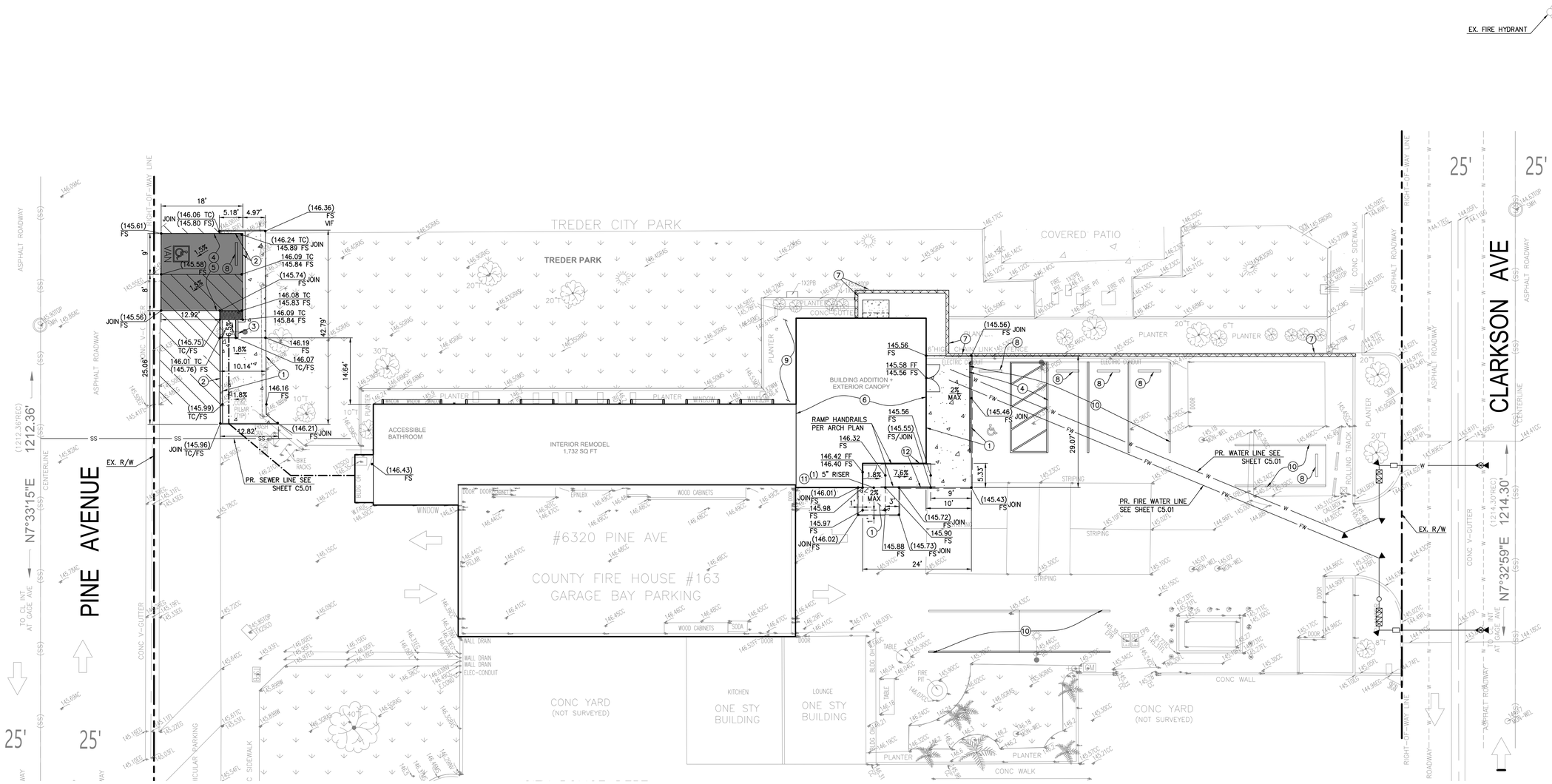


CONSTRUCTION NOTES:

1. CONSTRUCT CONCRETE PAVEMENT PER DETAIL 1 ON SHEET C2.01.
2. CONSTRUCT CONCRETE CURB PER DETAIL 2 ON SHEET C2.01.
3. CONSTRUCT CONCRETE CURB RAMP PER SPPWC STD. PLAN 111-5 CASE B, TYPE 1 (SEE STD. ON SHEET C2.01).
4. INSTALL ACCESSIBLE PARKING STRIPING & SIGNAGE PER DETAIL 4 ON SHEET C2.01.
5. CONSTRUCT AC PAVEMENT PER DETAIL 5 ON SHEET C2.01.
6. CONSTRUCT BUILDING EXTENSION PER ARCHITECTURAL PLANS.
7. CONSTRUCT PERIMETER BLOCK WALL PER ARCHITECTURAL PLANS.
8. CONSTRUCT CONCRETE WHEEL STOP PER ARCHITECTURAL PLANS.
9. REPLACE ALL DAMAGED LANDSCAPE PLANTING IN KIND.
10. INSTALL REGULAR PARKING STRIPING PER ARCHITECTURAL PLANS.
11. CONSTRUCT RISER STRUCTURAL PLANS.
12. CONSTRUCT CONCRETE RAMP PER DETAIL 1 ON SHEET C2.01.

LEGEND

- BUILDING OUTLINE
- NEW CONCRETE PAVEMENT PER DETAIL 1 ON SHEET C2.01
- NEW ASPHALT CONCRETE PAVEMENT PER DETAIL 5 ON SHEET C2.01
- 1048.00 FS — PROPOSED SPOT ELEVATION
- (1048.00) FS — EXISTING SPOT ELEVATION
- 146 — PROP. CONTOUR (1' INTERVAL)
- 146 — EXIST. CONTOUR (1' INTERVAL)
- PATH OF TRAVEL LINE
- SAWCUT LINE
- GRADE BREAK

NORTH

GRADING PLAN

0' 5' 10' 20'

GRAPHIC SCALE : 1"=10'

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REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

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700 S FLOWER ST # 1000, LOS ANGELES, CA 90017
T (213) 955-0955 F (213) 955-0956
B&J PROJECT # C21-0207
EST. 1945

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

REGISTERED PROFESSIONAL ENGINEER — DAVID S. KIM — No. C80540 — CIVIL — State of California

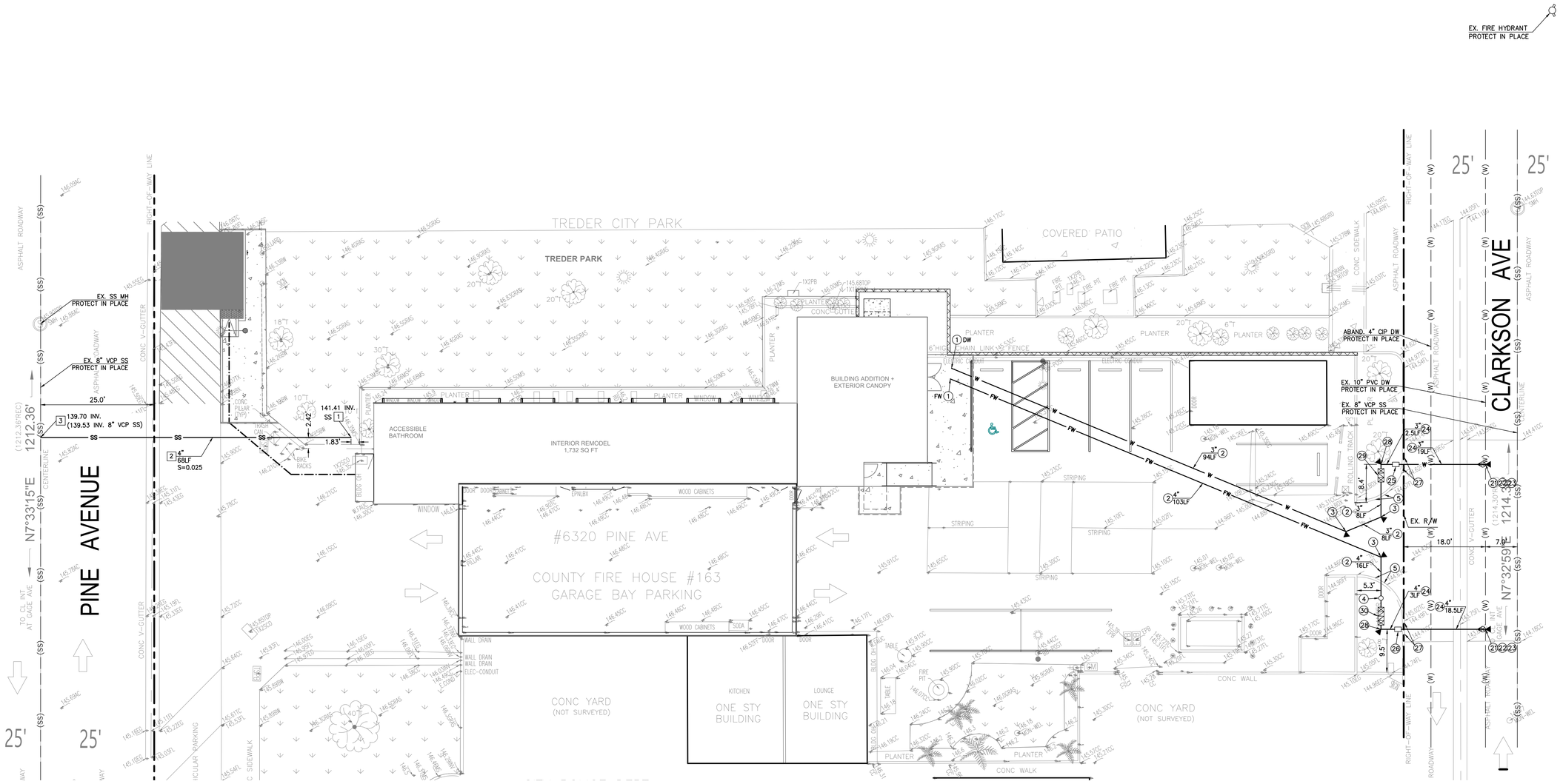
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CHECKED	Checker
DATE	10/05/2026

GRADING PLAN

CD

C4.01



SEWER CONSTRUCTION NOTES:

1. POINT OF CONNECTION, 5' FROM BUILDING.
2. INSTALL PVC WATER LINE, PER AWWA C-900, CLASS 150 W/ D.I. FITTINGS. SIZE AND LENGTH PER PLAN. SEE DETAIL 8 ON SHEET C2.01 FOR TRENCHING.
3. CONNECT TO EXISTING SEWER MAINLINE.

PRIVATE WATER CONSTRUCTION NOTES:

1. POINT OF CONNECTION, 5' FROM BUILDING.
2. INSTALL PVC WATER LINE, PER AWWA C-900, CLASS 150 W/ D.I. FITTINGS. SIZE AND LENGTH PER PLAN. SEE DETAIL 8 ON SHEET C2.01 FOR TRENCHING.
3. CONSTRUCT THRUST BLOCK PER DETAIL 9 ON SHEET C2.01.
4. INSTALL REMOTE FIRE DEPARTMENT CONNECTION.
5. SAWCUT, REMOVE, AND REPLACE IN KIND EXISTING 6" CURB PER SPPWC STD. PLAN 120-2 (SEE STD. ON SHEET C2.01).

PUBLIC WATER CONSTRUCTION NOTES:

21. CUT IN TEE AND CONNECT TO EXISTING PUBLIC WATER LINE PER GSWC STD. DWG. P-24 (SEE STD. ON SHEET C2.02). CONTRACTOR TO FIELD VERIFY.
22. INSTALL 6" GATE VALVE.
23. INSTALL 6" TO 4" REDUCER.
24. INSTALL PVC WATER LINE, PER AWWA C-900, CLASS 150 W/ D.I. FITTINGS. SIZE AND LENGTH PER PLAN. TRENCHING PER GSWC STD. DWG. P-3 (SEE STD. ON SHEET C2.02). CONCRETE PAVEMENT REPLACEMENT PER SPPWC STD. PLAN 132-4 (SEE STD. ON SHEET C2.02).
25. INSTALL 3" DOMESTIC WATER METER PER GSWC STD. DWG. P-30 (SEE STD. ON SHEET C2.02).
26. INSTALL 4" FIRE WATER METER PER GSWC STD. DWG. P-30 (SEE STD. ON SHEET C2.02).
27. SAWCUT, REMOVE, AND REPLACE IN KIND EXISTING 6" CURB PER SPPWC STD. PLAN 120-2 (SEE STD. ON SHEET C2.01).
28. CONSTRUCT THRUST BLOCK PER GSWC STD. DWG. P-18 (SEE STD. ON SHEET C2.02).
29. INSTALL 3" REDUCED PRESSURE PRINCIPLE ASSEMBLY, ZURN WILKINS 375 OR APPROVED EQUAL, PER GSWC STD. DWG. P-35B (SEE STD. ON SHEET C2.02).
30. INSTALL 4" REDUCED PRESSURE PRINCIPLE ASSEMBLY, ZURN WILKINS 375 OR APPROVED EQUAL, PER GSWC STD. DWG. P-35B (SEE STD. ON SHEET C2.02).

LEGEND

- PROPOSED BUILDING
- FW — PROPOSED FIRE WATER LINE
- W — W — EXISTING WATER LINE TO REMAIN
- GATE VALVE
- FIRE HYDRANT

NORTH

UTILITY PLAN

0' 5' 10' 20'

GRAPHIC SCALE : 1"=10'

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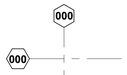
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DRAWN	Author
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DATE	10/05/2026

UTILITY PLAN

CD

C5.01

ARCHITECTURAL SYMBOLS



GRID LINE



DOOR IDENTIFICATION

RELITE IDENTIFICATION

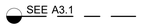


WINDOW TYPE

LOUVER TYPE



REVISION

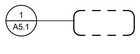


MATCH LINE
Shaded area is side considered

WORK POINT, DATUM POINT, CONTROL POINT



DETAIL
Upper mark denotes drawing number
Lower mark denotes sheet





PARTIAL BUILDING SECTION



BUILDING CROSS SECTION



INTERIOR ELEVATION
Elevation number denoted in arrow
Sheet number denoted in box



ROOM IDENTIFICATION



CODED NOTE



WALL TYPE



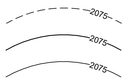
EQUIPMENT IDENTIFICATION

DASHED LINE
Used to denote items hidden, overhead, not in contract (NIC), or to be removed

BREAK LINE
Material to continue

CENTER LINE, GRID LINES

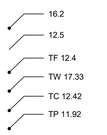
PROPERTY LINE



EXISTING CONTOUR, DISTURBED

NEW CONTOUR

EXISTING CONTOUR, UNCHANGED



NEW FINISH GRADE

EXISTING GRADE

TOP OF FOOTING

TOP OF WALL

TOP OF CURB

TOP OF PAVEMENT

ARCHITECTURAL MATERIALS

DETAIL INDICATIONS

ACOUSTIC TILE OR BOARD

ASPHALT CONCRETE PAVING

ROOFING

BRICK

CONCRETE

PRECAST CONCRETE

CONCRETE MASONRY UNIT

EARTH / FINISH GRADE

GLASS

GRAVEL

GYPSUM BOARD

INSULATION, BATT

INSULATION, RIGID

MORTAR, PLASTER, SAND

MDF

PLYWOOD

WOOD, FINISH

WOOD FRAMING
Continuous member

WOOD FRAMING
Interrupted member

PLAN INDICATIONS

STUD WALL

BRICK

CONCRETE MASONRY UNIT

CONCRETE

ABBREVIATIONS

∠	ANGLE
℄	CENTERLINE
#	FOUND OR NUMBER
&	AND
@	AT
°	DEGREE
±	PLUS / MINUS
Ø	DIAMETER
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
ACM	ALUMINUM COMPOSITE PANEL
ACOUS	ACOUSTICAL
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADJT	ADJACENT
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AJ	ACCENT JOINT
AL	ALUMINUM
ALT	ALTERNATE
ANC	ANCHOR(AGE)
ANOD	ANODIZED
APC	ACOUSTICAL PANEL CEILING
APF	ACOUSTICAL PANEL FABRIC
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
AUTO	AUTOMATIC
AWP	ACOUSTICAL WALL PANEL
BD	BOARD
BET	BETWEEN
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOF	BOTTOM OF FRAME
BOM	BOTTOM OF MASONRY
BOTT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BUR	BUILT UP ROOF
C	COURSES
CAB	CABINET
CB	CATCH BASIN, CHALKBOARD
CC	CUBICLE CURTAIN & TRACK
CEM	CEMENT
CER	CERAMIC
CFB	CEMENT FIBER BOARD
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST-IN-PLACE CONCRETE
CJ	CONTROL JOINT
CLG	CEILING
CLKG	CAULKING
CLO	CLOSET
CLR	CLEAR, COLOR
CMU	CONCRETE MASONRY UNIT
CNR	CORNER
CNTR	COUNTER
CO	CLEANOUT
COL	COLUMN
COMBO	COMBINATION TPD, SNR, & SCD
COMP	COMPOSITION, COMPOSITE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET
CRTN	CURTAIN
CT	CERAMIC TILE
CTR	CENTER
CW	CURTAIN WALL
CWP	COMPOSITE WALL PANEL

ABBREVIATIONS

D	DEEP, DEPTH
DBL	DOUBLE
DEMO	DEMOLISH, DEMOLITION
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPOSAL
DIV	DIVISION
DN	DOWN
DP	DAMPPROOF(ING)
DR	DOOR
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DWG	DRAWING
DWR	DRAWER
(E)	EXISTING
E	EAST
EA	EACH
EHD	ELECTRIC HAND/ HAIR DRYER
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	ENTRY MAT
EMB	ENAMELIZED MARKING BOARD
EMER	EMERGENCY
ENCL	ENCLOSURE
EP	ELECTRICAL PANELBOARD, EPOXY PAINT
EPT	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPOSED, EXPANSION
EXT	EXTERIOR
F	FILE (DRAWER)
FA	FIRE ALARM
FAB	FABRICATE
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET (RECESSED)
FEC-S	FIRE EXTINGUISHER CABINET (SEMI-RECESSED)
FF	FACTORY FINISHED
FFL	FINISHED FLOOR LINE
FHC	FIRE HOSE CABINET
FIN	FINISH
FLASH	FLASHING
FLR	FLOOR, FLOORING
FLUOR	FLUORESCENT
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOSH	FACE OF SHEATHING
FP	FIREPROOF
FR	FIRE RESISTANT
FRMG	FRAMING
FRP	FIBER REINFORCED PLASTIC
FRTW	FIRE RETARDANT TREATED WOOD
FS	FLOOR SINK
FSS	FOLDING SHOWER SEAT
FT	FOOT, FEET
FTG	FOOTING
FURR	FURRING
FUT	FUTURE
FWC	FABRIC WALL COVERING

ABBREVIATIONS

GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GEN	GENERAL
GI	GALVANIZED IRON
GL	GLASS
GLB	GLUE LAMINATED BEAM
GLZ	GLAZING
GMU	GLAZED MASONRY UNIT
GND	GROUND
GR	GRADE
GYP	GYPSUM BOARD (SCHEDULES ONLY)
GYP BD	GYPSUM BOARD
H	HIGH
HB	HOSE BIB
HC	HOLLOW CORE, HANDICAP (ACCESSIBLE)
HD	HEAD
HDW	HARDWARE
HDWD	HARDWOOD
HORIZ	HORIZONTAL
HS	HAND SANITIZER
HSS	HOLLOW STEEL SECTION
HT	HEIGHT
HTG	HEATING
HVAC	HEATING/ VENTILATING/ AIR CONDITIONING
HWH(T)	HOT WATER HEATER (TANK)
I/S	INSIDE
ID	INSIDE DIAMETER (DIM)
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTERCOM	INTERCOMMUNICATION
IRD	IMPACT RESISTANT DOOR
JAN	JANITOR
JST	JOIST
JT	JOINT
KIT	KITCHEN
L	LENGTH, LONG
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LIN	LINOLEUM
LKR	LOCKER
LMS	LIQUID MARKING SURFACE
LT	LIGHT, LEFT
LV	LOUVER
MACH	MACHINE
MAP	MUSIC ACOUSTICAL PANEL
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKING BOARD
MBR	MEMBER
MC	MEDICINE CABINET
MCM	METAL COMPOSITE PANEL
MCSP	MINERAL COMPOSITE SCULPTURAL PANEL
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE, MOP HOLDER
MIN	MINIMUM
MIR	MIRROR
MIR-S	MIRROR W/ SHELF
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MT(D)	MOUNT(ED)
MTL	METAL
MUL	MULLION

ABBREVIATIONS

(N)	NEW
N	NORTH
NAT	NATURAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/S	OUTSIDE
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OCC	OCCUPANT, OCCUPANCY
OD	OUTSIDE DIAMETER (DIM)
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD
OHD	OVERHEAD DOOR
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
PAR	PARALLEL
PB	PEG BOARD
PC	PRECAST
PCC	PORTLAND CEMENT CONCRETE
PCD	PAPER CUP DISPENSER
PERF	PERFORATED
PERP	PERPENDICULAR
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLUMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
POS	POSITIVE
PR	PAIR
PREFAB	PREFABRICATE(D)
PREFIN	PREFINISHED)
PROJ	PROJECT
PS	PROJECTION SCREEN
PT	POINT, PAINT
PTD	PAPER TOWEL DISPENSER
PTDR	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
PVMT	PAVEMENT
PWP	PLASTIC WALL PROTECTION
QT	QUARRY TILE
R	RISER, RADIUS
R&S	CLOSET ROD & SHELF
RAF	RESILIENT ATHLETIC FLOORING
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RDO	ROOF DRAIN, OVERFLOW
REBAR	REINFORCING BAR
RECD	RECEIVED
REF	REFERENCE
REFL	REFLECTED
REFR	REFRIGERATOR
REINF	REINFORCE(D)(ING)
REQD	REQUIRED
RESIL	RESILIENT
RF	ROOF
RFT	RESILIENT FLOORING TILE
RH	ROBE HOOK
RM	ROOM
RO	ROUGH OPENING
RSD	RECESSED SOAP DISPENSER
RSS	RUBBER STAIR STRINGER
RSTR	RUBBER STAIR TREAD / RISER
RT	RIGHT, RUBBER TILE

ABBREVIATIONS

RWL	RAIN WATER LEADER
S	SOUTH
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SD	SOAP DISPENSER
SDG	SIDING
SECT	SECTION
SHR	SHOWER
SHT	SHEET
SHTG	SHEETING / SHEATHING
SIM	SIMILAR
SLD	SOLID SURFACE
SLR	SEALER
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
STD	STANDARD
STL	STEEL
STN	STAIN
STOR	STORAGE
STRFT	STOREFRONT
STRUCT	STRUCTURAL
SUB	SUBSTITUTE
SUSP	SUSPENDED
SV	SHEET VINYL
SWC	SANITARY WALL COVERING
SYM	SYMMETRICAL
SYS	SYSTEM
T	TREAD, TEE
TB	TOWEL BAR, TACK BOARD
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPORARY
TERR	TERRAZZO
TF	TOP OF FOOTING
THK	THICK
THRU	THROUGH
TOF	TOP OF FRAME
TOM	TOP OF MASONRY
TP	TOP OF PAVEMENT
TPD	TOILET PAPER DISPENSER
TR	TOWEL RACK
TS	TUBE STEEL
TV	TELEVISION
TVB	TELEVISION BRACKET
TW	TOP OF WALL
TYP	TYPICAL
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UPT	UNGLAZED PORCELAIN TILE
UR	URINAL
USK	UTILITY SINK
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VENT	VENTILATE
VER	VERIFY
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOL	VOLUME
VRB	VENTILATING RUBBER BASE
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WEST, WIDE, WIDTH
W/	WITH
W/D	WASHER/DRYER
WO	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WFAP	WOOD FIBER ACOUSTICAL PANEL
WH	WALL HUNG
WP	WATERPROOF, WALL PADS
WPTL	WOOD PRESERVATIVE TREATED LUMBER
WR	WATER REPELLENT
WS	WEATHER STRIPPING
WSCT	WAINSCOT
WT	WEIGHT
WTR	WATER
WWF	WELDED WIRE FABRIC

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1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

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LICENSED ARCHITECT
VICTOR ORTEGA JASSO
No. C-34004
Exp. 8-31-23
STATE OF CALIFORNIA

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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

ARCHITECTURAL SYMBOLS AND ABBREVIATIONS

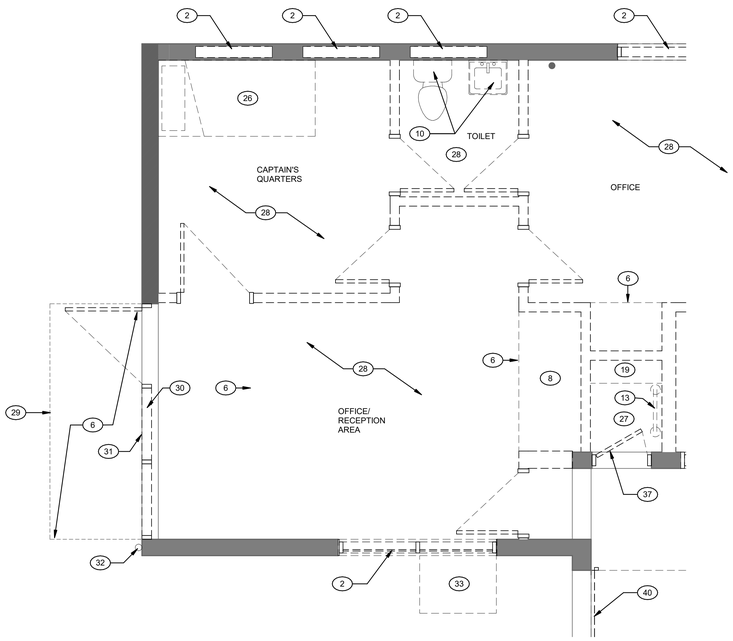
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DEMOLITION PLAN - GENERAL NOTES

1. THE LACFD RESERVES SALVAGE RIGHTS TO ANY AND ALL ITEMS SLATED FOR DEMOLITION. G.C. TO VERIFY WITH THE AUTHORIZED LACFD REPRESENTATIVE (OAR) AS TO WHICH ITEMS ARE TO BE SALVAGED PRIOR TO PROCEEDING WITH DESTRUCTIVE DEMOLITION.
2. VERIFY THE LOCATIONS OF EXISTING CONSTRUCTION TO REMAIN IN THE FIELD AND COORDINATE WITH THE WORK INDICATED ON PLANS AND RCP.
3. COORDINATE ALL DEMOLITION WITH NEW CONSTRUCTION. SEE CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, FIRE ALARM, FIRE SPRINKLER, PLUMBING, ELECTRICAL AND TELECOM DRAWINGS FOR LOCATIONS AND SIZES.
4. EXISTING WALLS, STRUCTURE, DOORS AND OTHER ITEMS TO REMAIN ARE SHOWN AS SOLID LINES OR INDICATED AS SUCH BY NOTE. ALL STRUCTURAL MEMBERS, SLABS AND ROOF STRUCTURE/DECKS ARE TO REMAIN UNLESS SPECIFICALLY NOTED OTHERWISE. ALL STRUCTURE, WALLS, DOORS, WINDOWS, CABINETRY EQUIPMENT, FIXTURES, ETC., TO BE REMOVED ARE SHOWN DASHED OR NOTED AS SUCH.
5. COORDINATE NEW OPENINGS IN EXISTING WALLS, FLOORS, CEILINGS AND ROOFS FOR PIPES AND CONDUITS WITH CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, FIRE ALARM, FIRE SPRINKLER, PLUMBING, ELECTRICAL AND TELECOM DRAWINGS.
6. FOR EXACT LOCATION OF DEMOLITION WORK NOT SHOWN ON DEMOLITION PLAN, SEE NEW CONSTRUCTION FLOOR PLANS.
7. REMOVAL OF ALL DEBRIS SHALL BE DONE CAREFULLY AND NOT ALLOWED TO FALL AND IMPACT EXISTING STRUCTURE, WORK AND/OR FINISHES. CONDUCT DEBRIS REMOVAL TO ENSURE MINIMUM INTERFERENCE WITH ROADS, WALKS AND OTHER OCCUPIED FACILITIES.
8. EXECUTE WORK BY METHODS TO AVOID DAMAGE TO EXISTING ADJACENT WORK TO REMAIN AND PROVIDE PROPER SURFACES TO RECEIVE PATCHING AND FINISHING.
9. BEFORE PROCEEDING WITH NEW WORK, THE CONTRACTOR SHALL VERIFY THAT THE REMOVAL OF EXISTING BUILDING COMPONENTS DOES NOT REQUIRE SHORING AND/OR BRACING. WHERE DEMOLITION WORK NECESSITATES THE PROVISION OF SHORING AND/OR BRACING THE CONTRACTOR SHALL PROVIDE SUCH.
10. REMOVE ALL EXISTING CONSTRUCTION AND EQUIPMENT AS INDICATED TO OBTAIN CONCRETE SURFACES. CONTRACTOR TO REMOVE THE FOLLOWING WHERE INDICATED IN PLANS:
    A. FIXTURES, PIPING, AND RELATED PLUMBING ITEMS.
    B. FLOORING: INCLUDING CARPET, VINYL, AND CERAMIC TILE.
    C. CEILING: GYPSUM BOARD SOFFIT, ACOUSTICAL CEILING TILE OR AS INDICATED. SEE DEMO KEY NOTES.
    D. FIXTURES, CONDUIT, OUTLET BOXES AND RELATED ITEMS FOR ALL ELECTRICAL WORK.
    E. EXISTING DOORS: INCLUDING DOORS, FRAMES, SIDELITES, TRANSOMS, CENTER POSTS, HARDWARE, STOPS AND ADJACENT FURRING TO FULLY REVEAL ROUGH OPENING.
    F. ALL REMAINING FLOOR TILE ADJESIVE LEFT ON CONCRETE FLOORS AFTER REMOVAL OF TILE SHALL BE REMOVED THROUGH-OUT AND THE SURFACE PREPARED IN ORDER TO RECEIVE NEW FLOOR FINISH.
11. ALL MATERIALS NOT MENTIONED OR YET TO BE UNCOVERED WITHIN THE AREA OF NEW WORK, THAT ARE NOT PART OF NEW WORK ARE ALSO TO BE DEMOLISHED AS PART OF THIS CONTRACT. DEMOLITION SHALL BE COORDINATED WITH PLANS SHOWING NEW WORK.
12. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE OWNER'S REPRESENTATIVE AND ARCHITECT TO WALK THE JOB AND VERIFY ANY ITEMS TO BE SALVAGED. CONTRACTOR SHALL STORE ITEMS TO BE RETAINED IN A SAFE, DRY PLACE ON SITE AS DIRECTED.
13. IN ADDITION TO DEMOLITION SHOWN, CUT, MOVE OR REMOVE ITEMS AS NECESSARY TO PROVIDE ACCESS OR TO ALLOW ALTERNATIONS AND NEW WORK TO PROCEED. INCLUDE SUCH ITEMS AS:
    A. REMOVAL OF ABANDONED ITEMS AND ITEMS SERVING NO USEFUL PURPOSE SUCH AS ALL ABANDONED PIPING, CONDUIT AND WIRING.
    B. REMOVAL OF UNSUITABLE OR EXTRANEOUS MATERIALS NOT MARKED FOR SALVAGE, SUCH AS ABANDONED FURNISHINGS AND EQUIPMENT, AND DEBRIS SUCH AS ROTTED WOOD, RUSTED METALS AND DETERIORATED CONCRETE.
    C. CLEANING OF SURFACES AND REMOVAL OF SURFACE FINISHES AS NEEDED TO INSTALL NEW WORK AND FINISHES.
14. PATCH, REPAIR AND REFINISH EXISTING ITEMS TO REMAIN TO THE CONDITION INDICATED IN DRAWINGS OR SPECIFICATIONS FOR EACH MATERIAL, WITH A CRAFTSMAN-LIKE TRANSITION TO ADJACENT NEW ITEMS AND CONSTRUCTION.
15. DISCOVERIES OF CONSTRUCTION, FURNISHINGS, FIXTURES, EQUIPMENT AND ARTICLES HAVING VALUE SHALL REMAIN IN THE POSSESSION OF THE LACFD AS DIRECTED BY THE LACFD'S REPRESENTATIVE.
    A. PROMPTLY NOTIFY LACFD'S REPRESENTATIVE IN WRITING.
    B. PROTECT ALL MATERIALS FROM DAMAGE BY CONSTRUCTION ACTIVITIES AND ELEMENTS OF ADJACENT WORK.
    C. CONTRACTOR SHALL STORE ITEMS TO BE RETAINED BY THE LACFD IN SAFE, DRY PLACE ON SITE, OR SHALL DISPOSE OF ITEMS WHICH THE OWNER RELEASES.
16. PRODUCTS FOR PATCHING, EXTENDING, AND MATCHING:
    A. PROVIDE SAME PRODUCT OR TYPES OF CONSTRUCTION AS THAT IN EXISTING STRUCTURE, AS NEEDED, TO PATCH, EXTEND OR MATCH EXISTING WORK.
    B. GENERALLY CONTRACT DOCUMENTS WILL NOT DEFINE PRODUCTS OR STANDARDS OR WORKMANSHIP PRESENT IN EXISTING CONSTRUCTION. THE CONTRACTOR SHALL DETERMINE THE TYPE OF EXISTING PRODUCTS BY OBSERVATION AND TESTING IF NECESSARY, AND PROVIDE SAMPLE OR MOCK UP TO THE ARCHITECT FOR REVIEW AND APPROVAL.
17. PRESENCE OF AN EXISTING PRODUCT, FINISH OR TYPE OF CONSTRUCTION TO REMAIN, REQUIRES THAT PATCHING, EXTENDING OR MATCHING SHALL BE PERFORMED AS NECESSARY TO MAKE WORK COMPLETE AND CONSISTENT TO THE STANDARD OF QUALITY OF THE EXISTING MATERIAL.
18. PATCH AND EXTEND EXISTING WORK USING SKILLED CRAFTS PERSONS WHO ARE CAPABLE OF MATCHING EXISTING QUALITY OF WORKMANSHIP. QUALITY OF PATCHED OR EXTENDED WORK SHALL NOT BE LESS THAN THAT SPECIFIED FOR NEW WORK.
19. WHERE PARTITIONS ARE REMOVED, PATCH FLOORS, WALLS, AND CEILINGS THAT ARE TO REMAIN, WITH MATERIALS TO MATCH EXISTING. SURFACES SHALL BE FLUSH WITH EXISTING AND THE SURFACE READY TO RECEIVE NEW FINISH MATERIALS.
20. WHERE REMOVAL OF PARTITIONS RESULTS IN ADJACENT SPACES BECOMING ONE, REWORK FLOORS AND CEILINGS TO PROVIDE SMOOTH PLANES WITHOUT BREAKS, STEPS, OR BULKHEAD.
    A. WHERE AN EXTREME CHANGE OF PLANE OF TWO INCHES OR MORE OCCURS (ONE HALF INCH OR MORE AT FLOORS), REQUEST INSTURCTIONS FROM ARCHITECT AS TO THE METHOD OF MAKING TRANSITION.
22. ALL ADJACENT WORK DAMAGED DUE TO DEMOLITION OR NEW CONSTRUCTION SHALL BE PROMPTLY REPAIRED AS PART OF THIS CONTRACT. ADEQUATE PROTECTION BARRICADES & PARTITIONS SHALL BE INSTALLED TO PROTECT ALL EXISTING FINISHES THAT WILL NOT BE REWORKED IN ORDER TO DISTURB AS LITTLE AS POSSIBLE THE CONTINUOUS OPERATION OF THE EXISTING BUILDING AND TO COMPLY WITH LOCAL BUILDING DEPARTMENT REQUIREMENTS.
23. WHEN NEW WORK ABUTS OR FINISHES FLUSH WITH EXISTING WORK, MAKE A SMOOTH AND CRAFTSMAN LIKE TRANSITION. PATCH WORK SHALL MATCH EXISTING ADJACENT WORK IN TEXTURE AND APPEARANCE SO THAT THE PATCH OR TRANSITION IS INVISIBLE AT A DISTANCE OF FIVE FEET.
    A. WHEN FINISHED SURFACES ARE CUT IN SUCH A WAY THAT A SMOOTH TRANSITION WITH NEW WORK IS NOT POSSIBLE, TERMINATE EXISTING SURFACE IN NEAT MANNER ALONG A STRAIGHT LINE AT A NATURAL LINE OF DIVISION, AND PROVIDE TRIM APPROPRIATE TO FINISHED SURFACE.
24. DO NOT CLOSE, BLOCK, FACILITIES WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURIDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERMENT REGULATIONS.
25. DO NOT USE CUTTING TORCHES FOR REMOVAL UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEALED SPACES, SUCH AS INTERIOR OF DUCTS AND PIPE SPACES, VERIFY CONDITION OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN PORTABLE FIRE SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS.
26. MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
27. DO NOT INTERRUPT UTILITES SERVING OTHER FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION.
28. COMPLY WITH CFC CHAPTER 33, DURING ALL PHASES.
29. ELECTRICAL SERVICE WITHIN OR A PART OF THE DEMOLISHED CONSTRUCTION (WALLS, FLOORS, CEILINGS) SHALL BE CUT BACK TO THE SERVING ELECTRICAL PANEL. PASS THRU SERVICE WITHIN OR A PART OF DEMOLISHED CONSTRUCTION SHALL BE REROUTED.
30. OTHER UTILITY SERVICE WITHIN THE DEMOLISHED CONSTRUCTION (WALLS, FLOORS, CEILINGS & ROOF) SHALL BE CUT BACK & APPROPRIATE SHUT OFF VALVES INSTALLED AT THE NEAREST FUTURE CONCEALED LOCATION AS APPROVED BY THE ARCHITECT. THIS REMOVAL AND SHUTOFF MUST NOT IN ANY WAY INTERFERE WITH, DIMINISH OR AFFECT THE PERFORMANCE OF THE REMAINING UTILITY SERVICE. ACCESS DOORS TO SHUTOFF SERVICE MUST BE PROVIDED WHERE REQUIRED BY CODE.
31. PLANT MATERIAL DAMAGED DURING THE CONSTRUCTION SHALL BE REPLACED IN LIKE KIND, NUMBER, AND EXTENT TO MATCH PLANTINGS EXISTING AT THE COMMENCEMNET OF THE PROJECT.
32. ALL MASONRY REMOVAL IS TO BE REMOVED BY SAWCUTTING. PATCH AND REPAIR EXPOSED WALLS DAMAGED BY REMOVAL OF WORK AND LEAVE IN NEAT, CLEAN, FINISHED CONDITION. PROVIDE NEW LINTEL TO SUPPORT CMU. SEE STRUCTURAL DRAWINGS FOR DETAILS.
33. NEW WALL OPENINGS IN EXISTING WALLS NOT DIMENSIONED ON THIS PLAN ARE SHOWN ON THE FLOOR PLANS. NEW OPENINGS IN EXISTING MASONRY WALLS ARE TO BE SAWCUT.
34. REMOVE PORTION OF EXISTING WALL NECESSARY TO ACCOMODATE THE REQUIRED SEISMIC JOINT AND SEISMIC JOINT COVERS. VERIFY EXISTING CONSTRUCTION AND DIMENSIONS IN FIELD. PATCH OR REPLACE EXISTING WALL AS REQUIRED.
35. REFER TO LIMITED MOLD INSPECTION REPORT FROM A-TECH CONSULTING, INC FOR REMEDIATION RECOMMENDATIONS. GC TO REQUEST REPORTS FROM LAFD REPRESENTATIVE:
    A. LIMITED ASBESTOS AND XRF-LEAD SURVEY 01/26/2018
    B. MOLD POST-REMEDIATION VERIFICATION INSPECTION 02/09/2018
    C. LIMITED MOLD INSPECTION 01/29/2018



PLAN NORTH TRUE NORTH

3 ENLARGED DEMOLITION FLOOR PLAN

Scale: 3/8" = 1'-0"

DEMOLITION PLAN - CODED NOTES

1 (E) PLANTER & CONC CURB TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION
2 REMOVE (E) WINDOWS, FRAME, GLAZING AND EXTERIOR SECURITY SCREEN. (E) WINDOW OPENINGS TO BE PROTECTED IN PLACE. (N) WINDOW TO BE INSTALLED @ 36" SILL HIGH FROM FINISH FLOOR. SEE EXTERIOR ELEVATIONS FOR REFERENCE. SEE WINDOW SCHEDULE FOR EGRESS WINDOWS
3 REMOVE (E) 6' CMU WALL
4 REMOVE (E) MECHANICAL EQUIPMENT INCLUDING DUCTS AND DRAINAGE PIPING
5 REMOVE (E) HVAC VENTS, FANS AND ROOF EQUIPMENT. PATCH AND REPAIR (E) ROOF OPENINGS. PROVIDE A SMOOTH TRANSITION TO RECEIVE NEW ROOF FINISH
6 REMOVE (E) LIGHTS, SOFFIT AND TRIM
8 REMOVE (E) CABINETS
9 REMOVE (E) LOCKERS
10 REMOVE (E) PLUMBING FIXTURES & PARTITIONS
11 SEE CIVIL DWG C5.01 FOR AN EXTENT OF TRENCHING REQUIRED FOR A NEW SS LINE
12 REMOVE (E) CASEWORK & PLUMBING FIXTURES
13 REMOVE (E) PLUMBINGS, SEE PLUMNGING DWGS

DEMOLITION PLAN - CODED NOTES

14 RELOCATE (E) WATER HEATER TO NEW UTILITY/WORK AREA, SEE A3.01
15 REMOVE (E) FENCE. PHASED ACCORDINGLY.
16 REMOVE (E) PIPE FRAME INCLUDING CONC. BASE AND FOOTINGS
17 REMOVE (E) CANOPY
18 REMOVE (E) DECK & STAIR
19 REMOVE (E) SHELF
20 (E) BIKE RACKS TO REMAIN
21 (E) TRASH RECEPTACLE TO REMAIN
22 (E) BOLLARDS TO REMAIN UNO, TYP. (UNDER SEPARATE PERMIT)
23 (E) LIGHT POLE TO REMAIN. (UNDER SEPARATE PERMIT)
24 (E) SIGN TO REMAIN. (UNDER SEPARATE PERMIT)
25 (E) FENCE TO REMAIN UNO, TYP. (UNDER SEPARATE PERMIT)
26 REMOVE (E) BED, TYP
27 REMOVE (E) CONC. FLOOR FOR REPLACEMENT OF PLUMBING LINES, SEE PLUMBING DWGS
28 REMOVE (E) CEILING
29 (E) CANOPY TO REMAIN

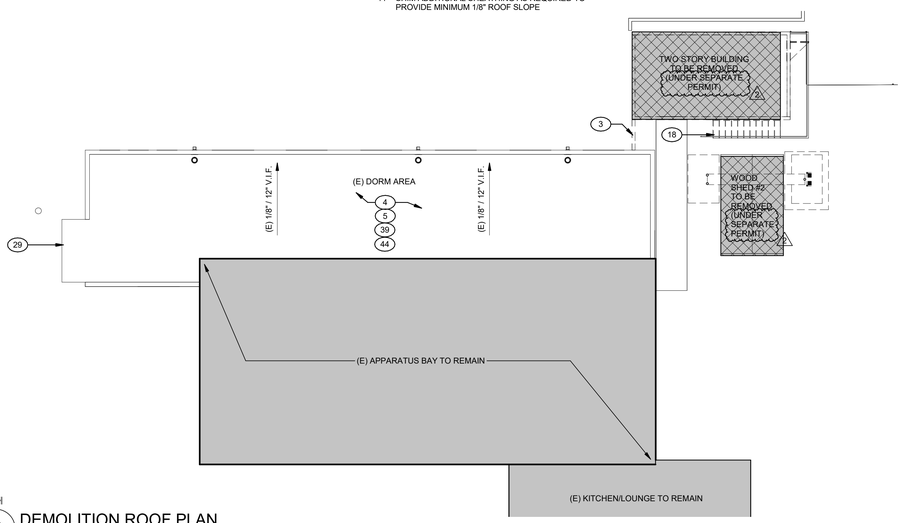
DEMOLITION PLAN - CODED NOTES

30 REMOVE (E) STOREFRONT, RETURN CLEAN & STORE PLAQUE FOR RE-INSTALLATION TO BELL FD
31 REMOVE & DISCONNECT (E) EMERGENCY PHONE, RETURN TO BELL FD
32 (E) HOSE BIB TO BE CAPPED & REMOVED
33 REMOVE (E) AC WINDOW UNIT
34 REMOVE (E) STRIPING AND MARKINGS. (UNDER SEPARATE PERMIT)
35 REMOVE (E) CONC. CURB. (UNDER SEPARATE PERMIT)
36 SEE CIVIL DWG C5.01 FOR AN EXTENT OF TRENCHING REQUIRED FOR NEW W & FW LINES
37 REMOVE PORTION OF (E) WALL. SEE STRUCT FOR REFERENCE.
38 DEMO & REPLACE (E) PULL BOXES W/ (N) SWITCHGEAR, SEE A1.02
39 REMOVE (E) ROOFING, PROTECT SHEATHING IN PLACE. CONTRACTOR TO PROVIDE ALLOWANCE FOR REPLACEMENT OF DAMAGED SHEATHING DUE TO WATER DAMAGE
40 REMOVE (E) ROLL-UP DOORS AND ELECTRICAL CONNECTIONS
41 REMOVE PORTION OF WALL NECESSARY FOR EXPANSION JOINT COVER INSTALLATION. PATCH AS REQUIRED.
42 REMOVE (E) GYP BOARD
43 (E) TENNIS COURT STRIPING TO BE REMOVED
44 SHIM ADDITIONAL SHEATHING AS REQUIRED TO PROVIDE MINIMUM 1/8" ROOF SLOPE

DEMOLITION PLAN - LEGEND

- (E) WALL TO REMAIN
- (E) BUILDING TO BE REMOVED. REMOVE ALL EXTERIOR & INTERIOR WALLS, FLOORING, PLUMBING FIXTURES, AND CABINETRY. CAP PLUMBING LINES PER PLUMBING DRAWINGS. **DEMOLITION OF (E) BUILDING(S) TO BE PERFORM UNDER A SEPARATE PERMIT.** 2
- (E) CONCRETE PAVING TO BE REMOVED
- (E) ASPHALT PAVING TO BE REMOVED
- DEMO (E) FLOOR SLAB TO ACCOMMODATE NEW PLUMBING
- (E) PLANTED AREA TO BE REMOVED

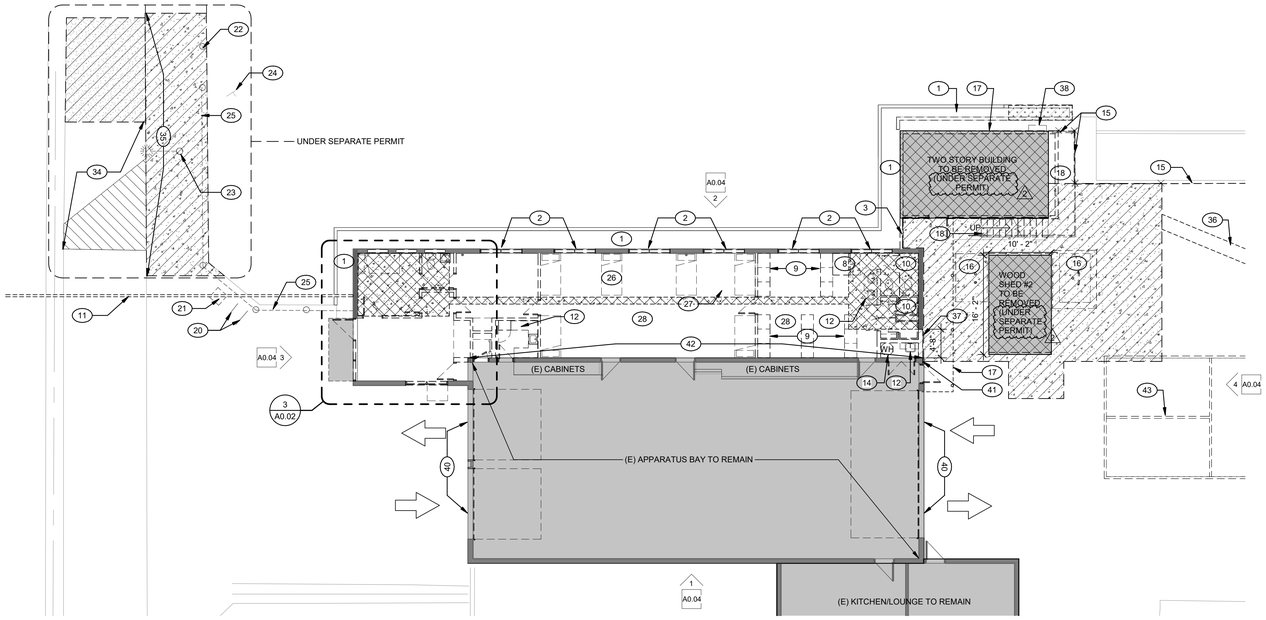
NOTE: SEPARATE PERMIT(S) ARE REQUIRED FOR DEMOLITION OF ALL STRUCTURES ON SITE. 2



PLAN NORTH TRUE NORTH

2 DEMOLITION ROOF PLAN

Scale: 1" = 10'-0"



PLAN NORTH TRUE NORTH

1 DEMOLITION SITE & FLOOR PLAN

Scale: 1" = 10'-0"

NOTE FOR PLANNING (EXISTING FLOOR PLAN)

(1) PRIVATE CAPTAIN BEDROOM
(1) SHARED DORM W/ (6) BEDS

EXISTING AREA TO BE REMODELED

NAME	AREA
CAPTAIN'S QUARTERS	122 SF
JANITOR	19 SF
LOCKER	353 SF
LOUNGE / DORM	627 SF
OFFICE	165 SF
OFFICE / RECEPTION AREA	236 SF
SHOWERS	52 SF
TOILET	38 SF
TOILETS	55 SF
UTILITY	46 SF
WATER WORKS	15 SF
	1,730 SF
EXTERIOR CANOPY	39 SF
	39 SF
	1,768 SF

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LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

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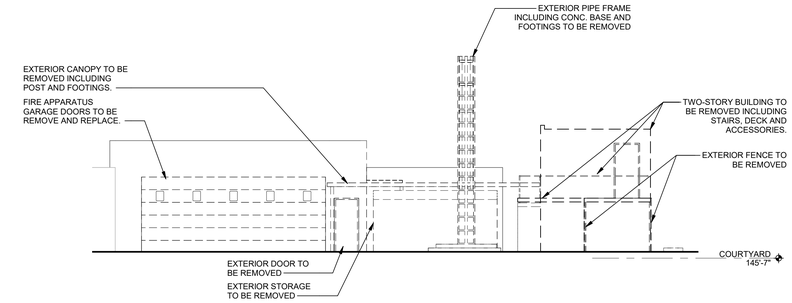
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DEMOLITION PLANS

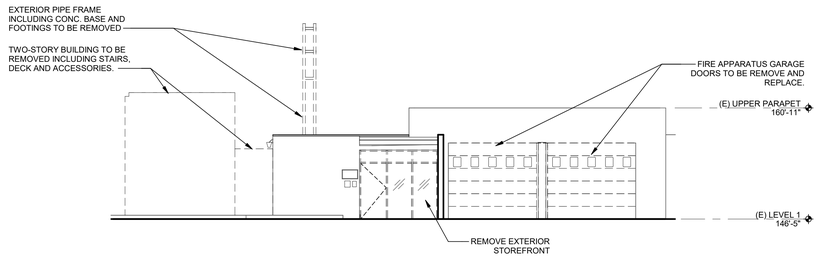
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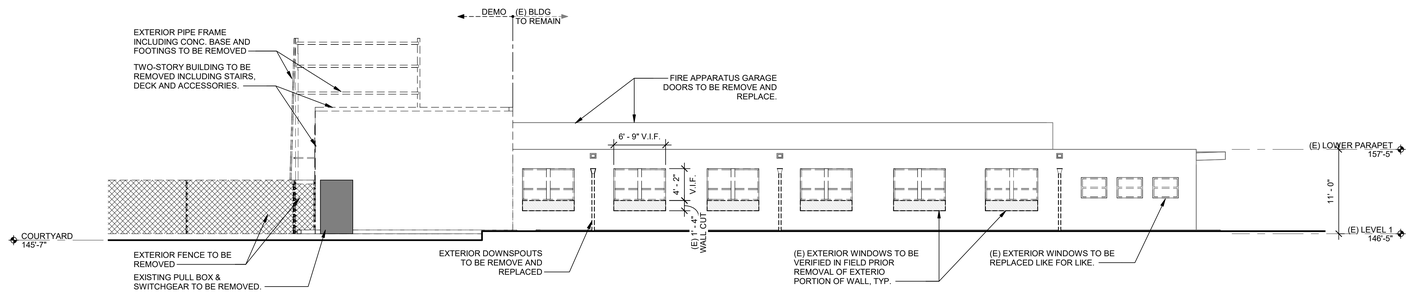
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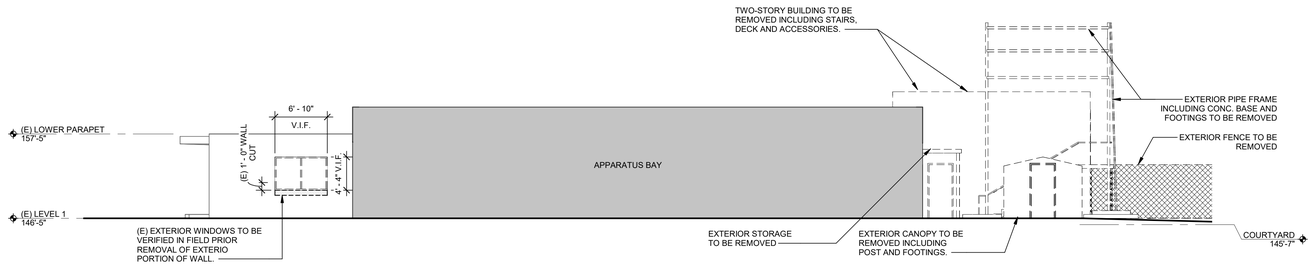
4 EAST ELEVATION - DEMO
Scale: 1/8" = 1'-0"



3 WEST ELEVATION - DEMO
Scale: 1/8" = 1'-0"



2 NORTH ELEVATION - DEMO
Scale: 1/8" = 1'-0"



1 SOUTH ELEVATION - DEMO
Scale: 1/8" = 1'-0"

EXTERIOR ELEVATION DEMO LEGEND:

- REMOVE / DEMO
- REMOVED SECTION OF WALL

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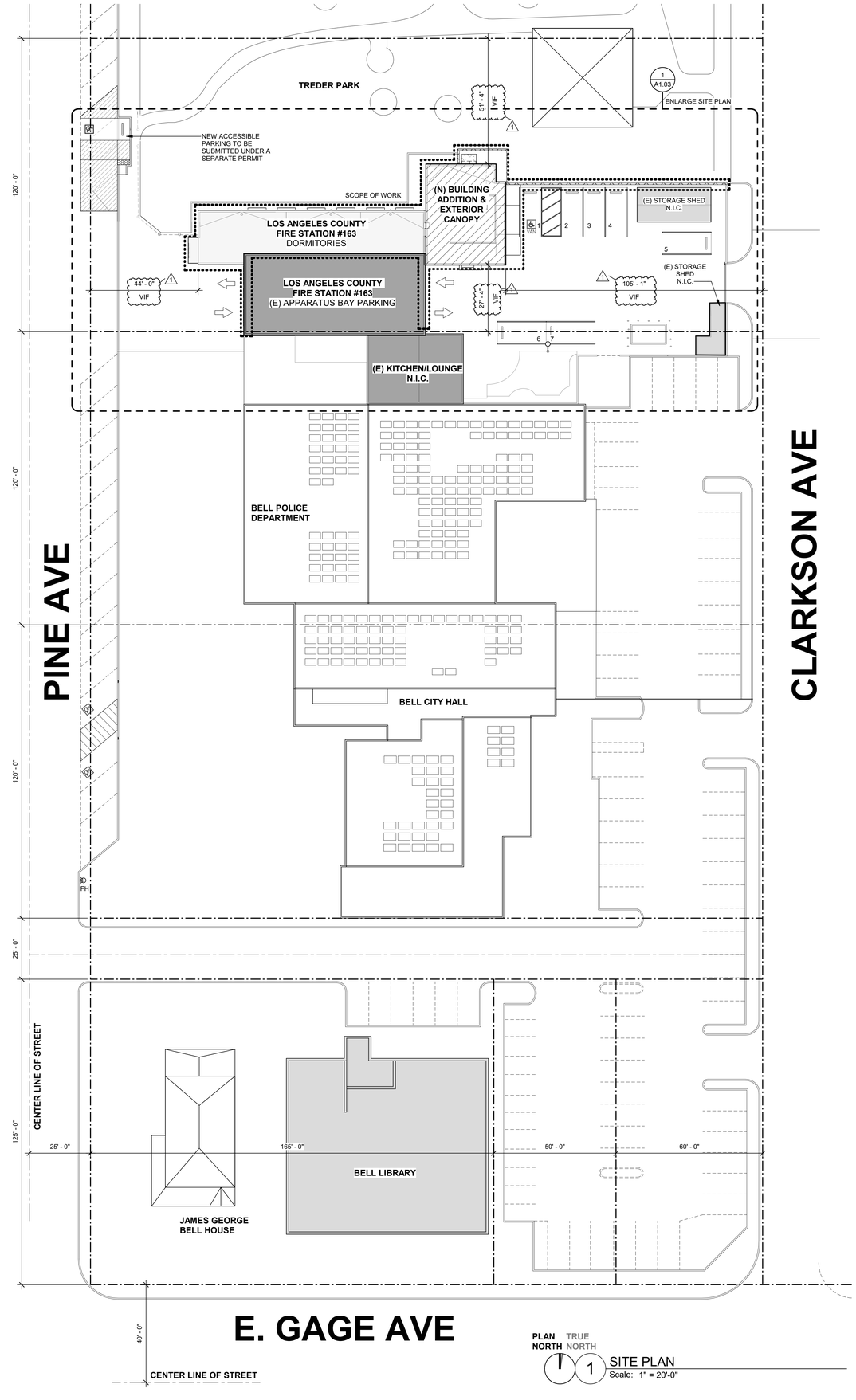
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DEMOLITION EXTERIOR ELEVATIONS

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PLAN NORTH TRUE NORTH

1 SITE PLAN
Scale: 1" = 20'-0"

SITE PLAN LEGEND

- PARCEL LINES
- SCOPE OF WORK
- (E) BUILDINGS
- (E) BUILDINGS/AREAS NOT IN SCOPE
- (E) BUILDING - INTERIOR REMODEL
- BUILDING ADDITION

SITE PLAN NOTES:

SEE ENLARGE SITE PLAN FOR BALANCE OF INFORMATION.

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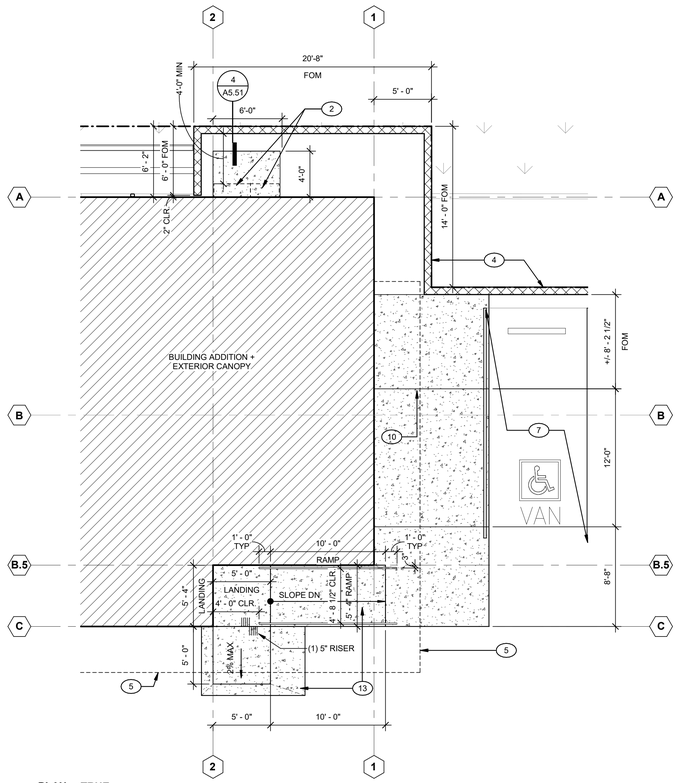
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SITE PLAN

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A1.01

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PLAN NORTH TRUE NORTH

2 ENLARGED ELECTRICAL EQUIPMENT AREA

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

SITE PLAN LEGEND

- PARCEL LINES
- 44" MIN. ACCESSIBLE PATH OF TRAVEL (P.O.T.) FLOOR AND GROUND SURFACES SHALL BE STABLE, FIRM, SLIP RESISTANT TYPE PER CBC 11B-302 (1)
- WATER LINE PER CIVIL
- FIRE WATER LINE PER CIVIL
- BUILDINGS INCLUDED IN SCOPE OF WORK
- BUILDINGS/AREAS NOT IN SCOPE
- BUILDING ADDITION
- NEW CONCRETE PAVING PER CIVIL
- NEW 4" STRIPPING

CODED NOTES - SITE PLAN

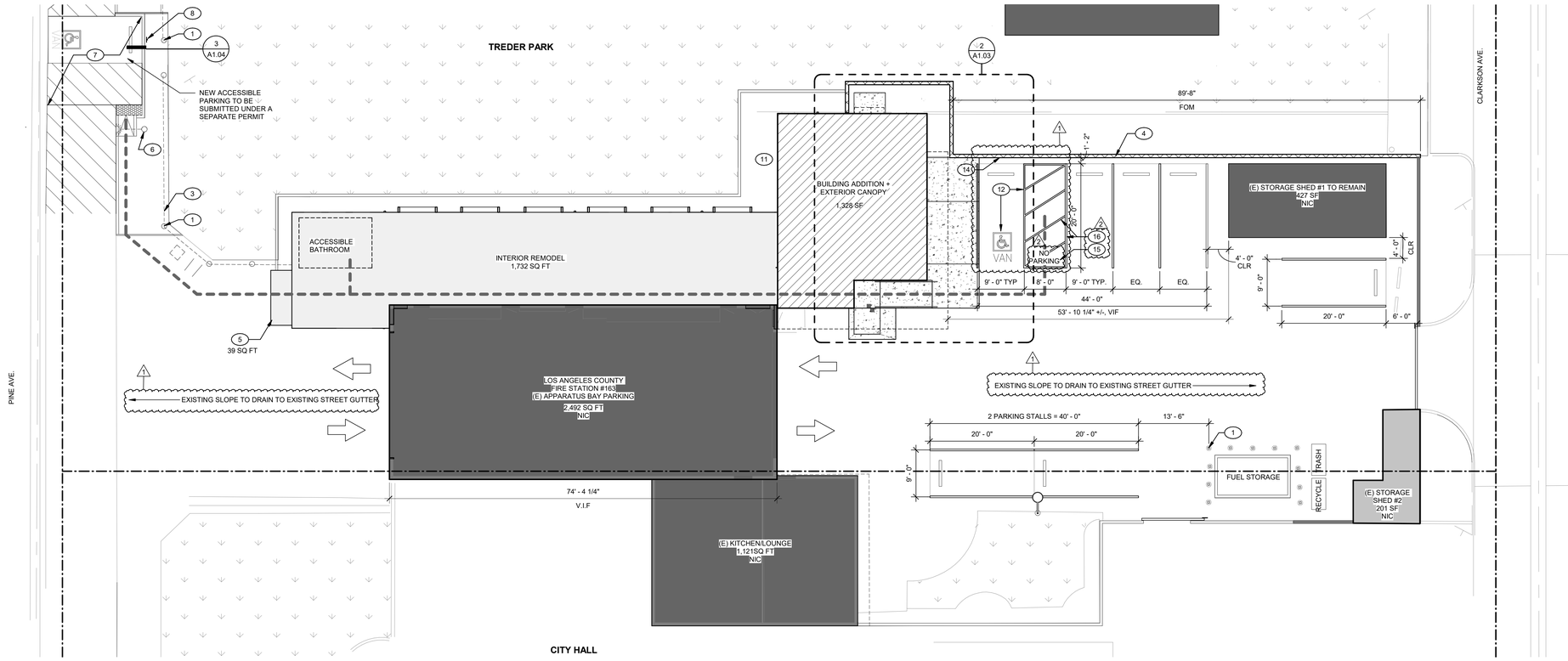
1 (E) BOLLARD TO REMAIN, TYP
2 (N) SWITCHGEAR, SEE ELECTRICAL DWG E1.01
3 PROVIDE DIRECTIONAL ACCESSIBLE SIGNAGE, SEE DETAIL 1/ A1.05
4 (N) PERIMETER BLOCK WALL, SEE STRUCTURAL 12/ S1.03
5 LINE OF CANOPY ABOVE
6 (E) LIGHT POLE
7 (N) PARKING STRIPING AND PAVEMENT, SEE CIVIL C4.01
8 ACCESSIBLE PARKING SIGN, SEE 4/ C2.01
9 (E) TENNIS COURT STRIPING TO BE REMOVED
10 CONSTRUCTION JOINTS, PER DETAIL 3/ C2.01
11 REPLACE ANY DAMAGED PLANTING IN KIND
12 (N) VAN ACCESSIBLE PARKING STRIPING, SEE 4/C2.01
13 RAMP & STAIR LANDING - SEE CIVIL DWGS FOR EXTERIOR PRECISE GRADING
14 VAN ACCESSIBLE PARKING SIGNAGE ON WALL, SEE 4/A1.04 (1)
15 "NO PARKING" SIGN - WHITE LETTERING, 12" MIN HEIGHT
16 HATCHED LINES @ 36" ON CENTER MAX WITH EXTERIOR BLUE BORDER (2)

SITE PLAN - GENERAL NOTES

1. A CONCRETE CUTTING SAW SHALL BE USED TO SAWCUT ALL EXISTING PAVEMENT ALONG LINES OF REMOVAL, WHERE NEW PAVEMENT IS TO ADJOIN EXISTING.
2. OVERLAP SEALER COAT A MINIMUM OF 12" BEYOND JOINT LINES, WHERE NEW PAVEMENT ABUTTS EXISTING.
3. ALL SURFACES SHALL PROVIDE POSITIVE DRAINAGE FREE FROM DEPRESSIONS AND SHALL BE FLOODED AS NECESSARY TO VERIFY DRAINAGE CHARACTERISTICS.
4. DUST SHALL BE CONTROLLED BY WATERING.
5. PATCH, REPAIR AND/OR RECONSTRUCT ALL DAMAGED AREAS OF EXISTING PAVING TO MATCH ADJACENT SURFACES.
6. REFER TO ELECTRICAL AND PLUMBING DRAWINGS PRIOR TO EXCAVATING, TRENCHING OR GRADING OPERATIONS. VERIFY LOCATIONS AND DEPTHS OF UTILITIES AND PROTECT THROUGH-OUT THE WORK.
7. SCORE CONCRETE WALKS AND RAMPS AS INDICATED. EQUAL SPACES BETWEEN EXPANSIONS JOINTS. 4 FT O.C. MAXIMUM PER DETAIL 3/C2.01.
8. DOUBLE LINES ACROSS CONCRETE WALKS INDICATE EXPANSION JOINTS AT 20'-0" O.C. MAXIMUM. PER DETAIL 3/C2.01.
9. PER CH 11B-502.2 EXCEPTION: VAN PARKING SPACES SHALL BE PERMITTED TO BE 108 INCHES WIDE MINIMUM WHERE THE ACCESS AISLE IS 96 INCHES WIDE MINIMUM. SEE CIVIL 4/C2.01 FOR STRIPING AND SIGNAGE INFORMATION.

SAFEGUARDS DURING CONSTRUCTION NOTES

1. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACE SO AS NOT TO ENDANGER THE PUBLIC, THE WORKERS OR ADJOINING PROPERTY FOR THE DURATION OF THE CONSTRUCTION PROJECT. CBC 3301.2.
2. REQUIRED EXITS, EXISTING STRUCTURAL ELEMENTS, FIRE PROTECTION DEVICES AND SANITARY SAFEGUARDS SHALL BE MAINTAINED AT ALL TIMES DURING ALTERATIONS, REPAIRS OR ADDITIONS TO ANY BUILDING OR STRUCTURE. CBC 3302.1.
3. SANITARY FACILITIES SHALL BE PROVIDED DURING CONSTRUCTION, REMODELING OR DEMOLITION ACTIVITIES IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE. CBC 3305.1.
4. PEDESTRIANS SHALL BE PROTECTED DURING CONSTRUCTION, REMODELING AND DEMOLITION ACTIVITIES AS REQUIRED BY THIS CHAPTER AND TABLE 3306.1. SIGNS SHALL BE PROVIDED TO DIRECT PEDESTRIAN TRAFFIC. CBC 3306.1.
5. ADJOINING PUBLIC AND PRIVATE PROPERTY SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION, REMODELING AND DEMOLITION WORK. CBC 3307.1.
6. STRUCTURES UNDER CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE PROVIDED WITH NOT FEWER THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER IN ACCORDANCE WITH SECTION 906 AND SIZED FOR NOT LESS THAN ORDINARY HAZARD. CBC 3309.1.



