# BUILDING 1800B HALL PROJECT

## Solano College

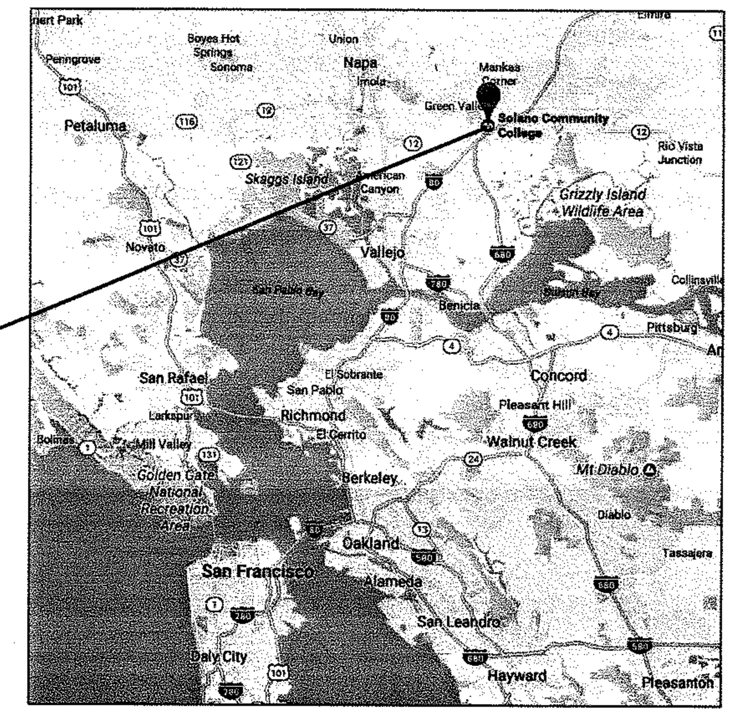
4000 Suisun Valley Rd, Fairfield, CA 94534

SOLANO COMMUNITY COLLEGE DISTRICT

4000 Suisun Valley Rd, Fairfield, CA 94534

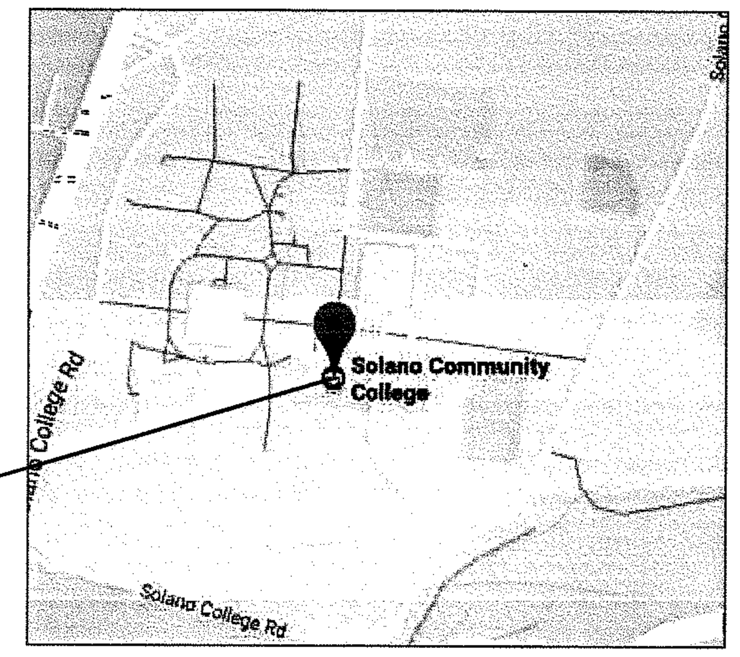
## CONSTRUCTION DOCUMENTS
## 100% MARCH 16, 2018

PROJECT SITE



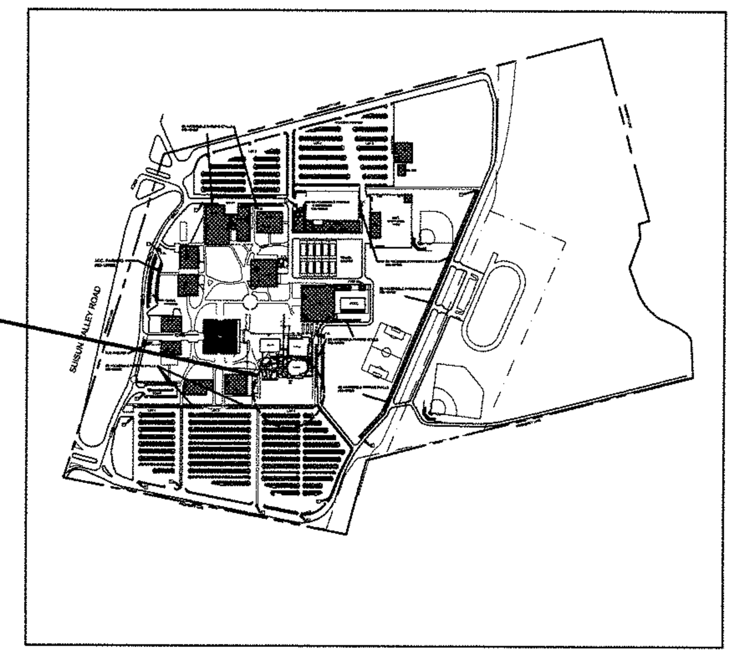

NORTHERN CALIFORNIA

PROJECT SITE




FAIRFIELD

PROJECT SITE



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MAY 0 4 2018

agency

BUILDING 1800B CORRIDOR PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

tBP project number: 20883.02

file name: A000 COVER SHEET

drawn by: checked by:

date: Feb. 23, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |
| | | |



drawing title:
COVER SHEET

drawing no.:
A000

drawing of

# ABBREVIATIONS

| | |
|---|---|
| & | AND |
| ∠ | ANGLE |
| @ | AT |
| ℄ | CENTERLINE |
| Ø | DIAMETER OR ROUND |
| # | NUMBER |
| AB | ANCHOR BOLT |
| AC | ASPHALTIC CONCRETE |
| ACC | ACCESSIBLE |
| ACP | ALUM. COMPOSITE PANEL |
| ACT | ACOUSTICAL TILE |
| ACOUS | ACOUSTICAL |
| AD | AREA DRAIN |
| ADH | ADHESIVE |
| ADJ | ADJACENT |
| AESS | ARCHITECTURALLY EXPOSED STRUCTURAL STEEL |
| AFF | ABOVE FINISH FLOOR |
| AGGR | AGGREGATE |
| ALT | ALTERNATE |
| ALUM | ALUMINUM |
| AMP | AMPERE |
| ANOD | ANODIZED |
| APPROX | APPROXIMATELY |
| ARCH | ARCHITECT |
| ASB | ASBESTOS |
| ASSY | ASSEMBLY |
| AWS | AMERICAN WOODWORK STANDARDS |
| AUTO | AUTO-ASSIST DOOR W/ WALL PUSH PLATES |
| BAT | BATTERY |
| BBD | BULLETIN BOARD |
| BD | BOARD |
| BLDG | BUILDING |
| BLKFACE | BLACK FACED INSULATION PANEL |
| BLKG | BLOCKING |
| BLR | BOILER |
| BLW | BELOW |
| BM | BEAM |
| BO | BOTTOM OF |
| BRKR | BREAKER |
| BTU | BRITISH THERMAL UNIT |
| BUR | BUILT UP ROOF |
| CA | CARPET |
| CAB | CABINET |
| CAS | CARD ACCESS SYSTEM |
| CAT | CATALOG |
| CB | CATCH BASIN |
| CEM | CEMENT |
| CF | CURB FACE |
| CFM | CUBIC FEET PER MINUTE |
| CHBD | CHALKBOARD |
| CHEM | CHEMICAL |
| CHWR | CHILLED WATER RETURN |
| CHWS | CHILLED WATER SUPPLY |
| CI | CAST IRON |
| CIR | CIRCLE |
| CJ | CONTROL JOINT |
| CL | CENTERLINE |
| CLG | CEILING |
| CLOS. | CLOSET |
| CLRM | CLASSROOM |
| CMT | CERAMIC MOSAIC TILE |
| CMU | CONCRETE MASONRY UNIT |
| CND | CONDUIT |
| CO | CLEANOUT |
| COL | COLUMN |
| COMM | COMMUNICATION |
| COMP | COMPOSITION |
| CONC | CONCRETE |
| CONF | CONFERENCE |
| CONN | CONNECTION |
| CONT | CONTINUOUS |
| CONTR | CONTRACTOR |
| COORD | COORDINATE |
| CORR | CORRIDOR |
| COV | COVER |
| CP | CONTROL PANEL |
| CPT | CENTER POINT |
| CR | CONDENSATE RETURN |
| CSWK | CASEWORK |
| CT | CERAMIC TILE |
| CTV | CABLE TELEVISION |
| CW | COLD WATER |
| (D) | DEMOLITION |
| DBL | DOUBLE |
| DEMO | DEMOLITION |
| DEPT | DEPARTMENT |
| DET | DETAIL |
| DF | DRINKING FOUNTAIN |
| DIA | DIAMETER |
| DIM | DIMENSION |
| DISP. | DISPENSER |
| DIST. | DISTANCE |
| DIV. | DIVISION |
| D.L. | DEAD LOAD |
| DN. | DOWN |
| DS. | DOWN SPOUT |
| DWG | DRAWING |
| (E) | EXISTING |
| EA | EACH |
| EL | EASEMENT LINE |
| EJ | EXPANSION JOINT |
| ELEC. | ELECTRICAL |
| ELEV. | ELEVATION |
| EMER. | EMERGENCY |
| ENCL. | ENCLOSURE |
| ENG | ENGINEER |
| ENGY | ENERGY |
| ENTR | ENTRANCE |
| EOD | EDGE OF DECK |
| EOS | EDGE OF SLAB |
| EP | EPOXY PAINT |
| EPG | EPOXY PAINT GLOSS |
| EPSG | EPOXY PAINT SEMI-GLOSS |
| EQ. | EQUAL |
| EQUIP. | EQUIPMENT |
| EST. | ESTIMATE |
| E.W.C. | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| EXH | EXHAUST |
| EXTG | EXISTING |
| EXP. | EXPANSION |
| EXPSD. | EXPOSED |
| EXT. | EXTERIOR |
| F | FACTORY FINISH |
| F.A. | FIRE ALARM |
| FC | FOOTCANDLE |
| F.D. | FLOOR DRAIN |
| FDC | FIRE DEPARTMENT CONNECTION |
| FDN | FOUNDATION |
| F.E. | FIRE EXTINGUISHER |
| FEC | FIRE EXTINGUISHER CABINET |
| FFE | FURNITURE, FIXTURES & EQUIPMENT |
| FG | FIRE-RATED GLASS |
| FH | FIRE HYDRANT |
| FIN. | FINISH |
| FLASH. | FLASHING |
| FLR. | FLOOR |
| FLUOR. | FLUORESCENT |
| FO | FACE OF |
| FOF | FACE OF FINISH |
| FOS | FACE OF STUD |
| FRA | FIRE RATED ASSEMBLY |
| FR | FIRE RATED |
| FRP | FIBERGLASS REINFORCED PANEL |
| FS | FLOOR SINK |
| FT. | FOOT OR FEET |
| FTG. | FOOTING |
| FURR. | FURRING |
| FIXT | FIXTURE |
| G. | GAS |
| GA. | GAUGE |
| GALV. | GALVANIZED |
| GB | GRAB BAR |
| GL. | GLASS |
| GLU.LAM. | GLUE LAMINATED |
| GND. | GROUND |
| GPM | GALLONS PER MINUTE |
| GR. | GRADE |
| GYP. | GYPSUM |
| H.B. | HOSE BIB |
| HCN | HOLLOW CORE NATURAL FINISH |
| HCP | HOLLOW CORE PAINT FINISH |
| HDBD. | HARDBOARD |
| HDR | HEADER |
| HDW. | HARDWARE |
| HDWD. | HARDWOOD |
| HGT. | HEIGHT |
| H.M. | HOLLOW METAL |
| HORIZ. | HORIZONTAL |
| HP | HIGH POINT |
| HR. | HOUR |
| HSTAT | HUMIDISTAT |
| HTG. | HEATING |
| HTWR | HOT WATER RETURN |
| HTWS | HOT WATER SUPPLY |
| HVAC | HEATING, VENTILATING, AIR CONDITIONING |
| HVY | HEAVY |
| HW | HOT WATER |
| I.D. | INSIDE DIAMETER |
| INSUL. | INSULATION |
| INT. | INTERIOR |
| INV. | INVERT |
| IW | IRRIGATION WATER |
| JAN. | JANITOR |
| JCT. | JUNCTION |
| JT. | JOINT |
| K | KIP (1000 LB) |
| KIT. | KITCHEN |
| KO | KNOCKOUT |
| KVA | KILOVOLT AMPERE |
| LAB. | LABORATORY |
| LAQ. | LACQUER FINISH |
| LAV. | LAVATORY |
| LB. | POUND |
| LDG | LANDING |
| LL | LIVE LOAD |
| LT | LIGHT |
| LTG | LIGHTING |
| LTWT | LIGHTWEIGHT |
| LVL | LEVEL |
| LVR | LOUVER |
| LWC | LIGHTWEIGHT CONCRETE |
| M | METER |
| MAINT | MAINTENANCE |
| MAN | MANUAL |
| MAS | MASONRY |
| MATL. | MATERIAL |
| MAWC. | MATCH ADJ. WALL COLOR |
| MAX. | MAXIMUM |
| MCC | MOTOR CONTROL CENTER |
| ME | MATCH EXISTING |
| MECH. | MECHANICAL |
| MED | MEDIUM |
| MEP | MECHANICAL, ELECTRICAL PLUMBING |
| MEZZ | MEZZANINE |
| MFR. | MANUFACTURER |
| MH | MAGNETIC HOLD |
| MIN. | MINIMUM |
| MIR | MIRROR |
| MISC. | MISCELLANEOUS |
| MKR | MARKER |
| MTL. | METAL |
| MTD. | MOUNTED |
| MUL. | MULLION |
| MVBL | MOVABLE |
| "N" | NEW |
| (N) | NEW |
| N. | NORTH |
| N/A | NOT APPLICABLE |
| NAT. | NATURAL |
| NC | NON COMBUSTIBLE |
| NEG | NEGATIVE |
| N.I.C. | NOISE ISOLATION CLASS |
| NO. | NUMBER |
| NOM. | NOMINAL |
| NRC | NOSIE REDUCTION COEFFICIENT |
| NTS | NOT TO SCALE |
| O.A. | OVERALL |
| OBS. | OBSCURE |
| O.C. | ON CENTER |
| O.D. | OUTSIDE DIAMETER |
| O.F. | OVERFLOW DRAIN |
| OFCI | OWNER FURNISHED-CONTRACTOR INSTALLED |
| OFF | OFFICE |
| OFOI | OWNER FURNISHED-OWNER INSTALLED |
| OPNG. | OPENING |
| OPP. | OPPOSITE |
| OVHD | OVERHEAD |
| PART. | PARTITION |
| PB | PULL BOX |
| PBD | PARTICLEBOARD |
| PC | PORTLAND CEMENT |
| PERF | PERFORATED |
| PERP | PERPENDICULAR |
| PES | PAINT EGGSHELL |
| PF | PAINT FLAT |
| PG | PAINT GLOSS |
| PH | EMERGENCY EGRESS HARDWARE |
| PIV | POST INDICATOR VALVE |
| P.L. | PROPERTY LINE |
| PLAS. | PLASTER |
| PLAT. | PLATFORM |
| PLBG | PLUMBING |
| PLF | POUNDS PER LINEAR FOOT |
| PLS | PAINT LOW SHEEN |
| PLYWD. | PLYWOOD |
| PNL | PANEL |
| POS | POSITIVE |
| POT | PATH OF TRAVEL |
| PP | PORTABLE PARTITION |
| PR. | PAIR |
| PREFAB | PREFABRICATED |
| PREFIN | PREFINISHED |
| PRELIM | PRELIMINARY |
| PROJ | PROJECT |
| PS | PREFINISHED STEEL |
| PSF | POUNDS PER SQUARE FOOT |
| PSG | PAINT SEMI-GLOSS |
| PSI | POUNDS PER SQUARE INCH |
| PTS | PILE TYPE SEALS (HEAD AND JAMB) |
| PVC | POLYVINYL CHLORIDE |
| Q.T. | QUARRY TILE |
| QTY | QUANTITY |
| R. | THERMAL RESISTANCE |
| RAD. | RADIUS |
| R.D. | ROOF DRAIN |
| RDWD. | REDWOOD |
| REF. | REFERENCE |
| REF. | REFRIGERATOR |
| REG. | REGISTER |
| REINF. | REINFORCING |
| REQD. | REQUIRED |
| RESIL. | RESILIENT |
| RET | RETURN |
| REV. | REVERSE |
| RFG | ROOFING |
| RM. | ROOM |
| R.O. | ROUGH OPENING |
| S | SEAL |
| S.B. | SPLASH BLOCK |
| S.C. | CONCRETE WITH SEALER |
| SCHED. | SCHEDULE |
| SCN | SOLID CORE NATURAL FINISH |
| SCP | SOLID CORE PAINT FINISH |
| SCPL | SOLID CORE PLASTIC LAMINATE |
| SCS | SOLID CORE STAIN FINISH |
| S.D. | STORM DRAIN |
| SECT. | SECTION |
| S.E.D. | SEE ELECTRICAL DWGS |
| SF | STAIN FINISH |
| SFL | STAIN FINISH W/ LACQUER |
| SFV | STAIN FINISH W/ VARNISH |
| SG | SOUND GASKETED |
| SHT. | SHEET |
| SIM. | SIMILAR |
| S.M.D. | SEE MECHANICAL DWGS |
| S.O.G. | SLAB ON GRADE |
| SPEC. | SPECIFICATIONS |
| S.P.D. | SEE PLUMBING DWGS |
| SPLY | SUPPLY |
| SPKR | SPEAKER |
| SQ. | SQUARE |
| S.S. | STANDING SEAM |
| S.S.D. | SEE STRUCTURAL DWGS |
| S.SK. | SERVICE SINK |
| SST. | STAINLESS STEEL |
| ST | STREET |
| STAG | STAGGERED |
| STC | SOUND TRANSMISSION CLASS |
| STD. | STANDARD |
| STL. | STEEL |
| STM | STEAM |
| STOR | STORAGE |
| STRUCT. | STRUCTURAL |
| SURF | SURFACE |
| SUSP. | SUSPENDED |
| SWBD | SWITCHBOARD |
| SWGR | SWITCHGEAR |
| SWR | SEWER |
| SYM. | SYMBOL |
| SYS | SYSTEM |
| SFPD | SEE FIRE PROTECTION DRAWINGS |
| T. | TEMPERED GLASS |
| T. & B. | TOP AND BOTTOM |
| T. & G. | TONGUE AND GROOVE |
| TD | TRENCH DRAIN |
| TECH | TECHNICAL |
| TEL. | TELEPHONE |
| TEMP. | TEMPERATURE |
| THK | THICK |
| THRES. | THRESHOLD |
| THRU | THROUGH |
| TKBD | TACKBOARD |
| T.O. | TOP OF |
| TOT | TOTAL |
| TR. | TREAD |
| TRNSF. | TRANSFORMER |
| TYP. | TYPICAL |
| U | HEAT TRANSFER COEFFICIENT |
| UC | UNDERCUT DOOR |
| UGND | UNDERGROUND |
| UNFIN. | UNFINISHED |
| UNO | UNLESS NOTED OTHERWISE |
| U.O.N. | UNLESS OTHERWISE NOTED |
| UPG | URETHANE PAINT GLOSS |
| UPSG | URETHANE PAINT SEMI-GLOSS |
| UR. | URINAL |
| UTIL | UTILITY |
| V | VOLT |
| VAC | VACUUM |
| VAR | VARIES |
| VAV | VARIABLE AIR VOLUME |
| V.C.T. | VINYL COMPOSITION TILE |
| VERT. | VERTICAL |
| VEST. | VESTIBULE |
| VF | VARNISH |
| W | WATT |
| W/ | WITH |
| W.C. | WATER CLOSET |
| WD. | WOOD |
| WDW. | WINDOW |
| WHSE | WAREHOUSE |
| WL | WIND LOAD |
| WLD | WELDED |
| WP | WORKING POINT |
| WPG | WATERPROOFING |
| WR | WATER RESISTANT |
| WSCT. | WAINSCOT |
| WT | WEIGHT |
| W.W.F. | WELDED WIRE FABRIC |
| XC | EXISTING CONCRETE |
| XFMR | TRANSFORMER |

# APPLICABLE CODES

1. 2016 EDITION OF TITLE 24 (CALIFORNIA BUILDING STANDARDS CODE) OF THE CALIFORNIA CODE OF REGULATIONS (CCR) AND THE LATEST SUPPLEMENTS:

   PART 01 CALIFORNIA STANDARDS BUILDING ADMINISTRATIVE CODE (CAC)
   PART 02 CALIFORNIA BUILDING CODE (CBC)
   PART 03 CALIFORNIA ELECTRICAL CODE (CEC)
   PART 04 CALIFORNIA MECHANICAL CODE (CMC)
   PART 05 CALIFORNIA PLUMBING CODE (CPC)
   PART 06 CALIFORNIA ENERGY CODE
   PART 09 CALIFORNIA FIRE CODE (CFC)
   PART 11 CALIFORNIA GREEN BUILDING STANDARDS CODE CALGREEN CODE)
   PART 12 CALIFORNIA REFERENCE STANDARDS CODE

2. STATE OF CALIFORNIA, TITLE 19, STATE FIRE MARSHAL (SFM) - PUBLIC SAFETY REGULATIONS

3. PARTIAL LIST OF APPLICABLE STANDARDS

| | | |
|---|---|---|
| NFPA 13 | STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED) | 2016 EDITION |
| NFPA 14 | STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS | 2013 EDITION |
| NFPA 17 | STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS | 2013 EDITION |
| NFPA 17A | STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS | 2013 EDITION |
| NFPA 20 | STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION | 2016 EDITION |
| NFPA 22 | STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION | 2013 EDITION |
| NFPA 24 | STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES | 2016 EDITION |
| NFPA 72 | NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) | 2016 EDITION |
| NFPA 80 | STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES | 2016 EDITION |
| NFPA 2001 | STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS | 2015 EDITION |
| UL 300 | STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT | 2005 (R2010) |
| UL 464 | AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES | 2003 EDITION |
| UL 521 | STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS | 1999 EDITION |
| UL 1971 | STANDARD FOR SIGNALING DEVICES FOR HEARING IMPAIRED | 2002 EDITION |
| UL 300 | STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS | 2012 EDITION |

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

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

4. STATE OF CALIFORNIA, TITLE 8, DEPARTMENT OF INDUSTRIAL RELATIONS, CHAPTER 4 DIVISION OF INDUSTRIAL SAFETY, SUB CHAPTER 6 ELEVATOR SAFETY ORDERS.

   2007 ASME A17.1 (W/A17.1a/ CSA B44a-08 ADDENDA) SAFETY CODE FOR ELEVATORS AND ESCALATORS.

# GENERAL NOTES

1. CHANGE TO THE APPROVED DRAWINGS & SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) AND APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
2. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. INSPECTOR SHALL BE CLASS 3.
3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
4. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK, (SECTION 4-317 (C), PART1, TITLE 24, CCR)
5. ALL WORK SHALL CONFORM TO 2016 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
6. NEW CONSTRUCTION, IF SPECIFICALLY NOTED IN THE ARCHITECTURAL DRAWINGS, WILL EITHER BE UNPREFIXED OR PREFIXED BY "_" OR "(N)" OR "N".
7. EXISTING CONSTRUCTION, IF SPECIFICALLY NOTED IN THE ARCHITECTURAL DRAWING, WILL ALWAYS BE PREFIXED BY (E).
8. DO NOT SCALE DRAWINGS.

# GENERAL CONFORMANCE

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. 02-116615 File No.48-C1 )

☒ The drawings or sheets listed on the cover or index sheet (showing with an Asterisk*)
☐ This drawing, page or 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 spcifications 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.

Signature: EP [illegible] SEE UP ARCH Date: 5/2/18

Architect or Engineer designated to be in general responsible charge
Print Name: PHIL NEWSOM
License Nuber: C23270 Exp Date: 10-31-19

# SCOPE OF WORK

REMODEL EXISTING CLASSROOM TO ACCOMMODATE NEW HALL, WITH EXISTING BUILDING 1800B SOLANO COLLEGE CAMPUS

THE REMODEL SCOPE IS TO INCLUDE ONE NEW PARTITION, NEW SECONDARY ENTRY AT EXISTING STOREFRONT, REPAINTING OF TWO INTERIOR SPACES, RE-CONFIGER MECHANICAL REGISTERS, AND ELECTRICAL OUTLETS/DATA AND UPDATE LIGHTING AT 1 CLASSROOM.

# DEFERRED APPROVALS

N/A

# DRAWING LIST

## GENERAL
4 sheets — 23 sheets total



## ARCHITECTURAL DRAWINGS
6 sheets



## MECHANICAL DRAWINGS
3 sheets



## FIRE PROTECTION
3 sheets



## ELECTRICAL DRAWINGS
7 sheets



# REFERENCE SYMBOLS

## FULL BUILDING SECTION
A / A-4 — LETTER ABOVE - SECTION; NUMBER BELOW - SHEET NUMBER

## PARTIAL BUILDING SECTION / WALL SECTION
B / A-4 — LETTER ABOVE - SECTION; NUMBER BELOW - SHEET NUMBER

## EXTERIOR ELEVATION
1 / A-3 — NUMBER ABOVE - ELEVATION NUMBER; NUMBER BELOW - SHEET NUMBER

## DETAIL
2 / 3.01 — NUMBER ABOVE - DETAIL NUMBER; NUMBER BELOW - SHEET NUMBER

## ROOM IDENTIFICATION WITH INTERIOR ELEVATION REFERNCES
101 / 2 / A-5 — NUMBER ABOVE - ROOM NUMBER; INTERIOR ELEVATION; NUMBER BELOW - SHEET NUMBER

## INTERIOR ELEVATION IDENTIFICATION
101 2 — NUMBER ABOVE - ROOM NUMBER; INTERIOR ELEVATION REFERENCE

## DOOR NUMBER IDENTIFICATION
101 — DOOR NUMBER - REFER TO DOOR SCHEDULE

## WINDOW TYPE IDENTIFICATION
A — WINDOW TYPE - REFER TO WINDOW DETAILS

## KEYNOTE REFERENCE
2 — KEYNOTE REFERENCE NUMBER

X — REFERENCE GRID

# MATERIAL SYMBOLS

| | |
|---|---|
| EARTH | PLYWOOD |
| SAND & GROUT | FINISH WOOD |
| CONCRETE | GYPSUM BOARD |
| STEEL | RIGID INSULATION |
| BATT INSULATION | ACOUSTICAL CEILING PANEL/ TILE |

# PROJECT DIRECTORY


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OFFICE OF REGULATION SERVICES
FILE # 48-C1
APPL # 02 116615
AC [illegible] FLS SS KG
DATE MAY 04 2018

Division of the State Architect
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BUILDING 1800B CORRIDOR PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUSISUN VALLEY ROAD
FAIRFIELD, CA. 94534
owner

| | |
|---|---|
| tBP project number: | 20883.02 |
| file name: | A001 SHEET INDEX |
| drawn by: | checked by: |
| date: | Feb. 23, 2018 |

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | 05/04/2018 | DSA BACKCHECK |

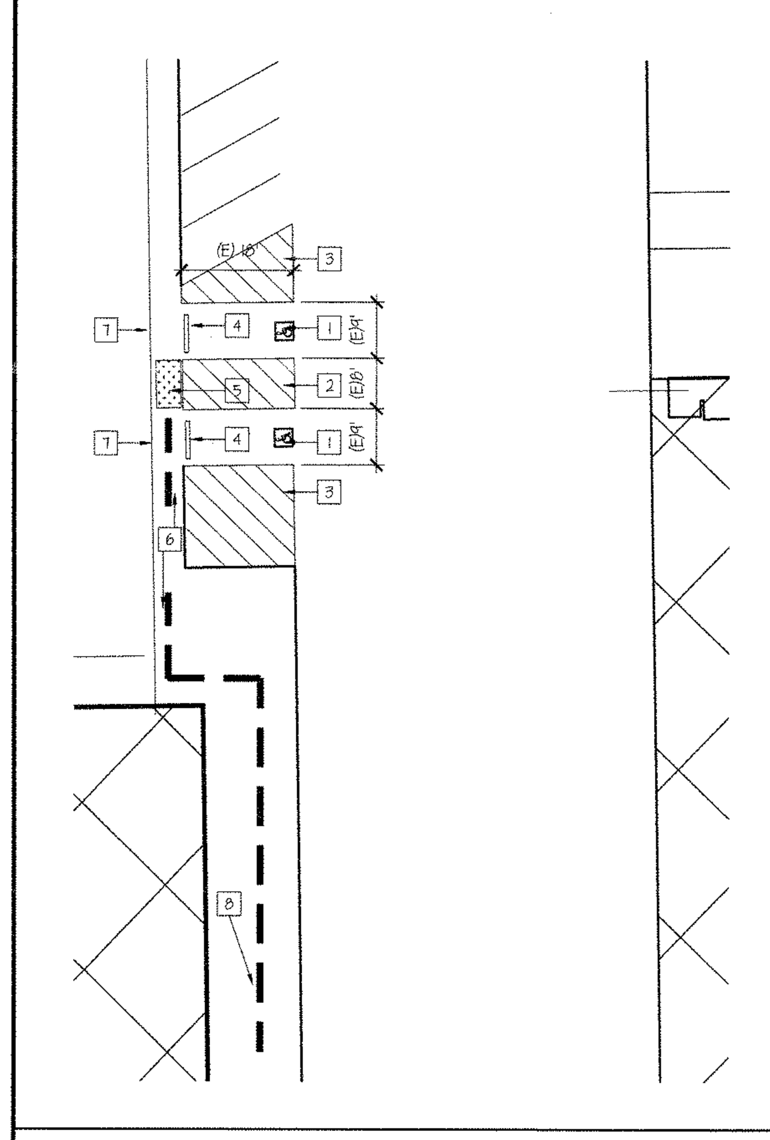


drawing title:
GENERAL NOTES, ABBREVS, & DRAFTING SYMBOLS

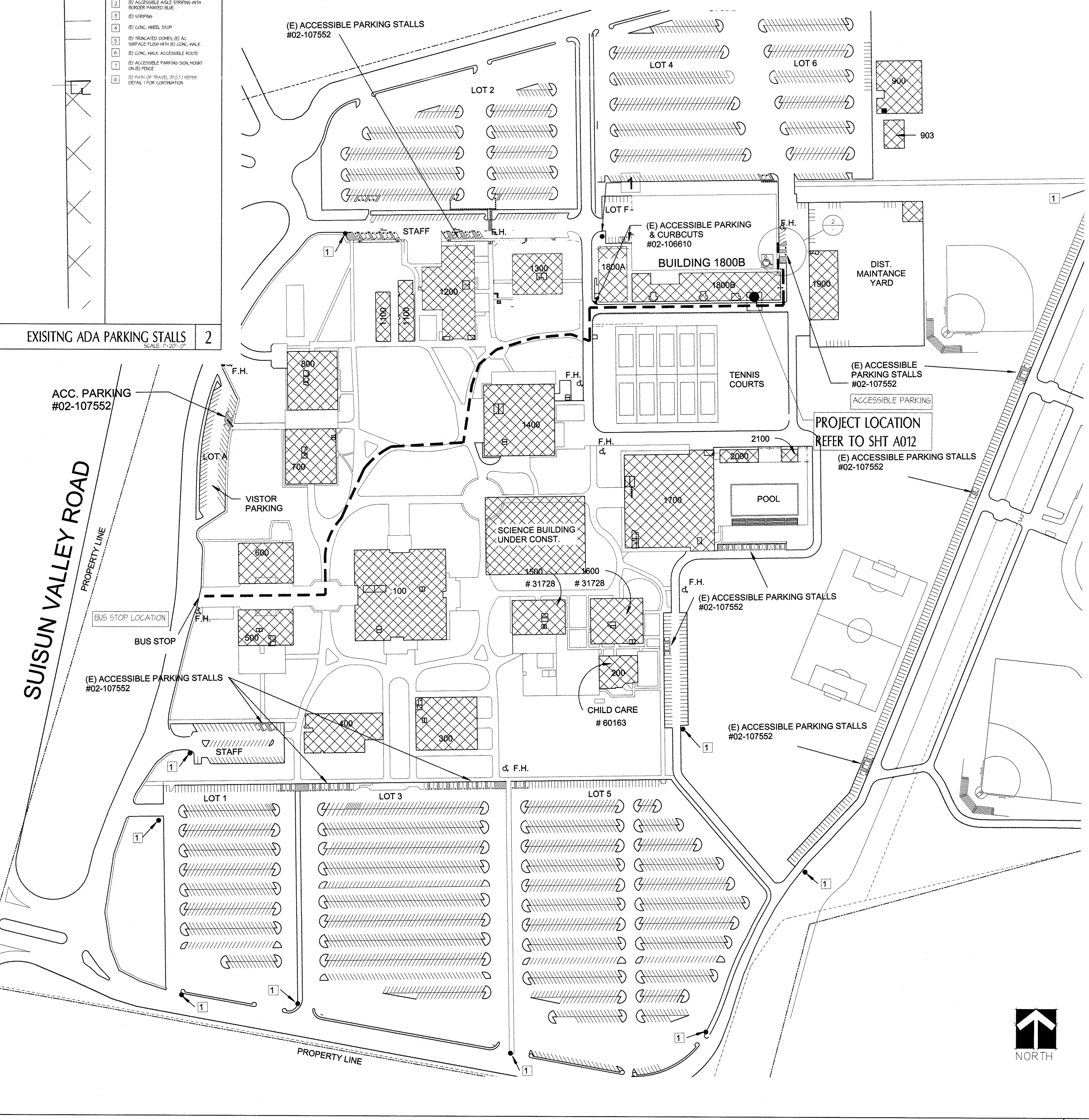
drawing no.:
A001
drawing of

## KEYNOTES

1. (E) WHITE SYMBOL OF ACCESSIBILTY
2. (E) ACCESSIBLE AISLE STRIPING WITH BORDER PAINTED BLUE
3. (E) STRIPING
4. (E) CONC. WHEEL STOP
5. (E) TRUNCATED DOMES, (E) AC SURFACE FLUSH WITH (E) CONC, WALK
6. (E) CONC, WALK ACCESSIBLE ROUTE
7. (E) ACCESSIBLE PARKING SIGN, MOUNT ON (E) FENCE
8. (E) PATH OF TRAVEL (P.O.T.) REFER DETAIL 1 FOR CONTINUATION



EXISITNG ADA PARKING STALLS 2
SCALE: 1"=20'-0"




(E) SITE PLAN - ACCESSIBLE PATH OF TRAVEL 1
SCALE: 1"=100'

## GENERAL NOTES

1. THIS DRAWING ILLUSTRATES THE APPROx. "SCOPE OF WORK" OF THIS PROJECT.
2. NOT USED
3. REFER TO DIVISION 1 SPECIFICATIONS FOR PROJECT PHASING. ADJUST CONSTRUCTION FENCING AS REQUIRED TO MAINTAIN "MEANS OF EGRESS".
4. REFER TO "STAGING SITE PLAN" PROVIDED BY COLLEGE FOR CONSTRUCTION STAGING AREA. ALL STAGING AND PARKING OPERATIONS SHALL OCCUR IN THIS AREA.
5. CONTRACTOR SHALL MAINTAIN FIRE VEHICLE ACCESS TO THE PROJECT SITE AND TO THE EXISTING FIRE HYDRANTS WITHIN THE PROJECT SITE.
6. CONTRACTOR SHALL MAINTAIN 10'-0" CLEARANCE BETWEEN CONSTRUCTION FENCING AND EXISTING ADJACENT BUILDINGS. CONSTRUCTION FENCING SHALL NOT OBSTRUCT THE "EXIT DISCHARGE" OR "PUBLIC WAY" FROM EXISTING ADJACENT BUILDINGS.
7. VERIFY ALL EXISTING & FINISH GRADES, DIMENSIONS & SITE CONDITIONS BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
8. CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL WITHIN THE PROJECT SCOPE OF WORK HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH **CBC CHAPTER 11B - DIVISION 4**.
9. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER FREE ACCESS ROUTE W/O ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGE NOT EXCEEDING 1/4" MAX AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED.
10. **REFER TO CBC CHAPTER 11B - DIVISION 7** FOR COMMUNICATION ELEMENTS & FEATURES INCLUDING SITE & BUILDING SIGNAGE, AND DETECTABLE WARNINGS.
11. "DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE "POT" IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE "POT" WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE "POT" THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THE 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 SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF "POT" ITEMS WITHIN THE SCOPE OF THIS PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, ARCHITECT SHALL BE NOTIFIED AND WILL PROVIDE DOCUMENTATION TO BRING BACK INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."

