If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

PALOMAR COLLEGE

ESCONDIDO CENTER HVAC/LAB

1951 EAST VALLEY PARKWAY, ESCONDIDO CA 92025

VOLUME 1 OF 1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects
5015021-100
3546 Concours Street / Ontario, CA 91764
T 909 989 9979 / www.hmcarchitects.com

PROJECT TEAM:

OWNER
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1951 E. VALLEY PKWY, ESCONDIDO, CA 92027
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FIRE PROTECTION
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5000 EAST SPRING STREET, SUITE 800 / LONG BEACH, CA 90815
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TELECOM
P2S Inc.
5000 EAST SPRING STREET, SUITE 800 / LONG BEACH, CA 90815
PHONE (562) 497-2999

PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
COVER SHEET

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:
G0.10

Please Recycle

If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

GENERAL NOTES

1. CONSTRUCTION DOCUMENTS DESCRIBE THE PRODUCTS, SYSTEMS, QUANTITIES, CONFIGURATION, AND PERFORMANCE SPECIFICATIONS THAT DELIVER THE OVERALL DESIGN INTENT OF THE PROJECT.
2. THE CONSTRUCTION DOCUMENT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH.
3. PERFORMANCE BY THE CONSTRUCTION TEAM SHALL BE CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AS NECESSARY TO DELIVER THE INDICATED RESULTS OF THE DESIGN INTENT.
4. VERIFY ALL DIMENSIONS, LOCATIONS OF EXISTING UTILITIES, AND CONDITIONS ON THE JOB SITE PRIOR TO THE START OF WORK OR PORTIONS OF THE WORK. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS. EXISTING CONDITIONS ARE INDICATED AS A RESULT OF FIELD OBSERVATIONS, INFORMATION SHOWN ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS AT THE TIME OF PREPARATION.
5. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES, ORDINANCES, REGULATIONS AND LAWS.
6. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND SCAFFOLDING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR
7. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
8. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWINGS.
9. DETAILS MARKED 'TYPICAL' SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY NOTED OTHERWISE.
10. ENACT ALL MEASURES TO PROTECT AND SAFEGUARD ALL EXISTING ELEMENTS TO REMAIN FROM BEING DAMAGED. REPLACE OR REPAIR EXISTING ELEMENTS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION.
11. PRIOR TO THE START OF WORK THE CONTRACTOR SHALL COORDINATE BETWEEN THE REQUIREMENTS OF ALL DISCIPLINES HEREIN AND BETWEEN THE REQUIREMENTS OF ALL DRAWINGS AND SPECIFICATIONS IN ORDER THAT ALL ITEMS SATISFACTORILY RELATE TO ONE ANOTHER. NOTIFY ARCHITECT IMMEDIATELY REGARDING ANY ITEMS THAT CANNOT BE COORDINATED.
12. CONTRACTOR SHALL EXCERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING, CONDUIT, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND/OR TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
13. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS SHALL NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD.

1. ALL WORK SHALL CONFORM TO 2016 EDITION TITLE 24, CALIFORNIA CODE OF REGULATION (CCR)
2. THE SCOPE OF WORK INDICATED ON G0.11
3. FABRICATION AND INSTALLTION 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.
4. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR.
5. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. INSPECTOR TO BE CLASS 3.
6. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT. THE REPORTS SHALL BE SUBMITTED TO ARCHITECT OF RECORD, STRUCTURAL ENGINEER OF RECORD, OWNER, INSPECTOR OR RECORD, AND THE DSA FIELD ENGINEER. THE REPORTS OF ANY FAILURES OF TESTS AND INSPECTIONS ARE TO BE SUBMITTED TO DSA DISTRICT STRUCTURAL ENGINEER.
7. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
8. SAFETY DURING CONSTRUCTION SHALL COMPLY WITH CFC CHAPTER 33.
9. 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.
10. 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 DSA APPROVED 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)

CODES

PARTIAL LIST OF APPLICABLE CODES

2016	California Administrative Code, Part 1, Title 24 C.C.R.
2016	California Building Code (CBC), Part 2, Title 24 C.C.R. (2015 International Building Code Volumes 1 & 2 and 2016 California Amendments)
2016	California Electrical Code (CEC), Part 3, Title 24 C.C.R. (2014 National Electrical Code and 2016 California Amendments)
2016	California Mechanical Code (CMC) Part 4, Title 24 C.C.R. (2015 Uniform Mechanical Code and 2016 California Amendments)
2016	California Plumbing Code (CPC), Part 5, Title 24 C.C.R. (2015 Uniform Plumbing Code and 2016 California Amendments)
2016	California Energy Code (CEC), Part 6, Title 24 C.C.R.
2016	California Fire Code, Part 9, Title 24 C.C.R. (2015 International Fire Code and 2016 California Amendments)
2016	California Existing Building Code (CEBC), Part 10, Title 24 CCR (2015 International Existing Code and 2016 California Amendments)
2016	California Green Building Standards Code (CALGreen), Part 11, Title 24 C.C.R.
2016	California Referenced Standards, Part 12, Title 24 C.C.R.
Title 19	C.C.R., Public Safety, State Fire Marshal Regulations.
2013	ASME A17.1/844-13 Safety Code For Elevators And Escalators

PARTIAL LIST OF APPLICABLE STANDARDS

ADDITIONAL NFPA APPLICABLE CODES SHALL BE LISTED IN THE PROJECT SPECIFICATION SECTIONS OF THE PROJECT MANUAL.

NFPA 13	Automatic Fire Sprinkler Systems (CA Amended)	2016 Ed.
NFPA 14	Standpipe and Hose Systems	2013 Ed.
NFPA 17	Dry Chemical Extinguishing Systems	2013 Ed.
NFPA 17a	Wet Chemical Extinguishing Systems	2013 Ed.
NFPA 20	Stationary Pumps for Fire Protection	2016 Ed.
NFPA 22	Water Tanks for Private Fire Protection	2013 Ed.
NFPA 24	Private Fire Mains & Their Appurtenances	2016 Ed.
NFPA 72	National Fire Alarm & Signaling Code (CA Amended)	2016 Ed.
NFPA 80	Fire Doors and Other Opening Protectives	2016 Ed.
NFPA 2001	Clean Agent Fire Extinguishing Systems	2015 Ed.
ICC 300	ICC Standards on Bleachers, Folding and Telescoping Seating and Grand Stands	2012 Ed.
UL 300	Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas	2005 Ed. (R2010)
UL 464	Audible Signal Appliances	2003 Ed.
UL 521	Heat Detectors for Fire Protective Signaling Systems	1999 Ed.
UL 1971	Standard for Signaling Devices for the Hearing Impaired	2002 Ed.

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2016 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

STATEMENT OF GENERAL CONFORMANCE

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

(Application No. 04- 117752 File No. 37-C1)

☒ The drawings or sheets listed on the cover or index sheet
☐ This drawing, page of specifications/calculations

have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1) design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and
2) coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

The Statement of General Conformance "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. (Title 24, Part 1, Section 4-317 (b))

I find that: ☒ All drawings or sheets listed on the cover or index sheet ☐ This drawing or page

☒ is/are in general conformance with the project design, and ☒ has/have been coordinated with the project plans and specifications.	☒ is/are in general conformance with the project design intent, and ☒ has/have been coordinated with the project plans and specifications
Signature: [signature] Date: 10.04.2018	Signature: _____ Date: _____
Architect or Engineer designated to be in general responsible charge	Architect or Engineer delegated responsibility for this portion of the work
Print Name: Bradley E. Glassick	Print Name: _____
License Number: C-32437 Expiration Date: 02.28.2019	License Number: _____ Expiration Date: _____

PROJECT DESCRIPTION

WORK INCLUDED IN THE CONTRACT:

INTERIOR REMODEL OF (E) CLASSROOMS TO CONVERT TO HVAC LAB AND LECTURE ROOM, WITH SOME STORAGE AND OFFICE SPACE. THE LAB WILL CONTAIN HVAC EQUIPMENT FOR EDUCATIONAL PURPOSES. THE NEW HVAC EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT IS FOR DEMONSTRATION AND TRAINING PURPOSES AND IS NOT INTENDED TO OPERATE AS A STANDARD INSTALLATION. EXTERIOR REMODEL AND DEMOLITION OF EXISTING PARKING SPACES, CURBS, AND LANDSCAPE TO ADD A NEW EQUIPMENT YARD ADJACENT TO HVAC LAB. TRENCHING OF EXISTING PARKING SPACES, ASPHALT PAVING, AND PLANTERS TO BRING NEW UTILITIY LINES TO AREA OF WORK.

PROJECT DATA

PROJECT ADDRESS:
1951 EAST VALLEY PARKWAY
ESCONDIDO, CA 92025

OCCUPANCY TYPE:
A3 & B

CONSTRUCTION TYPE:
II-B

AUTOMATIC SPRINKLERS THROUGHOUT:
YES

SQUARE FOOTAGE:
45,915 SF.

REFER TO G1.11 FOR CODE ANALYSIS PLAN

NO DEFERRED SUBMITTALS

SHEET INDEX VOL. 1

ARCHITECT
HMC Architects

G0.10	COVER SHEET
G0.11	PROJECT DATA SHEET & SHEET INDEX
G1.11	CODE ANALYSIS
G1.21	FIRST FLOOR - EXITING ANALYSIS

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CIVIL
Snipes - Dye

C-100	TITLE SHEET & NOTES
C-101	DETAIL SHEET
C-200	EXISTING CONDITION PLAN
C-300	GRADING PLAN
C-301	ENLARGED GRADING PLAN
C-302	ENLARGED PATH OF TRAVEL DETAIL (EXISTING CONDITIONS)

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ARCHITECT
HMC Architects

A1.11	OVERALL SITE PLAN
A1.12	DEMOLITION AND REMODEL SITE PLAN
A2.00	OVERALL FLOOR PLAN
A2.10	FIRST FLOOR - DEMOLITION PLAN
A2.11	FIRST FLOOR - NEW PLAN
A2.12	CONCRETE PAD AND EQUIPMENT FRAME LOCATIONS
A3.10	FIRST FLOOR - DEMOLITION REFLECTED CEILING PLANS
A3.11	FIRST FLOOR - NEW REFLECTED CEILING PLANS
A8.11	INTERIOR ELEVATIONS - FIRST FLOOR
A9.11	DOOR SCHEDULE, DOOR DETAILS, & SCHEDULES
A10.01	SITE DETAILS
A10.11	WALL TYPES & DETAILS
A10.31	CEILING DETAILS
A10.81	SIGNAGE DETAILS
A10.91	MISCELLANEOUS DETAILS
A10.92	MISCELLANEOUS DETAILS

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STRUCTURAL
Saiful Bouquet

S0.1	GENERAL NOTES
S0.2	GENERAL NOTES
S1.1	TYPICAL CONCRETE DETAILS
S1.2	TYPICAL CONCRETE DETAILS
S1.3	TYPICAL METAL STUDS DETAILS
S2.11	BLDG 2A - FOUNDATION PLAN
S2.12	BLDG 2A - FRAMING PLAN
S3.1	ELEVATIONS AND DETAILS
S3.2	DETAILS
S3.3	DETAILS
S3.4	DETAILS
S3.5	PRE-APPROVED LT GA DETAILS

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MECHANICAL
MA Engineers

M0.01	MECHANICAL LEGEND AND GENERAL NOTES
M0.02	MECHANICAL EQUIPMENT SCHEDULE
M2.11	MECHANICAL LEVEL 01 FLOOR PLAN
M2.12	MECHANICAL 3D CONCEPT
M3.01	MECHANICAL PIPING DIAGRAMS
M5.01	MECHANICAL DETAILS
M6.01	MECHANICAL CONTROL DIAGRAMS

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PLUMBING
MA Engineers

P0.10	PLUMBING LEGEND AND GENERAL NOTES
P1.11	PLUMBING OVERALL SITE PLAN
P2.11	PLUMBING LEVEL 01 FLOOR PLAN
P4.11	PLUMBING RISER DIAGRAMS
P10.10	PLUMBING DETAILS

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ELECTRICAL
Johnson Consulting Engineers

E1.0	ELECTRICAL SYMBOLS, ABBREVIATIONS, AND NOTES
E1.1	PARTIAL SITE PLAN
E1.2	SITE ELECTRICAL DETAILS
E2.0.0	TITLE 24
E2.1	LIGHTING FLOOR PLAN
E2.2	LIGHTING DETAILS
E2.3	FIXTURE SCHEDULE/ CONTROL DETAILS
E3.1	POWER FLOOR PLAN
E3.2	POWER DETAILS
E3.3	MECHANICAL EQUIPMENT SCHEDULE
E5.0	FIRE ALARM SITE PLAN
E5.1	FIRE ALARM FLOOR PLAN
E5.2	FIRE ALARM SCHEDULE
E7.1	ONE-LINE DIAGRAM
E7.2	ONE-LINE DETAILS
E8.1	ELECTRICAL DETAILS
E9.1	PANEL SCHEDULES
E10.1	DEMOLITION PLAN

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FIRE PROTECTION
P2S Inc.

FP001	GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
FP101	SITE PLAN
FP200	LEVEL 1 OVERALL FLOOR PLAN
FP201	LEVEL 1 DEMO PLAN
FP202	LEVEL 1 FLOOR PLAN
FP203	LEVEL 1 RENO RCP PLAN
FP401	SECTIONS
FP601	DETAILS
FP602	DETAILS

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TELECOM
P2S Inc.

T001	GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
T101	SITE PLAN
T201	LEVEL 1 DEMO PLAN
T202	LEVEL 1 FLOOR PLAN
T301	LEVEL 1 IDF LAYOUT
T501	DETAILS

6

TOTAL SHEETS 83

SYMBOLS

NORTH ARROW
OVERLAY ARROW INDICATES TRUE NORTH
SHADED AREA INDICATES PLAN NORTH

ELEVATION CALLOUT (TYPICAL FOR EXTERIOR AND INTERIOR)
SIM
1 / A101
INDICATES A SIMILAR CONDITION
SHEET WHERE ELEVATION IS DRAWN
LOCATION ON SHEET

ELEVATION CALLOUT (TYPICAL FOR EXTERIOR AND INTERIOR)
A101
LOCATION ON SHEET
SHEET WHERE ELEVATION IS DRAWN

SECTION CALLOUT
SIM
1
A3X.XX.XX
INDICATES A SIMILAR CONDITION
LOCATION ON SHEET
SHEET WHERE SECTION IS DRAWN

DETAIL CALLOUT
SIM
1
A101
INDICATES A SIMILAR CONDITION
LOCATION ON SHEET
SHEET WHERE DETAIL IS DRAWN

LONG DETAIL CALLOUT
SIM
AA2.2X0A.11
INDICATES A SIMILAR CONDITION
LOCATION ON SHEET
LONG SHEET NAME WHERE DETAIL IS DRAWN

CONTROL OR DATUM POINT
FIRST FLOOR
+0' - 0"
NAME OF ELEVATION (IF APPLICABLE)
ELEVATION ABOVE FINISHED FLOOR

GRID BUBBLE
EXISTING BUILDING GRID SYMBOL
GRID NUMBER
NEW BUILDING GRID SYMBOL

DOOR CALLOUT
C1.01
DOOR NUMBER

INTERIOR FINISH CALLOUT
A#
MATERIAL FINISH TYPE

WINDOW CALLOUT
AA
WINDOW NUMBER
(SEE WINDOW SCHEDULE)

WALL TYPE CALLOUT
S6A
WALL TYPE MARK
SEE A2.11

CONTROL OR DATUM POINT
LOCATION ON SHEET
SHEET NUMBER

KEYNOTE
2.00
KEYNOTE NUMBER (SEE LEGEND ON SHEET)

ROOM EXITING INFORMATION
ROOM NAME
101
150 SF
OL
OLF
Exit
AREA (SQ FT)
OCCUPANT LOAD (AREA DIVIDED BY LOAD FACTOR)
OCCUPANT LOAD FACTOR (REFER TO TABLE 1004.1.1)
NUMBER OF EXITS REQUIRED (REFER TO TABLE 1015.1)

WIC CASEWORK TAG
MANUFACTURER REFERNCE AND MODEL NUMBER
CABINET WIDTH
CABINET HEIGHT
CABINET DEPTH

NUMBER SYSTEM

DISCIPLINE

G	GENERAL
C	CIVIL
L	LANDSCAPE
A	ARCHITECTURE
I	INTERIORS
Q	EQUIPMENT
S	STRUCTURAL
P	PLUMBING
M	MECHANICAL
E	ELECTRICAL
FA	FIRE ALARM
T	TELECOM
AV	AV EQUIPMENT
K	KITCHEN
FP	FIRE PROTECTION

SHEET TYPE

0	CODE ANALYSIS, NOTES
1	SITE PLAN
2	FLOOR PLAN
3	CEILING PLAN
4	ROOF PLAN
5	EXTERIOR ELEVATIONS
6	SECTIONS
7	ENLARGED PLANS
8	INTERIOR ELEVATIONS
9	SCHEDULES
10	DETAILS

BUILDING LETTER, SEGMENT, (USER DEFINED)
USED ONLY IF REQUIRED. IF NOT, COLUMN IS OMITTED.

DISCIPLINE | SHEET TYPE | SERIES / ORDER | USER DEFINED (IF APPLICABLE)
A A 1 . 1 1 A . A
BUILDING LETTER (IF APPLICABLE) | FLOOR LEVEL OR SEQUENTIAL ORDER | SEGMENT (IF APPLICABLE)

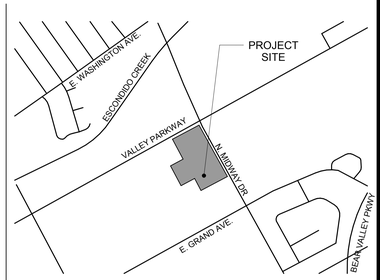
ABBREVIATIONS

(E)	EXISTING
AB	ANCHOR BOLT
AC PAVING	ASPHALTIC CONCRETE PAVING
ACC	ACCESS/ACCESSIBLE
ACP	ACOUSTICAL CEILING PANEL
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJACENT/ADJUSTABLE
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
ARCH	ARCHITECTURAL
ATT	ATTENUATION
AUTO	AUTOMATIC
BD	BOARD
BLCG	BLOCKING
BUR	BUILT UP ROOFING
CABT	CABINET
CF	CUBIC FEET
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CG	CORNER GUARD
CJ	CONTROL JOINT
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMP	COMPRESSION / COMPOSITE
CF	CUBIC FEET
COORD	COORDINATE
CORR	CORRUGATED
CT	CERAMIC TILE
CTSK	COUNTER SKUNK
CW	CURTAINWALL
DEPR	DEPRESSED / DEPRESSION
DF	DRINKING FOUNTAIN
DIM	DIMENSION
DISP	DISPENSER
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
E/W	EACH WAY
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION / ELEVATOR
ENCL	ENCLOSE / ENCLOSURE
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EQ	EQUAL
ESC	EXCUTCHEON
EWC	ELECTRIC WATER COOLER
EXP	EXPOSED
FA	FIRE ALARM
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER W/ CABINET
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FSH	FLAT HEAD SCREW
FIN	FINISH
FLR	FLOOR
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FP	FIREPROOFING
FR	FIRE RATED
FRG	FIRE RATED GLASS
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FS	FINISH SURFACE
FTG	FOOTING
GB	GRAB BAR
GFRC	GLASS FIBER REINFORCED CONCRETE
GL	GLASS TYPE
GLB	GLUE LAMINATED BEAM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTIC
HB	HOSE BIBB
HD	HEAVY DUTY
HDR	HEADER
HDWR	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HP	HIGH POINT
HSS	HOLLOW STEEL SECTION
ID	INSIDE DIAMTER
INT	INTERIOR
INV	INVERT
LANDS	LANDSCAPE
LAV	LAVATORY
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT WT	LIGHT WEIGHT
LVR	LOUVER
MACH	MACHINE
MB	MACHINE BOLT
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
NIC	NOT IN CONTRACT
NR	NON RATED
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
O/	OVER
O/A	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OFVI	OWNER FURNISHED, VENDOR INSTALLED
OPER	OPERABLE
OPNG	OPENING
ORD	OVERFLOW ROOF DRAIN
P/L	PROPERTY LINE
PA	PUBLIC ADDRESS
PAF	POWDER ACTUATED FASTENER
PCC	PAVING PORTLAND CEMENT CONCRETE PAVING
PED	PEDESTRIAN
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PH	PANIC HARDWARE
PIV	POST INDICATOR VALVE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLUMB	PLUMBING
PNL	PANEL
PNT	PAINT / PAINTED
POC	POINT OF CONNECTION
POLY ISO	POLYISOCYANURATE
PREFIN	PREFINISHED
PREP	PREP / PREPARATION
PTC	POST TENSIONED CONCRETE
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PT	PAINT
PTS	PNEUMATIC TUBE STATION / SYSTEM
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
R	RADIUS, RISER
RB	RESILIENT BASE
RD	ROOF DRAIN
RECEPT	ECEPTACLE
REF	REFERENCE
REFL	REFLECT(ED), (IVE)
REFL	REFLECT(ED), (IVE)
REFR	REFRIGERATOR
REINF	REINFORCE/REINFORCED/ REINFORCEMENT
REM	REMOVE
RH	ROUND HEAD
RHS	ROUND HEAD SCREW
RO	ROUGH OPENING
ROW	RIGHT OF WAY
SCH	SCHEDULE (FOR PIPE)
SCHED	SCHEDULE / SCHEDULING
SD	STORM DRAIN / SOAP DISPENSER
SECT	SECTION
SG	SAFETY GLASS
SHT	SHEET
SHTG	SHEATHING
SMS	SHEET METAL SCREW
SND	SANITARY NAPKIN DISPOSAL
SOV	SHUT OFF VALVE
SPEC	SPECIFICATIONS
SS	STAINLESS STEEL
STC	SOUND TRAMISSION CLASS
STL	STEEL
STSMS	SELF TAPPING SHEET METAL SCREW
SUSP	SUSPENDED
SV	SHEET VINYL
SYM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
TO	TOP OF
TOC	TOP OF CURB / CONCRETE
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TS	TACKABLE SURFACE
UC	UNDER CABINET OR COUNTER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VAC	VACUUM
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
VIF	VERYFY IN FIELD
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WGT	WEIGHT
WH	WATER HEATER
WP	WATERPROOFING/WALL PROTECTION
WR	WATER RESISTANT
WRGB	WATER RESISTANT GYPSUM BOARD
WS	WOOD SCREW
WSCT	WAINSCOT
WWF	WELDED WIRE FABRIC

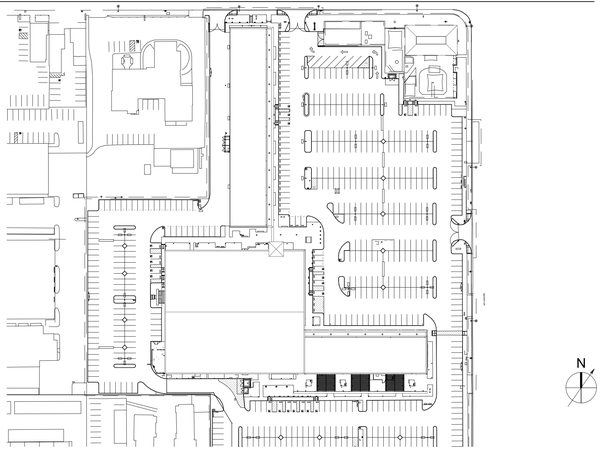
NOTE:
OTHER ABBREVIATIONS USED ON THESE DRAWINGS ARE CONSIDERED STANDARDS IN THE BUILDING INDUSTRY. CONTACT ARCHITECT FOR NECESSARY CLARIFICATION.

STATE MAP

VICINITY MAP



OVERALL SITE PLAN



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LICENSED ARCHITECT BRADLEY E GLASSICK NO. C-32437 REGISTERED 02-28-19 STATE OF CALIFORNIA

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Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
PROJECT DATA SHEET & SHEET INDEX

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Date: 10.04.2018 | **Client Project No:** 5015021-100

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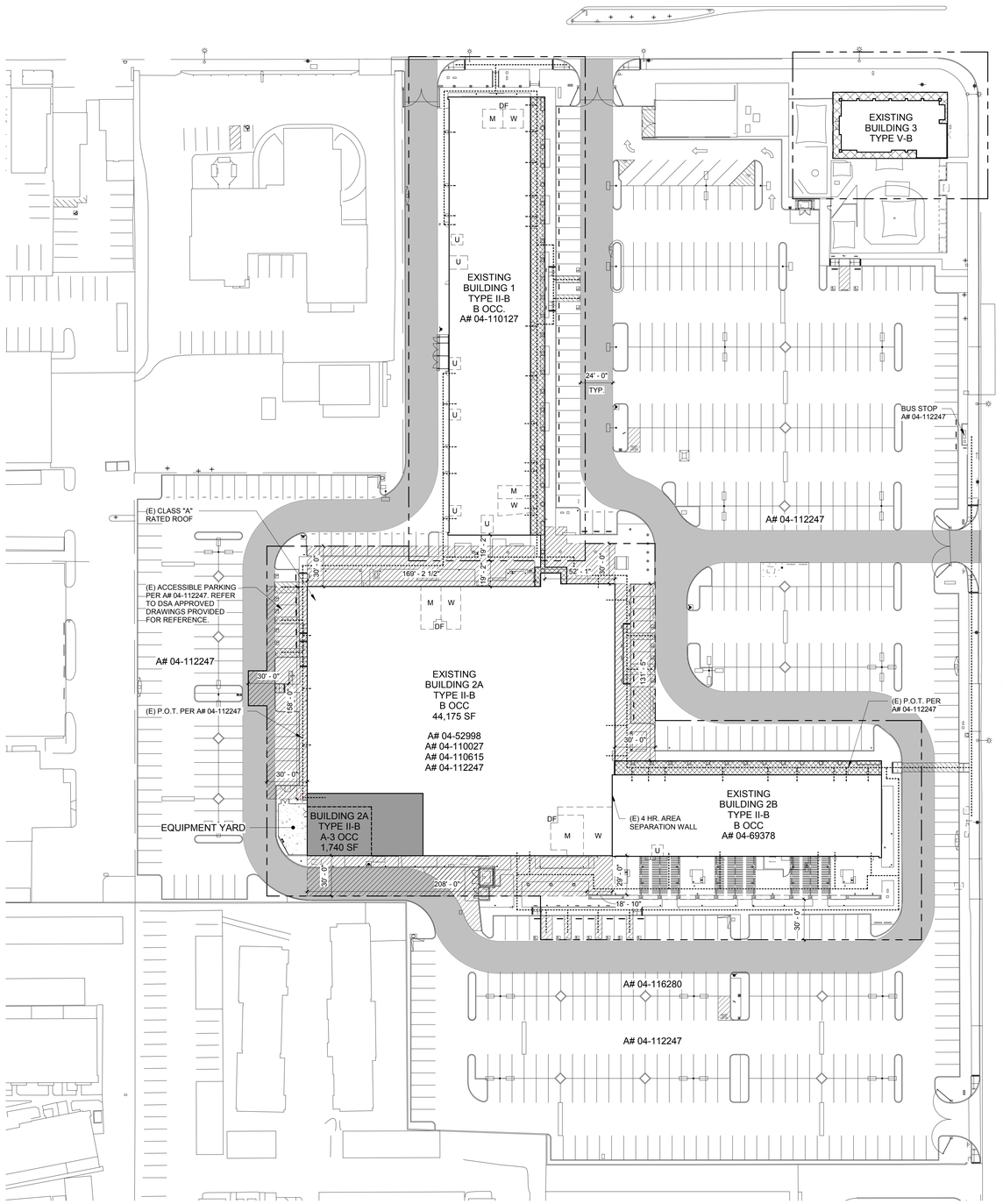
BUILDING DESIGNATION	SPACE	OCCUPANCY CLASSIFICATION	MIXED OCCUPANCY REQUIREMENTS	ACTUAL FLOOR AREA IN SQ. FT.	ALLOWABLE AREA PER TABLE 506.2 (W/ SPRINKLER SYSTEM $1)	AUTOMATIC FIRE SPRINKLER SYSTEM	CONSTRUCTION TYPE	ACTUAL BUILDING HEIGHT IN FEET	ALLOWABLE BUILDING HEIGHT IN FEET	ACTUAL # OF STORIES	ALLOWABLE # OF STORIES
2A	HVAC LAB	A-3	1 HR SEPARATION IS REQUIRED BETWEEN SEPARATED OCUPANCIES SEE SHEETS G1.21	1,740 SF	38,000 SF	YES	TYPE II-B	24 FT.	55 FT.	1	2
	ALL OTHER EXISTING SPACES INCLUDING HVAC LECTURE, OFFICE, & STORAGE	B		44,175 SF	92,000 SF	YES		58 FT.	75 FT.	1	4

BUILDING DESIGNATION	ALLOWABLE AREA CALCULATION	OCCUPANCY	ACTUAL AREA CALCULATION		MIXED OCCUPANCY RATIO	REMARKS
	(EQUATION 5-4) W = (L x w) + (L x w)..../F (EQUATION 5-5) If = [F/P - 0.25] W/30 W = (158 x 30) + (208 x 30) + (18.83 x 29) + (131.42 x 30) + (52.08 x 30) + (169.21 x 30)/737.54 W = 22,107.37/737.54 = 29.97 If = [737.54/876 - 0.25] 29.97/30 If = 0.59					
2A	HVAC LAB	A-3	HVAC LAB AREA	1,740 SF (OK)	1,740/43,605 = 0.04	
	FRONTAGE INCREASE FACTOR	0.59				
	FRONTAGE INCREASE Aa = At + (NS x If)					
	Aa = 38,000 + (9,500 x 0.59)	43,605 SF				
	ALL OTHER EXISTING SPACES	B	ALL OTHER SPACES	44,175 SF (OK)	44,175/105,570 =0.42	
	INCLUDING HVAC LECTURE, OFFICE, & STORAGE					
	FRONTAGE INCREASE FACTOR	0.59				
	FRONTAGE INCREASE Aa = At + (NS x If)					
	Aa = 92,000 + (23,000 x 0.59)	105,570 SF	SUM OF RATIO (SHALL NOT BE > 1)			
			A3 + B = 0.04+ 0.42 =0.46		0.46 < 1 (OK)	

CODE ANALYSIS 16
3" = 1'-0"



CODE ANALYSIS 1
1" = 40'-0"

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Legend:

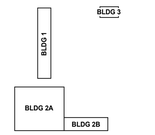
- EXISTING BUILDING - AREA OF WORK
- EXISTING BUILDING - NO SCOPE
- ROOF OVERHANG
- FRONTAGE AREA
- EXISTING FIRE ACCESS LANE PER DSA APPROVED A# 04-112247
- M W U — EXISTING RESTROOMS (MEN, WOMEN, UNISEX)
- DF — DRINKING FOUNTAIN
- ASSUMED PROPERTY LINE
- 1 HOUR FIRE RATING
- PATH OF TRAVEL (P.O.T.)
  PATH OF TRAVEL AS INDICATED IS A BARRIER-FREE ACCESS AT LEAST 48 INCHES WIDE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2 INCH AT 1:2 MAX SLOPE EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4 INCH VERTICAL. MAXIMUM CROSS SLOPE IS 2% TYPICAL, AND MAXIMUM SLOPE IN DIRECTION OF TRAVEL IS 5% UNLESS OTHERWISE NOTED. THE ARCHITECT SHALL VERIFY THAT ALL BARRIERS ON THE INDICATED PATH OF TRAVEL HAVE BEEN REMOVED.

  FOR GRATINGS LOCATED IN TEH SURFACE OF ANY PEDESTRIAN WAY IN THE PATH OF TRAVEL, GRID/OPENINGS IN GRATINGS SHALL BE LIMITED TO 1/2 INCH MAXIMUM CLEAR IN THE DIRECTION OF TRAFFIC FLOW.

Notes:

1. "Design Professional in General Responsible Charge Statement: The POT identified these construction documents meets the requirements of the current applicable California Building Code (CBC) accessibility provisions for path of travel requirements or alterations, additions 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 noncompliant with the CBC have been identified and the corrective work necessary to bring them into compliance has been included within the scope of this project's work through details, drawings and specifications incorporated into these construction documents. Any noncompliant elements, components or portions of the POT that will not be corrected by this project based on valuation threshold limitations or a finding of unreasonable hardship are indicated in these construction documents.
During construction, if POT items within the scope of the project represented as CBC compliant are found to be nonconforming beyond reasonable construction tolerances, the items shall be brought into compliance with the CBC as a part of this project by means of a construction change document."

Key Plan:



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Project:
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Sheet Title:
CODE ANALYSIS

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Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:
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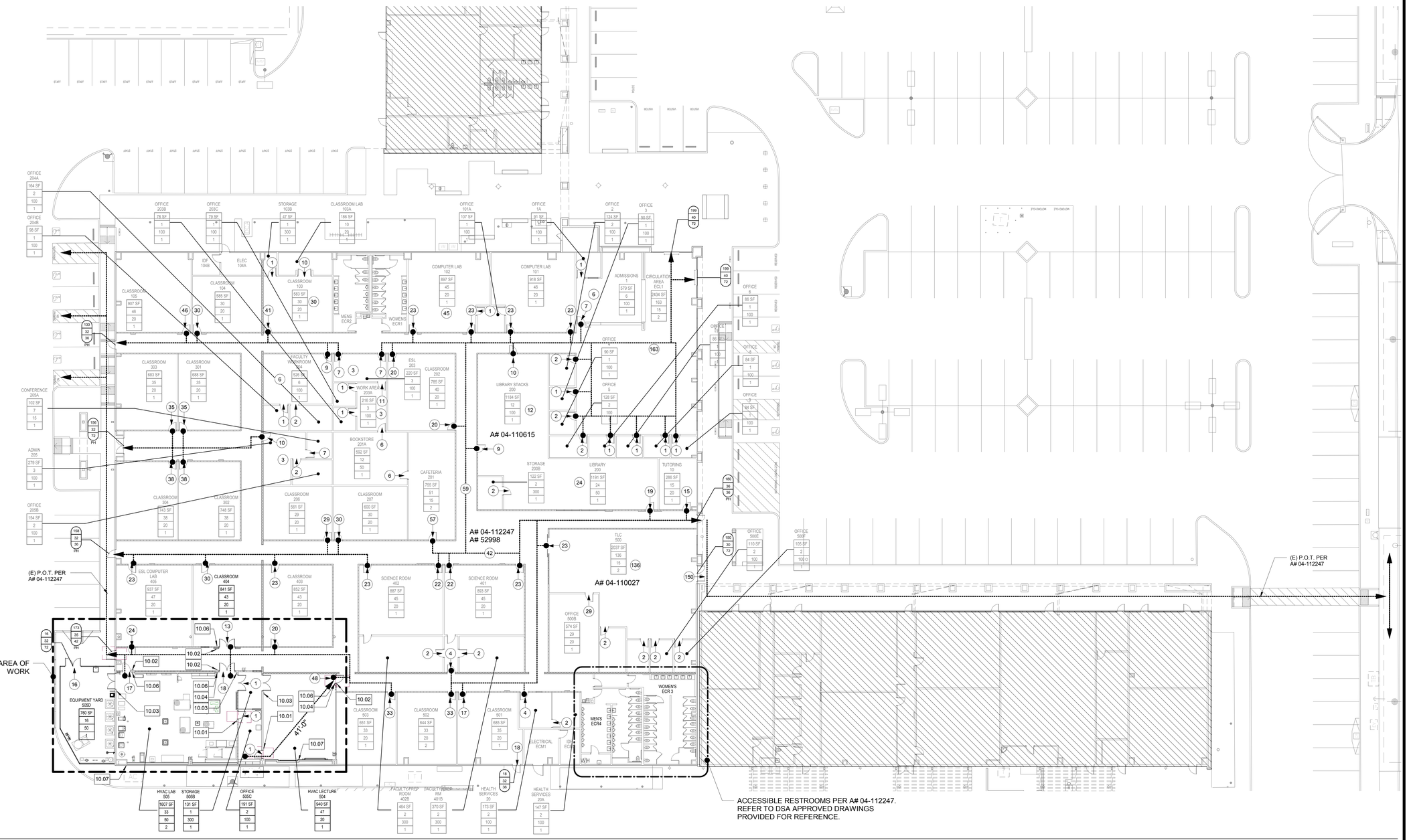

LEVEL 01 FLOOR PLAN EXITING ANALYSIS

2 1/16" = 1'-0"

TABLE 1004.1.1 Maximum Floor Area Allowances Per Occupant		
Use Description	Occupant Load Factor	Gross/ Net
No Classification Applies	0	N/A
Accessory storage areas, mechanical equipment room	300	gross
Assembly without fixed seats, Unconcentrated (tables and chairs)	15	net
Business area	100	gross
Educational, Classroom Area	20	net
Laboratory Educational	50	net
Library, Reading rooms	50	net
Library, Stack areas	100	gross

TABLE 1004.1.1 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT **1** NTS

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Keynotes:

10.01	OFFICE SIGN - 7/A10.81
10.02	CLASSROOM SIGN - 8/A10.81
10.03	ROOM ID SIGN - 6/A10.81
10.04	ASSISTED LISTENING SYSTEM SIGN - 3/A10.81
10.06	EXIT ROUTE SIGN - 12/A10.81
10.07	GAS SHUT-OFF VALVE SIGN - 13/A10.81

Legend:

ROOM EXITING INFORMATION
- ROOM NAME
- ROOM NUMBER
- ROOM AREA
- OCCUPANT LOAD
- OCCUPANT LOAD FACTOR
- # OF EXITS REQUIRED

DOOR EXITING INFORMATION
- # OF OCCUPANTS SERVED
- REQUIRED EXITING WIDTH (32" MIN.)
- PROVIDED EXITING WIDTH
- PANIC HARDWARE PROVIDED

EXITING TAG
- # OF OCCUPANTS EXITING ALONG EGRESS PATH
- DIRECTION OF TRAVEL

PATH OF TRAVEL (P.O.T.)
PATH OF TRAVEL AS INDICATED IS A BARRIER-FREE ACCESS AT LEAST 48 INCHES WIDE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2 INCH AT 1:2 MAX SLOPE EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4 INCH VERTICAL. MAXIMUM CROSS SLOPE IS 2% TYPICAL, AND MAXIMUM SLOPE IN DIRECTION OF TRAVEL IS 5% UNLESS OTHERWISE NOTED. THE ARCHITECT SHALL VERIFY THAT ALL BARRIERS ON THE INDICATED PATH OF TRAVEL HAVE BEEN REMOVED.

FOR GRATINGS LOCATED IN TEH SURFACE OF ANY PEDESTRIAN WAY IN THE PATH OF TRAVEL, GRID/OPENINGS IN GRATINGS SHALL BE LIMITED TO 1/2 INCH MAXIMUM CLEAR IN THE DIRECTION OF TRAFFIC FLOW.

- EXISTING 1-HR RATED WALL
- EXISTING 2-HR RATED WALL
- AREA OF WORK BOUNDARY
- FIRE EXTINGUISHER (SEMI-RECESSED)

Notes:

1. "Design Professional in General Responsible Charge Statement: The POT identified these construction documents meets the requirements of the current applicable California Building Code (CBC) accessibility provisions for path of travel requirements or alterations, additions 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 noncompliant with the CBC have been identified and the corrective work necessary to bring them into compliance has been included within the scope of this project's work through details, drawings and specifications incorporated into these construction documents. Any noncompliant elements, components or portions of the POT that will not be corrected by this project based on valuation threshold limitations or a finding of unreasonable hardship are indicated in these construction documents.
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FIRST FLOOR - EXITING ANALYSIS

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GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY HORIZONTAL AND VERTICAL ALIGNMENT OF ALL EXISTING AND PROPOSED IMPROVEMENTS TO BE MET BY WORK TO BE DONE PRIOR TO CONSTRUCTION. IN THE EVENT THAT THE ALIGNMENT IS IN CONFLICT WITH THE WORK TO BE DONE, CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE CONSTRUCTION MANAGER OF THE CONFLICT.
2. THE LOCATION OF EXISTING UNDERGROUND FACILITIES ARE INDICATED ON THE PLANS AS A RESULT OF A SEARCH OF THE AVAILABLE RECORDS. LOCATIONS HAVE NOT BEEN FIELD VERIFIED. CONTRACTOR IS DIRECTED TO REQUEST UTILITY MARK OUT AND TO EXCAVATE AND VERIFY LOCATIONS PRIOR TO EXCAVATIONS. ENGINEER OF WORK DOES NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF ANY UTILITY LOCATIONS INDICATED ON THE PLANS.
3. ENGINEER OF WORK IS NOT RESPONSIBLE FOR JOB SAFETY.
4. CONTRACTOR SHALL SUBMIT A WORK PLAN TO CAMPUS FOR REVIEW & APPROVAL. WORK PLAN SHALL INCLUDE, BUT NOT LIMITED TO, WORK HOURS, LIMIT OF WORK, ADA PATH OF TRAVEL, FENCE LOCATIONS, SIGNAGE.
5. CONTRACTOR SHALL MAINTAIN SAFE AND THROUGH PASSAGE ACCESS TO ALL BUILDINGS & ADA PATH OF TRAVEL AT ALL TIMES. CAMPUS SHALL BE NOTIFIED 14 DAYS PRIOR TO ANY ACCESS CLOSURE DUE TO CONSTRUCTION ACTIVITIES.
6. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEY STAKING AS A PART OF CONTRACT.
7. STOCKPILING OF MATERIALS OUTSIDE OF LIMIT OF WORK SHALL NOT BE ALLOWED.
8. THE 2016 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) ADOPTS THE 2015 INTERNATIONAL BUILDING CODE (IBC).

GRADING NOTES

1. GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE UPDATED GEOTECHNICAL REPORT & GEOTECHNICAL CONSULTANT FOR THIS PROJECT.
2. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (CURRENT EDITION), THESE PLANS AND THE PROJECT SPECIFICATIONS.
3. THE MINIMUM GRADIENT FOR GRADED SWALES SHALL BE 1%.
4. THE MINIMUM GRADIENT OF FINISHED GRADE AWAY FROM STRUCTURES SHALL BE 1.5%, UNLESS OTHERWISE NOTED ON PLANS.
5. FINISH GRADE SHALL BE DETERMINED AS THE ELEVATION OF ANY LANDSCAPE MATERIAL PLACED ON GRADE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERCUT GRADE TO ALLOW FOR PLACEMENT OF LANDSCAPE MATERIALS.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HANDLE ANY EXPORT OF EXCESS MATERIAL FOR THE SITE. RESPONSIBILITY SHALL INCLUDE ALL PERMITS AND APPROVALS BY THE APPROPRIATE AGENCIES. THE OWNER AND ENGINEER OF WORK WILL NOT ASSUME ANY RESPONSIBILITY FOR THE REMOVAL, TRANSPORTATION OR PLACEMENT OF EXCESS MATERIAL.
7. FINISH GRADE SHALL BE INSPECTED BY THE ENGINEER OF WORK AND VERIFIED THAT THE ACTUAL GRADING IS REPRESENTATIVE OF THE PROPOSED GRADING AND THAT THE MINIMUM SLOPE GRADIENTS EXIST.
8. THE MAXIMUM SLOPE GRADIENT SHALL BE 2:1 (HORIZONTAL TO VERTICAL).
9. CONCRETE CURBS AND GUTTERS SHALL BE INSTALLED IN ACCORDANCE WITH THE REFERENCED DETAIL AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) (CURRENT EDITION).
10. SAW CUTTING OF EXISTING IMPROVEMENTS SHALL PROVIDE A CLEAN VERTICAL EDGE VOID OF CHIPPING AND SHALL BE MADE AT THE NEAREST JOINT.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY REMOVAL OF ALL SPOIL MATERIALS CREATED BY THE DEMOLITION OF EXISTING IMPROVEMENTS.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING IMPROVEMENTS. CONTRACTOR SHALL, IN ADVANCE OF CONSTRUCTING IMPROVEMENTS, NOTIFY THE ENGINEER OF WORK OF ANY CONFLICTS BETWEEN THE PROPOSED DESIGN AND EXISTING IMPROVEMENTS. THE ENGINEER OF WORK SHALL REVIEW THE CONFLICTS AND MAKE RECOMMENDATIONS FOR RESOLUTION IN A TIMELY MANNER.
13. SIDEWALK FINISHES AND JOINT DETAILS SHALL MATCH EXISTING ADJACENT FINISHES FLUSH.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE COUNTY OF SAN DIEGO "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMPS AND FOR PERMANENT POST CONSTRUCTION TREATMENT CONTROL PERMANENT BMPS, THE WATER QUALITY TECHNICAL REPORT (WQTR) IF APPLICABLE.
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

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EROSION AND SEDIMENT CONTROL NOTES (CONT.)

16. CONTRACTOR SHALL PROTECT SPOIL AND MATERIAL STORAGE PILES FROM MOVEMENT OF SILT VIA WATER AND WIND EROSION.
17. UPON COMPLETION OF GRADING, CONTRACTOR SHALL STABILIZE AREA WITH LANDSCAPING OR HYDROSEED AND RELOCATE SILT FENCE TO THE PERIMETER OF THE WORK AREA.
18. CONTRACTOR TO INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT AT POINT OF ACCESS TO CONSTRUCTION SITE TO REDUCE THE TRACKING OF MUD AND DIRT.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MEASURES & IMPLEMENTATION AS A PART OF EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION REPAIR.

MINIMUM POST-CONSTRUCTION MAINTENANCE PLAN

AT THE COMPLETION OF THE WORK SHOWN, THE FOLLOWING PLAN SHALL BE FOLLOWED TO ENSURE WATER QUALITY CONTROL IS MAINTAINED FOR THE LIFE OF THE PROJECT:

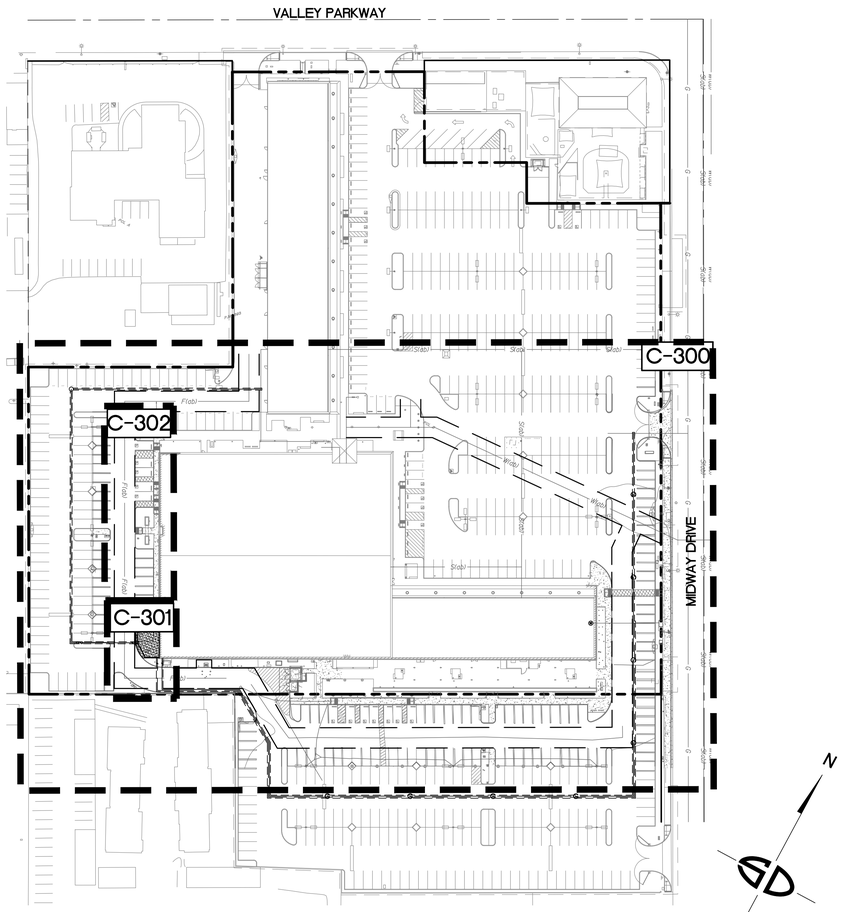
1. STABILIZATION: ALL PLANTED SLOPES AND OTHER VEGETATED AREAS SHALL BE INSPECTED PRIOR TO OCTOBER 1 OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH) AND REPAIRED AND REPLANTED AS NEEDED UNTIL A NOTICE OF TERMINATION (NOT) IS FILED.
2. STRUCTURAL PRACTICES: DESILTING BASINS, DIVERSION DITCHES, DOWNDRAINS, INLETS, OUTLET PROTECTION MEASURES, AND OTHER PERMANENT WATER QUALITY AND SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED PRIOR TO OCTOBER 1ST OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH). REPAIRS AND REPLACEMENTS SHALL BE MADE AS NEEDED AND RECORDED IN THE MAINTENANCE LOG IN PERPETUITY.
3. OPERATION AND MAINTENANCE, FUNDING: POST-CONSTRUCTION MANAGEMENT MEASURES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL THE TRANSFER OF RESPECTIVE SITES TO HOME BUILDERS, INDIVIDUAL OWNERS, HOMEOWNERS ASSOCIATIONS, SCHOOL DISTRICTS, OR LOCAL AGENCIES AND/OR GOVERNMENTS. AT THAT TIME, THE NEW OWNERS SHALL ASSUME RESPONSIBILITY FOR THEIR RESPECTIVE PORTIONS OF THE DEVELOPMENT.

PERMANENT POST-CONSTRUCTION BMP NOTES

1. OPERATION AND MAINTENANCE SHALL BE SECURED BY AN EXECUTED AND RECORDED STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT (SWMDCMA), OR ANOTHER MECHANISM APPROVED BY THE CITY ENGINEER, THAT ASSURES ALL PERMANENT BMP'S WILL BE MAINTAINED IN PERPETUITY, PER THE LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS.
2. PERMANENT POST CONSTRUCTION BMP DEVICES SHOWN ON PLAN SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY ENGINEER OR RESIDENT ENGINEER AND THE ENGINEER OF WORK.

ABBREVIATIONS

A.C., ASPH	ASPHALT CONCRETE PAVEMENT	NO.	NUMBER
B.M.	BENCH MARK	OC	ON CENTER
BLDG.	BUILDING	P.A.	PEDESTRIAN ACCESS
CB	CATCH BASIN	P.O.T.	ADA COMPLIANT PATH OF TRAVEL
℄	CENTERLINE	PSF	PER SQUARE FOOT
C.O.	CLEANOUT	PSI	PER SQUARE INCH
CONC.	CONCRETE	PVC	POLYVINYL CHLORIDE
COMP.	COMPACTION	R	RADIUS
C.S.F.M.	CALIFORNIA STATE FIRE MARSHALL	RD	ROOF DRAIN
DEPT.	DEPARTMENT	REL.	RELATIVE
DIA.	DIAMETER	S, SWR	SEWER
(E), EXIST.	EXISTING	SMH	STEAM MANHOLE
FF	FINISH FLOOR	S.F.	SQUARE FEET
FH	FIRE HYDRANT	SHT.	SHEET
FL	FLOW LINE	SD	STORM DRAIN
FT.	FOOT	SDMH	STORM DRAIN MANHOLE
G.V.	GATE VALVE	SDSU	SAN DIEGO STATE UNIVERSITY
G	GUTTER	SDR	STANDARD DIMENSION RATIO
GB	GRADE BREAK	STD	STANDARD
HDPE	HIGH DENSITY POLYETHYLENE	TC	TOP OF CURB
HP	HIGH POINT	TG	TOP OF GRATE
IRR	IRRIGATION	TF	TOP OF FOOTING
LA	LANDSCAPE AREA	TW	TOP OF WALL
LP	LOW POINT	VCP	VITRIFIED CLAY PIPE
IE	INVERT ELEVATION	W	WATER
MAX.	MAXIMUM	WM	WATER METER
MIN.	MINIMUM	W/	WITH
MH	MANHOLE	&	AND



KEYMAP
SCALE: 1"=60'

WORK TO BE DONE

THE WORK SHOWN IN THESE DRAWINGS SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, THE PROJECT SPECIFICATIONS AND THE STANDARD DRAWINGS OF THE COUNTY OF SAN DIEGO, CURRENT EDITIONS.

STANDARD SPECIFICATIONS

STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (CURRENT EDITION) AND PROJECT SPECIFICATIONS.

STANDARD DRAWINGS

COUNTY OF SAN DIEGO STANDARD DRAWINGS (CURRENT EDITION)*

LEGEND

IMPROVEMENT	STD. DWG. *	SYMBOL
EXISTING CONTOUR		686
EXISTING ELEVATION		x 686.50
PROPOSED ELEVATION		686.50
EXISTING STEAM		ST ST
EXISTING SEWER		S S
EXISTING WATER MAIN		W W
EXISTING FIRE HYDRANT		
EXISTING WATER VALVE		⊗
EXISTING GAS LINE		G G
EXISTING STORM DRAIN		SD SD
EXISTING TELECOM LINE		T T
EXISTING ELECTRICAL LINE		E E
A.C. PAVING	DETAIL 5 / C-101	
UTILITY TRENCH		
CONCRETE PAVEMENT	DETAIL 4 / C-101	
SEWER MANHOLE		○
WATER LINE		W
SEWER LINE		S
2" PVC SHC. 80 WATER SERVICE		W W
4" PVC SEWER SERVICE		S S
SURVEY CONTROL POINT		SCP
2" GAS LINE		G
UTILITIES POINT OF CONNECTION		

SEE COUNTY OF SAN DIEGO REGIONAL STANDARD DRAWINGS (SDRSD) ON SHEET C-102

SHEET INDEX

SHEET NO.	DESCRIPTION
C-100	TITLE AND NOTES SHEET
C-101	DETAIL SHEET
C-200	EXISTING CONDITION PLAN
C-300	GRADING PLAN
C-301	ENLARGED GRADING PLAN
C-302	ENLARGED PATH OF TRAVEL DETAIL (EXISTING CONDITIONS)

BENCH MARK

THE BENCHMARK FOR THIS SURVEY IS THE CITY OF ESCONDIDO BENCHMARK NO. 241, CHISELED ON TOP OF CURB, ON THE NORTH SIDE OF VALLEY PARKWAY, 60 FT. ± WEST OF WESTERLY DRIVEWAY EXIT TO POST OFFICE, IN FRONT OF POWER POLE #100818CH, ELEVATION = 680.23, NGVD29.

LEGAL DESCRIPTION

PARCEL B OF ESCONDIDO MAP P-71-49, IN THE CITY OF ESCONDIDO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO PARCEL MAP NO. 693, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, DECEMBER 17, 1971.

ASSESSOR'S PARCEL NUMBER

231-060-58

TOPOGRAPHIC SURVEY

1. SURVEY AND TOPOGRAPHIC DATA SHOWN ON THESE PLANS IS BASED ON FIELD SURVEY BY SNIPES-DYE ASSOCIATES DATED 06-20-2018.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects
5015021-100
3546Concours Street /Ontario ,CA 91764
T 909 989 9979 / www.hmcarchitects.com

LICENSED ARCHITECT BRADLEY E GLASSICK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

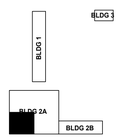
ISSUE:

No.	Issued	Date
	DSA SUBMITTAL	10.04.2018
	DSA BACKCKECK	12.11.2018

No.	Issued	Date

Keynotes:

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
TITLE SHEET & NOTES

DSA APPROVED SET

Date: 10.05.2018 | Client Project No: ---

Sheet:
C-100

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
12-05-18
MATTHEW P. KURTZ R.C.E. 79546
EXPIRES 09-30-20

REGISTERED PROFESSIONAL ENGINEER MATTHEW P. KURTZ No. 79546 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

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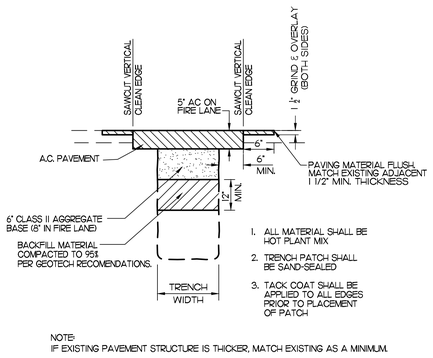
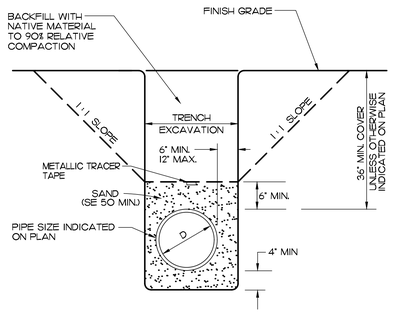
S:\SNIPES-DYE\2525 Palomar College Education Center HVAC_all\SHEETS\Drawing Files\P2525-C100-1.dwg
Plotted: 05-DEC-2018 8:49am By: mmartin

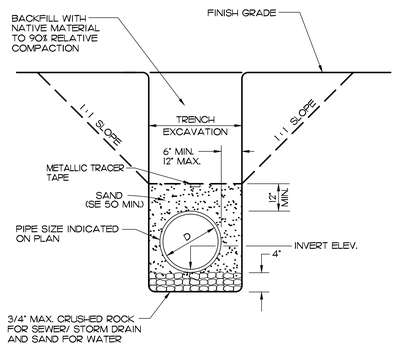
If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.



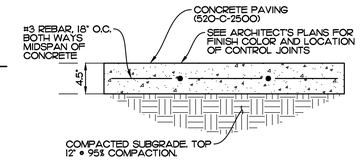
1 C-101 **TYPICAL AC PAVEMENT TRENCH PATCH**
NO SCALE



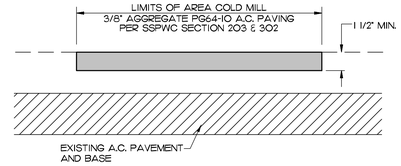
2 C-101 **WATER TRENCH BEDDING**
NO SCALE



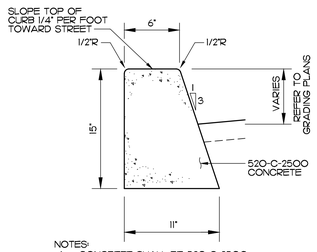
3 C-101 **STORM DRAIN AND SANITARY SEWER TRENCH BEDDING**
NO SCALE



4 C-101 **CONCRETE PAVEMENT**
NO SCALE



5 C-101 **A.C. PAVEMENT COLD MILL & OVERLAY**
NO SCALE

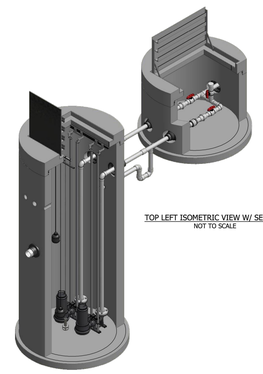


NOTES:
1. CONCRETE SHALL BE 520-C-2500.
2. SLOPE TOP OF CURB 1/4" PER FOOT TOWARD STREET.

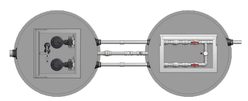
6 C-101 **6" CONCRETE CURB**
NO SCALE

8 C-101 **CONCRETE PAVEMENT DOWELL**
NO SCALE

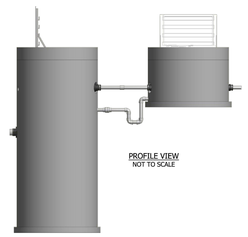
2" GRINDER PUMP DISCHARGE DUPLEX LIFT STATION



TOP LEFT ISOMETRIC VIEW W/ SECTION
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

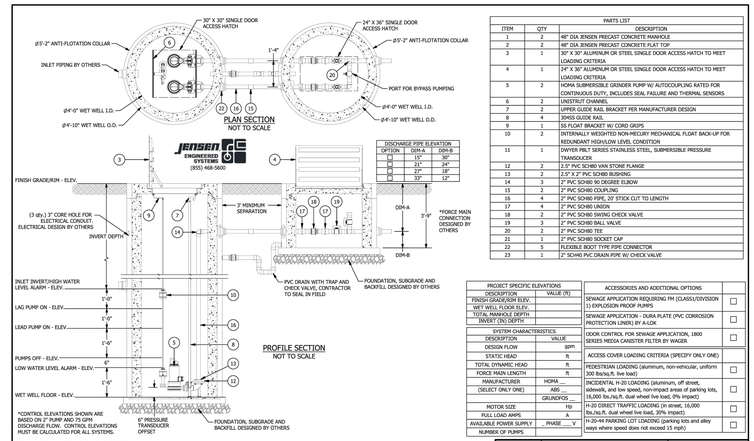


PROFILE VIEW
NOT TO SCALE

DISCLAIMERS, INCLUDING BUT NOT LIMITED TO:
1.) Elevations provided by others. Changes greater than 0.1' require engineer approval. Field elevations have not been verified by Jensen Precast. Refer to Jensen Precast concrete production drawings for concrete excavation. These mechanical drawings are not intended for setting of precast structures.
2.) Pump station design characteristics such as, but not limited to; inflow rate, on-site power availability, etc., were provided by the engineer of record.
3.) Purchasing agent must verify pump station complies with engineering plans, specifications, and site conditions prior to production.
4.) Site assembly required. Purchasing agent is responsible for assembly of entire pump station. Includes but is not limited to; off-loading & setting of concrete material, piping assembly, and electrical wiring.
5.) Location of control panel must be disclosed to Jensen Precast.

PROJECT: **2" DISCHARGE LIFT STATION**
TITLE PAGE
DATE: April 2014 | DRAWN BY: NEC | SHEET NO.: 1 of 3

JENSEN ENGINEERED SYSTEMS (855) 468-5600 501 GUNN CIRCLE, BRAWLEY, KY 92227 jensen@engineeredbyjensen.com (951) 446-5500



PARTS LIST		
ITEM	QTY	DESCRIPTION
1	2	48" DIA JENSEN PRECAST CONCRETE MANHOLE
2	2	48" DIA JENSEN PRECAST CONCRETE FLAT TOP
3	1	30" X 30" ALUMINUM OR STEEL SINGLE DOOR ACCESS HATCH TO MEET LOADING CRITERIA
4	1	24" X 36" ALUMINUM OR STEEL SINGLE DOOR ACCESS HATCH TO MEET LOADING CRITERIA
5	2	HOMA SUBMERSIBLE GRINDER PUMP W/ AUTOCOUPLING RATED FOR CONTINUOUS DUTY, INCLUDES SEAL FAILURE AND THERMAL SENSORS
6	2	UNISTRUT CHANNEL
7	2	UPPER GUIDE RAIL BRACKET PER MANUFACTURER DESIGN
8	4	304SS GUIDE RAIL
9	1	SS FLOAT BRACKET W/ CORD GRIPS
10	2	INTERNALLY WEIGHTED NON-MECURY MECHANICAL FLOAT BACK-UP FOR REDUNDANT HIGH/LOW LEVEL CONDITION
11	1	DWYER PELT SERIES STAINLESS STEEL, SUBMERSIBLE PRESSURE TRANSDUCER
12	2	2.5" PVC SCH80 VAN STONE FLANGE
13	2	2.5" X 2" PVC SCH80 BUSHING
14	3	2" PVC SCH80 90 DEGREE ELBOW
15	2	2" PVC SCH80 COUPLING
16	4	2" PVC SCH80 PIPE, 20' STICK CUT TO LENGTH
17	4	2" PVC SCH80 UNION
18	2	2" PVC SCH80 SWING CHECK VALVE
19	3	2" PVC SCH80 BALL VALVE
20	2	2" PVC SCH80 TEE
21	1	2" PVC SCH80 SOCKET CAP
22	5	FLEXIBLE BOOT TYPE PIPE CONNECTOR
23	1	2" SCH40 PVC DRAIN PIPE W/ CHECK VALVE

PROJECT SPECIFIC ELEVATIONS	
DESCRIPTION	VALUE (ft)
FINISH GRADE/RIM ELEV.	
WET WELL FLOOR ELEV.	
TOTAL MANHOLE DEPTH	
INVERT (IN) DEPTH	

SYSTEM CHARACTERISTICS		
DESCRIPTION	VALUE	
DESIGN FLOW		gpm
STATIC HEAD		ft
TOTAL DYNAMIC HEAD		ft
FORCE MAIN LENGTH		ft
MANUFACTURER (SELECT ONLY ONE)	HOMA	—
	ABS	—
	GRUNDFOS	—
MOTOR SIZE		Hp
FULL LOAD AMPS		A
AVAILABLE POWER SUPPLY	PHASE	V
NUMBER OF PUMPS		

ACCESSORIES AND ADDITIONAL OPTIONS	
SEWAGE APPLICATION REQUIRING FM (CLASS1/DIVISION 1) EXPLOSION PROOF PUMPS	☐
SEWAGE APPLICATION - DURA PLATE (PVC CORROSION PROTECTION LINER) BY A-CDK	☐
ODOR CONTROL FOR SEWAGE APPLICATION, 1800 SERIES MEDIA CANISTER FILTER BY WAGER	☐
ACCESS COVER LOADING CRITERIA (SPECIFY ONLY ONE)	
PEDESTRIAN LOADING (aluminum, non-vehicular, uniform 300 lbs/sq.ft. live load)	☐
INCIDENTAL H-20 LOADING (aluminum, off street, sidewalk, and low speed, non-impact areas of parking lots, 16,000 lbs./sq.ft. dual wheel live load, 0% impact)	☐
H-20 DIRECT TRAFFIC LOADING (in street, 16,000 lbs./sq.ft. dual wheel live load, 30% impact)	☐
H-20-44 PARKING LOT LOADING (parking lots and alley ways where speed does not exceed 15 mph)	☐

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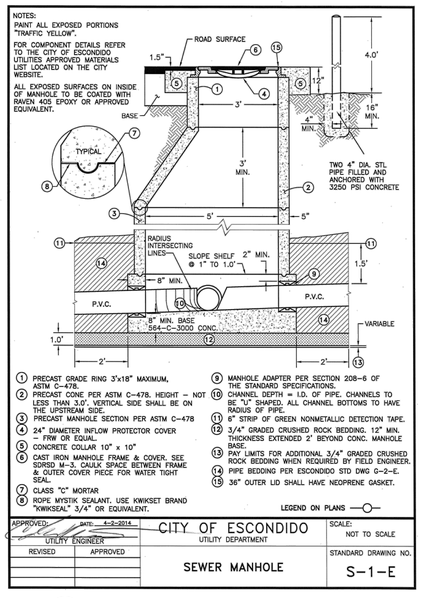
2.) Pump station design characteristics such as, but not limited to; inflow rate, on-site power availability, etc., were provided by the engineer of record.
3.) Purchasing agent must verify pump station complies with engineering plans, specifications, and site conditions prior to production.
4.) Site assembly required. Purchasing agent is responsible for assembly of entire pump station. Includes but is not limited to; off-loading & setting of concrete material, piping assembly, and electrical wiring.
5.) Location of control panel must be disclosed to Jensen Precast.

PROJECT: **2" DISCHARGE LIFT STATION**
MECHANICAL DETAIL
DATE: April 2014 | DRAWN BY: NEC | SHEET NO.: 2 of 3

JENSEN ENGINEERED SYSTEMS (855) 468-5600 501 GUNN CIRCLE, BRAWLEY, KY 92227 jensen@engineeredbyjensen.com (951) 446-5500

© Hirschfeld Benham Steinhilber Grosso Beaton Ellis Stokes ASSPH Assn

7A C-101 **ALTERNATIVE - FOR REFERENCE ONLY**
NO SCALE

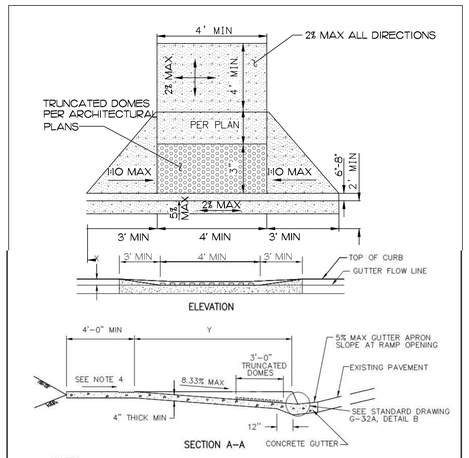


1. PRECAST GRADE RING 3"x18" MAXIMUM, ASTM C-478.
2. PRECAST CONE PER ASTM C-478. HEIGHT – NOT LESS THAN 3.0". VERTICAL SIDE SHALL BE ON THE UPSTREAM SIDE.
3. PRECAST MANHOLE SECTION PER ASTM C-478
4. 24" DIAMETER INFLOW PROTECTOR COVER – FRW OR EQUAL.
5. CONCRETE COLLAR 10" x 10"
6. CAST IRON MANHOLE FRAME & COVER. SEE SDRSD M-3. CAULK SPACE BETWEEN FRAME & OUTER COVER PIECE FOR WATER TIGHT SEAL.
7. CLASS "C" MORTAR
8. ROPE MYSTIK SEALANT. USE KWIKSET BRAND "KWIKSEAL" 3/4" OR EQUIVALENT.
9. MANHOLE ADAPTER PER SECTION 208-6 OF THE STANDARD SPECIFICATIONS.
10. CHANNEL DEPTH = I.D. OF PIPE. CHANNELS TO BE "U" SHAPED. ALL CHANNEL BOTTOMS TO HAVE RADIUS OF PIPE.
11. 6" STRIP OF GREEN NONMETALLIC DETECTION TAPE.
12. 3/4" GRADED CRUSHED ROCK BEDDING. 12" MIN. THICKNESS EXTENDED 2' BEYOND CONC. MANHOLE BASE.
13. PAY LIMITS FOR ADDITIONAL 3/4" GRADED CRUSHED ROCK BEDDING WHEN REQUIRED BY FIELD ENGINEER.
14. PIPE BEDDING PER ESCONDIDO STD DWG G-2-E.
15. 36" OUTER LID SHALL HAVE NEOPRENE GASKET.

APPROVED:	DATE: 4-5-2014	CITY OF ESCONDIDO	SCALE: NOT TO SCALE
UTILITY ENGINEER		UTILITY DEPARTMENT	
REVISED	APPROVED	SEWER MANHOLE	STANDARD DRAWING NO. S-1-E

9 C-101 **SEWER SHALLOW MANHOLE**
NO SCALE

7B C-101 **ALTERNATIVE - FOR REFERENCE ONLY**
NO SCALE



NOTES:
1. SEE STANDARD DRAWING G-32A FOR GENERAL NOTES.
2. ~~TYPE A-1 IS A DESIGNATION FOR RAMP AT CURB RETURN.~~
3. ~~TYPE B-1 IS A DESIGNATION FOR RAMP AT STRAIGHT CURB (SHOWN ABOVE).~~
4. LANDING CROSS SLOPE SHALL BE 2.0% MAX IN BOTH DIRECTIONS.
5. FOR TRUNCATED DOMES DETAIL, SEE ARCHITECTURAL PLANS
6. SEE STANDARD DRAWING G-32B FOR X, Y, AND Z* DETAILS.

Revision	By	Approved	Date
ORIGINAL		BAHMANIAN	02/95
UPDATE		D. DAVIES	12/04
REVISED		T. STANTON	04/06
UPDATED	MR	MR/CV	03/12
UPDATED	CV	CV	12/15

SAN DIEGO REGIONAL STANDARD DRAWING
CURB RAMP - TYPES A-1 AND B-1 (FOR EXISTING SIDEWALK)
MODIFIED

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
Chairperson R.C.E. 19246 Date
DRAWING NUMBER G-28

10 C-101 **TRUNCATED DOMES**
NO SCALE

DEMOLITION NOTES

I. THE GENERAL CONTRACTOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION WASTE MANAGEMENT PLAN. DEMOLITION AND CONSTRUCTION WASTE SHALL BE QUANTIFIED AND TRACKED. MATERIALS REMOVED AS PART OF ASBESTOS AND HAZARDOUS MATERIAL REMEDIATION ARE EXCLUDED FROM THIS REQUIREMENT.

2. REFER TO PRECISE GRADING PLAN, SHEETS FOR LOCATIONS OF SAWCUT AND MATCH OF EXISTING IMPROVEMENTS FLUSH.

3. COORDINATE WITH PALOMAR COLLEGE REPRESENTATIVE FOR THE DISCONNECT OF ALL UTILITIES TO EXISTING STRUCTURES. CUT, CAP, AND DISCONNECT IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND SERVING UTILITY COMPANY PROCEDURES.

4. CONTRACTOR SHALL DISPOSE OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL RETURN ANY AND ALL SALVAGED PROPERTY REMOVED FROM SITE TO PALOMAR COLLEGE.

5. CONTRACTOR SHALL COORDINATE ALL UTILITY REMOVALS AND REALIGNMENTS TO PROVIDE CONTINUOUS SERVICE TO ALL BUILDINGS TO REMAIN. CONTRACTOR SHALL COORDINATE WITH PALOMAR COLLEGE MAINTENANCE & OPERATION PERSONNEL. CONTRACTOR SHALL PROVIDE A WRITTEN PLAN FOR UTILITY RELOCATION & DEMOLITION TO THE PROJECT PALOMAR COLLEGE REPRESENTATIVE FOR APPROVAL 20 WORKING DAYS IN ADVANCE OF SITE DEMOLITION.

6. CONTRACTOR SHALL PROTECT THE EXISTING WATER MAINS IN PLACE. COORDINATE WITH PALOMAR COLLEGE REPRESENTATIVE.

7. CONTRACTOR SHALL PROTECT EXISTING ELECTRICAL & COMMUNICATION LINES IN PLACE. SEE ELECTRICAL PLANS, UNLESS OTHERWISE NOTED.

8. ENGINEER OF WORK IS NOT RESPONSIBLE FOR JOB SAFETY.

9. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY HORIZONTAL AND VERTICAL ALIGNMENT OF ALL EXISTING AND PROPOSED IMPROVEMENTS TO BE MET BY WORK TO BE DONE PRIOR TO CONSTRUCTION. IN THE EVENT THAT THE ALIGNMENT IS IN CONFLICT WITH THE WORK TO BE DONE, CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE UNIVERSITY'S REPRESENTATIVE OF THE CONFLICT

IO. THE LOCATION OF EXISTING UNDERGROUND FACILITIES ARE INDICATED ON THE PLANS AS A RESULT OF A SEARCH OF THE AVAILABLE RECORDS. LOCATIONS HAVE NOT BEEN FIELD VERIFIED. CONTRACTOR IS DIRECTED TO REQUEST UTILITY MARK OUT AND TO EXCAVATE AND VERIFY LOCATIONS PRIOR TO EXCAVATIONS. ENGINEER OF WORK DOES NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF ANY UTILITY LOCATIONS INDICATED ON THE PLAN.

II. CONTRACTOR SHALL PERFORM REMEDIAL GRADING OF THE SITE IN ACCORDANCE WITH THE DIRECTION OF THE SUPERVISING GEOTECHNICAL ENGINEER.

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
MATTHEW P. KURTZ R.C.E. 79546 12-05-18
EXPIRES 09-30-20

REGISTERED PROFESSIONAL ENGINEER MATTHEW P. KURTZ No. 79546 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects
5015021-100
3546Concours Street /Ontario ,CA 91764
T 909 989 9979 / www.hmcarchitects.com

LICENSED ARCHITECT BRADLEY E. GLASSICK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

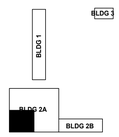
ISSUE:

No.	Issued	Date
	DSA SUBMITTAL	10.04.2018
	DSA BACKCKECK	12.11.2018

No.	Issued	Date

Keynotes:

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
DETAIL SHEET

DSA APPROVED SET

Date: 10.05.2018 | Client Project No: ---

Sheet:

C-101

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S:\SNIPES\DRAWS Palomar_Escondido_Education_Center_HVAC Lab\PWC\Grading Plans\G32A&B-CURB-RAMPS.dwg
Robert Wolkowicz Jr. Jan 04, 2018 10:16am by rwolkowicz

If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

EXISTING BUILDING TO REMAIN

20' WATER EASEMENT M-34-13

DEMOLITION FOR NEW ELECTRICAL EQUIPMENT

MIDWAY DRIVE

DEMOLITION NOTES

- (1) SAWCUT.
- (2) EXISTING A.C. PAVEMENT TO BE REMOVED.
- (3) EXISTING LANDSCAPE TO BE REMOVED. CONTRACTOR TO PROTECT EXISTING IRRIGATION LINES, TREES, AND LANDSCAPE FEATURES. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- (4) EXISTING CONCRETE TO BE REMOVED.
- (5) EX. TREE TO BE REMOVED.

- [A] EXISTING A.C. PAVEMENT TO REMAIN. PROTECT IN PLACE.
- [B] EXISTING CONCRETE PAVEMENT TO REMAIN. PROTECT IN PLACE.
- [C] EXISTING CURB TO REMAIN. PROTECT IN PLACE.
- [D] EXISTING BUILDING TO REMAIN. PROTECT IN PLACE.
- [E] EXISTING LANDSCAPE TO REMAIN. PROTECT IN PLACE.
- [F] EXISTING WATER METER TO REMAIN. PROTECT IN PLACE.
- [G] EXISTING FIRE HYDRANT TO REMAIN. PROTECT IN PLACE.
- [H] EXISTING IRRIGATION LINE TO REMAIN. PROTECT IN PLACE.
- [J] APPROXIMATE LOCATION OF EXISTING ELECTRICAL CONDUITS. CONDUITS TO REMAIN AND PROTECT IN PLACE. CONTRACTOR TO SURVEY THE EXISTING TRENCH PRIOR TO EXCAVATION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- [K] EXISTING TREE TO REMAIN. PROTECT IN PLACE.

CAUTION:
LOCATION OF EXISTING UTILITIES ON THIS PLAN ARE APPROXIMATE & PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

NOTE:
EXISTING SUBSURFACE UTILITIES SHALL REMAIN IN PLACE, PROTECTED, & IN SERVICE. ANY SERVICE DISRUPTION MUST BE COORDINATED WITH PALOMAR COLLEGE MINIMUM 5 WORKING DAYS IN ADVANCE.

SCALE: 1"=20'

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
MATTHEW P. KURTZ R.C.E. 79546 12-05-18
EXPIRES 09-30-20

REGISTERED PROFESSIONAL ENGINEER MATTHEW P. KURTZ No. 79546 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

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Robert Kirby December 06, 2018 8:44am by dsmith

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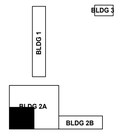
LICENSED ARCHITECT BRADLEY E GLASSTICK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCKECK	12.11.2018			

Keynotes:

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
EXISTING CONDITION PLAN

DSA APPROVED SET

Date: 10.05.2018 **Client Project No:** ---

Sheet:
C-200

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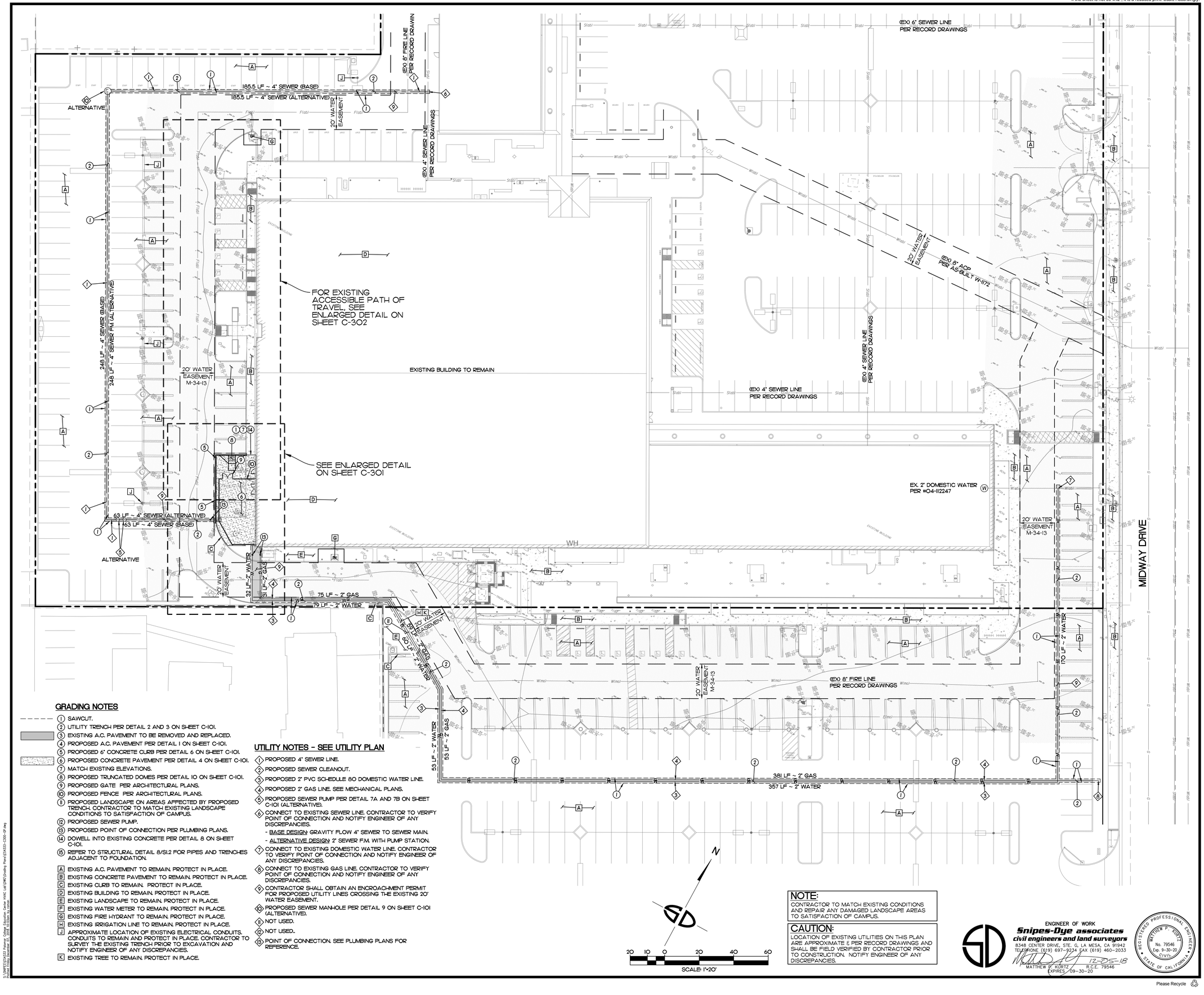

GRADING NOTES

1. SAWCUT.
2. UTILITY TRENCH PER DETAIL 2 AND 3 ON SHEET C-101.
3. EXISTING A.C. PAVEMENT TO BE REMOVED AND REPLACED.
4. PROPOSED A.C. PAVEMENT PER DETAIL 1 ON SHEET C-101.
5. PROPOSED 6" CONCRETE CURB PER DETAIL 6 ON SHEET C-101.
6. PROPOSED CONCRETE PAVEMENT PER DETAIL 4 ON SHEET C-101.
7. MATCH EXISTING ELEVATIONS.
8. PROPOSED TRUNCATED DOMES PER DETAIL 10 ON SHEET C-101.
9. PROPOSED GATE PER ARCHITECTURAL PLANS.
10. PROPOSED FENCE PER ARCHITECTURAL PLANS.
11. PROPOSED LANDSCAPE ON AREAS AFFECTED BY PROPOSED TRENCH. CONTRACTOR TO MATCH EXISTING LANDSCAPE CONDITIONS TO SATISFACTION OF CAMPUS.
12. PROPOSED SEWER PUMP.
13. PROPOSED POINT OF CONNECTION PER PLUMBING PLANS.
14. DOWELL INTO EXISTING CONCRETE PER DETAIL 8 ON SHEET C-101.
15. REFER TO STRUCTURAL DETAIL 8/S1.2 FOR PIPES AND TRENCHES ADJACENT TO FOUNDATION.

- A. EXISTING A.C. PAVEMENT TO REMAIN. PROTECT IN PLACE.
- B. EXISTING CONCRETE PAVEMENT TO REMAIN. PROTECT IN PLACE.
- C. EXISTING CURB TO REMAIN. PROTECT IN PLACE.
- D. EXISTING BUILDING TO REMAIN. PROTECT IN PLACE.
- E. EXISTING LANDSCAPE TO REMAIN. PROTECT IN PLACE.
- F. EXISTING WATER METER TO REMAIN. PROTECT IN PLACE.
- G. EXISTING FIRE HYDRANT TO REMAIN. PROTECT IN PLACE.
- H. EXISTING IRRIGATION LINE TO REMAIN. PROTECT IN PLACE.
- J. APPROXIMATE LOCATION OF EXISTING ELECTRICAL CONDUITS. CONDUITS TO REMAIN AND PROTECT IN PLACE. CONTRACTOR TO SURVEY THE EXISTING TRENCH PRIOR TO EXCAVATION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- K. EXISTING TREE TO REMAIN. PROTECT IN PLACE.

UTILITY NOTES - SEE UTILITY PLAN

1. PROPOSED 4" SEWER LINE.
2. PROPOSED SEWER CLEANOUT.
3. PROPOSED 2" PVC SCHEDULE 80 DOMESTIC WATER LINE.
4. PROPOSED 2" GAS LINE. SEE MECHANICAL PLANS.
5. PROPOSED SEWER PUMP PER DETAIL 7A AND 7B ON SHEET C-101 (ALTERNATIVE).
6. CONNECT TO EXISTING SEWER LINE. CONTRACTOR TO VERIFY POINT OF CONNECTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
   - BASE DESIGN: GRAVITY FLOW 4" SEWER TO SEWER MAIN.
   - ALTERNATIVE DESIGN: 2" SEWER F.M. WITH PUMP STATION.
7. CONNECT TO EXISTING DOMESTIC WATER LINE. CONTRACTOR TO VERIFY POINT OF CONNECTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. CONNECT TO EXISTING GAS LINE. CONTRACTOR TO VERIFY POINT OF CONNECTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
9. CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FOR PROPOSED UTILITY LINES CROSSING THE EXISTING 20' WATER EASEMENT.
10. PROPOSED SEWER MANHOLE PER DETAIL 9 ON SHEET C-101 (ALTERNATIVE).
11. NOT USED.
12. NOT USED.
13. POINT OF CONNECTION. SEE PLUMBING PLANS FOR REFERENCE.

NOTE:
CONTRACTOR TO MATCH EXISTING CONDITIONS AND REPAIR ANY DAMAGED LANDSCAPE AREAS TO SATISFACTION OF CAMPUS.

CAUTION:
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ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
MATTHEW P. KURTZ R.C.E. 79546
EXPIRES: 09-30-20
12-05-18

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LICENSED ARCHITECT BRADLEY E GLASSTICK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

ISSUE:

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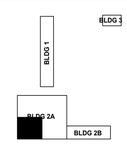
	DSA BACKCKECK	12.11.2018			

Keynotes:

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
GRADING PLAN

DSA APPROVED SET

Date: 10.05.2018 | Client Project No: ---

Sheet:
C-300

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Robert Kirby Snipes-Dye 12/5/2018 8:58am by rsnipes

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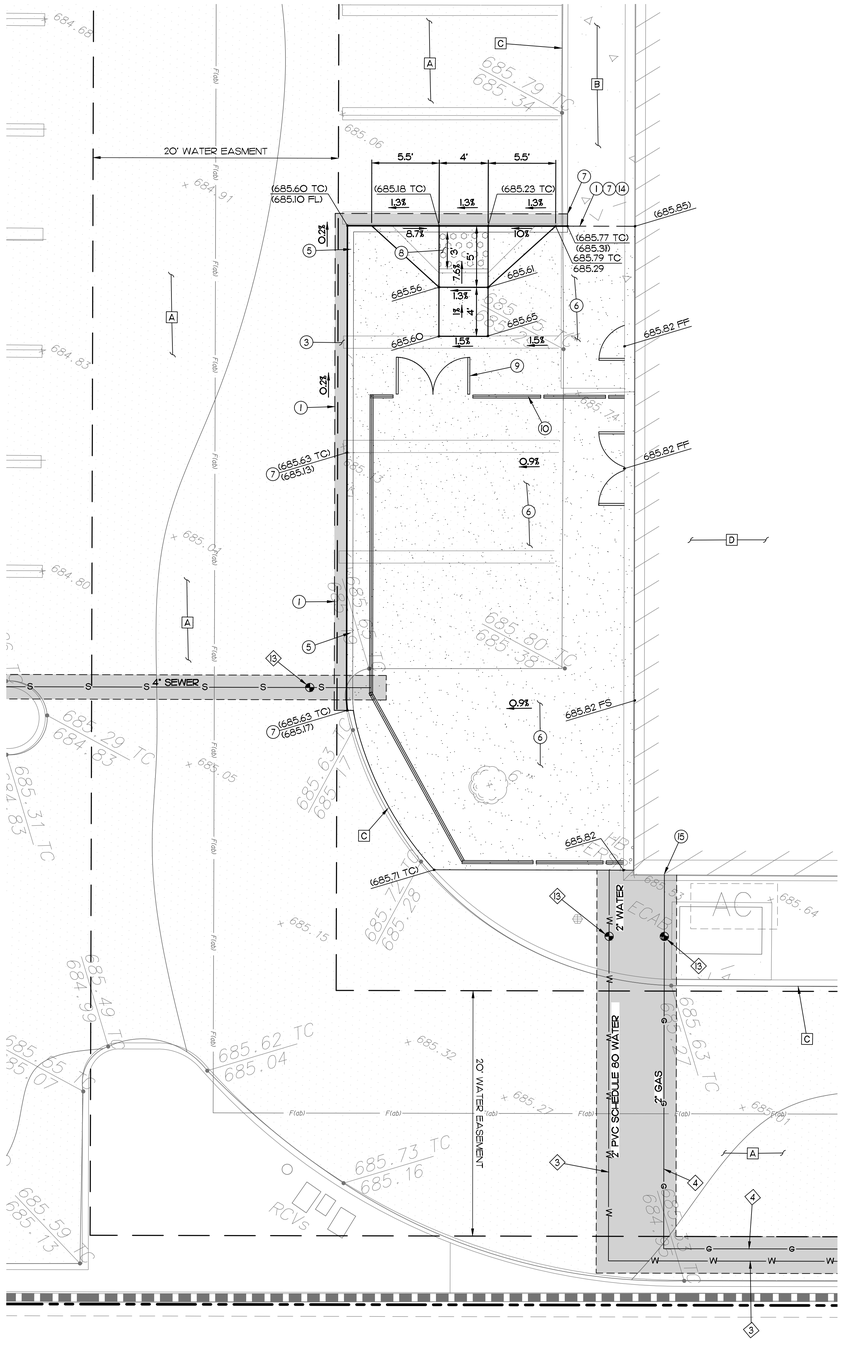

GRADING NOTES

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11. NOT USED.
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NOTE:
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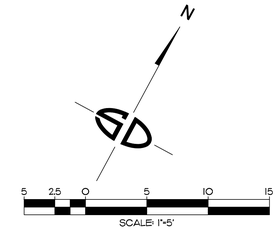

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
MATTHEW P. KURTZ
R.C.E. 79546
EXPIRES 09-30-20
12-05-18

REGISTERED PROFESSIONAL ENGINEER · MATTHEW P. KURTZ · No. 79546 · Exp. 9-30-20 · CIVIL · STATE OF CALIFORNIA

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LICENSED ARCHITECT · BRADLEY E GLASSTICK · NO. C-32437 · REN. 02-28-19 · STATE OF CALIFORNIA

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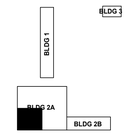
No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCKECK	12.11.2018			

Keynotes:

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
ENLARGED GRADING PLAN

DSA APPROVED SET

Date: 10.05.2018 | **Client Project No:** ---

Sheet:
C-301

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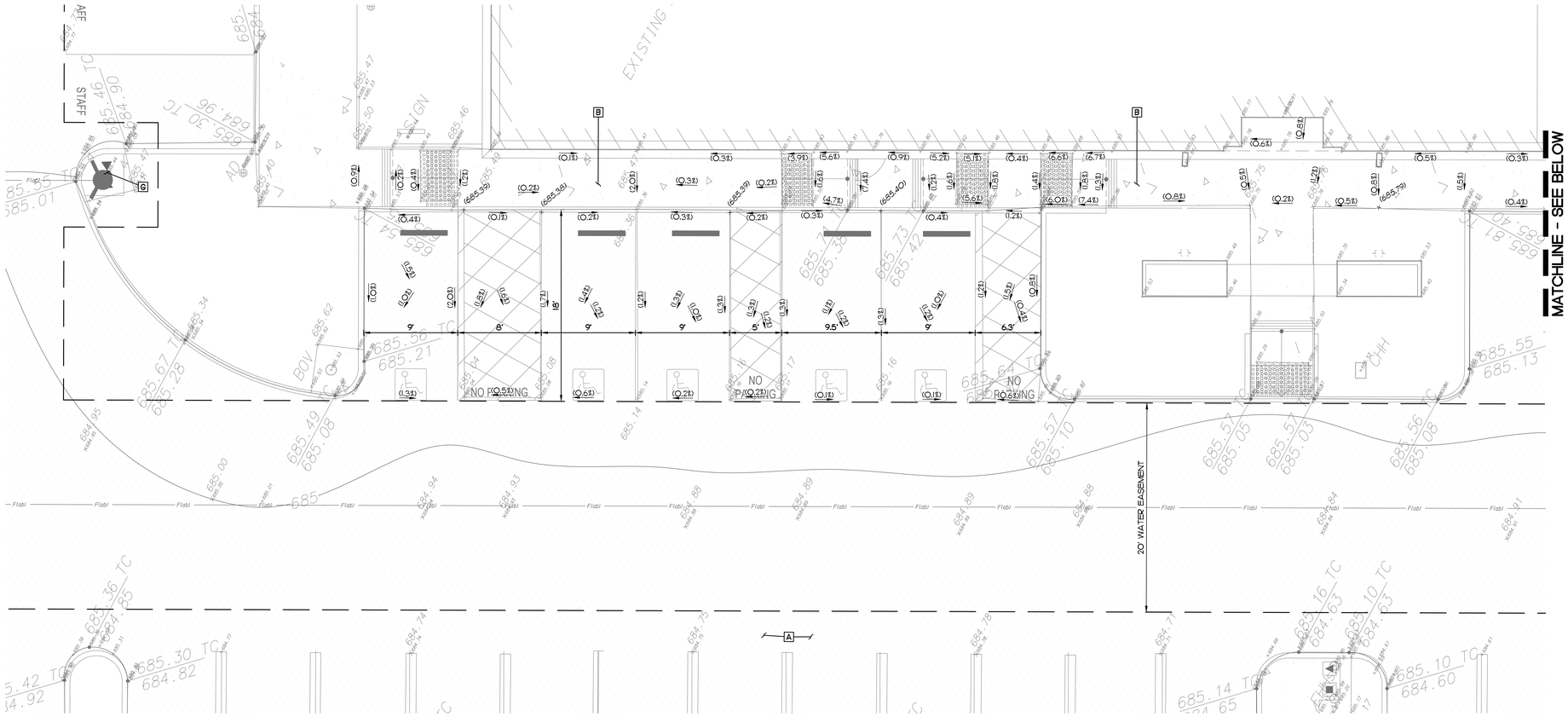

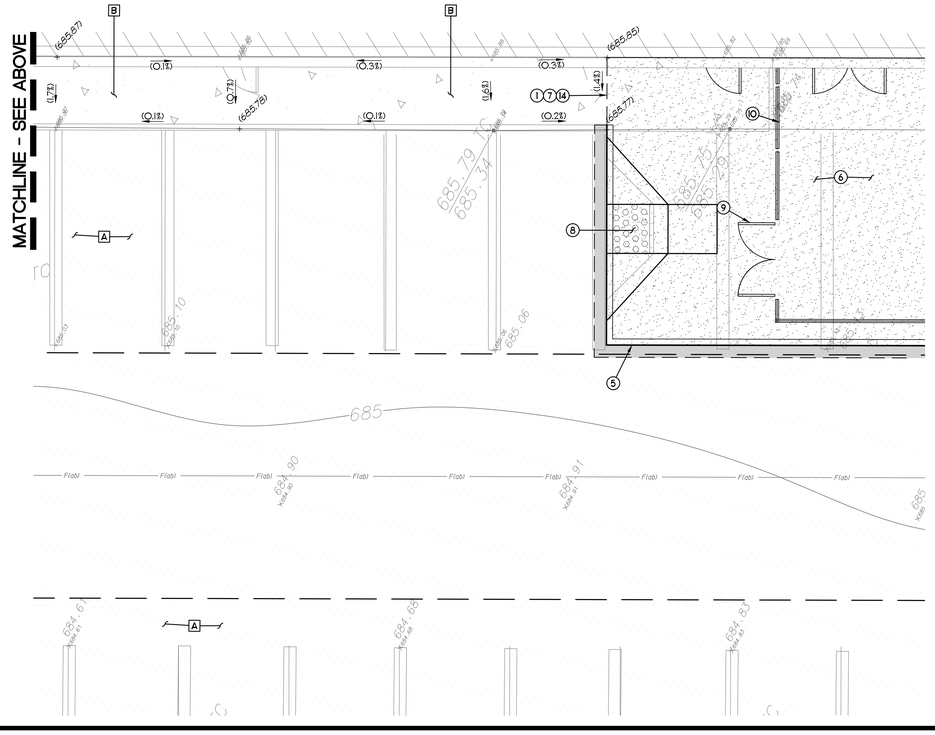

GRADING NOTES

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- K. EXISTING TREE TO REMAIN. PROTECT IN PLACE.