PLAN NORTH TRUE NORTH

1 SITE PLAN

Scale: 1" = 10'-0"

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REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT — KEVIN ORTEGA CHOU — No. C-34858 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

NAC ARCHITECTURE
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837 N SPRING STREET | THIRD FLOOR
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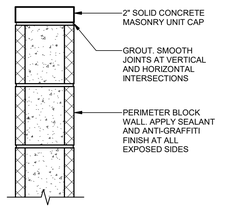
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DATE	10/05/2026

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13 CAP DETAIL ON CMU WALL
Scale: 1 1/2" = 1'-0"

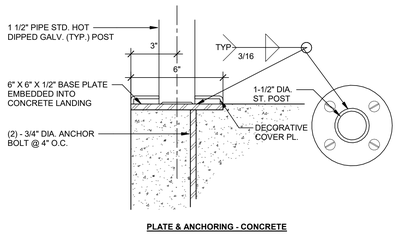
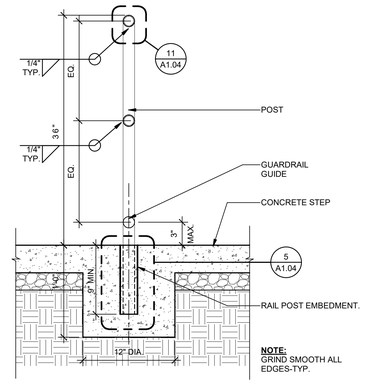
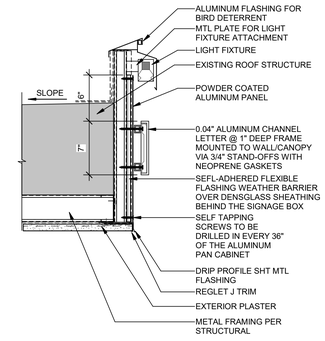


PLATE & ANCHORING - CONCRETE

10 HANDRAIL @ LANDING
Scale: 3" = 1'-0"

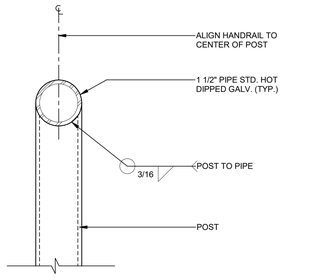


9 STAIR HANDRAIL
Scale: 1 1/2" = 1'-0"



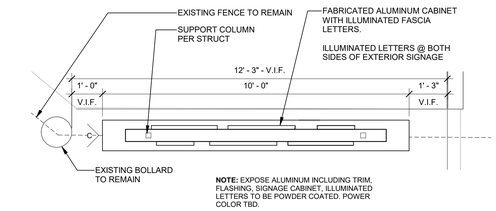
12 SIGNAGE @ CANOPY
Scale: 1 1/2" = 1'-0"

8 NOT USED
N.T.S.



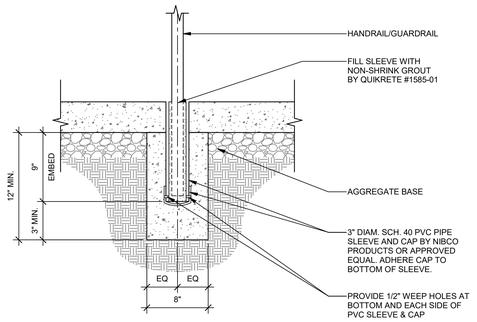
11 HANDRAIL @ THE TOP
Scale: 6" = 1'-0"

7 NOT USED
N.T.S.

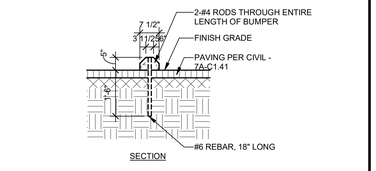


6 TOP VIEW
Scale: 1/2" = 1'-0"

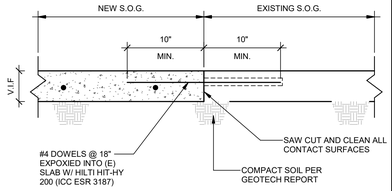
NOTE:
1. CONTRACTOR TO PROVIDE A CONTROL JOINT INTO THE CONCRETE ON BOTH SIDES FOR EACH POST.
2. CONTRACTOR TO FOLLOW SOLVENT WELDING INSTRUCTIONS PER MANUFACTURER'S SPECIFICATIONS WHEN ADJERING PVC CAP TO BOTTOM OF SLEEVE.



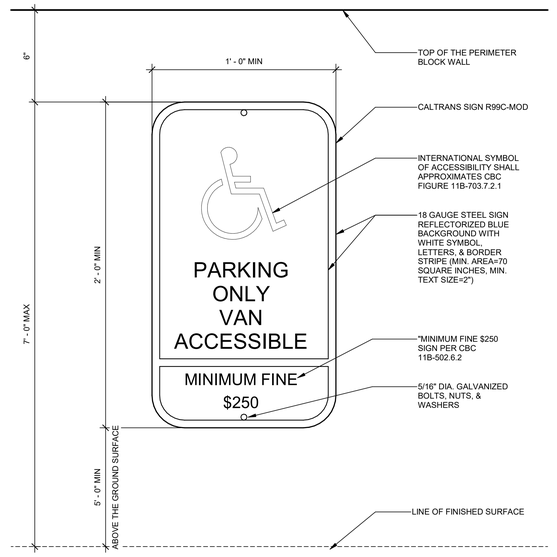
5 POST SLEEVE DETAIL
Scale: 1 1/2" = 1'-0"



3 CONC. WHEEL STOP
Scale: 1/2" = 1'-0"



2 CONC SLAB W/ EPOXY DOWEL
Scale: 1 1/2" = 1'-0"



NOTE:
VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 20 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER

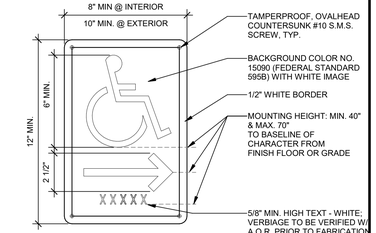
CHARACTER HEIGHT TO BE 5/8" MIN. AND 2" MAX BASED ON THE HEIGHT OF THE UPPERCASE "T" CBC 11B-703.2.5

ISA (INTERNATIONAL SYMBOL OF ACCESSIBILITY) SHALL COMPLY WITH CBC 11B-703.7 & CBC FIGURE 11B-703.7.2.1 (PROPORTIONS), TYP.

ACCESSIBLE DIRECTIONAL SIGN; COMPLY WITH *VISUAL* SIGN REQUIREMENTS (11B-703.5)

REFER TO SPEC 10 1400 - 2.3 - B AND CBC 2016 11B-703.5 FOR REQUIREMENTS FOR VISUAL CHARACTER SIGNS

4 VAN ACCESSIBLE PARKING SIGNAGE ON WALL
Scale: 3" = 1'-0"



NOTE:
VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 20 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER

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REFER TO SPEC 10 1400 - 2.3 - B AND CBC 2016 11B-703.5 FOR REQUIREMENTS FOR VISUAL CHARACTER SIGNS

1 ACCESIBLE DIRECTIONAL SIGNAGE
Scale: 3" = 1'-0"

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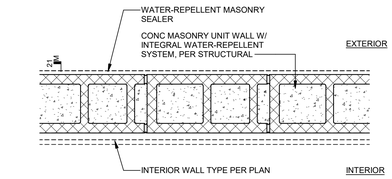
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SITE DETAILS

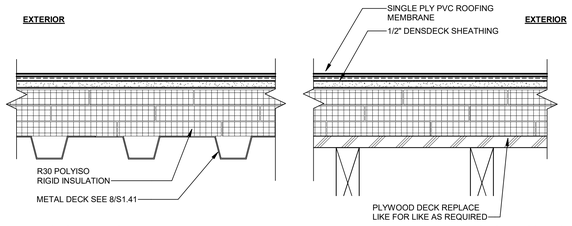
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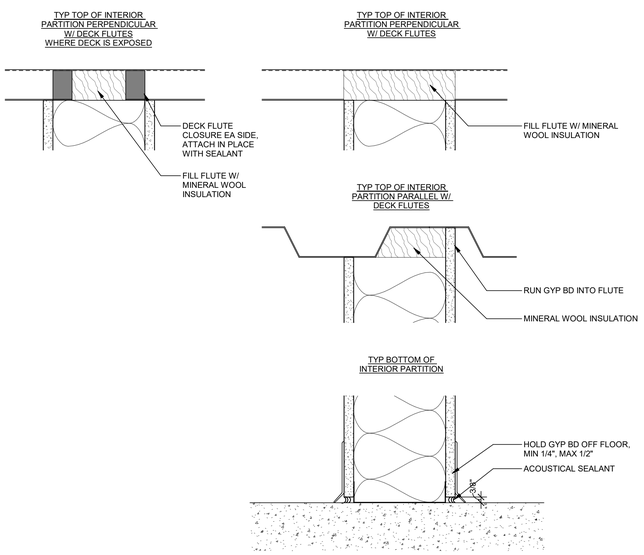
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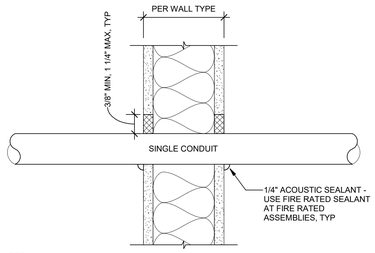
6 TYP CMU WALL
Scale: 1 1/2" = 1'-0"



SINGLE PLY ROOF ASSEMBLY OVER METAL DECK
5
Scale: 3" = 1'-0"



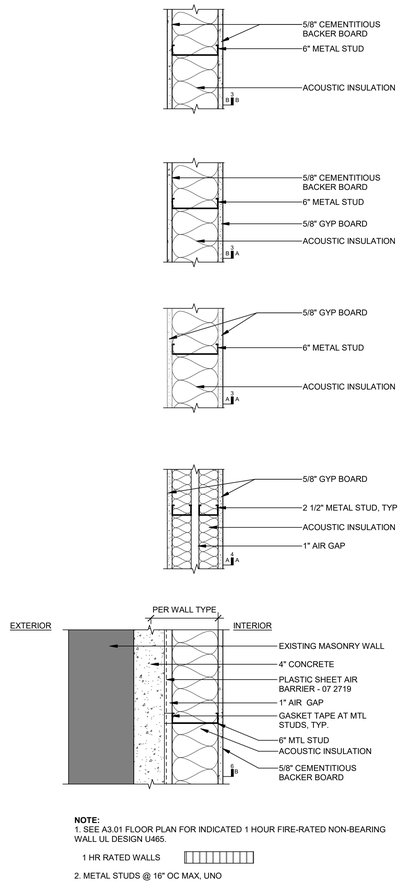
4 TYP TOP & BOTTOM OF WALL TERMINATIONS
Scale: 3" = 1'-0"



NOTE:

1. USE METAL PIPE SLEEVES AT DOUBLE STUD WALL ASSEMBLIES TO PREVENT INSULATION FROM FALLING INTO STUD CAVITY
2. INSTALL PIPES CENTERED IN THE OPENING. PIPES SHALL NOT TOUCH ADJACENT STUDS OR GYPSUM BOARD.
3. RATED PIPE PENETRATION SHALL BE UTILIZE AS NEEDED. REFERENCE FLOOR PLAN A3.01 FOR RATED WALLS.

3 CABLE / PIPE 1HR RATED - PENETRATION DETAIL
Scale: 3" = 1'-0"

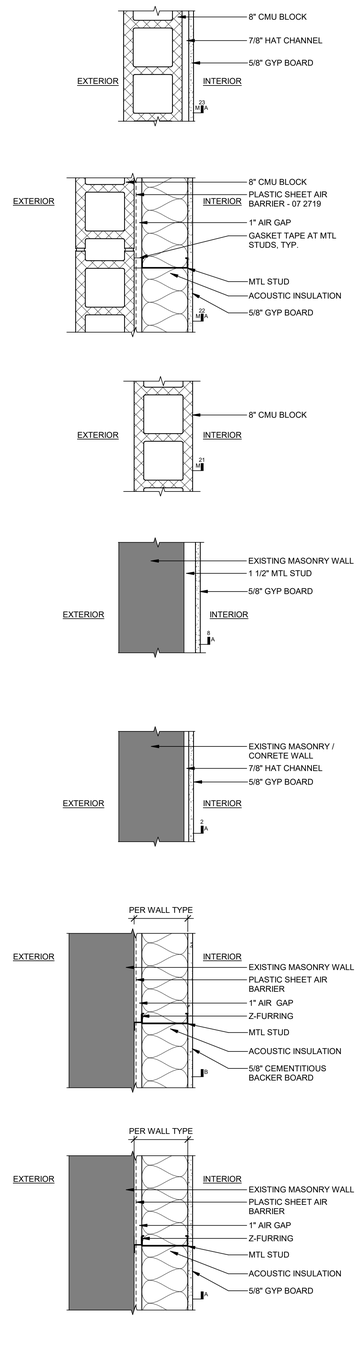


NOTE:
1. SEE A3.01 FLOOR PLAN FOR INDICATED 1 HOUR FIRE-RATED NON-BEARING WALL UL DESIGN U465.

1 HR RATED WALLS

2. METAL STUDS @ 16" OC MAX, UNO

2 INTERIOR WALL ASSEMBLIES
Scale: 1 1/2" = 1'-0"



1 EXTERIOR WALL ASSEMBLIES
Scale: 1 1/2" = 1'-0"

WALL ASSEMBLIES

WALL FLAG KEY:

NUMBER INDICATES SUBSTRATE
LETTERS INDICATE SHEATHING TYPE AND SIDE OF WALL AFFECTED
* (ASTERISK) INDICATES PARTIAL HEIGHT WALL +3'-6" AFF UNO ON INT ELEVATIONS

NOTES:

1. TYPICAL INTERIOR WALL ASSEMBLY IS TYPE A|A AND TYPICAL EXTERIOR WALL ASSEMBLY IS TYPE A|M UNLESS OTHERWISE SHOWN. THE TYPICAL INTERIOR AND EXTERIOR WALL ASSEMBLIES ARE NOT FLAGGED EXCEPT FOR CLARITY. ALL NON-TYPICAL ASSEMBLIES ARE CALLED OUT.
2. A WALL ASSEMBLY CONTINUES THE FULL ROOM LENGTH, INCLUDING ANY JOGS, ANGLES, RECESSES, OR STUB WALLS FOR THE SIDE OF THE WALL UPON WHICH THE FLAG OCCURS.
3. WHERE DIFFERENT STUD SIZES OCCUR ALONG A CORRIDOR WALL, IT IS INTENDED THAT THE CORRIDOR SIDE FINISHES ALIGN.
4. ALL INTERIOR STUD FRAMING AND FURRING IS 16" OC UNO.
5. SEE SHEET G1.01 FOR FIRE RATING CLASSIFICATIONS OF WALLS.
6. EXTEND FRAMING, INSULATION, AND SHEATHING COMPONENTS TO BOTTOM OF DECK ABOVE UNO.
7. PROVIDE FS25 VAPOR BARRIER AT ALL WALLS AND LOCATIONS NOTED TO RECIEVE A VAPOR BARRIER WHERE THE VAPOR BARRIER IS NOT COVERED BY SHEATHING (FOR EXAMPLE: SHELL SPACES AND INTERSTITIAL SPACES ABOVE CEILINGS).
8. COMBINATION SHEATHING SUCH AS "B,C" INDICATES ONE SHEATHING MATERIAL ABOVE OR BELOW THE OTHER. SEE INTERIOR ELEVATIONS FOR EXTENTS.
9. REFER TO DETAILS, STRUCTURAL DRAWINGS, AND NOTES FOR PROPER INSTALLATION OF MATERIALS LISTED IN WALL ASSEMBLIES, INCLUDING INFILL CONNECTIONS AND CONNECTIONS TO FOUNDATION AND DECK.
10. ALL GYPSUM BOARD TO BE TYPE "X" UNO. ALL GYPSUM BOARD IN "WET" ROOM WALLS (FOR EXAMPLE: TOILET ROOMS, SHOWER INSERTS, AND CUSTODIAL ROOMS) TO BE WATER RESISTANT TYPE EXCEPT AS NOTED. DO NOT USE WATER RESISTANT GYPSUM BOARD ON CEILINGS. WALLS BEHIND CERAMIC TILE FINISH TO RECEIVE CEMENT BACKER BOARD.
11. ALL GYPSUM BOARD SURFACES TO BE PREPARED FOR PAINT GRADE FINISH UNO.
12. FOR FINISHES, REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS.
13. WALL ASSEMBLY TAGS DESCRIBE MAJOR EXTENT OF EXTERIOR WALL ASSEMBLIES. SEE ELEVATIONS AND DETAILS FOR TRANSITIONS IN, AND LOCATIONS OF CHANGES IN, EXTERIOR WALL ASSEMBLIES.
14. ON EXTERIOR WALLS, SEE ELEVATIONS FOR LOCATION OF TRANSITION OF EXTERIOR CLADDING. WALL ASSEMBLY REFLECTS GENERAL WALL CONDITION, DETAILS & ELEVATIONS WILL INDICATE CHANGES.
15. PROVIDE ABUSE RESISTANT GYPSUM BOARD WHERE NOTED ON INTERIOR ELEVATIONS.
16. PROVIDE SOLID BLOCKING AT ALL CASEWORK AT TOP AND BOTTOM OF UPPERS AND AT TOP OF COUNTERS AND LOWER CABINETS. ALSO PROVIDE BLOCKING IN WALLS FOR WALL MOUNTED/ SUPPORTED ITEMS INCLUDING TV BRACKETS, SHELVES, MARKER BOARDS, ET.
17. ALL INSULATION BOARD OR BATTS INSTALLED AS PART OF THE EXTERIOR WALL ASSEMBLY SHALL BEAR A MARK FROM THE MANUFACTURER IDENTIFYING THE R-VALUE OF THE INSULATION. INSULATION SHALL BE INSTALLED SO THAT THE MARK IS VISIBLE FOR INSPECTION.

EXTERIOR WALL FINISH MATERIALS

M CLEAR WATER-REPELLENT SEALER

EXTERIOR WALL SUBSTRATE MATERIALS

21 8"x8"x16" CONCRETE MASONRY UNIT

22 8"x8"x16" CONCRETE MASONRY UNIT
1" AIR SPACE
6" MTAL STUD

23 8"x8"x16" CONCRETE MASONRY UNIT
7/8" HAT CHANNEL

INTERIOR WALL SHEATHING MATERIALS

A (1) LAYER 5/8" GYPSUM BOARD

B TILE OVER (1) LAYER 5/8" CEMENTITIOUS BOARD

C (1) LAYER 5/8" TYPE-X GYPSUM BOARD

INTERIOR WALL SUBSTRATE MATERIALS

1 2 1/2" METAL STUD

2 7/8" HAT CHANNEL

3 6" METAL STUD W/ ACOUSTIC INSULATION

4 2 1/2" METAL STUD W/ ACOUSTIC INSULATION
1" AIR GAP
2 1/2" METAL STUD W/ ACOUSTIC INSULATION

5 7/8" HAT CHANNEL
8" METAL STUD
7/8" HAT CHANNEL

6 4" CONCRETE
1" AIR GAP
6" METAL STUD

7 3 5/8" METAL STUD

8 1 1/2" METAL STUD

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KEVIN ORTEGA DAVIS
No. C-34858
Exp. 8-31-23
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WALL TYPES

CD

A3.00

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PLAN NOTES

1. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DRAWINGS, DIMENSIONS, SPECIFICATIONS AND SCHEDULES PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. NOTIFY ARCHITECT IMMEDIATELY OF ANY UNCERTAINTY OR DISCREPANCY.
2. DRAWINGS SHALL NOT BE SCALED.
3. WHERE NOTES ON THE DRAWINGS INDICATE A CONDITION AT ONE LOCATION, WHETHER INDICATED AS TYPICAL OR NOT, THE NOTE SHALL APPLY TO ALL SIMILAR LOCATIONS UNO.
4. SEE SHEET A0.01 FOR SYMBOLS, & ABBREVIATIONS, ETC.
5. SEE G1.01 CODE PLAN SHEET FOR EXTENT OF RATED WALLS, CEILINGS & OPENINGS AS WELL AS CONSTRUCTION REQUIREMENTS.
6. DIMENSIONS ARE TYPICALLY TAKEN TO GRID LINE, EDGE OF MASONRY, ROUGH OPENING AND FACE OF STUD, UNLESS NOTED OTHERWISE OR INDICATED ON DETAILS.
7. TYPICAL METAL STUD SIZES ARE AS SPECIFIED IN STRUCTURAL DRAWINGS. REFER TO STRUCTURAL DOCUMENTS FOR ADDITIONAL SPECIFIC REQUIREMENTS.
8. FOR WALL TYPE INFORMATION SEE A3.00.
9. FURNITURE TO BE O.F.O.I. UNLESS NOTED OTHERWISE.
10. FOR DOOR TYPES AND HARDWARE SEE A3.71.
11. FOR ROOM FINISH INFORMATION SEE A3.70.
12. SEE SHEET A7.00 FOR TOILET ROOM ACCESSORIES AND FIXTURE MOUNTING HEIGHTS AND DETAILS.
13. GC TO PATCH AND REPAIR WALLS/FLOORS/CEILINGS DAMAGED BY REMOVAL/DEMOLITION/INSTALLATION OF PLUMBING, ELECTRICAL, FIRE ALARM, OR TECHNOLOGY WORK.
14. SEE CIVIL GRADING PLAN C4.01 FOR FINISH FLOOR AND FINISH SURFACE ELEVATIONS.
15. APPLIANCES, SUCH AS WASHER, DRYER, ICE MACHINE ARE NOT IN CONTRACT AND WILL BE PROVIDED BY OWNER.

FLOOR PLAN LEGEND

NOTE: NOT ALL TYPES MAY BE USED

- (E) WALL TO REMAIN
- (N) WALL - SEE A3.01 FOR TYPE
- NEW INFILL WALL
- LINE OF FLOOR/ ROOF ABOVE
- NEW CMU WALL
- 60" WHEELCHAIR TURNING CIRLE
- 30x48 CLEAR SPACE
- CENTERLINE
- 24" @ EXT DOORS
- DOOR ACCES CLEARANCES (60", 18", 12", 20 5/8")

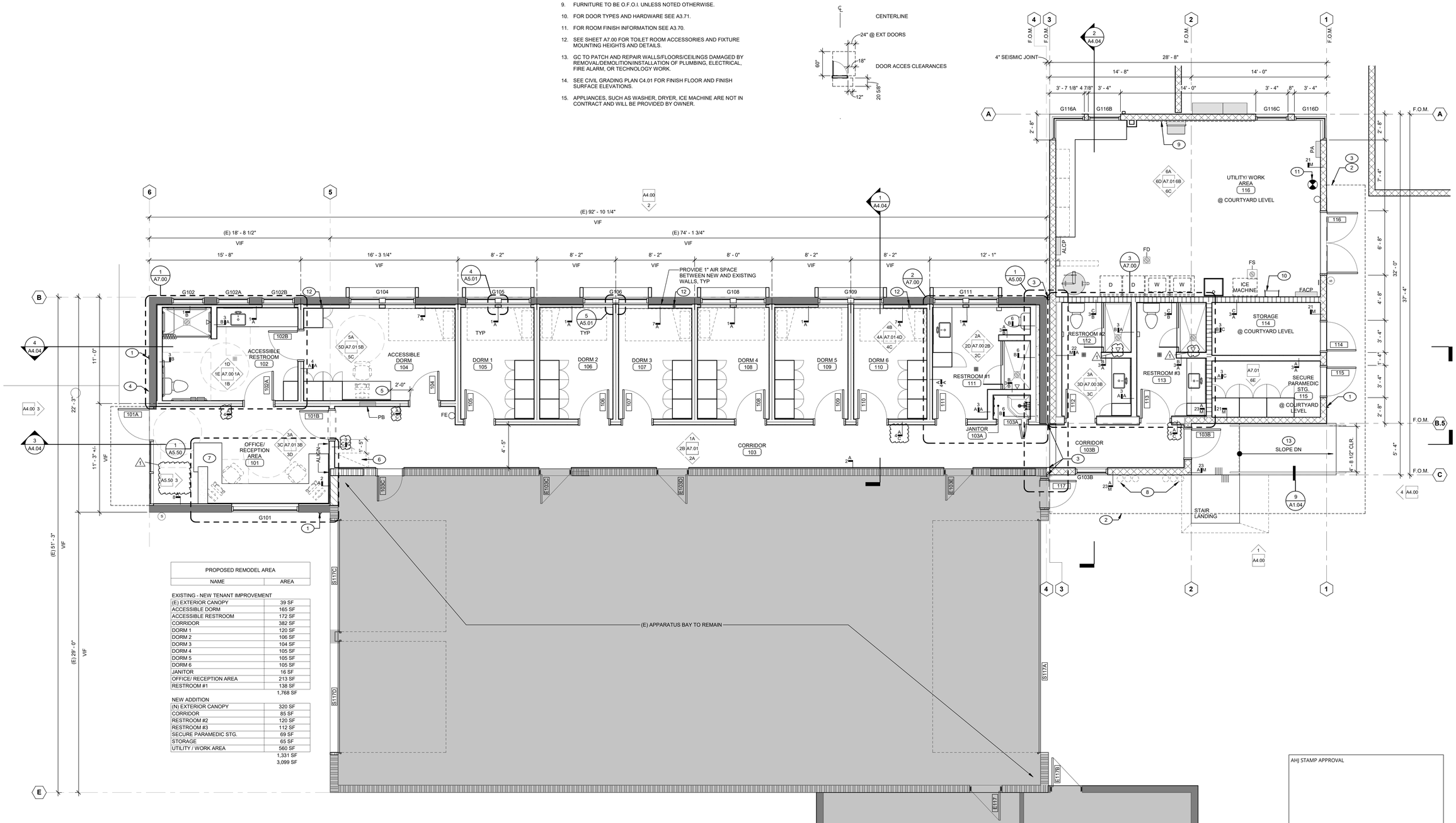
FLOOR PLAN LEGEND

NOTE: NOT ALL TYPES MAY BE USED

- FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- E.F.O. — O.F.O.I. FURNITURE, TYP.
- FLOOR DRAIN @ TILED FLOOR (DEPRESSED CONCRETE) - SEE DETAIL 14/A5.40, TYP.
- DRAIN ELEVATION NOTED IS THE TOP OF DRAIN - CENTER DRAIN IN AREA INDICATED, U.N.O. - SLOPE FLOOR TO DRAIN 1/8" / 1'-0" MIN., 1/4" / 1'-0" MAX.
- ELECTRICAL AND INTRUSION PANEL

CODED NOTES - FLOOR PLAN

#	
1	RECESSED HOSE BIBB
2	NEW 6FT HIGH PERIMETER BLOCK WALL
3	SEISMIC SEPARATION
4	WALL MOUNTED RED GLOBE LIGHT
5	DESK
6	RELOCATED (E) FILE CABINET
7	NEW DESK WITH FILE STORAGE CABINETS BELOW 3/4" THK BIRCH 2/S MULTI-PLY WITH CLEAR ROLLED EDGES
8	(6) OXYGEN TANKS
9	FIRE RETARDANT PLYWOOD BACKING PAINTED, DO NOT PAINT OVER LABEL
10	WALL MOUNTED ROOF LADDER
11	(N) FIRE SPRINKLER RISER PER FIRE PROTECTION
12	(E) ROOF DRAIN TO REMAIN.
13	SEE 2/A1.03 FOR EXTERIOR ACCESS RAMP, STEP AND LANDING DIMENSIONS



PROPOSED REMODEL AREA	
NAME	AREA
EXISTING - NEW TENANT IMPROVEMENT	
(E) EXTERIOR CANOPY	39 SF
ACCESSIBLE DORM	165 SF
ACCESSIBLE RESTROOM	172 SF
CORRIDOR	382 SF
DORM 1	120 SF
DORM 2	106 SF
DORM 3	104 SF
DORM 4	105 SF
DORM 5	105 SF
DORM 6	105 SF
JANITOR	16 SF
OFFICE/ RECEPTION AREA	213 SF
RESTROOM #1	138 SF
	1,768 SF
NEW ADDITION	
(N) EXTERIOR CANOPY	320 SF
CORRIDOR	85 SF
RESTROOM #2	120 SF
RESTROOM #3	112 SF
SECURE PARAMEDIC STG.	69 SF
STORAGE	65 SF
UTILITY / WORK AREA	560 SF
	1,331 SF
	3,099 SF

PLAN NORTH TRUE NORTH

1 NEW/PROPOSED FLOOR PLAN - LEVEL 1
Scale: 1/4" = 1'-0"

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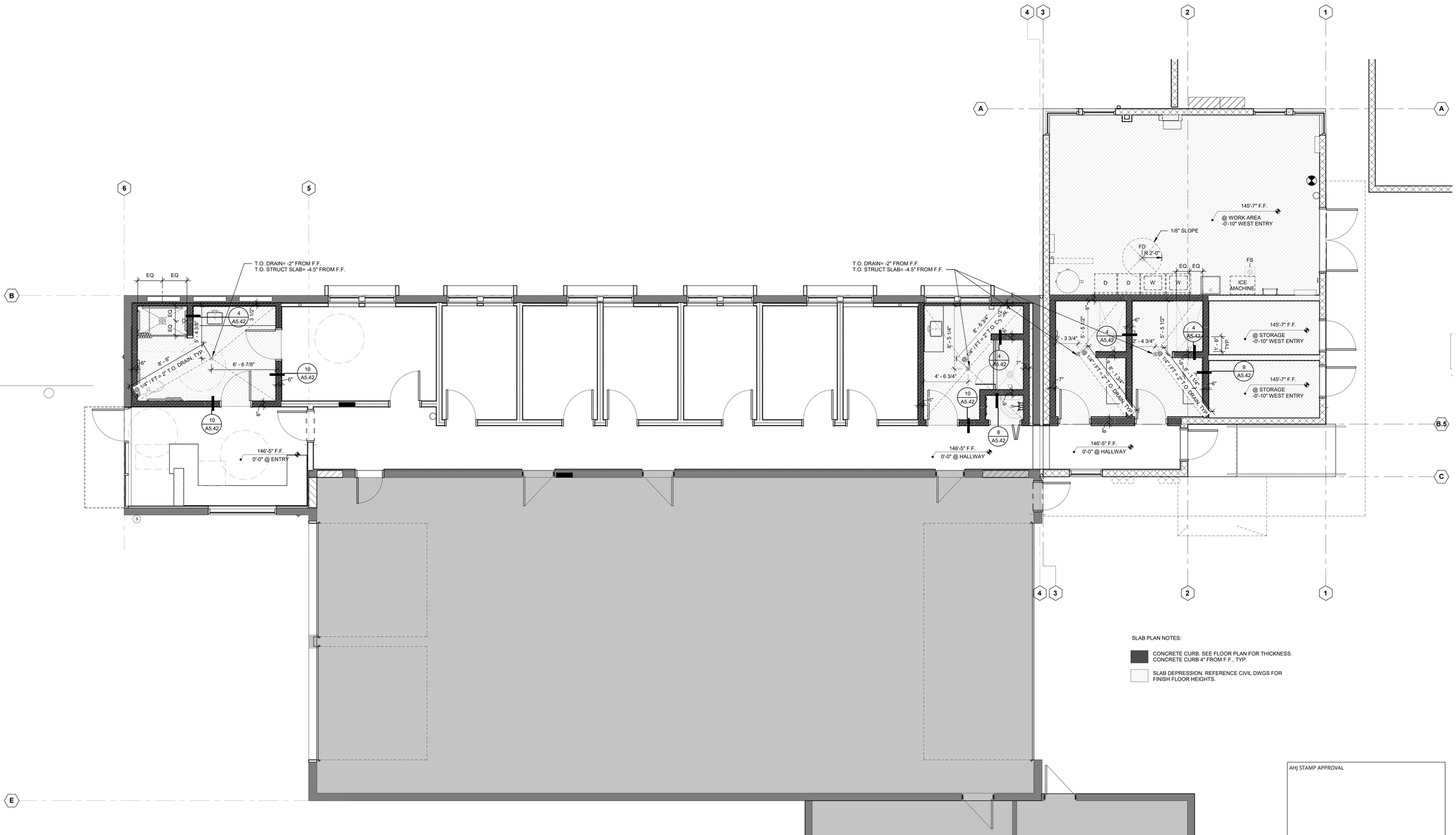
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NEW/PROPOSED FLOOR PLAN

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PLAN NORTH TRUE NORTH

1 SLAB FLOOR PLAN - LEVEL 1
Scale: 1/4" = 1'-0"

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SLAB FLOOR PLAN

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GENERAL RCP NOTES

1. GENERALLY CENTER CEILING GRIDS IN EACH ROOM TO PROVIDE EQUALLY SIZED PANELS ON OPPOSITE WALLS. IF PLANS INDICATE A GRID ALIGNING WITH A COLUMN, WALL, SOFFIT, ETC, START GRID AT THE INDICATED SURFACE. AVOID PANELS LESS THAN 12" IN WIDTH.
2. SEE FINISH SCHEDULE FOR COLORS.
3. ALL WALLS EXTEND TO STRUCTURAL DECK ABOVE, UNLESS NOTED OTHERWISE. SEE CODE PLANS FOR ADDITIONAL INFORMATION.
4. SEE DETAILS 4/A5.30 FOR TYPICAL LATERAL BRACING OF SUSPENDED ACOUSTICAL PANELS.
5. ALL GYP BD CEILING AND SOFFITS TO BE PAINTED.
6. ALL EXPOSED STEEL FRAMING AND DECK AT CEILINGS TO BE PAINTED.
7. EXCEPT AT STORAGE, MECHANICAL AND ELECTRICAL UTILITY ROOMS PAINT ALL EXPOSED DUCTWORK, PIPING AND CONDUITS.
8. SEE SHEETS A5.30 AND A5.31 FOR TYPICAL SUSPENDED CEILING AND SOFFIT EDGES AND CONNECTIONS.
9. CEILING HEIGHT TO BE MEASURED FROM FINISH FLOOR LEVEL OF THE ROOM OR THE AREA WHERE CEILING IS IN. CEILING HEIGHT ABOVE RAMP TO BE MEASURED FROM BOTTOM OF LOWEST LEVEL LANDING OF RAMP.
10. ALL FIRE SPRINKLERS AT LINEAR METAL CEILING SYSTEM AND AT GYP BD CEILING CLOUDS TO BE RECESSED, TYP.

CEILING TYPES

ALL CEILINGS ARE ABOVE LEVEL 1 FLOOR FINISH, UNO

- C-1 EXPOSED TO STRUCTURE ABOVE
- C-2 2' x 2' SUSPENDED ACOUSTICAL PANEL CEILING, SEE 1/A5.30, TYP
- C-3 FRAMED 5/8" GYPSUM BOARD
- C-4 FRAMED 1" PLASTER BOARD
- C-5 2' x 2' SUSPENDED ACOUSTICAL PANEL CEILING ATTACHED TO STL STRUCTURE

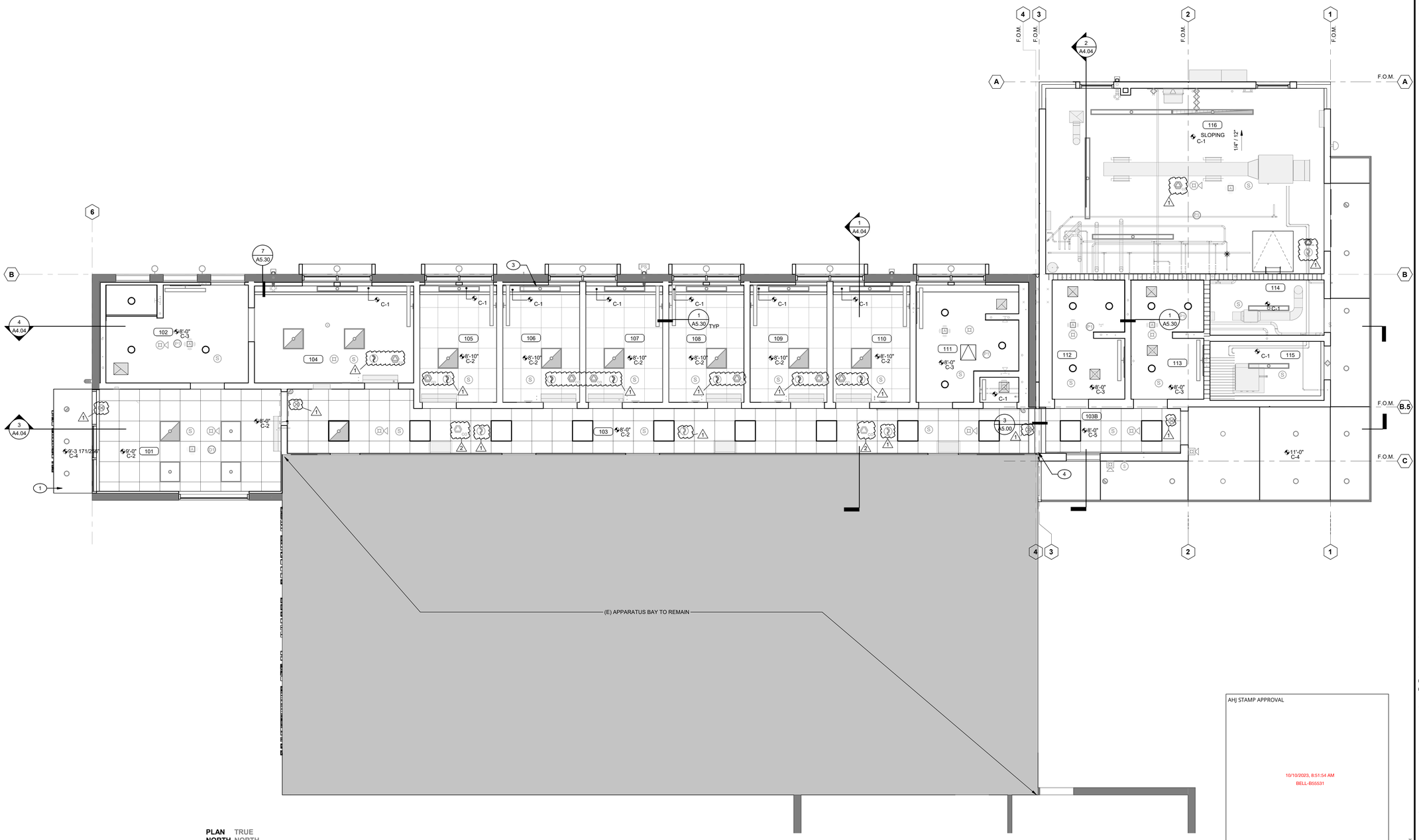
CODED NOTES - RCP

(#)

1 (E) CANOPY, NEW FINISH, NEW LIGHTS, NEW TRIM
3 SURFACE MOUNTED LINEAR LIGHT FIXTURE IN LIGHT TROUGH
4 EXPANSION JOINT COVER, SEE DETAIL 1/A5.10

LEGEND

- LIGHT FIXTURES
- WALL MOUNTED LIGHT FIXTURES
- SUSPENDED LIGHT FIXTURES
- EMERGENCY LIGHT FIXTURES
- SUPPLY DIFFUSERS
- RETURN AIR REGISTER OR EXHAUST FAN
- EXIT LIGHT
- HARD WIRE SMOKE DETECTOR
- HEAT DETECTOR
- INTERCOM
- PAGING SPEAKER
- INFRARED DETECTOR
- PAGING SPEAKER
- FIRE PROTECTION SPRINKLER
- VIDEO CAMERA
- DAYLIGHT SENSOR
- OCCUPANCY SENSOR
- MOTION DETECTOR
- ALARM SIREN
- FIRE ALARM HORN, SEE FIRE PROTECTION DWGS
- FIRE ALARM STROBE, SEE FIRE PROTECTION DWGS
- CEILING ACCESS PANEL
- HARD WIRED CARBON MONOXIDE DETECTOR
- CEILING / WALL MOUNTED OCCUPANCY SENSOR, SEE ELEC DWGS
- DAYLIGHT SENSOR, SEE ELEC DWGS
- POWER PACK, SEE ELEC DWGS
- 1'-0" C-1 CEILING HEIGHTS, FINISH PER SCHEDULE
- FIRE-RATED WALL



PLAN NORTH TRUE NORTH

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

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9/15/2023 10:18:34 AM Autodesk Docs://161-21001 FS 163/FIRE_STATION_163_Arch_R22.rvt

REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT — VICTOR ORTEGA GARCIA — No. C-34698 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

NAC ARCHITECTURE
nacarchitecture.com
837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012
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NAC NO	161-21001
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DATE	10/05/2026

REFLECTED CEILING PLAN

CD

A3.21

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NOTE: SEE SHEET A3.00 FOR WALL TYPES AND FLOOR PLAN GENERAL NOTES.

LEGEND

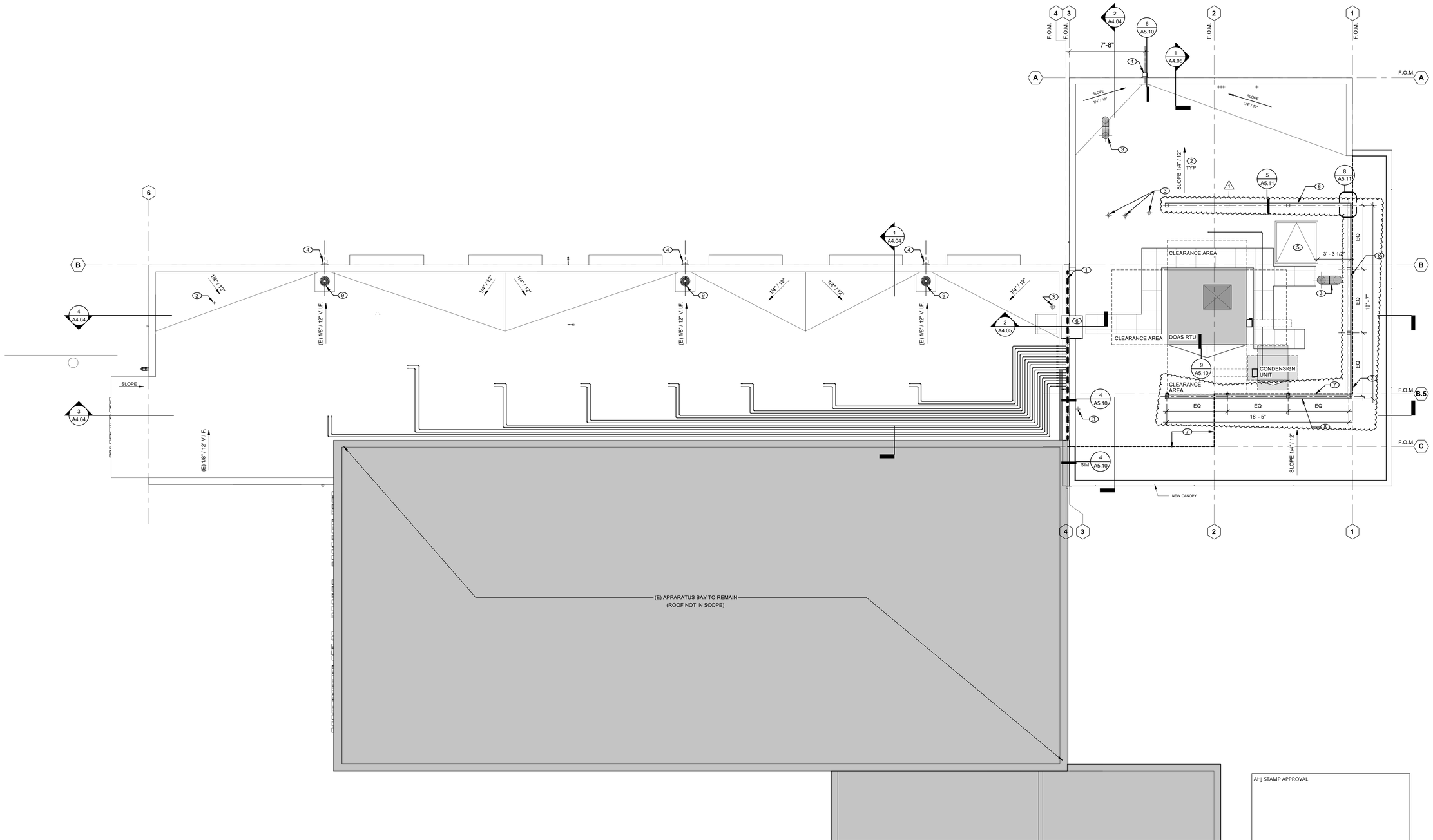
- DIRECTION OF SLOPE TO DRAIN
- EXPANSION JOINT IN ROOFING OVER SEISMIC JOINT BELOW
- DS DOWNSPOUT, SEE UNO
- 2'-0"W TRAFFIC PAD, TYP

(#) CODED NOTES - ROOF PLAN

1 EXPANSION JOINT COVER
2 FALL PROTECTION ANCHOR @ MTL ROOF 13/S1.32 & 14/S1.32
3 VENT THROUGH ROOF, SEE PLUMBING PLAN P2.01
4 NEW SCUPPER & DOWNSPOUT, SEE DETAIL 8/A5.10
5 4'-0" x 4'-0" ROOF ACCESS HATCH - SEE DETAIL 4/A5.11
6 LADDER OVER PARAPET
7 BUILDING OUTLINE BELOW
8 ROOF MOUNTED SCREEN @ 4FT MAX HEIGHT. SUPPORTS TO BE CENTERED ON BEAMS.
9 (E) ROOF DRAIN AND STORM DRAIN TO REMAIN. GC TO REPLACE ROOF DRAIN IF NECESSARY PER DETAIL 1/A5.10. VERIFY SD POC IN FIELD.

GENERAL ROOF NOTES

1. NEW ROOF CONSTRUCTION IS PVC AND MOISTURE BARRIER OVER STRUCTURAL METAL DECK.
2. ALL ROOF STRUCTURE IS SLOPED 1/4":12, UNO.
3. VENTS, EXHAUST, & COWLS ARE MECHANICAL ROOF PENETRATION ITEMS. SEE MECHANICAL FOR LOCATIONS, TYPES, SIZES AND QUANTITY OF ALL PENETRATIONS. PENETRATIONS SHALL BE MIN 18" FROM ANY RIDGE VALLEY HIP, OR EDGE OF ROOF.
4. ALL FLASHING & ROOFING TIE-INS TO PLUMBING & HVAC PENETRATIONS ARE BY ROOFING CONTRACTOR.
5. PROVIDE R-30 BATT INSULATION BELOW METAL DECK AT ROOF OCCURRING ABOVE ADDITION.
6. SEE EXTERIOR ELEVATIONS FOR ADDITIONAL ROOFING DETAIL INDICATIONS.
7. SEE DETAILS & STRUCTURAL FOR ROOF VENTILATION HOLES IN ROOF FRAMING, LOCKING, & BEARING PLATES. REGARDLESS OF WHETHER VENT OPENINGS ARE SHOWN CONTRACTOR SHALL PROVIDE VENT OPENINGS AT ALL BLOCKING CONDITIONS. UNLESS NOTED OTHERWISE, OR AS OTHERWISE APPROVED BY ARCHITECT THE MIN AREA OF VENT OPENING SHALL BE 8.5 SQUARE INCHES PER LINEAL FOOT OF BLOCKING. VERIFY LAYOUT OF VENTING WITH ARCHITECT IF NOT SPECIFICALLY SHOWN.



PLAN NORTH TRUE NORTH

1 ROOF PLAN
Scale: 1/4" = 1'-0"

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ROOF PLAN

CD

A3.31

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EXTERIOR MATERIALS & FINISH LEGEND

NOTES:
1. NOT ALL MATERIALS LISTED MAY BE USED.
2. MANUFACTURER, MODEL AND COLOR LISTED ARE BASIS-OF-DESIGN SELECTIONS FOR BIDDING PURPOSES.
3. PROVIDE ANTI-GRAFFITI COATING ON ALL UNFINISHED CMU. USE PROTECTOSIL AS BASIS OF DESIGN.
4. PROVIDE PROTECTOSIL SC 100 AS BASIS OF DESIGN FOR SEALED CONCRETE AND CAST-IN-PLACE CONCRETE.

NUMBER	MANUFACTURER	MODEL	COLOR	COMMENTS
CONCRETE BLOCK WALL:				
CMU 1	ANGELUS BLOCK	PRECISION MEDIUM WEIGHT	CHAMPAGNE	
CMU 2	ANGELUS BLOCK	PRECISION MEDIUM WEIGHT	MOSS	
CMU 3	ANGELUS BLOCK	BURNISHED MEDIUM WEIGHT	ONYX	
EXTERIOR METAL FINISH:				
MTL 1	LINETEC	-	BOYSENBERRY	
MTL 2	OLD COUNTRY MILLWORK	-	DARK BRONZE	
EXTERIOR ALUMINUM FINISH:				
AL 1	ARCADIA	ANODIZED	AB5 MEDIUM-DARK BRONZE	
PAINT:				
PT 6.2	DUNN EDWARDS	-	DILL GRASS DE5536	
PT 6.5	DUNN EDWARDS	-	SPICED BERRY DEA149	
STUCCO/CEMENT PLASTER:				
CP 1	LA HABRA	20/30	P-1661 TITANIUM (B BASE)	

INTERIOR MATERIALS & FINISH LEGEND

NOTES:
1. NOT ALL MATERIALS LISTED MAY BE USED.
2. MANUFACTURER, MODEL AND COLOR LISTED ARE BASIS-OF-DESIGN SELECTIONS FOR BIDDING PURPOSES.

NUMBER	MANUFACTURER	MODEL	COLOR	COMMENTS
CARPET:				
1 CPT 1.1	J+J FLOORING	COLOR ZONE MODULAR 7479	PEPPER 3226	
CONCRETE FLOORING:				
CONC 4.1			SEALED CONCRETE	
CERAMIC TILE:				
CT 3.1	CROSSVILLE	ARGENT	A1417 - CLEAN SLATE	FLOOR TILE 12" x 12"
CT 3.2	CROSSVILLE	COLOR BLOX 2.0	CBX34 - SPRING SAGE	WALL TILE 6" x 6"
CT 3.3	CROSSVILLE	ARGENT	A1417 - CLEAN SLATE	COVE BASE 6" x 12"
1 CT 3.4	CROSSVILLE	ARGENT	A1417 - CLEAN SLATE	WALL OR FLOOR TILE 6" x 6"
GROUT:				
GT 4.1	CUSTOM BUILDING PRODUCTS	-	#333 ALABASTER	FLOOR TILE GROUT COLOR
GT 4.2	CUSTOM BUILDING PRODUCTS		#545 BLEACHED WOOD	WALL TILE GROUT COLOR
PAINT:				
PT 6.1	DUNN EDWARDS	-	ANTIQUE WHITE DEW351	WALL PAINT
PT 6.2	DUNN EDWARDS	-	DILL GRASS DE5536	WALL PAINT
PT 6.3	DUNN EDWARDS	-	MIDNIGHT GARDEN DE5657	WALL PAINT
PT 6.4	DUNN EDWARDS	-	BONSAI DE5538	WALL PAINT
PT 6.5	DUNN EDWARDS	-	SPICED BERRY DEA149	WALL/DOOR FRAMES PAINT
PLASTIC LAMINATE:				
PLAM 7.1	FORMICA	AGED ASH 8844	-	FACE OF CABINETS
RESILIENT:				
LVT 2.1	INTERFACE	STUDIO SET	A00706 MUSHROOM	FLOOR
WALL COVERING:				
SWC 5.2	MARLITE	#P-199	BRITE WHITE	WALL
MISCELLANEOUS:				
LN 5.1	FORBO	FURNTURE LINOLEUM	4184 OLIVE	WORKSURFACE
SS 9.1	CORIAN	SOLID SURFACE RAIN CLOUD	-	RECEPTION DESK SURFACE
SS 9.2	WILSONART	-	WHITE STONE 9208CS	COUNTERTOP
RB 9.3	ROPPE	PINNACLE RUBBER	123 CHARCOAL	WALL BASE

FLOOR FINISH GENERAL NOTES

1. SEE FINISH KEY ON SHEET A3.70 FOR FLOORING MATERIAL AND COLOR INFORMATION.
2. ALL FLOORING MATERIAL TRANSITION AND COLOR CHANGES SHALL BE CENTERED UNDER DOOR, UNO.
3. HATCH PATTERNS ARE ONLY USED TO DESIGNATE MULTIPLE FLOOR MATERIALS AND/ OR COLORS USED WITHIN A ROOM. FOR ROOMS WITH ONLY ONE FLOORING TYPE SEE FINISH SCHEDULE.
4. ALIGN ALL MATERIAL TRANSITIONS AND TILE JOINTS AS SHOWN WITH THE PATTERN AND IN RELATION TO ADJACENT ARCHITECTURAL ELEMENTS.
5. FLOOR FINISHES AND RUBBER BASE SHALL EXTEND UNDER ALL MOVEABLE CASEWORK.

PLASTIC LAMINATE AND CASEWORK FINISH NOTES

1. ALL INTERIOR LOW PRESSURE LAMINATE TO BE ANTIQUE WHITE.
2. ALL PVC EDGE BANDING TO BE WHITE.
3. SEE DETAILS FOR LOCATIONS OF SPECIALTY CASEWORK.
4. STEEL SUPPORT BRACKETS AND CABLE TRAYS BELOW COUNTERTOP SHALL BE PAINTED TO MATCH ADJACENT BASE CABINETS. IF NO BASE CABINETS OCCUR, SUPPORT BRACKETS SHALL BE PAINTED TO MATCH COUNTERTOP PLAM.

INTERIOR FINISH ABBREVIATIONS

ALUM	ALUMINUM
APC	ACOUSTICAL PANEL CEILING
AWP	ACOUSTICAL WALL PANEL
CLR	COLOR
CONC	CONCRETE
CPT	CARPET
CT	CERAMIC TILE
EM	ENTRY MAT
EP	EPOXY PAINT
EXP	EXPOSED
FF	FACTORY FINISHED
FIN	FINISH
GLZ	GLAZING
GYP	GYPSUM BOARD
GT	GROUT
LN	LINOLEUM
LVT	LUXURY VINYL TILE
MATL	MATERIAL
MCSP	MINERAL COMPOSITE SCULPTURAL PANEL
MTL	METAL
PT	PAINT
RAF	RESILIENT ATHLETIC FLOORING
RB	RUBBER BASE
RFT	RESILIENT FLOORING TILE
RSS	RUBBER STAIR STRINGER
SLR	SEALER
SWC	SANITARY WALL COVERING
SV	SHEET VINYL
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VRB	VENTILATING RUBBER BASE
VWC	VINYL WALL COVERING
WP	WALL PADS

INTERIOR FINISH GENERAL NOTES

1. AN ASTERISK (*) IN THE FINISH SCHEDULE REFERENCES CODED NOTES IN THE REMARKS COLUMN.
2. AT ALL ROOMS AND/ OR CORRIDORS TURNED @ A 45 DEGREE ANGLE, THE NORTH WALL REFERENCE ON THIS FINISH SCHEDULE REFERS TO THE NORTHWEST WALL IN PLAN.
3. ALL FLOORING/ COLOR TRANSITIONS WHERE REQUIRED SHALL BE CENTERED UNDER DOOR.
4. PAINT ALL EXPOSED ACCESS PANELS (EXCEPT THOSE FACTORY FINISHED), ELECTRICAL PANELS, FIRE SPRINKLER PIPING, MECHANICAL GRILLES AND DIFFUSERS (EXCEPT THOSE IN LAY-IN CEILINGS), DUCTWORK, AND ELECTRICAL OR COMMUNICATIONS RACEWAYS TO MATCH ADJACENT SURFACES UNO. EXPOSED UTILITIES DO NOT NEED TO BE PAINTED IN DATA, ELECTRICAL, AND MECHANICAL ROOMS.
5. PAINT ALL DOOR & RELITE FRAMES PAINT COLOR 6.2 UNO.
6. ALL GYP BD CEILINGS TO BE PAINT 6.1, UNO.
7. ALL GYP BD SOFFITS SHALL BE PAINTED ON ALL EXPOSED SURFACES, TYP. SOFFIT PAINT COLOR SHALL BE PT 6.1, TYP UNO ON REFLECTED CEILING PLANS OR INTERIOR ELEVATIONS.
8. ALL EXPOSED BRICK AND CONCRETE IS TO REMAIN UNPAINTED, UNO. PROVIDE SEALER AS SPECIFIED.
9. INSTALL RUBBER WALL BASE AT INTERIOR LOCATIONS OF CONCRETE, UNO TYP.
10. WALL WHICH CONTAIN WALL MOUNTED ACCESSORIES INCLUDING MIRRORS, ETC SHALL BE ENTIRELY FINISHED AS SCHEDULED. PT, CT OR OTHER MATERIALS SHALL BE CONTINUOUS BEHIND ANY WALL HUNG ACCESSORIES, TYP UNO.
11. LOCKERS AT ACCESSIBLE DORM 104 AND DORMS 105, 106, 107, 108, 109, 110 TO BE __ OR APPROVED EQUAL
12. WALLS OF THE CORRIDOR, LOBBY AND EXIT ENCLOSURE TO BE DRYWALL TYPE X. FLAME SPREAD RATING C FLAME SPREAD INDEX 76-200; SMOKE DEVELOPED INDEX 0–450, PER TABLE 803.13.
13. INTERIOR WALL AND CEILING FINISHES SHALL CONFORM TO IBC SECTION 803 AND TABLE 803.11 FOR FLAME SPREAD REQUIREMENTS.

1

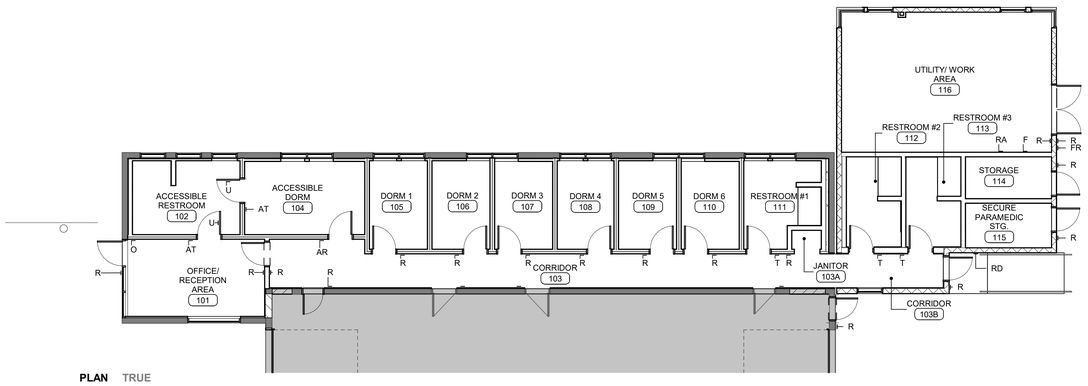
INTERIOR FINISH CODED NOTES

1. SEE INTERIOR ELEVATIONS AND/ OR REFLECTED CEILING PLANS FOR EXTENT AND LOCATION OF ACCENT PAINT COLOR(S).
2. SEE FLOOR PATTERN PLAN FOR FLOOR FINISH PATTERNS AND COLOR DESIGNATION.
3. SEE INTERIOR ELEVATION FOR PARTIAL HEIGHT CERAMIC TILE WALL

ROOM FINISH SCHEDULE

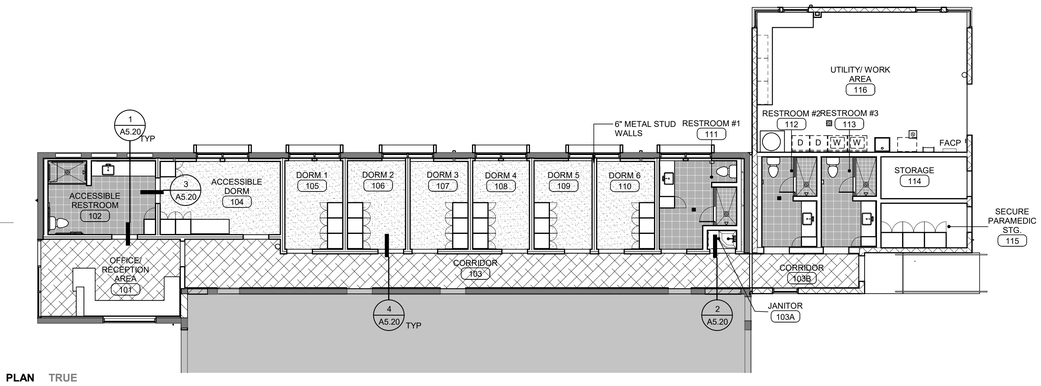
AN ASTERISK (*) IN THE ROOM FINISH SCHEDULE REFERENCES THE # IN THE CODED NOTES COLUMN

ROOM NUMBER	NAME	FLOOR MAT	FLOOR FIN	FLOOR CLR	BASE FIN	BASE CLR	NORTH WALL MATL	NORTH WALL FIN	NORTH WALL CLR	EAST WALL MATL	EAST WALL FIN	EAST WALL CLR	SOUTH WALL MATL	SOUTH WALL FIN	SOUTH WALL CLR	WEST WALL MATL	WEST WALL FIN	WEST WALL CLR	CODED NOTES
101	OFFICE/ RECEPTION AREA	CONC	LVT	2.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.2	GYB	PT	6.1	GYB	PT	6.1	
102	ACCESSIBLE RESTROOM	CONC	CT	3.1	CT	3.3	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT	6.1	GYP	CT	6.1	GYB	PT/CT	6.1/3.2*, 3.4	3
1 103	CORRIDOR	CONC	LVT	2.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.1	GYP	PT	6.1, 6.3, 6.5	GYB	PT	6.1	
103A	JANITOR	CONC	SLR	4.1	CT	3.3	GYB	SWC/CT	5.2/3.2*	GYP	SWC	5.2	GYM	SWC/CT	5.2/3.2*	GYP	SWC	5.2	3
103B	CORRIDOR	CONC	LVT	2.1	RB	9.3	GYB	PT	6.1	CMU	PT	6.1	CMU	PT	6.1	GYP	PT	6.1	
104	ACCESSIBLE DORM	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.2	GYB	PT	6.1	
105	DORM 1	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.4	
106	DORM 2	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.3	GYB	PT	6.1	GYB	PT	6.1	
107	DORM 3	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.2	
108	DORM 4	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.4	GYB	PT	6.1	GYB	PT	6.1	
109	DORM 5	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.3	GYB	PT	6.1	GYB	PT	6.1	
110	DORM 6	CONC	CPT	1.1	RB	9.3	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.1	GYB	PT	6.2	
1 111	RESTROOM #1	CONC	CT	3.1, 3.4	CT	3.3	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT	6.1	3
112	RESTROOM #2	CONC	CT	3.1, 3.4	CT	3.3	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT/CT	6.1/3.4	GYB	PT	6.1	3
113	RESTROOM #3	CONC	CT	3.1, 3.4	CT	3.3	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT/CT	6.1/3.2*, 3.4	GYB	PT/CT	6.1/3.4	GYB	PT	6.1	3
114	STORAGE	CONC	SLR	4.1	RB	9.3	GYB	PT	6.1	CMU	PT	6.1	GYM	PT	6.1	GYB	PT	6.1	
115	SECURE PARAMEDIC STG.	CONC	SLR	4.1	RB	9.3	GYB	PT	6.1	CMU	PT	6.1	CMU	PT	6.1	GYP	PT	6.1	
116	UTILITY/ WORK AREA	CONC	SLR	4.1	RB	9.3	CMU	-	-	CMU	-	-	GYM	-	-	CMU	-	-	



PLAN NORTH TRUE NORTH

2 SIGNAGE FLOOR PLAN
Scale: 1/8" = 1'-0"



PLAN NORTH TRUE NORTH

1 FLOOR FINISH PLAN
Scale: 1/8" = 1'-0"

SIGNAGE NOTES

1. PROVIDE 'EMERGENCY EGRESS WINDOW' UPPER AND LOWER SIGNS AT EACH OPERABLE WINDOW PER SPECIFICATION 10 1400
2. ALL DIMENSIONS ARE TAKEN FROM GRIDLINE, FACE OF STUD, OR FACE OF MASONRY, U.N.O.

SIGNAGE LEGEND

A	ACCESSIBLE SIGNAGE SEE 5/A5.41
U	UNISEX TOILET SIGNAGE SEE 4/A5.41
M	MEN'S TOILET DOOR SIGNAGE SEE 4/A5.41
R	ROOM SIGNAGE SEE 3/A5.41
AR	ROOM SIGNAGE W/ ISA SIGN SEE 1/A5.41
RA	ROOF ACCESS SIGNAGE SEE 9/A5.41
T	TOILET SIGNAGE SEE 2/A5.41
AT	ACCESSIBLE TOILET SIGNAGE SEE 2/A5.41
W	WOMEN'S TOILET DOOR SIGNAGE SEE 4/A5.41
RD	EXIT RAMP DOWN SIGNAGE SEE 6/A5.41
O	MAXIMUM OCCUPANCY SIGNAGE SEE 10/A5.41
FR	FIRE SPRINKLER RISER INSIDE SIGNAGE SEE 7/A5.41
F	F.A.C.P. INSIDE SIGNAGE SEE 8/A5.41

FLOOR FINISH LEGEND

- CPT 1.1
- CT 3.4, 6"x6"
- LVT 2.1
- CONC 4.1
- CT 3.1, 12"x12"

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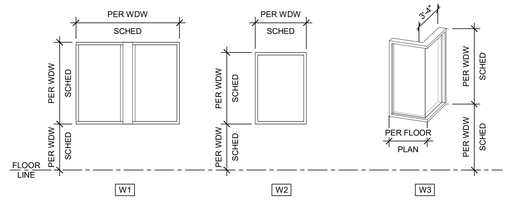
ROOM FINISH AND SCHEDULES

CD

A3.70

WINDOW SCHEDULE

WINDOW	WIDTH	HEIGHT	SILL HEIGHT	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	REMARKS / CODED NOTES
G101	6'-11"	5'-0"	3'-0"	W-2	STL	PT 6.1	13/A5.02	13/A5.02, SIM	5/A5.02	
G102	3'-4"	2'-8"	4'-8"	W-2	STL	PT 6.1	13/A5.02	13/A5.02, SIM	4/A5.02	17
G102A	3'-4"	2'-8"	4'-8"	W-2	STL	PT 6.1	13/A5.02	13/A5.02, SIM	4/A5.02	17
G102B	3'-4"	2'-8"	4'-8"	W-2	STL	PT 6.1	13/A5.02	13/A5.02, SIM	4/A5.02	17
G103B	3'-4"	4'-0"	3'-2"	W-2	STL	PT 6.1	15/A5.02	14/A5.02	16/A5.02	
G104	6'-10"	5'-4"	3'-0"	W-1	STL	PT 6.1	2/A5.01	4/A5.01	1/A5.01	16
G105	6'-9"	5'-4"	3'-0"	W-1	STL	PT 6.1	2/A5.01	4/A5.01	1/A5.01	16
G106	6'-9"	5'-4"	3'-0"	W-1	STL	PT 6.1	2/A5.01	5/A5.01	1/A5.01	16
G108	6'-9"	5'-4"	3'-0"	W-1	STL	PT 6.1	2/A5.01	4/A5.01	1/A5.01	16
G109	6'-9"	5'-4"	3'-0"	W-1	STL	PT 6.1	2/A5.01	5/A5.01	1/A5.01	16
G111	6'-9"	5'-4"	3'-0"	W-1	STL	PT 6.1	2/A5.01	4/A5.01	1/A5.01	17
G116A	3'-4"	5'-4"	4'-0"	W-3	STL	PT 6.1	15/A5.02	14/A5.02	16/A5.02	
G116B	3'-4"	5'-4"	4'-0"	W-2	STL	PT 6.1	15/A5.02	14/A5.02	16/A5.02	
G116C	3'-4"	5'-4"	4'-0"	W-2	STL	PT 6.1	15/A5.02	14/A5.02	16/A5.02	
G116D	3'-4"	5'-4"	3'-2"	W-3	STL	PT 6.1	15/A5.02	14/A5.02	16/A5.02	



EXTERIOR WINDOW TYPES
Scale: 1/4" = 1'-0"

GENERAL DOOR & RELITE NOTES

1. ALL DOORS TO BE 1 3/4" THICK, UNLESS NOTED OTHERWISE.
2. SEE SPECIFICATIONS FOR ALL DOOR, RELITE, SIDELITE AND TRANSOM GLAZING TYPES.
3. SEE SHEET A5.20 & A5.21 FOR INTERIOR STEEL FRAME DOOR AND RELITE DETAILS.
4. LABEL COLUMN NUMBERS INDICATES THE RATING IN MINUTES, UNLESS NOTED OTHERWISE.
5. GLAZING DIMENSIONS FOR DOOR TYPES ARE TO INSIDE OF FRAME (CLEAR GLAZING AREA). ACTUAL CUTOUT AND TOTAL FRAME WILL BE SLIGHTLY LARGER.
6. RELITE GLAZING AND STOP TO OCCUR ON CORRIDOR SIDE OF FRAME, UNLESS NOTED OTHERWISE.
7. ALL DOOR HANDLES TO BE LEVER TYPE COMPLYING WITH ADA.
8. ALL RELITE GLAZING AND LITES IN DOORS TO BE TEMPERED GLASS.
9. WINDOW FRAMES TO BE ANODIZED ALUMINUM FACTORY FINISH, UNO.
10. REFER TO EXTERIOR ELEVATIONS FOR DETAIL REFERENCES AT EXTERIOR DOORS

DOOR & RELITE ABBREVIATIONS

AL	ALUMINUM
BOF	BOTTOM OF FRAME
CAA	CLEAR ANODIZED ALUMINUM
FF	FACTORY FINISH
GL	GLASS
H	HINGE (JAMB)
HR	HOUR
MFR	MANUFACTURER
PLAM	PLASTIC LAMINATE
PR	PAIR OF DOORS
PT	PAINT
S	STRIKE (JAMB)
SC	SOLID CORE
STL	STEEL
STN	STAIN & VARNISH
TOF	TOP OF FRAME
WD	WOOD
MTL	METAL

DOOR SCHEDULE

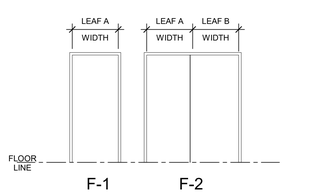
DOOR NO	PR	DOOR LEAF A	DOOR LEAF B	DOOR HT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	HARDWARE SET	FIRE RATING	REMARKS / CODED NOTES	DOOR NO
101A		3'-3"	0"	7'-3"	F	AL/GLASS	FF	-	AL	CAA	-	-	-	01		3, 4, 5, 7, 9, 11, 13	101A
101B		3'-0"	0"	7'-0"	B	SC	STN	F-1	HM	PT 6.1	6/A5.20	4/A5.20	-	08	45	7, 8, 13, 19, 20	101B
102A		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	06		6, 7, 8, 10, 13, 19	102A
102B		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	4/A5.20	4/A5.20	-	06A		8, 10, 13, 19	102B
103A		3'-0"	0"	7'-0"	D	SC	STN	F-1	HM	AL	-	-	-	09		6	103A
103B		3'-0"	0"	7'-0"	B	MTL	PT 6.1	F-1	HM	PT 6.1	-	-	-	01A		1, 3, 4, 5, 7, 9, 11, 12, 13, 20	103B
103C		2'-7"	0"	7'-0"	A	SC	STN	F-1	HM	PT 6.1	5/A5.20	5/A5.20	-	13	45	2, 8,19	103C
104		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	104
105		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	105
106		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	106
107		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	107
108		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	108
109		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	109
110		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	05		8, 10, 13, 19	110
111		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	6/A5.20	4/A5.20	-	07		6, 7, 8, 10, 13, 19	111
112		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	5/A5.20	5/A5.20	-	07		6, 7, 8, 10, 13, 19	112
113		3'-0"	0"	7'-0"	A	SC	STN	F-1	HM	AL	5/A5.20	5/A5.20	-	07		6, 7, 8, 10, 13, 19	113
114		3'-0"	0"	7'-0"	A	MTL	PT 6.1	F-1	HM	PT 6.1	-	-	-	02		1, 4, 5, 8, 11, 12, 14	114
115		3'-0"	0"	7'-0"	A	MTL	PT 6.1	F-1	HM	PT 6.1	-	-	-	02		1, 4, 5, 8, 11, 12	115
116	PR	3'-2"	3'-2"	7'-0"	C	MTL	PT 6.1	F-2	HM	AL	-	-	-	03		1, 4, 5, 8, 11, 12, 14	116
117		2'-10"	0"	7'-0"	B	MTL	STN	F-1	HM	AL	-	-	-	01A		2, 4, 5, 8, 11, 12, 20	117

DOOR & RELITE CODED NOTES

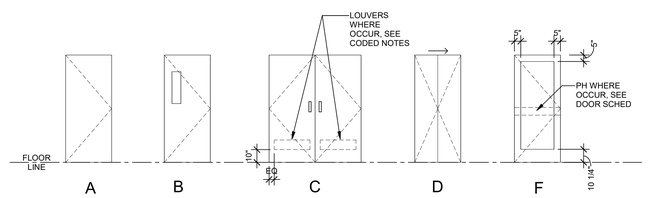
1. 4" HEAD FRAME.
2. NEW DOOR IN (E) OPENING.
3. PANIC HARDWARE.
4. ACCESS CONTROL.
5. CARD READER.
6. 1" DOOR UNDERCUT.
7. CLOSER.
8. LEVER TYPE OPERATION
9. PUSH/PULL OPERATION
10. PRIVACY LOCK
11. LOCK SET (COORDINATE W/ FIRE DEPT.)
12. KICK PLATE
13. DOOR STOP
14. DOOR LOUVER - TOTAL OF 2 SF (1 SF PER DOOR)
15. THERMA SERIES BY HORMANN NORTHWEST DOOR USED AS BASIS OF DESIGN
16. OPERABLE WINDOW
17. SPANDREL WINDOW
18. VERIFY DOOR R.O. IN FIELD PRIOR PURCHASING
19. MOP PLATE
20. VISION PANEL

FIRE APPARATUS DOOR SCHEDULE

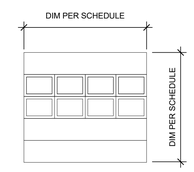
DOOR NO	DOOR LEAF A	DOOR HT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	DETAILS HEAD	DETAILS HINGE JAMB	DETAILS STRIKE JAMB	DETAILS SILL	HARDWARE SET	REMARKS / CODED NOTES	DOOR NO
S117A	24'-0"	10'-0"	L3	G40 GALV STEEL	FF	STL	FF	7/A5.00	8/A5.00	8/A5.00	-	12	15, 18	S117A
S117C	11'-6"	10'-0"	L3	G40 GALV STEEL	FF	STL	FF	7/A5.00	8/A5.00	8/A5.00	-	12	15, 18	S117C
S117D	11'-6"	10'-0"	L3	G40 GALV STEEL	FF	STL	FF	7/A5.00	8/A5.00	8/A5.00	-	12	15, 18	S117D



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



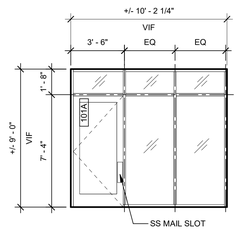
DOOR TYPES
Scale: 1/4" = 1'-0"



DOOR TYPES - SPECIAL
Scale: 1/4" = 1'-0"

STOREFRONT NOTES

1. REFER TO SPECIFICATIONS FOR LOCATIONS OF LAMINATED AND TEMPERED GLASS.
2. STOREFRONT DIMENSIONS SHOWN INDICATE ROUGH OPENING DIMENSION.
3. ALL EXTERIOR GLAZING TO BE CERIFIED BY INDEPENDENT AGENCY FOR SOLAR HEAT GAIN COEFFICIENT AND U-VALUE.