## EXISTING PARKING COUNT

| Parking Lot # | Total # of Spaces | Accessible Spaces | Parking Ratio |
|---|---|---|---|
| Lot #1 | 386 | 2 | 1% |
| Lot #2 | 416 | 6 | 1.4% |
| Lot #3 | 728 | 24 | 3.3% |
| Lot #4 | 391 | 2 | 0.5% |
| Lot #5 | 966 | 3 | 0.3% |
| Lot #6 | 251 | 0 | 0% |
| Lot A | 51 | 2 | 4% |
| Lot B | 60 | 3 | 5% |
| Lot D | 52 | 4 | 7.7% |
| Lot E | 84 | 21 | 25% |
| Lot F | 14 | 2 | 14.3% |
| Bldg 1900 | 21 | 2 | 9.5% |
| Athletic Fields | 221 | 10 | 4.5% |
| Bldg 1700B | 30 | 13 | 43% |
| Totals | 3671 | 94 | 2.6% |

## EXISTING BUILDING SUMMARY

| BLDG. NO. | DSA APPL. NO. | DATE | AREA |
|---|---|---|---|
| 100 | 02-110053, 01-102029, 31727, 43623 | 8/27/08, - | 49,600 SF |
| 200 | 60163, 43623 | | 9,562 SF |
| 300 | 31728, 43623, 31407 | | 24,240 SF |
| 400 | 01-100548, 43623 | | 1,440 SF |
| 500 | 31728, 43623, 31407 | | 11,616 SF |
| 600 | 31728, 43623, 31407 | | 13,056 SF |
| 700 | 31728, 43623, 31407 | | 16,864 SF |
| 800 | 40424, 43623 | | 17,856 SF |
| 900 | 38943, 43623 | | 2,447 SF |
| 1100 | 28325 | | 17,500 SF |
| 1200 | 35987, 43623 | | 25,251 SF |
| 1300 | 40424, 43623 | | 12,400 SF |
| 1400 | 31727, 43623 | | 30,976 SF |
| 1500 | 31728, 43623, 31407 | | 11,616 SF |
| 1600 | 31728, 43623, 31407 | | 14,336 SF |
| 1700 | 32298, 43623 | | 48,201 SF |
| 1800A | 34859, 43623 | | 9,660 SF |
| 1800B | 34859, 43623 | | 24,610 SF |
| 1900 | 31728, 43623, 31407 | | 10,730 SF |
| 2000 | 31728, 31407 | | 3,100 SF |
| 2100 | 32556, 43623 | | 3,500 SF |
| 2500 | 33490, 33013, 43623 | | |
| SWIM. POOL | 32556, 43623 | | 12,320 SF |
| ARCH. BARR-IERS | 43623 | | |
| 2700 | 02-115858 | | 44,249 SF |

## LEGEND

= ACCESSIBLE PATH OF TRAVEL
1 = ACCESSIBLE PARKING TOW AWAY SIGNAGE
= ACCESSIBLE PARKING
LIMIT OF WORK
= CAMPUS BUILDINGS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# BUILDING 1800B CORRIDOR PROJECT
# SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

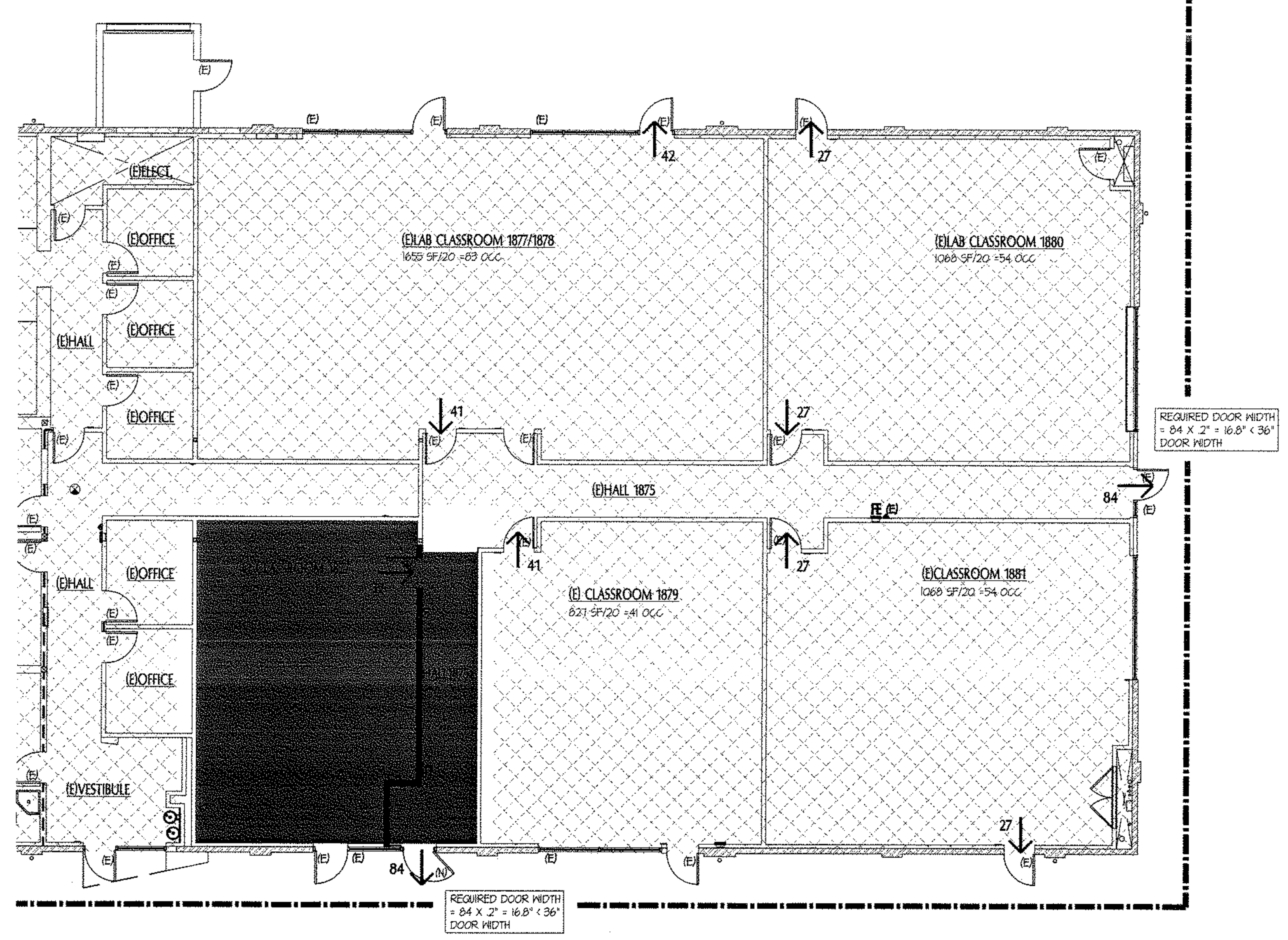
tBP project number: 20883.02
file name:
drawn by: checked by:
date: Feb. 23, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
CAMPUS SITE PLAN
ACCESSIBLE PATH OF TRAVEL

drawing no.:
A011
drawing of




PARTIAL FLOOR PLAN 1
SCALE: 1" = 10'-0"

## CODE ANALYSIS

DESCRIPTION:

- EXISTING BUILDING AREA APPROX. 35,620 SF. THE EXISTING BUILDING INCLUDES VOCATIONAL CLASSROOMS AND OFFICES.
- (E) OCCUPANCY TYPES: B, H-4, S-3.
- (E) CONSTRUCTION TYPE: TYPE V-NR, PARTIALLY SPRINKLED

## LEGEND

= PATH OF TRAVEL

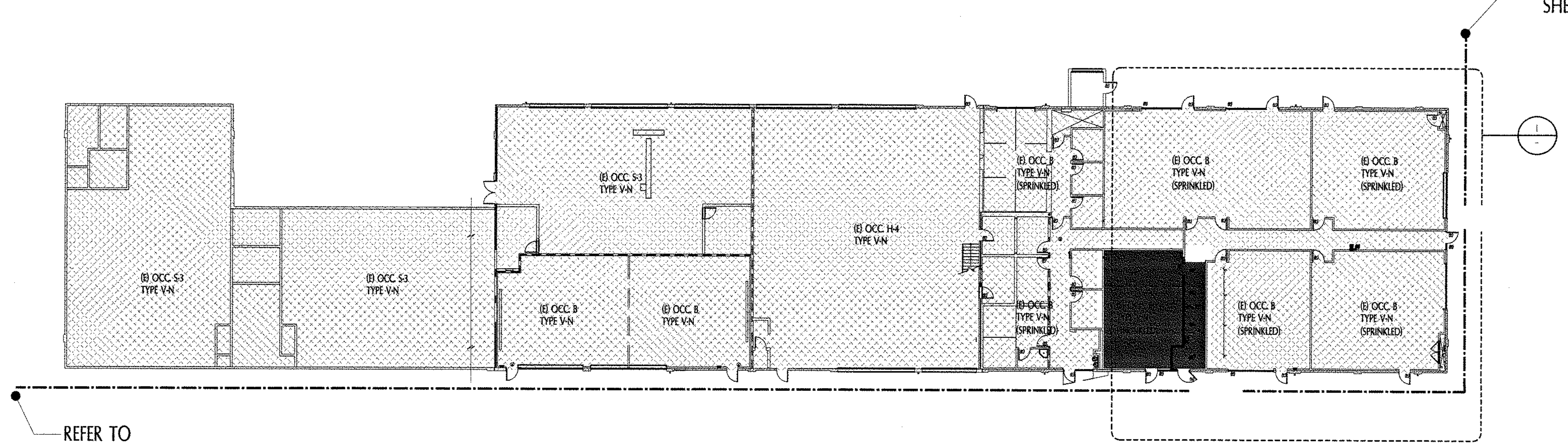
= AREA OF WORK

= # OF OCCUPANTS EXITING THRU THIS DOOR

= (E) NOT IN SCOPE, UNO

FE (E) = EXISTING FIRE EXTINGUISHER

FE = FIRE EXTINGUISHER. REFER TO DETAIL 17-18/A815




KEY PLAN 2
SCALE: 1" = 40'-0"

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Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
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owner

tBP project number: 20883.02

file name: A012 CODE ANALYSIS

drawn by: checked by:

date: Feb. 23, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
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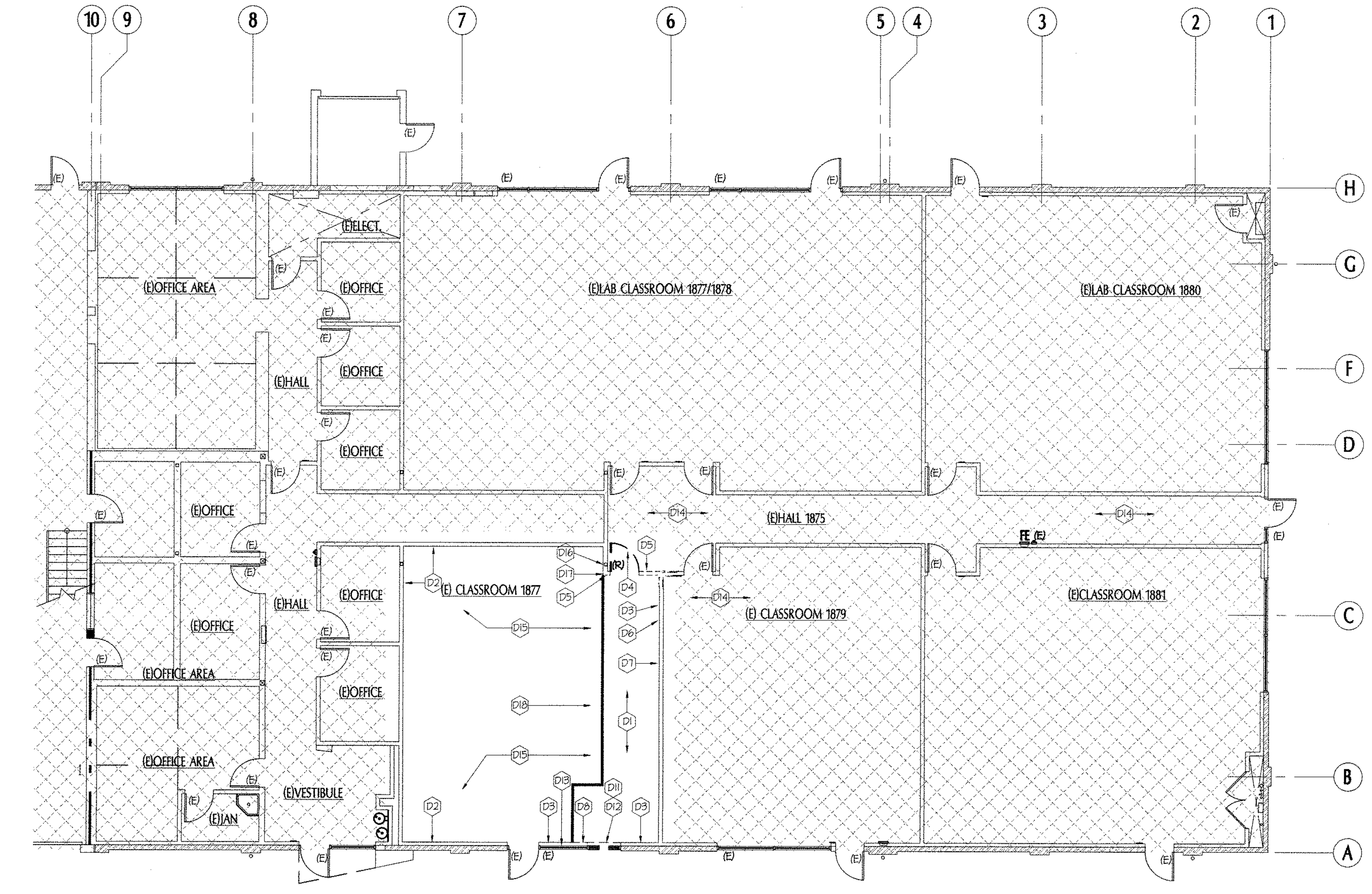
| | | |



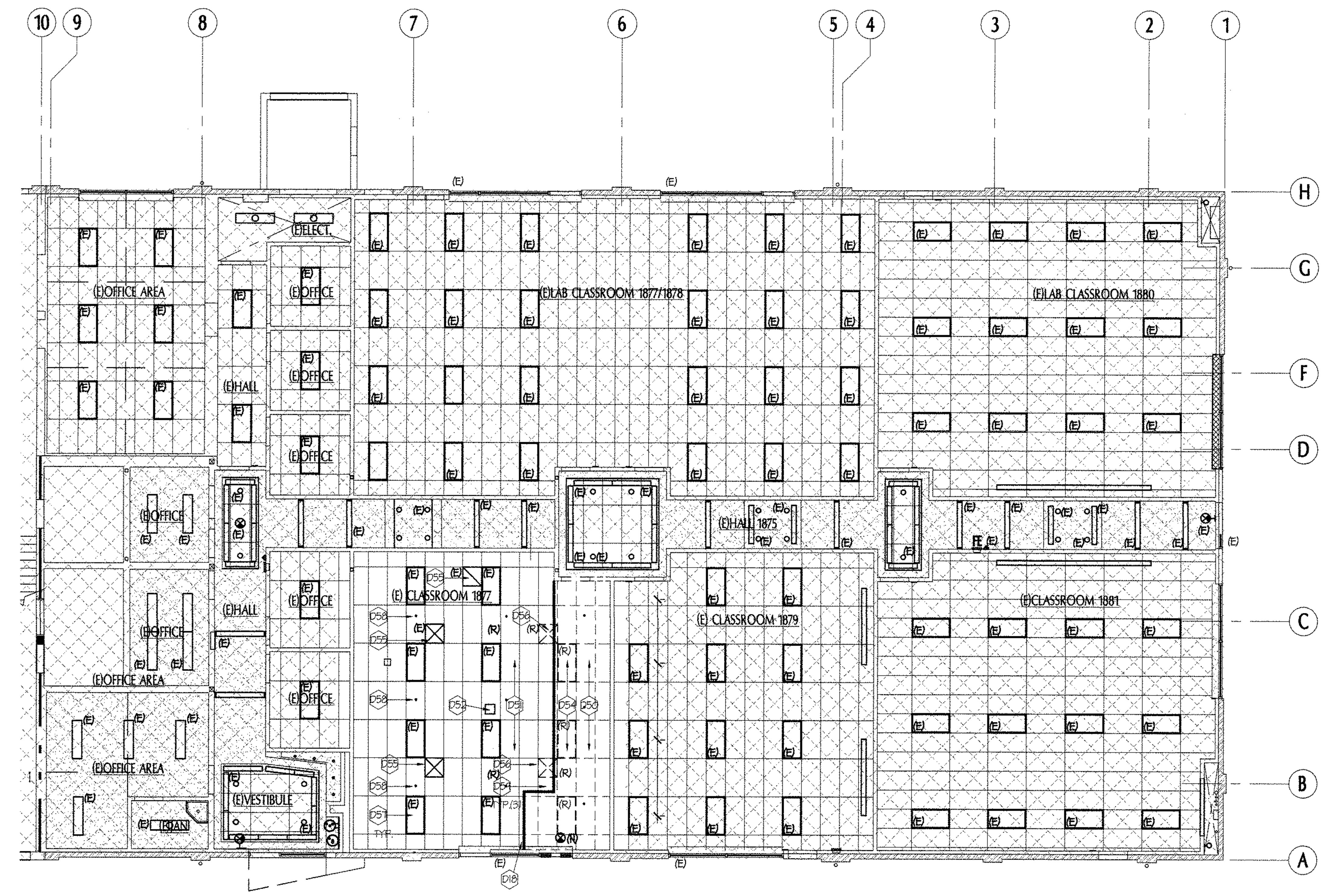
drawing title:
CODE ANALYSIS
KEY PLAN

drawing no.:
A012
drawing of




FLOOR PLAN - DEMO 1

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




REFLECTED CEILING PLAN - DEMO 2

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

## GENERAL NOTES

1. REFER TO OTHER DISCIPLINE'S DOCUMENTS FOR ADDITIONAL DEMOLITION SCOPE, INCLUDING BUT NOT LIMITED TO LIGHT FIXTURES, DUCTWORK, CABLE TRAYS, RACEWAYS ETC. COORDINATE WITH M.E.P., FIRE ALARM, AND DRAWINGS.
2. PRIOR TO START OF DEMOLITION, CONTRACTOR TO WALK THE SCOPE WITH DISTRICT AND BUILDING/GROUNDS, COORDINATE AND DETERMINE ITEMS TO BE SALVAGED AND DELIVERED TO COLLEGE, OR TO BE DISPOSED IF NOT NEEDED.
3. REFER TO ELECTRICAL DRAWINGS FOR EXTENT OF ELECTRICAL & LIGHTING DEMOLITION
4. REFER TO MECHANICAL DRAWINGS FOR EXTENT OF MECHANICAL DEMOLITION

## DEMOLITION PLANS KEYNOTES

FLOOR PLAN:

- D1 REMOVE EXISTING FLOOR COVERING AND ADHESIVE THROUGHOUT. PREPARE CONCRETE SURFACE FOR NEW WORK
- D2 (E) ITEMS ON WALL TO REMAIN
- D3 (E) POWER/DATA TO BE REROUTED TO THE NEW WALL, S.E.D.
- D4 REMOVE DOOR AND FRAME, CAREFUL REMODEL FOR POSSIBLE REUSE
- D5 REMOVE WALL AND PREPARE FOR NEW OPENING
- D6 THERMOSTAT TO BE RELOCATED - SMD
- D7 (E) FIRE DEVICE TO BE MODIFIED - SED
- D8 REMOVE PARTIAL INTERIOR FURRING SILL, PREPARE FOR NEW SILL FRAMING, REROUTE ELETRICAL/DATA TO NEW WALL, SED
- D11 REMOVE ALUMINUM SILL CHANNEL AND CONCRETE CURB, REFER TO DET. 10/A815. WINDOW JAMBS TO REMAIN, PROTECT AS NEEDED. REFER TO A814
- D12 REMOVE BOTTOM GLAZING PANEL, PREPARE JAMB AND HEAD FOR NEW OPENING, REFER TO DET. 10/A815
- D13 REMOVE ROLLER SHADES
- D14 (E) FLOOR AND WALL FINISH TO REMAIN
- D15 PROTECT (E) FLOORING AND CUT BACK AS NECESSARY TO INSTALL WALL
- D16 PROTECT (E) STEEL COLUMN TO REMAIN
- D17 (E) RELOCATE THERMOSTAT, SMD
- D18 LOCATION OF NEW WALL SHOWN HERE TO CLARIFY EXTENT OF DEMO

REFLECTED CEILING PLAN:

- D50 AT (E) METAL SUSPENSION SYSTEM, REMOVE CROSS RUNNERS, AND CUT MAIN RUNNER
- D51 (E) METAL SUSPENSION SYSTEM TO REMAIN, PROTECT AS NEEDED, REPLACE LAY-IN PANELS IF DAMAGED
- D52 (E) PROJECTOR TO REMAIN, PROTECT AS NEEDED
- D53 (E) MOTION LIGHT SENSOR TO REMAIN
- D54 (E) LIGHT FIXTURE TO BE REMOVED, S.E.D
- D55 (E) MECHANICAL REGISTER TO REMAIN, S.M.D.
- D56 RELOCATE MECHANICAL REGISTER, S.M.D.
- D57 (E) LIGHT FIXTURE TO REMAIN, PROTECT AS NEEDED, S.E.D.
- D58 (E) FIRE SPRINKLER TO REMAIN, PROTECT SFPD
- D59 (E) RELOCATE FIRE SPRINKLER, SFPD

## DEMO PLAN LEGEND

### WALL TYPES

(E) CONCRETE WALL TO REMAIN

(E) NON-STRUCTURAL NON RATED PARTITION WALL TO BE DEMOLISHED

(N) NON RATED, PARTITION, SEE WALL TYPE

(E) NOT IN SCOPE, UNO

(X) = WINDOW

(X) = DOOR

(X) = OUTLET

FE = (E) FIRE EXTINGUISHER CABINET TO REMAIN

(X) = (D) DEMOLITION
(R) REMOVE AND/OR RELOCATE
(E) EXISTING TO REMAIN - PROTECT
(-) NEW

### CEILING

(X) = EXIT SIGN

### LIGHTING

S.E.D. FOR FIXTURE SCHEDULE, EMERGENCY LIGHTING AND EXIT SIGNS.

(X) = LIGHT FIXTURE

(X) = LIGHT FIXTURE

### MECHANICAL

S.M.D.

(X) = REGISTER

= (D) DEMOLITION
(R) REMOVE AND/OR RELOCATE
(E) EXISTING TO REMAIN - PROTECT
(-) NEW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# BUILDING 1800B CORRIDOR PROJECT
# SOLANO COLLEGE

Solano Community College District

SOLANO COLLEGE
4000 SUSISUN VALLEY ROAD
FAIRFIELD, CA. 94534

owner

| | | |
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| file name: | A111 DEMO PLAN | |
| drawn by: | | checked by: |
| date: | Feb. 23, 2018 | |
| Rev: | date: | description: |
| | 2/16/2018 | 50% CD's |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
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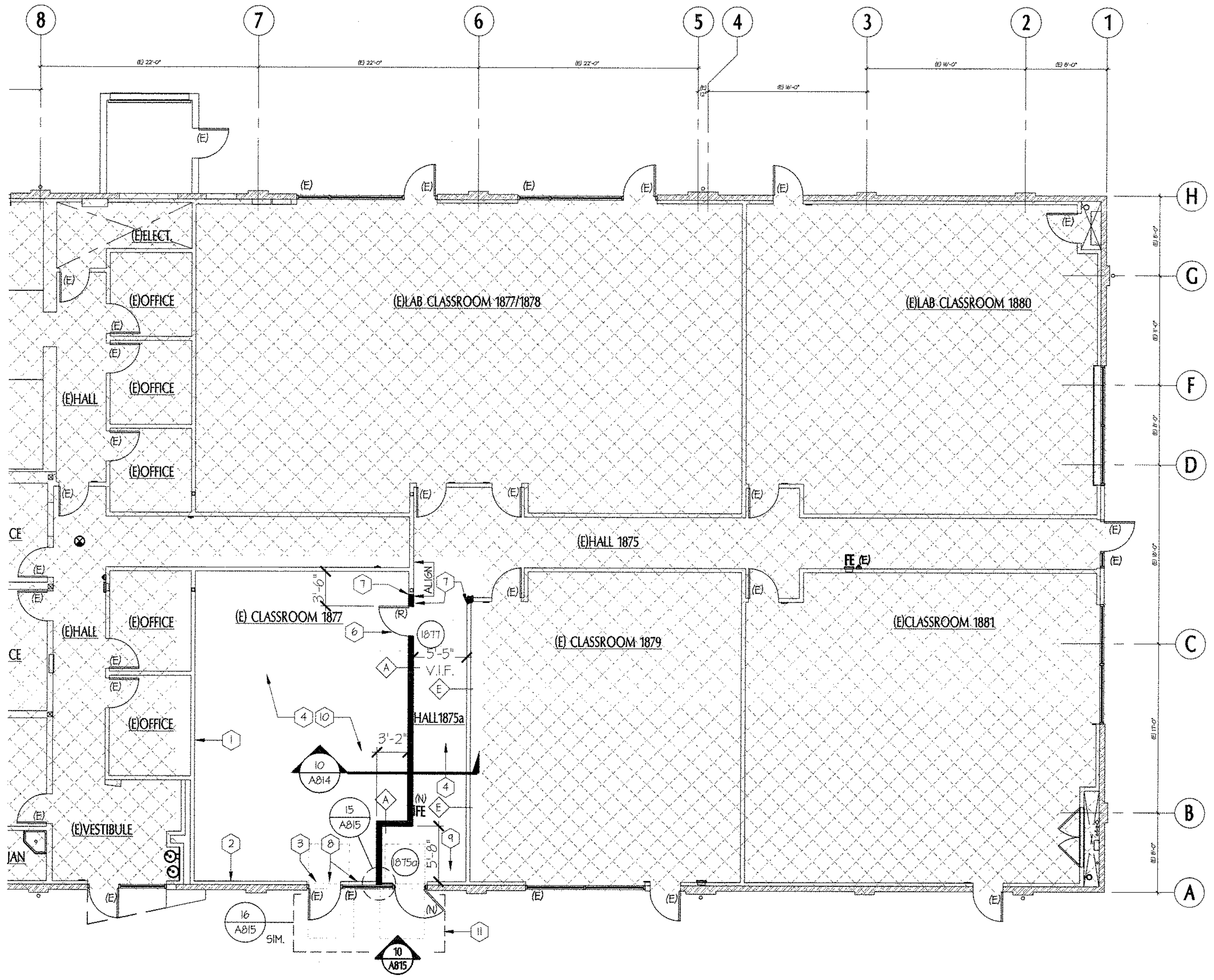
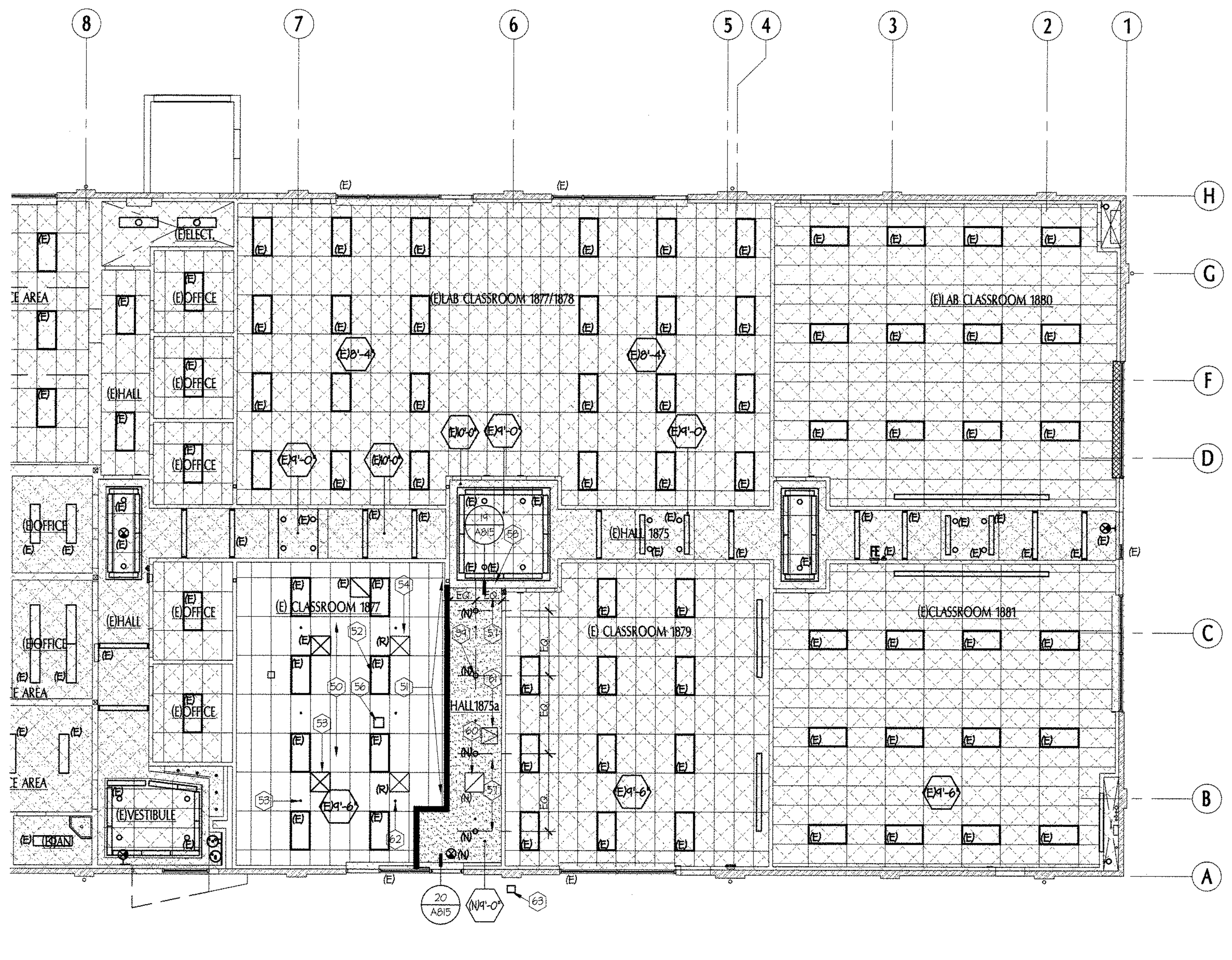
drawing title:
DEMO PLAN
& DEMO RCP

drawing no.:
A111

drawing of



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



REFLECTED CEILING PLAN - NEW 2
SCALE: 1/8" = 1'-0"

## GENERAL NOTES

1. INTERIOR PARTITIONS:
   - A. DIMENSIONS ARE GIVEN TO FACE OF FINISH (F.O.F) UNLESS OTHERWISE NOTED.
   - B. ALL INTERIOR PARTITIONS SHALL NOT BE FULL-HEIGHT
   - C. SOUND BATT INSULATION SHALL MATCH THE THICKNESS OF THE METAL STUD.
   - D. SEE SHEET A813 FOR PENETRATION DETAILS THROUGH SOUND RATED WALLS.

6. PATCH / REPAIR AND FILL-IN ALL OPENINGS / HOLES FROM / DURING DEMOLITION.

7. EXISTING CONSTRUCTION, IF SPECIFICALLY NOTED IN THE ARCHITECTURAL DRAWINGS, WILL ALWAYS BE PREFIXED BY "(E)".

8. DO NOT SCALE DRAWINGS.

9. SEE FINISH SCHEDULE FOR FINISH

10. UPGRADE EXISTING METAL SUSPENSION SYSTEM SUPPORTS AS REQUIRED TO CONFORM WITH DETAILS ON SHEET A816, COORDINATE PLACEMENT FOR ALL MECHANICAL, ELECTRICAL, AND FIRE PROTECTION DEVICES

## FLOOR AND CEILING FLOORS - KEYNOTES

FLOOR PLAN:

1 (E) MARKER BOARD, TACK BOARD, WALL MOUNTED PROJECTOR SCREEN, WALL CLOCK AND WALL SPEAKERS TO REMAIN, PROTECT DURING CONSTRICTION
2 (E) AV CONTROLS, WALL POWER OUTLETS, AND DATA TO REMAIN, PROTECT
3 (E)ROLLER SHADE AT STOREFRONT DOOR AND TRANSOM TO REMAIN, PROTECT
4 PREP AND PAINT ALL WALLS
5 NOT USED
6 WOOD DOOR AND STEEL FRAME, REFER TO DOOR SCHEDULE SHT. A814
7 PATCH WALL AS NEEDED MATCH (E)
8 (E) STOREFRONT FRAME, DOOR, AND GLAZING TO REMAIN, PROTECT
9 VCT AND BASE, REFER TO FINISH SCHEDULE
10 PROTECT (E) FLOOR FINISH, TO REMAIN
11 FLUID APPLIED FLOORING SEE SPEC 09 67 00

REFLECTED CEILING PLAN:

50 (E) METAL SUSPENSION SYSTEM AND LAY-IN PANELS TO REMAIN, PROTECT
51 PROVIDE METAL SUSPENSION SYSTEM WALL ANGLE, FREE SIDE(VIF) AT (E) MAIN RUNNERS, PER DETAILS ON A815. REPLACE LAY-IN PANELS, IF DAMAGED, REFER TO GENERAL NOTES
52 (E) LIGHT FIXTURE, S.E.D.
53 (E) MECHANICAL REGISTER TO REMAIN, PROTECT S.M.D.
54 (E) RELOCATED MECHANICAL REGISTER, S.M.D.
55 (E) FIRE SPRINKLER HEAD TO REMAIN, PROTECT S.M.D.
56 (E) OVERHEAD PROJECTOR TO REMAIN, PROTECT
57 GYP BOARD CEILING
58 (E) GYP BOARD CEILING TO REMAIN, PROTECT
59 DOWNLIGHT, S.E.D.
60 MECHANICAL REGISTER, S.M.D.
61 CEILING ACCESS DOOR, COORDINATE LOCATION IN FIELD
62 FIRE SPRINKLER HEAD, SFPD
63 FIXTURE TO BE MOUNTED ON EXTERIOR SOFFIT, S.E.D SOFFIT NOT SHOWN

## LEGEND

### WALL TYPES

(E) CONCRETE WALL TO REMAIN
(E) NON-STRUCTURAL NON RATED PARTITION WALL TO BE DEMOLISHED
NON RATED, PARTITION, SEE WALL TYPES
(E) NOT IN SCOPE, UNO

(X) = WINDOW
(XXX) = DOOR REFERENCE, SEE DOOR SCHEDULE, SHEET **A814** DASHED LINES INDICATE ACCESSIBLE FLOOR CLEARANCE
X= DOOR
FE = (E) FIRE EXTINGUISHER CABINET TO REMAIN
(X) = (D) DEMOLITION
(R) REMOVE AND/OR RELOCATE
(E) EXISTING TO REMAIN - PROTECT
(N) NEW
X = WALL TYPE, SEE 17/A813

### CEILING

(X) = EXIT SIGN

### LIGHTING

S.E.D. FOR FIXTURE SCHEDULE, EMERGENCY LIGHTING AND EXIT SIGNS.

(X) = LIGHT FIXTURE
(X) = LIGHT FIXTURE

### MECHANICAL

S.M.D.

(X) = REGISTER

= (D) DEMOLITION
(R) REMOVE AND/OR RELOCATE
(E) EXISTING TO REMAIN - PROTECT
(-) NEW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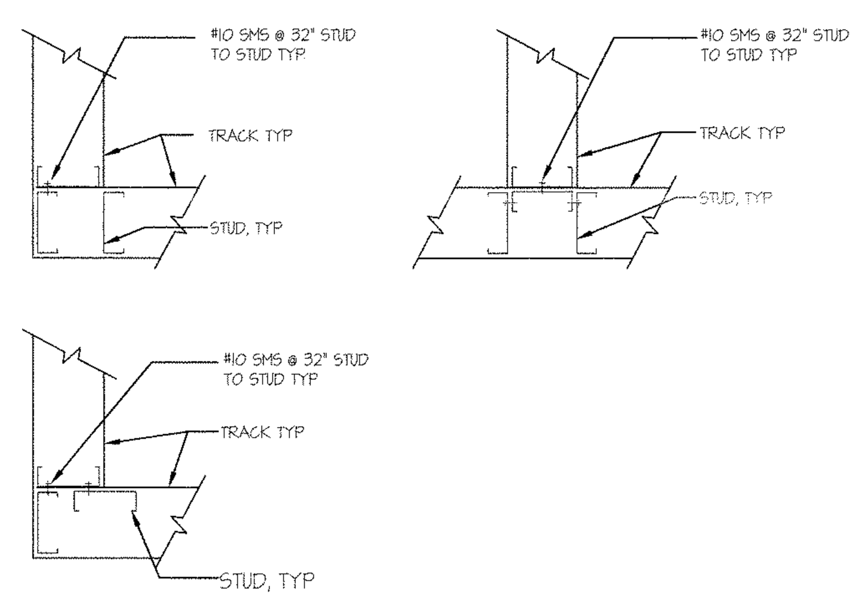
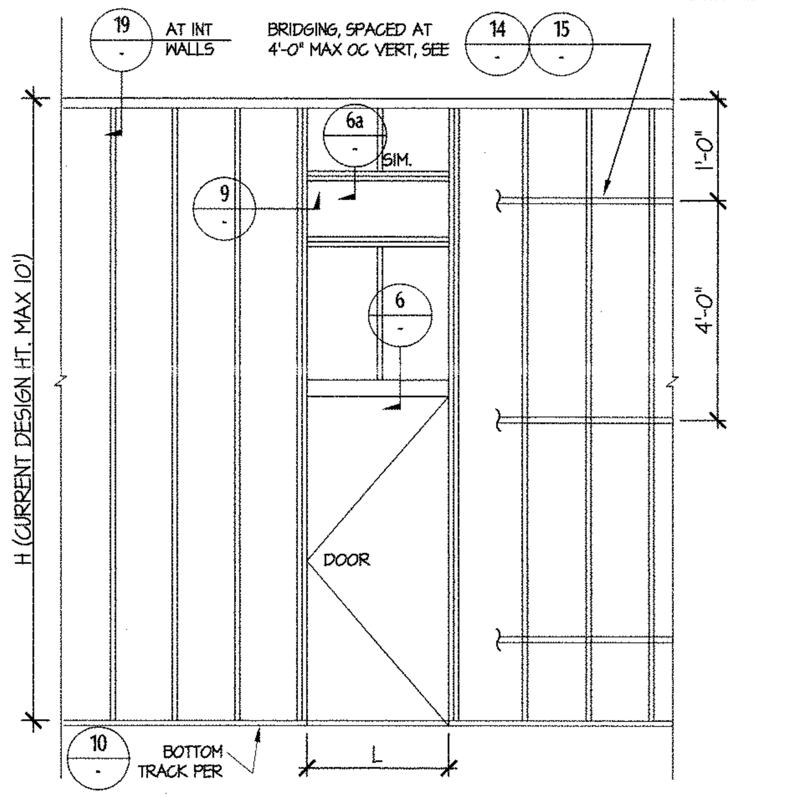
drawing title:
FLOOR PLAN
REFLECTED CEILING PLAN

drawing no.:
A121
drawing of




## TYP. CORNER AND INTERSECTIONS 1
SCALE: N.T.S.




## TYPICAL METAL STUD FRAMING ELEVATION 2
N.T.S.

| REF.: STEEL STUD MANUFACTURER'S ASSOCIATION (ESR-3064P) | | | | | | | |
|---|---|---|---|---|---|---|---|
| NOMINAL SIZE | CATALOG SIZE | MINIMUM PROPERTIES | | | | SPACING (INCHES) | MAX. HT. H (FEET) |
| | | Ix in4 | Sx in3 | Ma in-k | A in2 | | |
| INTERIOR STUDS | | | | | | | |
| 4" x 18GA | 400S125-43 | 0.676 | 0.327 | 6.46 | 0.295 | 16 | 13'-6" |
| 4" x 16GA | 400S125-54 | 0.828 | 0.391 | 11.71 | 0.365 | 16 | 13'-6" |
| 4" x 14GA | 400S125-68 | 1.015 | 0.498 | 14.91 | 0.452 | FOR SILLS | |
| INTERIOR TRACKS | | | | | | | |
| 4" x 16GA | 400T125-54 | 0.849 | 0.359 | 10.74 | 0.367 | TYP TRACK AT 4" STUDS | |
| 4" x 16GA | 400T150-54 | 0.918 | 0.374 | 11.19 | 0.396 | BOTTOM & TOP TRACK | |
| 4" x 16GA | 400T200-54 | 1.037 | 0.397 | 11.88 | 0.452 | | |