LEGEND:

(0.1%) EXISTING GRADE

5 2.5 0 5 10 15
SCALE: 1"=5'

NOTE:
CONTRACTOR TO MATCH EXISTING CONDITIONS AND REPAIR ANY DAMAGED LANDSCAPE AREAS TO SATISFACTION OF CAMPUS.

CAUTION:
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EXPIRES: 09-30-20
12-05-18

REGISTERED PROFESSIONAL ENGINEER · MATTHEW P. KURTZ · No. 79546 Exp. 9-30-20 CIVIL · STATE OF CALIFORNIA

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LICENSED ARCHITECT · BRADLEY E GLASSTICK · REN. 02-28-19 · STATE OF CALIFORNIA · NO. C-32437

ISSUE:

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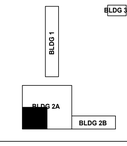
Keynotes:

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
ENLARGED PATH OF TRAVEL DETAIL (EXISTING CONDITIONS)

DSA APPROVED SET

Date: 10.05.2018 | Client Project No: ---

Sheet:

C-302

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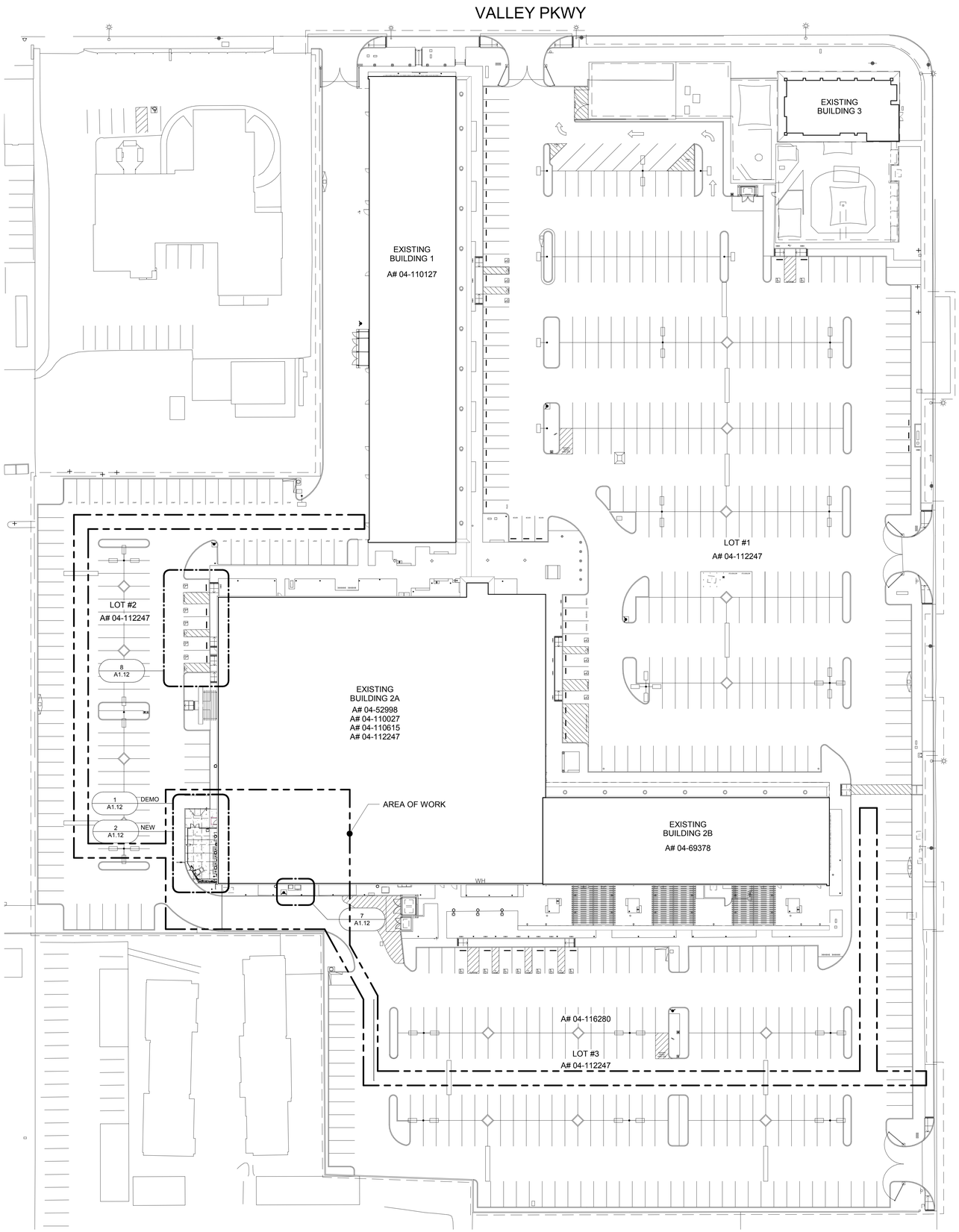

PARKING COUNT - WITHIN SCOPE OF WORK

LOT 2	COUNT
TOTAL	123
ACCESSIBLE PARKING STALLS	5
VAN ACCESSIBLE	1

OVERALL CAMPUS SITE PLAN

1
1/32" = 1'-0"

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REG. 02-28-19
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ISSUE:

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	DSA BACKCHECK	12.11.2018			

Keynotes:

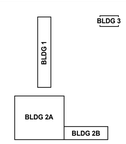
Legend:

AREA OF WORK/PROJECT LIMITS

Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS.
2. REFER TO CIVIL DRAWINGS FOR PAVING, GRADING, AND UTILITY INFORMATION.
3. REFER TO MEP DRAWINGS FOR UTILITY INFORMATION.
4. CONTRACTOR IS RESPONSIBLE FOR REPAIR/REPLACEMENT OF ALL HARDSCAPE/PLANTING OUTSIDE OF LIMIT OF WORK LINE FOR CONNECTION OF UNDERGROUND UTILITIES.
5. NEW PAVING, HARDSCAPE, LANDSCAPE, STRIPING, ETC. TO BE ADDED IN AREAS OF WORK AFTER TRENCHING AND UTILITY LINES HAVE BEEN INSTALLED TO MATCH EXISTING CONDITIONS.

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

OVERALL SITE PLAN

DSA APPROVED SET

Date: 10.04.2018 **Client Project No:** 5015021-100

Sheet:

A1.11

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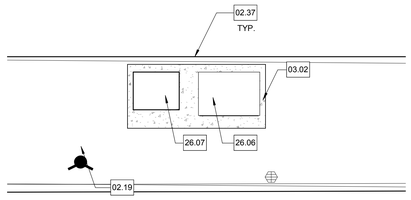
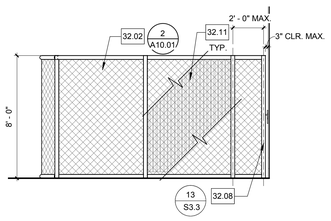
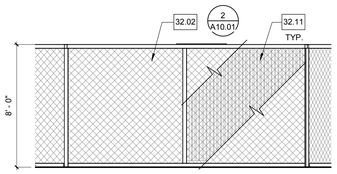


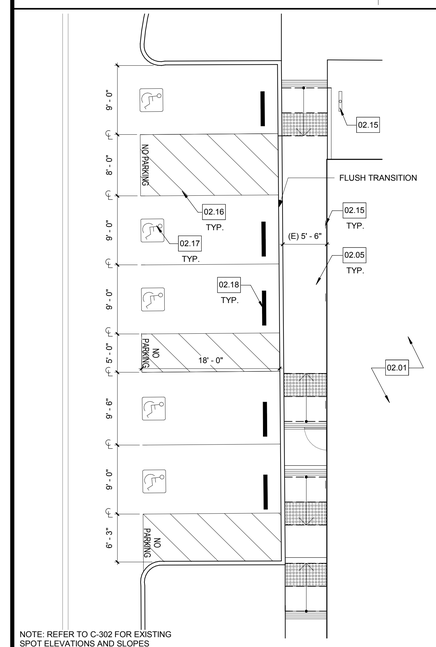
SWITCHBOARD & TRANSFORMER ENLARGED PLAN — 7
1/4" = 1'-0"



CHAINLINK FENCE - SOUTH ELEVATION — 6
1/4" = 1'-0"

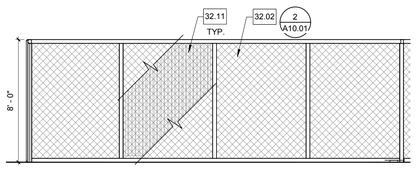


CHAINLINK FENCE - WEST ELEVATION — 5
1/4" = 1'-0"

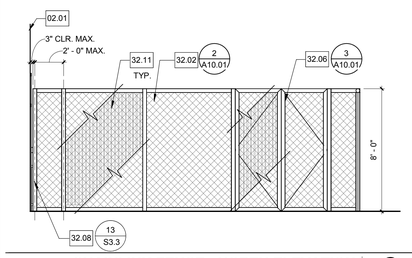


NOTE: REFER TO C-302 FOR EXISTING SPOT ELEVATIONS AND SLOPES

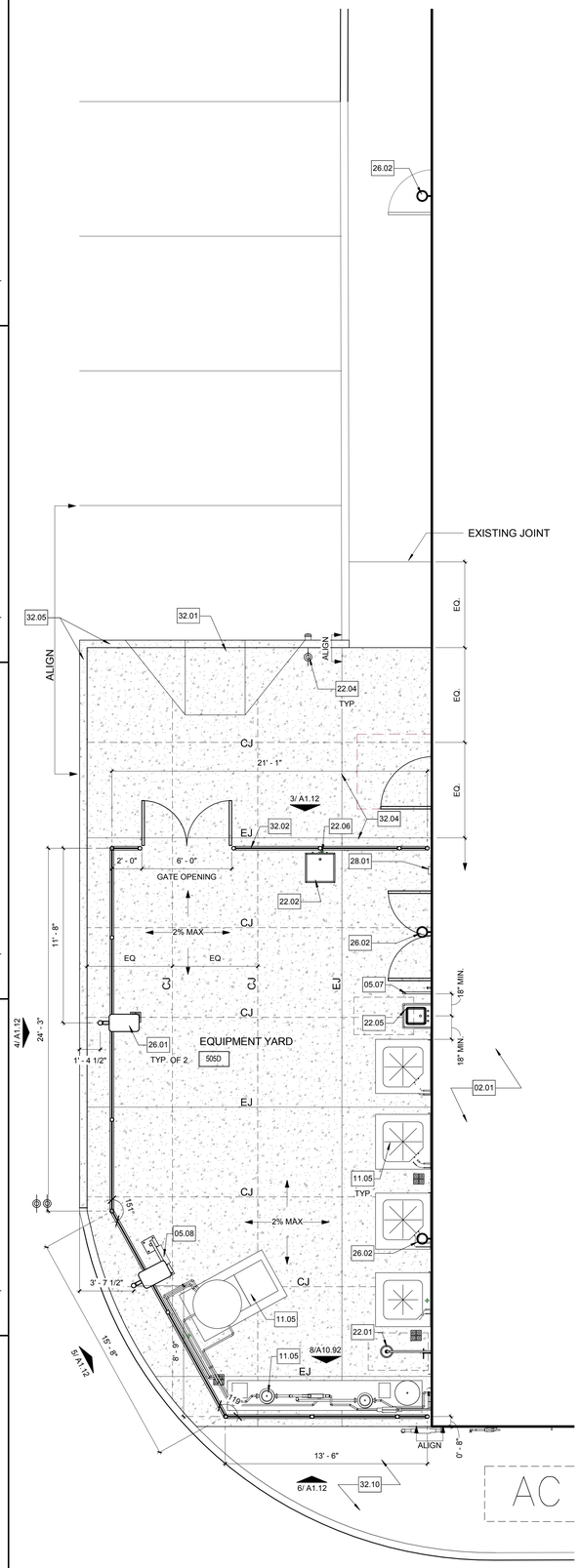
(E) ACCESSIBLE PARKING — 8
1/8" = 1'-0"



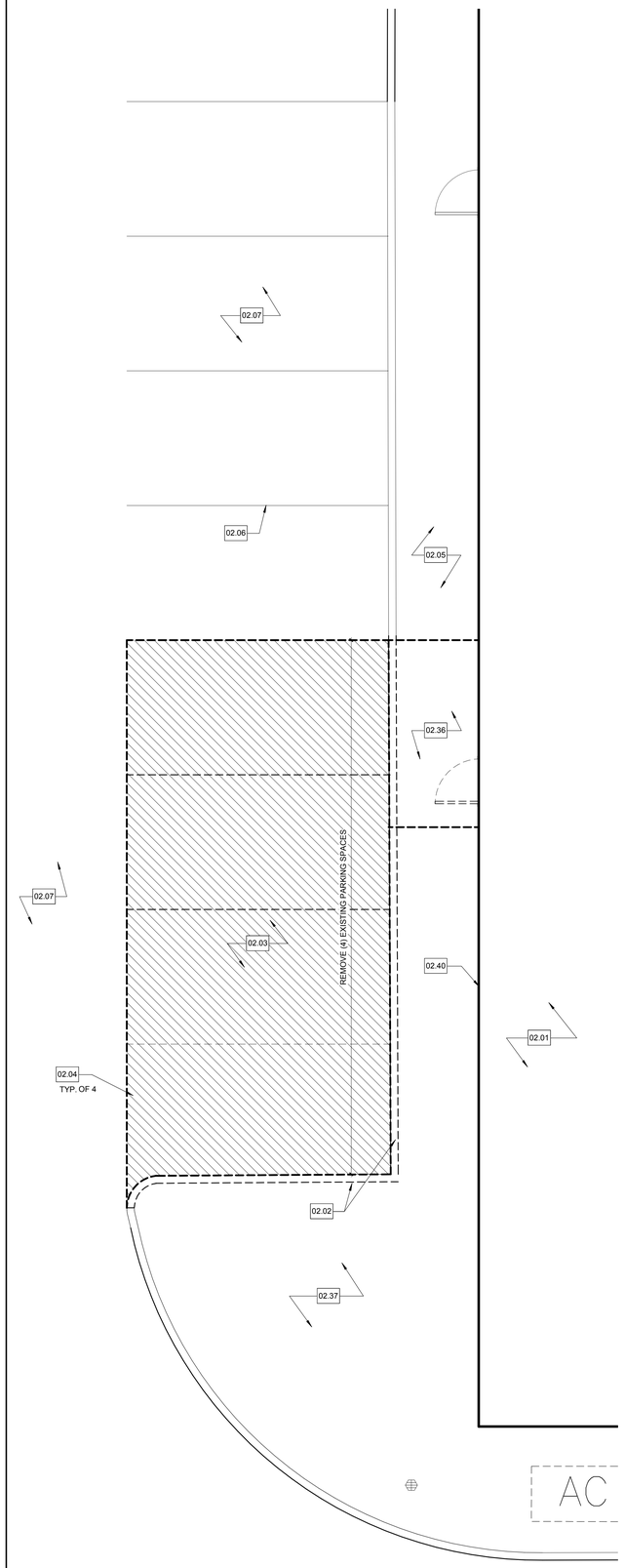
CHAINLINK FENCE - WEST ELEVATION — 4
1/4" = 1'-0"



CHAINLINK FENCE - NORTH ELEVATION — 3
1/4" = 1'-0"



SITE PLAN - NEW CONSTRUCTION — 2
1/4" = 1'-0"



SITE PLAN - DEMOLITION — 1
1/4" = 1'-0"

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ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Keynotes:

02.01	(E) BUILDING
02.02	REMOVE (E) CONCRETE CURB
02.03	REMOVE (E) AC PAVING
02.04	REMOVE (E) PARKING SPACES
02.05	(E) CONCRETE WALKWAY TO REMAIN
02.06	(E) PARKING STRIPING TO REMAIN
02.07	(E) AC PAVING TO REMAIN
02.15	(E) ACCESSIBLE PARKING SIGN
02.16	(E) ACCESSIBLE LOADING STRIPING WITH THE WORDS "NO PARKING"
02.17	(E) ACCESSIBLE PARKING PAVEMENT SYMBOL
02.18	(E) CONCRETE WHEEL STOP
02.19	(E) FIRE HYDRANT
02.36	REMOVE (E) CONCRETE PAVING
02.37	(E) LANDSCAPE TO BE REMOVED
02.40	REMOVE PORTION OF (E) PLASTER FINISH FOR NEW WALL PENETRATIONS AND OPENINGS.
03.02	NEW CONCRETE PAD FOR TRANSFORMER & SWITCHBOARD, COORDINATE SIZE OF PAD WITH EQUIPMENT SIZE - REFER TO ELECTRICAL DWGS. SEE STRUCTURAL DWGS. 2/S3.1.
05.07	GUARDRAIL AT SINK - 10/A10.92
05.08	ELECTRICAL PANEL MOUNTED ON UNISTRUT & HSS FRAME - 11/A10.92
11.05	EDUCATIONAL TRAINING EQUIPMENT - REFER TO MECHANICAL DWGS. FOR ANCHORING INFORMATION REFER TO STRUCTURAL EQUIPMENT SCHEDULE ON SHEET S2.12
22.01	EYE WASH STATION/ EMERGENCY SHOWER - REFER TO PLUMBING DWGS.
22.02	UTILITY SINK - REFER TO PLUMBING DWGS.
22.04	CLEAN OUT, FLUSH WITH SLAB - REFER TO PLUMBING DWGS.
22.05	ACCESSIBLE SINK - SEE 21/A10.91 FOR CLEARANCES - REFER TO PLUMBING DWGS. FOR MORE INFORMATION
22.06	EXPOSED VENT PIPE TO BE PAINTED SAME COLOR AS CHAINLINK FENCE
26.01	NEW LIGHT POLE - REFER TO ELECTRICAL DWGS. - 2/E2.2
26.02	NEW LIGHT FIXTURE - REFER TO ELECTRICAL DWGS. 1/E2.2
26.06	NEW TRANSFORMER - REFER TO ELECTRICAL DWGS. FOR ANCHORING REFER TO STRUCTURAL EQUIPMENT SCHEDULE ON S2.12.
26.07	NEW SWITCHBOARD - REFER TO ELECTRICAL DWGS. FOR ANCHORING REFER TO STRUCTURAL EQUIPMENT SCHEDULE ON S2.12.
28.01	CARD READER
32.01	CURB CUT - REFER TO CIVIL DWGS.
32.02	CHAINLINK FENCE
32.04	FLUSH TRANSITION
32.05	CONCRETE CURB
32.06	CHAINLINK GATE
32.08	SEE STRUCTURAL DWGS. FOR NEW FOOTING AT FENCE POST ADJACENT TO BUILDING FOOTING
32.10	RECONFIGURE IRRIGATION/LANDSCAPE TRANSITION
32.11	CHAINLINK FENCE TO HAVE WIND BREAK SLATS FOR SCREENING

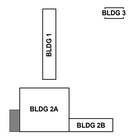
Legend:

- ASPHALT TO BE DEMOLISHED
- CONCRETE PAVING, REFER TO CIVIL
- EJ — EXPANSION JOINT, SEE 11 / A10.01
- CJ — CONTROL JOINT, SEE 9 / A10.01

Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS
2. ALL PAVING, VEGETATION,UTILITIES, ETC. OUTSIDE OF SCOPE OF DEMO BOUNDARY SHALL BE PROTECTED IN PLACE.
3. REFER TO CIVIL AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
4. NEW PAVING, HARDSCAPE, LANDSCAPE, STRIPING, ETC. TO BE ADDED IN AREAS OF WORK AFTER TRENCHING AND UTILITY LINES HAVE BEEN INSTALLED TO MATCH EXISTING CONDITIONS.

Key Plan:



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Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

DEMOLITION AND REMODEL SITE PLAN

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

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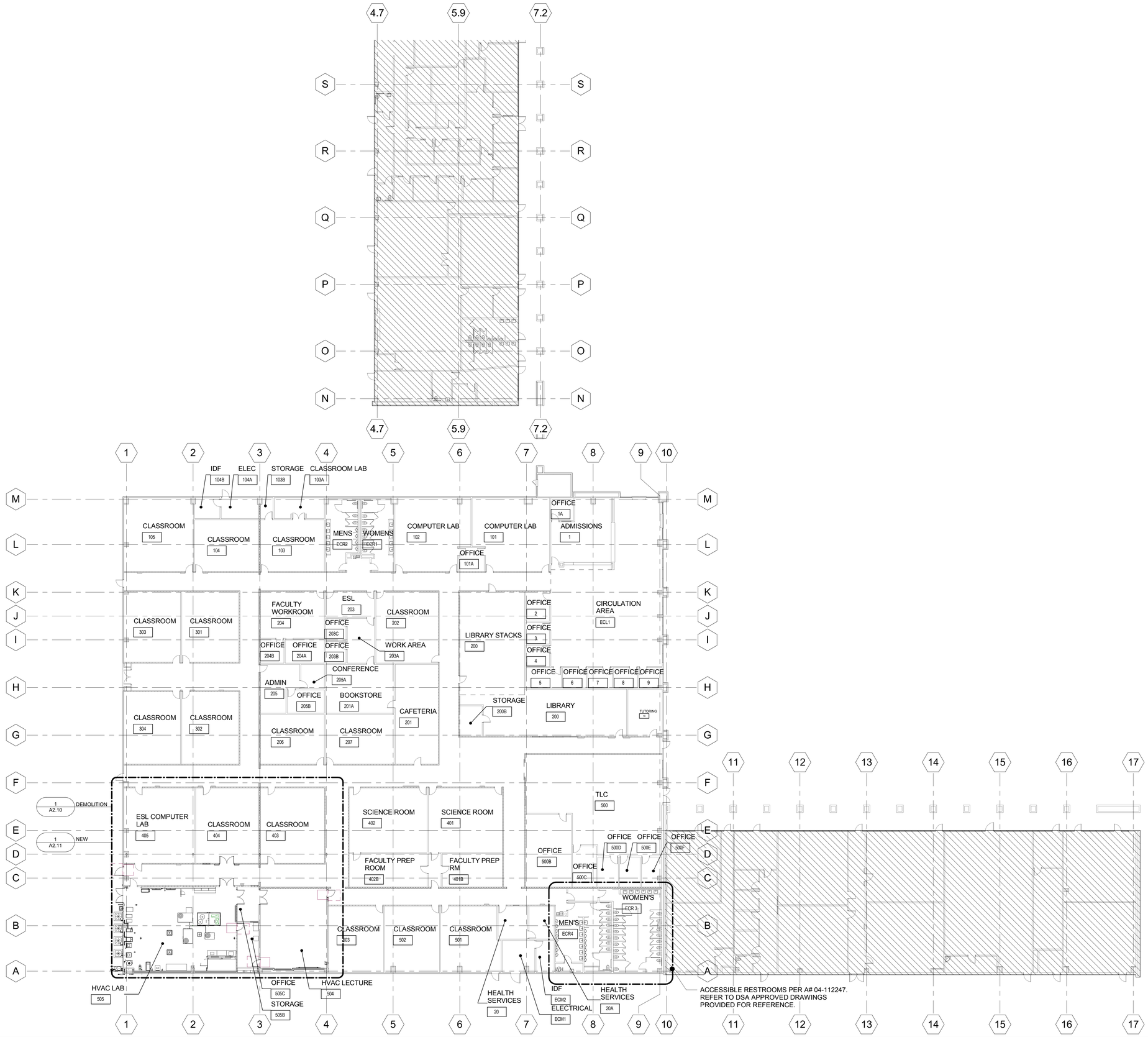

LEVEL 01 FLOOR PLAN

1
1/16" = 1'-0"

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REN. 02-28-19
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	DSA BACKCHECK	12.11.2018			

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Project:

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Sheet Title:

OVERALL FLOOR PLAN

DSA APPROVED SET

Date: 10.04.2018 **Client Project No:** 5015021-100

Sheet:

A2.00

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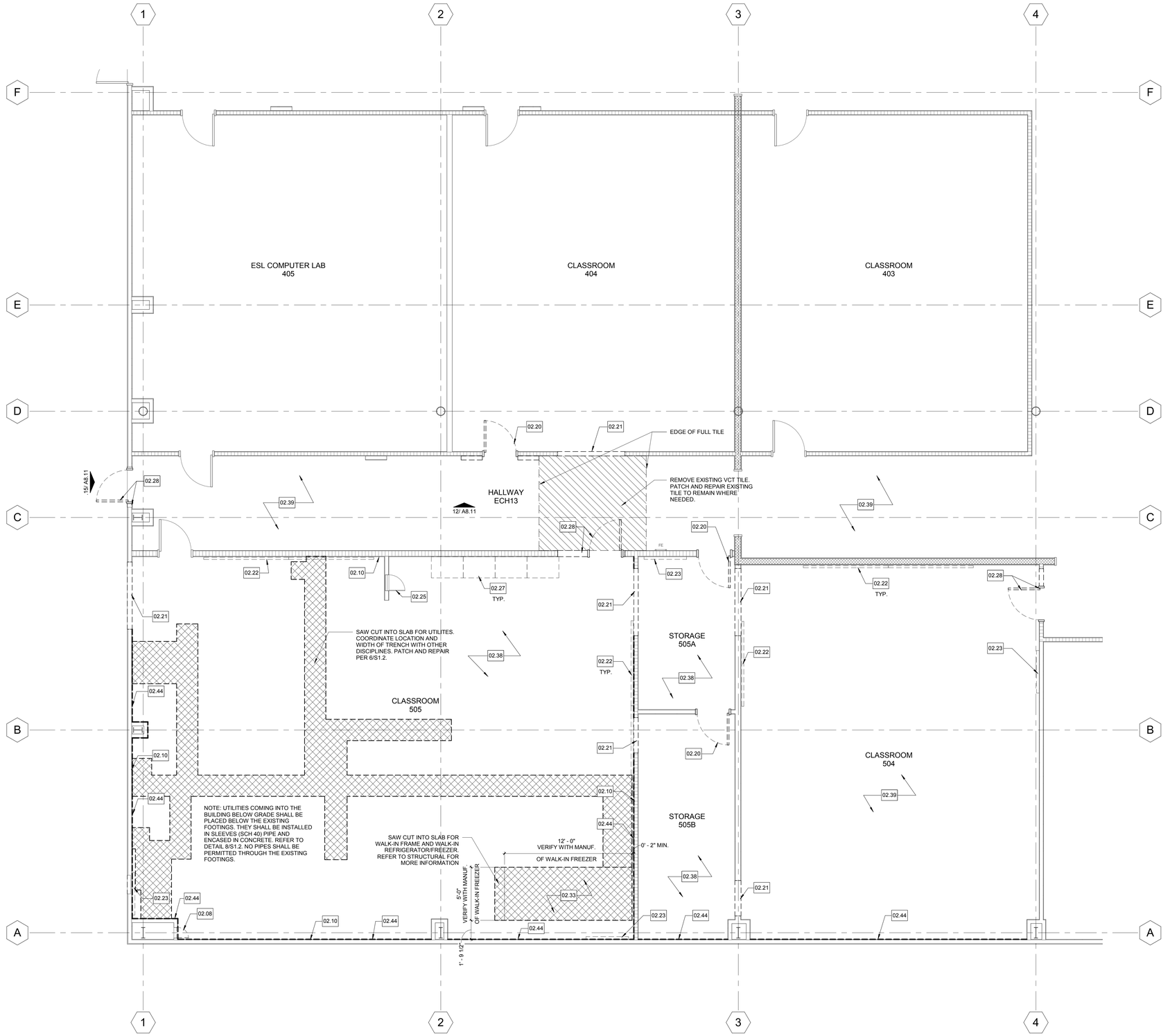

LEVEL 01 DEMOLITION PLAN

1
1/4" = 1'-0"

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Keynotes:

02.08	(E) ACCESS PANEL. REMOVE AND RELOCATE TO ALLOW FOR NEW FURRING WALL
02.10	DEMO EXISTING UTILITIES RUNNING ALONG WALL. MAINTAIN FIRE RATING AT FIRE RATED WALLS
02.20	REMOVE (E) DOOR. PATCH AND REPAIR AS NEEDED. IF (E) WALL IS RATED MAINTAIN EXISTING RATING
02.21	DEMOLISH PART OF (E) WALL FOR NEW DOOR. COORDINATE WITH NEW WORK.
02.22	REMOVE (E) MARKERBOARD. PROTECT AND STORE FOR REINSTALLATION IN NEW WORK SCOPE. DISPOSE OF EXTRA MARKERBOARDS.
02.23	REMOVE (E) TACKBOARD. PROVIDE TO COLLEGE FOR REINSTALLATION AT ALTERNATE LOCATION
02.25	PROTECT IN PLACE (E) ELECTRICAL PANEL
02.27	REMOVE (E) CASEWORK. PROVIDE TO COLLEGE TO DISPOSE OF OR REUSE
02.28	REMOVE (E) DOOR & DEMOLISH PART OF (E) WALL FOR NEW DOOR
02.33	DEMO EXISTING PORTION OF CONCRETE SLAB TO CREATE NEW SLAB DEPRESSION AT NEW WALK-IN FREEZER/REFRIDERATOR. DEMOLITION TO BE COORDINATED WITH EXISTING FOOTINGS. SIZE AND DEPTH OF DEPRESSION TO BE +/- 4 3/4" - COORDINATE WITH WALK-IN FREEZER MANUFACTURER. ADD VAPOR BARRIER PER MANUFACTURER RECOMMENDATIONS. REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION
02.38	REMOVE (E) VCT TILE
02.39	(E) VCT TILE TO REMAIN. PROTECT IN PLACE
02.44	DEMO PORTION OF EXISTING GYP. BD. AS NEEDED FOR NEW UTILITIES, CONDUITS, BACKING, ATTACHMENTS, AND OPENINGS. PATCH AND REPAIR EXISTING TO REMAIN.

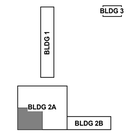
Legend:

- DEMOLISH WALL
- (E) WALL
- (E) 1-HR FIRE RATED WALL
- (E) 2-HR FIRE RATED WALL

Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS
2. ALL PAVING, VEGETATION,UTILITIES, ETC. OUTSIDE OF SCOPE OF DEMO BOUNDARY SHALL BE PROTECTED IN PLACE.
3. REFER TO CIVIL AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
4. PROTECT IN PLACE ALL EXISTING BUILDING COMPONENTS TO REMAIN
5. PENETRATIONS IN FIRE RATED WALLS TO BE FIRE CAULKED AND SEALED

Key Plan:



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Project:

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Sheet Title:

FIRST FLOOR - DEMOLITION PLAN

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

A2.10

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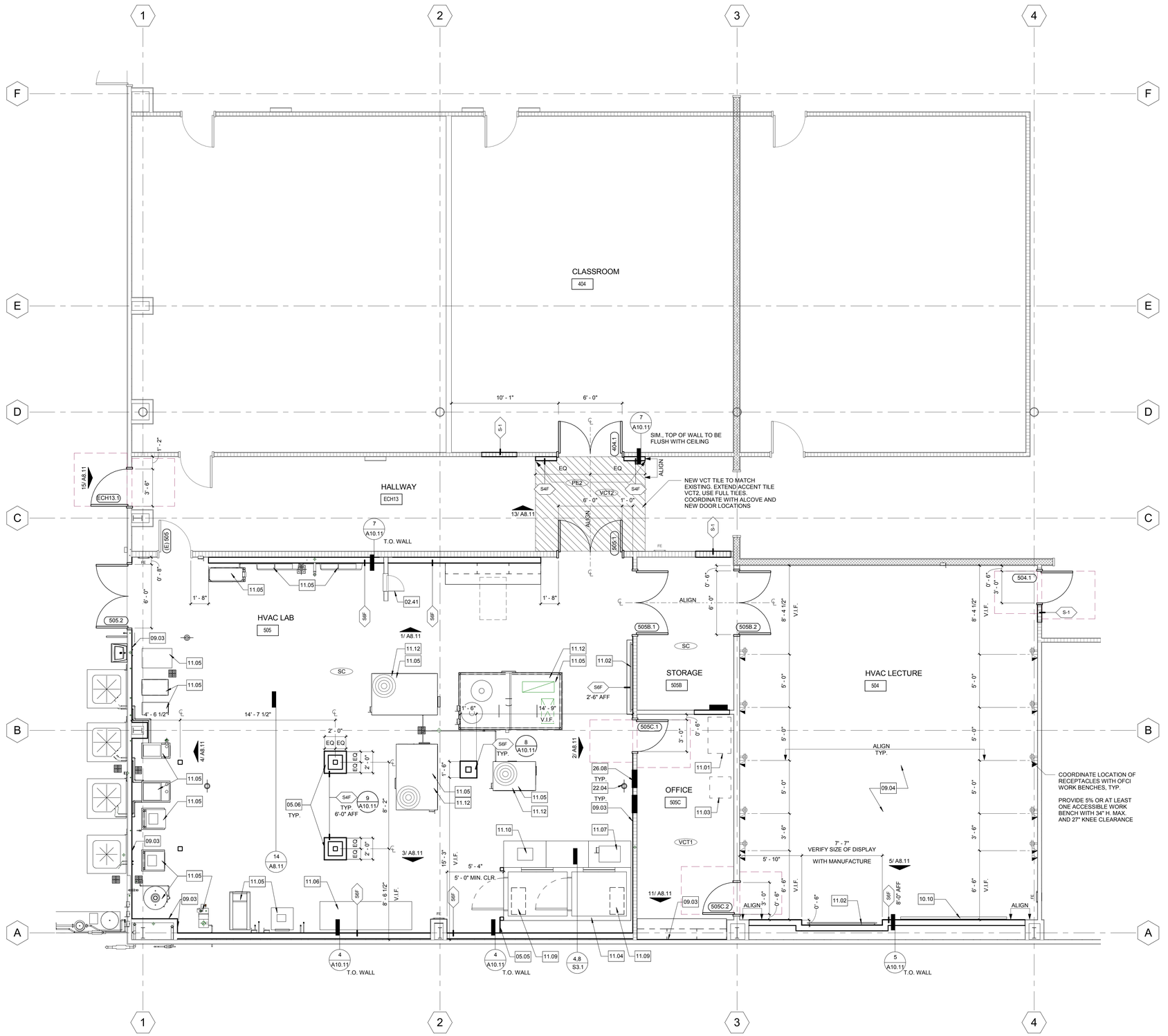

LEVEL 01 FLOOR PLAN

1 — 1/4" = 1'-0"

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No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Keynotes:

02.41	(E) ELECTRICAL PANEL
05.05	STAINLESS STEEL CLOSURE PANEL
05.06	ADD BACKING AT FURRED OUT WALLS
09.03	NEW PAINTED GYP. BD.
09.04	REPLACE ANY DAMAGED VCT TILE
10.10	MARKERBOARD - 4" MAX. PROJECTION - 4'-0" X 10'-0"
11.01	LAPTOP CART, OFOI
11.02	WALL MOUNTED FLAT PANEL DISPLAY, OFCI - 8/S3.4
11.03	EDUCATIONAL EQUIPMENT SERVER
11.04	WALK-IN FREEZER/REFRIGERATOR FOR TRAINING PURPOSES, OFCI - 14/A10.91
11.05	EDUCATIONAL TRAINING EQUIPMENT - REFER TO MECHANICAL DWGS. FOR ANCHORING INFORMATION REFER TO STRUCTURAL EQUIPMENT SCHEDULE ON SHEET S2.12
11.06	EXISTING EDUCATIONAL TRAINING EQUIPMENT
11.07	OFCI LOW TEMP. CONDENSING UNIT FOR TRAINING PURPOSES, REFER TO WALK-IN EQUIPMENT SCHEDULE CU-LT ON 17/A9.11 FOR MORE INFORMATION
11.09	OFCI EVAPORATOR COIL FOR TRAINING PURPOSES, REFER TO WALK-IN EQUIPMENT SCHEDULE EC-1 ON 17/A9.11 FOR MORE INFORMATION
11.10	OFCI MEDIUM TEMP. CONDENSING UNIT FOR TRAINING PURPOSES, REFER TO WALK-IN EQUIPMENT SCHEDULE CU-MT ON 17/A9.11 FOR MORE INFORMATION
11.12	HEAT PUMPS TO HAVE DUCTWORK BELOW UNIT AND BE SUPPORTED BY STEEL FRAME. REFER TO 1/A10.92
22.04	CLEAN OUT, FLUSH WITH SLAB - REFER TO PLUMBING DWGS.
26.08	NEW ELECTRICAL PANEL - REFER TO ELECTRICAL DWGS. DRYWALL FRAMING REQUIRED AND ALL PENETRATIONS TO BE FIRE CAULKED IF PANEL IS LOCATED AT FIRE RATED WALL.

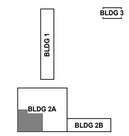
Legend:

- 30" X 48" ACCESSIBLE CLEAR SPACE
- (E) 1-HR FIRE RATED WALL
- (E) 2-HR FIRE RATED WALL
- A101 — NEW DOOR PER DOOR SCHEDULE, SEE A9.11
- S6A — WALL TAG, SEE A10.11
- --- — FINISH TAG, REFER TO FINISH SCHEDULE, SEE A9.11
- FE — FIRE EXTINGUISHER (SEMI-RECESSED) — 1 / A10.91

Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS
2. FOR ALL WALL TYPES REFER TO A10.11
3. REFER TO INTERIOR ELEVATIONS FOR ALL CASEWORK INFORMATION
4. COORDINATE RECEPTACLES WITH EQUIPMENT & FURNITURE
5. PATCH AND REPAIR EXISTING WALLS WHERE PENETRATIONS OCCUR. MAINTAIN RATING AT FIRE RATED WALLS.
6. PENETRATIONS IN FIRE RATED WALLS TO BE FIRE CAULKED AND SEALED

Key Plan:



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Sheet Title:

FIRST FLOOR - NEW PLAN

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

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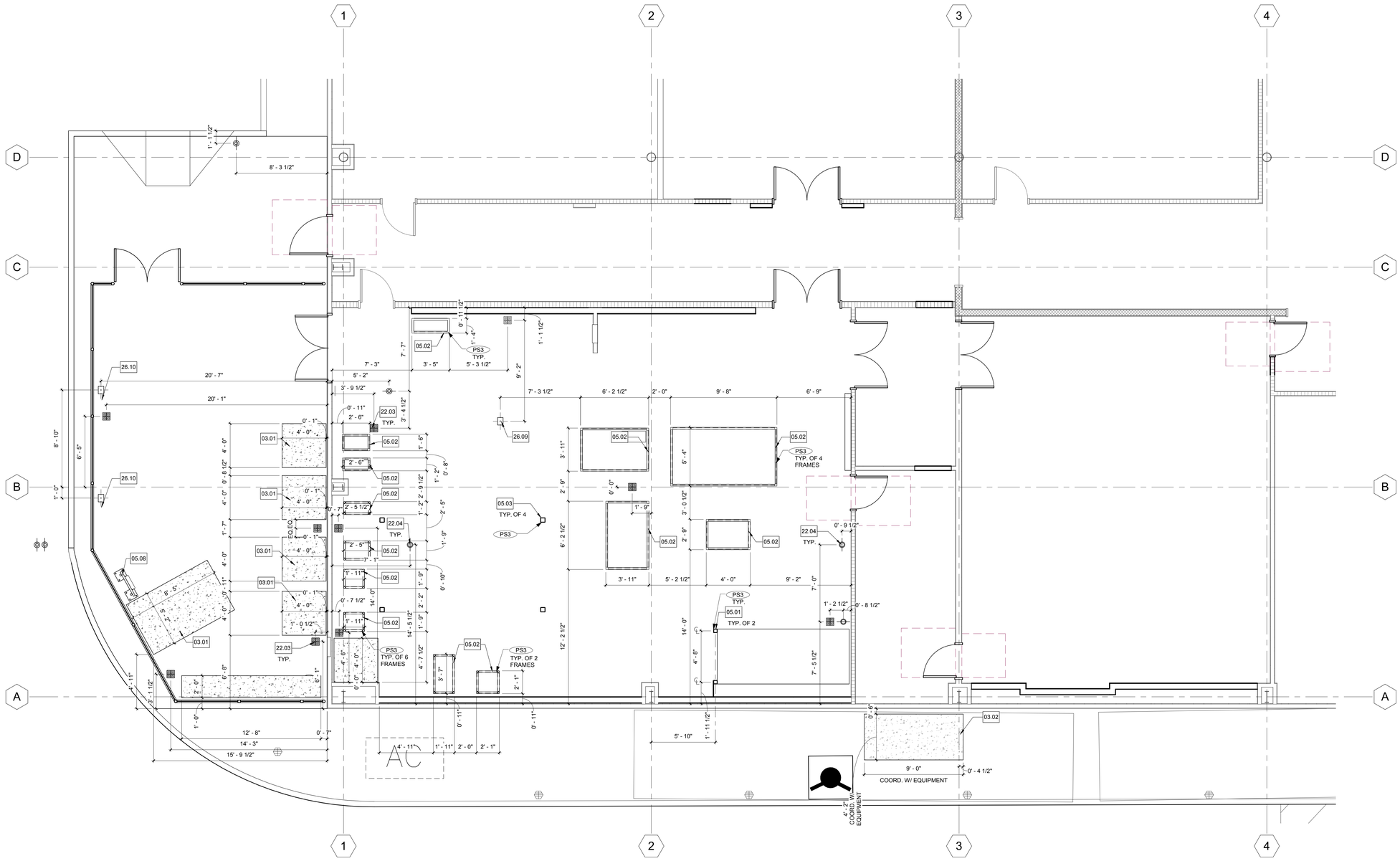

LEVEL 01 FLOOR PLAN

1
1/4" = 1'-0"

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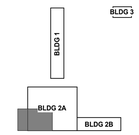
Keynotes:

03.01	NEW CONCRETE PAD - REFER TO STRUCTURAL DWGS. COORDINATE SIZE OF PAD WITH MECHANICAL EQUIPMENT
03.02	NEW CONCRETE PAD FOR TRANSFORMER & SWITCHBOARD, COORDINATE SIZE OF PAD WITH EQUIPMENT SIZE - REFER TO ELECTRICAL DWGS. SEE STRUCTURAL DWGS. 2/S3.1.
05.01	HSS POST - REFER TO STRUCTURAL DWGS.
05.02	EQUIPMENT STEEL FRAME - REFER TO STRUCTURAL DWGS. COORDINATE SIZE OF EQUIPMENT FRAME WITH MECHANICAL EQUIPMENT
05.03	EXHAUST FAN AND DUCT SUPPORT STEEL FRAME - REFER TO STRUCTURAL DWGS.
05.08	ELECTRICAL PANEL MOUNTED ON UNISTRUT & HSS FRAME - 11/A10.92
22.03	FLOOR SINK - REFER TO PLUMBING DWGS.
22.04	CLEAN OUT, FLUSH WITH SLAB - REFER TO PLUMBING DWGS.
26.09	FLOOR BOX, FLUSH WITH FLOOR. REFER TO ELECTRICAL DWGS. FOR MORE INFORMATION
26.10	POWER PEDESTAL - REFER TO ELECTRICAL DWGS. FOR MORE INFORMATION

Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS
2. ALL EQUIPMENT FRAMES AND PADS TO BE COORDINATED WITH EQUIPMENT SIZE
3. STEEL FRAMES AND CONCRETE PADS SHOWN IN PLAN FOR APPROXIMATE LOCATIONS. COORDINATE WITH ALL OTHER DISCIPLINES FOR EXACT LOCATION.

Key Plan:



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CONCRETE PAD AND EQUIPMENT FRAME LOCATIONS

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Date: 10.04.2018 | **Client Project No:** 5015021-100

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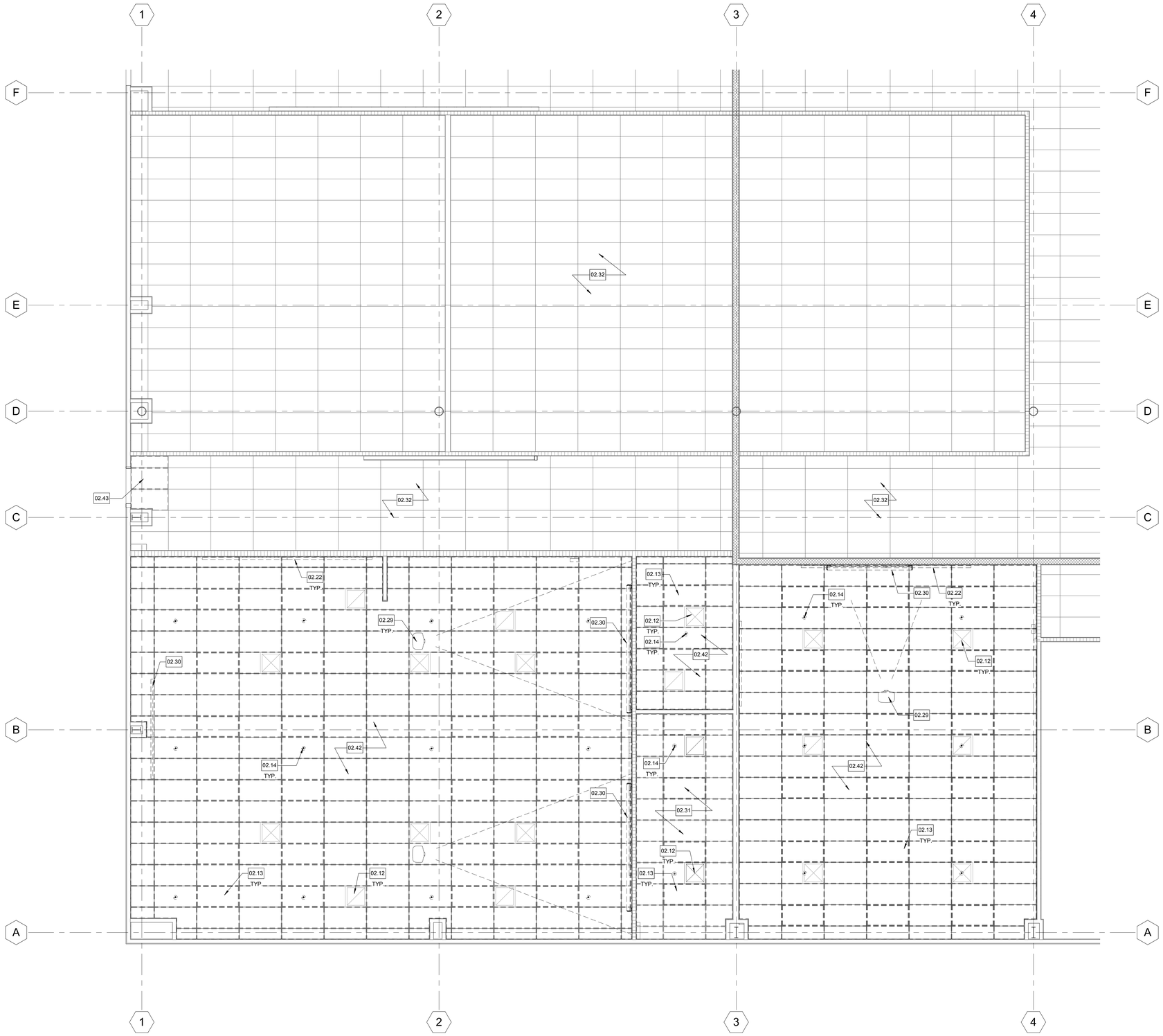

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FIRST FLOOR - DEMOLITION REFLECTED CEILING PLAN 1 1/4" = 1'-0"

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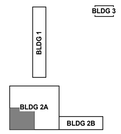
Keynotes:

02.12	EXISTING SUPPLY AND RETURN REGISTERS TO REMAIN. PROTECT IN PLACE
02.13	DEMOLISH EXISTING LIGHT FIXTURES AND REPLACE WITH NEW LIGHT FIXTURES - REFER TO ELECTRICAL DWGS.
02.14	EXISTING SPRINKLER HEADS - REFER TO FIRE SPRINKLER DWGS.
02.22	REMOVE (E) MARKERBOARD. PROTECT AND STORE FOR REINSTALLATION IN NEW WORK SCOPE. DISPOSE OF EXTRA MARKERBOARDS.
02.29	REMOVE (E) PROJECTOR AND PROJECTOR SUPPORT. PROVIDE TO COLLEGE
02.30	REMOVE (E) PROJECTOR SCREEN. PROTECT AND STORE FOR REINSTALLATION IN NEW WORK SCOPE. PROVIDE EXTRAS TO COLLEGE.
02.31	DEMOLISH (E) ACT TILES. CEILING GRID TO REMAIN, PROTECT IN PLACE. DEMOLISH INSULATION ABOVE CEILING.
02.32	(E) CEILING, LIGHTS, REGISTERS, ETC. TO REMAIN. PROTECT IN PLACE
02.42	DEMOLISH (E) ACT TILES, CEILING GRID, AND INSULATION ABOVE CEILING
02.43	REMOVE PORTION OF (E) CEILING GRID AND TILES FOR NEW DOOR OPENING

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
FIRST FLOOR - DEMOLITION REFLECTED CEILING PLANS

DSA APPROVED SET

Date: 10.04.2018 | Client Project No: 5015021-100

Sheet:

A3.10

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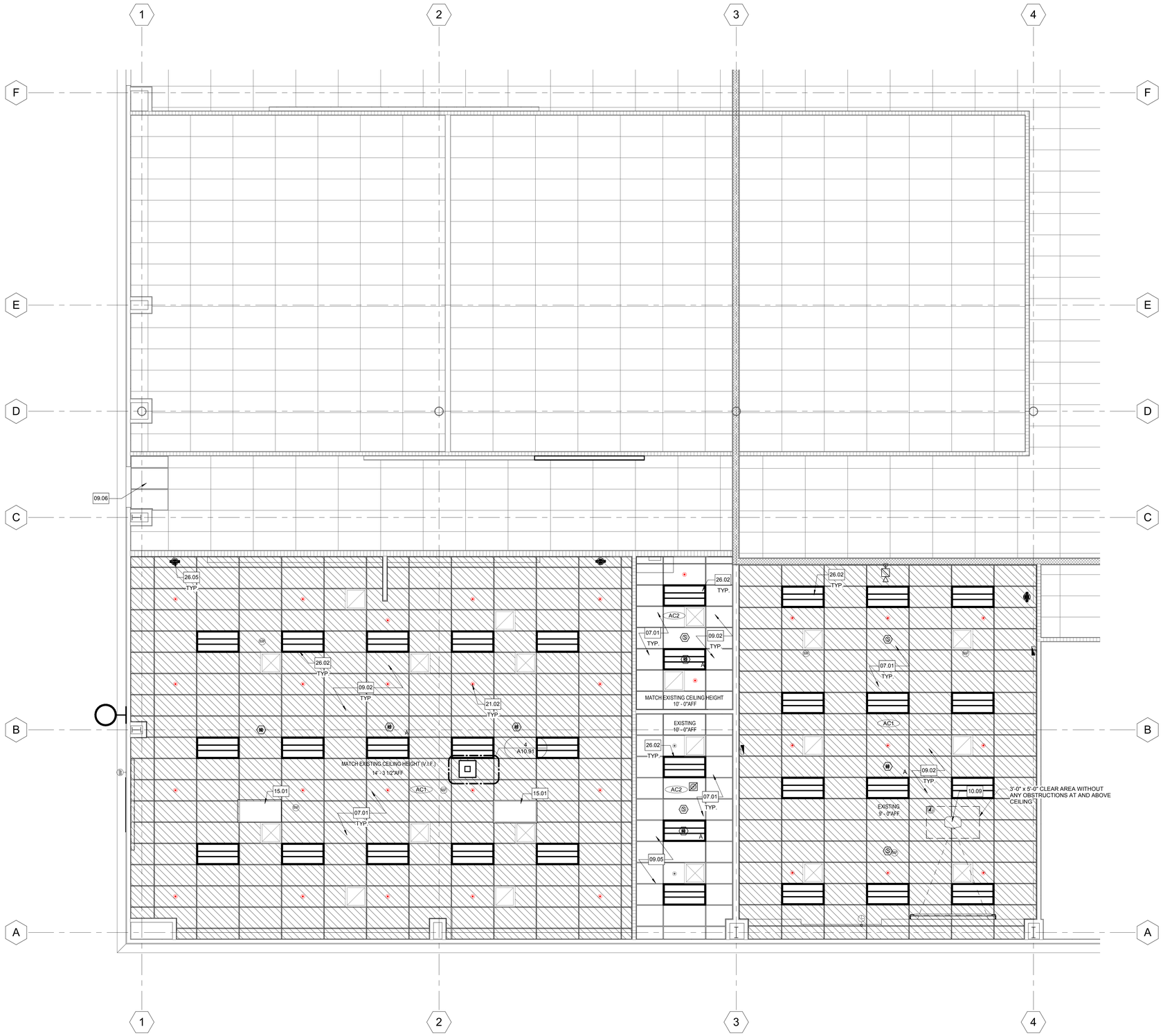

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects

5015021-100

3546 Concours Street / Ontario, CA 91764
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LICENSED ARCHITECT
BRADLEY E GLADSTONE
NO. C-42437
REG. 02-28-19
STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Keynotes:

07.01	NEW INSULATION ABOVE CEILING TILES
09.02	NEW ACT CEILING TILES AND CEILING GRID. CEILING GRID TO MATCH EXISTING CEILING ELEVATION AND GRID LOCATION
09.05	NEW ACT CEILING TILES
09.06	NEW ACT CEILING TILES AND GRID TO MATCH (E) ADJACENT CEILING
10.09	CEILING MOUNTED PROJECTOR. COORDINATE PROJECTOR AND SCREEN LOCATION. SEE 22/A10.91 - OFCI
15.01	NEW DIFFUSER - REFER TO MECHANICAL DWGS.
21.02	NEW FIRE SPRINKLER - REFER TO FIRE DWGS.
26.02	NEW LIGHT FIXTURE - REFER TO ELECTRICAL DWGS. 1/E2.2
26.05	NEW EXIT SIGN

Legend:

NEW SUSPENDED T-BAR CEILING SYSTEM WITH NEW ACOUSTIC CEILING TILES - SEE FINISH SCHEDULE ON A9.11
SEE 1 / A10.31 FOR CEILING DETAILS

NEW SUSPENDED T-BAR CEILING SYSTEM WITH NEW VINYL ACOUSTICAL CEILING TILES - SEE FINISH SCHEDULE ON A9.11
SEE 1 / A10.31 FOR CEILING DETAILS

NEW LIGHT FIXTURE - REFER TO ELECTRICAL

(E) SUPPLY AND RETURN REGISTERS TO REMAIN. PROTECT IN PLACE

EXIT SIGN

FINISH TAG, REFER TO FINISH SCHEDULE

Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS.
2. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE INFORMATION.
3. EXISTING RETURN AND SUPPLY REGISTERS TO REMAIN. PROTECT IN PLACE.
4. REFER TO FIRE DWGS. FOR FIRE SPRINKLER INFORMATION.

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PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
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1951 East Valley Parkway
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Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

FIRST FLOOR - NEW REFLECTED CEILING PLANS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

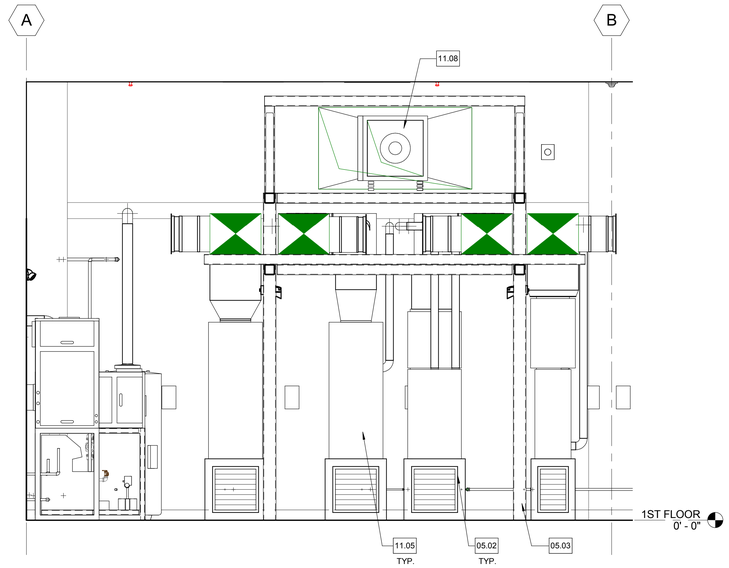
Sheet:

A3.11

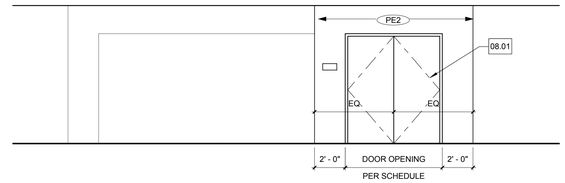
N

FIRST FLOOR - REFLECTED CEILING PLAN **1** 1/4" = 1'-0"

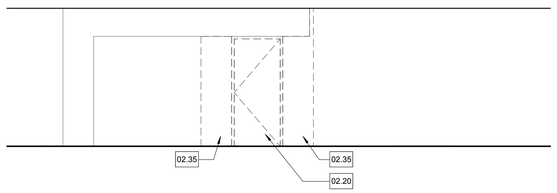
If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.



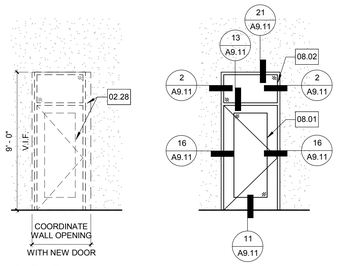
SECTION AT DUCT SUPPORTS — 14
1/2" = 1'-0"



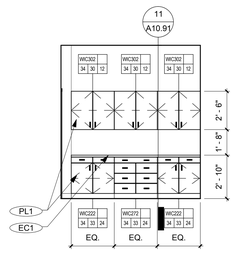
CORRIDOR-NEW WORK AT DOOR ALCOVE — 13
1/4" = 1'-0"



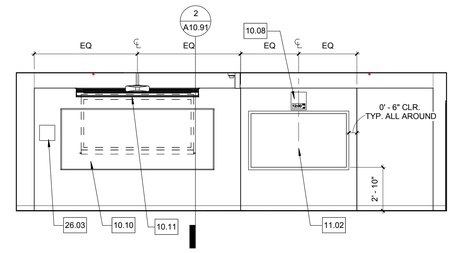
CORRIDOR-DEMOLITION AT DOOR ALCOVE — 12
1/4" = 1'-0"



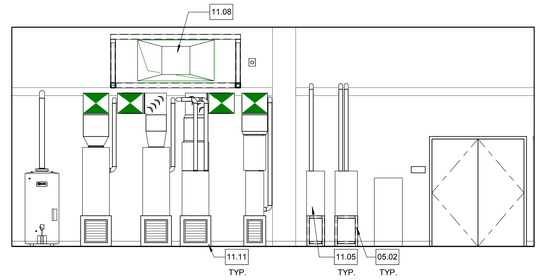
ELEVATION AT EXT. DOOR — 15
1/4" = 1'-0"



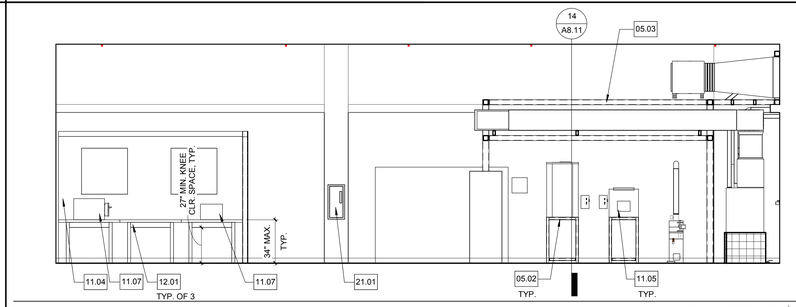
OFFICE 505C - SOUTH INTERIOR ELEVATION — 11
1/4" = 1'-0"



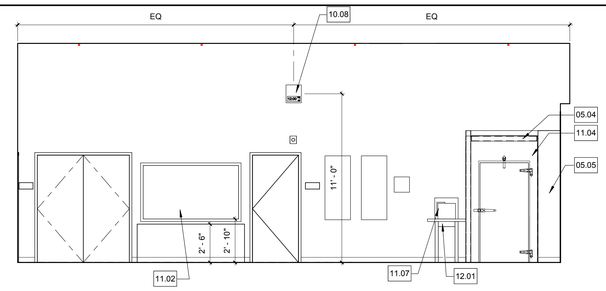
HVAC LECTURE 504 - SOUTH INTERIOR ELEVATION — 5
1/4" = 1'-0"



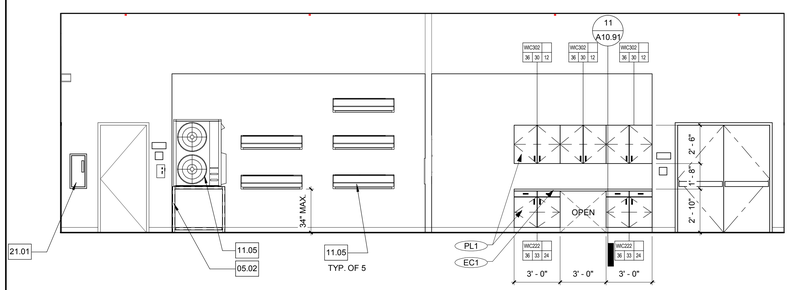
HVAC LAB 505 - WEST INTERIOR ELEVATION — 4
1/4" = 1'-0"



HVAC LAB 505 - SOUTH INTERIOR ELEVATION — 3
1/4" = 1'-0"



HVAC LAB 505 - EAST INTERIOR ELEVATION — 2
1/4" = 1'-0"



HVAC LAB 505 - NORTH INTERIOR ELEVATION — 1
1/4" = 1'-0"

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ISSUE:

No.	Issued	Date
	DSA SUBMITTAL	10.04.2018
	DSA BACKCHECK	12.11.2018

No.	Issued	Date

Keynotes:

02.20	REMOVE (E) DOOR. PATCH AND REPAIR AS NEEDED. IF (E) WALL IS RATED MAINTAIN EXISTING RATING
02.28	REMOVE (E) DOOR & DEMOLISH PART OF (E) WALL FOR NEW DOOR
02.35	DEMO (E) PORTION OF ACCENT WALL AROUND DOOR. PATCH AND REPAIR PORTION OF WALL TO REMAIN
05.02	EQUIPMENT STEEL FRAME - REFER TO STRUCTURAL DWGS. COORDINATE SIZE OF EQUIPMENT FRAME WITH MECHANICAL EQUIPMENT
05.03	EXHAUST FAN AND DUCT SUPPORT STEEL FRAME - REFER TO STRUCTURAL DWGS.
05.04	WALK-IN BRACING FRAME - B/S3.1
05.05	STAINLESS STEEL CLOSURE PANEL
08.01	DOOR PER DOOR SCHEDULE
08.02	STOREFRONT SYSTEM
10.08	WALL MOUNTED CLOCK/SPEAKER -
10.10	MARKERBOARD - 4" MAX. PROJECTION - 4'-0" X 10'-0"
10.11	PROJECTION SCREEN
11.02	WALL MOUNTED FLAT PANEL DISPLAY, OFCI - 8/S3.4
11.04	WALK-IN FREEZER/REFRIGERATOR FOR TRAINING PURPOSES, OFCI - 14/A10.91
11.05	EDUCATIONAL TRAINING EQUIPMENT - REFER TO MECHANICAL DWGS. FOR ANCHORING INFORMATION REFER TO STRUCTURAL EQUIPMENT SCHEDULE ON SHEET S2.12
11.07	OFCI LOW TEMP. CONDENSING UNIT FOR TRAINING PURPOSES, REFER TO WALK-IN EQUIPMENT SCHEDULE CU-LT ON 17/A9.11 FOR MORE INFORMATION
11.08	EXHAUST FAN - REFER TO MECHANICAL DWGS.
11.11	EQUIPMENT FRAME TO BE SEALED WITH RIGID INSULATION, SEAL AIRTIGHT. LOUVERS TO BE ADDED PER DETAIL 3/A10.92
12.01	WORK BENCH - 34" MAX. TO TOP OF TABLE AND 27" MIN. KNEE CLEARANCE, OFCI
21.01	RECESSED FIRE EXTINGUISHER
26.03	PANEL MOUNTED INDUSTRIAL OUTLET - REFER TO ELECTRICAL DWGS.

Notes:

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS SHOWING LAYOUT OF ALL MEP & TELECOM UTILITIES, OUTLETS, SWITCHES, ETC. MOUNTED ON THE WALLS FOR REVIEW BY ARCHITECT.

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1951 East Valley Parkway
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Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

INTERIOR ELEVATIONS - FIRST FLOOR

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

A8.11

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FINISH SCHEDULE					
MATERIAL TAG	MANUFACTURER	STYLE	COLOR	FINISH	COMMENTS/DESCRIPTION
PAINT					
PS1	SHERWIN WILLIAMS (FRAZEE)		WHITE	SEMI-GLOSS	INTERIOR PAINT: FIELD PAINT NOTE: ALL WALLS TO BE PS1 UNLESS NOTED OTHERWISE. COLOR TO MATCH EXISTING. USE SEMI-GLOSS PAINT IN LAB, LECTURE, OFFICE, AND STORAGE SPACE. ALL OTHER LOCATIONS TO MATCH EXISTING FINISH.
PE2	SHERWIN WILLIAMS (FRAZEE)		ACCENT COLOR FRAZEE 1250403	EGGSHELL	INTERIOR PAINT: ACCENT NOTE: ACCENT COLOR TO MATCH EXISTING PAINT COLOR FRAZEE 1250403
PE3	SHERWIN WILLIAMS (FRAZEE)		GREY		HM DOOR & DOOR FRAME PAINT NOTE: COLOR TO MATCH EXISTING DOORS
PS3	SHERWIN WILLIAMS (FRAZEE)		GREY		SEMI-GLOSS PAINT: EQUIPMENT STEEL FRAME PAINT NOTE: COLOR TO MATCH EXISTING DOORS
FLOOR					
VCT1	ARMSTRONG	MIGRATIONS T3509	MUSHROOM BEIGE		12" X 12" X 1/8" VINYL COMPOSITION TILE TO MATCH EXISTING.
VCT2	ARMSTRONG	MIGRATIONS T3501	PLATINUM GRAY		12" X 12" X 1/8" VINYL COMPOSITION TILE. ACCENT TILE TO MATCH EXISTING.
SC		SMOOTH	STAINED		CONCRETE FLOOR, CLEAR SEALED, SLIP RESISTANT. CONCRETE TO BE STAINED. COLOR TBD.
BASE					
B1	JOHNSONITE	RUBBER, COVED WITH TOE	PEBBLE		4" HIGH RUBBER BASE TO MATCH EXISTING. RUBBER BASE LOCATED AT ALL WALLS IN AREA OF WORK.
CASEWORK					
PL1	WILSONART	KENSINGTON MAPLE 10776	MATTE 60		PLASTIC LAMINATE
EC1	DURCON	EPOXY RESIN WORKSURFACE	BLACK ONYX		
CEILING TILE					
AC1	ARMSTRONG	CLEAN ROOM VL UNPERFORATED 870	WHITE		SIZE: 2' X 4' X 5/8" EDGE: SQUARE LAY-IN
AC2	ARMSTRONG	CORTEGA 769A	WHITE		SIZE: 2' X 4' X 5/8" MATCH EXISTING CEILING TILES.

NOTE:

1. WHERE CALLED OUT TO MATCH EXISTING, VERIFY LISTED FINISHES MATCH EXISTING FINISHES AT CAMPUS.

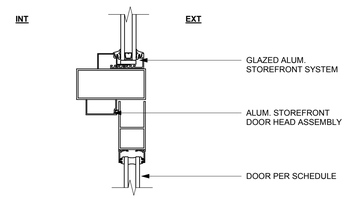
FINISH SCHEDULE 18 NTS

DOOR SCHEDULE																					
	DOOR SIZE				DOOR				FRAME						DETAILS (SHEET A10.15 U.N.O.)						
	WIDTH																				
DOOR NUMBER	PANEL A	PANEL B	HEIGHT	FIRE RATING	MATERIAL	FINISH	PANEL TYPE	UNDERCUT	MATERIAL	FINISH	FRAME TYPE	HARDWARE GROUP	PANIC	GLASS	HEAD	JAMB 1	JAMB 2	THRESH	SIGN DETAILS (SHEET A10.81)	COMMENTS
(E) 505	3' - 0"		7' - 0"	90 Min.	HM	PT	01	0' - 0"	HM	PT	A : S		Yes	-	---	---	---	---	---	EXISTING DOOR TO REMAIN AS IS. REPLACE THRESHOLD IF NEEDED FOR TRANSITION FROM VCT TO CONCRETE.
404.1	3' - 0"	3'-0"	7' - 0"	45 Min.	HM	PT	01 : D	0' - 0"	HM	PT	A : D	2	No	-	8/A9.11	8/A9.11	8/A9.11	7/A9.11	REFER TO G1.21	
504.1	3' - 0"		7' - 0"	45 Min.	HM	PT	01	0' - 0"	HM	PT	A : S	6	Yes	-	8/A9.11	8/A9.11	8/A9.11	7/A9.11	REFER TO G1.21	
505.1	3' - 0"	3'-0"	7' - 0"	45 Min.	HM	PT	01 : D	0' - 0"	HM	PT	A : D	3	Yes	-	8/A9.11	8/A9.11	8/A9.11	7/A9.11	REFER TO G1.21	
505.2	3' - 0"	3'-0"	7' - 0"	NR	HM	PT	01 : D	0' - 0"	HM	PT	A : D	1	No	-	12/A9.11	12/A9.11	12/A9.11	11/A9.11	REFER TO G1.21	CARD READER
505B.1	3' - 0"	3'-0"	7' - 0"	45 Min.	HM	PT	01 : D	0' - 0"	HM	PT	A : D	4	No	-	8/A9.11	8/A9.11	8/A9.11	7/A9.11	REFER TO G1.21	
505B.2	3' - 0"	3'-0"	7' - 0"	NR	HM	PT	01 : D	0' - 0"	HM	PT	A : D	5	No	-	8/A9.11	8/A9.11	8/A9.11	6/A9.11	REFER TO G1.21	
505C.1	3' - 0"		7' - 0"	45 Min.	HM	PT	01	0' - 0"	HM	PT	A : S	8	No	-	8/A9.11	8/A9.11	8/A9.11	7/A9.11	REFER TO G1.21	
505C.2	3' - 0"		7' - 0"	NR	HM	PT	01	0' - 0"	HM	PT	A : S	7	No	-	8/A9.11	8/A9.11	8/A9.11	6/A9.11	REFER TO G1.21	
505D.1	3' - 0"	3'-0"	8' - 0"	NR	-	CL	.SEE : ELEV	0' - 0"	-	-	SEE : ELEV	9	No	-	---	6/A10.01	6/A10.01	---		GATE AT EQUIPMENT YARD
ECH13.1	3' - 6"		6' - 10"	NR	AL	PT	05	0' - 0"	AL	PT	F : S	10	Yes	GL	13/A9.11	16/A9.11	16/A9.11	11/A9.11 SIM.	REFER TO G1.21	36" MIN. CLR. REQUIRED FROM DOOR OPENED 90 DEGREES TO FACE OF THE OPPOSING STOP. MATCH (E) DOOR HEIGHT AND TRANSOM TO (E) ADJACENT DOORS.

NOTE:
1. ALL INTERIOR DOORS AND FRAMES TO BE PAINTED PE3
2. EXTERIOR DOOR PAINT TO MATCH OTHER EXTERIOR DOORS

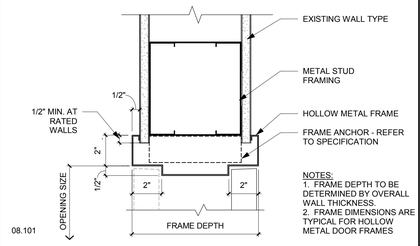
DOOR SCHEDULE ABBREVIATION:
AL ALUMINUM
GL 1" INSULATED GLAZING (TINTED TO MATCH EXISTING)
HM HOLLOW METAL
PT PAINTED
T TEMPERED GLAZING
CL CHAINLINK

DOOR SCHEDULE 4 NTS



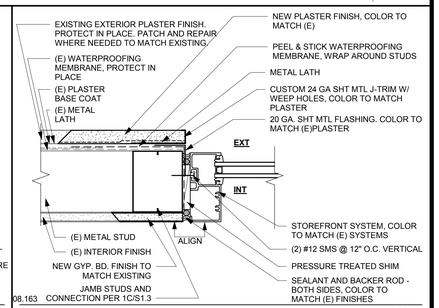
08.204

ALUM. STOREFRONT DOOR HEAD/TRANSOM 13 3" = 1'-0"



08.101

INTERIOR HM DOOR JAMB/HEAD 8 3" = 1'-0"

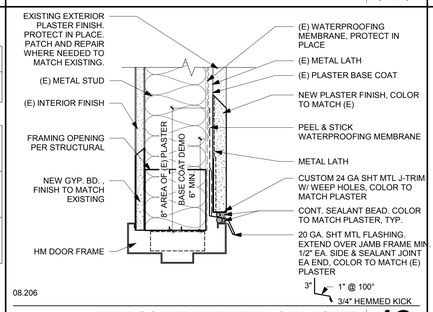


08.163

STOREFRONT JAMB @ PLASTER 2 3" = 1'-0"

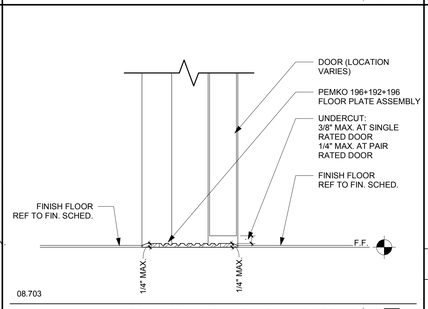
WALK-IN EQUIPMENT SCHEDULE								
PURCHASED BY	EQUIP. LABEL	MANUFACTURER	MODEL NUMBER	DIMENSIONS	WEIGHT	QUANTITY	LOCATION	DESCRIPTION
OFCI	CU-LT	COPELAND	FFAP-017Z-CFV-072	16.6" (H) X 24.1" (L) X 18.3" (W)	114 LBS.	1	ON BENCH OUTSIDE WALK-IN TRAINER	CONDENSING UNIT LOW-TEMP FOR WALK-IN REF./FREEZER
OFCI	CU-MT	COPELAND	M7ZH-H067-CFA-272	12.3" (H) X 17.3" (L) X 13.8" (W)	73 LBS.	1	ON BENCH OUTSIDE WALK-IN TRAINER	CONDENSING UNIT MEDIUM-TEMP FOR WALK-IN REF./FREEZER
OFCI	EC-1	TRENTON	T30-TPLP-PDI-12	17.25" (H) X 30.25" (L) X 13.5" (W)	53 LBS.	2	INSIDE WALK-IN TRAINER	EVAPORATIVE COILS FOR WALK-IN REF./FREEZER

WALK-IN EQUIPMENT SCHEDULE 17 NTS



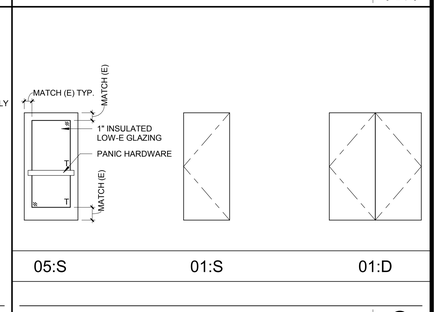
08.206

HM DOOR FRAME HEAD @ PLASTER (JAMB SIM.) 12 3" = 1'-0"

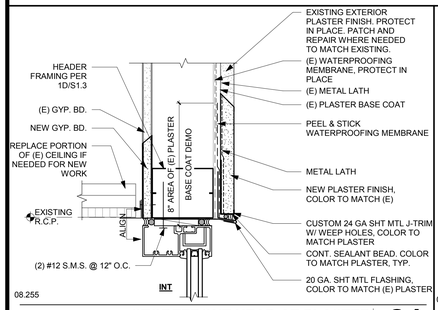


08.703

INT. DOOR SILL @ FIRE RATED DOOR 7 3" = 1'-0"

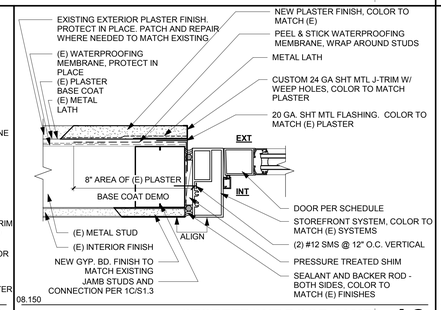


DOOR PANEL TYPES 2 1/4"=1'-0"



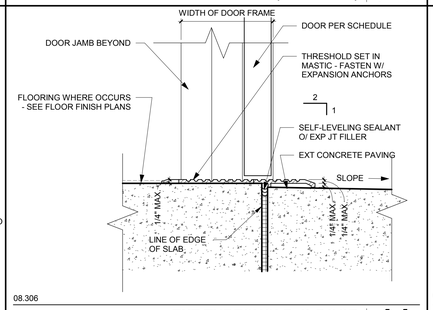
08.255

STOREFRONT HEAD AT PLASTER 21 3" = 1'-0"



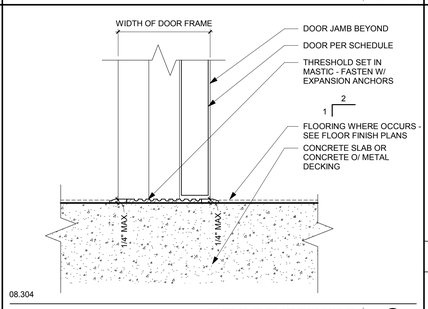
08.150

STOREFRONT DOOR JAMB 16 3" = 1'-0"



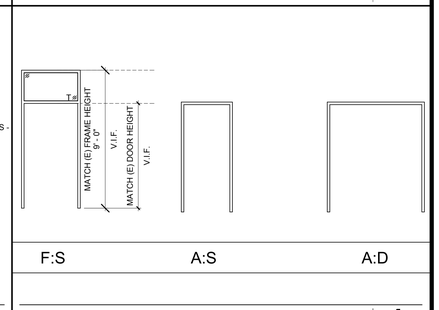
08.306

EXT THRESHOLD @ DOOR 11 3" = 1'-0"



08.304

TYP INT THRESHOLD 6 3" = 1'-0"



DOOR FRAME TYPES 1 1/4"=1'-0"

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DATE: 12/13/2018

LICENSED ARCHITECT BRADLEY E GLADSTEIN REN. 02-28-19 NO. C-32437 STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date
	DSA SUBMITTAL	10.04.2018
	DSA BACKCHECK	12.11.2018

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Notes:

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS

PALOMAR COLLEGE
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Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
DOOR SCHEDULE, DOOR DETAILS, & SCHEDULES

DSA APPROVED SET

Date: 10.04.2018 **Client Project No:** 5015021-100

Sheet:
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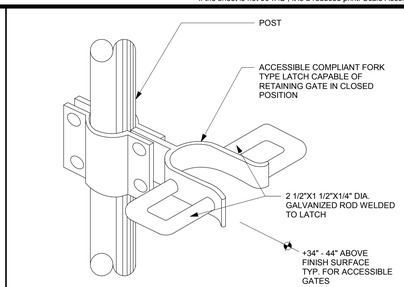
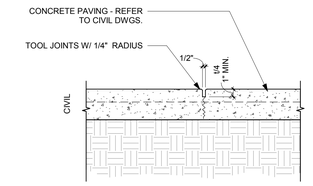


05.213

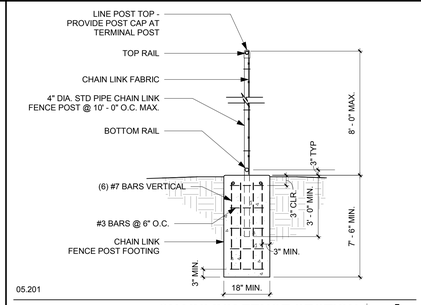
ACCESSIBLE FORK TYPE LATCH 5
1/2" = 1'-0"



NOTE:
1. SEE SITE PLAN FOR LOCATIONS

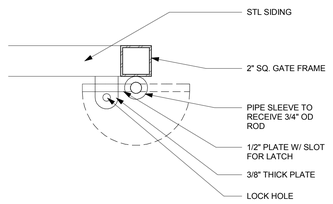
03.003

CONCRETE CONTROL JOINT 9
1 1/2" = 1'-0"



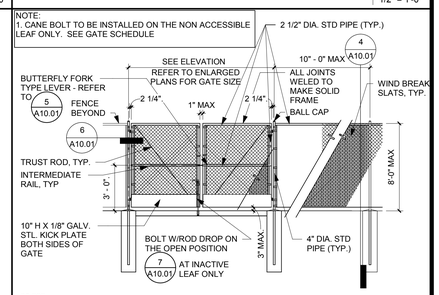
05.201

CHAINLINK FENCE SECTION 4
1/2" = 1'-0"



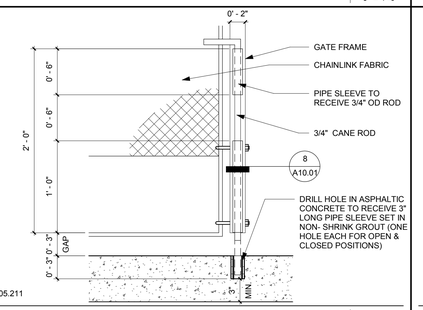
05.212

CANE BOLT SECTION 8
3" = 1'-0"



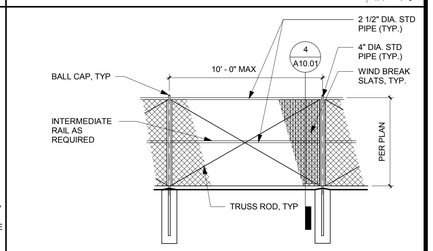
05.202

DOUBLE C.L. GATES 3
1/4" = 1'-0"



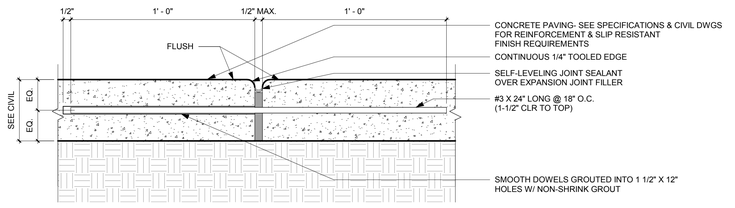
05.211

CANE BOLT ELEVATION AT METAL GATE 7
1 1/2" = 1'-0"



05.200B

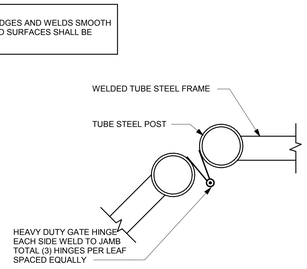
CHAIN LINK FENCE 2
1/4" = 1'-0"



NOTE:
1. SEE SITE PLAN FOR LOCATIONS

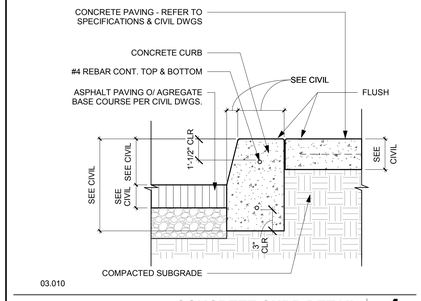
03.002

EXPANSION JOINT 11
3" = 1'-0"



05.210

C.L. GATE DETAIL 6
1/4" = 1'-0"



03.010

CONCRETE CURB DETAIL 1
1 1/2" = 1'-0"

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1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
SITE DETAILS

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Date: 10.04.2018 | **Client Project No:** 5015021-100

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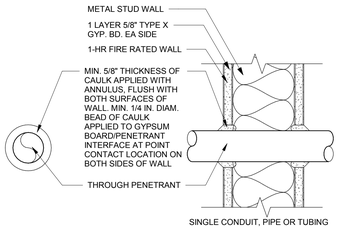
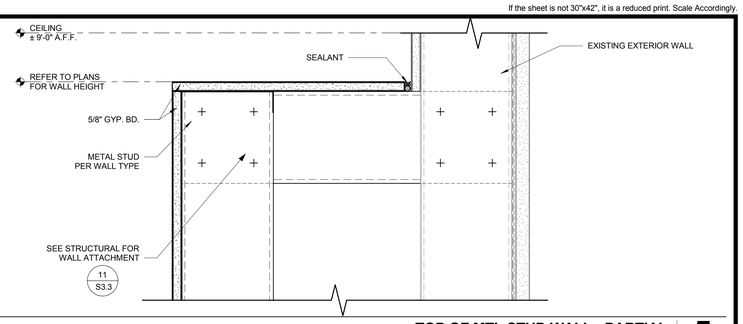


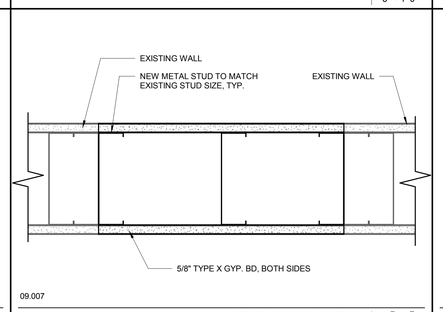
NOTE:
1 HR RATED WALL THRU PENETRATION FIRE STOP SYSTEM TO BE INSTALLED IN ACCORDACE WITH UL SYSTEM NO W-L-1001

TYP. 1 HR RATED WALL PIPE/CONDUIT THRU PENETRATION UL W-L-1001 — 15 — 3" = 1'-0"



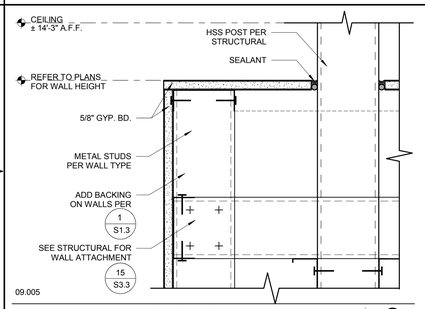
09.004

TOP OF MTL STUD WALL - PARTIAL HEIGHT — 5 — 3" = 1'-0"



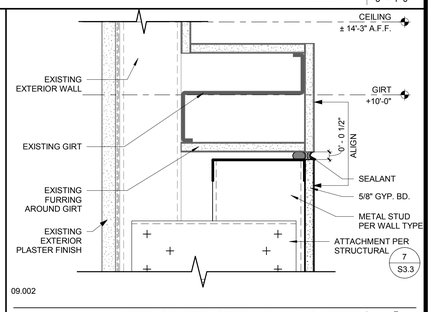
09.007

TYP. WALL INFILL — 14 — 3" = 1'-0"



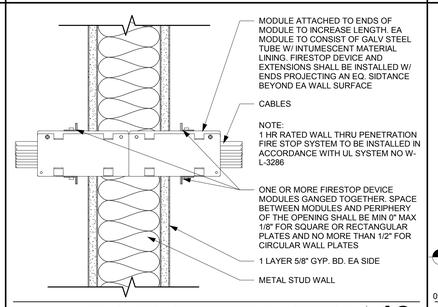
09.005

TOP OF MTL STUD WALL - PARTIAL HEIGHT — 9 — 3" = 1'-0"

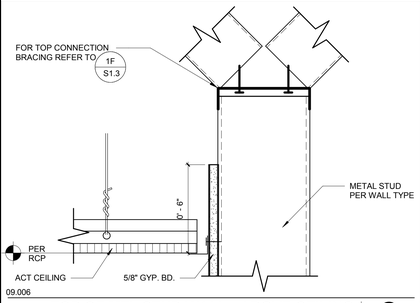


09.002

TOP OF MTL STUD WALL @ GIRT — 4 — 3" = 1'-0"

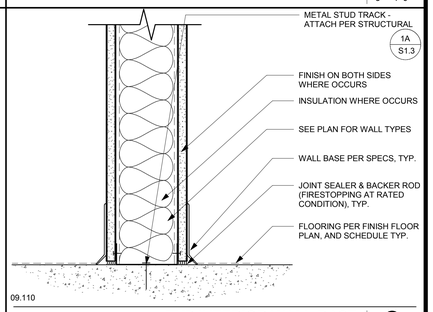


TYP 1 HR. RATED WALL CABLE TRAY THRU PENETRATION UL W-L-3286 — 13 — 3" = 1'-0"



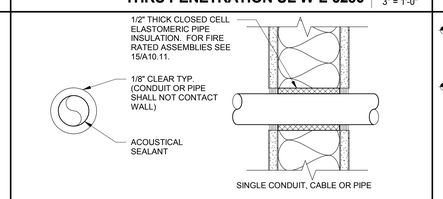
09.006

TOP OF MTL STUD WALL - ABOVE CEILING — 8 — 3" = 1'-0"



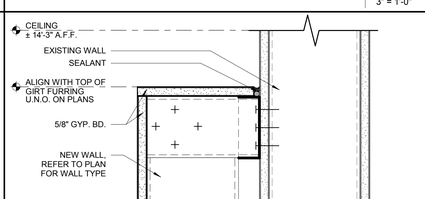
09.110

TYP INTERIOR WALL BASE — 3 — 3" = 1'-0"



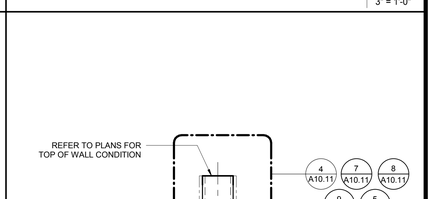
NOTES:
1. PENETRATIONS OF ACOUSTICAL PARTITIONS BY, CONDUIT, CABLE, PIPES ETC. SHALL BE ACOUSTICALLY SEALED AS SHOWN. ANY GAP LARGER THAN 1.2" SHALL BE COVERED WITH GYP. BD., LAPPED A MIN. OF 2" AND SCREWED BEFORE USING ACOUSTICAL SEALANT. CABLE TRAYS SHOULD NOT PENETRATE SLAB -TO-SLAB PARTITIONS. A CONDUIT SLEEVE SHOULD BE USED AT SUCH PENETRATIONS. A CONDUIT SLEEVE SHOULD BE USED AT SUCH PENETRATIONSAND SEALED AS SHOWN ON THIS DETAIL. SEAL THE ENDS OF THE CONDUIT WITH FIRE STOP PUTTY ON BOTH SIDES OF THE WALL.
2. FLEXIBLE DUCT, PIPE, CONDUIT, ETC. CONNECTIONS SHOULD BE INCORPORATED BETWEEN ROMOS WHERE RESILIENTLY ISOLATED FLOORS, WALLS OR CEILING LIDS OCCUR.
3. WHERE PENETRATING WALL TYPE M4SB OR M6SB TEST SEALANT IN ACCORDACE TO ASTM E 814 AND OR UL 1479 AND 2016 CBC 714.3

THRU PENETRATION @ FULL HT. WALL — 12 — 3" = 1'-0"



09.003

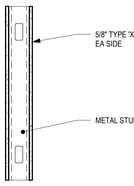
TOP OF MTL STUD WALL - PARTIAL HEIGHT @ FIRE RATED WALL — 7 — 3" = 1'-0"



09.001

TYPICAL INTERIOR WALL SECTION — 1 — 1" = 1'-0"

NOTES:
1. FOR TOP AND BOTTOM OF WALL DETAILS SEE 1 A10.11

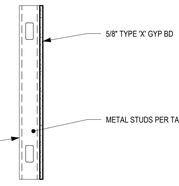


TAG	CORE PROPERTIES	STC	GA FILE #	FIRE	UL #
S-1	METAL STUD TO MATCH EXISTING. MIN. 3 -5/8" DEEP. METAL STUDS @ 16"OC(MIN. 16 GAUGE, 1 5/8" FLANGE WIDTH)	N/A		1 HR	U465
		N/A		NR	
		N/A		NR	

09.000

INTERIOR WALL TYPES - S-1 — 11 — 1" = 1'-0"

NOTES:
1. FOR TOP AND BOTTOM OF WALL DETAILS SEE 1 A10.11
2. TOP OF GYP BD SHALL TERMINATE 6" ABOVE ADJOINING SUSPENDED ACOUSTICAL TILE CEILINGS WHERE WALL IS FULL HEIGHT.
3. STUD WALLS WITHOUT FINISH BOTH SIDES TO HAVE FLANGE BRACING EACH SIDE. FLANGE BRACING TO BE IN THE FORM OF STRAPS AND BLOCKING AT 4'-0" O.C. OR AS REQUIRED TO BRACE THE FLANGE. SEE 3/S1.3.



