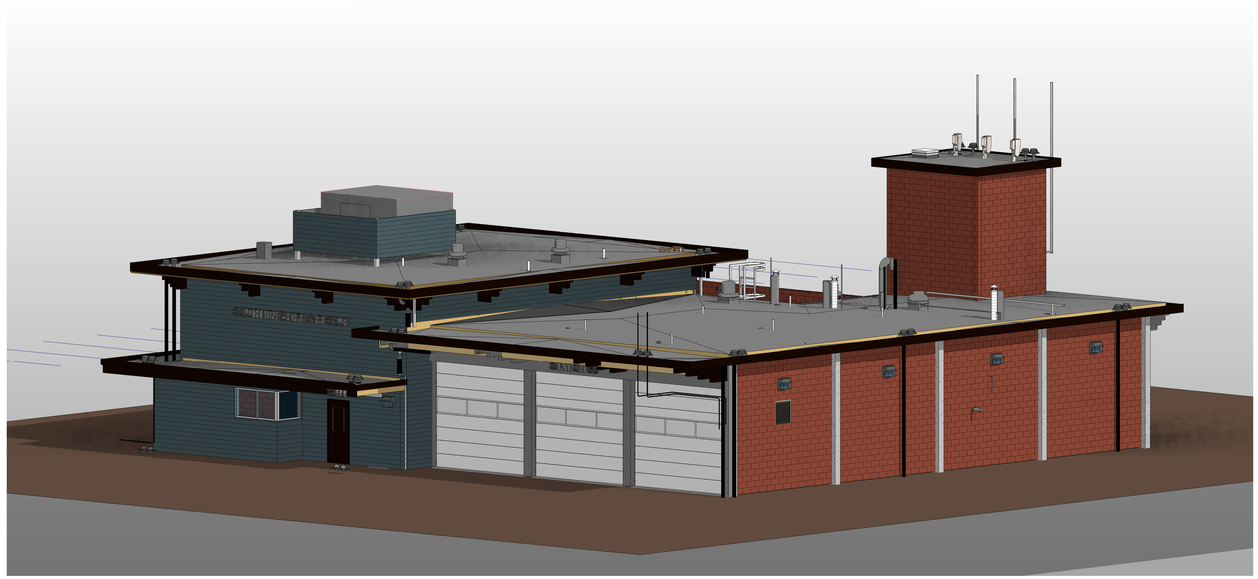
SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS



PROJECT INFORMATION

GOVERNING CODES

2015 INTERNATION BUILDING CODE (IBC)
WASHINGTON STATE AMENDMENTS, WAC 51-50 AND RCW 19.27 & 70.92
ACCESSIBILITY CODE ICC/ANSI A117.1-2009
2015 INTERNATIONAL CODE (IRC)
WASHINGTON STATE AMENDMENTS, WAC 51-11R, 51-56 AND 296-46B
2015 INTERNATIONAL MECHANICAL CODE (IMC)
WASHINGTON STATE AMENDMENTS, WAC 51-52 AND RCW 19.27
2015 INTERNATIONAL FIRE CODE (IFC)
WASHINGTON STATE AMENDMENTS, WAC 51-54A AND RCW 19.27
2015 INTERNATION EXISTING BUILDING CODE (IEBC)
WASHINGTON STATE AMENDMENTS, WAC 51-11R & 51-11C AND RCW 19.27
2015 WASHINGTON STATE ENERGY CODE (WSEC)
2014 NATIONAL ELECTRICAL CODE
WASHINGTON STATE AMENDMENTS, WAC 296-43, 296-45 & 296-46B AND RCW 19.28
2015 UNIFORM PLUMBING CODE (UPC)
WASHINGTON STATE AMENDMENTS, WAC 51-56 AND RCW 19.27

PROJECT INFORMATION

PARCEL NUMBER: 1321039062

BUILDING ADDRESS: 33414 21 ST AVENUE SOUTH, FEDERAL WAY, WASHINGTON

ZONING: BN - NEIGHBORHOOD BUSINESS

TOTAL GROSS FLOOR AREA	7,383 SQ FT
LEVEL 1	5,704 SQ FT
MEZZANINE	1,679 SQ FT

TOTAL SITE AREA 2.27 ACRES (APPROXIMATE 99,000 SQ FT)

TYPE OF CONSTRUCTION VB-SPRINKLERED

OCCUPANCY TYPE:
S1: APPARATUS BAY AND ASSOCIATED SUPPORT AREAS
R3: SLEEPING ROOMS, KITCHEN AND PHYSICAL FITNESS AREA

SCOPE OF WORK

SITE IMPROVEMENTS:
SECURITY FENCING, GATES, AND REQUIRED SITEWORK, SEE SITE PLAN AND SPECIFICATIONS FOR WORK BY OWNER

EXTERIOR IMPROVEMENTS:

REROOFING THE EXISTING ROOF TO MEET THE ENERGY CODE
RESIDING EXTERIOR WALLS

INTERIOR RENOVATION
PROVIDE BUNKER GEAR STORAGE ROOM AND A SEPARATE AREA ADJACENT TO APPARATUS BAY FOR WASHER EXTRACTOR, BUNKER DRYING CABINET, WASH SINK AND DRYING RACK

INSTALL NFPA 13 FIRE SPRINKLER SYSTEM THROUGHOUT THE STATION

SEISMIC UPGRADE

MECHANICAL AND ELECTRICAL IMPROVEMENTS

PROJECT TEAM

OWNER:

SOUTH KING FIRE & RESCUE
31617 1ST AVENUE
FEDERAL WAY, WASHINGTON 98003
PHONE: 253-927-3118

ARCHITECT:

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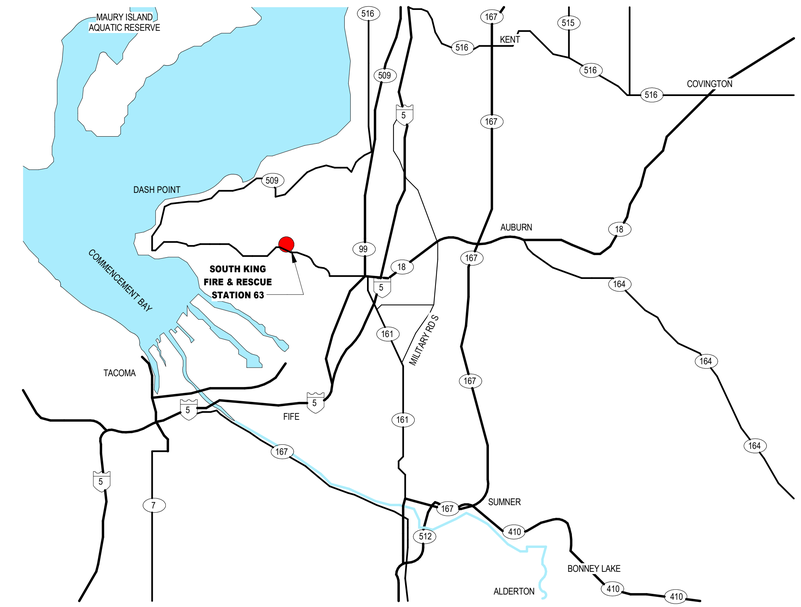
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SEATTLE, WASHINGTON 98134
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CONTACT: DERICA ESCAMILLA
EMAIL: DericaE@ehsintl.com



N
1 VICINITY MAP
NTS

DRAWING INDEX

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A00.02	ABBREVIATIONS AND SYMBOLS
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TS.1	EXISTING CONDITIONS
C1.00	TEMPORARY EROSION CONTROL AND DEMOLITION PLAN
C2.00	STORM DRAINAGE AND FIRE PROTECTION PLAN
C3.00	DETAILS
C3.01	DETAILS
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HA001	GENERAL NOTES, ABBREVIATIONS, SHEET INDEX, AND MATERIALS SUMMARY
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HA102	HAZMAT - LEVEL MEZZANINE WALL & CEILING PLAN
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A21.03	DEMO REFLECTED CEILING PLAN
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A22.01	REFLECTED CEILING PLAN
A30.01	DEMO EXTERIOR ELEVATIONS
A31.01	EXTERIOR ELEVATIONS
A33.01	BUILDING SECTIONS
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A35.02	EXTERIOR DETAILS
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(360) 377-8773
FAX 792-1385
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4794 REGISTERED ARCHITECT
DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS
FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 2015137

BID SET

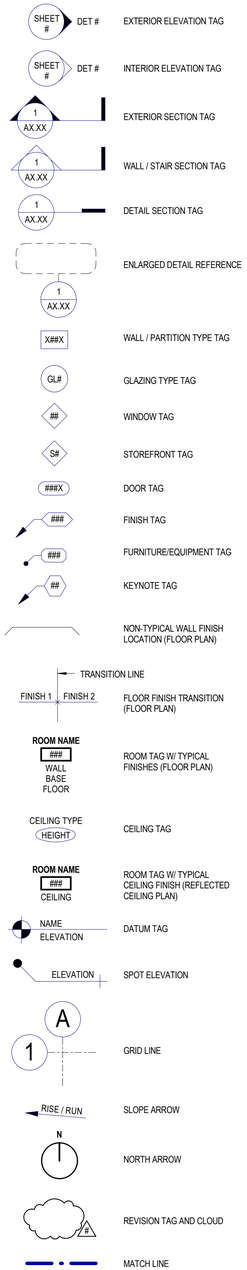
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