ENTRANCE STOREFRONT
Scale: 1/4" = 1'-0"

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1 1ST PC RESUBMITTAL 4/14/23
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Exp. 8-31-23
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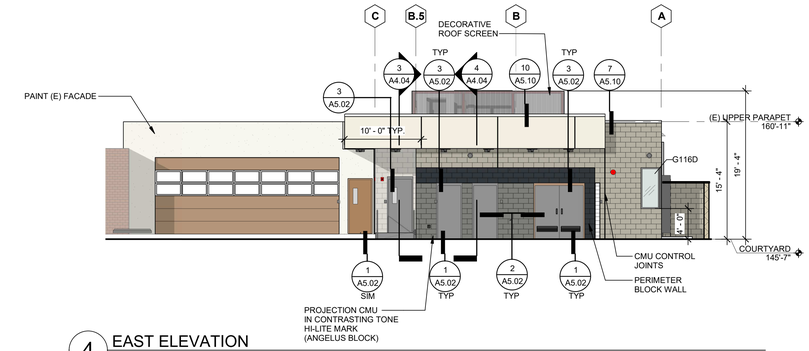
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DATE 10/05/2026

WINDOW AND DOOR SCHEDULES

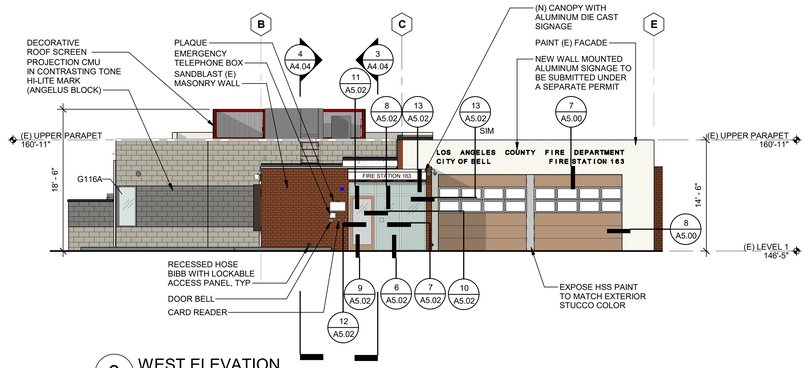
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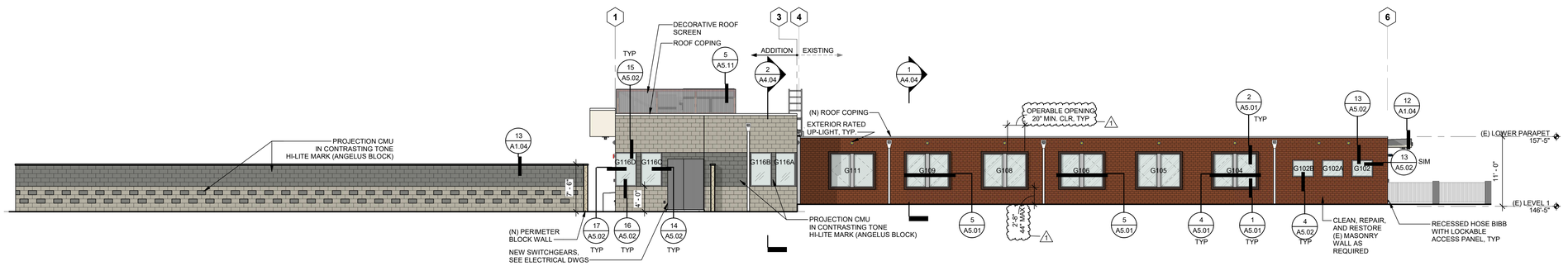
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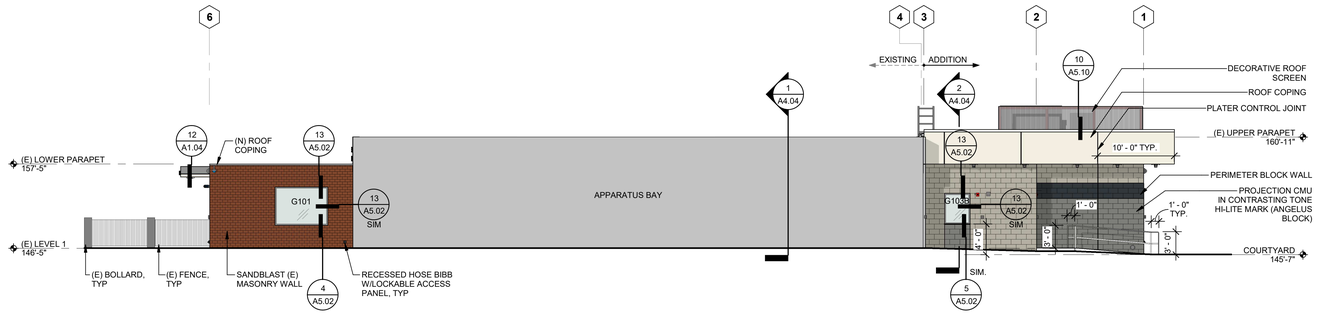
4 EAST ELEVATION
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3 WEST ELEVATION
Scale: 1/8" = 1'-0"



2 NORTH ELEVATION
Scale: 1/8" = 1'-0"



1 SOUTH ELEVATION
Scale: 1/8" = 1'-0"

EXTERIOR ELEVATION GENERAL NOTES

1. LOCATION AND SPACING OF WINDOW MULLIONS, MASONRY CONTROL JOINTS AND COURSE PATTERNS, ETC, ARE TO BE AS SHOWN ON EXTERIOR ELEVATIONS. WHERE NOT DIMENSIONED OR DETAILED, WINDOW MULLIONS AND MATERIAL JOINTS ARE TO BE EQUALLY SPACED AND/ OR CENTERED/ ALIGNED W/ ADJACENT ELEMENT (MASONRY COLUMN, EDGE OR CENTER LINE OF WINDOW OR DOOR OPENING, ETC) AS SHOWN.
2. REFER TO DETAILS FOR DIMENSION REFERENCE POINTS.
3. CONTROL JOINTS EXTEND FULL HEIGHT OF MASONRY, TYP. WHERE "CJ" IS INDICATED AT INSIDE CORNERS THE JOINT SHALL PENETRATE THE MASONRY SURFACE ON WHICH THE LABEL OCCURS. SEE DETAILS FOR ADDITIONAL CJ LOCATIONS.
4. ALL WINDOW AND LOUVER DIMENSIONS ARE FOR ROUGH OR MASONRY OPENING, UNLESS NOTED OTHERWISE. SEE PLANS FOR ADDITIONAL DIMENSION INFORMATION.
5. 146'-5" IS THE DATUM ELEVATION AND CORRESPONDS TO THE REFERENCED FLOOR SLAB ELEVATION. SEE CIVIL FOR FURTHER INFORMATION.
6. EXTERIOR WALL FINISHES EXTEND FULL HEIGHT TO SOFFITS (NOT SHOWN WHERE EAVES OBSCURE VIEW). SEE BUILDING SECTIONS & DETAILS.

EXTERIOR ELEVATION LEGEND:

- G-## — WINDOW TYPE, SEE A3.71
- CASEMENT WINDOW
- FROSTED GLASS
- SPANDREL GLASS WITH SHADOWBOX
- VISION GLASS
- EMERGENCY EGRESS/ OPERABLE OPENING
- STD. PRECISION BLOCK WITH WATER-REPELLENT SEALER AND ANTI GRAFFITI COATING.
- CMU IN CONTRASTING TONE
- PROJECTION CMU IN CONTRASTING TONE HI-LITE MARK (ANGELUS BLOCK)
- (E) BRICK

EXTERIOR WINDOW NOTES:

1. ALL GLAZING SHALL BE TEMPERED, U.N.O.
2. ALL EXPOSED METAL @ STAIR GUARDRAIL SHALL BE HOT DIP GALVANIZED AND PAINTED W/ HIGH PERF. COATING UNLESS OTHERWISE NOTED.
3. PROVIDE ANTI-GRAFFITI COATING OVER CLEAR SEALER AT ALL EXPOSED INTERIOR AND EXTERIOR CMU.

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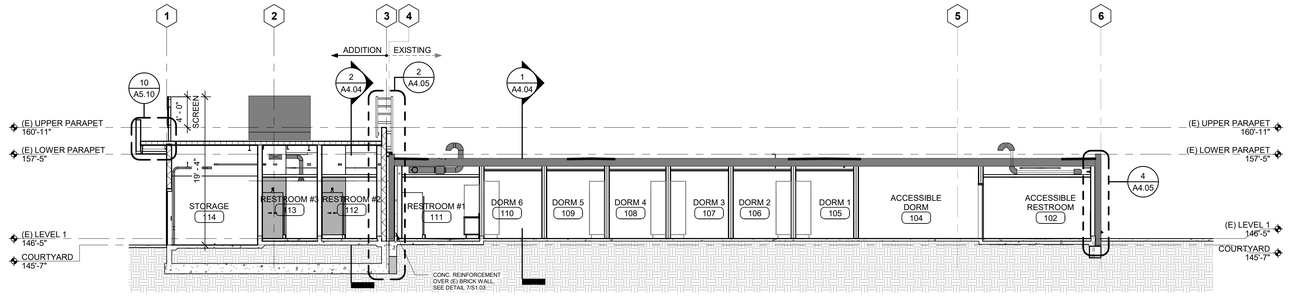
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EXTERIOR ELEVATIONS

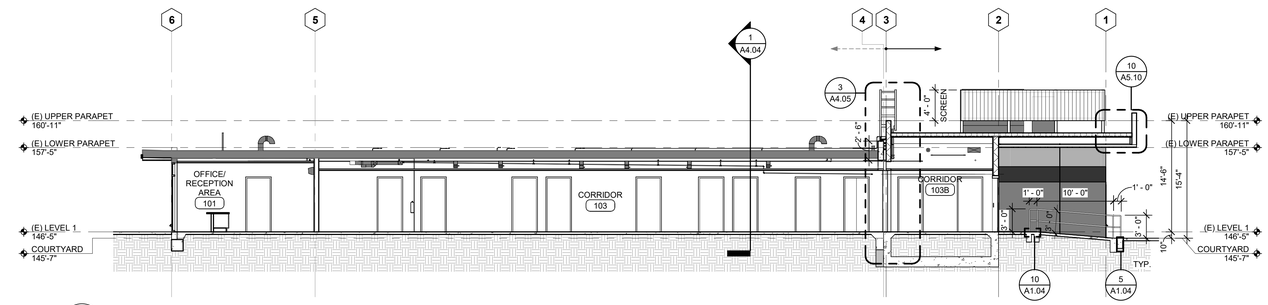
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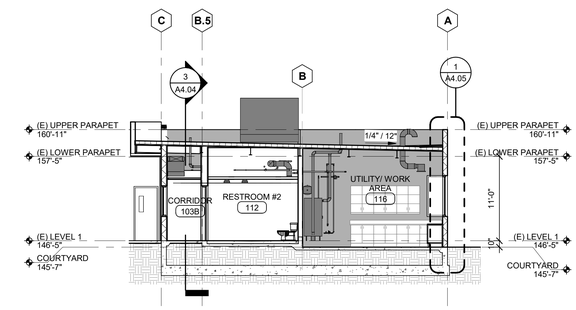
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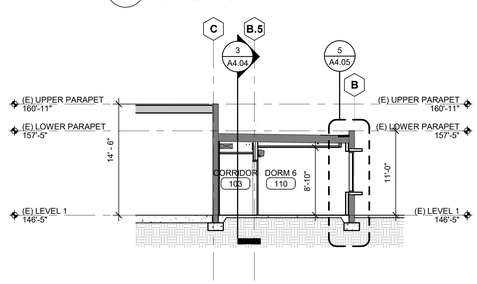
4 SOUTH SECTION
Scale: 1/8" = 1'-0"



3 NORTH SECTION
Scale: 1/8" = 1'-0"



2 WEST SECTION
Scale: 1/8" = 1'-0"



1 WEST SECTION AT EXISTING BUILDING
Scale: 1/8" = 1'-0"

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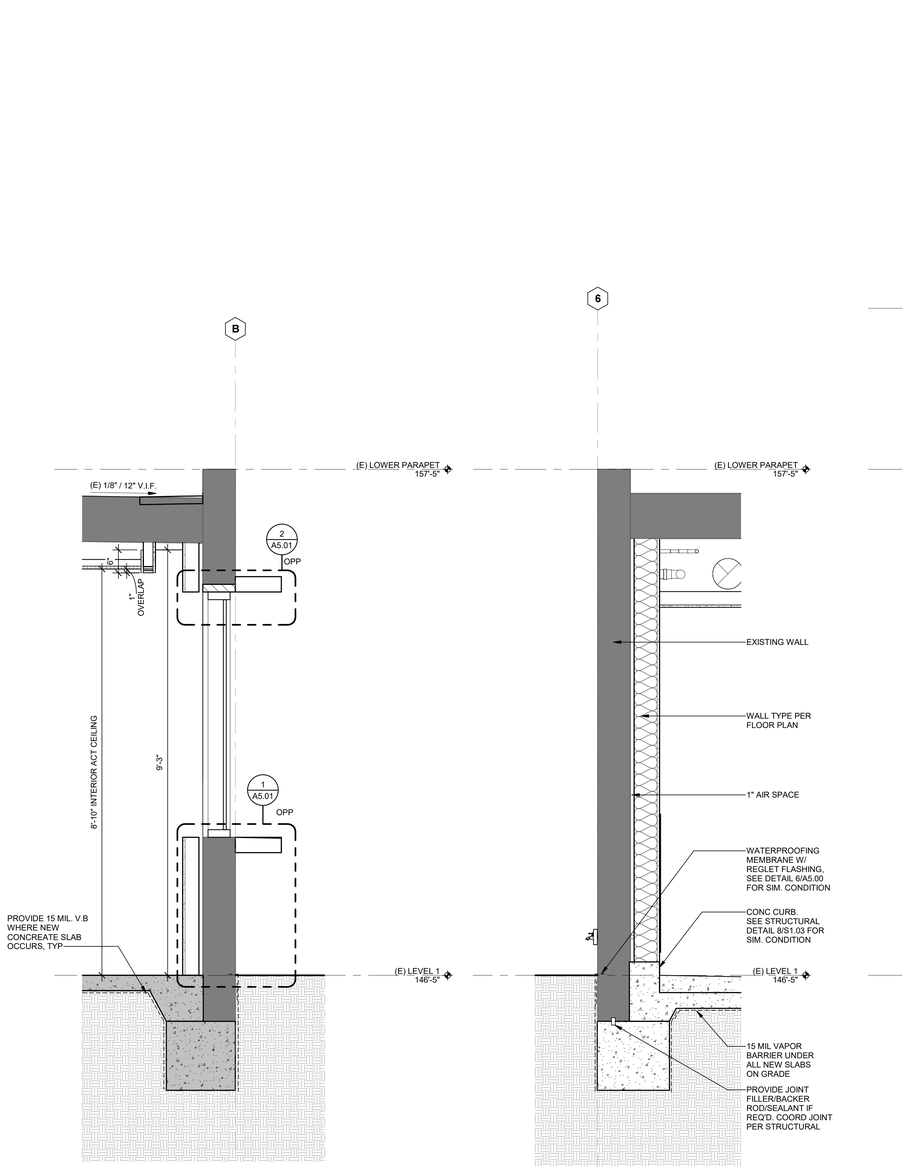
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BUILDING SECTIONS

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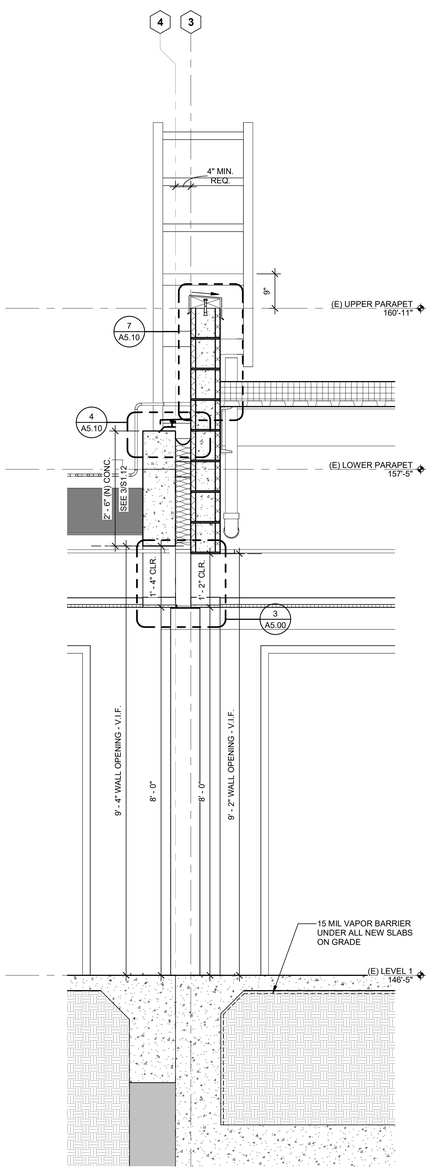
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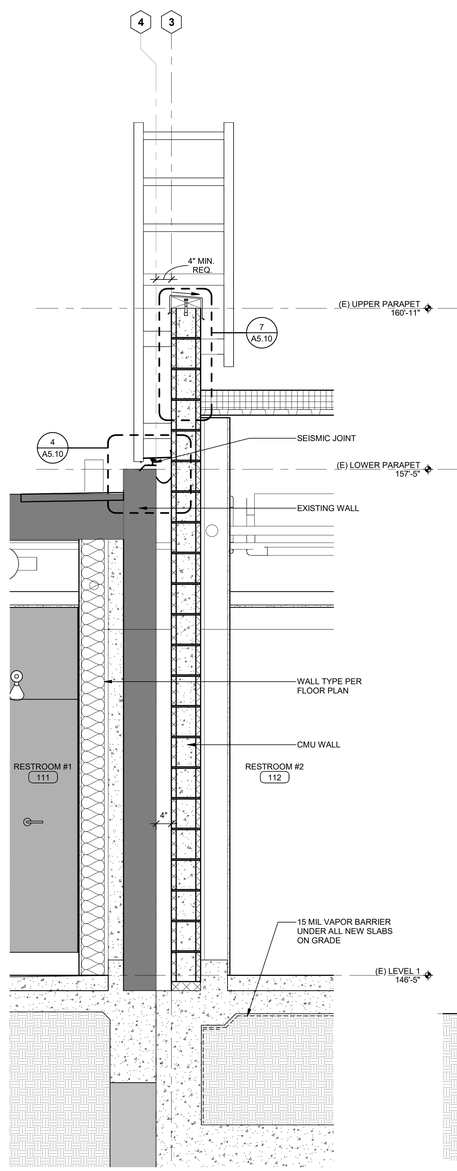


5 WALL SECTION - WINDOW BOX-OUT
Scale: 3/4" = 1'-0"

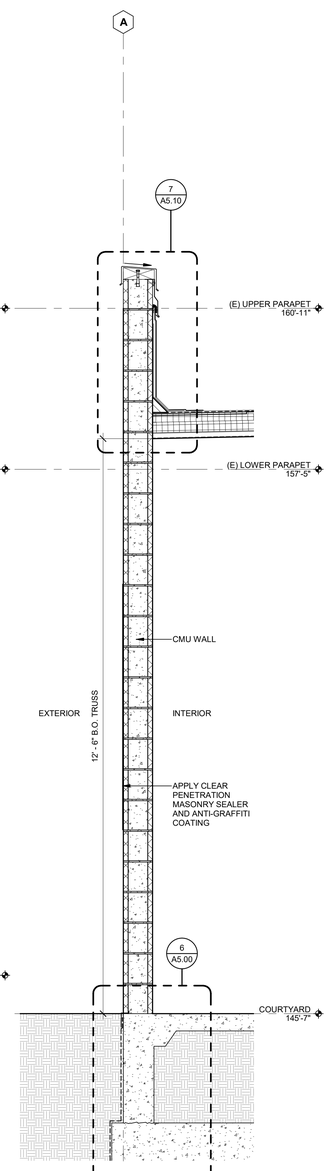
4 WALL SECTION - WEST
Scale: 3/4" = 1'-0"



3 WALL SECTION - NEW & OLD @ DOOR
Scale: 3/4" = 1'-0"



2 WALL SECTION - NEW & OLD
Scale: 3/4" = 1'-0"



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

LEGEND

EXISTING TO REMAIN

EXISTING CONCRETE SLAB OR FOUNDATION

NOTE: SEE SHEET A4.1 FOR GENERAL EXTERIOR ELEVATION NOTES, MATERIALS LEGEND & GLAZING LEGEND

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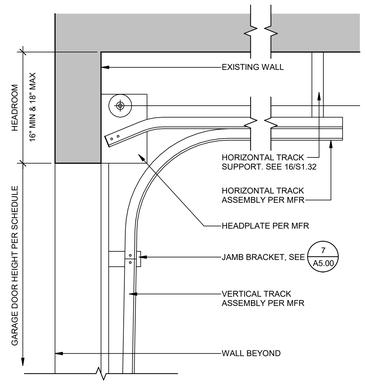
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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

WALL SECTIONS & PARTIAL BUILDING SECTIONS

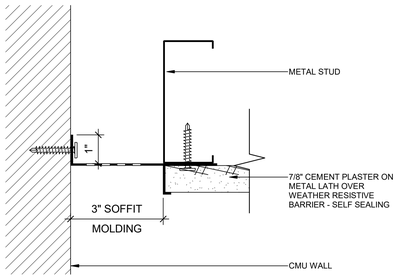
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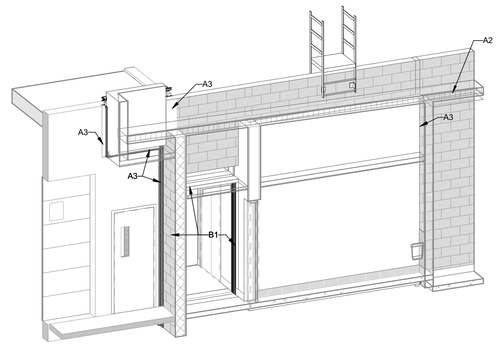
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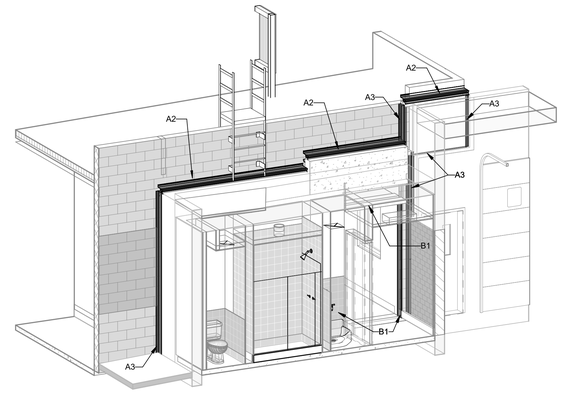
8 GARAGE DOOR HEAD
Scale: 1 1/2" = 1'-0"



5 SOFFIT VENT DETAIL
Scale: 6" = 1'-0"



1B SEISMIC JOINT - EW AXON VIEW
Scale:



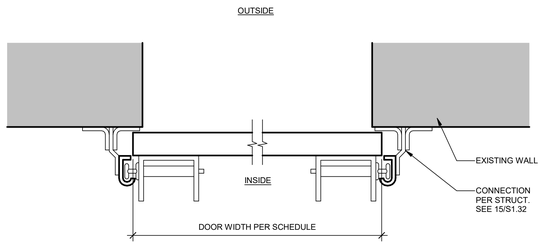
1A SEISMIC JOINT - WE AXON VIEW
Scale:

SEISMIC JOINT AXON LEGEND:

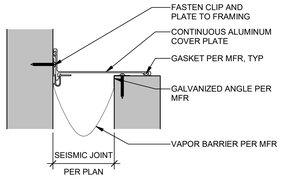
- EXTERIOR SEISMIC JOINT COVER
- INTERIOR SEISMIC JOINT COVER
- A 1 — SEISMIC JOINT COVER TAG (REFER TO SPEC)
  - **APPLICATION** (REFER TO SPEC)
  - **CATEGORY** A: EXTERIOR; B: INTERIOR

SEISMIC JOINT NOTES:

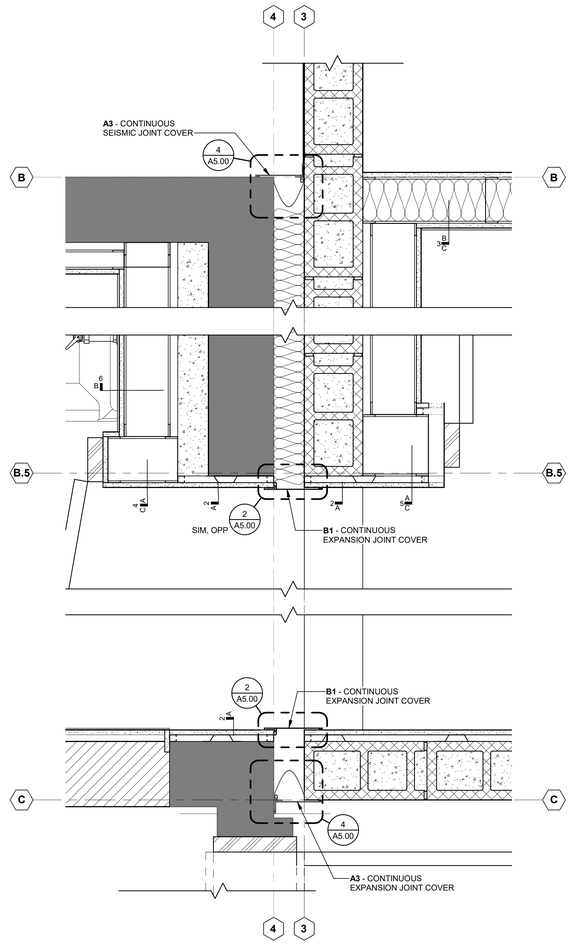
1. REFER TO ARCHITECTURAL SPECIFICATIONS FOR JOINT COVER APPLICATIONS AND BASIS-OF-DESIGN.

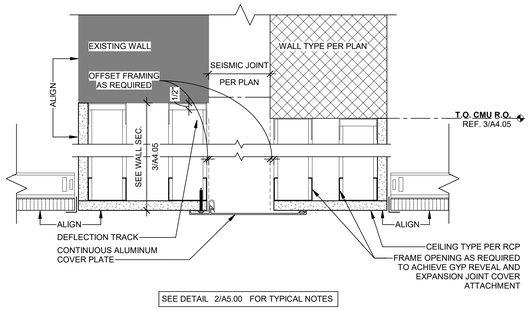


7 GARAGE DOOR JAMB
Scale: 3" = 1'-0"



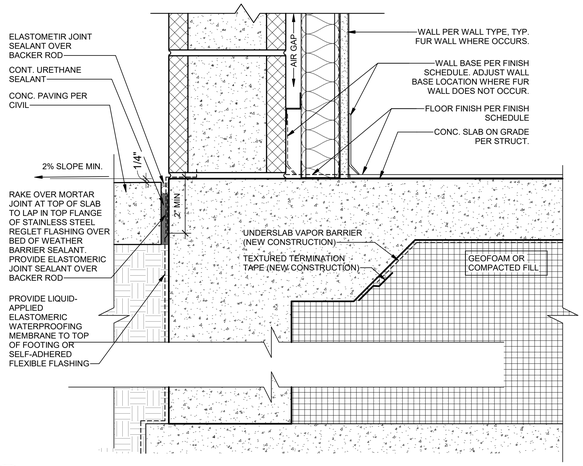
4 EXTERIOR WALL TO CORNER EXPANSION JOINT
Scale: 3" = 1'-0"



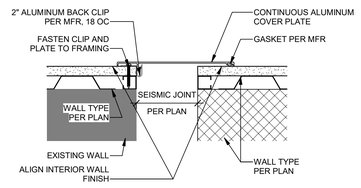


SEE DETAIL 2/A5.00 FOR TYPICAL NOTES

3 TYP INTERIOR EXPANSION JOINT COVER @ CEILING
Scale: 3" = 1'-0"



6 EXTERIOR CMU WALL
Scale: 3" = 1'-0"



2 TYP INTERIOR EXPANSION JOINT COVER @ VERTICAL WALL
Scale: 3" = 1'-0"

1 ENLARGED FLOOR PLAN - SEISMIC JOINT
Scale: 1 1/2" = 1'-0"

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REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
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LICENSED ARCHITECT — VICTOR ORTEGA JR. — No. C-34698 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

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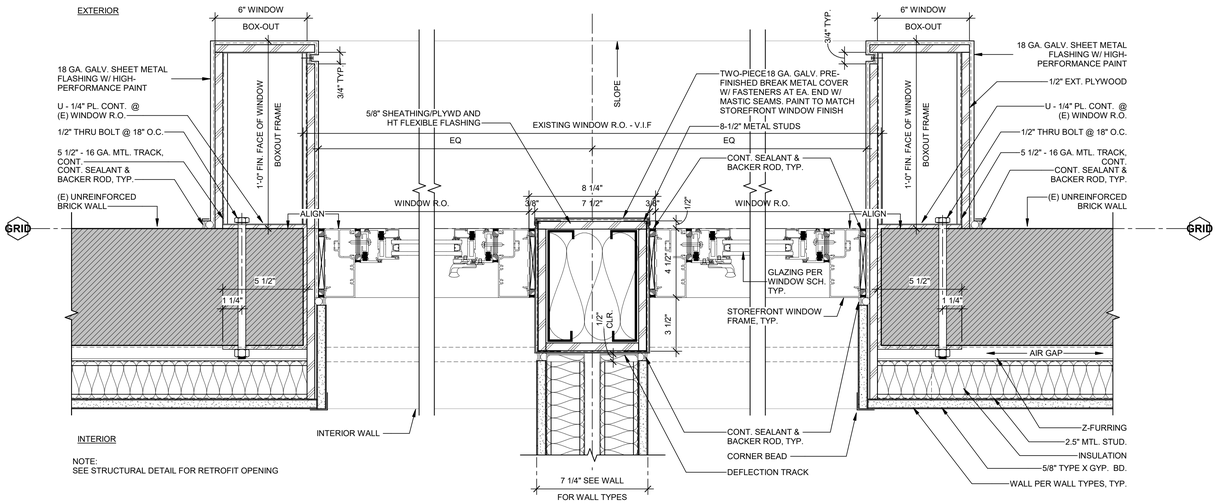
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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

EXTERIOR DETAILS

CD

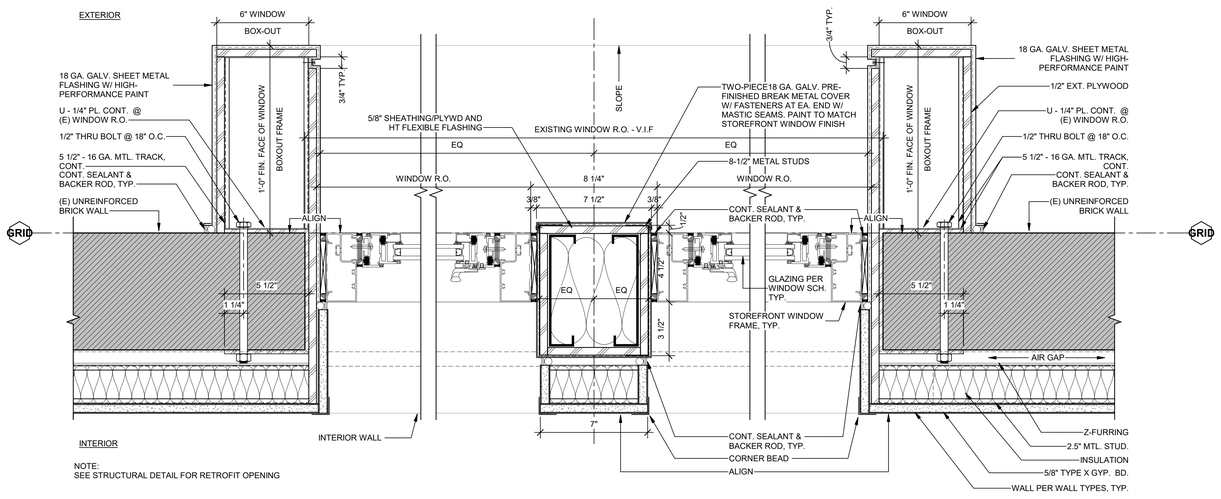
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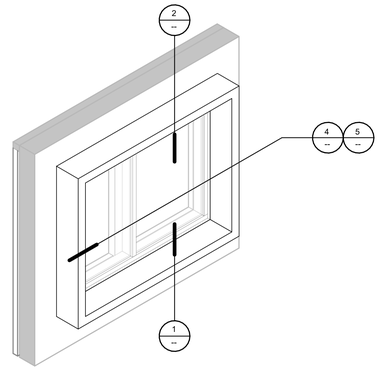
5 WINDOW BOX JAMB @ INTERIOR WALL

Scale: 3" = 1'-0"



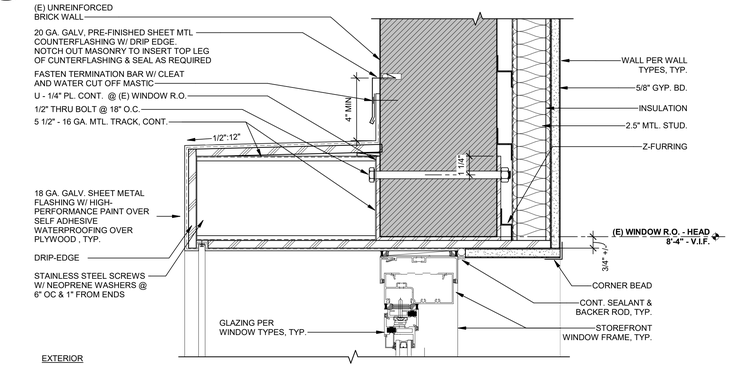
4 WINDOW BOX JAMB

Scale: 3" = 1'-0"



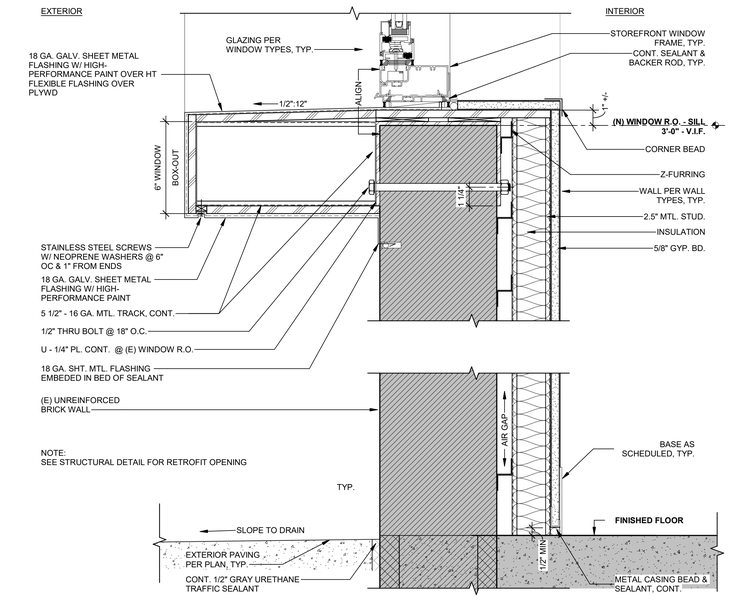
3 WINDOW BOXOUT - DETAIL LAYOUT

Scale:



2 WINDOW BOX HEAD

Scale: 3" = 1'-0"



1 WINDOW BOX SILL

Scale: 3" = 1'-0"

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REVISIONS

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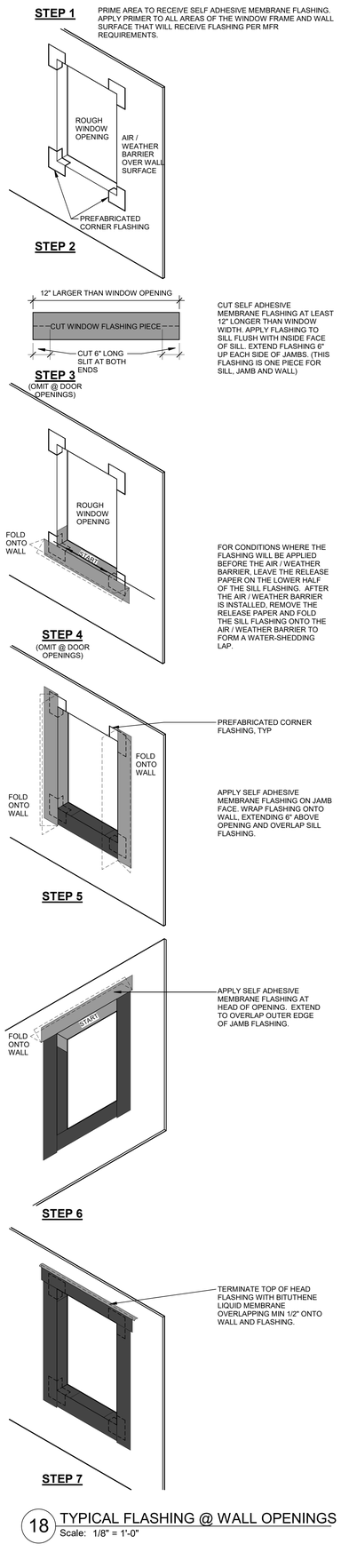
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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

EXTERIOR DETAILS

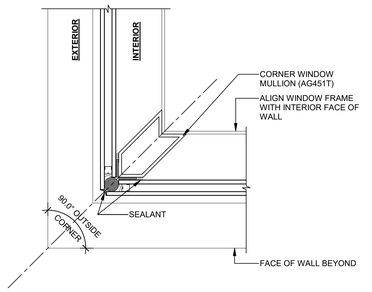
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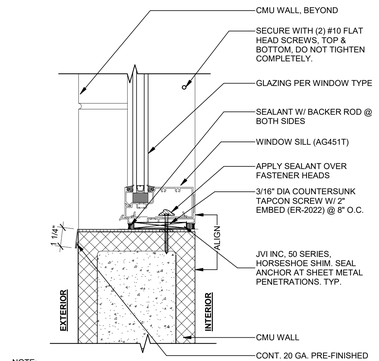
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18 TYPICAL FLASHING @ WALL OPENINGS
Scale: 1/8" = 1'-0"

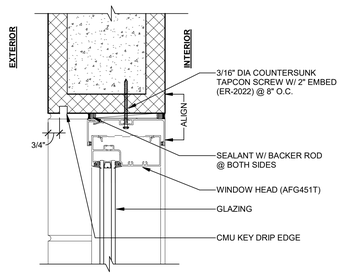


17 AL CW @ OUTSIDE CORNER, TYP
Scale: 3" = 1'-0"

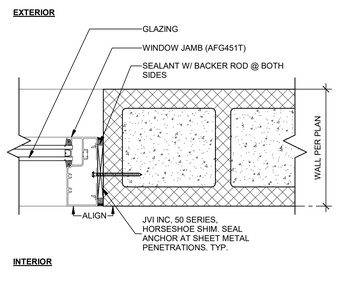


NOTE:
1. AT WINDOW SILL ANCHOR, PRE-DRILLED HOLE FILLED WITH SILICONE SEALANT AND APPLY TOPICAL SEALANT OVER ANCHOR HEADS, TYPICAL.
2. AT SCREEN SILL ANCHOR, PRE-DRILLED HOLE FILLED WITH SILICONE SEALANT, TYPICAL.

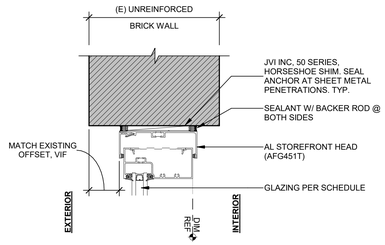
16 WINDOW SILL @ CMU WALL
Scale: 3" = 1'-0"



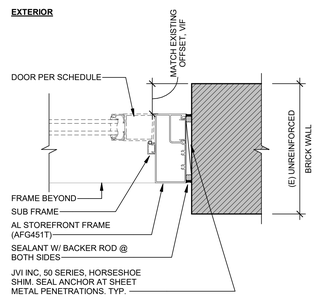
15 WINDOW HEAD @ CMU WALL
Scale: 3" = 1'-0"



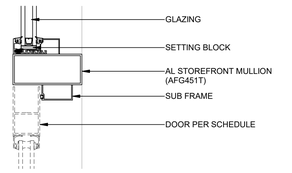
14 WINDOW JAMB @ CMU WALL
Scale: 3" = 1'-0"



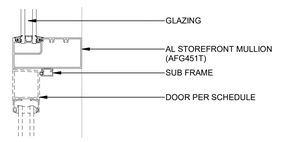
13 AL STOREFRONT HEAD @ EXISTING BRICK WALL - JAMB SIM
Scale: 3" = 1'-0"



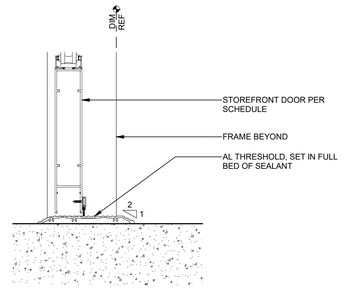
12 AL STOREFRONT DOOR JAMB
Scale: 3" = 1'-0"



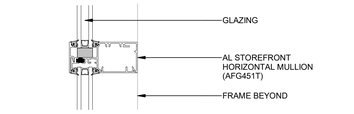
11 AL STOREFRONT DOOR HEAD @ SIDELITE
Scale: 3" = 1'-0"



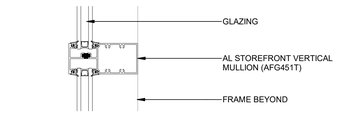
10 AL STOREFRONT DOOR JAMB @ SIDELITE
Scale: 3" = 1'-0"



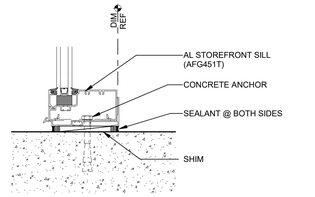
9 AL STOREFRONT DOOR SILL
Scale: 3" = 1'-0"



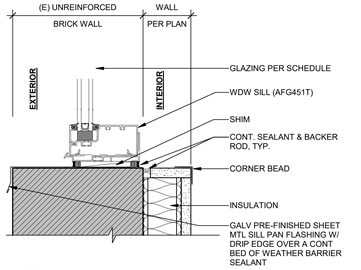
8 AL STOREFRONT @ HORIZONTAL MULLION
Scale: 3" = 1'-0"



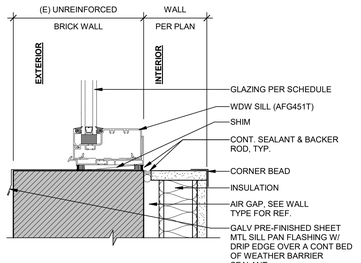
7 AL STOREFRONT @ VERTICAL MULLION
Scale: 3" = 1'-0"



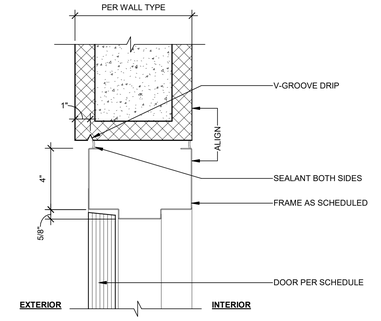
6 AL STOREFRONT SILL
Scale: 3" = 1'-0"



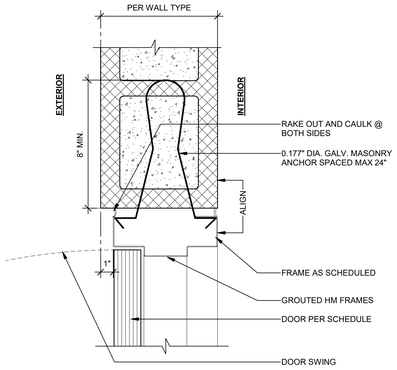
5 WDW SILL @ (E) BRICK WALL
Scale: 3" = 1'-0"



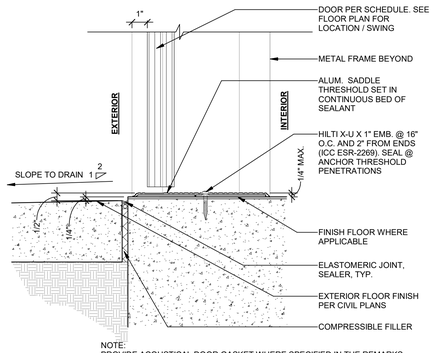
4 WDW SILL @ (E) BRICK WALL
Scale: 3" = 1'-0"



3 DOOR HEAD @ CMU WALL, TYP
Scale: 3" = 1'-0"



2 HM DOOR JAMB @ CMU WALL, TYP
Scale: 3" = 1'-0"



NOTE:
PROVIDE ACOUSTICAL DOOR GASKET WHERE SPECIFIED IN THE REMARKS SECTION OF THE DOOR SCHEDULE

1 HM DOOR THRESHOLD @ EXTERIOR WALL, TYP
Scale: 3" = 1'-0"

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1 1ST PC RESUBMITTAL 4/14/23
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LICENSED ARCHITECT KEVIN ORTEGA CHOW No. C-34698 Exp. 8-31-23 STATE OF CALIFORNIA

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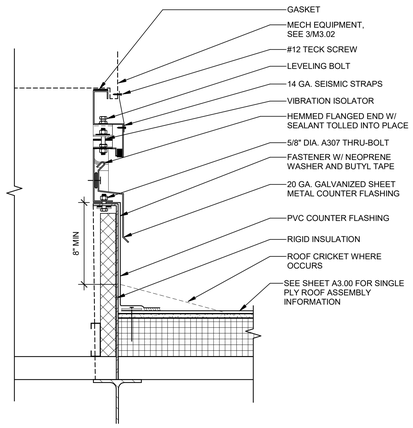
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CHECKED RR
DATE 10/05/2026

EXTERIOR STOREFRONT WINDOW & DOOR

CD

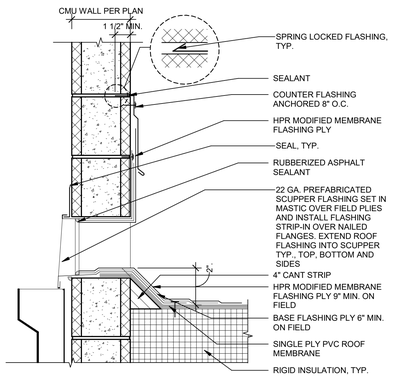
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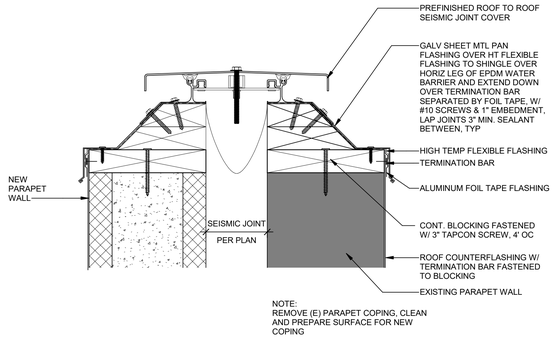
9 EQUIPMENT CURB @ DECK

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



6 OVERFLOW SCUPPER PLAN DETAIL

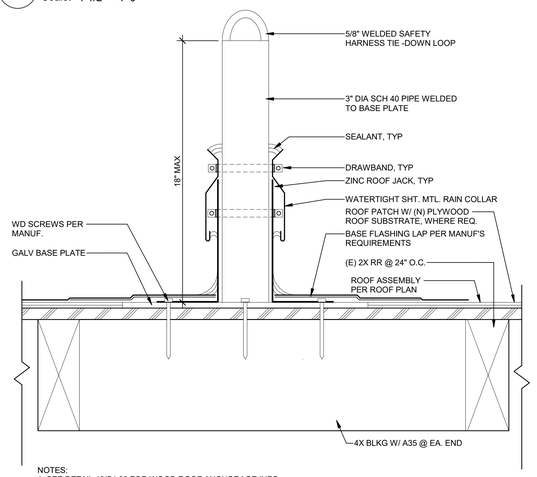
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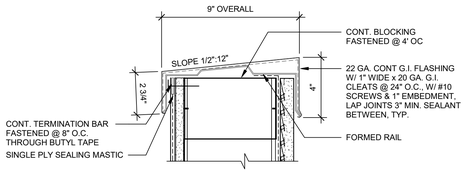
NOTE:
REMOVE (E) PARAPET COPING, CLEAN AND PREPARE SURFACE FOR NEW COPING

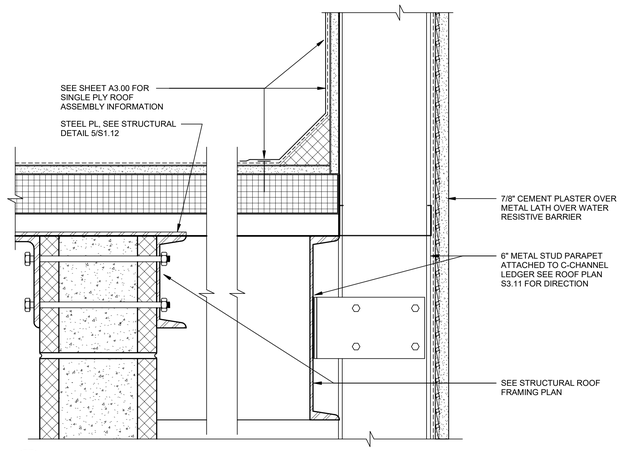
3 EQUIPMENT PLATFORM SECTION @ WOOD ROOF

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



NOTES:
1. SEE DETAIL 13/S1.32 FOR WOOD ROOF ANCHORAGE INFO.
2. SEE DETAIL 14/S1.32 FOR STEEL ROOF ANCHORAGE INFO.



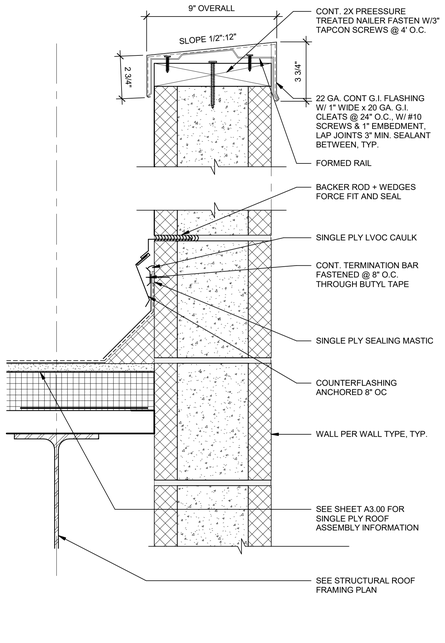


10 PARAPET & ROOF DECK

Scale: 3" = 1'-0"

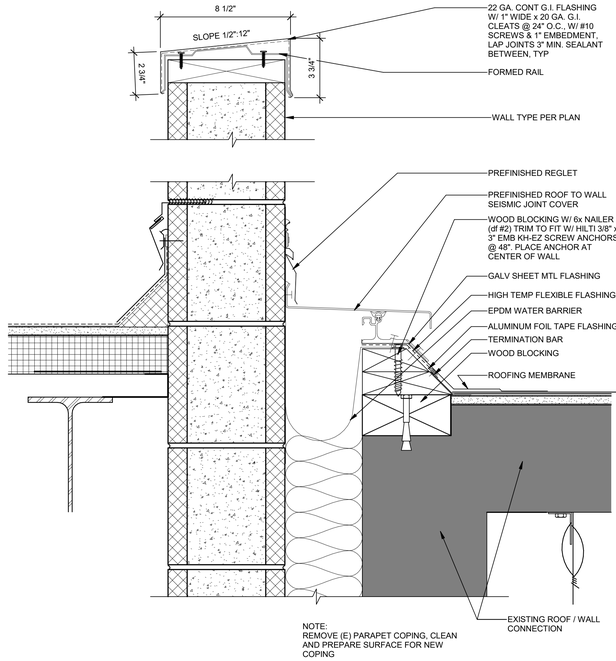
8 OVERFLOW SCUPPER DETAIL

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



7 PARAPET AT CMU WALL & ROOF DECK

Scale: 3" = 1'-0"



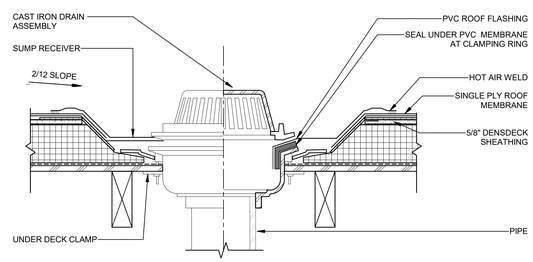
NOTE:
REMOVE (E) PARAPET COPING, CLEAN AND PREPARE SURFACE FOR NEW COPING

4 NEW PARAPET WALL TO EXISTING ROOF EXPANSION JOINT

Scale: 3" = 1'-0"

2 SAFETY HARNESS TIE-DOWN @ WOOD ROOF

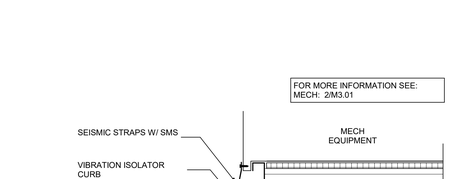
Scale: 3" = 1'-0"



NOTES:
1. STEEL CLAMPING RINGS SHALL BE USED ON ALL ROOF DRAINS.

1 ROOF DRAIN

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



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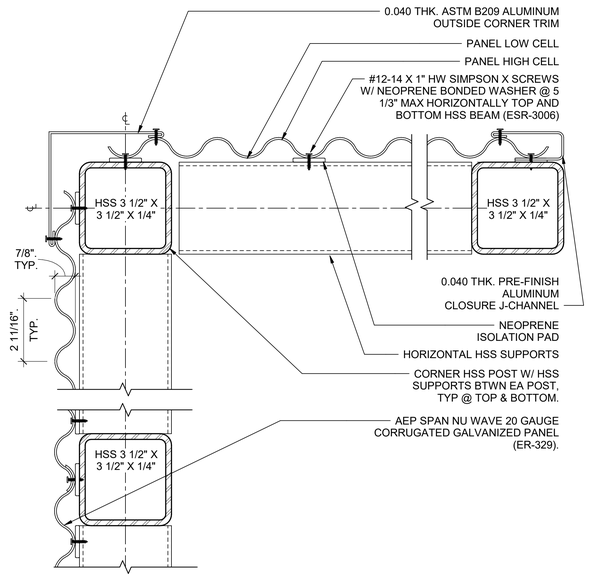
NAC NO	161-21001
DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

ROOF DETAILS

CD

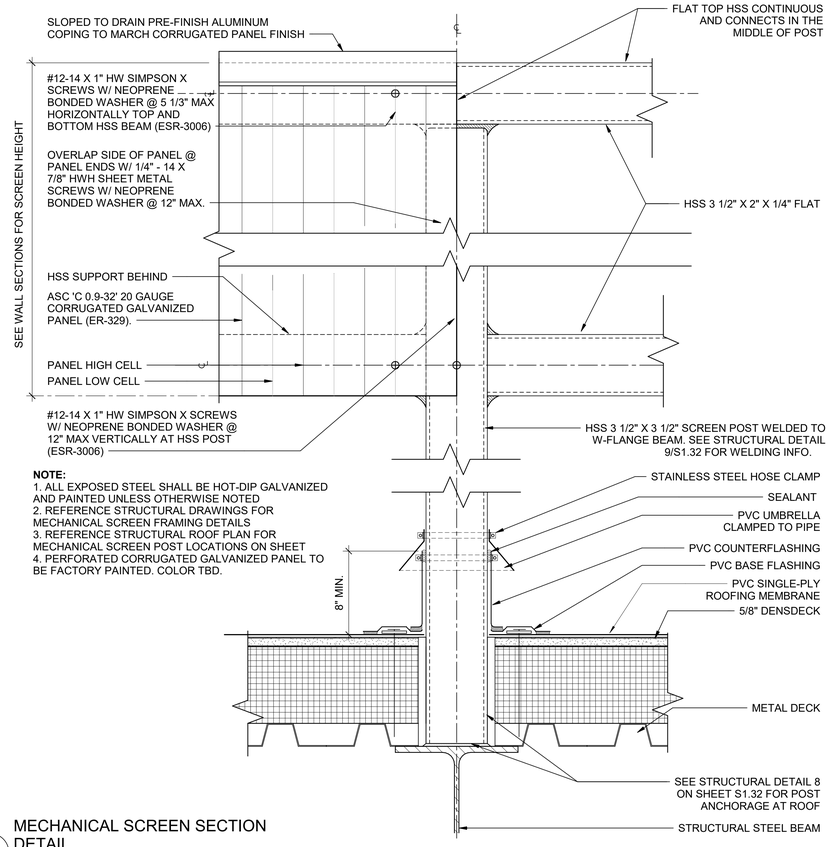
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BIDDING SET



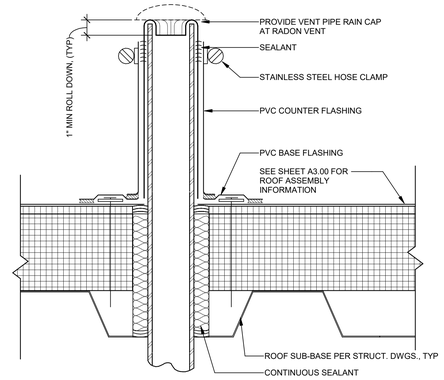
NOTE:
1. ALL EXPOSED STEEL SHALL BE HOT-DIP GALVANIZED AND PAINTED UNLESS OTHERWISE NOTED
2. REFERENCE STRUCTURAL DRAWINGS FOR MECHANICAL SCREEN FRAMING DETAILS
3. REFERENCE STRUCTURAL ROOF PLAN FOR MECHANICAL SCREEN POST LOCATIONS ON SHEET
4. PERFORATED CORRUGATED GALVANIZED PANEL TO BE FACTORY PAINTED. COLOR TBD.

8 MECHANICAL SCREEN PLAN DETAIL
Scale: 3" = 1'-0"

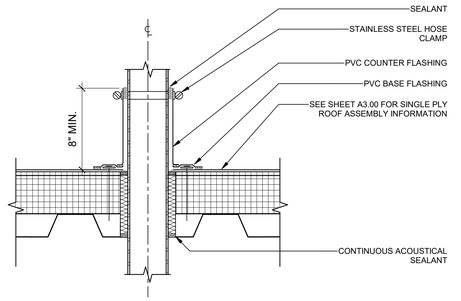


NOTE:
1. ALL EXPOSED STEEL SHALL BE HOT-DIP GALVANIZED AND PAINTED UNLESS OTHERWISE NOTED
2. REFERENCE STRUCTURAL DRAWINGS FOR MECHANICAL SCREEN FRAMING DETAILS
3. REFERENCE STRUCTURAL ROOF PLAN FOR MECHANICAL SCREEN POST LOCATIONS ON SHEET
4. PERFORATED CORRUGATED GALVANIZED PANEL TO BE FACTORY PAINTED. COLOR TBD.

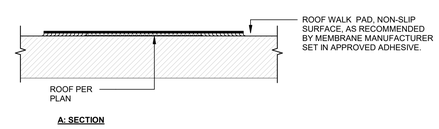
5 MECHANICAL SCREEN SECTION DETAIL
Scale: 3" = 1'-0"



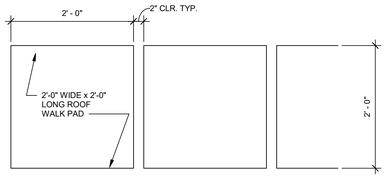
3 TYP VENT STACK PENETRATION
Scale: 3" = 1'-0"



2 PIPE/HSS PENETRATION @ METAL DECK
Scale: 1 1/2" = 1'-0"



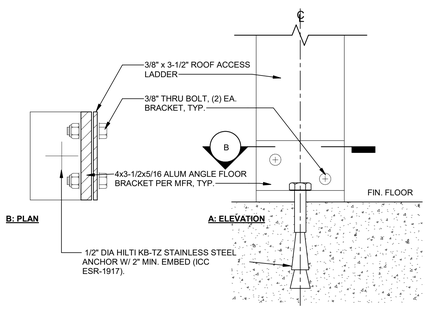
A: SECTION



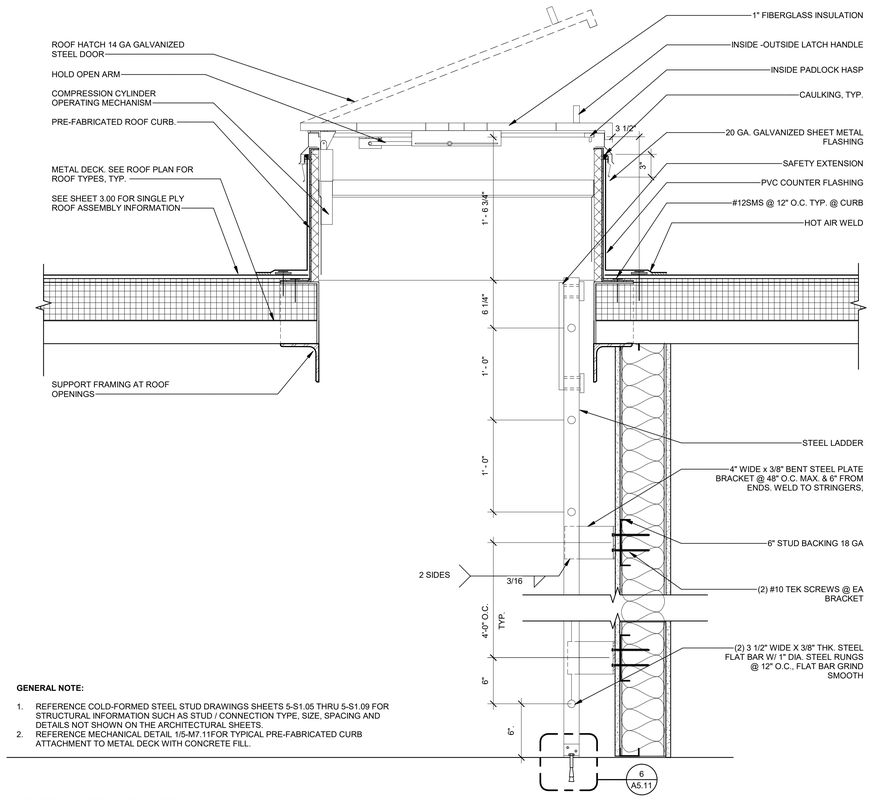
B: PLAN VIEW

NOTE:
LAY OUT ROOF WALK PADS AROUND MECHANICAL EQUIPMENT ON ROOF & CONNECT BETWEEN THE EQUIPMENT & TO THE POINT OF ROOF ACCESS

1 ROOF WALK PAD, TYP.
Scale: 1" = 1'-0"



6 ACCESS LADDER BASE PLATE
Scale: 6" = 1'-0"



GENERAL NOTE:

1. REFERENCE COLD-FORMED STEEL STUD DRAWINGS SHEETS S-S1.05 THRU S-S1.09 FOR STRUCTURAL INFORMATION SUCH AS STUD / CONNECTION TYPE, SIZE, SPACING AND DETAILS NOT SHOWN ON THE ARCHITECTURAL SHEETS.
2. REFERENCE MECHANICAL DETAIL 1/5-M7.11FOR TYPICAL PRE-FABRICATED CURB ATTACHMENT TO METAL DECK WITH CONCRETE FILL.

4 ROOF HATCH @ METAL
Scale: 1 1/2" = 1'-0"

REVISIONS
1 1ST PC RESUBMITTAL 4/14/23
2 2ND PC RESUBMITTAL 09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT
KEVIN ORTEGA DOOLEY
No. C-34858
Exp. 8-31-23
STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

NAC ARCHITECTURE
nacarchitecture.com
837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012
P:323.475.8075

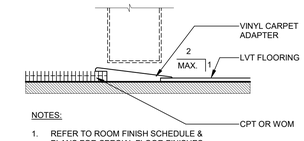
NAC NO 161-21001
DRAWN Author
CHECKED Checker
DATE 10/05/2026

AHJ STAMP APPROVAL
10/10/2023, 8:51:54 AM
BELL-B55531

ROOF DETAILS
CD
A5.11

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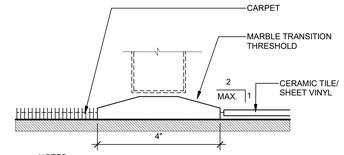


NOTES:

1. REFER TO ROOM FINISH SCHEDULE & PLANS FOR SPECIAL FLOOR FINISHES
2. REFER TO DOOR HARDWARE SETS FOR OTHER SPECIFIED TRANSITIONS/THRESHOLDS

4 FLOOR THRESHOLDS - CARPET TO LVT

Scale: 6" = 1'-0"

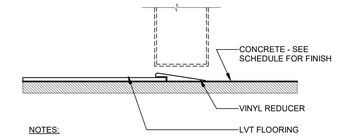


NOTES:

1. REFER TO ROOM FINISH SCHEDULE & PLANS FOR SPECIAL FLOOR FINISHES
2. REFER TO DOOR HARDWARE SETS FOR OTHER SPECIFIED TRANSITIONS/THRESHOLDS

3 FLOOR THRESHOLDS - CARPET TO CERAMIC TILE

Scale: 6" = 1'-0"

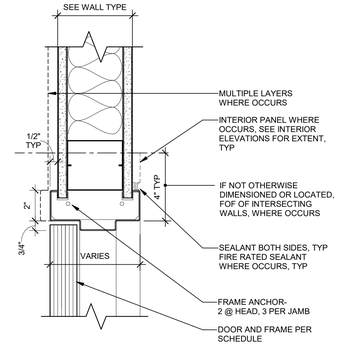


NOTES:

1. REFER TO ROOM FINISH SCHEDULE & PLANS FOR SPECIAL FLOOR FINISHES
2. REFER TO DOOR HARDWARE SETS FOR OTHER SPECIFIED TRANSITIONS/THRESHOLDS

2 FLOOR THRESHOLD - LVT TO CONCRETE

Scale: 6" = 1'-0"

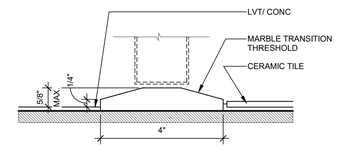


NOTE:

1. CONT GYP LAYERS BEHIND FRAME AT ALL FIRE RATED WALLS, TYP

6 HM DOOR HEAD/JAMB

Scale: 3" = 1'-0"

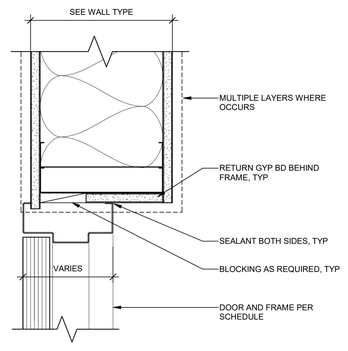


NOTES:

1. REFER TO ROOM FINISH SCHEDULE & PLANS FOR SPECIAL FLOOR FINISHES
2. REFER TO DOOR HARDWARE SETS FOR OTHER SPECIFIED TRANSITIONS/THRESHOLDS

1 FLOOR THRESHOLD - LVT / CONCRETE TO CERAMIC TILE

Scale: 6" = 1'-0"



5 HM DOOR HEAD/JAMB @ 8"+ WALL

Scale: 3" = 1'-0"

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10/10/2023, 8:51:54 AM
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BIDDING SET

REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT — VICTOR ORTEGA JR. — No. C-34694 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT

FIRE STATION 163

6320 PINE AVENUE, BELL, CA 90201

NAC ARCHITECTURE
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837 N SPRING STREET | THIRD FLOOR
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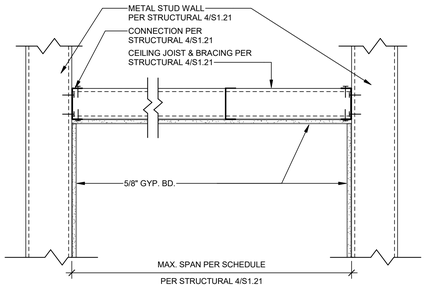
NAC NO	161-21001
DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

DOOR DETAILS

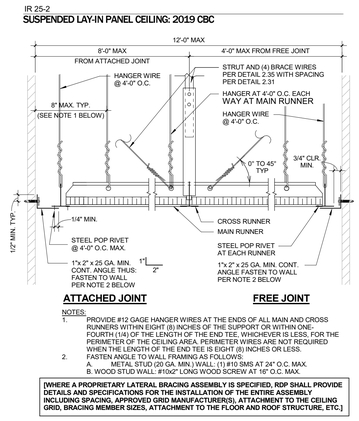
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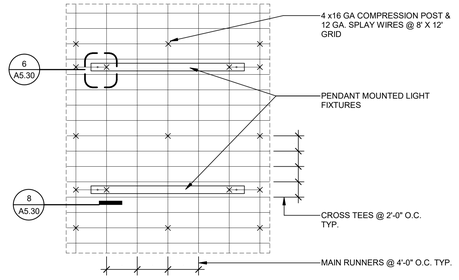
10 TYP. FRAMED GYP. BRD. CEILING
Scale: 1 1/2" = 1'-0"



NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. FASTEN ANGLE TO WALL FRAMING AS FOLLOWS:
   A. METAL STUD (20 GA. MIN.) WALL: (1) #10 SMS AT 24" O.C. MAX.
   B. WOOD STUD WALL: #10x2" LONG WOOD SCREW AT 16" O.C. MAX.