TAG	CORE PROPERTIES	STC	GA FILE #	FIRE	UL #
S4F	4" METAL STUDS (400S162-54) @ 16"OC (16 GAUGE)	N/A		NR	
S6F	6" METAL STUDS (600S162-54) @ 16"OC (16 GAUGE)	N/A		NR	
		N/A		NR	
		N/A		NR	
		N/A		NR	

09.000

INTERIOR WALL TYPES - S6F — 6 — 1" = 1'-0"

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1951 East Valley Parkway
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Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
WALL TYPES & DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:
A10.11

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1. CEILING SYSTEM GENERAL NOTES: (HEAVY DUTY)

1.01 Ceiling system components shall comply with ASTM C635-07 and Section 5.1 of ASTM E580-10a.
1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635-08.
1.03 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:

TYPICAL ACOUSTICAL CEILING/GRID SYSTEM

MANUFACTURER'S CATALOG NAMES/NO.S (ARMSTRONG or EQUAL):

GRID:	HEAVY DUTY 15/16" "PRELUDE XL" EXPOSED TEE SUSPENSION SYSTEM, ICC-ESR 1308/ DSA IR 25-2.13 (COLOR: WHITE)
WALL ANGLE:	#7877 SHADOW MOLD (COLOR TO MATCH PANEL SYSTEM)* ESR 1308* *TO BE USED WITH "BERC 2 CLIP" & "SEISMIC RX" SYSTEM BY ARMSTRONG
ADD'L EDGE TRIM:	4"H EDGE TRIM WHERE APPLICABLE (COLOR TO MATCH CEILING PANEL)
CEILING TILE:	2'X4' "ULTIMA 1904" BEVELD TEGULAR, COLOR: WHITE 2'X4' "CORTEGA 769A", COLOR: WHITE (MATCH EXISTING) FACTORY CUT ALL EDGES @ LIGHT FIXTURE

1.05 Ceiling panels shall not support any light fixtures, air terminals or devices.
1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide ¾" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide ¾" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.

2. MATERIALS:

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641-09a. Wire shall be #12 gage (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.
2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653-11, or other equivalent sheet steel listed in Section A2.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members 2012, (AISI S100-12).
Material 43 mil (18 gage) and lighter shall have minimum yield strength of 33 ksi.
Material 54 mil (16 gage) and heavier shall have a minimum yield strength of 50 ksi.
2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing, EMT shall have minimum yield strength (Fy) of 30 ksi and minimum ultimate strength (Fu) of 48 ksi.

3. ATTACHMENT OF HANGER AND BRACING WIRES:

3.01 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.
3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.
3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.
3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.
3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)

4. FASTENERS AND WELDING:

4.01 Sheet metal screws shall comply with ASTM C1513-10, ASME B18.6.4-89 (R2005). Penetration of screws through joined material shall not be less than three exposed threads.
4.02 Expansion anchors shall be: Refer to Details on dwgs.
For Testing Refer to CBC 1910A.5
4.03 Power-Actuated Fasteners shall be: [RDP to indicate manufacturer, product, evaluation report number]
4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.
4.05 Power-actuated fasteners in concrete are not permitted for bracing wires.
4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post - installed anchor.
4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

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

5.01 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power actuated fasteners in concrete shall be field tested for 200 lbs. in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1910A.5
5.02 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1910A.5

6. LIGHT FIXTURES:

6.01 All light fixtures shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the fixture. A minimum of two screws or approved fasteners are required at each light fixture, per ASTM E580, Section 5.3.1.
6.02 Surface-mounted light fixtures shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gage. Rotational spring catches do not comply. A #12 gage slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when light fixtures are eight (8) feet or longer or exceed 56 lb. Maximum spacing between supports shall not exceed eight (8) feet.
6.03 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.
6.04 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.
6.05 Light fixtures weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners to the structure above. Exception: All light fixtures greater than two by four feet weighing less than 56 lbs. shall have a #12 gage slack safety wire at each corner
6.06 All Light fixtures weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four (4) taut #12 gage wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four (4) times the weight of the fixture.

7. SERVICES WITHIN THE CEILING:

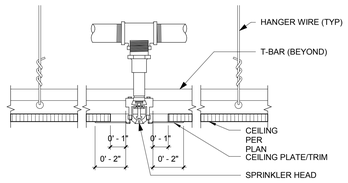
7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.
7.02 Ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gage slack safety wire attached from the terminal or service to the structure above.
7.03 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gage slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.
7.04 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gage hanger wires attached from the terminal or service to the structure above or other approved hangers.

8. OTHER DEVICES WITHIN THE CEILING:

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

(REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION)

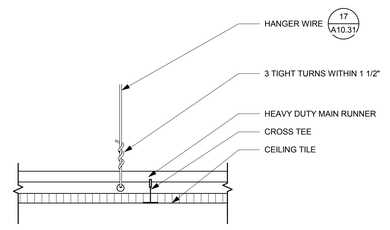
CEILING NOTES 21
12" = 1'-0"



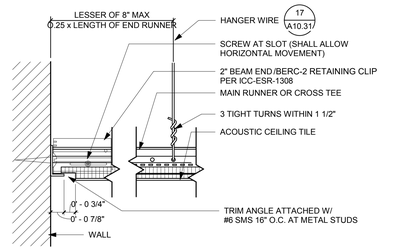
NOTE: 1. EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTIONS, SPRINKLER HEADS AND OTHER PENETRATIONS SHALL HAVE A 2" OVERSIZE RING, SLEEVE OR ADAPTOR THROUGH THE CEILING TO ACCOMMODATE 1" OF CEILING MOVEMENT IN ALL HORIZONTAL DIRECTIONS. ALTERNATELY, A SWING JOINT CAN ACCOMMODATE 1" OF CEILING MOVEMENT IN ALL HORIZONTAL DIRECTIONS IS PERMITTED TO BE PROVIDED AT THE TOP OF THE SPRINKLER HEAD EXTENSION. (IBC 01621, ASCE 7-10, 13.5.6.2.2 ITEM A.

2. PROVIDE MOCK UP IN THE FIELD FOR REVIEW OF ARCHITECT & PROJECT INSPECTOR.

SEISMIC SPRINKLER AT SUSPENDED CEILING SYSTEM 15
3" = 1'-0"



HANGER WIRE CONNECTION TO CLG GRID 10
3" = 1'-0"

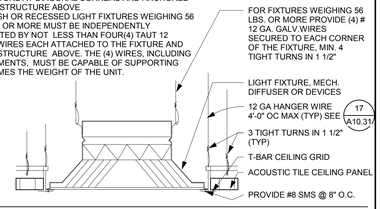


T-BAR CEILING PERIMETER SLIP JOINT 5
3" = 1'-0"

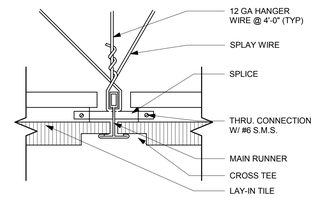
CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5'-0"
250S137-33	6'-10"
362S137-33	8'-0"
250137-43	8'-10"
400S137-43	10'-10"

COMPRESSION STRUT TABLE 19
3" = 1'-0"

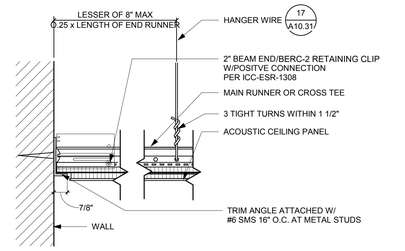
NOTES:
1. ATTACH ALL LIGHT FIXTURES TO CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE TO THE WEIGHT OF THE FIXTURES.
2. FLUSH OR RECESSED LIGHT FIXTURES, WEIGHING LESS THAN 56 POUNDS, MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM BUT, IN ADDITION, THEY MUST HAVE A MINIMUM OF TWO 12 GAUGE SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE
3. ALL FLUSH OR RECESSED LIGHT FIXTURES WEIGHING 56 POUNDS OR MORE MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR(4) TAUT 12 GAUGE WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE. THE (4) WIRES, INCLUDING ATTACHMENTS, MUST BE CAPABLE OF SUPPORTING FOUR TIMES THE WEIGHT OF THE UNIT.



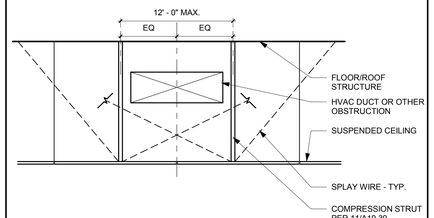
MECH. DIFFUSER @ SUSP ACOUS PANEL CLG 14
1 1/2" = 1'-0"



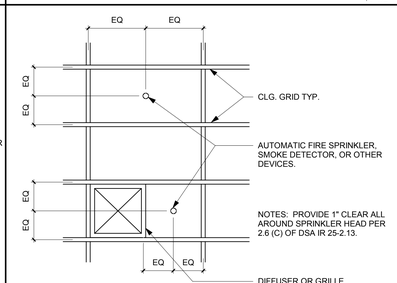
TYP. T-BAR INTERSECTION 9
6" = 1'-0"



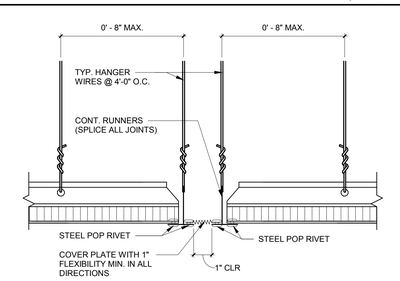
T-BAR CEILING PERIMETER FIXED JOINT 4
3" = 1'-0"



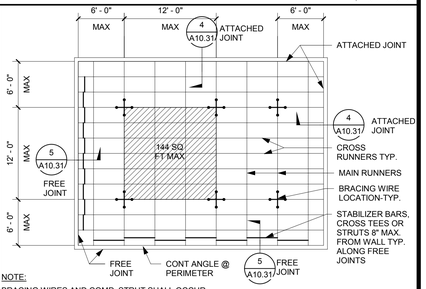
CEILING SUPPORT @ OBSTRUCTION 18
1" = 1'-0"



HORIZ. CONTROL FOR CEILING DEVICES 13
1 1/2" = 1'-0"

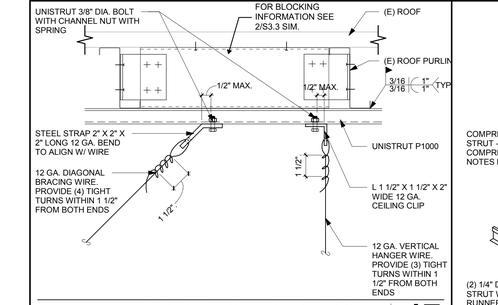


SUSP. ACOUTICAL CEILING - EXPANSION JOINT AT INTERSECTIONS 8
3" = 1'-0"

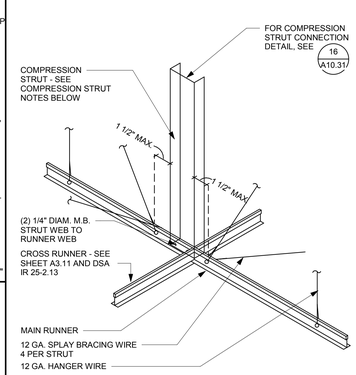


NOTE:
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

SUSP. LAY-IN PANEL CLG FRAMING (2X4 GRID) PER DSA 25-2.13 3
1/8" = 1'-0"

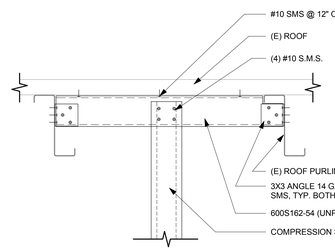


TYP. CEILING HANGER AND SWAY WIRE TO ROOF 17
1 1/2" = 1'-0"

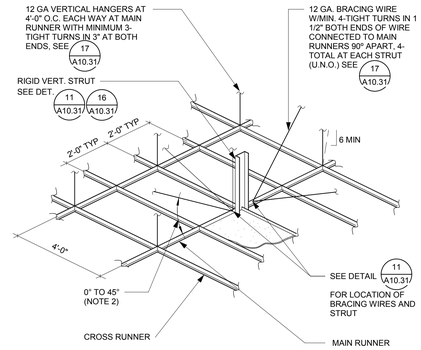


NOTES:
1. COMPRESSION STRUTS SHALL BE STEEL SECTION WITH L/R RATIO OF 200 MAX. STARTING NOT MORE THAN 4'-0" FROM ADJACENT WALLS TO SUPPORT A TRIBUTARY AREA OF 144 SF MAX.
2. ATTACH TO MAIN RUNNER WITHIN 2" OF CROSS RUNNER W/ (2) 1/4" DIAM. M.B. AND TO STRUCTURE AS NOTED ABOVE.
3. COMPRESSION STRUT SHALL NOT REPLACE HANGER WIRE.
4. COMPRESSION STRUT SHALL HAVE A KL/R RATIO LESS THAN 200, AND Ry = 0.42 MINIMUM
5. SEE COMPRESSION STRUT TABLE 19 A10.31 FOR SIZES AND LENGTHS.

METAL STUD COMPRESSION STRUT CONNECTION 16
1 1/2" = 1'-0"



METAL STUD COMPRESSION STRUT 11
1 1/2" = 1'-0"



NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.
3. FOR TYP. PERIMETER DETAILS AT SUSPENDED ACOUSTICAL T-BAR CEILING CONDITION SEE 5 A10.31 4 A10.31
4. PROVIDE 12 GAUGE MINIMUM SPLAYED BRACING WIRES FASTENED WITH NOT LESS THAN FOUR TIGHT TURNS IN 1-1/2 INCHES AT BOTH ENDS OF WIRE. SLOPE OF SPLAYED BRACING WIRES SHOULD NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING.
5. PROVIDE HANGER WIRES AT A SPACING NOT MORE THAN 4'-0" X 4'-0" ON CENTER. PROVIDE 12 GAUGE MINIMUM HANGER WIRES FASTENED WITH NOT LESS THAN THREE TIGHT TURNS IN 1-1/2 INCHES AT BOTH ENDS OF WIRE. HANGER WIRES TO BE ATTACHED TO MAIN RUNNERS.
6. FOR TYPICAL DSA IR-25-2.13 ACOUSTICAL T-BAR CEILING NOTES SEE 21 A10.31
7. LAYOUT GRID & BRACING PER 3 A10.31
8. FOR HORIZONTAL CONTROL DETAIL AT DEVICES & PENETRATIONS THRU T-BAR GRID SEE 13 A10.31
9. PROVIDE CEILING SUPPORT AT CEILING OBSTRUCTIONS PER 18 A10.31
10. SUPPORT MECHANICAL DIFFUSERS PER 14 A10.31
11. ACOUSTICAL CEILING SUSPENSION SYSTEM SHALL BE HEAVY DUTY.

CL2.35
DSA IR 25-2.13

TYP. SUSPENDED ACOUST T-BAR CLG 1
3" = 1'-0"

HMC Architects
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Keynotes:

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Facility:
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PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025
Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
CEILING DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100
Sheet:

A10.31

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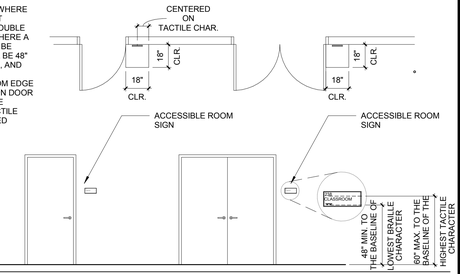
If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

NOTES:
1.
SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONCE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. TACTILE CHARACTERS HEIGHT SHALL BE 48" MIN. ABOVE THE FINISH FLOOR TO THE BASELINE OF THE LOWEST TACTILE BRAILLE CELLS, AND HIGHEST LINE OF RAISED CHARACTERS SHALL BE 60" MAX. ABOVE THE FINISH FLOOR.
FOR PAIRS OF DOORS WHERE DOOR SWING IS LIMITED TO 90 DEGREE MOUNT SIGN 9" FROM EDGE OF DOOR. FOR PAIRS OF DOORS WHERE DOOR SWING EXCEEDS 90 DEGREES MOUNT SIGN DOOR WIDTH PLUS 9" FROM EDGE OF DOOR. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN. BY 18" MIN., CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. **REFER TO CBC 11B-703.4.2.**
2.
RESTROOM GEOMETRIC SIGNS SHALL BE INSTALLED CENTERED ON THE DOOR. MOUNTING HEIGHT SHALL BE 60" ABOVE THE FINISH FLOOR TO THE CENTERLINE OF THE SIGN. THE COLOR AND CONTRAST OF THE SIGN SHALL BE DISTINCTLY DIFFERENT FROM THE COLOR AND CONTRAST OF THE DOOR.
3.
SEE 11/A10.81 FOR SIGNAGE ON GLAZING

10.005



DOOR SIGNAGE LOCATIONS — 5 — 1/4" = 1'-0"

NOTES:
1. CHARACTER TYPE: CHARACTERS ON SIGN SHALL BE RAISED 1/32" MINIMUM AND SHALL BE "FUTURA MEDIUM" UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE.

2. CHARACTER SIZE: RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8" AND A MAXIMUM OF 2" HIGH.

3. FINISH AND CONTRAST: CHARACTERS, SYMBOLS, AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH AND CONTRAST 70% MIN. WITH THEIR BACKGROUNDS.

CHARACTER & SYMBOLS - "APCO" COLOR #A01 WHITE (U.N.O.)

BACKGROUND - "APCO" COLOR #A54 GRAPHITE (U.N.O.)

INTEGRAL COLOR FRAME: "APCO" COLOR PEARL GREY (U.N.O.)

PANEL: 1/4" THICK ACRYLIC PANEL WITH PHOTO POLYMER RAISED TACTILE COPY SUB-SURFACE SYMBOL (U.N.O.)

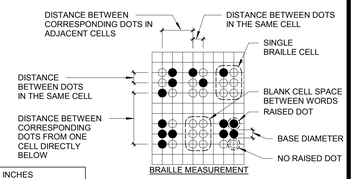
4. BRAILLE: CONTRACTED CALIFORNIA GRADE 2 BRAILLE SHALL BE USED WHERE BRAILLE IS REQUIRED. DOTS SHALL BE 1/10 INCH ON CENTERS IN EACH CELL WITH 2/10 INCH SPACE BETWEEN CELLS AND HAVE DOMED OR ROUNDED TOPS. CBC TABLE 11B-703.3.1

5. EXTERIOR SIGNS SHALL BE METAL COMPONENTS SUITABLE TO EXTERIOR USE AND SIMILAR TO INTERIOR SIGNS FOR SHAPE AND FORM

6. CONTRACTOR TO SUBMIT A SCHEDULE TO VERIFY ALL PERMANENT NUMBERS AND TEXT PRIOR TO FABRICATION.

*MEASURED CENTER TO CENTER

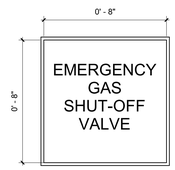
MEASUREMENT RANGE	MINIMUM IN INCHES MAXIMUM IN INCHES
DOT BASE DIAMETER	0.059 IN. TO 0.063 IN
DISTANCE BETWEEN TWO DOTS IN THE SAME CELL*	0.100 IN
DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS*	0.300 IN
DOT HEIGHT	0.025 IN. TO 0.037 IN
DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW*	0.395 TO 0.400 IN



10.101

TACTILE CHARACTER & BRAILLE STANDARDS FOR SIGNAGE PER TITLE 24 — 4 — 1/4" = 1'-0"

NOTE:
1. TO BE POSTED WHERE GAS SHUT OFF IS LOCATED PER MECH/PLUMB PLANS
2. LOCATE WHERE IT IS CLEARLY VISIBLE
3. FOR GENERAL REQUIREMENTS REFER TO 4/A10.81

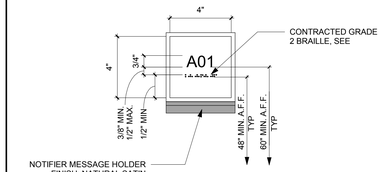


10.030

GAS SHUT-OFF SIGNAGE — 13 — 3" = 1'-0"

NOTES:

1. PROVIDE SIGN WHERE INDICATED ON PLANS. ALL SIGNED DOORS TO RECEIVE BRAILLE ROOM IDENTIFICATION PER 4/A10.81
2. WHERE SIGNAGE IS INSTALLED ON GLASS PROVIDE BLANK SIGNAGE ON OPPOSITE SIDE BEING EQUAL SIZE AND COLOR TO MASK ADHESIVE, SEE 11/A10.81
3. LOCATE PER DETAIL 5/A10.81
4. FOR BRAILLE NOTES/GENERAL REQUIREMENTS REFER TO 4/A10.81

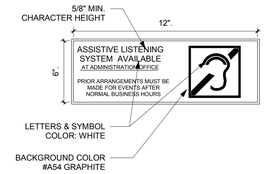


10.015

CLASSROOM SIGNAGE — 8 — 3" = 1'-0"

NOTES:

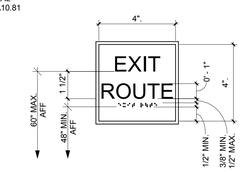
1. FOR SYSTEM LOCATION, SEE AV DRAWINGS.
2. SIGNAGE SHALL COMPLY WITH SECTION 11B-703.7, 11B-703.5, & 11B216.10 OF CALIFORNIA BUILDING CODE
3. LOCATE WHERE CLEARLY VISIBLE, MIN. 40 INCHES ABOVE FINISH FLOOR
4. NON-GLARE FINISH



10.013

ASSISTED LISTENING SYSTEM SIGN — 3 — 1/8" = 1'-0"

NOTES:
1. PROVIDE SIGN WHERE INDICATED ON PLANS PER G1.21
2. LOCATE PER DETAIL 5/A10.81
3. FOR BRAILLE NOTES/GENERAL REQUIREMENTS REFER TO 4/A10.81

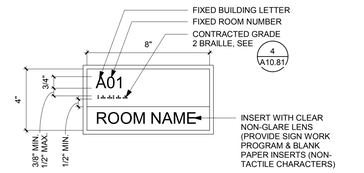


10.019

TACTILE EXIT SIGNAGE — 12 — 3" = 1'-0"

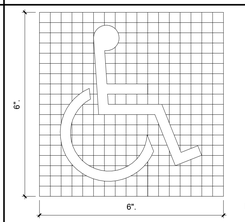
NOTES:

1. PROVIDE SIGN WHERE INDICATED ON PLANS. ALL SIGNED DOORS TO RECEIVE BRAILLE ROOM IDENTIFICATION PER 4/A10.81
2. WHERE SIGNAGE IS INSTALLED ON GLASS PROVIDE BLANK SIGNAGE ON OPPOSITE SIDE BEING EQUAL SIZE AND COLOR TO MASK ADHESIVE, SEE 11/A10.81
3. LOCATE PER DETAIL 5/A10.81
4. FOR BRAILLE NOTES/GENERAL REQUIREMENTS REFER TO 4/A10.81



10.016

OFFICE SIGNAGE — 7 — 3" = 1'-0"



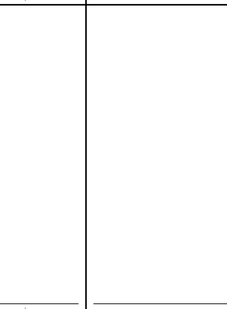
NOTES:

1.GRID LINES ARE SHOWN FOR PROPORTION ONLY AND ARE NOT TO APPEAR AS PART OF SYMBOL.

2. SIGNAGE SHALL COMPLY WITH SECTION 11B-703.7 CALIFORNIA BUILDING CODE.

10.003

ACCESSIBILITY SYMBOL — 2 — 1/8" = 1'-0"

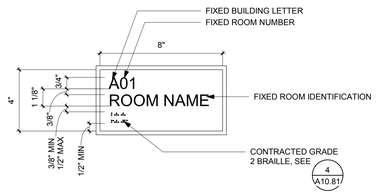


10.103

ROOM IDENTIFICATION SIGN MOUNTING — 11 — 3" = 1'-0"

NOTES:

1. PROVIDE SIGN WHERE INDICATED ON PLANS. ALL SIGNED DOORS TO RECEIVE BRAILLE ROOM IDENTIFICATION PER 4/A10.81
2. WHERE SIGNAGE IS INSTALLED ON GLASS PROVIDE BLANK SIGNAGE ON OPPOSITE SIDE BEING EQUAL SIZE AND COLOR TO MASK ADHESIVE, SEE 11/A10.81
3. LOCATE PER DETAIL 5/A10.81
4. FOR BRAILLE NOTES/GENERAL REQUIREMENTS REFER TO 4/A10.81

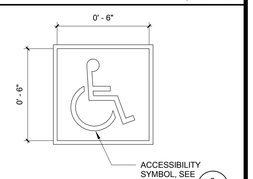


10.012

TACTILE ROOM IDENTIFICATION — 6 — 3" = 1'-0"

NOTES:
1. WHERE SIGNAGE IS INSTALLED ON GLASS PROVIDE BLANK SIGNAGE ON OPPOSITE SIDE BEING EQUAL SIZE AND COLOR TO MASK ADHESIVE.

2. ALL BLDG. ENTRANCES THAT ARE ACCESSIBLE TO & USABLE BY PHYSICALLY DISABLED PERSONS SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN & ADDITIONAL DIRECTIONAL SIGNS AS REQUIRED TO BE VISIBLE TO PERSONS ALONE APPROACHING PEDESTRIAN WAYS.



10.004

ACCESSIBILITY SIGN — 1 — 3" = 1'-0"

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HMC Architects

5015021-100

3546 Concours Street / Ontario, CA 91764
T 909 989 9979 / www.hmcarchitects.com

LICENSED ARCHITECT BRADLEY E GLADSTICK REG. NO. C-42437 EXP. 02-28-19 STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date
	DSA SUBMITTAL	10.04.2018
	DSA BACKCHECK	12.11.2018

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PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025
Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
SIGNAGE DETAILS

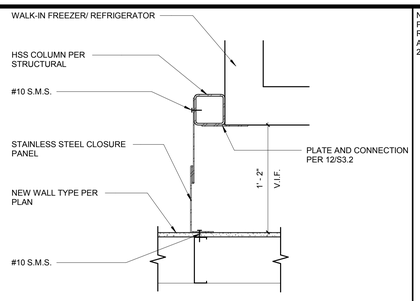
DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

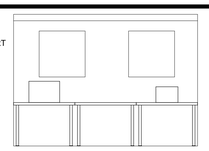
A10.81

If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

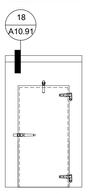


WALK-IN FREEZER/REFRIGERATOR CLOSER PANEL — 20 — 1 1/2" = 1'-0"

NOTE:
PANELS TO MEET REQUIREMENTS PER LOS ANGELES RESEARCH REPORT 25314. (CSI# 13030)

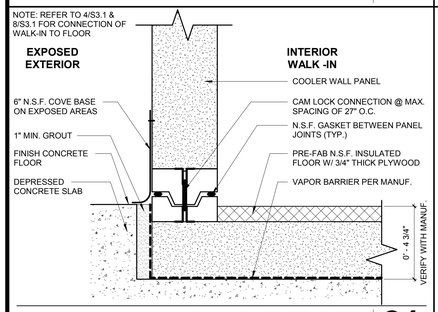


ELEVATION B

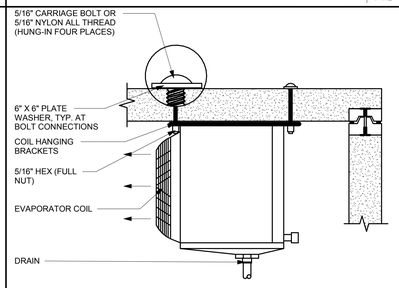


ELEVATION A

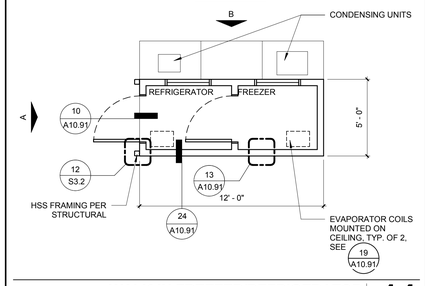
WALK-IN FREEZER/REFRIGERATOR — 14 — 1/4" = 1'-0"



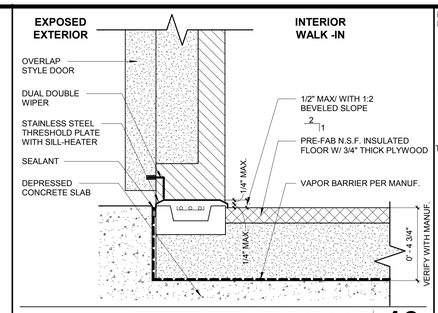
WALK-IN WALL PANEL TO FLOOR PANEL CONNECTION — 24 — 3" = 1'-0"



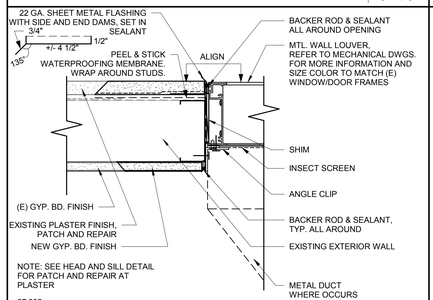
WALK-IN EVAPORATOR COIL SUPPORT DETAIL — 19 — 1 1/2" = 1'-0"



WALK-IN FREEZER/REFRIGERATOR — 14 — 1/4" = 1'-0"



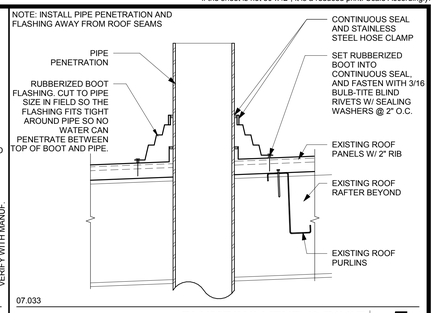
FREEZER/REFRIGERATOR DOOR THRESHOLD — 10 — 3" = 1'-0"



07.002

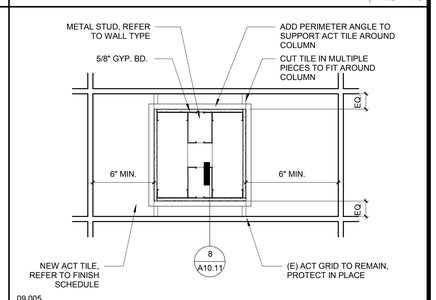
LOUVER @ EXTERIOR WALL- JAMB — 9 — 3" = 1'-0"

NOTE: INSTALL PIPE PENETRATION AND FLASHING AWAY FROM ROOF SEAMS



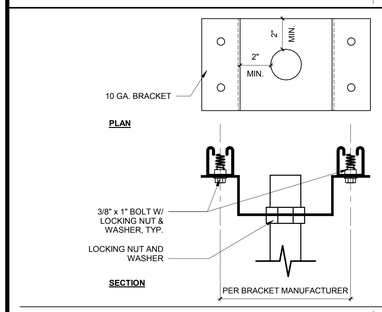
07.033

PLUMBING VENT @ ROOF — 5 — 1 1/2" = 1'-0"

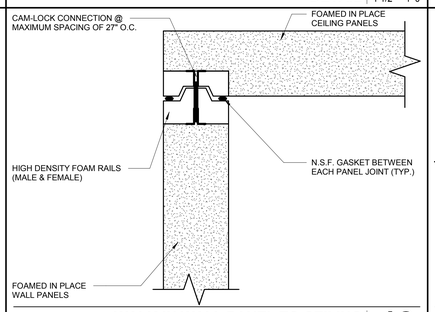


09.005

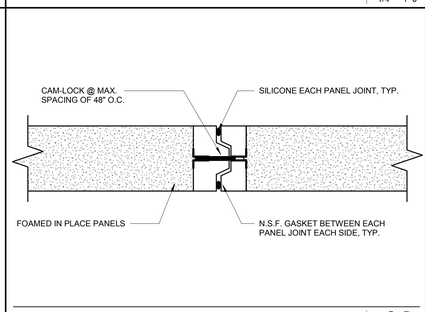
OPENING AT ACT TILE — 4 — 1" = 1'-0"



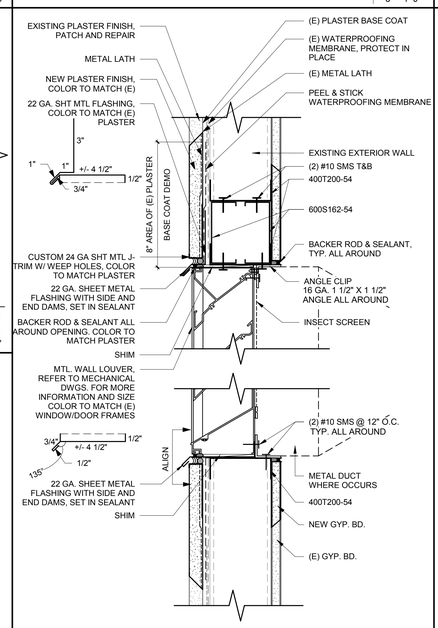
CEILING HUNG PROJECTOR ATTACHMENT — 23 — 3" = 1'-0"



WALK-IN WALL PANEL TO CEILING CONNECTION — 18 — 3" = 1'-0"

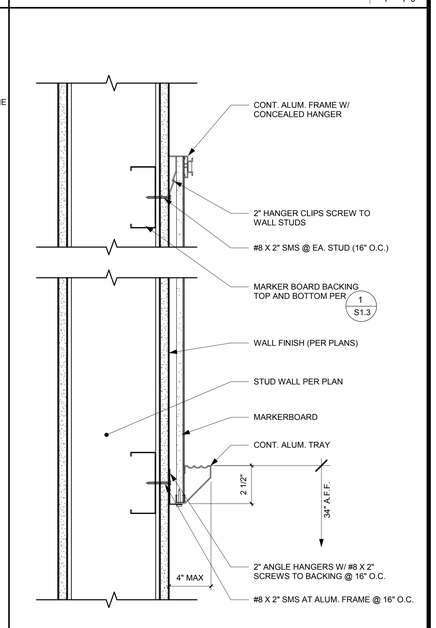


WALK-IN PANEL TO PANEL CONNECTION — 13 — 3" = 1'-0"



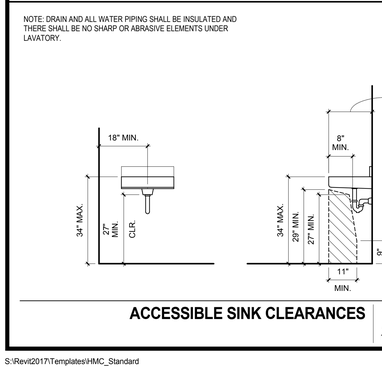
07.001

LOUVER @ EXTERIOR WALL - HEAD & SILL — 7 — 3" = 1'-0"

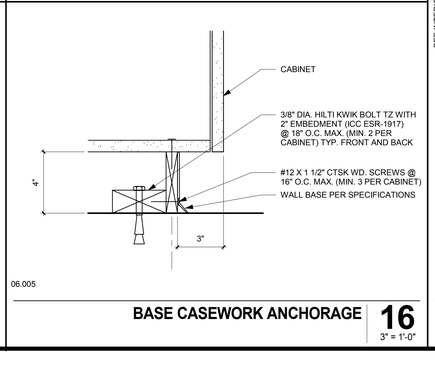


10.001

MARKERBOARD / TACKBOARD — 2 — 3" = 1'-0"

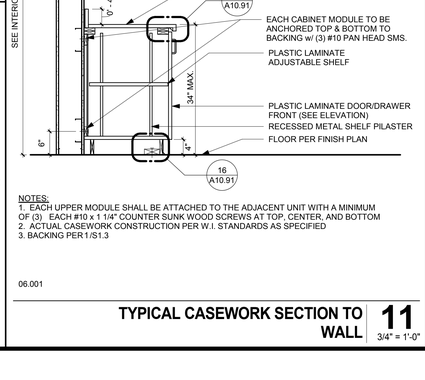


ACCESSIBLE SINK CLEARANCES — 21 — 1/2" = 1'-0"



06.005

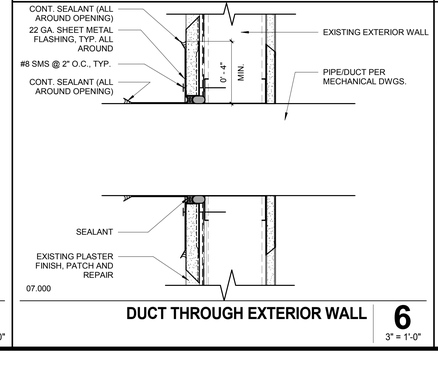
BASE CASEWORK ANCHORAGE — 16 — 3" = 1'-0"



NOTES:
1. EACH UPPER MODULE SHALL BE ATTACHED TO THE ADJACENT UNIT WITH A MINIMUM OF (3) EACH #10 x 1 1/4" COUNTER SUNK WOOD SCREWS AT TOP, CENTER, AND BOTTOM
2. ACTUAL CASEWORK CONSTRUCTION PER W.I. STANDARDS AS SPECIFIED
3. BACKING PER 1/S1.3

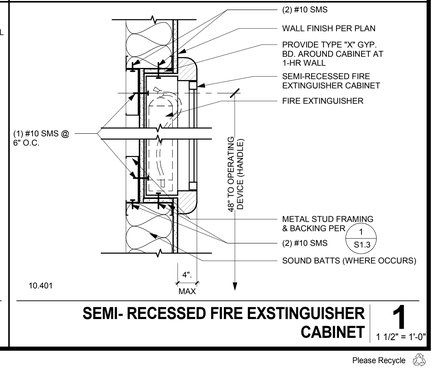
06.001

TYPICAL CASEWORK SECTION TO WALL — 11 — 3/4" = 1'-0"



07.000

DUCT THROUGH EXTERIOR WALL — 6 — 3" = 1'-0"



10.401

SEMI- RECESSED FIRE EXSTINGUISHER CABINET — 1 — 1 1/2" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

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5015021-100
3546 Concours Street / Ontario, CA 91764
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LICENSED ARCHITECT BRADLEY E GLASSICK NO. C-42437 EXP. 02-28-2019 STATE OF CALIFORNIA

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PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:
MISCELLANEOUS DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

A10.91

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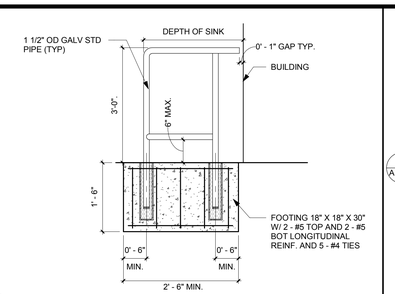
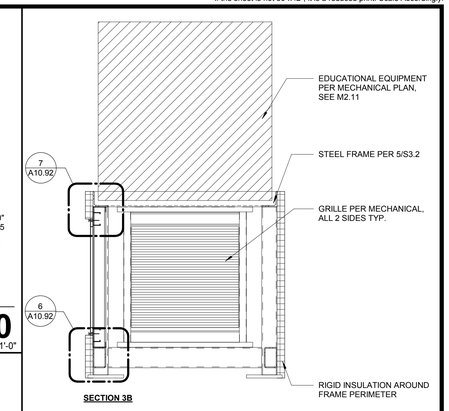
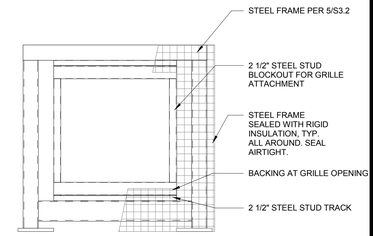


03.203

GUARDRAIL AT SINK 10
3/4" = 1'-0"

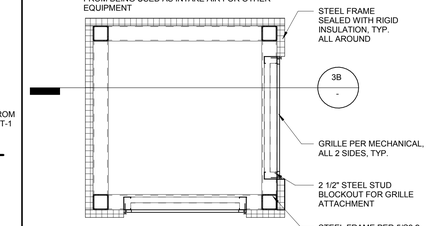


SECTION 3B



ELEVATION 3A

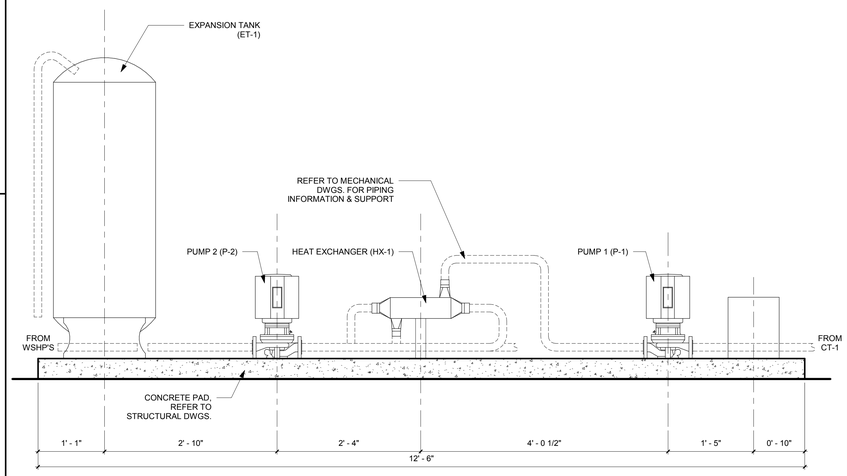
NOTE: COORDINATE GRILLE OPENINGS WITH ADJACENT EQUIPMENT TO AVOID EXHAUST AIR FROM BEING USED AS INTAKE AIR FOR OTHER EQUIPMENT



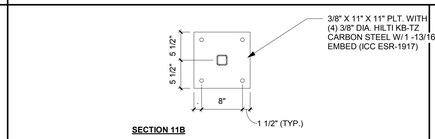
PLAN

BASE ENCLOSURE AT FURNACE 3
1" = 1'-0"

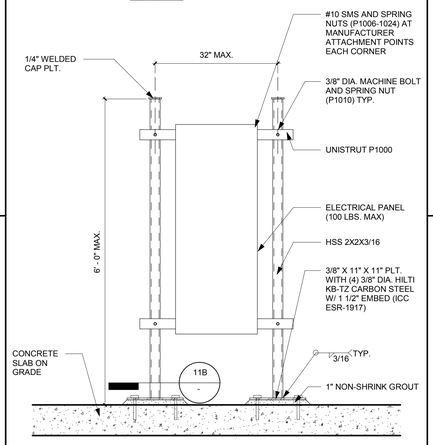
NOTE: REFER TO EQUIPMENT SCHEDULE ON SHEET S2.12 FOR ANCHORAGE INFORMATION



HEAT EXCHANGER AND EXPANSION TANK 8
1" = 1'-0"



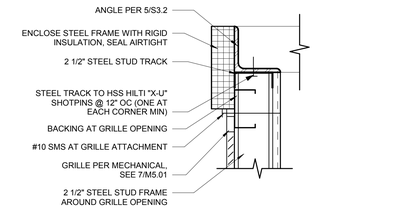
SECTION 11B



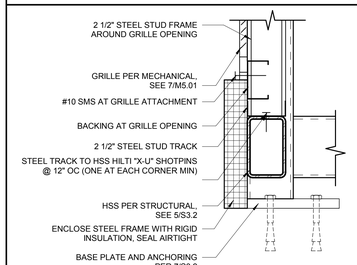
GENERAL NOTES:

1. ALL STEEL TO BE GALVANIZED & WELDS TO BE TOUCH-UP GALVANIZED
2. LOCATE ELECTRICAL PANEL TO ALLOW DOOR TO HAVE 90 DEG. OPENING AND 48" CLEAR IN FRONT

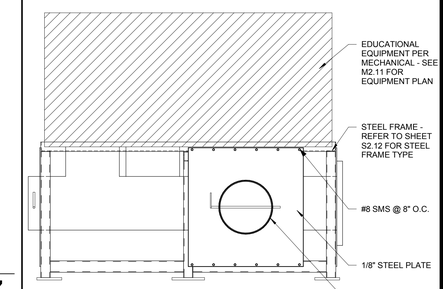
ELECTRICAL PANEL MOUNTING ON GRADE 11
1" = 1'-0"



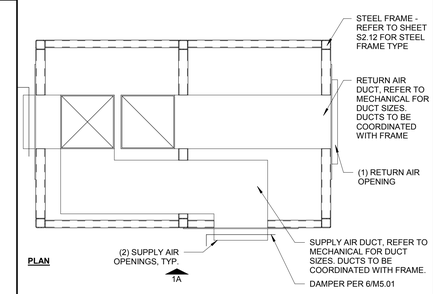
GRILLE/STUD ATTACHMENT TO EQUIPMENT FRAME TOP 7
3" = 1'-0"



GRILLE/STUD ATTACHMENT TO EQUIPMENT FRAME BOTTOM 6
3" = 1'-0"



ELEVATION 1A



PLAN

DUCTS AT HP UNITS 1
3/4" = 1'-0"

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T 909 989 9979 / www.hmcarchitects.com

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

LICENSED ARCHITECT BRADLEY E GLADSTONE NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

ISSUE:

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Keynotes:

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Sheet Title:
MISCELLANEOUS DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

A10.92

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CAST-IN-PLACE CONCRETE CONTINUED

11. CONCRETE MIX PROPORTIONING SHALL BE SIGNED AND SEALED BY A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND APPROVAL.
    1. STRENGTH: CONCRETE MIX PROPORTIONING SHALL BE BASED ON FIELD EXPERIENCE AND/OR TRIAL MIXTURES AS STIPULATED IN ACI 301, ARTICLE 4.2.3. SUBMIT CONCRETE MIX PROPORTIONING DATA, INCLUDING HISTORICAL STRENGTH RECORDS AND/OR RESULTS OF TRIAL MIXTURES, FOR EACH TYPE AND COMPRESSIVE STRENGTH OF CONCRETE.
    2. MODULUS OF ELASTICITY (MOE): MODULUS OF ELASTICITY TESTS SHALL BE PERFORMED ON LABORATORY TRIAL MIXTURES FOR EACH CONCRETE STRENGTH, EACH CONCRETE MIX PROPORTION, AND FOR EACH AGGREGATE SOURCE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
    3. THE DESIGN CONCRETE MIX PROPORTION SHALL SPECIFY AGGREGATES THAT PRODUCE A CONCRETE MODULUS OF ELASTICITY NOT LESS THAN THAT SPECIFIED IN THE PROJECT PLANS AND SPECIFICATIONS. THE MODULUS OF ELASTICITY OF PRODUCTION CONCRETE DELIVERED TO THE JOBSITE SHALL BE CONSISTENT WITH THE MODULUS OF ELASTICITY OF THE DESIGN MIX PROPORTION FOR ESTABLISHING THE CONCRETE f'c AND MOE USED IN THE BUILDING DESIGN.

12. FOR CONCRETE SLABS-ON-GRADE PLACED DIRECTLY ON VAPOR RETARDER:
    1. CONCRETE MIXTURE:
        1. USE INCREASED SIZE OF MAXIMUM-SIZE COARSE AGGREGATE (1" MINIMUM) AND COARSER SAND.
        2. COARSE AGGREGATE TO BE WELL GRADED WITH MINIMUM FLAT OR ELONGATED PARTICLES.
        3. REDUCE SAND CONTENT TO LOWEST LEVEL CONSISTENT WITH ADEQUATE WORKABILITY.
        4. USE HIGH-RANGE WATER-REDUCING ADMIXTURE WITH GOOD SHRINKAGE-REDUCTION CHARACTERISTICS.
    2. FINISHING AND CURING:
        1. USE PROPER FINISHING TECHNIQUES AND PROPER TIMING BETWEEN FINISHING OPERATIONS TO AVOID BLISTERING AND DELAMINATION.
        2. USE CONTINUOUS MOIST CURE OR HIGH-SOLIDS CURING COMPOUND.

13. CONCRETE MIXING SHALL CONFORM TO ASTM C94.

14. FOR MAT FOUNDATIONS 7 FEET AND THICKER, THE MIX DESIGN, PLACING SEQUENCE, AND METHOD OF THERMAL CONTROL MUST BE DONE IN SUCH A MANNER SUCH THAT THE INTERNAL CONCRETE TEMPERATURE DURING HYDRATION DOES NOT EXCEED 165 DEG F AND THE DIFFERENTIAL TEMPERATURE BETWEEN ANY TWO SURFACES WITHIN THE CONCRETE MASS IS LIMITED TO 40 DEG F.

15. THE MAXIMUM SIZE OF A SINGLE POUR FOR ELEVATED SLABS SHALL NOT EXCEED 25,000 SQUARE FEET AND THE LENGTH TO WIDTH RATIO OF THE POUR SHALL NOT EXCEED 2 WITHOUT THE APPROVAL OF THE ARCHITECT (STRUCTURAL EINGINEER).

16. SUBMIT SHOP DRAWINGS INDICATING LOCATIONS OF CONCRETE CONSTRUCTION JOINTS TO THE ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND APPROVAL PRIOR TO PLACING CONCRETE. LOCATE CONSTRUCTION JOINTS TO MINIMIZE EFFECTS OF SHRINKAGE AND AT POINTS OF LOW STRESS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED IN BEAMS AND SLABS UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS OR APPROVED BY THE ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO CONSTRUCTION.

17. THE OUTSIDE DIAMETER OF CONDUITS AND PIPES EMBEDDED IN WALLS AND SLABS SHALL NOT EXCEED 1/3 THE OVERALL THICKNESS OF SLAB OR WALL IN WHICH THEY ARE EMBEDDED. LOCATE CONDUITS AND PIPES WITHIN THE MIDDLE THIRD OF SLABS OR WALLS AND NO CLOSER THAN 3 DIAMETERS ON CENTER WITH A CLEAR SPACING NOT LESS THAN 4 INCHES. CROSSING OF ELECTRICAL CONDUIT IS NOT PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE ARCHITECT (STRUCTURAL ENGINNER).

18. PROVIDE SLEEVES FOR ELECTRICAL AND PLUMBING OPENINGS. IF CONFLICT OCCURS BETWEEN REINFORCING AND SLEEVES, REPOSITION REINFORCING OR SLEEVES OR BOTH. DO NOT CUT ANY REINFORCING. CORING IS NOT PERMITTED UNLESS APPROVED IN WRITING BY THE ARCHITECT (STRUCTURAL ENGINEER).

19. PRIOR TO PLACING CONCRETE, REINFORCING BARS (INCLUDING WELDED WIRE REINFORCEMENT), EMBEDDED PLATES, ANCHOR BOLTS, AND OTHER CONCRETE EMBEDMENTS SHALL BE WELL SECURED IN POSITION.

20. CONCRETE PLACEMENT SHALL CONFORM TO ACI 304 AND CONTRACT DOCUMENTS. INTENTIONALLY ROUGHEN ALL PREVIOUSLY HARDENED CONCRETE SURFACES TO A FULL AMPLITUDE OF 1/4-INCH AGAINST WHICH FRESH CONCRETE IS PLACE.

21. PROVIDE KEYED CONSTRUCTION JOINT WHERE INDICATED ON DRAWINGS. CLEAN, REMOVE LAITANCE, THOROUGHLY WET, AND REMOVE STANDING WATER IMMEDIATELY BEFORE PLACING FRESH CONCRETE.

22. FORMS SHALL BE CONSTRUCTED TO PROVIDE CAMBER AS SPECIFIED ON THE DRAWINGS. CONCRETE SLAB THICKNESS SHALL BE MAINTAINED.

23. FORM EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS WITH A 3/4-INCH CHAMFER, UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.

24. AT LEAST TWO HOURS MUST ELAPSE BETWEEN THE END OF COLUMN OR WALL PLACEMENT AND THE BEGINNING OF SLAB PLACEMENT.

25. CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY ARCHITECT (STRUCTURAL ENGINEER).

26. CURING COMPOUNDS, SEALERS, HARDENERS, ETC., USED ON CONCRETE THAT RECEIVES A FINISH SHALL BE APPROVED BY THE ARCHITECT BEFORE USE.

27. GROUT SHALL BE NON-SHRINK, NON-METALLIC, SHALL NOT CONTAIN CHLORIDES, AND SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI AND CONFIRM TO ASTM C-1107.

28. LEAN CONCRETE SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE. USE ONLY WHERE SPECIFICALLY INDICATED.

REINFORCING STEEL CONTINUED

11. MINIMUM CLEARANCES BETWEEN PARALLEL REINFORCING STEEL INCLUDING SPLICED BARS SHALL BE ONE INCH, ONE BAR DIAMETER, OR 4/3 TIMES THE MAXIMUM SIZE AGGREGATE, WHICHEVER IS GREATER. PROVIDE 1 1/2 INCHES OR 1 1/2 BAR DIAMETERS, WHICHEVER IS GREATER, AT COLUMNS ONLY. FOR BUNDLED BARS, MINIMUM CLEAR DISTANCES BETWEEN UNITS OF BUNDLED BARS SHALL BE SAME AS SINGLE BARS EXCEPT BAR DIAMETER IS DERIVED FROM EQUIVALENT TOTAL AREA OF BUNDLE.PROVIDE THE FOLLOWING CONCRETE COVERAGE FOR REINFORCING STEEL PLACED IN CAST-IN-PLACE CONCRETE:
    1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
    2. CONCRETE EXPOSED TO EARTH OR WEATHER:
        NO. 6 THROUGH NO. 18 BARS 2"
        NO. 5 BARS, W31 OR D31 WIRE, AND SMALLER 1-1/2"
    3. SLAB-ON-GRADE MID-HEIGHT OF SLAB

    (*) CONCRETE COVERAGE ADEQUATE FOR FIRE-RESISTIVE PERIOD OF 2 HOURS.

12. WALL AND COLUMN DOWELS SHALL MATCH SIZE, GRADE, AND SPACING OF RESPECTIVE VERTICAL REINFORCING, UNLESS OTHERWISE NOTED.

13. USE PLASTIC OR PLASTIC COATED SPACERS AND CHAIRS IF RESTING ON EXPOSED CONCRETE SURFACES.

14. WELDING OF REINFORCING STEEL SHALL BE MADE WITH LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH AMERICAN WELD SOCIETY AWS D1.4 "STRUCTURAL WELDING CODE – REINFORCING STEEL".
    1. EXCEPT FOR REINFORCING STEEL CONFORMING TO ASTM A706/A706M, DETERMINE CARBON EQUIVALENT OF ALL REINFORCING STEEL TO BE WELDED. SUBMIT WPS FOR ALL REINFORCING STEEL TO BE WELDED TO ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND TO GOVERNING CODE AUTHORITY FOR APPROVAL PRIOR TO EXECUTION. WPS SHALL INCLUDE:
        1. SKETCH OF JOINT DESCRIBING GEOMETRY AND APPLICABLE DIMENSIONS, WELD TYPE AND SIZE, SEQUENCE OF WELD DEPOSITION, AND MAXIMUM LAYER THICKNESS AND BEAD WIDTHS.
        2. APPLICABLE WELD PROCESS.
        3. FILLER METAL PER AWS STANDARD AND ELECTRODE SPECIFICATION AND CLASSIFICATION, AS WELL AS DETAILS OF SHIELDING MATERIAL.
        4. ELECTRICAL CHARACTERISTICS FOR WELD PROCESS USED SUCH AS TYPE OF CURRENT AND ACCEPTABLE RANGE OF CURRENT MEASURED IN AMPERAGE, VOLTAGE RANGE, AND ELECTRODE DIAMETER. FOR WELD FEED PROCESS, INDICATE MANUFACTURER RECOMMENDED WIRE SPEED, MELT OFF RATE AND DEPOSITION RATE.
        5. PREHEAT TEMPERATURES.
        6. PROCEDURE QUALIFICATION RECORDS (PQR) FOR ALL WPS'S QUALIFIED BY TESTING.
    2. WELDERS SHALL BE CERTIFIED TO CONFORM WITH AWS STANDARDS AND APPROVED BY THE GOVERNING CODE AUTHORITY.

15. REINFORCING STEEL BENDS SHALL BE MADE COLD. RE-BENDING OF PREVIOUSLY BENT REINFORCING IS NOT PERMITTED.

16. ALL REINFORCING STEEL, INCLUDING WELDED WIRE REINFORCING, SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, CONCRETE BLOCKS, CHAIRS, BOLSTERS, ETC. SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL REINFORCING. HOOKING AND WALKING-IN IS NOT PERMITTED.

17. ALL REINFORCING STEEL SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN FINAL INSPECTION IS CONDUCTED.

18. CONTACTOR SHALL PROVIDE FOR AN ALLOWANCE OF 5 TONS OR 2%, WHICHEVER IS GREATER, OF REINFORCING STEEL TO BE FABRICATED AND/OR PLACED DURING THE PROGRESS OF WORK AS MAY BE DIRECTED BY THE ARCHITECT (STRUCTURAL ENGINEER). THE UNUSED PORTION SHALL BE CREDITED TO THE OWNER AT THE COMPLETION OF CONCRETE WORK.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE STANDARDS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", WITH MODIFICATIONS AS NOTED IN THE CONTRACT DOCUMENTS.

2. CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28-DAY (f'c), UNLESS NOTED OTHERWISE:

CONTINUOUS FOOTINGS	4,000 PSI	NORMAL WEIGHT
SPREAD FOOTINGS	4,000 PSI	NORMAL WEIGHT
SLABS-ON-GRADE	4,000 PSI	NORMAL WEIGHT
ALL OTHER CONCRETE	4,000 PSI	NORMAL WEIGHT

3. UNLESS NOTED OTHERWISE HEREIN, CONCRETE IS ASSIGNED TO EXPOSURE CLASSES F0, S0, W0, AND C0, AS DEFINED IN TABLE 19.3.1.1 OF ACI 318.
    A. CONCRETE IN CONTACT WITH SITE SOIL SHALL BE ASSIGNED TO EXPOSURE CLASS S2.

4. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR TYPE II. PORTLAND CEMENT FOR CONCRETE IN EXPOSURE CLASS S2 SHALL CONFORM TO ASTM C150, TYPE V (OR OTHER TYPES OF PORTLAND CEMENT WITH C3A CONTENT LESS THAN 5 PERCENT).

5. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. NORMAL WEIGHT CONCRETE SHALL HAVE A MINIMUM DRY UNIT WEIGHT OF 145 PCF.

6. AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL BE EXPANDED SHALE CONFORMING TO ASTM C330. PRESIZE AGGREGATE BEFORE FIRING TO ALLOW OUTER CERAMIC SHELL TO REMAIN INTACT. LIGHTWEIGHT CONCRETE SHALL HAVE A DRY UNIT WEIGHT OF 110±3 PCF AND AIR CONTENT OF 4.5±1.5 PERCENT AS MEASURED BY THE VOLUMETRIC METHOD DESCRIBED IN ASTM C173.

7. MAXIMUM AGGREGATE SIZE SHALL BE 1-1/2 INCHES FOR FOUNDATIONS AND 1 INCH ELSEWHERE, BUT NO LARGER THAN (A) 1/5 THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS, (B) 1/3 THE DEPTH OF SLABS, OR (C) 3/4 THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS OR WIRES, BUNDLES OF BARS, INDIVIDUAL TENDONS, BUNDLED TENDONS, OR DUCTS. SMALLER AGGREGATE SIZES MAY BE ALLOWED WITH THE APPROVAL OF THE ARCHITECT (STRUCTURAL ENGINEER).

8. MAXIMUM SLUMP SHALL BE 4 INCHES TYPICALLY AND 4 INCHES IN FLATWORK, UNLESS A HIGH-RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER) IS USED IN THE CONCRETE MIX PROPORTIONS.

9. CONCRETE SHRINKAGE SHALL BE LIMITED TO 0.05 PERCENT AT 35 DAYS AS DETERMINED BY ASTM C157. TEST SPECIMENS SHALL BE MOIST CURED IN LIME SATURATED WATER FOR 28 DAYS AND AIR STORED FOR 7 DAYS.

10. WATER CEMENT RATIO SHALL NOT EXCEED 0.45 FOR ALL FLATWORK THAT RECEIVES A MOISTURE SENSITIVE ADHESIVE TO AFFIX FLOOR FINISHES AND 0.50 ELSEWHERE. EXCEPTION: FOR CONCRETE ON METAL DECK, A WATER CEMENT RATIO OF 0.50 MAY BE USED FOR CONCRETE PLACED ON VENTED METAL DECKS. WATER CEMENT RATIO FOR CONCRETE IN EXPOSURE CLASS S2 SHALL NOT EXCEED 0.45 AND f'c NOT LESS THAN 4500 PSI.

FOUNDATIONS

1. DESIGN OF FOUNDATION SYSTEM BASED ON CBC-2016 & 1806A, PRESUMPTIVE LOAD BEARING VALUES OF SOIL.

2. ISOLATED SPREAD FOOTING AND CONTINUOUS SPREAD FOOTING DESIGN BASED ON ALLOWABLE NET BEARING PRESSURES OF 1500 PSF. BOTTOM OF FOOTINGS SHALL BE A MINIMUM OF 18 INCHES BELOW LOWEST ADJACENT FLOOR OR GRADE AND FOUNDED ON RECOMMENDED BEARING MATERIAL (COMPACTED ONSITE SOILS).

3. LATERAL BEARING PRESSURE FOR ISOLATED POLS IS ASSUMED TO BE 100 PSF/FT. ISOLATED POLS THAT ARE NOT AFFECTED BY 1/2 INCH MOTION AT THE GROUND SURFACE DUE TO SHORT TERM LATERAL LOADS SHALL BE PERMITTED TO BE DESIGNED USING LATERAL BEARING PRESSURE EQUAL TO TWO TIMES THIS VALUE.

4. FOUNDATIONS MAY BE CAST DIRECTLY AGAINST EXCAVATIONS PROVIDED EXCAVATION IS CAPABLE OF MAINTAINING A VERTICAL CUT WITHOUT SLOUGHING.

5. CONCRETE SHALL NOT BE PLACED ON FROZEN GRADE. IF FOOTING IS SUBJECT TO FREEZING TEMPORATURES AFTER FOUNDATION CONSTRUCTION, THEN FOOTING SHALL BE ADEQUATELY PROTECTED FROM FREEZING.

6. EXCAVATION, BACKFILL, AND COMPACTION SHALL BE DONE IN STRICT ACCORDANCE WITH REPORT OF GEOTECHNICAL ENGINEERING INVESTIGATION RECOMMENDATIONS.

7. FOUNDATION EARTHWORK SHALL BE OBSERVED BY A QUALIFIED GEOTECHNICAL ENGINEER, RETAINED BY OWNER AND SATISFACTORY TO ARCHITECT (STRUCTURAL ENGINEER) AND GOVERNING CODE AUTHORITY. PERFORM REQUIRED OBSERVATIONS OF THIS CONTRACT AND CBC SECTION 1705.6.

8. FOUNDATION EXCAVATION, BACKFILLING, AND COMPACTION SHALL BE OBSERVED AND APPROVED BY A GEOTECHNICAL ENGINEER AND THE GOVERNING AGENCY PRIOR TO PLACING REINFORCING STEEL AND CONCRETE. GEOTECHNICAL ENGINEER SHALL PROVIDE A LETTER OF COMPLIANCE TO THE OWNER.

9. TEMPORARY CUT SLOPES SHALL NOT EXCEED THOSE RECOMMENDED IN THE REPORT OF GEOTECHNICAL ENGINEERING INVESTIGATION. DO NOT PERMIT ANY PERSON TO DESCEND INTO TRENCHES OR EXCAVATIONS GREATER THAN FIVE FEET IN DEPTH UNLESS NECESSARY PERMIT FROM STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY IS OBTAINED PRIOR TO ISSUANCE OF BUILDING OR GRADING PERMIT. CONTRACTOR TO PROVIDE FOR DESIGN, PERMIT, AND INSTALLATION OF ALL SHORING AND SHEATHING NECESSARY TO SAFELY RETAIN EARTH BANKS.

10. CONTRACTOR TO PROVIDE FOR DEWATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. DEWATERING SHALL EFFECTIVELY ELIMINATE ANY HYDROSTATIC PRESSURE ON SHORING. ENSURE THAT CONTAMINATED WATER IS NOT DISPOSED OF IN PUBLIC SEWER OR STORM DRAIN SYSTEM AND ENSURE THAT DIRTY WATER IS NOT DISPOSED OF INTO PUBLIC RIGHT-OF-WAY.

11. UNLESS ADEQUATELY BRACED AND SHORED, RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL WALLS HAVE ATTAINED FULL DESIGN STRENGTH. FOR PIT WALLS AND BUILDING WALLS BELOW GRADE, BRACING AND SHORING SHALL REMAIN IN PLACE UNTIL ATTACHED FLOORS ARE PLACED, CURED FOR AT LEAST 7 DAYS, AND HAVE ATTAINED FULL DESIGN STRENGTH. BACKFILL PLACED IMMEDIATELY BEHIND RETAINING WALLS SHALL BE COMPACTED WITH HAND OPERATED EQUIPMENT.

12. SIDEWALKS OR PAVING IMMEDIATELY ADJACENT TO BUILDING PERIMETER SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING. LANDSCAPE IRRIGATION IS NOT PERMITTED WITHIN FIVE FEET OF BUILDING PERIMETER FOOTINGS EXCEPT WHEN ENCLOSED IN PROTECTED PLANTERS THAT DIRECT DRAINAGE AWAY FROM STRUCTURE AND FOUNDATIONS. DISCHARGE FROM DOWNSPOUTS, ROOF DRAINS AND SCUPPERS IS NOT PERMITTED ONTO UNPROTECTED SOILS WITHIN FIVE FEET OF BUILDING PERIMETER

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE TO AMERICAN CONCRETE INSTITUTE ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".

2. REINFORCING STEEL SHALL CONFORM TO ASTM A615/A615M, GRADE 60, UNLESS NOTED OTHERWISE. BARS TO BE WELDED SHALL CONFORM TO LOW ALLOY ASTM A706/A706M, GRADE 60.

3. EFORMED LONGITUDINAL REINFORCEMENT RESISTING EARTHQUAKE-INDUCED MOMENT, AXIAL FORCE, OR BOTH, IN SPECIAL MOMENT FRAMES, SPECIAL STRUCTURE WALLS, AND ALL COMPONENTS OF SPECIAL STRUCTURAL WALLS INCLUDING COUPLING BEAMS AND WALL PIERS SHALL COMPLY WITH ASTM A706/A706M, GRADE 60. ASTM A615/A615M GRADES 40 AND 60 REINFORCEMENT SHALL BE PERMITTED IN THESE MEMBERS IF:
    A. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI.
    B. FOR ASTM A615/A615M GRADE 40 REINFORCEMENT, THE RATIO OF THE ACTUAL TENSILE STRENGTH TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
    C. FOR ASTM A615/A615M GRADE 60 REINFORCEMENT, THE MINIMUM ELONGATION IN 8 INCHES SHALL BE AS FOLLOWS:
        1. NO. 3 THROUGH NO. 6 = 14 PERCENT
        2. NO. 7 THROUGH NO. 11 = 12 PERCENT
        3. NO. 14 AND NO. 18 = 10 PERCENT

4. WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064/A1064M. LAP WELDED WIRE REINFORCEMENT 8 INCHES MINIMUM, MEASURED BETWEEN OUTERMOST CROSS WIRE OF EACH REINFORCEMENT SHEET.

5. DEFORMED BAR ANCHOR STUDS SHALL BE NELSON STUD WELDING, INC. TYPE D2L (ICC EVALUATION SERVICE REPORT ESR-2907), OR AN APPROVED EQUAL, AND SHALL BE MADE FROM DEFORMED STEEL WIRE CONFORMING TO ASTM A1064/a1064M, WITH A MINIMUM YIELD STRENGTH OF 70 KSI AND A MINIMUM TENSILE STRENGTH OF 80 KSI.

6. SHEAR REINFORCING IN FLAT SLABS SHALL BE DECON STUDRAILS BY DECON, INC. (ICC EVALUATION SERVICE REPORT ESR-2494) OR APPROVED EQUAL. THE SHEAR REINFORCING ASSEMBLY, CONSISTING OF LARGE–HEAD SHEAR STUDS WELDED TO STEEL BARS, SHALL COMPLY WITH ASTM A1044.

7. HEADED STEEL REINFORCING BAR ANCHORS SHALL BE LENTON TERMINATOR BY ERICO INTERNATIONAL CORPORATION (IAPMO UES EVALUATION REPORT NO. 0188) OR APPROVED EQUAL. HEADED STEEL REINFORCING BAR ANCHORS MAY BE USED IN LIEU OF STANDARD HOOKS ONLY WHERE SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER.

8. MECHANICAL COUPLERS FOR SPLICING REINFORCING BARS SHALL BE LENTON STANDARD COUPLERS OR LENTON FORM SAVER COUPLERS, SA OR FS SERIES, BY ERICO INTERNATIONAL CORPORATION (IAPMO UES EVALUATION REPORT NO. 0129) OR APPROVED EQUAL. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICING REINFORCING BARS ONLY WHERE SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER.

9. PREPARE REINFORCING STEEL SHOP DRAWINGS IN ACCORDANCE TO ACI 315, PART B. SHOP DRAWINGS MAY BE PREPARED MANUALLY OR BY COMPUTER. PLACING DRAWINGS SHALL BE PREPARED TO THE SAME STANDARD AS CONTRACT DRAWINGS. SHOW REINFORCING PLACEMENT, SPLICE LOCATIONS, REINFORCING LENGTHS, DETAILS, ELEVATIONS, BEND DETAILS, ETC. SUBMIT TO ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW PRIOR TO FABRICATION. PROMPTLY NOTIFY ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO DEVELOPING REINFORCING STEEL SHOP DRAWINGS IF INSUFFICIENT CLEAR DISTANCES BETWEEN REINFORCING STEEL OR OTHER CONGESTION IS ENCOUNTERED. DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS. IF SUBMITTAL IS PARTIAL, CLEARLY INDICATE ITEMS EXCLUDED FROM SUBMITTAL. SHOP DRAWINGS WILL BE REJECTED IF NOT PREPARED TO THE STANDARDS STATED ABOVE.

10. REINFORCING STEEL SHALL BE SPLICED AS SHOWN ON THE DRAWINGS. IF NOT SHOWN, LOCATE SPLICES IN AREAS OF MINIMUM STRESS. LAP (SPLICE) LENGTHS ARE AS INDICATED ON THE DRAWINGS.

GENERAL

1. ALL WORK SHALL CONFORM TO THE STANDARDS OF THE 2016 CALIFORNIA BUILDING CODE, AS AMENDED BY DIVISION OF THE STATE ARCHITECT (DSA).

2. THE PROJECT MANUAL FORMS A PART OF THESE GENERAL NOTES. CODES, STANDARDS, AND SPECIFICATIONS, INCLUDING ADDENDA AND SUPPLEMENTS, REFERENCED IN THE CONTRACT DOCUMENTS SHALL BE THE LATEST APPROVED ISSUE, UNLESS SPECIFICALLY NOTED.

3. NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. IF CONFLICT OCCURS BETWEEN THE CONTRACT DRAWINGS AND THE PROJECT MANUAL, IMMEDIATELY NOTIFY ARCHITECT (STRUCTURAL ENGINEER) FOR RESOLUTION. DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.

4. DESIGN LIVE LOADS ARE NOTED ON DRAWINGS.

5. RISK CATEGORY = III

6. CODE LEVEL WIND DESIGN DATA:
    a. DESIGN WIND SPEED, V_{ULT} (ULTIMATE) / V_{ASD} (NOMINAL) = 115 MPH
    b. EXPOSURE CATEGORY = C
    c. ENCLOSURE CLASSIFICATION = ENCLOSED BUILDING
    d. INTERNAL PRESSURE COEFFICIENT, GCpi = ± 0.18

7. CODE LEVEL EARTHQUAKE DESIGN DATA:
    a. SITE COORDINATES = 33.13565 °N, -117.05203 °W
    b. MAPPED SPECTRAL RESPONSE ACCELERATION, S_S = 0.923g
    c. MAPPED SPECTRAL RESPONSE ACCELERATION, S_1 = 0.335g
    d. SITE CLASS = D
    e. DESIGN SPECTRAL RESPONSE COEFFICIENT, S_{DS} = 0.696g
    f. DESIGN SPECTRAL RESPONSE COEFFICIENT, S_{D1} = 0.439g
    g. IMPORTANCE FACTOR, I_E = 1.25
    h. SEISMIC DESIGN CATEGORY = D

8. GOVERNING CODE AUTHORITY: DIVISION OF THE STATE ARCHITECT (DSA).

9. CONTRACT DOCUMENTS INDICATE INFORMATION SUFFICIENT TO CONVEY DESIGN INTENT. REVIEW CONTRACT DOCUMENTS AND VERIFY FIELD AND EXISTING CONDITIONS. PROMPTLY NOTIFY ARCHITECT (STRUCTURAL ENGINEER), PRIOR TO PROCEEDING WITH WORK, IF FURTHER CLARIFICATION OF DESIGN INTENT IS NEEDED.

10. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ARCHITECT (STRUCTURAL ENGINEER) OF ANY DISCREPANCIES.

11. PERFORM STRUCTURAL RELATED WORK AND DEVELOP SHOP DRAWINGS CONSIDERING CONTRACT DOCUMENTS IN THEIR ENTIRETY. CONDITIONS NOT SPECIFICALLY DETAILED SHALL BE CONSTRUCTED AS DETAILED FOR SIMILAR WORK.

12. CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION. PROVIDE ALL NECESSARY MEASURES TO PROTECT THE STRUCTURE DURING CONSTRUCTION. COMPLY WITH THE STATE OF CALIFORNIA, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH REGULATIONS. CONSTRUCTION MATERIALS, IF PLACED ON FRAMED FLOORS AND ROOFS, SHALL BE SPREAD OUT SUCH THAT THE DESIGN LIVE LOAD PER SQUARE FOOT IS NOT EXCEEDED. PROVIDE ADEQUATE SHORING IF OVERLOAD IS ANTICIPATED OR WHERE STRUCTURAL ELEMENTS HAVE NOT ATTAINED FULL DESIGN STRENGTH. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT CONSTITUTE ACCEPTANCE OF CONSTRUCTION MEANS AND METHODS.

13. SUBMIT SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION. CONTRACTOR SHALL REVIEW FOR COMPLETENESS AND COMPLIANCE WITH CONTRACT DOCUMENTS PRIOR TO SUBMISSION TO ARCHITECT (STRUCTURAL ENGINEER). ARCHITECT'S (STRUCTURAL ENGINEER'S) REVIEW IS FOR GENERAL CONFORMANCE WITH DESIGN INTENT AND DOES NOT CONSTITUTE AN AUTHORIZATION TO DEVIATE FROM TERMS AND CONDITIONS OF CONTRACT. WHEN INDICATED, THE SUBMITTAL SHALL BE SIGNED AND SEALED BY A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA. MAINTAIN AT SITE A COPY OF REVIEWED AND ACCEPTED SUBMITTALS.

14. MODIFICATIONS AND SUBSTITUTIONS MUST BE ACCEPTED IN WRITING BY ARCHITECT (STRUCTURAL ENGINEER). NO MODIFICATION OR SUBSTITUTION WILL BE ACCEPTED VIA SHOP DRAWING REVIEW. MANUFACTURED MATERIALS SHALL BE APPROVED BY THE GOVERNING CODE AUTHORITY PRIOR TO THEIR USE. ADHERE TO ALL CONDITIONS OF THOSE APPROVALS.

15. "TYPICAL DETAILS" ARE APPLICABLE THROUGHOUT CONSTRUCTION DOCUMENTS AND MAY NOT BE SPECIFICALLY REFERENCED THEREIN. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THESE TYPICAL DETAILS AND UNDERSTANDING EXTENT OF THEIR APPLICATION PRIOR TO PERFORMING WORK.

16. UNLESS SPECIFICALLY SHOWN ON THE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.

17. SEE ARCHITECTURAL DRAWINGS FOR:
    a. SIZE AND LOCATION OF DOOR AND WINDOW OPENINGS IN STRUCTURAL WALLS
    b. SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS AND SLAB EDGES
    c. SIZE AND LOCATION OF NON-BEARING CMU WALLS AND OPENINGS THEREIN
    d. SIZE AND LOCATION OF CONCRETE CURBS, SLOPES, DEPRESSIONS, CHANGES IN LEVEL, CHAMFERS AND REVEALS, INSERTS FOR FINISH SYSTEMS.
    e. EXTERIOR WALL SYSTEM AND LOCATION
    f. STAIR SIZE AND LOCATION, FRAMING AND DETAILS
    g. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS

18. SEE MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS FOR:
    a. SIZE AND LOCATION OF EQUIPMENT PADS, EQUIPMENT ANCHORAGE TO STRUCTURE, AND EQUIPMENT WEIGHTS
    b. ANCHORAGE OF DUCTWORK, PIPING, ELECTRICAL CONDUITS TO STRUCTURE
    c. ELECTRICAL CONDUIT RUNS, OUTLETS AND BOXES IN CONCRETE SLABS AND WALLS
    d. PIPE SLEEVES, TRENCHES, AND OPENINGS THROUGH WALLS AND SLABS FOR DUCTWORK, PIPE RUNS, ELECTRICAL CONDUIT RUNS

19. MECHANICAL, ELECTRICAL AND PLUMBING LOADS SHALL BE SUPPORTED FROM BEAMS. EXCEPTION: LIGHT MECHANICAL, ELECTRICAL AND PLUMBING LOADS MAY BE SUPPORTED BY CONCRETE-ON-METAL DECK ASSEMBLY, BUT MUST BE ANCHORED INTO STRUCTURAL CONCRETE BY A SYSTEM HAVING CURRENT ICC-ES OR IAPMO UES EVALUATION REPORT.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects
5015021-100
3546 Concours Street / Ontario, CA 91764
T 909

If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

Sheet List	
TW	Sheet Name
S0.1	GENERAL NOTES
S0.2	GENERAL NOTES
S1.1	TYPICAL CONCRETE DETAILS
S1.2	TYPICAL CONCRETE DETAILS
S1.3	TYPICAL METAL STUDS DETAILS
S2.11	BLDG 2A - FOUNDATION PLAN
S2.12	BLDG 2A - FRAMING PLAN
S3.1	ELEVATIONS AND DETAILS
S3.2	DETAILS
S3.3	DETAILS
S3.4	DETAILS
S3.5	PRE-APPROVED LT GA DETAILS

Grand total: 12

POST-INSTALLED ANCHORS

1. POST-INSTALLED ANCHORS INSTALLED IN NORMAL WEIGHT OR LIGHTWEIGHT CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
   A. KWIK BOLT TZ EXPANSION ANCHORS (ICC-ES REPORT ESR-1917) AS MANUFACTURED BY HILTI, INC.
   B. HIT-RE 500-V3 ADHESIVE ANCHORS (ICC-ES REPORT ESR-3814) AS MANUFACTURED BY HILTI, INC. (NORMAL WEIGHT CONCRETE ONLY).
2. POST-INSTALLED ANCHORS INSTALLED IN NORMAL WEIGHT OR LIGHTWEIGHT CAST-ON-METAL DECK CONCRETE SHALL BE AS FOLLOWS:
   A. INSTALLED ON UNDERSIDE OF DECK: KWIK BOLT TZ EXPANSION ANCHORS (ICC-ES REPORT ESR-1917) AS MANUFACTURED BY HILTI, INC.
   B. INSTALLED ON TOP SIDE OF DECK HAVING A MINIMUM CONCRETE THICKNESS OF 3-1/4 INCH OVER TOP OF DECK: KWIK BOLT TZ EXPANSION ANCHORS (ICC-ES REPORT ESR-1917) AS MANUFACTURED BY HILTI, INC.
3. POST-INSTALLED ANCHORS INSTALLED IN FULLY GROUTED CONCRETE MASONRY UNITS SHALL BE AS FOLLOWS:
   A. KWIK BOLT 3 EXPANSION ANCHORS (ICC-ES REPORT ESR-1385) AS MANUFACTURED BY HILTI, INC.
   B. HIT HY 150 MAX ADHESIVE ANCHORS (ICC-ES REPORT ESR-1967) AS MANUFACTURED BY HILTI, INC.
4. POST-INSTALLED ANCHORS INSTALLED IN UNREINFORCED BRICK (13-INCH MIN THICKNESS) SHALL BE AS FOLLOWS:
   A. HIT HY-20 ADHESIVE ANCHORS WITH SCREEN TUBE (ICC-ES REPORT ESR-2659) AS MANUFACTURED BY HILTI, INC.
5. POST-INSTALLED ANCHORS OF EQUAL QUALITY AND WITH CURRENT ICC-ES REPORT MAY BE SUBSTITUTED IF APPROVED BY THE ARCHITECT (STRUCTURAL ENGINEER).
6. POST-INSTALLED ANCHORS INSTALLED IN EXTERIOR EXPOSURE OR DAMP ENVIRONMENT SHALL BE STAINLESS STEEL.
7. DOWELS ANCHORED IN CONCRETE, CONCRETE MASONRY UNITS (GROUTED OR HOLLOW), OR BRICK SHALL BE AS FOLLOWS. DOWELS INSTALLED IN EXTERIOR EXPOSURE OR DAMP ENVIRONMENT SHALL BE STAINLESS STEEL. LENGTHS SHALL BE AS INDICATED ON DRAWINGS.
   A. DEFORMED REINFORCING BARS: ASTM A615, GRADE 60; OR ASTM A706.
   B. CARBON STEEL THREADED STEEL RODS: ASTM A36.
   C. STAINLESS STEEL THREADED RODS: ASTM F593, ALLOY GROUP I, TYPE 304, CONDITION CW.
8. INSTALL POST-INSTALLED ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REINFORCING STEEL DOWELS, THREADED RODS, AND ANCHORS SHALL BE FREE OF DUST, GREASE, RUST AND OTHER MATERIALS THAT WILL IMPAIR BOND WITH CONCRETE.
9. USE ONLY NON-REBAR CUTTING DRILL BITS TO DRILL HOLES IN CONCRETE AND CONCRETE MASONRY UNITS. EXISTING REINFORCING STEEL SHALL BE POSITIVELY LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. DO NOT CUT OR DAMAGE EXISTING REINFORCING STEEL UNLESS APPROVED BY THE ARCHITECT (STRUCTURAL ENGINEER).
10. WHERE EXISTING CONCRETE IS DAMAGED AND/OR DRILLED HOLES ABANDONED, THE DAMAGED CONCRETE OR ABANDONED HOLES SHALL BE REPAIRED OR FILLED WITH NON-SHRINK GROUT, RESPECTIVELY. BRING EACH CONDITION TO THE ATTENTION OF THE ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO IMPLEMENTING REPAIRS.
11. DO NOT DRILL HOLES WITHIN 4 INCHES OF EXISTING ELECTRICAL OUTLETS THAT ARE EMBEDDED IN SUBSTRATE.
12. BRING TO THE ATTENTION OF THE ARCHITECT (STRUCTURAL ENGINEER) ANY POST-INSTALLED ANCHOR LOCATION THAT CANNOT COMPLY WITH THE PARAMETERS STATED HEREIN AND INDICATED ON THE DRAWINGS.