COVER SHEET AND GENERAL PROJECT INFORMATION

SHEET:

A00.01



2 SYMBOL LEGEND

1 ABBREVIATION LIST

-- A --

A	AMP
A/V	AUDIO VISUAL
AB	ANCHOR BOLT
ACC	ACCESSORIES
ACST	ACOUSTIC(AL)
ACT	ACOUSTIC CEILING TILE
ADJ	ADJACENT,
	ADJUST(ABLE)
AFF	ABOVE FLOOR FINISH
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
ARCH	ARCHITECT(URAL)
AUTO	AUTOMATIC

-- B --

BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF
BR	BEDROOM
BTWN	BETWEEN
BUR	BUILT UP ROOF(ING)

-- C --

CAB	CABINET
CALC	CALCULATION
CB	CATCH BASIN,
	CORNER BEAD
CEM	CEMENT
CFOI	CONTRACTOR FURNISHED & OWNER INSTALLED
CG	CORNER GUARD
CH	COAT HOOK
CIP	CAST IN PLACE
CJ	CONTROL JOINT,
	CONSTRUCTION JOINT
CL	CENTERLINE
CLG	CEILING
CLKJ	CAULKED JOINT
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECT(ION)
CONSTR	CONSTRUCTION
CONT	CONTINUE,
	CONTINUOUS
CONTR	CONTRACTOR
CORRD	CORDINATE
CORR	CORRIDOR
COV	COVE
CP	CEMENT PLASTER
CPT	CARPET
CRK	CORK
CRL	CHAIR RAIL
CS	CONCRETE SEALER
CSMT	CASEMENT
CTR	CENTER

-- D --

D	DEEP,
	DRYER
DBL	DOUBLE
DEB	DRY ERASE BOARD
DEMO	DEMOLISH,
	DEMOLISION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPOSAL
DL	DEAD LOAD
DN	DOWN
DP	DECORATIVE PANEL
DR	DOOR,
	DINING ROOM,
	DRAIN
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
DWR	DRAWER

-- E --

(E)	EXISTING
EXIST	
E	EAST
EA	EACH
EC	EDGE OF CURB
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR,
	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSE(D),
	ENCLOSURE
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE(D)
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXP	EXPOSED,
	EXPANSION
EXT	EXTERIOR

-- F --

FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDMPR	FIRE DAMPER
FDTN	FOUNDATION
FDV	FIRE DEPARTMENT VALVE
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FACTORY FINISH,
	FINISH FACE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK, FIRE HOSE REEL
FIN	FINISHED
FIN FLR	FINISHED FLOOR
FIXT	FIXTURE
FLASH	FLASHING
FLR	FLOOR
FLUOR	FLUORESCENT
FMF	FLEXIBLE MEMBRANE FLASHING
FOB	FACE OF BRICK
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FPL	FIREPLACE
FRCP	FIBER REINFORCED CEMENT PANEL
FRP	FIBER REINFORCED PLASTIC

-F--

FRTW	FIRE RETARDANT TREATED WOOD
FRZ	FREEZER
FS	FULL SIZE
FT	FOOT,
	FEET
FTG	FOOTING
FURN	FURNITURE
FUT	FUTURE

-- G --

G	GROUND
GA	GAUGE
GALV	GALVANIZED
GAR	GARAGE
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GFRG	GLASS REINFORCED PLASTER, GLASS FIBER REINFORCED GYPSUM
GI	GALVANIZED IRON
GL	GLASS
GLULAM	GLUE LAMINATED
GR	GROSS
GT	GROUT
GWB	GYPSUM WALL BOARD
GYP	GYPSUM

-- H --

H	HIGH,
	HEIGHT
HB	HOSE BIB
HC	HOLLOW CORE, HANDICAPPED
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HGR	HANGER
HM	HOLLOW METAL
HRL	HANDRAIL
HORIZ	HORIZONTAL
HR	HOURS
HT	HEIGHT
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
HWT	HOT WATER TANK

-- I --

IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER, INSIDE DIMENSION
IFC	INTERNATIONAL FIRE CODE
IIC	IMPACT INSULATION CLASS
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH(ES)
INC	INCREASE
INCL	INCLUDE(D), INCLUDING
INFO	INFORMATION
INSTL	INSTALL(ATION)
INSUL	INSULATION
INT	INTERIOR

-- J --

JAN	JANITOR
JBOX	JUNCTION BOX
JT	JOINT

-- K --

KD	KILN DRIED
KIT	KITCHEN
KW	KILOWATT

-- L --

L	LEFT, LINEN, LONG
LAB	LABORATORY
LAM	LAMINATE(D)
LAU	LAUNDRY
LAV	LAVATORY
LB(S)	POUND(S)
LDG	LANDING
LINO	LINOLEUM
LL	LIVE LOAD
LOC	LOCATION
LPT	LOW POINT
LR	LIVING ROOM
LRG	LARGE
LT	LIGHT
LTG	LIGHTING
LVR	LOUVER

-- M --

M&S	MIRROR & SHELF
MACH	MACHINE
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MASTER BEDROOM
MC	MEDICINE CABINET
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANIC(AL)
MED	MEDIUM
MEDS	MEDICINE, MEDICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MFRREC	MANUFACTURER'S RECOMMENDATION(S)
MGR	MANAGER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MO	MASONRY OPENING, MONITOR
MTD	MOUNTED
MTL	METAL
MULL	MULLION
MULT	MULTIPLE
MW	MICROWAVE OVEN

-- N --

N	NORTH
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NURSE CALL
NCAP	NURSE CALL ANNUNCIATOR PANEL
NCOMBL	NON-COMBUSTIBLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NT	NET
NTS	NOT TO SCALE

-- O --

O/	OVER
OA	OVERALL
OC	ON CENTER
OCC	OCCUPANTS, OCCUPANT LOAD, OCCUPANCY
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED & CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED & OWNER INSTALLED
OFD	OVERFLOW DRAIN
OFF	OFFICE
OGL	OBSCURE GLASS
OHDR	OVERHEAD DOOR
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OZ	OUNCE

-- P --

P	PAINT(ED), PANTRY
PC	PORTLAND CEMENT
PCC	PRECAST CONCRETE
PED	PEDESTAL
PERF	PERFORATED
PERM	PERMANIENT
PERP	PERPENDICULAR
PFP	PREPARED FOR PAINT
PIV	POST INDICATOR VALVE
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PMTL	PAINTED METAL
PNT	POINT
PP	POWER POLE
PR	PAIR
PREFAB	PREFABRICATE
PRELIM	PRELIMINARY
PRKG	PARKING
PROP	PROPERTY
PS	PROJECTOR SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESERVATIVE TREATED, PRESSURE TREATED, POST TENSIONED
PTD	PAPER TOWEL DISPENSER
PTDWRC	PAPER TOWEL DISPENSER & WASTE RECEPTACLE
PTN	PARTITION
PVC	POLYVINYL CHLORIDE, POLYVINYL CHLORIDE PIPE
PVD	PROVIDE
PVG	PAVING
PVR	PAVERS

-- Q --

QTY	QUANTITY
QTZ	QUARTZ

-- R --

R	RISER, RANGE, RADIUS
R/S	ROD & SHELF
RA	RETURN AIR
RCF	RAISED COMPUTER FLOOR
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCING BAR
REC	RECESSED
RECPT	RECEPTACLE
REF	REFERENCE, REFRIGERATOR
REINF	REINFORCE(D), REINFORCING
RES	RESILIENT FLOORING
REQD	REQUIRED
REST	RESTROOM
RET	RETAINING
REV	REVISED, REVISION
RH	ROBE HOOK
RM	ROOM
RO	ROUGH OPENING
RP	RADIUS POINT
RS	ROUGH SAWN
RT	RIGHT
RVL	REVEAL

-- S --

S	SOUTH, SINK
SAFF	SELF-APPLIED FLEXIBLE FLASHING
S/R	SHELF & ROD
SAN	SANITARY
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SD	SOAP DISH, SOAP DISPENSER, STORM DRAIN
SEAL	SEALER, SEALANT
SECT	SECTION
SEP	SEPARATION
SF	SQUARE FEET
SG	SAFETY GLASS, SAFETY GLAZING
SHR	SHOWER
SHT	SHEET
SHTG	SHEATHING, SHEETING
SHLV	SHELVING
SIM	SIMILAR
SM	SHEET METAL
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SOL	SOLID SURFACE
STO	STONE
SPECS	SPECIFICATION(S)
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SQIN	SQUARE INCH
SS	SERVICE SINK, SANITARY SEWER
SST	STAINLESS STEEL
ST	STREET, STAIN
STA	STATION
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SU	SOILED UTILITY
SUBFL	SUBFLOOR
SUSP	SUSPENDED
SW	SWITCH
SYM	SYMMETRICAL

-- T --

T	TREAD, TILE
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TB	TOWEL BAR
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TER	TERRAZZO
THK	THICK(NESS)
TI	TENANT IMPROVEMENT
TL	TOTAL LOAD
TMPD	TEMPERED
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CURB, TOP OF CONCRETE
TOF	TOP OF FOOTING, TOP OF FLOOR, TOP OF FRAME
TOS	TOP OF SLAB, TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TR	TRANSITION STRIP
TV	TELEVISION
TYP	TYPICAL