## INTERIOR STEEL STUD SCHEDULE 3
N.T.S.

1. PROVIDE STUDS, TRACKS AND BRACING PER SCHEDULE 2 & 3/-:
2. ALL INTERIOR STUDS AND TRACKS SHALL CONFORM TO ASTM A653, A1008 OR A1011.
   18GA AND LIGHTER: MINIMUM YIELD POINT OF 33 KSI. 16GA AND HEAVIER: MINIMUM YIELD POINT OF 50 KSI
   ALL STUDS AND TRACKS SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA). ALL STUDS AND TRACK SHALL COMPLY WITH THE LATEST SSMA PRODUCT TECHNICAL INFORMATION MANUAL.
3. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY OR ON AN ANGLE (SUCH AS BRACING) TO SQUARELY FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY IN POSITION UNTIL PROPERLY FASTENED.
4. STUDS AND TRACKS SHALL BE ATTACHED BY WELDING AND SELF DRILLING SHEET METAL SCREWS AS NOTED ON THE DRAWINGS.
5. PUNCH-OUTS MAY BE LOCATED ALONG THE CENTERLINE OF THE WEBS OF FRAMING MEMBERS. PUNCH-OUTS SHALL HAVE A MINIMUM CENTER-TO-CENTER SPACING OF 24" AND BE 12" FROM MEMBER ENDS. PUNCH-OUTS SHALL HAVE A MAXIMUM WIDTH OF HALF THE MEMBER DEPTH OR 2 1/2", WHICHEVER IS LESS, AND A MAXIMUM LENGTH OF 4".
6. BUTT WELDS OR SPLICES SHALL BE USED AT ALL JOINTS IN TRACK. SPLICES IN STUDS AND BRACES SHALL NOT BE PERMITTED. ALL WELDS SHALL BE FILLET PLUG, BUTT OR SEAM WELDS. WHERE STUDS ARE BURNED THROUGH BY WELDING, PROVIDE SUITABLE STITCH PLATE OF SAME GAGE.
7. ALL FRAMING SHALL BE COORDINATED WITH MECHANICAL, ELECTRICAL, PLUMBING AND OTHER TRADES.
8. STEEL STUDS AND TRACKS SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURE ASSOCIATION (SSMA) LISTED IN ICC REPORT NO. ESR-3064P. ALL STUDS AND TRACK SHALL COMPLY WITH ICC REPORT NO. ESR-3064P
9. SEE DETAIL2 14 &15 ON THIS SHEET FOR TYPICAL COLD ROLLED CHANNEL (CRC) BRIDGING ATTACHMENTS AND SPLICES. CRC MAY BE OMMITTED WHERE THE FOLLOWING SHEATHING AND ATTACHMENTS ARE PROVIDED ON BOTH SIDES OF STUDS.
10. SEE DETAILS 11&13 FOR BACKING PLATE SIZES AND GAGE.
11. X-U POWER DRIVER FASTENERS SHALL BE BY HILTI, ICC ESR-2269.
12. FOR SINGLE-PLY GYPSUM WALLBOARD APPLIED PARALLEL OR PERPENDICULAR TO FRAMING MEMBERS, FASTENER SPACING AS FOLLOWS:
    (NOTES: SCREWS SHALL BE LONG ENOUGH TO PENETRATE THRU MTL FRAMING NOT LESS THAN 1/4-INCH.
    PARALLEL APPLICATION OF GYP BD SHEETS TO FRAMING MEMBERS AT CEILINGS NOT PERMITTED. PERPENDICULAR APPLICATION RECOMMENDED FOR BOTH WALLS AND CEILINGS)

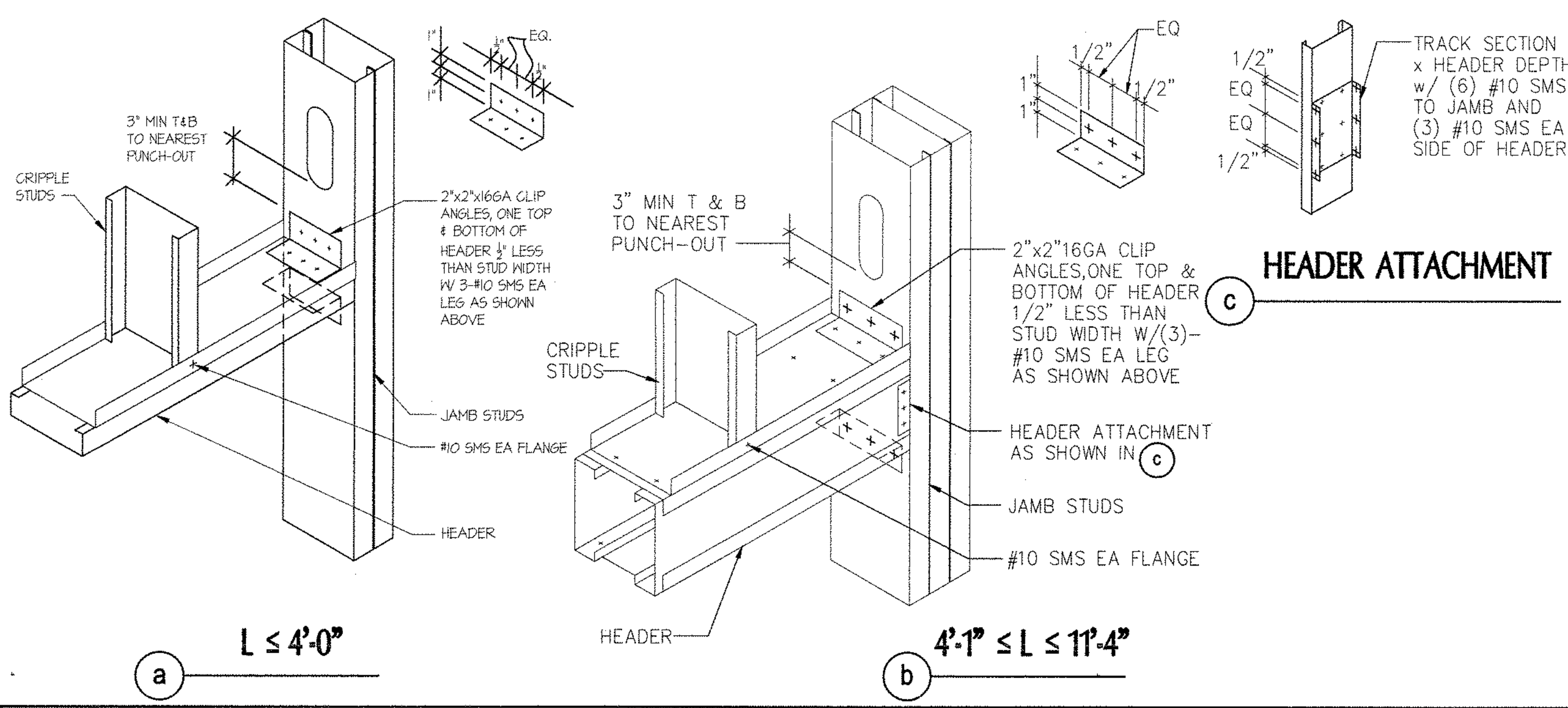
| WALLBOARD THICKNESS (IN.) | PLANE OF FRAMING SURFACE | MAX SPACING OF FRAMING (O.C.) | MAX SPACING OF FASTENERS (O.C.) |
|---|---|---|---|
| (1) LAYER 5/8 | HORIZ (CLG) | 16 | 12 |
| | | 24 | |
| | VERT (WALL) | 16 | 16 |
| | | 24 | 12 |

13. FOR TWO-PLY GYPSUM WALLBOARD APPLIED PARALLEL OR PERPENDICULAR TO FRAMING MEMBERS, FASTENER SPACING AS FOLLOWS:
    (NOTES: SCREWS SHALL BE LONG ENOUGH TO PENETRATE THRU MTL FRAMING NOT LESS THAN 1/4-INCH.)

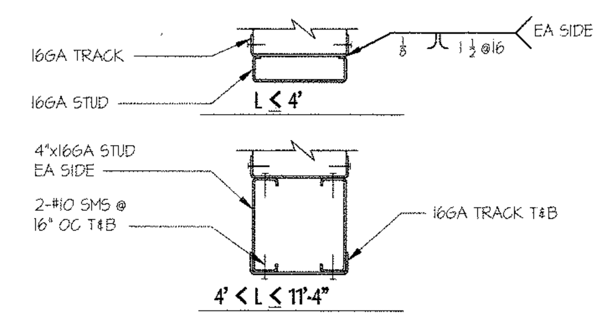
| WALLBOARD THICKNESS (IN.) | PLANE OF FRAMING SURFACE | MAX SPACING OF FRAMING (O.C.) | BASE PLY MAX SPACING OF FASTENERS (O.C.) | FACE PLY MAX SPACING OF FASTENERS (O.C.) |
|---|---|---|---|---|
| (2) LAYERS 5/8 | HORIZ (CLG) PERP. TO FRAMING ONLY | 24 | 24 | 12 |
| | VERT (WALL) PERP. OR // | 24 | | |

14. FOR PLYWOOD APPLIED TO FRAMING MBMBERS, #6 PHILLIPS BUGLE HEAD SCREWS SPACED PER NOTES AND TABLE IN ITEM #12 ABOVE.

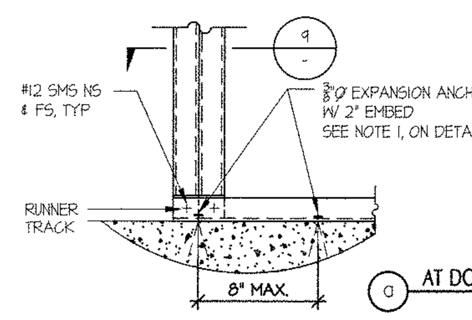
## TYPICAL METAL STUD FRAMING NOTES 5
N.T.S.



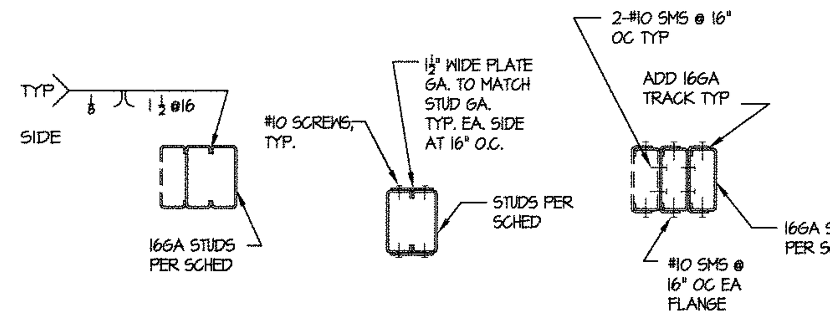

## HEADER AND JAMB CONNECTION 6
N.T.S.




## HEADERS 8A
SCALE: N.T.S.




## BOXED STUDS AT JAMBS 8B
SCALE: N.T.S.

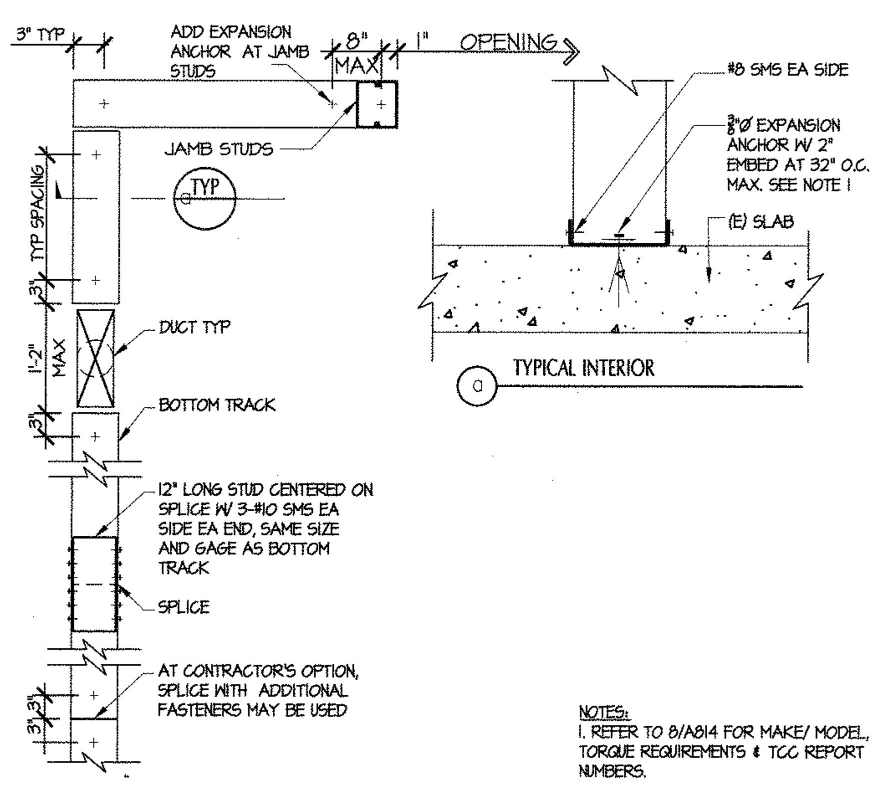



WELD OPTION — PLATE OPTION — SCREW OPTION

| JAMB STUD SCHEDULE | |
|---|---|
| NUMBER OF STUDS | MAX ALLOWABLE OPENING WIDTH L OR MAX ALLOWABLE COMBINE OPENING WIDTH L1 + L2 AT ADJACENT OPENING |
| (2) STUDS | 11'-4" |
| | |

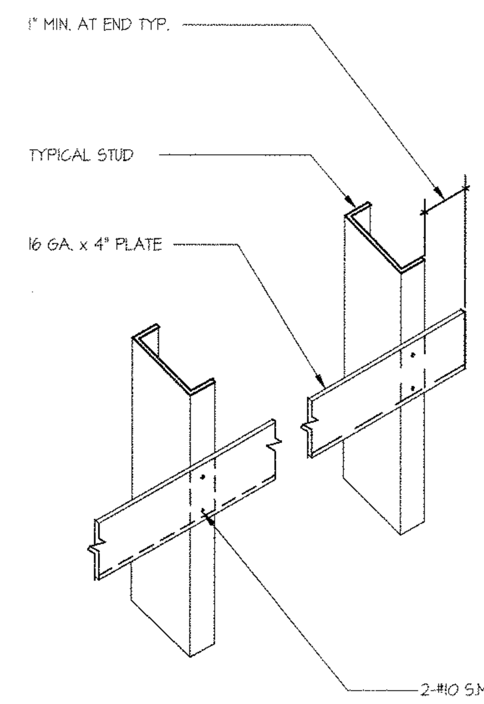
NOTES:
1. JAMB STUDS DEPTHS SHALL MATCH TYPICAL WALL STUD DEPTHS
2. SEE DETAIL 9/8B FOR ADDITIONAL INFORMATION

## JAMBS 9
SCALE: N.T.S.



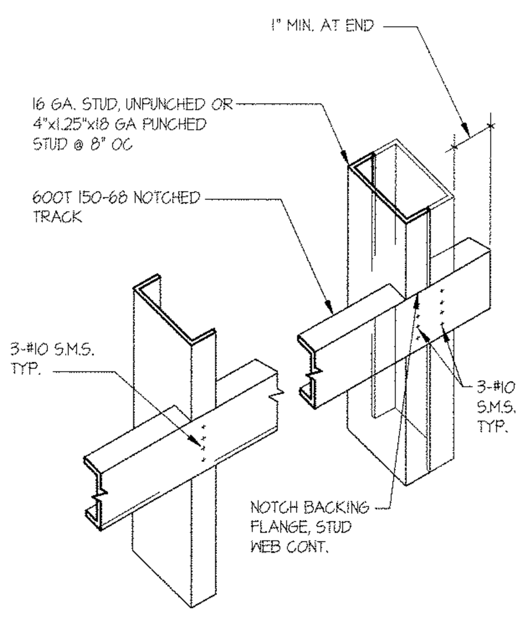

NOTES:
1. REFER TO 8/A814 FOR MAKE/ MODEL, TORQUE REQUIREMENTS & ICC REPORT NUMBERS.

## BOTTOM TRACK 10
SCALE: N.T.S.




NOTES:
1. USE FOR MISC. ITEMS (E.G. SURFACE MOUNTED MIRROR, WASTE RECEPTACLE, TOWEL DISPENSERS, WALL MOUNTED DOOR STOP, ETC.) MAX. WT. 50LB. POINT LOAD.
2. VERIFY LENGTH HEIGHT, LOCATION OF BACKING PLATE & NUMBER REQUIRED WITH ACCESSORY MANUFACTURERS.
3. USE # 12 SELF TAPPING SCREWS MIN. WHEN ATTACHING ITEM TO BACKING.

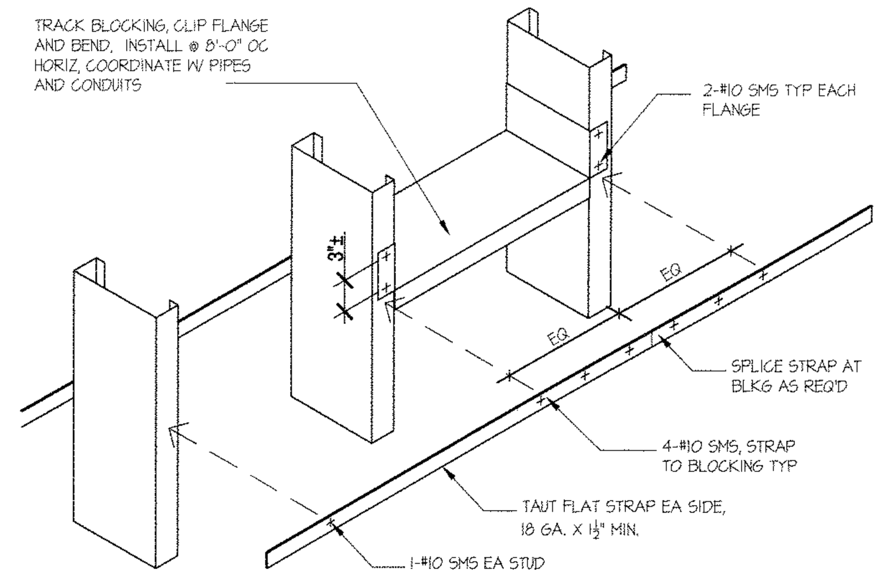
## BACKING PLATE - TYPE 'A' 11
SCALE: N.T.S.



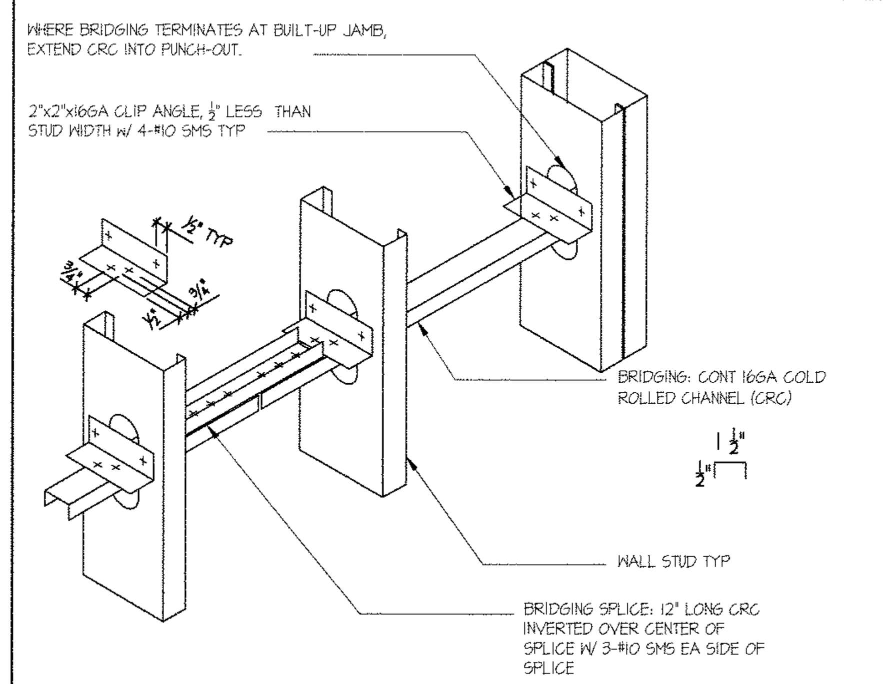

NOTES:
1. USE FOR UPPER WALL HUNG CABINETS, FULL HEIGHT CABINETS, HANDRAILS, WALL HUNG EQUIPMENT ETC. MAX. WT. 300 LBS./ LIN. FT.
2. LENGTH, HEIGHT AND LOCATION TO SUIT ITEMS BEING FASTENED SEE ANCHORAGE DETAIL OF SPECIFIC ITEMS FOR ADDITIONAL INFORMATION.
3. ATTACH TO THREE STUDS MIN. (DBL. STUD COUNTS AS ONE STUD)
4. USE # 12 SELF TAPPING SCREWS MIN. WHEN ATTACHING ITEMS TO BACKING
5. USE DBL. STUDS WHEN STUD IS SUPPORTING BACKING PLATES ON BOTH SIDES
6. WHEN STUD PENETRATIONS ARE REQUIRED, AVOID PUNCHING MIN. 6" ABOVE TOP OF PLATE AND 6" BELOW BOTTON OF PLATE.

IN LIEU OF BACKING PLATE TYPE "B" CONTRACTORS OPTION TO USED TYPE - "C"

## BACKING PLATE - TYPE 'C' 13
SCALE: 3/4" = 1'-0"

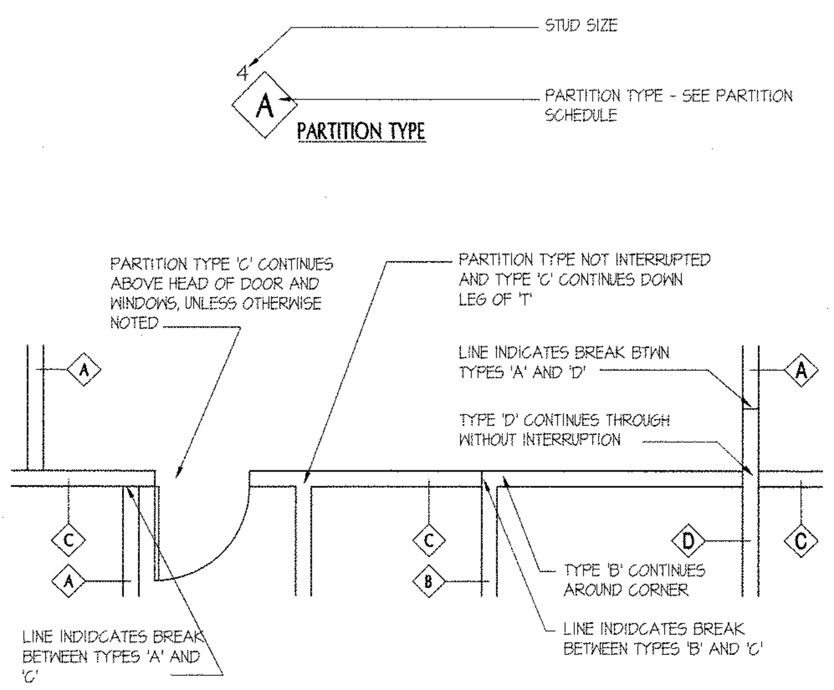



## BRIDGING 14
SCALE: N.T.S.




NOTE: DETAIL 14 ON THIS SHEET MAY BE USED AS AN ALTERNATE.

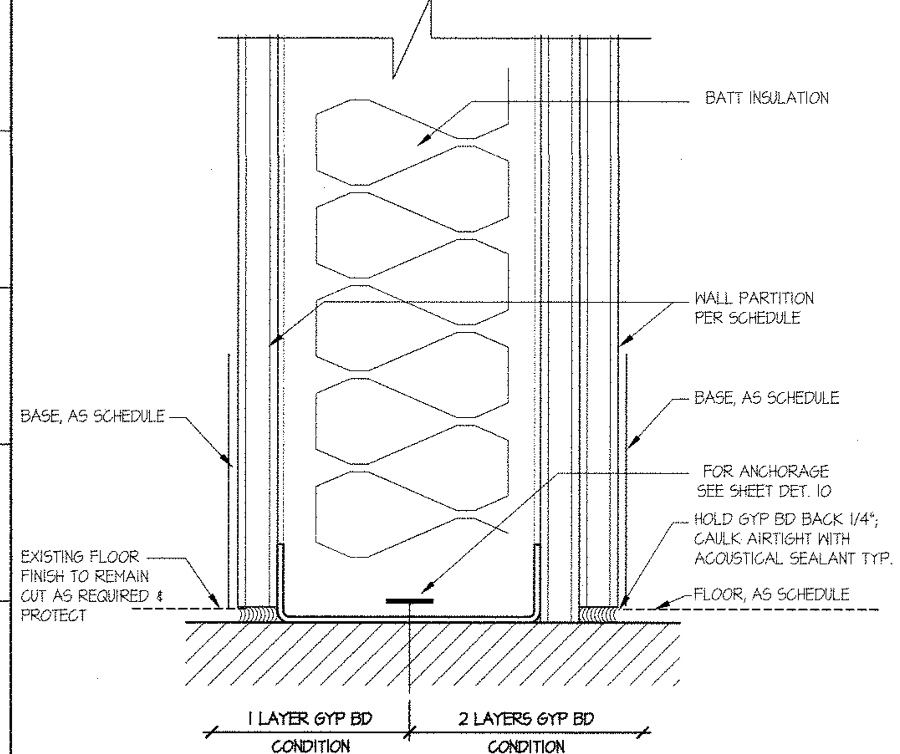
## BRIDGING 15
SCALE: N.T.S.



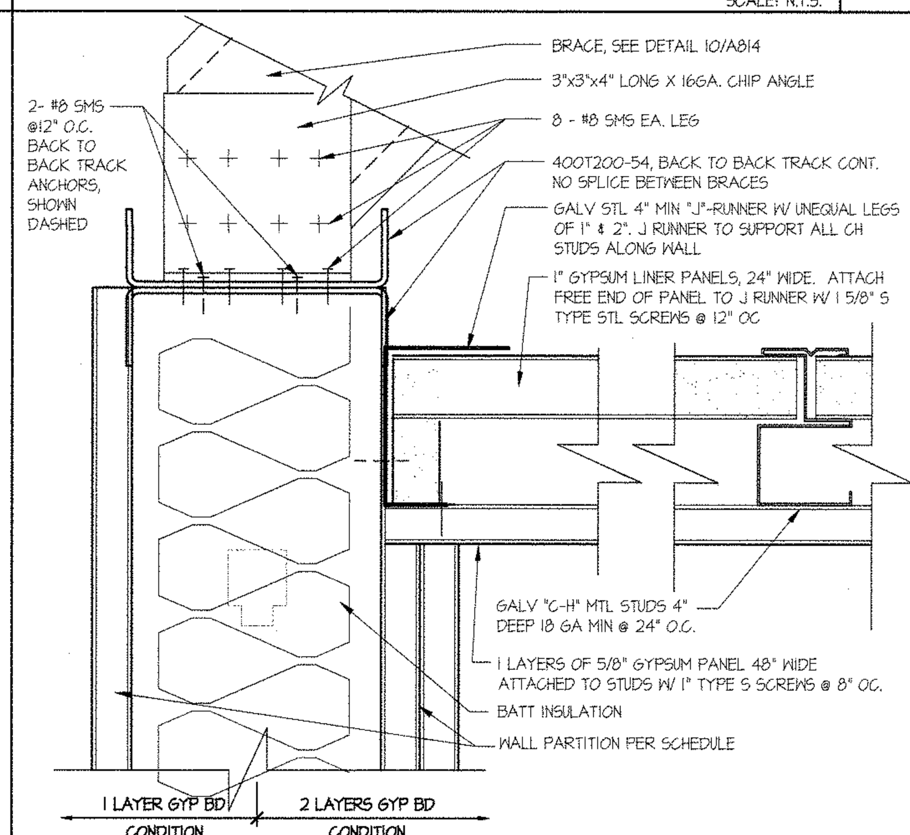

## TYP. PARTITION TYPE SYMBOL LEGEND 16
NTS

| WALL ASSEMBLY | RATING | DESCRIPTION |
|---|---|---|
| INT. CLASSROOM SIDE / INTERIOR HALL SIDE | A — S.R. N.R. STC 50-54 | 4" METAL STUDS AT 16" O.C. W/ ACOUSTICAL BATT INSULATION<br>TWO LAYER OF 5/8" GYP. BOARD ON ONE SIDE, AND ONE LAYER ON THE OTHER SIDE<br>ALL WALLS TO HAVE ACOUSTICAL TREATMENT, REFER TO ALL DETAIL ON THIS SHEET |
| INTERIOR HALL SIDE / (E) CLASSROOM SIDE | E | (E) METAL STUDS AT 16" O.C. 5/8", WITH (E) GYP. BOARD EA. SIDE<br>(E)W/ ACOUSTICAL BATT INSULATION<br>ADD ONE LAYER OF 5/8" GYP. BOARD ON HALL SIDE<br>ADD EXTENSION BOXES/RINGS, AT (E) ELECTRICAL/DATA SWITCHES, RECEPTACLES |
| | | |
| | | |

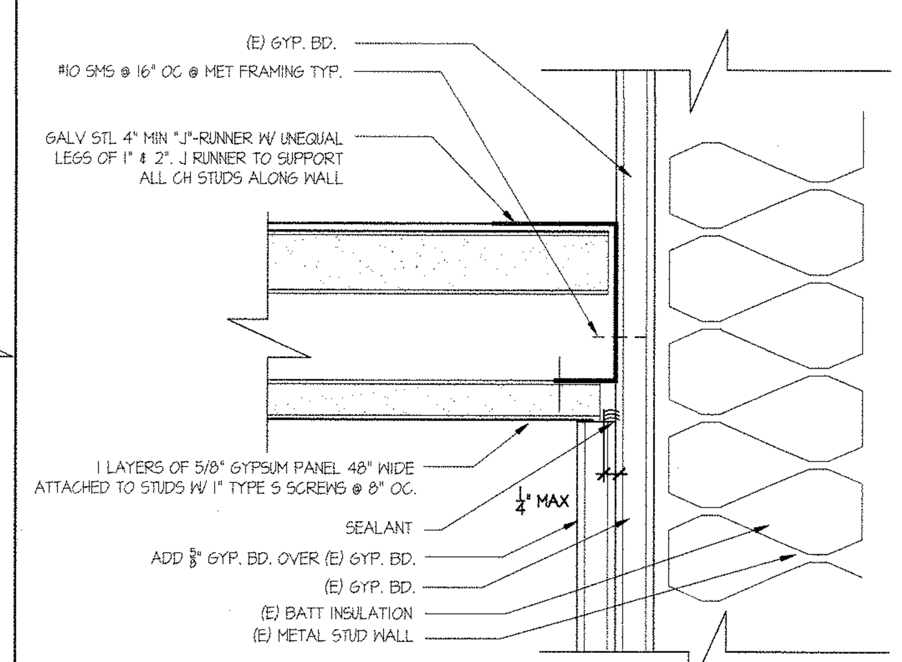
## INTERIOR WALL PARTITION TYPES 17
SCALE: N.T.S.




## SOUND RATED BASE DETAIL 18
SCALE: HALF




## SOUND RATED HEAD DETAIL 19
SCALE: HALF




## SOUND RATED HEAD DETAIL 20
SCALE: HALF

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# BUILDING 1800B CORRIDOR PROJECT
# SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534
owner

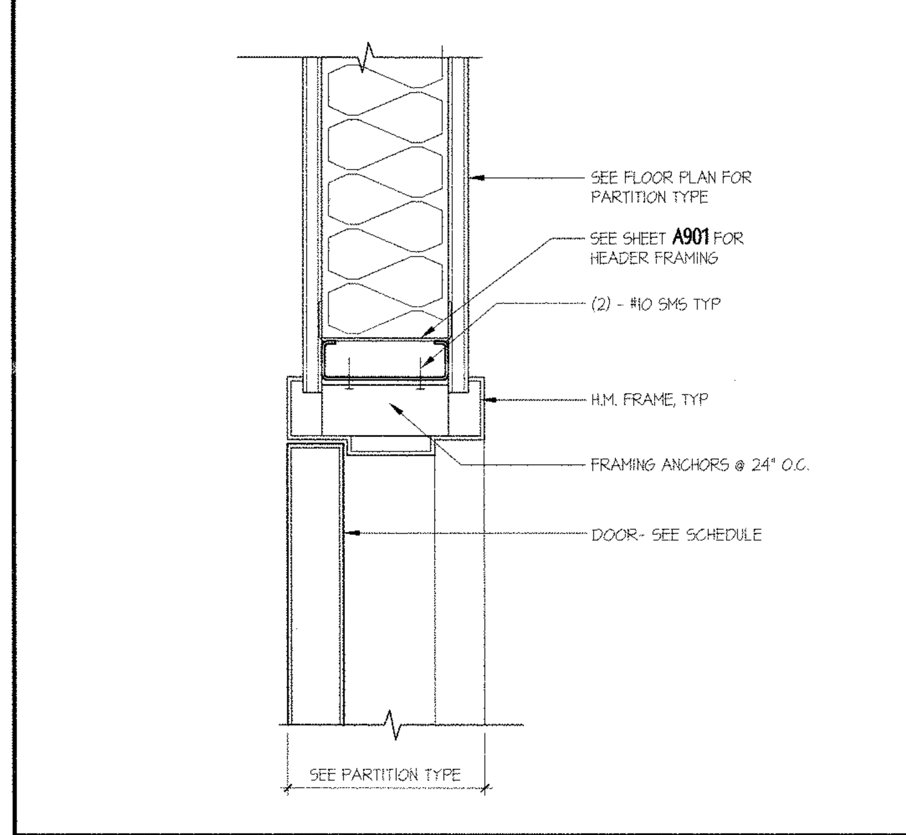
| | |
|---|---|
| tBP project number: | 20883.02 |
| file name: | |
| drawn by: | checked by: |
| date: | Feb. 23, 2018 |

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |

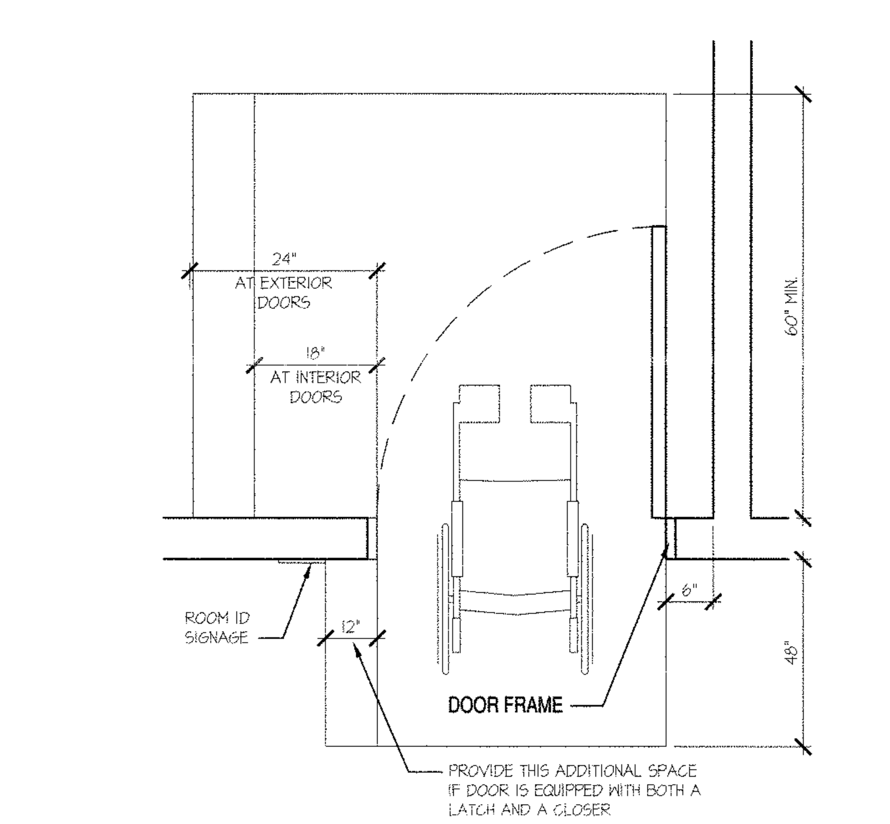


drawing title:
DETAILS

drawing no.:
A813
drawing of




HEAD DETAIL · HM DOOR | 1
SCALE: 3" = 1'-0"




ACCESSIBLE ENTRANCE CLEARANCES | 2
N.T.S.

EXPANSION ANCHORS

A. EXPANSION ANCHORS SHALL BE EITHER ONE OF THE FOLLOWING, UON:

HILTI KWIK BOLT TZ
(ICC-ES REPORT ESR-1917)

SIMPSON STRONG-BOLT 2
(ICC-ES REPORT ESR-3037)

USE OF CARBON STEEL EXPANSION ANCHORS IS LIMITED TO DRY, INTERIOR LOCATIONS. USE STAINLESS STEEL EXPANSION ANCHORS AT EXTERIOR, WEATHER-EXPOSED, OR DAMP LOCATIONS.