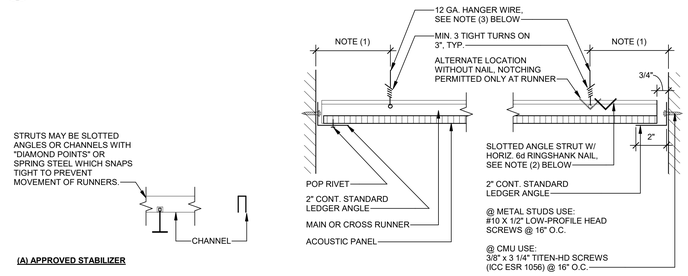
[WHERE A PROPRIETARY LATERAL BRACING ASSEMBLY IS SPECIFIED, RDP SHALL PROVIDE DETAILS AND SPECIFICATIONS FOR THE INSTALLATION OF THE ENTIRE ASSEMBLY INCLUDING SPACING, APPROVED GRID MANUFACTURER(S), ATTACHMENT TO THE CEILING GRID, BRACING MEMBER SIZES, ATTACHMENT TO THE FLOOR AND ROOF STRUCTURE, ETC.]

9 TYPICAL SECTION @ EXIT CORRIDOR (2019 CBC)
Scale: 3" = 1'-0"

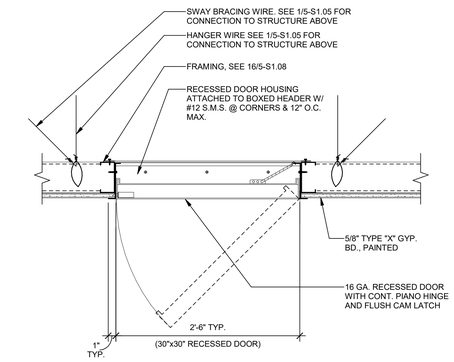


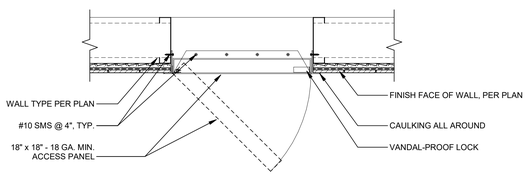
NOTE:
1. WHERE PENDANT-MOUNTED LIGHT FIXTURES ARE TO BE INSTALLED IN AREAS WITH A SUSPENDED CEILING, THE CONSTRUCTION DOCUMENTS SHALL INCLUDE COMPLETE SUPPORT DETAILS COMPLYING WITH THIS IR AND DSA IR16-9; PENDANT MOUNTED LIGHT FIXTURES.
2. SUPPORT PENDANT-MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING TWO (2) TIMES THE WEIGHT OF THE FIXTURE.
3. IF A PENDANT-MOUNTED LIGHT FIXTURE IS DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING (I.E., AIRCRAFT CABLES TO WALLS), THEN A BRACE ASSEMBLY IS NOT REQUIRED ABOVE THE CEILING.
4. IF A PENDANT-MOUNTED LIGHT FIXTURE IS FREE TO SWING 45 DEGREES FROM VERTICAL IN ALL DIRECTIONS, AND IS NOT DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING, THEN A BRACING ASSEMBLY IS ONLY REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING. SPECIAL DETAILS ARE REQUIRED TO ATTACH THE PENDANT HANGER TO THE BRACING ASSEMBLY TO TRANSMIT THE ORIZONTAL AND VERTICAL FORCES. EXCEPTION: WHERE THE WEIGHT OF THE FIXTURE IS LESS THAN 20LBS., THE VERTICAL COMPONENT OF THE BRACE FORCE NEED NOT BE CONSIDERED SO NO COMPRESSION STRUT/POST IS REQUIRED.
5. RIGID CONDUIT SHALL NOT BE USED FOR ATTACHMENT OF THE FIXTURES.

5 PENDANT MOUNTED LIGHT FIXTURE @ SUSPENDED CEILING
Scale: 1 1/2" = 1'-0"

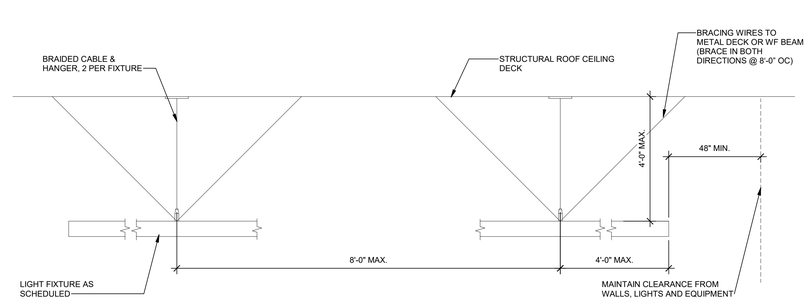


2B ACCESS PANEL @ GYP. BRD. CEILING
Scale: 1 1/2" = 1'-0"

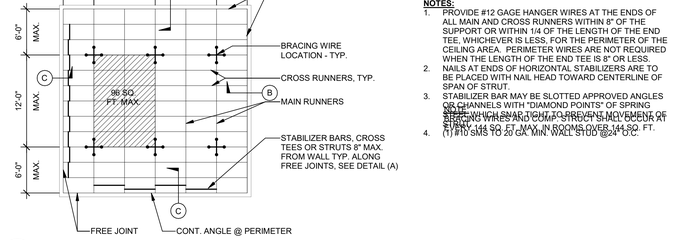




2A ACCESS PANEL @ GYP. BRD. CEILING
Scale: 1 1/2" = 1'-0"

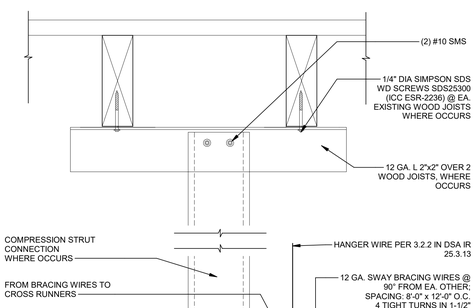


8 PENDANT LIGHT DIAGRAM
Scale: 1 1/2" = 1'-0"



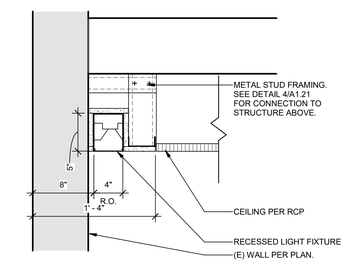
NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN 8" OF THE SUPPORT OR WITHIN 1/4 OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS 8" OR LESS.
2. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTERLINE OF SPAN OF STRUT.
3. STABILIZER BAR MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF BRACING WIRES AND COMPRESSION STRUTS. SHALL OCCUR AT SUBWAY LOCATED AT MAX. IN ROOMS OVER 144 SQ. FT.
4. (1) #10 SMS TO 20 GA. MIN. WALL STUD @24" O.C.

4 TYPICAL CEILING PLAN FOR 12'-0" X 8'-0" BRACE ASSEMBLY SPACING
Scale: 1/8" = 1'-0"

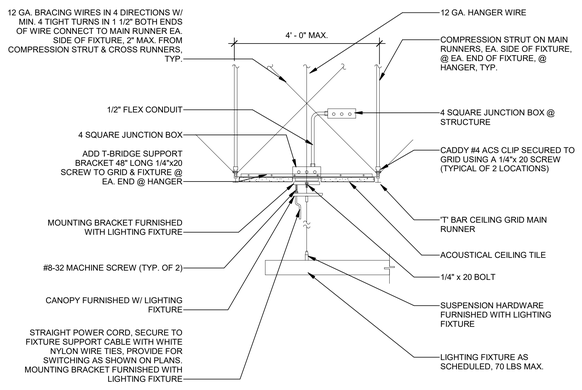


NOTE:
1. SUSPENDED GYPSUM BOARD CEILING SHALL BE INSTALLED PER DSA 1R 25-3.13
2. MECH. DUCTS REQUIRE INDEPENDENT SUPPORT TO STRUCTURE ABOVE, SEE STRUCTURAL

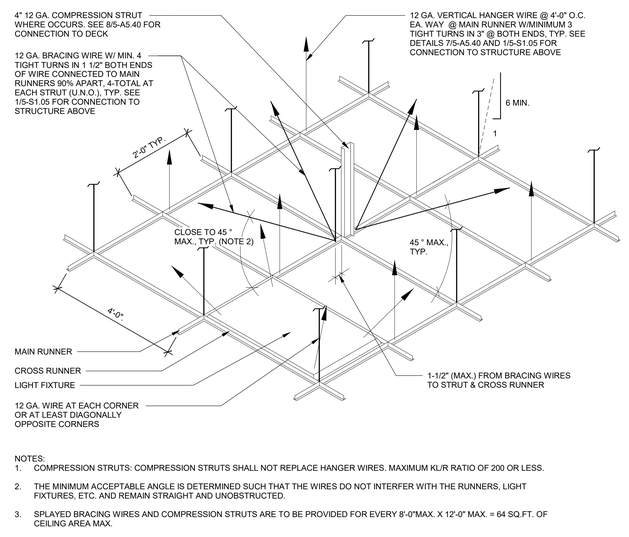
1 TYP. SUSPENDED GYP. BRD. CEILING @ WOOD FRAMED ROOF
Scale: 3" = 1'-0"



7 SOFFIT WITH RECCESSED LIGHT
Scale: 1 1/2" = 1'-0"



6 PENDANT MOUNTED LIGHT FIXTURE TYP.
Scale: 1 1/2" = 1'-0"



NOTES:
1. COMPRESSION STRUTS: COMPRESSION STRUTS SHALL NOT REPLACE HANGER WIRES. MAXIMUM KL/R RATIO OF 200 OR LESS.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFER WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.
3. SPLAYED BRACING WIRES AND COMPRESSION STRUTS ARE TO BE PROVIDED FOR EVERY 8'-0"MAX. X 12'-0" MAX. = 64 SQ.FT. OF CEILING AREA MAX.

3 SUSPENDED CEILING -SUSPENSION AND BRACING ASSEMBLY
Scale: 1 1/2" = 1'-0"

REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

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LICENSED ARCHITECT
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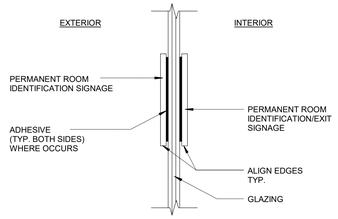
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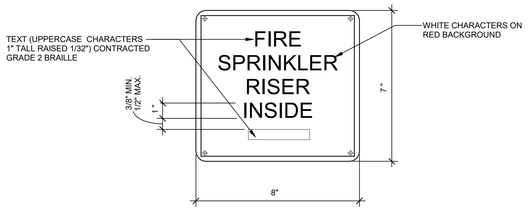
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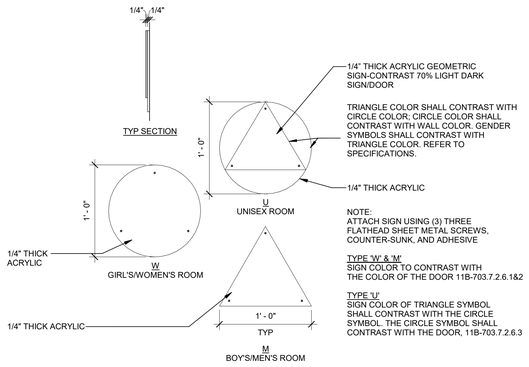


11 SIGNAGE @ GLAZING
Scale: 3" = 1'-0"



NOTE: SEE DETAIL 3/- FOR MOUNTING HEIGHT

7 FIRE SPRINKLER RISER INSIDE SIGN (FR)
N.T.S.



4 RESTROOM DOOR SIGNS (NON-TACTILE) (W, M, U)
Scale: 1 1/2" = 1'-0"

SIGNAGE NOTES

11B-703.2 RAISED CHARACTERS

RAISED CHARACTERS SHALL COMPLY WITH SECTION 11B-703.2 AND SHALL BE DUPLICATED IN BRAILLE COMPLYING WITH SECTION 11B-703.3. RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDINACE WITH SECTION 11B-703.4.

11B-703.2.1 DEPTH: RAISED CHARACTERS SHALL BE 1/32 INCH MIN. ABOVE THEIR BACKGROUND.

11B-703.2.2 CASE: CHARACTERS SHALL BE UPPERCASE.

11B-703.2.3 STYLE: CHARACTERS SHALL BE SANS SERIF. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSAL FORMS.

11B-703.2.4 CHARACTER PROPORTIONS: CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".

11B-703.2.5 CHARACTER HEIGHT: CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8" MINIMUM AND 2" MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".

11B-703.2.6 STROKE THICKNESS: STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15% MAXIMUM OF THE HEIGHT OF THE CHARACTER.

11B-703.2.7 CHARACTER SPACING: CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8" MIN. AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHERE CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16" MIN. AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8" MIN. AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAX. AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8" MINIMUM.

11B-703.2.8 LINE SPACING: SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135% MIN. AND 170% MAX. OF THE RAISED CHARACTER HEIGHT.

11B-703.2.9 FORMAT: TEXT SHALL BE IN A HORIZONTAL FORMAT.

11B-703.3 BRAILLE

BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH SECTIONS 11B-703.3 & 11B-703.4.

11B-703.3.1 DIMENSIONS AND CAPITALIZATION: BRAILLE DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND SHALL COMPLY WITH TABLE 11B-703.3.1. THE INDICATION OF AN UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS, AND ACRONYMS.

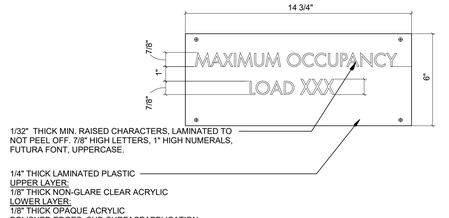
11B-703.3.2 POSITION: BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" MIN. AND 1/2" MAX. FROM ANY OTHER TACTILE CHARACTERS AND 3/8" MIN. FROM RAISED BORDERS AND DECORATIVE ELEMENTS.
EXCEPTION: BRAILLE PROVIDED ON ELEVATOR CAR CONTROLS SHALL BE SEPARATED 3/16" MIN. AND SHALL BE LOCATED EITHER DIRECTLY BELOW THE CORRESPONDING RAISED CHARACTERS OR SYMBOLS

11B-703.4 INSTALLATION HEIGHT AND LOCATION

SIGNS WITH TACTILE CHARACTERS SHALL COMPLY WITH SECTION 11B-703.4.

11B-703.4.1 HEIGHT ABOVE FINISH FLOOR OR GROUND: TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48" MIN. ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED FROM THE BASELINE OF THE LOWEST BRAILLE CELLS CHARACTER, AND 60" MAX. ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS.
EXCEPTION: TACTILE CHARACTERS FOR ELEVATOR CAR CONTROLS SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-703.4.1.

11B-703.4.2 LOCATION: WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN. BY 18" MIN., CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. WHERE PROVIDED, SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL BE LOCATED AT THE ENTRANCE TO, AND OUTSIDE OF THE ROOM OR SPACE. WHERE PROVIDED, SIGNS IDENTIFYING EXITS SHALL BE LOCATED AT THE EXIT DOOR WHEN APPROACHED IN THE DIRECTION OF EGRESS TRAVEL.
EXCEPTION: IN ALTERATIONS WHERE SIGN INSTALLATION LOCATIONS IDENTIFIED IN SECTION 11B-703.4.2 ARE OBSTRUCTED OR OTHERWISE UNAVAILABLE FOR SIGN INSTALLATION, SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.



NOTE:
1. SEE SIGNAGE NOTE FOR SIGNAGE INFORMATION
2. SIGN SHALL COMPLY WITH CBC 1004.9

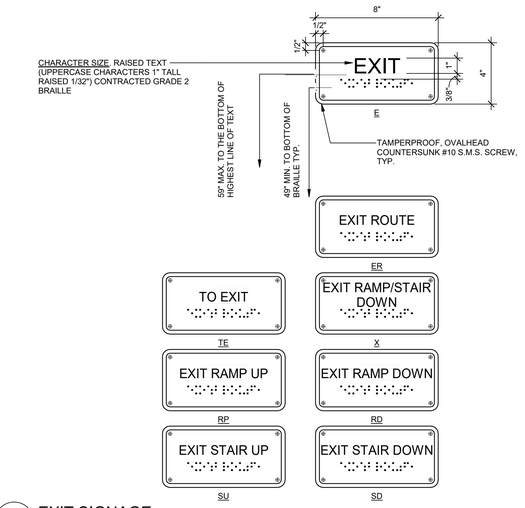
10 MAX. OCCUPANCY LOAD (O)
Scale: 3" = 1'-0"

CHARACTER TYPE. INTEGRAL LETTERS, SYMBOL & BRAILLE RAISED 1/32" BY ETCHING OR SAND BLASTING AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE COMPLYING WITH 11B 703.2. TYP. FOR ALL SIGNS

PROPORTIONS. VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 20 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER

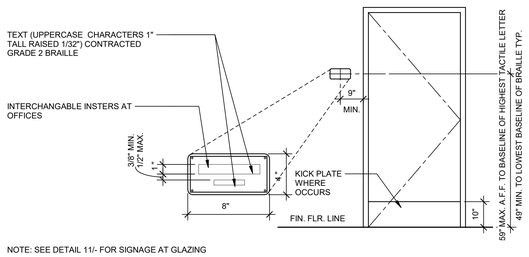
FINISH AND CONTRAST. CHARACTERS, SYMBOLS AND BACKGROUNDS SHALL HAVE A NON-GLARE FINISH. CHARACTERS & SYMBOLS SHALL HAVE 70% MINIMUM CONTRAST DIFFERENCE WITH BACKGROUNDS.

BRAILLE. CALIFORNIA CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL BE 1/10" (2.54 MM) ON CENTERS IN EACH CELL WITH 2/10" (5.08 MM) SPACE BETWEEN CELLS, MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/40" (0.653 MM) ABOVE THE BACKGROUND W/ ROUNDED OR EASED EDGES.



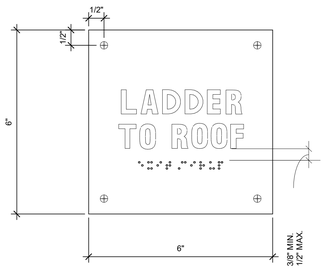
6 EXIT SIGNAGE
Scale: 3" = 1'-0"

PERMANENT ROOM IDENTIFICATION SIGNAGE TO BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. MOUNTING LOCATION MUST ALLOW A PERSON TO APPROACH WITHIN 3" WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING PATH OF THE DOOR. (PLACE SIGN NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT, WHERE THERE IS NO SPACE ADJACENT TO THE LATCH SIDE OF THE DOOR). ROOM IDENTIFICATION SIGNAGE TO INDICATE ROOM NAME AND NUMBER.



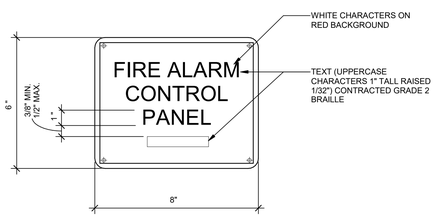
NOTE: SEE DETAIL 11/- FOR SIGNAGE AT GLAZING

3 ROOM NAME & NUMBER SIGN (R)
Scale: 1/2" = 1'-0"



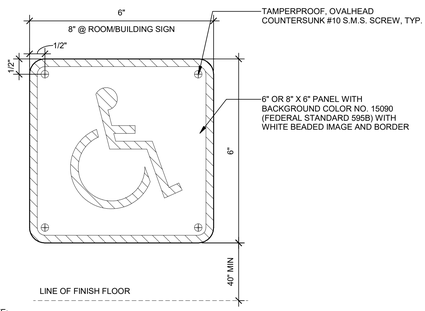
NOTE:
1. SEE SIGNAGE NOTE FOR SIGNAGE INFORMATION
2. SEE DETAIL 3/- FOR MOUNTING HEIGHT

9 ROOF ACCESS (RA)
Scale: 6" = 1'-0"



NOTE: SEE DETAIL 3/- FOR MOUNTING HEIGHT

8 F.A.C.P. SIGN
N.T.S.

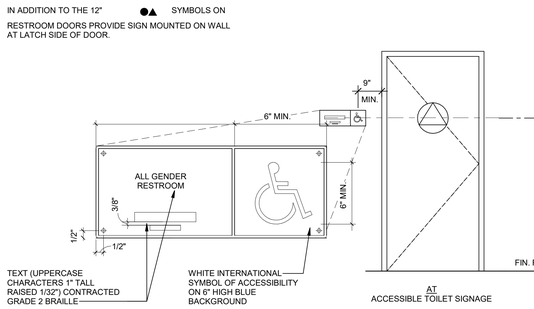


NOTE:
ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USABLE BY PERSONS WITH DISABILITIES SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN, TO BE VISIBLE TO PERSONS APPROACHING FROM PEDESTRIANS WAYS.

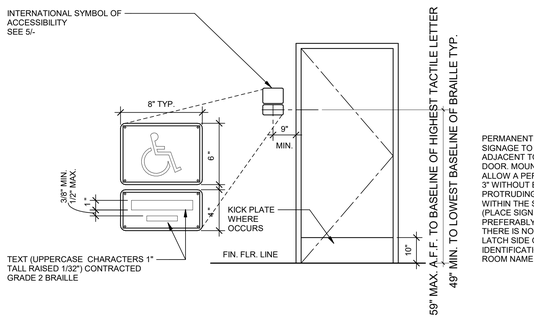
ISA (INTERNATIONAL SYMBOL OF ACCESSIBILITY) SHALL COMPLY WITH CBC 11B-703.7 & CBC FIGURE 11B-703.7.2.1 (PROPORTIONS), TYP.

5 INTERNATIONAL SYMBOL OF ACCESSIBILITY (A)
Scale: 6" = 1'-0"

IN ADDITION TO THE 12" ●▲ SYMBOLS ON RESTROOM DOORS PROVIDE SIGN MOUNTED ON WALL AT LATCH SIDE OF DOOR.



2 RESTROOM SIGNAGE - ALL GENDER (AT, T)
Scale: 1/2" = 1'-0"



PERMANENT ROOM IDENTIFICATION SIGNAGE TO BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. MOUNTING LOCATION MUST ALLOW A PERSON TO APPROACH WITHIN 3" WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING PATH OF THE DOOR. (PLACE SIGN NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT, WHERE THERE IS NO SPACE ADJACENT TO THE LATCH SIDE OF THE DOOR). ROOM IDENTIFICATION SIGNAGE TO INDICATE ROOM NAME AND NUMBER.

1 BUILDING / ROOM ID SIGN WITH ISA SIGN (AR)
Scale: 1/2" = 1'-0"

AHJ STAMP APPROVAL

10/10/2023, 8:51:54 AM
BELL-B55531

REVISIONS
1 1ST PC RESUBMITTAL 4/14/23
2 2ND PC RESUBMITTAL 09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT — KEVIN ORTEGA DOOLEY — No. C-34858 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
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NAC NO 161-21001
DRAWN Author
CHECKED Checker
DATE 10/05/2026

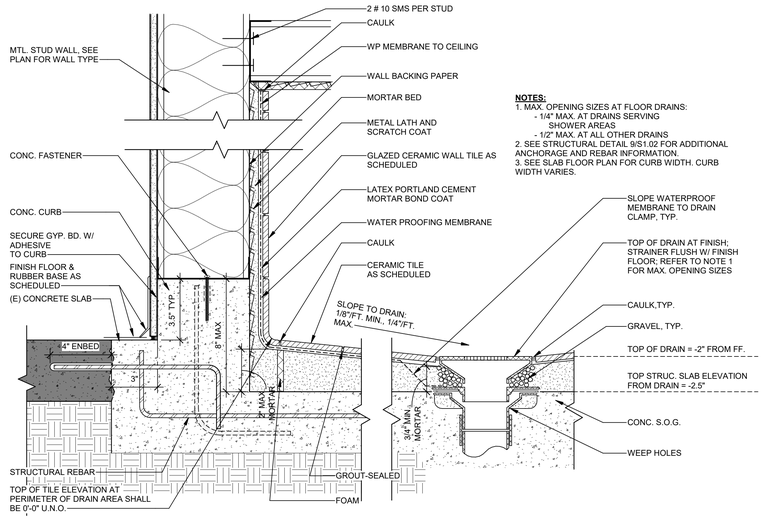
SIGNAGE DETAILS

CD

A5.41

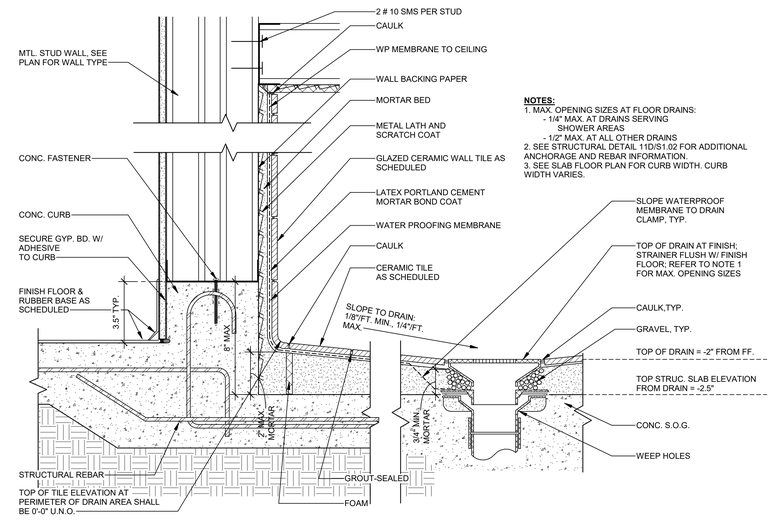
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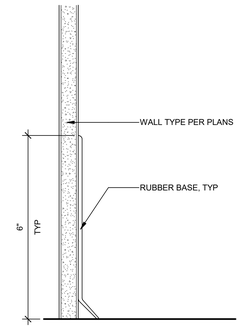
NOTES:
1. MAX. OPENING SIZES AT FLOOR DRAINS:
   - 1/4" MAX. AT DRAINS SERVING SHOWER AREAS
   - 1/2" MAX. AT ALL OTHER DRAINS
2. SEE STRUCTURAL DETAIL 9/S1.02 FOR ADDITIONAL ANCHORAGE AND REBAR INFORMATION.
3. SEE SLAB FLOOR PLAN FOR CURB WIDTH. CURB WIDTH VARIES.

10 CONCRETE CURB AND FLOOR DRAIN (REMODEL)
Scale: 3" = 1'-0"

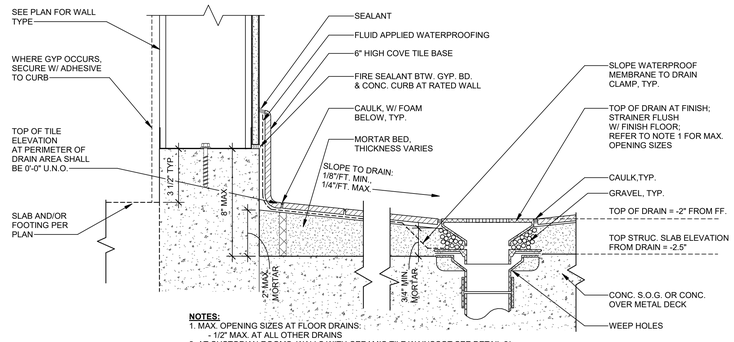


NOTES:
1. MAX. OPENING SIZES AT FLOOR DRAINS:
   - 1/4" MAX. AT DRAINS SERVING SHOWER AREAS
   - 1/2" MAX. AT ALL OTHER DRAINS
2. SEE STRUCTURAL DETAIL 11D/S1.02 FOR ADDITIONAL ANCHORAGE AND REBAR INFORMATION.
3. SEE SLAB FLOOR PLAN FOR CURB WIDTH. CURB WIDTH VARIES.

9 CONCRETE CURB AND FLOOR DRAIN (ADDITION)
Scale: 3" = 1'-0"

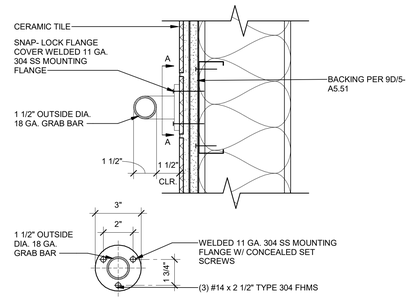


11 TYP RUBBER BASE
Scale: 6" = 1'-0"



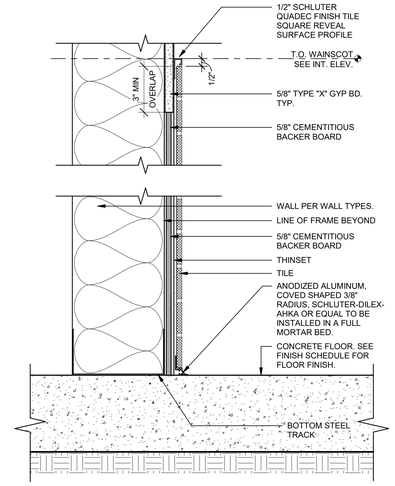
NOTES:
1. MAX. OPENING SIZES AT FLOOR DRAINS:
   - 1/2" MAX. AT ALL OTHER DRAINS
2. AT CUSTODIAN ROOMS: WALLS WITH CERAMIC TILE WAINSCOT SEE DETAIL 2/-

8 CONCRETE CURB & FLOOR DRAIN AT TILED FLOOR
Scale: 3" = 1'-0"

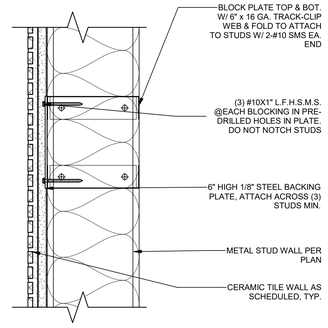


A: MOUNTING FLANGE

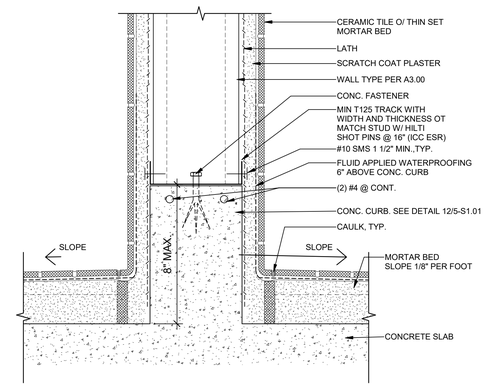
7 GRAB BAR ANCHORAGE
Scale: 3" = 1'-0"



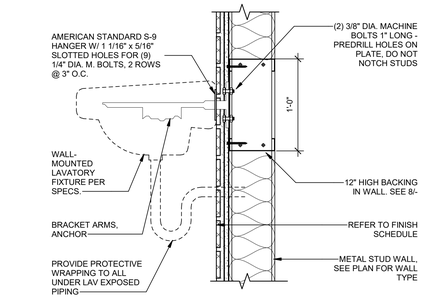
6 VERTICAL TILE TRANSITION
Scale: 3" = 1'-0"



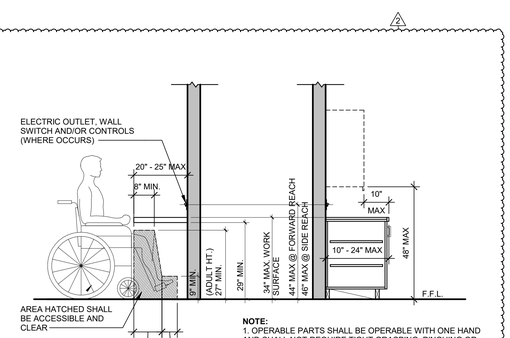
5 BACKING ANCHORAGE AT CERAMIC TILE
Scale: 3" = 1'-0"



4 CERAMIC TILE WALL AT RESTROOMS
Scale: 3" = 1'-0"

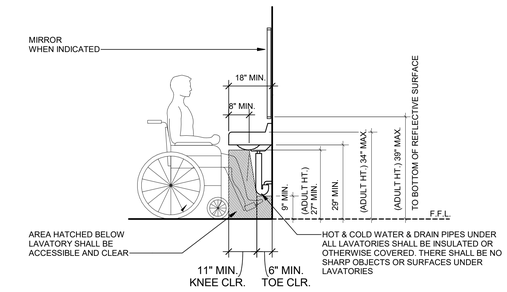


3 ANCHORAGE FOR LAVATORY
Scale: 1 1/2" = 1'-0"



NOTE:
1. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
2. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
3. FORWARD REACH RANGES TO COMPLY WITH 11B-308.2
4. SIDE REACH RANGES TO COMPLY WITH 11B-308.3

2 WORK SURFACE CLEARANCE
Scale: 1/2" = 1'-0"



1 LAVATORY CLEARANCE
Scale: 1/2" = 1'-0"

REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT — KEVIN ORTEGA NAC — No. C-34858 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

AHJ STAMP APPROVAL

10/10/2023, 8:51:54 AM
BELL-B55531

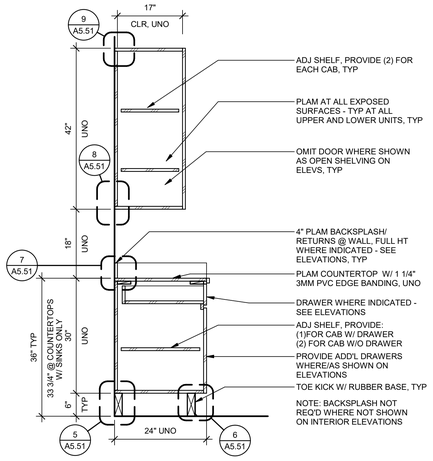
INTERIOR DETAILS

CD

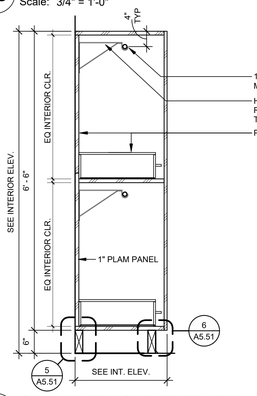
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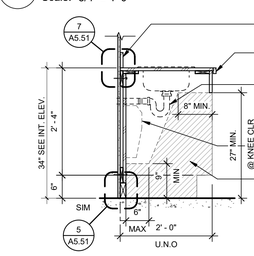
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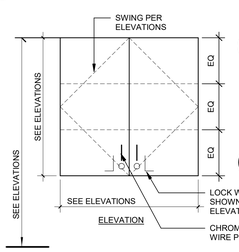


18 CM - TYPICAL CABINET SECTION
Scale: 3/4" = 1'-0"

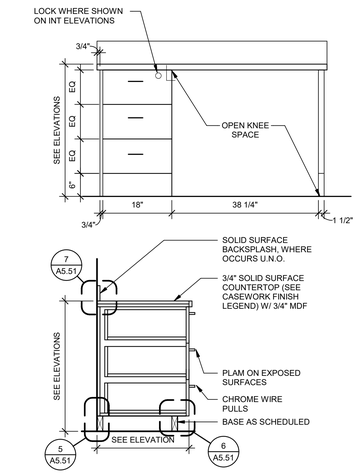




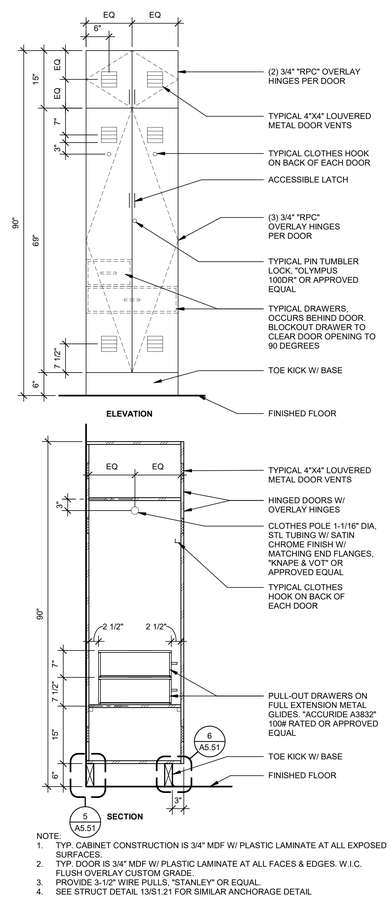
16 CM - ACCESSIBLE SINK CABINET
Scale: 3/4" = 1'-0"



15 CM-UPPER CABINET DOUBLE
Scale: 3/4" = 1'-0"

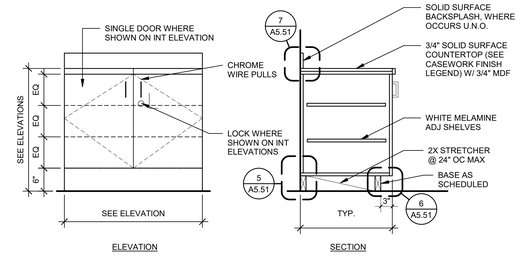


14 CM-DESK
Scale: 3/4" = 1'-0"

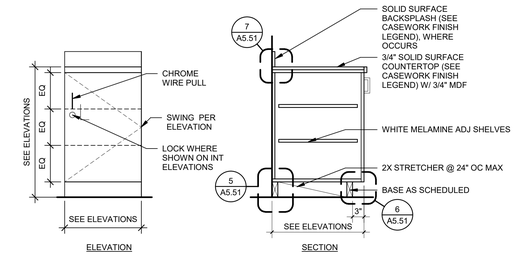


NOTE:
1. TYP. CABINET CONSTRUCTION IS 3/4" MDF W/ PLASTIC LAMINATE AT ALL EXPOSED SURFACES.
2. TYP. DOOR IS 3/4" MDF W/ PLASTIC LAMINATE AT ALL FACES & EDGES. W.I.C. FLUSH OVERLAY CUSTOM GRADE.
3. PROVIDE 3-1/2" WIRE PULLS, "STANLEY" OR EQUAL.
4. SEE STRUCT DETAIL 13/S1.21 FOR SIMILAR ANCHORAGE DETAIL

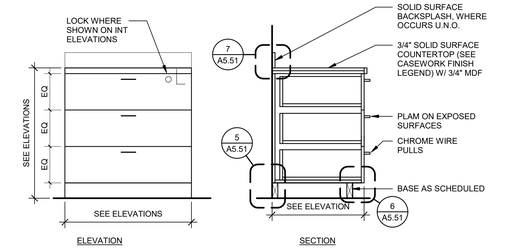
13 CN - LOCKER
Scale: 3/4" = 1'-0"



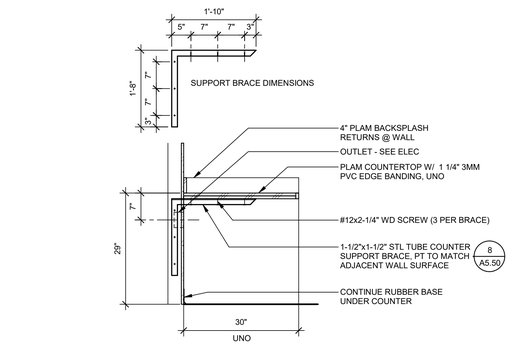
12 CM-BASE CABINET DOUBLE
Scale: 3/4" = 1'-0"



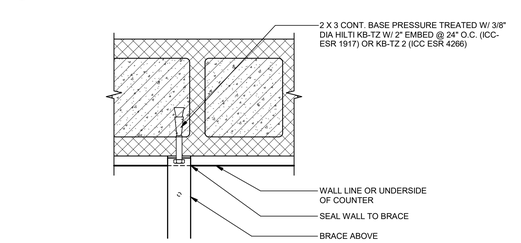
11 CM-BASE CABINET SINGLE
Scale: 3/4" = 1'-0"



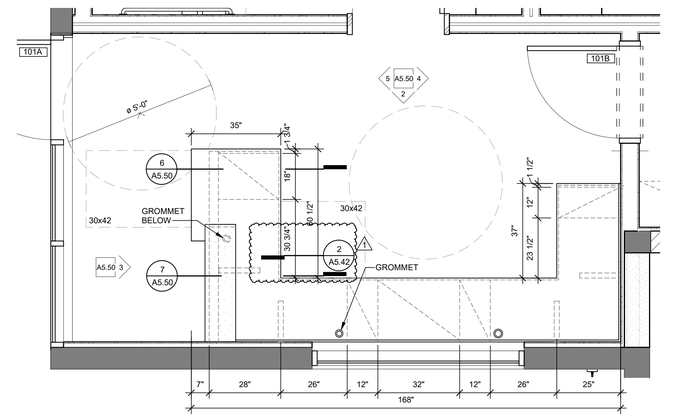
10 CM-DRAWERS 3X
Scale: 3/4" = 1'-0"



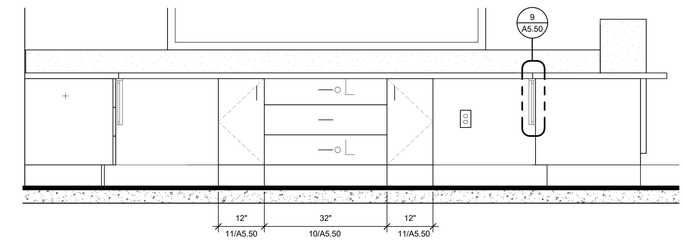
9 KNEE SPACE - SUPPORT BRACE
Scale: 3/4" = 1'-0"



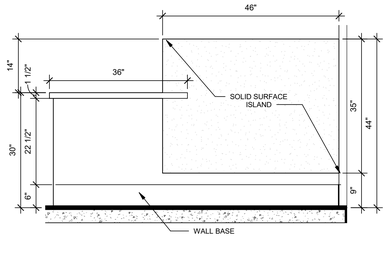
8 COUNTER SUPPORT BRACKET
Scale: 3" = 1'-0"



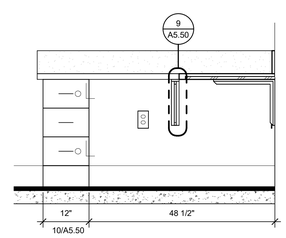
1 ENTRY LOBBY - RECEPTION DESK
Scale: 1/2" = 1'-0"



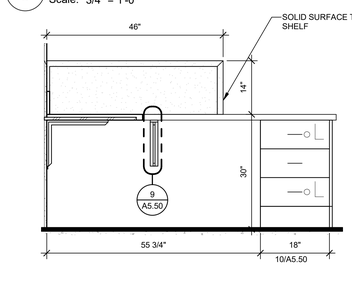
2 RECEPTION DESK - A
Scale: 3/4" = 1'-0"



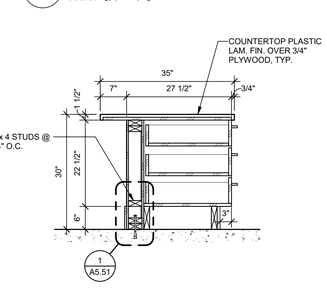
3 RECEPTION DESK - D
Scale: 3/4" = 1'-0"



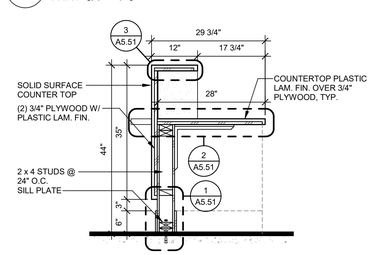
4 RECEPTION DESK - C
Scale: 3/4" = 1'-0"



5 RECEPTION DESK - B
Scale: 3/4" = 1'-0"



6 RECEPTION SECTION - A
Scale: 3/4" = 1'-0"



7 RECEPTION SECTION - B
Scale: 3/4" = 1'-0"

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10/10/2023, 8:51:54 AM
BELL-B55531

REVISIONS
1 1ST PC RESUBMITTAL 4/14/23
2 2ND PC RESUBMITTAL 09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT
JUAN ORTEGA JACOBO
No. C-34858
Exp. 8-31-23
STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

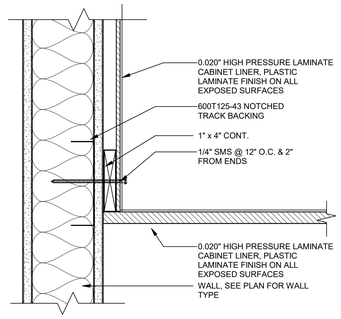
NAC ARCHITECTURE
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837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012
P:323.475.8075

NAC NO 161-21001
DRAWN Author
CHECKED Checker
DATE 10/05/2026

CASEWORK DETAILS
CD
A5.50

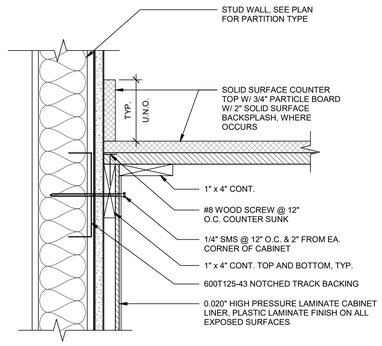
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BIDDING SET



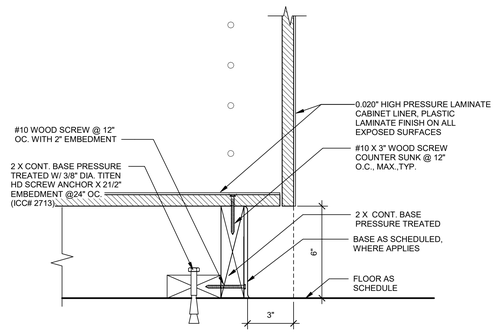
8 UPPER CABINET ANCHORAGE- BOTTOM, TYP

Scale: 3" = 1'-0"



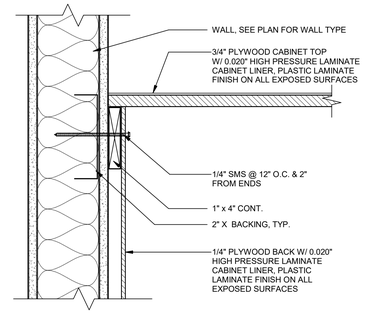
7 CABINET COUNTERTOP

Scale: 3" = 1'-0"



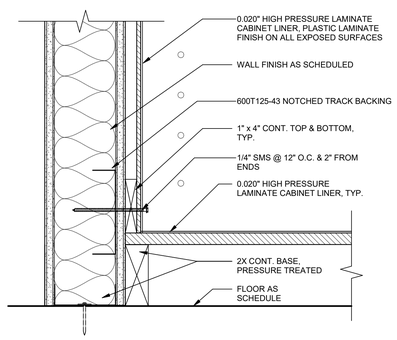
6 CABINET BASE AT BASE

Scale: 3" = 1'-0"



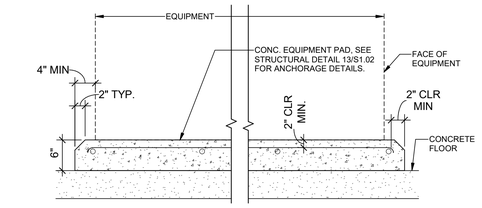
9 UPPER CABINET ANCHORAGE- TOP

Scale: 3" = 1'-0"



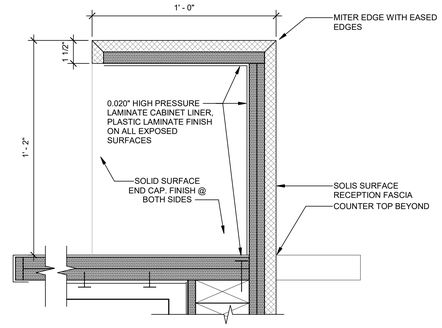
5 CABINET BASE AT STUD WALL

Scale: 3" = 1'-0"



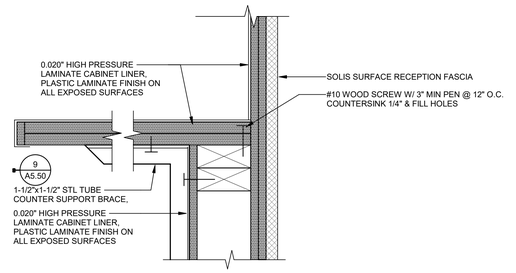
4 EQUIPMENT CONCRETE PAD

Scale: 1" = 1'-0"



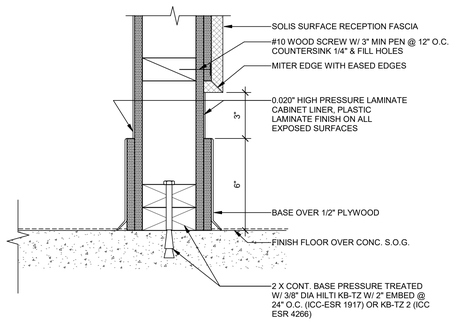
3 RECEPTION DESK - TOP COUNTER

Scale: 3" = 1'-0"



2 RECEPTION DESK - UPPER PANEL DETAIL

Scale: 3" = 1'-0"



1 RECEPTION DESK - BASE DETAIL

Scale: 3" = 1'-0"

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BIDDING SET

REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

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LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

NAC ARCHITECTURE
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NAC NO	161-21001
DRAWN	ND
CHECKED	RR
DATE	10/05/2026

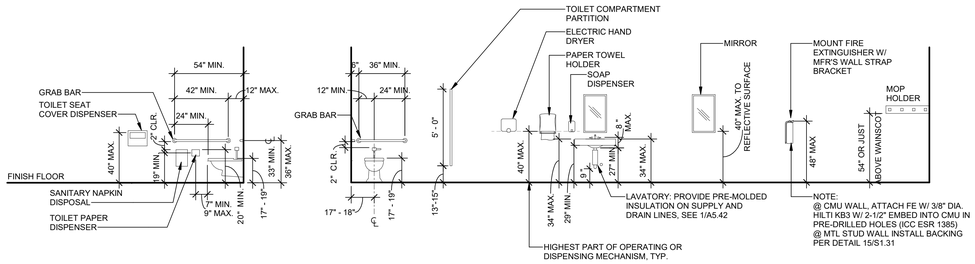
CASEWORK DETAILS

CD

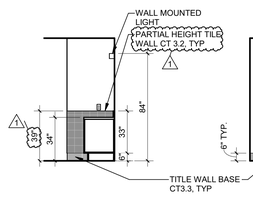
A5.51

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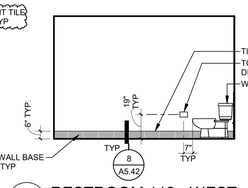
NOTES:
1. ALL EXPOSED PLUMBING PIPES UNDER ACCESSIBLE LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED.
2. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER LAVATORIES.
3. TOILET FLUSH VALVE ON WIDE SIDE AT 44" MAXIMUM A.F.F.
4. FOR TOILET ACCESSORY BACKING DETAIL SEE A5.42.
5. FOR WATER CLOSET AND URINAL PARTITIONS SEE 8/A5.42.



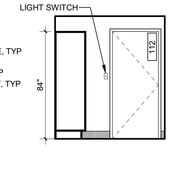
5A TYP ACCESSIBLE RESTROOM FIXTURE MOUNTING HEIGHT, U.N.O
Scale: 1/4" = 1'-0"



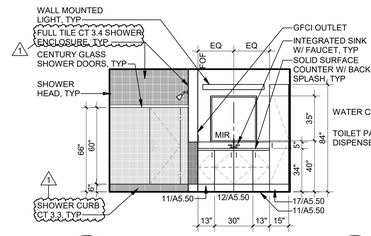
3E RESTROOM 112 - NORTH
Scale: 1/4" = 1'-0"



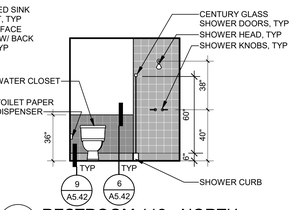
3D RESTROOM 112 - WEST
Scale: 1/4" = 1'-0"



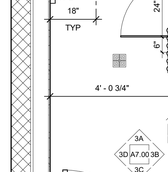
3C RESTROOM 112 - SOUTH
Scale: 1/4" = 1'-0"



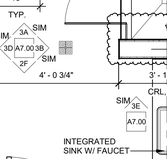
3B RESTROOM 112 - EAST
Scale: 1/4" = 1'-0"



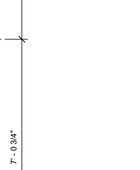
3A RESTROOM 112 - NORTH
Scale: 1/4" = 1'-0"



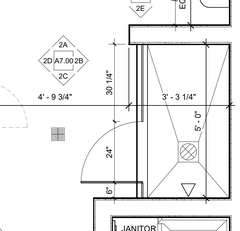
2G JANITOR 103A - EAST
Scale: 1/4" = 1'-0"



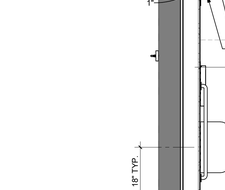
2F RESTROOM 113 - SOUTH
Scale: 1/4" = 1'-0"



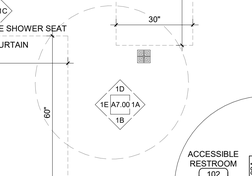
2E RESTROOM 111 - SOUTH
Scale: 1/4" = 1'-0"



2D RESTROOM 111 - WEST
Scale: 1/4" = 1'-0"



2C RESTROOM 111 - SOUTH
Scale: 1/4" = 1'-0"



2B RESTROOM 111 - EAST
Scale: 1/4" = 1'-0"

2A RESTROOM 111 - NORTH
Scale: 1/4" = 1'-0"

1G JANITOR 103A - NORTH
Scale: 1/4" = 1'-0"

1F ACCESSIBLE RESTROOM 102 - WEST
Scale: 1/4" = 1'-0"

1E ACCESSIBLE RESTROOM 102 - WEST
Scale: 1/4" = 1'-0"

1D ACCESSIBLE RESTROOM 102 - NORTH
Scale: 1/4" = 1'-0"

1C ACC. REST. 102 - EAST
Scale: 1/4" = 1'-0"

1B ACCESSIBLE RESTROOM 102 - SOUTH
Scale: 1/4" = 1'-0"

1A ACCESSIBLE RESTROOM 102 - EAST
Scale: 1/4" = 1'-0"

3 ENLARGED RESTROOM 112 & 113 PLAN
Scale: 1/2" = 1'-0"

2 ENLARGED RESTROOM 111 & JANITOR 117 PLAN
Scale: 1/2" = 1'-0"

1 ENLARGED ACCESSIBLE RESTROOM 102 PLAN
Scale: 1/2" = 1'-0"

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9/15/2023 10:20:10 AM Autodesk Docs://161-21001 FS 163/FIRE_STATION_163_Arch_R22.rvt

REVISIONS
1 1ST PC RESUBMITTAL 4/14/23
2 2ND PC RESUBMITTAL 09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT — JOHN ORTEGA CORNEJO — No. C-34698 — Exp. 8-31-23 — STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
6320 PINE AVENUE, BELL, CA 90201

NAC ARCHITECTURE
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LOS ANGELES CA 90012
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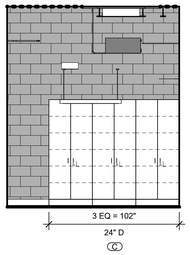
NAC NO 161-21001
DRAWN Author
CHECKED Checker
DATE 10/05/2026

ENLARGED TOILET PLANS & INTERIOR ELEVATIONS

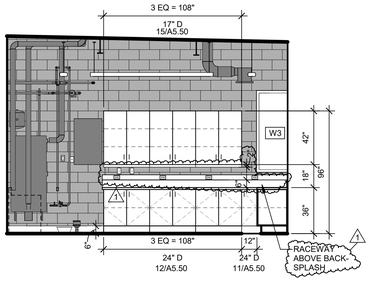
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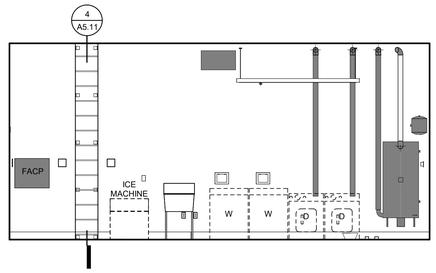
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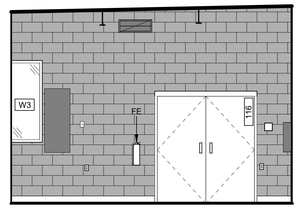
6E SECURE PARAMEDIC STG 115 - SOUTH
Scale: 1/4" = 1'-0"



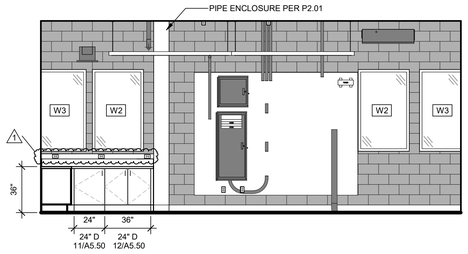
6D UTILITY/WORK AREA 116 - WEST
Scale: 1/4" = 1'-0"



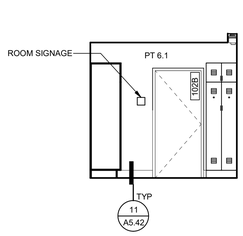
6C UTILITY/WORK AREA 116 - SOUTH
Scale: 1/4" = 1'-0"



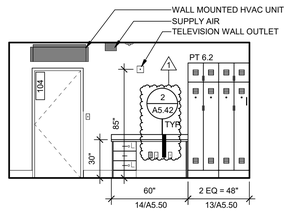
6B UTILITY/WORK AREA 116 - EAST
Scale: 1/4" = 1'-0"



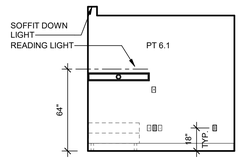
6A UTILITY/WORK AREA 116 - NORTH
Scale: 1/4" = 1'-0"



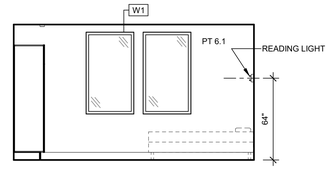
5D ACCESSIBLE DORM 104 - WEST
Scale: 1/4" = 1'-0"



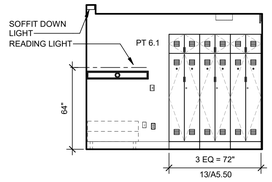
5C ACCESSIBLE DORM 104 - SOUTH
Scale: 1/4" = 1'-0"



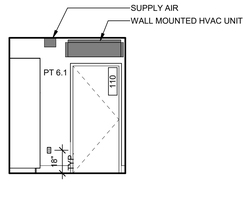
5B ACCESSIBLE DORM 104 - EAST
Scale: 1/4" = 1'-0"



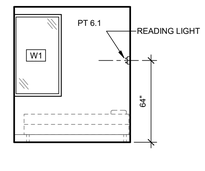
5A ACCESSIBLE DORM 104 - NORTH
Scale: 1/4" = 1'-0"



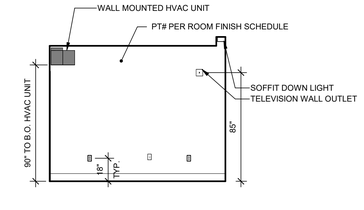
4D DORM ROOM - EAST, TYP
Scale: 1/4" = 1'-0"



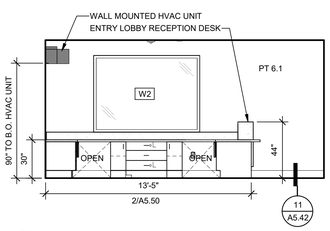
4C DORM ROOM - SOUTH, TYP
Scale: 1/4" = 1'-0"



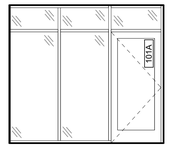
4B DORM ROOM - NORTH, TYP
Scale: 1/4" = 1'-0"



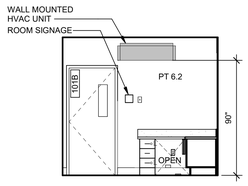
4A DORM ROOM - WEST, TYP
Scale: 1/4" = 1'-0"



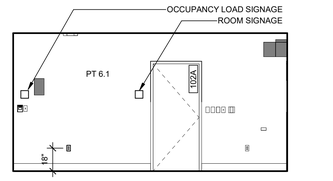
3D OFFICE/RECEPTION AREA 101 - SOUTH
Scale: 1/4" = 1'-0"



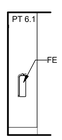
3C OFFICE/RECEPTION AREA 101 - WEST
Scale: 1/4" = 1'-0"

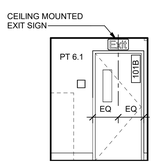


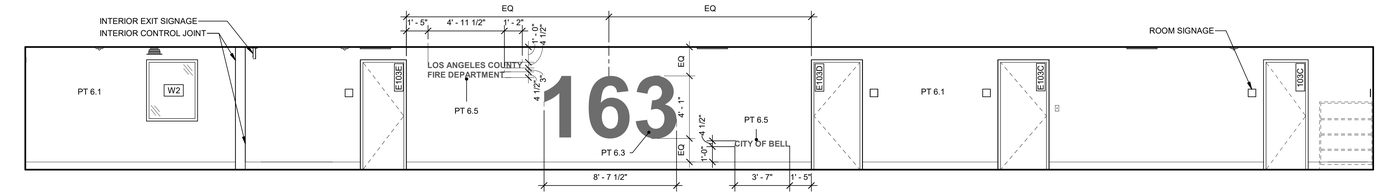
3B OFFICE/RECEPTION AREA 101 - EAST
Scale: 1/4" = 1'-0"



3A OFFICE/RECEPTION AREA 101 - NORTH
Scale: 1/4" = 1'-0"



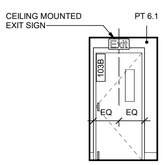


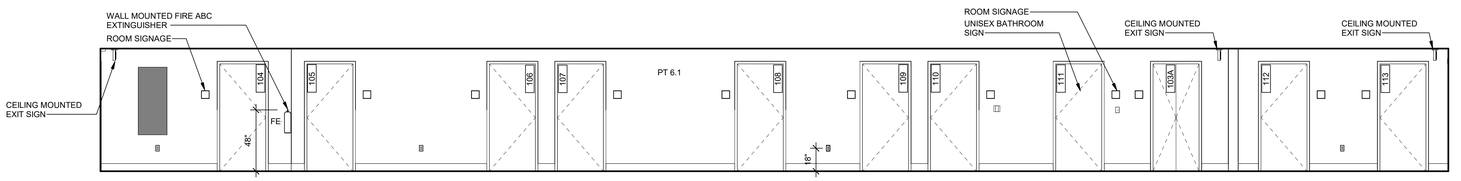


2C CORRIDOR 103 - EAST
Scale: 1/4" = 1'-0"

2B CORRIDOR 103 - WEST
Scale: 1/4" = 1'-0"

2A CORRIDOR 103 - SOUTH
Scale: 1/4" = 1'-0"





1B CORRIDOR 103B - EAST
Scale: 1/4" = 1'-0"

1A CORRIDOR 103 - NORTH
Scale: 1/4" = 1'-0"

AHJ STAMP APPROVAL

10/10/2023, 8:51:54 AM
BELL-B55531

REVISIONS

1	1ST PC RESUBMITTAL	4/14/23
2	2ND PC RESUBMITTAL	09/22/23

ISSUED FOR PERMIT

LICENSED ARCHITECT
VICTOR ORTEGA CASTRO
No. C-34858
Exp. 8-31-23
STATE OF CALIFORNIA

LOS ANGELES COUNTY FIRE DEPARTMENT
FIRE STATION 163
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P:323.475.8075

NAC NO	161-21001
DRAWN	ND
CHECKED	RR
DATE	10/05/2026

INTERIOR ELEVATIONS

CD

A7.01

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BIDDING SET

GENERAL REQUIREMENTS

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS, PROJECT BOUNDARIES AND EXISTING CONDITIONS AT THE SITE PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL CROSS-CHECK DETAILS AND DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH RELATED REQUIREMENTS ON OTHER CONSTRUCTION DOCUMENTS.

2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE STRUCTURAL ENGINEER OF RECORD (SEOR) OF ANY CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND OTHER CONSTRUCTION DOCUMENTS OR EXISTING CONDITIONS. THE CONTRACTOR SHALL NOT ORDER MATERIAL, FABRICATE ELEMENTS, OR CONSTRUCT ANY PORTION OF STRUCTURE THAT IS IN CONFLICT UNTIL RESOLUTION IS MADE.

3. WHEN DIMENSIONS ARE UNCLEAR, REQUEST CLARIFICATION FROM THE SEOR AND ARCHITECT. DO NOT SCALE DRAWINGS. UNLESS NOTED OTHERWISE, PLAN DIMENSIONS INDICATE CENTERLINE OF BEAMS AND COLUMNS, LIGHT-FRAMED WALLS ARE DIMENSIONED TO FACE OF STUDS, AND FOOTINGS ARE CENTERED UNDER THE ELEMENTS THEY SUPPORT.

4. WHERE INFORMATION IS CONFLICTING WITHIN THE STRUCTURAL DOCUMENTS, SPECIFIC DETAILS SHALL GOVERN OVER TYPICAL DETAILS, WHICH HAVE PRECEDENCE OVER THESE NOTES, WHICH IN TURN OVERRULE PROJECT SPECIFICATIONS.

5. DETAILS NOTED AS TYPICAL ON STRUCTURAL SHEETS SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. WHERE NO DETAIL IS INDICATED, CONSTRUCTION SHALL BE OF THE SAME NATURE AS FOR SIMILAR CASES OF CONSTRUCTION ON THIS PROJECT.

6. THE ARCHITECT AND SEOR SHALL INTERPRET THE CONSTRUCTION DOCUMENTS IN CASE OF POSSIBLE CONFLICT OR DISCREPANCY BETWEEN STRUCTURAL AND OTHER DISCIPLINES.

7. THE CONTRACTOR SHALL PROVIDE ALL NEW (N) MATERIALS TO PERFORM THE WORK INDICATED ON STRUCTURAL DOCUMENTS UNLESS NOTED AS EXISTING (E) OR SUPPLIED BY OTHERS. WRITTEN APPROVAL FROM THE SEOR SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL OR PRODUCT SPECIFIED ON THE STRUCTURAL DOCUMENTS.

8. STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION OR NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN OF TEMPORARY ERECTION AIDS, FORMWORK, SCAFFOLDING, SAFETY MEASURES, SHORING OF ANY PORTION OF WORK, AND PROTECTION OF ADJACENT PROPERTIES. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. VISITS TO THE SITE BY THE SEOR SHALL NOT INCLUDE OBSERVATION OR INSPECTION OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.

9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE SEOR AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE.

10. ALL STRUCTURAL FRAMING SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND LEFT IN PLACE UNTIL ADEQUATE STRUCTURE IS CONSTRUCTED FOR STABILITY.

11. CONSTRUCTION MATERIALS AND ERECTION LOADS SHALL BE DISTRIBUTED WHEN PLACED ON THE STRUCTURE SUCH THAT THEY DO NOT EXCEED DESIGN LIVE LOADS OR RESULT IN AN UNBALANCED CONDITION. MAXIMUM PERMANENT EQUIPMENT WEIGHTS, POSTED LOAD LIMITS OR OTHER RESTRICTIONS NOTED ON THE STRUCTURAL DRAWINGS SHALL NOT BE EXCEEDED WITHOUT PRIOR WRITTEN APPROVAL BY THE SEOR. UNLESS SPECIFICALLY STATED, THE STRUCTURE IS NOT DESIGNED TO SUPPORT TRAFFIC FROM CRANES OR OTHER HEAVY CONSTRUCTION VEHICLES.

12. FLOOR, ROOF AND WALL OPENINGS, SLEEVES, INSERTS, EMBEDS, CONDUITS AND OTHER DISCIPLINE REQUIREMENTS MUST BE COORDINATED BEFORE THE CONTRACTOR PROCEEDS WITH CONSTRUCTION. THE EXACT DEPTH, EXTENT, AND LOCATION OF ALL FLOOR OR ROOF DEPRESSIONS, SLOPES, CURBS, PADS, TRENCHES, DRAINS AND OTHER FEATURES SHALL BE COORDINATED WITH THE CONSTRUCTION DOCUMENTS. THE STRUCTURAL DRAWINGS DO NOT NECESSARILY INDICATE ALL OF THESE ITEMS.

13. CORE DRILLING OF CONCRETE OR MASONRY IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE SEOR. CORES, WHERE APPROVED SHALL NOT CUT REINFORCEMENT. THE CONTRACTOR SHALL PRESENT ALL CORES TO THE INSPECTOR OF RECORD (IOR) FOR VERIFICATION.

14. STRUCTURAL DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EQUIPMENT AND THEIR SECONDARY FRAMING SUPPORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK BETWEEN SUBCONTRACTORS AND CRAFTS IN ORDER TO PROVIDE NECESSARY DIMENSIONS IN A TIMELY MANNER TO ALL PARTIES AND DETAILERS INVOLVED.