-- U --

UC	UNDERCOUNTER, UNDERCABINET, UNDERCUT
UGND	UNDERGROUND
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UP	UTILITY POLE
UPC	UNIFORM PLUMBING CODE
UTIL	UTILITY

-- V --

V	VOLT(AGE)
VCT	VINYL COMPOSITION TILE
VEH	VEHICLE
VEND	VENDING MACHINE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VNR	VENEER
VTO	VENT TO OUTSIDE
VTR	VENT THROUGH ROOF

-- W --

W	WEST, WIDE, WASHING MACHINE
W/	WITH
W/D	WASHER & DRYER
W/O	WITHOUT
WB	WALL BASE
WC	WATER CLOSET, WALL COVERING
WCO	WINDOW COVERING
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WH	WATER HEATER
WIC	WALK-IN CLOSET
WM	WIRE MOLD, WATER METER, WIRE MESH
WO	WALK-OFF FLOORING
WP	WORK POINT, WATERPROOFING, WEATHER PROOF
WPM	WATERPROOF MEMBRANE
WR	WATER REPELLENT, WATER RESISTANT
WRB	WATER RESISTANT BARRIER
WRC	WAIST RECEPTACLE
WSCT	WAINSCOT
WSEC	WASHINGTON STATE ENERGY CODE
WSVIAQC	WASHINGTON STATE VENTILATION & INDOOR AIR QUALITY CODE
WT	WEIGHT
WWF	WELDED WIRE FABRIC

--ASSOCIATIONS--

AISI	AMERICAN IRON AND STEEL INSTITUTE
AMCA	AIR MOVING & CONDITIONING ASSOCIATION, INC.
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ARIB	ASPHALT ROOFING INDUSTRY BUREAU
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
AWI	AMERICAN WOODWORK INSTITUTE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CS	COMMERCIAL STANDARD OF THE U.S. DEPARTMENT OF COMMERCE
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
FGMA	FLAT GLASS MARKETING ASSOCIATION
HUD	US DEPARTMENT OF HEALTH AND URBAN DEVELOPMENT
ICC	INTERNATIONAL CODE COUNCIL
IBC	INTERNATIONAL BUILDING CODE
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONIC ENGINEERS
IPCEA	INSULATED POWER CABLE ENGINEER ASSOCIATION
MLA	METAL LATH ASSOCIATION
NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
NEMA	NATIONAL FIRE PROTECTION ASSOCIATION
NWMA	NATIONAL WOODWORK MANUFACTURER'S ASSOCIATION
OSHA	OCCUPACTIONAL SAFETY AND HEALTH ADMINISTRATION
PS	PRODUCT STANDARD OF U.S. DEPARTMENT OF COMMERCE
SDI	STEEL DECK INSTITUTE
SDI	STEEL DOOR INSTITUTE
SMACNA	SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SSPC	STEEL STRUCTURES PAINTING COUNCIL
TCA	TILE COUNCIL OF AMERICA
UL	UNDERWRITER'S LABORATORIES
WAC	WASHINGTON ADMINISTRATIVE CODE
WISHA	WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT
WSDOH	WASHINGTON STATE DEPARTMENT OF HEALTH
WSDSHS	WASHINGTON STATE DEPARTMENT OF SOCIAL AND HEALTH SERVICES
WSEC	WASHINGTON STATE ENERGY CODE
WSVIAQC	WASHINGTON STATE VENTILATION & INDOOR AIR QUALITY CODE
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION

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4794
REGISTERED ARCHITECT
DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 2015137

BID SET

ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

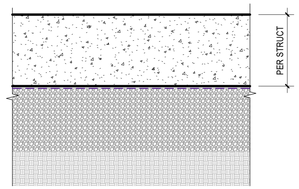
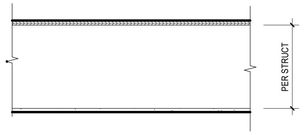
ABBREVIATIONS AND SYMBOLS

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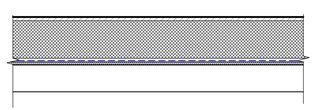
A00.02

WALL SCHEDULE

WALL #	WIDTH	Type	FIRE RATING	FIRE SOURCE	SMOKE RATING	SMOKE SOURCE	SOUND RATING	SOUND SOURCE
C01	6"	C01 - SHOTCRETE CONCRETE	NA	NA	NA	NA		
E02	11 5/16"	E02 - LAP SIDING COMPOSITE FURRING STRIP AT 16" OC WRB OVER CONCRETE WALL	NA	NA	NA	NA		
E03	1 1/8"	E03 - LAP SIDING COMPOSITE FURRING STRIP AT 16" OC WRB OVER (E) PLYWOOD SHEATHING OR (E) CONCRETE WALL	NA	NA	NA	NA		
E04	1 7/8"	E04 - LAP SIDING 2x 3 FURRING STRIP AT 16" OC LIQUID APPLIED WATERPROOF OVER (E) CONCRETE WALL OR CMU WALL	NA	NA	NA	NA		
W20	4 1/8"	W20 - 5/8" GWB, 2X4 STUDS	NA	NA	NA	NA		
W21	4 3/4"	W21 - 5/8" GWB, 2X4 STUDS, 5/8" GWB	NA	NA	NA	NA		
W40	6 1/8"	W40 - 5/8" GWB, 2X6 STUDS	NA	NA	NA	NA		
W41	6 3/4"	W41 - 5/8" GWB, 2X6 STUDS, 5/8 " GWB	1 HOUR	WP3660; ITS J99-22441.2, 10-99	NA	NA		
W42	7 1/4"	W42 - SHEAR WALL 5/8" GWB, PLYWOOD SHEATHING PER STRUCTURAL, 2X6 STUDS 5/8 " GWB	1 HOUR	WP3660; ITS J99-22441.2, 10-99	NA	NA		
W42A	7 1/4"	W42A - SHEAR WALL 5/8" GWB, PLYWOOD SHEATHING PER STRUCTURAL, 2X6 STUDS 5/8 " GWB WITH GLASS FIBER INSULATION IN STUD CAVITY 38 STC	1 HOUR	WP3660; ITS J99-22441.2, 10-99	NA	NA	38 STC	

FLOOR TYPE	FLOOR ASSEMBLY	DESCRIPTION
F1		NEW REINFORCED SLAB ON GRADE FLOOR PER STRUCTURAL VAPOR BARRIER COMPACTRED GRAVEL FILL
F2		PLYWOOD SHEATHING PER STRUCTURAL LSL BEAM PER STRUCTURAL 5/8" TYPE X GWB

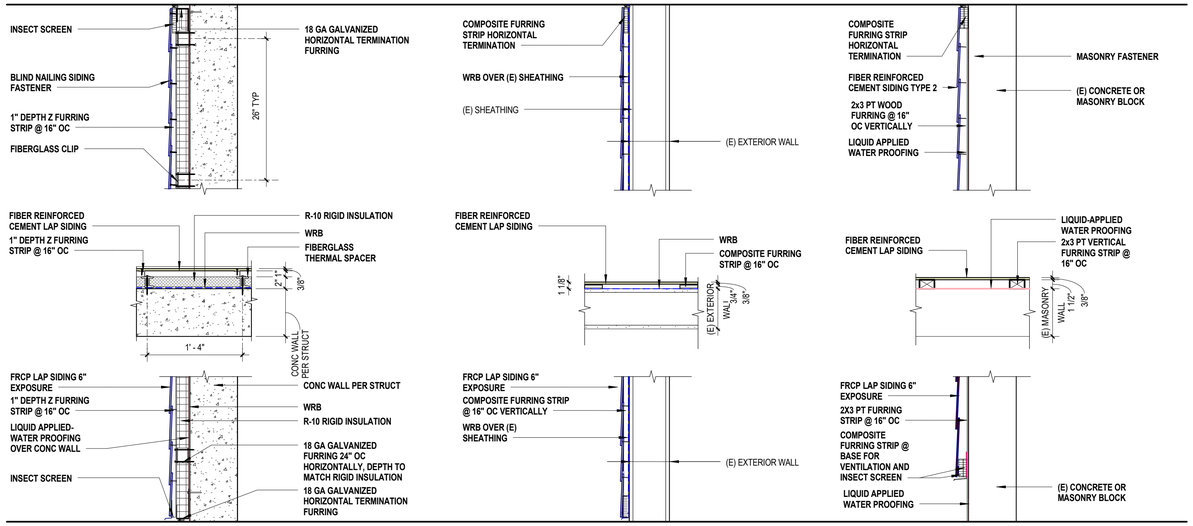
FLOOR ASSEMBLY

ROOF TYPE	ROOF ASSEMBLY	DESCRIPTION
R1		MEMBRANE ROOFING 1/2" PROTECTION BOARD R-38 MINIMUM RIGID INSULATION TAPERED TO DRAIN VAPOR RETARDER PLYWOOD SHEATHING PER STRUCTURE (E) ROOF DECKING
R2		MEMBRANE ROOFING 1/2" PROTECTION BOARD RIGID INSULATION MINIMUM 1/4" THICK TAPERED TO DRAIN VAPOR RETARDER PLYWOOD SHEATHING PER STRUCTURE (E) ROOF DECKING

ROOF SCHEDULE

1" = 1'-0"