B. ANCHOR EMBEDMENT AND FIELD TEST VALUES ARE AS FOLLOWS, UON

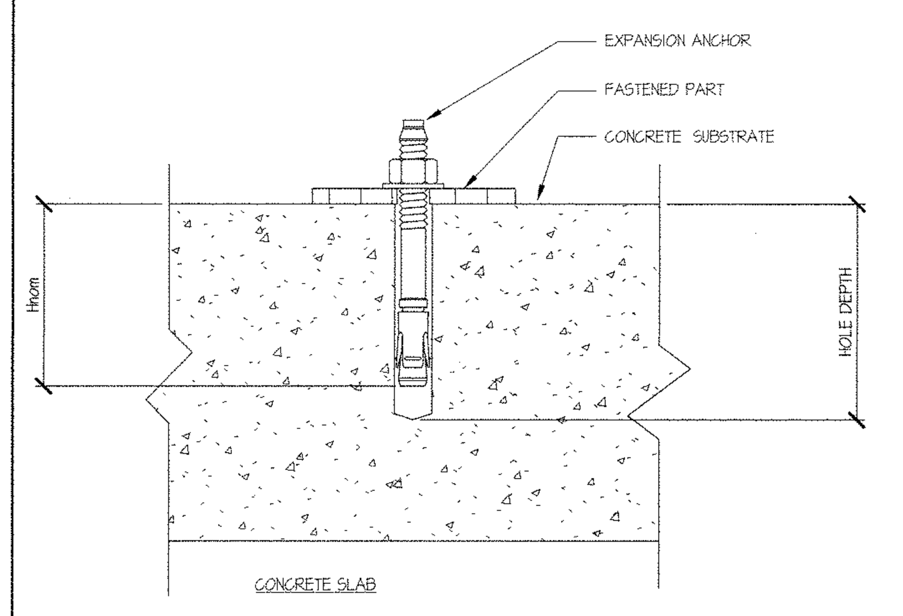
IN GENERAL THIS DETAIL IS HERE TO COVER ALL THE EXPANSION ANCHORS WHERE WE CONT.
CALL FOR EMBED. DEPTH AND OTHER INSTALLATION INSTRUCTIONS. THIS APPLIES TO ALL THE DETAILS

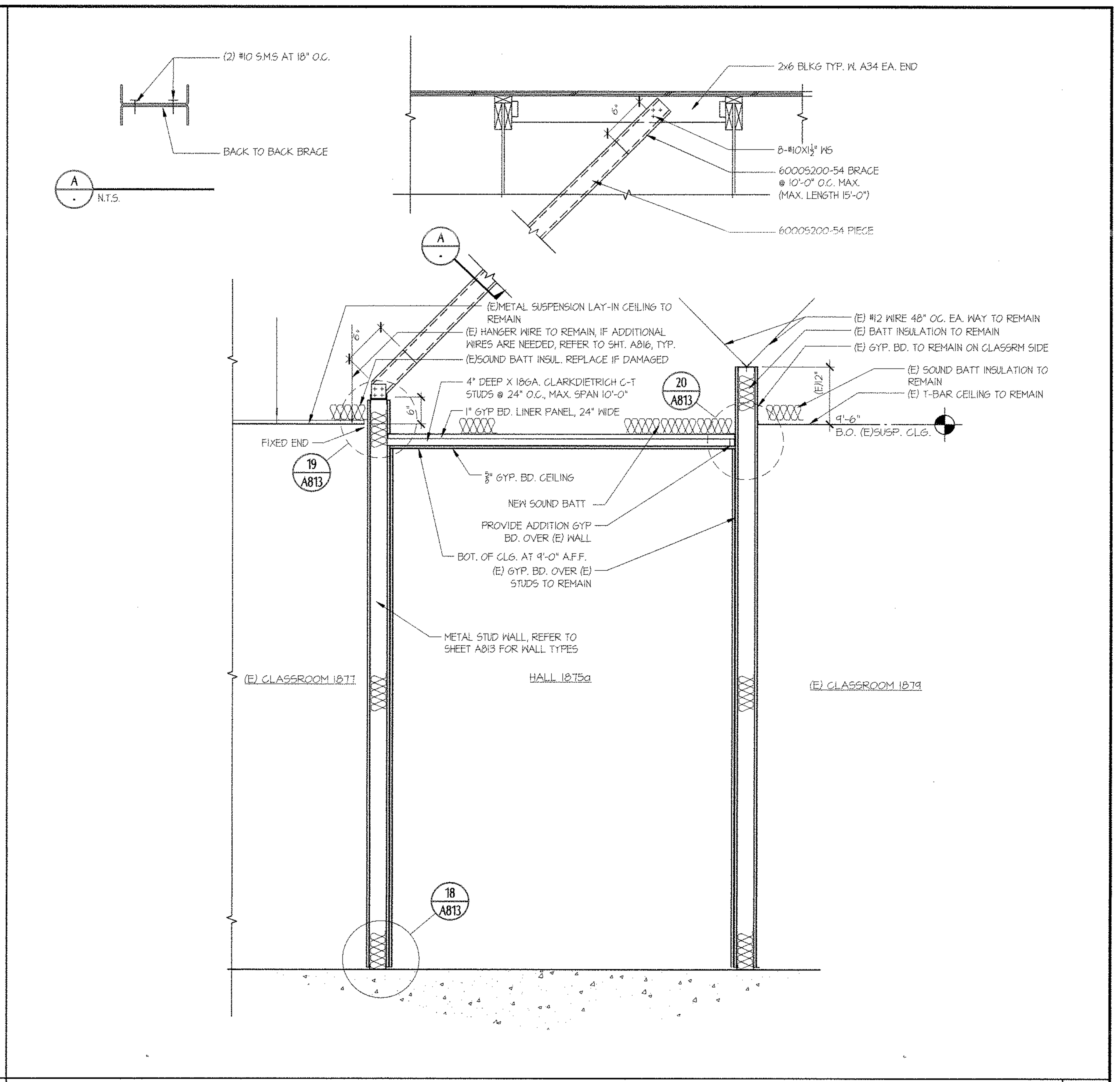
| HILTI KWIK BOLT TZ IN NORMAL-WEIGHT CONCRETE | | | |
|---|---|---|---|
| ANCHOR DIAMETER | Hnom | MINIMUM HOLE DEPTH | TORQUE TEST VALUE (FT-LBS) |
| 3/8" | 2 5/16" | 2 5/8" | 25 |
| 1/2" | 2 3/8" | 2 5/8" | 40 |
| ~~5/8"~~ | ~~4 7/16"~~ | ~~4 3/4"~~ | ~~60~~ |
| | | | |

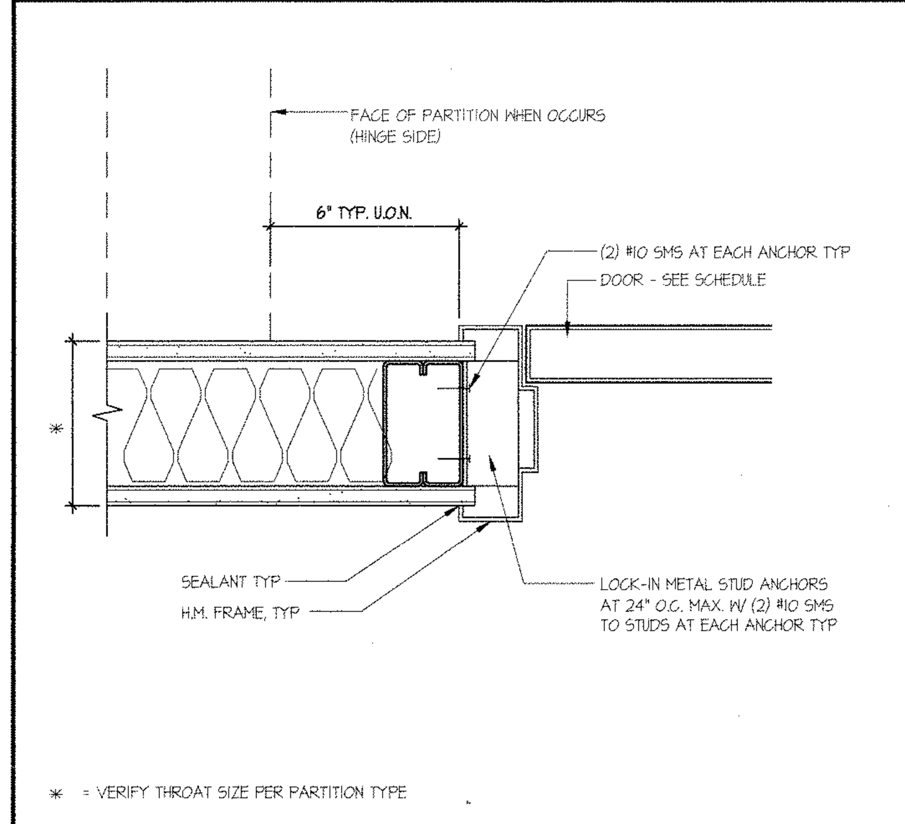
| SIMPSON STRONG-BOLT 2 IN NORMAL-WEIGHT CONCRETE | | | |
|---|---|---|---|
| ANCHOR DIAMETER | Hnom | MINIMUM HOLE DEPTH | TORQUE TEST VALUE (FT-LBS) |
| 3/8" | 1 7/8" | 2" | 30 |
| 1/2" | 2 3/4" | 3" | 60 |
| ~~5/8"~~ | ~~5 1/8"~~ | ~~5 3/8"~~ | ~~90~~ |
| | | | |

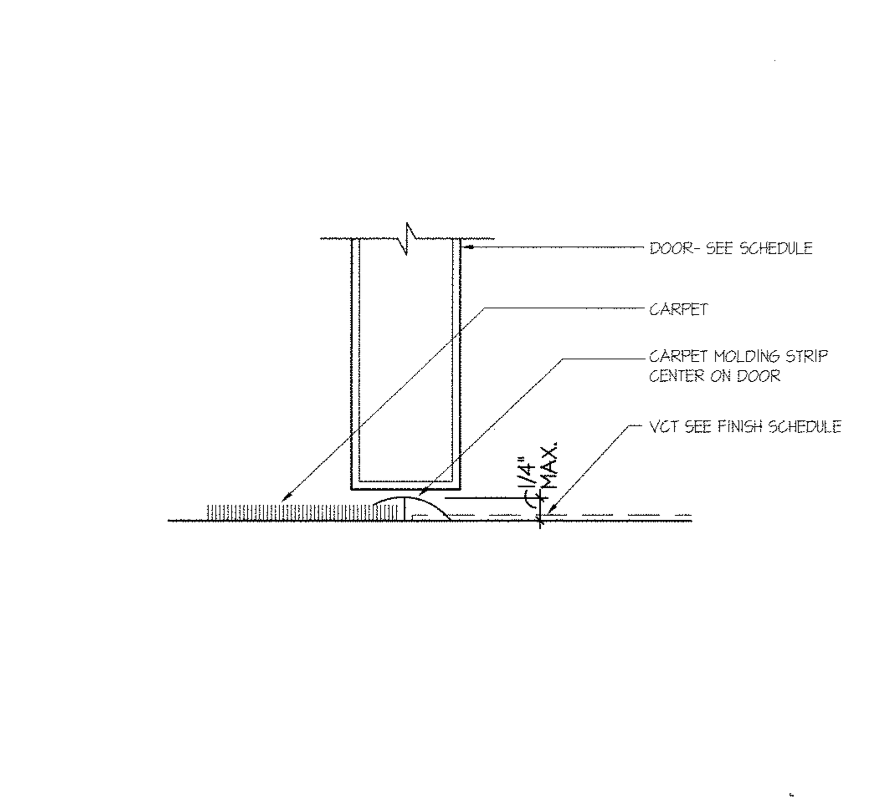
C. Hnom IS MEASURED FROM FACE OF CONCRETE SUBSTRATE TO THE END OF THE BOLT.

D. CONTRACTOR SHALL PROVIDE ANCHORS WITH SUFFICIENT TOTAL LENGTH FOR THE SPECIFIED EMBEDMENT LENGTH, THICKNESS OF FASTENED PART, WASHER AND NUT.




JAMB DETAIL · HM DOOR · PARTITION WALL | 6
SCALE: 3" = 1'-0"

CARPET / VCT TRANSITION | 7
SCALE: HALF

POST-INSTALLED ANCHORS | 8
SCALE: N.T.S.

HALL SECTION | 10
3/4" = 1'-0"

## INTERIOR FINISH LEGEND

FLOOR FINISHES

(E) CT — CARPET TILE

V1 — VINYL COMPOSITION TILE - VCT.
V2 — VINYL COMPOSITION TILE - VCT
V3 — VINYL COMPOSITION TILE - VCT.

WALL FINISHES
MIX SPECIFIED MFR. CUSTOM COLOR TO MATCH BELOW COLORS

P-2 — BENJAMIN MOORE, EAST LILY, 2150-70
P-3 — BENJAMIN MOORE, PALE CELERY, 2150-60
P-5 — BENJAMIN MOORE, SOFT FERN, 2144-40
P-6 — MATTHEWS PAINT, MP00965-6

CEILING FINISHES

(E)A1 — ACOUSTICAL SUSPENDED PANELS - ARMSTRONG, ULTIMA, REGULAR SQUARE EDGE LAY-IN, 2X4

A1 — ACOUSTICAL SUSPENDED PANELS - ARMSTRONG, ULTIMA, REGULAR SQUARE EDGE LAY-IN, 2X4

P1 — CEILING PAINT FINISH, COLOR TO MATCH ADJACENT CEILING FINISH

WALL BASE

RB-1 — 4 1/2" VINYL BASE - JOHNSONITE, 40 BLACK (4'-0") LENGTHS.

## ABBREVIATIONS

SEE SHEET A001 FOR ADDL ABBREVIATIONS USED IN THIS PROJECT

| | | | |
|---|---|---|---|
| AFF | ABOVE FINISH FLOOR | PES | PAINT EGG SHELL |
| BD | BOARD | PF | PAINT FLAT |
| EXPSD | EXPOSED | PG | PAINT GLOSS |
| F | FACTORY FINISH | PLS | PAINT LOW SHEEN |
| (E)F | FACTORY FINISH | PSG | PAINT SEMI GLOSS |
| EP | EPOXY PAINT | SF | SATIN FINISH |
| GL | GLASS | SLR | SEALER |
| GYP | GYPSUM | | |
| MTL | METAL | | |

## GENERAL NOTES

1. INTERIOR FRAMES - TO BE PAINTED

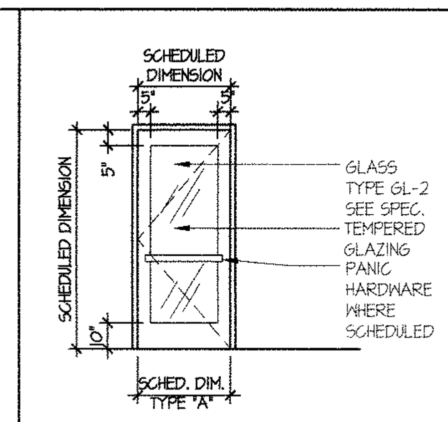
## ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| AL | ALUMINUM | N/A | NOT APPLICABLE | SF | STAIN FINISH |
| AUTO | AUTO-ASSIST DOOR WITH WALL PUSH PLATES | NIC | NOISE ISOLATION CLASS | SG | SOUND GASKETED |
| AN | ANODIZE FINISH | PES | PAINT EGGSHELL | SST | STAINLESS STEEL |
| CAS | CARD ACCESS SYSTEM | PF | PAINT FLAT | STL | STEEL |
| EP | EPOXY PAINT | PG | PAINT GLOSS | T | TEMPERED GLASS |
| F | FACTORY FINISH | PH | EMERGENCY EGRESS HARDWARE | UC | UNDERCUT DOOR |
| FG | FIRE-RATED GLAZING | PS | PREFINISHED STEEL | VF | VARNISH |
| GL | GLASS | PSG | PAINT SEMI-GLOSS | WD | FLUSH WOOD DOOR |
| HCN | HOLLOW CORE NATURAL FINISH | PTS | PILE TYPE SEALS (HEAD AND JAMB) | T | INDICATES TEMPERED GLASS REQUIREMENT. |
| HCP | HOLLOW CORE PAINT FINISH | | | | |
| HM | HOLLOW METAL | S | SEAL | | |
| LAQ | LACQUER FINISH | SCD | SOLID CORE DOOR | | |
| MAWC | MATCH ADJ. WALL COLOR | SCN | SOLID CORE NATURAL FINISH | | |
| ME | MATCH EXTG | SCP | SOLID CORE PAINT FINISH | | |
| MH | MAGNETIC HOLD | SCPL | SOLID CORE PLASTIC LAMINATE | | |
| | | SCS | SOLID CORE STAIN FINISH | | |

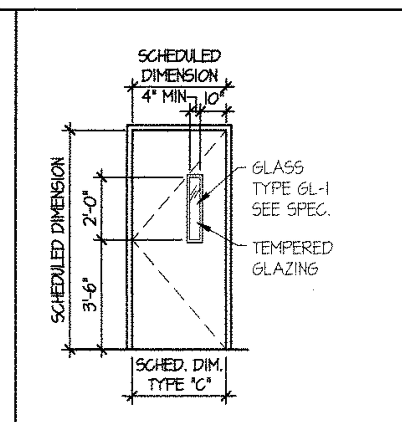
## NOTES

1. DOORS SHALL BE 1-3/4" THICK, UNLESS NOTED OTHERWISE.

## DOOR TYPES




DOOR TYPE | A




DOOR TYPE | B

## INTERIOR FINISH SCHEDULE

| ROOM | | FLOOR | BASE | WALL | | CEILING | | REMARKS |
|---|---|---|---|---|---|---|---|---|
| NO. | NAME | MATERIAL | MATERIAL | COLOR | FINISH | MATERIALS | FINISH | |
| 1877 | (E) CLASSROOM | (E) CT | RB-1 | P-3<br>P-5<br>P-6 | GYP | (E)A1 / A1 | (E)F / F | 1. PROTECT (E) CARPET TILE, NEW BASE ONLY ON EAST WALL.<br>2. REFER TO GENERAL NOTE 10 ON SHEET A121 REGARDING CEILING FINISH<br>3. AT WALLS PAINT; NORTH P-3, EAST P-5, P-6, SOUTH P-3, AND WEST P-5, P-6 |
| 1875a | HALL | V1<br>V2<br>V3 | RB-1 | P-2<br>P-6 | GYP | P1 | GYP | 1. VCT PATTERN TO MATCH ADJACENT EXISTING HALL<br>2. AT WALLS PAINT P-2, & P-6 |

## DOOR SCHEDULE

| DOOR NO. | (E) OR (N) | HARD WARE GROUP | DIMENSION | | DOOR | | | | FRAME | | | DETAILS | | | RATING | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | WIDTH | HEIGHT | TYPE | MAT. | FINISH | COLOR | MAT. | FINISH | COLOR | HEAD | JAMB | THRESHOLD | | |
| 1877 | N | 02 | 3'-0" | 7'-0" | B | WD | SCN | ME | HM | PSG | - | 1 / A814 | 6 / A814 | 7 / A814 | - | REUSE DOOR AND FRAME IF POSSIBLE |
| 1875a | N | 01 | 3'-0" | 7'-0" | A | AL/GL | AN | AN | AL | AL | - | 6 / A815 | 1 / A815 | 6 / A815 | - | WIRELESS ACCESS CONTROL & CARD READER, REFER TO HARDWARE SPEC'S<br>NEW DOOR AND FRAME IN EXISTING FRAME FIELD VERIFY FOR EXACT DOOR SIZE |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

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BUILDING 1800B CORRIDOR PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUSISUN VALLEY ROAD
FAIRFIELD, CA. 94534

owner

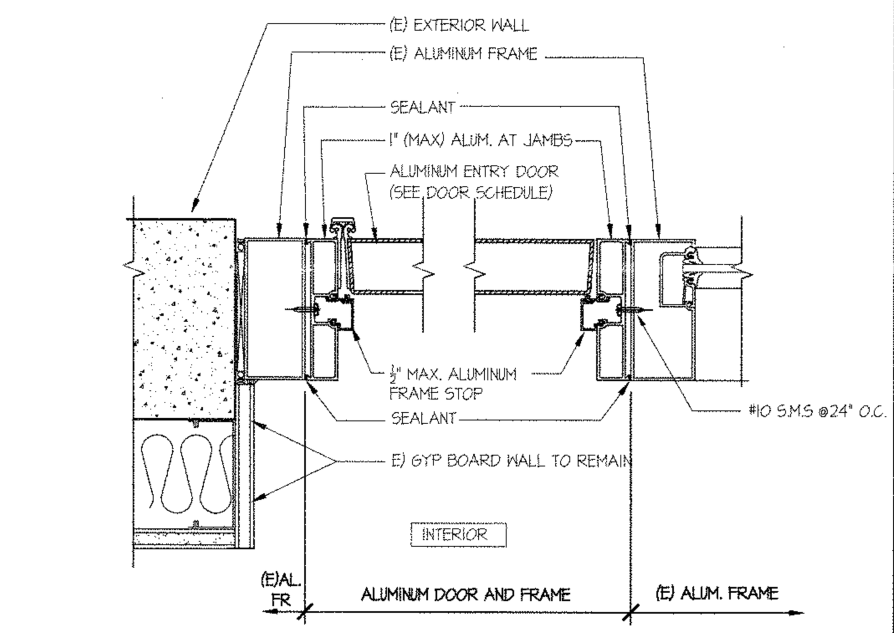
tBP project number: 20883.02
file name: A813 INT DET DOOR WIN
drawn by: checked by:
date: Feb. 23, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |
| | | |

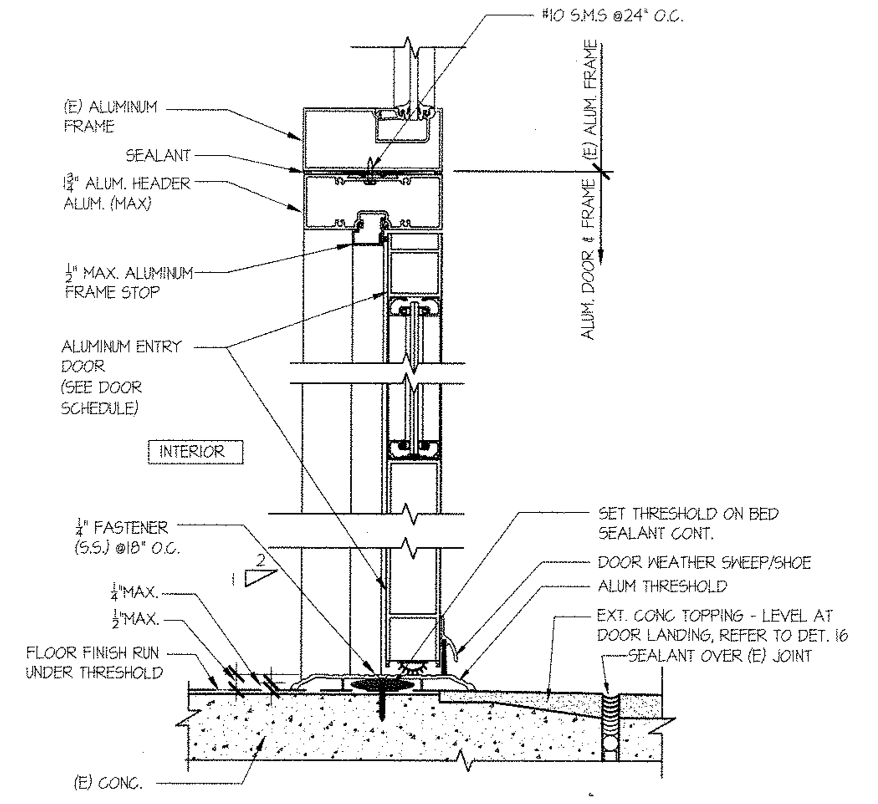


drawing title:
INTERIOR DETAILS
DOORS & WINDOWS

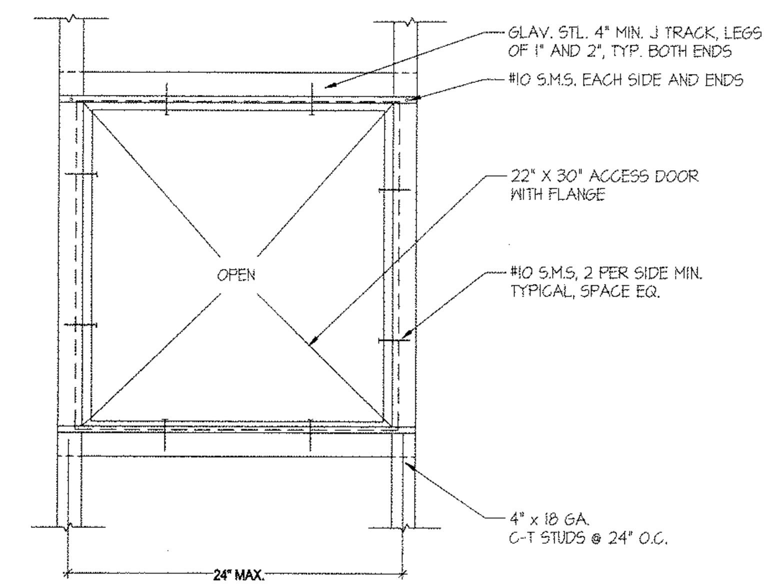
drawing no.:
A814
drawing of



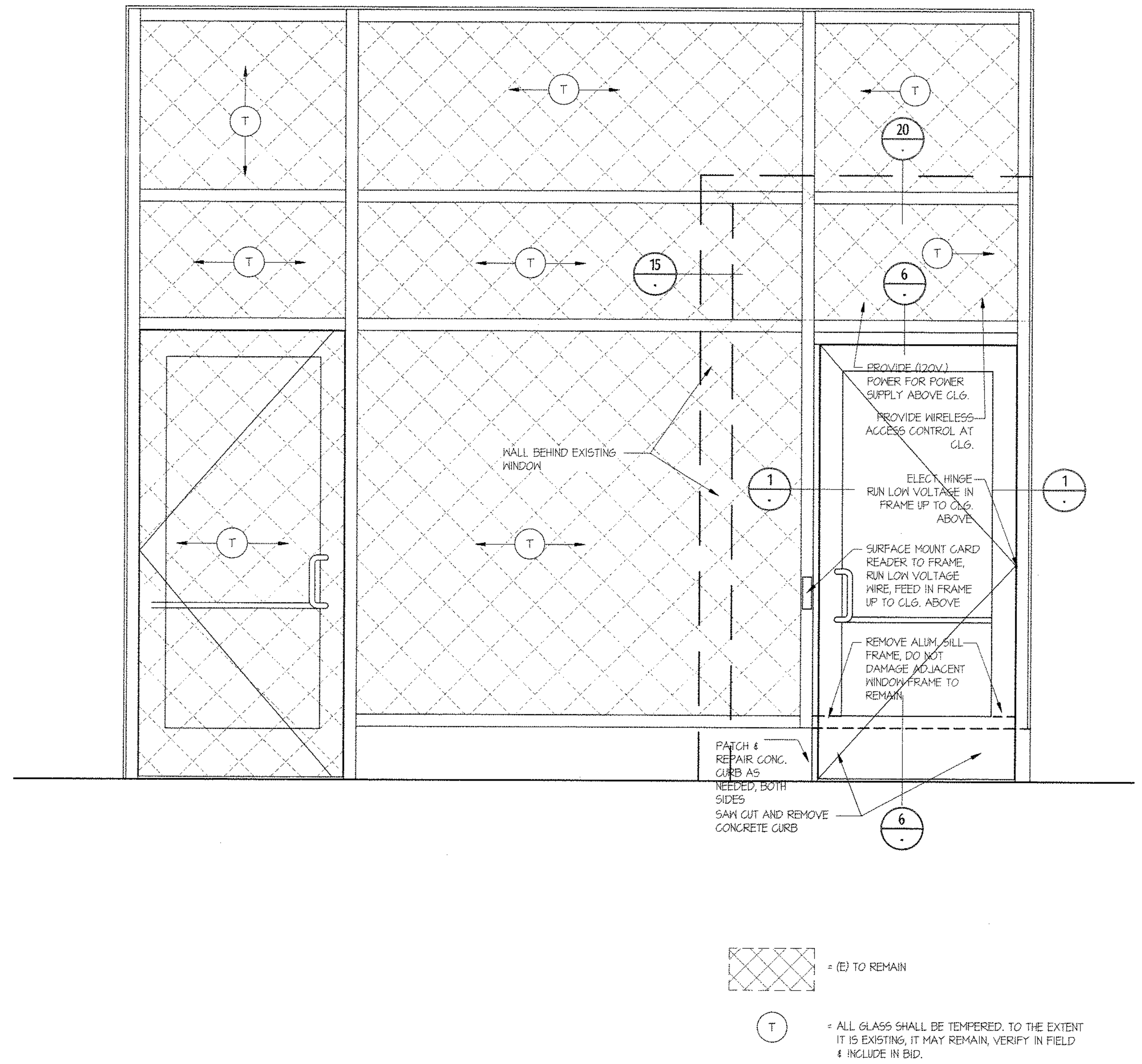

EXTERIOR DOOR JAMB DETAIL 1
SCALE: 3" = 1'-0"



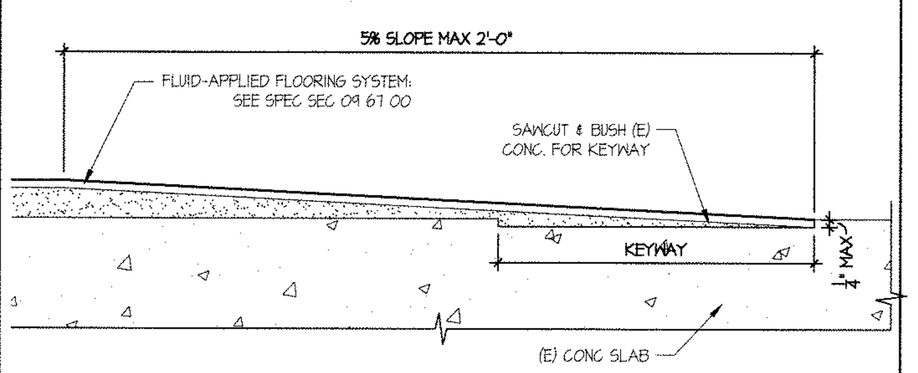

EXTERIOR DOOR HEAD AND THRESHOLD DETAIL 6
SCALE: 3" = 1'-0"



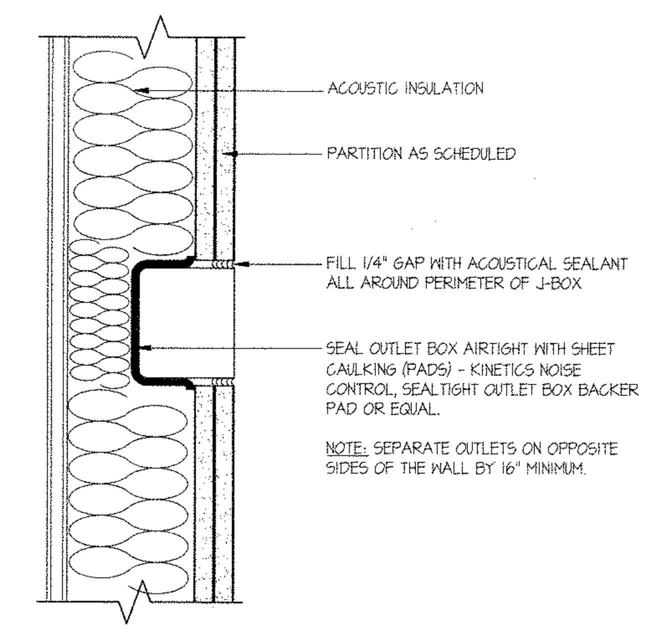

ACCESS PANEL 8
SCALE: NTS



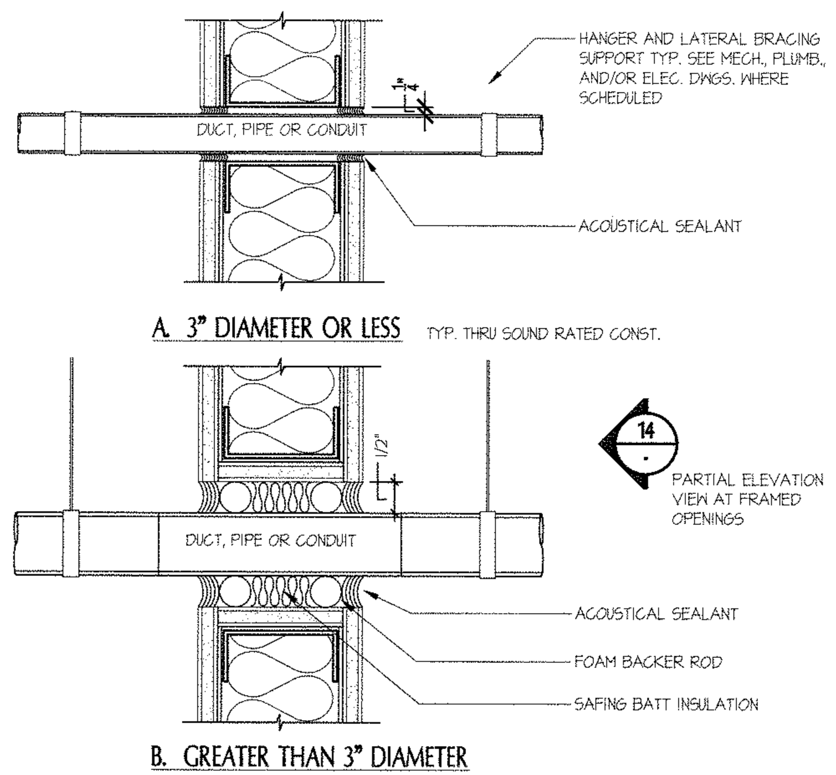

EXTERIOR ELEVATION 10
3/4" = 1'-0"



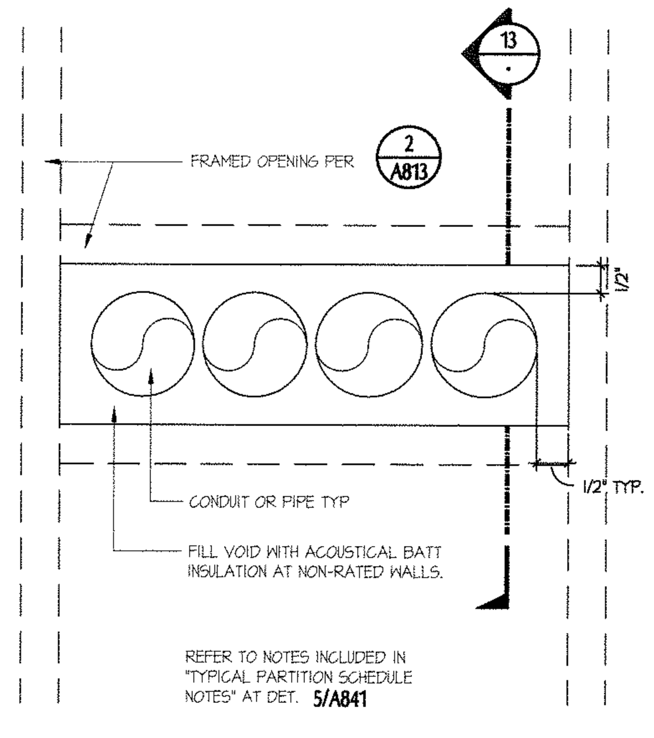

DETAIL - DOOR LANDING KEYWAY 11
SCALE: 3" = 1'-0"



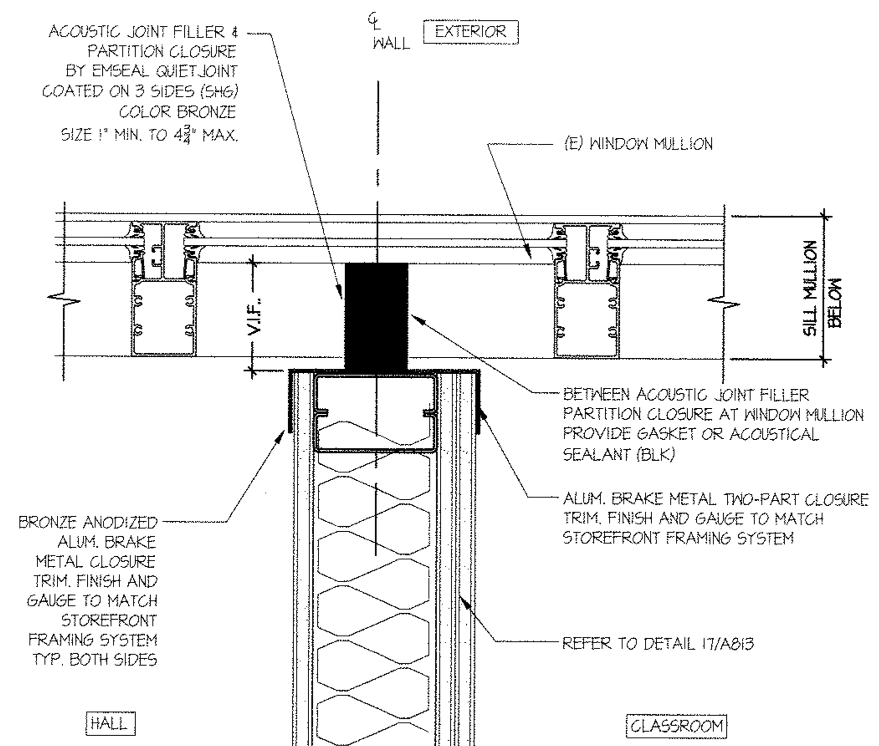

ACOUS. DETAIL AT ELEC. DEVICES 12
IN SOUND RATED WALLS
SCALE: 3" = 1'-0"



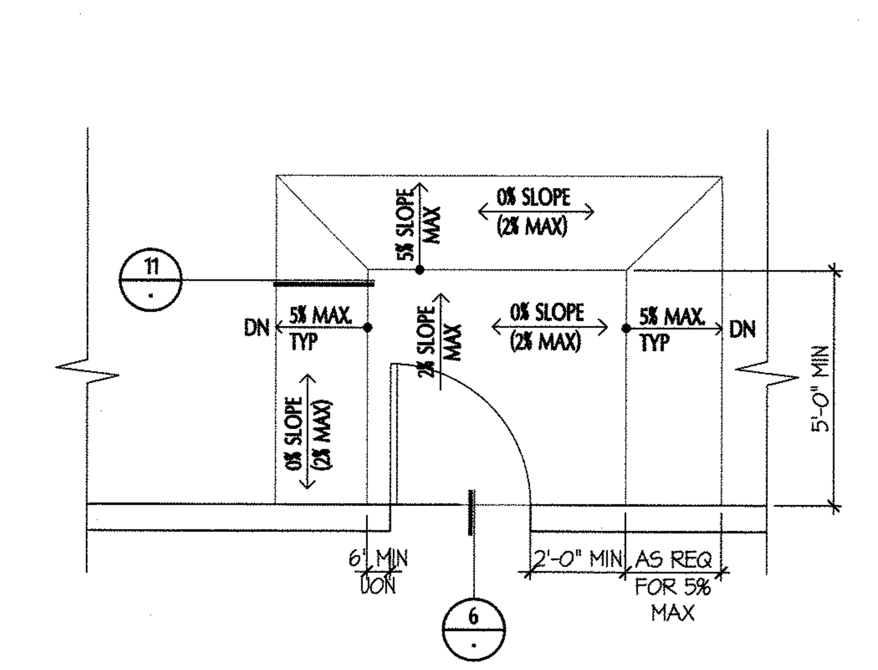

ACOUS. TREATMENT AT TYP. PENETRATION 13
SCALE: 3" = 1'-0"



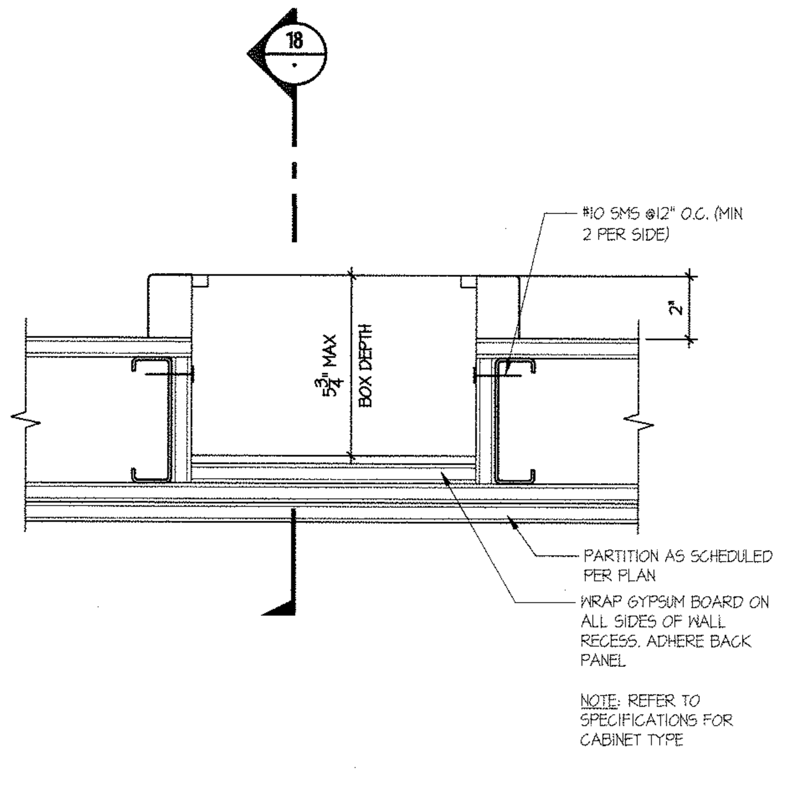

ACOUSTIC PENETRATION DETAIL 14
SCALE: N.T.S.