15. PROVIDE A SHIM SPACE AT HEADERS AND JAMBS TO ALLOW FOR SETTLEMENT AND MOVEMENT OF FRAMING. INSTALL WINDOWS, DOORS AND OTHER INSET ITEMS IN WALLS AFTER BUILDING LOADS ARE FULLY APPLIED.

16. EXPANSION AND SEPARATION JOINT DIMENSIONS SHOWN INDICATE THE CLEAR DISTANCE REQUIRED. COMPONENTS COVERING OR CROSSING SUCH JOINTS MUST ACCOMMODATE THE JOINT FULLY CLOSING OR OPENING TO TWICE THE DIMENSION SHOWN, AS WELL AS RELATIVE LATERAL MOVEMENT ALONG THE JOINT. ALL PIPES, DUCTS, CONDUIT, ETC., CROSSING SUCH JOINTS SHALL HAVE FLEXIBLE LINES WITH ADEQUATE RANGE OF MOTION.

STRUCTURAL DESIGN CRITERIA

CODES: DESIGN IS BASED ON THE 2019 CALIFORNIA BUILDING CODE

LIVE LOADS (REDUCIBLE, UNO):
- ROOF, UNIFORM.....20 PSF
- TYPICAL FLOOR, UNIFORM + PARTITION ALLOWANCE.....80 PSF + 20 PSF = 100 PSF
- CORRIDOR & EXIT STAIRS.....100 PSF (UNREDUCIBLE)

WIND LOADS:
- RISK CATEGORY.....IV
- EXPOSURE.....C
- ULTIMATE DESIGN WIDE SPEED, Vult.....110 MPH
- INTERNAL PRESSURE COEFFICIENT, G Cpi.....± 0.18
- DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING (STRENGTH).....30 PSF
- MAINTAIN SERVICEABILITY OF CLADDING AND NONSTRUCTURAL COMPONENTS FOR WIND LOAD STORY DRIFTS OF NOT LESS THAN = 0.01 h AT ANY LEVEL

EARTHQUAKE LOADS:
- RISK CATEGORY.....IV
- SEISMIC IMPORTANCE FACTOR, Ie.....1.5
- SITE CLASSIFICATION.....D
- SPECTRAL ACCEL PARAMETERS (USGS '08).....Ss = 1.792, S1 = 0.639
- DESIGN SPECTRAL ACCEL PARAMETERS.....Sds = 1.195, Sd1 = N/A
- SEISMIC DESIGN CATEGORY.....D
- SEISMIC FORCE RESISTING SYSTEM(S):
  - N-S DIRECTION.....SPECIAL REINFORCED MASONRY SHEAR WALL
    - SYSTEM FACTORS, R = 5, Ωo = 2.5, Cd = 3.5
    - REDUNDANCY, ρ = 1.3
    - BASE SHEAR, V = Cs W = 0.36 W (STRENGTH)
  - E-W DIRECTION.....SPECIAL REINFORCED MASONRY SHEAR WALL
    - SYSTEM FACTORS, R = 5, Ωo = 2.5, Cd = 3.5
    - REDUNDANCY, ρ = 1.3
    - BASE SHEAR, V = Cs W = 0.36 W (STRENGTH)
- INSTALL CLADDING AND NONSTRUCTURAL COMPONENTS TO SAFELY ACCOMMODATE SEISMIC STORY DRIFTS OF NOT LESS THAN = 0.025 h AT ANY LEVEL
- ANALYSIS PROCEDURE(S).....EQUIVALENT LATERAL FORCE, MODAL RESPONSE SPECTRUM

STRUCTURAL OBSERVATIONS

1. VISUAL OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF THE OWNER, ARCHITECT, SEOR, AND AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE BUILDING CODE. VISUAL OBSERVATIONS SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR THE SPECIAL INSPECTION REQUIREMENTS.

2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE SEOR AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION WILL BE READY FOR OBSERVATION A MINIMUM OF FIVE (5) WORKING DAYS IN ADVANCE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ITEMS LISTED IN THE SCHEDULE ARE VISIBLE FOR OBSERVATION WHEN THE SEOR IS ON SITE AND FOR ANY SCHEDULING DELAYS DUE TO NONCOMPLIANT ITEMS FOUND DURING THE OBSERVATION.

4. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVERS KNOWLEDGE, HAVE NOT BEEN RESOLVED.

STRUCTURAL OBSERVATIONS (CONTINUED)

STRUCTURAL OBSERVATION SCHEDULE

ITEM/CONSTRUCTION STAGE	WHEN
FOUNDATION REBAR AND ANCHORS	PRIOR TO POUR OF CONRETE
STRUCTURAL FRAMING AND WALLS	AFTER ERECTION AND PRIOR TO CLOSING IN
ROOF DIAPHRAGM FASTENERS	PRIOR TO ROOFING APPLICATION

014000 – DEFERRED APPROVALS & DELEGATED DESIGN

SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE REVIEWED BY THE SEOR AND THEN SUBSEQUENTLY REVIEWED AND APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION.

MECHANICAL

1. MECHANICAL CONTRACTOR TO VERIFY ALL MECHANICAL UNIT LOCATIONS, SIZES AND OPENINGS.

2. STEEL FABRICATOR TO LOCATE ALL BEAMS BASED ON INFORMATION FROM MECHANICAL CONTRACTOR AND SUBMIT STEEL BEAM LOCATION TO THE SEOR FOR REVIEW.

3. WHERE REQUIRED BY THE CODE, MECHANICAL CONTRACTOR IS TO SUBMIT HVAC ANCHORAGE DETAILS STAMPED AND SIGNED BY A CALIFORNIA LICENSED CIVIL OR STRUCTURAL ENGINEER. THIS INCLUDES ANCHORAGE FOR UNITS MORE THAN 400 LBS MOUNTED ON A FLOOR OR ROOF LEVEL AND UNITS MORE THAN 20 LBS OR 5 LBS/FT HANGING BELOW A FLOOR OR ROOF.

STATEMENT OF SPECIAL INSPECTIONS

1. THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO DEMONSTRATES COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

2. SEE THE SPECIAL INSPECTIONS SCHEDULE AND PROJECT SPECIFICATIONS FOR REQUIREMENTS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THESE INSPECTIONS ARE PERFORMED.

3. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVED FABRICATORS MUST SUBMIT A CERTIFICATE OF COMPLIANCE FOR OFFSITE FABRICATIONS SUCH AS STRUCTURAL STEEL, PRECAST CONCRETE, GLUED LAMINATED TIMBER, ETC.

4. ALL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT SPECIAL INSPECTORS. JOB SITE VISITS BY THE STRUCTURAL ENGINEER OR BUILDING OFFICIAL DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS BY A SPECIAL INSPECTOR.

5. ALL INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND SEOR. THE FINAL REPORTS BY THE SPECIAL INSPECTOR(S) MUST CERTIFY THAT THE ENTIRE STRUCTURAL SYSTEM COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.

6. WORK REQUIRING SPECIAL INSPECTION SHALL BE INSPECTED BY THE SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS PERFORMED AND AT THE COMPLETION OF WORK. CONTINUOUS INSPECTION CONSISTS OF FULL-TIME INSPECTION; PERIODIC INSPECTION CONSISTS OF PART-TIME OR INTERMITTENT INSPECTION.

7. THE SPECIAL INSPECTIONS SCHEDULE BELOW IS A SUMMARY LIST AND MAY NOT BE ALL INCLUSIVE OF INSPECTIONS REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL CALL FOR ALL INSPECTIONS NOTED ON THE CONTRACT DOCUMENTS AND AS REQUIRED BY THE ARCHITECT, BUILDING OFFICIAL AND OWNER'S REPRESENTATIVE.

SPECIAL INSPECTIONS SCHEDULE

SOILS SUPPORTING FOUNDATIONS

PERIODIC:	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
PERIODIC:	VERIFY MATERIALS BELOW FOOTING ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
PERIODIC:	PRIOR TO PLACEMENT OF CONTROLLED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY
CONTINUOUS:	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILLS
PERIODIC:	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS

STRUCTURAL CONCRETE AND REINFORCEMENT

PERIODIC:	INSPECTIONS OF REINFORCING STEEL AND PLACEMENT
PERIODIC:	INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE
PERIODIC:	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
PERIODIC:	VERIFY USE OF REQUIRED DESIGN MIX
PERIODIC:	VERIFY COMPLIANCE OF NON-POTABLE MIX WATER
CONTINUOUS:	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES
CONTINUOUS:	SAMPLING FRESH CONCRETE AND PERFORMING SLUMP AND AIR CONTENT TESTS & DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS
PERIODIC:	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUE
PERIODIC:	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS
PERIODIC:	POST-INSTALLED AND ADHESIVE ANCHORS
PERIODIC:	VERIFY INSTALLER CERTIFICATIONS FOR OVERHEAD ADHESIVE ANCHORS
CONTINUOUS:	REBAR COUPLERS AND TERMINATORS, SELECT SPLICE SPECIMENS FOR TESTING

WELDING

CONTINUOUS:	COMPLETE AND PARTIAL PENETRATION GROOVE WELDS
CONTINUOUS:	FILLET WELDS > 5/16" AND MULTIPASS FILLET WELDS
PERIODIC:	FILLET WELDS ≤ 5/16"
PERIODIC:	METAL DECK WELDS
PERIODIC:	LIGHT GAUGE METAL WELDS
PERIODIC:	WELD FILLER MATERIAL IDENTIFICATION MARKINGS TO CONFORM TO AWS STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS, MANUFACTURE'S CERTIFICATION OF COMPLIANCE REQUIRED
PERIODIC:	VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706
CONTINUOUS:	WELDING OF STIRRUPS, HOOPS OR TIES
PERIODIC:	ALL OTHER REINFORCEMENT WELDS, UNO

CONCRETE MASONRY

PERIODIC:	PROPORTIONS OF SITE-PREPARED MORTAR AND GROUT
CONTINUOUS:	PREPARATION OF GROUT AND MORTAR SPECIMENS AND/OR PRISMS
PERIODIC:	VERIFICATION OF SIZE AND LOCATION OF MASONRY UNITS
PERIODIC:	VERIFICATION OF SIZE, GRADE, TYPE AND PLACEMENT OF REINFORCING STEEL
PERIODIC:	VERIFICATION OF SIZE AND LOCATION OF ANCHORS OR EMBEDDED STRUCTURAL ELEMENTS INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION
PERIODIC:	CONSTRUCTION OF MORTAR JOINTS
PERIODIC:	GROUT SPACE CLEAN PRIOR TO GROUTING
CONTINUOUS:	GROUT PLACEMENT PER CONSTRUCTION DOCUMENTS AND CODE COMPLIANCE
PERIODIC:	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF CONSTRUCTION DOCUMENTS AND APPROVED SUBMITTALS SHALL BE VERIFIED
PERIODIC:	PROTECTION OF MASONRY DURING COLD WEATHER BELOW 40°F OR HOT WEATHER ABOVE 90°F
PERIODIC:	POST-INSTALLED ANCHORS AND REINFORCEMENT

COLD-FORMED STEEL FRAMING

PERIODIC:	SCREW ATTACHMENT, BOLTING, AND ANCHORING OF STRAPS, HOLDOWNS, BRACES, DRAG STRUTS, AND ROOF, WALLS AND FLOORS.
PERIODIC:	INSTALLATION OF STEEL DECKING PER SDI QA/QC STANDARDS

016000 – PRODUCT SPECIFICATION

1. THE STRUCTURAL PRODUCT SCHEDULE INDICATES BASIS-OF-DESIGN MANUFACTURERS AND PRODUCTS FOR USE ON THIS PROJECT. WHERE STRUCTURAL PRODUCTS ARE NOT EXPLICITLY NAMED IN THE CONSTRUCTION DOCUMENTS, PROVIDE A LISTED PRODUCT.

2. PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AS AMENDED BY THE REFERENCED PRODUCT ACCEPTANCE REPORTS (ICC, IAPMO, ETC.) FOR THE INTENDED USE.

3. AT CONTRACTOR'S OPTION, SUBSTITUTION REQUESTS MAY BE MADE FOR LIKE PRODUCTS WHICH DEMONSTRATE QUALITIES THAT EQUAL OR EXCEED THOSE OF SPECIFIED PRODUCTS.

STRUCTURAL PRODUCT SCHEDULE

TYPE	PRODUCT	ICC / IAPMO
EXPANSION ANCHOR TO CONCRETE	HILTI KWIK BOLT TZ-2	ESR-4266
	DEWALT/POWERS-STUD+ SD2	ESR-2502
	SIMPSON STRONG-BOLT 2	ESR-3037
ADHESIVE ANCHOR TO CONCRETE	HILTI HIT-HY 200	ESR-4868
	HILTI HIT-RE 500-V3	ESR-3814
	DEWALT/POWERS AC200+	ESR-4027
	DEWALT/POWERS PURE110+	ESR-3298
	SIMPSON AT-XP	ER-0263
	SIMPSON SET-3G	ESR-4057
SCREW ANCHOR TO CONCRETE (≥ 1/4" DIAM)	HILTI KWIK HUS-EZ, -EZ 1	ESR-3027
	SIMPSON TITEN HD	ESR-2713
	DEWALT/POWERS WEDGE-BOLT+	ESR-2966
SCREW ANCHOR TO CONCRETE (≤ 3/16" DIAM)	ITW RED HEAD TAPCON	ESR-2202
SHOTPIN	HILTI LOW-VELOCITY X-U	ESR-2269
	ITW RAMSET POWER-DRIVEN	ESR-1799
	SIMPSON POWDER-ACTUATED	ESR-2138
EXPANSION ANCHOR TO GROUTED CMU	DEWALT/POWERS STUD+ SD1	ESR-2818
	DEWALT/POWERS STUD+ SD4, SD6	ESR-2502
	SIMPSON STRONG-BOLT 2	ER-0240
ADHEVISE ANCHOR TO GROUTED CMU	HILTI HIT-HY 270	ESR-4143
	DEWALT/POWERS AC100+ GOLD	ESR-3200
	SIMPSON AT-XP	ER-0281
SCREW ANCHOR TO GROUTED CMU (≥ 1/4" DIAM)	HILTI KWIK HUS-EZ	ESR-3056
	SIMPSON TITEN HD	ESR-1056

SHEET LIST

Sheet Number	Sheet Name
S0.01	GENERAL NOTES
S0.02	GENERAL NOTES
S0.03	GENERAL NOTES
S0.04	GENERAL NOTES
S1.01	TYPICAL CONCRETE DETAILS
S1.02	TYPICAL CONCRETE DETAILS
S1.03	TYPICAL CONCRETE DETAILS
S1.11	TYPICAL CMU DETAILS
S1.12	TYPICAL CMU DETAILS
S1.21	TYPICAL INTERIOR METAL STUD DETAILS
S1.31	TYPICAL METAL STUD DETAILS
S1.32	TYPICAL METAL STUD DETAILS
S1.41	TYPICAL METAL DECK DETAILS
S3.10	FOUNDATION / FIRST FLOOR PLAN
S3.11	ROOF FRAMING PLAN
S4.11	BUILDING ELEVATIONS

REVISIONS
3 Revision 3 10/06/2026

ISSUED FOR PERMIT

REGISTERED PROFESSIONAL ENGINEER
ALI CARAVALOS
No. 4896
STRUCTURAL
STATE OF CALIFORNIA
DATE:
FOR BRANDOW & JOHNSTON

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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

GENERAL NOTES

CD
S0.01

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BIDDING SET

EXISTING CONDITIONS

1. SEE PROJECT REPORTS AND ARCHITECTURAL DRAWINGS FOR HAZARDOUS MATERIALS (LEAD, ASBESTOS, ETC.) ABATEMENT REQUIREMENTS.
2. WHERE EXISTING CONDITIONS VARY SIGNIFICANTLY FROM THOSE SHOWN ON THESE DRAWINGS, THE SEOR SHALL BE NOTIFIED PRIOR TO CONTINUED CONSTRUCTION RELATED TO SUBJECT CONDITIONS.
3. EXISTING CONCRETE SURFACES TO BE IN CONTACT WITH NEW CONCRETE SHALL BE ROUGHENED AS FOR TYPICAL CONSTRUCTION JOINTS, AND AN ASTM C1059 COMPLIANT BONDING AGENT SHALL BE APPLIED PRIOR TO PLACING NEW CONCRETE.
4. DO NOT CUT OR DAMAGE EXISTING CONCRETE OR MASONRY REINFORCEMENT EXCEPT AS CLEARLY INDICATED. MAINTAIN AT LEAST 2 INCHES CLEAR TO EXISTING REINFORCEMENT, CONDUIT AND OTHER EMBEDDED ITEMS FROM CUTS, CORES, DRILL HOLES, SHOTPINS, ETC. IN AREAS OF WORK, MARK LOCATIONS OF SUCH ITEMS USING NONDESTRUCTIVE METHODS SUCH AS GROUND PENETRATING RADAR OR X-RAY.
5. THE GENERAL CONTRACTOR SHALL COORDINATE THE SPECIFIC LOCATION OF REPLACEMENT MECHANICAL EQUIPMENT WITH THE STRUCTURAL FRAMING. IF NEW EQUIPMENT DEVIATES IN WEIGHT, SIZE OR LOCATION FROM EXISTING EQUIPMENT BEING REPLACED, SEOR APPROVAL MUST BE OBTAINED PRIOR TO INSTALLATION OF THE UNITS.
6. EXISTING STRUCTURAL MEMBERS SUPPORTING NEW EQUIPMENT SHALL BE INSPECTED FOR DAMAGE AND DETERIORATION PRIOR TO INSTALLATION OF THE UNITS. NOTIFY THE SEOR OF SUCH CONDITIONS AND DO NOT INSTALL UNITS UNTIL THE CONDITIONS ARE ADDRESSED.
7. DURING THE COURSE OF WORK, NOTIFY THE SEOR OF EXISTING STRUCTURAL DETERIORATION, APPARENT DISTRESS, WATER INTRUSION, OR COMPROMISED MEMBERS THAT ARE DISCOVERED.
8. REPAIR FIREPROOFING, WATERPROOFING AND FINISHES AS REQUIRED WHERE DISTURBED BY STRUCTURAL WORK. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
9. EXISTING WOOD MEMBER SIZES MAY BE FULL-SIZE OR NONSTANDARD RELATIVE TO CURRENT PRACTICE. PROVIDE FULL-SIZE CURED, OR CUT NEW STRUCTURAL WOOD TO MATCH WHERE INDICATED. DO NOT FUR OUT TO MAKE UP GAPS BETWEEN NEW STRUCTURAL MEMBERS OR SHEATHING UNLESS SPECIFICALLY DETAILED OR NOTED.

FOUNDATION AND SLAB ON GRADE

1. FOUNDATION DESIGN BASED UPON GEOTECHNICAL REPORT BY: GPI GEO-TECHNICAL PROFESSIONALS INC., TITLE: GEO INVESTIGATION PROPOSED BUILDING ADDITION. COUNTY FIRE STATION 163, DATED: JULY 8TH, 2022
2. THE CONTRACTOR SHALL CONFORM TO ALL RECOMMENDATIONS AND CONDITIONS INDICATED IN THE REPORT. NOTE THAT THE STRUCTURAL DOCUMENTS DO NOT NECESSARILY INDICATE ALL SUBGRADE PREPARATION AND UNDERLAYMENT REQUIREMENTS. SEE THE GEOTECHNICAL REPORT FOR SITE SOIL CONDITIONS, ESPECIALLY REGARDING EXCAVATION, TRENCHING AND COMPACTION METHODS.
3. A GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING AND FOUNDATION PHASE OF THE CONSTRUCTION.
4. FOUNDATION BEARING AND FILL MATERIALS UNDER STRUCTURE SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER AND BUILDING INSPECTOR BEFORE PLACING CONCRETE.
5. UNLESS OTHERWISE STATED BY THE GEOTECHNICAL ENGINEER, EXISTING UNDOCUMENTED FILL WITHIN THE BUILDING FOOTPRINT SHALL BE REMOVED AND RECOMPACTED. TOPSOILS, ORGANIC MATERIAL AND OTHER DEBRIS SHALL BE REMOVED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. NATIVE AND IMPORTED SOILS SHALL BE APPROVED AS FILL BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
6. CONTRACTOR SHALL COORDINATE BOTTOM OF FOOTINGS AND GRADE BEAMS WITH FINISH GRADE AND UTILITIES PRIOR TO EXCAVATION. COORDINATE WITH ARCHITECTURAL AND CIVIL PLANS FOR LOCATION OF FINISH GRADE, FINISH FLOOR, SLOPE AND DEPRESSIONS.
7. FOUNDATION ELEVATIONS AND OTHER OVEREXCAVATION REQUIREMENTS ON THE CONSTRUCTION DOCUMENTS SHALL BE USED FOR PRICING. ACTUAL DEPTH OF REMOVAL WILL BE DETERMINED AS DIRECTED BY THE GEOTECHNICAL ENGINEER DURING GRADING.
8. ALL TRENCHES SHALL COMPLY WITH APPLICABLE OSHA REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND SERVICES WHETHER SHOWN ON THE DRAWINGS OR NOT, AND SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION.
9. SUBGRADE WITHIN THE BUILDING FOOTPRINT SHALL BE MECHANICALLY COMPACTED IN LAYERS WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER. BACKFILL JETTING OR FLOODING IS NOT PERMITTED.
10. BACKFILL BEHIND RETAINING WALLS SHALL BE PERFORMED AFTER NEW CONCRETE OR MASONRY HAS ATTAINED ITS FULL DESIGN STRENGTH. WALL DRAINAGE MUST BE PROVIDED, UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS PROVIDE A 12-INCH WIDE CONTINUOUS PEA GRAVEL STRIP IMMEDIATELY BEHIND THE WALL WITH PERFORATED DRAIN LINES AT THE BASE CONNECTED TO A DESIGNED STORM DRAINAGE SYSTEM.

MINIMUM FOOTING AND SLAB-ON-GRADE SCHEDULE

MINIMUM FOOTING WIDTH:	1'-6" FOR CONTINUOUS / WALL FOOTINGS 2'-0" FOR ISOLATED PAD / COLUMN FOOTINGS
MINIMUM FOOTING EMBEDMENT:	1'-0" BELOW LOWEST ADJACENT GRADE AND 1'-6" INTO CERTIFIED COMPACTED FILL OR APPROVED UNDISTURBED NATIVE SOIL.
MINIMUM SUBGRADE RELATIVE COMPACTION PER ASTM D1557:	90% UNDER FOUNDATIONS, SLAB-ON-GRADE AND OTHER BACKFILL WITH CLAY FRACTION > 15%, 95% FOR CLAY FRACTION < 15%
MINIMUM SLAB-ON-GRADE:	5" THICK W/ #4 @ 1'-6" ON CENTER EACH WAY POSITIONED 2 INCHES CLEAR FROM TOP OF SLAB, OVER 15 MIL VAPOR BARRIER (STEGOWRAP OR EQUAL) ON PREPARED SUBGRADE PER SOIL REPORT.

DESIGN LOAD BEARING VALUES OF SOILS

ALLOWABLE SOIL BEARING:	1500 PSF FOR CONTINUOUS FOOTINGS (DL+LL) WITH INCREASE OF 300 PSF FOR EACH ADDITIONAL 0.5 FT OF DTG DEPTH BEYOND MINIMUM, MAXIMUM OF 2,100 PSF. 2000 PSF FOR ISOLATED PAD FOOTINGS 2'x2' MIN (DL+LL). AN ADDITIONAL 1/3 INCREASE IS PERMITTED FOR WIND OR SEISMIC EFFECTS.
ALLOWABLE COEFFICIENT OF FRICTION:	0.35 AT THE BASE OF FOUNDATIONS USED WITH VERTICAL LOADS, NO INCREASE IS PERMITTED FOR WIND OR SEISMIC EFFECTS.
ALLOWABLE PASSIVE SOIL PRESSURE:	350 PSF/FT OF DEPTH ON THE SIDES OF FOUNDATIONS POURED AGAINST UNDISTURBED OR RECOMPACTED SOIL, A ONE-THIRD INCREASE IS PERMITTED FOR WIND OR SEISMIC EFFECTS.
LATERAL RESISTANCE:	PROVIDED BY FRICTION AND / OR PASSIVE EARTH PRESSURE, WHICH MAY BE COMBINED WITHOUTH REDUCTION

REINFORCING STEEL

1. PLACING TOLERANCES AND BAR SUPPORTS SHALL CONFORM TO THE "MANUAL OF STANDARD PRACTICE" FOR REINFORCED CONCRETE CONSTRUCTION, BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
2. ALL REINFORCING BAR (REBAR) STEEL SHALL BE DEFORMED ROUND BARS CONFORMING TO ASTM A615 OR ASTM A706, GRADE 60.
3. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A1064. ADJACENT WWF SHEETS SHALL BE LAPPED 12 INCHES MINIMUM.
4. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING IN POSITIONS INDICATED. CHAIRS OR BOLSTERS WHICH BEAR AGAINST FORMS FOR EXPOSED SURFACES SHALL BE GREY COLORED PLASTIC COATED STEEL OR STAINLESS STEEL.
5. REINFORCING BARS SHALL BE KEPT CLEAN AND FREE OF OIL, GREASE AND LOOSE RUST OR MILL SCALE.
6. BEND REINFORCING BARS COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.
7. ALL REINFORCING SHALL BE CONTINUOUS UNLESS NOTED OTHERWISE, WITH CONTACT LAP SPLICES PER THE TYPICAL DETAILS OR AS SHOWN.
8. PROVISION FOR LAP SPLICES OR DOWELS SHALL BE PROVIDED ACROSS ALL CONSTRUCTION JOINTS AND SHALL BE THE SAME GRADE, SIZE AND SPACING AS REINFORCING CONTINUING BEYOND UNLESS NOTED OTHERWISE. IN LIEU OF SPLICES OR DOWELS, THE CONTRACTOR MAY SUBMIT FOR SEOR APPROVAL THE LOCATION AND MANUFACTURER DATA OF FORMSAVERS OR COUPLERS PRIOR TO THEIR USE.
9. ALL BENDS WITHIN HOOKS, STIRRUPS, HOOPS AND CROSS-TIES SHALL ENGAGE A LONGITUDINAL BAR, PROVIDE A #5 CONTINUOUS BAR WHERE ONE IS NOT SPECIFICALLY DETAILED.
10. CLEARANCE BETWEEN PARALLEL BARS, OR BARS AND CONSTRUCTION JOINTS SHALL BE NOT LESS THAN THE SMALLER OF 1 INCH, 1 BAR DIAMETER, OR THE MAXIMUM AGGREGATE SIZE. UNLESS NOTED OTHERWISE, BARS IN PARALLEL LAYERS SHALL BE PLACED IN ALIGNMENT WITH ONE ANOTHER.
11. MAINTAIN A MINIMUM COVER FROM FACE OF CONCRETE TO EDGE OF REINFORCEMENT PER THE MINIMUM CONCRETE COVER OF REINFORCEMENT SCHEDULE OR AS DETAILED. PROVIDE THE LARGEST COVER REQUIRED FOR ALL APPLICABLE CONDITIONS AND BAR SIZES. WHERE #3 STIRRUPS OR TIES ARE USED, ENSURE THAT THE COVER FOR LONGITUDINAL BARS IS ADEQUATE.
12. THE FOLLOWING REINFORCEMENT SHALL CONFORM TO ASTM A706:
    a. REINFORCEMENT TO BE WELDED.
    b. LONGITUDINAL COLUMN AND BEAM REINFORCEMENT IN DESIGNATED MOMENT FRAMES.
    c. VERTICAL REINFORCEMENT AT INTERSECTIONS AND ENDS OF DESIGNATED CONCRETE SHEAR WALLS ENCLOSED IN TIES.

MINIMUM CONCRETE COVER OF REINFORCEMENT SCHEDULE

CONDITION	MIN.COVER
OTHER INTERIOR CONCRETE, #11 BARS AND SMALLER	3/4"
FORMED AND EXPOSED TO SOIL OR WEATHER, #6 BARS AND LARGER: #5 BARS AND SMALLER:	2" 1 1/2"
CAST AGAINST AND PERMANENTLY EXPOSED TO SOIL	3"
STRUCTURAL SLAB-ON-GRADE, FROM BOTTOM OF SLAB: FROM TOP OF SLAB:	2" 1 1/2"

STRUCTURAL CONCRETE

1. CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH ACI 318 AND ACI 301 LATEST EDITION AND THE CONSTRUCTION DOCUMENTS.
2. CONCRETE MIXING OPERATIONS SHALL CONFORM TO ASTM C94. QUANTITIES OF MATERIALS SHALL BE CERTIFIED BY A LICENSED WEIGHT-MASTER.
3. RETAIN AN APPROVED TESTING LABORATORY, ACCEPTABLE TO THE OWNER, TO PREPARE CONCRETE MIX DESIGNS ACCORDING TO GOVERNING CODE AND THE CONSTRUCTION DOCUMENTS. ALL CONCRETE MIXES SHALL BE STAMPED AND SEALED BY A LICENSED CALIFORNIA CIVIL ENGINEER AND SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT. NEW MIX DESIGNS ARE REQUIRED WHEN THERE IS A CHANGE IN MATERIALS BEING USED. MIX DESIGNS SHALL CLEARLY STATE THE INTENDED LOCATION FOR USE.
4. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS INDICATED ON THE CONCRETE SCHEDULE. ALL CONCRETE TEST REPORTS SHALL BE SUBMITTED TO THE SEOR WITHIN 7 DAYS AFTER TESTING.
5. AGGREGATE SHALL BE HARDROCK FOR NORMAL WEIGHT CONCRETE (NWC) CONFORMING TO ASTM C33. THE UNIT WEIGHT OF NWC SHALL HAVE AN AIR-DRY EQUILIBRIUM DENSITY OF 145 ± 5 PCF. THE UNIT WEIGHT OF NWC SHALL BE CONFIRMED BY THE MIX DESIGN AND DOES NOT REQUIRE TESTING UNO.
6. AGGREGATE FOR SAND LIGHT WEIGHT CONCRETE (LWC) SHALL CONFORM TO ASTM C330. UNIT WEIGHT OF LWC SHALL NOT EXCEED 115 PCF MEASURED AIR-DRY EQUILIBRIUM DENSITY PER ASTM C567, OR 110 PCF MEASURED OVEN-DRY. THE UNIT WEIGHT OF LWC SHALL BE LAB TESTED FOR EACH MIX DESIGN AND AGGREGATE SOURCE.
7. COARSE AGGREGATE WITH A MAXIMUM SIZE OF 1/2 INCH OR LESS SHALL BE CRUSHED STONE.
8. PORTLAND CEMENT TYPE SHALL BE AS SPECIFIED IN THE CONCRETE SCHEDULE AND CONFORM TO ASTM C150, LOW ALKALI.
9. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 25% TOTAL CEMENTITIOUS MATERIAL BY WEIGHT WHEN THE MIX DESIGN IS PROPORTIONED BY FIELD EXPERIENCE OR TRIAL MIXTURES.
10. WATER USED IN MIX SHALL BE POTABLE OR NONPOTABLE RECLAIMED/RECYCLED, CONFORMING TO ASTM C1602. PRIOR TO MIXING, FREE MOISTURE CONTENT OF AGGREGATES SHALL BE MEASURED, RECORDED, AND MIX WATER QUANTITY ADJUSTED ACCORDINGLY. MIX WATER AND FREE MOISTURE ON AGGREGATES SHALL NOT CONTAIN CHLORIDES OR ANY OTHER DELETERIOUS OR ODOROUS COMPOUNDS.
11. ADMIXTURES, WHERE USED FOR WATER REDUCTION AND SETTING TIME MODIFICATION SHALL CONFORM TO ASTM C494, SUPERPLASTICIZER SHALL CONFORM TO ASTM C1017.
12. SHRINKAGE REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, AND WHERE USED SHALL BE GRACO ECLIPSE, EUCLID EUCON SRA, SIKA CONTROL, OR APPROVED EQUAL. SPECIFIED MAXIMUM SHRINKAGE RATES SHALL BE LAB TESTED PER ASTM C157 FOR EACH MIX DESIGN AND AGGREGATE SOURCE.

STRUCTURAL CONCRETE

16. USE PLACEMENT AND FINISHING PROCEDURES THAT PREVENT DELAMINATION, BLISTERING OR OTHER SURFACE DEFECTS.
17. NONSHRINK OR DRYPACK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI, AND SHALL BE MASTERFLOW 713, EUCON NS GROUT, SIKA GROUT 212, OR APPROVED EQUAL. FOR THICK GROUT LAYERS AND LARGE VOLUME PLACEMENTS FOLLOW MANUFACTURER'S GUIDELINES, WHICH MAY INCLUDE THE ADDITION OF WASHED COARSE AGGREGATE AND POUR SEQUENCING. UNDER BASE PLATES LARGER THAN 6 SQUARE FEET, USE MASTERFLOW 928 OR OTHER APPROVED HI-FLOW GROUT.
18. THE USE OF CONSTRUCTION JOINTS (CJ) AT LOCATIONS NOT SHOWN ON THE PLANS AND DETAILS SHALL BE APPROVED BY THE SEOR PRIOR TO PLACEMENT OF CONCRETE. CJ'S SHALL BE USED WHENEVER CONCRETE PLACEMENT IS INTERRUPTED FOR MORE THAN 30 MINUTES. HORIZONTAL/FLAT CJ'S MAY BE UNFORMED, VERTICAL CJ'S SHALL BE FULLY FORMED WITH SHEAR KEYS. CJ'S SHALL BE CLEANED, LAITANCE REMOVED, AND ROUGHENED TO AN AMPLITUDE OF 1/4 INCH BY REMOVING THE ENTIRE SURFACE TO EXPOSE CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED CJ'S SHALL BE WETTED AND STANDING WATER REMOVED.
19. PIPES, DUCTS OR CONDUIT SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. PROVIDE SLEEVES FOR ALL PIPES THROUGH CONCRETE WALLS AND FOOTINGS.
20. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL MOULDS, REVEALS, GROOVES, CHAMFERS, DRIPS, ORNAMENTS AND OTHER FINISH REQUIREMENTS. UNLESS OTHERWISE NOTED, EXPOSED CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4 INCH CHAMFER STRIPS OR 1/2 INCH RADIUS TOOLED EDGE.
21. ALL DOWELS, ANCHORS AND OTHER EMBEDMENTS TO BE SET IN CONCRETE OR GROUT SHALL BE SECURED IN POSITION PRIOR TO PLACEMENT, NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE ALLOWED. THE CONTRACTOR SHALL COORDINATE WITH CONTRACT DOCUMENTS AND DISCIPLINES ITEMS SUCH AS; REINFORCEMENT, ANCHORS, INSERTS, HANGERS, NOSING, GUARDS, ELECTRICAL GROUNDS, INTEGRAL FRAMES, ETC.
22. CONCRETE AND GROUT MAINTAINED BETWEEN 50 TO 90 DEGREES FAHRENHEIT AND IN A MOIST, WIND SHELTERED CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT DOES NOT REQUIRE A WRITTEN PROTECTION PLAN. WHERE REQUIRED BY WEATHER AND SITE CONDITIONS, THE CONTRACTOR SHALL FOLLOW AN APPROVED COLD- OR HOT-WEATHER PROTECTION PLAN COMPLYING WITH ACI 306.1 / 301.
23. PRIOR TO ERECTING ANY ELEMENTS THAT LOAD THE FOUNDATION, CONCRETE MUST REACH AN UNCONFINED COMPRESSION STRENGTH OF 2000 PSI MINIMUM AS DETERMINED BY CYLINDER TESTING, AND MUST BE ALLOWED TO CURE FOR A MINIMUM OF 3 DAYS.
24. REVIEW MANUFACTURER REQUIREMENTS FOR OVERLAYMENTS, FINISHES AND FLOORING SYSTEMS TO BE APPLIED TO CONCRETE AS THESE MAY BE MORE RESTRICTIVE.
25. STYROFOAM VOID FILLER SHALL BE A DOW BUILDING SOLUTIONS PRODUCT "BLUE BOARD" TYPE OR APPROVED EQUAL WITH PROPERTIES APPROPRIATE FOR THE CONDITIONS OF USE.

STRUCTURAL CONCRETE SCHEDULE

	1	2	3	4	5	6
LOCATION	CEMENT	TYPE	STRENGTH	W/C RATIO	AGG SIZE	SHRINKAGE
FOUNDATIONS	II	NWC	4000	0.50	1 1/2"	-
SLAB-ON-GRADE	II	NWC	3000	0.45	1"	0.05%
NEW WALLS	II	NWC	4000	0.45	1"	0.05%
NEW WALL IN-FILLS	II	NWC	3000	0.45	1"	0.05%
ALL OTHER CONCRETE	II	NWC	3000	0.55	1"	-

CONCRETE SCHEDULE NOTES:

1. PORTLAND CEMENT TYPE.
2. INDICATES NORMAL WEIGHT CONCRETE (NWC). OR SAND LIGHT WEIGHT CONCRETE (LWC).
3. MINIMUM 28-DAY CYLINDER COMPRESSIVE STRENGTH IN PSI.
4. MAXIMUM WATER TO CEMENTITIOUS MATERIAL RATIO, INCLUDING FREE MOISTURE ON AGGREGATES. * 0.45 MAXIMUM W/C RATIO REQUIRED FOR CONCRETE RECEIVING ADHESIVE FINISHES.
5. MAXIMUM AGGREGATE SIZE, SEE ACI 318 FOR ADDITIONAL REQUIREMENTS INCLUDING GRADATION.
6. MAXIMUM SHRINKAGE AT 28 DAYS.

WET MIX SHOTCRETE

1. SHOTCRETE SHALL CONFORM TO ALL REQUIREMENTS OF ACI 506R-05, EXCEPT AS MODIFIED BY THE FOLLOWING REQUIREMENTS: APPLICATORS OF STRUCTURAL WET MIX SHOTCRETE SHALL HAVE A COPY OF ACI 506R ON EACH WORK SITE AT THE TIME OF SHOTCRETING. THE WORD "SHALL" SHALL BE SUBSTITUTED WHENEVER THE WORD "SHOULD" OCCURS IN ACI 506R.
2. THE SHOTCRETE MIX DESIGN AND TESTING SHALL COMPLY WITH ACI 318, ACI 506.2 AND PROJECT CONCRETE SPECIFICATIONS, AND SHALL NOT BE BATCHED VOLUMETRICALLY. A TEST CONSISTING OF AT LEAST TWO CYLINDERS AT 28 DAYS SHALL ALSO BE REQUIRED. ALL APPLICABLE REQUIREMENTS OF THE CODE (INCLUDING ALL REQUIREMENTS FOR PNEUMATICALLY PLACED WET MIXED MORTAR) SHALL APPLY, INCLUDING MAXIMUM TIME IN MIXER.
3. THE MINIMUM SLUMP SHALL BE 1 1/2" AND THE MAXIMUM SHALL BE 2 1/2". SLUMP SHALL BE MEASURED AT THE POINT OF DISCHARGE FROM THE MIXER, EXCEPT THE INSPECTOR MAY REQUIRE SLUMP TESTS AT THE DISCHARGE POINT WHERE WATER MAY HAVE BEEN ADDED.
4. SHOTCRETE SHALL NOT BE USED WHERE:
    a. THE STREAM FROM THE NOZZLE CANNOT DIRECTLY IMPINGE ON THE SURFACE ON WHICH THE CONCRETE IS TO BE PLACED.
    b. KEYWAYS OR EMBEDMENTS ARE PLACED IN FRONT FACE THAT WILL INTERFERE WITH THE STREAM FROM THE NOZZLE.
    c. CONDITIONS PRECLUDE THE POSSIBILITY OF OBTAINING CORES FROM THE STRUCTURE.
    d. REINFORCEMENT CANNOT BE COMPLETELY ENCASED.
    e. SHOTCRETE CONTRACTOR SHALL SHOW A MINIMUM OF 5 YEARS EXPERIENCE ON SIMILAR SEISMIC BUILDING PROJECTS AND SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. ONLY A QUALIFIED PERSON ON THE NOZZLE WITH A MINIMUM OF THREE YEARS STRUCTURAL WET MIX SHOTCRETE EXPERIENCE AND POSSESSING WRITTEN DOCUMENTATION OF THAT EXPERIENCE SHALL APPLY WET MIX SHOTCRETE. THE SHOTCRETE SUPERVISOR AND THE PERSON AT THE NOZZLE SHALL PROVIDE A RESUME APPROVED BY THE DEPARTMENT PRIOR TO PLACING. THE SUBCONTRACTOR WHO WILL PLACE THE SHOTCRETE SHALL SUPPLY A WRITTEN RESUME OF HIS/HER EXPERIENCE IN THE PLACING OF STRUCTURAL SHOTCRETE (OTHER THAN SWIMMING POOLS) AND LOCATIONS OF PREVIOUS JOBS APPROVED BY THE DEPARTMENT.
5. EACH TEAM OF THE PERSON AT THE NOZZLE AND THE HELPER SHALL SHOOT TEST PANEL(S) OF AT LEAST 4 FEET x 4 FEET IN DIMENSION OF THE THICKNESS AND WITH TYPICAL REINFORCING STEEL PATTERN USING EACH SHOOTING POSITION BEFORE COMMENCING ANY WET MIX SHOTCRETING WORK ON THE BUILDING. THE DEPUTY BUILDING INSPECTOR SHALL WITNESS THE ASSEMBLY, REINFORCING, SHOOTING AND DISASSEMBLY OF THE TEST. AFTER SHOOTING, BUT BEFORE THE CONCRETE HAS FULLY SET, THE PANEL(S) SHALL BE DISASSEMBLED TO ASSURE THAT THE TEAM AND EQUIPMENT TO BE USED IS CAPABLE OF PROVIDING SOUND CONCRETE BEHIND REINFORCING STEEL. THE PANEL SHALL BE FREE OF VOIDS, SAGS, ETC. CORE SAMPLES SHALL BE TAKEN FOR TESTING AND GRADING PER ACI 506.2. ONLY NOZZLEMENT WITH A MEAN TEST PANEL CORE GRADE OF LESS THAN OR EQUAL TO 2.5 SHALL BE ALLOWED TO PLACE SHOTCRETE. APPLICATION OF STRUCTURAL WET MIX SHOTCRETE IN THE FINISHED WORK SHALL NOT PROCEED UNTIL THE TEST PANEL HAS BEEN SHOT, DISASSEMBLED, INSPECTED AND APPROVED BY THE DEPARTMENT. EXCEPTION: WHEN THE PERSON AT THE NOZZLE AND HIS/HER HELPER TEAM HAS PREVIOUSLY SUCCESSFULLY SHOT A TEST PANEL UNDER THE JURISDICTION OF THE DEPARTMENT, THE BUILDING INSPECTOR MAY ALLOW APPLICATION OF WET MIX SHOTCRETE TO PROCEED ON THE STRUCTURE PRIOR TO DISASSEMBLING THE TEST PANEL. IF ANY DEFECTS ARE FOUND IN THE TEST PANEL WHICH WOULD INDICATE THE POSSIBILITY OF STRUCTURAL FAILURE, WORK SHALL BE STOPPED IMMEDIATELY AND ALL STRUCTURAL WET MIX SHOTCRETE PLACED WHILE WAITING THE DISASSEMBLY OF THE PANEL SHALL BE REMOVED.

WET MIX SHOTCRETE (CONTINUED)

6. IN ADDITION TO THE TYPICAL WALL REINFORCEMENT STEEL PATTERN, TEST PANEL RESULTS MUST ALSO SHOW THAT ADEQUATE ENCASEMENT OF THE BARS WILL BE ACHIEVED FOR THE FOLLOWING CONDITIONS WHERE THEY OCCUR ON THE PROJECT:
    a. REINFORCING SPACING LESS THAN 6 BAR DIAMETERS FOR WALLS WITH ONE CURTAIN OF STEEL.
    b. REINFORCING SPACING LESS THAN 12 BAR DIAMETERS FOR WALLS WITH TWO CURTAINS OF STEEL.
    c. CONTACT LAP SPLICES AND COUPLERS FOR BARS #6 AND LARGER, ALL CONFIGURATIONS.
    d. AREAS OF SUBSTANTIAL CONGESTION AND/OR EMBEDDED CONDUIT, ETC.
7. CONTINUOUS INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR IS REQUIRED DURING PLACEMENT OF SHOTCRETE AND TAKING OF CORES. THE CONTRACTOR SHALL PROVIDE A DESIGNATED LIAISON BETWEEN HIS/HER CREW, THE DEPUTY INSPECTOR AND THE BUILDING INSPECTOR. THE DEPUTY INSPECTOR SHALL BE INTERVIEWED AND APPROVED BY DEPARTMENT REPRESENTATIVES PRIOR TO INSPECTING THE WORK AT THE JOBSITE, AND ONE DEPUTY SHALL BE ASSIGNED TO EACH NOZZLE.
8. TESTING SHALL CONSIST OF 4 INCH OR LARGER DIAMETER CORES CUT FROM THE FULL DEPTH OF THE WALL WITH A MINIMUM OF ONE CORE FOR EACH 1000 SQUARE FEET OF WALL AND A MINIMUM OF TWO CORES FOR EACH DAY'S APPLICATON BY ANY ONE NOZZLE TEAM. CORE LOCATIONS SHALL BE LOCATED AT LEAST 2 INCHES CLEAR OF REINFORCEMENT AND SELECTED BY THE BUILDING DEPARTMENT WITH APPROVAL BY THE ENGINEER OF RECORD. ALL CORES SHALL BE CUT WITHIN TWO TO FIVE CALENDAR DAYS OF PLACEMENT OF THE CONCRETE, SHALL BE VISUALLY INSPECTED ON THE JOBSITE BY THE DEPUTY INSPECTOR AND REPLACED INTO THE HOLES FROM WHICH THEY WERE CUT. CORES MUST BE FREE OF VOIDS AND REBOUND. THE SURFACE AT THE CORES SHALL BE SEALED TO PREVENT HYDRATION AND SHALL BE MARKED TO AID IN IDENTIFICATION OF THE CORE FOR TESTING AT 28-DAY AGE. THE CORES SHALL BE TESTED IN ACCORDANCE WITH ASTM C42. THE CORES SHALL BE TESTED IN THE CONDITION THEY WERE REMOVED FROM THE WALL WITH NO FURTHER CURING ALLOWED. VERIFICATION OF THE FIELD INSPECTION SHALL BE REPORTED TO THE DEPARTMENT IMMEDIATELY BY THE DEPUTY INSPECTOR.
9. REINFORCING STEEL WILL BE SECURELY TIED IN PLACE IN A MANNER THAT PREVENTS ANY MOVEMENT DURING THE WET MIX SHOTCRETING. WHERE POSSIBLE, LAP SPLICES OF REINFORCING BARS SHALL UTILIZE THE NON-CONTACT LAP SPLICE METHOD WITH MINIMUM CLEARANCE OF 2 INCHES BETWEEN AND THE SPLICE ORIENTED SO THAT A PLANE THROUGH THE CENTER OF THE SPLICED BARS IS PERPENDICULAR TO THE SURFACE OF THE SHOTCRETE.
10. THE HEIGHT OF A LAYER SHALL BE LIMITED TO NOT MORE THAN 3 FEET, AND SUFFICIENT DELAY PROVIDED BETWEEN SUCCEEDING LAYERS OF NOT LESS THAN 3 HOURS AND AS REQUIRED TO PERMIT SETUP. NO SLOUGHING OR SAGGING SHALL BE PERMITTED. SHOOTING MUST BE SUSPENDED WHEN INCLEMENT WEATHER CONDITIONS OCCUR WHICH PROHIBIT PROPER APPLICATION OR CURING.
11. DETAILS OF COLD JOINTS, INCLUDING SLOPE OF JOINTS, SHALL BE AS SHOWN ON THESE PLANS OR AS APPROVED IN WRITING BY THE SEOR. THE FILM OF LAITANCE WHICH FORMS ON THE SURFACE OF THE SHOTCRETE SHALL BE REMOVED WITHIN APPROXIMATELY 2 HOURS AFTER APPLICATION BY BRUSHING WITH A STIFF BROOM. IF THIS FILM IS NOT REMOVED WITHIN 2 HOURS, IT SHALL BE REMOVED BY THOROUGH WIRE BRUSHING. CONSTRUCTION JOINTS OVER 8 HOURS OLD SHALL BE THOROUGHLY CLEANED AND WETTED PRIOR TO RECEIVING SHOTCRETE. WHEN SHOOTING UP TO UNDERSIDE OF EXISTING STRUCTURE THE LAST TWO INCHES SHALL BE DRY PACKED, UNLESS AN ALTERNATE METHOD IS SHOWN ON THE PLANS OR APPROVED IN WRITING BY THE SEOR.
12. A CAPABLE NOZZLEPERSON'S HELPER WITH AN AIR BLOW PIPE SHALL BE PROVIDED TO ASSIST THE NOZZLEPERSON IN KEEPING ALL REBOUND BUILD-UP OUT OF THE WORK. ADDITIONAL WORKERS MAY BE REQUIRED TO TAKE REBOUND FROM THE WORK IF THE REBOUND CANNOT BE REMOVED BY THE AIR BLOW PIPE.
13. CONCRETE OR MASONRY TO RECEIVE SHOTCRETE SHALL BE THOROUGHLY CLEANED AND ROUGHENED BY SAND BLASTING, AND JUST PRIOR TO RECEIVING SHOTCRETE SHALL BE THOROUGHLY CLEANED OF ALL DEBRIS, DIRT AND DUST. CONCRETE AND MASONRY SURFACES SHALL BE THOROUGHLY WETTED TO A SATURATED SURFACE DRY CONDITION JUST PRIOR TO APPLICATION OF SHOTCRETE.
14. STEEL TO RECEIVE SHOTCRETE SHALL BE PREPARED ACCORDING TO SSPC-SP3 "POWER TOOL CLEANING" UNLESS NOTED OTHERWISE.
15. REMOVE REBOUND AND DO NOT REUSE. CUT AWAY LAITANCE, SAGS, AND DEFECTS.
16. UNLESS NOTED OTHERWISE PROVIDE A SMOOTH STEEL TROWELED FINISH WHERE THE COMPLETED WORK WILL BE VISIBLE TO THE GENERAL PUBLIC, AND A FLOATED FINISH FOR ALL OTHER CONDITIONS.
17. SHOTCRETE PLACEMENT OVER EARTH:
    a. RIGID BACKING: PRIOR TO SHOTCRETE APPLICATION, PLACE RIGID OR OTHER APPROVED BACKING AGAINST EARTH WHERE THERE IS ANY LIKELIHOOD OF SOIL BEING DISLODGED IN SUFFICIENT QUANTITY TO DAMAGE SHOTCRETE. ALSO, PLACE BACKING WHERE VOIDS IN EMBANKMENT ARE TO BE BRIDGED.
    b. SLOUGHING EARTH: IF PREVIOUSLY PRESU

CONCRETE MASONRY UNIT

1. CONCRETE MASONRY UNIT (CMU) BLOCK WALLS SHALL BE OF MATERIALS AND CONSTRUCTION IN CONFORMANCE WITH CHAPTER 21 OF THE BUILDING CODE, INCLUDING THE PROVISIONS OF TMS 402/602 AS ADOPTED.
2. THE 28 DAY COMPRESSIVE STRENGTH OF CMU SHALL BE f'm = 2000 PSI MINIMUM AS DETERMINED USING THE UNIT STRENGTH METHOD, OR THE PRISM TEST METHOD PER ASTM C1314.
3. CONCRETE MASONRY UNIT BLOCK SHALL CONFORM TO ASTM C90 MEDIUM WEIGHT.
4. MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S, AND PROPORTIONED TO ACHIEVE THE SPECIFIED CMU f'm.
5. GROUT SHALL CONFORM TO ASTM C476. GROUT 28-DAY COMPRESSIVE STRENGTH SHALL BE DETERMINED PER ASTM C1019, WHICH SHALL EQUAL OR EXCEED THE SPECIFIED CMU f'm AND 2000 PSI. SLUMP SHALL BE BETWEEN 8 AND 11 INCHES, EXCEPT FOR SELF CONSOLIDATING GROUT TEST SLUMP FLOW AND VISUAL STABILITY INDEX PER ASTM C1611.
6. ALL CONCRETE BLOCK CELLS, BOTH VERTICAL AND HORIZONTAL SHALL BE FILLED SOLID WITH GROUT. VERTICAL CELLS TO BE GROUTED ARE TO BE ALIGNED AND UNOBSTRUCTED. REMOVE MORTAR PROTRUSIONS EXTENDING 1/2 INCH OR MORE INTO CELLS OR CAVITIES TO BE GROUTED.
7. VERTICAL REINFORCING SHALL BRACED AT 6'-8" MAXIMUM AND AS REQUIRED TO PREVENT MOVEMENT WHILE GROUTING. HORIZONTAL BARS SHALL BE PLACED IN BOND BEAM UNITS AND TIED SECURELY TO VERTICAL BARS.
8. ALL DOWELS, ANCHORS AND OTHER EMBEDMENTS TO BE SET IN CMU SHALL BE SECURED IN POSITION PRIOR TO GROUTING. NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE ALLOWED.
9. UNLESS NOTED OTHERWISE, CONSTRUCT CMU USING HOLLOW PRECISION BLOCK 8" HIGH x 8" WIDE x 16" LONG NOMINAL PLACED IN RUNNING BOND WITH FACE SHELLS AND WEBS IN VERTICAL ALIGNMENT, AND 3/8" THICK MORTAR BED AND HEAD JOINTS WITH A CONCAVE FINISH.
10. FULLY MORTAR WEBS OF CMU BLOCK AT ALL COURSES OF PIERS, COLUMNS AND PILASTERS, UNO.
11. GROUT LIFTS SHALL NOT EXCEED 8'-0" AND CLEANOUTS AT THE BOTTOM OF ALL CELLS SHALL BE USED UNLESS THE LIFT IS 4'-0" OR LESS. GROUT KEYS SHALL BE FORMED BETWEEN POURS BY TERMINATING GROUT 1-1/2" BELOW THE TOP OF A BLOCK COURSE. CONSOLIDATE GROUT AT THE TIME OF PLACEMENT UNLESS SELF-CONSOLIDATING GROUT IS USED.
12. PROVIDE OPEN END, HALF, CORNER, LINTEL, BOND, PILASTER, OR FIELD MODIFIED BLOCK AS REQUIRED TO ACHIEVE THE CONFIGURATIONS SHOWN ON THE CONSTRUCTION DOCUMENTS. OPEN-ENDED UNITS SHALL BE USED WHEN PLACING BLOCKS IN STACK BOND. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SAFE GROUT LIFT HEIGHT FOR OPEN ENDED AND FIELD MODIFIED BLOCKS.
13. CMU MAINTAINED BETWEEN 40 TO 90 DEGREES FAHRENHEIT AND IN A WIND SHELTERED CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT DOES NOT REQUIRE A WRITTEN PROTECTION PLAN. WHERE REQUIRED BY WEATHER AND SITE CONDITIONS, THE CONTRACTOR SHALL FOLLOW AN APPROVED COLD- OR HOT-WEATHER PROTECTION PLAN COMPLYING WITH ACI 530.1.
14. TOPS OF CMU WALLS THAT WILL REMAIN EXPOSED TO WEATHER SHALL HAVE A 1.5 INCH THICK SOLID CMU CAP BLOCK, OR ROUNDED MORTAR CAP SLOPED TO PREVENT PONDING OF WATER.
15. PROVIDE VERTICAL WALL CONTROL JOINTS AT A SPACING OF 24 TO 32 FEET ON CENTER AND WITHIN 16 FEET OF WALL CORNERS AND INTERSECTIONS, OR AS INDICATED ON THE DRAWINGS. LOCATE CONTROL JOINTS AT EVEN INTERVALS, OR AT SIGNIFICANT LOCATIONS OF STRESS SUCH AS; CHANGES IN WALL HEIGHT OR THICKNESS, FOUNDATION STEPS, ETC. UNO, CONTROL JOINTS SHALL BE FORMED WITH BACKER ROD AND CAULKING AT FACE SHELL JOINTS, WITH HORIZONTAL REINFORCEMENT AND GROUT CONTINUOUS THROUGH THE JOINT.

CMU WALL REINFORCEMENT SCHEDULE

NOMINAL CMU WALL THICKNESS	MINIMUM REINFORCEMENT UNO
3	
8"	#5@24" OC VERT CENTERED, #5@24" OC HORIZ CENTERED
3	

POST INSTALLED ANCHORS

UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING APPLIES TO ALL POST INSTALLED ANCHORAGE INTO HARDENED CONCRETE OR MASONRY WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE/EPOXY, SHOT-PIN, SCREW AND UNDERCUT.

1. INSTALL PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) EXCEPT AS OTHERWISE STATED IN THE SPECIFIED PRODUCT REPORTS. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT USE CORE DRILL BITS FOR ANCHOR HOLES WITHOUT PRIOR SEOR APPROVAL. COPIES OF INSTALLATION INSTRUCTIONS SHALL BE MAINTAINED ON SITE.
2. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS STEEL TYPE 304 OR 316 AT EXTERIOR / DAMP INTERIOR LOCATIONS. DOWELS TO RECEIVE CONCRETE COVER MAY BE PLAIN CARBON STEEL. ANCHORS SHALL BE CLEAN AND FREE OF DEBONDING SUBSTANCES.
3. UNLESS OTHERWISE NOTED, THE SPECIFIED EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "H_{ef}" AS DEFINED IN THE PRODUCT REPORT. MINIMUM ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER. FOR EXPANSION ANCHORS PROVIDE A MINIMUM ANCHOR HOLE DEPTH PER THE MPII, BUT NOT LESS THAN THE SPECIFIED EMBEDMENT + THE SMALLER OF 1.5x DIAM OR 1 INCH. WHERE EMBEDMENT IS NOT SPECIFIED, PROVIDE AN EMBEDMENT DEPTH OF THE SMALLER OF 8 TIMES THE ANCHOR DIAMETER AND 2/3 THE THICKNESS OF THE MEMBER THE ANCHOR IS PLACED INTO.
4. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST TENSIONING (WHERE OCCURS), ETC. PRIOR TO DRILLING, CORING OR SHOOTING PINS INTO EXISTING CONCRETE OR MASONRY USE NON DESTRUCTIVE TESTING TO LOCATE SUCH ITEMS. FOR INSTALLATION DEEPER THAN 3 INCHES USE GROUND PENETRATING RADAR OR X-RAY METHODS.
5. WHERE THE SPECIFIED ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE PROVIDED, NOTIFY THE SEOR AND IOR.
6. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATER PROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.
7. INSTALL IN DRY CONCRETE OR MASONRY HAVING A MINIMUM AGE OF 21 DAYS UNLESS SPECIFICALLY APPROVED BY THE SEOR.
8. ADHESIVE/EPOXY ANCHORS ON THIS PROJECT ARE NOT DESIGNED TO SUPPORT, OR INTENDED TO RESIST SUSTAINED TENSION LOADS.
9. INSTALLERS PLACING OVERHEAD ADHESIVE ANCHORS SHALL BE CERTIFIED BY ACI OR APPROVED EQUIVALENT.
10. DO NOT PLACE POST INSTALLED ANCHORS IN CMU WITHIN 1 1/2" OF HEAD JOINTS OR INTO UNGROUTED CELLS UNLESS SPECIFICALLY INDICATED ON THE STRUCTURAL DOCUMENTS.

ANCHOR TESTING NOTES

11. UNLESS NOTED OTHERWISE PROVIDE SPECIAL INSPECTION AND TESTING OF POST-INSTALLED ANCHORS PER ACI 318 SECTION 17.8, THESE NOTES, AND THE FOLLOWING ANCHOR TEST SCHEDULE.
12. POST-INSTALLED ANCHORS SHALL BE INSPECTED BY A SPECIAL INSPECTOR SPECIFICALLY APPROVED BY THE ENFORCEMENT AGENCY FOR THAT PURPOSE.
13. PROOF LOADING IN TENSION (PULL TESTING) IS TO BE PERFORMED USING A HYDRAULIC RAM. ANCHORS SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL HAVE NO DISCERNABLE MOVEMENT AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT OR BY CONTINUOUS LOSS OF JACKING PRESSURE.
14. FOR ACCEPTANCE OF PROOF LOADING BY CALIBRATED TORQUE WRENCH TESTING, THE APPLICABLE TEST LOAD MUST BE REACHED WITHIN 1/2 TURN OF THE NUT.

POST INSTALLED ANCHORS - (CONTINUED)

EXPANSION ANCHOR TESTING

15. EXPANSION ANCHOR TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR, AND MUST OCCUR WITHIN 24 HOURS AFTER INSTALLATION OF THE ANCHORS.
16. TEST 50% OF ALL EXPANSION ANCHORS FOR ATTACHMENT OF EQUIPMENT WEIGHING MORE THAN 400 LBS, AND 20% FOR ALL OTHER CONDITIONS ON THIS PROJECT.
17. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE PASS, THEN RESUME INITIAL TESTING FREQUENCY.

CONDITION	PROOF TEST LOAD	TEST TORQUE
3/8" DIA x 2" EMBED INTO NWC	2250 LBS	25 LB-FT
1/2" DIA x 3" EMBED INTO NWC	3000 LBS	40 LB-FT
5/8" DIA x 4" EMBED INTO NWC	4750 LBS	60 LB-FT
3/4" DIA x 5" EMBED INTO NWC	6000 LBS	110 LB-FT

ADHESIVE ANCHOR TESTING

18. ADHESIVE ANCHOR TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR, AND MUST OCCUR BETWEEN 24 TO 72 HOURS AFTER INSTALLATION OF THE ANCHORS.
19. PROOF TEST LOADING SHALL USE A HYDRAULIC CYLINDER WITH A LOADING PLATE HAVING A HOLE DIAMETER OF 1.5 TO 2 TIMES THE ANCHOR HOLE DIAMETER (CONFINED CONFIGURATION).
20. TEST 50% OF ALL ADHESIVE ANCHORS FOR ATTACHMENT OF EQUIPMENT WEIGHING MORE THAN 400 LBS, AND 20% FOR ALL OTHER CONDITIONS ON THIS PROJECT. TEST 50% OF ALL VERTICAL WALL DOWELS INTO EXISTING CONCRETE FOUNDATIONS.
21. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE PASS, THEN RESUME INITIAL TESTING FREQUENCY.

CONDITION	PROOF TEST LOAD
3/8" DIA ROD OR #3 REBAR x 2" TO 4" EMBED INTO NWC	2250 LBS
1/2" DIA ROD OR #4 REBAR x 3" TO 5" EMBED INTO NWC	3000 LBS
5/8" DIA ROD OR #5 REBAR x 4" TO 6" EMBED INTO NWC	4750 LBS
3/4" DIA ROD OR #6 REBAR x 5" TO 7" EMBED INTO NWC	6000 LBS
#3 REBAR > 4" EMBED	5200 LBS
#4 REBAR > 5" EMBED	9600 LBS
#5 REBAR > 6" EMBED	15000 LBS
#6 REBAR > 7" EMBED	21000 LBS
#7 REBAR > 8" EMBED	29000 LBS
#8 REBAR > 9" EMBED	38000 LBS

POWER ACTUATED FASTENER NOTES AND TESTING

22. POWER ACTUATED FASTENERS (SHOTPINS) DRIVEN INTO HARDENED CONCRETE SHALL BE HILTI "DS" 0.177 INCH DIAMETER WITH 1 INCH MINIMUM EMBEDMENT, SPACED AT LEAST 4 INCHES ON CENTER, AND AT LEAST 3 INCHES FROM EDGES UNLESS NOTED OTHERWISE. REFER TO ICC REPORT ESR-1663.
23. SHOTPINS MAY BE USED TO RESIST SHEAR AND TENSION LOADS OF UP TO 100 LBS, OR 80% OF THE ICC REPORT VALUES FOR THE CONDITION USED, WHICHEVER IS LESS.
24. TEST THE FIRST 10 SHOTPINS, AND 10% OF THE REMAINDER OF SHOTPINS ON THE PROJECT. THESE TEST SHALL BE RANDOMLY SELECTED AND UNDER THE PROJECT INSPECTOR'S SUPERVISION.
25. IF ANY PIN FAILS TESTING, TEST ALL PINS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE PASS, THEN RESUME THE INITIAL TESTING FREQUENCY.
26. PROOF TEST LOADING SHALL BE 200 LBS, OR TWICE THE DESIGN LOAD, WHICHEVER IS LESS. THE TEST LOAD SHALL BE APPLIED TO THE PIN IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PIN.

STRUCTURAL STEEL

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE CURRENT CBC ADOPTED EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 360) AND AISC "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 341).
2. ALL WORK SHALL BE IN CONFORMANCE WITH ANY AND ALL TESTING, INSPECTION, QUALIFICATION, AND QUALITY ASSURANCE PROVISIONS AS REQUIRED BY THE BUILDING CODE AND ANY APPLICABLE STANDARDS (LATEST ADOPTED EDITION OF CURRENT CBC).
   - ANSI/AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
   - ANSI/AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"
   - AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"
   - AWS D1.8 "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT"
   - RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS"
   - ANSI/AISC 303 " CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES"
   - ANSI/AISC 358 " PREQUALIFIED CONNECTIONS FOR SPECIAL AND INTERMEDIATE STEEL MOMENT FRAMES FOR SEISMIC APPLICATIONS"

   CONFORMANCE TO SUPPLEMENTS TO THESE STANDARDS, IF PUBLISHED ON OR BEFORE THE DATE OF PERMIT ISSUANCE, IS ALSO REQUIRED. ALTHOUGH THESE CONTRACT DOCUMENTS INCLUDE GENERAL REFERENCES TO CODES AND STANDARDS, AND REFERENCES TO OR INCLUSIONS OF SPECIFIED PROVISIONS, OMISSIONS OF ANY APPLICABLE CODE, STANDARD, OR PROVISION DOES NOT RELIEVE THE GENERAL CONTRACTOR FROM COMPLIANCE TO THE APPLICABLE REQUIREMENTS. COORDINATION OF QUALITY CONTROL AND QUALITY ASSURANCE IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
3. STRUCTURAL STEEL MATERIAL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS, UNO:

   WIDE FLANGE SECTIONS.....ASTM A992
   PLATE, ANGLE, CHANNEL & TEES.....ASTM A36 (UNO)
   PLATES USED IN SFRS.....ASTM A572 (50 KSI)
   SQUARE OR RECTANGULAR HSS.....ASTM A500, GRADE C (50 KSI)
   ROUND HSS.....ASTM A500, GRADE C (46 KSI)
   PIPES.....ASTM A53, GRADE B (35 KSI)

4. NOT USED
5. NOT USED
6. ALL STEEL NOT ENCASED IN CONCRETE, MASONRY, OR FIREPROOFING SHALL BE SHOP PRIMED AND PAINTED PER SPECIFICATIONS, EXCEPT FOR TOP FLANGE OF BEAMS SUPPORTING METAL DECK. ANY ABRASIONS OR UNPAINTED AREAS SHALL BE REPAIRED AFTER ERECTION.
7. ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL PERMANENTLY EXPOSED TO WEATHER OR GROUND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A385 UNLESS A WEATHER PROOF COATING IS SPECIFIED BY THE ARCHITECT, UNO. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT. GALVANIZED SURFACES SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE REPAIRED AS NECESSARY. BOLTED CONNECTIONS PERMANENTLY EXPOSED TO WEATHER SHALL USE GALVANIZED HIGH-STRENGTH BOLTS ASTM F3125 GRADE A325 TYPE 1 OR GALVANIZED ASTM F3125 GRADE F1852 TYPE 1. WELDED CONNECTIONS PERMANENTLY EXPOSED TO WEATHER SHALL RECEIVE ZINC RICH TOUCH UP PAINT (COORDINATE WITH AOR). STEEL IN CONTACT WITH TREADED WOOD SHALL BE HOT DIP GALVANIZED, UNO.

STRUCTURAL STEEL - (CONTINUED)

8. NOT USED
9. NOT USED
10. NOT USED
11. NOT USED
12. NOT USED
13. DO NOT CUT HOLES IN STRUCTURAL STEEL WITHOUT WRITTEN APPROVAL OF THE SEOR.
14. PLACE NON-SHRINK OR DRYPACK GROUT UNDER ALL BASE PLATES AND ALLOW TO CURE BEFORE APPLYING ANY LOAD.
15. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.
16. SUBMIT SHOP DRAWINGS TO AOR AND SEOR FOR REVIEW AND, UPON REQUEST, TO GOVERNING CODE AUTHORITY. INDICATE AN ERECTION SEQUENCE OF WELDING TO MINIMIZE LOCKED-UP STRESSES OR DISTORTION FOR MOMENT-RESISTING STEEL FRAMES.
17. NOT USED
18. NOT USED
19. MECHANICAL CONTRACTOR TO VERIFY ALL MECHANICAL UNIT LOCATIONS, SIZES AND OPENINGS. NOTIFY SEOR OF ANY DISCREPANCY PRIOR TO START OF WORK.
20. STEEL FABRICATOR TO LOCATE ALL BEAMS BASED ON INFORMATION FROM MECHANICAL CONTRACTOR AND SUBMIT STEEL BEAM LOCATION TO THE AOR AND SEOR FOR REVIEW AND APPROVAL.
21. SEE "HIGH-STRENGTH BOLT" AND "WELDING" NOTES FOR ADDITIONAL INFORMATION.

HIGH-STRENGTH BOLTS:

1. SEE "STRUCTURAL STEEL" NOTES FOR ADDITIONAL INFORMATION.
2. JOINT ASSEMBLIES USING HIGH-STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH THE CURRENT CBC ADOPTED EDITIOIN OF THE "AISC (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
3. HIGH-STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" PREPARED BY RCSC AND AS AMENDED BY CBC SECTION 2204A. PROVIDE STANDARD-SIZE HOLES UNLESS NOTED OTHERWISE.
4. ALL BOLTS SHALL BE HIGH-STRENGTH BOLTS, UNLESS NOTED OTHERWISE.
5. BOLTS WITH UPSET THREADS ARE NOT ALLOWED UNLESS NOTED OTHERWISE.
6. BOLTED CONNECTIONS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS UNO:

   MACHINE BOLTS (MB).....ASTM A307
   HIGH-STRENGTH BOLTS (CONVENTIONAL) .....ASTM F3125 GRADE A325 (TYPE 1) UNO
   HIGH-STRENGTH BOLTS (TWIST-OFF-TYPE TENSION-CONTROLLED).....ASTM F3125 GRADE F1852 (TYPE 1) UNO
   THREADED RODS USED AS ANCHOR BOLTS.....ASTM F1554, GRADE 36 (UNO)
   THREADED RODS USED IN SFRS.....ASTM F1554, GRADE 55 (WELDABLE WITH SUPPLEMENT S1)

7. PAINT SHALL NOT BE PERMITTED ON CONTACT SURFACES UNLESS NOTED OTHERWISE. CONTACT SURFACES OF BOLTED PARTS SHALL BE DESCALED AND FREE OF DIRT, OIL, BURRS, PITS, AND OTHER DEFECTS WHICH PREVENT SOLID SEATING OF PARTS.
8. ALL HIGH-STRENGTH BOLTS SHALL BE TIGHTENED TO SNUG-TIGHT CONDITION USING ASTM F3125 GRADE A325 BEARING TYPE BOLTS WITH THREADS INCLUDED IN SHEAR PLANE UNLESS NOTED OTHERWISE.