STRUCTURAL STEEL (CONTINUED)

13. WELDING SHALL CONFORM TO LATEST EDITION OF AWS D1.1/ D1.1M, AS AMENDED IN CBC SECTION 2204A.1.
   A. WELDING PROCESS SHALL BE ELECTRIC ARC USING E70XX ELECTRODES. SUBMERGED ARC PROCESS (SAW) WITH AUTOMATIC WELDING MAY BE USED AS AN ALTERNATIVE.
   B. WELDERS SHALL BE CERTIFIED TO CONFORM WITH AWS STANDARDS AND APPROVED BY THE GOVERNING CODE AUTHORITY.
   C. SHOP WELDING, INCLUDING ULTRASONIC TESTING OF FULL PENETRATION GROOVE WELDS, SHALL BE PERFORMED ON THE PREMISES OF AN APPROVED FABRICATOR.
   D. MINIMUM FILLET WELD SIZE SHALL CONFORM TO AISC SPECIFICATION TABLE J2.4. WELDS LENGTHS NOTED ON DRAWINGS ARE THE NET EFFECTIVE LENGTHS REQUIRED.
   E. FIELD WELD SYMBOLS NOTED ON THE DRAWINGS SHOW ENGINEERING INTENT, BUT NO ATTEMPT HAS BEEN MADE TO CLASSIFY ALL WELDS. AT FABRICATOR'S OPTION, ANY WELD INDICATED AS A FIELD WELD MAY BE SHOP WELDED AND ANY WELD INDICATED AS A SHOP WELD MAY BE FIELD WELDED.
14. WELDS SHALL BE PREQUALIFIED PER AWS D1.1/D1.1M. NON-PREQUALIFIED WELDED JOINTS SHALL BE QUALIFIED BY TEST PER AWS D1.1/ D1.1M.
15. SUBMIT TO ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW A WRITTEN WELDING PROCEDURE SPECIFICATION (WPS) FOR ALL WELDS USED ON PROJECT PRIOR TO FABRICATION. FOR WELDS NOT PREQUALIFIED, THE SUPPORTING PROCEDURE QUALIFICATION RECORD (PQR) SHALL ALSO BE SUBMITTED WITH THE WPS. WPS SHALL BE IN ACCORDANCE TO AWS D1.1/D1.1M, SECTION 4.6 AND SHALL INCLUDE THE FOLLOWING INFORMATION FOR EACH WELD TYPE AND POSITION:
   A. SKETCH OF JOINT DESCRIBING GEOMETRY AND APPLICABLE DIMENSIONS, WELD TYPE AND SIZE, SEQUENCE OF WELD DEPOSITION, AND MAXIMUM LAYER THICKNESS AND BEAD WIDTHS. LAYER THICKNESS SHALL NOT EXCEED 1/4 INCH, AND BEAD WIDTH SHALL NOT EXCEED 5/8 INCH.
   B. BASE METAL TYPES AND THICKNESS.
   C. APPLICABLE WELD PROCESS (SMAW OR FCAW).
   D. FILLER METAL PER AWS STANDARD AND ELECTRODE SPECIFICATION AND CLASSIFICATION, AS WELL AS DETAILS OF SHIELDING MATERIAL.
   E. ELECTRICAL CHARACTERISTICS FOR WELD PROCESS USED SUCH AS TYPE OF CURRENT AND ACCEPTABLE RANGE OF CURRENT MEASURED IN AMPERAGE, VOLTAGE RANGE, AND ELECTRODE DIAMETER. FOR WELD FEED PROCESS, INDICATE MANUFACTURER RECOMMENDED WIRE SPEED, CONTACT DISTANCE, MELT OFF RATE AND DEPOSITION RATE.
   F. A COPY OF ELECTRODE MANUFACTURER'S TECHNICAL INFORMATION AND CERTIFICATE OF CONFORMANCE.
16. TESTING LABORATORY WILL VERIFY COMPLIANCE WITH ACCEPTED WPS AND WILL PROMPTLY NOTIFY ARCHITECT (STRUCTURAL ENGINEER) IF DEVIATIONS ARE FOUND. THE WPS MUST BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO REFORMING THE WELDING
17. ELECTRODE DIAMETER SHALL NOT EXCEED PREQUALIFIED LIMITS SHOWN IN AWS D1.1/ D1.1M TABLE 3.7, AS APPLICABLE. FOR FCAW PROCESS, MAXIMUM ELECTRODE SIZE SHALL NOT EXCEED 1/8 INCH.
18. DIFFUSIBLE HYDROGEN LEVEL FOR ELECTRODES AND ELECTRODE-FLUX COMBINATION SHALL MEET THE REQUIREMENTS OF TABLE 6.3 OF AWS D1.8/D1.8M.
19. DETAILS, MATERIALS, WORKMANSHIP, AND TESTING AND INSPECTION REQUIREMENTS OF WELDED JOINTS COMPRISING THE SFRS SHALL CONFORM TO THE FOLLOWING APPLICABLE STANDARDS:
   A. AWS D1.1/ D1.1M "STRUCTURAL WELDING CODE - STEEL."
   B. AWS D1.8/ D1.8M "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT."
   C. ANSI/AISC 341, "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", CHAPTER J (QUALITY CONTROL AND QUALITY ASSURANCE).
   D. ANSI/AISC 358 "PREQUALIFIED CONNECTIONS FOR SPECIAL AND INTERMEDIATE STEEL MOMENT FRAMES FOR SEISMIC APPLICATIONS."
20. WELD MATERIALS USED IN SFRS WELDED CONNECTIONS SHALL CONFORM TO THE FOLLOWING TOUGHNESS REQUIREMENTS:
   A. WELDED CONNECTIONS SHALL BE MADE WITH A FILLER METAL THAT CAN PRODUCE WELDS THAT HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT 0°F AS DETERMINED BY THE APPROPRIATE AWS CLASSIFICATION TEST METHOD.
   B. WELDED CONNECTIONS DESIGNATED AS "DEMAND CRITICAL", SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 40 FT-LB AT 70°F BASED ON WPS HEAT INPUT ENVELOPE TESTING PRESCRIBED IN ANNEX A OF AWS D1.8/D1.8M.
21. INTERMIX OF FILLER METAL: WHEN FCAW-S FILLER METALS ARE USED IN COMBINATION WITH FILLER METALS FOR OTHER PROCESSES, INCLUDING FCAW-G, SUPPLEMENTAL CVN NOTCH TOUGHNESS TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ONE OR MORE OF THE FOLLOWING:
   A. TESTS AS DESCRIBED IN ANNEX B OF AWS D1.8/D1.8M.
   B. PQR TESTS THAT CONTAIN INTERMIX WELD METAL, WHEREIN CVN TEST SPECIMENS HAVE BEEN TAKEN FROM THE INTERMIX ZONE.
22. WELDING OF SHEET METAL AND METAL STUDS SHALL BE IN ACCORDANCE WITH AWS D1.3/ D1.3M.
23. MOVEMENT CONNECTIONS SHALL BE JOINED USING BOLTS WITH NUT AND JAM NUT. SNUG TIGHTEN FIRST NUT, AND THEN BACK OFF 1/4 TURN. FULLY TIGHTEN JAM NUT. SLOTTED HOLES SHALL BE MILLED SMOOTH. WHEN A SLOTTED HOLE OCCURS IN THE OUTER PLY, PROVIDE AN ASTM F436 WASHER OR A 5/16" PLATE WASHER TO COVER THE HOLE.
24. SLIDE BEARINGS SHALL BE CON-SLIDE TYPE CSA AS MANUFACTURED BY CON-SERV INC. OR APPROVED EQUAL. SLIDE BEARINGS SHALL BE ATTACHED TO THE STRUCTURE MEMBER WITH 1/8"x1" LONG FILLET WELDS AT 6" MAXIMUM SPACING. EACH SIDE SHALL HAVE AT LEAST TWO WELDS (ONE AT EACH CORNER).
25. CONTACTOR SHALL PROVIDE FOR AN ALLOWANCE OF 5 TONS OR 2%, WHICHEVER IS GREATER, OF STRUCTURAL STEEL TO BE FABRICATED AND/OR ERECTED DURING THE PROGRESS OF WORK AS MAY BE DIRECTED BY THE ARCHITECT (STRUCTURAL ENGINEER). THE UNUSED PORTION SHALL BE CREDITED TO THE OWNER AT THE COMPLETION OF STRUCTURAL STEEL WORK.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI/AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", ANSI/AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", AND AISI/AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AS AMENDED BY CALIFORNIA BUILDING CODE (CBC) SECTIONS 2203A, 2204A, 2205A
2. SEISMIC FORCE RESISTING SYSTEM (SFRS) IS THAT PART OF THE STRUCTURAL SYSTEM THAT HAS BEEN CONSIDERED IN THE DESIGN TO PROVIDE THE REQUIRED RESISTANCE TO THE SEISMIC FORCES PRESCRIBED IN ASCE/SEI 7.
3. STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS, UNLESS NOTED OTHERWISE ON DRAWINGS:

WIDE FLANGE SHAPES	ASTM A992/A992M
CHANNELS, ANGLES, M- & S-SHAPES	ASTM A36/A36M
PIPES	ASTM A53/A53M, GRADE B (F_Y = 35 KSI)
ROUND HOLLOW STRUCTURAL SECTIONS	ASTM A500/A500M, GRADE C (F_Y = 46 KSI)
RECTANGULAR HOLLOW STRUCTURAL SECTIONS	ASTM A500/A500M, GRADE C (F_Y = 50 KSI)
PLATES	ASTM A36/A36M (UNO)
PLATES USED IN SFRS	ASTM A572/A572M, GRADE 50
ANCHOR BOLTS	ASTM F1554, GRADE 36 (UNO)
ANCHOR BOLTS USED IN SFRS	ASTM F1554, GRADE 55, WELDABLE, (UNO)
UNFINISHED MACHINE BOLTS	ASTM A307
THREADED ROUND STOCK	ASTM A36/A36M

   FURNISH READILY IDENTIFIABLE STRUCTURAL STEEL IN COMPLIANCE WITH CBC SECTION 2203A.1.
4. HEAVY SECTIONS
   A. HOT-ROLLED SHAPES WITH A FLANGE THICKNESS EXCEEDING 2 INCH ARE CONSIDERED TO BE ROLLED HEAVY SHAPES. ROLLED HEAVY SHAPES USED AS MEMBERS SUBJECT TO PRIMARY TENSILE FORCES DUE TO TENSION OR FLEXURE AND SPLICED OR CONNECTED USING CJP GROOVE WELDS THAT FUSE THROUGH THE THICKNESS OF THE FLANGE OR THE FLANGE AND WEB, SHALL CONFORM TO THE FOLLOWING. SUCH SHAPES SHALL BE SUPPLIED WITH CHARPY V-NOTCH (CVN) IMPACT TEST RESULTS IN ACCORDANCE WITH ASTM A6/A6M, SUPPLEMENTARY REQUIREMENT S30. THE IMPACT TEST SHALL MEET A MINIMUM AVERAGE VALUE OF 20 FT-LB ABSORBED ENERGY AT 70 °F (MAX).
   B. BUILT-UP CROSS SECTIONS CONSISTING OF PLATES WITH A THICKNESS EXCEEDING 2 INCH ARE CONSIDERED BUILT-UP HEAVY SHAPES. BUILT-UP HEAVY SHAPES USED AS MEMBERS SUBJECT TO PRIMARY TENSILE FORCES DUE TO TENSION OR FLEXURE AND SPLICED OR CONNECTED TO OTHER MEMBERS USING CJP GROOVE WELDS THAT FUSE THROUGH THE THICKNESS OF THE PLATES SHALL CONFORM TO THE FOLLOWING. STEEL FOR SUCH BUILT-UP SHAPES SHALL BE SUPPLIED WITH CHARPY V-NOTCH (CVN) IMPACT TEST RESULTS IN ACCORDANCE WITH ASTM A6/A6M, SUPPLEMENTARY REQUIREMENT S5. THE IMPACT TEST SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM A673/A673M, FREQUENCY P, AND SHALL MEET A MINIMUM AVERAGE VALUE OF 20 FT-LB ABSORBED ENERGY AT 70 °F (MAX). WHEN A BUILT-UP HEAVY SHAPE IS WELDED TO THE FACE OF ANOTHER MEMBER USING GROOVE WELDS, THIS REQUIREMENT APPLIES ONLY TO THE SHAPE THAT HAS WELD METAL FUSED THROUGH THE CROSS SECTION.
   C. SFRS APPLICATIONS. IN ADDITION TO THE ABOVE, HOT-ROLLED SHAPES WITH FLANGES 1 1/2 INCH THICK AND THICKER SHALL HAVE A MINIMUM CVN TOUGHNESS OF 20FT-LB AT 70 °F, TESTED IN THE ALTERNATE CORE LOCATION AS DESCRIBED IN ASTM A6/A6M SUPPLEMENTARY REQUIREMENT S30. PLATES 2 INCH THICK AND THICKER SHALL HAVE A MINIMUM CVN TOUGHNESS OF 20 FT-LB AT 70 °F, MEASURED AT ANY LOCATION PERMITTED BY ASTM A673/A673M, FREQUENCY P, WHERE THE PLATE IS USED FOR THE FOLLOWING:
      1. MEMBERS BUILT UP FROM PLATE.
      2. CONNECTION PLATES WHERE INELASTIC STRAIN UNDER SEISMIC LOADING IS EXPECTED.
      3. THE STEEL CORE OF BUCKLING-RESTRAINED BRACES.
5. HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", AS AMENDED BY CBC SECTION 2204A.2. WHEN ASSEMBLED, ALL JOINT SURFACES, INCLUDING THOSE ADJACENT TO WASHERS, SHALL BE FREE OF SCALE, EXCEPT TIGHT MILL SCALE. USE STANDARD HOLES UNLESS NOTED OTHERWISE.
   A. PROVIDE ASTM A325, TYPE I, SNUG-TIGHTENED (ST) BOLTS WITH THREADS INCLUDED IN SHEAR PLANE, UNLESS NOTED OTHERWISE. PROVIDE ASTM A325, TYPE I, SLIP-CRITICAL (SC) BOLTS AT CONNECTIONS IN SFRS AND WHERE SPECIFICALLY INDICATED. FAYING SURFACES FOR SLIP-CRITICAL CONNECTIONS SHALL MEET CLASS A SLIP RESISTANCE, UNLESS OTHERWISE NOTED. NUTS AND WASHERS SHALL MEET THE REQUIREMENTS OF ASTM A563 AND ASTM F436, RESPECTIVELY.
   B. ASTM A325-ST BOLTS SHALL BE SNUG TIGHTENED IN ACCORDANCE WITH RCSC SPECIFICATION SECTION 8.1, UNLESS NOTED OTHERWISE. FULLY TENSION ALL ASTM A325-SC BOLTS AND ALL BOLTS REQUIRED TO BE TENSIONED BY AISC SPECIFICATION SECTION J1.10 AND RCSC SPECIFICATION SECTIONS 4.2 AND 4.3. FULLY TENSIONED BOLTS SHALL BE TIGHTENED TO THE MINIMUM TENSION USING TURN-OF-THE-NUT PRETENSIONING METHOD, CALIBRATED WRENCH PRETENSIONING METHOD, OR DIRECT-TENSION-INDICATOR PRETENSIONING METHOD USING DIRECT TENSION INDICATORS THAT MEET THE REQUIREMENTS OF ASTM F959.
   C. TWIST-OFF-TYPE TENSION-CONTROL BOLTS THAT MEET THE REQUIREMENTS OF ASTM F3125/F3125M, TYPE 1, MAY BE USED IN LIEU OF ASTM A325-ST OR ASTM A325-SC BOLTS.
6. COMPOSITE STRUCTURAL BEAMS AND GIRDERS ARE DESIGNED FOR UNSHORED CONSTRUCTION UNLESS NOTED OTHERWISE.
7. HEADED STUD ANCHORS SHALL BE NELSON TYPE S3L OR TYPE H4L FLUX-FILLED HEADED SHEAR CONNECTOR STUDS (ICC EVALUATION SERVICE REPORT ESR-2856), OR AN APPROVED EQUAL, AND SHALL BE MADE FROM COLD DRAWN, LOW CARBON STEEL CONFORMING TO ASTM A29, GRADES C1010 THROUGH C1020, WITH A MINIMUM TENSILE STRENGTH OF 65 KSI. STUD WELDING TEST AND INSPECTION SHALL CONFORM TO AWS D1.1, CLAUSE 7. ANCHOR LENGTHS NOTED ON DRAWINGS ARE AFTER WELD LENGTHS.
8. PROVIDE UPWARD CAMBER TO ALL BEAMS SPECIFIED TO HAVE CAMBER. AMOUNT MEASURES IN THE FIELD PRIOR TO ERECTION SHALL NOT DEVIATE MORE THAN ALLOWED BY AISC SPECIFICATIONS. BEAMS WITHOUT SPECIFIED CAMBER SHALL BE FABRICATED TO SO THAT ANY MINOR CAMBER DUE TO ROLLING SHALL BE UPWARD AFTER ERECTION.
9. PRIOR TO FABRICATION, SUBMIT SHOP DRAWINGS TO ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND, UPON REQUEST, TO GOVERNING CODE AUTHORITY. INDICATE AN ERECTION SEQUENCE OF WELDING TO MINIMIZE LOCKED-UP STRESSES OR DISTORTION FOR MOMENT-RESISTING STEEL FRAMES.
10. HOURLY FIRE RESISTIVE REQUIREMENTS FOR STRUCTURAL STEEL MEMBERS SHALL BE DETERMINED USING CBC TABLE 601. BUILDING TYPES OF CONSTRUCTION AND FIREPROOFING MATERIALS ARE AS INDICATED ON ARCHITECTURAL DRAWINGS.
11. ALL STEEL NOT ENCASED IN CONCRETE, MASONRY, OR FIREPROOFING SHALL BE SHOP PRIMED AND PAINTED PER SPECIFICATIONS, EXCEPT FOR TOP FLANGE OF BEAMS SUPPORTING METAL DECK. ANY ABRASIONS OR UNPAINTED AREAS SHALL BE TOUCHED UP AFTER ERECTION.
12. ALL STRUCTURAL STEEL AND MISCELLANEOUS METALS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

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LICENSED ARCHITECT BRADLEY E GLADSTEIN NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

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Keynotes:

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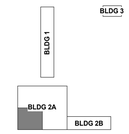
Consultant's Project No.

REGISTERED PROFESSIONAL ENGINEER JOSEPH WILLIAM LYNCH S4882 EXP. 12/31/18 STRUCTURAL STATE OF CALIFORNIA

Key Plan:



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Project:
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GENERAL NOTES

DSA APPROVED SET

Date: 10.04.2018 **Client Project No:** 5015021-100

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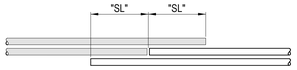
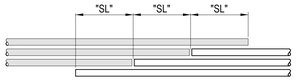


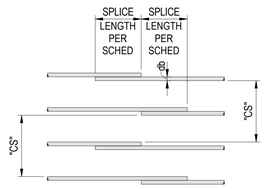
2 BAR BUNDLE SPLICE DETAIL



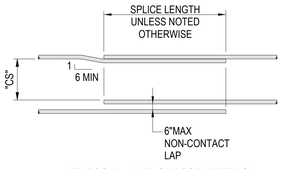
3 BAR BUNDLE SPLICE DETAIL

NOTES:
1. BARS SHALL BE BUNDLED WITH NO MORE THAN 2 BARS IN SAME PLANE
2. "SL" INDICATES SPLICE LENGTH AT BUNDLED BARS. SEE REINFORCING SPLICE NOTE 5.

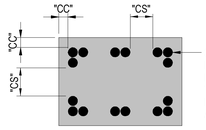
TYPICAL BUNDLED LAP SPLICES



TYPICAL STAGGERED LAP SPLICING DETAIL



TYPICAL LAP SPLICE DETAIL



TYPICAL BAR CONCRETE COVER & CLEAR SPACING DIAGRAM

REINFORCING SPLICE NOTES:

1. SCHEDULED SPLICE LENGTHS ARE IN ACCORDANCE WITH ACI 318-11 AND APPLY TO REBAR Fy=60 KSI. LENGTHS ARE FROM CHAPTER 25 (NON-SEISMIC ELEMENTS) AND CHAPTER 18 (SEISMIC ELEMENTS).

2.

CATEGORY	DESCRIPTION
1	2db ≤ CC AND 4db ≤ CS
2	[db ≤ CC < 2db & 2db ≤ CS] OR [db ≤ CC & 2db ≤ CS < 4db]
3	1/2db ≤ CC < db OR db ≤ CS < 2db
CC INDICATES CONCRETE COVER, CS INDICATES BAR CLEAR SPACING.	

3. IF CC < 1/2db OR CS < db CONTACT SEOR FOR REQUIRED SPLICE LENGTH.

4. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE POURED BELOW BARS.

5. FOR BUNDLED BARS, AN EFFECTIVE BAR DIAMETER (dbe) SHALL BE USED FOR DETERMINING COVER AND SPACING LIMITATIONS:
   a. FOR 2 BAR BUNDLE dbe = 1.414db
   b. FOR 3 BAR BUNDLE dbe = 1.732db
   c. FOR 4 BAR BUNDLE dbe = 2.000db

6. WHERE BARS OF DIFFERENT SIZES ARE LAP SPLICED, LAP SPLICE LENGTH SHALL BE THE LARGER OF Ld (STRAIGHT BAR DEVELOPMENT) FOR LARGER BAR AND LAP SPLICE LENGTH OF SMALLER BAR.

7. SPLICES LENGTHS MAY BE REDUCED 23% IF SPECIFICALLY NOTED ON STRUCT DRAWINGS AS CLASS "A" SPLICE.

8. APPLY THE FOLLOWING MULTIPLIERS TO SCHEDULED SPLICE LENGTHS FOR EACH INSTANCE BELOW WHICH APPLIES:

   a. FOR REBAR YIELD STRENGTHS OTHER THAN 60 KSI, MULTIPLY SPLICE LENGTHS IN SCHEDULE BY RATIO OF ACTUAL YIELD STRENGTH / 60,000.

   b. SPLICE LENGTH OF LONGITUDINAL BARS IN THE "SPECIAL SPLICE ZONE" AS INDICATED ON SHEAR WALL ELEVATIONS SHALL BE MULTIPLIED BY 1.25 THAT INDICATED IN THE SCHEDULE.

   c. FOR 3-BAR BUNDLES, MULTIPLY SPLICE LENGTHS IN SCHEDULE BY 1.20. FOR 4-BAR BUNDLES, MULTIPY SPLICE LENGTHS IN SCHEDULE BY 1.33. ENTIRE BUNDLE SHALL NOT BE LAP SPLICED.

   d. FOR LIGHTWEIGHT CONCRETE, MULTIPLY SPLICE LENGTHS IN SCHEDULE BY 1.33.

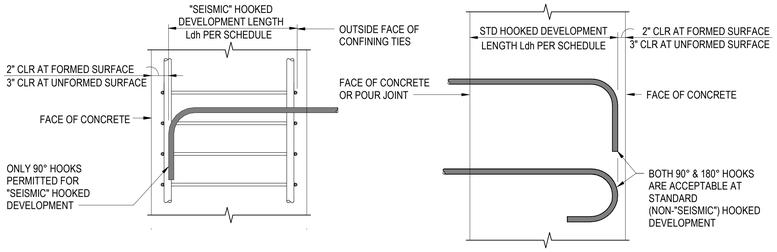
   e. FOR EPOXY COATED BARS WITH CC < 3db OR CS < 6db, MULTIPLY SPLICE LENGTHS IN SCHEDULE BY 1.50. FOR OTHER EPOXY COATED BARS, MULTIPLY SPLICE LENGTHS IN SCHEDULE BY 1.20.

   f. FOR CONCRETE STRENGTH IN BETWEEN STRENGTHS INDICATED IN THE SCHEDULE. USE DEVELOPMENT LENGTH FOR THE LOWER CONCRETE STRENGTH.

SPLICE LENGTH SCHEDULE IN INCHES
(APPLICABLE TO REBAR W/ 60 KSI YIELD STRENGTH)

NORMAL WEIGHT CONCRETE (f'c PSI)		3000 PSI						4000 PSI						5000 PSI					
CATEGORY		1		2		3		1		2		3		1		2		3	
BAR SIZE	BAR DIAMETER (db)	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS
#4	0.500	23	18	38	29	56	43	20	15	33	25	49	37	18	14	29	23	44	34
#5	0.625	28	22	47	36	70	54	25	19	41	31	61	47	22	17	36	28	54	42
#6	0.750	34	26	56	43	84	65	29	23	49	37	73	56	26	20	44	34	65	50
#7	0.875	49	38	81	63	122	94	43	33	71	54	106	81	38	29	63	49	95	73
#8	1.000	56	43	93	72	139	107	49	37	81	62	121	93	44	34	72	56	108	83
#9	1.128	63	49	105	81	157	121	55	42	91	70	136	105	49	38	81	63	122	94
#10	1.270	71	55	118	91	177	136	62	47	102	79	153	118	55	43	92	71	137	106
#11	1.410	79	61	131	101	196	151	68	53	114	87	170	131	61	47	102	78	152	117

TYPICAL REINFORCING SPLICE LENGTH SCHEDULE | 2 | 3/4" = 1'-0"



"SEISMIC" HOOKED DEVELOPMENT | STANDARD (NON-"SEISMIC") HOOKED DEVELOPMENT

NOTES:

A. ALL HOOKED BARS SHALL EXTEND TO THE FAR FACE OF CONCRETE, AS MUCH AS PRACTICAL, WITH 2" MINIMUM END COVER AND WITH DEVELOPMENT NOT LESS THAN LENGTHS INDICATED IN SCHEDULE INCLUDING APPROPRIATE MULTIPLIERS.

B. PROVIDE 2 1/2" MINIMUM CONCRETE SIDE COVER.

C. "SEISMIC" HOOKED DEVELOPMENT LENGTH Ldh IN SCHEDULE INCLUDING APPROPRIATE MULTIPLIERS APPLY TO BARS W/ STD 90° HOOKS LOCATED WITHIN A CONFINED CORE OF SPECIAL MOMENT FRAME COLUMNS. 180° HOOKS ARE NOT PERMITTED FOR "SEISMIC" HOOKED DEVELOPMENT.

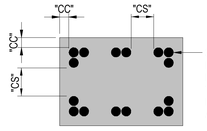
HOOKED DEVELOPMENT Ldh

STRAIGHT DEVELOPMENT LENGTH SCHEDULE (Ld) IN INCHES
(APPLICABLE TO REBAR W/ 60 KSI YIELD STRENGTH)

NORMAL WEIGHT CONCRETE (f'c PSI)		3000 PSI								4000 PSI								5000 PSI							
CATEGORY		1		2		3		SEISMIC (SEE NOTE 6)		1		2		3		SEISMIC (SEE NOTE 6)		1		2		3		SEISMIC (SEE NOTE 6)	
BAR SIZE	BAR DIAMETER (db)	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS
#4	0.500	18	14	29	22	43	33	28	22	15	12	25	19	37	29	24	19	14	12	23	17	34	26	22	17
#5	0.625	22	17	36	28	54	42	35	27	19	15	31	24	47	36	30	23	17	13	28	22	42	32	27	21
#6	0.750	26	20	43	33	65	50	42	32	23	18	37	29	56	43	36	28	20	16	34	26	50	39	32	25
#7	0.875	38	29	63	48	94	72	48	37	33	25	54	42	81	63	42	32	29	23	49	38	73	56	38	29
#8	1.000	43	33	72	55	107	83	55	43	37	29	62	48	93	72	48	37	34	26	56	43	83	64	43	33
#9	1.128	49	38	81	62	121	93	62	48	42	33	70	54	105	81	54	42	38	29	63	48	94	72	48	37
#10	1.270	55	42	91	70	136	105	70	54	47	37	79	61	118	91	61	47	43	33	71	54	106	81	54	42
#11	1.410	61	47	101	78	151	116	78	60	53	41	87	67	131	101	67	52	47	36	78	60	117	90	60	47
#14	1.693	73	56	121	93	181	140	-	-	63	49	105	81	157	121	-	-	57	44	94	72	141	108	-	-
#18	2.257	97	75	161	124	242	186	-	-	84	65	140	108	209	161	-	-	75	58	125	96	187	144	-	-

HOOKED DEVELOPMENT LENGTH SCHEDULE (Ldh) IN INCHES
(APPLICABLE TO REBAR W/ 60 KSI YIELD STRENGTH)

NORMALWEIGHT CONCRETE (f'c PSI)		3000 PSI		4000 PSI		5000 PSI		6000 PSI		7000 PSI		8000 PSI	SEISMIC (SEE NOTE 7)
BAR SIZE	BAR DIAMETER (db)	STANDARD	SEISMIC (SEE NOTE 7)	STANDARD	SEISMIC (SEE NOTE 7)	STANDARD	SEISMIC (SEE NOTE 7)	STANDARD	SEISMIC (SEE NOTE 7)	STANDARD	SEISMIC (SEE NOTE 7)	STANDARD	
#4	0.500	8	9	7	8	6	6	6	6	6	6	6	6
#5	0.625	10	11	9	10	8	9	7	8	7	7	6	7
#6	0.750	12	13	10	11	9	10	9	9	8	9	8	8
#7	0.875	14	15	12	13	11	12	10	11	9	10	9	10
#8	1.000	16	17	14	15	12	14	11	12	11	12	10	11
#9	1.128	18	20	15	17	14	15	13	14	12	13	11	12
#10	1.270	20	22	17	19	16	17	14	16	13	15	12	14
#11	1.410	22	24	19	21	17	19	16	17	15	16	14	15
#14	1.693	38	-	33	-	29	-	27	-	25	-	23	-
#18	2.257	50	-	43	-	39	-	35	-	33	-	31	-



TYPICAL BAR CONCRETE COVER & CLEAR SPACING DIAGRAM

REINFORCING DEVELOPMENT NOTES:

1. SCHEDULED DEVELOPMENT LENGTHS ARE IN ACCORDANCE WITH ACI 318-11 AND APPLY TO REBAR Fy=60 KSI. LENGTHS ARE FROM CHAPTER 25 (NON-SEISMIC ELEMENTS) AND CHAPTER 18 (SEISMIC ELEMENTS).

2.

CATEGORY	DESCRIPTION
1	2db ≤ CC AND 4db ≤ CS
2	[db ≤ CC < 2db & 2db ≤ CS] OR [db ≤ CC & 2db ≤ CS < 4db]
3	1/2db ≤ CC < db OR db ≤ CS < 2db
SEISMIC	SEE NOTES 6 & 7
CC INDICATES CONCRETE COVER, CS INDICATES BAR CLEAR SPACING.	

3. IF CC < 1/2db OR CS < db CONTACT SEOR FOR REQUIRED DEVELOPMENT LENGTH.

4. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE POURED BELOW BARS.

5. FOR BUNDLED BARS, AN EFFECTIVE BAR DIAMETER (dbe) SHALL BE USED FOR DETERMINING COVER AND SPACING LIMITATIONS:
   a. FOR 2 BAR BUNDLE dbe = 1.414db
   b. FOR 3 BAR BUNDLE dbe = 1.732db
   c. FOR 4 BAR BUNDLE dbe = 2.000db

6. "SEISMIC" STRAIGHT DEVELOPMENT LENGTH Ld IN SCHEDULE APPLIES TO STRAIGHT BARS TERMINATING IN OR PASSING THROUGH CONFINED CORES OF SPECIAL MOMENT FRAME COLUMNS.

7. "SEISMIC" HOOKED DEVELOPMENT LENGTH Ldh IN SCHEDULE APPLIES TO BARS W/ STD 90° HOOKS LOCATED WITHIN A CONFINED CORE OF SPECIAL MOMENT FRAME COLUMNS.

8. APPLY THE FOLLOWING MULTIPLIERS TO SCHEDULED DEVELOPMENT LENGTHS FOR EACH INSTANCE BELOW WHICH APPLIES:

   a. FOR REBAR YIELD STRENGTHS OTHER THAN 60 KSI, MULTIPLY DEVELOPMENT LENGTHS Ld & Ldh IN SCHEDULE BY RATIO OF ACTUAL YIELD STRENGTH / 60,000.

   b. DEVELOP LENGTH OF LONGITUDINAL BARS IN THE "SPECIAL SPLICE ZONE" AS INDICATED ON SHEAR WALL ELEVATIONS SHALL BE MULTIPLIED BY 1.25 THAT INDICATED IN THE SCHEDULE.

   c. FOR 3-BAR BUNDLES, MULTIPLY DEVELOPMENT LENGTHS Ld & Ldh IN SCHEDULE BY 1.20. FOR 4-BAR BUNDLES, MULTIPY DEVELOPMENT LENGTHS Ld & Ldh IN SCHEDULE BY 1.33.

   d. FOR LIGHTWEIGHT CONCRETE, MULTIPLY STRAIGHT DEVELOPMENT LENGTH Ld IN SCHEDULE BY 1.33. FOR LIGHTWEIGHT CONCRETE, MULTIPLY HOOKED DEVELOPMENT LENGTH Ldh IN SCHEDULE BY 1.33 (1.25 FOR "SEISMIC" CONDITIONS AS DEFINED IN NOTE 7).

   e. FOR EPOXY COATED BARS WITH CC < 3db OR CS < 6db, MULTIPLY STRAIGHT DEVELOPMENT LENGTH Ld IN SCHEDULE BY 1.50. FOR STRAIGHT DEVELOPMENT FOR OTHER EPOXY COATED BARS, MULTIPLY STRAIGHT DEVELOPMENT LENGTH Ld IN SCHEDULE BY 1.20. FOR EPOXY COATED BARS, MULTIPLY HOOKED DEVELOPMENT LENGTH Ldh IN SCHEDULE BY 1.20.

   f. DEVELOP ALL DIAGONAL COUPLING BEAM REBARS BY MULTIPLYING DEVELOPMENT LENGTHS Ld AND Ldh IN SCHEDULE BY 1.25.

   g. FOR CONCRETE STRENGTH IN BETWEEN STRENGTHS INDICATED IN THE SCHEDULE. USE DEVELOPMENT LENGTH FOR THE LOWER CONCRETE STRENGTH.

TYPICAL REINFORCING STRAIGHT AND HOOKED DEVELOPMENT LENGTH SCHEDULE | 1 | 3/4" = 1'-0"

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No.	Issued	Date
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Consultant's Project No.

REGISTERED PROFESSIONAL ENGINEER RAFAEL T KALE TAMAYO S4822 EXP. 12/31/18 STRUCTURAL STATE OF CALIFORNIA

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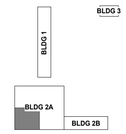

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TYPICAL CONCRETE DETAILS

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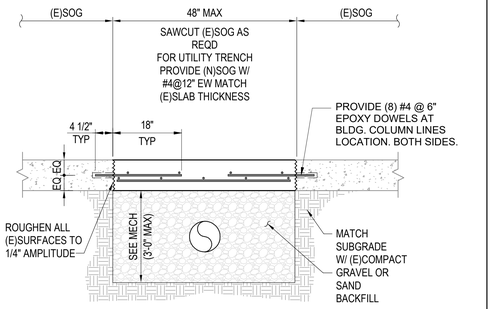
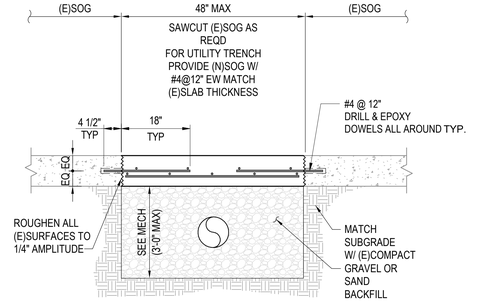
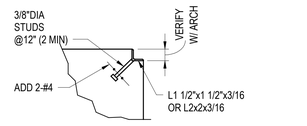


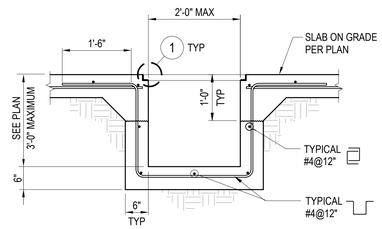
TYPICAL INFILL AT EXISTING SLAB-ON-GRADE AT BLDG. COLUMN LINES DETAIL | 6A | 3/4" = 1'-0"



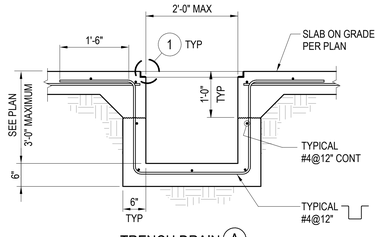
TYPICAL INFILL AT EXISTING SLAB-ON-GRADE DETAIL | 6 | 3/4" = 1'-0"



DETAIL (1)



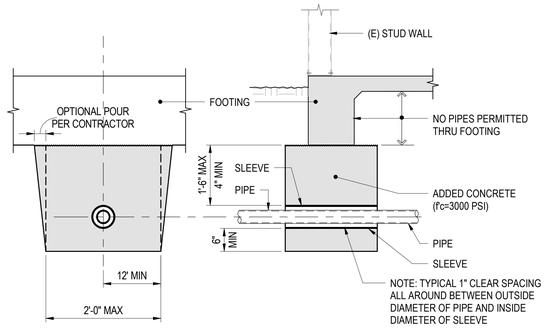
SUMP PIT (B)



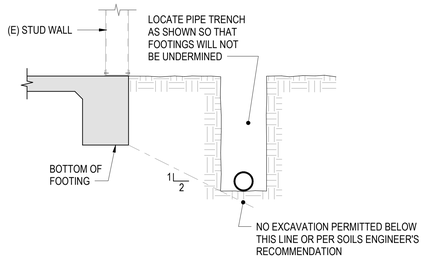
TRENCH DRAIN (A)

NOTES:
1. VERIFY ALL DIMENSIONS WITH THE ARCHITECT.
2. SEE GEOTECHNICAL REPORT FOR SUB-SURFACE PREPARATION.

TYPICAL TRENCH DRAIN AND SUMP PIT DETAILS | 3 | 3/4" = 1'-0"

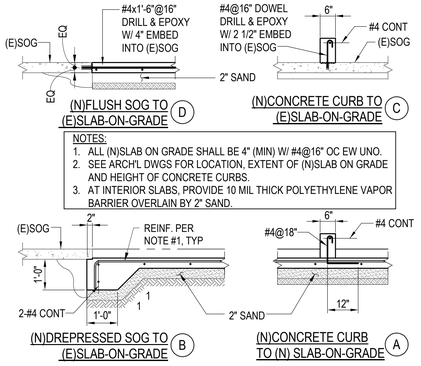


PIPES UNDER (E)FOUNDATION

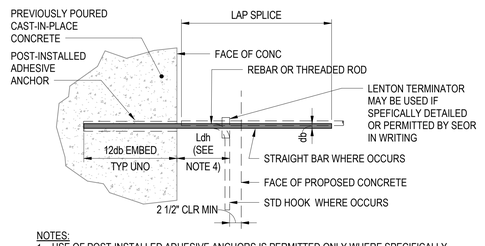


PIPE AND TRENCH ADJACENT TO FOUNDATION

TYPICAL PIPES UNDER OR TRENCHES ADJACENT TO (E) FOUNDATION | 8 | 3/4" = 1'-0"

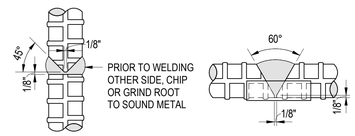


TYPICAL MISCELLANEOUS SLAB-ON-GRADE INFILL DETAIL | 5 | 3/4" = 1'-0"



NOTES:
1. USE OF POST-INSTALLED ADHESIVE ANCHORS IS PERMITTED ONLY WHERE SPECIFICALLY DETAILED ON STRUCT DWGS OR AS DIRECTED IN WRITING BY SEOR.
2. POST-INSTALLED ADHESIVE ANCHORS SHALL COMPLY WITH "POST-INSTALLED ANCHORS" SECTION OF GENERAL NOTES. ADHESIVE ANCHORS OF TYPE SPECIFIED IN "ANCHORS INSTALLED IN NORMAL WEIGHT OR LIGHTWEIGHT CAST-IN-PLACE CONCRETE" SECTION IS ACCEPTABLE FOR USE UNO.
3. METHODS OF INSTALLATION SHALL MEET REQUIREMENTS OF "POST-INSTALLED ANCHORS" SECTION OF GENERAL NOTES.
4. Ldh HOOKED DEVELOPMENT TO COMPLY W/ (1 / S1.1) .

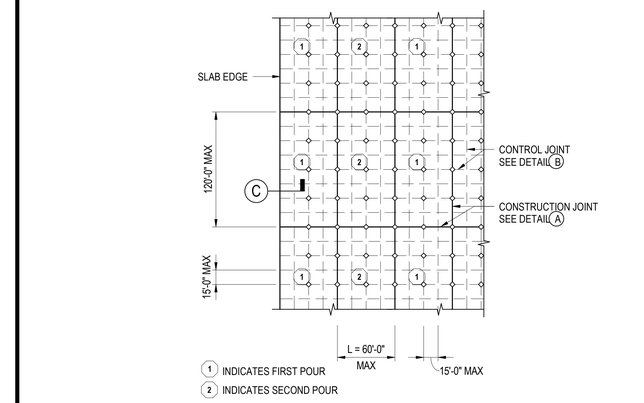
TYPICAL DOWEL AND EPOXY IN CONCRETE DETAIL | 4 | 3/4" = 1'-0"



VERTICAL BAR HORIZONTAL BAR

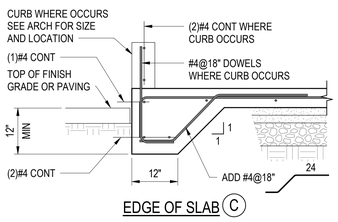
NOTES:
1. AS AN ALTERNATE TO LAP SPLICE, BUTT WELD MAY BE USED AS INDICATED ABOVE, PROVIDED THEY ARE STAGGERED @24" MINIMUM.
2. AN APPROVED TESTING LABORATORY SHALL PROVIDE A PREQUALIFICATION TENSION TEST FOR SAMPLES ON EVERY SIZE OF BAR BEING WELDED.
3. MATERIALS, CONDITIONS AND WELDING PROCEDURES UTILIZED SHALL COMPLY WITH THE CURRENT APPLICABLE BUILDING CODE AND THE REQUIREMENTS OF THE GOVERNING INSPECTION AGENCY.
4. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCURRED IN OBTAINING APPROVAL.

TYPICAL REINFORCING BUTT WELDS DETAIL (ALTERNATE TO SPLICES) | 2 | 3/4" = 1'-0"

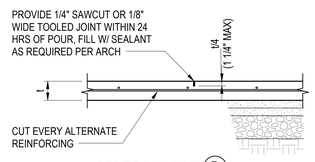


NOTES:
1. LOCATE CONSTRUCTION JOINTS ON CL OF COLUMNS AND UNDER PARTITIONS AS PRACTICAL AS POSSIBLE.
2. PROVIDE CONTROL JOINTS AT CL OF COLUMNS IF NO CONSTRUCTION JOINTS OCCUR.
3. CONTRACTOR TO SUBMIT A JOINTING PLAN TO ARCHITECT FOR REVIEW.

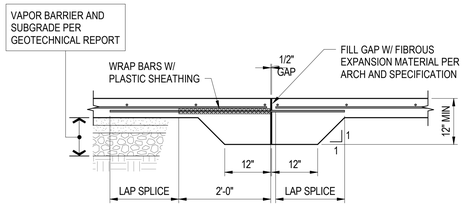
SLAB POUR METHOD LAYOUT (F)



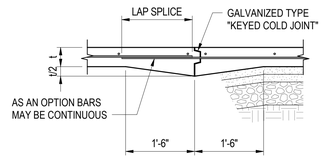
EDGE OF SLAB (C)



CONTROL JOINT (B)

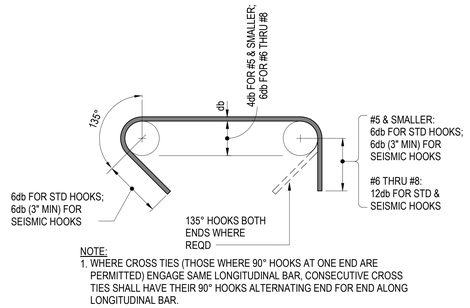


EXPANSION JOINT (E)
(EXPANSION JOINTS APPLY ONLY WHERE INDICATED ON STRUCT DWGS)



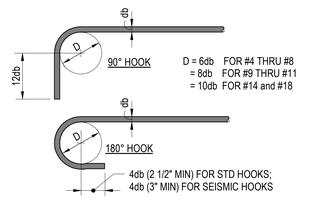
POUR / CONSTRUCTION JOINT (A)

TYPICAL CONCRETE SLAB ON GRADE DETAILS | 7 | 3/4" = 1'-0"



NOTE:
1. WHERE CROSS TIES (THOSE WHERE 90° HOOKS AT ONE END ARE PERMITTED) ENGAGE SAME LONGITUDINAL BAR, CONSECUTIVE CROSS TIES SHALL HAVE THEIR 90° HOOKS ALTERNATING END FOR END ALONG LONGITUDINAL BAR.

HOOKS FOR TIES, STIRRUPS AND HOOPS



HOOKS FOR BARS OTHER THAN TIES, SITRRUPS AND HOOPS

TYPICAL REINFORCING STEEL STANDARD AND SEISMIC HOOK DETAILS | 1 | 3/4" = 1'-0"

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Project #18540
Consultant's Project No.

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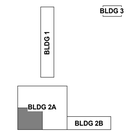
Key Plan:



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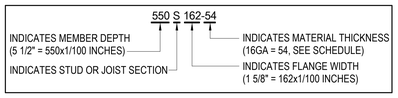
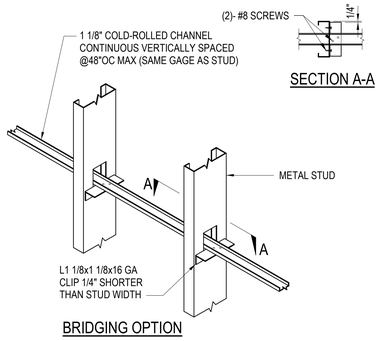
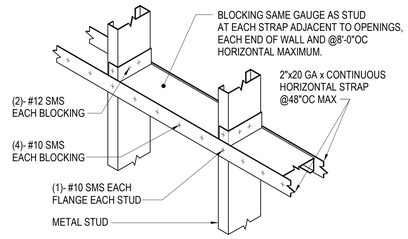


METAL STUD IDENTIFICATION 4
1" = 1'-0"



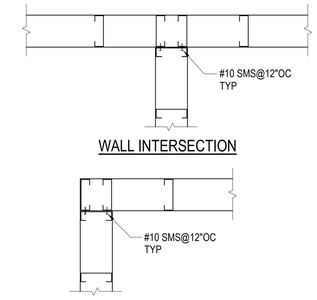
BRIDGING OPTION



STRAP OPTION

NOTE:
REQUIRED WHERE RIGID WALL FINISH DOES NOT CONTINUE FULL HEIGHT OF EITHER OR BOTH SIDES OF STUDS

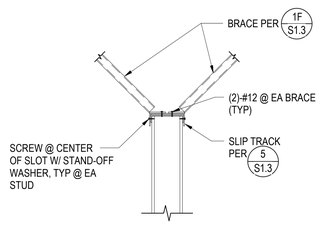
TYPICAL LATERAL BRIDGING AT METAL STUDS 3
1" = 1'-0"



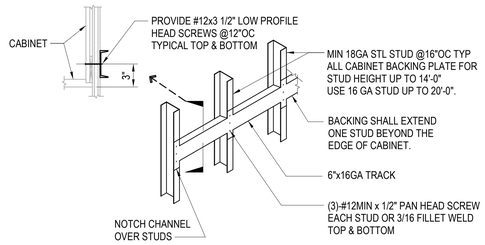
WALL INTERSECTION

WALL CORNER

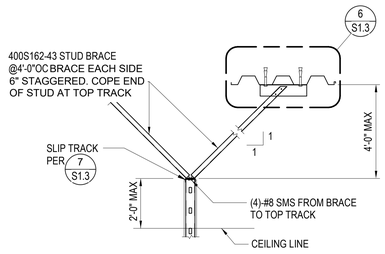
TYPICAL METAL STUD WALL AT INTERSECTION DETAILS 2
1" = 1'-0"



DETAIL 7
1" = 1'-0"

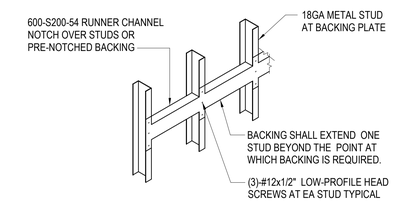


BACKING AT CABINET

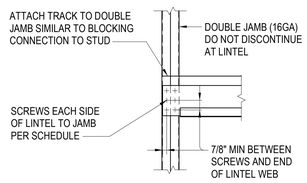


NOTE:
NOT ALLOWED FOR ATTACHING BACKING AT WALL SUPPORTED ITEMS

TOP CONNECTION F



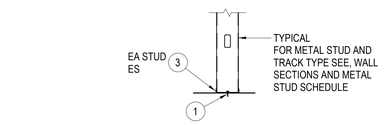
EQUIPMENT WEIGHT UNDER 100 LBS (AND FIXTURES)



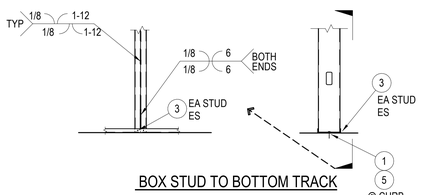
CONNECTION TO JAMB E

LINTEL / JAMB SCHEDULE			
MAX LENGTH	LINTEL BEAM SIZE	# OF STUDS AT JAMB	#10 SCREWS EACH SIDE OF BEAM TO JAMB
4'-0"	(2) 400 S162-33	1	2 SCREWS (4 TOTAL)
6'-0"	(2) 400 S162-33	2	2 SCREWS (4 TOTAL)
8'-0"	(2) 600 S162-33	2	3 SCREWS (6 TOTAL)
10'-0"	(2) 600 S162-33	2	3 SCREWS (6 TOTAL)
12'-0"	(2) 800 S162-33	3	4 SCREWS (8 TOTAL)
14'-0" *	(2) 800 S162-33	3	4 SCREWS (8 TOTAL)
16'-0"	(2) 1000 S162-33	3	5 SCREWS (10 TOTAL)

* 13'-0" MAX HEADER WIDTH FOR 4" STUDS

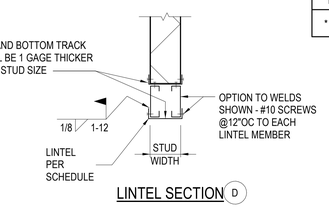


SINGLE STUD TO BOTTOM TRACK

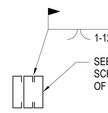


BOX STUD TO BOTTOM TRACK

NOTES:
1. FOR STEEL STUD AND TRACK TYPE, SEE PLANS, SECTIONS AND METAL STUD SIZE SCHEDULE.
2. FOR METAL STUD FASTENERS, SEE METAL STUD FASTENER SCHEDULE.



LINTEL SECTION D



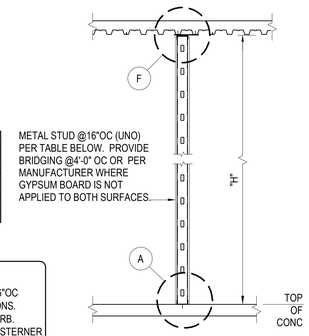
JAMB SECTION C

JAMB / LINTEL DETAILS AND SCHEDULE

STUD TO SLAB DETAIL A

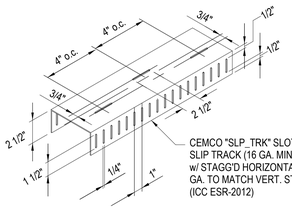
METAL STUD FASTENER SCHEDULE	
MARK	FASTENERS SIZE AND SPACING
1	HILTI X-U POWER DRIVEN FASTENER @24"OC W/ 1 1/2" MIN EMBED
2	HILTI X-U POWER DRIVEN FASTENER W/ 1 1/4" MIN EMBED
3	#10 SHEET METAL SCREW
4	#12 SHEET METAL SCREW
5	1/2"DIA HEADED BOLT @24"OC (MIN 6" EMBED

MAXIMUM ALLOWABLE HEIGHT ("H") SCHEDULE				
METAL STUD (S-STUD) SIZE (MIN1 5/8" FLANGE)				
GAUGE	4"	6"	8"	
16	18'-0"	-	-	



METAL STUD @16"OC (UNO)
PER TABLE BELOW. PROVIDE
BRIDGING @4'-0" OC OR PER
MANUFACTURER WHERE
GYPSUM BOARD IS NOT
APPLIED TO BOTH SURFACES.

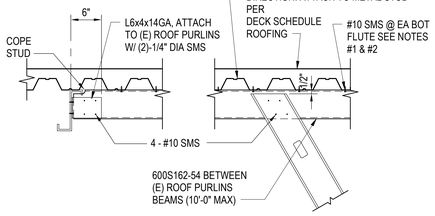
TYPICAL METAL STUD WALL SECTION



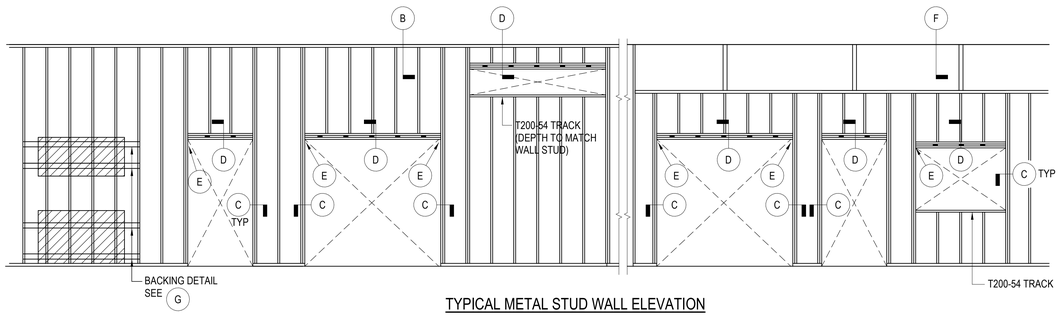
TYPICAL SLIP TRACK 5
1 1/2" = 1'-0"

NOTES:
1. WHERE DECK IS PARALLEL, USE #10 SMS @12" OC.
2. SEE DETAIL ABOVE FOR DECK PARALLEL @ TOP FLUTE.

STUD AT DECK TOP FLUTE



BRACE AT BARE METAL DECK 6
1" = 1'-0"

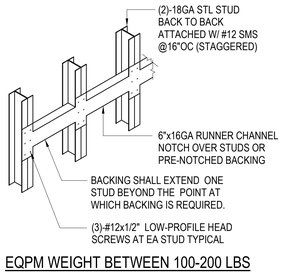


TYPICAL METAL STUD WALL ELEVATION

NOTES:
1. MAXIMUM STUD HEIGHT "H" FOR STUDS @16"OC
2. SEE ARCHITECTURAL FOR OTHER CONDITIONS.
3. SEE ARCHITECTURAL FOR LOCATION OF CURB.
4. HILTI X-U LOW VELOCITY POWER DRIVEN FASTERNER SHALL BE PER ICC REPORT No. ESR 2269
5. ALL TRACKS SHALL BE 1 GAGE THICKER THAN STUDS WITH 1-1/2" FLANGE

BACKING FOR WALL SUPPORTED ITEMS G

EQPM WEIGHT BETWEEN 100-200 LBS (AND FIXTURES)



TYPICAL NON-BEARING METAL STUD WALL CONSTRUCTION DETAILS 1
1" = 1'-0"

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5015021-100
3546 Concours Street / Ontario, CA 91764
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LICENSED ARCHITECT BRADLEY E GLADSTICK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date
	DSA SUBMITTAL	10.04.2018
	DSA BACKCHECK	12.11.2018

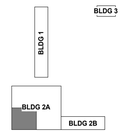
No.	Issued	Date

Keynotes:

Consultant:
saiful•bouquet structural engineers
2020 Camino Del Rio North, Ste 305,
San Diego, CA 92108
www.saifulbouquet.com
(619) 630-9199
Project #18540
Consultant's Project No.

REGISTERED PROFESSIONAL ENGINEER TOAFA HALE ISMAIL No. EXP 12/31/18 STRUCTURAL STATE OF CALIFORNIA

Key Plan:



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Project:
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Sheet Title:
TYPICAL METAL STUDS DETAILS

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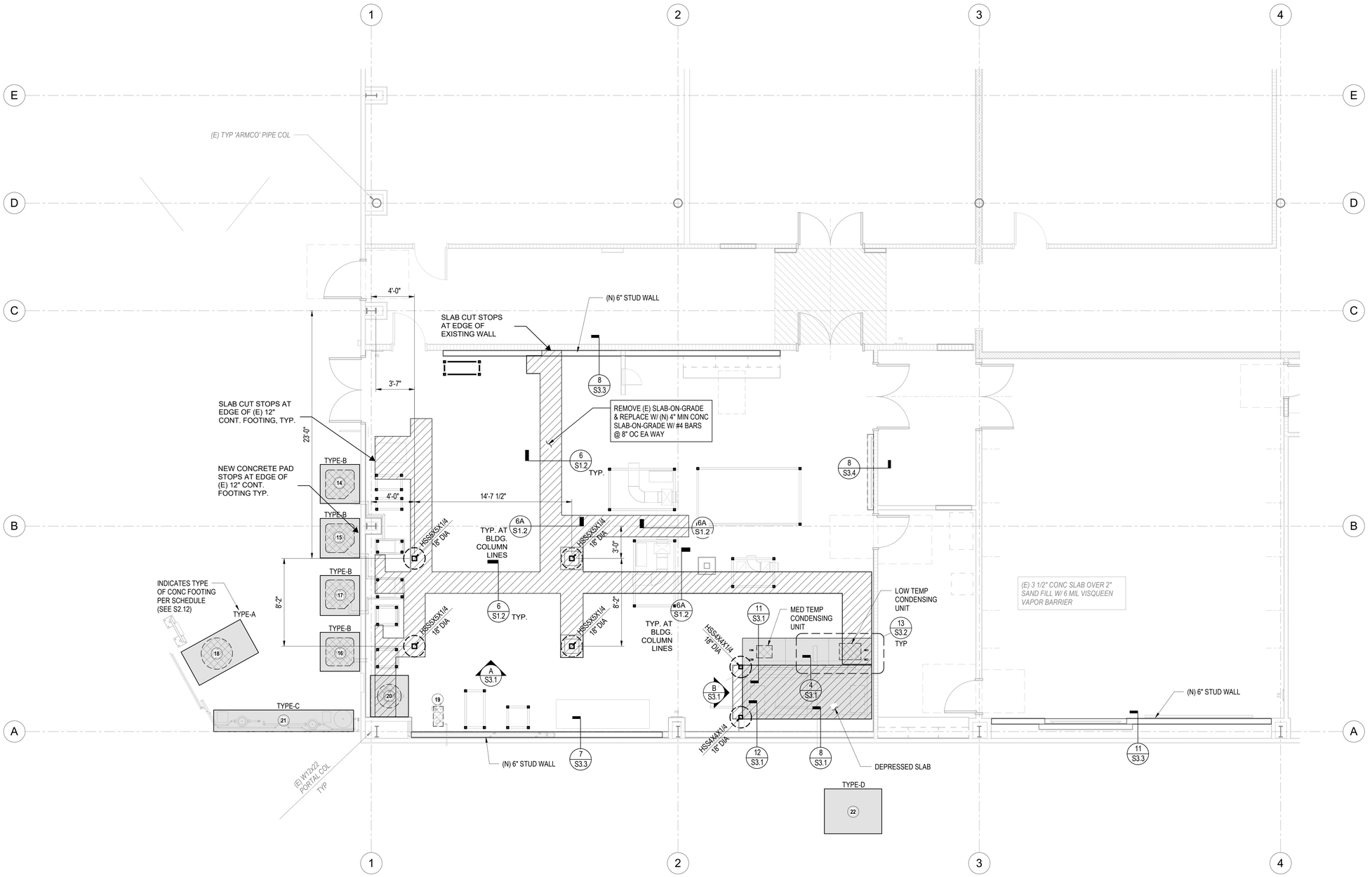

NOTES:

1. REFER TO MECHANICAL DRAWINGS AND MODEL FOR DIMENSIONS AND EXACT LOCATION OF ALL EQUIPMENT.
2. REFER TO ARCH'L DEMO PLAN FOR DIMENSIONS OF THE AREA OF (E) SLAB-ON-GRADE THAT SHALL BE REMOVED.

BLDG 2A - FOUNDATION PLAN | 1 | 1/4" = 1'-0"

S:\Revit2017\Templates\HMC_Standard

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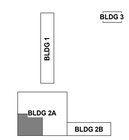
(619) 630-9199 Project #18540
REGISTERED PROFESSIONAL ENGINEER ROBERT K HALE RAYMENT S4822 EXP. 12/31/18 STRUCTURAL STATE OF CALIFORNIA

Key Plan:



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BLDG 2A - FOUNDATION PLAN

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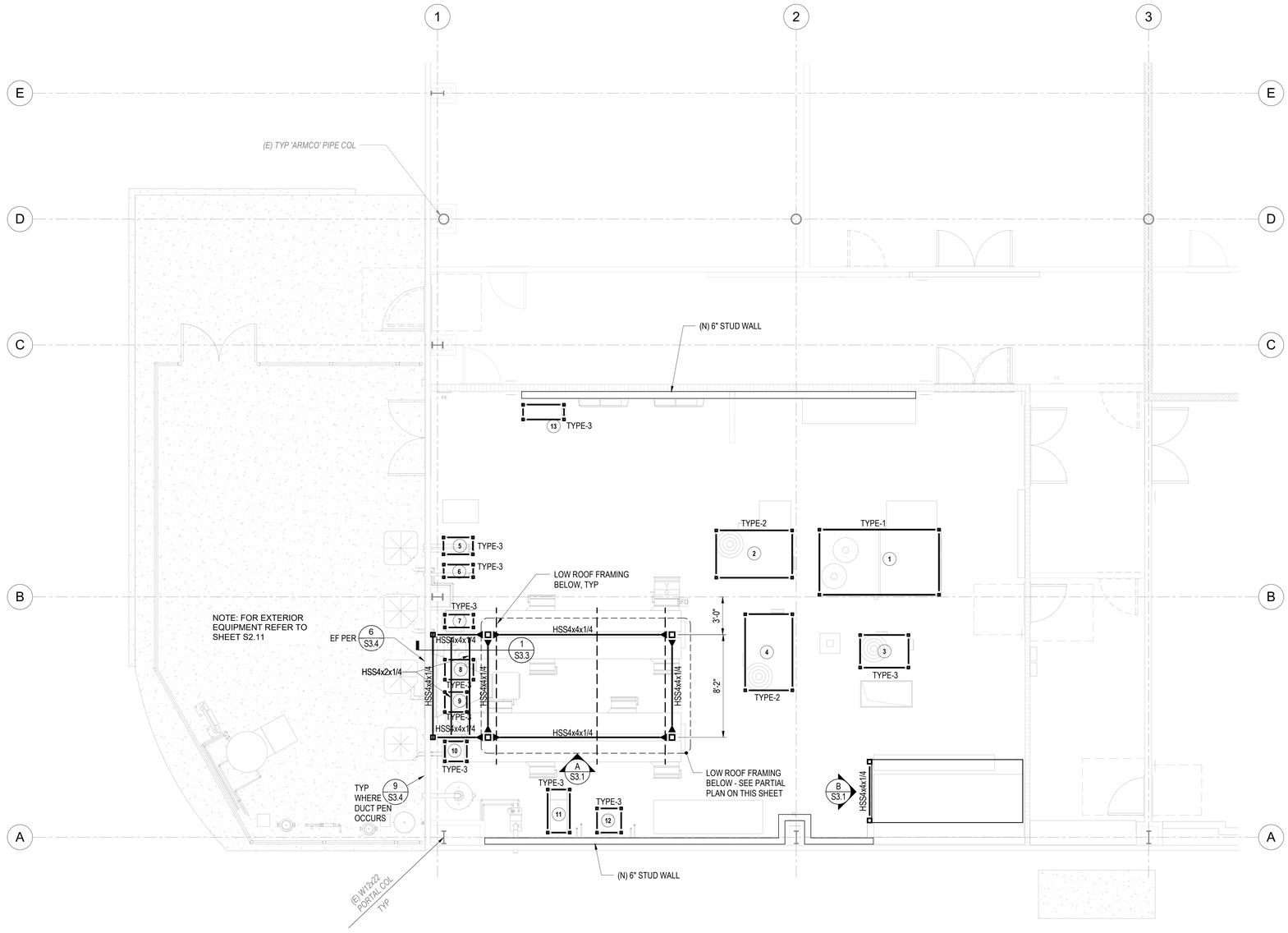

LOW ROOF FRAMING PLAN

Palomar College HVAC Electrical Equipment List

14	CU-1	Carrier	32" square x 35.5" Ht.	151	Concrete Pad (TYPE B)	4'-0" x 4'-0"	2/S3.1	2/S3.1
15	CU-2	Carrier	32" square x 35.5" Ht.	216	Concrete Pad (TYPE B)	4'-0" x 4'-0"	2/S3.1	2/S3.1
16	CU-3	Carrier	32" square x 39" Ht.	218	Concrete Pad (TYPE B)	4'-0" x 4'-0"	2/S3.1	2/S3.1
17	CU-4	Carrier	32" square x 39" Ht.	218	Concrete Pad (TYPE B)	4'-0" x 4'-0"	2/S3.1	2/S3.1
18	CT-1	Delta Cooling Tower	68"L x 39"w x 80" Ht.	705	Concrete Pad (TYPE A)	8'-5" x 5'-2"	2/S3.1	2/S3.1
19	B-1 (42 CFH)	Raytherm	18" w x 27" deep x 34" Ht.	120	(E) SOG	N/A	3/S3.4	3/S3.4
20	WH-1	AO Smith	27" dia x 62" ht	945	(E) SOG	N/A	1/S3.4	1/S3.4
21	HX-1, ET-1, P-1, P-2	SEE M0.02	SEE M0.02	SEE M0.02	Concrete Pad (TYPE C)	2'-0" x 12'-8"	2/S3.1	2/S3.1
22	TG	SEE 1/E7.1	48"w x 34" deep x 56" Ht. 36" w x 24" deep x 90" Ht.	1365 767	Concrete Pad (TYPE D)	4'-2" x 9'-0"	2/S3.1	2/S3.1

Palomar College HVAC Electrical Equipment List

No.	Equip. Label	Manufacturer	Unit Dimensions	Unit Weight (lbs)	Support Type	Support Size	Support Detail	Anchor Detail
1	HP-1 (7.5T)	Carrier	7'-5"x 5'-0" (+Power Exh) x 4'-3" Ht	910	Steel Frame (TYPE 1)	7'-7" x 5'-2"	1/S3.2	1/S3.2
2	HP-2 (5T)	Carrier	6'-3" x 3'-11" (+18" Hood) x 3'6" Ht.	620	Steel Frame (TYPE 2)	6'-5" x 4'-1"	3/S3.2	3/S3.2
3	HP-3 (2T)	Carrier	4'-2" x 2'-9" (+8" OSA Hood) x 3'8" Ht.	304	Steel Frame (TYPE 3)	4'-4" x 2'-11"	5/S3.2	5/S3.2
4	HP-4 (4T)	Carrier	6'-2" x 3'-11" x 3'-6" Ht.	590	Steel Frame (TYPE 2)	6'-5" x 4'-1"	3/S3.2	3/S3.2
5	F-1 (100 CFH)	Carrier	21" w x 30" deep x 35" Ht.	167	Steel Frame (TYPE 3)	2'-8" x 1'-11"	5/S3.2	5/S3.2
6	F-2 (88 CFH)	Bryant	18" w x 29" deep x 33" Ht.	127	Steel Frame (TYPE 3)	2'-7" x 1'-8"	5/S3.2	5/S3.2
7	FC-1 (66 CFH)	Carrier	Furnace section 33" Ht. x 29" deep x 17" wide Coil 22"	126 + 50 = 176	Steel Frame (TYPE 3)	2'-7" x 1'-7"	5/S3.2	5/S3.2
8	FC-2 (60 CFH)	Carrier	Furnace section 35" Ht. x 29" deep x 17" wide Coil 22"	142 + 50 = 192	Steel Frame (TYPE 3)	2'-7" x 1'-7"	5/S3.2	5/S3.2
9	FC-3 (60 CFH)	Carrier Changed to Bryant	Furnace: 36" Ht x 30" deep x 18" wide Dx Coil: 18.5" Ht x	140 + 44 = 184	Steel Frame (TYPE 3)	2'-8" x 1'-8"	5/S3.2	5/S3.2
10	FC-4 (Heat Pump. No Gas Htg.)	Bryant	54" Ht x 23" deep x 21" wide	150	Steel Frame (TYPE 3)	2'-1" x 1'-11"	5/S3.2	5/S3.2
11	WSHP-1	Carrier	22" w x 26" deep x 44" height	255	Steel Frame (TYPE 3)	2'-0" x 2'-4"	5/S3.2	5/S3.2
12	WSHP-2	Carrier	22" w x 26" deep x 48" Ht.	290	Steel Frame (TYPE 3)	2'-0" x 2'-4"	5/S3.2	5/S3.2
13	DCU-1 on frame	Carrier	42" w x 15"deep x 53" Ht.	224	Steel Frame (TYPE 3)	3'-8" x 1'-5"	5/S3.2	5/S3.2

N

BLDG 2A - FRAMING PLAN | 1 | 1/4" = 1'-0"

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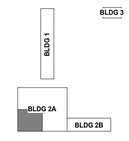
Project #18540

REGISTERED PROFESSIONAL ENGINEER GARY K HALE JR KAHLE SA5822 EXP. 12/31/18 STRUCTURAL STATE OF CALIFORNIA

Key Plan:



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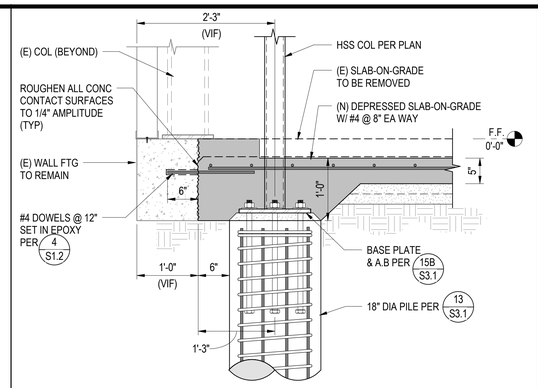
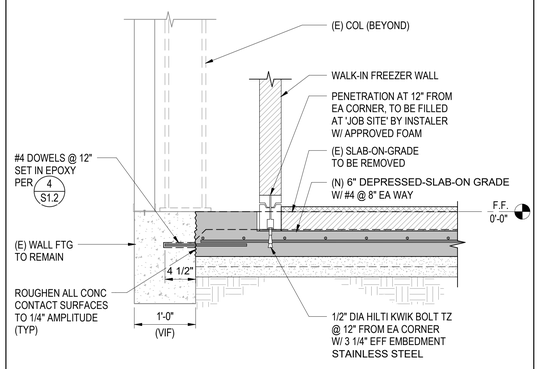
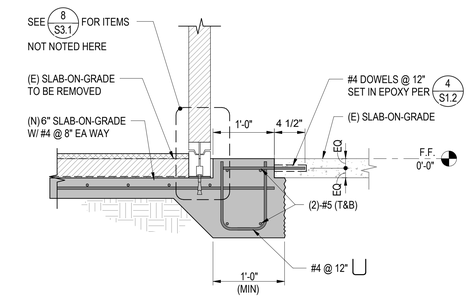


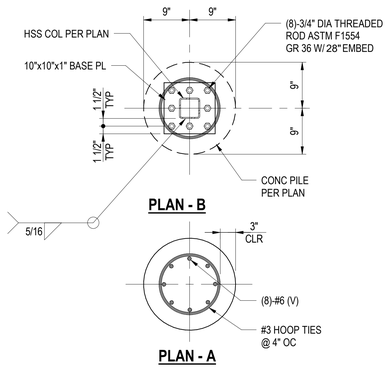
DETAIL 12 — 1" = 1'-0"



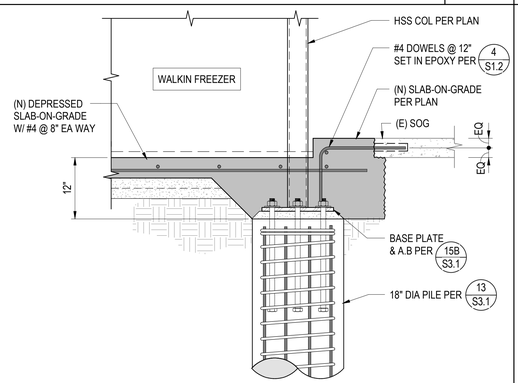
DETAIL 8 — 1" = 1'-0"



DETAIL 4 — 1" = 1'-0"



DETAIL 15 — 1" = 1'-0"



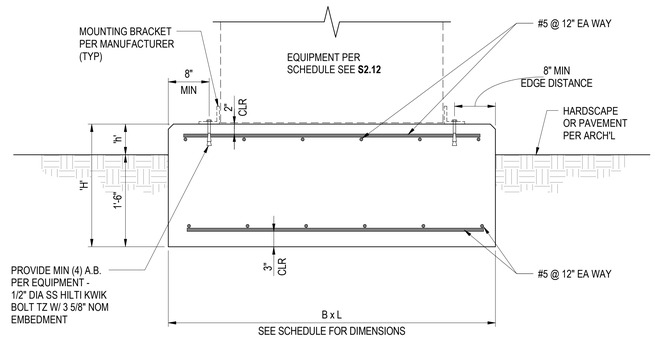
DETAIL 11 — 1" = 1'-0"

SCHEDULE

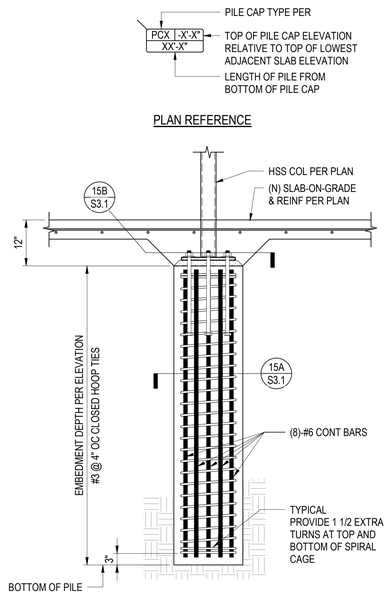
TYPE	B	L	H	h
A	5'-2"	8'-5"	3'-0"	1'-6"
B	4'-0"	4'-0"	2'-0"	0'-6"
C	2'-0"	12'-8"	2'-0"	0'-6"
D	4'-2"	9'-0"	2'-0"	0'-6"

HILTI KWIK BOLT TZ EMBEDMENT SCHEDULE

DIA	h_{ef}	h_{NOM}
3/8"	1 1/2"	1 13/16"
3/8"	2"	2 3/8"
3/8"	2 3/4"	3 1/16"
1/2"	2"	2 3/8"
1/2"	3 1/4"	3 5/8"

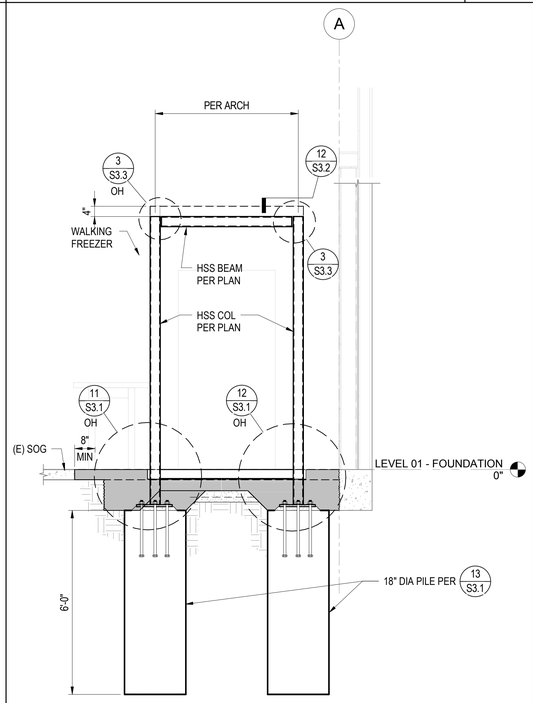


OUTDOOR EQUIPMENT CONCRETE PAD 2 — 1" = 1'-0"

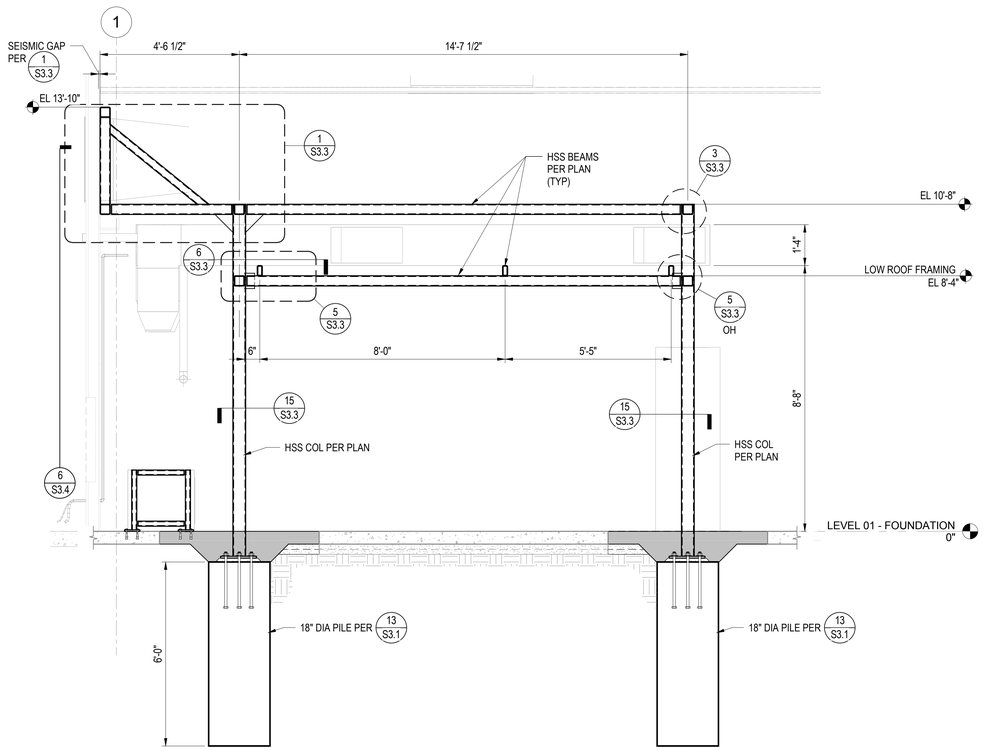


NOTES:
1. FREE FALL OF CONCRETE IS NOT ALLOWED. A TREMIE OR EQUIVALENT SHOULD BE USED TO PLACE CONCRETE IN DRILLED SHAFTS.
2. PROVISIONS FOR MITIGATING THE POTENTIAL FOR CAVING IN DRILLED SHAFTS, INCLUDING BUT NOT LIMITED TO THE USE OF DRILLING MUD AND /OR CASING MAY BE REQUIRED.
3. SEE DETAIL FOR FOUNDATION / GRADE PROFILE.

TYPICAL 18" DIAMETER PILE AND PILE CAP ELEVATION AND SECTIONS 13 — 3/4" = 1'-0"



FRAME ELEVATION B — 1/2" = 1'-0"



FRAME ELEVATION A — 1/2" = 1'-0"

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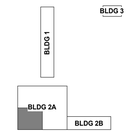
Keynotes:

Consultant:
saiful•bouquet structural engineers
2020 Camino Del Rio North, Ste 305,
San Diego, CA 92108
www.saifulbouquet.com
(619) 630-9199
Project #18540
REGISTERED PROFESSIONAL ENGINEER SAIFUL A. BOUQUET 34892 EXP 12/31/18 STRUCTURAL STATE OF CALIFORNIA
Consultant's Project No.

Key Plan:



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PALOMAR COLLEGE
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Project:
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Sheet Title:
ELEVATIONS AND DETAILS

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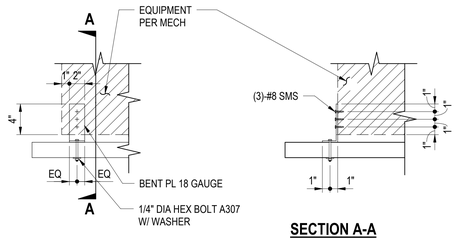
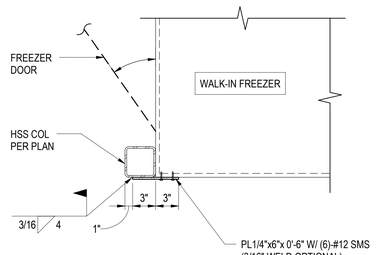
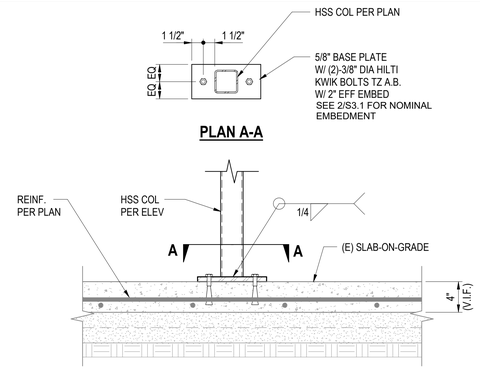


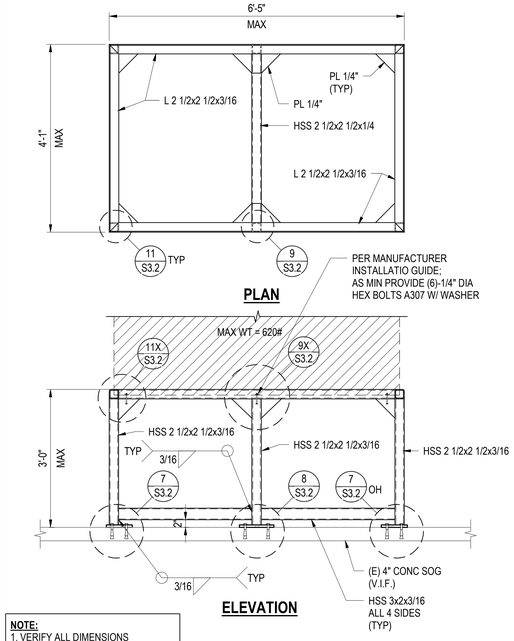
DETAIL 16 — 1 1/2" = 1'-0"



DETAIL 12 — 1 1/2" = 1'-0"

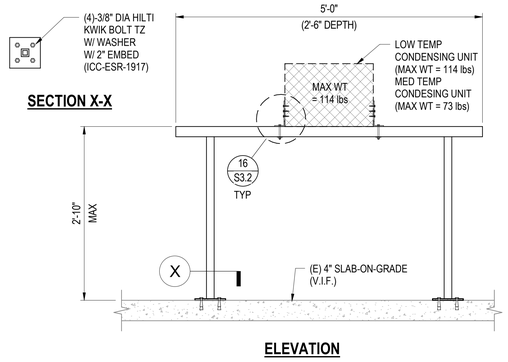


DETAIL 8 — 1 1/2" = 1'-0"

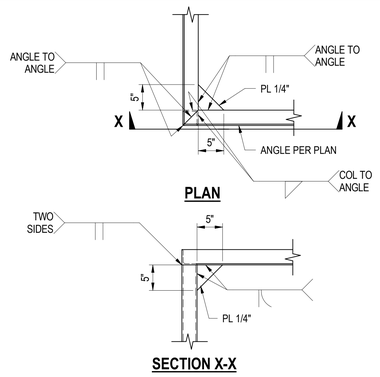


NOTE:
1. VERIFY ALL DIMENSIONS PER MECHANICAL DRAWINGS & EQUIPMENT DATA SHEETS.
2. BE SURE THAT EQUIPMENT WILL FIT WELL INTO STEEL SUPPORTING FRAME BEFORE STARTING ANY FABRICATION.

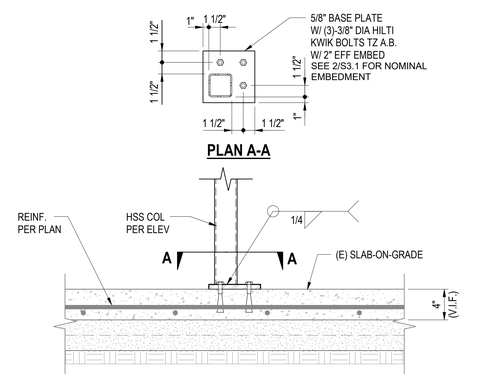
TYPE - 2 STEEL FRAME — 3 — 3/4" = 1'-0"



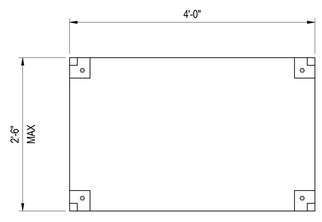
WORK BENCH TYPE-2 ANCHORAGE — 15 — 1" = 1'-0"



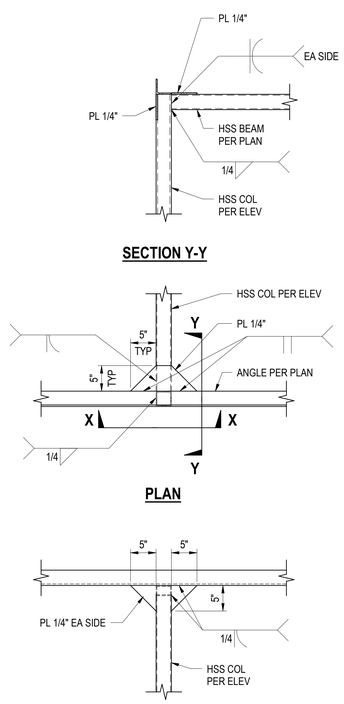
DETAIL 11 — 1" = 1'-0"



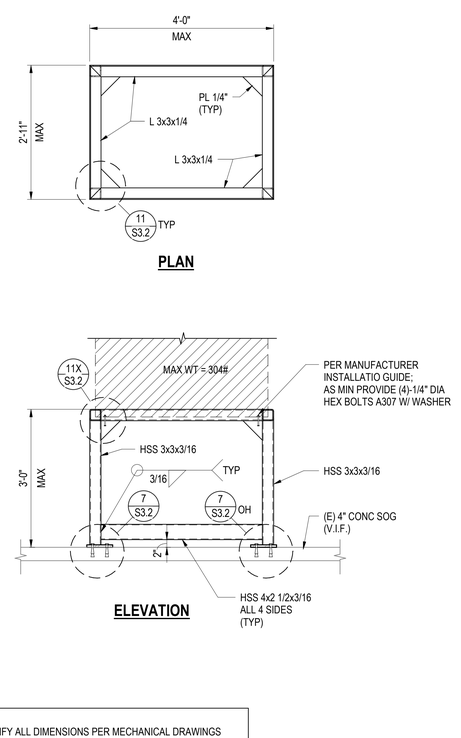
DETAIL 7 — 1 1/2" = 1'-0"



WORK BENCH TYPE-1 ANCHORAGE — 13 — 1" = 1'-0"



DETAIL 9 — 1" = 1'-0"



NOTE:
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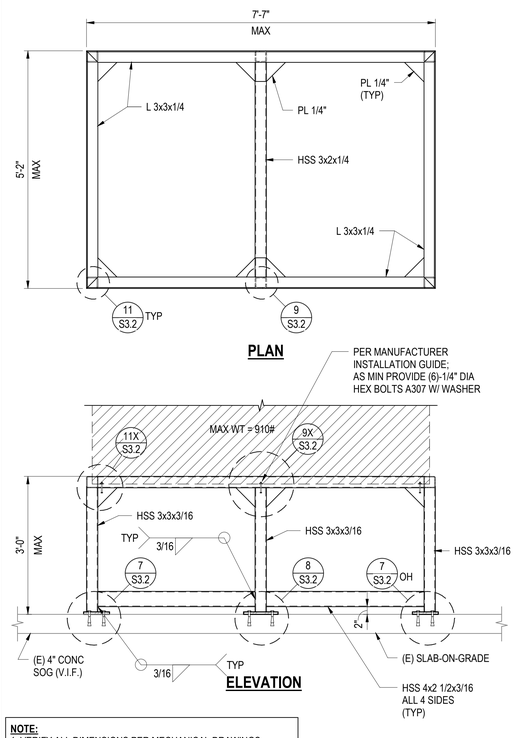
2. BE SURE THAT EQUIPMENT WILL FIT WELL INTO STEEL SUPPORTING FRAME BEFORE STARTING ANY FABRICATION.

TYPE - 3 STEEL FRAME — 5 — 3/4" = 1'-0"



NOTE:
1. VERIFY ALL DIMENSIONS PER MECHANICAL DRAWINGS & EQUIPMENT DATA SHEETS.
2. BE SURE THAT EQUIPMENT WILL FIT WELL INTO STEEL SUPPORTING FRAME BEFORE STARTING ANY FABRICATION.

TYPE - 1 STEEL FRAME — 1 — 3/4" = 1'-0"

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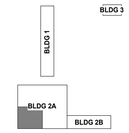
Project #18540
Consultant's Project No.

REGISTERED PROFESSIONAL ENGINEER
TOUFIC T HALE
54832
EXP 12/31/18
STRUCTURAL
STATE OF CALIFORNIA

Key Plan:



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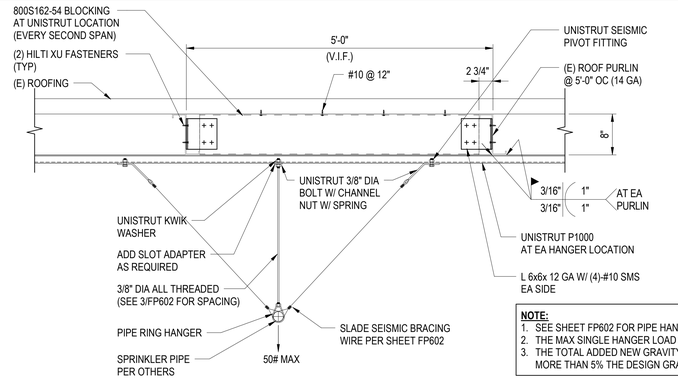
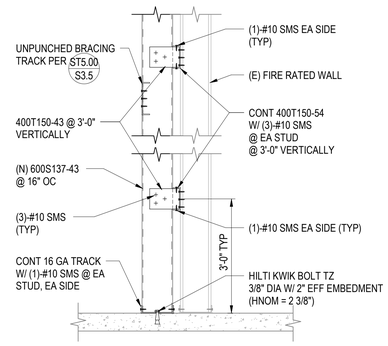
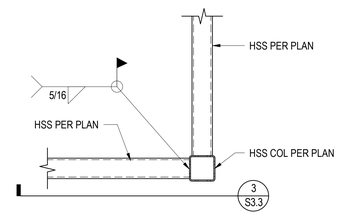


NOTE:
1. SEE SHEET FP602 FOR PIPE HANGERS DETAILS.
2. THE MAX SINGLE HANGER LOAD SHALL BE MAX 50 lbs.
3. THE TOTAL ADDED NEW GRAVITY LOAD SHALL NOT BE MORE THAN 5% THE DESIGN GRAVITY LOAD.

TYPICAL SPRINKLE SYSTEM ATTACHMENT & BRACING | 2 | 1" = 1'-0"

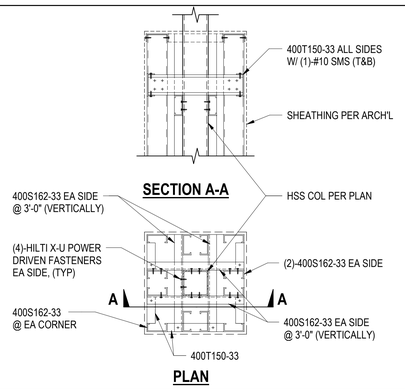


(N) STUD WALL ATTACHMENT TO (E) FIRE RATED WALL | 8 | 1" = 1'-0"



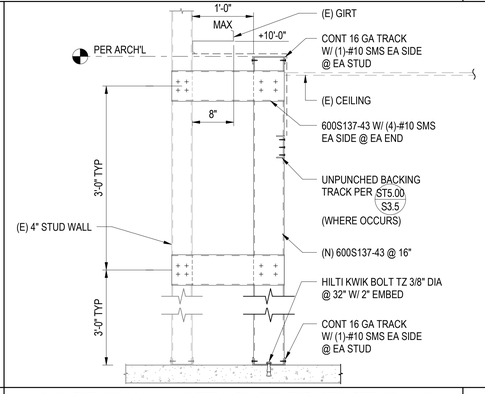
PLAN

DETAIL | 4 | 1" = 1'-0"

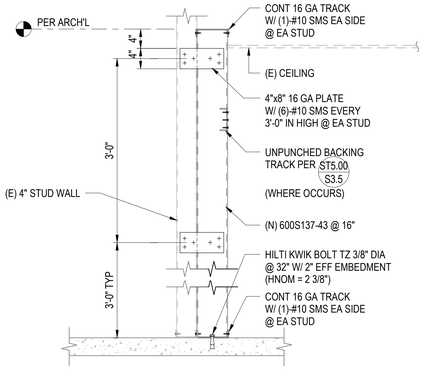


PLAN

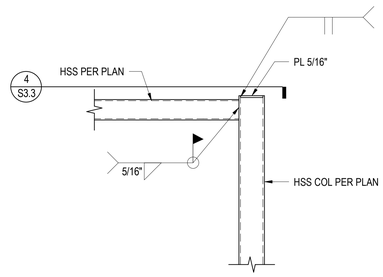
DETAIL | 15 | 1" = 1'-0"



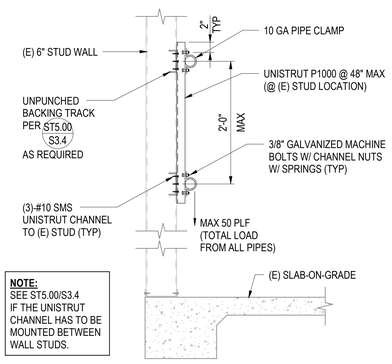
(N) STUD WALL ATTACHED TO (E) STUD WALL | 11 | 1" = 1'-0"



(N) STUD WALL ATTACHED TO (E) STUD WALL | 7 | 1" = 1'-0"

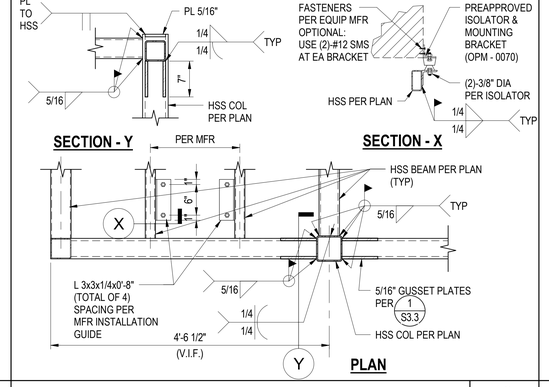


DETAIL | 3 | 1" = 1'-0"

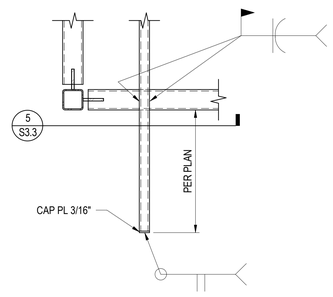


NOTE:
SEE ST5.00/S3.4
IF THE UNISTRUT
CHANNEL HAS TO BE
MOUNTED BETWEEN
WALL STUDS.

DETAIL | 14 | 1" = 1'-0"

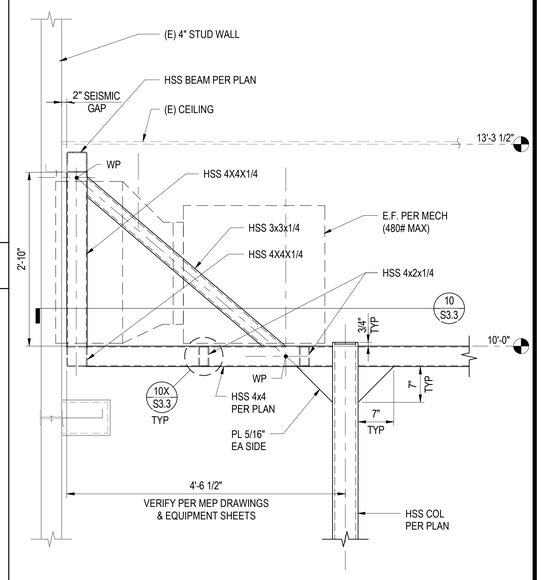


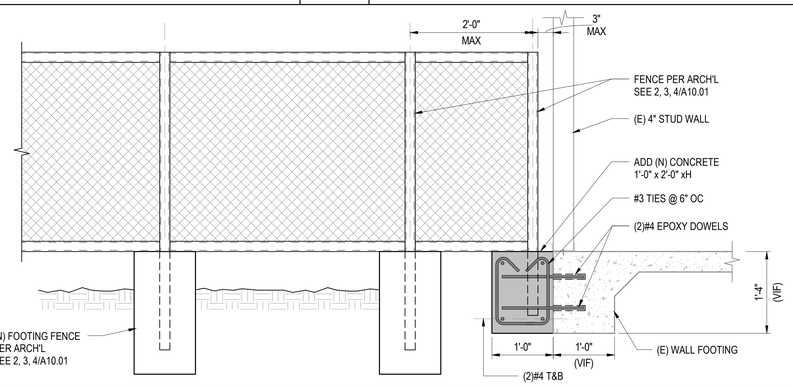
DETAIL | 10 | 1" = 1'-0"



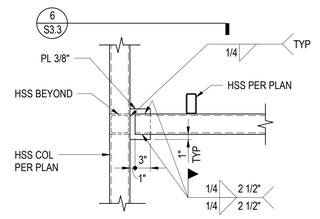
PLAN

DETAIL | 6 | 1" = 1'-0"





DETAIL | 13 | 1" = 1'-0"



DETAIL | 5 | 1" = 1'-0"

DETAIL | 1 | 1" = 1'-0"

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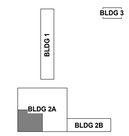
Project #18540
Consultant's Project No.