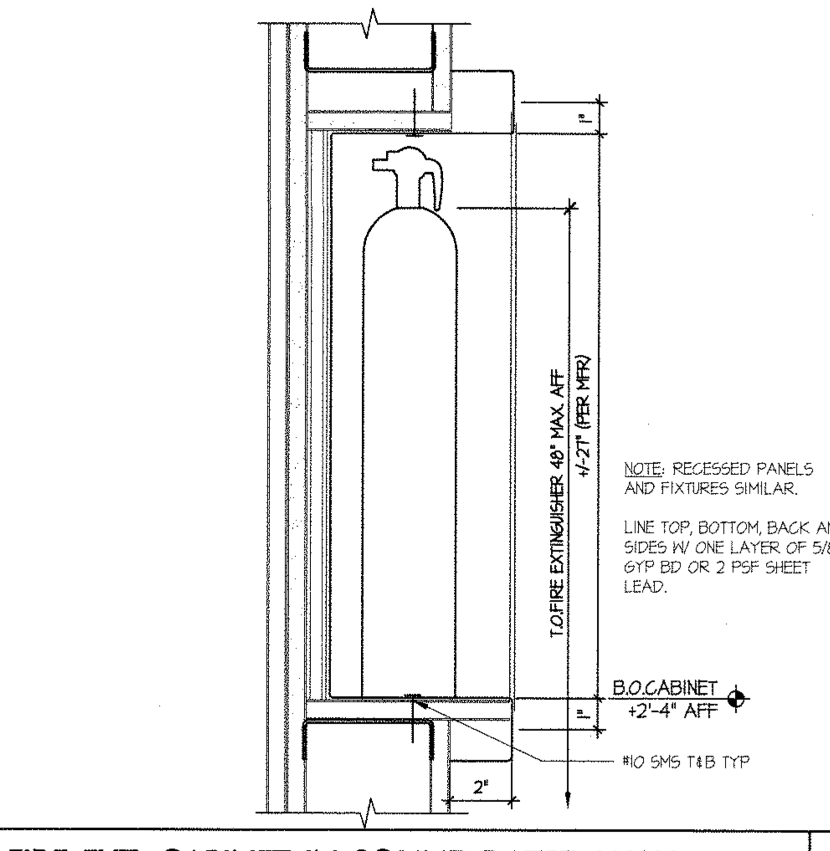

WALL CLOSURE AT (E) WINDOW 15
SCALE: 3" = 1'-0"



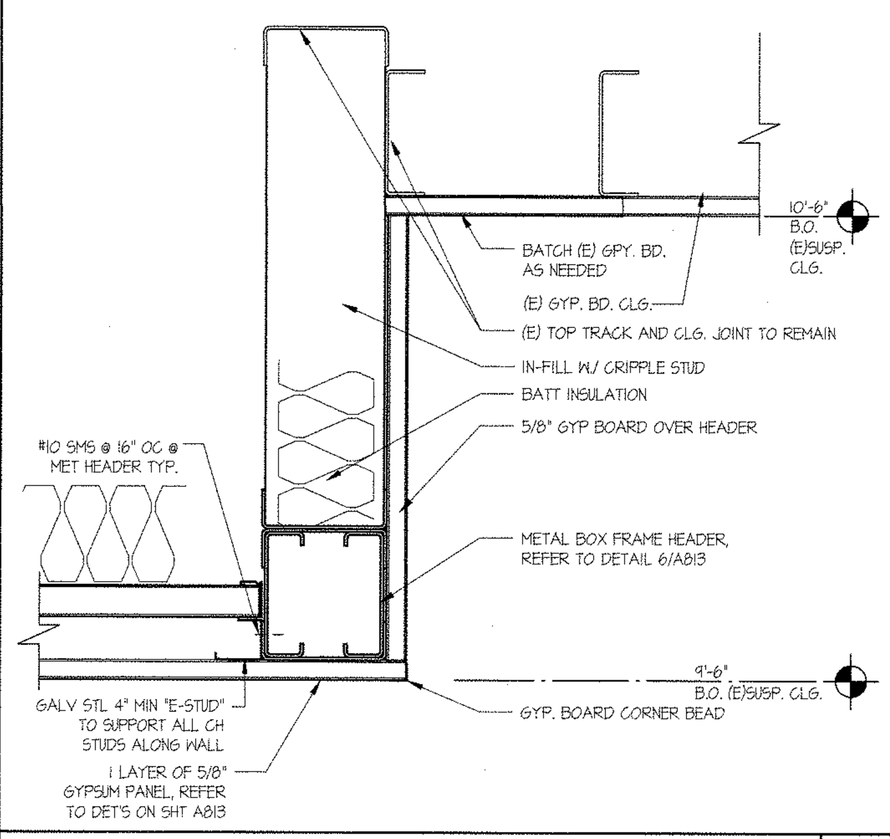

DOOR LANDING 16
SCALE: 3/8" = 1'-0"



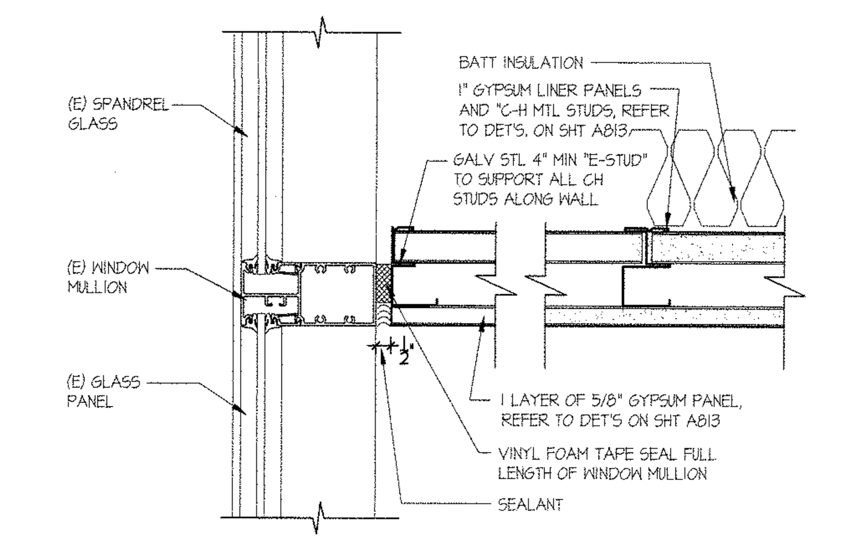

PLAN DETAIL - FIRE EXTINGUISHER CABINET 17
SCALE: 3" = 1'-0"




FIRE EXT. CABINET IN SOUND-RATED WALL 18
SCALE: 3" = 1'-0"




CEILING CLOSURE AT (E) HALL 19
SCALE: 3" = 1'-0"




CEILING CLOSURE AT (E) WINDOW 20
SCALE: 3" = 1'-0"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agency

BUILDING 1800B CORRIDOR PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

| | |
|---|---|
| tBP project number: | 20883.02 |
| file name: | A813 INT DET DOOR WIN |
| drawn by: | checked by: |
| date: | Feb. 23, 2018 |

| Rev. | date: | description: |
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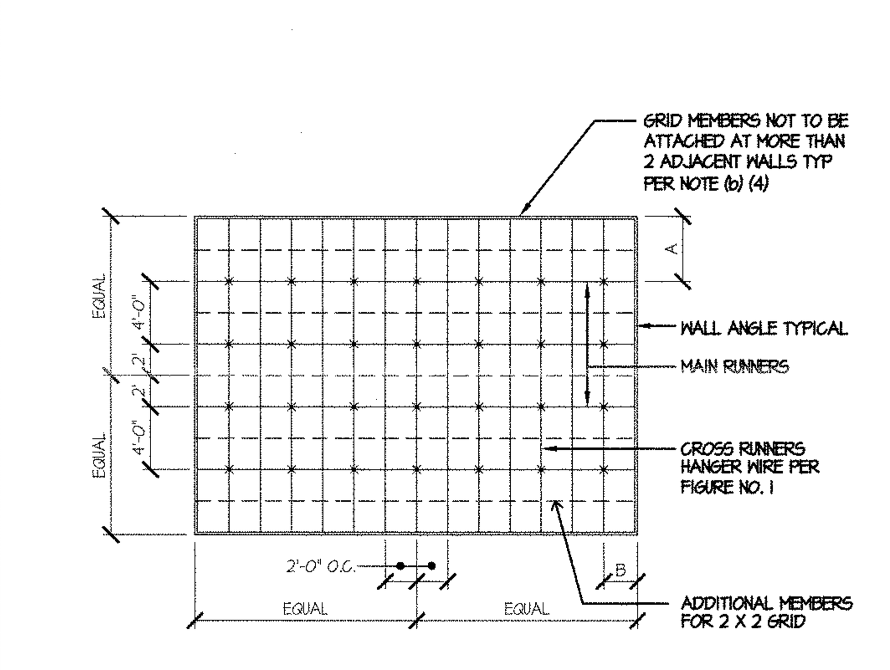
| | 2/16/2018 | 50% CDs |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
DETAILS

drawing no:
A815
drawing of

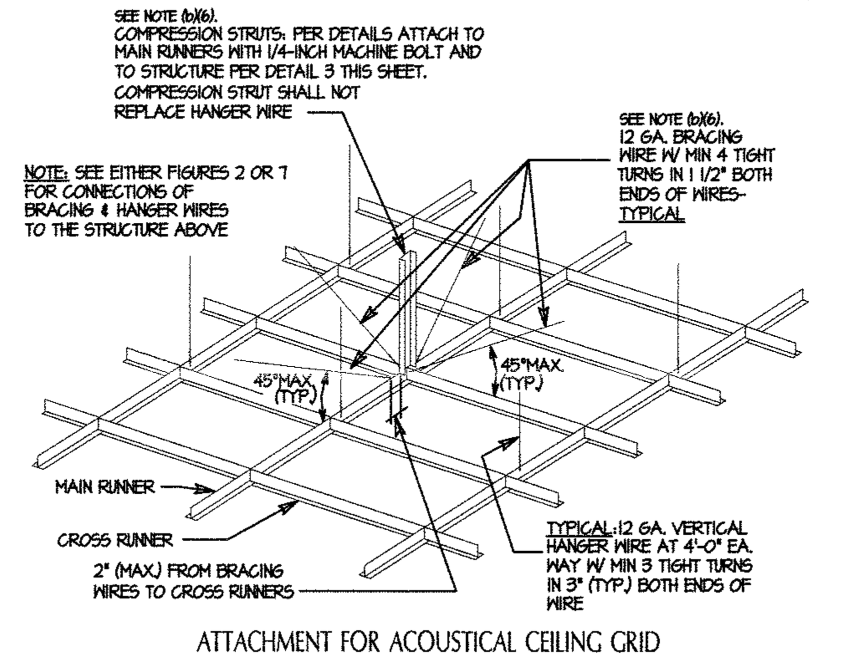



A = 47 1/2" OR LESS TO ACCOMMODATE STANDARD GRID & CEILING BOARD.
B = 24" OR LESS TO ACCOMMODATE STANDARD CEILING BOARD.

NOTE: ALL COMPONENTS OF CEILING GRID TO BE CLASSIFIED 'HEAVY DUTY'

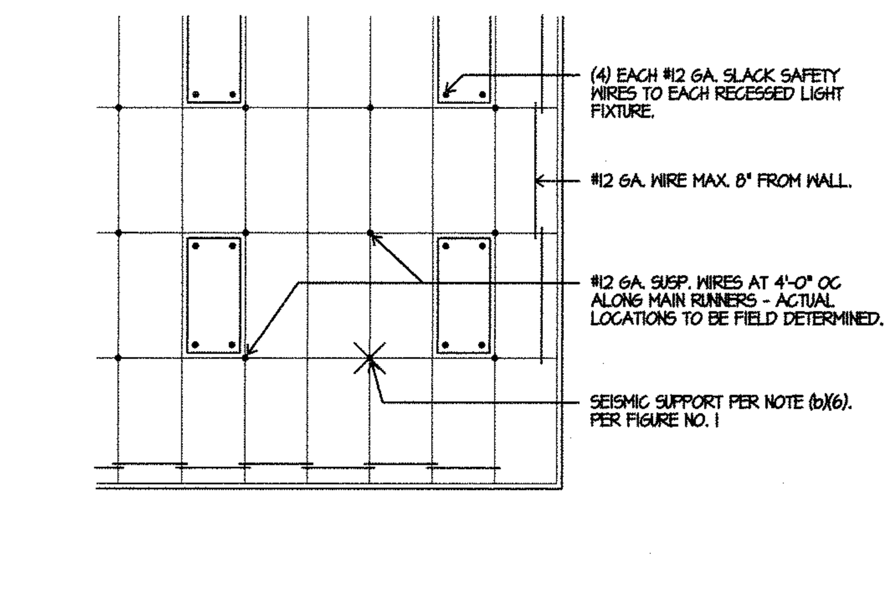
## TYPICAL SUPPORT PLAN AT LAY-IN CEILING — 1

SCALE: NTS



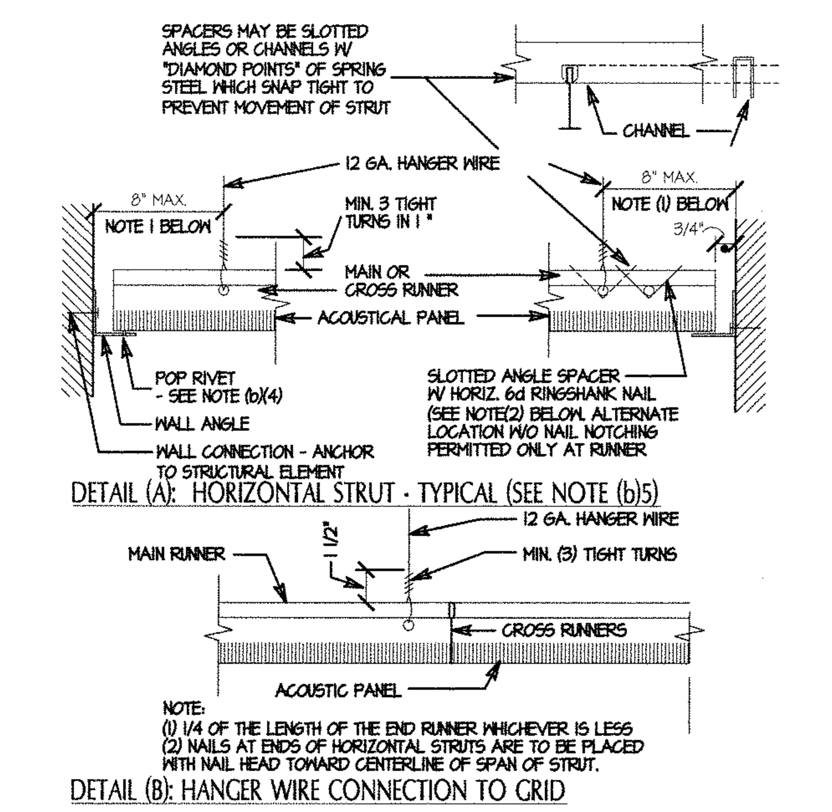

ATTACHMENT FOR ACOUSTICAL CEILING GRID

## FIGURE NO. 1

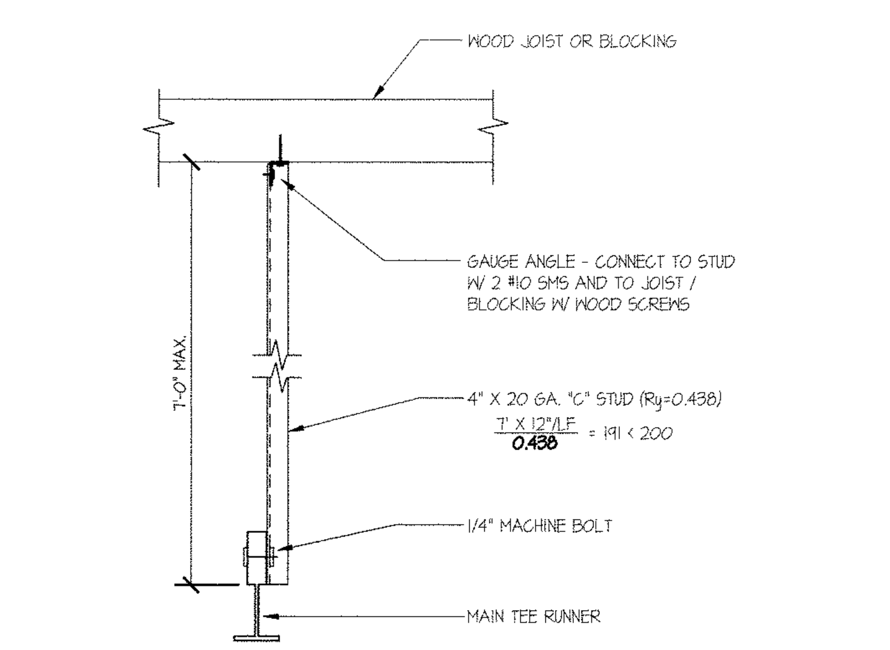



## LATERAL BRACING PLAN — 6

SCALE: NTS

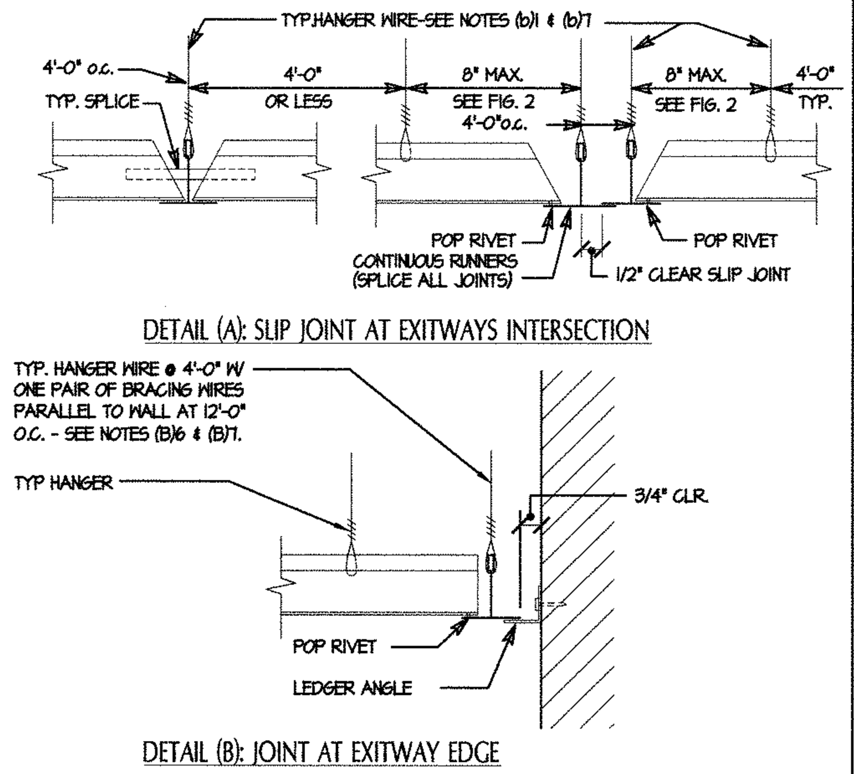



## FIGURE NO. 2




## COMPRESSION STRUT — 11

SCALE: NTS




## FIGURE NO. 7

## TYPICAL SUPPORT PLAN AT LAY-IN CEILING — 12

SCALE: NTS

# METAL SUSPENSION SYSTEMS FOR LAY-IN PANEL CEILINGS

PURPOSE:
The purpose of this Interpretation of Regulations (IR) is to provide guidelines for the installation of metal suspension systems for lay-in ceilings on projects approved under the 2013 California Building Code (CBC). For projects submitted to DSA for review under the 2016 CBC, see IR 25-2.13 for 2016 CBC respectively.

1. GENERAL REQUIREMENTS:
CBC Section 1615A1.20 (1616.10.16*) requires the design and installation to be in compliance with ASTM C635, C636, and E580, Section 5, with modifications.
Note: Amendments in CBC Section 1616A.1.20 (1616.10.16*) replace and append ASCE 7, Section 13.5.6.

The requirements in this IR apply to ceiling systems whose total weight, including ceiling mounted air terminals, services and light fixtures, does not exceed four (4) psf. Heavy systems, and those supporting lateral loads from partitions, will require special design details.

2. SUSPENSION SYSTEM COMPONENTS:
shall comply with ASTM C635 and E580 Section 5.1 of ASTM E580.
2.1 The ceiling grid system must be rated heavy duty as defined by ASTM C635.
2.2 Suspension wires shall be #12 gage (0.106" diameter), soft annealed, and galvanized steel wires with Class 1 coating.
2.3 Main runners, cross runners, splices, expansion devices, intersection connectors shall be designed to carry a mean ultimate test load of not less than 180 lbs. in compression and tension per ASTM E580 Section 5.1.2.
3. SUSPENSION SYSTEM INSTALLATION:
shall comply with ASTM C636 and E580 Section 5.2 of ASTM E580
3.1 #12 gage hanger wires may be used for up to and including 4 ft. by 4 ft. grid spacing and shall be attached to main runners.
3.2 Provide #12 gage hanger wires at the ends of all main and cross runners within eight (8) inches of the support or within one-fourth (1/4) of the length of the end tee, whichever is least, for the perimeter of the ceiling area. See Figure 2. Perimeter wires are not required when the length of the end tee is eight (8) inches or less.
DSA IR 25-2.13 Metal Suspension Systems For Lay-In Panel Ceilings: 2013 CBC
3.3 Ceiling grid members shall be attached to two (2) adjacent walls per ASTM E580 Section 5.2.3. Ceiling grid members shall be at least 3/4 inch clear of other walls. If walls run diagonally to ceiling grid system runners, one end of main and cross runners should be free, and a minimum of 3/4 inch clear of wall.
3.4 The width of the perimeter supporting closure angle shall be not less than 2 inches. Grid systems with specialty angles and support clips may be acceptable in accordance with Section 11 below.
3.5 At the perimeter of the ceiling area where main or cross runners are not connected to the adjacent wall, provide interconnection between the runners at the free end to prevent lateral spreading. A metal strut or a #16 gage wire with a positive mechanical connection to the runner may be used. Where the perpendicular distance from the wall to the first parallel runner is 8 inches or less, this interlock is not required.

(CONTINUED)

4. EXPANSION JOINTS, SEISMIC SEPARATION JOINTS, AND PENETRATIONS:
4.1 Expansion joints shall be provided in the ceiling at intersections of corridors and at junctions of corridors with lobbies or other similar areas. See Figure 7 Detail A.
4.2 For ceiling areas exceeding 2500 square feet, a seismic separation joint shall be provided in accordance with Figure 7 Detail A to divide the ceiling into areas not exceeding 2500 square feet. Alternatively, comply with ASTM E580 Section 5.2.9.
4.3 Penetrations through the ceiling for sprinkler heads and other similar devices that are not integrally tied to the ceiling system in the lateral direction shall have a two (2) inch oversized ring, sleeve or adapter through the ceiling tile to allow free movement of one (1) inch in all horizontal directions. Alternatively, per ASTM E580 Section 5.2.8.8, a flexible sprinkler hose fitting that can accommodate 1 inch of ceiling movement shall be permitted to be used in lieu of the oversized ring, sleeve or adapter.

5. LATERAL FORCE BRACING:Lateral force bracing is required per this section for all ceiling areas. The spacing of the bracing assemblies must be shown on the construction documents.
Exception: Lateral force bracing may be omitted for suspended acoustical ceiling systems with a ceiling area of 144 square feet or less, and fire rated suspended acoustical ceiling systems with a ceiling area of 96 square feet or less, when perimeter support in accordance with Section 3.4 of this IR or with ASTM E580 Sections 5.2.2 and 5.2.3 are provided and perimeter walls are designed to carry the ceiling lateral forces.
5.1 Provide lateral-force bracing assemblies consisting of a compression strut and four (4) #12 gage splayed bracing wires oriented 90 degrees from each other (see Figure 1).
5.2 Lateral-force bracing assemblies shall be spaced at a maximum of 12 feet by 12 feet on centers for school buildings and 8 feet by 12 feet on centers for essential services buildings, with the first assembly within half the maximum spacing from each wall and at the edges of any change in elevation of the ceiling. The last assembly must be within maximum distance from each wall.
5.3 The slope of bracing wires shall not exceed 45 degrees from the plane of the ceiling and wires shall be taut. Splices in wires are not permitted without special DSA approval.
5.4 Compression struts shall be adequate to resist the vertical component induced by the bracing wires, and shall not be more than 1 (horizontal) in 6 (vertical) out of plumb. DSA IR 25-2.13 Metal Suspension Systems For Lay-In Panel Ceilings: 2013 CBC

ATTACHMENT OF HANGER AND BRACING WIRES:
6.1 Fasten #12 hanger wires with not less than three (3) tight turns in 3 inches. Hanger wire loops shall be tightly wrapped and sharply bent to prevent any vertical movement or rotation of the member within the loops (see ASTM E580, Section 5.2.7.2).
6.2 Fasten #10 or #12 bracing wires with four (4) tight turns. Make all tight turns within a distance of 1-1/2 inches.
6.3 Hanger or bracing wire anchored to the structure should be installed in such a manner that the direction of the anchor aligns as closely as possible with the direction of the wire.
6.4 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.
6.5 Hanger wires shall not attach to or bend around interfering material or equipment. Provide trapeze or other supplementary support members at obstructions to typical hanger spacing. See Figure 3A, Detail F. Provide additional hangers, struts or braces as required at all ceiling breaks, soffits, or discontinuous areas.
6.6 Hanger wires that are more than 1 (horizontal) in 6 (vertical) out of plumb shall have counter-sloping wires. Perimeter hanger wires at main runners that are positively attached to the perimeter closure angle, counter-sloping is optional.
Note : See ASTM C-636 Figure 1 for counter-sloping methods.
6.7 When connection details differ from those in the attached figures, attachment of bracing wires to the structure above and to the main runners shall be adequate for the load imposed. The weight (Wp) shall be taken as not less than 4 psf for calculating seismic forces (Fp)
6.8 When drilled-in concrete anchors or shot-in anchors are used in reinforced concrete for hanger wires, 1 out of 10 wire/anchor assemblies must be field tested for 200 lbs. in tension. When drilled-in concrete anchors are used for bracing wires, 1 out of 2 wire/anchor assemblies must be field tested for 440 lbs. in tension in the direction of the wire. Shot-in anchors in concrete are not permitted for bracing wires.).

Note: Drilled-in or shot-in anchors require special DSA approval prior to use in prestressed concrete.

7. CEILING FIXTURES, TERMINALS, AND DEVICES:All fixtures, terminals, and other devices shall be mounted in a manner that will not compromise ceiling performance in accordance with Section 13.5.6.2.2(5) of ASCE 7-05 as amended by 2016 CBC Section 1616A.1.20 1616.10.16*) and ASTM E580 Setions 5.3 and 5.4.
7.1 Ceiling panels shall not support any light fixtures, air terminals or devices.
7.2 Attach all light fixtures, ceiling mounted air terminals, and all other devices to the ceiling grid runners to resist a horizontal force equal to the weight of the fixture. Screws or approved fasteners are required. A min. of two attachments are required at each light fixture, per ASTM E580, Sections 5.3.1.
7.3 Recessed or drop-in light fixtures, grilles, mechanical terminals, and flexible sprinkler hose fittings or other services be supported directly on runners classified as ASTM heavy duty, but they must also have a minimum of two (2) #12 gage slack safety wire attached to the fixture at diagonal corners and anchored to the structure above.
7.4 All flush or recessed light fixtures, mechanical terminals, and flexible sprinkler hose fittings or other sercices weighing 56 lbs. or more must be independentaly supported by not less than four (4) taut #12 gage wires attached to the housing and to the structure above. The four (4) taut #12 gage wires, including their attachment to the structure above, must be capable of supporting four (4) times the weight of the unit.
7.5 All 4ft.X4ft. light fixtures must have slack safety wires at each corner.
7.6 Surface-mounted fixture shall be attached to the main runner with at least two positive clamping devices made of material with min. #14 gage. Rotational spring catches do not comply. A #12 gage suspension wire shall be attached to each clamping devices to the structure above. Provide additional supports when light fixture are eight (8) feet or longer. Maximum spacing between supports shall not exceed eight (8) feet.
7.8 All lightweight misc. devices such as strobe lights, occupancy sensors. speakers, exit signs, ect. shall be attached to the ceiling grid per Section 7.1 of this IR. In addition, devices weighting more than 10lbs. shall have a #12 slack safety wire anchored to the structure above. Devices weighting more than 20lbs shall be supported from the structure above per Section 7.3 of this IR.

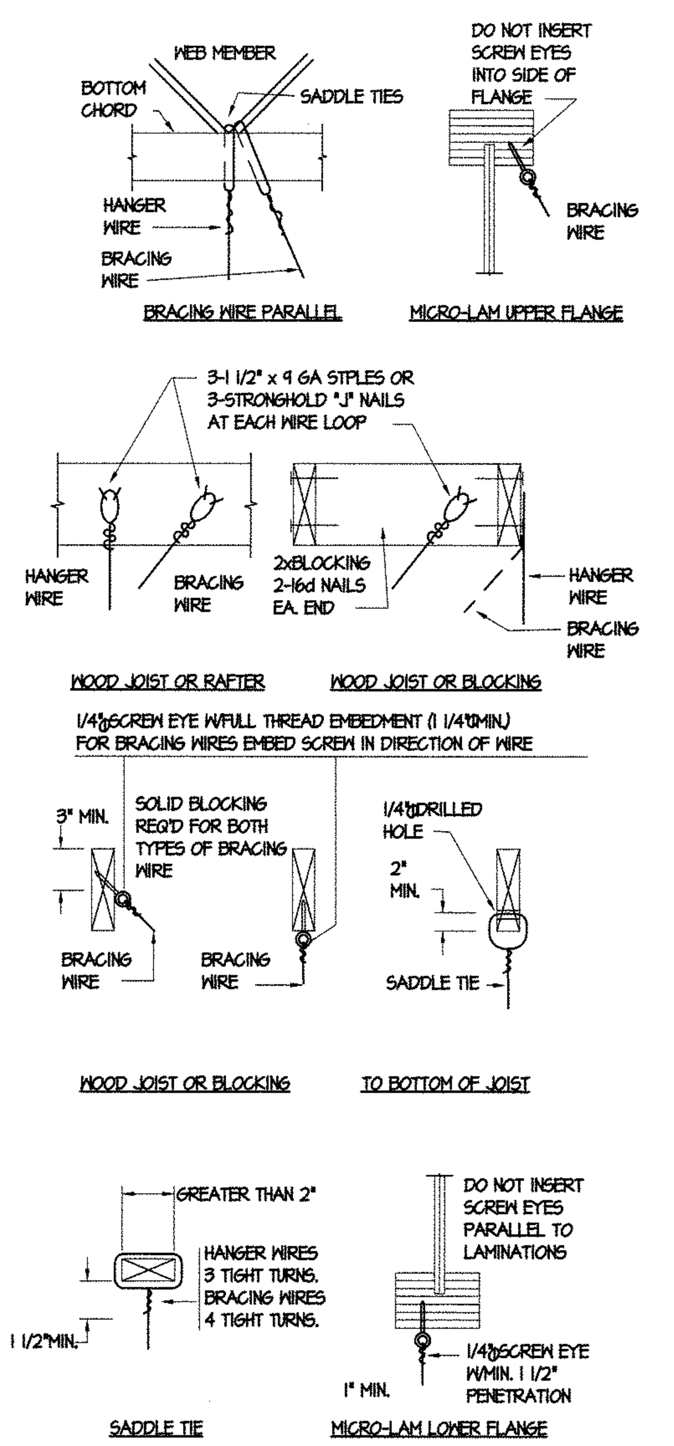
8. ADDITIONAL REQUIREMENTS:
8.1 Fire Rated Ceilings:Provide a detail and design number for rated ceiling assemblies from an authorized testing agency. The components and installation details must conform in every respect with the listed detail and number. Details shall clearly depict all components, including insulation materials, framing and attachment of the design so that the assembly can be constructed and inspected accordingly. Pop rivets, screws, or other attachments are not acceptable unless specifically detailed on the drawings and approved by U.L. and State Fire Marshal. (SFM) recognized laboratories.
8.2 Metal and Other Panels:Metal panels and panels weighing more than 1/2 psf, other thanmineral fiber acoustical tile, are to be positively attached to the ceiling suspension runners.
8.3 Essential Services Buildings: Exit ways shall be installed in accordance with Section 13.5.6.2.2(1) of ASCE 7-05 as amended by 2016 CBC Section 1615A.1.16 (1615.10.13*). A main or cross runner shall be installed on all sides of each piece of tile, board or panel and each light fixture or grill (see Figure 7 Detail B). Splices or intersection of such runners shall be attached with through connectors such as pop rivets, screws, pins, plates with end tabs or other approved connectors.
8.4 Suspended Acoustical Ceilings Below Gypsum Board Ceilings: Where gypsum board or other ceiling finishes are attached to the framing, specific details will be required for the vertical hanger wire and lateral bracing wire support connections to the framing.

RE-USE OF EXISTING CEILING HANGER WIRES AND BRACING WIRES:

9.1 The gage and spacing of the wires must comply with the current applicable codes.
9.2 All existing ceiling hanger wire/anchor assemblies must be tested to 200 lbs.
9.3 All existing bracing wire/anchor assemblies must be field tested to 440 lbs.
9.4 If a new wire is to be spliced to an existing wire, the following is required:
- The architect or structural engineer in general responsible charge must submit to DSA a detail and specification describing how the splice is to be made.
- All new wires, after being spliced to the existing wires, must be field tested per Sections 9.2 and 9.3 above.
- All field tests must be performed in the presence of the project inspector.
10. MODERNIZATION AND ALTERATION:
The entire ceiling shall be upgraded to meet the current requirements of the CBC and this IR if any portion of the grid system is cut or altered.
Exception: The replacement of existing ceiling panels with panels of the same materials and light fixtures of the same size, locations, and weights does not require an upgrade to the ceiling grid and suspension system.
11. DSA ACCEPTANCE REPORT:
DSA no longer issues Acceptance Reports for products. Ceiling grid systems or components, with valid evaluation reports issued by qualified evaluation agencies in accordance with DSA IR A-5, are accepted by DSA, provided the system or component meets the requirements of CBC Section 1615A.1.16 (Section 1615.10.13 for CC), ASTM C635, C636 and E580. Where qualified evaluation report is utilized, the installation shall comply with all the requirements specified in the evaluation report, i.e. connections, member sizes, perimeter details, special clips to wall angles,etc.
12. CONSTRUCTION DOCUMENTS:
Drawings and specifications shall clearly identify all systems and shall define or show all supporting details, lighting fixture attachment, lateral force bracing, partition bracing, seismic separations, etc. Where differences occur between provisions of this IR and the CBC, the provisions of the CBC shall apply.

A list of acceptable grid systems must be shown on the drawings. The grid systems specified shall have valid evaluation reports in accordance with IR A-5. The following information shall be included on the drawings for each acceptable grid system specified:
Classification of ceiling grid is heavy duty
Manufacturer's catalog number - main runner . heavy duty, USG Donn DX System
Manufacturer's catalog number - cross runner . USG Donn DX System, See note 3 below.
Manufacturer's catalog number of detail for runner splice . USG Donn brand grid Cat. # DGSC-180

Notes: (1) Runners must be rated as heavy duty.
(2) Show manufacturer, duty classification and catalog numbers.
(3) If a cross runner supports light fixture, air terminals or other cross runners, it shall be considered a main runner for the purpose of the structural classification.




## WIRE CONNECTION AT WOOD FRAMING — 12

SCALE: NTS

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architect

consultant

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
APP. 02-116615
INC:
AC / FLS / SS
DATE: MAY 04 2018

Division of the State Architect
1102 Q Street, #5100
Sacramento, Ca, 95811
ph: (916) 445-8100

agency

BUILDING 1800B CORRIDOR PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

| | |
|---|---|
| tBP project number: | 20888.02 |
| file name: | A8D INT DET DOOR HIN |
| drawn by: | checked by: |
| date: | Feb. 23, 2018 |

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
DETAILS

drawing no:
A816
drawing of

| QC | |
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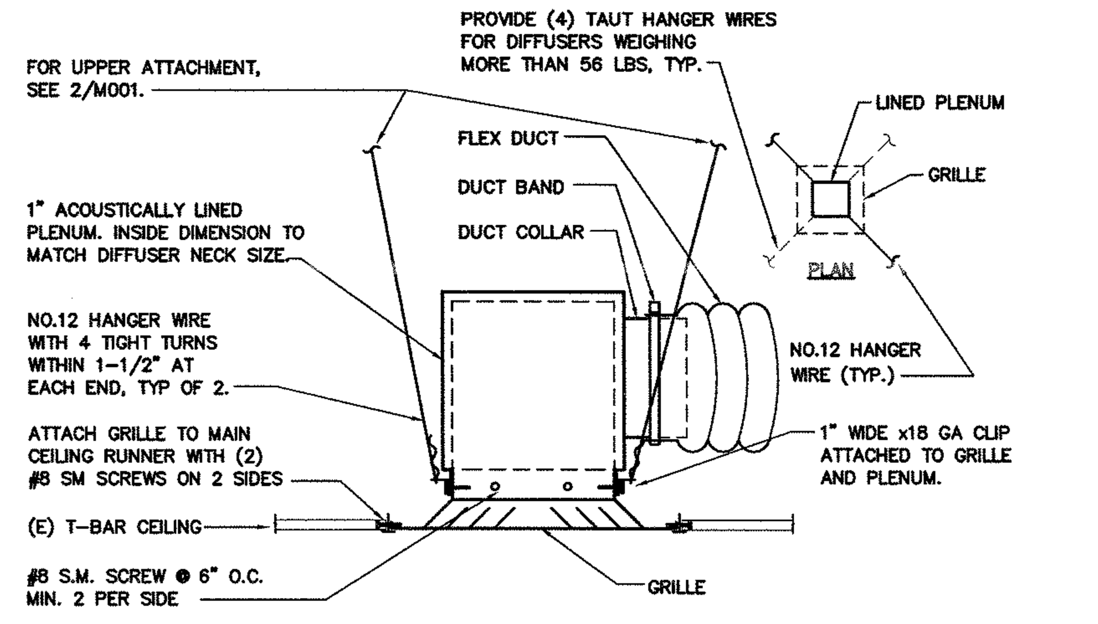
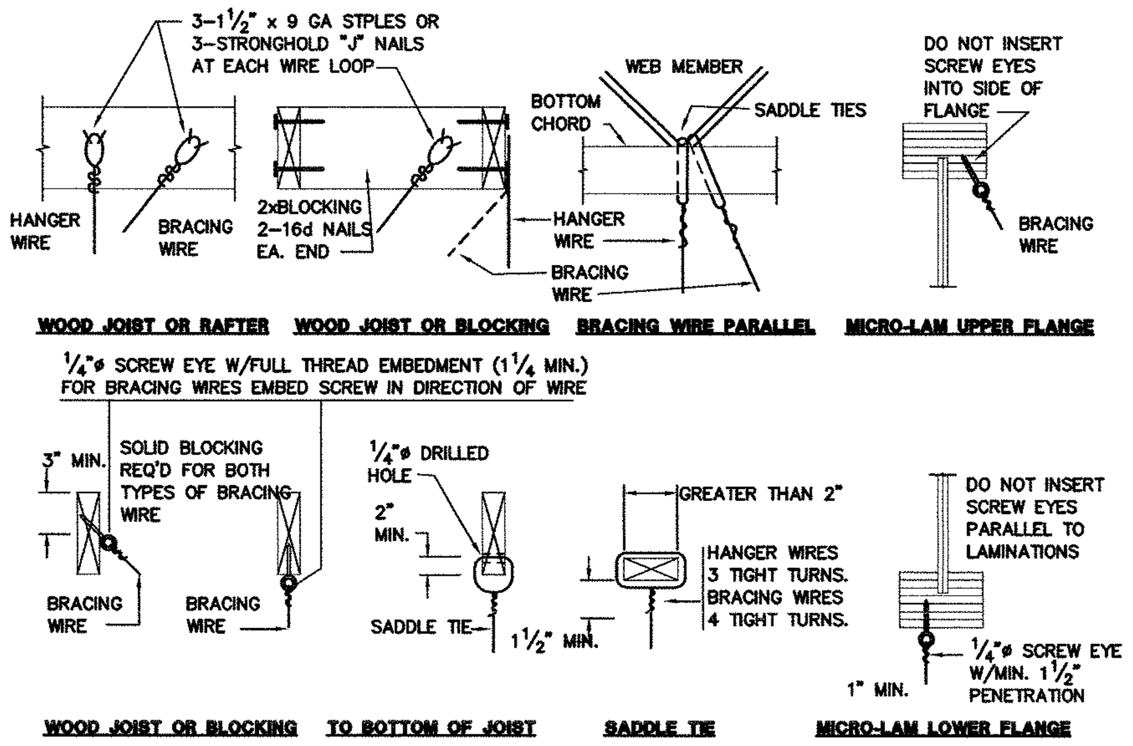



## TYP. LAY-IN DIFFUSER/GRILLE MOUNTING (1/M001)

SCALE : NONE




## WIRE SUPPORTS (2/M001)

SCALE : NONE

## MECHANICAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES AND INDUSTRY STANDARDS.
2. VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3. COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4. COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE AND EQUIPMENT PRIOR TO COMMENCING WORK.
5. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES.
6. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DUFFUSER.
7. FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8. ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING ETC., ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING ETC. IS SHOWN LIGHT. SEE LEGEND.
9. (E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT, SEE LEGEND, COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10. WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9"ø & 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMODATE THE ROUND DUCT CONNECTION.
11. THERMOSTATS AND ROOM TEMPERATURE SENSORS SHALL BE INSTALLED AT 46" ABOVE FINISHED FLOOR (TO TOP OF DEVICE). DO NOT INSTALL THERMOSTATS AND ROOM TEMPERATURE SENSORS ABOVE CASEWORK, SHELVING OR OTHER OBSTRUCTIONS OVER 24" IN DEPTH AND 34" IN HEIGHT.