STEEL WELDING

1. WELDING PROCEDURES, ELECTRODES AND WELDER QUALIFICATIONS SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION," AMERICAN WELDING SOCIETY (AWS), D1.1 AND THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS"
2. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.
3. PROJECT WELDING SHALL BE PERFORMED ONLY IN ACCORDANCE WITH WELDING PROCEDURE SPECIFICATIONS (WPS) SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE SEOR AND PROJECT WELDING INSPECTOR. THE WPS SHALL BE IN ACCORDANCE WITH AWS D1.1-D1.4 CURRENT EDITION.
4. WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS D1.1 USING E70XX ELECTRODES UNLESS OTHERWISE NOTED.
5. WELDING OF REINFORCING BARS SHALL BE PERFORMED PER AWS D1.4 USING E90XX ELECTRODES.
6. WELDING OF METAL DECK AND LIGHT GAGE STEEL SHALL BE IN ACCORDANCE WITH AWS D1.3.
7. WHERE WELDED METAL DECK ATTACHMENTS ARE SPECIFIED TO STEEL SUPPORTS USE PUDDLE WELDS OR WELDED STUDS SPACED AS NOTED. EFFECTIVE AREA OF PUDDLE WELDS SHALL BE NOT LESS THAN 1/2" EFFECTIVE DIAMETER AND FOR SEAM WELDS NOT LESS THAN 3/8" WIDE BY 1" LONG.
8. WELDS SHALL BE TESTED PER AWS D1.1 WITH MAGNETIC PARTICLE TESTING AT A RATE OF 10% UNLESS NOTED OTHERWISE.
9. ALL FULL PENETRATION WELDS SHALL BE TESTED PER AWS D1.1 WITH ULTRASONIC TESTING. ALL CJP GROOVE WELDS SHALL BE ULTRASONICALLY TESTED IN MATERIAL 5/16" THICK OR GREATER. FILLET WELDS AND PARTIAL PENETRATION SHALL BE TESTED BY MAGNETIC PARTICLE (MT) AT A RATE OF 40%.
10. ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS, UNO. EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
11. NOT USED
12. FIELD WELDS HAVE BEEN INDICATED WHERE THEY ARE EXPECTED TO OCCUR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL FIELD WELDING NECESSARY TO COMPLETE THE PROJECT AND INCLUDE ALL ASSOCIATED COSTS WITHIN THE BASE PRICE.
13. REMOVE ALL WELD TABS AND WELD BACKING BARS UNLESS NOTED OTHERWISE. WHERE BACKING IS REMOVED THE WELD ROOT SHALL BE BACKGOUGED TO SOUND METAL AND FILLED WITH WELD METAL.

STEEL DECK

1. LIGHT GAGE STEEL DECKING AND ACCESSORIES SHALL BE FABRICATED OF SHEET METAL CONFORMING TO ASTM A653 / A1063 SS GRADE 50 WITH GALVANIZED G60 COATING, OR ASTM A1008 / A1039 SS GRADE 50 WITH A SHOP-PRIMER AND FINISH COATING AS SPECIFIED BY THE ARCHITECT.
2. SEE STEEL DECK SCHEDULE FOR DECK TYPE, GAGE, MIN SECTION PROPERTIES, AND ATTACHMENT.
3. SEE TYPICAL DETAILS FOR REINFORCEMENT AND SUPPLEMENTAL STEEL REQUIREMENTS AT DECK OPENINGS. OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS INDICATE THE GENERAL ARRANGEMENT ONLY, THE CONTRACTOR SHALL COORDINATE AND VERIFY THE FINAL SIZE AND LOCATIONS OF DECK OPENINGS WITH OTHER CONSTRUCTION DRAWINGS AND VARIOUS TRADES.
4. EDGE OF DECK CLOSURE PLATES SHALL BE HELD WITHIN ± 1/2" OF THE DIMENSIONS REQUIRED ON THE ARCHITECTURAL DRAWINGS. CONFIRM THE CUT LENGTH OF DECK AND EDGE OF DECK LOCATIONS FROM FIXED SURVEY REFERENCE LINES.
5. PROVIDE 2" MINIMUM FULL BEARING AT ALL SUPPORTS PERPENDICULAR TO THE DECK DIRECTION. AT SUPPORTS PARALLEL TO THE DECK A LOW DECK FLUTE SHALL BE ALIGNED, OR GIRDER FILLER INSTALLED FOR REQUIRED ATTACHMENTS. END LAPS SHALL BE 2" MINIMUM AND OCCUR AT SUPPORTS.
6. DECK SHALL BE INSTALLED CONTINUOUS OVER 3 OR MORE EQUALLY SPACED SUPPORTS WHERE FRAMING PERMITS. UNFILLED DECK SHALL HAVE A 2 SPAN MINIMUM.
7. PROVIDE ALL NECESSARY ACCESSORIES INCLUDING POUR STOPS, GIRDER FILLERS, COLUMN CLOSURES, SUMP PANS, CELL/RIB/DECK EDGE CLOSURES, INSULATION, ETC. AS INDICATED ON THE CONSTRUCTION DOCUMENTS AND ACCORDING TO SDI PUBLICATION No. 31. METAL ACCESSORIES SHALL HAVE THE SAME GAGE AS DECKING UNO.
8. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STEEL DECK INSTITUTE (SDI) QA/QC STANDARDS.

SLURRY FILL

1. WHERE NOTED ON THESE DRAWINGS, SLURRY FILL REFERS TO LEAN CONCRETE CONTROLLED LOW STRENGTH MATERIAL (CLSM) CONFORMING TO THE REQUIREMENTS SHOWN ON THESE PLANS, AND WITH STANDARD PRACTICE GUIDELINES AND SPECIFICATIONS BY THE "NATIONAL READY MIXED CONCRETE ASSOCIATION".
2. SLURRY FILL SHALL HAVE AN UNCONFINED COMPRESSIVE STRENGTH OF 150 PSI MAXIMUM AT ONE YEAR, 50 PSI MINIMUM AT 28 DAYS, 20-40% STABLE AIR CONTENT WITH A UNIT WEIGHT OF 75-95 LBS/CU.FT.
3. SPECIMEN SAMPLES SHALL BE PREPARED AND TESTED PER ASTM D4832, D5971 AND D6023 WITH A SAMPLING FREQUENCY NOT LESS THAN FOR STRUCTURAL CONCRETE.
4. SLURRY INFILL SHALL BE PLACED IN LIFTS NOT EXCEEDING 2'-6" IN HEIGHT WITH 24 HOURS BETWEEN POURS. UNWORKED COLD JOINTS ARE ACCEPTABLE BETWEEN POURS.
5. INSPECT, SEAL AND BRACE THE BASE, SURROUNDING WALLS AND FORMWORK SUCH THAT SLURRY DOES NOT ESCAPE DURING PLACEMENT. MONITOR ADJACENT SPACES FOR LEAKS, MAINTAIN CONTINGENCY CLEANUP PROCEDURES AND EQUIPMENT IN CASE LEAKAGE OCCURS.
6. ALLOW TO SET A MINIMUM OF 72 HOURS BEFORE PLACING TOPPINGS OR COVER. EXERCISE CAUTION PRIOR TO USING AS A WORKING SURFACE, SPREAD LOADS EVENLY AS IF BEARING ON LOOSE SOIL.

REVISIONS
3 Revision 3 10/06/2026

ISSUED FOR PERMIT

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GENERAL NOTES

CD
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L.A. COUNTY STRUCTURAL OBSERVATION NOTES

1. STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH SECTION 1709 OF THE LOS ANGELES COUNTY BUILDING CODE. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION AT THE CONSTRUCTION STAGES AND THE COMPLETE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE SPECIAL INSPECTOR.
2. THE OWNER SHALL EMPLOY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN, OR ANOTHER REGISTERED DESIGN PROFESSIONAL DESIGNATED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN TO PERFORM STRUCTURAL OBSERVATIONS.
3. THE OWNER OR OWNER'S REPRESENTATIVE SHALL COORDINATE AND CALL FOR A MEETING BETWEEN THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS AND SPECIAL INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF THE STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT SUBMITTED TO THE BUILDING INSPECTOR.
4. THE STRUCTURAL OBSERVER SHALL PREPARE A REPORT OF THE STRUCTURAL OBSERVATION REPORT FORM FOR EACH SIGNIFICANT STAGE OF CONSTRUCTION OBSERVED. THE ORIGINAL OF THE STRUCTURAL OBSERVATION REPORT SHALL BE SENT TO THE BUILDING INSPECTOR'S OFFICE AND SHALL BE SIGNED AND SEALED (WET STAMP) BY THE RESPONSIBLE STRUCTURAL OBSERVER. COPIES OF THE REPORT SHALL ALSO BE GIVEN TO THE OWNER, CONTRACTOR, AND DEPUTY INSPECTOR. ANY DEFICIENCY NOTED ON THE OBSERVATION REPORT WILL BECOME THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD TO VERIFY ITS COMPLETION BY HIM (HER), OR BY A REGISTERED SPECIAL INSPECTOR AT THE DISCRETION OF THE STRUCTURAL OBSERVER.
5. A FINAL OBSERVATION REPORT AND THAT OF THE REGISTERED SPECIAL INSPECTOR MUST BE SUBMITTED WHICH SHOWS THAT ALL OBSERVED DEFICIENCIES WERE RESOLVED AND STRUCTURAL SYSTEM GENERALLY CONFORMS WITH THE APPROVED PLANS AND SPECIFICATIONS.
6. WHEN THE OWNER ELECTS TO CHANGE THE STRUCTURAL OBSERVER OF RECORD, THE OWNER SHALL:
   a. NOTIFY THE BUILDING INSPECTOR IN WRITING BEFORE THE NEXT INSPECTION BY SUBMITTING THE COMPLETED STRUCTURAL OBSERVATION PROGRAM AND DESIGNATION OF THE STRUCTURAL OBSERVER FORM.
   b. CALL AN ADDITIONAL PRECONSTRUCTION MEETING.
   c. FURNISH THE REPLACEMENT STRUCTURAL OBSERVER WITH A COPY OF ALL PREVIOUS OBSERVATION REPORTS.
7. THE REPLACEMENT STRUCTURAL OBSERVER SHALL APPROVE THE CORRECTION OF THE ORIGINAL OBSERVED DEFICIENCIES UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL.
8. THE ENGINEER OR ARCHITECT OF RECORD SHALL DEVELOP ALL CHANGES RELATING TO THE STRUCTURAL SYSTEMS. THE BUILDING OFFICIAL SHALL REVIEW AND APPROVED ALL CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS.
9. VISUAL OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF THE OWNER, ARCHITECT, SEOR, AND AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE BUILDING CODE. VISUAL OBSERVATIONS SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR THE SPECIAL INSPECTION REQUIREMENTS.
10. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE SEOR AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION WILL BE READY FOR OBSERVATION A MINIMUM OF FIVE (5) WORKING DAYS IN ADVANCE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ITEMS LISTED IN THE SCHEDULE ARE VISIBLE FOR OBSERVATION WHEN THE SEOR IS ON SITE AND FOR ANY SCHEDULING DELAYS DUE TO NONCOMPLIANT ITEMS FOUND DURING THE OBSERVATION.
12. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVERS KNOWLEDGE, HAVE NOT BEEN RESOLVED.

L.A. COUNTY STANDARD NOTES:

1. THE USE OF ROLLED STEEL SECTIONS AND/OR BOLTS MANUFACTURED OUTSIDE OF THE UNITED STATES WILL REQUIRE VERIFICATION THAT THE PRODUCTS COMPLY WITH APPLICABLE ASTM STANDARDS. MILL CERTIFICATES WILL BE REQUIRED FOR ALL STEEL. STEEL GRADES OTHER THAN ASTM A36 WILL REQUIRE TESTING BY AN APPROVED LABORATORY. ALL FOREIGN BOLTS MUST BE APPROVED BY COUNTY OF LOS ANGELES BUILDING AND SAFETY PRIOR TO THEIR USE.
2. THE DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW AND APPROVE THEM, AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. PROVIDE AMPLE TIME FOR THE BUILDING OFFICIAL TO REVIEW THE DOCUMENTS.
3. THE PERIMETER WALLS ARE NOT TO BE BACKFILLED UNTIL THE FLOOR SLABS ARE POURED AND CURED.
4. COMPACTION REPORT SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO FOOTING INSPECTION.
5. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING.
6. HOLD-DOWN CONNECTOR BOLTS SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE HALF WRENCH TURN PRIOR TO COVERING THE WALL FRAMING.
7. HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.

ABBREVIATIONS

A	
AB	ANCHOR BOLT
ADDL	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ARCH	ARCHITECT(URAL)
B	
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAILING
BO	BOTTOM OF
BOTT, (B)	BOTTOM
BTWN	BETWEEN
C	
C	CAMBER
CIP	CAST IN PLACE
CJ	CONTROL/CONSTRUCTION JOINT
CJP, CP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CTR(D)	CENTER(ED)
CY	CUBIC YARDS
D	
DB	BAR DIAMETER
DBL	DOUBLE
DC	DEMAND CRITICAL
DEMO	DEMOLISH, DEMOLITION
DIA, DIAM	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DO	DITTO
DWG	DRAWING
E	
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION, ELEVATOR
EMBED	EMBEDMENT
EN	EDGE NAIL
EO	EDGE OF
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXIST, (E)	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	
FLR	FLOOR
FN	FIELD NAILING
FND	FOUNDATION
FO	FACE OF
FS	FAR SIDE
FT	FOOT, FEET
FTG	FOOTING
G	
GA	GAUGE
GALV	GALVANIZED
GLBM, GB	GLUED-LAMINATED BEAM
GR	GRADE
GRBM	GRADE BEAM
H	
HK	HOOK
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
I	
ID	INSIDE DIAMETER
IN	INCH
INT	INTERIOR
J	
JT	JOINT

ABBREVIATIONS

K	
K, KIP(S)	KILOPOUND
KLF	KIPS PER LINEAR FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	
L	ANGLE
LB, LBS	POUND(S)
LF	LINEAR FEET
LFRS	LATERAL FORCE RESISTING SYSTEM
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
M	
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURE
MIN	MINIMUM
MW	MEDIUM WEIGHT
N	
(N)	NEW
NDT	NON-DESTRUCTIVE TESTING
NS	NEAR SIDE
NTS	NOT TO SCALE
NW(C)	NORMAL WEIGHT (CONCRETE)
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
OPP	OPPOSITE
P	
PAF, PDF	POWDER DRIVEN/POWER ACTUATED FASTENER
PJP, PP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUND PER LINEAR FOOT
PSF	POUND PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PT	PRESSURE TREATED WOOD, POST/PRE-TENSIONED
R	
R	RADIUS
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
S	
(S)EOR	(STRUCTURAL) ENGINEER OF RECORD
SC	SLIP CRITICAL
SCHED	SCHEDULE
SDS, SMS	SELF-DRILLING / SHEET METAL SCREW
SIM	SIMILAR
SN	SILL NAILING
SOG	SLAB ON GRADE
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T	
T&B	TOP & BOTTOM
TO	TOP OF
TYP	TYPICAL
U	
UNO	UNLESS NOTED OTHERWISE
V	
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

REVISIONS

ISSUED FOR PERMIT

REGISTERED PROFESSIONAL ENGINEER — ALAN CRAWFORD — No. 4896 — STRUCTURAL — STATE OF CALIFORNIA

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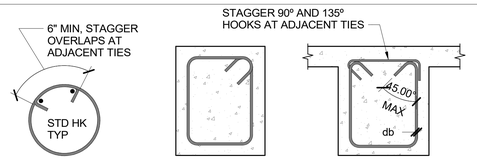
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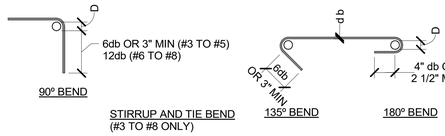
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GENERAL NOTES

CD

S0.04





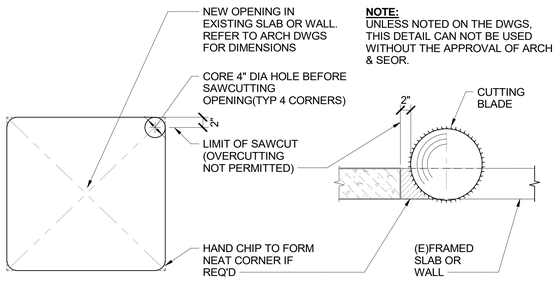
NOTES:
1. MINIMUM INSIDE BEND DIAMETER:
   D = 4db FOR #3 TO #5
   D = 6db FOR #6 TO #8

2. SEE TYPICAL LAP SPLICE SCHEDULE DETAIL FOR STANDARD HOOK DIMENSIONS.

TYPICAL REBAR STIRRUP, TIE AND HOOP BEND DETAIL

13

DETAIL ID: CR-REBAR-03 SCALE: NTS S1.01



TYPICAL SAWCUT OPENING

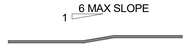
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DETAIL ID: CR-SOG-03 SCALE: NTS S1.01

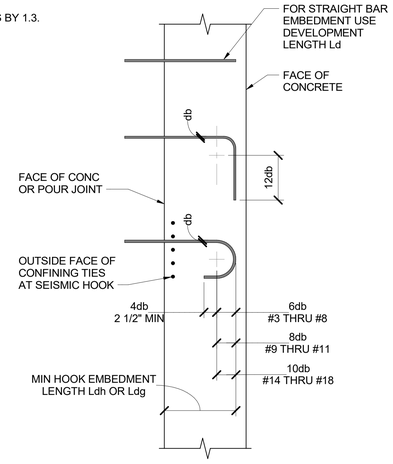
LAP SPLICE LENGTH												
BAR SIZE	f'c = 3,000 PSI				f'c = 4,000 PSI				f'c = 5,000 PSI			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	28	42	22	32	24	36	19	28	22	33	17	25
#4	37	56	29	43	32	48	25	37	29	43	22	33
#5	47	70	36	54	40	60	31	47	36	54	28	42
#6	56	84	43	64	48	72	37	56	43	65	33	50
#7	81	122	63	94	70	106	54	81	63	94	49	73
#8	93	139	72	107	80	121	62	93	72	108	55	83
#9	105	157	81	121	91	136	70	105	81	122	63	94
#10	118	177	91	136	102	153	79	118	91	137	70	105
#11	131	196	101	151	113	170	87	131	101	152	78	117

HOOK LENGTH						
BAR SIZE	f'c = 3,000 PSI		f'c = 4,000 PSI		f'c = 5,000 PSI	
	STD HOOK DEVELOPMENT LENGTH Ldh (IN)	CONFINED HOOK LENGTH Ldg (IN)	STD HOOK DEVELOPMENT LENGTH Ldh (IN)	CONFINED HOOK LENGTH Ldg (IN)	STD HOOK DEVELOPMENT LENGTH Ldh (IN)	CONFINED HOOK LENGTH Ldg (IN)
#3	6	6	6	6	6	6
#4	8	6	7	6	6	6
#5	10	8	9	7	8	6
#6	12	10	10	8	9	7
#7	14	11	12	10	11	9
#8	16	13	14	11	2	10
#9	18	14	15	12	14	11
#10	20	16	17	14	15	12
#11	22	18	19	15	17	14

NOTES:
1. ALL LAP SPLICES SHALL BE CLASS B UNO. LENGTHS ARE IN INCHES.
2. VALUES ARE BASED ON GRADE 60 (Fy=60 KSI) REINFORCING.
3. TOP BARS REFERS TO HORIZONTAL REINFORCING WITH MORE THAN 12" OF CONCRETE PLACED BELOW REINFORCING BAR DURING POUR. OTHER BARS ARE ALL BOTTOM BARS ARE HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE PLACED BELOW REINFORCING BAR DURING POUR AND ALL VERTICAL BARS.
4. WHERE REQUIRED EMBEDMENT CANNOT BE ACHEIVED WITH STRAIGHT BARS, PROVIDE 180 OR 90 DEGREE HOOKS WITH ADEQUATE HOOKED BAR EMBEDMENT.
5. FOR LIGHTWEIGHT CONCRETE, MULTIPLY TABULATED VALUES BY 1.33.
6. TABULATED VALUES SHALL BE MULTIPLIED BY 1.25 FOR ALL SPLICES OF CHORD BARS, VERTICAL BOUNDARY REINFORCING SPLICES, AND DRAG BAR EMBEDMENT OR SPLICE.
7. SEE BUILDING CODE AND LATEST VERSION OF ACI FOR ALL REQUIREMENTS NOT NOTED.
8. FOR EPOXY COATED REINFORCEMENT, SEE CURRENT BUILDING CODE FOR ADJUSTMENT FACTORS.
9. WHERE BARS OF DIFFERENT SIZES ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF THE DEVELOPMENT LENGTH Ld OF THE LARGER BAR AND THE TENSION LAP SPLICE LENGTH OF THE SMALLER BAR.
10. ALL HOOKED BARS SHALL EXTEND AS FAR AS POSSIBLE TO THE OPPOSITE FACE WITH A MINIMUM 2" END COVER AND EMBEDMENT NOT LESS THAN THE SCHEDULE.
11. CASE #1 AND #2 ARE DEFINED AS FOLLOWS:
    CASE #1 = CONCRETE COVER IS AT LEAST 1.0db AND CENTER-TO-CENTER SPACING IS AT LEAST 2.0db
    CASE #2 = CONCRETE COVER IS LESS THAN 1.0db OR CENTER-TO-CENTER SPACING IS LESS THAN 2.0db
12. FOR CLASS A STRAIGHT DEVELOPMENT LENGTHS, Ld, DIVIDE SPLICE LENGTHS BY 1.3.



OFFSET BEND

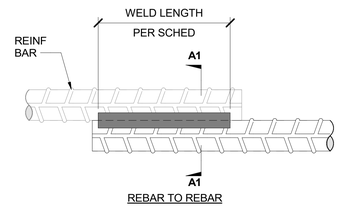


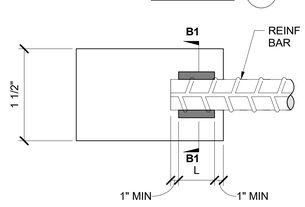
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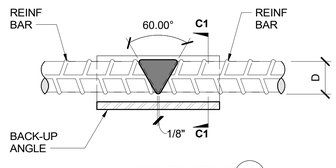
TYPICAL LAP SPLICE AND HOOK LENGTH SCHEDULE

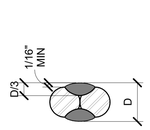
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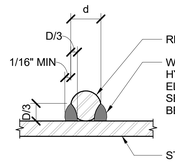
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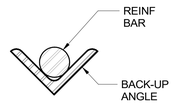




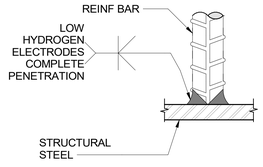


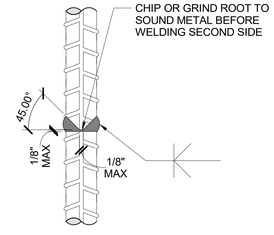






NOTE:
1. #8 BAR & LARGER SHALL BE BUTT WELDED.
2. NO WELDING WITHIN 1" OF BEGINNING OF BAR BEND.
3. SEE GENERAL NOTE; REINFORCING STEEL NOTE._





MINIMUM WELD REQUIREMENT FOR LAP WELDING		
BAR SIZE	WELD DIAGRAM	WELD LENGTH (EACH SIDE), L
#3	A1	2"
#4		2 1/2"
#5		3"
#6	B1	3 1/2"
#7		4"

LAP WELD SCHEDULE		
BAR SIZE	WELD DIAGRAM	WELD LENGTH (EACH SIDE)
#3	A1	2"
#4		2 1/2"
#5		3"
#6	B1	3 1/2"
#7		4"

NOTES:
1. WELDING OF REINFORCING STEEL:
   FIELDING WELDING OF REINFORCING SHALL BE PREFORMED BY WELDERS SPECIFICALLY CERTIFIED FOR REINFORCING STEEL. PRIOR TO WELDING, THE CARBON EQUIVALENT (CE) OF STEEL SHALL BE DETERMINED. A CERTIFIED MILL TEST REPORT WILL SATISFY THIS REQUIREMENT. REINFORCING STEEL WHOSE CE CANNOT BE INDENTIFIED OR WHOSE CE EXCEEDS 0.75% SHALL NOT BE WELDED. REINFORCING STEEL SHALL BE PREHEATED ACCORDING TO AWS REQUIREMETS.
   IN ADDITION, STEEL WITH CE BETWEEN 0.66% and 0.75% SHALL BE WELDED ONLY WHERE PRIOR QUALIFICATION TESTS VERIFY ACCEPTABLE WELDABILITY. CARBON EQUIVALANCY DETERMINATION IS WAIVED FOR REINFORCING STEEL CONFORMING TO ASTM A706.
2. WELDING OF REBAR PERMITTED WHERE SPECIFICALLY DETAILED PER DRAWINGS.
3. PRIOR APPROVAL BY SEOR REQUIRED WHERE REBAR WELDING IS REQUESTED BY GC.
4. VERIFY WITH THE GOVERNING AGENCY THAT WELDS ARE PREQUALIFIED BEFORE PROCEEDING WITH THE WORK. GC IS RESPONSIBLE FOR REQUIRED TESTS NEEDED FOR QUALIFICATION.

TYPICAL WELDED REINFORCING BARS

4

DETAIL ID: CR-REBAR-02 SCALE: NTS S1.01

REVISIONS

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CHECKED	Checker
DATE	10/05/2026

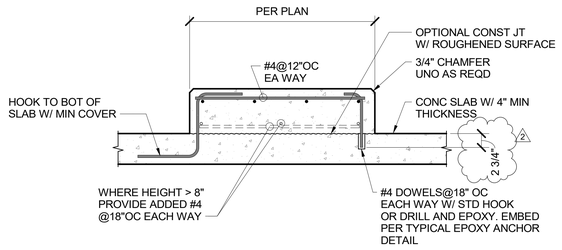
TYPICAL CONCRETE DETAILS

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S1.01

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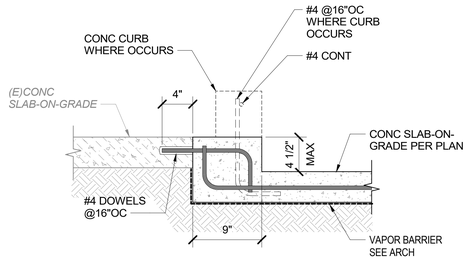
BIDDING SET



NOTE:
FOR SIZE, DEPTH, AND LOCATION OF RAISED PADS SEE ARCH AND MECH DRAWINGS UNO.

TYPICAL CONCRETE RAISED PAD 13

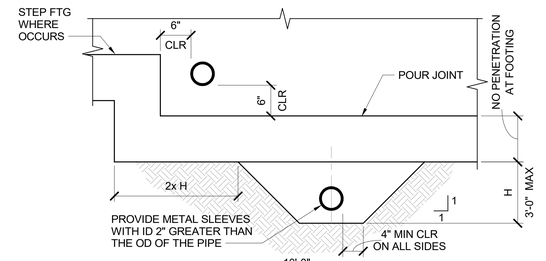
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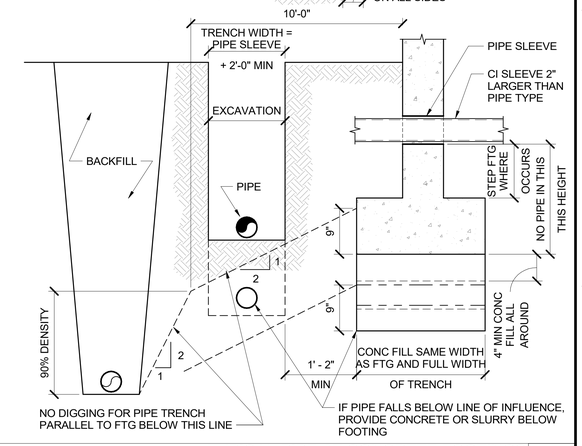


SLAB DEPRESSION AT (E) CONC SLAB ON GRADE 9

DETAIL ID: SCALE: NTS S1.02

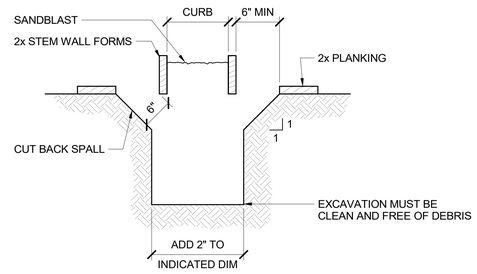
NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING OR OTHERWISE MAINTAINING THE SIDES OF THE EXCAVATION FROM CAVE-INS UNTIL ALL BACKFILL IS COMPLETED PER SPECIFICATIONS AND GEOTECHNICAL REPORT.
2. CONCRETE FILL TO BE MADE BEFORE FOOTING IS POURED.
3. PIPES GREATER THAN 8" IN SIZE, BUNDLES OR BANKS NOT SPECIFICALLY SHOWN ON THE STRUCTURAL PLANS ARE NOT ALLOWED TO BE PLACED WITHOUT OBTAINING EOR APPROVAL
4. CONTRACTOR SHALL COORDINATE ALL PIPE LOCATIONS WITH BUILDING FOUNDATION REQUIREMENTS.
5. IF REQUIREMENTS AS SHOWN CANNOT BE MET, STEP FOOTING PER TYPICAL STEPPED FOOTING DETAIL
6. PIPES MORE THAN 3'-0" BELOW BOTTOM OF FOOTING TRENCH MAY BE BACKFILLED WITH CONTROLLED, COMPACTED FILL.





TYPICAL PIPE AT CONCRETE FOOTINGS 2

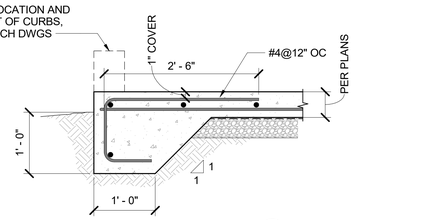
DETAIL ID: CR-FTG-03 SCALE: NTS S1.02



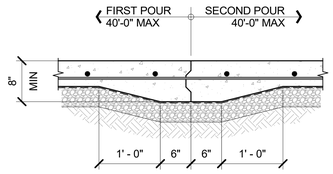
NOTES:
1. FOOTING WIDTHS SHALL NOT BE MORE THAN 4" WIDER THAN SHOWN ON PLAN.
2. FORMWORK NOT PERMITTED BELOW GRADE UNLESS FULLY FORMED.
3. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE GEOTECHNICAL ENGINEER AND/OR SEOR/AEOR. THE MINIMUM FORMWORK SHOWN ON THE DRAWINGS IS MANDATORY TO ENSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE.
4. CONTINUOUS CLEAN-OUT STAKES NOT PERMITTED IN THE FOOTING AREA.
5. AFTER CONCRETE HAS SET, REMOVE LAITANCE AND SCUM

TYPICAL MIN MANDATORY FOOTING FORMWORK 3

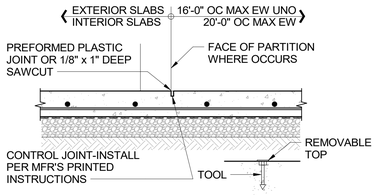
DETAIL ID: CR-FTG-04 SCALE: NTS S1.02



EDGE OF SLAB A

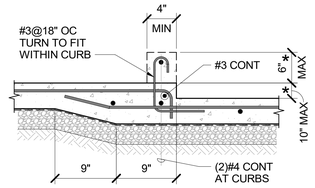


CONSTRUCTION JOINT B



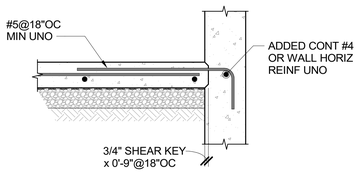
NOTE:
SAWCUT SHALL BE PERFORMED AS SOON AS SLAB WILL ACCEPT CUT WITHOUT RAVELING OR 12 HOURS AFTER POUR, WHICHEVER OCCURS FIRST.

CONTROL JOINT C

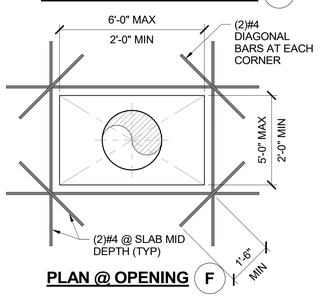


* SIZE, LOCATION AND EXTENT OF CURBS AND DEPRESSIONS PER ARCH DWGS.

CURBS AND DEPRESSIONS D



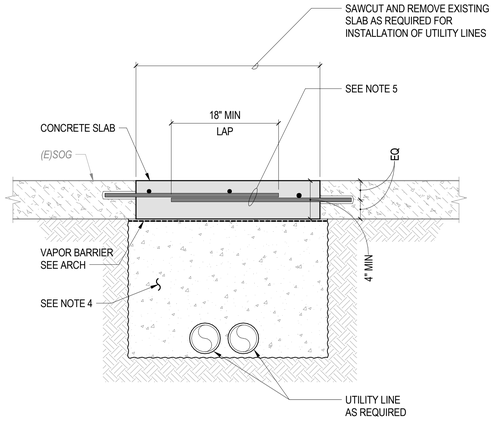
SLAB TO WALL E



PLAN @ OPENING F

TYPICAL SLAB ON GRADE 11

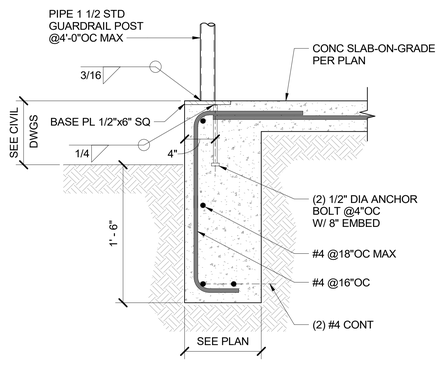
DETAIL ID: CR-SOG-01 SCALE: NTS S1.02



NOTES:
1. VERIFY IN FIELD ALL (E)INFORMATION.
2. SAW-CUTTING SHALL BE AVOIDED NEAR ANY OF THE (E)PAD FOOTINGS, GRADE BEAMS AND CONT FOOTINGS.
3. WHERE REPLACEMENT OF WATERPROOFING IS REQUIRED BELOW THE SLAB ON GRADE, SAW CUT AN ADDITIONAL WIDTH OF SLAB ON GRADE AS REQUIRED WITHOUT DAMAGING THE EXISTING WATERPROOFING.
4. BACKFILL WITH CONTROLLED COMPACTED FILL OR LEAN CONCRETE AT CONTRACTOR'S OPTION OR PER RECOMMENDATIONS FROM GEOTECHNICAL REPORT IF AVAILABLE.
5. REBAR TO MATCH (E)SIZE AND SPACING IN BOTH DIRECTIONS (#4@18"OC MIN). HOOK BARS WHERE LAP CANNOT BE ACHIEVED. INSTALL REBAR IN EPOXY ADHESIVE PER TYPICAL EPOXY DETAIL. SPECIAL INSPECTION IS NOT REQUIRED UNLESS NOTED ON THE PLANS.
6. FOR ANY SLAB ON GRADE SAW-CUTTING THAT IS NOT SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT SHOWING LOCATION, WIDTH, DEPTH AND LENGTH OF TRENCH PRIOR TO CUTTING THE SLAB. SIZE OF TRENCH WILL BE AS REQ'D BY ELECTRICAL OR PLUMBING.

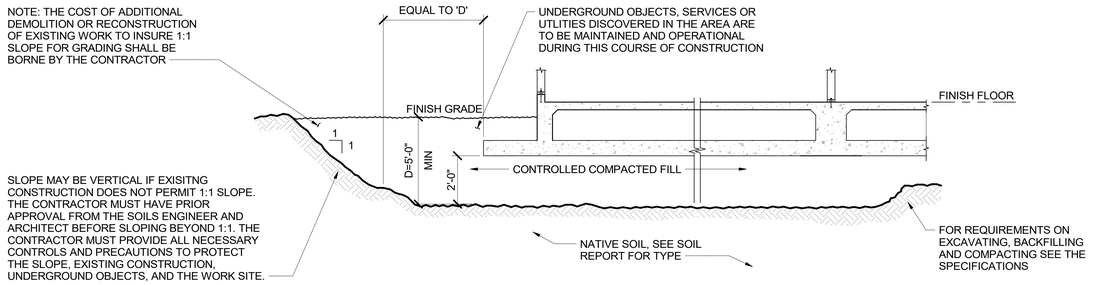
TYPICAL TRENCH AT (E) SLAB ON GRADE 1

DETAIL ID: EXS-CONC-07 SCALE: NTS S1.02



DETAIL 16

DETAIL ID: SCALE: NTS S1.02



NOTE:
FOR SITE PREPERATION REFER TO SPECIFICATION

TYPICAL DIAGRAMMATIC EARTHWORK EXCAVATION 8

DETAIL ID: CR-FTG-06 SCALE: NTS S1.02

REVISIONS

2 2ND PC RESUBMITTAL 08/18/23

ISSUED FOR PERMIT

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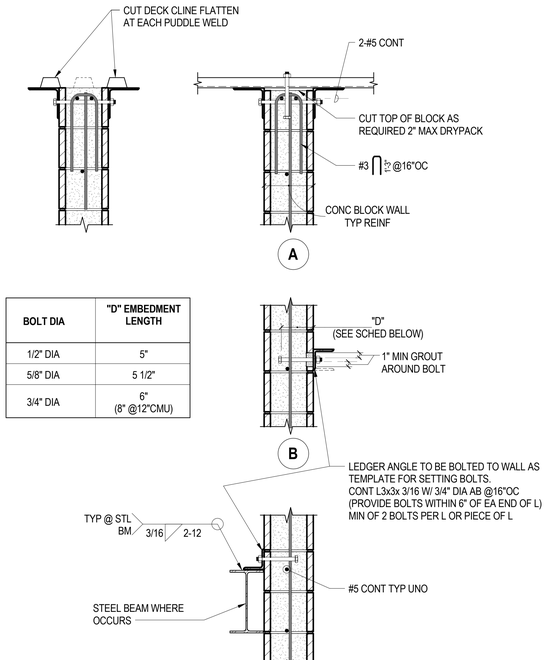
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CHECKED	Checker
DATE	10/05/2026

TYPICAL CONCRETE DETAILS

CD
S1.02

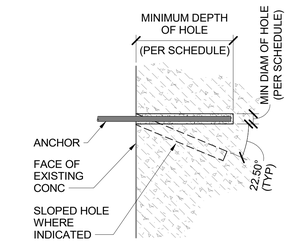
BIDDING SET



BOLT DIA	"D" EMBEDMENT LENGTH
1/2" DIA	5"
5/8" DIA	5 1/2"
3/4" DIA	6" (8" @12"CMU)

ANCHOR BOLTS AT BLOCK WALL

DETAIL ID: MS-WALL-18 | SCALE: NTS | 14 | S1.03



NOTE:
UNLESS NOTED/ REFERENCED ON THE DETAILS/DRAWINGS, THIS DETAIL CANNOT BE USED TO REPLACE CAST-IN-PLACE ANCHORS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

LOAD TEST:
1. THE FOLLOWING LOAD TESTING PROCEDURES APPLY TO EACH ANCHOR SIZE AND GROUT PRODUCT PLACED BY EACH INSTALLATION TEAM FOR EACH OF THE FOLLOWING INSTALLATIONS: a.) VERTICAL SET OVERHEAD b.) VERTICAL SET DOWN c.) HORIZONTAL
2. PRIOR TO BEGINNING WORK, PROOF TEST 3 ANCHORS TO A PROOF TEST LOAD OF 125% OF TABULATED TEST LOAD.
3. LOAD TEST INSTALLED ANCHORS AT A RATE OF 100%.
4. WHEN TEST LOAD IS NOT ACHIEVED, REPLACE THE DEFICIENT ANCHORS AND RETEST. ASSOCIATED COSTS SHALL BE BORNE BY THE CONTRACTOR.
5. WHERE EMBEDMENT NOTED ON SPECIFIC DETAILS IS LESS THAN EMBEDMENT NOTED ON THIS SCHEDULE, REDUCE TEST LOAD BY THE RATION OF THE EMBEDMENTS.

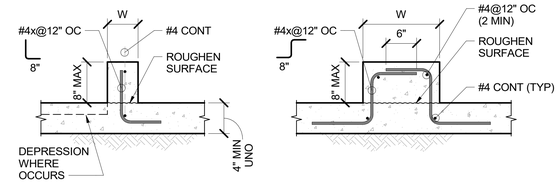
INSTALLATION NOTES:
1. PROVIDE HOLE OF DEPTH AND DIAMETER AS SCHEDULED. AVOID ANY EXISTING REINFORCING STEEL BY RELOCATING HOLE SLIGHTLY. CONTRACTOR SHALL ALLOW FOR 5% REDRILLING. ABANDONED HOLES SHALL BE GROUTED. WHEN INSTALLING GROUTED ANCHOR INTO PRESTRESSED CONCRETE (PRE-OR-POST TENSIONED), LOCATE TENDONS BY NON-DESTRUCTIVE METHODS PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE TENDON AND THE HOLE FOR THE GROUTED ANCHOR. COSTS TO REPAIR/REPLACE DAMAGED TENDONS SHALL BE BORNE BY THE CONTRACTOR.
2. FOR EPOXY GROUT, CLEAN HOLE THOROUGHLY BY VACUUM OR AIR PRESSURE, HOLE TO BE DRY BEFORE GROUTING, FOR CEMENT GROUT CLEAN, AND PRE-WET HOLE 24 HOURS BEFORE GROUTING; REMOVE FREE WATER PRIOR TO GROUTING.
3. PLACE GROUT IN HOLE WITH CAULKING GUN OR SIMILAR EQUIPMENT. APPROXIIMATELY 2/3 FULL. STARING AT BOTTOM, FILL HOLE.
4. INSERT DOWEL INTO HOLE FORCING MATERIAL AROUND SIDES OF BAR AND COMPLETELY FILLING VOIDS.
5. PROVIDE SUPPORT FOR ANCHOR UNTILL GROUT HAS CURED.
6. EPOXY GROUT: PER PRODUCT SCHEDULE
   CEMENT GROUT: "MASTERFLOW 928" BY MASTER BUILDERS(LARR #23137) OR EQUAL.
7. ALL WORK SHALL BE INSTALLED UNDER CONTINUOUS INSPECTION BY INSPECTOR OF RECORD.
8. SURFACES TO RECEIVE NEW CONCRETE TO BE ROUGHENED PER SPECIFICATIONS.

EPOXY GROUT							
BAR SIZE, ASTM A615 GRADE 60	MIN HOLE DIAM	MIN DEPTH	TEST LOAD	BAR SIZE, ASTM A36 FULLY THREADED	MIN HOLE DIAM	MIN DEPTH	TEST LOAD
#3	1/2"	6"	6.0 KIPS	1/2"	9/16"	6"	4.6 KIPS
#4	5/8"	8"	10.6 KIPS	5/8"	11/16"	8"	7.3 KIPS
#5	3/4"	10"	16.6 KIPS	3/4"	13/16"	10"	10.8 KIPS
#6	1"	14"	23.8 KIPS	7/8"	15/16"	12"	15.0 KIPS
#7	1-1/8"	16"	32.5 KIPS	1"	1-1/16"	14"	19.6 KIPS
#8	1-1/4"	18"	42.4 KIPS	1-1/8"	1-3/16"	16"	24.7 KIPS
#9	1-3/8"	21"	53.6 KIPS	1-1/4"	1-5/16"	18"	31.4 KIPS
#10	1-1/2"	24"	66.2 KIPS	-	-	-	-
#11	1-3/4"	28"	80.1 KIPS	-	-	-	-

CEMENT GROUT							
BAR SIZE, ASTM A615 GRADE 60	MIN HOLE DIAM	MIN DEPTH	TEST LOAD	BAR SIZE, ASTM A36 FULLY THREADED	MIN HOLE DIAM	MIN DEPTH	TEST LOAD
#3	1-1/2"	6"	6.0 KIPS	1/2"	1-1/2"	6"	4.6 KIPS
#4	1-5/8"	8"	10.6 KIPS	5/8"	1-5/8"	8"	7.3 KIPS
#5	1-3/4"	12"	16.6 KIPS	3/4"	1-3/4"	12"	10.8 KIPS
#6	1-7/8"	16"	23.8 KIPS	7/8"	1-7/8"	16"	15.0 KIPS
#7	2"	21"	32.5 KIPS	1"	2"	21"	19.6 KIPS
#8	2-1/8"	28"	42.4 KIPS	1-1/8"	2-1/8"	24"	24.7 KIPS
#9	2-1/4"	33"	53.6 KIPS	1-1/4"	2-1/4"	28"	31.4 KIPS
#10	2-1/2"	36"	66.2 KIPS	-	-	-	-
#11	2-5/8"	40"	80.1 KIPS	-	-	-	-

TYPICAL GROUTED ANCHOR DETAIL

DETAIL ID: CR-AB-02.2 | SCALE: NTS | 6 | S1.03

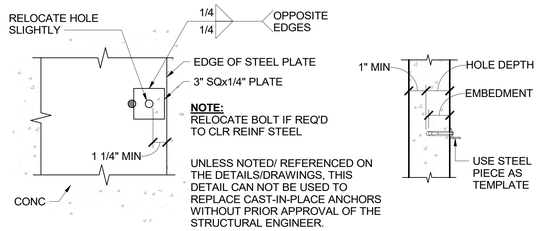


NOTES:
1. COORDINATE WIDTH, HEIGHT AND LOCATION OF CURBS WITH ARCHITECTURAL DRAWINGS.
2. CONSTRUCTION JOINT SHOWN IS OPTIONAL.

TYPICAL CURBS-ON-GRADE

DETAIL ID: CR-POCB-02 | SCALE: NTS | 1 | S1.03

TYPICAL CARBON STEEL ANCHOR INSTALLATION DESIGN AND TEST VALUES							
BOLT DIAMETER	3/8"	1/2"		5/8"		3/4"	
MIN. EMBEDMENT	2"	2"	3 1/4"	3 1/8"	4"	3 3/4"	4 3/4"
MIN. HOLE DEPTH	2 5/8"	2 5/8"	4"	3 7/8"	4 3/4"	4 5/8"	5 3/4"
MIN MEMBER THICKNESS	4"	4"	6"	5"	6"	6"	8"
INSTALLATION TORQUE	25 FT-LBS	40 FT-LBS		60 FT-LBS		110 FT-LBS	



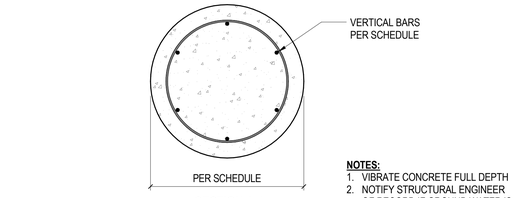
ANCHOR RELOCATION DETAIL

ANCHOR AT WALL OR SLAB

INSTALLATION:
1. ALLOWABLE WEDGE ANCHOR TYPES: PER PRODUCT SCHEDULE.
2. UNO INSTALL ANCHORS PER MANUFACTURER'S RECOMMENDED SPECIFICATIONS.
3. THE TABULATED INSTALLATION AND TEST VALUES PERTAIN TO USE IN HARDROCK CONCRETE, LIGHT-WEIGHT CONCRETE AND CONCRETE FILL OVER METAL DECK. CONCRETE FILL OVER METAL DECK SHALL CONSIST OF 20GA. MIN. METAL DECK WITH EITHER HARD ROCK OR LIGHT WEIGHT CONCRETE. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI.
4. WHEN INSTALLING DRILLED-IN ANCHORS IN NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE REINFORCING BARS OR OTHER EMBEDDED ITEMS SUCH AS ELECTRICAL/TELECOMMUNICATIONS CONDUIT AND GAS LINES. WHEN INSTALLING DRILLED-IN ANCHORS INTO PRESTRESSED CONCRETE (PRE OR-POST-TENSIONED). LOCATE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR.
5. DRILLED EXPANSION TYPE ANCHOR BOLTS SHALL BE USED ONLY WHERE DETAILED OR FOR ATTACHMENT OF MECH, ELEC, OR MISC ACCESSORIES OR EQUIPMENT TO THE STRUCTURE.
6. WHERE EDGE DISTANCE AND SPACING IS NOT SHOWN ON DETAILS, REFER ICC ESR REPORT FOR MINIMUM VALUES.

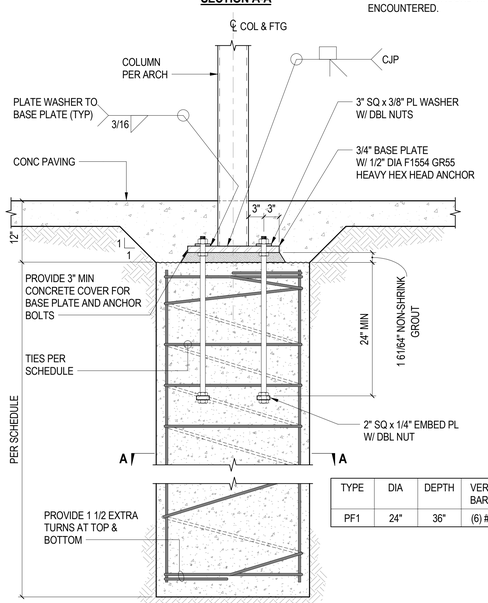
TYPICAL CONCRETE POST-INSTALLED ANCHOR

DETAIL ID: CR-AB-01 | SCALE: NTS | 3 | S1.03



NOTES:
1. VIBRATE CONCRETE FULL DEPTH
2. NOTIFY STRUCTURAL ENGINEER OF RECORD IF GROUND WATER IS ENCOUNTERED.

SECTION A-A



TYPE	DIA	DEPTH	VERT BARS	TIES
PF1	24"	36"	(6) #5	#4 @6"

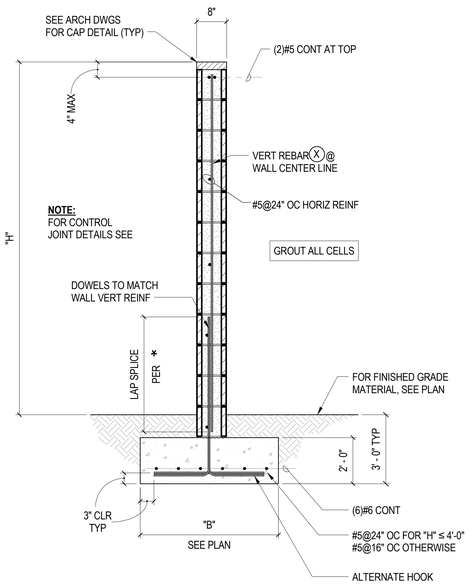
CAST IN PLACE CONC PILE

TYPICAL POLE FOOTING

DETAIL ID: CON-POLE-01 | SCALE: NTS | 16 | S1.03

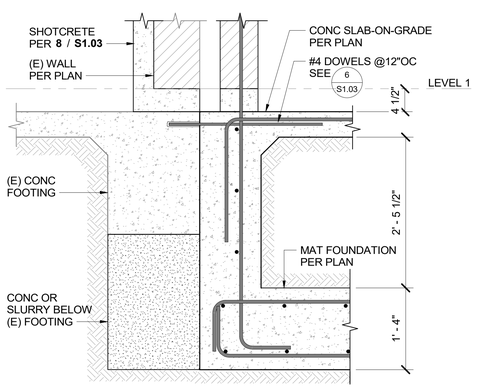
NOTES:
1. FOR HORIZONTAL WALL REINFORCING AT CORNER AND INTERSECTIONS, REFER TO SIM
2. ✶ USE WALL REBAR DOWELED INTO FOOTING FOR WALL HT. "H"≤4'-0"
3. SEE ARCH FOR LOCATION

MAX. "H"	"B" (UNO)	BAR (X)
4'-6"	-	#5 @24" OC
7'-6"	5'-0"	#5 @16" OC



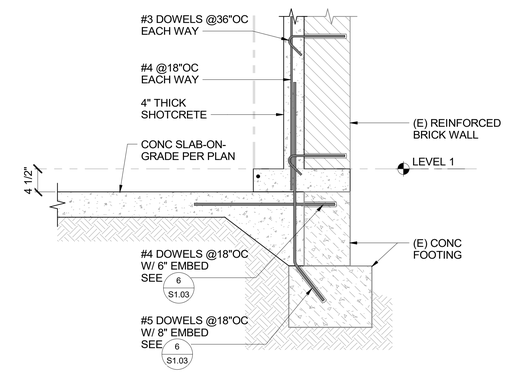
8" FREE STANDING CMU SITE WALL

DETAIL ID: MS-WALL-09 | SCALE: NTS | 12 | S1.03



NEW WALL FOOTING AT EXISTING FOOTING

DETAIL ID: | SCALE: NTS | 7 | S1.03



DETAIL

DETAIL ID: | SCALE: NTS | 8 | S1.03

REVISIONS

ISSUED FOR PERMIT

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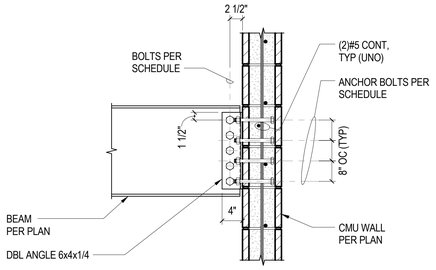
NAC NO	161-21001
DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

TYPICAL CONCRETE DETAILS

CD S1.03

BIDDING SET

BEAM SIZE	A325 SC BOLT TO BEAM	A307 ANCHOR BOLTS EACH LEG
W8x, W10x	(2) - 7/8" DIA	(2) - 3/4" DIA
W12x	(3) - 7/8" DIA	(3) - 3/4" DIA

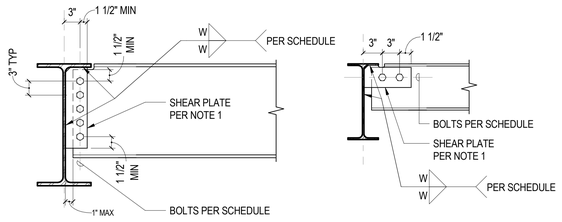


BEAM SIZE	BOLTS TO BEAM	NELSON STUDS	"w"
W8x	(2) - 7/8" DIA	2 ROWS OF (2) - 3/4" DIA	3/16"
W10x,W12x	(3) - 7/8" DIA	2 ROWS OF (3) - 3/4" DIA	1/4"
W14x,W16x	(4) - 7/8" DIA	2 ROWS OF (4) - 3/4" DIA	1/4"
W18x,W21x	(5) - 7/8" DIA	2 ROWS OF (5) - 3/4" DIA	1/4"
W24x	(6) - 7/8" DIA	2 ROWS OF (6) - 3/4" DIA	3/8"

NOTES:
1. PROVIDE SHEAR PLATE OF THICKNESS EQUAL TO OR GREATER THAN BEAM WEB THICKNESS, BUT NOT LESS THAN 1/4" THICK. PLATE THICKNESS SHALL BE IN INCREMENTS OF 1/8".
2. WHERE BEAM OCCURS AT BOTH SIDES OF WALL, USE THROUGH BOLTS.
3. IF SHORT SLOTTED HOLES ARE USED, PROVIDE WELDED PLATE WASHER.

BEAM TO CMU WALL CONNECTION

DETAIL ID: MS-WALL-19 | SCALE: NTS | 14 | S1.11



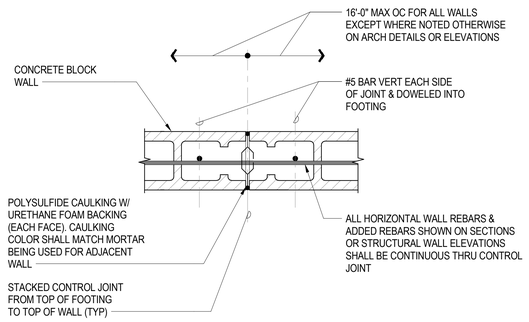
CONNECTION AT W6x AND SMALLER

CONNECTION SCHEDULE			
BEAM SIZE	A325N BOLTS		FILLET WELD W MIN
	No	SIZE	
W10x OR LESS	2	7/8" DIA	1/4"
W12x, W14x	3	7/8" DIA	1/4"

NOTES:
1. SHEAR PLATE THICKNESS TO MATCH SUPPORTED BEAM WEB THICKNESS (3/8" MIN).
2. HORIZONTAL SHORT SLOTTED HOLES MAY BE USED AT CONTRACTORS OPTION EXCEPT AT SEISMIC CONNECTIONS.
3. FOR SKEWED CONNECTION, SEE TYPICAL SKEWED CONNECTION PL DETAIL.
4. FOR CHANNELS FRAMING INTO WF BEAM, USE TABLE FOR SIMILAR DEPTH.

TYPICAL BEAM TO BEAM CONNECTION

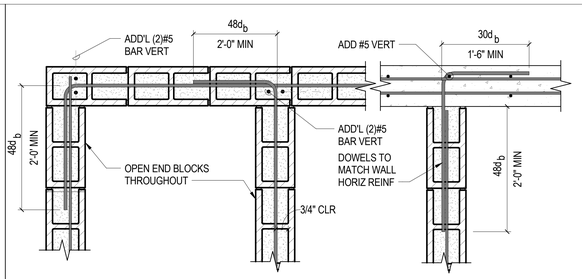
DETAIL ID: ST-BEAM-01 | SCALE: NTS | 16 | S1.11



NOTES:
FOR CONTROL JOINTS IN HEAD SECTION OVER OPENINGS, INSTALL DIVISION STRIPS IN 8" SECTIONS WITH ALTERNATING KEY EACH SIDE OF JOINT

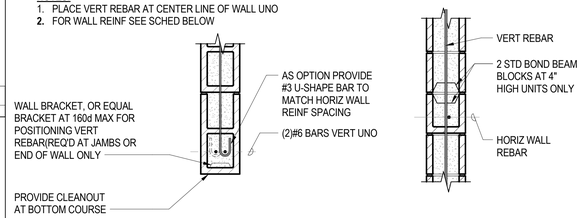
TYPICAL MASONRY CONTROL JOINT

DETAIL ID: MS-WALL-02 | SCALE: NTS | 9 | S1.11



CORNER **INTERSECTION** **INTERSECTION AT CONC**

NOTES:
1. PLACE VERT REBAR AT CENTER LINE OF WALL UNO
2. FOR WALL REINF SEE SCHED BELOW



JAMB OR WALL END **BOND BEAM BLOCK**

(AT ALL HORIZ REBAR)

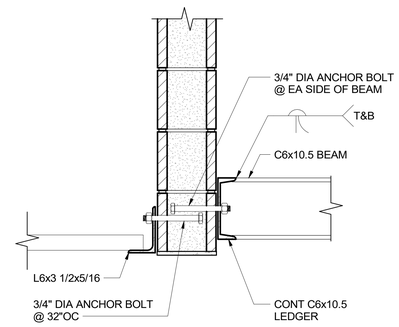
SCHEDULED REINF SHALL APPLY IN ALL CASES UNLESS NOTED OTHERWISE ON SPECIFIC DETAILS OR SECTIONS

TYPICAL WALL REINFORCING SCHEDULE			
WALL THICKNESS	VERT REINF	HORIZ REINF	REMARKS
8"	#5@16"OC UNO	#5@16"OC UNO	℄ WALL
12"	#5@16"OC UNO	#5@16"OC UNO	EACH FACE

NOTES:
1. WHERE CONDUIT IS REQUIRED IN WALL FOR SECURITY EQUIPMENT, IT IS ACCEPTABLE TO ELIMINATE (1)#5 VERT BAR SPACING OF CONDUITS SHALL NOT BE LESS THAN 16" OC.
2. NOT OTHER CONDUITS ARE ALLOWED IN CMU WALLS WITHOUT PRIOR PERMISSION FROM STRUCTURAL ENGINEER OF RECORD.
3. FOR CORNER & INTERSECTION AT 12" WALL SEE TYPICAL CMU BLOCK WALL DOUBLE REINFORCING.
4. USE OPEN ENDED BLOCKS AT BOTH ENDS FOR ALL STACK BOND CONDITIONS.

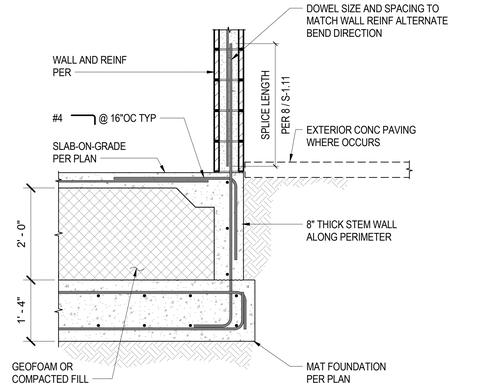
TYPICAL CMU WALLS

DETAIL ID: MS-WALL-01 | SCALE: NTS | 6 | S1.11



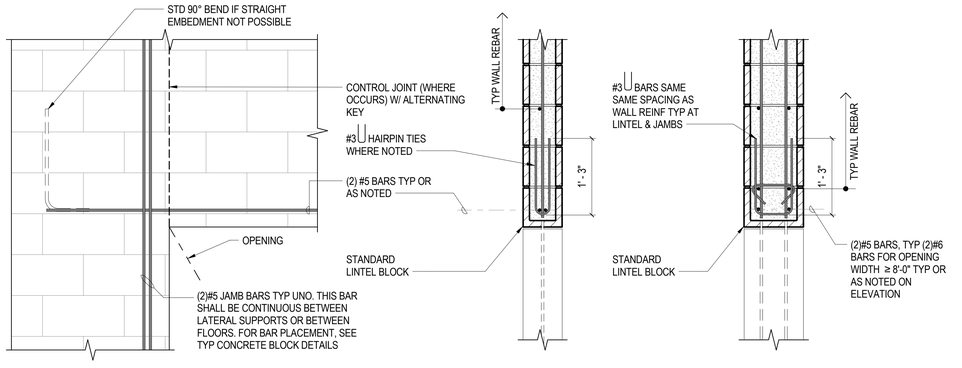
DETAIL

DETAIL ID: | SCALE: NTS | 1 | S1.11



TYPICAL WALL TO FOOTING

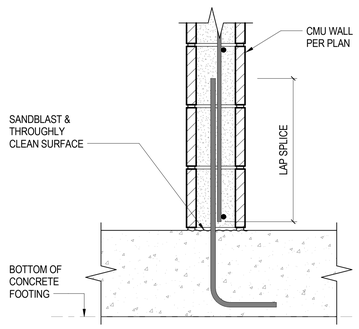
DETAIL ID: MS-WALL-05 | SCALE: NTS | 2 | S1.11



ELEVATION **SECTION @ 8" WALL** **SECTION @ 12" WALL**

REBAR AT CMU WALL OPENING

DETAIL ID: MS-WALL-08 | SCALE: NTS | 7 | S1.11



STRAIGHT DEVELOPMENT / LAP SPLICE LENGTH SCHEDULE (IN INCHES)											
MIN MASONRY COMPRESSIVE STRENGTH (fm-1500 PSI)		MINIMUM (CC, CS) IN INCHES)									
BAR SIZE	BAR DIAM (db)	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
#4	0.500	34	25	24	24	24	24	24	24	24	24
#5	0.625	45	39	32	30	30	30	30	30	30	30
#6	0.750	54	54	54	49	42	42	42	42	42	42
#7	0.875	63	63	63	63	57	50	50	50	50	50
#8	1.000	72	72	72	72	72	72	67	61	61	61
#9	1.125	82	82	82	82	82	82	82	77	70	24

NOTES:
1. CC INDICATES CLEAR COVER
2. CS INDICATES BAR CLEAR SPACING
3. db INDICATES BAR DIAMETER
4. ▭ INDICATES LENGTHS GOVERNED BY 5db
5. ALL LENGTHS INDICATED ARE IN INCHES
6. 72db MAX 48db MIN
7. IF ACTUAL CC (OR CS) FALLS BETWEEN THAT SHOWN IN SCHEDULE, DEVELOPMENT/SPLICE LENGTH TO BE BASED ON SMALL CC (OR CS)
8. ALL LAPS SHALL BE FULL CONTACT LAPS

TYPICAL REBAR SPLICE & EMBED AT CMU WALLS

DETAIL ID: MS-WALL-04 | SCALE: NTS | 8 | S1.11

REVISIONS

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DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

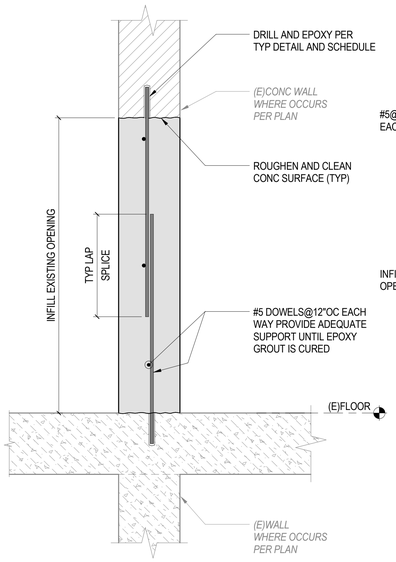
TYPICAL CMU DETAILS

CD

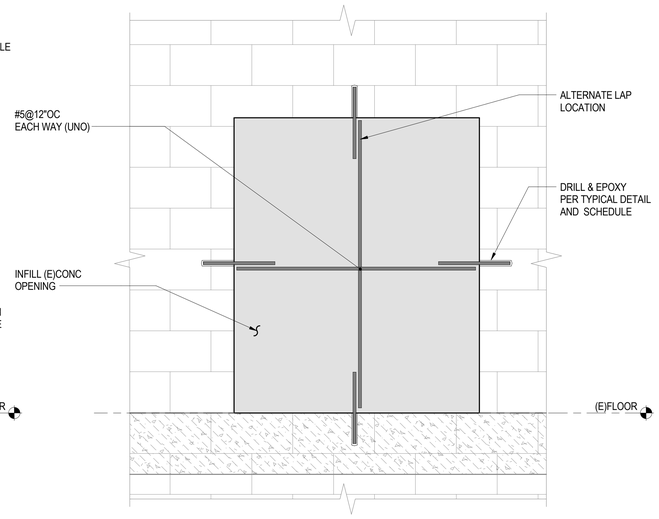
S1.11

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BIDDING SET



SECTION

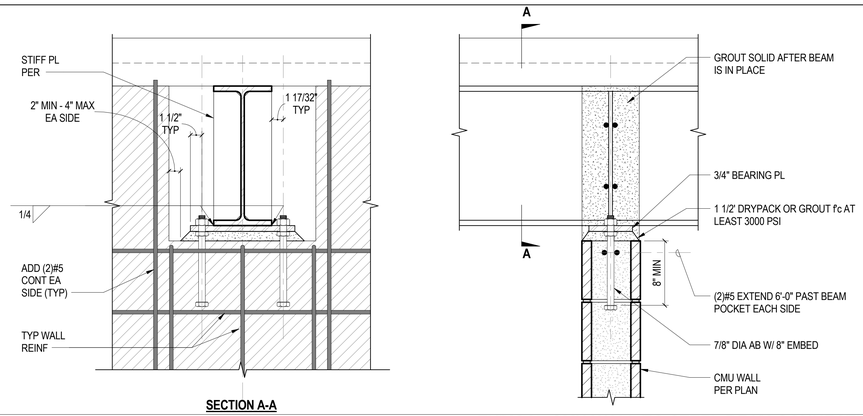


ELEVATION

NOTES:
1. WHERE LAP CANNOT BE ACHIEVED, USE STD HOOK.
2. SEE ARCH FOR WATERSTOP / WATERPROOFING DETAILS AT EXTERIOR CONDITION.