EXTERIOR WALL ASSEMBLY



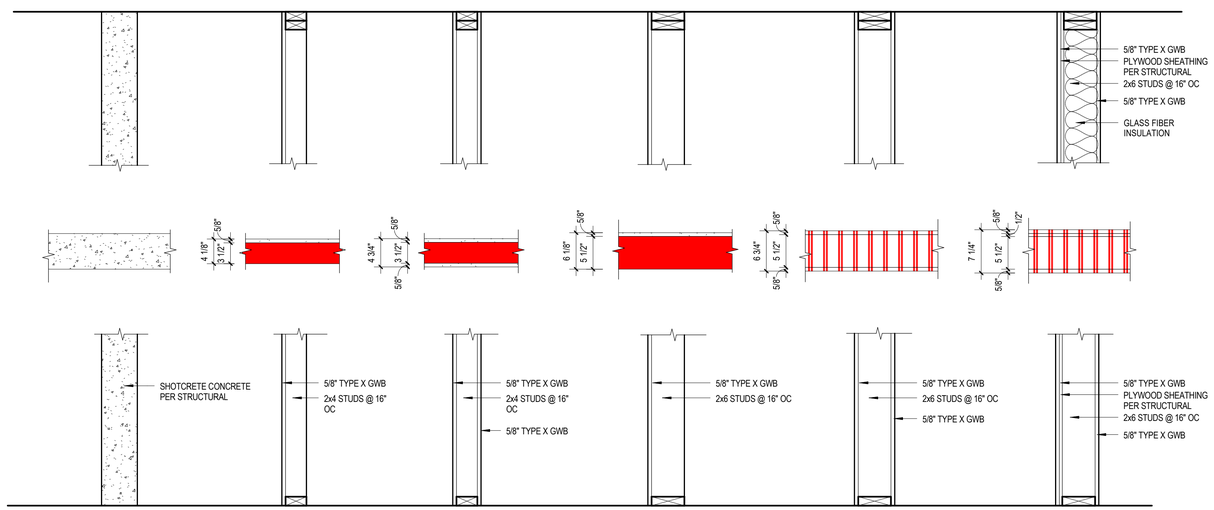
E02 E02 - LAP SIDING COMPOSITE FURRING STRIP AT 16" OC WRB OVER CONCRETE WALL

E03 E03 - LAP SIDING COMPOSITE FURRING STRIP AT 16" OC WRB OVER (E) PLYWOOD SHEATHING OR (E) CONCRETE WALL

E04 E04 - LAP SIDING 2x 3 FURRING STRIP AT 16" OC LIQUID APPLIED WATERPROOF OVER (E) CONCRETE WALL OR CMU WALL

INTERIOR WALL ASSEMBLY

1" = 1'-0"



C01 C01 - SHOTCRETE CONCRETE

W20 W20 - 5/8" GWB, 2X4 STUDS

W21 W21 - 5/8" GWB, 2X4 STUDS, 5/8" GWB

W40 W40 - 5/8" GWB, 2X6 STUDS FIRE: NA HR

W41 W41 - 5/8" GWB, 2X6 STUDS, 5/8 " GWB FIRE: 1 HR

W42 W42 - SHEAR WALL 5/8" GWB, PLYWOOD SHEATHING PER STRUCTURAL, 2X6 STUDS 5/8 " GWB FIRE: 1 HR

W42A W42A - SHEAR WALL 5/8" GWB, PLYWOOD SHEATHING PER STRUCTURAL, 2X6 STUDS 5/8 " GWB WITH GLASS FIBER INSULATION IN STUD CAVITY 38 STC FIRE: 1 HR

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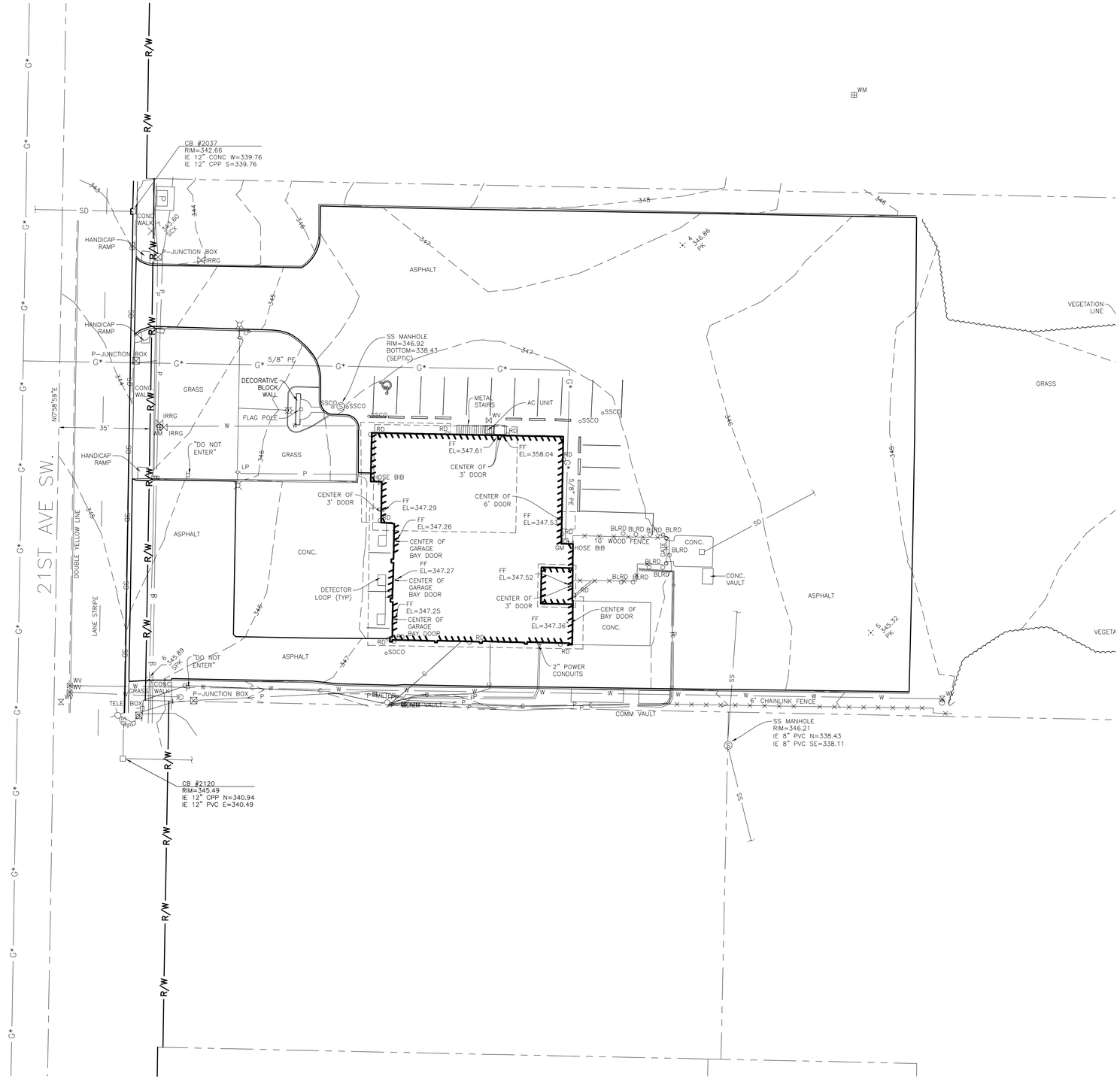
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

ASSEMBLY SCHEDULES

SHEET:

A01.01



LEGEND

- TELEPHONE PEDESTAL
- GAS VALVE
- GAS METER
- JUNCTION BOX
- POWER VAULT
- LIGHT POLE
- UTILITY POLE
- GUY ANCHOR
- STORM DRAIN MANHOLE
- CATCH BASIN
- SANITARY SEWER CLEANOUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- HOSE BIB
- SANITARY SEWER MANHOLE
- BOLLARD
- SIGN
- FOUND MONUMENT IN CASE
- PK NAIL W/WASHER
- BUILDING LINE
- EDGE OF GRAVEL
- VEGETATION LINE
- FENCE
- GUARD RAIL
- UNDERGROUND POWER LINE
- GAS LINE
- RECORD GAS LINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- WATER LINE
- UNDERGROUND COMMUNICATIONS LINE
- PAVEMENT STRIPING

SURVEY NOTES:

1. COORDINATES ESTABLISHED BY GPS RTK OBSERVATIONS ON FOUND MONUMENTS AT THE INTERSECTIONS OF 21ST AVE. SW WITH SW 328TH ST. AND 21ST AVE. SW WITH SW 336TH ST VIA THE WASHINGTON STATE REFERENCE NETWORK. ADDITIONAL CONTROL COORDINATES ESTABLISHED BY CLOSED TRAVERSE.
2. THE UTILITIES SHOWN HEREON ARE BASED ON OBSERVATION OF SURFACE FEATURES, RECORD UTILITY MAPS AND BY PAINT MARKS SET BY A UTILITY LOCATING COMPANY. FIELD LOCATIONS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.
3. RIGHT-OF-WAY BASED ON KING COUNTY DEPT. OF ASSESSMENTS QUARTER SECTION MAP FOR THE NE QUARTER OF SECTION 13, TWP. 21 N, R 3 E.
4. THIS SURVEY WAS MADE WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ANY EASEMENTS OR OTHER ITEMS OF RECORD.