## DIFFUSER, REGISTER & GRILLE SCHEDULE

| SYMBOL | DESCRIPTION | KRUEGER | METALAIRE | NAILOR | TITUS | TUTTLE & BAILEY |
|---|---|---|---|---|---|---|
| CR | CEILING RETURN WITH ½" EGG CRATE CORE SURFACE MOUNT | EGC-5 | CC5D | 61 EC-S | MODEL 50 F BORDER TYPE 1 | CRE500-SF |

NOTES:

1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.
2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.

* ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS

4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.
5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.
6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.

## DUCT LEGEND

| SINGLE LINE SYMBOL | DOUBLE LINE SYMBOL | DESCRIPTION |
|---|---|---|
| 24x12 | 24x12 | RECTANGULAR DUCT – WIDTH X DEPTH (PLAN VIEW) DEPTH X WIDTH (SECTION VIEW) |
| 26x14L | 26x14L | ACOUSTICALLY LINED RECTANGULAR DUCT – DIMENSIONS ARE OUTSIDE. |
| | | MANUAL AIR DAMPER |
| R OR D | RISE OR DROP | RISE OR DROP DUCT IN DIRECTION OF AIR FLOW |
| | OR | RECTANGULAR TO RECTANGULAR TRANSITION, MAX SLOPE OF 1:3<br>RECTANGULAR TO ROUND TRANSITION, MAX SLOPE OF 1:3 |
| | W R R/W = 1.5 | ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES. |
| | | SQUARE/RECTANGULAR DUCT ELBOW WITH TURNING VANES |
| | | CONVERGING OR DIVERGING TEE, 45° ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAXIMUM SLOPE OF 1:3. |
| | | CONICAL DUCT TAKE OFF FROM RECTANGULAR VIA SPIN-IN W/DAMPER AND SCOOP. |
| | ROUND DUCT | ROUND DUCT TAKE OFF FROM RECTANGULAR VIA SMOOTH CONVERGING BELL MOUTH. |
| | | RECTANGULAR DUCT TEE, MAD'S ON THE 2 BRANCHES, THROAT SIZED FOR EQUAL PRESSURE DROP. |
| | | RECTANGULAR DUCT SPLIT MAD'S, THROAT SIZED FOR EQUAL PRESSURE DROP. |
| | | 3-WAY RECTANGULAR SPLIT WITH TWO TRANSITIONAL ELBOWS AND TRANSITIONING MAIN. DOWNSTREAM MAD'S ON THE TREE BRANCHES. THROATS SIZED FOR EQUAL PRESSURE DROP. |
| | | FOR CONCEALED DUCT: DROP TO DIFFUSER SHALL BE FULL SIZE OF DIFFUSER NECK. FOR EXPOSED DUCT: DROP SHALL BE FULL SIZE OF OD DIFFUSER FRAME, FLANGE FOR MOUNTING DIFFUSER TURNED IN. AIR EXTRACTOR AND EQUALIZER GRID AT CONNECTION TO MAIN. |
| | | SUPPLY AIR, SUPPLY AIR DUCT IN SECTION, SUPPLY DROP |
| | | RETURN AIR, RETURN AND OUTSIDE AIR DUCT IN SECION , RETURN AIR DROP. |
| | | EXHAUST AIR, EXHAUST AIR DUCT IN SECTION, EXHAUST AIR DROP. |
| | | FLEXIBLE DUCT (ROUND) |
| | | FLEXIBLE DUCT (FABRIC) |
| MAD | 18"ø 10"ø 12"ø 12"ø | 45° REDUCING LATERAL FITTING |
| 18"ø 10"ø MAD | 18"ø 10"ø 12"ø | 90° REDUCING TEE FITTING |

## MECHANICAL LEGEND

| SYMBOL | ABBREVIATION | DESCRIPTION |
|---|---|---|
| | ABV | ABOVE |
| | AFF | ABOVE FINISHED FLOOR |
| | AD , AP | ACCESS DOOR , ACCESS PANEL |
| | APD | AIR PRESSURE DROP, INCHES WATER COLUMN |
| | BDD | BACK DRAFT DAMPER |
| | BHP | BRAKE HORSE POWER |
| | BTU(H) | BRITISH THERMAL UNITS (PER HOUR) |
| | CLG | CEILING |
| | CFM | CUBIC FEET OF AIR FLOW PER MINUTE |
| | DPR | DAMPER |
| | DN | DOWN |
| | DB | DRY BULB (DEGREES FAHRENHEIT) |
| | EA | EXHAUST AIR |
| | EF | EXHAUST FAN |
| | (E), EXIST | EXISTING |
| | (E) | EXISTING TO BE REMOVED |
| | ESP | EXTERNAL STATIC PRESSURE |
| | FPM | FEET PER MINUTE |
| | FLR | FLOOR |
| | FA | FROM ABOVE |
| | FB | FROM BELOW |
| | FLA | FULL LOAD AMPS |
| | KW | KILOWATTS |
| | LRA | LOCKED ROTOR AMPERES |
| | MAD, MD | MANUAL AIR DAMPER |
| | MFR | MANUFACTURER |
| | MAX | MAXIMUM |
| | MIN | MINIMUM |
| | (N) | NEW |
| | OA | OUTSIDE AIR |
| | POC | POINT OF CONNECTION |
| | LBS | POUNDS |
| | RA | RETURN AIR |
| | RLA | RUNNING LOAD AMPERES |
| | SM | SHEET METAL |
| | SQFT, $FT^2$ | SQUARE FEET |
| | SQIN, $IN^2$ | SQUARE INCHES |
| | SP | STATIC PRESSURE |
| | SPD | STATIC PRESSURE DROP |
| | SA | SUPPLY AIR |
| $TS_X$ | | TEMPERATURE SENSOR, "X" INDICATES DEVICE CONTROLLED |
| | MBH | THOUSAND BRITISH THERMAL UNITS PER HOUR |
| | TA | TO ABOVE |
| | TB | TO BELOW |
| | TSP | TOTAL STATIC PRESSURE |
| | TYP | TYPICAL |
| | UON | UNLESS OTHERWISE NOTED |
| | W | WATTS |
| | WT | WEIGHT |
| | WMS | WIRE MESH SCREEN |

## 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 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 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 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 DISTRIBUTION 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 & 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.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON 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 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-APPROVED (OPM #) #0043-13 (MASON WEST, INC.).

MP☐ MD☐ PP☐ OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL. OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.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REGISTERED PROFESSIONAL ENGINEER
THOMAS A. DUVAL
M 22896
EXPIRES 9/30/18
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 04/26/18

CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA
TD - JCH 180118.00
PM - DESIGN TEAM PROJECT NO.
consultant

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE # 48-C1
APPL # 02-116615
AC FLS SS KG
DATE MAY 04 2018

Division of the State Architect
1102 Q Street, #5100
Sacramento, Ca, 95811
ph: (916) 445-8100
agency


BUILDING 1800B HALL PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUSISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

tBP project number: 20883.02

file name: MECHANICAL NOTES, LEGENDS & DETAILS

drawn by: checked by:

date: APRIL 25, 2018

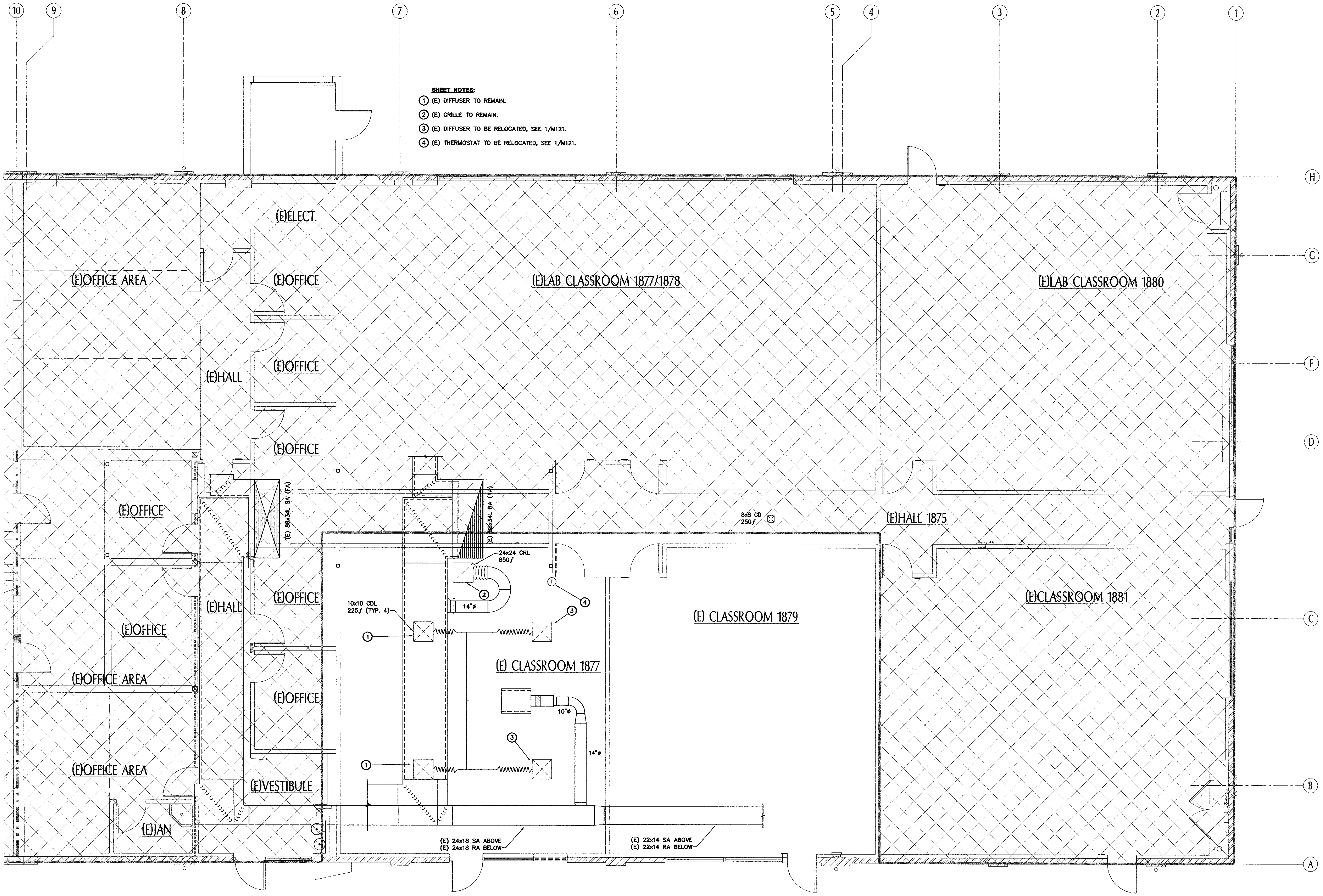
| Rev. | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | 3/16/2018 | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
MECHANICAL NOTES, LEGENDS, & DETAILS

drawing no:
M001

drawing of




**SHEET NOTES:**

1. (E) DIFFUSER TO REMAIN.
2. (E) GRILLE TO REMAIN.
3. (E) DIFFUSER TO BE RELOCATED, SEE 1/M121.
4. (E) THERMOSTAT TO BE RELOCATED, SEE 1/M121.

## MECHANICAL DEMOLITION PLAN

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

1 / M111

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DATE SIGNED: 04/26/18

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BUILDING 1800B HALL PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

tBP project number: 20883.02

file name: MECHANICAL DEMO PLAN

drawn by: checked by:

date: APRIL 25, 2018

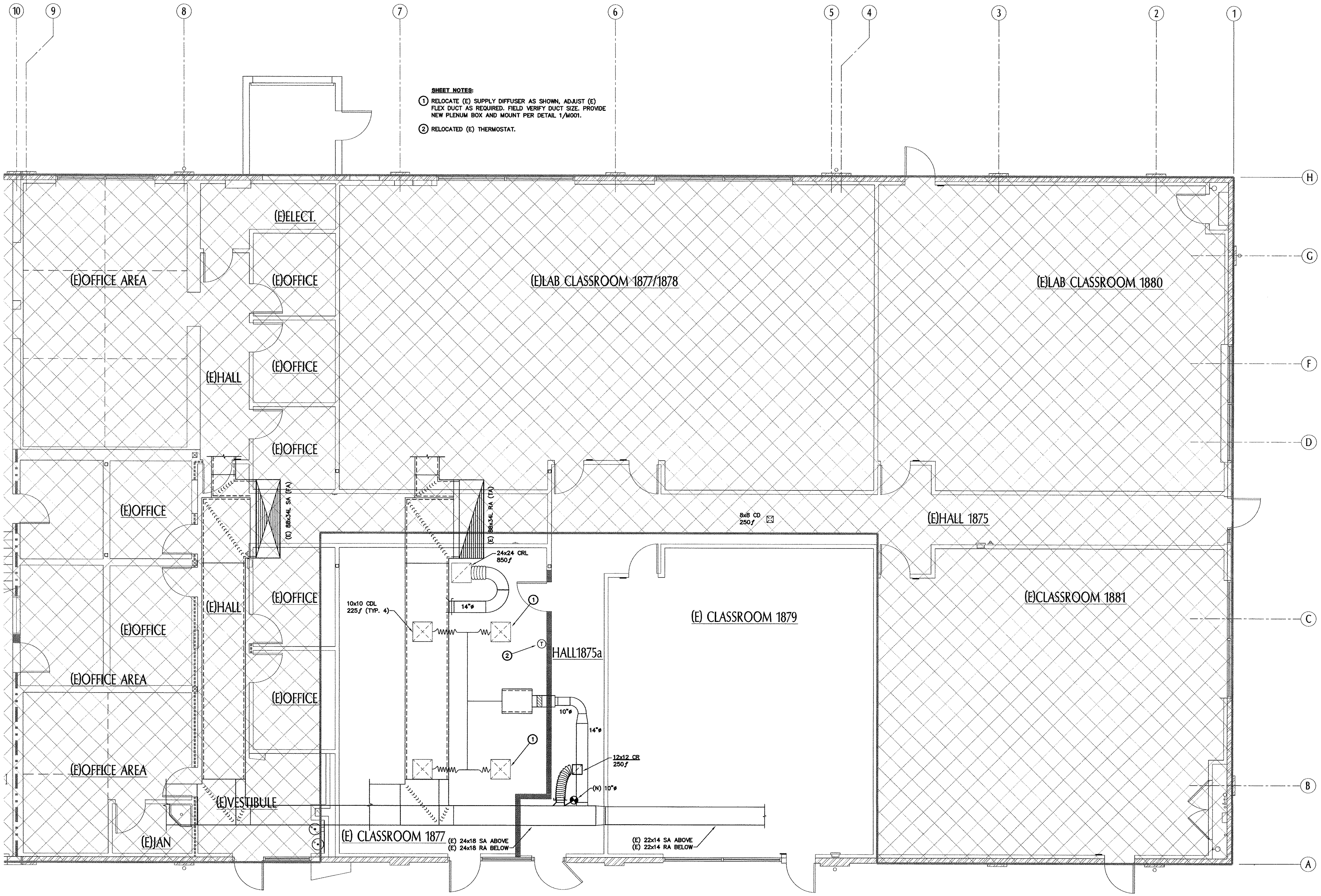
| Rev. | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | 3/16/2018 | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |



drawing title:
MECHANICAL DEMOLITION PLAN

drawing no:
M111

drawing of




**SHEET NOTES:**

1. RELOCATE (E) SUPPLY DIFFUSER AS SHOWN, ADJUST (E) FLEX DUCT AS REQUIRED. FIELD VERIFY DUCT SIZE. PROVIDE NEW PLENUM BOX AND MOUNT PER DETAIL 1/M001.
2. RELOCATED (E) THERMOSTAT.

**MECHANICAL FLOOR PLAN** 1 / M121

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

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# BUILDING 1800B HALL PROJECT
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Solano Community College District

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owner

| | | |
|---|---|---|
| tBP project number: | 20883.02 | |
| file name: | MECHANICAL FLOOR PLAN | |
| drawn by: | | checked by: |
| date: | APRIL 25, 2018 | |
| Rev. | date: | description: |
| | 2/16/2018 | 50% CD's |
| | 3/16/2018 | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |



drawing title:
MECHANICAL FLOOR PLAN

drawing no:
M121

drawing of

# SYMBOLS AND ABBREVIATIONS LEGEND

## SYMBOLS

| | | | |
|---|---|---|---|
| (NOT USED) | SCREWED UNION | STANDARD FDC | PIPE HANGERS |
| PENDENT CONCEALED ON DROP | GROOVED COUPLING | FLUSH FDC | BRANCH LINE RESTRAINT |
| (NOT USED) | FLANGED CONNECTION | FREE STANDING FDC | POINT OF CONNECTION NEW TO EXISTING |
| UPRIGHT ON SPRIG | ANGLE VALVE | FHC / FHR | |
| (NOT USED) | GLOBE VALVE | POST INDICATOR | |
| EXISTING PENDENT SPRINKLER | BUTTERFLY VALVE | KEY GATE | |
| (NOT USED) | O.S.&Y. VALVE | FIRE HYDRANT | |
| (NOT USED) | WAFER CHECK VALVE | MJ CONNECTION | |
| (NOT USED) | SWING CHECK VALVE | THRUST BLOCK | |
| (NOT USED) | ALARM VALVE | 2-WAY E.Q.B. | |
| (NOT USED) | DRY / PREACTION VALVE | 4-WAY E.Q.B | |
| PIPE ELEV. CHANGE | FIRE SPRINKLER RISER | CALCULATION NODE | |
| CAP | FLOW SWITCH | | |
| SCREWED PLUG | ELECTRIC BELL | | |

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| AFF – ABOVE FIN. FLR. | EQB – EARTHQUAKE BRACE | JST – JOIST | SCR – SCREW |
| AV – ANGLE VALVE | FDC – FIRE DEPT. CONN. | LVL – LEVEL | TC – THRD. CPLG. |
| AO – ARM OVER | FHC – FIRE HOSE CAB. | MI – MALLEABLE IRON | TF – THRD. FLG. |
| AS – AUTO. SPRINKLER | FHR – FIRE HOSE RACK | MJ – MECH. JOINT | TBE – THRD. BOTH ENDS |
| ASR – AUTO. SPRK. RISER | FLG – FLANGE | (N) – NEW | THRD – THREAD |
| BOB – BOT. OF BEAM | FOB – FACE OF BLOCK | N&C – NIPPLE & CAP | TOE – THRD. ONE END |
| BOD – BOT. OF DECK | FOC – FACE OF CONC. | NF – NO FITTING | TOL – THRD. OUTLET |
| BOJ – BOT. OF JOIST | FOS – FACE OF STUD | NIC – NOT IN CONTRACT | TRC – THRD. TED. CPLG. |
| CH VA – CHECK VALVE | FOW – FACE OF WALL | NTS – NOT TO SCALE | T&G – THRD. & GRV. |
| CI – CAST IRON | GC – GRV. CPLG. | PE – PLAIN END | UNO – UNLESS NOTED OTHERWISE |
| COE – CHANGE OF ELEVATION | GLB – GLULAM BEAM | PI – POST INDICATOR | WF – WLD. FLG. |
| COJ – CUT ON JOB | GRC – GRV. RED. CPLG. | PIV – POST INDICATOR VALVE | WLD – WELD |
| COUP – COUPLING | GRV – GROOVE | PLG – PLUG | WMG – WATER MOTOR GONG |
| CTF – CUT TO FIT | GBE – GRV. BOTH ENDS | SLP – SLOPE | |
| DI – DUCTILE IRON | GOE – GRV. ONE END | SP – STANDPIPE | |
| DN – DOWN | GOL – GRV. OUTLET | STB – STEEL BEAM | |
| DR – DROP | GV – GLOBE VALVE | RED – REDUCING | |
| (E) – EXISTING | HGR – HANGER | RN – RISER NIPPLE | |

## Sprinkler Head Schedule

| Symbol | Count | Thread | K-Factor | Description | Note |
|---|---|---|---|---|---|
| O | EXISTING | 1/2" | 5.6 | TYCO TY3131 1/2 QR 155 B UPRIGHT | ON LINE |
| ● | 6 | 1/2" | 5.6 | TYCO TY3231 1/2 QR 165 CHR REC. PENDENT | ON DROP w/RECESSED CHR ESCUTCHEON |
| | | | | | |
| 6 = Total Number of New Sprinklers In Area of Work | | | | | |

# APPLICABLE CODES

2016 CALIFORNIA ADMINISTRATION CODE , TITLE 24,CCR

2016 CALIFORNIA BUILDING CODE (PART 2, VOLUME 1 AND 2, TITLE 24) (2015 INTERNATIONAL BUILDING CODE)

2016 CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24, CCR) (2014 NATIONAL ELECTRICAL CODE)

2016 CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24, CCR) (2015 UNIFORM MECHANICAL CODE)

2016 CALIFORNIA PLUMBING CODE (PART 5, TITLE 24, CCR) (2015 UNIFORM PLUMBING CODE)

2016 CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE (PART 7, TITLE 8, CCR)

2016 CALIFORNIA FIRE CODE (PART 9, TITLE 24, CCR) (2015 INTERNATIONAL FIRE CODE)

2016 NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

2016 CALIFORNIA GREEN BUILDING STANDARDS CODE

2016 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)

2016 NFPA 24 - PRIVATE FIRE MAINS

2013 NFPA 14 - STANDPIPE SYSTEMS

# FIRE PROTECTION PROJECT SCOPE

CONSTRUCT ON EXISTING CAMPUS MODIFICATION OF FIRE SPRINKLER LOCATIONS TO SUIT THE FLOOR AND CEILING PLAN AT EXISTING CLASSROOM AND NEW EXIT CORRIDOR. THE EXISTING CLASSROOM BUILDING IS PROTECTED WITH AN AUTOMATIC WET PIPE FIRE SPRINKLER SYSTEM.

K-12 & COMMUNITY COLLEGE AFSS HAZARD CLASSIFICATION

| | |
|---|---|
| CLASSROOMS; OFFICES; AUDITORIUMS/MULTI-PURPOSE ROOMS; LIBRARY READING AREAS | LIGHT HAZARD |
| CAMPUS KITCHENS; LARGE STORAGE AREAS; PARKING GARAGES STRUCTURES | ORD. HAZARD GROUP 1 |
| SCIENCE LABS; VOCATIONAL SHOPS; STAGES; LIBRARY STACK AREAS >8FT IN HEIGHT | ORD. HAZARD GROUP 2 |

NFPA 13-2016 A.5.1, A.5.2, A.5.3.1, A.5.3.2

# FIRE PROTECTION PROJECT NOTES

1. THE AUTOMATIC WET PIPE SPRINKLER SYSTEM MODIFICATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 EDITION OF NFPA PAMPHLET #13.

2. A MINIMUM OF 48 HOURS NOTICE SHALL BE REQUIRED FOR ANY INSPECTAND/OR TESTING.

3. INSTALLATION OF THE SPRINKLER SYSTEM MODIFICATIONS SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND SPECIFICATIONS (INCLUDING TYPE OF EXISTING SPRINKLER SYSTEM, IF ANY) HAVE BEEN APPROVED BY THE DEPARTMENT THE STATE ARCHITECT (D.S.A.). A STAMPED SET OF APPROVED DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF ANY COMPONENTS SHALL BE APPROVED BY THE DSA. FAILURE TO COMPLY MAY RESULT IN A STOP WORK ORDER.

4. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED SPRINKLER STANDARDS SHALL BE BROUGHT TO TO THE ATTENTION OF THE INSPECTOR OF RECORD.

5. ALL NEW PIPE ROUTING AND LENGTHS SHALL BE MEASURED ON THE PROJECT SITE FOR EXACT FIT PRIOR TO PIPE FABRICATION.

6. OFFSET NEW PIPING AROUND THE WORK OF OTHER TRADES WHERE NECESSARY FOR COORDINATION.

7. THE EXISTING FIRE SPRINKLER SYSTEMS ARE HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY AT A DESIGN DENSITY OF .10 GPM SF OVER 1,500 SF.

8. THREADED PIPING TO BE SCH-40, BLACK STEEL WITH CAST OR DUCTILE IRON FITTINGS.

9. THE INSTALLING FIRE SPRINKLER CONTRACTOR SHALL VERIFY / COORDINATE, AT NO ADDITIONAL COST TO THE OWNER, THE LOCATION OF SPRINKLERS, PIPING, AND DEVICES PRIOR TO FABRICATION AND INSTALLATION OF THE FIRE SPRINKLER SYSTEM.

10. THE INSTALLING FIRE SPRINKLER CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW AND APPROVAL, SHOP DRAWINGS AND SUPPORTIVE CALCULATIONS FOR ANY/ALL CHANGES TO THE FIRE SPRINKLER SYSTEM LAYOUT SHOWN ON THESE DRAWINGS, AT NO ADDITIONAL COST TO THE OWNER. THE INSTALLATION SHALL BE BASED ON THIS APPROVED SET.

# FIRE PROTECTION GENERAL NOTES

1. NFPA 13 (2016) SEC. 10.10.2.2 ALL INTERIOR PIPING AND APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS (WITNESSED BY THE INSPECTOR OF RECORD). LOCAL FIRE DEPARTMENT SHALL BE NOTIFIED OF DATE AND TESTING SO THAT THEY MAY OBSERVE TESTING.
2. NFPA 13 (2016) SEC. 6.2.9.5 PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH, AND NO FEWER THAN 6 SPARE SPRINKLER HEADS MATCHING THE TYPES AND TEMPERATURE RATING IN EACH PROTECTED BUILDING FOR SYSTEMS LESS THAN 300 SPRINKLERS (12 SPARE SPRINKLER HEADS FOR SYSTEMS 300 TO 1000 SPRINKLERS).
3. NFPA 13 (2016) SEC. 25.1 SPRINKLER CONTRACTOR (C16) SHALL COMPLETE AND SIGN CONTRACTOR'S MATERIAL TEST CERTIFICATE FOR THE OVERHEAD SPRINKLER SYSTEM USING FORM IN FIGURE 25.1. THIS FORM SHALL BE GIVEN TO THE INSPECTOR OF RECORD (IOR) WHO WILL TURN-IN FOR DSA RECORDS.
4. NFPA 13 (2016) SEC. 25.2.3.4.1 THE MAIN DRAIN VALVE SHALL BE OPEN AND REMAIN OPEN UNTIL THE SYSTEM PRESSURE STABILIZES. THE STATIC AND RESIDUAL PRESSURES SHALL BE RECORDED IN THE CONTRACTOR'S TEST CERTIFICATE (WITNESSED BY INSPECTOR OF RECORD-IOR).
5. ALL PENETRATIONS IN RATED WALL OR CEILING/FLOOR ASSEMBLIES WILL BE SEALED WITH AN APPROVED MATERIAL.
6. NFPA 13 (2016) SEC. 25.4 THE INSTALLING CONTRACTOR SHALL PROVIDE THE OWNER WITH A CALIFORNIA NFPA 25, CALIFORNIA EDITION - 2006.
7. ANY SUBSTITUTION OF "FLEXIBLE" TYPE PIPING IN LIEU OF "RIGID" PIPE OR ANY CHANGES TO SIZE, MANUFACTURER OR LENGTHS OF "FLEXIBLE" TYPE PIPING WILL REQUIRE RESUBMITTAL OF PIPING PLANS, PRODUCT DATA SHEETS AND HYDRAULIC CALCULATIONS TO DSA FOR REVIEW AND APPROVAL.

# COORDINATION AND SHOP DRAWING NOTES

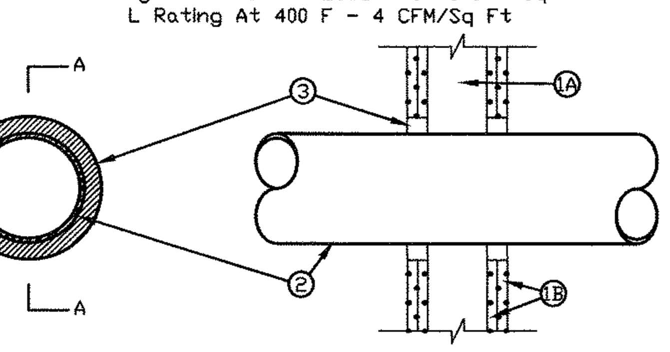
1. CLEARANCES IN ALL ATTIC AREAS ARE EXTREMELY LIMITED. MULTIPLE SYSTEMS ARE LOCATED IN THE ATTIC SPACES. WORK CLOSELY TOGETHER WITH ALL TRADES TO ENSURE THAT PROPER ROUTING OF THE ALL FIRE PROTECTION SYSTEMS IS ACHIEVED, AND TO ENSURE THAT NO CONFLICTS OCCUR.

2. CONDITIONS HAVE BEEN SHOWN AS ACCURATELY AS POSSIBLE. ALL CONDITIONS ARE TO BE FIELD VERIFIED. CONTRACTOR IS TO INCLUDE IN HIS BID ADJUSTMENTS TO THE WORK AS REQUIRED TO ACCOMMODATE THE ACTUAL FIELD CONDITIONS.

3. COORDINATED SHOP DRAWINGS ARE REQUIRED. CONTRACTORS ARE TO PROVIDE COORDINATED SHOP DRAWINGS THAT INCLUDE ALL SYSTEMS TO BE INSTALLED. SYSTEMS FROM ALL TRADES ARE TO BE COORDINATED SO THAT NO CONFLICTS OCCUR.

F Ratings - 1 and 2 Hr (See Items 1 and 3)
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/Sq Ft
L Rating At 400 F - 4 CFM/Sq Ft

WL 1054




SECTION A-A

1. Wall Assembly -- The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
   B. Gypsum Board* -- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.
   The F Rating of the firestop system is equal to the fire rating of the wall assembly.

HILTI FIRESTOP SYSTEMS — Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. December 4, 2002 — CLASSIFIED C UL US — Page: 1 of 2

F Ratings - 1 and 2 Hr (See Items 1 and 3)
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/Sq Ft
L Rating At 400 F - 4 CFM/Sq Ft

WL 1054

2. Through-Penetrants -- One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. Pipe may be installed with continuous point contact. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe -- Nom 30 in diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe -- Nom 30 in. diam (or smaller) cast or ductile iron pipe.
   C. Conduit -- Nom 4 in diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
   D. Copper Tubing -- Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe -- Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material* -- Sealant -- Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall .
   HILTI CONSTRUCTION CHEMICALS, DIV OF
   HILTI INC -- FS-One Sealant

*Bearing the UL Classification Mark

WALL LEGEND

1-HR RATED

NON RATED

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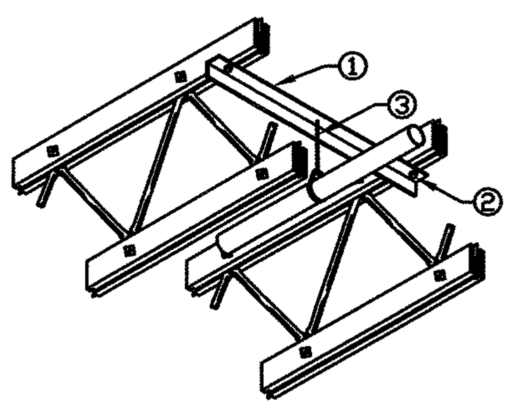
FIRE PROTECTION - RATED WALL PENETRATION DETAIL 3
SCALE: NONE

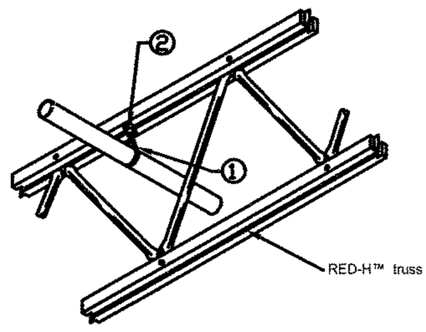



1. 2 x 2 x 1/8 Angle iron, per NFPA 13 Table 9.1.1.7.1 (b), 24" Span
2. 1/4" lag screws, min 2" embedment, into 1/8" predrilled pilot hole on outside chords
3. Hanger rod support per NFPA 13

Center the sprinkler pipe support (parallel or perpendicular) between trusses

(9) Pipe size at maximum hanger spacing: 1"

SYMBOL #9

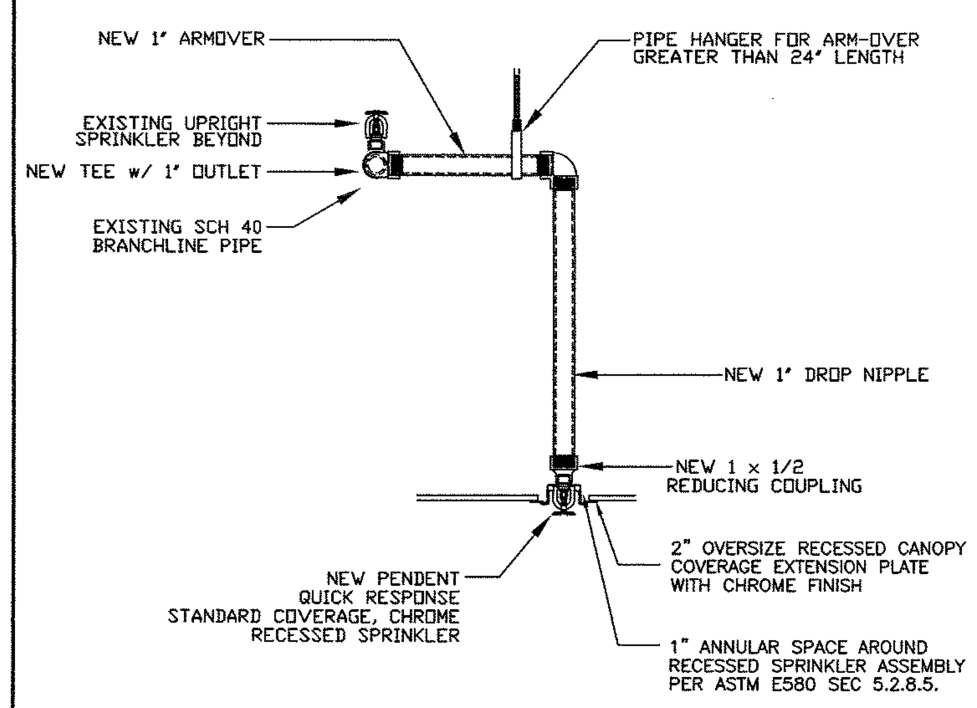



1. Hanger per NFPA 13
2. 2-screw ceiling flange with two 18 gauge (0.294") x 1½" wood screws into ⅛" predrilled pilot holes
   * For RED-L™ and RED-W™ trusses, screws must line up along the center of the chord ± ½" tolerance
   * For all double chord trusses, one screw must be positioned in the center of each chord ± ¼" tolerance
   * This detail may be used on top or bottom chord
   * If installing through a gypsum board ceiling, increase the fastener length by the gypsum board thickness

(4) Pipe size at maximum hanger spacing: 2"

SYMBOL #4

FIRE PROTECTION - PIPE HANGER DETAIL 2
SCALE: NONE




FIRE PROTECTION - SPRINKLER DROP DETAIL 1
SCALE: NONE


architecture planning interiors management

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Walnut Creek, CA 94596
ph: 925.246.6419

architect

REGISTERED PROFESSIONAL ENGINEER THOMAS A. DUVAL M 22836 EXPIRES 9/30/18 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 04/26/18

CAPITAL ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

TD - JCH 180118.00
PM - DESIGN TEAM PROJECT NO.

consultant

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
FILE # 48-C1
APPL # 02-116615
AC FLS SS
DATE MAY 04 2018

Division of the State Architect
1102 Q Street, #5100
Sacramento, Ca, 95811
ph: (916) 445-8100

agency


BUILDING 1800B HALL PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUSISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

tBP project number: 20663.02

file name: AIII DEMO PLAN

drawn by: checked by:

date: APRIL 25, 2018

| Rev. | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | 3/16/2018 | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |

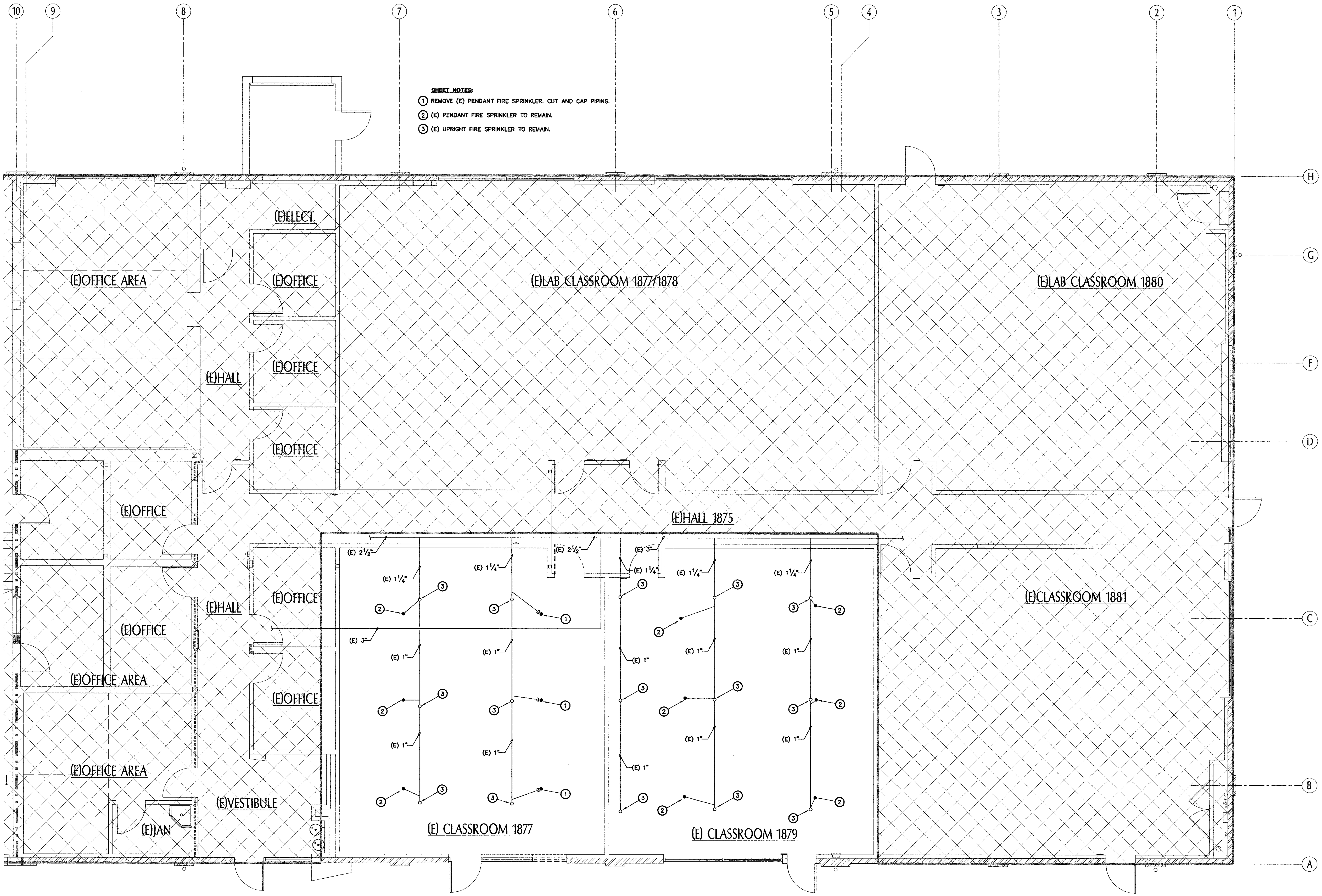


drawing title:
FIRE PROTECTION NOTES, LEGENDS, & DETAILS

drawing no:
FP001
drawing of

**SHEET NOTES:**

1. REMOVE (E) PENDANT FIRE SPRINKLER. CUT AND CAP PIPING.
2. (E) PENDANT FIRE SPRINKLER TO REMAIN.
3. (E) UPRIGHT FIRE SPRINKLER TO REMAIN.