REGISTERED PROFESSIONAL ENGINEER S.A.B.E.P. WALE M. NAWAZ S4882 EXP. 12/31/18 STRUCTURAL STATE OF CALIFORNIA

Key Plan:



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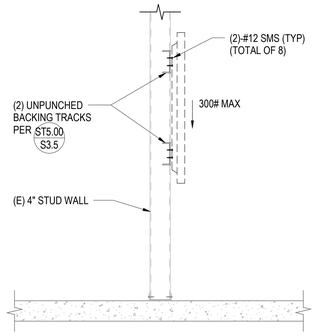
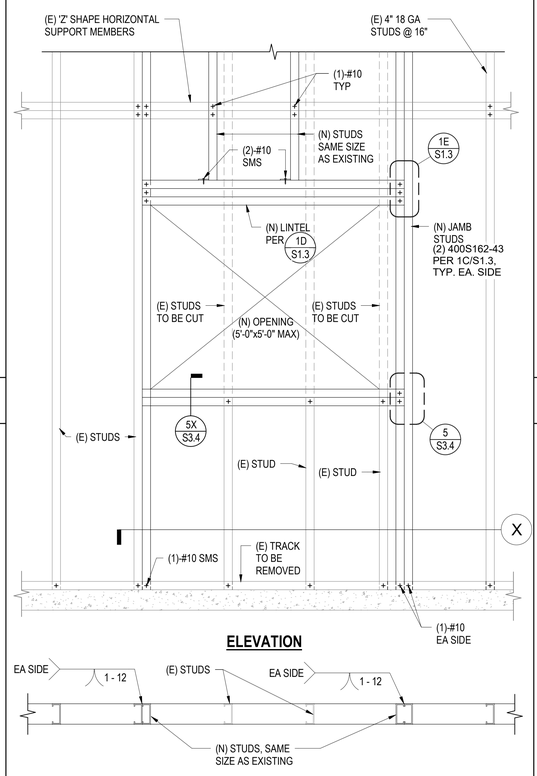
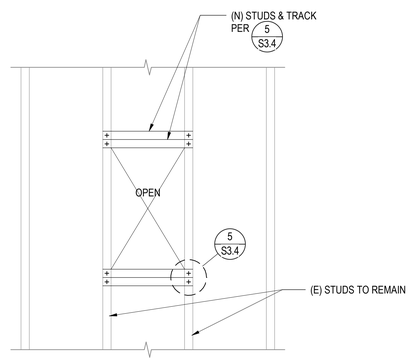


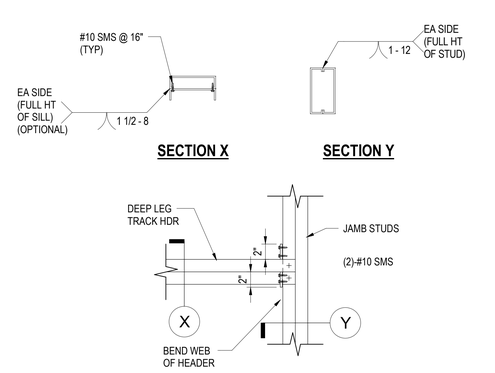
TV ATTACHMENT DETAIL | 8 | 1" = 1'-0"



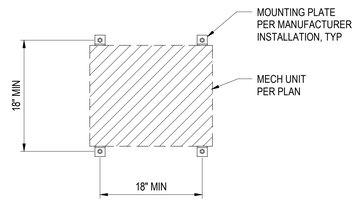
NEW OPENING AT EXISTING STUD WALL | 6 | 1" = 1'-0"



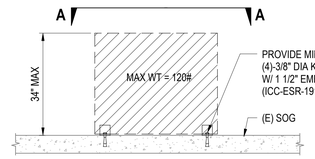
DUCT OPENING AT (E) 4" STUD WALL (MAX 16"x24") | 9 | 1" = 1'-0"



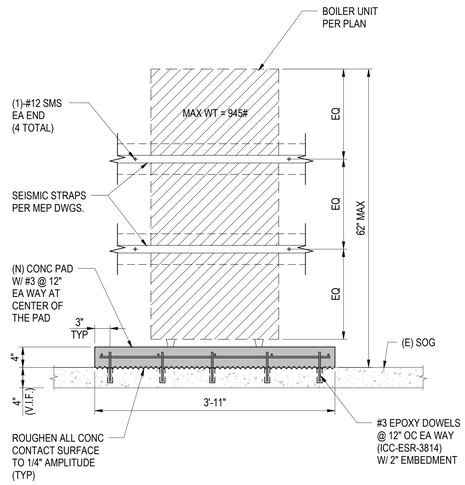
DETAIL | 5 | 1 1/2" = 1'-0"



SECTION A-A



DETAIL | 3 | 1" = 1'-0"



WATER HEATER DETAIL | 1 | 1" = 1'-0"

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Project #18540
Consultant's Project No.

REGISTERED PROFESSIONAL ENGINEER
RAFAT ALI SAIFUL
No. S4892
EXP 12/31/18
STRUCTURAL
STATE OF CALIFORNIA

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LICENSED ARCHITECT BRADLEY E GLADSTICK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date
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Keynotes:

PLOT DATE: Oct 01, 2014

C. POST-INSTALLED ANCHORS (E.G. EXPANSION ANCHORS, SCREW ANCHORS, AND POWER-ACTUATED FASTENERS) SHALL HAVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH THE 2013 CBC SECTIONS 1705A.3 & 1913A.7. FOR QUALIFICATION, DESIGN AND USE OF POST-INSTALLED ANCHORS IN CONCRETE, SEE THE 2013 CBC SECTIONS 1616A.1.19 AND 1908A.1.1 LISTING OF CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD) SHALL BE REQUIRED FOR FASTENERS USED.

D. POWER-ACTUATED FASTENERS (PAF), POWDER DRIVEN FASTENERS (PDF), POWER DRIVEN PINS (PDP) AND SHOT PINS ALL REPRESENT THE SAME DEVICE AND WILL HEREAFTER BE REFERRED TO AS POWER ACTUATED FASTENERS (PAF). PAF SHALL SATISFY THE CURRENT AC70-ACCEPTANCE CRITERIA FOR FASTENERS POWER-DRIVEN INTO CONCRETE, STEEL AND MASONRY ELEMENTS AND THE 2013 CBC SECTION 1908A.1.1. LISTING OF CURRENT ICC-ES EVALUATION REPORTS (OR REPORTS FROM OTHER TESTING AGENCIES ACCEPTABLE TO OSHPD) SHALL BE REQUIRED FOR FASTENERS USED.

E. FOR PAF INSTALLED IN STEEL THE FASTENER PENETRATION SHALL HAVE THE ENTIRE POINTED END OF THE FASTENER DRIVEN THROUGH THE STEEL MEMBER, EXCEPT AS NOTED IN CURRENT REPORTS FROM TESTING AGENCIES ACCEPTABLE TO OSHPD.

7. DESIGN CRITERIA

A. CODE: 2013 CALIFORNIA BUILDING STANDARDS CODE (2013 CBC), ASCE 7-10 WITH SUPPLEMENT #1, AISI S100-07/S2-10, AISI S211-07 WALL STUD DESIGN AND AISI S212-07 FOR HEADER DESIGN.

B. LOAD COMBINATIONS: ALLOWABLE STRESS DESIGN IN ACCORDANCE WITH 2013 CBC SECTION 1605A.3.1.

C. SYSTEM WEIGHTS:

PARTITION WALLS = 7.5 PSF (INCLUDES METAL STUDS, TWO LAYERS OF GYP BOARD, TWO LAYERS ON ONE SIDE OR ONE LAYER ON BOTH SIDES, AND 1 PSF FOR INSULATION AND FINISHES)

SOFFITS = 10 PSF (INCLUDES METAL STUDS, TWO LAYERS OF GYP BOARD, TWO LAYERS ON ONE SIDE OR ONE LAYER ON BOTH SIDES, AND 3.5 PSF FOR INSULATION, FINISHES AND MINOR FIXTURES)

DOORS AND WINDOWS = 10 PSF

CABINETS = 38 PCF (INCLUDES CONTENTS AT 33 PCF PER 2013 CBC TABLE 1607A.1 AND CABINET SELF WEIGHT OF 5 PCF)

EQUIPMENT = 38 PCF (EQUIPMENT LOAD IS ASSUMED TO BE THE SAME AS CABINET LOAD)

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: GENERAL NOTES - PAGE 2 OF 3
OPD NO.: ST0.01

PLOT DATE: Oct 01, 2014

SHEET METAL SCREW (SMS) ALLOWABLE STRENGTHS (CONTINUED)

TABLE 3 – NON-PRYING CONDITION
SHEET METAL SCREW ALLOWABLE STRENGTHS FOR STEEL TO STEEL CONNECTIONS WITH TWO LAYERS OF 5/8" GYP BOARD BETWEEN STEEL SURFACES.

F_y (KSI)	MIL (STEEL GA)	FASTENER SIZE NO. 14 0.250 IN SHEAR (LB)	NO. 14 0.250 IN TENSION (LB)	NO. 12 0.216 IN SHEAR (LB)	NO. 12 0.216 IN TENSION (LB)	NO. 10 0.190 IN SHEAR (LB)	NO. 10 0.190 IN TENSION (LB)	NO. 8 0.164 IN SHEAR (LB)	NO. 8 0.164 IN TENSION (LB)	NO. 6 0.138 IN SHEAR (LB)	NO. 6 0.138 IN TENSION (LB)
50	97 (12)	166	275	130	205						
	68 (14)	166	275	130	205	100	159				
	54 (16)	166	261	130	205	100	159	80	118		
33	43 (18)	166	144	130	124	100	109	80	94	50	79
	33 (20)					70	84	50	72	40	61

NOTES:
1. SEE GENERAL NOTES ON ST1.06 FOR MORE INFORMATION.
2. ALLOWABLE STRENGTH VALUES DO NOT ACCOUNT FOR EFFECTS FROM PRYING. RDP IN RESPONSIBLE CHARGE TO PROVIDE ADEQUATE BLOCKING/RESTRAINT TO PREVENT PRYING ACTION. WHERE PRYING OCCURS, THE VALUES AND CONSTRAINTS OF TABLE 4 SHALL BE USED.

TABLE 4 – PRYING CONDITION (SEE DETAILS BELOW – STRUT CAN BE HORIZONTAL OR VERTICAL)
SHEET METAL SCREW ALLOWABLE STRENGTHS FOR STEEL TO STEEL CONNECTIONS WITH ONE OR TWO LAYERS OF 5/8" GYP BOARD BETWEEN STEEL SURFACES AND MAXIMUM PRYING MOMENT ARM OF 1 5/8".

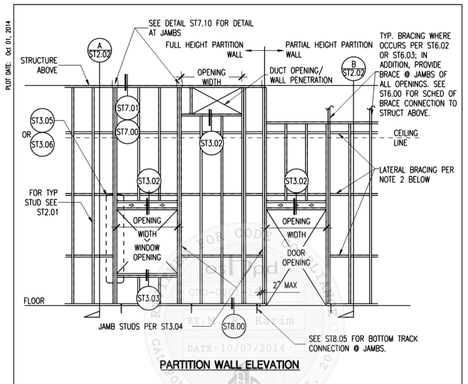
F_y (KSI)	MIL (STEEL GA)	FASTENER SIZE NO. 14 0.250 IN SHEAR (LB)	NO. 14 0.250 IN TENSION (LB)	NO. 12 0.216 IN SHEAR (LB)	NO. 12 0.216 IN TENSION (LB)	NO. 10 0.190 IN SHEAR (LB)	NO. 10 0.190 IN TENSION (LB)	NO. 8 0.164 IN SHEAR (LB)	NO. 8 0.164 IN TENSION (LB)	NO. 6 0.138 IN SHEAR (LB)	NO. 6 0.138 IN TENSION (LB)
50	97 (12)	40	275	30	205						
	68 (14)	40	275	30	205	25	159				
	54 (16)	40	261	30	205	25	159	20	118		
33	43 (18)	40	144	30	124	25	109	20	94	10	79
	33 (20)					15	84	15	72	10	61

NOTES:
1. SEE GENERAL NOTES ON ST1.06 FOR MORE INFORMATION.
2. THE ALLOWABLE STRENGTH VALUES LISTED IN TABLE 4 ARE BASED UPON A LIMITED TEST ASSEMBLY WHERE THE ORIGIN AND DIRECTION OF THE LOAD RESULTS IN PRYING UPON THE FASTENER. THE MAGNITUDE OF THIS PRYING EFFECT SHALL BE LIMITED TO A MOMENT ARM OF 1 5/8" FROM THE FASTENER.

WALL ELEV WITH LOAD APPLIED THROUGH STRUT

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: SHEET METAL SCREW ALLOWABLE STRENGTHS (CONTINUED)
OPD NO.: ST1.08

PLOT DATE: Oct 01, 2014



PARTITION WALL ELEVATION

NOTES:
1. ATTACHMENT OF CEILING, EQUIPMENT, ETC. TO THE JAMB, HEADER OR STUD ABOVE THE HEADER IS NOT PERMITTED WITHOUT THE APPROVAL OF THE RDP IN RESPONSIBLE CHARGE & OSHPD.
2. LATERAL BRACING PER ST4.00 & ST4.01 @ 4'-0" O.C. MAX. LATERAL BRACING NOT REQUIRED WHERE GYP. BOARD OCCURS ON BOTH SIDES OF PARTITION WALL.
3. SEE ST2.07 FOR CONDITION AT OVERLAPPING OPENINGS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTITION WALL ELEVATION - FULL HEIGHT AND PARTIAL HEIGHT PARTITION WALLS
OPD NO.: ST2.06

PLOT DATE: Oct 01, 2014

TYPICAL PARTITION WALL CONDITIONS

CONDITION 'A' – PARTITION WALL WITHOUT ATTACHMENTS. SEE DETAIL ST2.02

CONDITION 'B' – PARTITION WALL SUPPORTING CABINETS OR EQUIPMENT ON ONE SIDE OR BOTH SIDES OF THE WALL DISTRIBUTING UP TO 50 LB TOTAL VERTICAL LOAD PER STUD (37 PLF). REFER TO GENERAL NOTE 7C ON ST0.01. CENTER OF GRAVITY LESS THAN 6" FROM THE FACE OF THE STUD. SEE DETAIL ST2.03.

CONDITION 'C' – PARTITION WALL SUPPORTING OVERHEAD AND/OR BASE CABINETS OR EQUIPMENT ON ONE SIDE OR BOTH SIDES OF THE WALL, DISTRIBUTING UP TO 152 LB TOTAL VERTICAL LOAD PER STUD (114 PLF). REFER TO GENERAL NOTE 7C ON ST0.01. CENTER OF GRAVITY WITHIN 6" OF FACE OF THE STUD. SEE DETAIL ST2.04.

CONDITION 'D' – PARTITION WALL SUPPORTING FULL HEIGHT CABINETS OR EQUIPMENT ON ONE SIDE OR BOTH SIDES OF THE WALL, DISTRIBUTING UP TO 380 LB TOTAL VERTICAL LOAD PER STUD (285 PLF). REFER TO GENERAL NOTE 7C ON ST0.01. CENTER OF GRAVITY WITHIN 6" OF FACE OF THE STUD. SEE DETAIL ST2.04.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: TYPICAL PARTITION WALL CONDITIONS
OPD NO.: ST2.00

PLOT DATE: Oct 01, 2014

D. SEISMIC COEFFICIENTS:

a_h = 1.0 (ASCE 7-10, TABLE 13.5-1, CEILINGS, PARTITIONS, CABINETS, ETC.)

R_p = 2.5 (ASCE 7-10, TABLE 13.5-1, CEILINGS, PARTITIONS, CABINETS, ETC.)

Ω_o = 2.5 (ASCE 7-10, TABLE 13.5-1, CEILINGS, PARTITIONS, CABINETS, ETC.)

Ip = 1.5 (ASCE 7-10, SECTION 13.1.3)

z/h = 1.0 (ALLOWS FOR INSTALLATION AT ANY FLOOR OR ROOF LEVEL OF THE BUILDING)

F_p = LARGER OF 5 PSF IN ACCORDANCE WITH 2013 CBC SECTION 1607A.14 OR SEISMIC DESIGN FORCE IN ACCORDANCE WITH ASCE 7-10 SECTION 13.3.1

$F_p = 0.25 S_{DS} D$ (ASCE 7-10, SECTION 13.3.1), APPLIED CONCURRENTLY WITH F_p

p = 1.0 (ASCE 7-10, SECTION 13.3.1)

S_{DS} - WHERE LIMITING S_{DS} VALUES ARE NOT EXPLICITLY NOTED IN THE OPD, FRAMING SYSTEM OR COMPONENT SHOWN IN THE OPD HAS BEEN DESIGNED TO ACCOMMODATE ALL S_{DS} VALUES UP TO 1.95g. PROJECT SPECIFIC DESIGN IS REQUIRED FOR S_{DS} HIGHER THAN 1.95g.

E. DEFLECTION LIMIT = L/120 (2013 CBC TABLE 1604A.3, INTERIOR PARTITION WALLS WITH FLEXIBLE FINISHES). NOT PERMITTED FOR INTERIOR PARTITION WALLS WITH BRITTLE FINISHES.

F. FASTENER ALLOWABLE STRENGTH TABLES WERE DEVELOPED BASED ON ICC REPORTS BY MULTIPLE MANUFACTURERS.

G. THE OPD DESIGN ASSUMES THAT STRUCTURAL ELEMENTS AND SUPPORTS TO WHICH THE COMPONENTS ARE ANCHORED HAVE SUFFICIENT CAPACITY TO CARRY THE LOADS IMPOSED BY THE COMPONENTS IN COMBINATION WITH ALL OTHER LOADS. EVALUATION OF THE CAPACITY OF THESE SUPPORTING STRUCTURAL ELEMENTS IS BEYOND THE SCOPE OF THE OPD.

H. LG BEAMER 8.10 SOFTWARE WAS USED FOR STUD CAPACITY CHECK. THIS SOFTWARE USES AISI S100-07/S2-10 AS THE BASIS FOR SECTION PROPERTY CALCULATIONS AND INTERACTION CHECKS.

8. THE RDP IN RESPONSIBLE CHARGE SHALL VERIFY FIRE RESISTIVE AND ACOUSTICAL RATINGS FOR ALL PARTITION WALL ASSEMBLIES.

9. INDIVIDUAL DETAILS WITHIN THIS OPD TYPICALLY RELY UPON OTHER DETAILS FOR INFORMATION ESSENTIAL TO THEIR APPLICATION. OPD ARE TO BE USED IN CONJUNCTION WITH ALL RELATED, APPLICABLE DETAILS WITHIN THIS OPD PACKAGE INCLUDING THE GENERAL NOTES.

10. OPD PROVIDE OPTIONS FOR COMPONENTS SUCH AS STUD SIZES, BRACES SIZES, FASTENERS, ETC. THE RDP IN RESPONSIBLE CHARGE SHALL CLEARLY IDENTIFY ALL COMPONENTS SELECTED FOR USE IN THE PROJECT-SPECIFIC CONDITIONS.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: GENERAL NOTES - PAGE 3 OF 3
OPD NO.: ST0.02

PLOT DATE: Oct 01, 2014

GENERAL NOTES

1. CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE 2013 CALIFORNIA BUILDING STANDARDS CODE (2013 CBSC).
2. THE CONTRACTOR SHALL NOTIFY OSHPD AND THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE OSHPD PRE-APPROVED DETAILS (OPD) AND ANY OTHER PORTION OF THE CONSTRUCTION DOCUMENTS, FIELD CONDITIONS OR WHERE ANY CONDITIONS ARISE NOT COVERED BY THESE DOCUMENTS WHEREIN WORK WILL NOT COMPLY WITH THE REQUIREMENTS OF THE 2013 CBSC.
3. THE INTENT OF THE OPD IS TO CONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE 2013 CBSC. SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE WORK WILL NOT COMPLY WITH THE 2013 CBSC, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY OSHPD BEFORE PROCEEDING WITH THE WORK.
4. GALVANIZED METAL STUDS, TRACKS AND SHEET STEEL SHALL CONFORM TO ASTM A635-09a MATERIAL, OR OTHER EQUIVALENT ASTM LISTED MATERIALS IN SECTION A2.1 OF THE AISI S100-07/S2-10: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH SUPPLEMENT 2, DATED 2010, WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL (18 GAGE) AND LIGHTER AND MINIMUM YIELD STRENGTH OF 50 KSI FOR HEAVIER GAGES.
5. METAL STUDS AND TRACKS SHALL BE OF SIZE, THICKNESS AND SECTION PROPERTIES SHOWN ON TABLES I-1, I-2 AND I-3 OF THE AISI MANUAL, COLD FORMED STEEL DESIGN, 2008 EDITION. THE RDP IN RESPONSIBLE CHARGE SHALL OBTAIN OSHPD APPROVAL FOR ANY SUBSTITUTIONS.
6. THESE OPD REFER TO FASTENER TYPE AND SIZE BUT DO NOT SPECIFY OR ENDORSE A SPECIFIC MANUFACTURER. THE RDP IN RESPONSIBLE CHARGE SHALL SELECT A MANUFACTURER, AND SELECTED FASTENER CAPACITIES SHALL MATCH OR EXCEED THE ALLOWABLE STRENGTHS LISTED HEREIN. THE FOLLOWING REQUIREMENTS SHALL ALSO BE MET:
   A. SHEET METAL SCREWS SHALL COMPLY WITH ASTM C 1513-10, ASME B18.6.4-98 (R2005) AND ICC-ES AC 118 AND ALLOWABLE STRENGTH SHALL BE BASED ON INFORMATION PROVIDED IN ST1.07 AND ST1.08. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
   B. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES. ALL FIELD WELDING SHALL HAVE SPECIAL INSPECTION IN ACCORDANCE WITH 2013 CBC 1705A.2.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: GENERAL NOTES - PAGE 1 OF 3
OPD NO.: ST0.00

PLOT DATE: Oct 01, 2014

BACKING PLATE DETAIL TYPE 1

NOTES:
1. BACKING, CONNECTION TO STUD, AND STUDS FOR CABINETS OR EQUIPMENT EXCEEDING THIS LIMIT SHALL BE DESIGNED AND DETAILED BY RDP IN RESPONSIBLE CHARGE.
2. ST5.01 MAY BE USED FOR ATTACHMENT OF CABINETS OR EQUIPMENT DISTRIBUTING LESS THAN 20# PER STUD (CENTER OF GRAVITY LESS THAN 6" FROM FACE OF STUD).
3. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED EXCEPT AS SHOWN.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: BACKING PLATE DETAIL TYPE 1
OPD NO.: ST5.00

PLOT DATE: Oct 01, 2014

PARTITION WALL SCHEDULES

SCHEDULE 1: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'A')

S_{DS}	WALL HEIGHT 9 FT	12 FT	16 FT
0.25–0.99	3625137-33	3625137-43	4005137-43	6005137-43
1.00–1.25	3625137-33	3625137-43	4005137-43	6005137-43
1.26–1.45	3625137-33	3625137-43	4005137-43	6005137-43
1.46–1.95	3625137-33	3625137-54	4005137-54	6005137-43

SCHEDULE 2: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'B')

S_{DS}	WALL HEIGHT 9 FT	12 FT	16 FT
0.25–0.99	3625137-33	3625137-43	4005137-43	3625137-54	4005137-43	6005137-43
1.00–1.25	3625137-33	3625137-43	4005137-43	NA	4005137-54	6005137-43
1.26–1.45	3625137-33	3625137-43	4005137-43	NA	4005137-54	6005137-43
1.46–1.95	3625137-33	3625137-54	4005137-54	NA	4005137-54	6005137-43

SCHEDULE 3: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'C')

S_{DS}	WALL HEIGHT 9 FT	12 FT	16 FT
0.25–0.99	3625137-33	4005137-54	3625137-54	4005137-43	6005137-43	6005137-43
1.00–1.25	3625137-43	4005137-54	3625137-54	4005137-54	6005137-43	6005137-43
1.26–1.45	3625137-43	4005137-54	NA	4005137-54	6005137-43	6005137-43
1.46–1.95	3625137-54	4005137-54	NA	NA	6005137-54	6005137-54

SCHEDULE 4: MINIMUM PARTITION WALL STUD SIZE (PARTITION CONDITION 'D')

S_{DS}	WALL HEIGHT 9 FT	12 FT	16 FT
0.25–0.99	3625137-33	4005137-43	6005137-43	3625137-43	4005137-43	6005137-43	6005137-43
1.00–1.25	3625137-43	4005137-43	6005137-43	NA	4005137-54	6005137-43	6005137-43
1.26–1.45	3625137-43	4005137-43	6005137-43	NA	4005137-54	6005137-43	6005137-54
1.46–1.95	NA	4005137-54	6005137-54	NA	NA	6005137-54	6005137-54

NOTES:
1. PARTITION WALL STUDS ARE SPACED @ 16" O.C. TYPICAL UNLESS NOTED OTHERWISE.
2. SEE ST2.06 FOR PARTITION WALL ELEVATION & ADDITIONAL INFORMATION.
3. SEE ST2.00 FOR DEFINITION OF PARTITION WALL CONDITIONS.
4. SEE ST1.00 FOR METAL STUD PROFILES.
5. 3625137-33 IS A 3 5/8" WIDE SSMA STUD WITH 1 3/8" WIDE FLANGE THAT IS 33 MIL THICK.
6. STUDS SHOWN IN THE TABLES ABOVE CAN BE REPLACED BY EQUIVALENT STUDS WITH EQUAL OR HIGHER AREA (A), SECTION MODULUS (S_x, S_y) AND MOMENT OF INERTIA (I_x, I_y) PROVIDED MATERIALS CONFORM TO THE SAME ASTM STANDARD WITH EQUAL OR HIGHER YIELD STRENGTH (f_y) AND ULTIMATE STRENGTH (f_u) WHEN APPROVED.
7. PARTITION WALLS TO HAVE LATERAL BRACING @ 48" O.C. PER ST4.00 OR ST4.01, FOR FULL HT OF PARTITION WALL. LATERAL BRACING IS NOT REQUIRED WHERE GYP BOARD IS INSTALLED ON BOTH SIDES OF PARTITION WALL.

SECTION TITLE: STANDARD PARTITION WALL DETAILS
SHEET TITLE: PARTITION WALL SCHEDULES
OPD NO.: ST2.01

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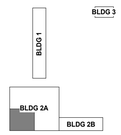
Consultant's Project No.
REGISTERED PROFESSIONAL ENGINEER S4932 EXP. 12/31/18 STRUCTURAL STATE OF CALIFORNIA

Key Plan:



PALOMAR COLLEGE
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Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
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Project:
ESCONDIDO CENTER HVAC/LAB

Sheet Title:
PRE-APPROVED LT GA DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:
S3.5

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MECHANICAL LEGEND

SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
E		COORDINATE WITH ELECTRICAL		DIA. ø	DIAMETER
CD	CD	CONDENSATE DRAIN (A.C)		DN.	DOWN
		PIPE DOWN		DWGS.	DRAWINGS
		PIPE UP		DB	DRY BULB
UP		PIPE RISE (OR DN. FOR DROP)		DTR	DUCT THRU ROOF
DN		DIRECTION OF FLOW IN PIPE		EA	EXHAUST AIR
	DN.	DOWN OR DROP		ER	EXHAUST REGISTER
	UP	RISE OR RISER		EFF.	EFFICIENCY
10x6		DUCTWORK (1ST NUMBER INDICATES WIDTH SHOWN), NET INSIDE DIMENSION		ELEV.	ELEVATION
	TV	SQUARE ELBOW WITH TURNING VANES		ENT.	ENTERING
10x6		RADIUS ELBOW		EWT	ENTERING WATER TEMPERATURE
	MVD	MANUAL VOLUME DAMPER		EXH.	EXHAUST
M	MOD	MOTOR OPERATED DAMPER		EXIST.	EXISTING
	BDD	BACKDRAFT DAMPER		FF	FINISHED FLOOR
FD	FD	FIRE DAMPER		FIN.	FINISH
SD	SD	DUCT MOUNTED SMOKE DETECTOR		FLR.	FLOOR
				GPM	GALLONS PER MINUTE
SFD	SFD	AUTOMATIC SMOKE AND FIRE DAMPER		IN.	INCH
	FLEX	FLEXIBLE CONNECTION (DUCTWORK)		HD.	HEAD
	FLEX	FLEXIBLE CONNECTION OR SEISMIC JOINT		HOA	HAND-OFF-AUTOMATIC
		LINED DUCTWORK (OR PLENUM)		HP	HORSEPOWER
UP		DUCT RISE IN DIRECTION OF FLOW		LD	LINEAR DIFFUSER
DN		DUCT DROP IN DIRECTION OF FLOW		LVG.	LEAVING
		ROUND DUCT UP		LWT	LEAVING WATER TEMPERATURE
		ROUND DUCT DOWN		MAX.	MAXIMUM
		SUPPLY DUCT UP		MBH	ONE THOUSAND B.T.U.'s PER HOUR
		SUPPLY DUCT DOWN		MECH.	MECHANICAL
	RA/OA	RETURN AIR DUCT/OUTSIDE AIR DUCT UP		MIN.	MINIMUM
		RETURN AIR DUCT/OUTSIDE AIR DUCT DOWN		MTD.	MOUNTED
		EXHAUST AIR DUCT UP		MTG.	MOUNTING
		EXHAUST AIR DUCT DOWN		NC	NORMALLY CLOSED
		DUCT TRANSITION		NO	NORMALLY OPEN
	CD	CEILING DIFFUSER		OBD	OPPOSED BLADE DAMPER
	RR	RETURN REGISTER		OA	OUTSIDE AIR
	ER	EXHAUST REGISTER		PD	PRESSURE DROP
				PSIG	POUNDS PER SQUARE INCH GAUGE
T AC-3	T'STAT	THERMOSTAT OR TEMPERATURE SENSOR (NUMBER INDICATES EQUIPMENT ZONE SERVED)		RA	RETURN AIR
H	H'STAT	HUMIDISTAT		REG.	REGISTER
CO2		CARBON DIOXIDE SENSOR		RR	RETURN REGISTER
	CFM	CUBIC FEET PER MINUTE		SA	SUPPLY AIR
OR		SYMBOL, SEE EQUIPMENT SCHEDULE		SF	SQUARE FEET
	AD/AP	ACCESS DOOR / ACCESS PANEL		SS	STAINLESS STEEL
	AFF	ABOVE FINISHED FLOOR		TYP.	TYPICAL
	BDD	BACK DRAFT DAMPER		UNO	UNLESS NOTED OTHERWISE
	BOD	BOTTOM OF DUCT		UOS	UNLESS OTHERWISE SPECIFIED
	BOP	BOTTOM OF PIPE (ABOVE FIN. FLR.)		UTR	UP THRU ROOF
	CD	CEILING DIFFUSER		VAV	VARIABLE AIR VOLUME
	CLG.	CEILING		VFD	VARIABLE FREQUENCY DRIVE
	CFM	CUBIC FEET PER MINUTE		VTR	VENT THRU ROOF
	CONC.	CONCRETE		WG	WATER GAUGE
	CONT.	CONTINUATION		WB	WET BULB
	°F	DEGREES FAHRENHEIT		W/	WITH
		GATE VALVE			
		AUTOFLOW BALANCING VALVE			

CA GREEN BUILDING NOTES

1. THE EXISTING HVAC UNIT SERVING THE HVAC LAB TO REMAIN.
2. PROVIDE TESTING AND ADJUSTING OF NEW HVAC LAB HVAC SYSTEMS AND CONTROLS PER 5.713.10.4.
3. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM. (CAL GREEN SECTION 5.504.3)
4. EXISTING HVAC UNIT SERVING THE AREA OF WORK COMPLIES WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8.
5. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2. HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CHLOROFLUOROCARBONS (CFCs) AND SHALL NOT CONTAIN HALONS (SECTION 5.508.1)
6. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.

DSA NOTES

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 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A 1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G.: HARD-WIRED) TO BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
3. MOVABLE EQUIPMENT THAT IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENT

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE. BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND 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.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR THE STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR SHALL VERIFY THAT ALL THE COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED TO 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 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8 AND 2016 CBC SECTIONS 1616A 1.24, 166A 1.25 AND 1616A 1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE (E.G. SMACNA OR OSHPD OPM), COPIES OF THE INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO START OF AND DURING THE HANGING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGAR AND BRACE LOADS.

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 PREAPPROVAL.

MP☒ MD☒ PP ☒ OPTION 3: SHALL COMPLY WITH SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANT ADDENDA. FASTNERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL AA AND CONNECTION LEVEL 2 FOR THE PROJECT AND CONDITIONS.

GENERAL NOTES:

1. THESE DRAWINGS ARE A GENERAL GRAPHIC PRESENTATION OF THE WORK. DUCTWORK, PIPING, AND EQUIPMENT, AS SHOWN, ARE SCHEMATIC. FABRICATE AND INSTALL BASED ON ACTUAL FIELD MEASUREMENT. COORDINATE WITH OTHER TRADES. PROVIDE A COMPLETE SET OF SHOP DRAWINGS REFLECTING ACTUAL INSTALL, ACCESS REQUIREMENTS, AND DETAILS BASED UPON THE ACTUAL EQUIPMENT PROCURED. MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS AT THE JOB SITE.
2. THESE DRAWINGS ARE TO BE CONSIDERED NOT FOR CONSTRUCTION UNTIL THEY ARE STAMPED, SIGNED, AND PERMITTED. UNTIL THEN THEY ARE SUBJECT TO CHANGE wITHOUT NOTICE.
3. COMPLY WITH CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PLUMBING CODE (CPC), AND NATIONAL FIRE PROTECTION AGENCY (NFPA), AND GOVERNING CODES. THERE SHALL BE NO EXCEPTION. REPORT DEFICIENCIES WITHIN THIRTY (30) DAYS UPON AUTHORIZATION TO PROCEED.
4. REVIEW ALL DRAWINGS AND SPECIFICATIONS INCLUDING ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL. ANY QUESTIONS SHALL BE BROUGHT UP, IN WRITING, TO THE ATTENTION OF THE ENGINEER BEFORE THE START OF CONSTRUCTION.
5. PROVIDE ACCESS AND CLEARANCE FOR MAINTENANCE FOR MECHANICAL EQUIPMENT AND COMPONENTS AS RECOMMENDED BY EQUIPMENT MANUFACTURER AND APPLICABLE CODES.
6. HANDLE, STORE AND INSTALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
7. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
8. BRACE AND SUPPORT PIPES, CONDUIT, AND DUCTWORK IN ACCORDANCE WITH SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING PIPING SYSTEM.
9. ALL DUCT DIMENSIONS, AS SHOWN ON MECHANICAL DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
10. INSULATION AND FLEXIBLE DUCT SHALL COMPLY WITH STATE FIRE MARSHALL CRITERIA AND SHALL NOT EXCEED FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50 PER ASTM-84, NFPA-223, AND UL 723.
11. INSULATE PIPING, DUCTWORK AND FLEXIBLE DUCT IN ACCORDANCE WITH TITLE 24.
12. COMMISSION AND START-UP THE MECHANICAL SYSTEMS TO ASSURE A COMPLETE AND OPERATIONAL HVAC SYSTEM IN ACCORDANCE WITH ASHRAE AND NEBB.
13. ALL SQUARE ELBOWS IN DUCTWORK SHALL HAVE DOUBLE THICKNESS TURNING VANES. ALL RADIUS ELBOWS IN DUCTWORK SHALL BE MINIMUM 1.5W (1.5xWIDTH) AND HAVE 3 SPLITTER VANES. PROVIDE MANUAL VOLUME DAMPER AT EACH BRANCH DUCT TAKE- OFF SERVING EACH AIR TERMINAL DEVICE. PROVIDE BALANCING DAMPERS FOR EACH MAIN DUCT TAKE-OFF IN ACCORDANCE WITH SMACNA IN ORDER TO ASSURE A COMPLETELY BALANCED SYSTEM.
14. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO ORDERING ANY EQUIPMENT AND PRIOR TO BID.
15. UPON INSTALLATION OF ALL EQUIPMENT, DEVICES, VIBRATION ISOLATION, ETC., PROVIDE WRITTEN CONFIRMATION BY EQUIPMENT MANUFACTURER'S REPRESENTATIVES TO ENSURE COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.
16. PROVIDE DETAILS AND SEISMIC CALCULATIONS FOR ALL EQUIPMENT ON VIBRATION ISOLATION. ALL DETAILS SHALL BE STAMPED BY A STRUCTURE ENGINEER FROM VIBRATION ISOLATION MANUFACTURER.
17. THE CONTRACTOR SHALL SELECT ALL CIRCUIT SETTERS/BALANCING VALVES FOR ACTUAL FLOW THROUGH THE PIPE AND THE PROPER PRESSURE DROP TO ENSURE PROPER OPERATION AND NOT BASED ON PIPE SIZES.

PROJECT NOTES

1. THE NEW HVAC EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT IS FOR DEMONSTRATION AND TRAINING PURPOSES AND IS NOT INTENDED TO OPERATE AS A STANDARD INSTALLATION.
2. CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL PLANS WITH ALL DISCIPLINES TO VERIFY CLEARANCES BETWEEN HVAC DUCTS, HVAC PIPING, ELECTRICAL DATA CONDUITS, PLUMBING LINES, STRUCTURAL MEMBERS, ETC. SPECIAL ATTENTION IS REQUIRED MOUNTING THE PIPING ALONG THE WALL.
3. CONTRACTOR TO SUBMIT A SHOP DRAWING OF THE LAYOUT OF THE MECHANICAL PIPING, PLUMBING AND ELECTRICAL MOUNTED TO THE WALLS FOR REVIEW BY ARCHITECT.
4. CONTRACTOR TO COORDINATE EQUIPMENT TO BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR AND SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT ALONG WITH A LAYOUT OF THE EQUIPMENT FOR REVIEW BY ARCHITECT.

PLAN CHECK NOTES

1. THE EXISTING HVAC UNIT SERVING THE HVAC LAB TO REMAIN.
2. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 120.3, 120.4, 120.7 TITLE 24 ENERGY STANDARDS AND CHAPTER 6 OF CMC.
3. ALL HVAC SYSTEMS MEET THE CONTROL REQUIREMENTS PER SECTION 110.2 AND 120.2 E.E.S.
4. ALL HVAC EQUIPMENT AND APPLIANCES MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 TITLE 24 ENERGY STANDARDS.
5. EXISTING SMOKE DETECTORS IN MAIN SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM COMPLIES WITH SECTION 608.0 CMC.
6. EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER SEC. 504.0 CMC.
7. ROOF ACCESS SHALL COMPLY WITH SECTION 304 CMC.
8. CALIFORNIA MECHANICAL CODE 2015 (CMC), CALIFORNIA PLUMBING CODE (CPC) AND TITLE 24 ENERGY STANDARDS ARE THE CURRENT CODES/STANDARDS APPLICABLE TO THIS PROJECT.
9. HVAC DUCT SHALL BE R-8 AT EXTERIOR INSTALLED DUCTWORK.

TITLE 24 NOTES

1. THE EXISTING DX ROOFTOP UNIT TO REMAIN AND NOT MODIFIED. UNIT COMPLIES WITH SECTIONS 110.2 & 120.2 ENERGY EFFICIENCY STANDARDS INCLUDING IN-DUCT SMOKE DETECTOR.
2. THERE ARE NO CHANGES TO THE EXISTING ENVELOPE.

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Sheet Title:
MECHANICAL LEGEND AND GENERAL NOTES

DSA APPROVED SET

Date: 10.04.2018 **Client Project No:** 5015021-100

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MECHANICAL EQUIPMENT SCHEDULE

Purchased By	Equip. Label	Manufacturer	MODEL NUMBER	Volt / Phase	MCA / MOCP	Unit Dimensions	Unit Weight
C	EF-1 (Exhaust fan)	L. Cook	165 SQN17D(VF2) rated at 4000 cfm at 0.75"SP, 2HP, 1725 rpm	208v / 3		26" square + Vari-Flow motor / drive on side of fan	247
OFCI	HP-1 (7.5T)	Carrier	50HCQD08A2A5-0A0G0	208v / 3	40 MCA / 50 MOCP + separate 0.5HP power exhaust 2.9 MCA / 5.2 MOCP	7'-5"x 5'-0" (+Power Exh) x 4'-3" Ht	910
OFCI	HP-2 (5T)	Carrier	50KCQA06A0A3-0A0A0	208v / 1	39 MCA / 60 MOCP NO POWER EXH. OSA DAMPER ONLY.	6'-3" x 3'-11" (+18" Hood) x 3'6" Ht.	620
OFCI	HP-3 (2T)	Carrier	50VL-C24-3	208v / 1	15.2 / 20	4'-2" x 2'-9" (+8" OSA Hood) x 3'8" Ht.	304
OFCI	HP-4 (4T)	Carrier	50KCQA05A2A5-0A0A0	208v / 3	24 / 30	6'-2" x 3'-11" x 3'-6" Ht.	590
OFCI	DFC-1 through 5 on wall	Bryant	619PEQ012BBMA		0.2 MCA each DFC. Units powered from DCU.	(5) 12"Ht x 33" wide x 8" deep	20 Each
OFCI	DCU-1 on frame	Carrier	38MGRQ48E-3	208v / 1	35 MCA / 50 MOCP	42" w x 15"deep x 53" Ht.	224
OFCI	ICE-1	Manitowoc	i-322A / B-320	120V / 1 Phase	11.5 MCA / 15 MOCP	22" w x 34" deep x 58" Ht.	800
OFCI	F-1 (100 CFH)	Carrier	59TP6A100E211320	120V/ 1 Phase	14.9 amps / 19.4 Unit Ampacity	21" w x 30" deep x 35" Ht.	167
OFCI	F-2 (88 CFH)	Bryant	310JAV042090	120V/ 1 Phase	8.6 amps / 15 MOCP	18" w x 29" deep x 33" Ht.	127
OFCI	FC-1 (66 CFH)	Carrier	Furnace: 58CTY070116 Dx Coil: CNPHP3617ALA	120V/ 1 Phase	9.6 MCA / 15 MOCP	Furnace section 33" Ht. x 29" deep x 17" wide Coil 22" Ht. X 21" deep X 21" wide 55" total Ht. x 29" deep x 21" wide base frame	126 + 50 = 176
OFCI	FC-2 (60 CFH)	Carrier	Furnace: 59TP6A060E17-14 Dx Coil: CNPHP3617ALA	120V/ 1 Phase	10.9 MCA / 15 MOCP	Furnace section 35" Ht. x 29" deep x 17" wide Coil 22" Ht. X 21" deep X 21" wide 57" total Ht. x 29" deep x 21" wide base frame	142 + 50 = 192
OFCI	FC-3 (60 CFH)	Carrier Changed to Bryant	Furnace: 987MA42060V17 Dx Cooling Coil C36A175L136	120V/ 1 Phase	Furnace: 9.7 amps / 15 MOCP	Furnace: 36" Ht x 30" deep x 18" wide Dx Coil: 18.5" Ht x 21" deep x 17.5" wide	140 + 44 = 184
OFCI	FC-4 (Heat Pump. No Gas Htg.)	Bryant	FE4ANF003L00	208v / 1 Phase	5.4 Min Ckt amps / 15 Fuse amps	54" Ht x 23" deep x 21" wide	150 lbs.
OFCI	CU-1	Carrier	24AAA536A003	208v / 1 Phase	18.1 MCA / 30 MOCP	32" square x 35.5" Ht.	151
OFCI	CU-2	Carrier	24ACB736A003	208v / 1 Phase	19.8 MCA / 35 MOCP	32" square x 35.5" Ht.	216
OFCI	CU-3	Carrier	288BNV-037	208v / 1 Phase	26 MCA / 40 MOCP	32" square x 39" Ht.	218
OFCI	CU-4	Carrier	288BNV-037	208v / 1 Phase	26 MCA / 40 MOCP	32" square x 39" Ht.	218
OFCI	CT-1	Delta Cooling Tower	DT-15	230v / 3 Phase	1.5HP / 4.5 Amps	68"L x 39"w x 80" Ht.	705
C	B-1 (42 CFH)	Raytherm	Model 0042 Residential Boiler	120v / 1 Phase		18" w x 27" deep x 34" Ht.	120
OFCI	WSHP-1	Carrier	50PCV036LCC5ACN1	208v / 3	14 MCA / 20 MOCP	22" w x 26" deep x 44" height	255
OFCI	WSHP-2	Carrier	GP036VTLCDET1	208v / 1	23.4 MCA / 35 MOCP	22" w x 26" deep x 48" Ht.	290
C	HX-1	Carlson Heat Exchanger	Model 7.5 ST / 72,000 BTUH, 45 GPM Hot, 20 GPM Cold	N/A	N/A	19" x 11" x 4"	40
C	P-1	Grundfos - CT Pump	P-1 Grundfos TPE40-80/2 A-G-Z-BUBE Rated at 45 GPM / 15 Ft HD @0.75HP	208v / 1 Phase		14" x 6" x 17" Ht.	65
C	P-2	Grundfos - WSHP pump	P-2 Grundfos TPE32-160/2 A-G-Z-BUBE Rated at 20 GPM / 25 Ft HD @0.75HP	208v / 1 Phase		14" x 6" x 17" Ht.	65
C	ET-1	Expansion Tank	Taco CA215-125	N/A	N/A	20" dia x 60" Ht.	290
Notes:	Refer to structural drawings for equipment to be mounted on frames. Coordinate actual size of equipment with frame for proper mounting of units.						
	Purchased by: C = Contractor, OFCI = Owner Furnished Contractor Installed						

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MECHANICAL EQUIPMENT SCHEDULE

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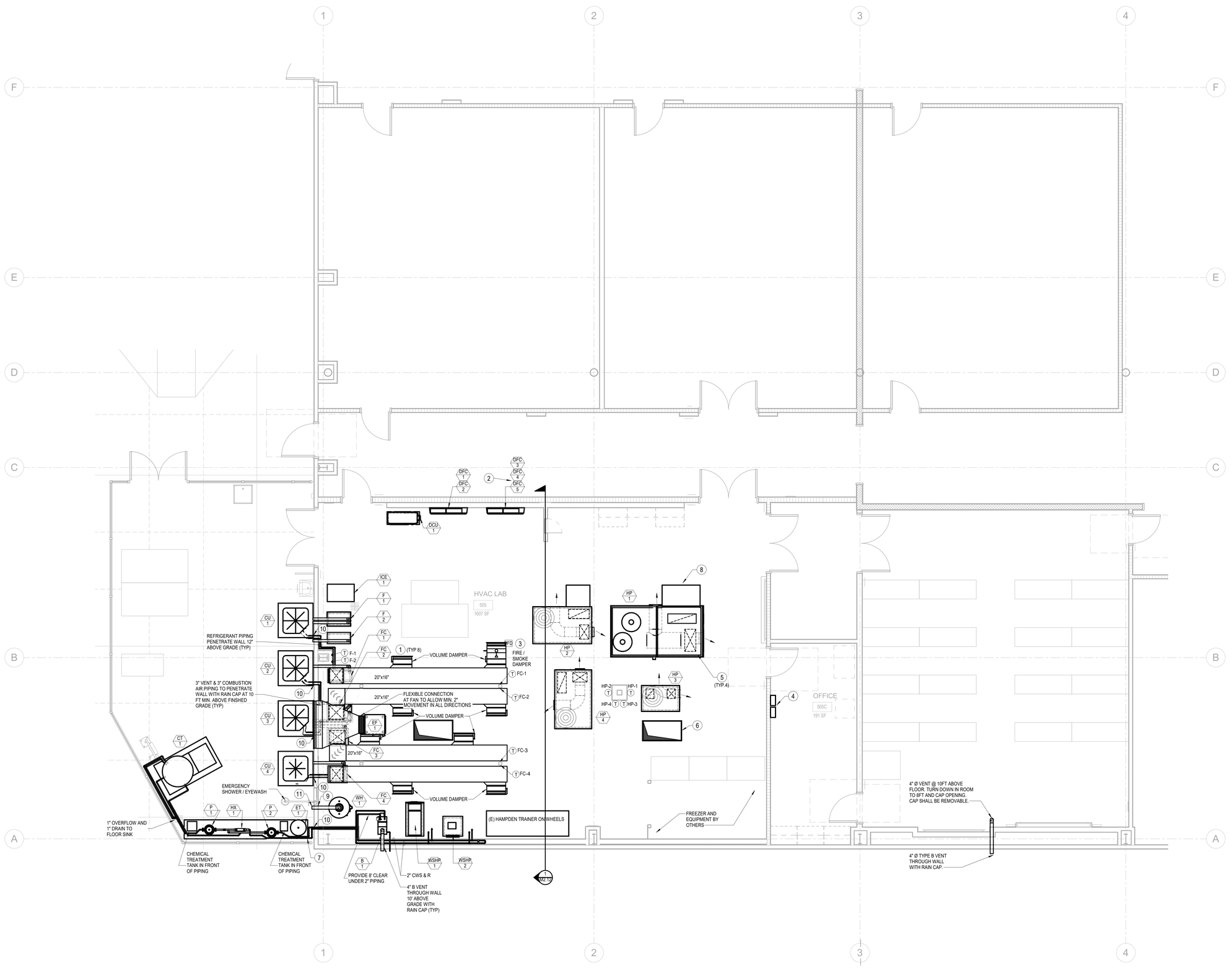

MECHANICAL LEVEL 01 FLOOR PLAN 1 1/4" = 1'-0"

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1. 24X14 TITUS 350 RL SIDEWALL REGISTER.
2. DFC UNITS MOUNTED TO WALL. MOUNT LOWER UNITS AT 34" ABOVE FINISHED FLOOR. SPACE UNITS 2FT APART EACH OTHER. REFRIGERANT PIPING MOUNTED TO WALL.
3. FIRE/SMOKE DAMPER IS FOR DEMONSTRATION PURPOSES. IT IS NOT INTENDED TO OPERATE AS A FIRE ALARM DEVICE.
4. CONTROL PANELS MOUNTED TO WALL. REFER TO DETAIL 1/M6.01.
5. SUPPLY AND RETURN AIR DUCTWORK. REFER TO DETAIL 6/M5.01.
6. MAKE-UP AIR FOR EF-1, PROVIDE 48X24 TITUS 350RL CEILING REGISTER WITH 48X24 MAKE-UP AIR DUCT TRANSITION UP TO EXISTING OPENING THROUGH ROOF. PROVIDE BACK-DRAFT DAMPER IN DUCT.
7. REFER TO PIPING DIAGRAM ON M3.01.
8. POWER EXHAUST/ECONOMIZER UNITS. NOTE: THE BOTTOM OF THE UNIT IS 3-3/4" BELOW THE BOTTOM OF THE HP UNIT.
9. REFER TO STRUCTURAL PENETRATION DETAILS 6 & 9 ON SHEET S3.4.
10. ADD FLEXIBLE CONNECTOR AT WALL FOR ALL PIPING PENETRATIONS, REFRIGERANT AND COPPER PIPING. SEE DETAIL 8/M5.01.
11. FLUE THROUGH WALL. REFER TO MANUFACTURERS INSTALLATION REQUIREMENTS FOR SIZE (TYP).

GENERAL NOTES:

1. THE EXISTING HVAC UNIT SERVING THE HVAC LAB, OFFICES AND CLASSROOM TO REMAIN.
2. THE NEW HVAC EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT IS FOR DEMONSTRATION AND TRAINING PURPOSES AND IS NOT INTENDED TO OPERATE AS STANDARD INSTALLATION.
3. CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL PLANS WITH ALL DISCIPLINES TO VERIFY CLEARANCES BETWEEN HVAC DUCTS, HVAC PIPING, ELECTRICAL DATA CONDUITS, PLUMBING LINES, STRUCTURAL MEMBERS, ETC. SPECIAL ATTENTION IS REQUIRED MOUNTING THE PIPING ALONG THE WALL.
4. CONTRACTOR TO SUBMIT A SHOP DRAWING OF THE LAYOUT OF THE MECHANICAL PIPING, PLUMBING AND ELECTRICAL MOUNTED TO THE WALLS FOR REVIEW BY ARCHITECT.
5. CONTRACTOR TO COORDINATE EQUIPMENT TO BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR AND SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT ALONG WITH A LAYOUT OF THE EQUIPMENT FOR REVIEW BY ARCHITECT.

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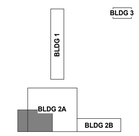

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MECHANICAL LEVEL 01 FLOOR PLAN

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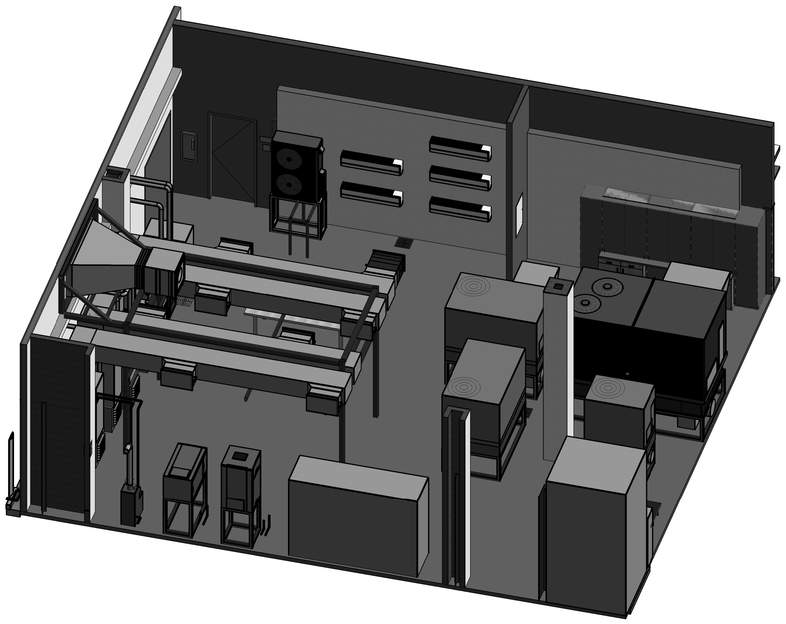
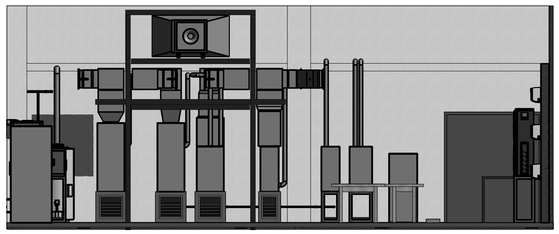


HVAC LAB 505 VIEW #3 — 3 / M2.12



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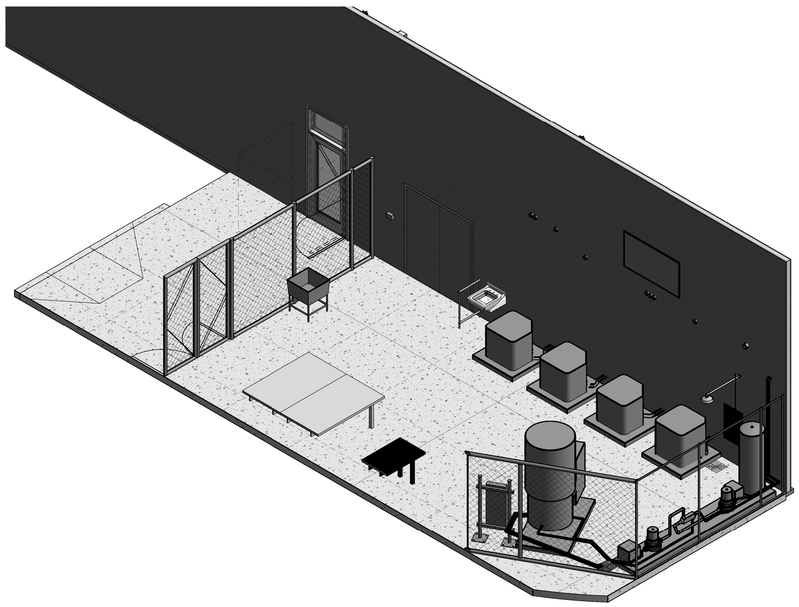
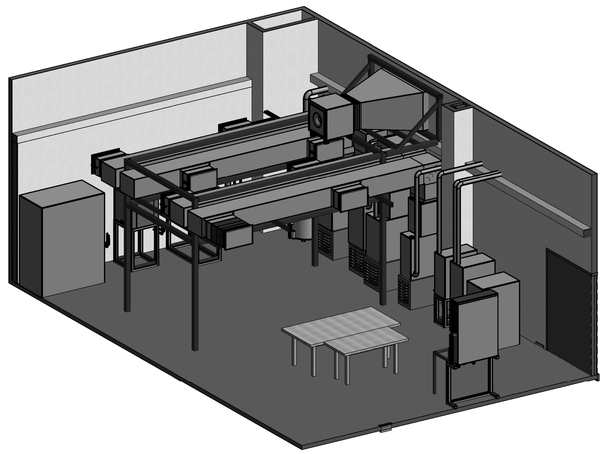


OUTDOOR VIEW — 4 / M2.12



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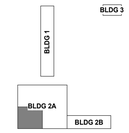
Key Plan:



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Project:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER HVAC/LAB

Sheet Title:
MECHANICAL 3D CONCEPT

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

M2.12

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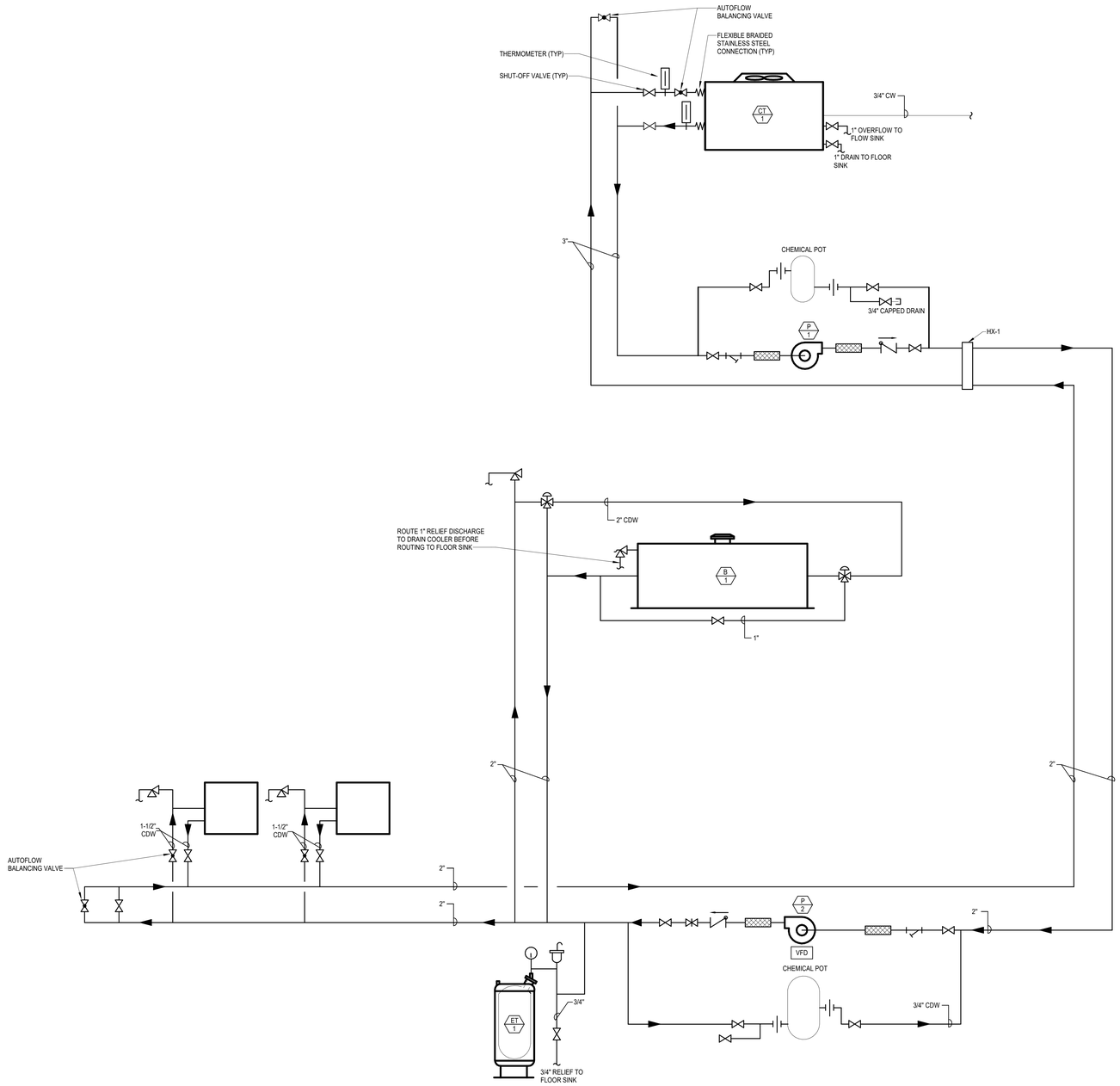

MECHANICAL CONDENSER WATER FLOW DIAGRAM 1 NO SCALE

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Sheet Title:
MECHANICAL PIPING DIAGRAMS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:
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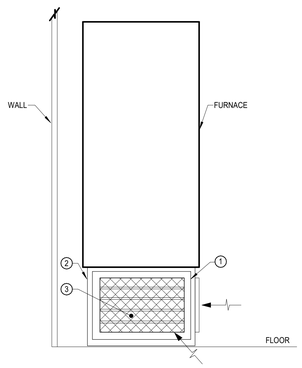
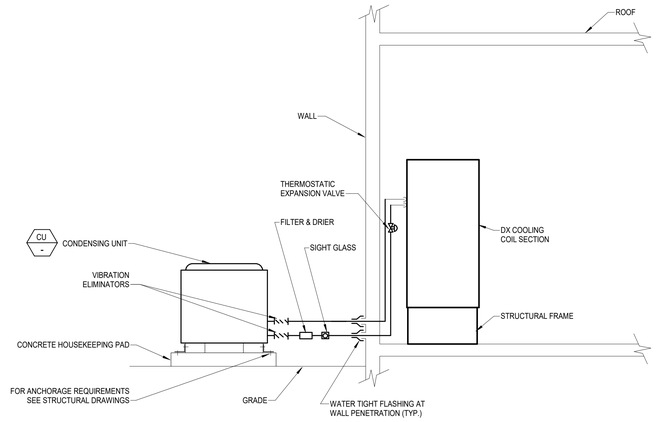


NOTES:

1. RETURN AIR SHEET METAL PLENUM ATTACHED TO BOTTOM OF FURNACE. COORDINATE SIZE OF OPENING WITH UNIT.
2. STRUCTURAL FRAME. REFER TO STRUCTURAL DETAIL 5/S3.2.
3. 12x12 TITUS 350RL RETURN AIR REGISTER WITH OPPOSED BLADE DAMPER. TYPICAL ON THREE SIDES.

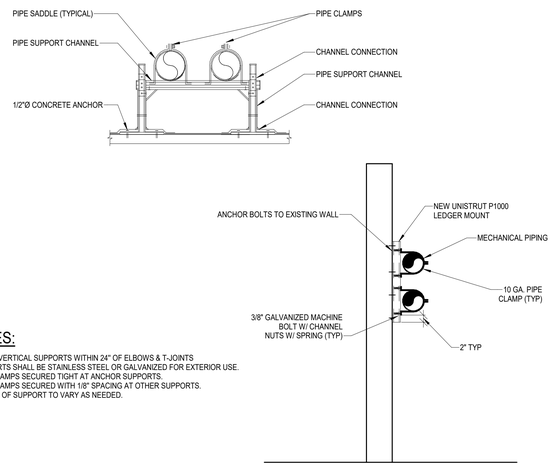
TYPICAL FURNACE DETAIL

NO SCALE — 7 / M5.01



REFRIGERANT PIPING DETAIL

NO SCALE — 4 / M5.01

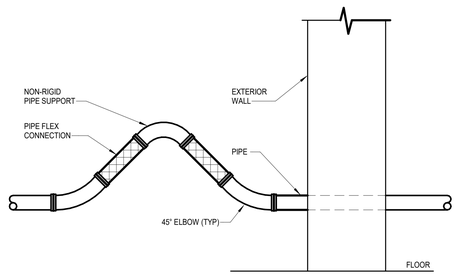


NOTES:

1. PLACE VERTICAL SUPPORTS WITHIN 24" OF ELBOWS & T-JOINTS
2. ALL PARTS SHALL BE STAINLESS STEEL OR GALVANIZED FOR EXTERIOR USE.
3. PIPE CLAMPS SECURED TIGHT AT ANCHOR SUPPORTS.
4. PIPE CLAMPS SECURED WITH 1/8" SPACING AT OTHER SUPPORTS.
5. HEIGHT OF SUPPORT TO VARY AS NEEDED.

PIPING SUPPORT DETAIL

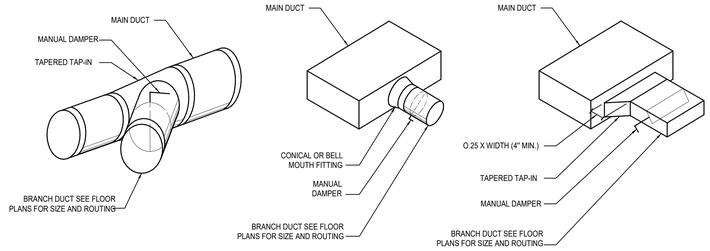
NO SCALE — 1 / M5.01



NOTE:
ALLOW FOR 2" MINIMUM MOVEMENT IN ALL DIRECTIONS.

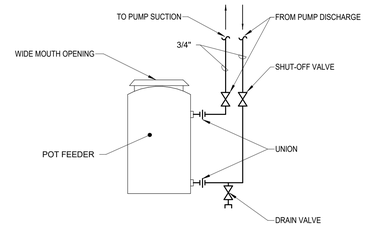
TYPICAL FLEXIBLE PIPE DETAIL

NO SCALE — 8 / M5.01



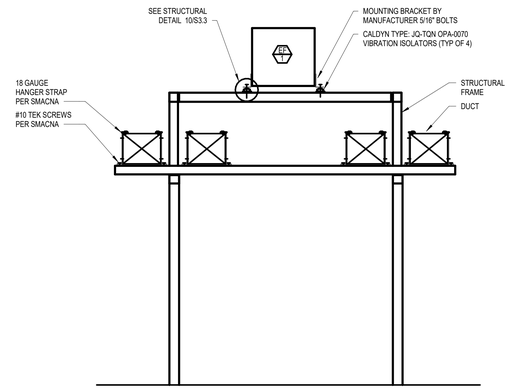
BRANCH DUCT TAKE OFF DETAIL

NO SCALE — 5 / M5.01



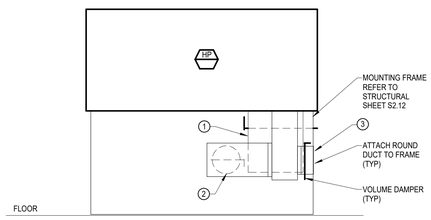
CHEMICAL POT FEEDER PIPING DIAGRAM

NO SCALE — 2 / M5.01



DUCT AND EXHAUST FAN TO FRAME ATTACHMENT DETAIL

NO SCALE — 9 / M5.01

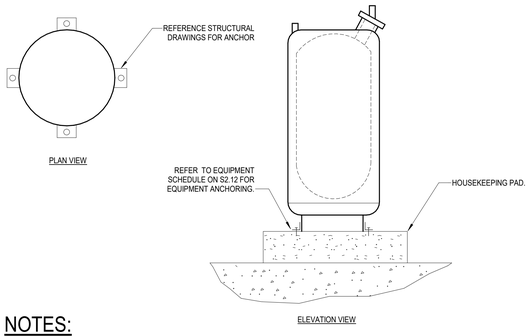


NOTES:

1. RETURN AIR DUCT TO MATCH SIZE OF HP UNIT OPENING. TERMINATE 1 FT ABOVE FINISHED FLOOR WITH 1/4" WIRE MESH SCREEN OVER OPEN ENDED DUCT.
2. SUPPLY AIR DUCT PLENUM WITH ROUND DUCT OPENING PER NOTE 3.
3. ROUND DUCT OPENING SIZED AS FOLLOWS:
   HP-1 (2) 16"Ø
   HP-2 (2) 14"Ø
   HP-3 (2) 8"Ø
   HP-4 (2) 12"Ø

DUCTWORK CONNECTIONS TO HP UNITS

NO SCALE — 6 / M5.01



NOTES:

1. VERIFY ALL DIMENSIONS WITH MANUFACTURER'S SHOP DRAWINGS.
2. REQUIRED EDGE DISTANCES: 6".

VERTICAL EXPANSION TANK SUPPORT

NO SCALE — 3 / M5.01

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Sheet Title:
MECHANICAL DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

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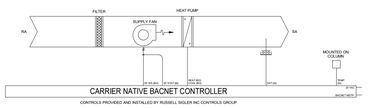


Sequence of Operation

Indoor Fan
During Occupied periods, fan shall operate continuously. During Unoccupied periods, fan shall operate when the space temperature exceeds the unoccupied heating or cooling setpoints.

Single Speed
The fan operates at one speed only and provides on/off operation

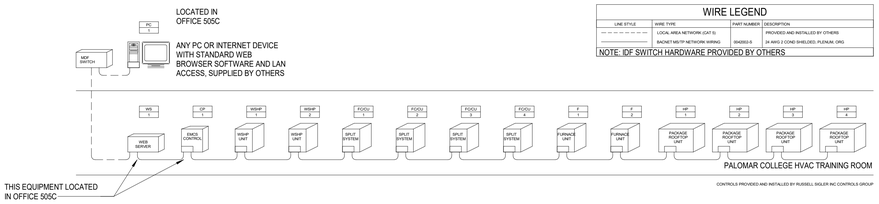
Heating Mode
When space temperature is below the occupied heating setpoint, unit shall operate in the heating mode. Unit shall stage available heat stages to satisfy demand in the occupied space.

Cooling Mode
When space temperature is above occupied cooling setpoint, unit shall operate in the cooling mode. Unit shall enable available cooling stages to satisfy demand in the occupied space.

PACKAGE UNIT CONTROL DETAIL (HP-3 AND HP-4)

NO SCALE

5 M6.01



WIRE LEGEND

LINE STYLE	WIRE TYPE	PART NUMBER	DESCRIPTION
– – – – – –	LOCAL AREA NETWORK (CAT 5)		PROVIDED AND INSTALLED BY OTHERS
————	BACNET MS/TP NETWORK WIRING	004350-5	24 AWG 2 COND SHIELDED, PLENUM, CMG

NOTE: IDF SWITCH HARDWARE PROVIDED BY OTHERS

EMCS RISER DIAGRAM

NO SCALE

1 M6.01

Sequence of Operation

Indoor Fan
During Occupied periods, fan shall operate continuously. During Unoccupied periods, fan shall operate when the space temperature exceeds the unoccupied heating or cooling setpoints.

Single Speed
The fan operates at one speed only and provides on/off operation

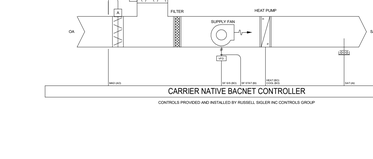
Heating Mode
When space temperature is below the occupied heating setpoint, unit shall operate in the heating mode. Unit shall stage available heat stages to satisfy demand in the occupied space.

Cooling Mode
When space temperature is above occupied cooling setpoint, unit shall operate in the cooling mode. Unit shall enable available cooling stages to satisfy demand in the occupied space.

FAN COIL CONTROL DETAIL (FC-1 THRU FC-4)

NO SCALE

6 M6.01



Sequence of Operation

System Run Condition
The loop monitor will run whenever any zone is occupied.

Cooling Tower - Run Conditions
The cooling tower will be enabled to run whenever the loop pumps run. The cooling tower condenser water control will stage its components (spray pump, fan, etc.) in sequence to maintain loop water supply temperature setpoint. The following setpoints are recommended values. All setpoints will be field adjusted during the commissioning period to meet the requirements of actual field conditions.

Condenser Water Pump Lead/Standby Operation
The condenser water pumps will run anytime the cooling tower is called to run. The lead condenser water pump will start prior to the cooling tower being enabled and will stop only after the cooling tower is disabled. The condenser water pumps will therefore have a user adjustable delay on start and a user adjustable delay on stop. The delay times will be set appropriately to allow for orderly condenser water system start-up, shutdown and sequencing. The condenser water pumps will operate in a lead/standby fashion. The lead pump will run first. On failure of the lead pump, the standby pump will run and the lead pump will turn off. The designated lead pump will rotate manually through a software switch or weekly

Boiler - Run Conditions
The boiler system will run subject to its own internal safeties and controls. The boiler system will be enabled to run whenever the loop monitor is enabled by zone requirements.

Bypass Valve
The controller will measure the condenser water supply temperature and modulate the bypass valve open to maintain setpoint.

EMCS CONTROLLER (CP-1)

NO SCALE

2 M6.01

Sequence of Operation

Indoor Fan
During Occupied periods, fan shall operate continuously. During Unoccupied periods, fan shall operate when the space temperature exceeds the unoccupied heating or cooling setpoints. The fan operates at 1 of 2 speeds depending on the mode of operation and load conditions. During vent only mode and low load conditions, the fan operates at low speed. If load conditions increase or if there is a call for heating, the fan operates at high speed.

Heating Mode
When space temperature is below the occupied heating setpoint, unit shall operate in the heating mode. Unit shall stage available heat stages to satisfy demand in the occupied space.

Cooling Mode
When space temperature is above occupied cooling setpoint, unit shall operate in the cooling mode. Unit shall enable available cooling stages to satisfy demand in the occupied space.

Economizer
Economizer shall close when fan is off or during a loss of power. During occupied hours when fan is energized, the economizer shall open to adjustable minimum position. When outside air temperature is below space temperature and occupied space requires cooling, economizer shall open. If economizer air is not sufficient to meet the demand in the occupied space, unit shall enable available mechanical cooling stages to satisfy demand in the occupied space.

Power Exhaust
The exhaust fan shall modulate to maintain the room pressure setpoint (as determined by air balancer). Not controlled through EMS.

PACKAGE UNIT WITH ECONOMIZER-POWER EXHAUST CONTROL DETAIL (HP-1)

NO SCALE

3 M6.01

Sequence of Operation

Indoor Fan
During Occupied periods, fan shall operate continuously. During Unoccupied periods, fan shall operate when the space temperature exceeds the unoccupied heating or cooling setpoints.

Single Speed
The fan operates at one speed only and provides on/off operation

Heating Mode
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Cooling Mode
When space temperature is above occupied cooling setpoint, unit shall operate in the cooling mode. Unit shall enable available cooling stages to satisfy demand in the occupied space.

WATER SOURCE HEAT PUMP CONTROL DETAIL (WSHP-1 AND WSHP-2)

NO SCALE

8 M6.01

Sequence of Operation

Indoor Fan
During Occupied periods, the fan shall operate continuously. During Unoccupied periods, the fan shall operate when the space temperature exceeds the unoccupied heating or cooling setpoints. The fan operates at 1 of 2 speeds depending on the mode of operation and load conditions. During vent only mode and low load conditions, the fan operates at low speed. If load conditions increase or if there is a call for heating, the fan operates at high speed. If load conditions increase or if there is a call for heating, the fan operates at high speed.

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PACKAGE UNIT WITH ECONOMIZER CONTROL DETAIL (HP-2)

NO SCALE

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Sheet Title:
MECHANICAL CONTROL DIAGRAMS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

M6.01

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PLUMBING LEGEND AND ABBREVIATIONS

SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
	POC	POINT OF CONNECTION		ABV	ABOVE
	W	WASTE OR SEWER		A/C	ABOVE CEILING
	V	SANITARY VENT		A.F.F.	ABOVE FINISH FLOOR
	CW	COLD WATER		A.F.G.	ABOVE FINISH GRADE
	HW	HOT WATER		A/G	ABOVE GRADE
	HWR	HOT WATER RETURN		A.P.	ACCESS PANEL
G	G	LOW PRESSURE NATURAL GAS		B/F	BELOW FLOOR
MPG	MPG	MEDIUM PRESSURE NATURAL GAS		B/G	BELOW GRADE
	SOV	SHUT OFF VALVE		CFH	CUBIC FEET PER HOUR
	PRV	PRESSURE REDUCING VALVE		DWGS.	DRAWINGS
	FS	FLOOR SINK		EA.	EACH
	FD	FLOOR DRAIN		(E)	EXISTING
	FCO	FLOOR CLEAN-OUT		FT.	FEET OR FOOT
	WCO	WALL CLEAN-OUT		FLR.	FLOOR
	GCO	GRADE CLEAN-OUT		G.P.F.	GALLONS PER FLUSH
	TWCO	TWO-WAY CLEAN-OUT		G.P.H.	GALLONS PER HOUR
	DN	DOWN OR DROP		G.P.M.	GALLONS PER MINUTE
	UP	RISE OR RISER		I.E.	INVERT ELEVATION
	HB	HOSE BIBB		MSA	MEDIUM PRESSURE GAS METER
		VALVE ON RISE OR DROP		NTS	NOT TO SCALE
	U	UNION TEMPERATURE & PRESSURE RELIEF VALVE		LB	POUNDS
				PSI	POUNDS PER SQUARE INCH
	RV			SF	SQUARE FEET
				T.D.H.	TOTAL DEVELOPED HEAD
CD	CD	CONDENSATE DRAIN PIPING		V.T.R.	VENT THROUGH ROOF
	CP	CIRCULATING PUMP		W.C.	WATER COLUMN
	CV	CHECK VALVE			
	TP	TRAP PRIMER			
	REG	GAS REGULATOR W/SHUT-OFF VALVE			
	C/O	CLEANOUT			
	BV	BALANCING VALVE			

INSTALLATION NOTES

1. CONTRACT DOCUMENTS INCLUDE THESE DRAWINGS AND A BOUND SPECIFICATION.
2. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. ROTATING EQUIPMENT SHALL BE SET TO EXACT PLUMB AND ALIGNMENT AND LUBRICATED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE OPERATION.
4. DIFFERENT MATERIALS SHALL BE ISOLATED TO PREVENT GALVANIC CORROSION.
5. PIPING AND EQUIPMENT SHALL BE CLEANED BEFORE ERECTION. PROTECTIVE COVERS ON EQUIPMENT SHALL BE LEFT IN PLACE DURING CONSTRUCTION. EQUIPMENT SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
6. PIPING TERMINATED FOR LATER HOOKUP SHALL BE EQUIPPED WITH A VALVE AND CAP ON THE OPEN END IMMEDIATELY AFTER INSTALLATION.
7. EQUIPMENT SHALL BE KEPT EXTERNALLY COVERED TO AVOID CONTAMINATION FROM OTHER SOURCES.
8. PIPE PENETRATIONS THROUGH SOUND-RATED WALLS AND/OR PARTITION FOR NOISE-SENSITIVE AREAS, SHALL HAVE ELASTIC CAULKING AND/OR AS DETAILED BY SOUND CONSULTANT.
9. THE INTEGRITY OF FIRE RATED PARTITIONS SHALL BE MAINTAINED USING UL AND/OR CSFM APPROVED LISTED MATERIALS. THE DESIGN TEAM SHALL DETAIL HOW THIS WILL BE PROVIDED FOR EACH SPECIFIC INSTALLATION CONDITION.
10. FITTINGS, SHUT-OFF VALVES, STRAINERS, ETC. SHALL BE SAME SIZE AS PIPE IN WHICH THEY ARE INSTALLED. ONLY EXCEPTIONS: MOTORIZED CONTROL VALVES; WATER METERS.
11. INSTALL RELIEF VALVE DISCHARGE PIPING WITH HANGER AND UNION NEAR RELIEF TO PLACE NO STRESS ON THE RELIEF VALVE FROM DISCHARGE PIPING.
12. FIXTURES MUST BE TIGHT FITTING TO WALLS AN BE NEATLY SEALED AT JOINT WITH SILICONE SEALANT.
13. EXPOSED PIPING PENETRATING WALLS, CEILINGS OR FLOORS SHALL BE COVERED WITH ESCUTCHEON PLATES.
14. BALL VALVES SHALL BE INSTALLED SO THAT WHEN THE HANDLE IS IN THE OPEN POSITION THE HANDLE IS ON THE WATER SERVICE SIDE OF THE VALVE.
15. EQUIPMENT CLEARANCES SHALL BE PROVIDED AS FOLLOWS: THE MINIMUM CLEARANCES GIVEN BY MANUFACTURERS IS JUST THAT MINIMUM AND MUST BE INCREASED TO UCI'S MINIMUM REQUIREMENTS.
16. ALL EQUIPMENT ANCHORAGE SHALL BE DETAILED ON DRAWINGS AND SHALL CONFORM TO DESIGN CALCS AND DETAILS REQUIRED FOR ANCHORAGE AND BRACING OF EQUIPMENT FOR BACK CHECK AND APPROVAL OF THIS PROJECT. SEE EQUIPMENT SCHEDULE ON SHEET S2.12 AND STRUCTURAL CALCULATIONS.
17. CONTRACTOR SHALL NOT CUT OR DAMAGE ANY STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON DRAWINGS.
18. ALL PIPES SHALL BE BRACED PER REQUIREMENTS OF SMACNA "SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS". SEE ON SHEET FOR DSA NOTES FOR MEP ANCHORAGE AND BRACING.

DSA NOTES

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 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A 1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G.: HARD-WIRED) TO BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND 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.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR THE STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR SHALL VERIFY THAT ALL THE COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED TO 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 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8 AND 2016 CBC SECTIONS 1616A 1.24, 166A 1.25 AND 1616A 1.26.

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

MECHANICAL (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 PREAPPROVAL.

MP☐ MD☐ PP ☒ OPTION 3: SHALL COMPLY WITH SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTNERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL AA AND CONNECTION LEVEL 2 FOR THE PROJECT AND CONDITIONS.

PIPE MATERIALS

1. WATER ABOVE GRADE: COPPER TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER JOINT FITTINGS.
2. WATER BELOW GRADE: COPPER TYPE "K" WITH CAST SOLDER JOINT FITTINGS. ROUGH SOLDER JOINT FITTINGS, OR FLARED JOINT FITTINGS.
3. SOIL/WASTE AND VENT ABOVE GRADE: HUBLESS CAST IRON PIPE AND FITTINGS.
4. SOIL/WASTE AND VENT BELOW GRADE: POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS PER ASTM D2665.
5. NATURAL GAS ABOVE GRADE: BLACK STEEL, SCHEDULE 40 WITH MALLEABLE IRON-THREADED FITTINGS.
6. NATURAL GAS BELOW GRADE: POLYETHYLENE (PE), SDR 11 PIPE WITH SOCKET FUSION FITTINGS.

GENERAL NOTES

1. THESE DRAWINGS ARE A GENERAL GRAPHIC PRESENTATION OF THE WORK. PIPING AND EQUIPMENT, AS SHOWN, ARE SCHEMATIC. FABRICATE AND INSTALL BASED ON ACTUAL FIELD MEASUREMENT. COORDINATE WITH OTHER TRADES. PROVIDE A COMPLETE SET OF SHOP DRAWINGS REFLECTING ACTUAL INSTALL, ACCESS REQUIREMENTS, AND DETAILS BASED UPON THE ACTUAL EQUIPMENT PROCURED. MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS AT THE JOB SITE.
2. THESE DRAWINGS ARE TO BE CONSIDERED NOT FOR CONSTRUCTION UNTIL THEY ARE STAMPED, SIGNED, AND PERMITTED. UNTIL THEN THEY ARE SUBJECT TO CHANGE WITHOUT NOTICE.
3. COMPLY WITH CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PLUMBING CODE (CPC), AND NATIONAL FIRE PROTECTION AGENCY (NFPA), AND COVERNING CODES. THERE SHALL BE NO EXCEPTION. REPORT DEFICIENCIES WITHIN THIRTY (30) DAYS UPON AUTHORIZATION TO PROCEED.
4. PROVIDE ACCESS AND CLEARANCE FOR MAINTENANCE FOR MECHANICAL & PLUMBING EQUIPMENT AND COMPONENTS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER AND APPLICABLE CODES.
5. HANDLE, STORE AND INSTALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS.
6. NO PLUMBING SHALL BE INSTALLED UNTIL ALL REQUIRED PLUMBING PLAN CHECK PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM ALL REQUIRED AGENCIES.
7. LAVATORY FAUCETS, SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS OR FAUCETS DESIGNATED AT INSTITUTIONAL) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS.
8. COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES AND DRAINS.
9. HOSE BIBBS SHALL BE PROTECTED BY AN APPROVED NON-REMOVABLE TYPE BACKFLOW PROTECTION DEVICE. HOSE BIBBS SHALL BE MOUNTED AT +18" ABOVE FLOOR UNLESS OTHERWISE NOTED.
10. PROVIDE ALL TAILPIECES, TRAPS, STOPS, SUPPLY PIPES TO LAVATORIES DESIGNED AS ACCESSIBLE, WITH PREFORMED INSULATION JACKET.
11. COORDINATE AND VERIFY SIZES, LOCATIONS, DEPTHS AND PRESSURIZED PIPING PRESSURES OF ALL BUILDING UTILITIES WITH CIVIL.
12. COORDINATE AND SCHEDULE TIMING FOR UTILITY SERVICE CONNECTION.
13. ALL LINES BELOW SLAB ON GRADE TO BE LOCATED AWAY FROM ALL LOAD BEARING FOOTINGS.
14. ALL LINES RUNNING BELOW GRADE BEAMS OR PENETRATING, SEE STRUCTURAL DRAWINGS FOR CONSTRUCTION.
15. ALL VENTS THRU ROOF SHALL BE MINIMUM OF 18 INCHES VERTICAL AND FIFTEEN FEET HORIZONTAL AWAY FROM ALL AIR CONDITIONING FRESH AIR INTAKES AND PROVIDED WITH VANDAL PROOF HOODS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, ROOFS, FOOTINGS, FLOORS, INCLUDING ALL SAW CUTTING AND CORE DRILLING. COORDINATE ALL SAW CUTTING AND CORE DRILLING WITH STRUCTRUAL DRAWINGS. ANY CUTTING AND DRILLING REQUIRED OF STRUCTURAL ELEMENTS THAT IS NOT SPECIFICALLY SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO CUTTING AND DRILLING. CONTRACTOR SHALL SUBMIT PROPOSED LOCATION AND SIZES OF SUCH CUTTING AND DRILLING FOR THE ARCHITECTS AND STRUCTURAL ENGINEERS APPROVAL.
17. COORDINATE ALL EQUIPMENT LOCATIONS, PIPE PENETRATIONS AND EQUIPMENT PAD LOCATIONS WITH STRUCTURAL DRAWINGS PRIOR TO WORK.
18. COORDINATE INSTALLATION OF ALL EQUIPMENT AND PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. ENSURE THAT ALL CONTROL DEVICES, SHUT-OFF VALVES, ETC. ARE ACCESSIBLE FOR MAINTENANCE. WHERE ACCESS PANELS IN FINISHED SPACES, OTHER THAN THAT SHOWN, CONTRACTOR SHALL PROVIDE AND COORDINATE EXACT LOCATION OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
19. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE, MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
20. ANY STRUCTURAL FIREPROOFING DAMAGED DURING INSTALLATION OF PLUMBING EQUIPMENT, PIPING, ETC. SHALL BE REPAIRED AT NO COST TO THE OWNER. REPAIRS SHALL BE AS DIRECTED BY THE ARCHITECT.
21. PROVIDE VACUUM BREAKERS AT HOSE BIBBS.
22. SINK FAUCETS TO BE 1.8 GPM MAXIMUM.
23. WATER HEATER IS TO BE USED ON CALIFORNIA ENERGY COMMISSION (CEC) LIST.
24. PROVIDE EXPANSION TANK OR OTHER APPROVED METHOD OF RELIEVING PRESSURE (SECTION 608.3 CPC).
25. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT.
26. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO BID.
27. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO ORDERING ANY EQUIPMENT.
28. UPON INSTALLATION OF ALL EQUIPMENT, DEVICES, VIBRATION ISOLATION, ETC., PROVIDE WRITTEN CONFIRMATION BY EQUIPMENT MANUFACTURER'S REPRESENTATIVES TO ENSURE COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.
29. PROVIDE DETAILS AND SEISMIC CALCULATIONS FOR ALL EQUIPMENT ON VIBRATION ISOLATION. ALL DETAILS SHALL BE STAMPED BY A STRUCTURAL ENGINEER FROM VIBRATION ISOLATIONS MANUFACTURER.
30. FOR EACH SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A LETTER (ON COMPANY LETTERHEAD) AND SIGNED BY THE PROJECT MANAGER INDICATING THE SUBMITTAL HAS BEEN FULLY IN HOUSE REVIEWED TO ENSURE FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND COORDINATION WITH OTHER TRADES. ANY EXCEPTIONS TO THE CONTRACT DOCUMENTS SHALL BE CLEARLY INDICATED ON THIS LETTER. ANY DISCREPANCIES/EXCEPTIONS NOT IDENTIFIED IN WRITING SHALL BE CORRECTED AT THE SOLE EXPENSE OF THE CONTRACTOR AND AT NO EXPENSE TO THE OWNER AND ENGINEER.
31. THE CONTRACTOR SHALL SELECT ALL CIRCUIT SETTERS/BALANCING VALVES FOR ACTUAL FLOW THROUGH THE PIPE AND THE PROPER PRESSURE DROP TO ENSURE PROPER OPERATION AND NOT BASED ON PIPE SIZES.
32. HOT WATER INSULATION SHALL HAVE A MINIMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE FOR A PIPE UP TO 2 INCHES (50 mm) IN DIAMETER. INSULATION WALL THICKNESS SHALL BE NOT LESS THAN 2 INCHES (51 mm) FOR A PIPE OF 2 INCHES (50 mm) OR MORE IN DIAMETER PER CURRENT CPC, SECTION 609.11.2.

PLUMBING EQUIPMENT SCHEDULE

SYMBOL	TYPE	ELECTRICAL DATA				CAPACITY		STORAGE VOLUME (GALLON)	WEIGHT (LBS)	DESCTIPTION	LOCATION
		POWER (HP)	VOLTS (V)	PHASE (PH)	HERTZ (HZ)	INPUT (MBH)	OUTPUT (MBH)				
WH 1	DOMESTIC WATER HEATER	--	--	--	--	75	--	74	945	AO SMITH BT80, GAS FIRED, 104 GPH RECOVERY @ 70° RISE.	HVAC LAB 505
ET 1	DOMESTIC EXPANSION TANK	--	--	--	--	--	--	3.2	27	AMTROL MODEL ST-8, 1.9 GAL ACCEPTANCE.	HVAC LAB 505
MX 1	MIXING VALVE	--	--	--	--	--	--	--	--	LEONARD TM-26-BDT-LF, THERMOSTATIC, LEAD-FREE, 1 GPM MINIMUM FLOW, 10 PSI PRESSURE LOSS.	HVAC LAB 505
BP 1	BACKFLOW PREVENTER	--	--	--	--	--	--	--	--	--	EQUIPMENT YARD 505D, EXTERIOR
CP 1	CIRCULATION PUMP	1/12	120	1	60	--	--	--	--	GRUNDFOS MODEL UP 26 - 96BF , BRONZE PUMP , LEAD FREE, 3 GPM, 20' TDH.	HVAC LAB 505
CDP 1	CONDENSATE PUMP	1/12	120	1	60	--	--	--	--	--	HVAC LAB 505

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	ROUGH-IN					REMARKS
		HW	CW	W	TRAP	V	
FS 1	FLOOR SINK	--	--	2"	2"	1 1/2"	JAY R SMITH FIGURE # 3200, CAST IRON FLANGED RECEPTOR WITH SEEPAGE HOLES, ACID RESISITANT, COATED INTERIOR,PROVIDE AUTOMATIC TRAP PRIMER.
EEWSH 1	EMERGENCY EYEWASH SHOWER	1 1/2"	1 1/2"	--	--	--	GUARDIAN MODEL GBF-1994, BASE MOUNTED, STAINLESS STEEL, SHOWER HEAD AND EYE/FACEWASH, G3800LF TEMPERING VALVE, ACCESSIBLE. PULL ROD TO BE 48" MAX. AFF.
TP 1	TRAP PRIMER MULTI	--	1/2"	--	--	--	PRECISION PLUMBING, MPB-500, MINI-PRIME ELECTRONIC, FLOOR SINKS/DRAINS.
S 1	HAND SINK - ACCESSIBLE	1/2"	1/2"	--	--	2"	JUST, HCL-23520-S, STAINLESS STEEL, WITH JSGN-6-AC, SENSOR OP. FAUCET, ACCESSIBLE.
S 2	SINK	1/2"	1/2"	--	--	2"	ADVANCE TABCO, # 6-1-24, 21" X 24" X 24-1/2", 600 SERIES, ONE COMPARTMENT SINK, 16 GAUGE, TYP 304, STAINLESS STEEL, WITH CHICAGO FAUCET, 540-LD317WXFABCP, WRISTBLADE HANDLES.