TYPICAL CONCRETE INFILL AT EXISTING BRICK WALL OPENING — 10

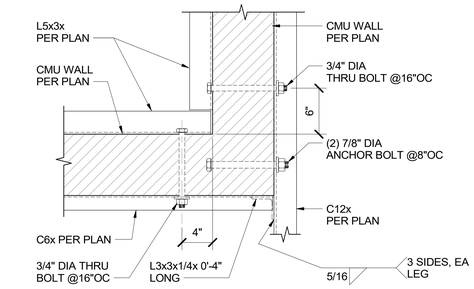
DETAIL ID: EXS-CONC-01 | SCALE: NTS | S1.12



SECTION A-A

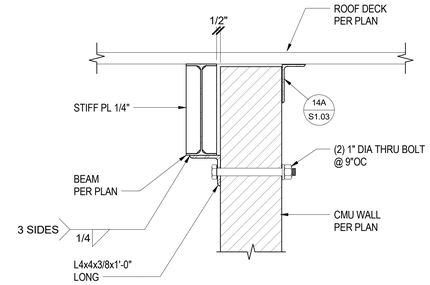
TYPICAL CMU WALL TO STEEL BEAM CONNECTION DETAIL — 11

DETAIL ID: MS-WALL-35 | SCALE: NTS | S1.12



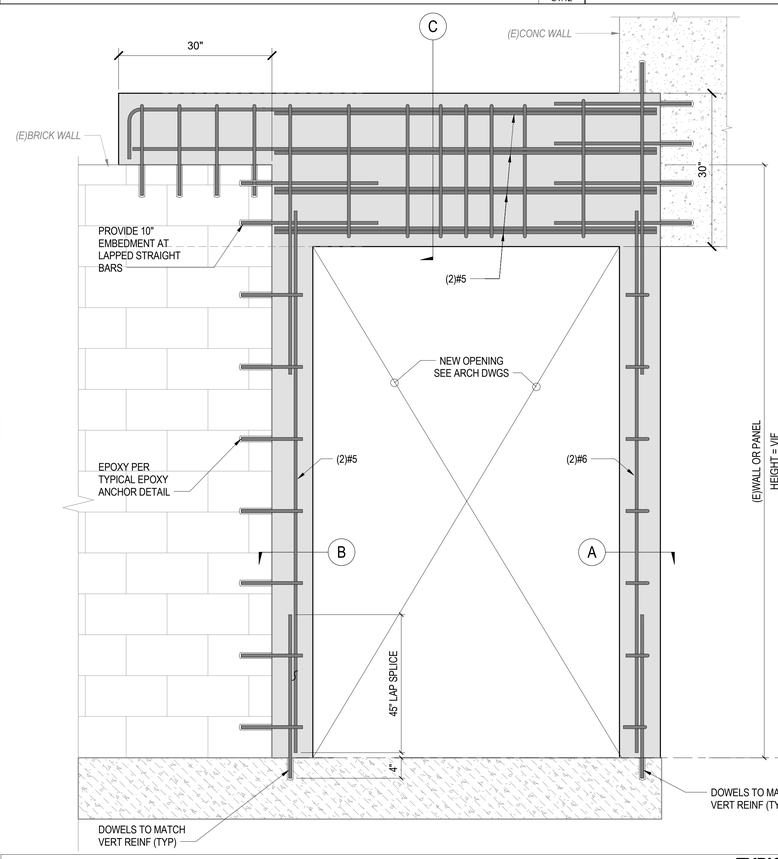
DETAIL 5

DETAIL ID: | SCALE: NTS | S1.12



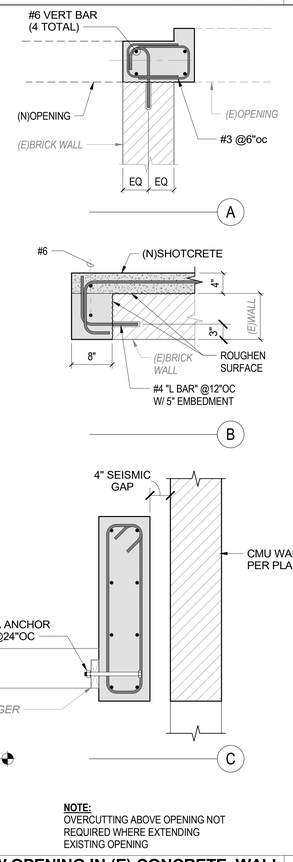
DETAIL 1

DETAIL ID: | SCALE: NTS | S1.12



TYPICAL NEW OPENING IN (E) CONCRETE WALL — 3

DETAIL ID: EXS-CONC-08 | SCALE: NTS | S1.12



NOTE:
OVERCUTTING ABOVE OPENING NOT REQUIRED WHERE EXTENDING EXISTING OPENING

REVISIONS

ISSUED FOR PERMIT

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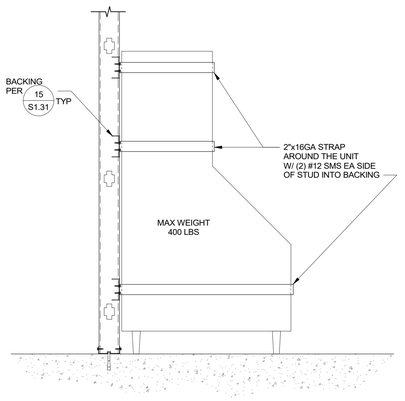
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NAC NO	161-21001
DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

TYPICAL CMU DETAILS

CD

S1.12



ICE MAKER ANCHORAGE DETAIL 13

DETAIL ID: CS-STUD-20 SCALE: NTS S1.21

NOTES:

1. USE 16 GA STUDS MINIMUM WHERE EQUIPMENTS, CABINETS, ELECTRICAL PANELS, ETC. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS.
2. ALL STUDS ARE 16" OC UNLESS NOTED OTHERWISE.
3. WHERE WALLS HAVE CABINETS/CASEWORK ON BOTH SIDES, USE SPACING 12" OC WHERE 16" OC CALLED OUT.
4. BOTTOM TRACK SIZE AND GAGE TO MATCH WALL STUDS.
5. AT FULL HT TRACK FOR TYPE "C" JAMB, STOP TRACK 2" FROM FLOOR AND TOP TRACK TO AVOID INTERFERENCE WITH SILL AND TOP TRACKS.
6. REFER TO ARCHITECTURAL SPECIFICATIONS AND DRAWINGS FOR WALL THICKNESSES.
7. CONTRACTOR MAY USE PRO-X HEADERS (IAPMO REPORT # 0286) AT INTERIOR NON-LOAD BEARING CONDITIONS IN LIEU OF THIS DETAIL. FOLLOW ALL REQUIREMENTS AND ATTACH TO JAMB STUDS PER ICC REPORT.

WALL TYPE	SIZE & SPACING	Fy (ksi)	MAX HT	TOP TRACK FULL HEIGHT	TOP TRACK PARTIAL HEIGHT
4-LAYERS OF 5/8" GYP TOTAL	600S200-54@24" OC	50	15'-0"		
	600S162-43@16" OC	33	15'-0"		
	400S250-54@12" OC	50	15'-0"		
3-LAYERS OF 5/8" GYP TOTAL	600S162-54@24" OC	50	15'-0"		
	600S162-43@16" OC	33	15'-0"		
	400S200-54@12" OC	50	15'-0"		
2-LAYERS OF 5/8" GYP TOTAL	600S162-54@24" OC	50	15'-0"		
	600S162-43@16" OC	33	15'-0"		
	400S162-54@12" OC	50	15'-0"		
1-LAYER OF 5/8" GYP TOTAL (1)	400S162-54@16" OC	50	15'-0"		
	600S162-43@24" OC	33	15'-0"		

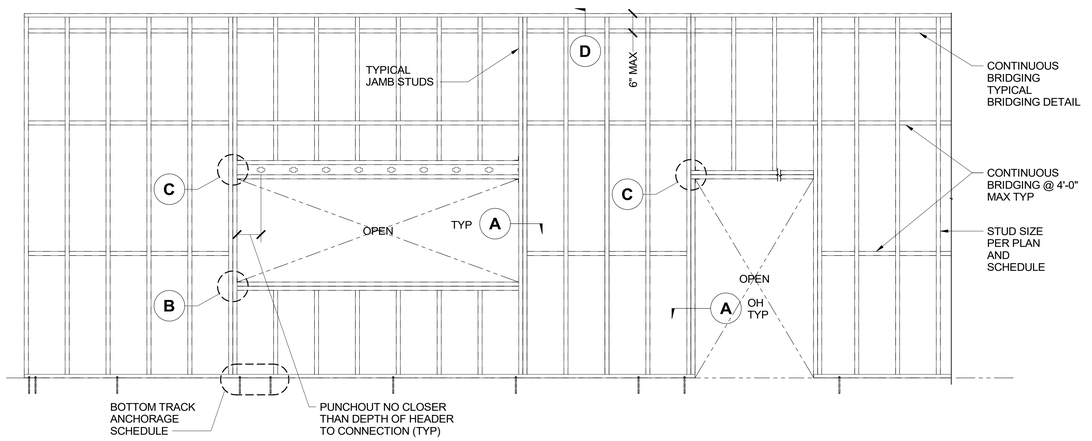
TABLE NOTES:

1. WALL BRIDGING REQUIRED PER TYPICAL WALL BRIDGING DETAIL.

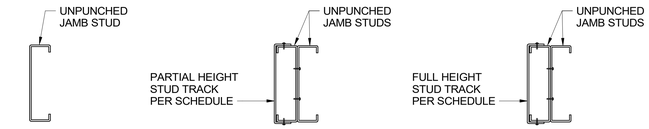
BOTTOM TRACK FASTENER SCHEDULE	
INTERIOR PARTITIONS TYPICALLY	0.145" DIA POWDER DRIVEN PINS @ 32" OC OR 3/8" DIA ANCHORS
INTERIOR PARTITIONS ADJACENT TO DEPRESSIONS OR CURBS	3/8" DIA ANCHORS @ 48" OC

INTERIOR WALL OPENING SCHEDULE SCHEDULE

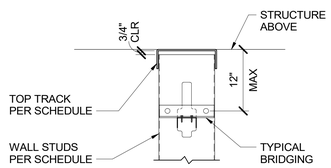
MAX HEIGHT (SEE NOTE 4)	MAXIMUM OPENING WIDTH	JAMB SIZE TYPE	JAMB SIZE STUD SIZE / TRACK SIZE	SILL SIZE TYPE	SILL SIZE STUD SIZE / TRACK SIZE	HEADER SIZE TYPE	HEADER SIZE STUD SIZE / TRACK SIZE
14'-0" OR LESS	3'-6"	A1	600S200-43 / 600T200-43	B1	600S200-43 / 600T200-43	C1	NONE / 600T200-43
14'-0" OR LESS	6'-0"	A2		B2		C2	
14'-0" OR LESS	8'-0"	A2		B3		C3	
14'-0" OR LESS	10'-0"	A3		B3		C4	



INTERIOR METAL STUD WALL ELEVATION

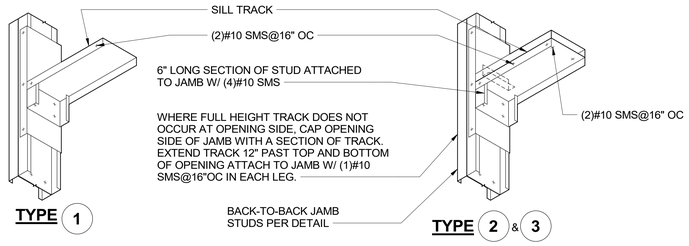


INTERIOR JAMB STUD CONFIGURATION A

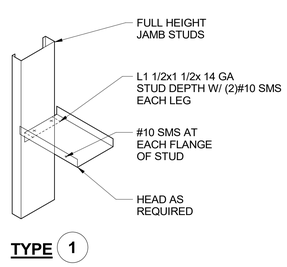


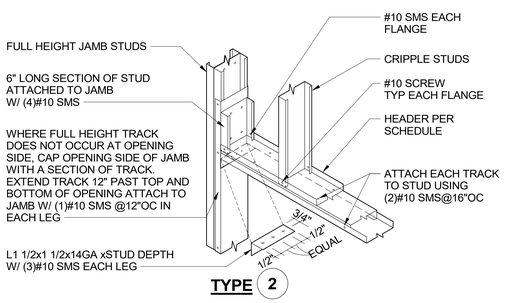
NOTES:
1. NO CONNECTIONS OF ARCHITECTURAL FINISHES TO TOP TRACK.
2. DO NOT CONNECT STUDS TO TOP TRACK.

TOP TRACK CONFIGURATION D

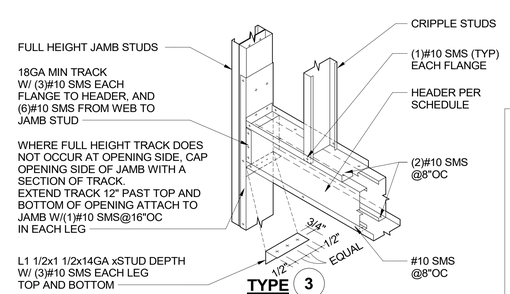


ISOMETRIC SILL TO JAMB B





ISOMETRIC HEADER TO JAMB C



TYPICAL INTERIOR METAL STUD WALL CONSTRUCTION 4

DETAIL ID: CS-ISTUD-01 SCALE: NTS S1.21

REVISIONS

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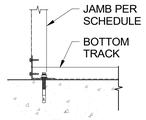
TYPICAL INTERIOR METAL STUD DETAILS

CD

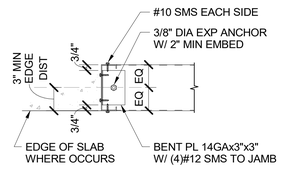
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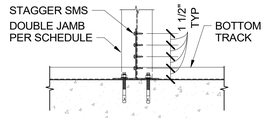
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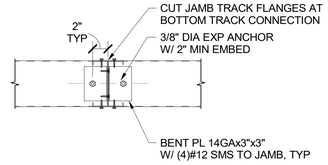
ELEVATION



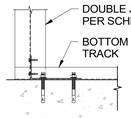
SINGLE JAMB TO BOTTOM TRACK PLAN VIEW



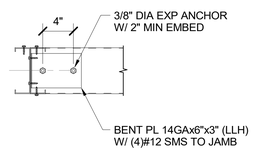
ELEVATION



DOUBLE JAMB TO BOTTOM TRACK PLAN VIEW WHERE OCCURS



ELEVATION

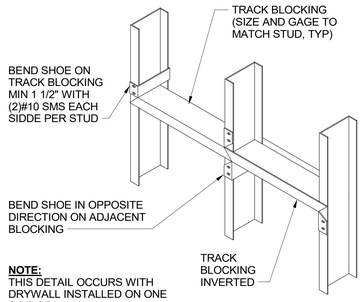


DOUBLE JAMB TO END OF TRACK PLAN VIEW WHERE OCCURS

TYPICAL JAMB CONNECTION

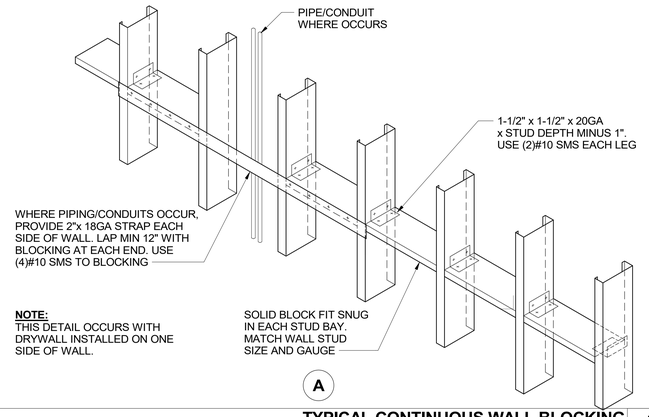
9

DETAIL ID: CS-MISC-04 SCALE: NTS S1.31



NOTE:
THIS DETAIL OCCURS WITH DRYWALL INSTALLED ON ONE SIDE OF WALL.

B



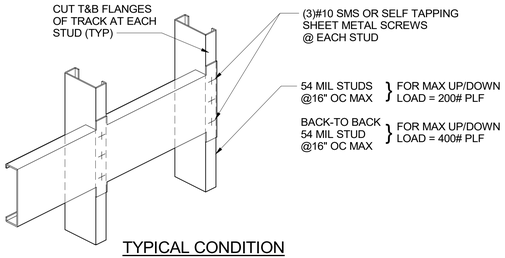
NOTE:
THIS DETAIL OCCURS WITH DRYWALL INSTALLED ON ONE SIDE OF WALL.

A

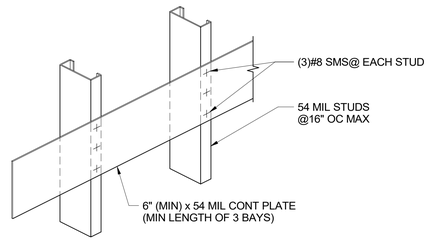
TYPICAL CONTINUOUS WALL BLOCKING

1

DETAIL ID: CS-STUD-12 SCALE: NTS S1.31

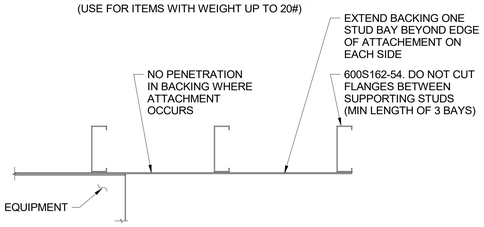


TYPICAL CONDITION



LIGHT EQUIPMENT CONDITION

(USE FOR ITEMS WITH WEIGHT UP TO 20#)



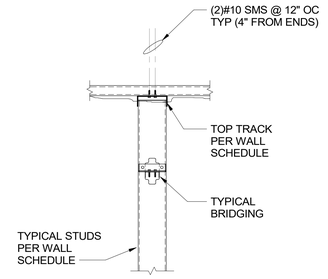
NOTES:
BACKING CONT AT ALL CABINETS, SHELVING, TRACKBOARDS, CHALK-BOARDS, WALL AFFIXED EQUIPMENT, PLUS FURNISHINGS, TOILET FIXTURES, COUNTERS, DRINKING FOUNTAINS, ETC. (MIN LENGTH OF 3 BAYS)

PLAN DETAIL **A**

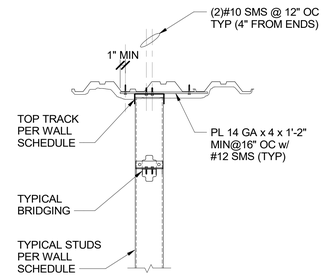
TYPICAL EQUIPMENT BACKING

15

DETAIL ID: CS-STUD-11 SCALE: NTS S1.31



WALL PERENDICULAR TO DECK **B**



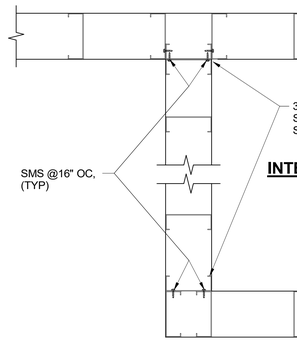
WALL PARALLEL TO DECK **A**

NOTES:
1. NO CONNECTIONS OF ARCHITECTURAL FINESHES TO TOP TRACK.
2. DO NOT CONNECT STUDS TO TOP TRACK.
3. SEE TYPICAL WALL STUD DETAIL FOR REMAINDER OF INFORMATION.

TYPICAL INTERIOR METAL STUD TO DECK CONNECTION

11

DETAIL ID: CS-STUD-10 SCALE: NTS S1.31



INTERSECTION

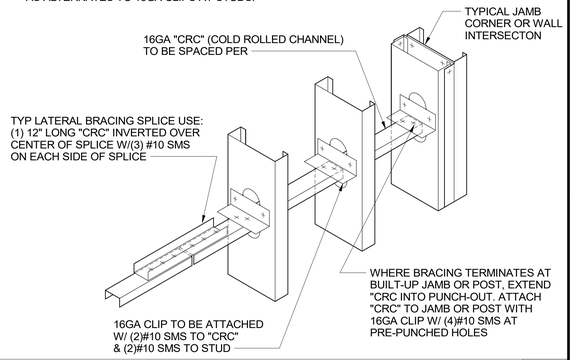
CORNER

TYPICAL CORNERS AND INTERSCTIONS

6

DETAIL ID: CS-STUD-07 SCALE: NTS S1.31

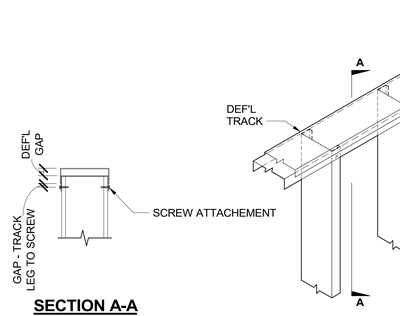
NOTES:
1. SIMPSON "SUBH" BRIDGING CONNECTORS MAY BE USED AS ALTERNATES TO 16GA CLIPS AT STUDS.



TYPICAL CONTINUOUS WALL BRIDGING (DRYWALL ONE SIDE)

2

DETAIL ID: CS-STUD-13 SCALE: NTS S1.31

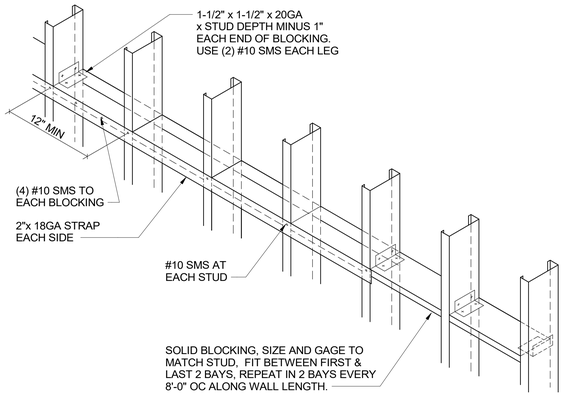


SECTION A-A

TYPICAL SLIP TRACK

7

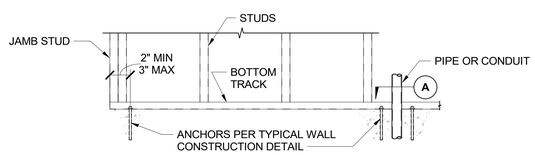
DETAIL ID: ST-MSTUD-16 SCALE: NTS S1.31



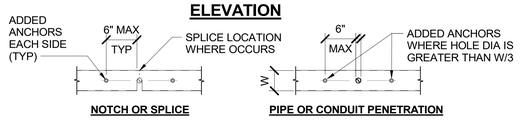
TYPICAL BLOCK AND STRAP BRIDGING

3

DETAIL ID: CS-STUD-14 SCALE: NTS S1.31



ELEVATION



NOTCH OR SPLICE **PIPE OR CONDUIT PENETRATION**

PLAN **A**

TYPICAL BOTTOM TRACK CONSTRUCTION

8

DETAIL ID: CS-STUD-08 SCALE: NTS S1.31

REVISIONS

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REGISTERED PROFESSIONAL ENGINEER No. 4896 CIVIL STRUCTURAL STATE OF CALIFORNIA

DATE: FOR BRANDOW & JOHNSTON

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NAC NO 161-21001
DRAWN Author
CHECKED Checker
DATE 10/05/2026

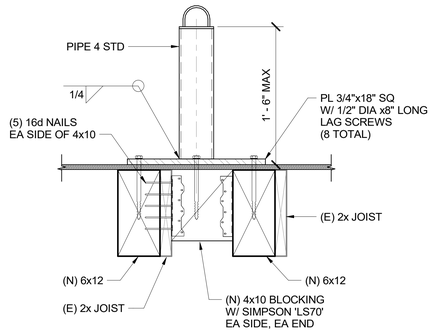
TYPICAL METAL STUD DETAILS

CD

S1.31

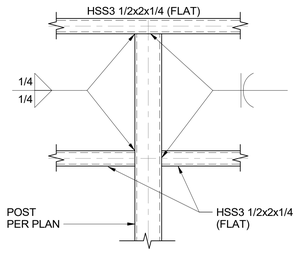
8/3/2023 3:16:08 PM Autodesk Docs://161-21001 FS 163/S21-0041 Fire Station 163_S22.rvt

BIDDING SET



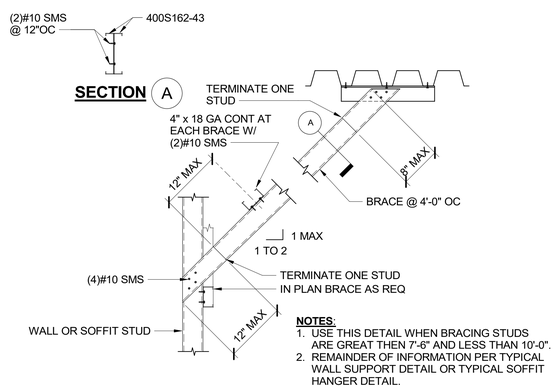
FALL PROTECTION AT WOOD ROOF

DETAIL ID: | SCALE: 1 1/2" = 1'-0" | 13 | S1.32



ROFF SCREEN WALL FRAMING DETAIL

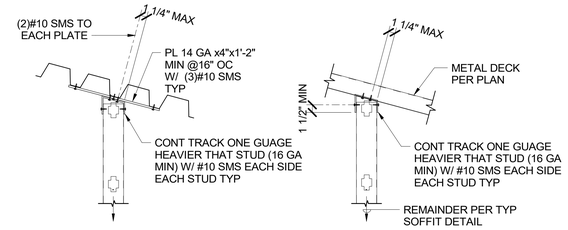
DETAIL ID: | SCALE: NTS | 9 | S1.32



NOTES:
1. USE THIS DETAIL WHEN BRACING STUDS ARE GREAT THEN 7'-6" AND LESS THAN 10'-0".
2. REMAINDER OF INFORMATION PER TYPICAL WALL SUPPORT DETAIL OR TYPICAL SOFFIT HANGER DETAIL.

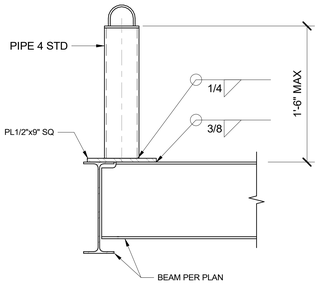
TYPICAL METAL STUD BRACING CONN DETAIL

DETAIL ID: CS-STUD-17 | SCALE: NTS | 5 | S1.32



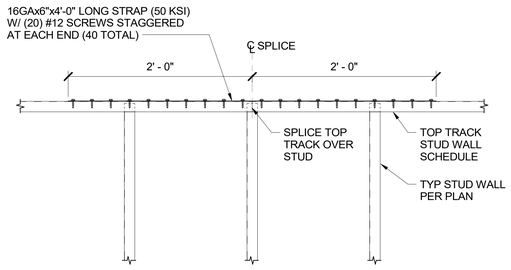
TYPICAL METAL STUD HANGER TO DECK CONN DETAIL

DETAIL ID: CS-STUD-19 | SCALE: NTS | 1 | S1.32



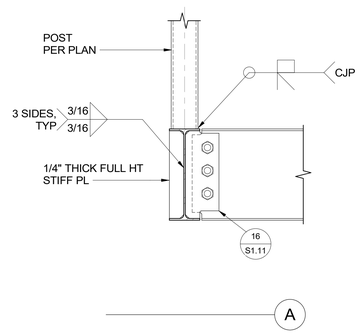
FALL PROTECTION AT STEEL ROOF

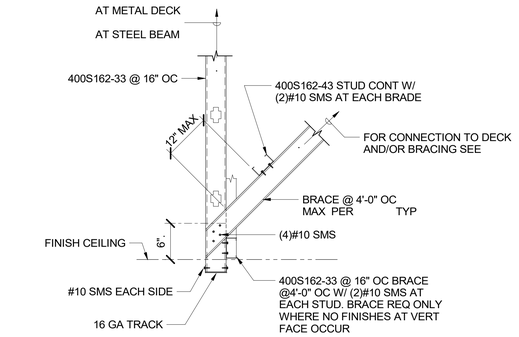
DETAIL ID: | SCALE: 1 1/2" = 1'-0" | 14 | S1.32

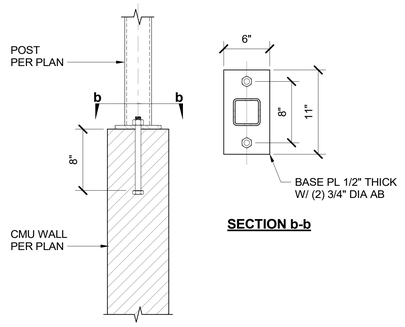


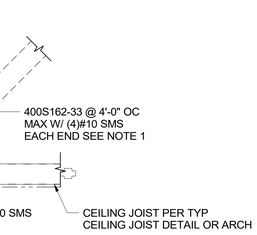
TYPICAL TOP TRACK SPLICE DETAIL

DETAIL ID: CS-STUD-12 | SCALE: NTS | 10 | S1.32



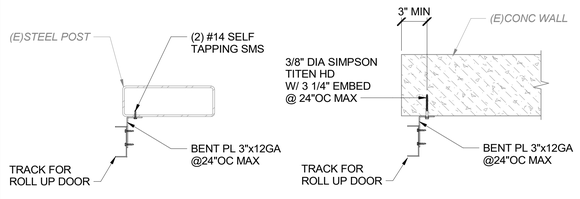






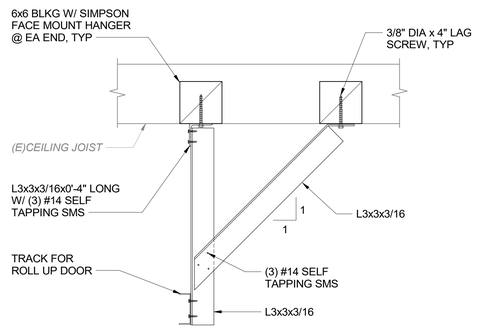
TYPICAL METAL STUD SOFFIT BRACING DETAIL

DETAIL ID: CS-STUD-20 | SCALE: NTS | 3 | S1.32



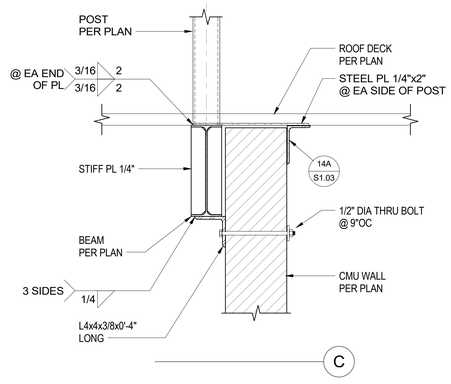
ROLL UP DOOR CONN AT (E) WALL & (E) POST

DETAIL ID: | SCALE: NTS | 15 | S1.32



ROLL UP DOOR CONN. AT (E)CEILING

DETAIL ID: | SCALE: NTS | 16 | S1.32



ROFF SCREEN POST CONNECTION DETAIL

DETAIL ID: | SCALE: NTS | 8 | S1.32

REVISIONS

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NAC NO	161-21001
DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

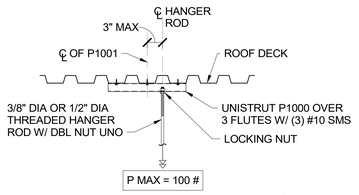
TYPICAL METAL STUD DETAILS

CD

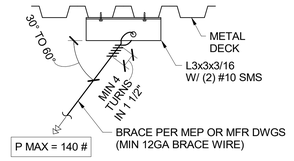
S1.32

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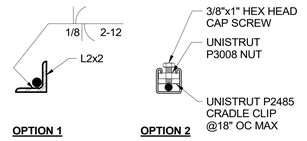
BIDDING SET



HANGER AT ROOF DECK (A)



BRACE AT METAL DECK (B)



THREADED ROD STIFFENER (C)

NOTES:

1. WHERE LOADS EXCEED THOSE SHOWN IN DETAILS AND SPACING CANNOT BE ADJUSTED TO REDUCE LOADING, PROVIDE HANGER ASSEMBLY PER TYPICAL PIPING, CABLE TRAY, AND DUCT SUPPORT FRAMING DETAIL OR TYPICAL HANGER AND BRACING AT STEEL FRAMING DETAIL.
2. MAXIMUM 2 HANGERS PER LOWER FLUTE PER DECK SPAN AT CONCRETE FILL OVER METAL DECK CONDITION.
3. MAXIMUM 2 UNISTRUT CONNECTIONS PER LOWER FLUTE PER DECK SPAN AT BARE METAL DECK CONDITION.
4. REFER TO FIRE PROTECTION DRAWINGS FOR HANGERS AND BRACE AT FIRE SPRINKLER SYSTEM.
5. WHERE STRAPS OR GAUGE ANGLES ARE USED IN LIEU OF WIRES OR CABLES, ATTACH PER SMACNA REQUIREMENTS OR MEP DRAWINGS.

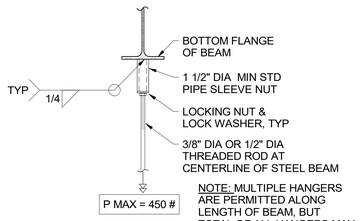
EXPANSION (WEDGE) ANCHORS			SCREW ANCHORS		
ANCHOR CAPACITY SCHEDULE			ANCHOR CAPACITY SCHEDULE		
ANCHOR DIA	3/8"	1/2"	ANCHOR DIA	3/8"	1/2"
NOM EMBED	2 3/8"	2 1/2"	NOM EMBED	2 1/2"	3"
MIN TOPPING THICKNESS	2 1/2"	3 1/4"	MIN TOPPING THICKNESS	2 1/2"	3 1/4"
MAX TENSION	300 LBS	300 LBS	MAX TENSION	300 LBS	300 LBS
ROD DIA	3/8"	1/2"	ROD DIA	3/8"	1/2"

TABLE NOTES:

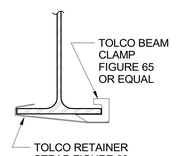
1. f'c MIN = 3000 PSI.
2. CAPACITIES ONLY APPLY TO ANCHORS TO ANCHORS INSTALLED TO THE UNDERSIDE OF CONCRETE FILLED METAL DECK AT LOWER FLUTE ONLY.
3. MINIMUM EDGE DISTANCE = 6"
4. MINIMUM ANCHOR SPACING = 12"
5. MAXIMUM DECK SPAN PER METAL DECK SCHEDULE.
6. ACCEPTABLE EXPANSION (WEDGE) ANCHORS FOR USE: HILTI KB-TZ (ESR-1917) OR DEWALT POWER STUD+SD2 (ESR-2502)
7. ACCEPTABLE SCREW ANCHORS FOR USE: HILTI KWIK HUS-EZ (ESR-3027) OR DEWALT SCREW BOLT+ (ESR-3889)
8. INSTALL ANCHORS PER TYPICAL EXPANSION ANCHOR DETAIL AND MANUFACTURER'S RECOMMENDED SPECIFICATIONS AND APPROVED ICC ESR REPORTS.

TYPICAL DUCT, CONDUIT & PIPE HANGER & BRACING AT METAL DECK 2

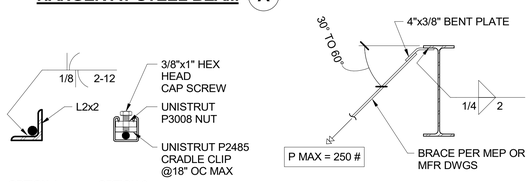
DETAIL ID: ST-MD-FLOOR-13 SCALE: NTS S1.41



HANGER AT STEEL BEAM (A)

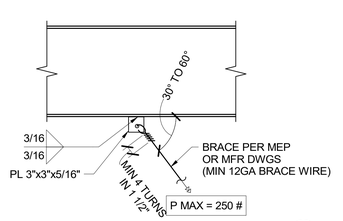


OPTION (A1)



THREADED ROD STIFFENER (B)

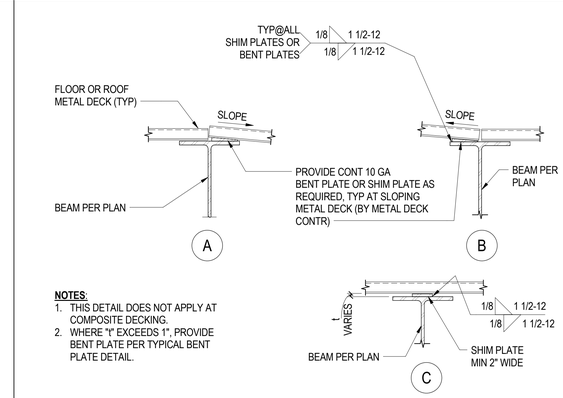
BRACE PERPENDICULAR TO STEEL BEAM (C)



BRACE PARALLEL TO STEEL BEAM (D)

TYPICAL HANGER & BRACING AT STEEL FRAMING DETAIL 8

DETAIL ID: ST-MD-FLOOR-20 SCALE: NTS S1.41



TYPICAL SHIM PLATE DETAIL 3

DETAIL ID: ST-MD-FLOOR-04 SCALE: NTS S1.41

METAL DECK							METHOD OF DECK CONNECTIONS		
DECK TYP	DEPTH	TYPE	GAGE	I (IN^4/FT)	+S (IN^3/FT)	-S (IN^3/FT)	ENDS AND INTERMEDIATE SUPPORT	LONGTITUDINAL SUPPORTS AND MEMBERS PARALLEL TO FLUTE	SIDE SEAMS
A	1 1/2"	VERCO PLB-36 (IAPMO ER-2018)	20	0.219	0.230	0.237	(7) 3/4" DIA FUSION (PUDDLE) WELDS PER SHEET	3/4" DIA FUSION (PUDDLE) WELDS @ 12"OC	PUNCHLOK II @ 12"OC

STEEL DECK NOTES:

1. ⟵ INDICATES DOUBLE ROW OF DECK ATTACHMENT, SEE PLAN FOR LOCATIONS.
2. DECKING SHALL BE CONTINUOUS OVER AT LEAST 2 SPANS AND 3 SPANS WHERE FRAMING PERMITS. SINGLE SPAN NOT PERMITTED UNLESS SPECIFICALLY SHOWED ON PLAN OR APPROVED BY SEOR.
3. MAXIMUM DECK SPAN SHALL NOT EXCEED 10' - 0"
4. WHERE STEEL FRAMING DESIGNATED WITH DRAG CONNECTIONS SYMBOL (●), PROVIDE A FULL DECK SHEET ADJACENT AND PARALLEL TO STEEL MEMBER.

TYPICAL METAL DECK SCHEDULE 12

DETAIL ID: ST-MD-SCHED-01 SCALE: NTS S1.41

REVISIONS

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REGISTERED PROFESSIONAL ENGINEER — ALI CAGRI KALYON — No. 4896 — STRUCTURAL — STATE OF CALIFORNIA

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FOR BRANDOW & JOHNSTON

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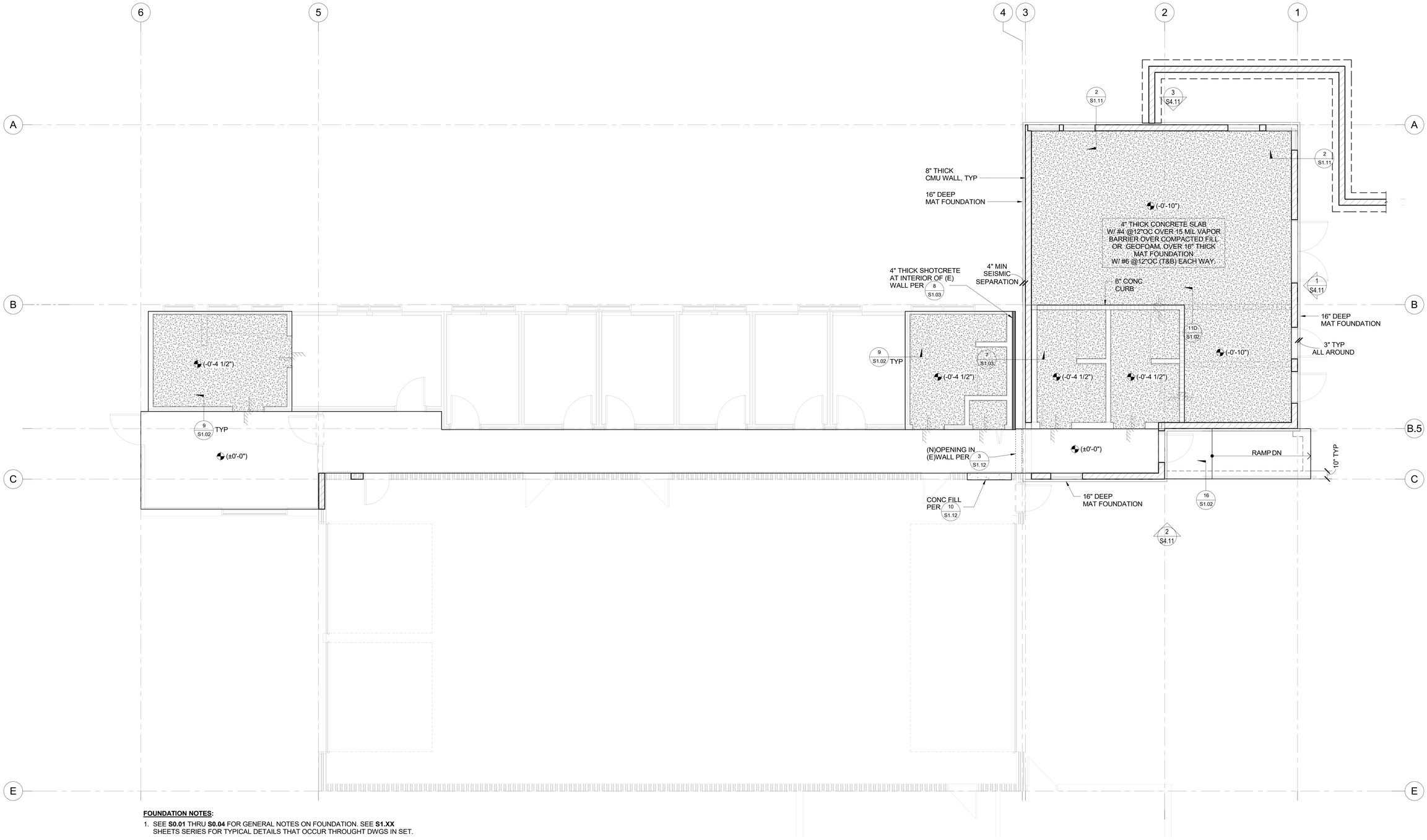
NAC NO	161-21001
DRAWN	Author
CHECKED	Checker
DATE	10/05/2026

TYPICAL METAL DECK DETAILS

CD

S1.41

BIDDING SET



FOUNDATION NOTES:

1. SEE **S0.01** THRU **S0.04** FOR GENERAL NOTES ON FOUNDATION. SEE **S1.XX** SHEETS SERIES FOR TYPICAL DETAILS THAT OCCUR THROUGHT DWGS IN SET.
2. TOP OF SPREAD FOOTING (TOF) SHALL BE (-1'-6") MIN BELOW FINISHED FLOOR ELEVATION UNO ON PLANS. TOP OF GRADE BEAM SHALL MATCH THE TOP OF THE PAD FOOTINGS, TYP, UNO.
3. FOR DIMENSIONS NOT NOTED SEE ARCHITECTURAL FLOOR PLANS.
4. SEE 11 S1.02 FOR SLAB -ON-GRADE CONTROL/CONSTRUCTION JOINT DETAIL.
5. ADJUST LOCATIONS OF PIPES & CONDUITS IN WALLS TO AVOID INTERFERENCE WITH MOMENT FRAME BASE PLATES
6. CONTRACTOR SHALL COORDINATE LOCATIONS OF ELECTRICAL CONDUITS PRIOR TO CASTING OF CONCRETE AT FOUNDATIONS. SEE DETAIL FOR CONDUITS IN STEM WALL.
7. TYPICAL SLAB ON GRADE IS 5" THICK WITH #4@16"OC EACH WAY.
8. PRIOR TO THE FOUNDATION INSPECTION, A REGISTERED SOILS ENGINEER OR ANOTHER QUALIFIED REPRESENTATIV DESIGNATED BY HIM OR HER SHALL CONDUCT VISUAL INSPECTION ON SITE PREPARATION AND SHALL SUBMIT TO THE BUILDING OFFICIAL A LETTER INDICATING FURTHER REMOVAL OF EXPOSED SOILS IS NOT REQUIRED OR OTHERWISE PROVIDING RECOMMENDATIONS FOR OVER-EXCAVATION AND RECOMPACTION WITH REQUIREMENTS FOR ADDITIONAL FOLLOW-UP TESTING AND INSPECTIONS.

FOUNDATION / FIRST FLOOR PLAN 1
SCALE: NTS S3.10

DETAIL ID:

8/3/2023 3:16:11 PM Autodesk Docs://161-21001 FS 163/S21-0041 Fire Station 163_S22.rvt

REVISIONS

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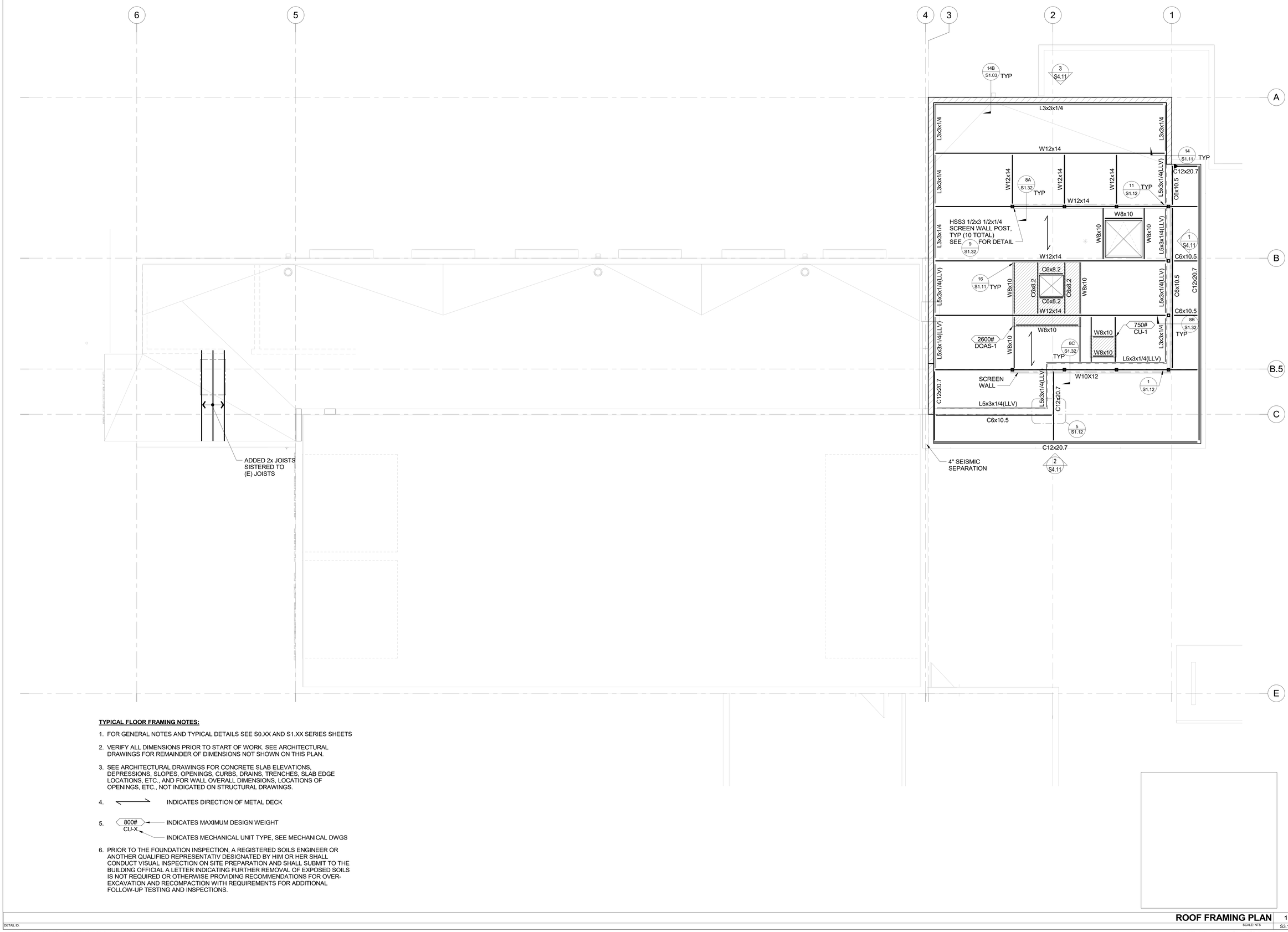
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DATE	10/05/2026

FOUNDATION / FIRST FLOOR PLAN

CD

S3.10

BIDDING SET



TYPICAL FLOOR FRAMING NOTES:

1. FOR GENERAL NOTES AND TYPICAL DETAILS SEE S0.XX AND S1.XX SERIES SHEETS
2. VERIFY ALL DIMENSIONS PRIOR TO START OF WORK. SEE ARCHITECTURAL DRAWINGS FOR REMAINDER OF DIMENSIONS NOT SHOWN ON THIS PLAN.
3. SEE ARCHITECTURAL DRAWINGS FOR CONCRETE SLAB ELEVATIONS, DEPRESSIONS, SLOPES, OPENINGS, CURBS, DRAINS, TRENCHES, SLAB EDGE LOCATIONS, ETC., AND FOR WALL OVERALL DIMENSIONS, LOCATIONS OF OPENINGS, ETC., NOT INDICATED ON STRUCTURAL DRAWINGS.
4. → INDICATES DIRECTION OF METAL DECK
5. 800# / CU-X — INDICATES MAXIMUM DESIGN WEIGHT; INDICATES MECHANICAL UNIT TYPE, SEE MECHANICAL DWGS
6. PRIOR TO THE FOUNDATION INSPECTION, A REGISTERED SOILS ENGINEER OR ANOTHER QUALIFIED REPRESENTATIV DESIGNATED BY HIM OR HER SHALL CONDUCT VISUAL INSPECTION ON SITE PREPARATION AND SHALL SUBMIT TO THE BUILDING OFFICIAL A LETTER INDICATING FURTHER REMOVAL OF EXPOSED SOILS IS NOT REQUIRED OR OTHERWISE PROVIDING RECOMMENDATIONS FOR OVER-EXCAVATION AND RECOMPACTION WITH REQUIREMENTS FOR ADDITIONAL FOLLOW-UP TESTING AND INSPECTIONS.

ROOF FRAMING PLAN 1
SCALE: NTS S3.11

DETAIL ID:

8/3/2023 3:16:12 PM Autodesk Docs://161-21001 FS 163/521-0041 Fire Station 163_S22.rvt

BIDDING SET

REVISIONS

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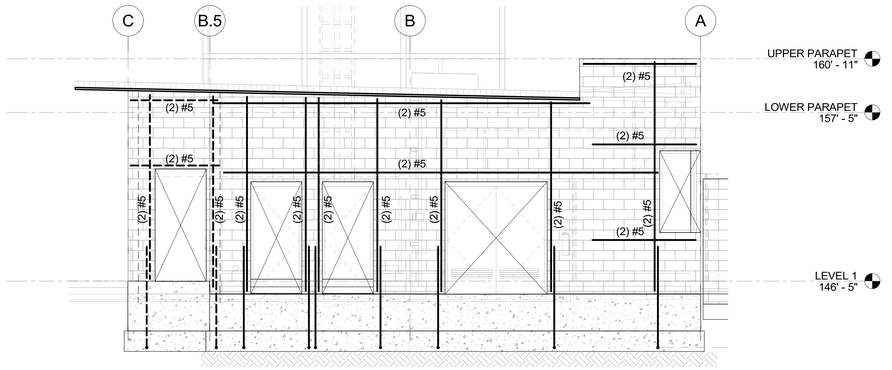
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ROOF FRAMING PLAN

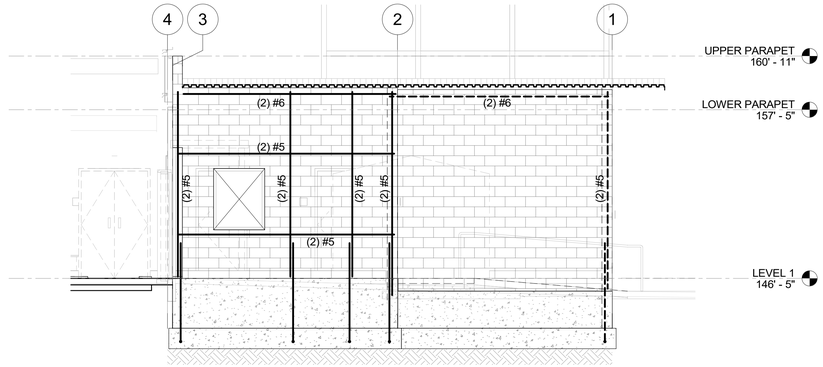
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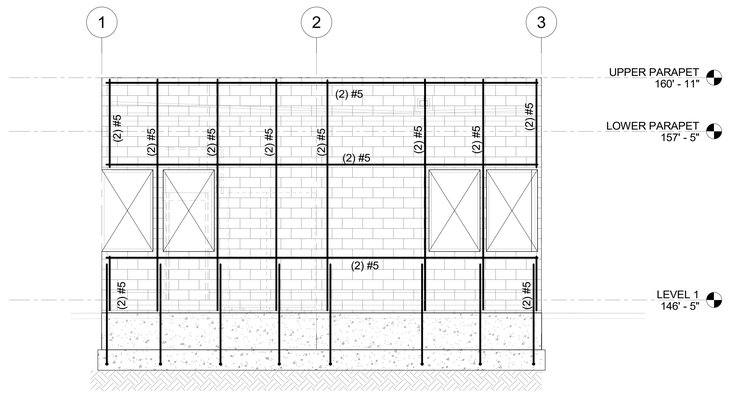
BUILDING ELEVATION ALONG GRID 1 1

DETAIL ID: SCALE: 1/4" = 1'-0" S4.11



BUILDING ELEVATION ALONG GRID C 2

DETAIL ID: SCALE: 1/4" = 1'-0" S4.11



BUILDING ELEVATION ALONG GRID A 3

DETAIL ID: SCALE: 1/4" = 1'-0" S4.11

REVISIONS

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BUILDING ELEVATIONS

CD

S4.11

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BIDDING SET

GENERAL NEW NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE SEISMIC RESTRAINTS AS NEEDED FOR THE MECHANICAL SYSTEMS IN THE PROJECT BASED ON THE SEISMIC ANALYSIS REQUIRED BY THE SPECIFICATIONS.
3. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
4. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
5. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
6. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.
7. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY DIVISION 23 UNLESS OTHERWISE NOTED.
8. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
9. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
10. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
11. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF (INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS BECOME WET AT ANY TIME DURING CONSTRUCTION, DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST. AN INDEPENDENT, PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO THE OWNER. THE INTERNAL SURFACES AND ASSOCIATED COILS OF ANY HVAC UNITS THAT WERE OPERATED SHALL ALSO BE CLEANED.
12. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
13. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
14. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
15. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
16. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.
17. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
18. PAINT PORTIONS OF DUCTWORK AND INSULATION THAT ARE EXPOSED TO VIEW BY THE INSTALLATION OF DIFFUSERS, REGISTERS, AND GRILLES IN CEILINGS OR WALLS FLAT BLACK. PORTIONS INCLUDE BOTH THE INTERIOR OF UNLINED DUCTWORK AND THE EXTERIOR OF DUCTWORK AND INSULATION.
19. DUCTWORK CROSSING FIRE RATED WALLS OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.
20. PROVIDE FIRE DAMPERS, AS APPLICABLE, IN DUCTWORK AT CEILINGS AND WALLS AT LOCATIONS SHOWN ON THE PLANS. FIRE AND FIRE/SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE. COORDINATE SLEEVE LENGTH WITH REQUIREMENTS OF INSTALLED LOCATION.
21. PROVIDE WALL OR DUCT ACCESS PANELS OR DOORS FOR ACCESS TO FIRE AND FIRE/SMOKE DAMPERS. ACCESS PANEL OR DOOR SHALL BE MINIMUM SIZE OF 10" BY 10" AND SHALL BE INSTALLED WITHIN 12" OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL FOR A 10" BY 10" ACCESS DOOR.
22. LOCATE AND SET THERMOSTATS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS. PROVIDE INSULATED BACKING FOR THERMOSTATS MOUNTED ON EXTERIOR BUILDING WALLS. INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 26. AT A MINIMUM, PROVIDE CONDUIT IN THE WALL FROM THE JUNCTION BOX TO 6" ABOVE THE CEILING.
23. COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH PRESENTATION BOARDS, DISPLAY CABINETS, SHELVES OR OTHER COMPONENTS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE TO BE INSTALLED UNDER OTHER DIVISIONS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
24. PROVIDE A MANUAL BALANCING DAMPER IN EACH DUCT TAKEOFF FROM SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.
25. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES. PROVIDE WITH INTEGRAL MANUAL BALANCING DAMPER AND LOCKING QUADRANT WHERE INDICATED ON PLANS.
26. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
27. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS, INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.
28. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
29. PROVIDE A NEW SET OF AIR FILTERS IN UNITS PRIOR TO TESTING, ADJUSTING AND BALANCING AND BEFORE TURNING SYSTEM(S) OVER TO OWNER.
30. TEMPORARY INSTALLATIONS OF INFECTION CONTROL MEASURES DURING CONSTRUCTION SHALL BE COORDINATED WITH THE FACILITY'S INFECTION CONTROL STAFF. PRIOR TO CONSTRUCTION PROVIDE ALL REQUIRED TEMPORARY INSTALLATIONS, INCLUDING DETAILS OF THE INFECTION CONTROL MEASURES SUCH AS TEMPORARY BARRIERS AND MEMBRANES, PORTABLE EXHAUST FANS AND TEMPORARY DUCTWORK. TEMPORARY INSTALLATIONS MUST NOT HAVE A NEGATIVE IMPACT ON EXISTING SYSTEMS NOR CAUSE UNSAFE CONDITIONS. TEMPORARY INSTALLATIONS SHALL MAINTAIN ADEQUATE EGRESS AND SHALL NOT OBSTRUCT EXISTING EXITS, CREATE A FIRE HAZARD OR REDUCE REQUIRED FIRE RESISTANCE. TEMPORARY VENTILATION SYSTEMS SHALL NOT CAUSE THE AIR BALANCE OF ADJACENT ROOMS OR SPACES TO BE IMPACTED OR ALTER THE PERFORMANCE OF PERMANENT BUILDING VENTILATION SYSTEMS. AIRFLOW MEASUREMENTS SHALL BE TAKEN TO VERIFY ADJACENT ROOMS OR SPACES ARE NOT IMPACTED.

MECHANICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.07

STANDARD MOUNTING HEIGHT

THERMOSTATS (USER ADJUSTABLE)	46"
CONTROLS	46"

INSTALL DEVICES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS ARE AFF OR AFG TO TOP OF THE DEVICE UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ANNOTATION

- 1 — MECHANICAL PLAN NOTE CALLOUT
- CU 1 — MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 M1 — DETAIL REFERENCE. UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 M1 — SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

ABBREVIATIONS

A/C	AIR CONDITIONING	HWP	HEATING WATER PUMP
ACC	AIR COOLED CHILLER	IN WC	INCHES OF WATER COLUMN
ACCU	AIR COOLED CONDENSING UNIT	L	LOUVER
AFC	ABOVE FINISHED CEILING	LAT	LEAVING AIR TEMPERATURE
AFF	ABOVE FINISHED FLOOR	LDB	LEAVING DRY BULB
AFG	ABOVE FINISHED GRADE	LP	LOW PRESSURE
AHJ	AUTHORITY HAVING JURISDICTION	LWB	LEAVING WET BULB
AHU	AIR HANDLING UNIT	LWT	LEAVING WATER TEMPERATURE
AI	ANALOG INPUT	MAU	MAKE-UP AIR UNIT
AO	ANALOG OUTPUT	MAX	MAXIMUM
AP	ACCESS PANEL	MBH	1000 BTU PER HOUR
APD	AIR PRESSURE DROP	MD	MOTORIZED DAMPER
AWG	AMERICAN WIRE GAUGE	MFR	MANUFACTURER
B	BOILER	MIN	MINIMUM
BAS	BUILDING AUTOMATION SYSTEM	N/A	NOT APPLICABLE
BB	BACKBONE	N/C	NORMALLY CLOSED
BD	BACKDRAFT DAMPER	N/O	NORMALLY OPEN
BD	BLOWDOWN	NOM	NOMINAL
BFC	BELOW FINISHED CEILING	NC	NOISE CRITERIA
BFF	BELOW FINISHED FLOOR	NF	NON-FUSED
BFG	BELOW FINISHED GRADE	NIC	NOT IN CONTRACT
BFP	BOILER FEED PUMP	OA	OUTSIDE AIR
BHP	BRAKE HORSEPOWER	PICV	PRESSURE INDEP. CONTROL VALVE
BI	BINARY INPUT	PROVIDE	FURNISH AND INSTALL
BO	BINARY OUTPUT	QTY	QUANTITY
BOD	BOTTOM OF DUCT	RA	RETURN AIR
BOS	BOTTOM OF STRUCTURE	RC	ROOM CRITERIA
BTU	BRITISH THERMAL UNIT	RD	RETURN DUCT
CFM	CUBIC FEET PER MINUTE	REA	RELIEF AIR
CH	CHILLER	RF	RETURN FAN
CLG	COOLING	RFR	REFRIGERANT
CP	CONDENSATE PUMP	RH	RELATIVE HUMIDITY
CPT	CONTROL POWER TRANSFORMER	ROH	ROOF HOOD
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT	RPM	REVOLUTIONS PER MINUTE
		RTU	ROOFTOP UNIT
CRU	COMPUTER ROOM UNIT	SA	SUPPLY AIR
CT	COOLING TOWER	SCP	STEAM CONDENSATE PUMP
CV	CONTROL VALVE	SD	SMOKE DUCT DETECTOR
CWP	CONDENSER WATER PUMP	SD	SUPPLY DUCT
CU	CONDENSING UNIT	SF	SUPPLY FAN
CHWP	CHILLED WATER PUMP	SH	SENSIBLE HEAT CAPACITY
DB	DECIBELS	SOW	SCOPE OF WORK
DBA	DECIBEL AVERAGE	SP	STATIC PRESSURE
DDC	DIRECT DIGITAL CONTROL	ST	STEAM TRAP
DI	DIGITAL INPUT	STM	STEAM
DISC	DISCONNECT	TBD	TO BE DETERMINED
DN	DOWN	TC/C	TEMPERATURE CONTROLS CONTRACTOR
DS	DUCT SILENCER	TCP	TEMPERATURE CONTROL PANEL
DX	DIRECT EXPANSION	TF	TRANSFER FAN
(E)	EXISTING	TFA	TO FLOOR ABOVE
EA	EXHAUST AIR	TFB	TO FLOOR BELOW
EAT	ENTERING AIR TEMPERATURE	TH	TOTAL HEAT CAPACITY
ED	EXHAUST DUCT	TSP	TOTAL STATIC PRESSURE
EDB	ENTERING DRY BULB	TT	TEMPERATURE TRANSMITTAL
EF	EXHAUST FAN	TYP	TYPICAL
EFF	EFFICIENCY	U/F	UNDERFLOOR
EMS	ENERGY MANAGEMENT SYSTEM	U/G	UNDERGROUND
ESP	EXTERNAL STATIC PRESSURE	U/S	UNDERSLAB
ETR	EXISTING TO REMAIN	UH	UNIT HEATER
EWB	ENTERING WET BULB	UNO	UNLESS NOTED OTHERWISE
EWT	ENTERING WATER TEMPERATURE	VAV	VARIABLE AIR VOLUME
FCU	FAN COIL UNIT	VEL	VELOCITY
FFA	FROM FLOOR ABOVE	VFD	VARIABLE FREQUENCY DRIVE
FFB	FROM FLOOR BELOW	VRF	VARIABLE REFRIGERANT FLOW
FF	FINISHED FLOOR	VRV	VARIABLE REFRIGERANT VOLUME
FPI	FINS PER INCH	W/	WITH
FPM	FEET PER MINUTE	W/O	WITHOUT
GC	GENERAL CONTRACTOR	WB	WET BULB
GPM	GALLONS PER MINUTE	WC	WATER COLUMN
HOA	HAND-OFF-AUTOMATIC	WPD	WATER PRESSURE DROP
HP	HORSEPOWER	XP	EXPLOSION PROOF
HTG	HEATING		

HVAC DUCTWORK AND ACCESSORIES

- LINEAR SLOT DIFFUSER
- INSULATED FLEXIBLE DUCT (MAX. 5'-0" LONG)
- BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER
- ELBOW WITH TURNING VANES
- BRANCH DUCT WITH BELL-MOUTH FITTING & MANUAL VOLUME CONTROL DAMPER
- N — DUCT UP
- N — DUCT DOWN
- EA — EXHAUST AIR
- GEA — EXHAUST AIR - GREASE
- OA — OUTSIDE AIR
- REA — RELIEF AIR
- EA — RETURN AIR
- XEA — SPECIAL EXHAUST
- SA — SUPPLY AIR
- EQUIPMENT WITH FLEXIBLE DUCT CONNECTION
- 10" (NECK SIZE) CSD-1 (TYPE) 300 CFM (CFM OF SUPPLY DIFFUSER OR REGISTER)
- 24x24 (NECK SIZE) CEG-1 (TYPE) 800 CFM (CFM OF EXHAUST GRILLE)
- EQUIPMENT ACCESS TILE (IN ACT CEILINGS)
- ACCESS PANEL (IN GYPSUM)
- MANUAL VOLUME DAMPER
- SQUARE TO ROUND TRANSITION
- RD — DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN)
- XX" Ø — ROUND DUCT TAG INDICATING DIAMETER
- XX" x XX" — RECTANGULAR DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS.
- XX' / XX" — FLAT OVAL DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS
- # — RISER DESIGNATION
- FD — FIRE DAMPER
- FSD — FIRE SMOKE DAMPER
- SD — SMOKE DAMPER
- VD — VOLUME DAMPER
- MD — MOTORIZED DAMPER
- BD — BACKDRAFT DAMPER

ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE DIMENSIONS. REFER TO DUCTWORK SPECIFICATIONS FOR DUCTWORK INSULATION AND LINER INFORMATION.

PIPING SYMBOLS

- DIRECTION OF FLOW
- CONTROL VALVE
- THREE-WAY CONTROL VALVE
- SHUTOFF VALVE
- CHECK VALVE
- BALANCING VALVE WITH PRESSURE PORTS
- TRIPLE DUTY VALVE WITH PRESSURE PORTS
- STRAINER
- STRAINER WITH BLOWDOWN VALVE
- RELIEF / SAFETY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- PA — PIPE ANCHOR
- EXPANSION JOINT
- PIPE GUIDE
- PIPING SUPPORT
- F & T TRAP
- BUCKET TRAP
- THERMOSTATIC TRAP
- BACKFLOW PREVENTER
- PRESSURE GAUGE
- THERMOMETER
- PRESSURE AND TEMPERATURE TEST PLUG
- UNION
- FLANGE CONNECTION
- VACUUM RELIEF VALVE
- AV — AUTOMATIC AIR VENT
- MV — MANUAL AIR VENT
- PRESSURE / VACUUM SWITCH
- CLEANOUT
- CAP
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- ELBOW UP WITH SHUT-OFF VALVE (SOV)
- ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
- TEE UP WITH SHUT-OFF VALVE (SOV)
- TEE DOWN WITH SHUT-OFF VALVE (SOV)
- REDUCER
- RECIRCULATION PUMP
- P-TRAP
- GAS COCK
- TOP BEAM CLAMP
- TRAPEZE HANGER
- FLEXIBLE CONNECTION

CALL OUTS

- ENLARGED PLAN CALLOUT
- NOT IN SCOPE

PIPING LINETYPES

EXISTING PIPING TO BE REMOVED OR RELOCATED	
EXISTING PIPING TO REMAIN	
CD	CONDENSATE DRAIN (CD)
ACD	AUXILIARY CONDENSATE DRAIN (ACD)
NPW	NON-POTABLE WATER (NPW)
G	NATURAL GAS (G)
G	NATURAL GAS ON ROOF (G)
MPG	MEDIUM PRESSURE NATURAL GAS (MPG)
MPG	MEDIUM PRESSURE NATURAL GAS ON ROOF (MGP)
FOS	FUEL OIL SUPPLY (FOS)
FOR	FUEL OIL RETURN (FOR)
FOV	FUEL OIL VENT (FOV)
LPG	LIQUEFIED PETROLEUM GAS (LPG)
BFW	BOILER FEED WATER (BFW)
HPS	HIGH PRESSURE STEAM SUPPLY (HPS)
HPC	HIGH PRESSURE STEAM CONDENSATE (HPC)
LPS	LOW PRESSURE STEAM SUPPLY (LPS)
LPC	LOW PRESSURE STEAM CONDENSATE (LPC)
CPD	CONDENSATE PUMP DISCHARGE (CPD)
HWS	HEATING HOT WATER SUPPLY (HWS)
HWR	HEATING HOT WATER RETURN (HWR)
CHWS	CHILLED WATER SUPPLY (CHWS)
CHWR	CHILLED WATER RETURN (CHWR)
HCS	HOT / CHILLED WATER SUPPLY (HCS)
HCR	HOT / CHILLED WATER SUPPLY (HCR)
CWS	CONDENSER WATER SUPPLY (CWS)
CWR	CONDENSER WATER RETURN (CWR)
RL	REFRIGERANT LIQUID (RL)
RD	REFRIGERANT DISCHARGE (HOT GAS) (RD)
RS	REFRIGERANT SUCTION (RS)
RDB	REFRIGERANT DISCHARGE BYPASS (RDB)
RV	REFRIGERANT VENT (RV)

HVAC CONTROL DEVICES

- H — HUMIDISTAT
- T — THERMOSTAT
- CO — CARBON MONOXIDE SENSOR
- CO2 — CARBON DIOXIDE SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- FS — FLOW SWITCH
- HS — HUMIDITY SENSOR
- PS — PULL STATION
- RT — REMOTE TESTING STATION WITH INDICATING LIGHT
- SP — STATIC PRESSURE
- TS — TEMPERATURE SENSOR

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	NEW
DEMOLISH	FUTURE

Sheet List - Mechanical

Sheet Number	Sheet Name
G3.30	MECHANICAL SPECIFICATIONS
G3.31	MECHANICAL SPECIFICATIONS
G3.32	MECHANICAL SPECIFICATIONS
M0.00	MECHANICAL GENERAL NOTES AND LEGEND
M1.01	HVAC LEVEL 1 PLAN
M2.01	HVAC ROOF PLAN
M3.01	MECHANICAL DETAILS
M3.02	MECHANICAL DETAILS
M4.01	MECHANICAL SCHEDULES
M4.02	MECHANICAL SCHEDULES
M5.01	MECHANICAL CONTROLS
M6.01	MECHANICAL ENERGY COMPLIANCE FORMS
M6.02	MECHANICAL ENERGY COMPLIANCE FORMS
M6.03	MECHANICAL ENERGY COMPLIANCE FORMS
M6.04	MECHANICAL ENERGY COMPLIANCE FORMS

Grand total: 15

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02/10/2023

LICENSED PROFESSIONAL ENGINEER — BRYAN JIMENEZ — M 38619 — EXPIRES: 09/30/2023 — MECHANICAL — STATE OF CALIFORNIA

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nacarchitecture.com
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P:509.838.8240

NAC NO	161-21001
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DATE	10/05/2026

MECHANICAL GENERAL NOTES AND LEGEND

CD

M0.00

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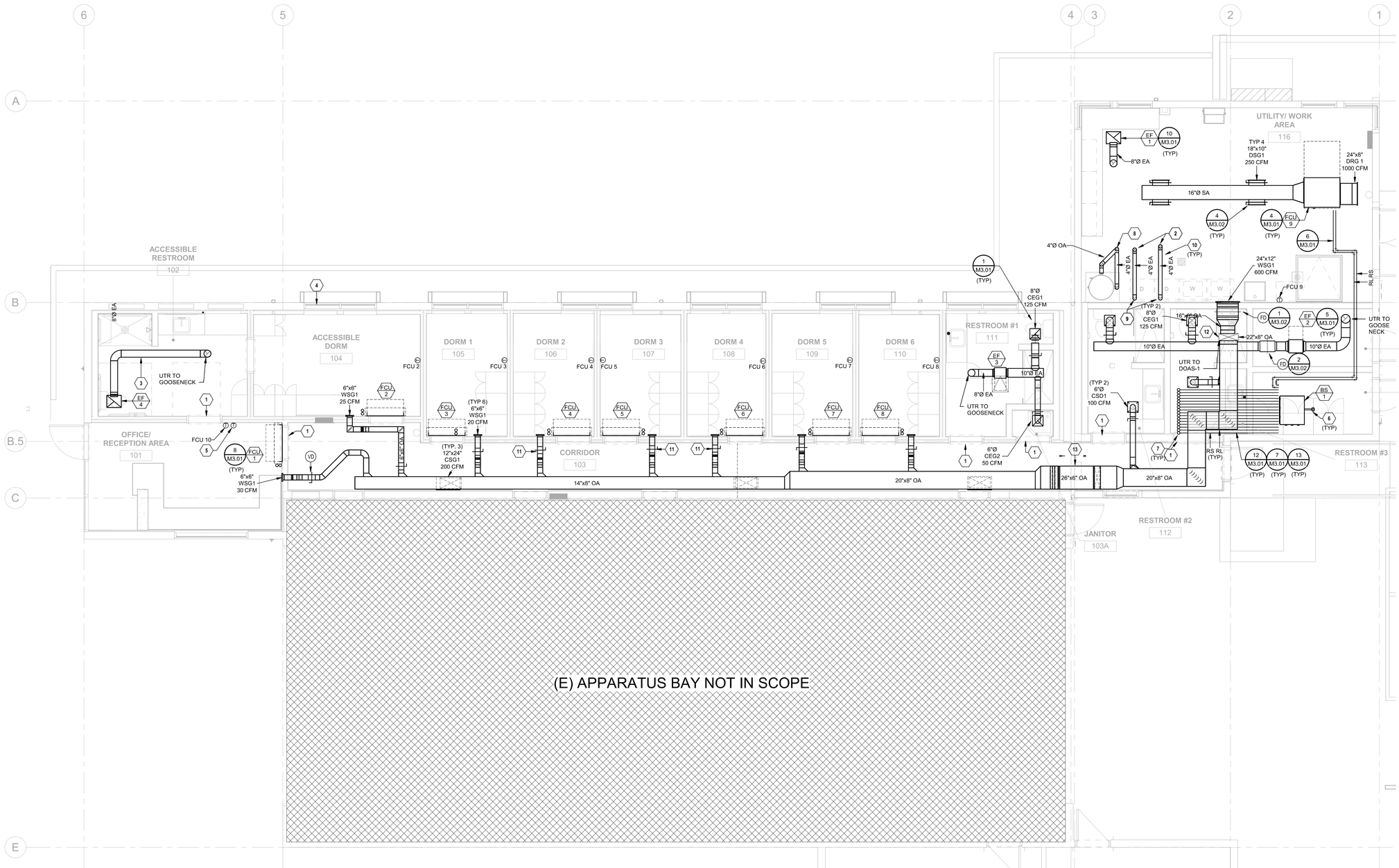
BRYAN . JIMENEZ

MECHANICAL PLAN NOTES:

1. PROVIDE 1" DOOR UNDERCUT.
2. DRYER EXHAUST DUCT UP.
3. ALL DUCTWORK, ACCESSORIES, AND AIR TERMINALS ASSOCIATED WITH GENERAL EXHAUST SYSTEM SERVING RESTROOMS SHALL BE ALUMINUM.
4. FAN COIL UNIT SHALL BE INTERLOCKED WITH WINDOW SWITCH AND SHALL BE DISABLED WHEN A WINDOW IS OPEN IN THE DORM ROOM. REFER TO FAN COIL UNIT CONTROL DRAWINGS ON SHEET M5.01 FOR MORE INFORMATION.
5. PROVIDE DAIKIN ITOUCH MANAGER TO SERVE AS VRF CENTRAL CONTROLLER AND BUILDING BAS SYSTEM THAT SHALL MONITOR ALL HVAC SYSTEMS.
6. ROUTE REFRIGERANT PIPING UP THRU ROOF TO CU-1. SEE SHEET M2.01 FOR CONTINUATION.
7. ROUTE REFRIGERANT PIPING UP THRU ROOF AND CONTINUE PIPING TO EXISTING ROOF, SEE SHEET M2.01 FOR CONTINUATION.