DATUMS:

HORIZONTAL DATUM: NAD 83/11 WA NORTH

VERTICAL DATUM: NAVD 88
ELEVATIONS ESTABLISHED THROUGH GPS OBSERVATIONS

SITE BENCHMARK: RM #6, PK NAIL W/WASHER SET IN ASPHALT
AT THE SOUTHERLY ENTRANCE TO SITE
ELEVATION = 345.89

N

SCALE IN FEET
20 0 20 40

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SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

Project Number 2015137

BID DOCUMENTS

ISSUED: DECEMBER 1 , 2016

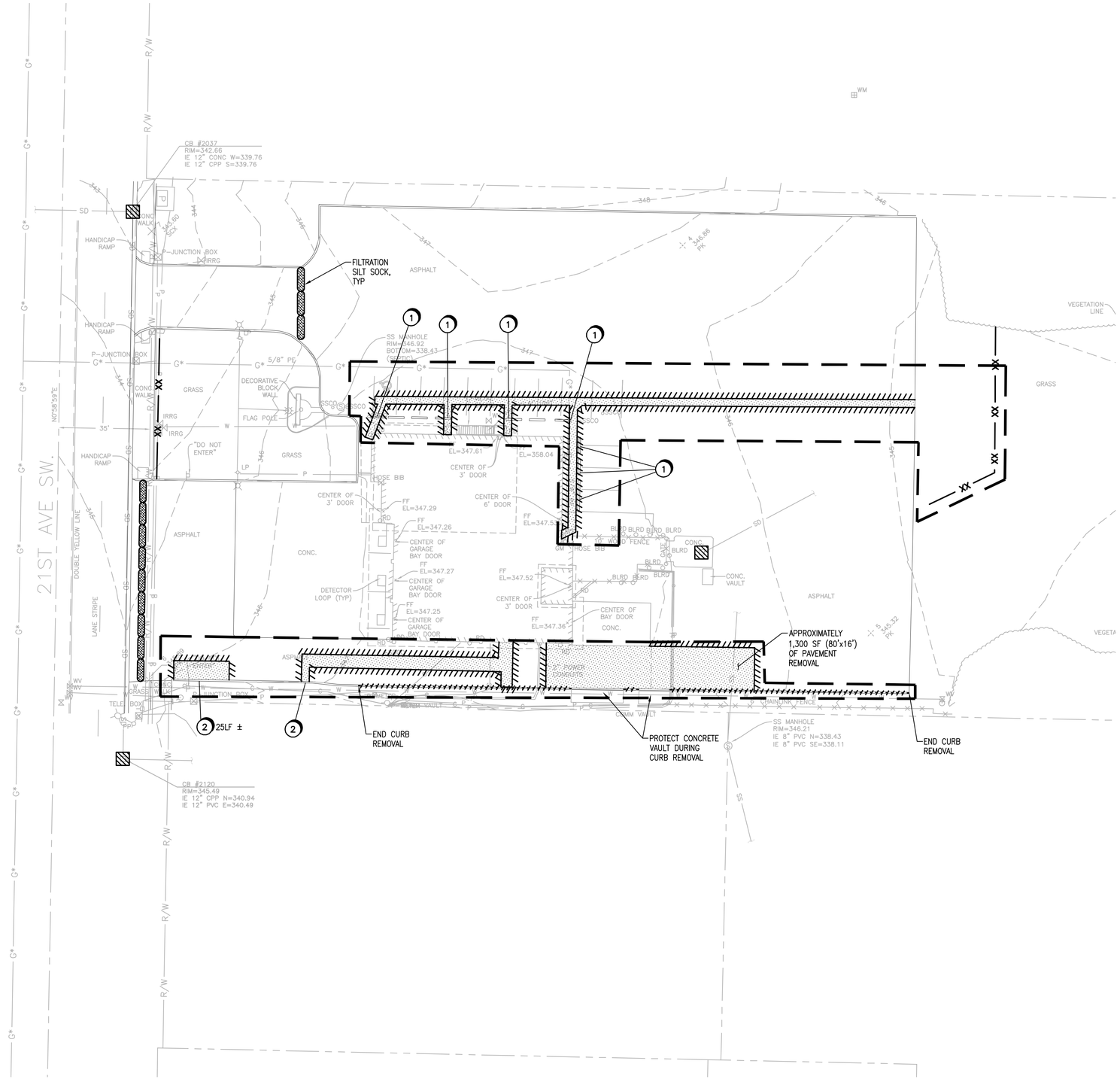
REVISION SCHEDULE	

Existing Conditions

SHEET:

TS.1

11/30/2016 1:58pm I:\21\2016\006 South King F&R Station Design\Fire Station 63\Design\1606-63_TS1EXST.dwg



11/30/2016 1:41pm I:\21\2016\006 South King F&R Station Design\Fire Station 63\Design\1606-63_C1.00EROS.dwg

LEGEND:

- SILT SOCK BARRIER
- CATCH BASIN FILTER (2 / C1.00 | C3.00)
- XX FILTER FABRIC FENCE (1 / C1.00 | C3.00)
- SAWCUT PAVEMENT
- REMOVE ASPHALT PAVEMENT
- REMOVE CONCRETE PAVEMENT
- LIMITS OF CONSTRUCTION
- REMOVE EXTRUDED CURB

NOTE: SEE TS.1 FOR EXISTING FEATURES LEGEND.

DEMOLITION NOTE:

1. REMOVE, SALVAGE, AND STORE WHEEL STOPS REMOVED DURING STORM PIPE INSTALLATION.
2. REMOVE EXTRUDED CURB FOR WATER PIPE TRENCH.

NOTES:

1. PROTECT EXISTING UNDERGROUND UTILITIES TO REMAIN, UNLESS NOTED OTHERWISE DURING CONSTRUCTION ACTIVITIES.
2. RE-STRIPE PAINT MARKINGS REMOVED DURING PROJECT DEMOLITION AND CONSTRUCTION ACTIVITIES, AND IN STAGING AREAS.
3. SEE ELECTRICAL FOR SAWCUTTING AND PAVEMENT REMOVAL LOCATIONS ASSOCIATED CONDUIT INSTALLATION.

CONSTRUCTION LIMITS NOTE:

PROVIDE TEMPORARY CHAIN LINK FENCE AT CONSTRUCTION LIMITS. COORDINATE WITH OWNER ON PLACEMENT AND EXTENTS.

LIMITS OF CONSTRUCTION ARE FOR PRIMARY UTILITY CONSTRUCTION AND WILL NEED TO BE TEMPORARILY EXPANDED TO PERMIT LIMITED WORK OUTSIDE THE AREA INDICATED (AS IN THE CASE OF ELECTRICAL UTILITY CONNECTIONS).

N.

SCALE IN FEET
20 0 20 40

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MARK A. DAVIS
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PROFESSIONAL ENGINEER
11/30/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

Project Number 2015137

BID DOCUMENTS

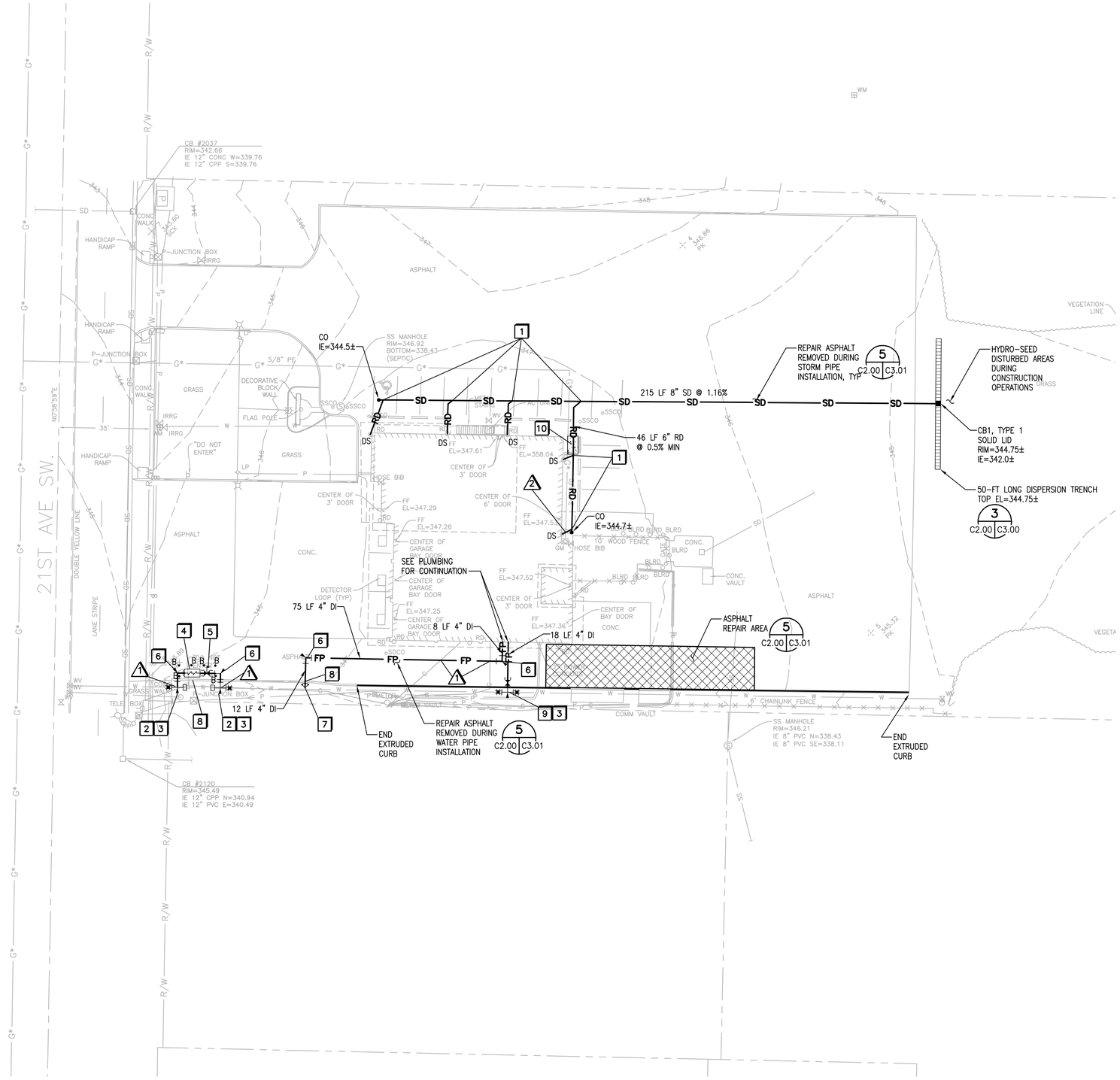
ISSUED: DECEMBER 1 , 2016

REVISION SCHEDULE	

Temporary Erosion Control and Demolition Plan

SHEET:

C1.00



LEGEND:

- CATCH BASIN, TYPE 1
- SD — STORM DRAIN PIPE
- RD — ROOF DRAIN PIPE, 6"ø @ 0.5% MIN
- FP — FIRE PROTECTION LINE
- TEE
- BOLLARD (1 | C2.00 | C3.01)
- POST INDICATOR VALVE
- CO — CLEANOUT (4 | C2.00 | C3.00)
- BEND C2.00 C3.00
- DS — DOWNSPOUT (5 | C2.00 | C3.00)
- DISPERSION TRENCH
- LUD — LAKEHAVEN UTILITY DISTRICT
- ASPHALT PAVEMENT PATCH
- EXTRUDED CURB (6 | C2.00 | C3.01)

CONSTRUCTION NOTES:

1. CONNECT ROOF DRAIN PIPE TO STORM PIPE WITH WYE FITTING.
2. CONNECT TO EXISTING 6" PIPE, CUT-IN:
   (1) 6"x6"x4" TEE (FL)
   (1) CAP
   (1) TRANSITION COUPLING
   THRUST BLOCKING
3. COORDINATE WITH LUD. LUD WILL OBSERVE WATER LINE CONNECTION.
4. PROVIDE 4" DOUBLE DETECTOR CHECK VALVE ASSEMBLY. REFER TO LUD STANDARD PLAN B-19D. COORDINATE WITH LUD TO SET ASSEMBLY AND METER. OWNER SHALL PURCHASE BYPASS METER.
5. (1) POST INDICATOR VALVE (MJxMJ)
6. (1) 4" 90° BEND
   THRUST BLOCKING
7. FIRE DEPARTMENT CONNECTION
8. REPLACE EXTRUDED CURB REMOVED DURING WATER PIPE INSTALLATION
9. CONNECT TO EXISTING 6" PIPE, CUT-IN:
   (1) 6"x6"x4" TEE (FL)
   (1) 4" GATE VALVE (FLxMJ)
   (2) TRANSITION COUPLINGS
   THRUST BLOCKING
10. PROVIDE 7' X 3'-9" CONCRETE MECHANICAL EQUIPMENT PAD. SEE MECHANICAL FOR DETAILS.

UTILITY CONFLICT NOTES:

1. INSTALL WATER MAIN UNDER EXISTING COMMUNICATION PIPING WITH 6" VERTICAL MINIMUM.
2. INSTALL ROOF DRAIN PIPE UNDER EXISTING GAS SERVICE WITH 6" VERTICAL CLEARANCE MINIMUM.

NOTES:

1. RESTRAIN ALL PIPES, JOINTS, AND FITTINGS OF THE FIRE PROTECTION SYSTEM.
2. BEFORE COMMENCING CONSTRUCTION OF WATER SYSTEM, VERIFY LOCATION AND INVERT ELEVATION OF EXISTING PIPE SYSTEMS. IF CONFLICT EXISTS, CONTACT THE ARCHITECT IMMEDIATELY.
3. BEFORE COMMENCING CONSTRUCTION OF UTILITY SERVICES, VERIFY LOCATION OF SERVICES PENETRATING THE BUILDING WALL WITH MECHANICAL. IF CONFLICT EXISTS, NOTIFY THE ARCHITECT IMMEDIATELY.
4. RESTRIPE PAINT MARKINGS REMOVED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES, AND IN STAGING AREAS.
5. SEE LUD STANDARD PLAN B-22A FOR THRUST BLOCKING.

N

SCALE IN FEET
20 0 20 40

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MARK A. DAVIS — STATE OF WASHINGTON — 21549 — REGISTERED PROFESSIONAL ENGINEER
11/30/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

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BID DOCUMENTS

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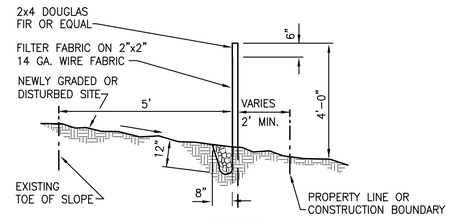
REVISION SCHEDULE	

Storm Drainage and Fire Protection Plan

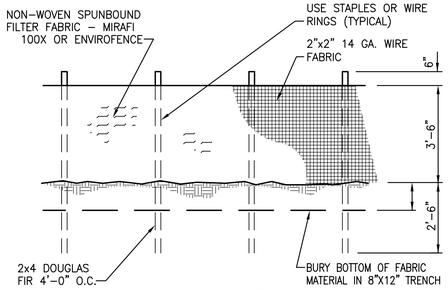
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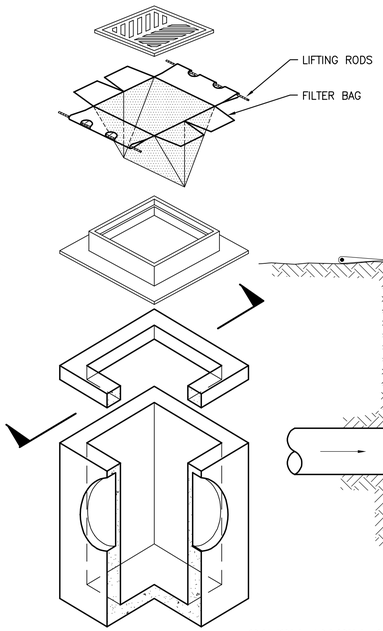
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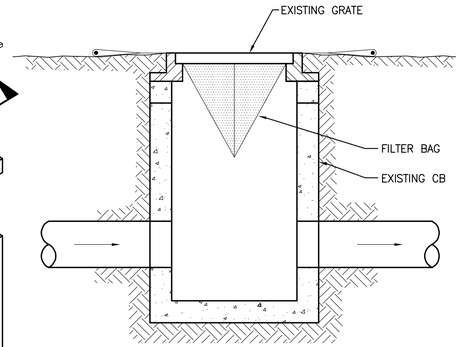


ELEVATION

1 DETAIL – FILTER FABRIC FENCE

C1.00 | C3.00 NOT TO SCALE





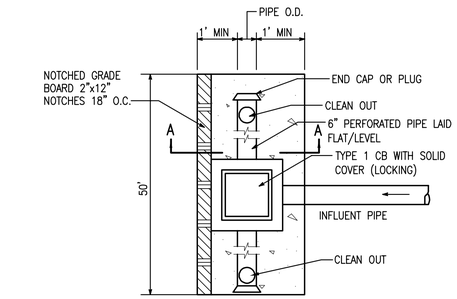
SECTION

2 CATCH BASIN SEDIMENTATION CONTROL WITH FILTER BAG

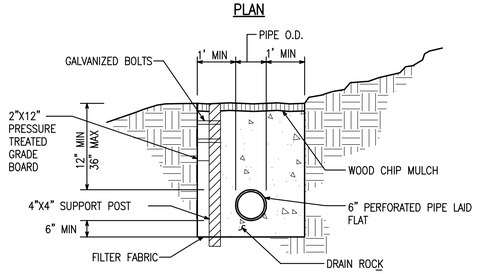
C1.00 | C3.00 NOT TO SCALE

EROSION AND SEDIMENT CONTROL NOTES

1. APPROVAL OF THIS TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE TESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPTH CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZIED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION, ETC.).
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G. SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DDES INSPECTOR FOR REVIEW.