CGC TABLE 5.303.2.3 FIXTURE FLOW RATES

FIXTURE TYPE	FLOW RATE	MAXIMUM FLOW RATE AT @ 20 PERCENT REDUCTION
SINK FAUCETS	2.2 GPM @ 60 PSI	1.8 GPM @ 60 PSI

COLD PIPING SIZING CHART 5 psi

SIZE	GPM	FIXTURE UNITS		VELOCITY (FPS)
		FLUSH TANK	FLUSH VALVE	
1/2"	2.4	1	---	3.2
3/4"	6.4	7	---	4.3
1"	13	18	---	5.2
1 1/4"	22	34	5	5.9
1 1/2"	36	69	21	6.8
2"	73	236	116	8
2 1/2"	120	479	365	8
3"	170	748	700	8
4"	280	1583	1583	8

HOT PIPING SIZING CHART 5 psi

SIZE	GPM	FIXTURE UNITS		VELOCITY (FPS)
		FLUSH TANK	FLUSH VALVE	
1/2"	2.4	3	---	3
3/4"	6.4	8	---	4
1"	13	18	---	5
1 1/4"	22	28	---	5
1 1/2"	36	49	---	5
2"	73	119	---	5
2 1/2"	120	275	---	5
3"	170	406	---	5

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PLUMBING LEGEND AND GENERAL NOTES

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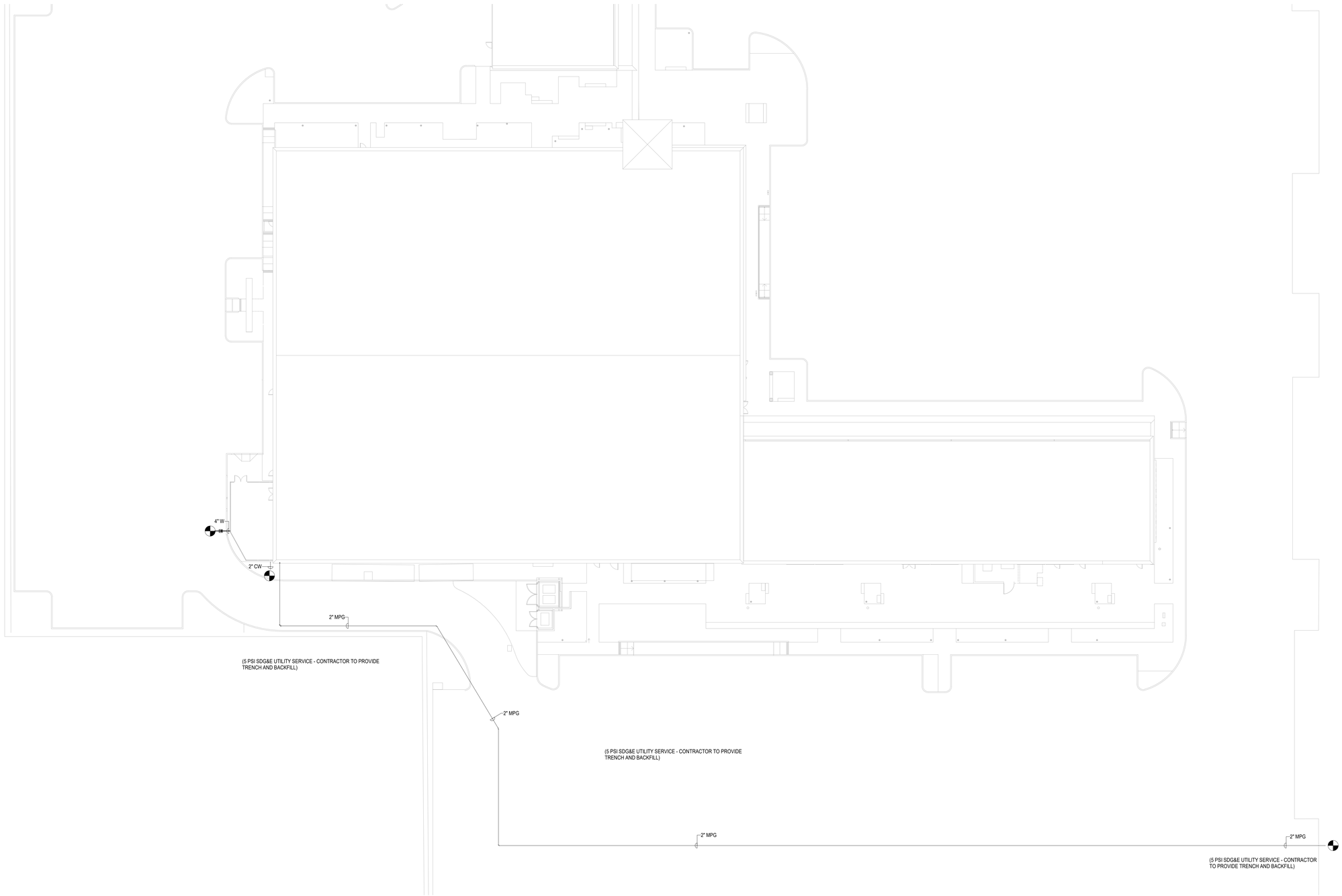

PLUMBING OVERALL SITE PLAN

1

1" = 20'-0"

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PLUMBING OVERALL SITE PLAN

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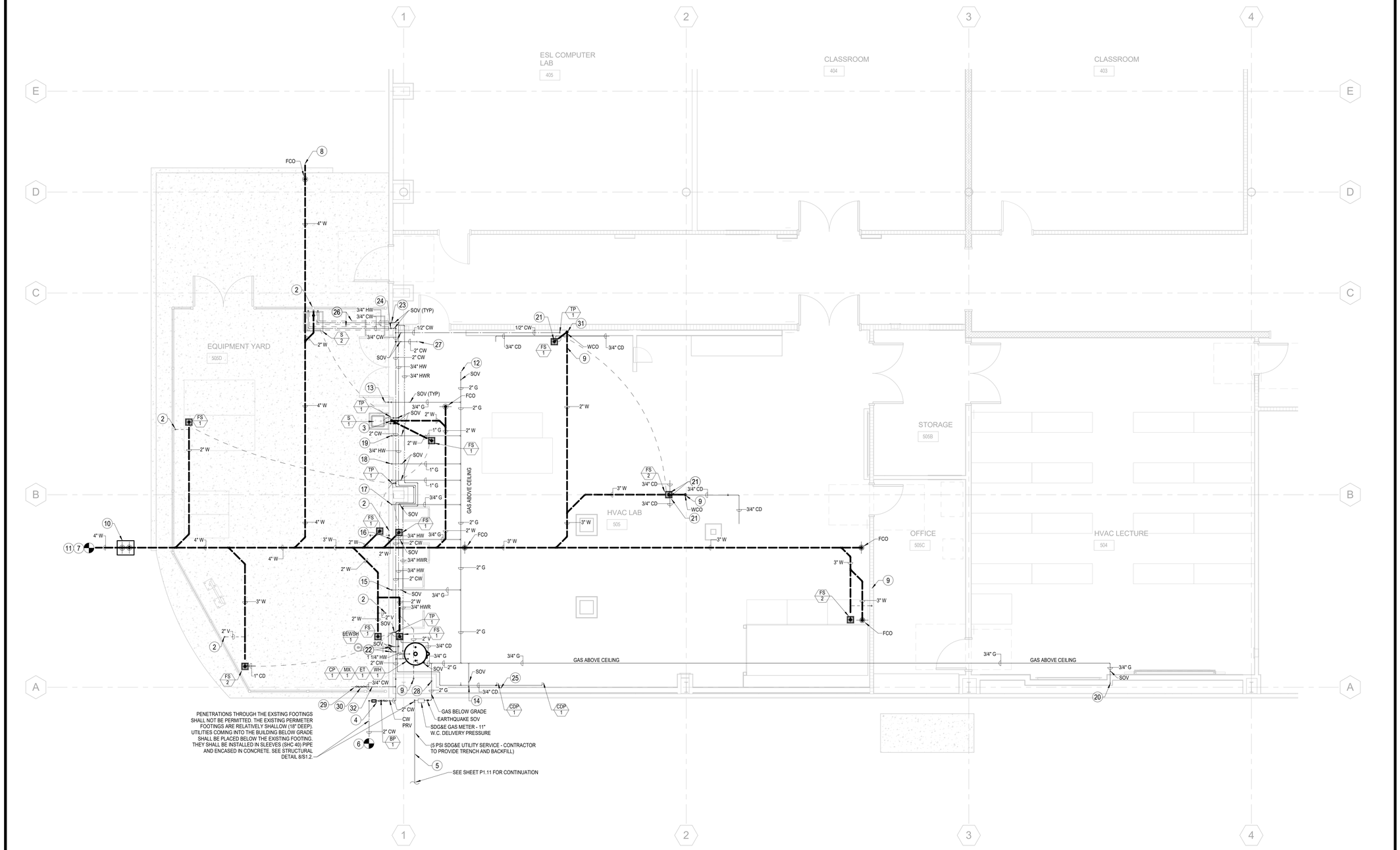

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1 MECHANICAL EQUIPMENT SHOWN FOR REFERENCE ONLY. SEE MECHANICAL DRAWINGS (TYP.)
2 2" VENT UP 10' EXPOSED ON WALL.
3 2" VENT UP IN WALL.
4 (N) WATER METER.
5 GAS SEE SITE PLAN FOR CONTINUATION.
6 2" CW BELOW GRADE POC TO CIVIL. SEE CIVIL DRAWINGS FOR CONTINUATION.
7 4" SEWER POC TO CIVIL. SEE CIVIL DRAWINGS FOR CONTINUATION.
8 CAP 4" W FOR FUTURE BELOW GRADE.
9 2" VTR.
10 TWO-WAY CLEANOUT.
11 4'- 6" INVERT ELEVATION.
12 CAP 2" G FOR FUTURE ABOVE CEILING.
13 2" G UNDERGROUND
14 3/4" GAS DN WALL TO B-1
15 3/4" GAS DN WALL TO FC-3
16 3/4" GAS DN WALL TO FC-2
17 3/4" GAS DN WALL TO FC-1
18 1" GAS DN WALL TO F-2
19 1" GAS DN WALL TO F-3
20 3/4" GAS DN WALL TO FUTURE FURNACE.
21 3/4" CONDENSATE DRAIN DOWN EXPOSED. DRAIN INDIRECT TO FLOOR SINK.
22 1 1/4" HW/CW DN WALL TO EES.
23 3/4" HW DOWN.
24 3/4" CW DOWN.
25 REMOVE EXISTING COMPRESSED AIR PIPING IN ROOM AND CAP OFF AT EACH SHUT OFF VALVE IN ROOM.
26 CW/HW BELOW SLAB IN CONDUIT.
27 CAP 2" CW FOR FUTURE ABOVE CEILING.
28 GAS UP.
29 3/4" CW MAKE-UP WATER TO CT-1.
30 PROVIDE REDUCED PRESSURE BACKFLOW PREVENTER.
31 2" VENT UP
32 3/4" CW EXPOSED ON WALL.

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PLUMBING LEVEL 01 FLOOR PLAN

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PLUMBING FIRST FLOOR 1
1/4" = 1'-0"

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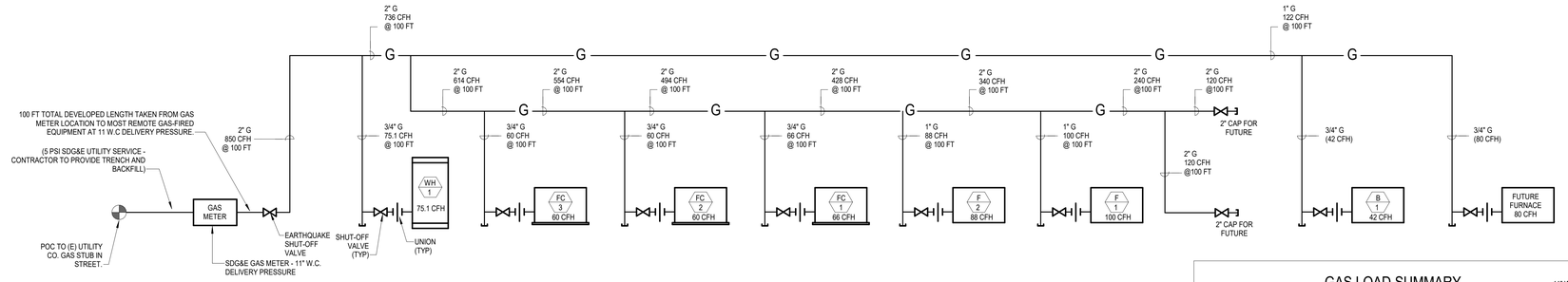


GAS RISER DIAGRAM

NO SCALE

1 P4.11

GAS LOAD SUMMARY

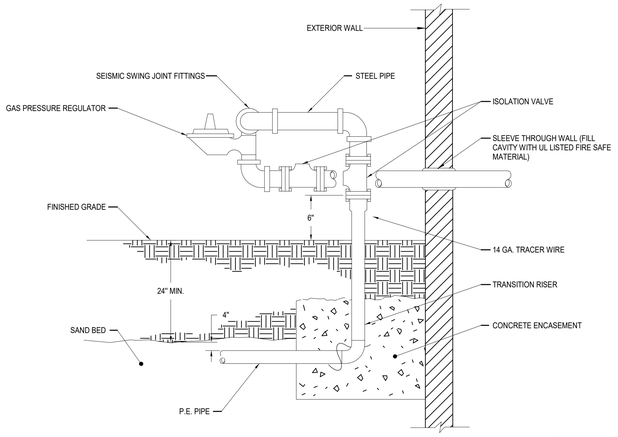
11" W.C.

ITEM		TOTAL - CFH
WATER HEATER (WH-1)	=	75.1
FAN COIL UNIT W/FURNACE (FC-1)	=	66
FAN COIL UNIT W/FURNACE (FC-2)	=	60
FAN COIL UNIT W/FURNACE (FC-3)	=	66
FURNACE (F-1)	=	100
FURNACE (F-2	=	88
BOILER (B-1)	=	42
FUTURE CONNECTION	=	120
FUTURE CONNECTION	=	120
FUTURE FURNACE	=	80
TOTAL	=	811.1 CFH

PIPE SIZING CHART BASED ON 100 FT. TOTAL DEVELOPED LENGTH.

* NOTE: TOTAL DEVELOPED LENGTH TAKEN FROM GAS METER LOCATION TO MOST REMOTE GAS-FIRED EQUIPMENT AT 11 W.C DELIVERY PRESSURE.

PIPE SIZING BASED ON 2016 CALIFORNIA PLUMBING CODE TABLE 1216.2.



GAS PRESSURE REGULATOR DETAIL

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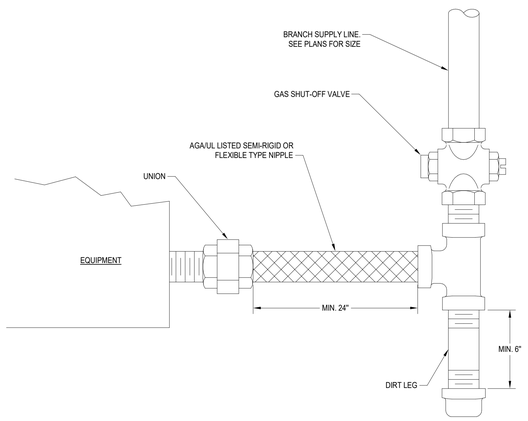
3 P4.11



EQUIPMENT FUEL GAS CONNECTION

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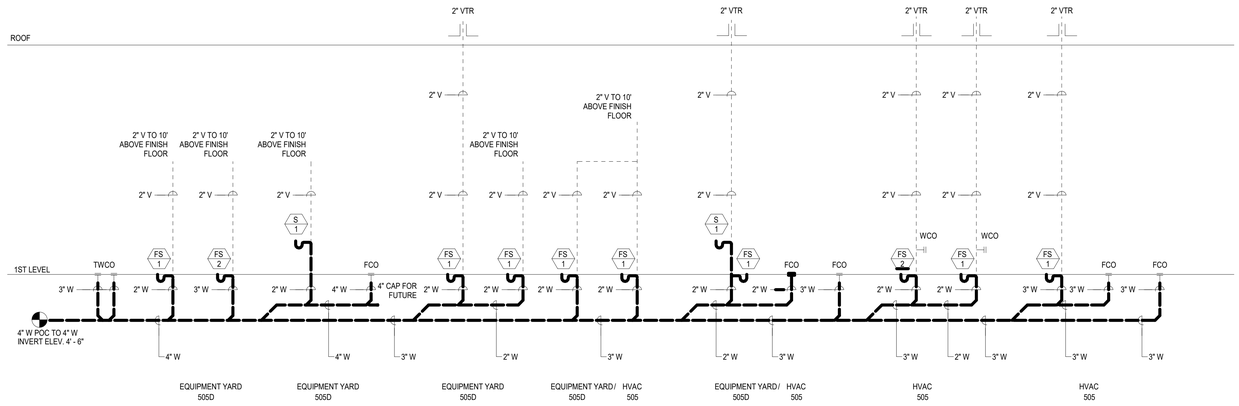
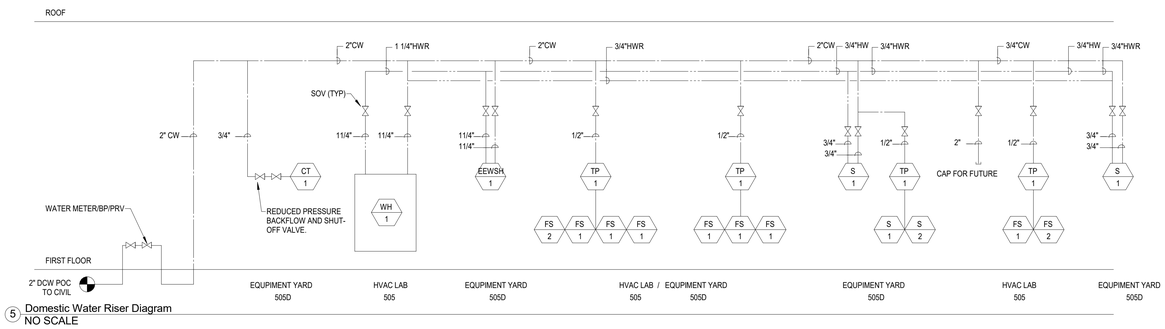
2 P4.11



4 5849 Domestic Waste and Vent
NO SCALE



5 Domestic Water Riser Diagram
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PLUMBING RISER DIAGRAMS

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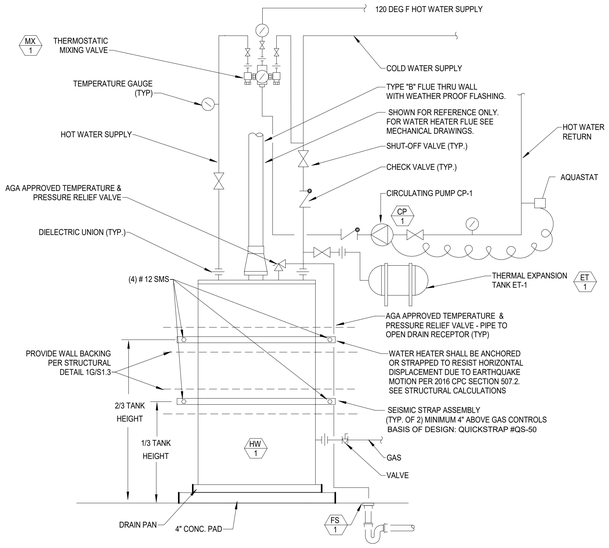
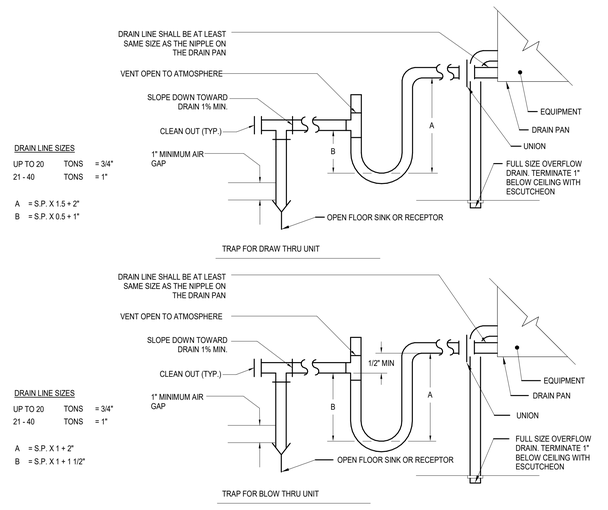


WATER HEATER DEAIL 3
NO SCALE



TYPICAL CONDENSATE DRAIN DETAIL 4
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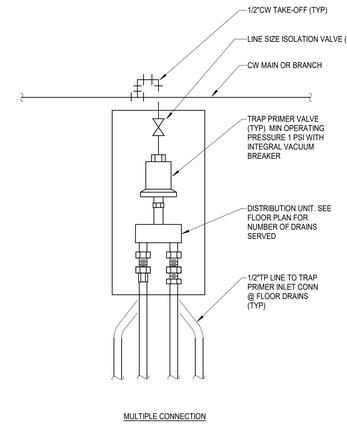

MULTIPLE CONNECTION

TRAP PRIMERS IN ACCESS PANEL DETAIL 1
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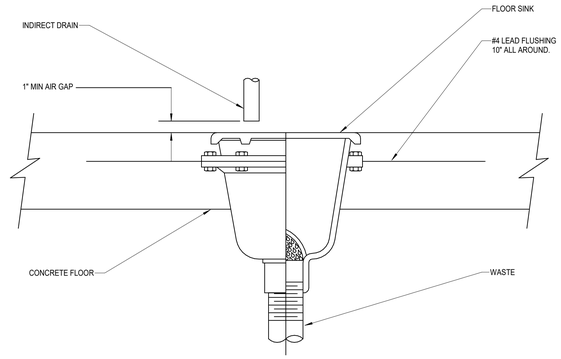

FLOOR SINK DETAIL 2
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Keynotes:

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PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER HVAC/LAB

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ABBREVIATIONS

A	AMPERE (AMPS)
AC	ALTERNATING CURRENT
AF	AMPS-FRAME (RATING)
AIC	AMP INTERRUPTING CURRENT
AM	AMMETER
AS	AMP SWITCH (FUSED SWITCH RATING)
AT	AMPS-TRIP (RATING)
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
CFCI	CONTRACTOR FURNISHED OWNER INSTALLED
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DWG	DRAWING
EX	EXISTING
FLA	FULL LOAD AMPS
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GFI	GROUND FAULT INTERRUPTER
GRD/GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ	HERTZ
KW	KILOWATT
LCL	LONG CONTINUOUS LOAD
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
MCC	MOTOR CONTROL CENTER
MCM (KCM)	THOUSAND CIRCULAR MILS
MECH	MECHANICAL
NC	NORMALLY CLOSED
NF	NON-FUSED
NO	NORMALLY OPEN/NUMBER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
P	POLE
PH	PHASE
POC	POINT OF CONNECTION
PRS	PVC COATED RIGID STEEL (CONDUIT)
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE DUCT
SWBD	SWITCHBOARD
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLTAMPERES
VM	VOLTMETER
VL	VERIFY LOCATION
W	WIRE/WATTS
WP	WEATHERPROOF (NEMA TYPE 3R)
WT	WATERTIGHT
XP	EXPLOSION PROOF (RATED FOR AREA HAZARD)

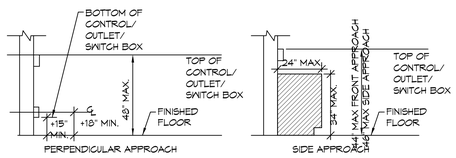
ELECTRICAL SYMBOL LEGEND

LIGHTING

- (A) — LIGHTING FIXTURE DESIGNATION
- O O — LIGHTING FIXTURE, CEILING OR WALL MOUNTED AS SHOWN.
- FLUORESCENT LIGHT FIXTURE
- LIGHTING FIXTURE ON EMERGENCY CIRCUIT (LIFE SAFETY BRANCH OR BATTERY PACK).
- EXIT SIGN WITH DIRECTION ARROWS AS INDICATED. SHADED QUADRANT INDICATES FACE.
- b b — EMERGENCY LIGHTING UNIT. WALL MOUNTED 12" BELOW CEILING (U.O.N.) LETTER INDICATES CIRCUIT CONTROLLED.
- FLUORESCENT STRIP LIGHT
- Sa — SINGLE POLE SWITCH, SUBSCRIPT WHEN SHOWN INDICATES FIXTURES CONTROLLED +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0. WHERE USED IN CONJUCTION WITH OCCUPANCY SENSORS FOR SWITCH TYPE.
- S3 — THREE-WAY SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- S4 — FOUR-WAY SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- SP — SWITCH WITH PILOT LIGHT +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- S2 — DOUBLE POLE SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- SWP — WEATHER PROOF SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- SK — KEY OPERATED SWITCH +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- SURFACE MOUNTED TRACK LIGHTING FIXTURES
- EXTERIOR SITE LIGHTING FIXTURE AND POLE
- EXTERIOR DECORATIVE SITE LIGHTING FIXTURE AND POLE
- LANDSCAPE LIGHTING FIXTURE
- SPORTSLIGHTING FIXTURES AND POLES
- [S]ab — WALL MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL +48" A.F.F. (U.O.N.) HEIGHT PER DETAILS #1/E1.0
- [S]ab — CEILING MOUNTED (CORNER OF THE ROOM) OCCUPANCY SENSOR LIGHTING CONTROL
- CEILING MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL
- S LV — LOW VOLTAGE LIGHT SWITCH. HEIGHT PER DETAILS #1/E1.0
- DIGITAL LIGHTING CONTROL TYPICAL ROOM REQUIREMENTS.
- NUMBERED DEVICES ARE ADDITIONAL ITEMS SHOWN ON FLOOR PLAN IN ADDITION TO WHAT IS REQUIRED FOR THE TYPICAL ROOM REQUIREMENTS.

DISTRIBUTION EQUIPMENT

- DRAW OUT TYPE EQUIPMENT
- VACUUM CIRCUIT BREAKER, RATING AS NOTED.
- AIR INTERRUPTER SWITCH AND FUSE
- AIR INTERRUPTER
- FUSE
- POWER TRANSFORMER, RATING AS NOTED
- POWER CIRCUIT BREAKER DRAWOUT
- AUTOMATIC TRANSFER SWITCH. SEE SCHEDULE
- (A) — AMMETER
- (V) — VOLTMETER
- CIRCUIT BREAKER
  - 200AF — 200AMP FRAME
  - 200AT — 200AMP TRIP
  - 3P — 3 POLE
  - 10,000AIC — 10,000 AMPS INTERRUPTING CURRENT
- FUSED SWITCH
  - 200AS — 200AMP SWITCH
  - 200AF — 200AMP FUSE
  - 3P — 3 POLE
- (M) — UTILITY COMPANY METER



NOTE: MAINTAIN MINIMUM 30"X48" CLEAR FLOOR SPACE AT EACH APPROACH.

MOUNTING HEIGHT OVER OBSTRUCTION — NO SCALE — 1 / E1.0

POWER CONTINUED

- DUPLEX RECEPTACLE, FLOOR MOUNTED
- DUPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.N.)
- HORZ — RECEPTACLE, WALL MOUNTED HORIZONTALLY, +18" A.F.F. (U.O.N.)
- FOURPLEX RECEPTACLE, WALL MOUNTED, +18" A.F.F. (U.O.N.)
- RECEPTACLE MOUNTED +6" ABOVE COUNTER BACKSPLASH SEE ARCHITECTURAL PLANS FOR REQUIRED MOUNTING HEIGHT PRIOR TO ROUGH-IN.
- LCD — PROVIDE (2) DUPLEX RECEPTACLE CEILING MOUNTED LOCATE ADJACENT TO PROJECTOR. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- SINGLE RECEPTACLE, WALL MOUNTED +18" A.F.F. (U.O.N.)
- C — SINGLE RECEPTACLE (CLOCK HANGER TYPE) WALL MOUNTED +7'-0" A.F.F. (U.O.N.)
- SWITCH CONTROLLED DUPLEX RECEPTACLE +18" U.O.N.
- GFI — DUPLEX GROUND FAULT INTERRUPTING RECEPTACLE +18" A.F.F. (U.O.N.)
- DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT +18" A.F.F. (U.O.N.)
- WP — DUPLEX RECEPTACLE IN WEATHERPROOF ENCLOSURE +18" A.F.F. (U.O.N.)
- WP/L — DUPLEX RECEPTACLE IN WEATHERPROOF "LOCKING" ENCLOSURE +18" A.F.F. (U.O.N.) (SEE TYPICAL DETAILS E3 SERIES SHEETS AND SPECIFICATIONS FOR REQUIRED TYPE).
- 1G — DUPLEX RECEPTACLE (ORANGE) ISOLATED GROUND WALL MOUNTED +18" A.F.F. (U.O.N.)
- 1G — FOURPLEX RECEPTACLE (ORANGE) ISOLATED GROUND WALL MOUNTED +18" A.F.F. (U.O.N.)
- TP — DUPLEX RECEPTACLE SAFETY TYPE / TAMPER PROOF WALL MOUNTED +18" A.F.F. (U.O.N.)
- DUPLEX COMPUTER RECEPTACLE (GREY), WALL MOUNTED +18" A.F.F. (U.O.N.)
- SPECIAL PURPOSE RECEPTACLE. SEE PLANS FOR EXACT TYPE. WALL MOUNTED +18" A.F.F. (U.O.N.)
- A — SINGLE RECEPTACLE 30 AMP, 250V, 4W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- B — SINGLE RECEPTACLE 50 AMP, 250V, 4W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- C — SINGLE RECEPTACLE 50 AMP, 250V, 3W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- E — SINGLE RECEPTACLE 30 AMP, 125V, 3W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- F — SINGLE RECEPTACLE 30 AMP, 250V, 3W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- G — SINGLE RECEPTACLE 30 AMP, 250V, 5W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- H — SINGLE RECEPTACLE 30 AMP, 480V, 5W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- J — SINGLE RECEPTACLE 20 AMP, 250V, 5W, GROUNDING, WALL MOUNTED +18" A.F.F. (U.O.N.). FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- K — SPECIAL PURPOSES KITCHEN EQUIPMENT RECEPTACLE. SEE KITCHEN PLANS FOR EXACT TYPE. FIELD VERIFY EXACT OUTLET CONFIGURATION WITH EQUIPMENT SUPPLIER PRIOR TO ORDERING. SEE KITCHEN PLANS FOR EXACT MOUNTING HEIGHT.
- FP — DUPLEX RECEPTACLE, WALL MOUNTED ADJACENT TO FLAT PANEL OUTLET, SEE SIGNAL PLAN FOR EXACT LOCATION.
- MULTI-OUTLET ASSEMBLY, "WIREMOLD" G-3000 SERIES WITH 20AMP DUPLEX RECEPTACLES ON 18" CENTERS, RECEPTACLES TO BE ALTERNATELY WIRED AND INSULATED GROUNDING CONDUCTOR PROVIDED TO EACH
- JUNCTION BOX, FLOOR MOUNTED
- J JH — JUNCTION BOX, CEILING OR WALL MOUNTED
- HD — HAND DRYER CONNECTION, SEE ARCHITECTURAL FOR MOUTNING HEIGHT.
- FUSED DISCONNECT SWITCH, WHERE SHOWN NF = NON-FUSED.
- S M — MANUAL MOTOR STARTER +48" A.F.F. OR ON EQUIPMENT (U.O.N.)
- 1 — MOTOR CONNECTION, NUMERAL INDICATES HORSEPOWER.
- AC-1 — MECHANICAL EQUIPMENT TAG (SEE MECHANICAL DRAWINGS FOR DESCRIPTION)
- CONDUIT AND WIRE, CONCEALED IN CEILING OR WALL
- CONDUIT AND WIRE, CONCEALED IN OR UNDER FINISHED FLOOR OR UNDER FINISHED GRADE.
- FLEXIBLE CONDUIT CONNECTION
- BRANCH CIRCUIT HOMERUN TO PANEL. SLASHES INDICATE NUMBER OF CONDUCTORS. EQUIPMENT GROUND WIRE NOT INDICATED U.O.N. #12 CONDUCTORS ARE MINIMUM, NO HASH MARKS = MIN (2) #12
- 3/4" CONDUIT STUBBED FROM DEVICE TO ABOVE ACCESSIBLE CEILING
- #8 — BRANCH CIRCUIT HOMERUN, NUMBER INDICATES INCREASED CONDUCTOR SIZE, CONDUCTORS SHALL REMAIN AS INDICATED FOR SIZE THROUGHOUT THE ENTIRE CIRCUIT.
- PANELBOARD, SURFACE MOUNTED.
- PANELBOARD, RECESSED
- T — STEP-DOWN TRANSFORMER
- DISTRIBUTION SWITCHBOARD
- SR — SURFACE MOUNTED RACEWAY SINGLE SECTION SERIES, NON METALLIC (WHITE)
- SR 2 — SURFACE MOUNTED RACEWAY TWO SECTION SERIES, NON METALLIC (WHITE)
- SR 3 — SURFACE MOUNTED RACEWAY THREE SECTION SERIES, NON METALLIC (WHITE)
- PB — PUSH BUTTON

GENERAL PROJECT NOTES:

1. UNLESS WHERE OTHERWISE NOTED, ALL WORK INDICATED ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK.
2. UNLESS WHERE OTHERWISE NOTED, ALL DIMENSIONS ARE TO BE CENTERLINE OF THE DEVICE.
3. "GENERAL NOTES" SHOWN ON AN INDIVIDUAL DRAWING APPLY TO ALL WORK SHOWN ON THAT SHEET. "KEY NOTES" ONLY APPLY TO SPECIFIC ITEMS WHERE ANNOTATED AT SPECIFIC LOCATIONS. SOME KEY NOTES MAY NOT APPLY TO ANY SPECIFIC ITEMS.
4. FOR TWO STORY BUILDING CONSTRUCTION, NO CONDUITS SHALL BE ROUTED HORIZONTALLY WITHIN THE FLOOR SLAB OF THE SECOND FLOOR.
5. UNLESS SPECIFICALLY SHOWN ON THESE 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.
6. FOR CONDUIT WALL SUPPORT DETAIL REFER TO 14/S3.3

GENERAL DEMOLITION NOTES:

1. ALL ELECTRICAL EQUIPMENT, EXPOSED RACEWAY AND CONDUIT, OUTLET BOXES AND RINGS, AND DEVICES ARE TO BE REMOVED, EXCEPT WHERE SHOWN TO REMAIN. EXISTING WIRING, WHETHER EXPOSED, IN CONDUIT OR RACEWAY IS TO BE REMOVED TO THE GREATEST EXTENT POSSIBLE.
2. THE ELECTRICAL CONTRACTOR IS TO DIRECT THE REMOVAL OF THE ABOVE LISTED WORK.

MEP COMPONENT ANCHORAGE NOTE:

ALL 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 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH 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 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.24 AND 1616A.1.25 AND 1616A.1.26.

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

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

MP☐MD☐PP☐E☒ - OPTION 1:	DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
MP☐MD☐PP☐E☐ - OPTION 2:	SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM#) #
MP☐MD☐PP☐ - OPTION 3:	SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2004), INCLUDING ANY ADDENDA, FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPACIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

FIRE RATED ASSEMBLIES NOTE:

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DESCRIPTION AND DETAIL OF ALL FIRE RATED ASSEMBLIES.

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Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

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ELECTRICAL SYMBOLS, ABBREVIATIONS, AND NOTES

DSA APPROVED SET

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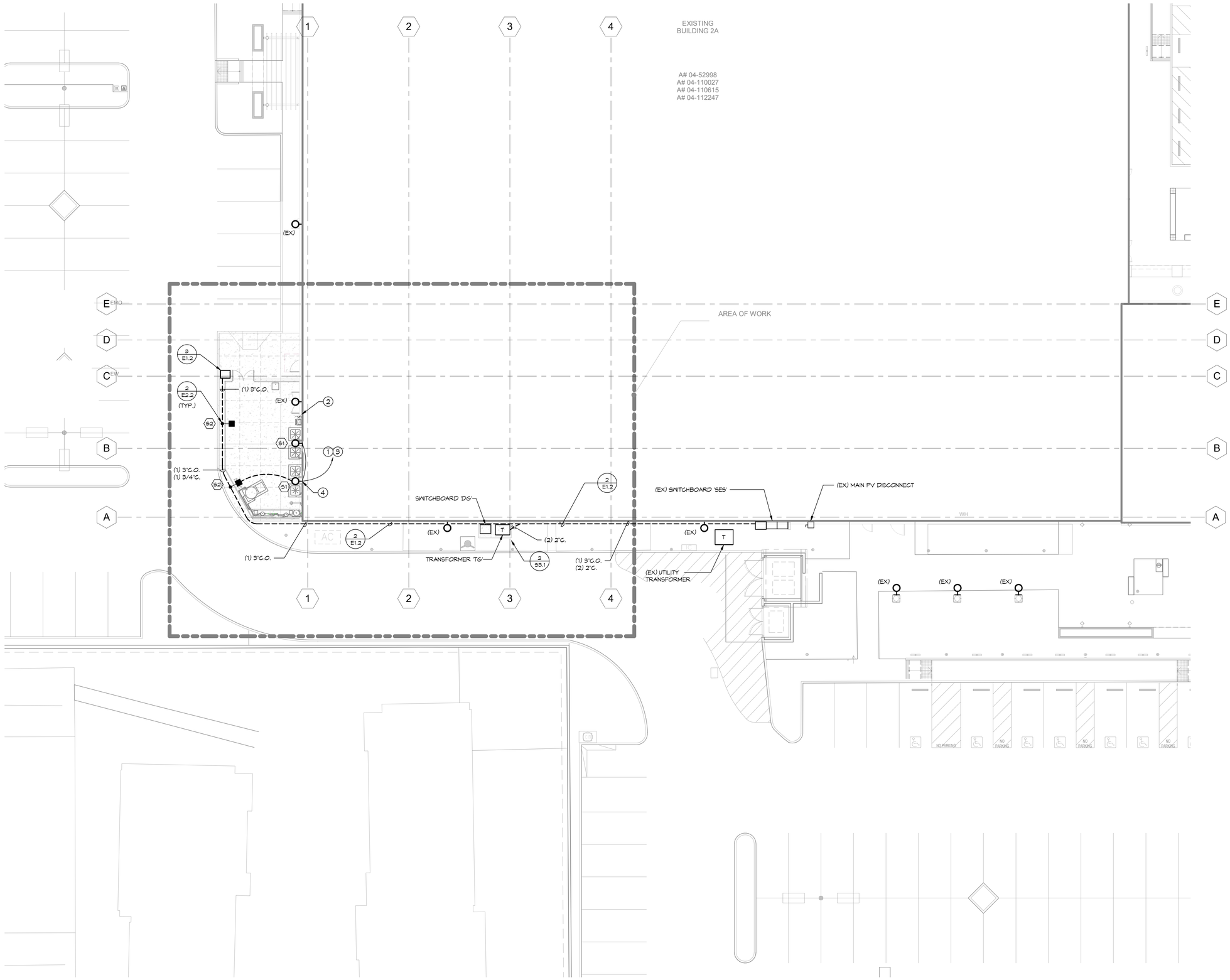

PARTIAL SITE PLAN 1
3/32" = 1'-0"

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GENERAL NOTES:
1. SEE E7.1 FOR CONDUCTOR SIZES AND QUANTITIES.
2. REFERENCE E1.2 FOR TYPICAL SITE DETAILS.
3. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AND VERIFY PROPOSED ROUTING WITH THE COLLEGE PRIOR TO COMMENCING TRENCHING. NOTIFY ARCHITECT OF ANY CONFLICTS.

KEY NOTES:
1. (1) #10 (HOT), (1) #10 (NEUTRAL), (1) #10 (GND). 3/4"C.
2. MANUAL OVERRIDE SWITCH.
3. TO EXISTING AVAILABLE 20A/1P SPARE IN NEAREST 480/277, 3PH PANEL SERVING EXTERIOR LIGHTING.
4. ROUTE CONDUIT FROM UNDERGROUND TO EXTERIOR WALL THEN UP FOR SHORT RUN BEFORE ENTERING WALL AND ROUTING UP TO FIXTURE.

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MATTHEW JESSE HUSER
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PARTIAL SITE PLAN

DSA APPROVED SET

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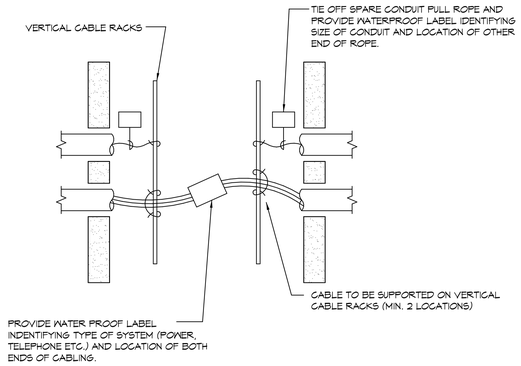
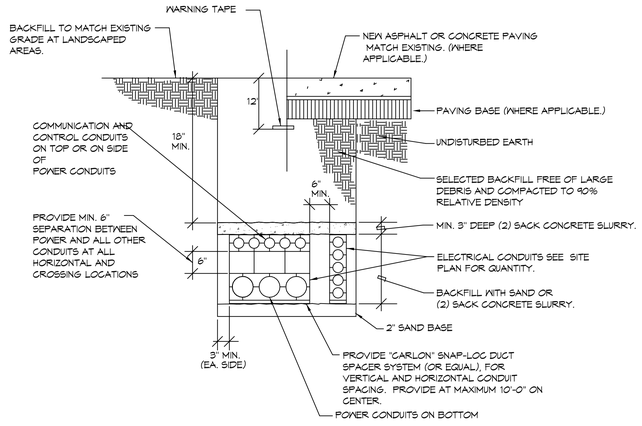


TYPICAL UNDERGROUND PULLBOX LABELING/SUPPORT DETAIL

NO SCALE

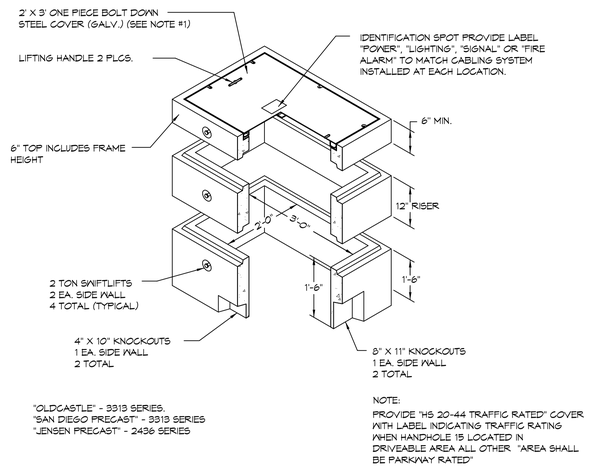
1 / E1.2



TYPICAL TRENCH DETAIL

NO SCALE

2 / E1.2



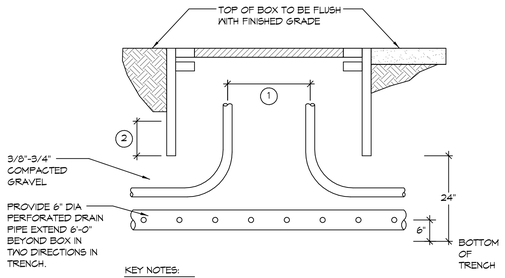
"OLDCASTLE" - 3313 SERIES.
"SAN DIEGO PRECAST" - 3313 SERIES
"JENSEN PRECAST" - 2436 SERIES

NOTE:
PROVIDE "HS 20-44 TRAFFIC RATED" COVER WITH LABEL INDICATING TRAFFIC RATING WHEN HANDHOLE IS LOCATED IN DRIVEABLE AREA ALL OTHER "AREA SHALL BE PARKWAY RATED"

UNDERGROUND PULLBOX STYLE 'B'

NO SCALE

3 / E1.2



KEY NOTES:

1. WHERE CONDUITS SERVE INCOMING AND OUTGOING CIRCUITS KEEP RISERS SEPARATED INSIDE PULLBOX TO ALLOW FOR SLACK CONDUCTORS.
2. TOPS OF CONDUITS MUST NOT EXTEND INTO PULLBOX MORE THAN 1/3 OF THE TOTAL AVAILABLE INSIDE BOX HEIGHT, IN ORDER TO ALLOW ADEQUATE SPACE FOR CABLE SLACK.

UNDERGROUND PULLBOX TYPICAL INSTALLATION

NO SCALE

4 / E1.2

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DATE: 12/13/2018

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ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Consultant:
REGISTERED PROFESSIONAL ENGINEER MARK ALEXANDER KNAE NO.E 14781 Exp. 6-30-2019 ELECTRICAL STATE OF CALIFORNIA
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#18013

PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

SITE ELECTRICAL DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

E1.2

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STATE OF CALIFORNIA
INDOOR LIGHTING
(SECMOD) CTZ-E (Revised 04/18)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 1 of 6)
Project Name: PALOMAR COLLEGE ESCONDIDO - HVAC LAB	Date Prepared: 10/04/2018

A. General Information

Climate Zone: 10 — Conditional Floor Area: 2889 — Unconditional Floor Area: 0

Building Type:	☒ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel		
☒ Schools	☐ Relocatable Public Schools	☐ Conditioned Spaces	☐ Unconditioned Spaces		
Phase of Construction:	☐ New Construction	☐ Addition	☒ Alteration		
Method of Compliance:	☐ Complete Building	☒ Area Category	☒ Tailored		

Project Address: 1951 East Valley Parkway, Escondido, CA 92025

B. Lighting Compliance Documents (select yes for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

YES	NO	COMP. DOC.	TITLE
◉	○	NRCC-LTI-01-E	Certificate of Compliance. All Pages required on plans for all submittals.
◉	○	NRCC-LTI-02-E	Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.
◉	○	NRCC-LTI-03-E	Indoor Lighting Power Allowance
○	◉	NRCC-LTI-04-E	Tailored Method Worksheets
○	◉	NRCC-LTI-05-E	Line Voltage Track Lighting Worksheets
○	◉	NRCC-LTI-06-E	Indoor Lighting Existing Conditions

STATE OF CALIFORNIA
INDOOR LIGHTING
(SECMOD) CTZ-E (Revised 04/18)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 2 of 6)
Project Name: PALOMAR COLLEGE ESCONDIDO - HVAC LAB	Date Prepared: 10/04/2018

C. Summary of Allowed Lighting Power

Conditioned and Unconditioned space Lighting must not be combined for compliance

	Indoor Lighting Power for Conditioned Spaces		Watts		Indoor Lighting Power for Unconditioned Spaces		Watts
01	**Installed** Lighting NRCC-LTI-03-E, Table H, page 5	+	1659		**Installed** Lighting NRCC-LTI-03-E, Table H, page 5	+	
02	Portable Only for Offices NRCC-LTI-03-E, page 2	+	0				
03	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0		Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	
04	Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3)	=	1659		Adjusted **Installed** Lighting Power (row 1 minus row 3)	=	0
	Complies ONLY if **Installed** ≤ **Allowed** (Box 04 < Box 05)				Complies ONLY if **Installed** ≤ **Allowed** (Box 04 < Box 05)		
05	**Allowed** Lighting Power Conditioned NRCC-LTI-03-E, page 1 Alterations with replacement luminaires that have at least 50/35%lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2		3350		**Allowed** Lighting Power Unconditioned NRCC-LTI-03-E, page 1 Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING
(SECMOD) CTZ-E (Revised 04/18)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 3 of 6)
Project Name: PALOMAR COLLEGE ESCONDIDO - HVAC LAB	Date Prepared: 10/04/2018

D. Declaration of Required Certificates of Acceptance

Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	FORM/TITLE	
○	○	NRCA-LTI-02-A – Must be submitted for occupancy sensors and automatic time switch controls.	☐ Field Inspector
○	○	NRCA-LTI-03-A – Must be submitted for automatic daylight controls.	☐ Field Inspector
○	○	NRCA-LTI-04-A – Must be submitted for demand responsive lighting controls	☐ Field Inspector
○	○	NRCA-LTI-05-A – Must be submitted for institutional tuning power adjustment factor (PAF).	

A Separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for: ☒ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

F. Indoor Lighting Schedule and Field Inspection Energy Checklist

- ☐ The actual indoor lighting power listed on the next 2 pages includes all installed permanent and planned portable lighting systems.
- ☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.
- ☐ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines
- ☐ Also include track lighting in schedule, and submit the track lighting compliance document (NRCC-LTI-05-E) when line-voltage track lighting is installed.

STATE OF CALIFORNIA
INDOOR LIGHTING
(SECMOD) CTZ-E (Revised 04/18)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 4 of 6)
Project Name: PALOMAR COLLEGE ESCONDIDO - HVAC LAB	Date Prepared: 10/04/2018

G. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)

- This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance document.
- This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office
- Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.

Office Portable Luminaire Schedule		Office Installed Portable Luminaire W/ft²					Office Location	Field Inspector	
01	02	03	04	05	06	07	08	09	10
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires per Office	Installed portable luminaire wattage (02) x (03)	Square Feet of Each Office	Watts per Square Foot (04) / (05)	If (06 ≤ 0.3, enter zero; If (06 > 0.3, (06-0.3)	(02) x (07)	Identify Office area in which these portable luminaires are installed	PASS	FAIL
			0				0		○	○
			0				0		○	○
			0				0		○	○
			0				0		○	○
Total installed portable luminaire watts that are greater than 0.3 W/ft² per office:								Enter sum total of all pages into NRCC-LTI-01-E, Page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING
(SECMOD) CTZ-E (Revised 04/18)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 5 of 6)
Project Name: PALOMAR COLLEGE ESCONDIDO - HVAC LAB	Date Prepared: 10/04/2018

A Separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☒ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

H. Indoor Lighting Schedule and Field Inspection Energy Checklist

Luminaire Schedule			Installed Watts				Location		Field Inspector[1]	
01	02		03	04	05	06	07		08	
Name or Item Tag	Complete Luminaire Description (i.e. 1 lamp fluorescent troffer, F32T8, cone dimmable electronic ballast)	How wattage was determined Watts per Luminaire	CEC Default Table Number	Ballast Factor (Assembly Ex 0.88)	Number of Luminaires	Total Installed Watts in Area (03) x (04) x (05)	Primary Function area in which these luminaires are installed		PASS	FAIL
A1	2' X 4' 40W LED Troffer	40	☐	☒	15	600	Classroom/Office		○	○
A2	2' X 4' 65W LED Troffer	61	☐	☒	15	915	Classroom/Vocational Area		○	○
A3	2'X 4' 32W Lensed LED Troffer	32	☐	☒	2	64	Corridor/Restfire/Support		○	○
B	20W LED Compact Adjustable Flood	20	☐	☐	4	80	Classroom/Vocational Area		○	○
			☐	☐		0

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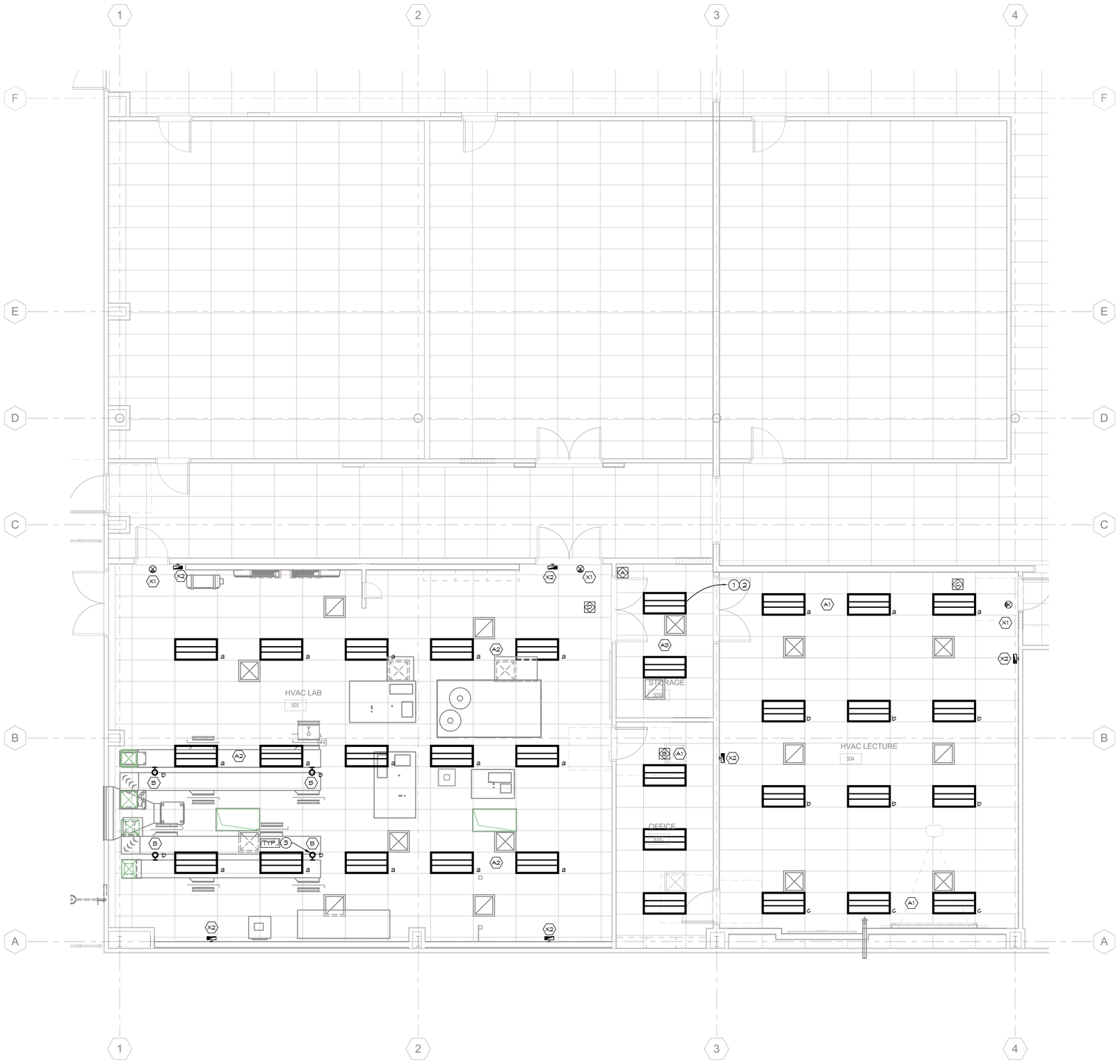

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LICENSED ARCHITECT
BRADLEY E GLADSTEIN
NO. C-32437
REN. 02-28-19
STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

GENERAL NOTES:

1. REFERENCE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. REFERENCE E2 SERIES SHEETS FOR ALL FIXTURE TYPES AND FOR TYPICAL DETAILS.
3. REFERENCE E8 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
4. LETTERS IN OR ADJACENT TO EACH FIXTURE OR FIXTURE ROW INDICATES SWITCH AND OR OCCUPANCY SENSOR WHICH CONTROLS THE LIGHTING FIXTURE.
5. CIRCUIT HOMERUNS ARE INDICATED TO SHOW THE LOCATION AND NUMBER OF CIRCUITS TO BE GROUPED TOGETHER.
6. PROVIDE MINIMUM 3/4" CONDUIT AND #12 CIRCUIT CONDUCTORS AS REQUIRED TO CONNECT EACH LIGHTING FIXTURES TO THEIR INDICATED CONTROL DEVICES. (U.O.N.)
7. LOCATION AND QUANTITIES OF OCCUPANCY SENSORS, PHOTOSENSORS, ETC. ARE APPROXIMATE ONLY. EXACT LOCATIONS AND QUANTITIES PER MANUFACTURER'S RECOMENDATIONS.
8. COORDINATE FIXTURE LOCATIONS WITH MECHANICAL DUCTWORK AND FIRE SPRINKLER PIPING.

KEY NOTES:

1. (1) #10 (HOT), (1) #10 (NEUTRAL), (1) #10 (GND), 3/4"C.
2. TO EXISTING LIGHTING CIRCUIT(S) CURRENTLY SUPPLYING REMODEL AREA. MAINTAIN CIRCUIT CONFIGURATION OF EMERGENCY LIGHTING.
3. TASK LIGHTING MOUNTED ON STRUCTURAL SUPPORTS FOR DUCTWORK.

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Facility:

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1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

LIGHTING FLOOR PLAN

DSA APPROVED SET

Date: 10.04.2018 | Client Project No: 5015021-100

Sheet:

E2.1

N

FIRST FLOOR - REFLECTIVE CEILING PLAN - LIGHTING 1 1/4" = 1'-0"

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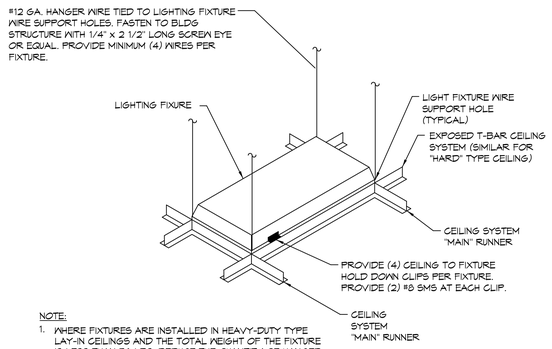
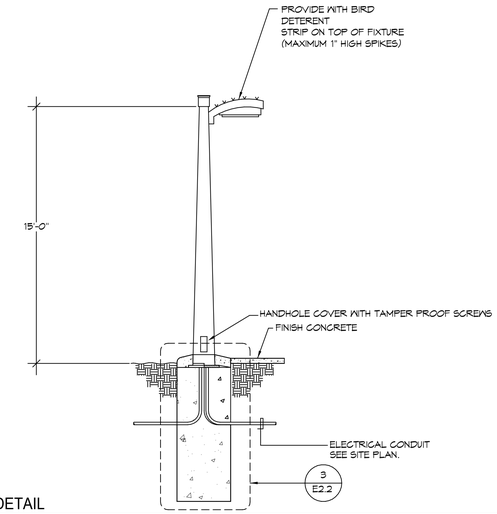


NOTE:

1. WHERE FIXTURES ARE INSTALLED IN HEAVY-DUTY TYPE LAY-IN CEILINGS AND THE TOTAL WEIGHT OF THE FIXTURE IS LESS THAN 56 LBS. REDUCE THE QUANTITY OF HANGER WIRES TO (2) SLACK WIRES AT DIAGONAL CORNERS.
2. REFERENCE ARCHITECTURAL PLANS FOR ADDITIONAL CEILING ANCHORAGE REQUIREMENTS.

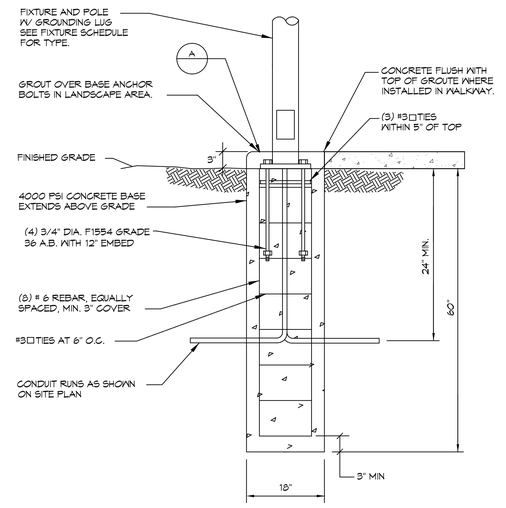
FLUORESCENT FIXTURE SEISMIC RESTRAINT DETAIL — 1 / E2.2

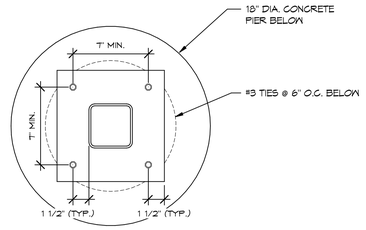
NO SCALE



POLE DETAIL — 2 / E2.2

NO SCALE





SECTION A

POLE BASE DETAIL — 3 / E2.2

NO SCALE

NOTE: LIGHT POLES LESS THAN 35 FT ABOVE GRADE ARE EXEMPT FROM DSA REVIEW

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Sheet Title:

LIGHTING DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

E2.2

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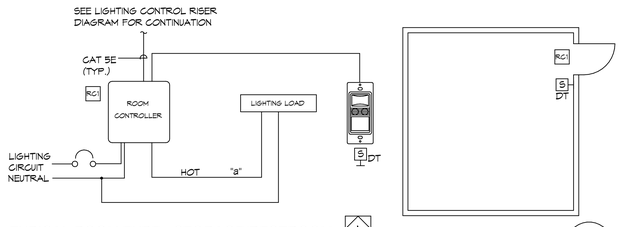
SYMBOL LENGEND

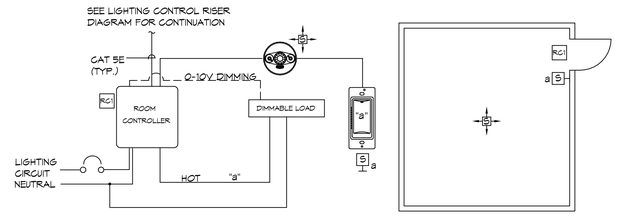
HS	WALL MOUNTED MANUAL ON AND OFF SWITCH +48" U.O.N.
HS DT	WALL MOUNTED DUAL TECH OCCUPANCY SENSOR WITH MANUAL ON AND OFF 48" U.O.N.
S	CEILING MOUNTED OCCUPANCY SENSOR (DUAL TECHNOLOGY)
S	WALL MOUNTED OCCUPANCY SENSOR (DUAL TECH) +84" U.O.N.
RC1	SINGLE CIRCUIT ROOM CONTROLLER FOR ROOMS WITH ONE DIMMING ZONE.
RC2	SINGLE CIRCUIT ROOM CONTROLLER FOR ROOMS WITH TWO DIMMING ZONES.
RC3	SINGLE CIRCUIT ROOM CONTROLLER FOR ROOMS WITH THREE DIMMING ZONES.
PL	PLUG LOAD CONTROLLER
DS	DAYLIGHT SENSOR
HS T	4 SCENE DIMMING CONTROL STATION
HS K	MANUAL ON AND OFF KEY SWITCH
HS a	MAIN ENTRY MANUAL ON AND OFF WITH DIMMER FOR ZONE 'a'
HS ab	MAIN ENTRY MANUAL ON AND OFF WITH DIMMER FOR ZONE 'a'&'b"
HS abc	MAIN ENTRY MANUAL ON AND OFF WITH DIMMER FOR ZONE 'a'&'b'&'c.'
HS abc	MAIN ENTRY MANUAL DIMMERS FOR ZONE 'a', 'b' & 'c.'

GENERAL NOTES

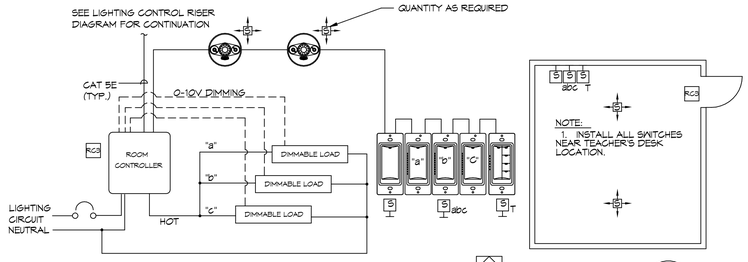
1. REFERENCE SPECIFICATION SECTION 260923 DIGITAL LIGHTING CONTROL SYSTEM FOR ADDITIONAL SCOPE OF WORK.
2. ITEMS RC1 RC2 RC3 PL TO BE WALL MOUNTED ABOVE THE ROOM ENTRY DOOR, ABOVE THE CEILING IN ALL ROOMS WITH T-BAR CEILINGS.
3. ITEMS RC1 RC2 RC3 PL TO BE LOCATED WITHIN A 24" x 24" RECESSED ENCLOSURE WITH HINGED LOCKING COVER LOCATED ABOVE THE ROOM ENTRY DOOR IN ALL ROOMS WITH INACCESSIBLE CEILINGS.
4. ALL 0-10V WIRING AND CAT 5E WIRING MAY BE INSTALLED AS OPEN WIRE WHERE ABOVE ACCESSIBLE CEILINGS. WHERE ABOVE INACCESSIBLE OR EXPOSED CEILINGS IT SHALL BE INSTALLED IN CONDUIT.
5. S WHERE CEILING HEIGHT EXCEED 11'-0" OR ROOM HAS EXPOSED CEILING PROVIDE S TYPE SENSOR MOUNTED ON WALL IN PLACE OF CEILING SENSOR.



TYPICAL ROOM TYPE - STORAGE/RESTROOM — A — 1 E2.3
NO SCALE



TYPICAL ROOM TYPE - OFFICE — B — 2 E2.3
NO SCALE



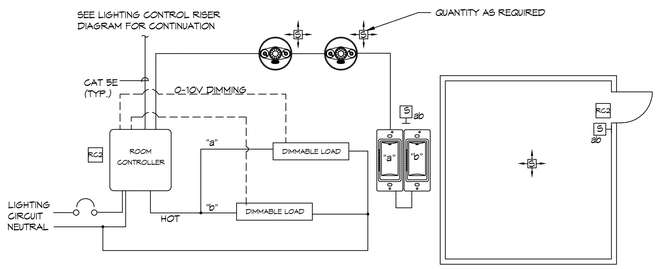
TYPICAL ROOM TYPE - CLASSROOM (W/O DAYLIGHT CONTROL) — C — 3 E2.3
NO SCALE

LIGHTING FIXTURE SCHEDULE

Mark	Approved Manufacturer's (See Key Note No. 1)	Catalog Series Type (See Key Note No. 2)	FIXTURE: Incandescent	Fluorescent	Metal Halide	High Pressure Sodium	Low Pressure Sodium	LED	Volts	LAMP: Lamps Watts / Fixture Watts	No.	Type	MOUNTING: Recessed / Ceiling	Surface / Ceiling	Wall	Recessed / Wall	Surface / Wall	Pole	Description
A1	DAY-BRITE	EVO GRID 2X4	☐	☐	☐	☐	☐	■	■120	40w			■	☐	☐	☐	☐	☐	2'X4' T-GRID FIXTURE WITH CENTER BASKET/CURVED DIFFUSER. MINIMUM 4800 LUMENS AT A CCT OF 5000 KELVIN. DRIVER VOLTAGE UNIVERSAL. 0-10v DIMMING. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ■ See Detail 1 E2.2
	COLUMBIA	LTGR24							☐208										
	LITHONIA	2BLT							■277										
									☐480										
A2	DAY-BRITE	EVO GRID 2X4	☐	☐	☐	☐	☐	■	■120	61w				■	☐	☐	☐	☐	2'X4' T-GRID FIXTURE WITH CENTER BASKET/CURVED DIFFUSER. MINIMUM 7200 LUMENS AT A CCT OF 5000 KELVIN. DRIVER VOLTAGE UNIVERSAL. 0-10v DIMMING. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ■ See Detail 1 E2.2
	COLUMBIA	LTGR24							☐208										
	LITHONIA	2BLT							■277										
									☐480										
A3	COLUMBIA	LLT24 SERIES	☐	☐	☐	☐	☐	■	■120	32w				■	☐	☐	☐	☐	2'X4' T-GRID LENSED (A19) TROFFER MINIMUM 4000 LUMENS AT A CCT OF 5000 KELVIN. DRIVER VOLTAGE UNIVERSAL. 0-10v DIMMING. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ■ See Detail 1 E2.2
	LITHONIA	2TL SERIES							☐208										
	DAY-BRITE	T-GRID LED							■277										
									☐480										
B	B-K LIGHTING	DENALI SERIES FLOODLIGHT	☐	☐	☐	☐	☐	■	■120	20w					☐	☐	☐	■	3" DIAMETER COMPACT ADJUSTABLE FLOODLIGHT, (60 DEG. OPTICS AND SOFT FOCUS LENS) MINIMUM 1168 LUMENS MOUNT ON STRUCTURAL SUPPORT FOR DUCTWORK AT 7'-6" AFF. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ☐ See Detail
									☐208										
									■277										
									☐480										
S1	RAB LIGHTING	SLIM WALLPACK SERIES	☐	☐	☐	☐	☐	■	■120	18w						☐	☐	■	MINIMUM 2585 LUMEN, 5000 KELVIN COMPACT LOW PROFILE WALLPACK INTEGRAL PHOTOCELL TO MATCH EXISTING BRONZE FINISH AND MOUNTING HEIGHT OF ADJACENT WALLPACKS. NO SUBTITUTIONS. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ☐ See Detail
									☐208										
									■277										
									☐480										
S2	RAB LIGHTING	ALED26 SERIES	☐	☐	☐	☐	☐	■	■120	26w								■	MINIMUM 3475 LUMEN, 5000 KELVIN, MOUNTED ON 15'-0" , 4" SQUARE STEEL POLE DESIGNED FOR 120 MPH WIND SPEED (SINGLE FIXTURE PER POLE) WITH INTEGRAL PHOTOCELL AND BRONZE FINISH. NO SUBSTITUTIONS. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ■ See Detail 2 E2.2
									☐208										
									■277										
									☐480										
X1	LITHONIA	LQM SERIES	☐	☐	☐	☐	☐	■	■120	1w							■	☐	THERMOPLASTIC LED EXIT SIGNS WITH BATTERY BACK UP, GREEN LETTERING AND SELF DIAGNOSTICS NUMBER OF FACES AS REQUIRED. SURFACE MOUNT ABOVE DOOR OR CEILING MOUNT AS REQUIRED. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ☐ See Detail
	DUAL LITE	EVE SERIES							☐208										
	EVENLITE	TELESIS SERIES							■277										
									☐480										
X2	LITHONIA LIGHTING	ELMLT SERIES	☐	☐	☐	☐	☐	■	■120	14w							■	☐	LED THERMOPLASTIC, WALL MOUNTED EMERGENCY LIGHTING UNIT. WHITE WITH SELF DIAGNOSTICS. ☐ Provide Emergency Ballast Type 'EM' ☐ Provide Custom Color Finish, to be selected at time submittal ☐ See Detail
	DUALLITE	LZ SERIES							☐208										
									■277										
									☐480										

LIGHTING FIXTURE SCHEDULE KEY NOTES:

1. ALTERNATE MANUFACTURER'S TO THOSE SPECIFIED MAY BE SUBMITTED FOR APPROVAL. ALTERNATE MANUFACTURER'S MUST MEET THE MINIMUM CRITERIA INDICATED IN THE DESCRIPTION AND OPTIONS COLUMNS OF THIS SCHEDULE, AND MUST BE EQUAL TO THE SPECIFIED FIXTURE AS DETERMINED BY THE SPECIFYING ENGINEER. (ALTERNATE FIXTURES MUST BE APPROVED PRIOR TO BID, ALLOW 72 HOURS FOR ENGINEER REVIEW AND APPROVED). WHERE 'NO KNOWN EQUAL' IS INDICATED THE FIXTURE DOES NOT HAVE AN EQUAL TO MEET THE PROJECT REQUIREMENTS, AND ALTERNATE SELECTIONS WILL NOT BE ACCEPTED.
2. COMPLETE CATALOG NUMBERS HAVE NOT BEEN PROVIDED, REFERENCE THE DESCRIPTION AND OPTIONS COLUMNS OF THIS SCHEDULE FOR COMPLETE FIXTURE REQUIREMENTS.



TYPICAL ROOM TYPE - LAB — D — 4 E2.3
NO SCALE

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FIXTURE SCHEDULE/ CONTROL DETAILS

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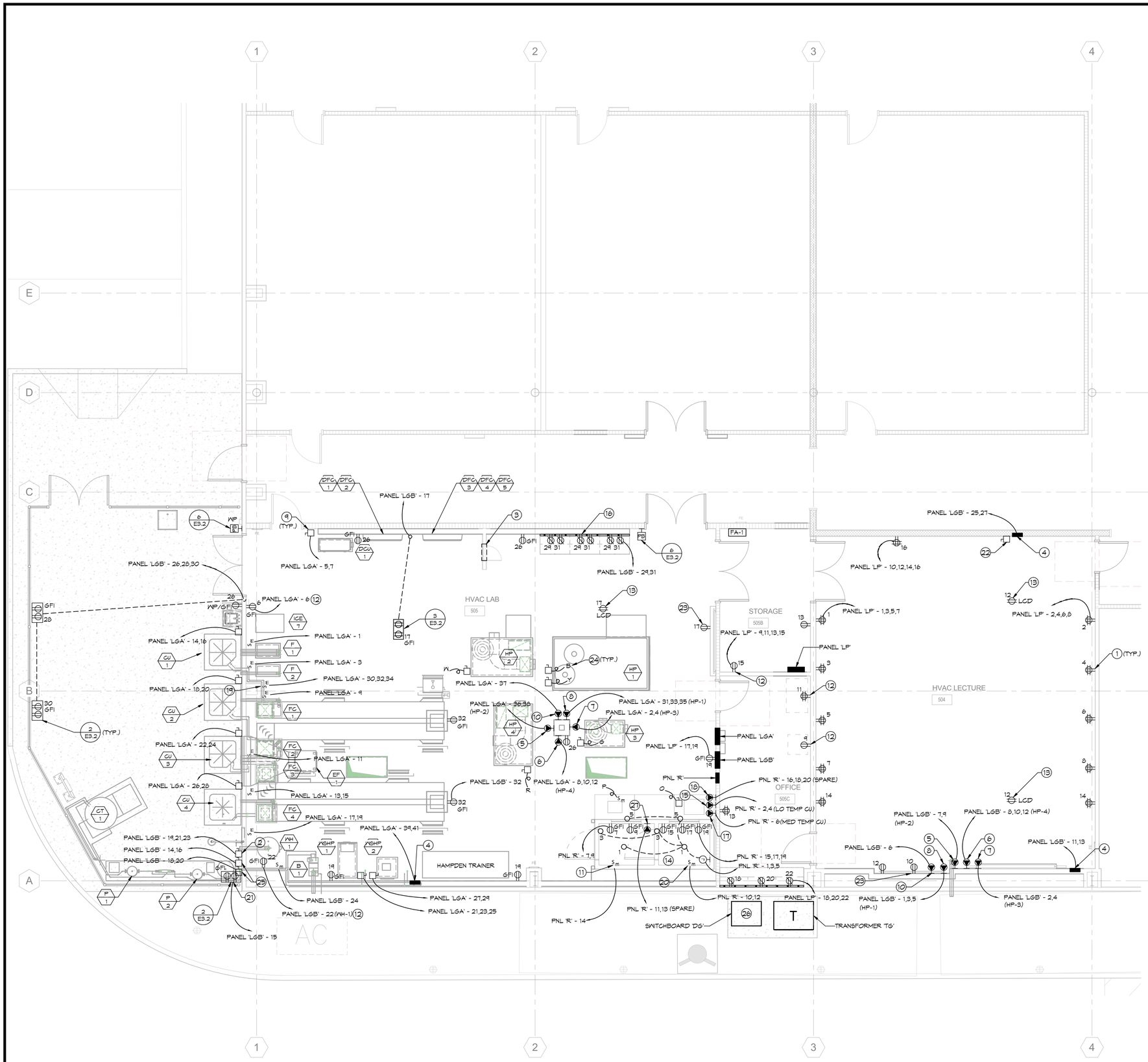

LEVEL 01 FLOOR PLAN - POWER

1/4" = 1'-0"

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KEY NOTES (CONTINUATION):

4. PANEL MOUNTED INDUSTRIAL SOCKET OUTLET STRAIGHT WATERTIGHT IP67, 63 AMP, 5P, 230v AS MANUFACTURED BY ABL SURSUM MODEL #FS35257 FOR HAMPDEN TRAINING UNIT.
5. 250v, 2P, 3W, 60A TWIST LOCK RECEPTACLE. SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
6. 250v, 3P, 4W, 30A, TWIST LOCK RECEPTACLE (L15-30R). SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
7. 250v, 2P, 3W, 20A TWIST LOCK RECEPTACLE (L6-20R). SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
8. 250v, 3P, 4W, 50A TWIST LOCK RECEPTACLE. SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
9. SEE MECHANICAL SCHEDULE FOR SIZES & TYPES OF DISCONNECTS. SEE E9.3.
10. RECEPTACLE FOR HP-1 POWER EXHAUST (L5-15R). SEE MECHANICAL EQUIPMENT SCHEDULE E9.3. SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
11. EVAPORATOR COIL WITH AIR DEFROST OWNER FURNISHED, CONTRACTOR INSTALLED. PROVIDE MANUAL MOTOR STARTER SWITCH RATED FOR MOTOR SIZE AND VOLTAGE. COORDINATE SWITCH LOCATION WITH WALK-IN MANUFACTURER.
12. RECEPTACLE ON DEDICATED CIRCUIT.
13. CEILING MOUNTED RECEPTACLE.
14. REFRIGERATOR/FREEZER WALK-IN IS OWNER FURNISHED, CONTRACTOR INSTALLED. RECEPTACLES AND SWITCHES ARE PROVIDED WITH UNIT E.C. TO PROVIDE CONNECTION FROM DEVICES TO PANEL 'R'. E.C. TO PROVIDE DISCONNECTS FOR EVAP COILS. SEE KEYNOTE #11 AND #20.
15. 250v, 2P, 3W, 30A TWIST LOCK RECEPTACLE (L6-30R). SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
16. ALL GFI RECEPTACLES (TYP.)
17. 125v, 2P, 3W, 30A TWIST LOCK RECEPTACLE (L5-30R). SEE DETAIL 4/E3.2 FOR LABELING REQUIREMENTS.
18. 250v, 3P, 3W, 30A TWIST LOCK RECEPTACLE (L15-30R). LABEL 'SPARE'
19. WALL MOUNTED DISCONNECT FOR EF-1
20. EVAPORATOR COIL WITH ELECTRIC DEFROST OWNER FURNISHED, CONTRACTOR INSTALLED. PROVIDE MANUAL MOTOR STARTER SWITCH RATED FOR MOTOR SIZE AND VOLTAGE (EVAP DEFROST REQUIRES SEPARATE ELECTRICAL CONNECTION). COORDINATE SWITCH LOCATION WITH WALK-IN MANUFACTURER.
21. RECEPTACLES FOR CHEMICAL TREATMENT TANKS.
22. DOUBLE THROW SAFETY SWITCH TO TRANSFER POWER SOURCE BETWEEN HAMPDEN TRAINING UNIT OUTLETS (SEE KEYNOTE #4) AT FRONT AND BACK OF LECTURE CLASSROOM. BOTH OUTLETS MAY NOT BE UTILIZED SIMULTANEOUSLY. SEE DETAIL 5/E3.2 FOR LABELING.
23. RECEPTACLE FOR FLAT PANEL. SEE TECHNOLOGY DRAWINGS FOR MOUNTING HEIGHT.
24. COLOR CODING SCHEME FOR CORD WRAP/RECEPTACLE LABELS. SEE DETAIL 4/E3.2.
    W = WHITE
    B = BLUE
    Y = YELLOW
    G = GREEN
    R = RED
    O = ORANGE
    P = PURPLE
25. DISCONNECTS FOR PUMPS P1 AND P2
26. ROUTE FEEDERS OUT OF TOP OF SWITCHBOARD AND INTO BUILDING AT ACCESSIBLE CEILING LEVEL. PAINT CONDUITS TO MATCH EXTERIOR. ONCE INSIDE CONDUITS SHALL BE ROUTED/SUPPORTED BY WALLS. NO MOUNTING OF CONDUITS TO CEILING/ROOF STRUCTURE. FOR WALL SUPPORT DETAIL REFER TO 14/S3.3
27. 250v, 2P, 3W, 30A TWIST LOCK RECEPTACLE (L6-30R) LABEL 'SPARE'

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GENERAL NOTES:

1. REFERENCE ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT LOCATION OF ALL WALL MOUNTED POWER DEVICES WHERE INDICATED AT MOUNTING HEIGHTS OTHER THAN +18".
2. REFERENCE E9.3 MECHANICAL EQUIPMENT SCHEDULE FOR CONDUIT, WIRE AND DISCONNECT REQUIREMENTS.
3. REFERENCE E9 AND E8 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
4. NUMBERS ADJACENT TO EACH POWER DEVICE INDICATES THE CIRCUIT NUMBER TO WHICH THE DEVICE IS TO BE CONNECTED.
5. CIRCUIT HOMERUNS ARE INDICATED TO SHOW THE LOCATION AND NUMBER OF CIRCUITS TO BE GROUPED TOGETHER.
6. PROVIDE MINIMUM 3/4" CONDUIT AND #12 CIRCUIT CONDUCTORS AS REQUIRED TO CONNECT EACH POWER DEVICE TO THEIR INDICATED CIRCUIT (U.O.N.).
7. FIELD VERIFY EXACT ROUTING LOCATION FOR CONCEALED CONDUITS AND RECEPTACLES PRIOR TO ROUGH-IN.
8. REFER TO ARCHITECTURAL FLOOR PLANS FOR MORE INFO REGARDING LOCATIONS AND RATING OF FIRE RATED PARTITIONS. SEE 1/E8.1 FOR DETAILS REGARDING PENETRATION OF FIRE-RATED ASSEMBLIES.
9. REFERENCE MECHANICAL PLANS FOR EXACT EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN.
10. PROVIDE COLOR CODED MICARTA LABEL FOR EACH SPECIALTY RECEPTACLE PER DETAIL 4/E3.2.

KEY NOTES:

1. OUTLET SERVING STUDENT WORKSTATIONS ON DEDICATED CIRCUIT.
2. DISCONNECT FOR CT-1.
3. EXISTING 120/208v, 3PH PANEL TO REMAIN. SEE E10.1 FOR DEMO REQUIREMENTS.

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POWER FLOOR PLAN

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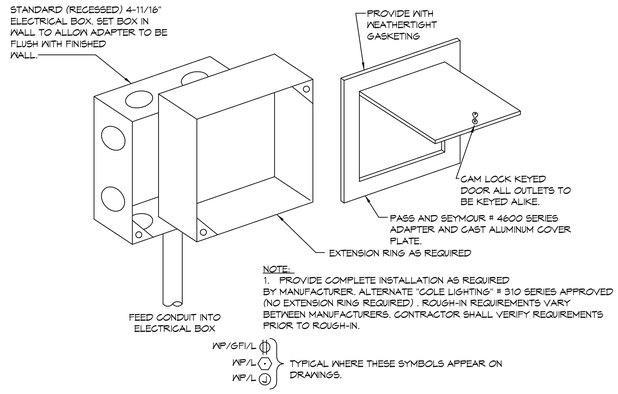
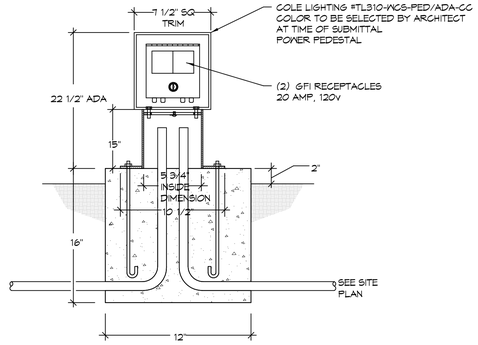
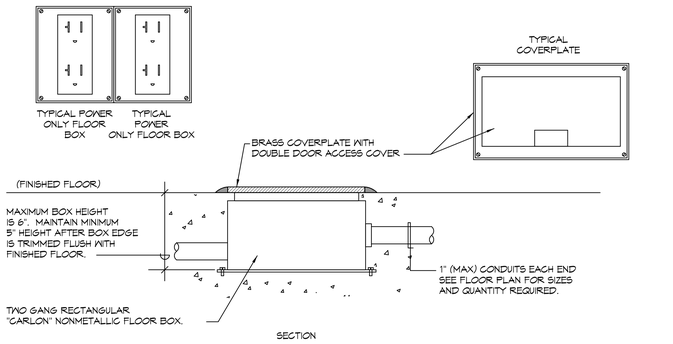


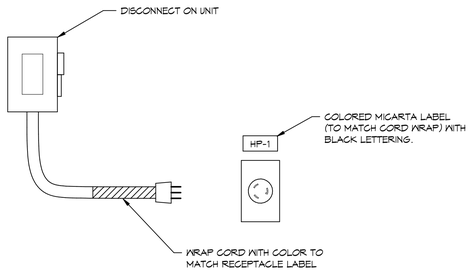
TYPICAL WEATHERPROOF/LOCKING RECEPTACLE COVER
NO SCALE
1 E3.2

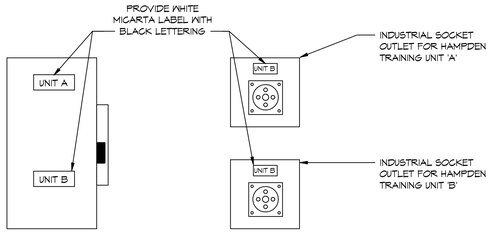


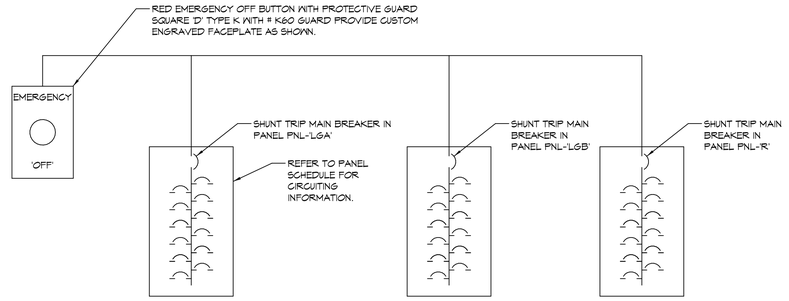
POWER PEDESTAL - EXTERIOR
NO SCALE
2 E3.2



TYPICAL TWO GANG FLOOR BOX INSTALLATION
NO SCALE
3 E3.2







COLOR CODING OF SPECIALTY PLUGS AND RECEPTACLES
NO SCALE
4 E3.2

SAFETY SWITCH FOR POWER TRANSFER
NO SCALE
5 E3.2

EMERGENCY SHUTOFF DIAGRAM
NO SCALE
6 E3.2

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MECHANICAL EQUIPMENT SCHEDULE

Mark	Voltage/Phase	Conduit/Wire	Fuse	Disc. Switch	Panel	Remarks
HP 1	208/3	1"C., (3) #6, (1) #10 GND.	50	60A/3P/1	SEE PLANS	40 MCA (4)(5)(6)
HP 2	208/1	1 1/4"C., (2) #4, (1) #8 GND.	60	60A/2P/1	SEE PLANS	39 MCA (4)(5)
HP 3	208/1	3/4"C., (2) #10, (1) #10 GND.	20	30A/2P/1	SEE PLANS	15.2 MCA (4)(5)
HP 4	208/3	3/4"C., (3) #10, (1) #10 GND.	30	30A/3P/1	SEE PLANS	24 MCA (4)(5)
DCU 1 / DFC 1-5	208/1	1"C., (2) #6, (1) #10 GND.	50	60A/2P/1	SEE PLANS	35 MCA (3)(5)
ICE 1	120/1	3/4"C., (2) #10, (1) #10 GND.	-	(2)	SEE PLANS	11.1 MCA (5)
F 1	120/1	3/4"C., (2) #10, (1) #10 GND.	-	(1)	SEE PLANS	14.9 MCA/20 MOCP (5)
F 2	120/1	3/4"C., (2) #10, (1) #10 GND.	-	(1)	SEE PLANS	8.6 MCA/15 MOCP (5)
FC 1	120/1	3/4"C., (2) #10, (1) #10 GND.	-	(1)	SEE PLANS	9.6 MCA/15 MOCP (5)
CU 1	208/1	3/4"C., (2) #10, (1) #10 GND.	30	30A/2P/1	SEE PLANS	18.1 MCA/30 MOCP (5)
FC 2	120/1	3/4"C., (2) #10, (1) #10 GND.	-	(1)	SEE PLANS	10.9 MCA/15 MOCP (5)
CU 2	208/1	3/4"C., (2) #8, (1) #10 GND.	35	60A/2P/1	SEE PLANS	19.8 MCA/35 MOCP (5)
FC 3	208/1	3/4"C., (2) #10, (1) #10 GND.	15	30A/2P/1	SEE PLANS	9.7 MCA/15 MOCP (5)
CU 3	208/1	3/4"C., (2) #8, (1) #10 GND.	40	60A/2P/1	SEE PLANS	26 MCA/40 MOCP (5)
FC 4	208/1	3/4"C., (2) #10, (1) #10 GND.	15	30A/2P/1	SEE PLANS	5.4 MCA/15 MOCP (5)
CU 4	208/1	3/4"C., (2) #8, (1) #10 GND.	40	60A/2P/1	SEE PLANS	26 MCA/40 MOCP (5)
CT 1	208/3	3/4"C., (3) #10, (1) #10 GND.	8	30A/3P/3R	SEE PLANS	1 HP (4.8 FLA)
B 1	120/1	3/4"C., (2) #10, (1) #10 GND.	-	(2)	SEE PLANS	
XSHP 1	208/3	3/4"C., (3) #10, (1) #10 GND.	20	30A/3P/1	SEE PLANS	14.0 MCA (5)
XSHP 2	208/1	3/4"C., (2) #8, (1) #10 GND.	35	60A/2P/1	SEE PLANS	23.4 MCA (5)
EF 1	208/3	3/4"C., (2) #10, (1) #10 GND.		(1)	SEE PLANS	2 HP (7.8 FLA)
P 1	208/1	3/4"C., (2) #10, (1) #10 GND.	10	30A/2P/3R	SEE PLANS	3/4 HP (6.9 FLA)
P 2	208/1	3/4"C., (2) #10, (1) #10 GND.	10	30A/2P/3R	SEE PLANS	3/4 HP (6.9 FLA)
WH 1	120/1	3/4"C., (2) #10, (1) #10 GND.		(1)	SEE PLANS	
CU LT	208/1	3/4"C., (2) #10, (1) #10 GND.	25	30A/2P/1	SEE PLANS	17.2 MCA (4)(5)(7)
CU MT	120/1	3/4"C., (2) #10, (1) #10 GND.		(1)	SEE PLANS	17.1 MCA (4)(5)(7)

(1) PROVIDE MANUAL MOTOR STARTER SWITCH RATED FOR MOTOR SIZE AND VOLTAGE.

(2) RECEPTACLE ONLY (DEDICATED) GFI.

(3) FIVE FC UNITS, POWERED FROM A SINGLE CONDENSING UNIT. - 0.4 MLA EACH

(4) MOBILE UNIT. PROVIDE CORD AND PLUG FOR UNIT. COLOR CODE (WRAP CORD MIN. 2 FT FROM END) TO MATCH COORDINATING RECEPTACLE.

(5) OWNER FURNISHED, CONTRACTOR INSTALLED.

(6) PROVIDE SEPARATE POWER CONNECTION TO POWER EXHAUST INCLUDING SEPARATE 30A/3P/1 DISCONNECT FUSED AT 6A AND SEPARATE CORD AND PLUG (L5-15P).