## FIRE PROTECTION DEMOLITION PLAN

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

1 / FP111

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DATE SIGNED: 04/26/18

CAPITAL ENGINEERING CONSULTANTS, INC.
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PM - DESIGN TEAM PROJECT NO.

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BUILDING 1800B HALL PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

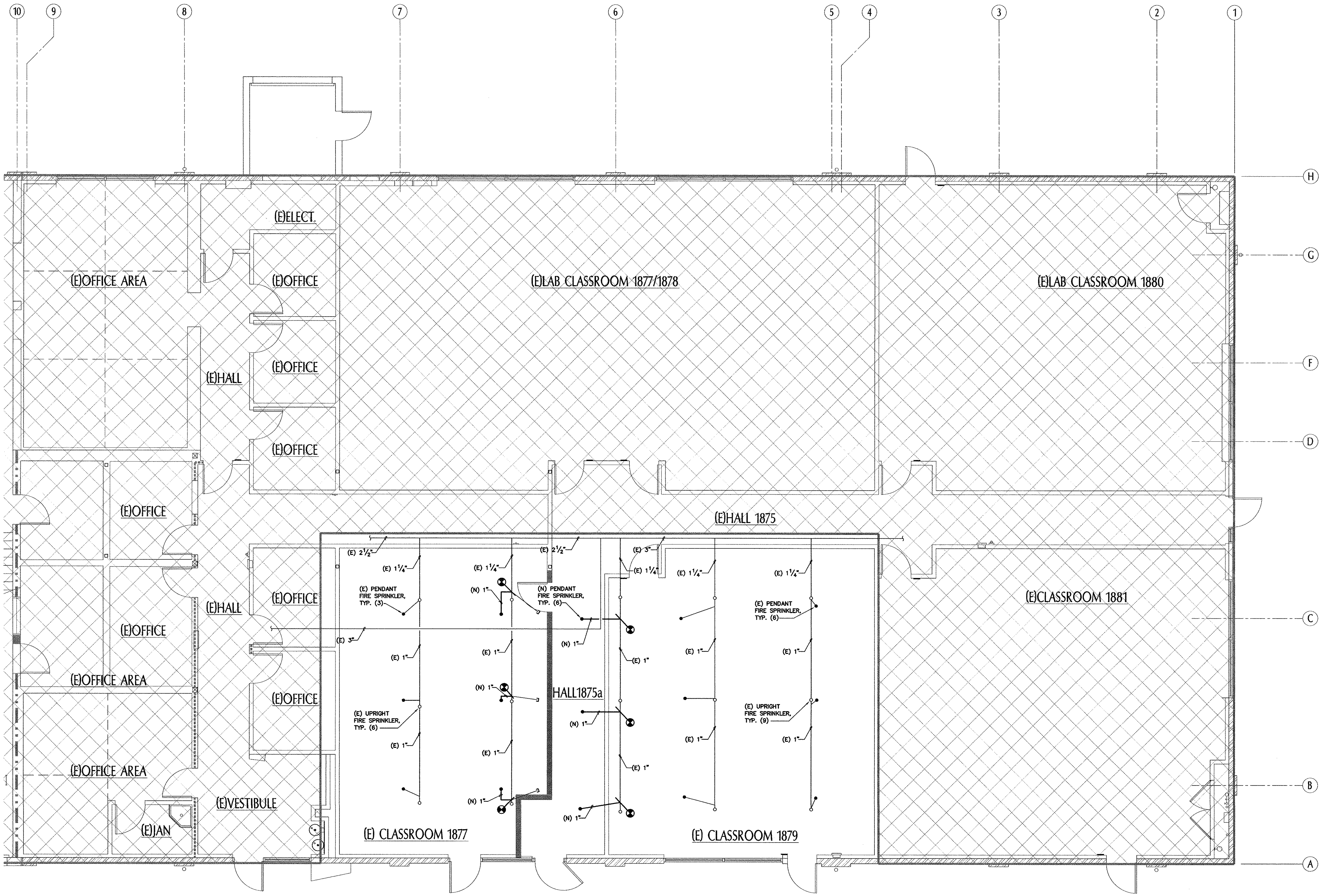
owner

| | | |
|---|---|---|
| tBP project number: | 20883.02 | |
| file name: | FIRE PROTECTION DEMOLITION PLAN | |
| drawn by: | checked by: | |
| date: | APRIL 25, 2018 | |
| Rev: | date: | description: |
| | 2/16/2018 | 50% CD's |
| | 3/16/2018 | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
FIRE PROTECTION DEMOLITION PLAN

drawing no:
FP111
drawing of




**FIRE PROTECTION FLOOR PLAN**

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

1 FP121

tBP architecture planning interiors management

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DATE SIGNED: 04/25/18

CAPITAL ENGINEERING CONSULTANTS, INC.

TD - JCH | 180118.00
PM - DESIGN TEAM | PROJECT NO.

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BUILDING 1800B HALL PROJECT
SOLANO COLLEGE
Solano Community College District

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4000 SUISUN VALLEY ROAD
FAIRFIELD, CA 94534

owner

tBP project number: 20883.02

file name: FIRE PROTECTION FLOOR PLAN

drawn by: | checked by:

date: APRIL 25, 2018

| Rev. | date | description |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | 3/16/2018 | 100% CD's - Plan Review |
| | 05/04/2018 | DSA BACKCHECK |

drawing title:
FIRE PROTECTION FLOOR PLAN

drawing no:
FP121

drawing of

# SYMBOLS LIST

SOME OF THESE SYMBOLS SHOWN MAY NOT BE USED ON THIS PROJECT

## EQUIPMENT ANCHORAGE NOTES

ELECTRICAL COMPONENT ACHORAGE NOTES

ALL ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE 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 1.26 AND ASCE 7-10 CHAPTER 13, 16, AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING 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 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 DISTRIBUTION SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES

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 13.6.8, 13.6.7, 13.6.5.6, AND 2016 CBC, SECTIONS 1616A 1.23 TO 1616A 1.26.

WHERE REQUIRED, THE BRACING ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS WHEN THERE IS NOT A PRE-APPROVED OPM NUMBER ASSOCIATED WITH THE INSTALLATION.

WHEN EQUIPMENT BRACING HAS A PRE-APPROVED OPM NUMBER, THAT OPM NUMBER WILL BE IDENTIFIED AND SHOWN ON THE DRAWINGS.

OPTION 2 HAS BEEN CHOSEN FOR THE ELECTRICAL DISTRIBUTION SYSTEM BRACING. NO ELECTRICAL EQUIPMENT IS INCLUDED IN THIS PROJECT WHICH WOULD REQUIRED AN OSHPD PRE-APPROVAL(OPM NUMBER)

COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

## POWER DISTRIBUTION

- PANELBOARD, 277/480V, FLUSH MOUNTED IN WALL.
- PANELBOARD, 120/208V, FLUSH MOUNTED IN WALL.

## WIRING DEVICES

- J — JUNCTION BOX, WALL MOUNTED, +18" UON.
- DUPLEX CONVENIENCE RECEPTACLE DEVICE, WALL MOUNTED, +18" UON.
- DOUBLE DUPLEX CONVENIENCE RECEPTACLE DEVICE, WALL MOUNTED, +18" UON.
- G — 'G' DENOTES GROUND FAULT CURRENT INTERRUPTER (GFCI), 'A' DENOTES ARC FAULT CURRENT INTERRUPTER (AFCI).
- S — SINGLE-POLE, SINGLE-THROW SWITCH, WALL MOUNTED, +42" UON.
- $S^3$ — THREE-WAY SWITCH, WALL MOUNTED, +42" UON.
- M — LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED FOR AREA COVERAGE.
- 924 — UL924 RATED TRANSFER RELAY, 20A RATED.
- D — MOTOR OPERATED FIRE/SMOKE DAMPER 'FSD', NIEC.

## FIRE ALARM

- SD — FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED.
- HD — FIRE ALARM HEAT DETECTOR, CEILING MOUNTED.
- F — FIRE ALARM HORN STROBE DEVICE. ADJACENT NUMBER GIVES CANDELA RATING. +80" AFF
- F — FIRE ALARM HORN DEVICE. +90" AFF UON
- FIRE ALARM STOBE DEVICE. ADJACENT NUMBER GIVES CANDELA RATING. +80" AFF
- EOL — END OF LINE RESISTOR
- FACP — MASTER FIRE ALARM CONTROL PANEL

## LOW VOLTAGE

- TELECOMMUNICATION DEVICE, WALL MOUNTED, +18" UON.
- TELECOMMUNICATION DEVICE, TELEVISION DEVICE, WALL MOUNTED, +18" UON.
- T — THERMOSTAT
- CR — ELECTRONIC CARD READER

## LIGHTING

- LIGHT FIXTURE, RECESSED IN CEILING.
- STRIP LIGHT FIXTURE, SURFACE OR PENDANT MOUNTED.
- DOWNLIGHT FIXTURE, RECESSED IN CEILING.
- EXIT SIGN LIGHT FIXTURE, CEILING OR WALL MOUNTED WITH DIRECTIONAL ARROWS AS NOTED ON PLANS. WORD 'EXIT' TO BE LOCATED IN SHADED FACE(S).
- SHADING OF ANY FIXTURE INDICATES EMERGENCY LIGHTING.

## RACEWAYS

- CONDUIT RUN EXPOSED ON WALL OR CEILING.
- CONDUIT RUN CONCEALED IN SLAB, UNDER SLAB OR UNDERGROUND.
- CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING.
- CONDUIT HOMERUN, CONTINUOUS RUN TO PANEL OR EQUIPMENT CABINET.
- FLEXIBLE METALLIC CONDUIT.
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN.
- CROSSMARKS ON BRANCH CIRCUIT CONDUIT RUNS INDICATE THE QUANTITY OF CONDUCTORS AS FOLLOWS (GROUND CONDUCTORS ARE NOT NOTED, BUT SHOULD BE INCLUDED IN EVERY CONDUIT WITH POWER CONDUCTORS):
  1. NO CROSSMARKS INDICATES TWO #12 AWG CONDUCTORS, UON.
  2. THREE TO SIX CROSSMARKS INDICATES THE QUANTITY OF #12 AWG CONDUCTORS, UON.
  3. SEVEN OR MORE CROSSMARKS INDICATES THE QUANTITY OF #10 AWG CONDUCTORS, UON.
- MULTI-OUTLET TWO PIECE SURFACE RACEWAY; TYPE, DEVICE SPACING AND MOUNTING AS NOTED ON PLANS.
- TWO PIECE SURFACE METAL RACEWAY, MOUNTED AS NOTED IN PLANS.

## CONVENTIONS

- 1 — NUMBERED SHEET NOTE, APPLIES TO DRAWING CONTAINING NOTES ONLY.
- 1 — OVERCURRENT PROTECTIVE DEVICE SPACE IDENTIFICATION TAG. REFERS TO LOCATION OF PROTECTIVE OR CONTROL DEVICE WITHIN SWITCHBOARDS, DISTRIBUTION BOARDS, MOTOR CONTROL CENTERS, ETC.
- NAME — EQUIPMENT IDENTIFICATION TAG: ITEM FURNISHED AND INSTALLED UNDER ANOTHER SECTION AND WIRED UNDER THIS SECTION.
- P2 — CABLE AND/OR RACEWAY TAG, FUNCTION AS NOTED BELOW:

P = POWER    T = TELEPHONE    C = COMMUNICATION

DETAIL REFERENCE:

A
EXX.XX
SHEET NUMBER
DETAIL DESIGNATION

2-F3
FIXTURE IDENTIFICATION TAG:
FIXTURE TYPE
QUANTITY

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| A | AMPERES | MLO | MAIN LUGS ONLY |
| AFC | ABOVE FINISHED CEILING | MT | EMPTY |
| AFF | ABOVE FINISHED FLOOR | (N) | NEW |
| AL | ALUMINUM | NIEC | NOT IN ELECTRICAL CONTRACT |
| BFC | BELOW FINISHED CEILING | NTS | NOT TO SCALE |
| C | CONDUIT | PVC | POLYVINYL CHLORIDE |
| CD | CANDELA | (R) | EXISTING TO BE REMOVED |
| CKT | CIRCUIT | (RL) | RELOCATED |
| CU | COPPER | (RR) | REMOVE AND RELOCATE |
| (E) | EXISTING TO REMAIN | TYP | TYPICAL |
| EOL | END OF LINE RESISTOR | UON | UNLESS OTHERWISE NOTED |
| EC | ELECTRICAL CONTRACTOR | UPS | UNINTERRUPTIBLE POWER SUPPLY |
| (F) | FUTURE | V | VOLTS |
| FACP | FIRE ALARM CONTROL PANEL | VA | VOLTS-AMPS |
| FLA | FULL LOAD AMPERES | W | WATTS |
| FMC | FLEXIBLE METAL CONDUIT | 1Ø | 1 PHASE |
| FSD | FIRE/SMOKE DAMPER | 3Ø | 3 PHASE |
| G | GROUND | 1P | 1 POLE |
| GND | GROUND | 2P | 2 POLE |
| HVAC | HEATING,VENTING AND AIR CONDITIONING | 3P | 3 POLE |
| JB | JUNCTION BOX | 3W | 3 WIRE |
| | | 4W | 4 WIRE |

## FIRE ALARM DESCRIPTION

- FIRE ALARM SYSTEM IS ADDRESSABLE, CLASS B, STYLE Y.
- FIRE ALARM SYSTEM SHALL BE TESTED AND INSPECTED IN ACCORDANCE WITH NFPA 72, CHAPTER 14.

## DRAWING INDEX

| DWG. No. | DRAWING TITLE | 50% CD's (2018.02.16) | 100% CD's - Plan Review | | | | |
|---|---|---|---|---|---|---|---|
| E001 | SYMBOLS LIST AND DRAWING INDEX | ● | ● | | | | |
| E002 | TITLE 24 | ● | ● | | | | |
| E003 | TITLE 24 | ● | ● | | | | |
| E004 | TITLE 24 | | ● | | | | |
| E121 | ELECTRICAL PLANS | ● | ● | | | | |
| E131 | OVERALL FIRE ALARM SYSTEM PLANS | | ● | | | | |
| E132 | FIRE ALARM SINGLE LINE, CALCS, & DETAILS | | ● | | | | |

ISSUE TITLE / DATE

ISSUE KEY:

● ISSUED AS PART OF A SET


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management

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agency

BUILDING 1800B HALLWAY PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA. 94534

owner

tBP project number: 20883.02

file name: E001 SYMBOLS LIST & DRAWING INDEX

drawn by: GL checked by: JB

date: APRIL 25, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
SYMBLOS LIST AND DRAWING INDEX

drawing no.:
E001

drawing of

STATE OF CALIFORNIA

## INDOOR LIGHTING - LIGHTING CONTROLS

CEC-NRCC-LTI-02-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-02-E |
|---|---|
| Indoor Lighting - Lighting Controls | (Page 1 of 3) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**A. Mandatory Lighting Control Declaration Statements** (Indicate if the measure applies by checking yes or no below)

| YES | NO | Control Requirements |
|---|---|---|
| ○ | ● | Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9. |
| ● | ○ | Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b). |
| ○ | ● | One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. An Installation Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b). |
| ○ | ● | A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.3. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b). |
| ● | ○ | All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1. |
| ● | ○ | All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a). |
| ● | ○ | General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.0(a)4. |
| ● | ○ | The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b). |
| ● | ○ | All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c). |
| ○ | ● | Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans. |
| ○ | ● | Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e). |
| ● | ○ | Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4.(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls. |



STATE OF CALIFORNIA

## INDOOR LIGHTING

CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-01-E |
|---|---|
| Indoor Lighting | (Page 4 of 6) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**G. Installed Portable Luminaires in Offices - Exception to Section 140.G(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 form.
- 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 | Installed portable luminaire watts in this office (G02 x G03) | Square feet of this office | Watts per square foot (G04/G05) | If G06 <= 0.3, enter zero; if G06> 0.3, (G06-0.3) | (G05 x G07) | Identify Office area in which these portable luminaires are installed | Pass | Fail |
| | | | | | | | | | ○ | ○ |
| | | | | | | | | | ○ | ○ |
| | | | | | | | | | ○ | ○ |
| | | | | | | | | | ○ | ○ |
| | | | | | | | | | ○ | ○ |
| Total installed portable luminaire watts that are greater than 0.3 watts per square foot per office: | | | | | | | | Enter sum total of all pages into NRCC- LTI-01-E; page 2 | | |



STATE OF CALIFORNIA

## INDOOR LIGHTING

CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-01-E |
|---|---|
| Indoor Lighting | (Page 1 of 6) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**A. General Information**

| | | | |
|---|---|---|---|
| Climate Zone: 2 | Conditioned Floor Area: | | |
| | Unconditioned Floor Area: | | |
| 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: 4000 Suisun Valley Rd.Fairfield, CA 94534 | | | |

**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 | FORM | 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 | Line Voltage Track Lighting Worksheets |



STATE OF CALIFORNIA

## INDOOR LIGHTING - LIGHTING CONTROLS

CEC-NRCC-LTI-02-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-02-E |
|---|---|
| Indoor Lighting - Lighting Controls | (Page 2 of 3) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
☑ CONDITIONED SPACE ☐ UNCONDITIONED SPACE

**B. Mandatory and Prescriptive Indoor Lighting Control Schedule, PAF Calculation, and Field Inspection Checklist**

| Lighting Control Schedule | | | Standards Complying With[1] (• all that apply, or enter 'E' if Exempted) | | | | | | | PAF Credit Calculation | | | ✓ if acceptance test required | Field Inspector | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Watts of Controlled Lighting | PAF | Control Credit (11 x 12) | | | |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | |
| Location in Building | Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc.) | # of units | §130.1(a) | §130.1(b) | §130.1(c) | §130.1(d) | §130.1(e) | §140.6(a)2 | §140.6(d) | | | | | Pass | Fail |
| Classroom 1877 | Occ. Sensor, multi-level control | 1 | • | • | • | E | • | E | E | | | | | ○ | ○ |
| Hallway 1875a | Occ Sensor, Dimmer | 1 | • | • | • | E | • | E | E | | | | | ○ | ○ |
| | | | | | | | | | | | | | | ○ | ○ |
| | | | | | | | | | | | | | | ○ | ○ |
| | | | | | | | | | | | | | | ○ | ○ |
| | | | | | | | | | | | | | | ○ | ○ |
| | | | | | | | | | | | | | | ○ | ○ |
| Control Credit PAGE TOTAL (Sum of column 13): | | | | | | | | | | | | | | | |
| IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column 13): | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | Enter Control Credit total into NRCC-LTI-01-E; Page 1. | | | |

*1. §130.1(a) = Manual area controls; §130.1(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.*
*2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.*



STATE OF CALIFORNIA

## INDOOR LIGHTING

CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-01-E |
|---|---|
| Indoor Lighting | (Page 5 of 6) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 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 | Inspector | |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | | 05 | 06 | 07 | 08 | |
| | | | How wattage was determined | | | | | | |
| Name or Item Tag | Complete Luminaire Description (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast) | Watts per Luminaire | CEC Default NA8 | According to §130.0(c) | Number of Luminaires | Total Installed Watts in this area (H03 x H05) | Primary Function area in which these luminaires are installed | Pass | Fail |
| F1 | 7" Surface Mounted Circular Downlight | 14.4 | ☐ | ☑ | 4 | 58 | Corridors, Restrooms, Stairs And Support Area | ○ | ○ |
| F2 | 2x4 Fluorescent Troffer | 93 | ☐ | ☑ | 8 | 744 | Classrooms, Lecture, Training Vocational Roon | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| | | | ☐ | ☐ | | | | ○ | ○ |
| Installed Watts Page Total: | | | | | | 802 | Enter sum total of all pages into NRCC-LTI-01-E; page 2 | | |



STATE OF CALIFORNIA

## INDOOR LIGHTING

CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-01-E |
|---|---|
| Indoor Lighting | (Page 2 of 6) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**C. Summary of Allowed Lighting Power**

Conditioned and Unconditioned space Lighting must not be combined for compliance

| | Indoor Lighting Power for Conditioned Spaces | | Watts | Indoor Lighting Power for Unconditioned Spaces | | Watts |
|---|---|---|---|---|---|---|
| 01 | **Installed** Lighting NRCC-LTI-01-E, Table H, page 5 | + | 802 | **Installed** Lighting NRCC-LTI-01-E, Table H, page 5 | + | |
| 02 | PORTABLE ONLY FOR OFFICES NRCC-LTI-01-E, Table G, page 4 | + | | | | |
| 03 | Minus Lighting Control Credits NRCC-LTI-02-E, page 2 | - | | Minus Lighting Control Credits NRCC-LTI-01-E, page 2 | - | |
| 04 | Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3) | = | 802 | Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3) | = | |
| | 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 | | 974 | **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 | | |

**D. Declaration of Required Installation Certificates**

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

| YES | NO | FORM/TITLE | |
|---|---|---|---|
| ● | ○ | NRCI-LTI-01-E - Must be submitted for all buildings | ☐ Field Inspector |
| ● | ○ | NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance. | ☐ Field Inspector |
| ○ | ● | NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance. | ☐ Field Inspector |
| ○ | ● | NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance. | ☐ Field Inspector |
| ○ | ● | NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance. | ☐ Field Inspector |
| ○ | ● | NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance. | ☐ Field Inspector |



STATE OF CALIFORNIA

## INDOOR LIGHTING - LIGHTING CONTROLS

CEC-NRCC-LTI-02-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-02-E |
|---|---|
| Indoor Lighting - Lighting Controls | (Page 3 of 3) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

| | |
|---|---|
| Documentation Author Name: Jonathan B. Chapman | Documentation Author Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | CEA/HERS Certification (if applicable): |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: David Johnson | Responsible Designer Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | License: E18964 |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |



STATE OF CALIFORNIA

## INDOOR LIGHTING

CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-01-E |
|---|---|
| Indoor Lighting | (Page 6 of 6) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: David Johnson | Responsible Designer Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | License: E18964 |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |



STATE OF CALIFORNIA

## INDOOR LIGHTING

CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTI-01-E |
|---|---|
| Indoor Lighting | (Page 3 of 6) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**E. Declaration of Required Certificates of Acceptance**

Declare by checking all of the Certificates of Acceptance 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) | ☐ Field Inspector |

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

**F. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST**

☑ The actual indoor lighting power listed on this page and on the next page 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 form (NRCC-LTI-05-E) when line-voltage track lighting is installed.



tBP
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architect

The Engineering Enterprise
Consulting Engineers
THE POWER HOUSE
1305 MARINA VILLAGE PARKWAY
ALAMEDA, CA. 94501 JOB #18084
(510) 769-7600
REGISTERED PROFESSIONAL ENGINEER DAVID JOHNSON No. E18964 ELECTRICAL STATE OF CALIFORNIA
consultant

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE # 48-C1
APPL # 02-116615
AC FLS SS KG
DATE MAY 04 2018
Division of the State Architect
1102 Q Street, #5100
Sacramento, Ca., 95811
ph: (916) 445-8100
agency

# BUILDING 1800B HALLWAY PROJECT
# SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA. 94534
owner

| | |
|---|---|
| tBP project number: | 20883.02 |
| file name: | E002 TITLE 24 |
| drawn by: GL | checked by: JB |
| date: | APRIL 25, 2018 |

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | 05/04/2018 | DSA BACKCHECK |



drawing title:
TITLE 24

drawing no.:
E002
drawing of

## OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTO-01-E |
| Outdoor Lighting | (Page 3 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**I. OUTDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST**

| Luminaire Schedule | | Installed Watts | | | | | Location | Cutoff | Field Inspector | |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | | 05 | 06 | 07 | 08 | 09 | |
| Name or Item Tag | Complete Luminaire Description | Watts per luminaire | How wattage was determined: CEC Default from NA8 | How wattage was determined: According to §130.0(c) | Number of Luminaires | Total Installed Watts in this area (03 x 05) | Primary Function area in which these luminaires are installed (Outdoor Lighting Zone) | BUG Rating | Pass | Fail |
| F3 | SURFACE MOUNTED RECTANGULAR DOWNLIGHT WITH INTEGRAL DAYLIGHT SENSOR | 28 | ☐ | ☑ | 1 | 28 | EGRESS PATH | UH: UL: FVH: BVH: FH: BH: | ☐ | ☐ |
| | | | ☐ | ☐ | | | | UH: UL: FVH: BVH: FH: BH: | ☐ | ☐ |
| | | | ☐ | ☐ | | | | UH: UL: FVH: BVH: FH: BH: | ☐ | ☐ |
| INSTALLED WATTS PAGE TOTAL: | | | | | | 28 | Enter sum total of all pages (**Sum Total INSTALLED** Outdoor lighting wattage) into NRCC-LTO-01-E; page 2 | | | |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

STATE OF CALIFORNIA

## INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTI-03-E |
| Certificate of Compliance - Indoor Lighting Power Allowance | (Page 4 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

| | |
|---|---|
| Documentation Author Name: Jonathan B. Chapman | Documentation Author Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | CEA/HERS Certification (if applicable): |
| City/State/Zip Alameda, CA 94501 | Phone: (510) 769-7600 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: David Johnson | Responsible Designer Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | License: E18964 |
| City/State/Zip Alameda, CA 94501 | Phone: (510) 769-7600 |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

STATE OF CALIFORNIA

## INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTI-03-E |
| Certificate of Compliance - Indoor Lighting Power Allowance | (Page 1 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**ALLOWED LIGHTING POWER**

*A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:*

☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

### A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES

☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.

☑ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

| | (a) | (b) |
|---|---|---|
| 01 Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page) | | |
| 02 Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page) | | 974 |
| 03 Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E | | |
| **TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1** | | 974 |

☐ Check here if building contains both conditioned and unconditioned areas.

### B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

| 01 | 02 | | 03 | | 04 |
|---|---|---|---|---|---|
| TYPE OF BUILDING (From §140.6 Table 140.6-B) | Watts per (ft$^2$) | X | Complete Building Area | = | Allowed Watts |
| | | | | | |
| | | | | | |
| | | Total Area: | | | |
| Total Watts. Enter Total Watts into section A, row 1 (Above on this page) | | | | | |

### C-1. AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES (C-2 plus C-3)

| | Watts |
|---|---|
| Total from section C-2: | 880 |
| Total from section C-3: | 94 |
| Total Watts. Enter Total Watts into section A, row 2 (Above on this page) | 974 |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

STATE OF CALIFORNIA

## OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTO-01-E |
| Outdoor Lighting | (Page 4 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

| | |
|---|---|
| Documentation Author Name: Jonathan B. Chapman | Documentation Author Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | CEA/HERS Certification (if applicable): |
| City/State/Zip Alameda, CA 94501 | Phone: (510) 769-7600 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: David Johnson | Responsible Designer Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | License: E18964 |
| City/State/Zip Alameda, CA 94501 | Phone: (510) 769-7600 |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

STATE OF CALIFORNIA

## OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTO-01-E |
| Outdoor Lighting | (Page 1 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

### A. General Information

| | |
|---|---|
| Project Address: 4000 Suisun Valley Rd.Fairfield, CA 94534 | Total Illuminated Hardscape Area |
| **Phase of Construction:** ☐ New Construction ☐ Addition ☑ Alteration | |
| **Outdoor Lighting Zone (LZ)** ☐ LZ-1 ☐ LZ-2 ☑ LZ-3 ☐ LZ-4 | |
| I have confirmed with the AHJ which OLZ applies to this site. For default lighting zone designations, see Title 24 Part 6, §10-114 | |

**B. LIGHTING COMPLIANCE DOCUMENTS (check box 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.*

| | | |
|---|---|---|
| ☑ | NRCC-LTO-01-E | Certificate of Compliance |
| ☑ | NRCC-LTO-02-E | Outdoor Lighting Controls Certificate of Compliance |
| ☑ | NRCC-LTO-03-E | Outdoor Lighting Power Allowance Certificate of Compliance |
| ☐ | NRCC-LTO-04-E | Outdoor Lighting Existing Conditions Certificate of Compliance |

| C. Summary of Allowed Lighting Power | | | Watts |
|---|---|---|---|
| 01 | **Sum Total of ALLOWED** Outdoor Lighting Wattage from NRCC-LTO-03-E, page 1 | = | 574.68 |
| | Complies ONLY if **Installed** (Box 02) **<= Allowed** (Box 1) | | ↕ |
| 02 | **Sum Total INSTALLED** Outdoor Lighting Wattage from NRCC-LTO-01-E, page 3 | | 28 |

**D. Declaration of Required Installation Certificates** - Declare by checking all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

| | |
|---|---|
| ☑ NRCI-LTO-01-E - Must be submitted for all buildings | ☑ Field Inspector |
| ☑ NRCI-LTO-02-E - Must be submitted for lighting control system, or for an Emergy Management Control System (EMCS), to be recognized for compliance | ☑ Field Inspector |

**E. Declaration of Required Certificates of Acceptance** - Declare by checking all Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)

| | |
|---|---|
| ☑ NRCA-LTO-02-A - Must be submitted for outdoor lighting controls. | ☑ Field Inspector |

**F. Schedule of luminaires exempt from the outdoor power lighting power requirements in §140.7**

| 01 | 02 |
|---|---|
| Name or Symbol | Description of exempt luminaire in accordance with the exemptions |
| | |
| | |
| | |
| | |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

## INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTI-03-E |
| Certificate of Compliance - Indoor Lighting Power Allowance | (Page 2 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

*A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:*

☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

### C-2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE

- Do not include portable lighting for offices. Portable lighting for offices shall be documented only in section B of NRCC-LTI-01-E.
- Separately list lighting for each primary function area as defined in §100.1 of the Standards.

| A | | B | | C | | D |
|---|---|---|---|---|---|---|
| AREA CATEGORY (From §140.6 Table 140.6-C) | | | | | | |
| Location in Building | Primary Function Area per Table 140.6-C | Watts per (ft$^2$) | x | Area (ft$^2$) | = | Allowed Watts |
| Classroom 1877 | Classrooms, Lecture, Training Vocational Room | 1.2 | | 652 | | 782 |
| Hallway 1875a | Corridors, Restrooms, Stairs And Support Areas | 0.6 | | 163 | | 98 |
| | | | | | | |
| | | **TOTALS** | | 815 | | |
| Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance form) | | | | | | 880 WATTS |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

STATE OF CALIFORNIA

## OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTO-01-E |
| Outdoor Lighting | (Page 2 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

**G. Schedule of luminaires exempt from the cuttoff requirements in §130.2(b)**

| 01 | 02 |
|---|---|
| Name or Symbol | Description of exempt luminaire in accordance with the exemptions |
| | |
| | |
| | |
| | |

**H. Schedule of luminaires exempt from the outdoor lighting control requirements in §130.2(c)**

| 01 | 02 |
|---|---|
| Name or Symbol | Description of exempt luminaire in accordance with the exemptions |
| | |
| | |
| | |
| | |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

## INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

| | |
|---|---|
| CERTIFICATE OF COMPLIANCE | NRCC-LTI-03-E |
| Certificate of Compliance - Indoor Lighting Power Allowance | (Page 3 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

*A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:*

☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

### C-3 Area Category Method Additional Lighting Wattage Allowance (from Table 140.6-C Footnotes)

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Primary Function | Sq Ft or linear ft[1] | Additional Watts Allowed | Wattage Allowance (02 x 03) | Description(s) and Quantity of Special Luminaire Types in each Primary Function Area | Total Design Watts[3] | Allowed Watts Smaller of 04 or 06 |
| Classrooms, Lecture, Trainir | 17 | 5.5 | 94 | | | 94 |
| | | | | | | |
| TOTALS - Enter into TOTAL AREA CATEGORY METHOD ADDITIONAL ALLOWANCES - Section C-1 | | | | | | 94 |

1. Use linear feet only for additional allowance for white board or chalk board. All other additional Area Category allowances shall use watts per square foot.
2. Additional watts are available only when allowed according to the footnotes on bottom of Table 146-C, which include: Specialized task work; Ornamental lighting; Precision commercial and industrial work; Per linear foot of white board or chalk board; Accent, display and feature lighting; and Videoconferencing Studio lighting.
3. Luminaire classification and wattage shall be determined in accordance with §130.0(c) of the Standards.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance April 2016

tBP

architecture
planning
interiors
management

tBP/Architecture
1777 Oakland Avenue, Suite 320
Walnut Creek, CA 94596
ph: 925.246.6419

architect

The Engineering Enterprise
Consulting Engineers
THE POWER HOUSE
1305 MARINA VILLAGE PARKWAY
ALAMEDA, CA. 94501
(510) 769-7600 JOB #18084

REGISTERED PROFESSIONAL ENGINEER DAVID JOHNSON No. E18964 Exp. 12/31/18 ELECTRICAL STATE OF CALIFORNIA

consultant

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE # 48-C1
APPL # 02-116615
AC ___ FLS ___ SS KG
DATE MAY 04 2018

Division of the State Architect
1102 Q Street, #5100
Sacramento, Ca., 95811
ph: (916) 445-8100

agency

BUILDING 1800B HALLWAY PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA. 94534

owner

tBP project number: 20883.02

file name: E003 TITLE 24

drawn by: GL checked by: JB

date: APRIL 25, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
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drawing title:
TITLE 24

drawing no.:
E003
drawing of

## OUTDOOR LIGHTING POWER ALLOWANCES

CEC-NRCC-LTO-03-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-03-E |
|---|---|
| Outdoor Lighting Power Allowances | (Page 1 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

### A. Outdoor Lighting Power Allowance Summary

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. General Hardscape Lighting Power Allowance (Site Total from Section B of NRCC-LTO-03-E) | | | | | 1. | 546.68 |
| 2. Additional Specific "use it or lose it" Lighting Power Allowances listed in each of these cells shall be identical to total allowed watts determined in Section C-1 to C-4 of NRCC-LTI-04-E | | | | | | |
| PER APPLICATION from Section C-1 | PER UNIT LENGTH (SALES FRONTAGE) from Section C-2 | PER HARDSCAPE AREA (ORNAMENTAL LIGHTING) from Section C-3 | PER SPECIFIC AREA from Section C-4 | | | |
| 28 + | + | + | = | | 2. | 28 |
| 3. **Sum Total ALLOWED** Outdoor Lighting Wattage (add rows 1 and 2) | | | | | 3. | 574.68 |

### B. General Hardscape Lighting Power Allowance From Table 140.7-A

| Area Wattage Allowance (AWA) | | | | Linear Wattage Allowance (LWA) | | | Initial Wattage Allowance (IWA) | Total General Hardscape Lighting Allowance |
|---|---|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| Name of area | Illuminated Hardscape Area | AWA Per Square Foot | AWA (B02 x B03) | Perimeter Length of General Hardscape | LPA per Linear Foot | LWA (B05 x B06) | IWA (Watts) | B04 + B07 + B08 |
| EGRESS LANDING | 142 | 0.04 | 5.68 | 60 | 0.35 | 21 | 520 | 546.68 |
| | | | | | | | | |
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| | | | | | | | TOTAL | 546.68 |





## OUTDOOR LIGHTING POWER ALLOWANCES

CEC-NRCC-LTO-03-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-03-E |
|---|---|
| Outdoor Lighting Power Allowances | (Page 2 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

### C. ADDITIONAL "USE IT OR LOSE IT" OUTDOOR LIGHTING POWER ALLOWANCES FOR SPECIFIC APPLICATIONS

☑ The additional specific outdoor lighting power allowance shall be smaller of the allowed lighting power or the actual lighting power used.

☑ Use Outdoor Lighting Zone (OLZ) that is documented on page 1 of NRCC-LTO-01-E to calculate the specific wattage allowances.