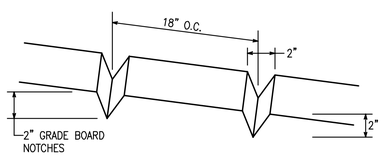
PLAN



SECTION A-A

3 DISPERSION TRENCH

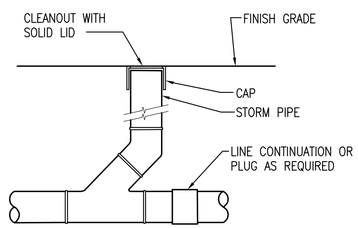
C2.00 | C3.00 NOT TO SCALE



TYPICAL NOTCH DETAIL IN 2x12 BOARD

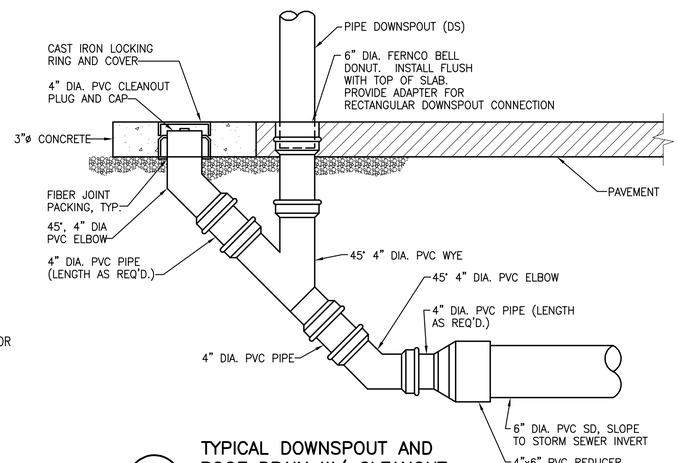
NOTES:

1. THIS TRENCH SHALL BE CONSTRUCTED SO AS TO PREVENT POINT DISCHARGE AND/OR EROSION.
2. TRENCHES MAY BE PLACED NO CLOSER THAN 10 FEET TO ONE ANOTHER.
3. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF SITE.
4. SUPPORT POST SPACING AS REQUIRED BY SOIL CONDITIONS TO ENSURE GRADE BOARD REMAINS LEVEL.



4 STORM DRAIN CLEANOUT

C2.00 | C3.00 NOT TO SCALE



TYPICAL DOWNSPOUT AND ROOF DRAIN W/ CLEANOUT

C2.00 | C3.00 NOT TO SCALE

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MARK A. DAVIS
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PROFESSIONAL ENGINEER
11/30/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

Project Number 2015137

BID DOCUMENTS

ISSUED: DECEMBER 1, 2016

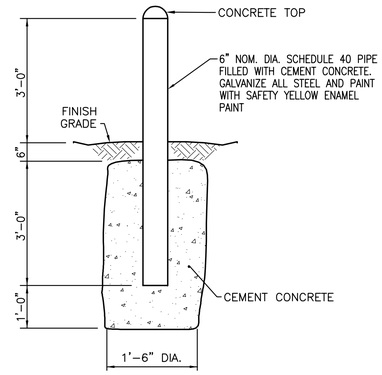
REVISION SCHEDULE	

Details

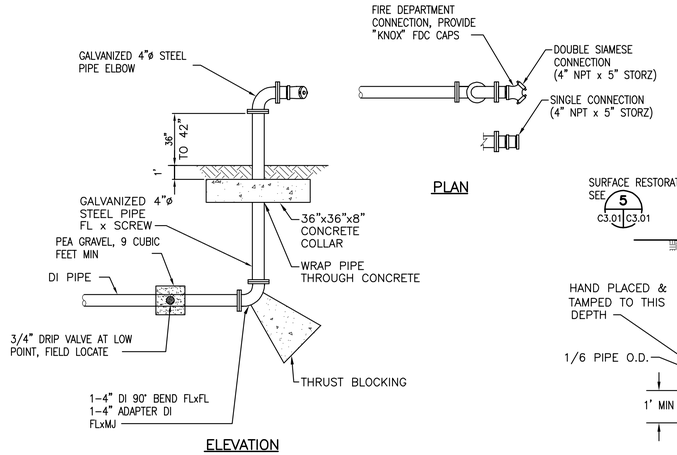
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C3.00

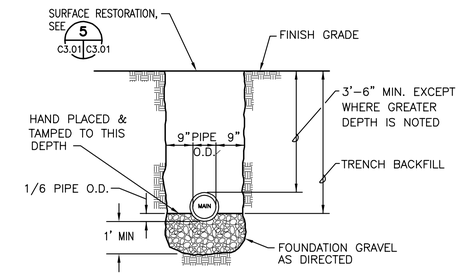
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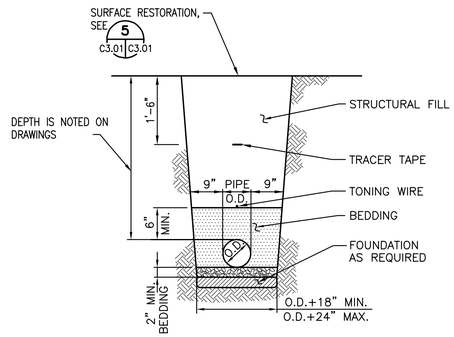
1 DETAIL – STEEL BOLLARD
C2.00 C3.01 NOT TO SCALE



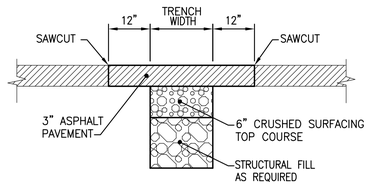
2 FIRE DEPARTMENT CONNECTION (FDC)
C2.00 C3.01 NOT TO SCALE



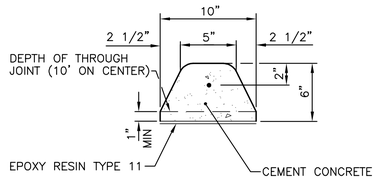
3 TYPICAL TRENCH
PRIVATE DUCTILE IRON WATER PIPE
C2.00 C3.01 NOT TO SCALE



4 TYPICAL TRENCH
PLASTIC SEWER & STORM PIPE
C2.00 C3.01 NOT TO SCALE



5 ASPHALT PATCH SECTION
C2.00 C3.01 NOT TO SCALE



6 SECTION–EXTRUDED CEMENT CONCRETE CURB
C2.00 C3.01 NOT TO SCALE

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MARK A. DAVIS STATE OF WASHINGTON 51349 REGISTERED PROFESSIONAL ENGINEER
11/30/16

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 63
33414 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

Project Number 2015137

BID DOCUMENTS

ISSUED: DECEMBER 1 , 2016

REVISION SCHEDULE	

Details

SHEET:
C3.01

11/30/2016 1:51pm I:\21\2016\006 South King F&R Station Design\Fire Station 63\Design\1606-63_C3.01DETL.dwg

GENERAL NOTES:
ASBESTOS-CONTAINING MATERIALS

1. THIS PROJECT INCLUDES REMOVAL AND DISPOSAL OF HAZARDOUS BUILDING MATERIALS (ASBESTOS, LEAD-BASED PAINT, ARSENIC-CONTAINING BRICK MORTAR, AND MERCURY-CONTAINING LIGHT TUBES) FROM FIRE STATION 63 LOCATED AT 33414 - 21ST AVE S, AUBURN, WA.

2. LOCATIONS OF ACM SHOWN ON THE DRAWINGS ARE SCHEMATIC AND APPROXIMATE. NOTE: A LIMITED HAZARDOUS MATERIALS SURVEY WAS ACCOMPLISHED FOR IN PREPARATION FOR THE WORK, THAT MEETS THE REQUIREMENTS OF WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (L&I DOSH) "GOOD FAITH INSPECTION" AND PUGET SOUND CLEAN AIR AGENCY (PSCAA) ASBESTOS INSPECTION TO LOCATE AND IDENTIFY ASBESTOS-CONTAINING MATERIALS EXPECTED TO BE IMPACTED BY THE PROJECT (INCLUDED AS APPENDIX OF SECTION 01 1110 SUMMARY OF HAZARDOUS MATERIALS). ALL IMPACTED ASBESTOS MATERIALS WILL BE REMOVED WITHIN THE SCOPE OF THIS PROJECT. DEMOLITION FOR ACCESS TO CONCEALED ACM AND/OR ASSUMED ACM IS WITHIN THE SCOPE OF WORK. IF ANY IDENTIFIED ACM, OR SUSPECT MATERIAL NOT ADDRESSED BY THE "GOOD FAITH SURVEY" WILL BE IMPACTED AND IS NOT CALLED-OUT BY OTHER WORK AND IS NOT CALLED-OUT FOR REMOVAL, CONSULT THE DISTRICT'S HAZARDOUS MATERIALS CONSULTANT (EHSI) PRIOR TO DISTURBANCE. ANY SUCH MATERIAL MUST BE TREATED AS ACM UNLESS SAMPLED BY A CERTIFIED AHERA BUILDING INSPECTOR AND DETERMINED TO BE NON-ASBESTOS.

3. USE THE PROJECT HAZARDOUS MATERIALS SUMMARY LISTED ON THIS SHEET FOR BASE BID QUANTITIES. QUANTITIES ARE CONSIDERED ACCURATE WITHIN PLUS OR MINUS (+/-) TEN PERCENT (10%). NO CONTRACT CHANGES WILL BE CONSIDERED FOR VARIANCES IN THESE QUANTITIES OF LESS THAN 10%. CONTRACTOR MUST HAVE HAZARDOUS MATERIALS CONSULTANT'S WRITTEN VERIFICATION OF QUANTITIES PRIOR TO THE REMOVAL OF MATERIALS FOR CONSIDERATION OF COMPENSATION FOR ADDITIONAL QUANTITIES OF MATERIAL IN EXCESS OF +10%.

4. THE CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DETAILS AND DIMENSIONS THAT MAY IMPACT THE WORK. THE CONTRACTOR SHALL VERIFY THE CONDITION, LOCATION, AND QUANTITIES OF HAZARDOUS MATERIALS IN THIS WORK PRIOR TO SUBMITTING A BID.