(7) WALK-IN EQUIPMENT

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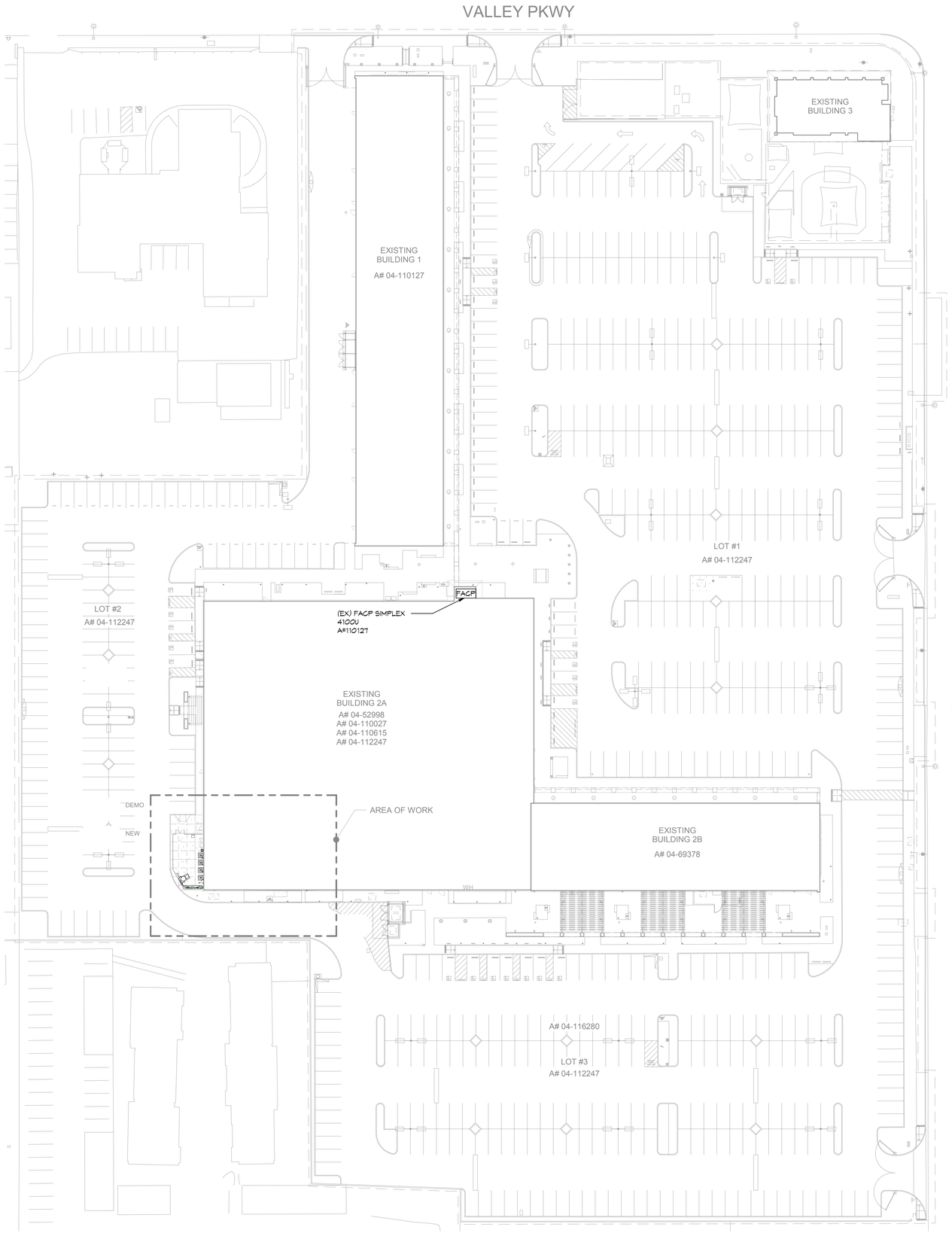

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OVERALL CAMPUSFIRE ALARM SITE PLAN 1 1/32" = 1'-0"

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Learning for Success

Facility:

PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

FIRE ALARM SITE PLAN

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

E5.0

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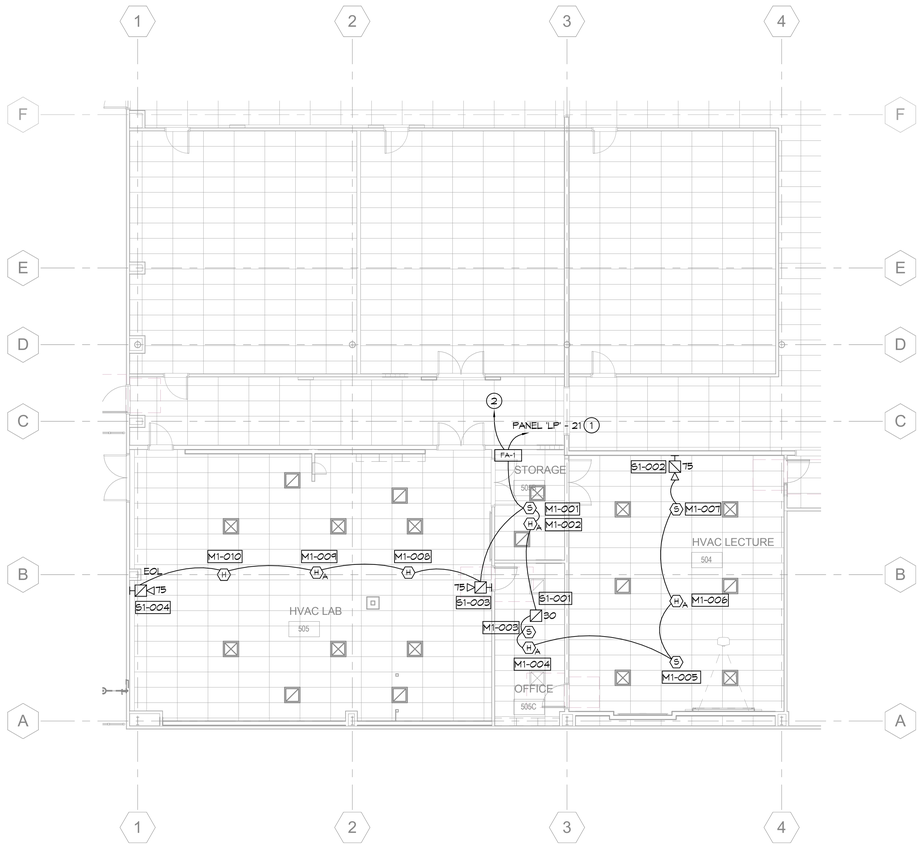

FIRE ALARM SYMBOLS LEGEND:

MF	MANUAL PULL STATION MOUNTED +48" A.F.F. TO CENTERLINE OF DEVICE.
SI 15	CEILING MOUNTED FLASHING LIGHT STROBE (15 = STROBE CANDELA RATING) (SI = SIGNAL CIRCUIT IDENTIFICATION)
SI 15	CEILING MOUNTED COMBINATION HORN/STROBE (15 = STROBE CANDELA RATING) (SI = SIGNAL CIRCUIT IDENTIFICATION)
SI WF	WALL MOUNTED WEATHERPROOF EXTERIOR HORN MOUNTED +90" A.F.F. TO BOTTOM OF DEVICE (SI = SIGNAL CIRCUIT IDENTIFICATION)
S	CEILING MOUNTED SMOKE DETECTOR
H	CEILING MOUNTED HEAT DETECTOR
HA	HEAT DETECTOR MOUNTED ABOVE CEILING (SEE GENERAL NOTE #6)
FACP	MAIN FIRE ALARM CONTROL PANEL
FA	REMOTE FIRE ALARM POWER EXTENDER
EOL	END OF LINE RESISTOR

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APP. 04-117752 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects

5015021-100

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LICENSED ARCHITECT
BRADLEY E GLADSTEIN
NO. C-32437
REN. 02-28-19
STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

GENERAL NOTES:

1. REFERENCE ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT LOCATION OF ALL WALL MOUNTED DEVICES.
2. REFERENCE E5 AND E6 SERIES SHEETS FOR TYPICAL CONDUIT AND BACKBOX INSTALLATION DETAILS.
3. REFERENCE RISER DIAGRAMS FOR TYPICAL CONDUIT SIZES AND INITIATION ZONE CIRCUIT IDENTIFICATIONS.
4. REFERENCE MECHANICAL PLANS FOR EXACT LOCATION OF ALL DUCT DETECTORS AND SMOKE DAMPER LOCATIONS.
5. UNLESS OTHERWISE NOTED SOLID LINES BETWEEN DEVICES SHALL BE 3/4" E.M.T. ROUTED CONCEALED ABOVE CEILINGS OR IN WALLS. DASHED LINES INDICATE 3/4" P.V.C. UNDERGROUND CONDUIT. ALL WIRING TO BE PROVIDED PER MANUFACTURER SHOP DRAWINGS.
6. CONTRACTOR SHALL PROVIDE CEILING ACCESS PANEL AT ALL NON-LAYIN TYPE CEILINGS, WHERE HEAT DETECTOR ABOVE CEILING IS INDICATED.
7. PROVIDE WIRE PROTECTIVE GUARD OVER ALL FIRE ALARM DEVICES LOCATED IN THE FOLLOWING AREAS, GYMNASIUM, LOCKER ROOMS, SHOP AREAS, AND ANY OTHER AREA WHERE DEVICES MAY BE SUBJECT TO CONTACT.
8. REFERENCE ARCHITECTURAL PLANS FOR FIRE RATED WALL LOCATIONS.

KEY NOTES:

1. PROVIDE DEDICATED 120 VOLT CIRCUIT TO PANEL CONNECT TO 'LOCK ON BREAKER'. REFER TO POWER E3 SERIES SHEETS FOR CIRCUIT INFORMATION.
2. PROVIDE CONNECTION TO 'FACP'. REFER TO SITE PLAN SHEET E5.0.

Consultant:

REGISTERED PROFESSIONAL ENGINEER
MARK JESSE-HARRIS
NO. E 14781
Exp. 6-30-2019
ELECTRICAL
STATE OF CALIFORNIA

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PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

FIRE ALARM FLOOR PLAN

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

E5.1

N

FIRST FLOOR - REFLECTIVE CEILING PLAN - FIRE ALARM | **1** 1/8" = 1'-0"

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HVAC Lab
Power Extender Panel
Supplementary Notification Appliance Circuit Battery Calculations

Type of Device Or Equipment	Standby Amperage Qty	Current	Total	Alarm Amperage Quantity	Current	Total
Power Extender Panel	1	0.006	0.006	1	0.006	0.006
Dual Sync Module	1		0.000	1	0.035	0.035
Exterior Horn	0		0.000	0	0.080	0.000
15cd Horn/Strobe	0		0.000	0	0.750	0.000
30cd Horn/Strobe	0		0.000	0	0.116	0.000
75cd Horn/Strobe	3		0.000	3	0.221	0.663
110cd Horn/Strobe	0		0.000	0	0.285	0.000
15cd Horn/Strobe (Ceiling)	0		0.000	0	0.860	0.000
30cd Horn/Strobe (Ceiling)	0		0.000	0	0.063	0.000
75cd Horn/Strobe (Ceiling)	0		0.000	0	0.250	0.000
110cd Horn/Strobe (Ceiling)	0		0.000	0	0.320	0.000
15cd Strobe Only	0		0.000	0	0.060	0.000
30cd Strobe Only	0		0.000	0	0.092	0.000
75cd Strobe Only	0		0.000	0	0.180	0.000
110cd Strobe Only	0		0.000	0	0.240	0.000
15cd Strobe Only (Ceiling)	0		0.000	0	0.060	0.000
30cd Strobe Only (Ceiling)	1		0.000	1	0.092	0.092
75cd Strobe Only (Ceiling)	0		0.000	0	0.180	0.000
110cd Strobe Only (Ceiling)	0		0.000	0	0.240	0.000
Total Standby Amperage			**0.006**	**Total Alarm Amperage**		**0.796**

Standby Time Required

24 Hours x Total Standby Amperage = 24 x 0.006 = 0.144 Amp Hours

Alarm Time Required

.25 (15 Min.) x Total Alarm Amperage = .25 x 0.796 = 0.199 Amp Hours

Total Required = 0.343 Amp Hours
0.343 x120% = 0.4116
Provide Battery & Minimum Battery Amp Hour Required = 8 Amp Hours

Fire Alarm Voltage Drop Calculations

Calculation Formula:

Total Current x Feet x 21.6 / Circular Mills (Voltage Drop)

Voltage Drop / 24 Volts x 100 Percent = Percentage Voltage Drop

Circular Mils Using #10 wire =10380
Circular Mils Using #12 wire = 6530
Circular Mils Using #14 wire = 4110
Circular Mils Using #18 wire = 1620

HVAC Lab

Circuit I.D.	Device Type	Devices x Current		Total Current	Distance In Feet	Circular Mils	=	Total Voltage Dropped: Volts Dropped	=	% Volts Dropped
S1	Exterior Horn	0	0.080	0.000						
	Sync Module	1	0.800	0.800						
	15cd Horn / Strobe	0	0.750	0.000						
	30cd Horn / Strobe	0	0.116	0.000						
	75cd Horn / Strobe	3	0.221	0.663						
	110cd Horn / Strobe	0	0.285	0.000						
	15cd Horn / ST (Ceiling)	0	0.860	0.000						
	30cd Horn / ST (Ceiling)	0	0.063	0.000						
	75cd Horn / ST (Ceiling)	0	0.250	0.000						
	110cd Horn / ST (Ceiling)	0	0.320	0.000						
	15cd Strobe	0	0.060	0.000						
	30cd Strobe	0	0.092	0.000						
	75cd Strobe	0	0.180	0.000						
	110cd Strobe	0	0.240	0.000						
	15cd Strobe (Ceiling)	0	0.060	0.000						
	30cd Strobe (Ceiling)	1	0.092	0.092						
	75cd Strobe (Ceiling)	0	0.180	0.000						
	110cd Strobe (Ceiling)	0	0.240	0.000						
			Total	1.555	160	6530	=	0.823	=	**3.43%**

(EX) SIMPLEX MODEL 4100U

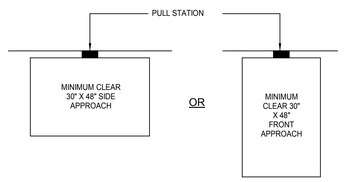
	SYM	MODEL NO.	DESCRIPTION	C.S.F.M. LISTING	MFG.
001	FACP	4100U	(EX) FIRE ALARM CONTROL PANEL	7165-0026:251	SIMPLEX
002	FA		REMOTE POWER SUPPLY	7300-0026:0214	SIMPLEX
003	DSM		WHEELOCK SYNC MODULE	7300-0785:132	WHEELOCK
		VARIES	BATTERIES	N/A	SIEMENS
004	S	4098-9714	INTELLIGENT SMOKE DETECTOR	7272-0026:0218	SIMPLEX
		4098-9792	SENSOR BASE	7300-0026:0217	SIMPLEX
005	H	4098-9733	INTELLIGENT HEAT DETECTOR	7270-0026:0216	SIMPLEX
		4098-9792	SENSOR BASE	7300-0026:0217	SIMPLEX
006	HA	4098-9733	INTELLIGENT HEAT DETECTOR (ABOVE CEILING)	7270-0026:0216	SIMPLEX
		4098-9792	SENSOR BASE	7300-0026:0217	SIMPLEX
			EXTERIOR FLUSH PLATE (PART OF ABOVE)		
007	HFSR	4906-9129	HORN/STROBE (15/30/75/110) cd	7125-0026:0317	SIMPLEX
008	FSR	4906-9204	STROBE (15/30/75/110) cd (CEIL MNT)	7125-0026:0235	SIMPLEX
009		TYPE FPL	SIGNAL LINE CIRCUIT CONDUCTORS ('M')	7161-0859:0101	WEST PENN

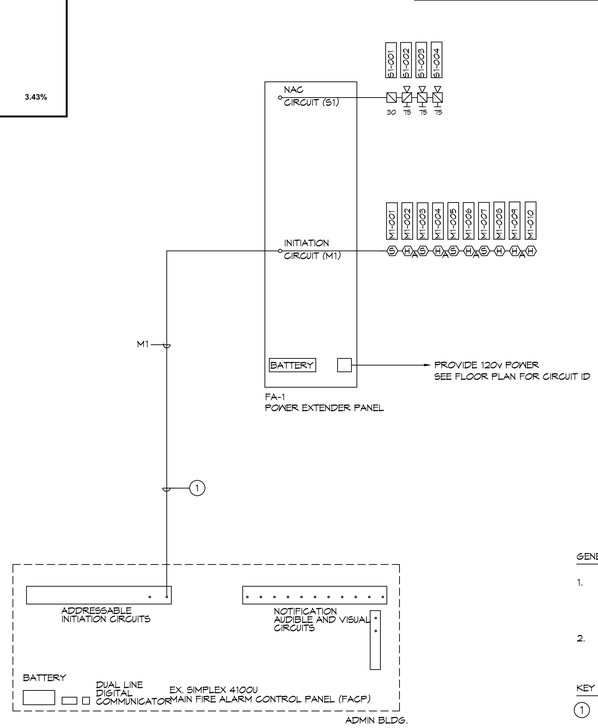
+ IF OTHER MANUFACTURER IS USED IT IS TO BE UL. AND CSFM LISTED.

WIRING SCHEDULE

DES	CONDUCTOR TYPE	WIRE COLOR	CIRCUIT TYPE
M	(1) 1 PR #14 TWISTED SHIELDED	RED/BLACK/SHIELD	SIGNAL LINE CIRCUIT
A	(2) #12 THHN (UON ON CALCS)	BLUE/WHITE	NOTIFICATION APP. CIRCUIT (NAC)
V	(2) #12 THHN (UON ON CALCS)	GREEN/BLUE	NOTIFICATION APP. CIRCUIT (NAC)
P	(2) #12 THHN	RED/BLACK	POWER

CLEAR SPACE REQUIREMENTS AT FIRE ALARM PULL STATIONS:





GENERAL NOTES - FIRE ALARM RISER DIAGRAM:

1. ALL WIRING INDICATED IS FOR GENERAL REFERENCE ONLY. CONTRACTOR SHALL PROVIDE ALL WIRING AND COMPONENTS NEEDED TO PROVIDE A COMPLETE OPERATIONAL SYSTEM.
2. REFERENCE FLOOR PLANS FOR EXACT QUANTITY, TYPE, AND LOCATION OF ALL DEVICES.

KEY NOTES:

(1) PROVIDE NEW SIGNAL LINE CIRCUIT FROM EXISTING MAIN FIRE ALARM PANEL TO POWER EXTENDER PANEL FA-1. PROVIDE ALL REQUIRED CARDS, SOFTWARE AND PROGRAMMING FOR A COMPLETE SYSTEM.

FIRE ALARM RISER DIAGRAM
NO SCALE

1
E5.2

FIRE ALARM MONITORING NOTE:

1. AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY CFC SECTION 907. 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.

FIRE ALARM GENERAL REQUIREMENTS:

1. THE COMPLETE INSTALLATION SHALL BE REVIEWED AND APPROVED BY THE ABOVE LOCAL MANUFACTURERS REPRESENTATIVE. SEE SPECIFICATIONS (28 30 00), FOR ADDITIONAL CONTRACTOR QUALIFICATIONS AND REQUIREMENTS.
2. UNLESS OTHERWISE NOTED SOLID LINES BETWEEN DEVICES SHALL BE 3/4" E.M.T. ROUTED CONCEALED ABOVE CEILINGS OR IN WALLS. DASHED LINES INDICATE 3/4" P.V.C. UNDERGROUND CONDUIT. ALL WIRING TYPES AND QUANITITES SHOWN ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL PROVIDE ALL WIRING AS REQUIRED TO MAKE A FULLY OPERATIONAL SYSTEM. SHOP DRAWINGS AND OR AS-BUILT DOCUMENTS SHALL INDICATE ALL WIRING PROVIDED.
3. THE AUDIBILITY OF FIRE ALARM WARNING DEVICES SHALL BE AUDIBLE THROUGH THE OCCUPANCY WITH A MINIMAL SOUND LEVEL 15 db's OVER THE AMBIENT NOISE LEVEL. ADD ADDITIONAL DEVICES AS REQUIRED.
4. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A REACCEPTANCE TEST OF THE ENTIRE SYSTEM SHALL BE PERFORMED IN THE PRESENCE OF THE ENFORCING AGENCY AND IN ACCORDANCE WITH SPECIFICATIONS (28 30 00). THE CONTRACTOR SHALL FURNISH db METERS AND ALL OTHER EQUIPMENT TO PERFORM THESE TESTS.
5. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL PREVENT THE PASSAGE OF HEAT, SMOKE AND FIRE GASES. ALL PENETRATIONS SHALL COMPLY WITH U.L. ASSEMBLY WL-1001. REFER TO THROUGH-PENETRATION FIRESTOP DETAIL ON THE DETAIL SHEET.
6. ALL OPERATING HARDWARE AT INITIATING DEVICES SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST, AND THE FORCE REQUIRED TO OPERATE SHALL BE LESS THAN 5 POUNDS.

APPLICABLE CODES

2016 BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24 C.C.R).

2016 CALIFORNIA BUILDING CODE (PART 2, TITLE 24 C.C.R).
(2012 INTERNATIONAL BUILDING CODE WITH 2013 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24 CCR)
(2011 NATIONAL ELECTRICAL CODE AND 2013 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24, CCR)
(2012 UNIFORM MECHANICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA PLUMBING CODE (PART 5, TITLE 24, CCR)
(2012 UNIFORM PLUMBING CODE AND 2013 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA ENERGY CODE (PART 6, TITLE 24, CCR)

2016 CALIFORNIA FIRE CODE (PART 9, TITLE 24, CCR)
(2015 INTERNATIONAL FIRE CODE AND 2015 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN),
PART 11, TITLE 24 C.C.R.

2016 CALIFORNIA REFERENCED STANDARDS (PART 12, TITLE 24, CCR)

TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS	2016 EDITION
NFPA 14	STANDPIPE SYSTEMS (CA AMENDED)	2013 EDITION
NFPA 17A	WET CHEMICAL SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS	2016 EDITION
NFPA 24	PRIVATE FIRE MAINS (CA AMENDED)	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE (CA AMENDED)	2016 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION

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

MAXIMUM NUMBER OF CONDUCTORS IN TRADE SIZES OF CONDUIT OR TUBING. MINIMUM CONDUIT SIZE FOR THIS PROJECT IS 3/4"												
CONDUIT TRADE SIZE (INCHES)		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5
TYPE LETTERS	CONDUCTOR SIZE AWG, kcmil											
THWN	14 12	13 10	24 18	39 29	69 51	94 70	154 114	164				
THHN	10 8	6 3	11 5	18 9	32 16	44 22	73 36	104 51	160 79	106	136	

TRADE SIZE	INTERNAL DIAMETER INCHES	AREA—SQUARE INCHES: 100% INCHES	PERCENT REDUCTION PER NUMBER OF 18AWG TWISTED SHIELD PAIRS: OVER 2 COND 40%	1	2	3	4	5	6	7	8
1/2	.622	.30	.12	38%	66%	99%	X	X	X	X	X
3/4	.824	.53	.21	19%	38%	57%	76%	95%	X	X	X
1	1.049	.86	.34	12%	24%	36%	48%	60%	72%	84%	96%
1 1/4	1.380	1.50	.60	7%	14%	21%	28%	35%	42%	49%	56%
1 1/2	1.610	2.04	.82	5%	10%	15%	20%	25%	30%	35%	40%
2	2.067	3.36	1.34	3%	6%	9%	12%	15%	18%	21%	24%

FIRE ALARM SEQUENCE OF OPERATION — DEVICE / ACTION	MANUAL PULL STATION	AREA/DUCT SMOKE/HEAT DETECTOR	AC POWER FAILURE	SPRINKLER ACTIVATION TAMPER SW.	SPRINKLER ACTIVATION FLOW SW.
SOUND ALARM THROUGHOUT BLDG.	YES	YES	NO	N/A	YES
ACTIVATE RELAY FOR MONITORING	YES	YES	YES	N/A	YES
ANNUNCIATE AT PANEL AND ANNUNCIATOR	YES	YES	YES	N/A	YES
SOUND TROUBLE BUZZER	ON WIRING FAULT	ON WIRING FAULT	YES	N/A	ON WIRING FAULT
SOUND SPRINKLER BELL	NO	NO	NO	N/A	YES
REPORT TO MONITORING STATION	YES	YES	YES	YES	YES
INITIATE SHUTDOWN OF HVAC UNITS	YES	YES	NO	N/A	YES

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#18013

REGISTERED PROFESSIONAL ENGINEER MICHAEL JESSE HATCH NO.E 14781 Exp. 6-30-2019 ELECTRICAL STATE OF CALIFORNIA

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Learning for Success

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1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

FIRE ALARM SCHEDULE

DSA APPROVED SET

Date: 10.04.2018 **Client Project No:** 5015021-100

Sheet:

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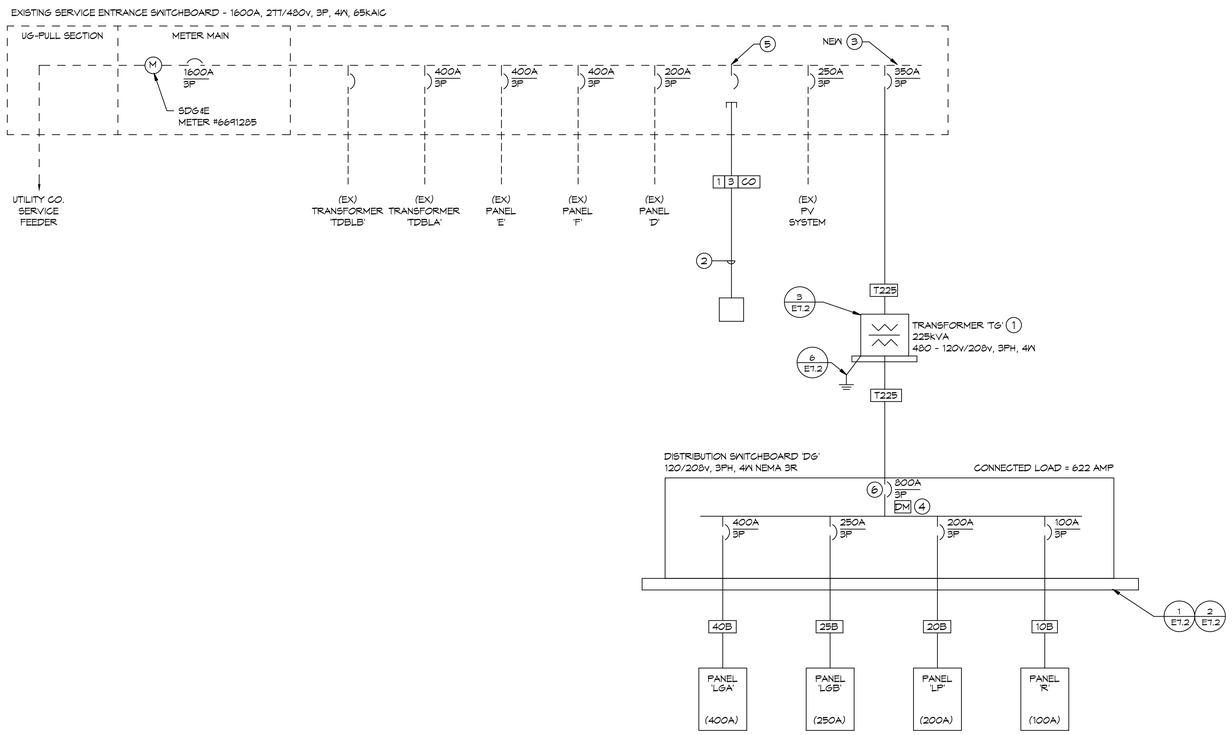

ELECTRICAL ONE-LINE DIAGRAM

NO SCALE

1 / E7.1

LOAD CALCULATION

		CONNECTED LOAD	
PEAK DEMAND (01/2017)	=	374	KW
X1.25	=	467.5	KW
DEMO'D LOAD	=	(9.0	KW)
ADDED MECHANICAL	=	(358.0	KW)
ADDED LIGHTING	=	(1.6	KW)
ADDED RECEPT., MISC.	=	(20.0	KW)
ADDED LOAD	=	(370.6	KW)
NEW TOTAL LOAD	=	838.1	KW
	=	1009A	@ 480V, 3PH
FUTURE EQUIP. YARD	=	95.8	KW
NEW TOTAL (INC. FUTURE)	=	933.9	KW
	=	1124A	@ 480V, 3PH

GENERAL NOTES:

1. A FAULT CURRENT AND TIME CURRENT STUDY MUST BE PROVIDED AS DESCRIBED IN THE SPECIFICATIONS PRIOR TO FINAL APPROVAL OF THE POWER EQUIPMENT.
2. REFERENCE DETAIL 4 / E7.2 FOR ALL EQUIPMENT FAULT CURRENT RATINGS.
3. UNLESS WHERE OTHERWISE NOTED, ALL WORK INDICATED ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK.
4. ALL ELECTRICAL GEAR AND EQUIPMENT SHOWN ON ONE-LINE DIAGRAM SHALL BE NEMA 3R UNLESS OTHERWISE NOTED.

KEY NOTES:

1. NEMA 3R RATED TRANSFORMER.
2. STUB SPARE 3"C. FROM EXISTING SES TO PULLBOX IN EQUIPMENT YARD FOR FUTURE.
3. NEW CIRCUIT BREAKER TO MATCH EXISTING MANUFACTURER AND RATING (65KAIC)
4. CUSTOMER DEMAND METER SCHNEIDER POWER LOGIC ION6200 OR EQUAL.
5. EXISTING 250/3P SPACE.
6. 100% RATED

600Volt Feeder Schedule

I.D.	Type	Ampacity	Copper Conduit	Copper Conductors	Aluminum Conduit	Aluminum Conductors
2A		20	(1) 3/4"	3 # 12, 1# 12 Gnd	NA	NA
2B		20	(1) 3/4"	4 # 12, 1# 12 Gnd	NA	NA
3A		30	(1) 3/4"	3 # 10, 1# 10 Gnd	NA	NA
3B		30	(1) 3/4"	4 # 10, 1# 10 Gnd	NA	NA
4A		40	(1) 1"	3 # 8, 1# 10 Gnd	NA	NA
4B		40	(1) 1"	4 # 8, 1# 10 Gnd	NA	NA
5A		50	(1) 1"	3 # 6, 1# 10 Gnd	NA	NA
5B		50	(1) 1"	4 # 6, 1# 10 Gnd	NA	NA
6A		60	(1) 1 1/4"	3 # 4, 1# 8 Gnd	NA	NA
6B		60	(1) 1 1/4"	4 # 4, 1# 8 Gnd	NA	NA
7A		70	(1) 1 1/4"	3 # 4, 1# 8 Gnd	NA	NA
7B		70	(1) 1 1/4"	4 # 4, 1# 8 Gnd	NA	NA
8A		80	(1) 1 1/4"	3 # 3, 1# 8 Gnd	NA	NA
8B		80	(1) 1 1/4"	4 # 3, 1# 8 Gnd	NA	NA
9A		90	(1) 1 1/2"	3 # 2, 1# 8 Gnd	NA	NA
9B		90	(1) 1 1/2"	4 # 2, 1# 8 Gnd	NA	NA
10A		100	(1) 1 1/2"	3 # 1, 1# 6 Gnd	NA	NA
10B		100	(1) 1 1/2"	4 # 1, 1# 6 Gnd	NA	NA
12A		125	(1) 2"	3 # 1, 1# 6 Gnd	NA	NA
12B		125	(1) 2"	4 # 1, 1# 6 Gnd	NA	NA
15A		150	(1) 2"	3 # 1/0, 1# 6 Gnd	NA	NA
15B		150	(1) 2"	4 # 1/0, 1# 6 Gnd	NA	NA
17A		175	(1) 2"	3 # 2/0, 1# 6 Gnd	(1) 2"	3 # 4/0, 1# 3 Gnd
17B		175	(1) 2"	4 # 2/0, 1# 6 Gnd	(1) 2"	4 # 4/0, 1# 3 Gnd
20A		200	(1) 3"	3 # 3/0, 1# 4 Gnd	(1) 3"	3 # 250, 1# 2 Gnd
20B		200	(1) 3"	4 # 3/0, 1# 4 Gnd	(1) 3"	4 # 250, 1# 2 Gnd
22A		225	(1) 3"	3 # 4/0, 1# 4 Gnd	(1) 3"	3 # 300, 1# 2 Gnd
22B		225	(1) 3"	4 # 4/0, 1# 4 Gnd	(1) 3"	4 # 300, 1# 2 Gnd
25A		250	(1) 3"	3 # 250, 1# 4 Gnd	(1) 3"	3 # 350, 1# 2 Gnd
25B		250	(1) 3"	4 # 250, 1# 4 Gnd	(1) 3"	4 # 350, 1# 2 Gnd
30A		300	(1) 3"	3 # 350, 1# 4 Gnd	(1) 3"	3 # 500, 1# 2 Gnd
30B		300	(1) 3"	4 # 350, 1# 4 Gnd	(1) 3"	4 # 500, 1# 2 Gnd
35A		350	(2) 2"	3 # 2/0, 1# 2 Gnd	(2) 2"	3 # 4/0, 1# 1 Gnd
35B		350	(2) 2"	4 # 2/0, 1# 2 Gnd	(2) 2"	4 # 4/0, 1# 1 Gnd
40A		400	(2) 3"	3 # 3/0, 1# 2 Gnd	(2) 3"	3 # 250, 1# 1/0 Gnd
40B		400	(2) 3"	4 # 3/0, 1# 2 Gnd	(2) 3"	4 # 250, 1# 1/0 Gnd
45A		450	(2) 3"	3 # 4/0, 1# 2 Gnd	(2) 3"	3 # 300, 1# 1/0 Gnd
45B		450	(2) 3"	4 # 4/0, 1# 2 Gnd	(2) 3"	4 # 300, 1# 1/0 Gnd
50A		500	(2) 3"	3 # 250, 1# 2 Gnd	(2) 3"	3 # 350, 1# 1/0 Gnd
50B		500	(2) 3"	4 # 250, 1# 2 Gnd	(2) 3"	4 # 350, 1# 1/0 Gnd
60A		600	(2) 3"	3 # 350, 1# 1 Gnd	(2) 3"	3 # 500, 1# 2/0 Gnd
60B		600	(2) 3"	4 # 350, 1# 1 Gnd	(2) 3"	4 # 500, 1# 2/0 Gnd
70A		700	(3) 3"	3 # 4/0, 1# 1/0 Gnd	(3) 3"	3 # 300, 1# 3/0 Gnd
70B		700	(3) 3"	4 # 4/0, 1# 1/0 Gnd	(3) 3"	4 # 300, 1# 3/0 Gnd
80A		800	(3) 3"	3 # 300, 1# 1/0 Gnd	(3) 3"	3 # 500, 1# 3/0 Gnd
80B		800	(3) 3"	4 # 300, 1# 1/0 Gnd	(3) 3"	4 # 500, 1# 3/0 Gnd
100B		1000	(4) 3"	4 # 250, 1# 2/0 Gnd	(4) 3"	4 # 400, 1# 4/0 Gnd
120B		1200	(4) 4"	4 # 350, 1# 3/0 Gnd	(4) 4"	4 # 500, 1# 250 Gnd
160B		1600	(5) 4"	4 # 400, 1# 4/0 Gnd	(5) 4"	4 # 600, 1# 350 Gnd
200B		2000	(6) 4"	4 # 500, 1# 250 Gnd	(6) 4"	4 # 600, 1# 400 Gnd
250B		2500	(7) 4"	4 # 500, 1# 350 Gnd	(7) 4"	4 # 750, 1# 600 Gnd
300B		3000	(8) 4"	4 # 500, 1# 350 Gnd	(8) 4"	4 # 750, 1# 600 Gnd
350B		3500	(12) 4"	4 # 350, 1# 400 Gnd	(12) 4"	4 # 500, 1# 600 Gnd
400B		4000	(12) 4"	4 # 400, 1# 400 Gnd	(12) 4"	4 # 600, 1# 750 Gnd

600V FEEDER SCHEDULE LEGEND

- MS — REFERENCE MECHANICAL EQUIPMENT SCHEDULE FOR SIZE → 1 / E3.2
- T75 — "T" INDICATES TYPICAL TRANSFORMER FEEDER REFERENCE. THE NUMBER INDICATES TRANSFORMER TYPE. REFER TO SCHEDULE ON SHEET FOR SIZE REQUIRED. → 3 / E7.2
- 2 CO — 2 | | INDICATES QUANTITY OF CONDUITS REQUIRED = (2)
- | 4 | INDICATES SIZE OF CONDUITS REQUIRED = 4"
- | | CO INDICATES "CONDUIT ONLY"

600V FEEDER SCHEDULE GENERAL NOTES:

1. ALL CONDUCTOR SHALL BE PROVIDED WITH TYPE THAN-2 INSULATION. REFERENCE SPECIFICATION SECTION 26 05 19 (16120) FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE 60 DEGREE COPPER/ALUMINUM RATED TERMINATION FOR ALL FEEDERS SIZED WITH #2 OR SMALLER CONDUCTORS. PROVIDE 75 DEGREE COPPER/ALUMINUM RATED TERMINATIONS FOR ALL FEEDERS SIZED WITH #1 OR LARGER CONDUCTORS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING LUG CONFIGURATION AN ALL EQUIPMENT, BREAKER OF DISCONNECTS TO MATCH FEEDER CONFIGURATIONS INDICATED.
4. WHERE MULTIPLE CONDUIT QUANTITIES ARE INDICATED, CONDUCTOR QUANTITIES AND SIZES SHOWN IN SCHEDULE SHALL BE PROVIDED IN EACH CONDUIT.

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APP. 04-117752 INC:
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DATE: 12/13/2018

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LICENSED ARCHITECT BRADLEY E GLASSOCK NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

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No.	Issued	Date
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#18013

PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

ONE-LINE DIAGRAM

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

E7.1

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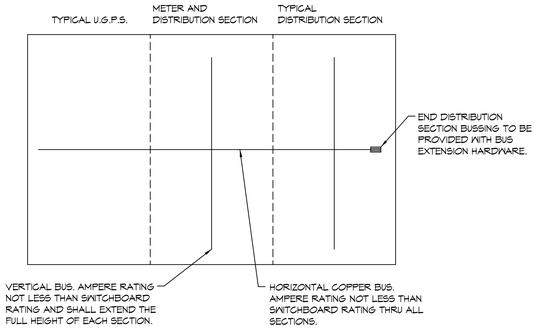
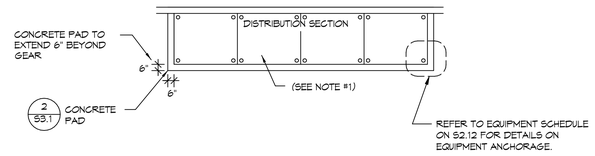
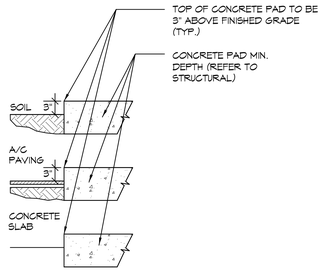


SWITCHBOARD BUS CONFIGURATION DETAIL

NO SCALE

1 / E7.2





NOTES:

1. SIZE OF EQUIPMENT TO BE VERIFIED WITH CONTRACTOR SHOP DRAWINGS.

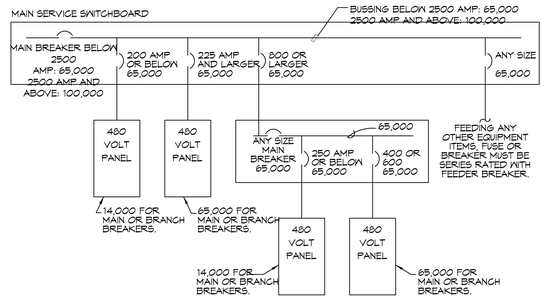
TYPICAL ELECTRICAL EQUIPMENT PAD DETAIL

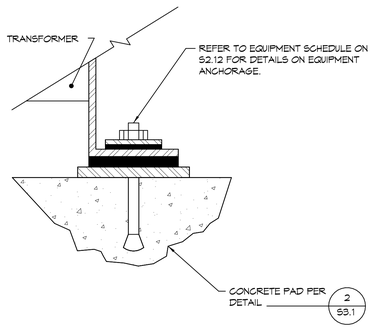
NO SCALE

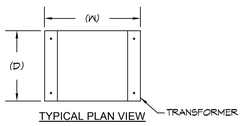
2 / E7.2

GENERAL NOTE:

1. ALL RATINGS SHOWN ARE FOR A UL LISTED SERIES COMBINATION OF THE BREAKERS INDICATED.







TRANSFORMER SIZING				
	WIDTH (W)	DEPTH (D)	HEIGHT	WEIGTH
15 KVA	24"	17"	27"	300 LBS.
30 KVA	24"	20"	33"	352 LBS.
45 KVA	32"	23"	35"	523 LBS.
75 KVA	32"	25"	33"	630 LBS.
112.5 KVA	35"	30"	46"	805 LBS.
150 KVA	38"	30"	56"	1045 LBS.
225 KVA	48"	34"	56"	1365 LBS.
300 KVA	48"	34"	63"	1575 LBS.
500 KVA	60"	50"	76"	4070 LBS.
1000 KVA	89"	72"	72"	13,800 LBS.
2500 KVA	98"	101"	72"	16,000 LBS.

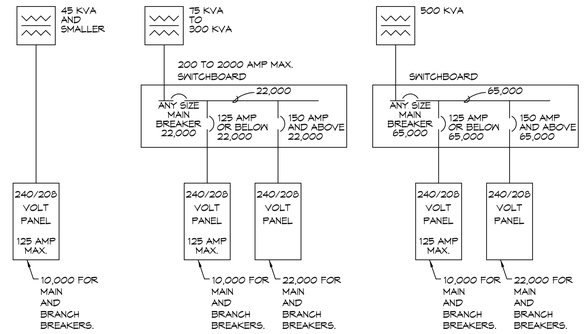
TRANSFORMER ANCHORAGE DETAIL

NO SCALE

3 / E7.2

SINGLE PHASE TRANSFORMER FEEDER SCHEDULE						
ID	RATING	CONDUCTOR	PRIMARY		SECONDARY	
T10	10KVA	COPPER	(1)	3/4"C. 2 #10, 1 #12 GND	(1)	1 1/4"C. 3 #4, 1 #10 GND
		ALUMINUM		NA		NA
T15	15KVA		(1)	3/4"C. 2 #8, 1#10 GND	(1)	1 1/2"C. 3 #3, 1 #6 GND
				NA		NA
T25	25KVA		(1)	1 1/4"C. 2 #4, 1 #8 GND	(1)	2"C. 3 #1, 1 #6 GND
				NA		NA

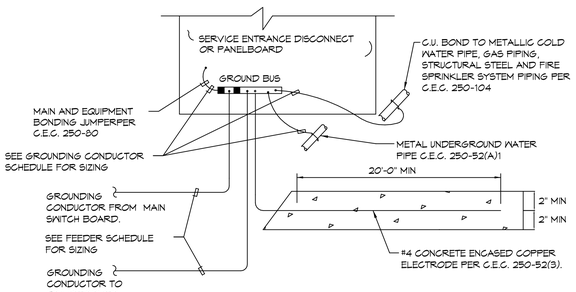
THREE PHASE TRANSFORMER FEEDER SCHEDULE						
ID	RATING	CONDUCTOR	PRIMARY		SECONDARY	
T30	30 KVA	COPPER	(1)	1"C. 3 #6, 1 #8 GND	(1)	1 1/2"C. 4 #1, 1 #6 GND
		ALUMINUM		NA		NA
T45	45 KVA	COPPER	(1)	1 1/4"C. 3 #4, 1 #6 GND	(1)	2"C. 4 #2/0, 1 #6 GND
		ALUMINUM		NA		NA
T75	75 KVA	COPPER	(1)	2"C. 3 #1, 1 #6 GND	(1)	3"C. 4 #250, 1 #4 GND
		ALUMINUM	(1)	2"C. 3 #2/0, 1 #3 GND		3"C. 4 #350, 1 #2 GND
T112	112 1/2 KVA	COPPER	(1)	2"C. 3 #2/0, 1 #4 GND	(2)	3"C. 4 #3/0, 1 #2 GND
		ALUMINUM	(1)	2"C. 3 #4/0, 1 #2 GND	(2)	3"C. 4 #250, 1 #1/0 GND
T150	150 KVA	COPPER	(1)	3"C. 3 #4/0, 1 #4 GND	(2)	3"C. 4 #350, 1 #1 GND
		ALUMINUM	(1)	3"C. 3 #300, 1 #2 GND	(2)	3"C. 4 #500, 1 #2/0 GND
T225	225 KVA	COPPER	(2)	2"C. 3 #2/0, 1 #2 GND	(3)	3"C. 4 #300, 1 #1/0 GND
		ALUMINUM	(2)	2"C. 3 #4/0, 1 #1/0 GND	(3)	3"C. 4 #500, 1 #3/0 GND
T300	300 KVA	COPPER	(2)	3"C. 3 #4/0, 1 #2 GND	(4)	3"C. 4 #350, 1 #3/0 GND
		ALUMINUM	(2)	3"C. 3 #300, 1 #1/0 GND	(4)	3"C. 4 #500, 1 #250 GND
T500	500 KVA	COPPER	(3)	4"C. 3 #300, 1 #1/0 GND	(8)	3"C. 4 #250, 1 #250 GND
		ALUMINUM	(3)	4"C. 3 #400, 1 #3/0 GND	(8)	3"C. 4 #400, 1 #400 GND



TYPICAL 480 VOLT SERVICE AIC EQUIPMENT RATINGS

NO SCALE

4 / E7.2

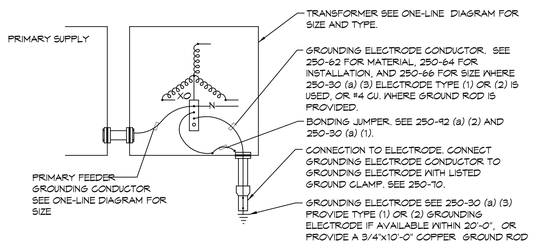


GROUND SIZING SCHEDULE	
EQUIPMENT AMPACITY	GROUNDING CONDUCTOR SIZE
0 - 200 AMPS	#4 CU.
201 - 400 AMPS	#1/0 CU.
401 - 800 AMPS	#2/0 CU.
801 - 1200 AMPS	#3/0 CU.
1201 - 2000 AMPS	#250 CU.
2001 - 4000 AMPS	#350 CU.

SERVICE ENTRANCE GROUNDING AND BONDING DETAIL

NO SCALE

5 / E7.2



THREE PHASE TRANSFORMER GROUNDING

NO SCALE

6 / E7.2

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LICENSED ARCHITECT BRADLEY E GLADSTEIN NO. C-32437 REN. 02-28-19 STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date
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	DSA BACKCHECK	12.11.2018

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Consultant:
REGISTERED PROFESSIONAL ENGINEER Ryan Hesse-Hatten NO.E 14781 Exp. 6-30-2019 ELECTRICAL STATE OF CALIFORNIA
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www.jce-inc.com
#18013

PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

ONE-LINE DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

E7.2

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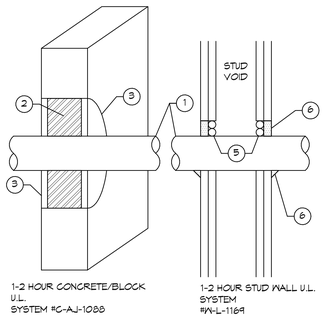


1-2 HOUR CONCRETE/BLOCK
U.L.
SYSTEM #C-AJ-1088

1-2 HOUR STUD WALL U.L.
SYSTEM
#W-L-1169

1-2 HOUR CONCRETE FLOOR
U.L.
SYSTEM #C-AJ-1088

KEY NOTES:

1. MAXIMUM 4" EMT CONDUIT.
2. COMPRESSED MINERAL WOOL MIN. 2" THICK (RECESSED TO ALLOW FOR SEALANT).
3. APPLY #F5900 MIN. 1" DEEP AND FLUSH WITH FINISHED SURFACE.
4. 'U' SHAPED STEEL WIRE FOR SUPPORT.
5. BACKER ROD COMPRESSED INTO ANNULUS (LEAVE ROOM FOR SEALANT)
6. APPLY #F51900 INTO ANNULAR SPACE MIN. 5/8" DEEP. ADD 3/8" BEAD AT POINT OF CONTACT.

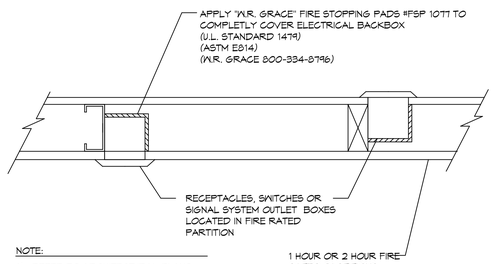
GENERAL NOTES:

1. ALL CONDUIT PENETRATION THRU FIRE RATED PARTITIONS SHALL COMPLY WITH THESE DETAILS. SEE ARCHITECTURAL PLANS FOR LOCATION OF ALL RATED PARTITIONS.
2. FOR FIRE STOPPING MATERIALS CONTACT W.R. GRACE (800) 334-8796.

CONDUIT PENETRATION THRU FIRE RATED PARTITIONS

NO SCALE

1 / E8.1



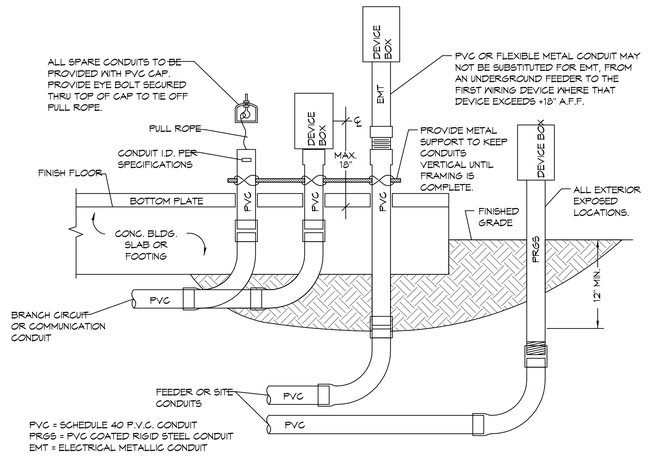
NOTE:

1) REFER TO ARCHITECTURAL PLANS FOR LOCATION OF ALL RATED PARTITIONS.

OUTLET BOX IN FIRE RATED PARTITION

NO SCALE

2 / E8.1



NOTE: 1. COMPLY WITH STRUCTURAL DETAILS FOR PENETRATIONS THRU SLABS (0/S1.2)
2. DO NOT PENETRATE/CUT THROUGH ANY (E) SLAB REINFORCEMENT

TYPICAL CONDUIT DETAIL

NO SCALE

3 / E8.1

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ELECTRICAL DETAILS

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

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LGA

120/208 3PH, 4WIRE | 200% Neutral Bus | (INTEGRAL)TVSS Protection | (REMOTE)TVSS Protection | Service Entrance Rated | Load Side Feed thru Lugs

*400 AMP

Main: Lug X | Enclosure: Recessed X, Surface

ENCLOSURE TYPE: X NEMA TYPE 1 | NEMA TYPE 3R | NEMA TYPE 4X

ENCLOSURE NOTE

GENERAL DISTRIBUTION — PROVIDE LOCK ON BREAKER DEVICES FOR ALL EMERGENCY LIGHTING,
BREAKER REQUIREMENTS : MOTORS, AND FIRE ALARM EQUIPMENT SERVED FROM THIS PANEL

LCL	NHL	CIRCUIT DESCRIPTION	AMP	POLE	NO	PHASE A	PHASE B	PHASE C	NO	AMP	POLE	CIRCUIT DESCRIPTION	LCL	NHL
	X	F-1	20	1	1	1788			2	20	2	HP-3		
						1581								
	X	F-2	20	1	3		1032		4	-	-	"		
							1581							
	X	DCU-1	50	2	5			3640	6	20	1	ICE-7		X
								1332						
	X	"	-	-	7	3640			8	30	3	HP-4		
						2880								
	X	FC-1	20	1	9		1152		10	-	-	"		
							2880							
	X	FC-2	20	1	11			1308	12	-	-	"		
								2880						
	X	FC-3	20	2	13	1009			14	30	2	CU-1		X
						1883								
	X	"	-	-	15		1009		16	-	-	"		X
							1883							
	X	FC-4	20	2	17			562	18	40	2	CU-2		X
								2060						
	X	"	-	-	19	562			20	-	-	"		X
						2060								
		WSHP-1	20	3	21		1680		22	40	2	CU-3		X
							2704							
		"	-	-	23			1680	24	-	-	"		X
								2704						
		"	-	-	25	1680			26	40	2	CU-4		X
						2704								
		WSHP-2	40	2	27		2434		28	-	-	"		X
							2704							
		"	-	-	29			2434	30	20	3	EF-1	X	X
								936						
		HP-1	50	3	31	4800			32	-	-	"	X	X
						936								
		"	-	-	33		4800		34	-	-	"	X	X
							936							
		"	-	-	35			4800	36	60	2	HP-2		
								4056						
		HP-1 PWR. EXHAUST	20	1	37	350			38	-	-	"		
						4056								
		HAMPDEN TRAINING UNIT	70	2	39		5825		40	20	1	SPARE		
		"	-	-	41			5825	42	20	1	SPARE		

SPECIAL PANEL
NOTE

*PROVIDE SHUNT TRIP MAIN BREAKER

NOTE #1
NOTE #2

NHL= Non Harmonic Load — TOTAL LOAD PER PHASE: 29929 | 30620 | 34217
LCL= Long Continuous Load — 25% LONG CONTINUOUS LOADS: 234 | 234 | 234

HIGH PHASE 34451 / 0.9pf = VA @ 120V = 319.0 AMPS
ALL PHASES 95468 / 0.9pf = VA @ 208V/3PH = 294.7 AMPS

Max. Neut. Load
SUB PANEL
SUB PANEL
DEMAND PER

307 AMPS — TOTAL CONNECTED LOAD: 30163 | 30854 | 34451 — NEC 220-34 6546 sq. ft. — AMPS

M:\Panel Schedule\2018\18013 Palomar HVAC Lab\LGA.xls 3:41 PM12/5/2018

LGB

120/208 3PH, 4WIRE | 200% Neutral Bus | (INTEGRAL)TVSS Protection | (REMOTE)TVSS Protection | Service Entrance Rated | Load Side Feed thru Lugs

*250 AMP

Main: Lug | Enclosure: Recessed X, Surface X

ENCLOSURE TYPE: X NEMA TYPE 1 | NEMA TYPE 3R | NEMA TYPE 4X

ENCLOSURE NOTE

GENERAL DISTRIBUTION — PROVIDE LOCK ON BREAKER DEVICES FOR ALL EMERGENCY LIGHTING,
BREAKER REQUIREMENTS : MOTORS, AND FIRE ALARM EQUIPMENT SERVED FROM THIS PANEL

LCL	NHL	CIRCUIT DESCRIPTION	AMP	POLE	NO	PHASE A	PHASE B	PHASE C	NO	AMP	POLE	CIRCUIT DESCRIPTION	LCL	NHL
		HP-1	50	3	1	4800			2	20	2	HP-3		
						1581								
		"	-	-	3		4800		4	-	-	"		
							1581							
		"	-	-	5			4800	6	20	1	HP-1 PWR EXHAUST		
								350						
		HP-2	60	2	7	4056			8	30	3	HP-4		
						2880								
		"	-	-	9		4056		10	-	-	"		
							2880							
		HAMPDEN TRAINING UNIT	70	2	11			5825	12	-	-	"		
								2880						
		"	-	-	13	5825			14	30	2	P-1		
						718								
		OUTDOOR RECEPT	20	1	15		400		16	-	-	"		
							718							
		FLOOR OUTLET	20	1	17			1200	18	40	2	P-2		
								718						
		CT-1	20	3	19	576			20	-	-	"		
						718								
		"	-	-	21		576		22	20	1	WH-1	X	X
							1000							
		"	-	-	23			576	24	20	1	B-1	X	X
								1000						
		HAMPDEN TRAINING UNIT	70	2	25				26	20	1	RECEPTACLES		
						600								
		"	-	-	27		1200		28	20	1	OUTDOOR PEDESTAL		
		WIREMOLD	20	1	29			600	30	20	1	OUTDOOR PEDESTAL		
								1200						
		WIREMOLD	20	1	31	600			32	20	1	RECEPTACLES		
						400								
		SPARE	20	1	33				34	20	1	SPARE		
		SPARE	20	1	35				36	20	1	SPARE		
		SPACE	20	1	37				38	20	1	SPACE		
		SPACE	20	1	39				40	20	1	SPACE		
		SPACE	20	1	41				42	20	1	SPACE		

SPECIAL PANEL
NOTE

*PROVIDE SHUNT TRIP MAIN BREAKER

NOTE #1
NOTE #2

NHL= Non Harmonic Load — TOTAL LOAD PER PHASE: 22754 | 17211 | 19149
LCL= Long Continuous Load — 25% LONG CONTINUOUS LOADS: 0 | 250 | 250

HIGH PHASE 22754 / 0.9pf = VA @ 120V = 210.7 AMPS
ALL PHASES 59614 / 0.9pf = VA @ 208V/3PH = 184.0 AMPS

Max. Neut. Load
SUB PANEL
SUB PANEL
DEMAND PER

322 AMPS — TOTAL CONNECTED LOAD: 22754 | 17461 | 19399 — NEC 220-34 6546 sq. ft. — AMPS

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R

120/208 3PH, 4WIRE | 200% Neutral Bus | (INTEGRAL)TVSS Protection | (REMOTE)TVSS Protection | Service Entrance Rated | Load Side Feed thru Lugs

*100 AMP

Main: Lug X | Enclosure: Recessed X, Surface

ENCLOSURE TYPE: X NEMA TYPE 1 | NEMA TYPE 3R | NEMA TYPE 4X

ENCLOSURE NOTE

GENERAL DISTRIBUTION — PROVIDE LOCK ON BREAKER DEVICES FOR ALL EMERGENCY LIGHTING,
BREAKER REQUIREMENTS : MOTORS, AND FIRE ALARM EQUIPMENT SERVED FROM THIS PANEL

LCL	NHL	CIRCUIT DESCRIPTION	AMP	POLE	NO	PHASE A	PHASE B	PHASE C	NO	AMP	POLE	CIRCUIT DESCRIPTION	LCL	NHL
	X	WALK-IN LTG	20	1	1	500			2	30	2	CU-LT (LO TEMP COND.)		
						1790								
		WALK-IN FANS	20	1	3		500		4	-	-	"		
							1790							
		WALK-IN HEATED WINDOW	20	1	5			500	6	30	1	CU-MT (MED. TEMP COND)		
								2052						
		STEAM HUMID. REC.	20	1	7	320			8	20	1	SPARE		
						1040								
		ELECTRIC HEATER REC.	20	1	9		1500		10	15	2	LOW TEMP EVAP COIL		
							700							
		30A 208V, 1PH Spare	30	2	11			700	12	-	-	"		
		"	-	-	13				14	20	1	MED. TEMP EVAP COIL		
						156								
		ELECTRIC HEATER REC.	20	1	15		1500		16	30	3	30A, 208V, 3PH Spare		
	X	STEAM HUMID. REC.	20	1	17			320	18	-	-	"		
	X	ELECTRIC HEATER REC.	20	1	19	1500			20	-	-	"		
		SPARE	20	1	21				22	20	1	SPARE		
		SPARE	20	1	23				24	20	1	SPARE		
		SPARE	20	1	25				26	20	1	SPARE		
		SPARE	20	1	27				28	20	1	SPARE		
		SPARE	20	1	29				30	20	1	SPARE		
		SPARE	20	1	31				32	20	1	SPARE		
		SPARE	20	1	33				34	20	1	SPARE		
		SPARE	20	1	35				36	20	1	SPARE		
		SPACE	20	1	37				38	20	1	SPACE		
		SPACE	20	1	39				40	20	1	SPACE		
		SPACE	20	1	41				42	20	1	SPACE		

SPECIAL PANEL
NOTE

*PROVIDE SHUNT TRIP MAIN BREAKER

NOTE #1
NOTE #2

NHL= Non Harmonic Load — TOTAL LOAD PER PHASE: 5306 | 5990 | 3572
LCL= Long Continuous Load — 25% LONG CONTINUOUS LOADS: 500 | 0 | 80

HIGH PHASE 5990 / 0.9pf = VA @ 120V = 55.5 AMPS
ALL PHASES 15448 / 0.9pf = VA @ 208V/3PH = 47.7 AMPS

Max. Neut. Load
SUB PANEL
SUB PANEL
DEMAND PER

85 AMPS — TOTAL CONNECTED LOAD: 5806 | 5990 | 3652 — NEC 220-34 6546 sq. ft. — AMPS

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LP

120/208 3PH, 4WIRE | 200% Neutral Bus | (INTEGRAL)TVSS Protection X | (REMOTE)TVSS Protection | Service Entrance Rated | Load Side Feed thru Lugs

200 AMP

Main: Lug | Enclosure: Recessed | Surface X

ENCLOSURE TYPE: X NEMA TYPE 1 | NEMA TYPE 3R | NEMA TYPE 4X

ENCLOSURE NOTE

GENERAL DISTRIBUTION — PROVIDE LOCK ON BREAKER DEVICES FOR ALL EMERGENCY LIGHTING,
BREAKER REQUIREMENTS : MOTORS, AND FIRE ALARM EQUIPMENT SERVED FROM THIS PANEL

LCL	NHL	CIRCUIT DESCRIPTION	AMP	POLE	NO	PHASE A	PHASE B	PHASE C	NO	AMP	POLE	CIRCUIT DESCRIPTION	LCL	NHL
		COMPUTER REC. RM 504	20	1	1	1600			2	20	1	COMPUTER REC. RM 504		
						1600								
		COMPUTER REC. RM 504	20	1	3		1600		4	20	1	COMPUTER REC. RM 504		
							1600							
		COMPUTER REC. RM 504	20	1	5			1600	6	20	1	COMPUTER REC. RM 504		
								1600						
		COMPUTER REC. RM 504	20	1	7	1600			8	20	1	COMPUTER REC. RM 504		
						1600								
		REC. RM 505C	20	1	9		200		10	20	1	REC. RM 504		
							200							
		REC. RM 505C	20	1	11			400	12	20	1	PROJECTOR - RM 504		
								600						
		REC. RM 505C	20	1	13	600			14	20	1	REC. RM 504		
						1000								
		REC. RM 505B-PRINTER	20	1	15		1000		16	20	1	REC. RM 504		
							1000							
		CLG. REC. LAB	20	1	17			400	18	20	1	WIREMOLD		
								1200						
		PROJECTOR- LAB	20	1	19	600			20	20	1	WIREMOLD		
						1200								
		FA Extender Panel	20	1	21		500		22	20	1	WIREMOLD		
							1200							
		SPARE	20	1	23				24	20	1	SPARE		
		SPARE	20	1	25				26	20	1	SPARE		
		SPARE	20	1	27				28	20	1	SPARE		
		SPARE	20	1	29				30	20	1	SPARE		
		SPARE	20	1	31				32	20	1	SPARE		
		SPARE	20	1	33				34	20	1	SPARE		
		SPARE	20	1	35				36	20	1	SPARE		
		FUTURE CLASSRM COMP	20	1	37				38	20	1	FUTURE CLASSRM COMP		
		FUTURE CLASSRM COMP	20	1	39				40	20	1	FUTURE CLASSRM COMP		
		FUTURE CLASSRM COMP	20	1	41				42	20	1	FUTURE CLASSRM COMP		

SPECIAL PANEL
NOTE

NOTE #1
NOTE #2

NHL= Non Harmonic Load — TOTAL LOAD PER PHASE: 9800 | 7300 | 5800
LCL= Long Continuous Load — 25% LONG CONTINUOUS LOADS: 0 | 0 | 0

HIGH PHASE 9800 / 0.9pf = VA @ 120V = 90.7 AMPS
ALL PHASES 22900 / 0.9pf = VA @ 208V/3PH = 70.7 AMPS

Max. Neut. Load
SUB PANEL
SUB PANEL
DEMAND PER X

139 AMPS — TOTAL CONNECTED LOAD: 9800 | 7300 | 5800 — NEC 220-34 6546 sq. ft. — 68 AMPS

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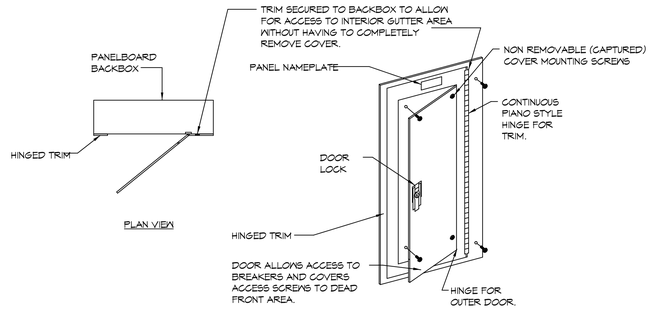

DETAIL GENERAL NOTES

1. PROVIDE FOR ALL PANELBOARDS FOR THIS PROJECT - SURFACE, RECESSED NEMA 1, OR NEMA 3R CONFIGURATION.
2. SEE REFERENCE ONE LINE DIAGRAM FOR ALL PANELBOARD AIC RATINGS.

TYPICAL PANELBOARD DOOR / TRIM DETAIL

NO SCALE

1
E9.1

LGA	LGB	R
		LP

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ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Consultant:

REGISTERED PROFESSIONAL ENGINEER — MICHAEL ROSS HANSEN — NO.E 14781 — Exp. 6-30-2019 — ELECTRICAL — STATE OF CALIFORNIA

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#18013

PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

PANEL SCHEDULES

DSA APPROVED SET

Date: 10.04.2018 | **Client Project No:** 5015021-100

Sheet:

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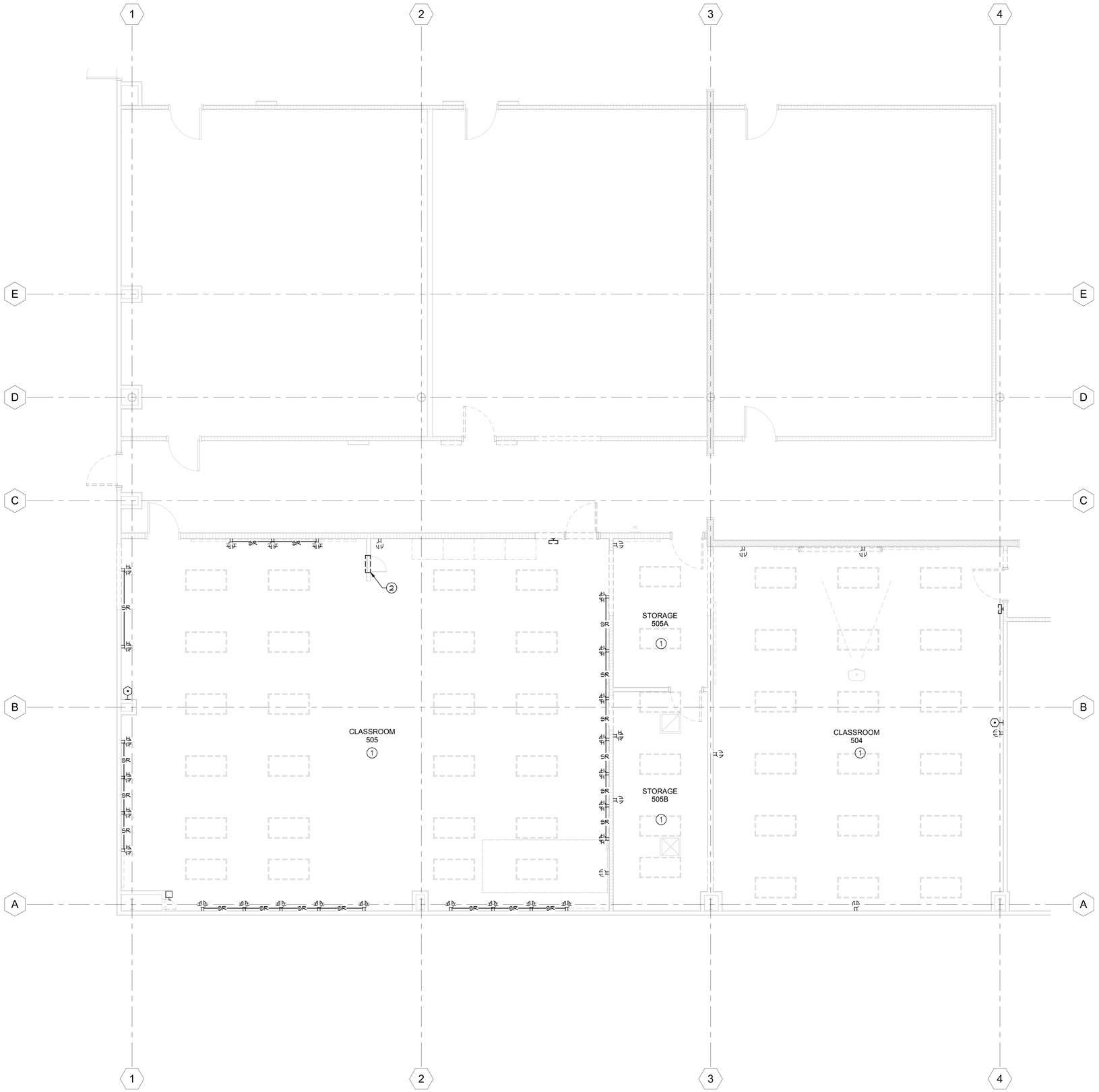

GENERAL DEMOLITION REQUIREMENTS:

1. LIGHTING FIXTURES
WHERE EXISTING LIGHTING FIXTURES ARE TO BE REMOVED, AND ARE NOT RELOCATED, CONTRACTOR SHALL DISPOSE OF ALL FIXTURES INCLUDING LAMPS AND BALLAST.

2. WIRING DEVICES
WHERE EXISTING SWITCHES OR RECEPTACLES ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSE OF ALL DEVICES AS REQUIRED.

3. COMMUNICATION DEVICES
WHERE EXISTING TELEPHONE/INTERCOM AND CLOCK HEAD END EQUIPMENT, PHONES, SPEAKERS AND OTHER ASSOCIATED EQUIPMENT ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSED OF ALL DEVICES AND EQUIPMENT AS REQUIRED.

4. FIRE ALARM
WHERE EXISTING FIRE ALARM PANELS AND ASSOCIATED SMOKE, HEAT, DUCT DETECTORS, PULL STATIONS AND STROBE OR HORN UNITS ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSED OF ALL DEVICES AND EQUIPMENT AS REQUIRED.

5. INTRUSION ALARM
EXISTING INTRUSION ALARM SENSORS AND EQUIPMENT SHALL BE REMOVED WHERE INDICATED. RETURN ALL DEVICES TO THE SCHOOL DISTRICT MAINTENANCE FACILITIES.

6. POWER EQUIPMENT
WHERE EXISTING SWITCHBOARDS, PANELBOARDS, LOAD CENTERS, TRANSFORMERS, DISCONNECT SWITCHES OR OTHER DISTRIBUTION EQUIPMENT ARE TO BE REMOVED, THE CONTRACTOR SHALL DISPOSED OF ALL DEVICES AND EQUIPMENT AS REQUIRED.

7. ALL BOXES, EXPOSED CONDUIT, WIRE, AND OTHER ITEMS ASSOCIATED WITH ELECTRICAL EQUIPMENT TO BE REMOVED, SHALL BE DISCONNECTED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AS REQUIRED, UNLESS SPECIFICALLY NOTED OTHERWISE. CUT AND CAP CONCEALED CONDUITS. PATCH, SEAL AND REPAIR SURFACE TO MATCH ADJACENT AREA WHERE BOXES ARE REMOVED.

DEMOLITION GENERAL NOTES:

1. ALL ITEMS SHOWN ON THIS DRAWING ARE EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED. SEE REQUIREMENTS BELOW FOR SCOPE OF WORK. ALL OTHER ELECTRICAL ITEMS IN THIS BUILDING ARE EXISTING TO REMAIN. MAINTAIN POWER CIRCUIT CONTINUITY UNTIL NEW SOURCE IS ENERGIZED AND READY FOR TRANSFER, REFER TO POWER AND LIGHTING PLANS.
2. ALL ELECTRICAL DEMOLITION WORK SHALL BE DIRECTED BY THE ELECTRICAL CONTRACTOR.

KEY NOTES:

(1) ALL LIGHT FIXTURES IN THIS ROOM TO BE DEMO'D AND REMOVED.

(2) EXISTING PANEL TO REMAIN. REMOVE ALL DEMO'D CIRCUITS BACK TO PANEL AND LABEL CIRCUIT BREAKERS AS SPARES.

N

LEVEL 01 DEMOLITION PLAN — 1 — 1/4" = 1'-0"

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NO. C-32437
REN. 02-28-19
STATE OF CALIFORNIA

ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

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Learning for Success

Facility:

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1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO - HVAC LAB

Sheet Title:

DEMOLITION PLAN

DSA APPROVED SET

Date: 10.04.2018 | Client Project No: 5015021-100

Sheet:

E10.1

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LEGEND

SYMBOL	DESCRIPTION
	NOTE CALLOUT
	DETAIL CALLOUT - NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN
	PIPE CALLOUT
	NODE USED IN CALCULATION
	SECTION CALLOUT
[+11'-0"]	FIRE SPRINKLER PIPE ABOVE FINISHED FLOOR. SEE PLAN FOR ELEVATION.
11'-0"	CEILING HEIGHT
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	CHANGING PIPE SIZE
F	NEW PIPE
E	EXISTING PIPE
	DEMOLISHED PIPE/EQUIPMENT
	THRUST BLOCK
	RISER
	DRAIN VALVE
	POST-INDICATOR VALVE
	OS&Y VALVE (OUTSIDE SCREW AND YOKE, RISING STEM)
	INDICATING BUTTERFLY VALVE
	CHECK VALVE
	CHECK VALVE WITH BALL DROP
	BUTTERFLY VALVE
	BACKFLOW PREVENTER - REDUCED PRESSURE ZONE (RPZ) TYPE
	PUBLIC FIRE HYDRANT, TWO HOSE OUTLETS
	PUBLIC FIRE HYDRANT, TWO HOSE OUTLETS AND PUMPER CONNECTION
	SIAMESE FIRE DEPARTMENT CONNECTION
	FREESTANDING SIAMESE FIRE DEPARTMENT CONNECTION
	FIRE PUMP WITH DRIVES
	UPRIGHT SPRINKLER
	PENDENT SPRINKLER
	CONCEALED SPRINKLER
	PENDENT SPRINKLER; ON DROP NIPPLE
	SPRINKLER, WITH GUARD
	LATERAL BRACE
	LONGITUDINAL BRACE
	FOUR-WAY BRACE
	WIRE, SURGE RESTRAINER
	WALL PENETRATION
	PIPE HANGER
	MECHANICAL PIPE COUPLING
	GROOVED ELBOW
	CHANGE IN PIPE ELEVATION
	ELBOW FACING AWAY FROM VIEWER
	ELBOW FACING TOWARD VIEWER
	TEE FACING AWAY FROM VIEWER
	TEE FACING TOWARD VIEWER
	THREADED CAP
	FIRE STOP SYMBOL
	ONE HOUR FIRE RATED WALL

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
(N)	NEW
AFF	ABOVE FINISHING FLOOR
BFV	BUTTERFLY VALVE
DCDA	DOUBLE CHECK DETECTOR ASSEMBELY
DI	DUCTILE IRON PIPE
EXIST / (E)	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
PIV	POST INDICATOR VALVE
POC	POINT OF CONNECTION
PVC	POLYVINYL CHLORIDE
UG	DOUBLE CHECK DETECTOR ASSEMBELYACID WASTE

BUILDING DESIGN INFORMATION

BUILDING DESIGN INFORMATION:	
-GOVERNING CODE=	CBC, CFC, CPC
-BUILDING OCCUPANCY=	B2
-CONSTRUCTION TYPE=	II N
-BUILDING HEIGHT=	28 FT.
-BUILDING AREA=	45,214 SQ.FT.
-STANDARDS=	NFPA 13, 24, 72
-SCOPE OF WORK AREA=	3,883 SQ.FT.
SPRINKLER DESIGN CRITERIA -	LAB, STORAGE, CLASSROOM
-CLASSIFICATION OF OCCUPANCY=	ORDINARY HAZARD GROUP I (O.H. I)
-DESIGN DENSITY=	0.15 GPM/SQ.FT.
-DESIGN AREA=	1,500 SQ.FT.
-MAX. SPRINKLER COVERAGE=	130 SQ. FT.

SCOPE OF WORK

1. PROVIDE FIRE SPRINKLER COVERAGE TO T.I.:

   • HVAC LAB (ROOM 505) - DEMO 12 SPRINKLER HEADS AND ADD 20 NEW SPRINKLER HEADS.

   • STORAGE (ROOM 505B) - DEMO 1 SPRINKLER HEAD AND ADD 1 NEW SPRINKLER HEAD.

   • HVAC LECTURE (ROOM 504) - DEMO 6 SPRINKLER HEADS AND ADD 9 NEW SPRINKLER HEADS.

SHEET INDEX

SHEET	DESCRIPTION
FP001	GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
FP101	SITE PLAN
FP200	LEVEL 1 OVERALL FLOOR PLAN
FP201	LEVEL 1 DEMO PLAN
FP202	LEVEL 1 FLOOR PLAN
FP203	LEVEL 1 RENO RCP PLAN
FP401	SECTIONS
FP601	DETAILS
FP602	DETAILS

OVERHEAD FIRE SPRINKLER SYSTEM NOTES

1. 2016 NFPA 13 SEC. 10.10.2.1.1 UNDERGROUND MAINS AND LEAD-IN CONNECTIONS TO SYSTEM RISERS SHALL BE COMPLETELY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD SPRINKLER PIPING. WHERE UNDERGROUND PIPING IS FLUSHED AND NOT IMMEDIATELY CONNECTED TO THE OVERHEAD PIPING, THE RISER SHALL BE CAPPED OR OTHERWISE PROTECTED TO PREVENT DEBRIS, DIRT, OR ANIMALS FROM ENTERING INTO THE UNDERGROUND PIPING (WITNESSED BY THE PROJECT INSPECTOR).
2. -
3. ARCHITECT OF RECORD & FIRE PROTECTION SHALL AFFIX THEIR SEAL AND STAMP & SIGN ALL SUBMITTAL DRAWINGS, OR PROVIDE DOCUMENTATION PER DSA IR A-18.
4. 2016 NFPA 13 SEC. 6.2.9: PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH, AND NO FEWER THAN 6 SPARE HEADS MATCHING THE TYPES AND TEMPERATURE RATINGS AT EACH SYSTEM RISER.
5. 2016 NFPA 13 SEC. 9.3.6.3: THE END SPRINKLER ON EACH LINE SHALL BE RESTRAINED AGAINST EXCESSIVE VERTICAL AND LATERAL MOVEMENT.
6. 2016 CBC 903.4.2: THE INSPECTOR'S TEST VALVE LOCATION SHALL BE INSTALLED AT THE END OF THE MOST HYDROSTATICALLY REMOTE SYSTEM WITH A PIPE SIZE OF NO LESS THAN 1 INCH, WITH A SMOOTH BORE, CORROSION-RESISTANT ORIFICE INSTALLED WITHIN THE SYSTEM. THE DISCHARGE SHALL BE TO THE EXTERIOR OF THE BUILDING.
7. 2016 NFPA 72 SEC 17.12.2: THE SPRINKLER FLOW SWITCH SHALL BE TESTED TO CONFIRM THAT WHEN THE INSPECTORS TEST VALVE IS ACTIVATED AN ALARM WILL SOUND NO MORE THAN 90 SECONDS AFTER INITIAL FLOW. (WITNESSED BY THE PROJECT INSPECTOR).
8. 2016 CBC 904.4.3: CONNECTIONS TO PROTECTED PREMISES AND SUPERVISING STATION FIRE ALARM SYSTEMS SHALL BE TESTED TO VERIFY PROPER IDENTIFICATION AND TRANSMISSION OF ALARMS FROM AUTOMATIC FIRE EXTINGUISHING SYSTEMS.
9. 2016 NFPA 13 SEC. 7.7.1.5: SIGNAGE SHALL BE PROVIDED AS REQUIRED.
10. 2016 CBC SEC. 903.4.1: ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS AND WATER FLOW SWITCHES ON ALL SPRINKLER SYSTEMS SHALL BE SUPERVISED.
11. 2016 NFPA 13 SEC. 24.5: A PERMANENT HYDRAULIC CALCULATIONS DESIGN DATA PLACARD SHALL BE ATTACHED TO EACH RISER.
12. 2016 NFPA 13 SEC. 6.9 AND 2016 CBC 903.4.2: FLOW SWITCH SHALL BE CONNECTED TO A 10 INCH OUTSIDE ALARM BELL AT EACH RISER. APPROVED IDENTIFICATION SIGNS SHALL BE PROVIDED TO OUTSIDE ALARM BELL "SPRINKLER FIRE ALARM - WHEN BELL RINGS CALL 911 / FIRE DEPARTMENT."
13. TITLE 19 ARTICLE 6 SECTION 906(A): A LABEL OF THE SELF-ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION OR ON THE RISER FOR FIRE SPRINKLER SYSTEM WITH THE DATE OF SERVICE AND/OR DATE OF INSTALLATION WAS PERFORMED AND LICENCE NUMBER OF PERSON PERFORMING SERVICE WORK.
14. 2016 NFPA 13 FIGURE 24.1: SPRINKLER CONTRACTOR SHALL COMPLETE AND SIGN CONTRACTORS MATERIAL & TEST CERTIFICATE FOR THE ABOVEGROUND PIPING. THIS FORM SHALL BE GIVEN TO THE PROJECT INSPECTOR WHO WILL FORWARD TO DSA FOR FILING IN PROJECT RECORDS.
15. ALL SPRINKLER FITTERS WORKING ON THIS PROJECT MUST BE AES CERTIFIED THROUGH CSFM & MUST CARRY CERTIFICATION CARD WITH THEM ON JOB SITE.

GENERAL NOTES

1. THE SUCCESSFUL C-16 LICENSED CONTRACTOR SHALL COORDINATE WITH ALL ENGINEER DISCIPLINE & ARCHITECT FOR THE INSTALLATION FIRE SPRINKLER SYSTEM FOR ALL CONCEALED AND UNCONCEALED AREAS OF THE BUILDINGS AS REQUIRED.
2. CONTRACTOR SHALL INSTALL, ROUTE AND SUPPORT AUTOMATIC SPRINKLER SYSTEM PER REQUIREMENTS OF THE CURRENT NATIONAL FIRE PROTECTION ASSOCIATION CODE (NFPA), 2016 NFPA 13, NFPA 14, NFPA 24, CALIFORNIA BUILDING CODE / CALIFORNIA FIRE CODE (CBC/CFC) CHAPTER 9, CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PLUMBING CODE (CPC) AND INSURANCES UNDER WRITER'S REQUIREMENTS.
3. THE DESIGN COORDINATION AND APPROVALS OF ALL MAINS AND BRANCHES LINES TO SERVE SPRINKLERS SHALL BE DONE BY A LICENSED FIRE PROTECTION CONTRACTOR.
4. SUBMIT SHOP DRAWINGS FOR APPROVAL. SHOP DRAWINGS SHALL BE APPROVED BY THE ARCHITECT AND E.O.R. PRIOR TO COMMENCING.
5. EXISTING WORK DAMAGED OR CUT INTO DURING CONSTRUCTION SHALL BE PATCHED OR REPAIRED, PAINTED AND FINISHED TO MATCH EXISTING ADJACENT SURFACES IN TEXTURE, FINISH AND COLOR.
6. LOCATION OF SPRINKLER HEADS SHALL BE DONE BY THE FIRE PROTECTION CONTRACTOR USING THE CRITERIA AS NOTED BELOW:
   A. IN LOCATIONS WITH SUSPENDED CEILING, THE SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF THE INDIVIDUAL CEILING TILES. THE SPRINKLER HEADS PATTERN SHALL BE SYMMETRICAL ABOUT ROOM CENTER LINES AS MUCH AS POSSIBLE. IN PANELS HAVING A FACTORY-MADE REVEAL, SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF AN INDIVIDUAL SEGMENT.
   B. IN LOCATIONS WITH PLASTERED OR GYPSUM BOARD CEILINGS, THE SPRINKLER HEAD PATTERN SHALL BE SYMMETRICAL ABOUT ROOM CENTER LINES AS MUCH AS POSSIBLE.
   C. FOR LOCATIONS OF CEILING TILES, DIFFUSERS AND LIGHTS, SEE ARCHITECTURAL REFLECTED CEILING PLANS.
7. ALL NEW EQUIPMENT AND MATERIAL TO BE INSTALLED AS PART OF RENOVATION / NEW CONSTRUCTION SHALL BEAR AN UNDERWRITERS LABORATORIES LABEL (UL), AND INSTALLED IN SUCH A MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.
8. NO HOLES SHALL BE DRILLED OR CUT IN OR THROUGH ANY STRUCTURAL ELEMENT WITHOUT WRITTEN APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER AND DSA.
9. SLEEVE AND GROUT ALL PIPE PENETRATIONS THROUGH FLOORS OR WALLS UNLESS PENETRATION IS FIRE RATED. WHEN PENETRATING A FIRE RATED FLOOR OR WALL, USE SLEEVE WITH 1" MIN. ANNULAR SPACE AROUND PIPE O.D. FILL ANNULAR SPACE WITH FIBERGLASS FILL TO 1" FROM END OF SLEEVE. ADD APPROVED FIRE PROOF SEALANT FOR THE HOUR RATING OF THE FLOOR OR WALL PENETRATION IN THE REMAINING SPACE.
10. -
11. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED TEMPORARY AND PERMANENT PERMITS, INCLUDING LICENSES, CERTIFICATES, INSPECTIONS AND TESTS.
12. SEE DIVISION 21 SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
13. ALL PIPE PENETRATION THRU WALLS, RATED OR OTHERWISE SHALL BE COVERED WITH A SPLIT ESCUTCHEON PLATE.
14. FIELD OBSERVATION AND SUPPORT SERVICES PERFORMED BY THE ENGINEER PRIOR TO, DURING, OR AFTER CONSTRUCTION IS PERFORMED FOR THE PURPOSE OF ACHIEVING QUALITY CONTROL AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
15. PHASING: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH GENERAL CONTRACTOR CONSTRUCTION SCHEDULE AND BASED UPON MINIMIZING DISRUPTIONS TO EXISTING OPERATION. PHASING SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION OR DEMOLITION.
16. ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR PROMPT DAILY REMOVAL FROM THE SITE. THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE RESULTING FROM THE WORK AT THE CONCLUSION OF THE DAYS CONSTRUCTION. THE AREA OF THE SITE SHALL BE LEFT BROOM CLEAN. IF NOT, UPON NOTIFICATION, THE GENERAL CONTRACTOR WILL PERFORM ALL NECESSARY CLEAN-UP WORK AND BACK CHARGE THE SUB CONTRACTOR FOR THE EXPENSE THUS INCURRED.
17. ALL DEVICES AND COMPONENTS TO BE EITHER LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR FIRE PROTECTION SERVICE OR APPROVED BY THE AUTHORITY HAVING JURISDICTION. IT SHALL BE PER OPM-0052-13 (B-LINE/TOLCO
18. FITTINGS FOR HOLE-CUT CONNECTIONS, SUCH AS VICTAULIC "HOOKER" OR EQUIVALENT, ARE NOT ACCEPTABLE AND SHALL NOT BE USED.
19. PROVIDE EACH FLOOR/ZONE WITH CONTROL VALVE AND FLOW SWITCH.
20. -
21. THE SPRINKLER REQUIRED AT THE TOP OF THE ELEVATOR HOISTWAY BY NFPA 13, 8.14.5.4 SHALL NOT BE REQUIRED WHERE THE HOISTWAY FOR PASSANGER ELEVATOR IS NONCOMBUSTIBLE AND THE CAR ENCLOSURE MATERIALS MEET THE REQUIREMENTS OF ASME A17.1, SAFETY CODE FOR ELEVATOR AND EXCALATORS.
22. A HYDROSTATIC TEST SHALL BE PERFORMED FOR ALL SYSTEM PIPING AT NOT LESS THEN 200 PSI FOR TWO HOURS, OR 50 PSI ABOVE STATIC PRESSURE IN EXCESS OF 150 PSI FOR TWO HOURS, AND WITNESSED BY A LOCAL FIRE INSPECTOR.
23. FIRE SPRINKLER FLOW ALARM BELL WILL BE INSTALLED ON THE ADDRESS SIDE OF THE BUILDING AND WILL BE EQUIPPED WITH THE PROPER SIGNAGE IDENTIFYING THE ALARM BELL.
24. ALL CONTROL VALVES AND DRAIN VALVES SHALL HAVE A SIGN AFFIXED FOR IDENTIFICATION.
25. ALL MECHANICALLY JOINED PIPING SHALL BE SCHEDULE 10 WITH ROLL GROOVED ENDS AND MECHANICAL FITTINGS. COUPLINGS SHALL BE RIGID TYPE, UNLESS OTHERWISE NOTED.
26. ALL THREADED PIPING SHALL BE SCHEDULE 40 WITH CUT THREADS AND CLASS 125 CAST IRON FITTINGS.
27. THE FIRE SPRINKLER SYSTEM SHALL BE MONITORED BY AN APPROVED LISTED CENTRAL MONITORING STATION.
28. HANGER LOCATION FOR ALL PIPING SHALL BE IN ACCORDANCE WITH NFPA 13, SECTION 9.2 THROUGH 9.2.6.3 SEE HANGER SCHEDULE AND/OR DETAILS FOR TYPES OF HANGERS USED. ALTERNATE UL AND FMHANGER METHODS ACCEPTABLE AT NO ADDITIONAL COST TO THE OWNER PROVIDE UL AND FM LITERATURE TO INSPECTOR OF RECORD AND ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

    PROVIDE RIGID COUPLING THROUGHOUT, EXCEPT FLEXIBLE COUPLING SHAL BE PROVIDE AS FOLLOWING:

    A. WITHIN 24" OF THE TOP AND BOTTOM OF AL RISERS.
    B. ON BOTH SIDES OF CONCRETE OR MASONARY WALLS WITHIN 3' OF THE WALL SURFACE
    C. WITHIN 24" OF BUILDING EXPANSION JOINTS.
    D. WITH24' OF THE TOP OF DROPS EXCEEDING 15' IN LENGTH TO PORTIONS OF SYSTEM SUPPLYING MORE THAN ONE SPRINKLER, REGARDLESS OF PIPE SIZE.
    E. ABOVE AND BELOW ANY INTERMEDIATE POINTS OF SUPPORT FOR A RISER OR OTHER VERITCAL PIPE.

29. BRANCHLINE SHALL BE LATERALLY RESTRAINED AT INTERVALS NOT EXCEEDING THOSE SPECIFIED IN NFPA TABLE 13 TABLE 9.3.6.4(a) OR (b) BASED ON BRANCHLINE DIAMETERS AND THE VALUE OF Cp.
30. ALL WELDING TO BE DONE BY CERTIFIED WELDERS.
31. INSPECTORS TEST CONNECTIONS AND LOW POINT DRAINS SHALL BE PER NFPA 13 (UNLESS NOTED OTHERWISE) AND SHALL BE SHOWN ON SHOP DRAWING. MOUNTING HEIGHTS OF CONTROL VALVES BE 5'-0" A.F.R. MOUNT CONTROL VALVES FOR INSPECTOR CONNECTION AND LOW POINT DRAINS INSIDE BUILDING. PIPE DRAIN LINES TO THE SANITARY DRAIN OR OTHER APPROVED LOCATION.
32. SPRINKLER CONTRACTOR TO COORDINATE AND ADJUST SPRINKLERS TO ELECTRICAL, MECHANICAL, STRUCTURE AND ALL OTHER TRADES AT NO ADDITIONAL COST TO THE OWNER.
33. OWNER TO BE PROVIDED WITH TEST CERTIFICATES, CARE & MAINTENANCE BOOK (NFPA 25 - CALIFORNIA AMENDED) AND A SPARE HEAD CABINET WITH SPRINKLERS AND A WRENCH PER NFPA 13.
34. DELIVERY OF ALL MATERIALS AND EQUIPMENT TO THE JOB SITE SHALL BE SCHEDULED TO ASSURE COMPLIANCE WITH THE PREDETERMINED CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE AND HANDLING ALL MATERIALS AND EQUIPMENT ON THE JOB SITE, INCLUDING FURNISHING OF ANY STORAGE FACILITIES OR STRUCTURE REQUIRED.
35. SPRINKLER CONTRACTOR SHALL BE FIELD VERIFY ALL DIMENSIONS AND COORDINATE WITH OTHER TRADES PRIOR TO INSTALLATION.
36. REFERENCE THE CIVIL DRAWINGS FOR ADDITIONAL FIRE LINE INFORMATION.
37. REFER TO THE ARCHITECTURAL DRAWING FOR ACTUAL BUILDING DIMENSIONS AND DETAILS. DO NOT SCALE "FP" DRAWINGS FOR CONSTRUCTION PURPOSES.
38. INSTALLATION OF SPRINKLER SYSTEM SHALL NOT BE STARTED UNTIL DRAWINGS, SPECIFICATIONS, CALCULATIONS, ETC. HAVE BEEN APPROVED BY DSA AND EOR.
39. LENGTHS OF PIPE SHOWN ON PLANS ARE EDGE OF FITTING TO EDGE OF FITTING DIMENSIONS. FIELD FABRICATION OF PIPE LENGTHS IS NOT ALLOWED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.

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REGISTERED PROFESSIONAL ENGINEER — MECHANICAL — STATE OF CALIFORNIA — No. 18628
SIGNED: 09/27/2018

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PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO -HVAC LAB

Sheet Title:
GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

Sheet:
FP001

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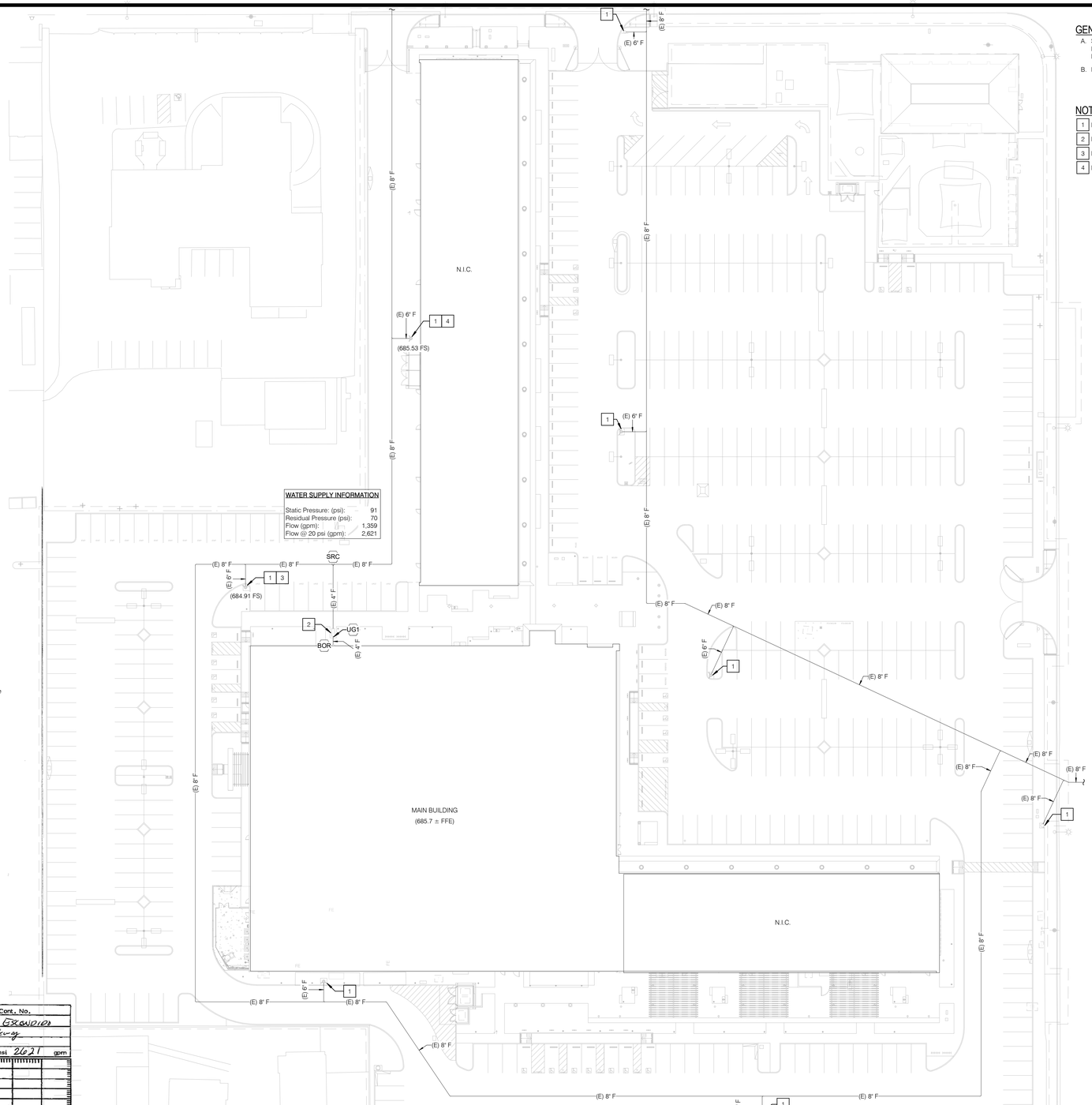


GENERAL NOTES

A. SITE UNDERGROUND PIPE AND APPURTANANCES AS SHOWN ON FIRE PROTECTION SITE PLAN ARE FOR REFERENCE AND CONTINUATION OF HYDRAULIC CALCULATION ONLY.