MECHANICAL PLAN NOTES:

8. TERMINATE AT ROOF LEVEL WITH CONCENTRIC VENT KIT. REFER TO PLUMBING DRAWINGS AND SCHEDULES FOR CONCENTRIC VENT KIT PROVIDED BY OTHERS.
9. CONNECT DUCTWORK TO EXHAUST OUTLET ON DRYER PROVIDED BY OTHERS.
10. ROUTE DRYER EXHAUST AND WATER HEATER FLUE/MAKE-UP AIR DUCTS TIGHT TO STRUCTURE BEFORE ROOF TERMINATION.
11. LOWER PORTION OF BRANCH DUCTWORK TO BE INSTALLED WITH B.O.D HEIGHT OF 8' 2" AFF TO AVOID SLOPING CONDENSATE DRAIN LINE.
12. -- NOT USED --
13. THICKNESS OF DUCT LINER OR INSULATED WRAP SHALL NOT EXCEED 1" THICKNESS AT THIS LOCATION CROSSING BUILDING SEPARATION DUE TO LIMITED CLEAR SPACE FOR DUCT ROUTING.



PLAN NORTH TRUE NORTH

1 HVAC LEVEL 1 PLAN
Scale: 1/4" = 1'-0"

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HVAC LEVEL 1 PLAN

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M1.01

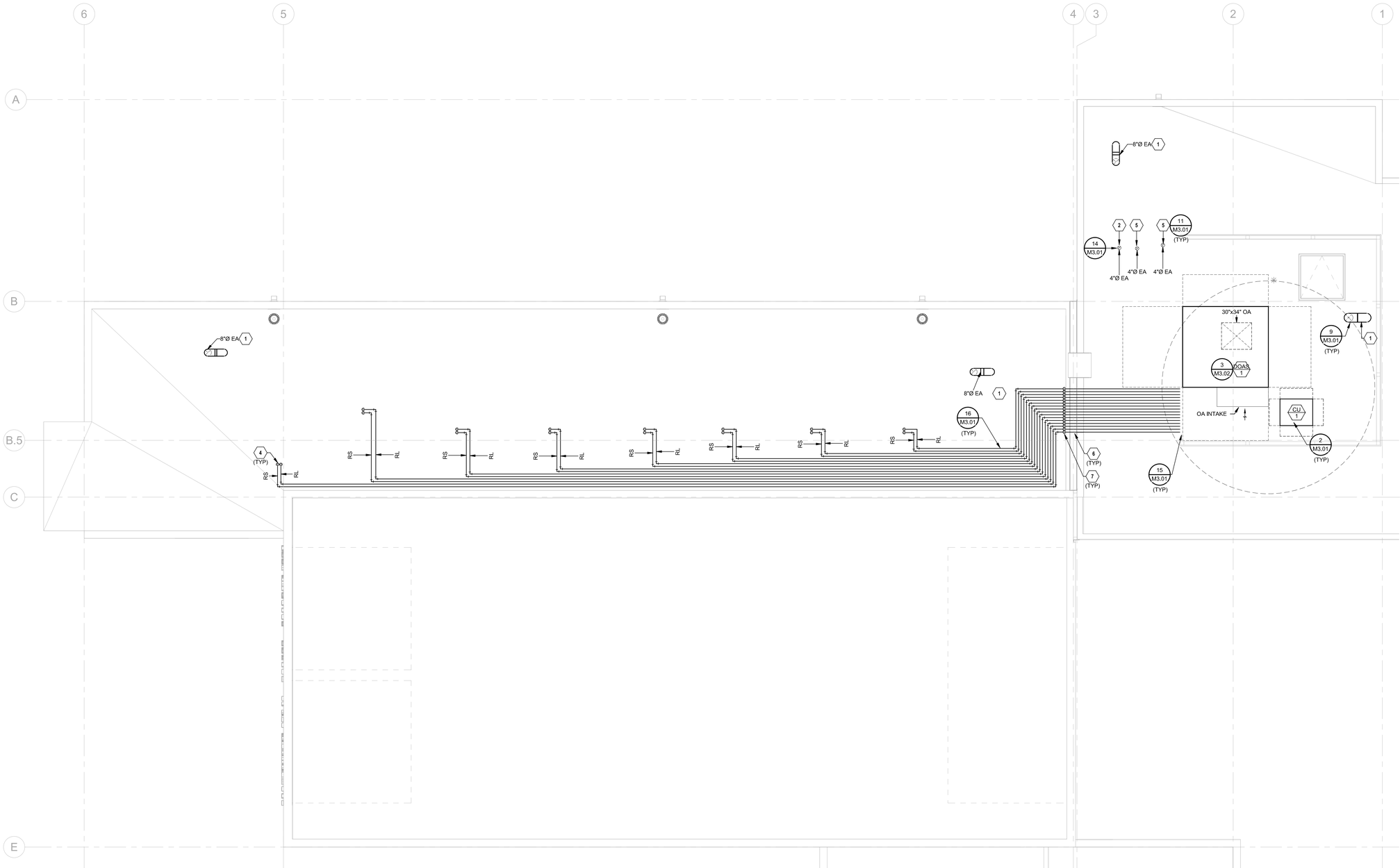
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MECHANICAL PLAN NOTES:

1. PROVIDE GOOSENECK TERMINATION WITH BIRD SCREEN.
2. PROVIDE CONCENTRIC VENT KIT. REFER TO MANUFACTURER INSTALLATION REQUIREMENTS.
3. REFRIGERANT PIPING FROM BRANCH SELECTOR BOX ON FLOOR BELOW. REFER TO SHEET M1.01 FOR CONTINUATION.
4. ROUTE REFRIGERANT PIPING DOWN TO FCU SERVING OFFICE/DORMS. TYPICAL ALL WALL MOUNTED FCU'S IN EXISTING PORTION OF THE BUILDING
5. PROVIDE VANDAL PROOF VENT COVER.
6. PROVIDE SEISMIC EXPANSION JOINTS IN THE REFRIGERANT LINES AT SEISMIC BUILDING SEPARATION PER SPECIFICATIONS.
7. --NOT USED -- DUCT LINER OR INSULATED WRAP SHALL NOT EXCEED 1" THICKNESS AT THIS LOCATION CROSSING BUILDING SEPARATION DUE TO LIMITED CLEAR SPACE FOR DUCT ROUTING.



PLAN NORTH TRUE NORTH

1 HVAC ROOF PLAN
Scale: 1/4" = 1'-0"

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HVAC ROOF PLAN

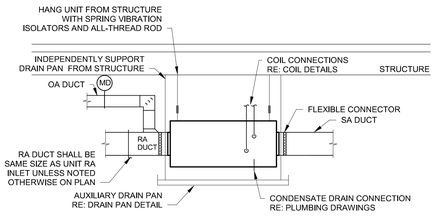
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M2.01

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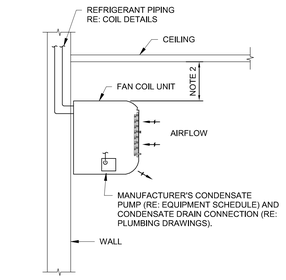
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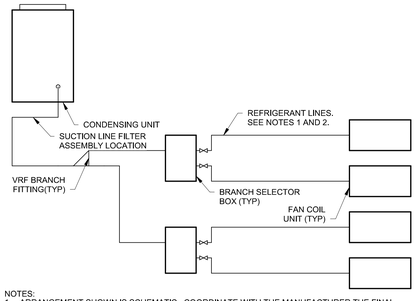
NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.

4 HORIZONTAL HVAC UNIT DETAIL
NTS



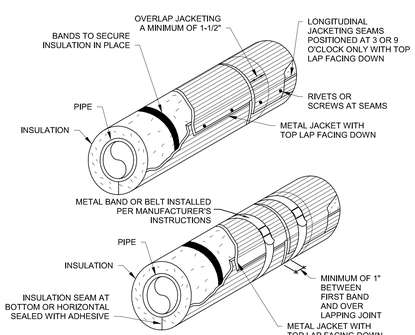
NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.
2. PROVIDE MINIMUM 3.5" OF CLEARANCE AT THE TOP OF THE UNIT.
3. ATTACH FAN COIL UNIT TO MANUFACTURER'S PROVIDED INSTALLATION PLATE. MOUNT INSTALLATION PLATE TO WALL PER MANUFACTURER'S RECOMMENDATIONS.

8 VRF WALL-MOUNTED UNIT DETAIL
NTS

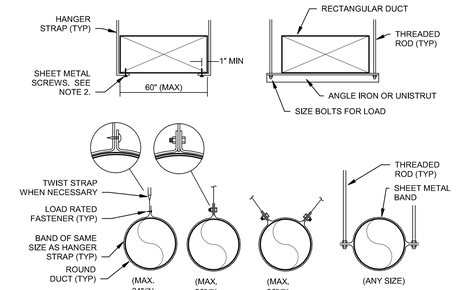


NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC. COORDINATE WITH THE MANUFACTURER THE FINAL HORIZONTAL AND VERTICAL REFRIGERANT PIPE ROUTING TO DETERMINE ACTUAL CIRCUITING, REFRIGERANT LINE QUANTITIES, LENGTHS, SIZES, FITTING TYPES, AND LOCATIONS.
2. MANUFACTURER SHALL PROVIDE DETAILED REFRIGERANT PIPING DIAGRAMS AND SHOP DRAWINGS INCLUDING DIMENSIONAL DATA FOR ALL REFRIGERANT PIPING DEVICES. THE MANUFACTURER SHALL SIZE AND LOCATE THE ASSOCIATED REFRIGERANT TRAPS BASED ON THE ACTUAL ROUTING AND FURNISH OTHER APPURTENANCES TO PROVIDE A FULLY FUNCTIONAL AND OPERATIONAL SYSTEM. COORDINATE WITH THE MANUFACTURER SHOP DRAWINGS TO MAINTAIN SERVICEABILITY AND ACCESSIBILITY OF SYSTEM COMPONENTS.

12 VRF PIPING DIAGRAM
NTS

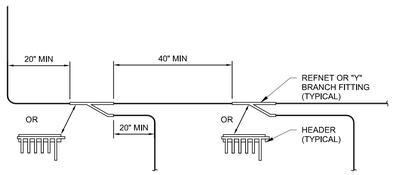


16 EXTERIOR PIPING WITH FIELD APPLIED METAL JACKET OVER INSULATION DETAIL
NTS



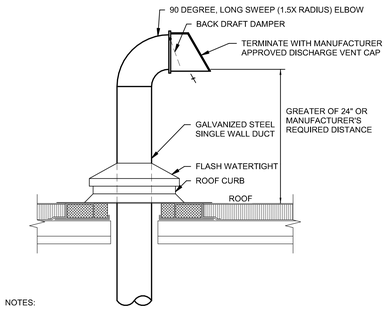
NOTES:
1. USE THREADED ROD FOR RECTANGULAR DUCTS LARGER THAN 60" WIDE.
2. OMIT SHEET METAL SCREWS IF HANGER STRAP IS CONTINUOUS AND LOOPS UNDER ENTIRE RECTANGULAR DUCT.
3. FOR ROUND DUCTS LARGER THAN 36"∅. USE TWO HANGER RODS TO SUPPORT DUCT FROM EACH
4. HANGERS MUST NOT DEFORM DUCT SHAPE.

3 DUCT HANGER LOWER ATTACHMENT DETAILS
NTS



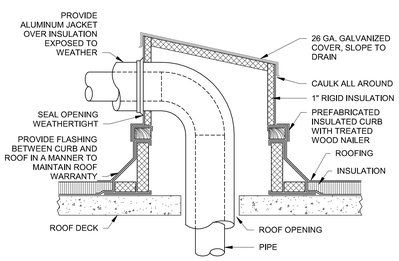
NOTES:
1. FITTINGS SHALL BE INSTALLED WITH THE SEPARATION DISTANCES AS SHOWN AND SUBJECT TO COMPLIANCE WITH THE VRF MANUFACTURER'S REFRIGERANT PIPING INSTALLATION INSTRUCTIONS AND CERTIFIED SHOP DRAWINGS. THE MORE STRINGENT SEPARATION DISTANCE REQUIREMENT SHALL GOVERN.
2. INSTALL 90° ELBOWS 20" MINIMUM FROM FAN COILS AND BS BOXES.
3. INSTALL 90° ELBOWS 20" MINIMUM FROM REFNET OR "Y" BRANCH FITTINGS AND HEADERS.
4. INSTALL REFNET OR "Y" BRANCH FITTINGS AND HEADERS 40" MINIMUM FROM EACH OTHER.
5. COORDINATE FITTING TORQUE REQUIREMENTS WITH ACTUAL VRF EQUIPMENT MANUFACTURERS PUBLISHED INSTALLATION REQUIREMENTS AND TIGHTEN FITTINGS WITHIN SPECIFIED VALUES.

7 BRANCH FITTING AND HEADER PIPING DETAIL
NTS



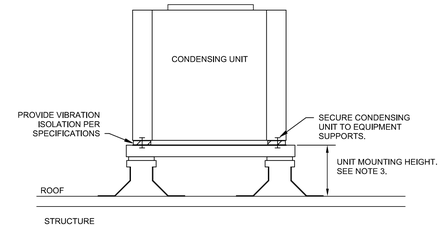
NOTES:
1. DRYER EXHAUST TERMINATIONS SHALL BE IN ACCORDANCE WITH THE APPLIANCE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. DAMPERS OR ANY OTHER OBSTRUCTIONS ARE NOT PERMITTED IN DRYER VENT DUCT.
3. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION.
4. ALL DRYER EXHAUST DUCTWORK SHALL BE SMOOTH INSIDE WITH NO PROJECTIONS FROM SHEET METAL SCREWS OR OTHER OBSTRUCTIONS.

11 DRYER EXHAUST VENT DETAIL
NTS



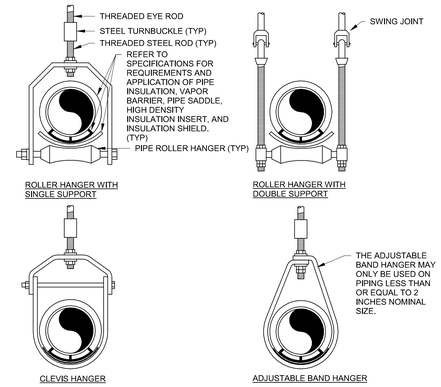
NOTES:
1. FOR MULTIPLE PIPES, PROVIDE ONE ENCLOSURE, WHERE FEASIBLE.

15 PIPE ROOF PENETRATION ENCLOSURE DETAIL
NTS

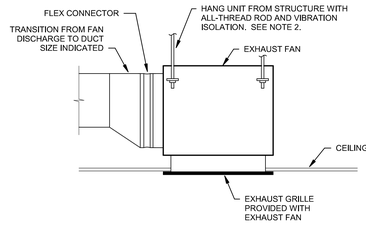


NOTES:
1. SUPPORT AND ANCHOR OUTDOOR UNITS IN COMPLIANCE WITH LOCAL SEISMIC AND WIND RESTRAINT REQUIREMENTS.
2. SEE MECHANICAL EQUIPMENT ANCHORS AND SUPPORT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. REFER TO THE EQUIPMENT SCHEDULE AND MANUFACTURER'S REQUIREMENTS FOR UNIT MOUNTING HEIGHT.

2 CONDENSING UNIT SUPPORT DETAIL
NTS

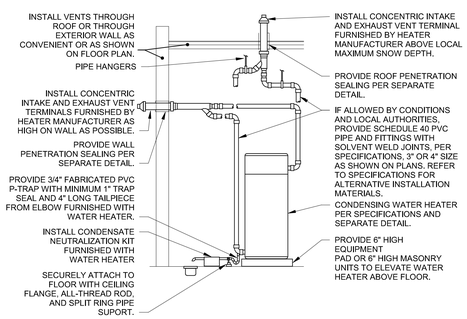


6 PIPE HANGERS DETAILS
NTS



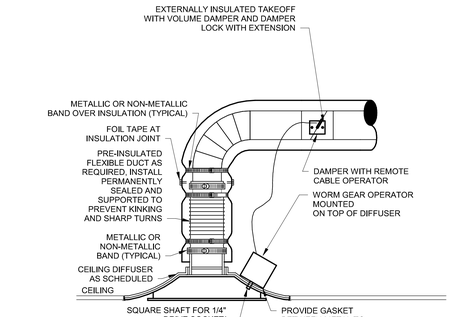
NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.
2. FOR FANS 1 HP AND LESS, PROVIDE NEOPRENE RUBBER MOUNT HANGER (NR). FOR FANS LARGER THAN 1 HP, PROVIDE SPRING VIBRATION ISOLATION HANGER (SPNH).

10 CEILING MOUNTED FAN DETAIL
NTS



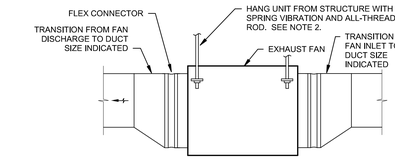
DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. ADJUST TO SUIT FIELD CONDITIONS. INSTALL THROUGH ROOF OR THROUGH WALL AS SHOWN ON PLANS. REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR MORE INFORMATION: MAINTAIN PROPER DISTANCES FROM EACH OTHER, AND FROM OTHER CONSTRUCTION FEATURES; VERIFY PIPE SIZE FOR MAXIMUM LENGTH OF RUN AND QUANTITY OF FITTINGS. DO NOT INSTALL BARE PVC PIPE IN AIR PATH PLENUMS; WRAP PIPE WITH FIRE-BARRIER INSULATION IF ALLOWED BY LOCAL AUTHORITIES, OR PROVIDE STAINLESS STEEL VENT PIPE, PER SPECIFICATIONS. VERIFY WATER HEATERS PROVIDED WITH CONDENSATE NEUTRALIZATION KITS HAVE THEM PROVIDED.

14 SEALED COMBUSTION WATER HEATER VENTS
NTS



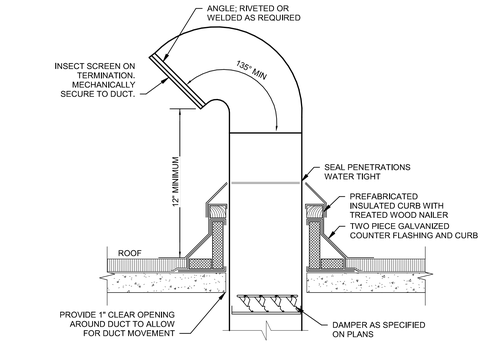
NOTES:
1. FLEXIBLE DUCT LENGTH MAY NOT EXCEED 5'-0". EXTEND RIGID DUCT AS REQUIRED.
2. REFER TO SPECIFICATIONS FOR FLEXIBLE DUCTWORK INSTALLATION REQUIREMENTS.

1 CEILING DIFFUSER DETAIL
NTS

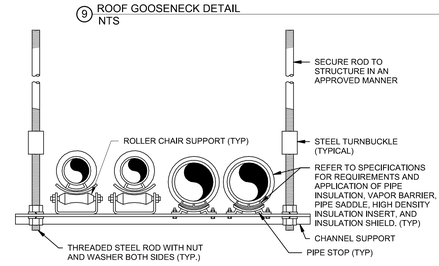


NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC, ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.
2. FOR FANS 1 HP AND LESS, PROVIDE NEOPRENE RUBBER MOUNT HANGER (NR). FOR FANS LARGER THAN 1 HP, PROVIDE SPRING VIBRATION ISOLATION HANGER (SPNH).

5 FAN INLINE
NTS



9 ROOF GOOSENECK DETAIL
NTS



13 MULTIPLE PIPE TRAPEZE HANGER DETAIL
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MECHANICAL DETAILS

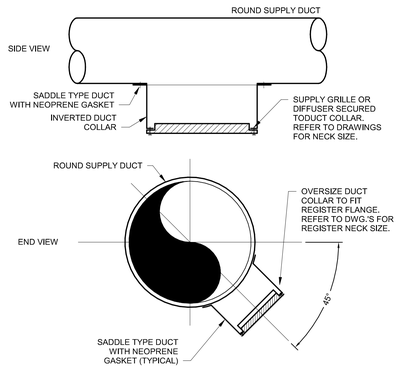
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M3.01

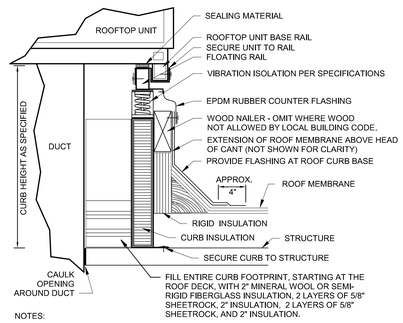
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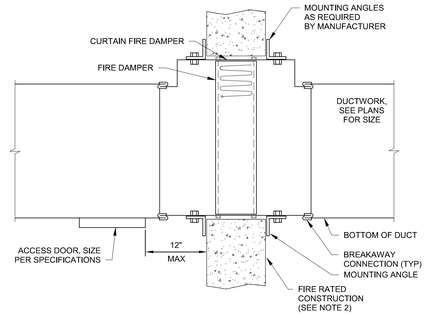


4 REGISTER MOUNTING TO ROUND DUCT DETAIL
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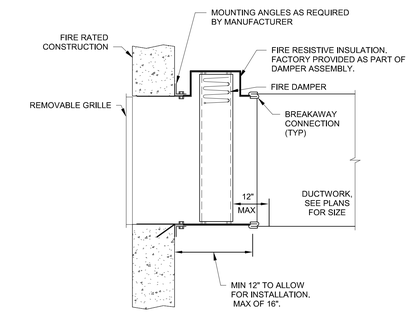
NOTES:
1. CUT METAL DECKING TO ALLOW CURB INSTALLATION ON STEEL FRAMING. AFTER CURB IS SET IN PLACE, TRIM REMAINING METAL DECKING AND INSTALL WITHIN CURB. TACK WELD DECKING TO SUPPORT STEEL. DO NOT WELD INTERIOR DECKING TO ROOF CURB. PROVIDE ADDITIONAL CROSS FRAMING TO SUPPORT INTERIOR DECKING AND FILL MATERIAL AS REQUIRED.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ROOF CURBS, ANCHORING AND SEISMIC/WIND RESISTANCE.

3 VIBR ISOLATION ROOF CURB DETAIL
NTS



NOTES:
1. INSTALL DAMPER PER MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS.
2. MAKE PENETRATION OPENING 1/8" PER FOOT LARGER THAN DAMPER DIMENSIONS WITH 1/4" MINIMUM REQUIRED, MAXIMUM 1".
3. INSTALL ACCESS DOOR (WHEN REQUIRED) IN AN ACCESSIBLE LOCATION FOR MAINTENANCE IN ACCORDANCE WITH NFPA REQUIREMENTS.
4. FRAME OUT OPENINGS FOR MULTIPLE SECTION INSTALLATIONS OR PROVIDE FALSE MULLIONS TO SUPPORT MULTIPLE SECTION INSTALLATIONS PER MANUFACTURER'S RECOMMENDATIONS.

2 FIRE DAMPER IN WALL DETAIL
NTS



NOTES:
1. INSTALL DAMPER PER MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS.
2. MAKE PENETRATION OPENING 1/8" PER FOOT LARGER THAN DAMPER DIMENSIONS WITH 1/4" MINIMUM REQUIRED, MAXIMUM 1".
3. FRAME OUT OPENINGS FOR MULTIPLE SECTION INSTALLATIONS OR PROVIDE FALSE MULLIONS TO SUPPORT MULTIPLE SECTION INSTALLATIONS PER MANUFACTURER'S RECOMMENDATIONS.

1 FIRE DAMPER OUT OF WALL DETAIL
NTS

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MECHANICAL DETAILS

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BRYAN JIMENEZ

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	SERVICE	MODEL	CONSTRUCTION TYPE	FACE TYPE	MOUNTING LOCATION	FACE SIZE (IN)	MAX. NC	MAX. PRESS. DROP (IN. W.C.)	NOTES
CSD1	TITUS	SUPPLY	OMNI-AA	ALUMINUM	PLAQUE	CEILING	12" X 12"	25	0.08	A-F
CEG1	TITUS	EXHAUST	OMNI-AA	ALUMINUM	PLAQUE	CEILING	24" X 24"	25	0.08	B-F
CEG2	TITUS	EXHAUST	OMNI-AA	ALUMINUM	PLAQUE	CEILING	12" X 12"	25	0.08	B-F
CSG1	TITUS	SUPPLY	350F	ALUMINUM	LOUVERED	CEILING	24" X 12"	25	0.08	B-F
DSG1	TITUS	SUPPLY	350F	ALUMINUM	LOUVERED	DUCT	18" X 10"	25	0.08	B, C, E, F
DRG1	TITUS	RETURN	350F	ALUMINUM	LOUVERED	DUCT	24" X 8"	25	0.05	B, C, E, F
WSG1	TITUS	SUPPLY	350F	ALUMINUM	LOUVERED	WALL	REFER TO PLAN	25	0.05	B-F

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. 4-WAY THROW PATTERN UNLESS OTHERWISE INDICATED BY FLOW ARROWS ON DRAWINGS.
B. NECK SIZE SHOWN ON DRAWINGS. PROVIDE BRANCH DUCT TO MATCH NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
C. BAKED ENAMEL FINISH, WHITE TO MATCH CEILING COLOR.
D. FRAME TYPE TO MATCH CEILING/WALL CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING/WALL PLAN.
E. PROVIDE DIFFUSERS AND GRILLES WITH NO EXPOSED MOUNTING SCREWS.
F. FRONT BLADES PARALLEL TO LONG DIMENSION.

VARIABLE REFRIGERANT FLOW FAN COIL UNIT SCHEDULE

MARK	SERVICE	MANUFACTURER	MODEL	TYPE	MOUNTING	SUPPLY FAN NOMINAL CFM	SUPPLY FAN DESIGN CFM	SUPPLY FAN ESP (IN)	COOLING COIL TH (MBH)	COOLING COIL SH (MBH)	COOLING COIL EAT (°F DB)	COOLING COIL EAT (°F WB)	COOLING COIL LAT (°F DB)	COOLING COIL LAT (°F WB)	COOLING COIL REFR TYPE	TOTAL HTG CAP (MBH)	EAT (°F DB)	LAT (°F DB)	MIN O/A (CFM)	ELECTRICAL V/PH	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL DISC TYPE	WEIGHT (LBS)	CONTROL METHOD	NOTES
FCU 1	CU 1	DAIKIN	FXAQ18	HEAT RECOVERY	WALL	400	375	0.00	8.5	7.9	74.0	61.7	55.0	53.9	R-410A	20.0	69.0	80.0	0	208/1	0.5	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 2	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	80	0.00	1.9	1.7	74.0	61.7	55.0	54.1	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 3	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	70	0.00	1.7	1.5	74.0	61.7	55.0	54.1	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 4	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	60	0.00	1.5	1.3	74.0	61.7	55.0	54.8	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 5	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	60	0.00	1.5	1.3	74.0	61.7	55.0	54.8	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 6	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	70	0.00	1.6	1.4	74.0	61.7	55.0	54.1	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 7	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	60	0.00	1.4	1.2	74.0	61.7	55.0	54.1	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 8	CU 1	DAIKIN	FXAQ07	HEAT RECOVERY	WALL	160	60	0.00	1.5	1.2	74.0	63.1	55.0	55.0	R-410A	8.5	69.0	85.0	0	208/1	0.4	15	DIV. 26	50	1	A, B, D-G, I-O
FCU 9	CU 1	DAIKIN	FXSQ36	HEAT RECOVERY	HORIZONTAL	953	1,000	0.50	23.5	20.7	74.0	61.7	55.0	52.9	R-410A	40.0	69.0	85.0	0	208/1	2.5	15	DIV. 26	125	1	A-H, J-L, N,O

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. ASSOCIATED CONDENSING UNIT SHALL BE BY THE SAME MANUFACTURER.
B. FOR COOLING, EQUIPMENT SIZED FOR 95°F AMBIENT TEMPERATURE. FOR HEATING, EQUIPMENT SIZED FOR 42.9°F AMBIENT TEMPERATURE.
C. PROVIDE PRE-MANUFACTURED OR FIELD FABRICATED FILTER RACK WITH 2" MERV 13, PLEATED THROWAWAY FILTERS.
D. DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
E. STARTER PROVIDED BY DIVISION 26 CONTRACTOR.
F. SPECIFIED FAN ESP ACCOUNTS FOR DUCT LOSSES EXTERNAL TO UNIT.
G. SPECIFIED MOTOR OUTPUT SHALL BE DEFINED IN WATTS IF THE VALUE IS GREATER THAN 5 AND HORSEPOWER IF THE VALUE IS 5 OR LESS.
H. SUSPEND UNIT FROM STRUCTURE IN HORIZONTAL POSITION WITH ALL -THREAD ROD AND SPRING VIBRATION ISOLATION (2" MINIMUM DEFLECTION).
I. INSTALL UNIT IN CEILING WITH FRAMING TO MATCH CEILING CONSTRUCTION. SUPPORT UNIT WITH ALL-THREAD ROD AND SPRING VIBRATION ISOLATION (2" MINIMUM DEFLECTION).
J. EQUIPMENT SHALL BE SIZED FOR WORST CASE OF HEATING OR COOLING CAPACITY NEEDS FOR ALL ASSOCIATED VRF SYSTEMS WITHOUT DIVERSITY FACTORS APPLIED.
K. EQUIPMENT MUST MEET DESIGN LEAVING AIR TEMPERATURE IN HEATING MODE AT RATED AIRFLOW. HEATING CAPACITY SHALL INCLUDE ALL APPLICABLE DERATES FOR PIPING, AMBIENT TEMPERATURE, CONNECTED LOAD AND DEFROST.
L. TOTAL HEATING CAPACITY INCLUDES THE HEAT PUMP HEATING COIL CAPACITY AT THE AMBIENT DRY BULB TEMPERATURE LISTED.
M. PROVIDE UNIT WITH MANUFACTURER WASHABLE FILTER.
N. PROVIDE UNIT WITH SPACE TEMPERATURE CONTROL DEVICES CONSISTENT WITH THE FOLLOWING CONTROL METHODS:
   1 - THERMOSTAT OR ROOM CONTROLLER FOR LOCAL OVERRIDE OF CENTRALIZED CONTROLLER WITH INTEGRAL TEMPERATURE SENSOR.
O. TIE INTO DAIKIN ITOUCH MANAGER FOR START/STOP STAUS.

VARIABLE REFRIGERANT FLOW CONDENSING UNIT SCHEDULE

MARK	SERVICE	MANUFACTURER	MODEL	CONFIGURATION	REFR TYPE	COOLING CAPACITY TOTAL (MBH)	HEATING CAPACITY HEAT PUMP (SEER)	HEATING CAPACITY HEAT PUMP (MBH)	HEATING CAPACITY AMBIENT (DB)	HEATING CAPACITY HSPF	OUTDOOR MODULE 1 MCA	OUTDOOR MODULE 1 MOCP	OUTDOOR MODULE 1 V/PH	DISC TYPE	WEIGHT (LBS)	NOTES
CU 1	FCU 1 THRU 9	DAIKIN	REYQ72	HEAT RECOVERY	R-410A	43.1	13.0	19.1	42.9	7.7	38.1	45	208/3	DIV. 26	750	ALL

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. EQUIPMENT SIZED FOR 95°F AMBIENT TEMPERATURE.
B. APPROXIMATE LOCATION OF REFRIGERANT COMPONENTS AND CONTROL DEVICES AND GENERAL PIPE ROUTING ARE SHOWN ON THE DRAWINGS ONLY TO CONVEY GENERAL DESIGN INTENT. COORDINATE WITH THE MANUFACTURER THE FINAL HORIZONTA.,
   ROUTING TO DETERMINE PIPE SIZES FOR THE REFRIGERANT PIPING. MANUFACTURER SHALL PROVIDE DETAILED REFRIGERANT PIPING DIAGRAMS INCLUDING DIMENSIONAL DATA FOR ALL REFRIGERANT PIPING DEVICES. THE MANUFACTURER SHALL SIZE...
   TRAPS BASED ON THE ACTUAL ROUTING AND PROVIDE OTHER APPURTENANCES TO PROVIDE A FULLY FUNCTIONAL AND OPERATIONAL SYSTEM. COORDINATE WITH THE MANUFACTURER LOCATIONS FOR ALL REFRIGERANT PIPING AND CONTROL DEVICES TO MAINTAIN SERVICEABILITY AND ACCESSIBILITY.
C. PROVIDE PRE-ENGINEERED ROOF EQUIPMENT SUPPORTS WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 8 INCHES ABOVE FINISHED ROOF SURFACE.
D. DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
E. STARTERS FOR ALL MOTORS SHALL BE PROVIDED INTEGRAL WITH UNIT.
F. COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
G. PROVIDE MANUFACTURER'S VRF SYSTEM CONTROLLER FOR CONTROL OF VRF SYSTEMS AND INTERFACE TO BUILDING CONTROL SYSTEM. GATEWAY SHALL BE PROVIDED BY CONTROLS CONTRACTOR (IF REQUIRED).
H. EQUIPMENT SHALL BE SIZED FOR WORST CASE OF HEATING OR COOLING CAPACITY NEEDS FOR ALL ASSOCIATED VRF SYSTEMS WITHOUT DIVERSITY FACTORS APPLIED.
I. HEATING CAPACITY SHALL INCLUDE ALL APPLICABLE DERATES FOR PIPING, AMBIENT TEMPERATURE, CONNECTED LOAD AND DEFROST.
J. PROVIDE CONDENSER COIL HAIL GUARDS.
K. TIE INTO DAIKIN ITOUCH MANAGER FOR START/STOP STAUS.

DEDICATED OUTDOOR AIR SYSTEM - HEAT PUMP ROOFTOP UNIT

MARK	MANUFACTURER	MODEL	NOMINAL TONS	UNIT TYPE	SUPPLY FAN TYPE	SUPPLY FAN DESIGN CFM	SUPPLY FAN MINIMUM CFM	SUPPLY FAN ESP (IN)	SUPPLY FAN BHP	SUPPLY FAN NOM HP	SUPPLY FAN VFD (Y/N)	COOLING COIL REFR TYPE	COOLING COIL TH (MBH)	COOLING COIL SH (MBH)	COOLING COIL EAT (°F DB)	COOLING COIL EAT (°F WB)	COOLING COIL LAT (°F DB)	COOLING COIL LAT (°F WB)	COOLING COIL MIN EFF (EER)	COOLING COIL MIN NO STAGES	COOLING COIL MAX VEL (FPM)	TOTAL HTG CAP (MBH)	HEAT PUMP HEATING COIL MIN OUT (MBH)	HEAT PUMP HEATING COIL AMBIENT (DB)	HEAT PUMP HEATING COIL EAT (°F DB)	HEAT PUMP HEATING COIL LAT (°F DB)	ELECTRICAL V/PH	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL DISC TYPE	WEIGHT (LBS)	NOTES
DOAS-1	DAIKIN	DPS007A	7.5	MULTIZONE	SWSI AF	1,575	1,575	1.0	0.72	2.3	N	R410A	81.4	35.5	75.4	68.7	55.0	52.1	12.2	VARIABLE	550.0	46.78	46.78	42.9	42.9	70	208/3	95	100	DIV 26	2600	ALL

MODEL NUMBERS AND NOMINAL TONS LISTED SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER, MODEL NUMBERS, OR NOMINAL TONS ONLY.
REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR TH..

NOTES:

A. REFER TO PACKAGED DOAS ROOFTOP UNIT CONTROL MATRIX FOR ADDITIONAL UNIT FEATURES, COMPONENTS, MODULES, ACCESSORIES, AND CONTROLS THAT SHALL BE PROVIDED WITH THE EQUIPMENT.
B. EQUIPMENT SIZED FOR 75.4 & 68.7°F AMBIENT TEMPERATURE BASED ON ASHRAE 99% DEHUMIDIFICATION DESIGN CONDITIONS
C. PROVIDE 2" MERV 13, EFFICIENT PLEATED THROWAWAY AIR FILTERS.
D. DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
E. STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
F. PROVIDE SINGLE POINT POWER CONNECTION.
G. COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
H. PROVIDE 125 VAC, 20 AMP DUPLEX CONVENIENCE RECEPTACLE MOUNTED TO UNIT READY FOR FIELD WIRING WITH A COVER UL LISTED FOR WET AND DAMPER LOCATIONS WHEN IN USE.
I. SPECIFIED FAN ESP ACCOUNTS FOR DUCT LOSSES EXTERNAL TO UNIT.
J. PROVIDE MOTOR HORSEPOWER TO OVERCOME INTERNAL UNIT STATIC PRESSURE DROP PLUS SPECIFIED EXTERNAL STATIC PRESSURE DROP. NOMINAL MOTOR HP SHALL BE NO LARGER THAN THE FIRST AVAILABLE NOMINAL MOTOR SIZE GREATER THAN THE REQUIRED BHP.
K. PROVIDE INSULATED ROOF CURB WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 8 INCHES ABOVE FINISHED ROOF SURFACE. PROVIDE SLOPED CURB IF NEEDED TO MATCH ROOF SLOPE.
   COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION. COORDINATE CURB TYPE WITH DRAWINGS.
L. SCHEDULED WEIGHT IS THE MAXIMUM ALLOWABLE OPERATING WEIGHT OF THE EQUIPMENT AND CURB AND FILL.
M. COOLING COIL LAT IS LEAVING AIR TEMPERATURE OF COIL.
N. COOLING COIL SHALL BE CAPABLE OF MODULATING CAPACITY WITHOUT THE USE OF HOT GAS BYPASS. PROVIDE VARIABLE SPEED OR DIGITAL SCROLL LEAD COMPRESSOR FOR CAPACITY CONTROL.
O. TOTAL HEATING CAPACITY INCLUDES THE HEAT PUMP HEATING COIL CAPACITY AT THE AMBIENT DRY BULB TEMPERATURE LISTED PLUS THE AUXILIARY HEATING COIL OUTPUT LISTED. HEAT PUMP HEATING COIL MINIMUM EFFICIENCY IS CALCULATED AT 47°F.
P. PROVIDE GUARDS TO PROTECT CONDENSER COIL FROM HAIL OR OTHER DAMAGE.
Q. PROVIDE HOT GAS REHEAT COIL CAPABLE OF PROVIDING LEAVING AIR TEMPERATURE OF 70 F AT DESIGN AIRFLOW.
R. TIE INTO DAIKIN ITOUCH MANAGER FOR START/STOP STAUS.

FAN SCHEDULE

MARK	SERVICE DESCRIPTION	MANUFACTURER	MOUNTING	MODEL	CFM	ESP (IN)	BHP	FAN RPM	DRIVE (BELT/DIRECT)	ELECTRICAL V/PH	ELECTRICAL DISC TYPE	ELECTRICAL STARTER TYPE	WEIGHT (LBS)	NOTES
EF 1	EXHAUST	GREENHECK	CEILING	CSP-A390-VG	150	0.3	0.03	977	DIRECT	115/1	DIV. 26	ECM	35	ALL
EF 2	EXHAUST	GREENHECK	INLINE	SQ-90-VG	250	0.3	0.03	1192	DIRECT	115/1	DIV. 26	ECM	75	ALL
EF 3	EXHAUST	GREENHECK	INLINE	SQ-70-VG	175	0.3	0.03	1603	DIRECT	115/1	DIV. 26	ECM	50	ALL
EF 4	EXHAUST	GREENHECK	CEILING	CSP-A390-VG	125	0.3	0.03	1057	DIRECT	115/1	DIV. 26	ECM	35	ALL

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. PROVIDE WITH SPRING VIBRATION ISOLATION AND ALL-THREAD HANGING RODS.
B. DIVISION 26 CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH.
C. PROVIDE WITH MANUFACTURER'S ELECTRONICALLY COMMUTATED (EC) MOTOR.
D. PROVIDE WITH AUXILIARY CONTACTS FOR SHUTDOWN UPON NOTIFICATION FROM FIRE ALARM SYSTEM.
E. TIE INTO DAIKIN ITOUCH MANAGER FOR START/STOP STAUS.

VRF BRANCH SELECTOR SCHEDULE

MARK	# PORTS	MANUFACTURER	MODEL	SERVICE	ELECTRICAL V/PH	ELECTRICAL MCA	ELECTRICAL MOCP	NOTES
BS 1	10	DAIKIN	BSF8Q54	CU 1	208/1	1	15	ALL

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. EQUIPMENT COMPONENTS SHALL BE BY THE SAME MANUFACTURER.
B. DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
C. PROVIDE WITH ALL-THREAD HANGING RODS.
D. MODEL NUMBER IS REPRESENTATIVE ONLY. FINAL BRANCH SELECTOR SIZE SHALL BE DETERMINED BY VRF MANUFACTURER'S CALCULATIONS.
E. PROVIDE SHUTOFF VALVES ON EACH OUTLET PORT OF BRANCH SELECTOR BOX.

AHJ STAMP APPROVAL

BIDDING SET

REVISIONS

ISSUED FOR PERMIT

02/10/2023

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NAC NO 161-21001
DRAWN TB
CHECKED LB
DATE 10/05/2026

MECHANICAL SCHEDULES

CD

M4.01

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BRYAN JIMENEZ

OUTSIDE AIR REQUIREMENTS, 2019 CMC AND CEC

SYSTEM DESIGNATION	SYSTEM TYPE:	SINGLE-ZONE SYSTEMS ONLY		MULTI-ZONE SYSTEMS ONLY	FLOOR AREA SERVED BY SYSTEM [As] (SF)	SYSTEM AVERAGED AREA-BASED OUTDOOR AIR RATE (CFM/SF)	SYSTEM POPULATION [Ps] (PEOPLE)	SYSTEM AVERAGED PEOPLE-BASED OUTDOOR AIR RATE (CFM/P)	CMC REQUIRED OA (CFM)	CEC REQUIRED OA (CFM)	CODE THAT SETS MAX OUTSIDE AIRFLOW	REQUIRED OA INTAKE FLOW [Vot] (CFM)	REQUIRED DCV OA INTAKE FLOW [Vot] (CFM)	DESIGN OA INTAKE FLOW [Vot] (CFM)	NOTES
		VENTILATION ZONE ASSOCIATED WITH SYSTEM	CMC WORST CASE ZONE AIR DISTRIBUTION EFFECTIVENESS [Ez]	SYSTEM VENTILATION EFFICIENCY [Ev] (CMC ONLY)											
DOAS 1	DOAS 1	-	-	N/A	486	0.15	0	#DIV/0!	36	74	CEC	74	0	600	1-5
FCU 1	SINGLE ZONE	OFFICE - 101	N/A	-	186	0.15	1	15.0	22	28	CEC	28	0	30	1-5
FCU 2	SINGLE ZONE	ACCESSIBLE DORM - 104	N/A	-	154	0.15	1	15.0	19	24	CEC	24	0	25	1-5
FCU 3	SINGLE ZONE	DORM 1 - 105	N/A	-	102	0.15	1	15.0	15	16	CEC	16	0	20	1-5
FCU 4	SINGLE ZONE	DORM 2 - 106	N/A	-	91	0.15	1	15.0	14	15	CEC	15	0	20	1-5
FCU 5	SINGLE ZONE	DORM 3 - 107	N/A	-	90	0.15	1	15.0	14	15	CEC	15	0	20	1-5
FCU 6	SINGLE ZONE	DORM 4 - 108	N/A	-	86	0.15	1	15.0	14	15	CEC	15	0	20	1-5
FCU 7	SINGLE ZONE	DORM 5 - 109	N/A	-	86	0.15	1	15.0	14	15	CEC	15	0	20	1-5
FCU 8	SINGLE ZONE	DORM 6 - 110	N/A	-	111	0.15	1	15.0	15	17	CEC	17	0	20	1-5
FCU 9	SINGLE ZONE	UTILITY - 116	N/A	-	497	0.50	13	15.0	119	249	CEC	249	0	600	
											TOTALS	468	0	1,375	

GENERAL NOTES:

1. VENTILATION CALCULATIONS BASED ON 2019 CALIFORNIA MECHANICAL CODE AND 2019 CALIFORNIA ENERGY CODE.
2. SYSTEM POPULATIONS BASED ON MAX SEATING AND/OR CODE MAXIMUM VALUES.
3. SINGLE ZONE SYSTEMS (Vot = Voz): SYSTEM VENTILATION EFFICIENCY CALCULATION IS NOT REQUIRED FOR SINGLE ZONE SYSTEMS. CALCULATION TAKES MAXIMUM OUTSIDE AIRFLOW REQUIRED BETWEEN THE CMC AND CEC FOR THAT ZONE. IF CMC SETS THE MAXIMUM AIRFLOW, THE CALCULATION USES THE WORST CASE AIR DISTRIBUTION EFFECTIVENESS BETWEEN HEATING AND COOLING MODES OF OPERATION.
4. 100% OA SYSTEMS (Vot = ∑all zones Voz): WHEN ONE AIR HANDLER SUPPLIES ONLY OUTDOOR AIR TO ONE OR MORE ZONES. CALCULATION TAKES THE MAXIMUM OUTSIDE AIRFLOW REQUIRED BETWEEN THE CMC AND CEC FOR EACH ZONE. IF CMC SETS THE MAXIMUM AIRFLOW, THE CALCULATION USES THE WORST CASE AIR DISTRIBUTION EFFECTIVENESS BETWEEN HEATING AND COOLING MODES OF OPERATION.
5. MULTI-ZONE RECIRCULATING SYSTEMS: CALCULATOR TAKES THE MAXIMUM OUTSIDE AIRFLOW REQUIRED BETWEEN THE CMC AND CEC ON A SYSTEM LEVEL. THE CMC CALCULATION USED TO DETERMINE VENTILATION AIRFLOW IN COMPLIANCE WITH VRP AND SECTION 404.0, VENTILATION RATE SHOWN IS ACTUAL CALCULATED WITH CORRECTION FACTORS INCLUDED. EACH ZONE IS CALCULATED WITH ITS WORST CASE ZONE AIR DISTRIBUTION EFFECTIVENESS (HEATING/COOLING) AS PART OF CALCUALTIONS TO FIND Ev.

ASHRAE 15-2013 COMPLIANCE CALCULATOR

WORST CASE ROOM NAME	OUTDOOR UNIT MARK	OCCUPANCY CLASSIFICATION	REFRIGERATING SYSTEM CLASSIFICATION	REFRIGERATING SYSTEM LEAK PROBABILITY	REFRIGERANT TYPE	REFRIGERANT GROUP	RCL: REFRIGERANT CONCENTRATION LIMIT (LB/1,000 CU FT)	RCL ADJUSTED FOR ALTITUDE (LB/1,000 CU FT)	ROOM AREA (SQ FT)	ROOM HEIGHT (FT)	ADDITIONAL VOLUME FROM COMMUNICABLE SPACE (CU FT)	TOTAL DISPERSION VOLUME (CU FT)	ALLOWABLE REF. CHARGE IN NETWORK (LBS)	ACTUAL SYSTEM REFRIGERANT CHARGE (LBS)	ACTUAL REF. CHARGE COMPLIES?
DORM 3 - 107	CU 1	RESIDENTIAL	DIRECT	HIGH	410A	A1	26	26.0	138.0	9.00		1,242	32.3	25.8	YES

NOTES:

A. PLENUMS: SPACE ABOVE SUSPENDED CEILING SHALL NOT BE INCLUDED IN CALCULATING THE REFRIGERANT QUANTITY LIMIT IN THE SYSTEM UNLESS SUCH SPACE IS PART OF THE AIR SUPPLY OR RETURN SYSTEM. (SECTION 7.3.2.2)

AHJ STAMP APPROVAL

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REVISIONS

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02/10/2023

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DRAWN	TB
CHECKED	Checker
DATE	10/05/2026

MECHANICAL SCHEDULES

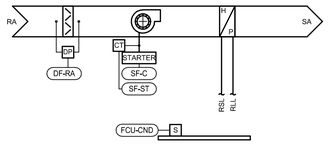
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SEQUENCE OF OPERATIONS
VARIABLE REFRIGERANT FLOW SYSTEM (VRF) (CU-1 & FCU-1 THRU FCU-9)

The sequence of operations is organized into the following main categories: operating modes; control setpoint resets; safeties, overrides and interlocks; and component control loops. The operating modes describe the criteria that either enable or disable the various modes of operation. If a mode of operation is not listed within a component control loop section then that mode of operation has no direct influence on the operation of the component. The control setpoint reset section describes the logic and reference variables that will be used to reset control setpoints to a new value within its reset range. The safeties, overrides, and interlocks section outlines the hardwired interlocks that are required to meet life safety requirements. Safeties and interlocks take precedence over all other control strategies outlined in this document. The control responses of each component for the various modes of operation are described in the component control loop sections. Setpoints shall be adjustable (adj.) as noted.

The sequence of operations, the points list and control diagrams shall be used to provide a complete description of the control philosophy for the controlled equipment. Individual setpoint values, reset ranges, and alarm action levels are listed in the points list. Components and control sensor locations are graphically depicted on the control diagram. The controls contractor shall be responsible for coordinating any necessary time delay setpoints to establish stable system operation.

GENERAL DESCRIPTION

The VRF system described by this sequence of operations consists of condensing unit(s), a branch selector box, fan coil unit(s), and a central controller that operate together to provide space conditioning as shown on the drawings. The VRF system shall be furnished with factory digital controls (DDC).

Ventilation air is provided via a dedicated outside air unit (DOAS-1) as shown on the drawings. The ventilation air is distributed directly to the space

Heat Recovery System Control
Each condensing unit shall be capable of serving multiple fan coil units. Each fan coil unit or bank of fan coil units associated with an individual branch selector box shall be capable of independent heating or cooling operation and independent temperature control.

Central Controller BAS Interface:
The manufacturer furnished central controller shall interface with the building automation system (BAS) via a manufacturer furnished gateway. BAS shall provide centralized monitoring and management of system scheduling, temperature setpoints, mode, alarms, fan speed, unoccupied space temperature limits, remote controller restrictions, and mode changeover.

OPERATING MODES
OCCUPIED MODE:
The unit shall be in occupied mode per the Project Design Conditions Schedule shown on the control drawings.

COOLING MODE:
The unit shall be in cooling mode subject to a command by the BAS.

HEATING MODE:
The unit shall be in cooling mode subject to a command by the BAS.

UNOCCUPIED MODE:
The unit shall be in unoccupied mode for all periods not included in the occupied hours of operation. Overrides of unoccupied schedule are defined at the zone level control. Coordinate with the owner for timed occupancy schedule overrides and zone level setpoint adjustment.

CONTROL SETPOINT RESETS

OPTIMAL START/STOP:
The unit shall start prior to scheduled occupancy based on the time necessary for the zones to reach their occupied setpoints.
The unit shall supply the lesser of the minimum rate of outdoor air or supply 3 complete air changes during the 1-hour period before normal occupied mode.

SAFETIES, OVERRIDES AND INTERLOCKS

FIRE ALARM CONTROL PANEL INTERLOCK:
The VRF system shall be disabled via receipt of signal from the fire alarm control panel.

LEAK DETECTION INTERLOCK (FCU-CND) (FCU-9 ONLY):
The fan coil unit shall automatically be disabled upon detection of water in the overflow drain pan.

EXTERIOR OPENING INTERLOCK:
The zone temperature (Z-T) setpoint shall be reset to 90 degrees F in cooling and 55 degrees F in heating whenever exterior operable opening status (OP-ST-X) is open. Setpoint change shall occur after 5 minutes of opening being opened.

COMPONENT CONTROL LOOPS

CONDENSING UNIT CONTROL
When in All Modes:
The unit shall operate subject to the manufacturer integrated controls in unison with the fan coil units to satisfy the heating and/or cooling demand.

FAN COIL UNIT CONTROL
When in All Modes:
The unit shall operate subject to the BAS command.

FILTER MONITORING (FCU-9 ONLY)
When in All Modes:
The controller shall monitor the fan runtime to provide maintenance reminder at 50% of filter elapsed time of 1100 hours (adj.) and an alarm at 100% elapsed time of 2200 hours (adj.).

POINTS LIST - VRF SYSTEM (CU-1, FCU-1 THRU FCU-9)

POINT ID	DESCRIPTION	POINT TYPE	DEFAULT SET POINT	FAIL POSITION	STATUS ALARM	ALARM RANGE	NOTES
BAS MONITORING, MANAGEMENT, AND ALARM INTERFACE WITH VRF CENTRAL CONTROLLER							
FCU-ST-X	VRF FAN COIL UNIT "X" STATUS	BV					
FCU-ALM-X	VRF FAN COIL UNIT "X" ALARM	BV			X	COMMON ALARM	G
CU-ST-X	COMPRESSOR "X" STATUS	BV					
ZONE LEVEL SENSORS							
Z-T	ZONE TEMPERATURE	AV	SCHED.		X	Z-T <> SPT +/- 5 F	B, E, F, J
Z-TA	MANUAL TEMPERATURE SETPOINT ADJUST	AI	+/- 2 F				H, J
OP-ST-X	EXTERIOR OPENING STATUS INTERLOCK (DOORS, WALLS, ROOFS, WINDOWS)	BI			X	ON ACTIVATION	
FCU SUPPLY FAN							
SF-C	SUPPLY FAN COMMAND (START/STOP)	BO					
SF-ST-X	SUPPLY FAN STATUS	BV			X	SF-ST <> SF-C	
FIRE ALARM/SMOKE DETECTORS							
FA-SD	FIRE ALARM SHUTDOWN AND STATUS	BV					

NOTES:
B. DEVICE PROVIDED BY VRF MANUFACTURER.
D. DIVISION 26 SHALL PROVIDE SENSOR WITH DRY CONTACT FOR BAS INTERFACE.
E. REFERENCE PROJECT DESIGN CONDITIONS SCHEDULE FOR SETPOINT.
F. REFERENCE VARIABLE REFRIGERANT FLOW FAN COIL UNIT SCHEDULE FOR THE TEMPERATURE CONTROL METHOD UTILIZED FOR EACH FCU.
G. DISPLAY MALFUNCTION CODE SPECIFIED BY THE MANUFACTURER AT BAS FRONT END UPON ALARM.
H. COORDINATE WITH OWNER THE LOCKOUT FUNCTIONS DESIRED FOR EACH ZONE.
J. POINT SHALL BE ADJUSTABLE.

PACKAGED DOAS UNIT CONTROL MATRIX

CONTROL FEATURE	UNITS	DOAS-1 SETPOINT OR Y/N	POINT TYPE INTERFACE WITH DDC (READ/WRITE)	NOTES
BUILDING AUTOMATION SYSTEM (BAS)				
BAS MONITORING AND MANAGEMENT INTERFACE		Y	BACNET	A
CONTROL STRATEGY				
DOAS SUPPLY AIR TEMPERATURE CONTROL		Y		
HEATING AND COOLING SET POINTS				
COOLING MODE ENABLE - OUTSIDE AIR TEMPERATURE	°F DB	75 < X	READ/WRITE	
COOLING - SUPPLY AIR TEMPERATURE SETPOINT	°F DB	74	READ/WRITE	
HEATING MODE ENABLE - OUTSIDE AIR TEMPERATURE	°F DB	X < 65	READ/WRITE	
HEATING - SUPPLY AIR TEMPERATURE SETPOINT	°F DB	70	READ/WRITE	
VENTILATION ONLY MODE ENABLE - OUTSIDE AIR TEMPERATURE	°F DB	65 < X < 75	READ/WRITE	
VENTILATION ONLY MODE - SUPPLY AIR TEMPERATURE SETPOINT	°F DB	N/A	READ/WRITE	Q
DEHUMIDIFICATION MODE ENABLE - OUTSIDE AIR DEW POINT	°F DP	60	READ/WRITE	F
DEHUMIDIFICATION - COOLING CONTROL - COIL LEAVING AIR TEMPERATURE SETPOINT	°F DB	55	READ/WRITE	F
DEHUMIDIFICATION - REHEAT CONTROL - SUPPLY AIR TEMPERATURE SETPOINT	°F DB	74	READ/WRITE	F
PROGRAMMED CONTROL FEATURES				
HVAC SYSTEM OCCUPIED/UNOCCUPIED MODE - SCHEDULED AT DOAS INTERNAL UNIT CONTROLLER		Y	READ	B
OPTIMUM START SEQUENCE		Y	READ STATUS	
PRE-OCCUPANCY PURGE		Y	READ STATUS	H
DEMAND LIMITING SEQUENCE		Y	WRITE	M
EQUIPMENT COMPONENTS, ACCESSORIES AND CONTROL FEATURES				
COOLING COIL (DX - MODULATING CAPACITY)		Y	READ STATUS	K
DEHUMIDIFICATION - MODULATING HOT GAS REHEAT		Y	READ STATUS	
HEATING - HEAT PUMP - MODULATING HEATING		Y	READ STATUS	K
OUTSIDE AIR DAMPER - MOTOR OPERATED		Y	READ STATUS	J
SUPPLY FAN CONTROL METHODS				
ON DURING OCCUPIED MODE		Y		
CONSTANT SPEED SUPPLY FAN OPERATION		Y	READ STATUS	K
SAFETIES, INTERLOCKS, AND ALARMS				
DIFFERENTIAL PRESSURE SWITCH - FILTER CHANGE ALARM		Y	READ	F
FIRE ALARM CONTROL PANEL - SAFETY SHUTDOWN INTERLOCK		Y	READ	

DIV. 23 CONTRACTOR SHALL PROVIDE CONTROL PANEL(S), WIRING, THERMOSTAT(S), TEMPERATURE SENSOR(S), HUMIDISTAT(S), AND/OR CO2 SENSOR(S) WHERE SHOWN ON THE DRAWINGS AND AS REQUIRED TO FACILITATE THE SCHEDULED CONTROL MODULES AND SEQUENCES OF OPERATION. EACH UNIT SHALL CONTROL BASED ON ITS OWN INTERNAL SAFETIES, TIME DELAYS, AND SEQUENCES UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FINAL BUILDING AND EQUIPMENT SCHEDULES DURING STARTUP. REFERENCE DIVISION SPECIFICATIONS FOR INDIVIDUAL DEVICE REQUIREMENTS.

NOTES:
A. PROVIDE UNIT WITH FACTORY MOUNTED DDC CONTROLS AND INTEGRATE INTO THE BAS. BAS SHALL PROVIDE MONITORING OF THE POINTS LISTED IN THE SCHEDULE FOR
B. DIVISION 23 CONTRACTOR SHALL PROVIDE DEVICE.
F. DEVICE SHALL BE FACTORY MOUNTED AND PRE-WIRED FOR OPERATION SUBJECT TO THE ONBOARD CONTROLLER.
H. THE UNIT SHALL SUPPLY THE LESSER OF THE MINIMUM RATE OF OUTDOOR AIR OR SUPPLY 3 COMPLETE AIR CHANGES DURING THE 1-HOUR PERIOD BEFORE NORMAL OCCUPIED MODE.
J. DAMPER SHALL BE CLOSED DURING UNOCCUPIED MODE.
K. UNITARY CONTROLLER SHALL MODULATE AND/OR CYCLE SUPPLY FAN SPEED AND COIL CAPACITY SUBJECT TO THE INTERNAL SAFETIES AND SEQUENCES TO MAINTAIN SCHEDULED SETPOINTS.
M. UPON RECEIPT OF SIGNAL TO TRIM ELECTRICAL DEMAND, THE COOLING TEMPERATURE SETPOINT SHALL RESET UP BY A MINIMUM OF 4 F (ADJ.). THE HEATING TEMPERATURE SETPOINT SHALL RESET DOWN BY A MINIMUM OF 4 DEG. F OR MORE (ADJ.)
Q. VENTILATION ONLY MODE PROVIDES OUTSIDE AIR DIRECTLY TO SPACE WITHOUT HEATING OR COOLING WHEN OUTDO... ARE FAVORABLE. VENTILATION ONLY MODE CAN BE INTERRUPTED ON A CALL FOR DEHUMIDIFICATION.

OUTSIDE AIR REQUIREMENTS, 2019 CMC AND CEC

SYSTEM DESIGNATION	SYSTEM TYPE:	SINGLE-ZONE SYSTEMS ONLY: VENTILATION ZONE ASSOCIATED WITH SYSTEM	SINGLE-ZONE SYSTEMS ONLY: CMC WORST CASE ZONE AIR DISTRIBUTION EFFECTIVENESS [Ez]	MULTI-ZONE SYSTEMS ONLY: SYSTEM VENTILATION EFFICIENCY [Ev] (CMC ONLY)	FLOOR AREA SERVED BY SYSTEM [As] (SF)	SYSTEM AVERAGED AREA-BASED OUTDOOR AIR RATE (CFM/SF)	SYSTEM POPULATION [Ps] (PEOPLE)	SYSTEM AVERAGED PEOPLE-BASED OUTDOOR AIR RATE (CFM/P)	CMC REQUIRED OA (CFM)	CEC REQUIRED OA (CFM)	CODE THAT SETS MAX OUTSIDE AIRFLOW	REQUIRED OA INTAKE FLOW [Vot] (CFM)	REQUIRED DCV OA INTAKE FLOW [Vot] (CFM)	DESIGN OA INTAKE FLOW [Vot] (CFM)	NOTES
DOAS 1	100%OA (SYSTEM)	-	-	-	1,889	0.24	24	15.0	304	501	CEC	501	0	1,575	1 2 4
											TOTALS	501	0	1,575	

GENERAL NOTES:
1. VENTILATION CALCULATIONS BASED ON 2019 CALIFORNIA MECHANICAL CODE AND 2019 CALIFORNIA ENERGY CODE.
2. SYSTEM POPULATIONS BASED ON MAX SEATING AND/OR CODE MAXIMUM VALUES.
4. 100% OA SYSTEMS (Vot = ∑all zones Voz): WHEN ONE AIR HANDLER SUPPLIES ONLY OUTDOOR AIR TO ONE OR MORE ZONES. CALCULATION TAKES THE MAXIMUM OUTSIDE AIRFLOW REQURIED BETWEEN THE CMC AND CEC FOR EACH ZONE. IF CMC SETS THE MAXIMUM AIRFLOW, THE CALCULATION USES THE WORST CASE AIR DISTRIBUTION EFFECTIVENESS BETWEEN HEATING AND COOLING MODES OF OPERATION.

PROJECT DESIGN CONDITIONS

CLIMATE CONDITONS

		WEATHER STATION				REFERENCE
WEATHER STATION:		LOS ANGELES USC CAMPUS, CA, USA				2021 ASHRAE
CLIMATE ZONE:		3B				
ASHRAE HEATING:	99.6%	42.9	°F DB			
DESIGN HEATING CONDITIONS:		42.9	°F DB			
ASHRAE COOLING:	0.4%	91.4	°F DB	65.6	°F WB	
DESIGN COOLING CONDITIONS:		91.4	°F DB	65.6	°F WB	
DEHUMIDIFICATION:	0.4%	65.59	°F DP	91.0 gr/lb	75.4	°F DB

BUILDING OPERATING HOURS:

MONDAY - FRIDAY	TBD BY OWNER
SATURDAY	TBD BY OWNER
SUNDAY	TBD BY OWNER
HOLIDAY	TBD BY OWNER

SPACE / UNIT DESCRIPTION	SET POINTS: COOLING / DE-HUMIDIFICATION OCC °F	UNOCC °F	MAX RH %	MIN RH %	HEATING OCC °F	UNOCC °F	HUMIDIFICATION MIN RH %	MAX RH %	ZONE VENTILATION RESET CONTROL METHOD	BASE PPM	MAXIMUM PPM	SPACE OPERATING HOURS OCCUPIED / UNOCCUPIED DAYS OF THE WEEK M-F	SAT	SUN	NOTES
OFFICE	74	80	50%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	A-B
DORM	74	80	50%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	A-B
UTILITY/BREAKROOM	74	80	50%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	A-B
RESTROOM	74	80	50%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	A-B
CORRIDOR	74	80	50%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	A-B
STORAGE	74	80	50%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	A-B

NOTES:
A. ZONE LEVEL SET POINT CONDITIONS SHALL BE AS SCHEDULED UNLESS OTHERWISE SCHEDULED OR NOTED ON THE DRAWINGS FOR ROOM SPECIFIC SPACE CONDITIONS.
B. ZONE LEVEL OCCUPANCY HOUR SCHEDULE SHALL BE PER BUILDING OPERATING HOURS UNLESS OTHERWISE SCHEDULED.

AHJ STAMP APPROVAL

BIDDING SET

REVISIONS

ISSUED FOR PERMIT

02/10/2023

LICENSED PROFESSIONAL ENGINEER BRYAN JIMENEZ M 38619 EXPIRES: 08/31/2023 MECHANICAL STATE OF CALIFORNIA

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MECHANICAL CONTROLS

CD

M5.01

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BRYAN JIMENEZ

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name:	Fire Station 163	Report Page:	Page 1 of 14
Project Address:	6320 Pine Avenue, Bell, CA 90201	Date Prepared:	2022-05-24

A. GENERAL INFORMATION

01	Project Location (city)	Bell, CA	04	Total Conditioned Floor Area	1,387
02	Climate Zone	8	05	Total Unconditioned Floor Area	973
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☐ School (E) ☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☑ Other (Write In): Fire Station

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01	02	03
Air System(s)	Wet System Components	Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☑ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08	09
System Summary §110.1, §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.3, §140.4(l)	AND	Cooling Towers §110.2(e)2	**Compliance Results**
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		**COMPLIES**
Mandatory Measures Compliance (See Table Q for Details)															**COMPLIES**

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Fire Station 163	Report Page:	Page 2 of 14
Project Address:	6320 Pine Avenue, Bell, CA 90201	Date Prepared:	2022-05-24

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table H indicates a Fan Power System Index that exceeds the maximum allowed per §140.4(c). Please revise to demonstrate compliance.
Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
CU 1	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	19.1	77	0	38.2	69	19.1	38.2
DOAS 1	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	46.78	82.64	0	35.5	85.01	46.78	35.5

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Table Continued

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Fire Station 163	Report Page:	Page 3 of 14
Project Address:	6320 Pine Avenue, Bell, CA 90201	Date Prepared:	2022-05-24

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
CU 1	≥65,000 and <135,000	47°Fdb/43°Fwb OSA	COP	3.3	3.7	EER	11	13.9
						IEER	14.6	21.3
DOAS 1	≥65,000 and <135,000	47°Fdb/43°Fwb OSA	COP	3.3	3.3	EER	10.8	12.2
						IEER	12	12

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

Table Instructions: Complete the following Table for fan systems to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m). First document the system details, then add fans within that system to document compliance with fan power requirements. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name: FCU 1 **Economizer:[1]** NA: ≤ 54 kBtu/h cooling **Economizer Controls:** **System Fan Type:** Constant Volume

01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
FCU 1	Supply	1	375	BHP	0.065	None used	
						Calculated Adjustment (in H_2O)	

Total System Design Supply Airflow (CFM): 375 Total System Design (B)HP: 0.07 **Maximum System Fan Power (B)HP:**

Table Continued

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Fire Station 163	Report Page:	Page 4 of 14
Project Address:	6320 Pine Avenue, Bell, CA 90201	Date Prepared:	2022-05-24

System Name: FCU 2 THRU 8 **Economizer:[1]** NA: ≤ 54 kBtu/h cooling **Economizer Controls:** **System Fan Type:** Constant Volume

01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
FCU 2 THRU 8	Supply	7	80	BHP	0.065	None used	
						Calculated Adjustment (in H_2O)	

Total System Design Supply Airflow (CFM): 560 Total System Design (B)HP: 0.46 **Maximum System Fan Power (B)HP:**

System Name: FCU 9 **Economizer:[1]** NA: ≤ 54 kBtu/h cooling **Economizer Controls:** **System Fan Type:** Constant Volume

01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
FCU 9	Supply	1	990	BHP	0.326	None used	
						Calculated Adjustment (in H_2O)	

Total System Design Supply Airflow (CFM): 990 Total System Design (B)HP: 0.33 **Maximum System Fan Power (B)HP:**

System Name: EF 1 **Economizer:[1]** NA: ≤ 54 kBtu/h cooling **Economizer Controls:** **System Fan Type:** Constant Volume

01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)

Table Continued

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02/10/2023

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MECHANICAL ENERGY COMPLIANCE FORMS

CD

M6.01

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