### C-1. WATTAGE ALLOWANCE PER APPLICATION – Table 140.7-B

☑ Available only for qualifying locations, which include Building Entrances or Exits; Primary Entrances to Senior Care Facilities, Police Stations, Hospitals, Fire Stations, and Emergency Vehicle Facilities; Drive Up Windows; Vehicle Servcice Station Uncovered Fuel Dispenser, ATM Machine Lighting

☐ If more than one luminaire type is used per location, use multiple rows for that location

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| | ALLOTED WATTS | | | DESIGN WATTS | | | | | |
| Name of Location for Which Allowance is Claimed | Number of Qualifying Locations | Wattage Allowance per Qualifying Location | Alloted Watts (02 x 03) | Luminaire Code or Symbol | Luminaire Description | Luminaire Quantity | Watts per Luminaire | Design Watts (07 x 08) | Allowed Watts (smaller of 04 or 09) |
| Egress Landing - Building Entrance or Exit | 1 | 35 | 35 | F3 | SURFACE MOUNTED RECTANGULAR DOWNLIGHT | 1 | 28 | 28 | 28 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Sum total allowance per application on this site: | | | | | | | | | 28 |

### C-2. WATTAGE ALLOWANCE PER UNIT LENGTH (Sales Frontage) from Table 140.7-B

☐ If more than om luminaire type is used per location, use multiple rows for that location

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| | ALLOTED WATTS | | | DESIGN WATTS | | | | | |
| Name of Location for Which Allowance is Claimed | Linear Feet of Sales Frontage | Wattage Allowance per Linear Foot | Alloted Watts (02 x 03) | Luminaire Code or Symbol | Luminaire Description | Luminaire Quantity | Watts per Luminaire | Design Watts (07 x 08) | Allowed Watts (smaller of 04 or 09) |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Sum total allowance for sales frontage on this site: | | | | | | | | | |





## OUTDOOR LIGHTING POWER ALLOWANCES

CEC-NRCC-LTO-03-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-03-E |
|---|---|
| Outdoor Lighting Power Allowances | (Page 3 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

### C-3. WATTAGE ALLOWANCE PER SQUARE FOOT OF HARDSCAPE AREA (Ornamental Lighting) – Table 140.7-B

- Allowance for the total site illuminated hardscape area. Lunimaires qualifying for this allowance shall be rated for 100 watts or less as determined in accordance with Section 130.0(c), and shall be post-top luminaires, lanterns, pendant luminaires, or chandeliers.
- If more than one luminaire type is used per location, use multiple rows for that location

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| | ALLOTED WATTS | | | DESIGN WATTS | | | | | |
| Name of area for which ornamental allowance is claimed | Square feet of Hardscape | Wattage Allowance per square foot | Allotted Watts (02 x 03) | Luminaire Code or Symbol | Luminaire Description | Luminaire Quantity | Watts per luminaire | Design Watts (07 x 08) | Allowed Watts (smaller of 04 or 09) |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Sum total allowance for ornamental lighting on this site: | | | | | | | | | |

### C-4. WATTAGE ALLOWANCE PER SQUARE FOOT OF SPECIFIC AREA – Table 140.7-B

- Allowances for Building Facades; Outdoor Sales Lots; Vehicle Service Station Hardscape; Vehicle Service Station Canopies; Sales Canopies; Non-sales Canopies; Guard Stations; Student Pick-up/Drop-off sone: Outdoor Dining; Special Security Lighting for Retail Parking and Pedestrian Hardscape
- If more than one luminaire type is used per location, use multiple rows for that location

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| | ALLOTED WATTS | | | DESIGN WATTS | | | | | |
| Name of Location for which allowance is claimed | Illuminated Area of Application | Wattage Allowance per square foot | Allotted Watts (02 x 03) | Luminaire Code or Symbol | Luminaire Description | Luminaire Quantity | Watts per luminaire | Design Watts (07 x 08) | Allowed Watts (smaller of 04 or 09) |
| | | | | | | | | | |
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| | | | | | | | | | |
| Sum total allowance for specific area on the site: | | | | | | | | | |





## OUTDOOR LIGHTING POWER ALLOWANCES

CEC-NRCC-LTO-03-E (Revised 01/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-03-E |
|---|---|
| Outdoor Lighting Power Allowances | (Page 4 of 4) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

| DOCUMENTATION AUTHOR'S DECLARATION STATEMENT | |
|---|---|
| 1. I certify that this Certificate of Compliance documentation is accurate and complete. | |
| Documentation Author Name: Jonathan B. Chapman | Documentation Author Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | CEA/HERS Certification (if applicable): |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: David Johnson | Responsible Designer Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | License: E18964 |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |





## OUTDOOR LIGHTING CONTROLS

CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-02-E |
|---|---|
| Outdoor Lighting Controls | (Page 1 of 3) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

The NRCC-LT0-02-E shall be used to document all mandatory and prescriptive lighting controls that are applicable to the project.

### A. Mandatory Outdoor Lighting Control Declaration Statements

check all that apply:

- ☑ Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9
- ☑ Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b)
- ☑ All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with §130.1
- ☐ Part-Night Outdoor Lighting Controls, as defined in Section 100.1, shall meet the requirements in Section 110.9(b)5
- ☐ All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c), shall be controlled by a motion sensor.
- ☐ All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG") in accordance with Section 130.2(b)
- ☑ All installed outdoor lighting shall be controlled by a photocontrol or outdoor astronomical time-switch control in accordance with Section 130.2(c)1
- ☑ All installed outdoor lighting shall be circuited and independently controlled from other electrical loads by an automatic scheduling control in accordance with Section 130.2(c)2.
- ☑ All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls in accordance with Section 130.2(c)3
- ☐ For Outdoor Sales Frontage, Outdoor Sales Lots, and Outdoor Sales Canopies lighting, an automatic lighting control in accordance with Section 130.2(c)4.
- ☐ For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control in accordance with Section 130.2(c)5
- ☑ Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4.(a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential Appendix NA7.8





## OUTDOOR LIGHTING CONTROLS

CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-02-E |
|---|---|
| Outdoor Lighting Controls | (Page 2 of 3) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

### B. MANDATORY OUTDOOR LIGHTING CONTROL SCHEDULE and FIELD INSPECTION CHECKLIST

| Outdoor Lighting Control Schedule | | | Standards Complying With (✓ all that apply, or leave empty if Exempted) | | | | | | ✓ if acceptance test required | Field Inspector | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | |
| Location and Application of Luminaires Being Controlled | Type/ Description of Lighting Control (i.e. oitdoor motion sensor, outdoor photocontrol, outdoor astronomical time-switch control, automatic scheduling control, part-night outdoor lighting control) | # of units | §130.2(a) | §130.2(c)1 | §130.2(c)2 | §130.2(c)3 | §130.2(c)4 | §130.2(c)5 | | Pass | Fail |
| EGRESS LANDING | DAYLIGHT SENSOR | 1 | | ✓ | ✓ | | | | ☐ | ○ | ○ |
| | | | | | | | | | ☐ | ○ | ○ |
| | | | | | | | | | ☐ | ○ | ○ |
| | | | | | | | | | ☐ | ○ | ○ |
| | | | | | | | | | ☐ | ○ | ○ |
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## OUTDOOR LIGHTING CONTROLS

CEC-NRCC-LTO-02-E (Revised 08/16) — CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | NRCC-LTO-02-E |
|---|---|
| Outdoor Lighting Controls | (Page 3 of 3) |
| Project Name: Solano Bldg 1800B Corridor Project | Date Prepared: February 16, 2018 |

| DOCUMENTATION AUTHOR'S DECLARATION STATEMENT | |
|---|---|
| 1. I certify that this Certificate of Compliance documentation is accurate and complete. | |
| Documentation Author Name: Jonathan B. Chapman | Documentation Author Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | CEA/HERS Certification (if applicable): |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: David Johnson | Responsible Designer Signature: |
| Company: The Engineering Enterprise | Signature Date: February 16, 2018 |
| Address: 1305 Marina Village Parkway | License: E18964 |
| City/State/Zip: Alameda, CA 94501 | Phone: (510) 769-7600 |



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OFFICE OF REGULATION SERVICES
FILE # 48-C1
APPL # 02-116615
AC FLS SS KG
DATE MAY 0 4 2018
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BUILDING 1800B HALLWAY PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
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FAIRFIELD, CA. 94534

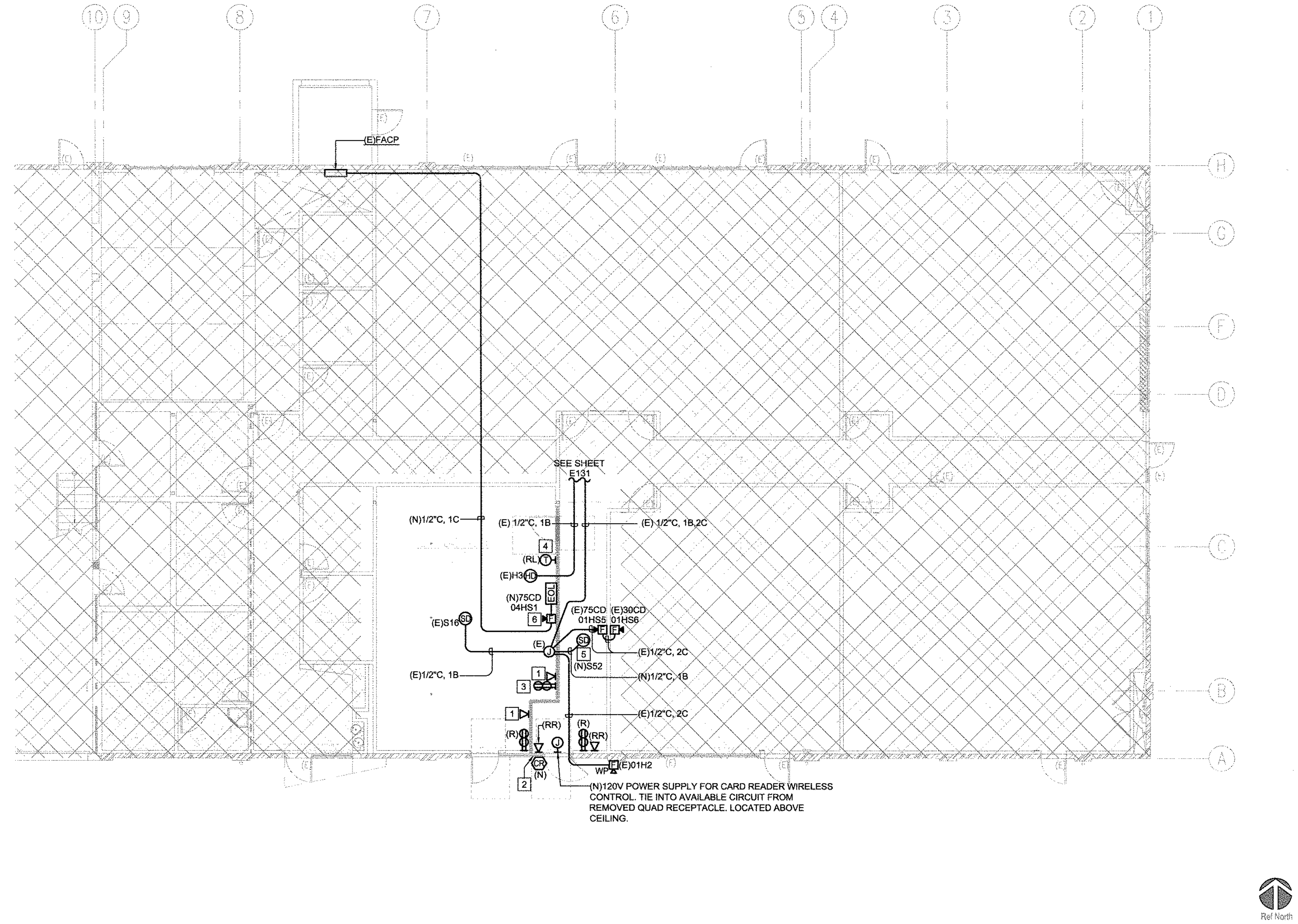
owner

| | | |
|---|---|---|
| tBP project number: 20883.02 | | |
| file name: E003 TITLE 24 | | |
| drawn by: GL | checked by: JB | |
| date: APRIL 25, 2018 | | |
| Rev: | date: | description: |
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |

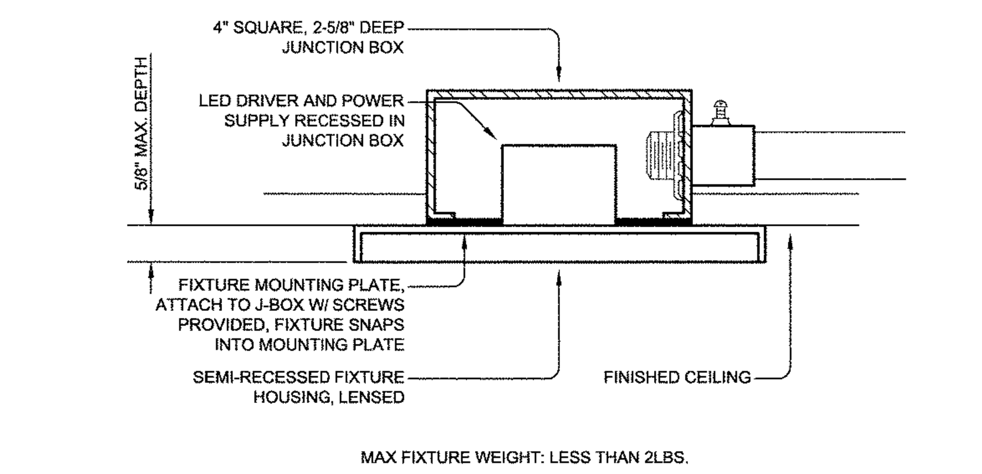


drawing title:
TITLE 24

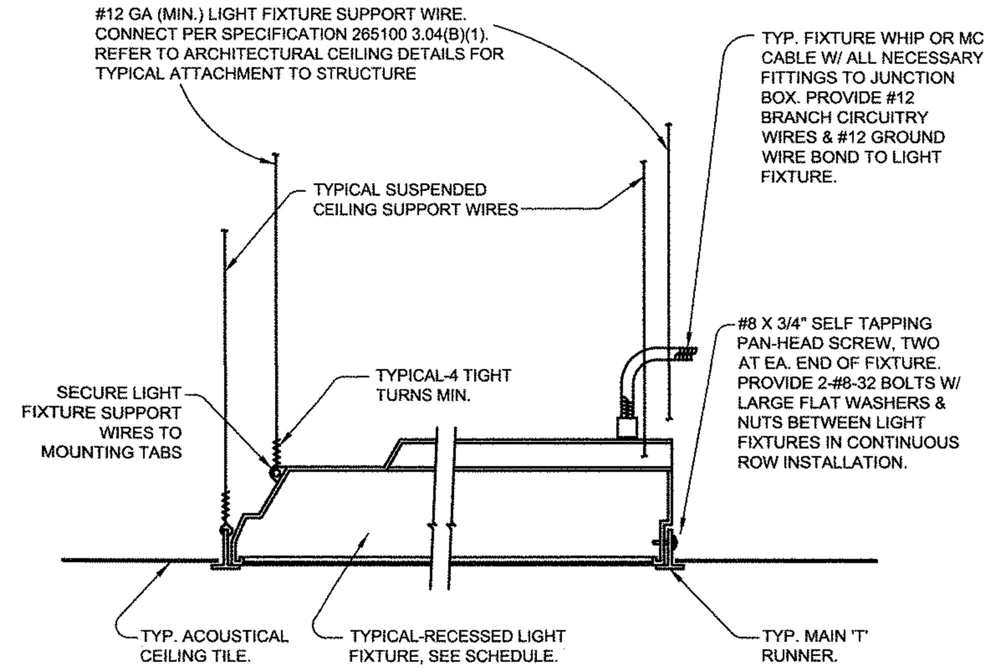
drawing no.:
E004
drawing of



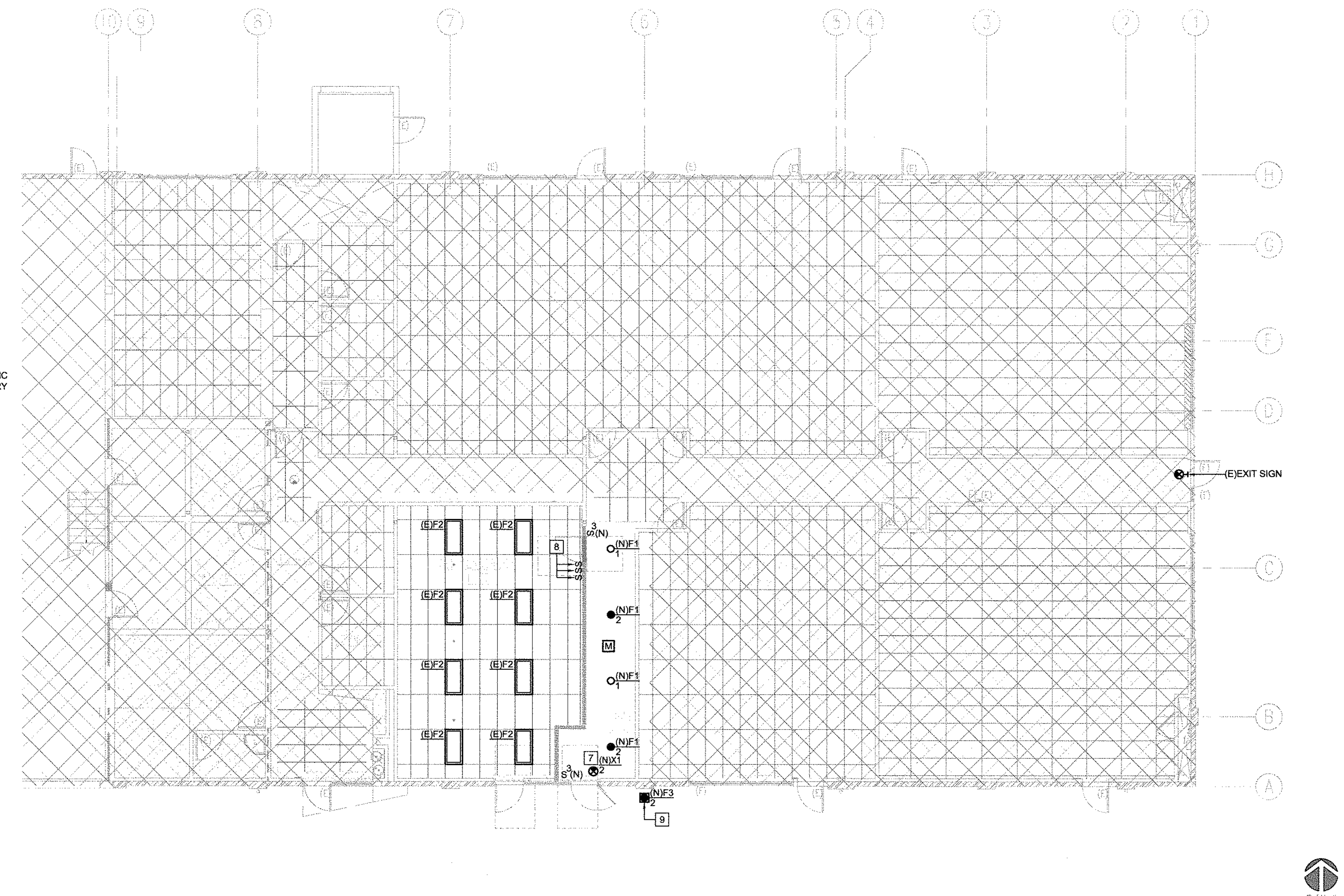

POWER, SIGNAL, AND FIRE ALARM PLANS - NEW 1
SCALE:1/8" = 1'-0"




B E121 SEMI-RECESSED FIXTURE
NONE




A E121 RECESSED FIXTURE AT T-BAR CEILING
NONE




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

## GENERAL SHEET NOTES

1. CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. NEW NORMAL LIGHTING SHALL TIE INTO EXISTING NORMAL LIGHTING CIRCUIT.
2. CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. NEW EMERGENCY LIGHTING SHALL TIE INTO EXISTING EMERGENCY LIGHTING CIRCUIT.

## NUMBERED SHEET NOTES

1 DATA TERMINAL TO BE RELOCATED FROM DEMOLISHED WALL.
- REMOVE AND RELOCATE DATA CABLES TO INTERIOR OF NEW WALL. PROVIDE NEW JACKS AND WALL PLATES.
- PROVIDE A 4-11/16" SQUARE BOX WITH SINGLE GANG RING AND 1-1/4" CONDUIT TO ACCESSIBLE CEILING.

2 RUN LOW VOLTAGE IN WINDOW FRAME TO HINGE AND STRIKE .

3 (N)QUAD RECEPTACLE TO TIE INTO CIRCUIT UTILIZED BY REMOVED QUAD RECEPTACLE.

4 REMOVE AND RELOCATE EXISTING THERMOSTAT FROM DEMOLISHED WALL.

5 NOT USED.

6 NOT USED.

7 EXIT SIGN SHALL TIE IN TO EMERGENCY LIGHTING CIRCUIT.

8 (RR)SWITCHES TO BE RELOCATED FROM DEMOLISHED WALL.
- PROVIDE NEW SWITCHES AND WALL PLATES

9 FIXTURE TO BE MOUNTED ON EXTERIOR SOFFIT.

## FIRE ALARM SYSTEM NARRATIVE

- NEW 75 CANDELA HORNSTROBE(DEVICE NUMBER TO BE 04HS1) DEVICE IS TO BE PLACED ON NEW WALL IN CLASSROOM 1877. DEVICE SHALL BE TIED DIRECTLY INTO AVAILABLE NAC CIRCUIT(IDC/NAC 6) IN EXISTING FIRE ALARM CONTROL PANEL. NEW 1/2" CONDUIT CONTAINING 1 WIRE TYPE "C"(WIRE TYPE "C" = 2/C X #12, PVC JACKET) SHALL BE RUN ABOVE THE T-BAR CEILING FROM THE EXISTING FIRE ALARM CONTROL PANEL TO THE NEW HORNSTROBE DEVICE.
- EXISTING 75 CANDELA HORNSTROBE(DEVICE NUMBER 01HS5) DEVICE IS TO REMAIN IN PLACE IN NEW HALL 1875A.
- NEW SMOKE DETECTOR(DEVICE NUMBER TO BE S52) DEVICE IS TO BE PLACED ON CEILING IN NEW HALL 1875A. DEVICE SHALL TIE IN TO EXISTING CIRCUIT THROUGH EXISTING SMOKE DETECTOR DEVICE "S16". NEW 1/2" CONDUIT CONTAINING 1 WIRE TYPE "B"(WIRE TYPE "B" = 2/C X #16, PVC JACKET) SHALL RUN FROM EXISTING SMOKE DETECTOR DEVICE "S16" TO NEW SMOKE DETECTOR DEVICE "S52".

## FIRE ALARM SYSTEM COMPONENT SCHEDULE

| SYMBOL | NAME | DESCRIPTION | CALIFORNIA STATE FIRE MARSHAL LISTING |
|---|---|---|---|
| F | FIRE ALARM HORN/STROBE WITH CANDELA AS INDICATED ON PLANS | EDWARDS GENESIS SERIES EG1RF-HDV1575 | 7125-1483:0147-0148 |
| SD | FIRE ALARM PHOTOELECTRONIC SMOKE DETECTOR | NOTIFIER FSP-851A WITH B710LP BASE | 7272-0028:0206 |

## LIGHTING FIXTURE SCHEDULE

| TAG | MANUFACTURER | LP QTY/TYPE | WATTS | VOLTS | BALLAST | DESCRIPTION |
|---|---|---|---|---|---|---|
| F1 | PHILIPS LIGHTOLIER #S7R/8/35K/10/Z10U OR EQUAL | LED 80CRI 3500K | 14.4 | 120-277V | INTEGRAL 0-10V DRIVER | 7" SURFACE MOUNTED CIRCULAR DOWNLIGHT. WEIGHT IS LESS THAN 2LBS. |
| F2 | FOCAL POINT | FLUORESCENT | 93 | 277V | EXISTING | (EXISTING) 2'X4' TROFFER. LIGHT FIXTURE, BALLASTS, AND CIRCUITS TO BE REUSED AND RELOCATED. WEIGHT IS 29LBS. |
| F3 | LIGHTWAY #CHSC-11-LED-U-28W-3-Z1-CPP-21-02 OR EQUAL | LED 80CRI 3500K | 28 | 120-277V | INTEGRAL 0-10V DRIVER | 10.5" SQUARE SURFACE MOUNTED DOWNLIGHT. TO BE CONTROLLED BY INTEGRAL PHOTOELECTRIC CELL. WEIGHT IS LESS THAN 20LBS. |
| X1 | LITHONIA #LQC-W-1-R, BUILDING STANDARD, OR EQUAL | LED | 3 | 120/277 | NA | UNIVERSAL EXIT SIGN WITH A SINGLE FACE. |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BUILDING 1800B HALLWAY PROJECT
SOLANO COLLEGE
Solano Community College District

SOLANO COLLEGE
4000 SUISUN VALLEY ROAD
FAIRFIELD, CA. 94534
owner

tBP project number: 20883.02
file name: E121 NEW ELECTRICAL PLAN
drawn by: GL checked by: JB
date: APRIL 25, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |

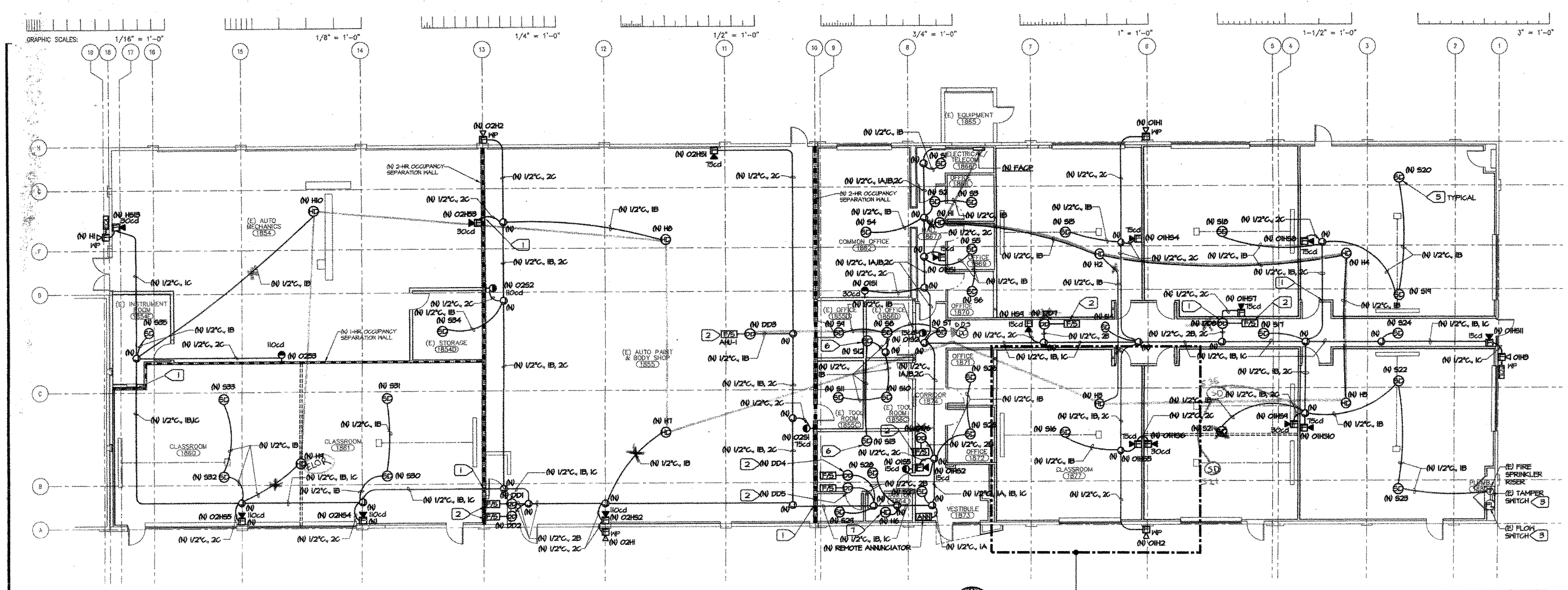


drawing title:
ELECTRICAL PLANS

drawing no.:
E121
drawing of

## GENERAL SHEET NOTES

1. PLANS ARE FOR REFERENCE ONLY
2. FIRE ALARM SYSTEM IS EXISTING.
   DSA APPLICATION NUMBER: 02-106610
   DATE: 12/09/2004




1 E3.1 FIRST FLOOR PLAN - FIRE ALARM
SCALE: 1/8" = 1'-0"

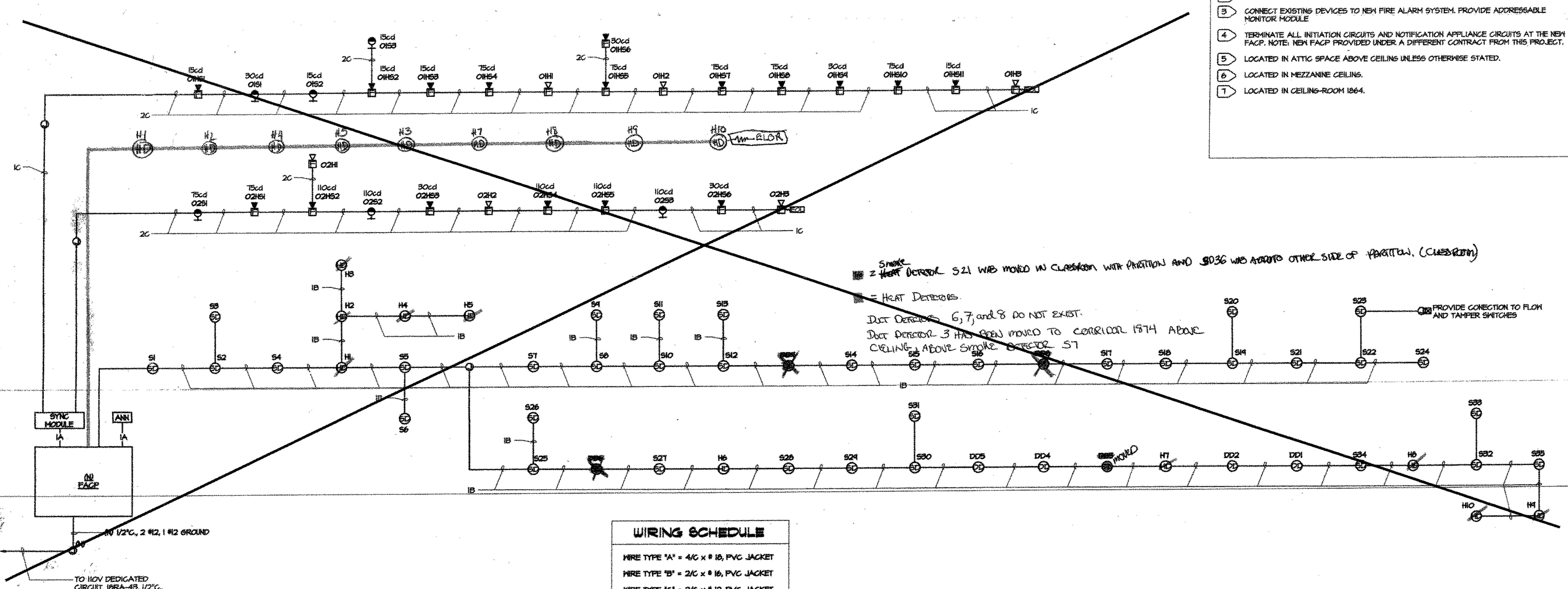
IF THIS SHEET IS NOT 30"x42", IT IS A REDUCED PRINT - SCALE ACCORDINGLY

DREYFUSS & BLACKFORD ARCHITECTS

PROJECT #: 04148.21

### NUMBERED NOTES

1. REFER TO FIRE RATED STUD WALL CONDUIT PENETRATION DETAIL 1/E3.2.
2. DEVICE PROVIDED BY A DISCIPLINE OTHER THAN ELECTRICAL.
3. CONNECT EXISTING DEVICES TO NEW FIRE ALARM SYSTEM. PROVIDE ADDRESSABLE MONITOR MODULE
4. TERMINATE ALL INITIATION CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS AT THE NEW FACP. NOTE: NEW FACP PROVIDED UNDER A DIFFERENT CONTRACT FROM THIS PROJECT.
5. LOCATED IN ATTIC SPACE ABOVE CEILING UNLESS OTHERWISE STATED.
6. LOCATED IN MEZZANINE CEILING.
7. LOCATED IN CEILING-ROOM 1864.




### WIRING SCHEDULE

| | |
|---|---|
| WIRE TYPE "A" = 4/C x # 18, PVC JACKET | |
| WIRE TYPE "B" = 2/C x # 16, PVC JACKET | |
| WIRE TYPE "C" = 2/C x # 12, PVC JACKET | |

2 E3.1 FIRE ALARM RISER DIAGRAM
NO SCALE

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
A# 02-106610

AS-BUILT
10-31-2005

SOLANO COMMUNITY COLLEGE
BUILDING 1800-B
SWING SPACE RENOVATION
INCREMENT #1

FIRST FLOOR PLAN - FIRE ALARM AND RISER DIAGRAM

A4745.01
AS NOTED
09 DECEMBER 2004

E3.1

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owner

| | |
|---|---|
| tBP project number: | 20883.02 |
| file name: | E131 NEW ELECTRICAL PLAN |
| drawn by: GL | checked by: JB |
| date: | APRIL 25, 2018 |

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |



drawing title:
OVERALL FIRE ALARM SYSTEM PLANS

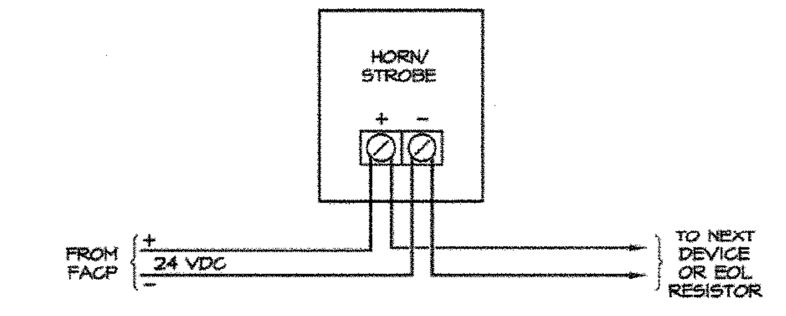
drawing no.:
E131
drawing of

## GENERAL SHEET NOTES

A. NOT USED

## FIRE ALARM DEVICE SEQUENCE OF OPERATION MATRIX

| | | INITIATION | | | | |
|---|---|---|---|---|---|---|
| | | FIRE SPRINKLER TAMPER & FLOW SWITCH | SMOKE DETECTOR | HEAT DETECTOR | DUCT DETECTOR | ANY SYSTEM TROUBLE OR FAILURE |
| RESPONSE | ANNUNCIATE AT FACP | YES | YES | YES | YES | YES |
| | ACTIVATE AUDIO VISUAL THROUGHOUT | YES | YES | YES | YES | NO |
| | TRANSMIT ALARM TO CENTRAL DEPT. | YES | YES | YES | YES | YES |
| | SHUT DOWN ASSOCIATED AIR HANDLER | NO | NO | NO | YES | NO |
| | ACTIVATE FIRE/SMOKE DAMPER | YES | YES | YES | YES | NO |
| | REMOTE ANNUNCIATOR | YES | YES | YES | YES | YES |
| | | | | | | |




### HORN/STROBE LIGHT POINT TO POINT WIRING DIAGRAM

1 / E131

NO SCALE

### VOLTAGE DROP CALCULATION FORMULA FOR 04HS1 AT IDC/NAC 6

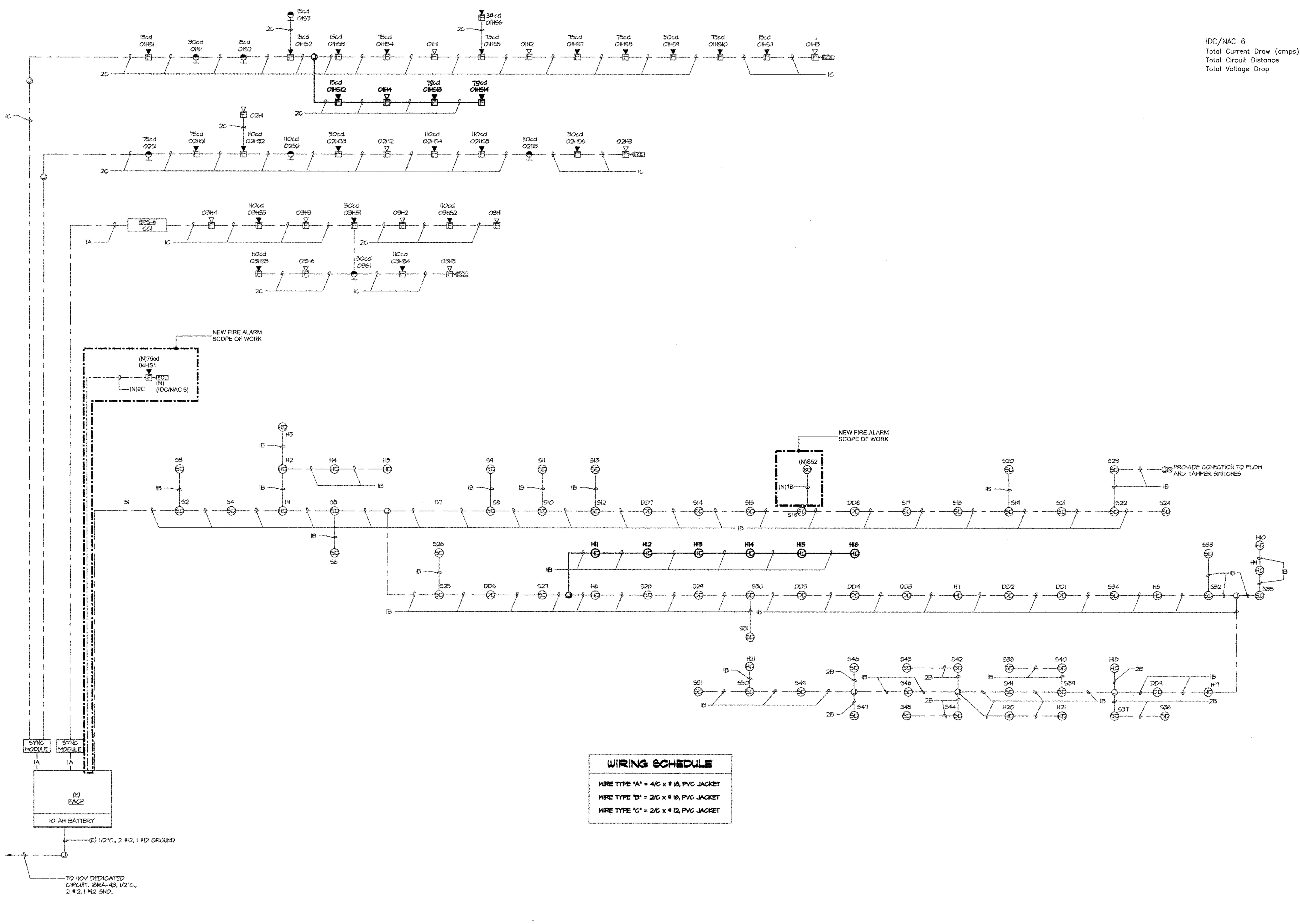
$$\% \text{ Voltage Drop} = \frac{\text{Distance X Total Current Draw X } 0.0032}{\text{Circuit Voltage}}$$

12 AWG WIRE RESISTANCE PER FOOT

24 VOLTS

IDC/NAC 6

| | |
|---|---|
| Total Current Draw (amps) | 0.197 |
| Total Circuit Distance | 87' |
| Total Voltage Drop | 0.23% |




### WIRING SCHEDULE

WIRE TYPE "A" = 4/C x # 18, PVC JACKET

WIRE TYPE "B" = 2/C x # 16, PVC JACKET

WIRE TYPE "C" = 2/C x # 12, PVC JACKET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# BUILDING 1800B HALLWAY PROJECT
# SOLANO COLLEGE

Solano Community College District

SOLANO COLLEGE
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owner

tBP project number: 20883.02

file name: E131 NEW ELECTRICAL PLAN

drawn by: GL checked by: JB

date: APRIL 25, 2018

| Rev: | date: | description: |
|---|---|---|
| | 2/16/2018 | 50% CD's |
| | | 100% CD's - Plan Review |
| | | |
| | 05/04/2018 | DSA BACKCHECK |
| | | |
| | | |



drawing title:
## FIRE ALARM SINGLE LINE, CALCS, & DETAILS

drawing no.:
# E132

drawing of