B. EXISTING CAMPUS FIRE WATER LOOP

NOTES

1. EXISTING FIRE HYDRANT
2. EXSITING BACKFLOW PREVENTER (AMES 4" DCDA - COLT 300-GV)
3. FLOW TEST HYDRANT
4. RESIDUAL TEST HYDRANT

J.G. Tate Fire Protection Systems Inc.
13771 Danielson St., Ste F, Poway, CA 92064
858-486-0900 fax-858-486-0950
License #800609 C16

September 12, 2018

Consulting & Inspection Services LLC
P.O. Box 2017
San Marcos, CA 92079

Attn: Kent Schafer
Re: Fire Flow Test at Palomar College Escondido Campus

Dear Kent,

On September 12, 2018 at 2:00pm, we conducted a fire hydrant flow test at the Escondido campus of Palomar College located at 1951 E. Valley Parkway. The test was witnessed by representatives from Escondido Fire Department, CIS, and the city of Escondido with the following results:

Static Pressure: 91 psi
Residual Pressure: 70 psi
Pitot Reading: 80 psi
Orifice size: 2 ½"
Flow: 1359 gpm
Calculated Flow @ 20psi residual: 2621 gpm

The flowed and gauged hydrants were exactly per the attached drawing you had provided in regards to elevation and location. Please do not hesitate to contact me if you have any questions or require any other services.

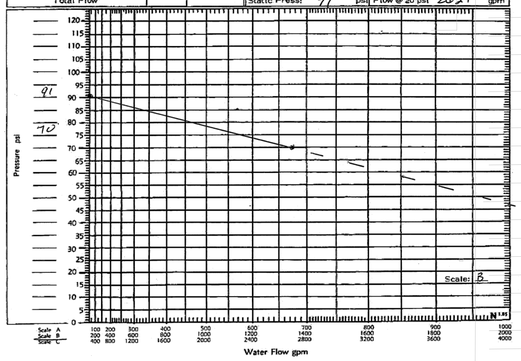
Regards,

Tom Meiss
Superintendent
J.G. Tate Fire Protection Systems, Inc.
858-486-0900 (o)
858-602-6780 (m)

WATER FLOW TEST SUMMARY SHEET

Hydrant No.	Outlet I.D. inches	Pitot Press. psi	Flow gpm	Residual psi
1	2.5	80	1359	73
2				
3				
Total Flow				

Date: 9/12/18 Time: 14:00 Cont. No.
Cont. Name: Palomar College Escondido
Address: 1951 E Valley Parkway Escondido, CA
Static Press: 91 psi Flow @ 20 psi 2621 gpm



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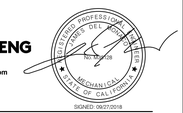

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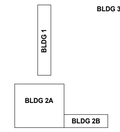

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Sheet Title:
SITE PLAN

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

Sheet:

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GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, LENGTH, AND CONDITION OF PIPE PRIOR TO COMMENCING WORK.

B. PRIOR TO FABRICATION OF ELEMENTS AND DRILLING FOR ANCHORS, THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING OF THE EXISTING REINFORCED CONCRETE SLAB TO DETERMINE THE LOCATION OF THE EXISTING REINFORCING BARS AT ALL ANCHOR LOCATIONS. CONTRACTOR SHALL NOTIFY ENGINEER WHERE CONFLICTS ARE FOUND SO ADJUSTMENTS MAY BE MADE IN THE DETAILS AS TO AVOID THE EXISTING SLAB REINFORCEMENT BARS NOR TENDONS. DO NOT CUT ANY EXISTING REINFORCEMENT BARS NOR TENDONS.

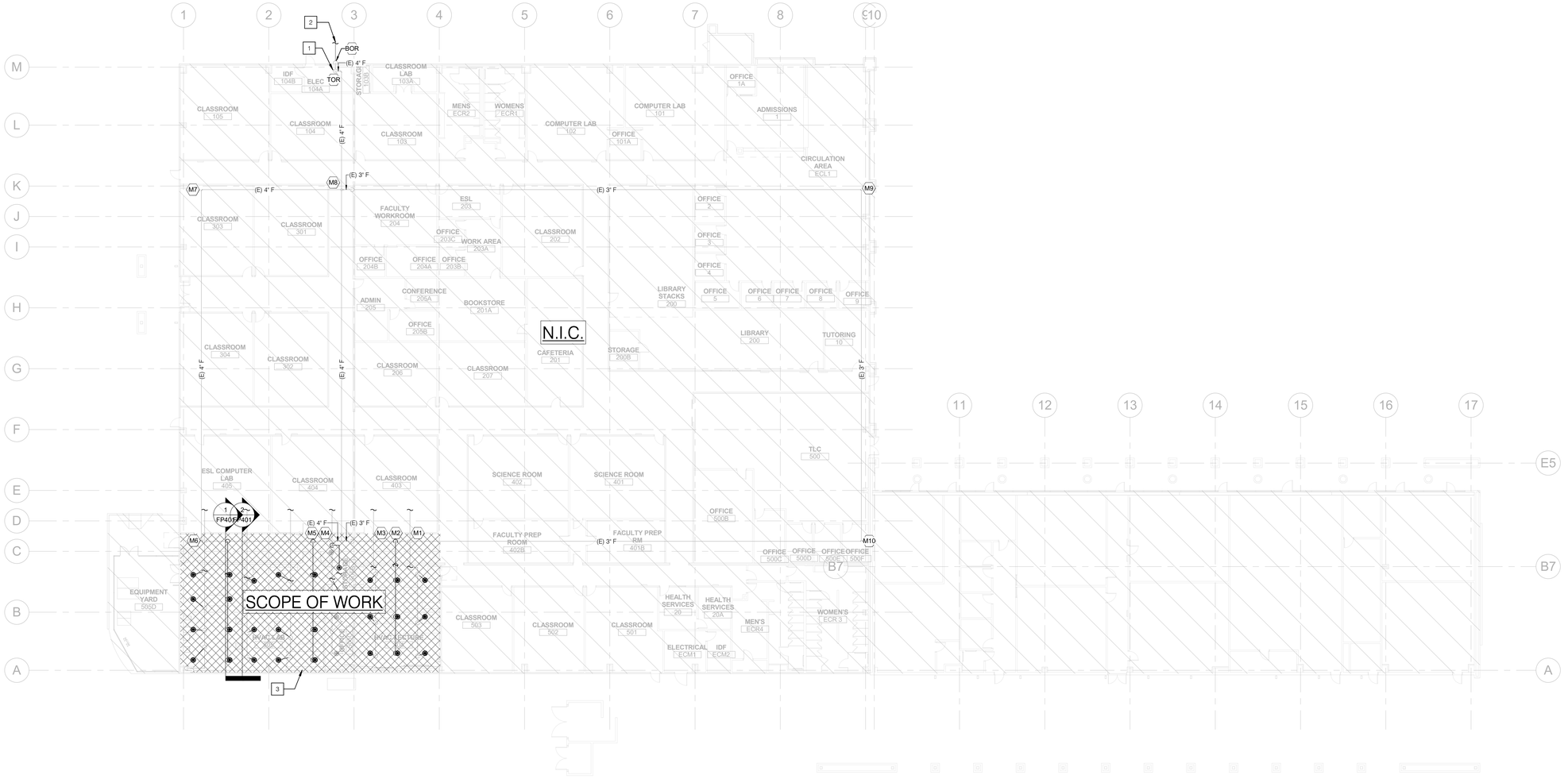
C. NEW BRANCHLINE ELEVATION TO MATCH EXISTING BRANCHLINE ELEVATIONS

NOTES

1 EXISTING 4" FIRE SPRINKLER SYSTEM RISER

2 EXISTING UNDERGROUND FIRE WATER. REFER TO SITE PLAN FP101 FOR CONTINUATION AND REFERENCE OF HYDRAULIC CALCULATION NODES ONLY.

3 SCOPE OF WORK. SEE FP202 FOR ENLARGED VIEW.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IDF 104B
ELEC 104A
CLASSROOM LAB 103A
STORAGE 103B
CLASSROOM 105
CLASSROOM 104
CLASSROOM 103
MENS ECR2
WOMENS ECR1
COMPUTER LAB 102
COMPUTER LAB 101
OFFICE 101A
OFFICE 1A
ADMISSIONS 1
CIRCULATION AREA ECA 1
CLASSROOM 303
CLASSROOM 301
FACULTY WORKROOM 204
ESL 203
OFFICE 203C
WORK AREA 203A
CLASSROOM 202
OFFICE 204B
OFFICE 204A
OFFICE 203B
OFFICE 2
OFFICE 3
OFFICE 4
CONFERENCE 205A
ADMIN 205
BOOKSTORE 201A
LIBRARY STACKS 200
OFFICE 5
OFFICE 6
OFFICE 7
OFFICE 8
OFFICE 9
OFFICE 205B
N.I.C.
CAFETERIA 201
LIBRARY 200
TUTORING 10
STORAGE 200B
CLASSROOM 304
CLASSROOM 302
CLASSROOM 206
CLASSROOM 207
TLC 500
ESL COMPUTER LAB 405
CLASSROOM 404
CLASSROOM 403
SCIENCE ROOM 402
SCIENCE ROOM 401
OFFICE 500B
FACULTY PREP ROOM 402B
FACULTY PREP RM 401B
OFFICE 500C
OFFICE 500D
OFFICE 500E
OFFICE 500F
EQUIPMENT YARD 505O
SCOPE OF WORK
CLASSROOM 503
CLASSROOM 502
CLASSROOM 501
HEALTH SERVICES 20
HEALTH SERVICES 20A
MEN'S ECR4
WOMEN'S ECR 3
ELECTRICAL ECM1
IDF ECM2
FP401
FP402
FP403
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GENERAL NOTES

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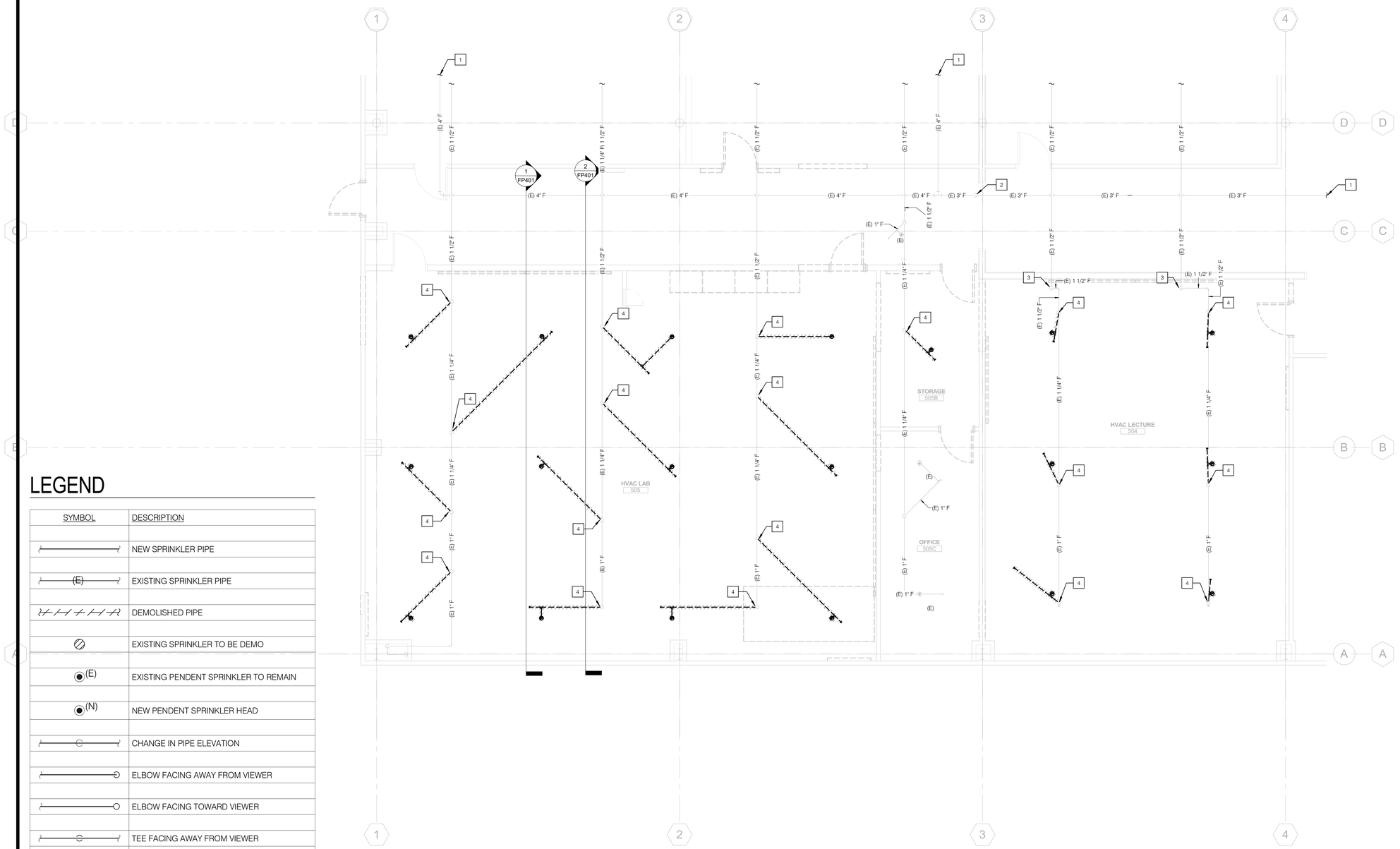
B. PRIOR TO FABRICATION OF ELEMENTS AND DRILLING FOR ANCHORS, THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING OF THE EXISTING REINFORCED CONCRETE SLAB TO DETERMINE THE LOCATION OF THE EXISTING REINFORCING BARS AT ALL ANCHOR LOCATIONS. CONTRACTOR SHALL NOTIFY ENGINEER WHERE CONFLICTS ARE FOUND SO ADJUSTMENTS MAY BE MADE IN THE DETAILS AS TO AVOID THE EXISTING SLAB REINFORCEMENT BARS NOR TENDONS. DO NOT CUT ANY EXISTING REINFORCEMENT BARS NOR TENDONS.

C. MATCH NEW BRANCHLINE ELEVATIONS WITH EXISTING BRANCHLINE ELEVATIONS

D. NEW BRANCHLINES SHALL MATCH EXISTING PIPE SCHEDULE

NOTES

1. REFER TO FP200 FOR CONTINUATION OF EXISTING FIRE MAIN.
2. EXISTING 3" DROP
3. EXISTING 1-1/2" DROP
4. POINT OF DISCONNECT FROM EXISTING RISER NIPPLE



LEGEND

SYMBOL	DESCRIPTION
	NEW SPRINKLER PIPE
(E)	EXISTING SPRINKLER PIPE
	DEMOLISHED PIPE
	EXISTING SPRINKLER TO BE DEMO
(E)	EXISTING PENDENT SPRINKLER TO REMAIN
(N)	NEW PENDENT SPRINKLER HEAD
	CHANGE IN PIPE ELEVATION
	ELBOW FACING AWAY FROM VIEWER
	ELBOW FACING TOWARD VIEWER
	TEE FACING AWAY FROM VIEWER
	TEE FACING TOWARD VIEWER
	THREADED CAP

SPRINKLER HEAD SCHEDULE AND LEGEND

SYMBOL	LOCATION	MANUFACTURER	SIN	K-FACTOR	SR/OR	TYPE	TEMP.	FINISH	THREAD SIZE	COMMENTS
◉	GYP. BOARD/ ACOUST. TILES.	VIKING	VK302	5.6	QR	SSP	200°	NICKEL	1/2"	PENDENT SPRINKLER

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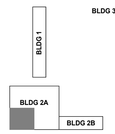

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PALOMAR COLLEGE
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Escondido, CA 92025

Project:
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LEVEL 1 DEMO PLAN

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

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LEGEND

SYMBOL	DESCRIPTION
	NEW SPRINKLER PIPE
(E)	EXISTING SPRINKLER PIPE
	DEMOLISHED PIPE
	EXISTING SPRINKLER TO BE DEMO
(E)	EXISTING PENDENT SPRINKLER TO REMAIN
(N)	NEW PENDENT SPRINKLER HEAD
C	CHANGE IN PIPE ELEVATION
	ELBOW FACING AWAY FROM VIEWER
	ELBOW FACING TOWARD VIEWER
	TEE FACING AWAY FROM VIEWER
	TEE FACING TOWARD VIEWER
	THREADED CAP
	HANGER
	WIRE RESTRAINT

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, LENGTH, AND CONDITION OF PIPE PRIOR TO COMMENCING WORK.

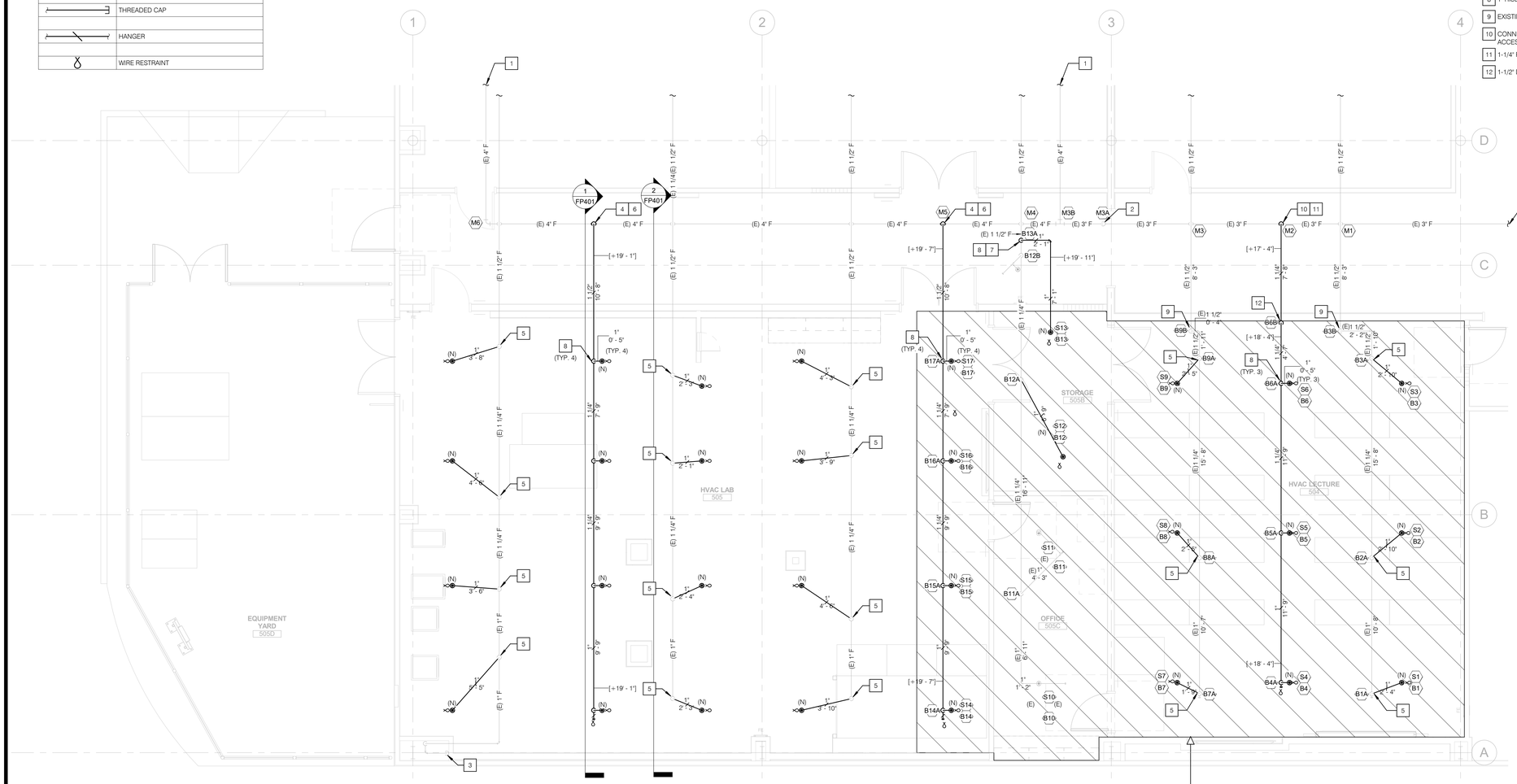
B. PRIOR TO FABRICATION OF ELEMENTS AND DRILLING FOR ANCHORS, THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING OF THE EXISTING REINFORCED CONCRETE SLAB TO DETERMINE THE LOCATION OF THE EXISTING REINFORCING BARS AT ALL ANCHOR LOCATIONS. CONTRACTOR SHALL NOTIFY ENGINEER WHERE CONFLICTS ARE FOUND SO ADJUSTMENTS MAY BE MADE IN THE DETAILS AS TO AVOID THE EXISTING SLAB REINFORCEMENT BARS NOR TENDONS. DO NOT CUT ANY EXISTING REINFORCEMENT BARS NOR TENDONS.

C. NEW BRANCHLINE ELEVATION TO MATCH EXISTING BRANCHLINE ELEVATIONS

D. FOR HANGERS AND RESTRAINTS THAT ARE ATTACHED TO UNISTRUTS SEE DETAIL 2/S3.3

NOTES

1. REFER TO FP200 FOR CONTINUATION OF EXISTING FIRE MAIN
2. EXISTING 3" DROP
3. EXISTING I.T.V. (INSPECTOR TEST VALVE) TO REMAIN
4. CONNECT NEW MECHANICAL TEE TO EXISTING 4" MAIN. ACCESS ABOVE CEILING SPACE.
5. POINT OF CONNECTION. CONENCT NEW PIPE TO EXISTING RISER NIPPLE
6. 1-1/2" RISER NIPPLE
7. CONNECT NEW MECHANICAL TEE TO EXISTING 1-1/2" PIPE. ACCESS ABOVE CEILING SPACE.
8. 1" RISER NIPPLE
9. EXISTING 1-1/2" DROP
10. CONNECT NEW MECHANICAL TEE TO EXISTING 3" MAIN. ACCESS ABOVE CEILING SPACE.
11. 1-1/4" RISER NIPPLE
12. 1-1/2" DROP



FIRE PROTECTION SYSTEM DEMAND

REMOTE AREA NUMBER:	1
OCCUPANCY CLASSIFICATION:	ORDINARY HAZARD 1
DENSITY:	0.15 GPM/SQFT
AREA OF APPLICATION:	1,500 SQFT
NO. OF SPRINKLERS CALCULATED:	17
INSIDE HOSE STREAMS:	250 GPM
TOTAL WATER REQUIRED (INCLUDING HOSE STREAM): @ A REQUIRED SYSTEM PRESSURE OF:	616.1 GPM 49.5 PSI

SPRINKLER HEAD SCHEDULE AND LEGEND

SYMBOL	LOCATION	MANUFACTURER	SIN	K-FACTOR	SR/QR	TYPE	TEMP.	FINISH	THREAD SIZE	COMMENTS
◉	GYP. BOARD/ ACOUST. TILES.	VIKING	VK302	5.6	QR	SSP	200°	NICKEL	1/2"	PENDENT SPRINKLER

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ALEJANDRO LOPEZ
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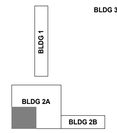

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PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO -HVAC LAB

Sheet Title:
LEVEL 1 FLOOR PLAN

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

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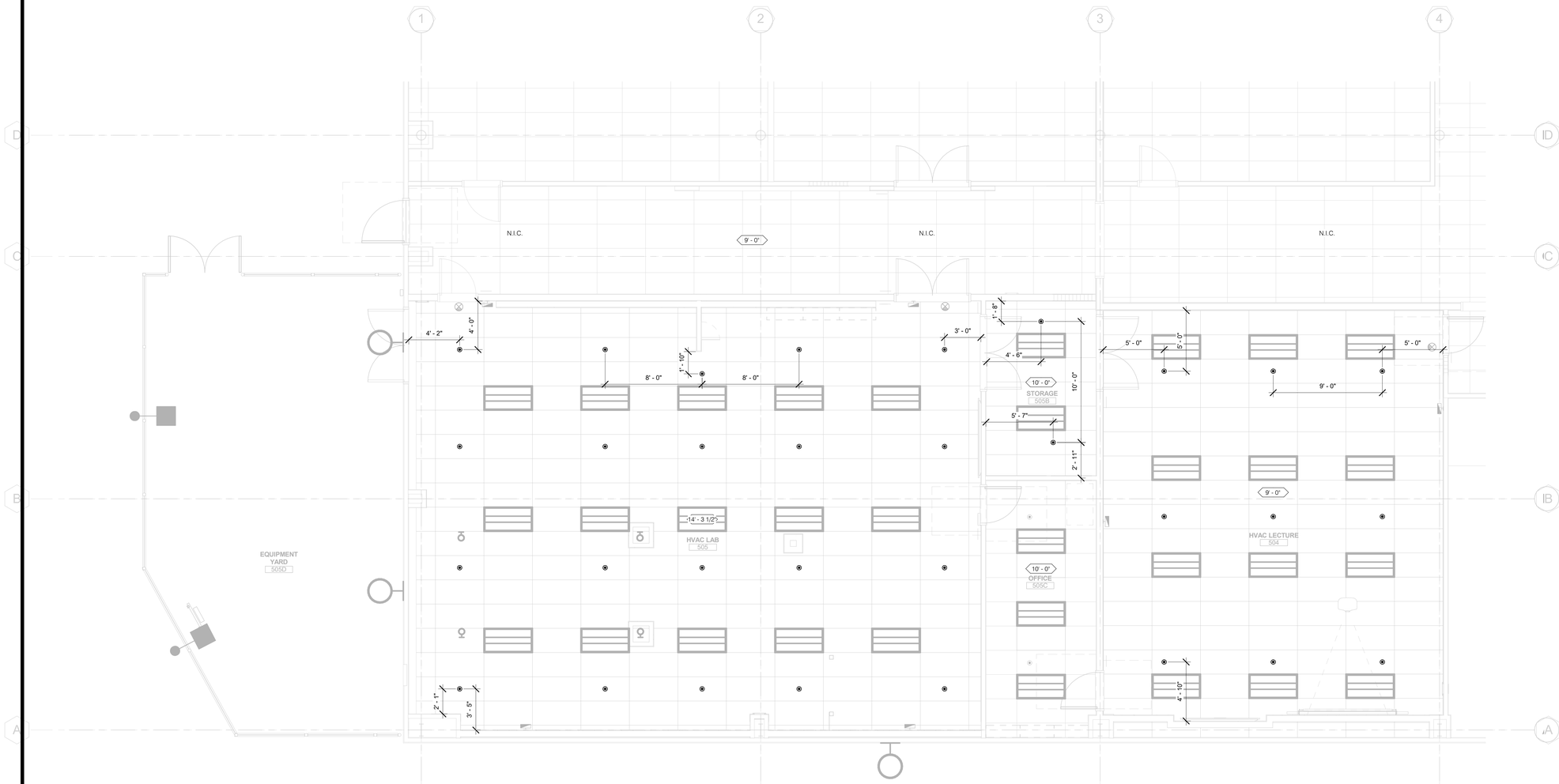

SPRINKLER HEAD SCHEDULE AND LEGEND

SYMBOL	LOCATION	MANUFACTURER	SIN	K-FACTOR	SR/QR	TYPE	TEMP.	FINISH	THREAD SIZE	COMMENTS
◉	GYP. BOARD/ ACOUST. TILES.	VIKING	VK302	5.6	QR	SSP	200°	NICKEL	1/2"	PENDENT SPRINKLER

0 4

N

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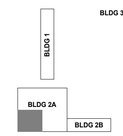
THOMAS C. [illegible]
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 09/27/2018

Key Plan:



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LEVEL 1 RENO RCP PLAN

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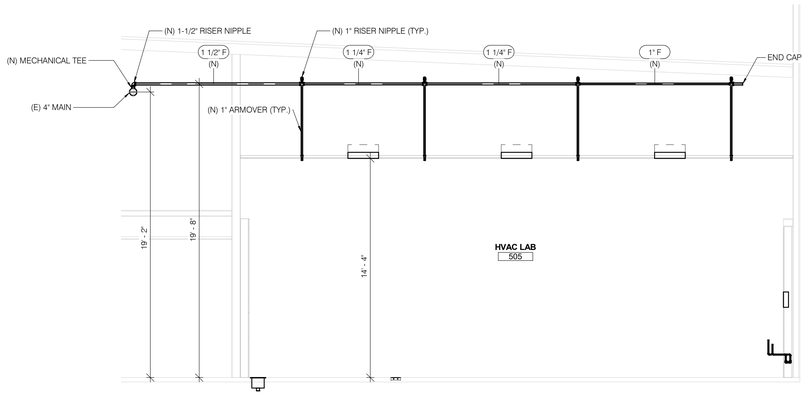
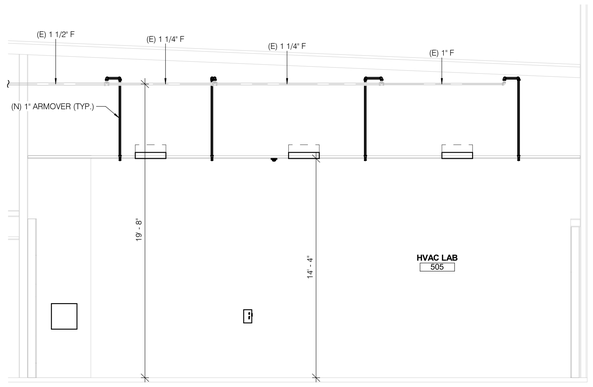


1 NORTH TO SOUTH SECTION VIEW FOR NEW BRANCHLINE

SCALE: NONE



2 NORTH TO SOUTH SECTION VIEW FOR EXISTING BRANCHLINE

SCALE: NONE

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SECTIONS

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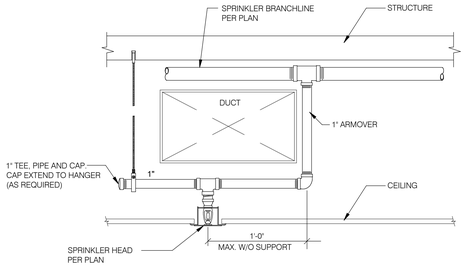
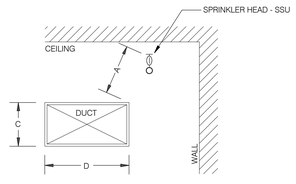


FOR PENDENT SPRINKLER



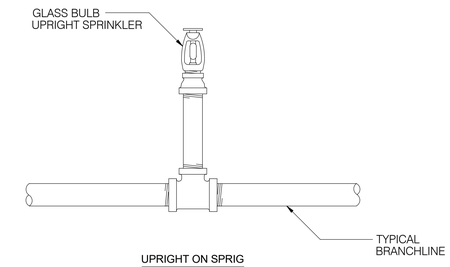
ELEVATION VIEW OF PIPE CONDUIT
OR LIGHT FIXTURE
A > 3C OR 3D
A < 24-INCHES
(USE DIMENSION C OR D, WHICHEVER IS GREATER)

NOTE:
SSP SPRINKLER SHALL BE IN FULL COMPLIANCE
WITH SECTION 8.6.5 AND ALL ITS SUB-SECTIONS.

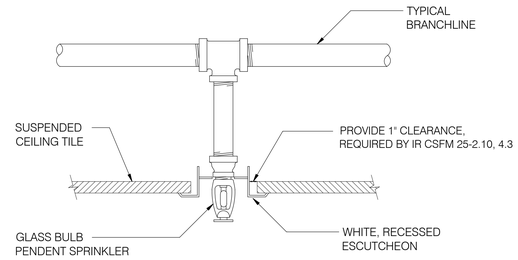
FOR UPRIGHT SPRINKLERS

4 SPRINKLER OBSTRUCTION DETAIL

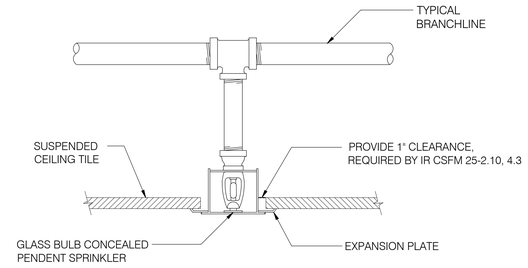
NO SCALE



UPRIGHT ON SPRIG



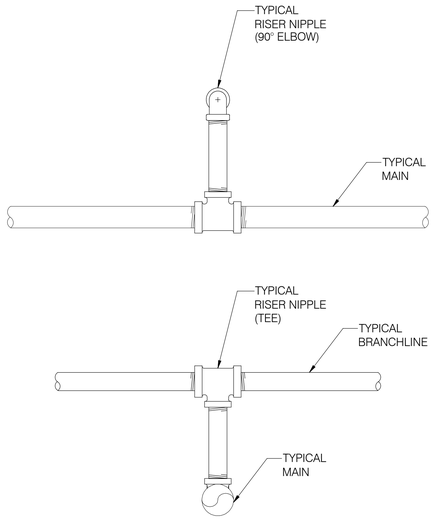
PENDENT W/ RECESSED ESCUTCHEON



CONCEALED PENDENT ESCUTCHEON

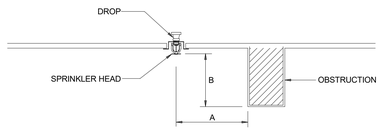
2 TYPICAL SPRINKLERS DETAIL

NO SCALE



5 TYPICAL RISER NIPPLE DETAIL

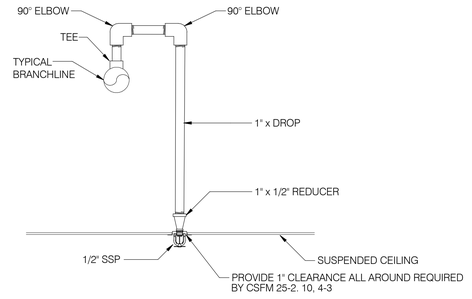
NO SCALE



DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTION (A)	MAX. ALLOWANCE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION (IN.) (B)
LESS THAN 1 FT.	0
1'-0" TO LESS THAN 1'-6"	2-1/2
1'-6" TO LESS THAN 2'-0"	3-1/2
2'-0" TO LESS THAN 2'-6"	5-1/2
2'-6" TO LESS THAN 3'-0"	7-1/2
3'-0" TO LESS THAN 3'-6"	9-1/2
3'-6" TO LESS THAN 4'-0"	12
4'-0" TO LESS THAN 4'-6"	14
4'-6" TO LESS THAN 5'-0"	16-1/2
5'-0" TO LESS THAN 5'-6"	18
5'-6" TO LESS THAN 6'-0"	20
6'-0" TO LESS THAN 6'-6"	24
6'-6" TO LESS THAN 7'-0"	30
7'-0" TO LESS THAN 7'-6"	35

3 SSP/SSU OBSTRUCTION TABLE

NO SCALE



ARMOVER CONFIGURATION

1 TYPICAL SPRINKLER PIPING DETAIL

NO SCALE

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PIPING WEIGHTS FOR DETERMINING HORIZOTAL LOAD

PIPE SIZE	PIPE SCHEDULE	WEIGHT OF WATER-FILLED PIPE (LBS/FT)[A]	MAX. LENGTH OF PIPE ON SINGLE HANGER (FT)[B]	MAX. LOAD ON SINGLE HANGER (LBS.)	MAX. LENGTH OF PIPE ON SINGLE RESTRAINT (FT)[C]	MAX. LOAD ON SINGLE RESTRAINT (LBS.)
1"	40	2.05	12	24.6	36	73.8
1-1/4"	40	2.93	12	35.16	39	114.27
1-1/2"	40	3.61	12	43.32	41	148.01

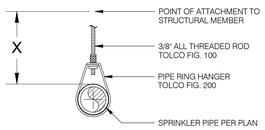
NOTE:
A. WEIGHT OF WATER FILLED PIPE FROM NFPA 13 2016 EDITION TABLE A.9.3.5.9 FOR SCH 10 AND SCH 40 PIPE
B. MAX LENGTH OF PIPE SUPPORTED BY A SINGLE HANGER FROM NFPA 13 2016 EDITION TABLE 9.2.2.1(a)
C. MAX LENGTH OF PIPE SUPPORTED BY RESTRAINTS FROM NFPA 13 2016 EDITION TABLE 9.3.6.4(a) USING Cp=0.54

*Cp VALUE DETERMINED FROM USGS DESIGN MAP OF 1951 E VALLEY PARKWAY, ESCONDIDO, CA 92025 AND NFPA 13 TABLE 9.3.5.9.3

**THE TOTAL WEIGHT OF THE ADDITIONAL SPRINKLER SYSTEM, INCLUDING HANGER, BRACES AND UNISTRUTS, IS MAX. 1PSF.

3 MAX LOADS ON HANGERS AND RESTRAINTS
NO SCALE

*FOR ATTACHMENT TO STRUCTURAL MEMBER, SEE 2/S3.3



BEAM CLAMP, ROD, COUPLING AND RING
PIPE HANGER TO STEEL BEAM

MAXIMUM HANGER SPACING FOR STEEL PIPE		
PIPE SIZE	HANGER SPACING	ALL THREAD THICKNESS
1"	12'-0"	3/8"
1 1/4"	12'-0"	3/8"
1 1/2"	15'-0"	3/8"
2"	15'-0"	3/8"
2 1/2"	15'-0"	3/8"
3"	15'-0"	3/8"
4"	10'-0"	3/8"
6"	10'-0"	1/2"
8"	10'-0"	1/2"

IF X IS LESS THAN 6", THEN
NO LATERAL BRACING AND NO SPLAY WIRE
BRACING WILL BE PROVIDED PER NFPA 9.3.5.5.10

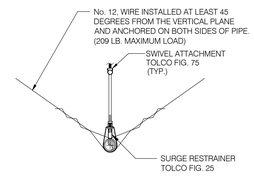
NOTE:
A. FOR STEEL PIPE, THE UNSUPPORTED HORIZONTAL LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL BE AS FOLLOWS;

PIPE SIZE	HORIZONTAL LENGTH	
1"	NOT GREATER THAN 36"	
1 1/4"	NOT GREATER THAN 48"	
1 1/2" & LARGER	NOT GREATER THAN 60"	(NFPA 13, SEC. 9.2.3.4.1, 2016 EDITION)

SYMBOL

2 PIPE HANGER DETAIL
NO SCALE

*FOR ATTACHMENT TO STRUCTURAL MEMBER, SEE 2/S3.3



END OF BRANCH LINE SEISMIC RESTRAINT
(NFPA 13, SECTION 9.3.6.1)

DENOTES LINE RESTRAINT WITH SPLAY WIRE, SURGE RESTRAINER, RING HANGER, HANGER ROD AND BEAM CLAMP ASSEMBLY FIELD VERIFY WITH INSPECTOR FOR ADDITION OR DELETION OF LINE RESTRAINTS AS REQUIRED BY UNFORESEEN FIELD CONDITIONS.

NOTE:
1. THE END SPRINKLER ON A BRANCH LINE SHALL BE RESTRAINED (NFPA 13, 9.3.6.3, 2016 EDITION.)
2. THE ABOVE DETAIL MAY BE USED AT INTERVALS BELOW WHERE THE UPWARD OR LATERAL MOVEMENT OF THE SYSTEM PIPING WOULD RESULT IN DAMAGE TO THE SPRINKLER THROUGH THE IMPACT AGAINST THE BLDG. STRUCTURE, EQUIPMENT OR FINISH MATERIALS. (NFPA 13, TABLE 9.3.6.4(a), 2016 EDITION.)

PIPE SIZE	MAXIMUM SPACING
1"	36' INTERVALS
1 1/4"	39' INTERVALS
1 1/2"	41' INTERVALS
2"	45' INTERVALS

SYMBOL

1 BRANCH LINE RESTRAINT DETAIL
NO SCALE

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TELECOM LEGEND

SYMBOL	DESCRIPTION
x	NOTE CALLOUT
	DETAIL CALLOUT - NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN
1	BUILDING NUMBER
	CONCEALED CONDUIT
	EXPOSED CONDUIT
	UNDERGROUND CONDUIT
	FUTURE CONDUIT
	CABLE TO BE REMOVED
	EXISTING CABLE TO BE ABANDONED OR RETURNED
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CONDUIT WITH CAP
	J-HOOK ROUTE
(E) #	EXISTING VOICE / DATA OUTLET - WALL MOUNTED WITH (X) CAT 6A CABLES / JACKS.
#	DATA OUTLET - WALL MOUNTED. PROVIDE AND INSTALL (#) QUANTITY OF CAT 6A CABLES / JACKS TERMINATED IN A 4-PORT ANGLED FACEPLATE AT 18" AFF. PROVIDE AND INSTALL RANDL 5S BOX T-55017 MINIMUM WITH SINGLE GANG MUDRING AND1-1/4" CONDUIT STUBBED UP 6" ABOVE ACCESSIBLE CEILING LOCATION. PROVIDE BUSHINGS AND PULLSTRING, U.O.N.
WAP	WIRELESS ACCESS POINT OUTLET - CEILING MOUNTED. PROVIDE AND INSTALL (2) CAT 6A CABLES / JACKS TERMINATED IN A SURFACE MOUNT MODULAR OUTLET. PROVIDE AND INSTALL OBERON WAP MOUNT AT EACH ACCESS POINT LOCATION, MODEL #1046-CCOAP3800.
	POWER SHOWN FOR REFERENCE ONLY. REFER TO ELECTRICAL PLAN FOR DETAILS.
	WALL MOUNTED DATA, AV AND POWER BACK BOX, LEGRAND EFSB4. PROVIDE (2) 1-1/4" CONDUITS STUBBED UP TO ACCESSIBLE CEILING SPACE. REFER TO DRAWINGS FOR MOUNTING HEIGHT REQUIREMENT. POWER IS SHOWN FOR REFERENCE ONLY. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CONDUIT REQUIREMENTS.
AV	AV BOX - WALL MOUNTED AT 18" AFF. PROVIDE AND INSTALL RANDL 5S BOX T-55017 MINIMUM WITH SINGLE GANG MUDRING AND1-1/4" CONDUIT STUBBED UP 6" ABOVE ACCESSIBLE CEILING LOCATION. PROVIDE BUSHINGS AND PULLSTRING, U.O.N.
WAP	OUTDOOR RATED EXTERIOR WIRELESS ACCESS POINT OUTLET - WALL MOUNTED. PROVIDE AND INSTALL (2) CAT 6A CABLES IN A SURFACE MOUNT MODULAR OUTLET WITH (1) 1" CONDUIT TO ACCESSIBLE CEILING SPACE (U.O.N.). PROVIDE AND INSTALL TESSCO ENCLOSURE BOX WITH ANTENNA MODEL #502103. COORDINATE INSTALLATION AND WAP REQUIREMENT WITH CAMPUS IT.
	OUTDOOR RATED 4K RESOLUTION WALL MOUNTED CAMERA OUTLET, SONY PART #SNC-VM772R. PROVIDE AND INSTALL 4" SQ DEEP JUNCTION BOX WITH 1" EMT CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE (U.O.N). ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT SUPPORT, CONNECTORS, COUPLINGS, PLASTIC BUSHING, PULL STRING, OUTLET BOX, AND MUD RING. EACH CAMERA SHALL HAVE (1) CATEGORY 6A CABLE INSTALLED.
	WALL MOUNTED CLOCK/SPEAKER. ATLAS IED PART#IP-SDMF-72
	WALL MOUNTED CLOCK/SPEAKER. ATLAS IED PART#IP-SDMF-72 FURNISH AND INSTALL (1) CAT 6A CABLE IN FLUSH MOUNT ENCLOSURE ATLAS IED PART#IP-FEST-S WITH (1) 1" CONDUIT TO ACCESSIBLE CEILING SPACE (U.O.N.). PROVIDE BUSHINGS AND PULLSTRINGS, U.O.N.
	DATA OUTLET - CEILING MOUNTED. PROVIDE AND INSTALL (2) CAT 6 CABLES / JACKS TERMINATED IN A 2-PORT SURFACE MOUNTED BISCUIT BOX. BOX SHALL BE SUPPORTED USING J-HOOK SUPPORTS ABOVE CEILING.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
#	NUMBER (IDENTIFICATION) OR COUNT
(#)	NUMBER IS QUANTITY
A OR AMP	AMPERES
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AH	AMPERE HOUR
AHJ	AUTHORITY HAVING JURISDICTION
ALS	ASSISTIVE LISTENING SYSTEM
AP	ACCESS POINT
ARCH	ARCHITECT, ARCHITECTURAL
ASP	ALUMINUM, STEEL, POLYETHYLENE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVC	AUDIOVISUAL CONTRACTOR
AWG	AMERICAN WIRE GAUGE
BJB/UR	BURIED
BDF	BUILDING DISTRIBUTION FRAME
BMS	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNIT
C.O.	CONDUIT ONLY – WITH PULL WIRE
CATV	COMMUNITY ANTENNA TELEVISION (CABLE TELEVISION)
CB	CONDUIT BANK
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CMP	COMMUNICATIONS PLENUM (CABLE JACKET RATING)
CMR	COMMUNICATIONS RISER (CABLE JACKET RATING)
CP	CONSOLIDATION POINT
CSC	CAPTURED SCREW CONNECTOR
CU	COPPER
DAS	DISTRIBUTED ANTENNA SYSTEM
dB	DECIBEL
DC	DIRECT CURRENT
DIST	DISTRIBUTION
DMARC	POINT OF DEMARCATION BETWEEN UTILITIES OR BETWEEN UTILITIES AND OWNER PREMISE EQUIPMENT
DWG	DRAWING
E.C.	ELECTRICAL CONTRACTOR
EA	EACH
EF	ENTRANCE FACILITY
ELEC	ELECTRIC
EMI	ELECTROMAGNETIC INTERFERENCE
EMS	EMERGENCY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EQUIP	EQUIPMENT
EXIST/(E)	EXISTING
FB	FLOOR BOX
FDC	OPTICAL - FIBER DISTRIBUTION CENTER
FDR	FEEDER
FEXT	FAR END CROSSTALK
FIN	FINISH
FIXT	FIXTURE
FLR	FLOOR
FOC	FIBER OPTIC CABLE
FPS	FRAMES PER SECOND
FT	FEET
G.C.	GENERAL CONTRACTOR
GA	GAUGE
GND	GROUND (MECHANICAL CONNECTION TO EARTH)
GRC	GALVANIZED RIGID CONDUIT
H., W., D., L.	HEIGHT, WIDTH, DEPTH, LENGTH
IC	INTERCOM
ID	INSIDE DIAMETER OR INSIDE DIMENSION
IDF	INTERMEDIATE DISTRIBUTION FRAME
IN	INCHES, MEASUREMENT
IR	INFRARED
ISP	INTERNET SERVICE PROVIDER
JB	JUNCTION BOX
LTG	LIGHTING
M	METER
MAC	MEDIA ACCESS CONTROL
MDF	MAIN DISTRIBUTION FRAME
MH	MAINTENANCE HOLE (QSP CONFINED SPACE) – (A.K.A. MANHOLE)
MM	MULTI-MODE - REFERRING TO OPTICAL FIBER CORE/CLADDING PROPERTIES
MTG	MOUNTING
MTU	MULTI TENNENT UNIT
N	NORTH
N.T.S.	NOT TO SCALE
ND	NETWORK DEVICE
NE	NETWORK ENCLOSURE
NEXT	NEAR END CROSSTALK
NIC	NOT IN CONTRACT
NO. OR #	NUMBER
O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
O.F.O.I.	OWNER FURNISHED OWNER INSTALLED
OD	OUTSIDE DIAMETER
OF	OPTICAL FIBER
OSP	OUTSIDE PLANT
OTDR	OPTICAL TIME DOMAIN REFLECTOMETER
PA	PUBLIC ADDRESS SYSTEM
PB	PULL BOX
PH	PHASE
PNL	PANEL
POE	POWER OVER ETHERNET
PPF	PIXELS PER FOOT
PR	PAIR
PSU	POWER SUPPLY UNIT
PTP	POINT-TO-POINT
PVC	POLYVINYL CHLORIDE
PWR	POWER
REC/RECEPT	RECEPTACLE
REQ'D	REQUIRED
RM	ROOM
RMC	RIGID METAL CONDUIT
RMS	RACK MOUNTED SPACE
RNC	RIGID NONMETALLIC CONDUIT
RU	RACK UNIT
S	SOUTH
SAC	SECURITY AND ACCESS CONTROL
SCH	SCHEDULE
SCS	STRUCTURED CABLING SOLUTION
SCTP	SCREENED TWISTED PAIR
SF	SQUARE FEET
SM	SINGLE-MODE REFERRING TO OPTICAL FIBER CORE/CLADDING PROPERTIES
SNR	SIGNAL TO NOISE RATIO
SPD	SURGE PROTECTION DEVICE
SQ	SQUARE
SYS	SYSTEM
TB	TERMINAL BLOCK
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TCP/IP	TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL
TE	TELECOMMUNICATIONS ENCLOSURE
TEL	TELEPHONE
TELCO	TELEPHONE UTILITY
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TP	TRANSITION POINT
TR	TELECOMMUNICATIONS ROOM OR SPACE
TV	TELEVISION
TYP	TYPICAL
UD	UNDERGROUND DUCT
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES INC.
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS OR VOLTAGE
V-A	VOLT-AMPERES
W	WATTS
W/	WITH
W/O	WITHOUT
WAO	WORK AREA OUTLET / WORK STATION OUTLET
WBS	WORK BREAKDOWN STRUCTURE
WiFi	WIRELESS FIDELITY (LOCALIZED WIRELESS USER ACCESS INTERNET/NETWORK)
WP	WATERPROOF OUTLET BOX
WS	WORK STATION

REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED. ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

DSA NOTES

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 COMPONENT SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC. SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTERS 13, 26, AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARDWIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHEMENT

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE. BUT THE ATTACHMENTS NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

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

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH 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 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.24, 1616A.1.25, AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE, (E.G. SMACNA OR OSHPD OPM), COPIED 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 HANGAR AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), OR 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.#)

MP☐ MD☐ PP☐ E☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITIONS (2009), INCLUDING AND ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH THE PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

GENERAL NOTES

1. ALL TELECOMMUNICATIONS WORK SHALL COMPLY WITH THE LATEST EDITION OF THE PALOMAR COLLEGE TELECOMMUNICATIONS INFRASTRUCTURE STANDARDS AND CURRENT MANUFACTURER AND BICSI INSTALLATION PRACTICES. THESE STANDARDS HAVE BEEN ESTABLISHED TO EXCEED ALL CURRENT CODE AND BICSI INSTALLATION PRACTICE. ANY ITEMS THAT RAISE QUESTION SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND COLLEGE REPRESENTATIVE IN WRITING. IT IS ALWAYS A BEST PRACTICE TO PROVIDE THE AHJ WITH DETAIL ON ANY AND ALL CONSTRUCTION ITEMS THAT COULD BE QUESTIONED BY THE AHJ. THE PROJECT DOCUMENTATION PACKAGE AND ASSOCIATED COLLEGE STANDARD ARE NOT TO BE INTERPRETED NOR CONSIDERED AS AUTHORIZATION TO DEVIATE FROM ANY CODE OR REGULATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VALIDATE THAT THESE REQUIREMENTS WILL MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENT TO PROVIDE THE COLLEGE WITH A MINIMUM 25-YEAR SCS EXTENDED MATERIALS WARRANTIES.
2. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS AND/OR SPECIFICATIONS, THE DOCUMENT WHICH PRESCRIBES AND ESTABLISHES THE COMPLETE JOB AS PER MANUFACTURER OR THE HIGHER STANDARD SHALL PREVAIL. ALL SUCH DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE COLLEGE REPRESENTATIVE IN WRITING IMMEDIATELY UPON DISCOVERY.
3. OMISSIONS FROM THE DRAWINGS OR FROM THE SPECIFICATIONS OR THE MISDESCRIPTION OF DETAILS OF WORK WHICH ARE CLEAR AND NECESSARY TO CARRY OUT THE INTENT FOR THE DRAWINGS AND SPECIFICATIONS, OR WHICH ARE CUSTOMARILY PERFORMED SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR MISDESCRIBED DETAILS OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND COLLEGE REPRESENTATIVE UPON IDENTIFICATION OF SUCH OMISSIONS, MISDESCRIPTION, AND UNCLEAR DIRECTIONS IMMEDIATELY. THE CONTRACTOR SHALL PERFORM ALL PROJECT TASKS AND ASSEMBLY BUILDS AS PER BICSI STANDARDS AND MANUFACTURERS REQUIREMENTS ALONG WITH COORDINATING AND WORKING WITH THE COLLEGE TO CORRECT SUCH DOCUMENTATION ERRORS.
4. THE CONTRACTOR SHALL CHECK ALL DRAWINGS FURNISHED IMMEDIATELY UPON THEIR RECEIPT AND PROMPTLY NOTIFY THE COLLEGE OF ANY DISCREPANCIES. THIS INCLUDES BUT NOT LIMITED TO, DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS, OR DRAWINGS AND MANUFACTURER INSTALLATION INSTRUCTIONS THAT WILL CAUSE EXTENDED WARRANTY ISSUES, OR DRAWINGS AND GOVERNING CODES AND BEST PRACTICES. THE CONTRACTOR SHALL BRING TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND COLLEGE REPRESENTATIVE ANY DISCREPANCIES BETWEEN DRAWINGS AND HOW THE CONTRACTOR NORMALLY DELIVERS THE SERVICES DESCRIBED IN THE DRAWINGS OR SPECIFICATIONS.
5. ALL MATERIALS AND EQUIPMENT FURNISHED AND INSTALLED SHALL BE NEW AND FREE FROM ANY KNOWN DEFECT. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL (UL™) LISTING, CLASSIFIED, AND/OR PERFORMANCE VERIFIED MARK OR FROM A COLLEGE APPROVED ALTERNATIVE TESTING ORGANIZATION. ALL MATERIALS SHALL BE INSTALLED AND USED IN THE MANNER FOR WHICH THE MANUFACTURER INTEND THEM FOR. THIS APPLIES FOR BOTH PIECE PARTS AND COMPLETE FUNCTIONING ASSEMBLIES.
6. CONTRACTOR IS REQUIRED TO RECEIVE WRITTEN APPROVAL FOR ALL RECOMMENDED AND REQUIRED WORK DEVIATIONS AND CLARIFICATIONS TO THE PLANS AND SPECIFICATIONS OF THIS PROJECT BY THE COLLEGE AND ITS REPRESENTATIVES PRIOR TO ANY FIELD ACTIVITY.
7. ALL WORK MUST BE COMPLETED IN AS PER MANUFACTURER INSTALLATION REQUIREMENTS AND BICSI INSTALLATION PRACTICES. THE COLLEGE DEMANDS THE UTMOST PROFESSIONALISM WHEN WORK IS BEING PERFORMED AT EITHER COLLEGE CAMPUS AND HOLDS ALL CONTRACTORS TO THAT LEVEL OF PROFESSIONALISM. THE WORK SITE SHALL BE KEPT CLEAN AND FREE FROM DEBRIS. IT IS EVERY CONTRACTOR AND ALL THEIR REPRESENTATIVES RESPONSIBILITY TO GUARD AGAINST ANY DAMAGE TO COLLEGE PROPERTY AND THE IMMEDIATE REPAIR IF ANY DAMAGE IS CAUSED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING A FINAL CLEANUP OF THE WORK SITE PRIOR TO FINAL SYSTEM ACCEPTANCE AS PART OF THE PUNCH-LIST PROCESS.
8. THE CONTRACTOR SHALL NOT BORE, NOTCH, OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE COLLEGE, ARCHITECT, AND STRUCTURAL ENGINEER. WITH PERMISSION FROM THE ABOVE AND PRIOR TO ALL CUTTING, DRILLING, NOTCHING, CORING, ETC. OF CONCRETE STRUCTURE AND FAÇADE THESE SURFACES SHALL BE X-RAYED OR GROUND PENETRATING RADAR USED TO ACCURATELY LOCATE REBAR, POST-TENSION CABLES & RODS, CONDUITS, AND ANY OTHER EMBEDDED POTENTIAL OBSTRUCTIONS TO ENSURE THAT NO DAMAGE IS CAUSED TO ANY STRUCTURAL REINFORCEMENTS.
9. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY THE TELECOM DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS WITH INFORMATION INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATION SECTIONS WHERE TELECOM WORK INTERFACES WITH OTHER TRADES.
10. THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WHEN WORKING IN AREAS WITH EXISTING CEILINGS AND SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILING TILES WITHOUT DAMAGING OR SOILING THE CEILING TILES. CHIPPED, DAMAGED, CRACKED, OR BROKEN TILES ARE THE CONTRACTORS RESPONSIBILITY TO REPLACE WITH LIKE TILES.
11. ALL FOOTAGES IDENTIFIED ON DRAWINGS OR SCALED OFF OF DRAWINGS ARE TO BE CONSIDERED ESTIMATES AND ARE REQUIRED TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO ORDERING OF MATERIAL.
12. ALL CABLE TRAYS, LADDER (TYPE) RACKING, "BASKET TYPE TRAY, CONDUIT & SLEEVES, EQUIPMENT RACKS, PROTECTION PANELS, AND CABLE SHEATHS SHALL BE BONDED TO AN APPROVED TELECOMMUNICATIONS BONDING ASSEMBLY.
13. ACCORDING TO TIA STANDARDS AND BICSI METHODOLOGIES PULL-BOXES LOCATED WITHIN A STRUCTURE ARE TO BE PLACED AT 100' INCREMENTS AND PROPERLY SPACED WITHIN RUNS OF MORE THAN 150'. PULL-BOXES ARE TO BE PLACED IN CONDUIT RUNS THAT EXCEED A MAXIMUM OF 180-DEGREES IN CHANGES OF DIRECTION. TELECOMMUNICATIONS PULL-BOXES ARE TO BE SIZED AT A MINIMUM OF TWELVE (12) TIMES THE DIAMETER OF THE LARGEST CONDUIT. PULL-BOXES SHOULD NOT BE USED FOR CHANGES OF DIRECTION. THESE STANDARDS ARE TO BE ADHERED TO WHERE EVER PRACTICAL AND ANY DEVIATION TO THESE STANDARDS REQUIRES A SHOP-DRAWING, IF DISCOVERED DURING THE SUBMITTAL PHASE, TO REMEDIATE THE ISSUE OR BY AN RFI DURING THE CONSTRUCTION INSTALLATION PHASE. THE COLLEGE MAY ELECT TO INCREASE THE CONDUIT SIZE OR QUANTITY OF CONDUITS TO MITIGATE THE ISSUE FOR THE EXCESS LENGTH, ADDITIONAL QUANTITY OF CHANGES OF DIRECTION, AND/OR THE REDUCED SIZE OF PULL-BOXES WITHIN THE GIVEN PATHWAY. THE CONTRACTOR IS REQUIRED TO HAVE APPROVAL IN WRITING PRIOR TO ANY ROUGH-IN WORK OR MATERIAL PROCUREMENT.
14. AS A STANDARD, ALL INTRA-BUILDING PATHWAYS SHALL HAVE A MINIMUM OF 25% AVAILABLE CAPACITY AT THE SCHEDULED END OF THE PROJECT. SHOULD THIS PERCENTAGE NOT BE ACHIEVABLE, THIS ISSUE MUST BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE COLLEGE REPRESENTATIVE.
15. USE "J" HOOKS FOR STATION CABLE DISTRIBUTION IN OPEN CEILING ENVIRONMENTS IS ACCEPTABLE TO THE COLLEGE AS LONG AS THE FOLLOWING PARAMETERS ARE MET. DO NOT USE CEILING SUPPORT WIRE OR CEILING HANGERS. DO NOT USE SUPPORTS FOR ANY OTHER BUILDING SERVICES UNLESS PRIOR WRITTEN APPROVAL FOR THEIR USE IS GIVEN AND VERIFIED WITH PROJECT STRUCTURAL ENGINEER. NEVER IS IT ACCEPTABLE FOR CABLING TO IMPEDE OR HINDER THE ACCESSING OF THE ABOVE CEILING SPACE OR ANY ABOVE CEILING MOUNTED EQUIPMENT. CABLES ARE NOT TO BE WRAPPED AROUND ANY BUILDING STRUCTURAL SUPPORTS OR BUILDING SERVICES. ALL APPROPRIATE COLLEGE AND BICSI INSTALLATION PRACTICE CLEARANCES FROM FIXTURES, CONTROLS, AND ACCESS DEVICES OF ANY KIND ARE TO BE ADHERED TO. CABLING IS NEVER TO RUN THROUGH OR IMPEDE THE OPERATION OF ANY AIRHANDLING DUCTS OR DAMPERS.
16. WHERE PATHWAY CONSISTS OF MULTIPLE CONDUITS OR SLEEVES, A PATHWAY MUST BE FILLED TO CURRENT TIA AND BICSI INSTALLATION RECOGNIZED MAXIMUM FILL BEFORE UTILIZING THE NEXT VACANT OR PARTIALLY FILLED PATHWAY.
17. OVERHEAD AND WALL MOUNTED LADDER (TYPE) RACKING INSTALLATION SHALL MATCH THE DRAWINGS AS CLOSELY AS POSSIBLE AND REQUIRES A SHOP DRAWING FOR EACH ROOM LOCATION. THE PACKAGE IS TO INCLUDE A BILL OF MATERIALS WITH PART NUMBERS FROM RACKING MANUFACTURER FOR MOUNTING AND CONNECTION PIECE PARTS. PRIOR TO ANY ROUGH-IN WORK BEING PERFORMED THESE SUBMITTALS MUST BE APPROVED BY THE COLLEGE REPRESENTATIVE.
18. ALL CABLING AND THEIR PATHWAYS PASSING THROUGH A RATED FIRE OR SMOKE BARRIER MUST BE PROPERLY SLEEVED AND FIRE STOPPED USING APPROVED (UL CLASSIFIED) FIRE STOP ASSEMBLIES. FIRESTOP ASSEMBLIES ARE TO BE INSTALLED PER THE MANUFACTURERS INSTRUCTIONS FOR THE TYPE OF BARRIER, PATHWAY SIZE, AND QUANTITY OF CABLES THE FIRESTOP ASSEMBLY IS BEING INSTALLED FOR. CONTRACTOR IS REQUIRED TO MAINTAIN TRAINING RECORDS FOR ALL STAFF PERFORMING FIRESTOP ASSEMBLY INSTALLATION WORK.
19. CABLE PULLING - LINE/ROPE/TAPE SHALL BE PLACED IN ALL NEW CONDUITS. ALL UNUSED CONDUITS SHALL ALSO BE CAPPED AND/OR PROPERLY FIRE STOPPED IN A MANNER APPROVED BY THE COLLEGE AND/OR THE AHJ.
20. CONTRACTOR TO COORDINATE WAO AND SUPPORTING CONDUIT WITH THE ELECTRICAL CONTRACTOR WHERE THE ELECTRICAL CONTRACTOR IS A DIFFERENT ORGANIZATION THAN LOW-VOLTAGE CABLING/CONDUIT CONTRACTOR FOR PROPER PLACEMENT.
21. ALL STATION CABLES SHALL BE NEATLY DRESSED AND SECURED FEET AT A MINIMUM EVERY FIVE FEET.
22. ALL STATION CABLES SHALL BE TERMINATED ON THE SAME FLOOR AS THE FLOOR SERVING BDF/IDF UNLESS OTHERWISE NOTED IN THESE DRAWINGS.
23. ALL STATION CABLING IS TO BE MECHANICALLY PROTECTED IN PLACE UNLESS OTHERWISE IDENTIFIED IN THESE DRAWINGS, BY A CONTRACT CHANGE RECORD, OR BY A RFI RESPONSE FROM THE COLLEGE REPRESENTATIVE IN WRITING DIRECTING SURFACE-MOUNT EXPOSED AS THE CABLE INSTALLATION MEANS.
24. ALL NEW AND REUSED STATION CABLES SHALL BE TESTED AND DOCUMENTED USING RECOGNIZED MANUFACTURER INSTALLATION REQUIREMENTS AND BICSI INSTALLATION PRACTICES. UTP (CATEGORY) CABLE TESTING RESULTS SHALL BE ONE TEST RECORD FOR EACH CABLE AND THE RECORD MUST INCLUDE THE COLLEGE APPROVED CABLE IDENTIFICATION STANDARD NAMING/NUMBERING SCHEME. OPTICAL FIBER TESTING SHALL FOLLOW ALL COLLEGE AND MANUFACTURER INSTALLATION PRACTICES. COAX TESTING SHALL FOLLOW BOTH COLLEGE AND THE ANSI/SCTE CABLE TESTING STANDARDS & BEST PRACTICES, INCLUDING BUT NOT LIMITED TO; ANSI/SCTE - 10-2014, 40-2011, 44-2010, 47-2007, 48-3-2011.
25. THE COLLEGE REQUIRES A ONE (1) METER SLACK LOOP FOR ALL WAO SUPPORTED BY OPEN CEILING CABLE DISTRIBUTION. THE SLACK LOOP MUST BE SUPPORTED ABOVE THE WAO IN NEAT AND REPEATABLE FASHION THAT MEETS BOTH BICSI INSTALLATION AND MANUFACTURER PRACTICES.
26. ALL STATION OUTLETS, WAO, AND TERMINATION POINTS INCLUDING EXISTING WAO UTILIZED UNDER THIS PROJECT SCOPE SHALL BE PROPERLY LABELED AND IDENTIFIED USING THE STANDARD COLLEGE INTERNAL DISTRIBUTION NAMING/NUMBERING SCHEME. IDENTIFIED IN THIS DRAWING SET. ALL LABELS ARE TO BE MACHINE GENERATED AND AN EXCEL TYPE MATRIX CREATED DEFINING LOCATION OF BOTH ENDS OF EACH LABELED CABLE. AS-BUILT CLOSEOUT PACKAGE MUST INCLUDE THESE STATION AND TERMINATION POINTS IDENTIFIED ON FLOOR PLANS FOR EACH LEVEL/FLOOR IN ADDITION TO THE STATION CABLING MATRIX. THE SAME CABLE IDENTIFICATION IS ALSO REQUIRED TO BE INCLUDED ON EACH CABLE TESTED RECORD BOTH HARD AND SOFT-COPY RECORD.
27. INCLUDED AS PART OF THE CABLING AS-BUILT DOCUMENTATION PACKAGE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TO THE COLLEGE THE ADD ON TO THE CURRENT STRUCTURED CABLING SOLUTION MANUFACTURER'S 25-YEAR EXTENDED WARRANTY CERTIFICATE FOR THIS PROJECT.
28. THE WAO UTP 8-CONDUCTOR JACKS ARE DESCRIBED WITHIN THIS DOCUMENT SET AS RJ-45 JACKS/INSERTS. THE DESIGNERS ARE AWARE THAT ABBREVIATION RJ-45 IS A FCC - REGISTERED JACK WITH 8-CONDUCTORS AND DESCRIPTION IN THIS DOCUMENT SET IS FOR A UTP CATEGORY CABLE RATED JACK/INSERT AND NOT FOR FCC INTERFACE JACKS.
29. NOT ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE USED IN THE DRAWING SET CURRENTLY, BUT ARE THERE, SHOULD THE SCOPE GROW TO INCLUDE SUCH WORK.
30. THE CONTRACTOR SHALL PROVIDE WIRE GUARDS FOR ALL EXPOSED AUDIO, VISUAL, AND NETWORK DEVICES LOCATED IN AREAS THAT CAN BE SUBJECT TO VANDALISM. FOR CLARIFICATION THE CONTRACTOR SHALL DISCUSS WITH CONSTRUCTION MANAGER.
31. ALL CONDUITS CROSSING BUILDING SEISMIC SEPARATIONS OR EXPANSION JOINTS SHALL BE PROVIDED WITH APPROVED CONNECTORS. REFER TO ARCHITECTURAL PLANS FOR ALL EXPANSION JOINT LOCATIONS.
32. COORDINATE INSTALLATION OF LIGHTING FIXTURES WITH CABLE TRAY AND EQUIPMENT IN BDF, IDF, AND ALL A/V ROOMS/SPACES TO

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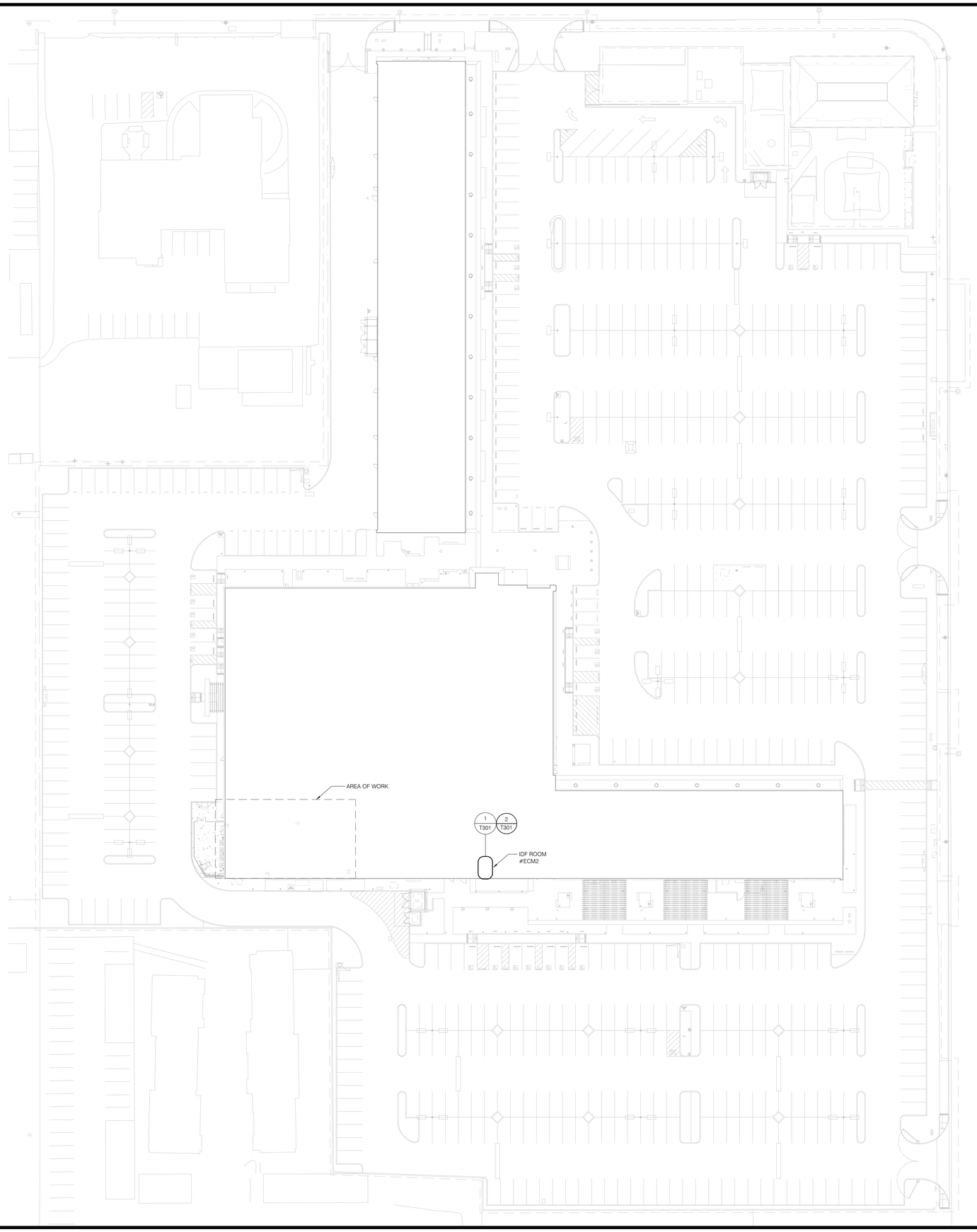

GENERAL NOTES

1. NO SCOPE OF WORK ON SITE PLAN. AREA OF WORK SHOWN FOR REFERENCE.

IDENTIFICATION STAMP
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APP: 04-117752 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects

5015021-100

3546 Concours Street / Ontario, CA 91764
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ISSUE:

No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Keynotes:

Notes:

Consultant:

P2S ENG
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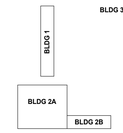
Consultant's Project No. J9348

REGISTERED PROFESSIONAL ENGINEER
No. E19609
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 09/27/2018

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO -HVAC LAB

Sheet Title:

SITE PLAN

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

Sheet:

T101

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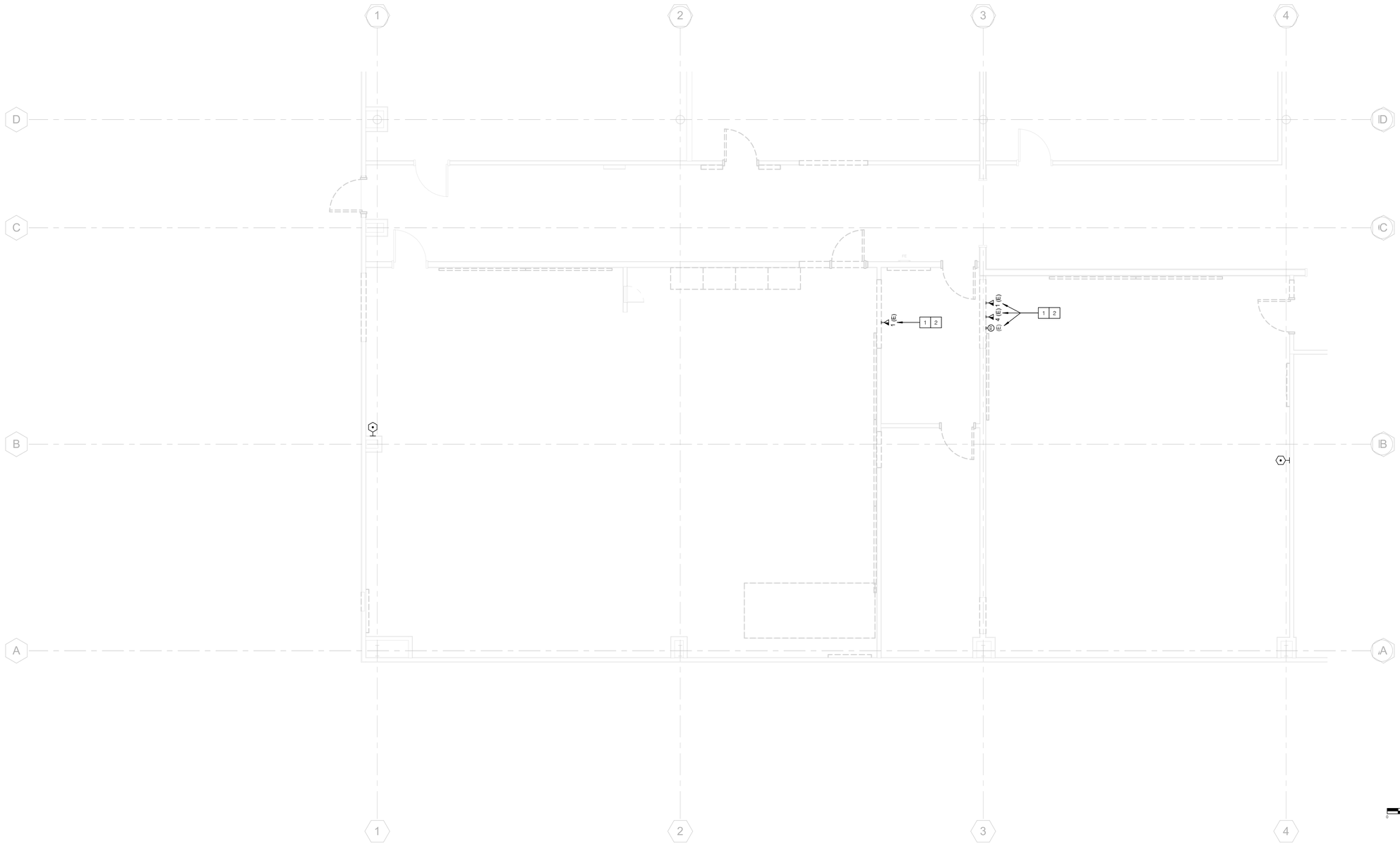
NOTES

1. REMOVE ALL LOW-VOLTAGE CABLING ONCE CONFIRMED THAT ALL SERVICES HAVE BEEN DISCONNECTED.
2. VERIFY THAT NO CABLING IN THE DEMOLITION AREA IS SERVING ADJACENT SPACES. THESE CABLES ARE TO BE TAGGED, RETAINED AND MARKED ON AS-BUILT PLANS.



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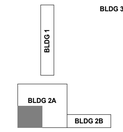
Consultant's Project No. J9348

REGISTERED PROFESSIONAL ENGINEER No. E16609 ELECTRICAL STATE OF CALIFORNIA

SIGNED: 09/27/2018

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:

PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:

PALOMAR COLLEGE ESCONDIDO -HVAC LAB

Sheet Title:

LEVEL 1 DEMO PLAN

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

Sheet:

T201

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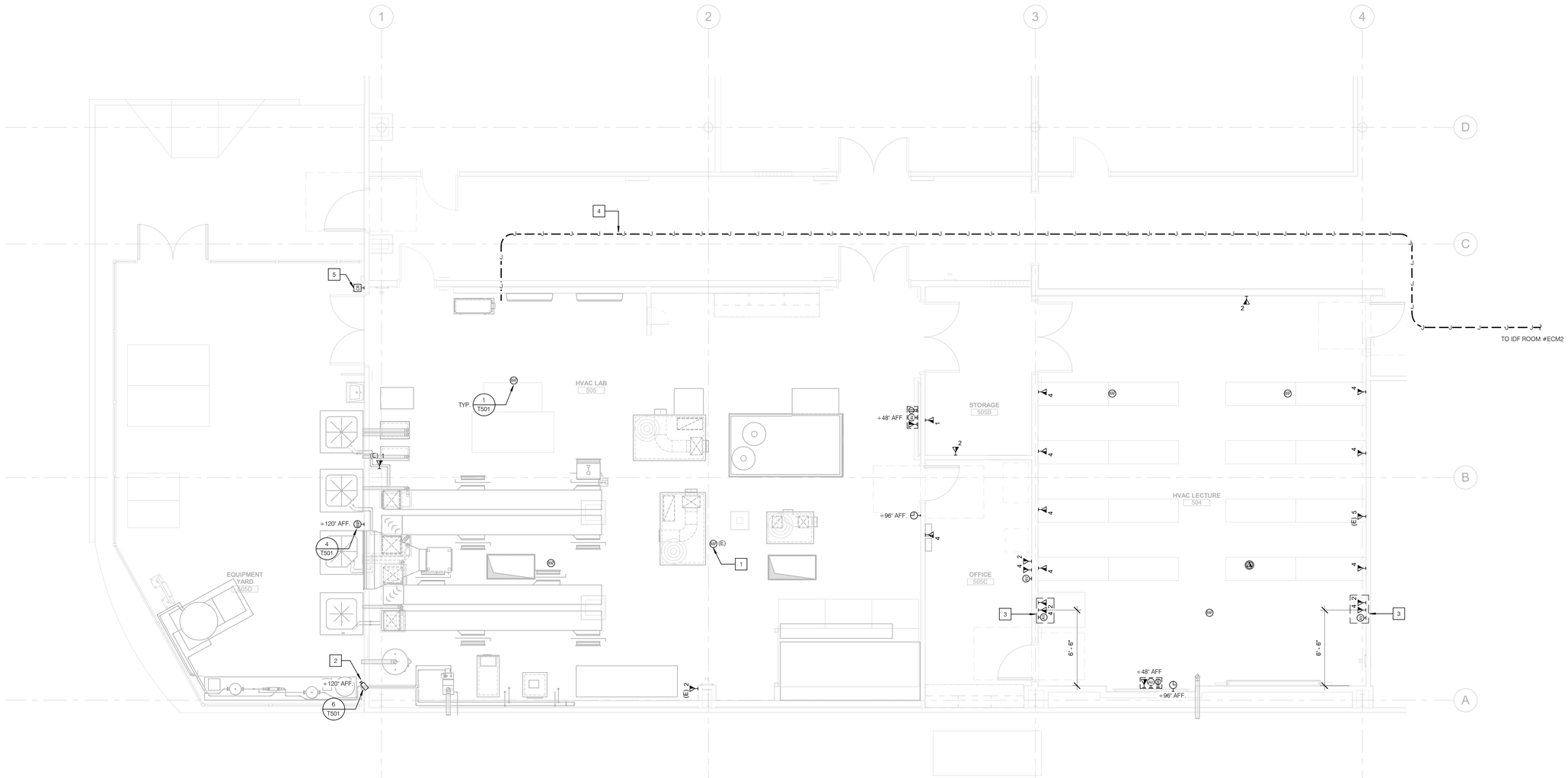
GENERAL NOTES

1. ALL CATEGORY CABLING SHALL BE TERMINATED IN IDF ECM2 ON NEW PATCH PANELS INSTALLED IN RACK #2. REFER TO SHEET T301 FOR DETAILS.
2. EXISTING J-HOOK PATHWAY SHALL BE FOLLOWED FOR ROUTING THE CATEGORY CABLING TO THE IDF ROOM ECM2.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REPLACING DAMAGED CEILING TILES IN AREAS OF PROJECT ACTIVITY.
4. ASSISTIVE LISTENING SYSTEM (ALS) SHALL BE PROVIDED AND INSTALLED BY THE CAMPUS.

NOTES

1. EXISTING WAP TO REMAIN IN PLACE.
2. CAMERA LOCATION IS PRELIMINARY. CONTRACTOR SHALL VERIFY FINAL PLACEMENT OF CAMERA WITH THE OWNER PRIOR TO ANY INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL SYSTEM HARDWARE INSTALLATION, CONFIGURATION AND CHECKOUT PRIOR TO PERFORMANCE VERIFICATION TESTING BEING CONDUCTED WITH THE OWNER.
3. DATA, AV AND ELECTRICAL OUTLETS AT INSTRUCTOR'S STATION LOCATIONS SHALL BE DIRECTLY ADJACENT TO ONE ANOTHER.
4. ALL NEW COMMUNICATION CABLING INSTALLATION SHALL ROUTE IN ACCESSIBLE CEILING SPACE IN CORRIDOR. PROVIDE FIRESTOP PENETRATIONS AT 1HR/2HR FIRE RATED WALL. FOR HARD LID CEILING, PROVIDE AND INSTALL (1) 4" CONDUIT.
5. PROVIDE AND INSTALL CARD READER PER EXISTING CAMPUS STANDARD.



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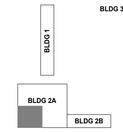
SIGNED: 09/27/2018

Key Plan:



PALOMAR COLLEGE
Learning for Success

Facility:
PALOMAR COLLEGE ESCONDIDO EDUCATION CENTER
PALOMAR COLLEGE
1951 East Valley Parkway
Escondido, CA 92025

Project:
PALOMAR COLLEGE ESCONDIDO -HVAC LAB

Sheet Title:
LEVEL 1 FLOOR PLAN

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

Sheet:
T202

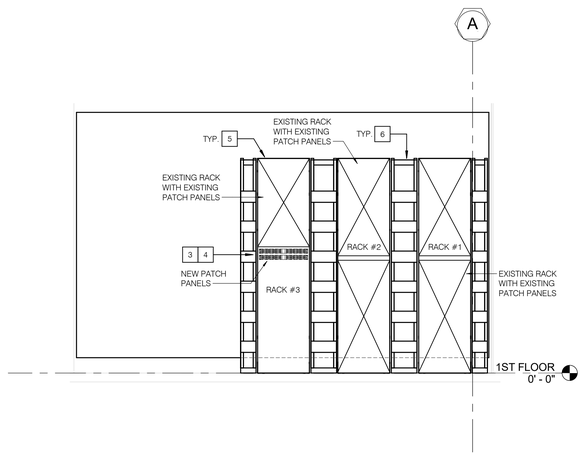
If the sheet is not 30"x42", it is a reduced print. Scale Accordingly.

GENERAL NOTES

1. ALL CONDUITS THAT ARE PART OF PROJECT SCOPE SHALL BE FITTED WITH BONDING RING AND NON-SNAG BUSHING.
2. ALL CONDUITS THAT ARE PART OF PROJECT SCOPE SHALL BE FIRE STOPPED AS PER COLLEGE APPROVED STANDARD.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REPLACING DAMAGED CEILING TILES IN AREAS OF PROJECT ACTIVITY.

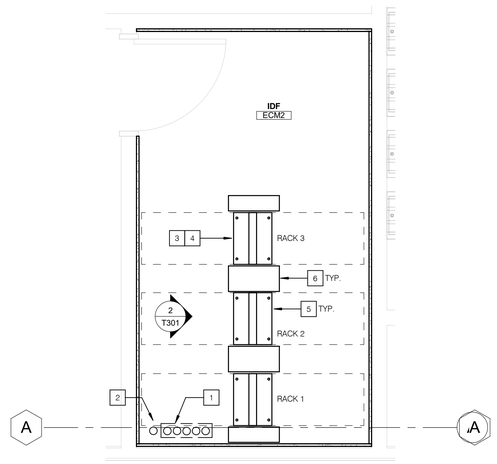
NOTES

1. EXISTING (4) 4" AND (1) 3" CONDUITS.
2. PROVIDE AND INSTALL (1) 4" CONDUIT SLEEVE FROM THE CABLE TRAY TO ACCESSIBLE CEILING SPACE. PROVIDE UNISTRUT AND SUPPORT CLAMPS TO SUPPORT NEW CONDUIT. MATCH EXISTING INSTALLATION.
3. PROVIDE AND INSTALL (2) CAT 6A ANGLED 110-STYLE 48-PORT PATCH PANELS LEVITON PART #6A587-U48 IN EXISTING RACK. LABEL PATCH PANELS TO MATCH EXISTING STANDARD.
4. TERMINATE ALL NEW CAT 6A CABLING UNDER SCOPE OF WORK ON NEW PATCH PANELS.
5. EXISTING EQUIPMENT RACK.
6. EXISTING VERTICAL WIRE MANAGER.



2 ENLARGED IDF LAYOUT - RACK ELEVATION

SCALE: NONE



1 ENLARGED IDF LAYOUT - EQUIPMENT PLAN

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

N

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SS ☑ FLS ☑ ACS ☑
DATE: 12/13/2018

HMC Architects
5015021-100
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ISSUE:

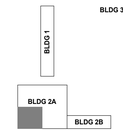
No.	Issued	Date	No.	Issued	Date
	DSA SUBMITTAL	10.04.2018			
	DSA BACKCHECK	12.11.2018			

Keynotes:

Notes:

Consultant:
P2S ENG
Long Beach | Los Angeles
San Diego | San Jose
p2sinc.com
Consultant's Project No. J9348
No. E18609
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 09/07/2018

Key Plan:



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LEVEL 1 IDF LAYOUT

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Sheet:

T301

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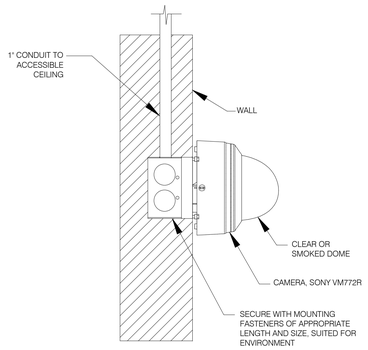
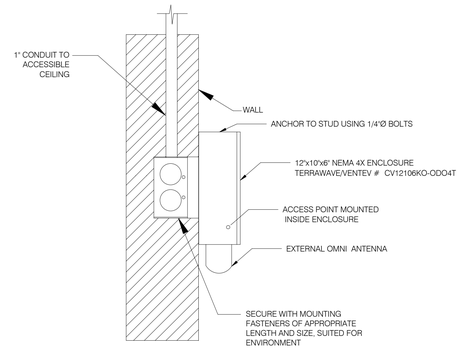
SYMBOL



6 WALL MOUNT MINI DOME

NO SCALE

SYMBOL

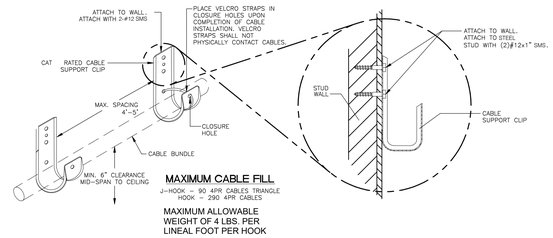


4 EXTERIOR AP WALL MOUNT

NO SCALE

GENERAL NOTES

1. SUPPORT CLIPS MUST SPECIFICALLY BE DESIGNED AND RATED FOR USE IN CATEGORY 6A CABLE INSTALLATION.
2. INSTALL APPROPRIATE SIZE AND QUANTITY SUPPORT CLIPS FOR CABLES TO BE SUPPORTED +30% EXPANSION.
3. USE MANUFACTURERS RECOMMENDED MOUNTING HARDWARE, APPROPRIATE FOR ATTACHING TO CEILING STRUCTURES.
4. CEILING TILE TEE GRID, DROP WIRES AND HVAC EQUIPMENT SHALL NOT BE USED AS MOUNTING POINTS.
5. SECURE CABLE IN SUPPORT CLIPS AS PER MANUFACTURES RECOMMENDATION FOR CAT 6A CABLE. DO NOT EXCEED INDICATED FILL RATIOS.
6. CABLE SUPPORT CLIPS SHALL BE SPACED A MAXIMUM OF 5' APART.
7. CABLE TRAY TO BE PROVIDED. SUPPORT CLIPS TO BE PROVIDED IN AREAS WHERE QUANTITIES OF CABLE ARE INSUFFICIENT TO REQUIRE CABLE TRAY.



MAXIMUM CABLE FILL

J-HOOK = 90 4PR CABLES TRIANGLE
HOOK = 290 4PR CABLES

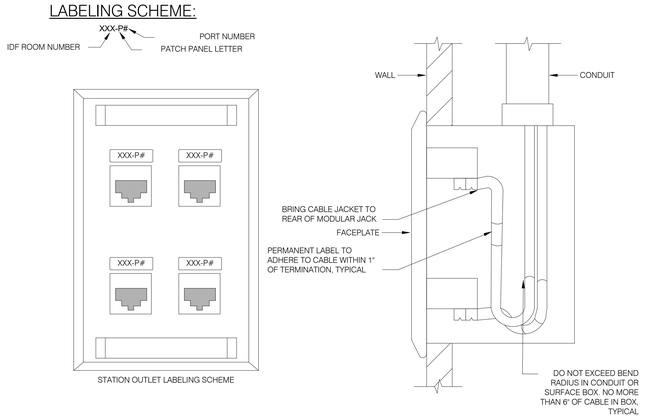
MAXIMUM ALLOWABLE WEIGHT OF 4 LBS. PER LINEAL FOOT PER HOOK

2 TYPICAL J-HOOK INSTALLATION

NO SCALE

SYMBOL

LABELING SCHEME:



FRONT VIEW

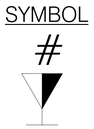
SIDE VIEW

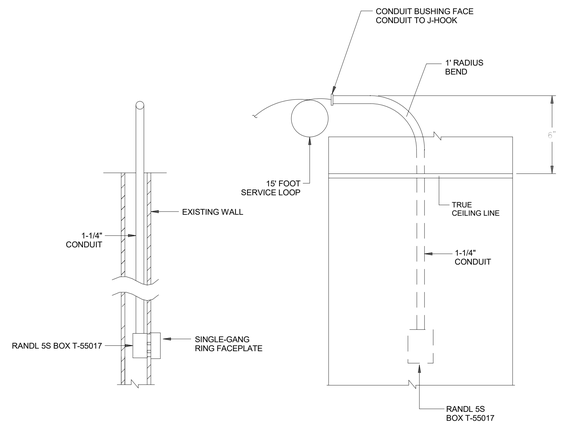
DETAIL NOTES:
FOR ALL UNUSED PORTS, PROVIDE BLANK INSERTS

5 STANDARD OUTLET

NO SCALE

SYMBOL

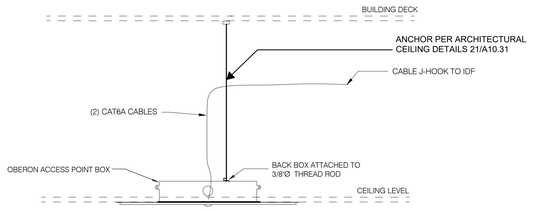




3 TYPICAL OUTLET CONCEALED CONDUIT

NO SCALE

SYMBOL



NOTE: ACCESS POINT AND ACCESS BOX IS LESS THAN 20LBS.

1 TYPICAL AP CEILING MOUNT

NO SCALE

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Sheet Title:
DETAILS

DSA APPROVED SET

Date: 12/11/18 | **Client Project No:** 5015021-100

Sheet:
T501

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