5. REFER TO CONTRACT AND CONTRACTOR'S APPROVED WORK PLAN FOR ASBESTOS REMOVAL AND DISPOSAL PROCEDURES AND REQUIREMENTS.

7. PIPING FITTINGS ARE ASSUMED TO HAVE ASBESTOS-CONTAINING PIPING INSULATION. PIPING FITTINGS INCLUDE: ELBOWS, VALVES, "TEE'S", REDUCERS, PIPE HANGERS, WALL PENETRATIONS AND FIBERGLASS INSULATION "ENCAPSULATED" ENDS. SMALL BORE FITTINGS ARE LESS THAN OR EQUAL TO 6" OD (OUTSIDE DIAMETER).

8. THE GRAY CAULKING WITH PAINT AROUND THE 1'x1' IN-DOOR WINDOW, ON METAL SINGLE DOOR IN THE FITNESS ROOM WAS IDENTIFIED AS CONTAINING <1% CHRYSOTILE ASBESTOS AND IS THEREFORE NOT AN ACM AND IS NOT REGULATED BY PSCAA; HOWEVER, L&I DOSH REQUIRES DEMOLITION PERSONNEL TO BE TRAINED IN ACCORDANCE WITH WAC 296-62-07722(5). THEY ARE REQUIRED TO USE WET METHODS, HAVE APPROPRIATE RESPIRATORY PROTECTION, COMPLETE AN EXPOSURE ASSESSMENT, AND A CERTIFIED ASBESTOS SUPERVISOR MUST SUPERVISE THE DEMOLITION.

9. THE JOINT COMPOUND WITH PAINT FOUND ON THE GWB CEILING IN THE RADIO ROOM WAS IDENTIFIED AS CONTAINING <1% CHRYSOTILE ASBESTOS AND IS THEREFORE NOT AN ACM AND IS NOT REGULATED BY PSCAA; HOWEVER, L&I DOSH REQUIRES DEMOLITION PERSONNEL TO BE TRAINED IN ACCORDANCE WITH WAC 296-62-07722(5). THEY ARE REQUIRED TO USE WET METHODS, HAVE APPROPRIATE RESPIRATORY PROTECTION, COMPLETE AN EXPOSURE ASSESSMENT, AND A CERTIFIED ASBESTOS SUPERVISOR MUST SUPERVISE THE DEMOLITION.

GENERAL NOTES:
LEAD AND ARSENIC-CONTAINING MATERIALS

1. INTERIOR AND EXTERIOR PAINTED/GLAZED SURFACES WERE FOUND TO CONTAIN LEAD (E.G., LEAD-BASED PAINT - LBP) AND/OR LEAD CONTAINING BUILDING MATERIALS (LCM). LCM MAY ALSO INCLUDE THE FOLLOWING: LEAD ROOF VENT PIPES, GLAZING OF CERAMIC WALL AND FLOOR TILES, AND GLAZED BATHROOM FIXTURES, (E.G., SINKS, TOILETS, AND UTILITY SINKS).

2. REFER TO THE HAZARDOUS MATERIALS REMOVAL SPECIFICATIONS FOR IMPACTS TO LEAD COATED SURFACES AND LCM. REFER TO SPECIFICATIONS FOR LEAD DISTURBANCES, DISPOSAL, AND TESTING REQUIREMENTS.

3. THE CONTRACTOR SHALL ASSUME THAT LEAD PAINT IS PRESENT ON ANY PAINTED BUILDING MATERIALS NOT TESTED. ALL WORK THAT MAY DISTURB PAINT-CONTAINING LEAD OR OTHER LEAD BUILDING MATERIAL SHALL BE IN ACCORDANCE WITH L&I REGULATION WAC 296-155-176, OSHA REGULATION 29 CFR 1926.62, AND THE SPECIFICATIONS, INCLUDING DUST CONTROL, EMPLOYEE EXPOSURE ASSESSMENTS AND WASTE CHARACTERIZATION.

4. BRICK MORTAR WAS FOUND TO CONTAIN ARSENIC. ALL WORK THAT MAY DISTURB ARSENIC-CONTAINING MORTAR OR OTHER ARSENIC BUILDING MATERIALS SHALL BE IN ACCORDANCE WITH L&I REGULATION WAC 296-848, OSHA REGULATION 29 CFR 1926.1118, AND THE SPECIFICATIONS, INCLUDING DUST CONTROL, EMPLOYEE EXPOSURE ASSESSMENTS AND WASTE CHARACTERIZATION.

5. REFER TO ARSENIC REMEDIATION SPECIFICATIONS FOR IMPACTS TO ARSENIC-CONTAINING BRICK MORTAR. REFER TO SPECIFICATIONS FOR ARSENIC DISTURBANCES, DISPOSAL, AND TESTING REQUIREMENTS.

GENERAL NOTES: MERCURY-CONTAINING LIGHT TUBES AND THERMOSTATS

1. INSPECT ALL LIGHT BALLASTS IN THE AREA. BALLASTS LABELED "ELECTRONIC" MAY BE DISPOSED AS CONSTRUCTION DEBRIS.

2. ALL FLUORESCENT LIGHT TUBES, CFL BULBS, HID LAMPS, AND SOME THERMOSTATS CONTAIN MERCURY AND WILL BE RECYCLED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND WITHOUT BREAKAGE ON SITE. REFER TO THE CONTRACT SPECIFICATIONS, REGULATIONS, AND THE CONTRACTOR'S APPROVED WORK PLAN FOR LIGHT TUBE, CFL BULB, HID LAMP AND THERMOSTAT RECYCLING PROCEDURES.

3. THE ABATEMENT CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL ISOLATION OF ALL IMPACTED LIGHT FIXTURES AND THE ABATEMENT CONTRACTOR SHALL VERIFY PRIOR TO COMMENCING WORK.

SHEET INDEX

HA001	GENERAL NOTES, ABBREVIATIONS AND MATERIALS SUMMARY
HA101	HAZMAT - LEVEL 1 WALL & CEILING PLAN
HA102	HAZMAT - LEVEL MEZZANINE WALL & CEILING PLAN
HA103	HAZMAT - LEVEL ROOF PLAN

ABBREVIATIONS

ACM - ASBESTOS-CONTAINING MATERIAL
AHERA - ASBESTOS HAZARD EMERGENCY RESPONSE ACT
BLDG - BUILDING
CFL - COMPACT FLUORESCENT LIGHT
CFR - CODE OF FEDERAL REGULATIONS
EA - EACH
GWB - GYPSUM WALLBOARD
HID - HIGH INTENSITY DISCHARGE
JC - JOINT COMPOUND
L&I DOSH - WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
LCM - LEAD-CONTAINING MATERIALS
LBP - LEAD-BASED PAINT
LCP - LEAD-CONTAINING PAINT
LF - LINEAR FEET
OD - OUTER DIAMETER
OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PCB - POLYCHLORINATED BIPHENYLS
PSCAA - PUGET SOUND CLEAN AIR AGENCY
SF - SQUARE FEET
TYP - TYPICAL
VAT - VINYL ASBESTOS TILE
VCT - VINYL COMPOSITE TILE
W/ - WITH
WAC - WASHINGTON ADMINISTRATIVE CODE

PROJECT HAZARDOUS MATERIALS SUMMARY

QUANTITY/ UNIT	DESCRIPTION
2 EA	ACM GRAY DOOR FRAME CAULKING WITH PAINT (AROUND SINGLE METAL DOOR FRAME)
6 LF	ACM GRAY DUCT SEAM SEALANT (ON 5" OD METAL FURNACE FLUE)
3 EA	ACM BROWN WINDOW FRAME CAULKING (AROUND 5'x5' METAL FRAMED WINDOW)
5 LF	NON-ACM NEW WHITE SEAM CAULKING ON ACM OLD BLACK ASPHALTIC CAULKING (ON 1'x1" METAL DUCTING ASSOCIATED WITH OLD EXHAUST FAN)
6 EA	NON-ACM NEW GRAY WINDOW FRAME CAULKING ON ACM OLD GRAY WINDOW FRAME CAULKING (AROUND 6'x5' METAL FRAMED WINDOW)
1 EA	2'x3' ELECTRICAL PANELS WITH ASSUMED ACM INTERNALS
2 EA	SMALL ELECTRICAL SWITCH GEAR PANELS WITH ASSUMED ACM INTERNALS
2 EA	ASSUMED ACM GLUE DOTS ASSOCIATED WITH WOOD WALL CABINETS (5'x14')
40 EA	ASSUMED ACM TSI ON SMALL BORE PIPE ELBOWS AND FITTINGS ON FIBERGLASS RUNS (CONCEALED IN PLUMBING WALLS AND CEILINGS)
9 EA	ASSUMED ACM MASTIC ASSOCIATED WITH 4'x9' PLASTER WALL PANELS ON BRICK WALL
1 EA	ASSUMED ACM WINDOWS CONCEALED UNDER 4'x9' EXTERIOR PLASTER WALL PANELS
40 LF	ASSUMED ACM INSULATION ON 12"x12" METAL DUCTING CONCEALED BENEATH SLAB
2 EA	MERCURY-CONTAINING THERMOSTAT
21 EA	MERCURY-CONTAINING FLUORESCENT LIGHT TUBES, HID LAMPS, AND CFL BULBS

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AHERA PROJECT DESIGNER
DEBRA ESCAMILLA
CERT. NO. 155592
10/10/2016
10/10/2017

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

BID SET

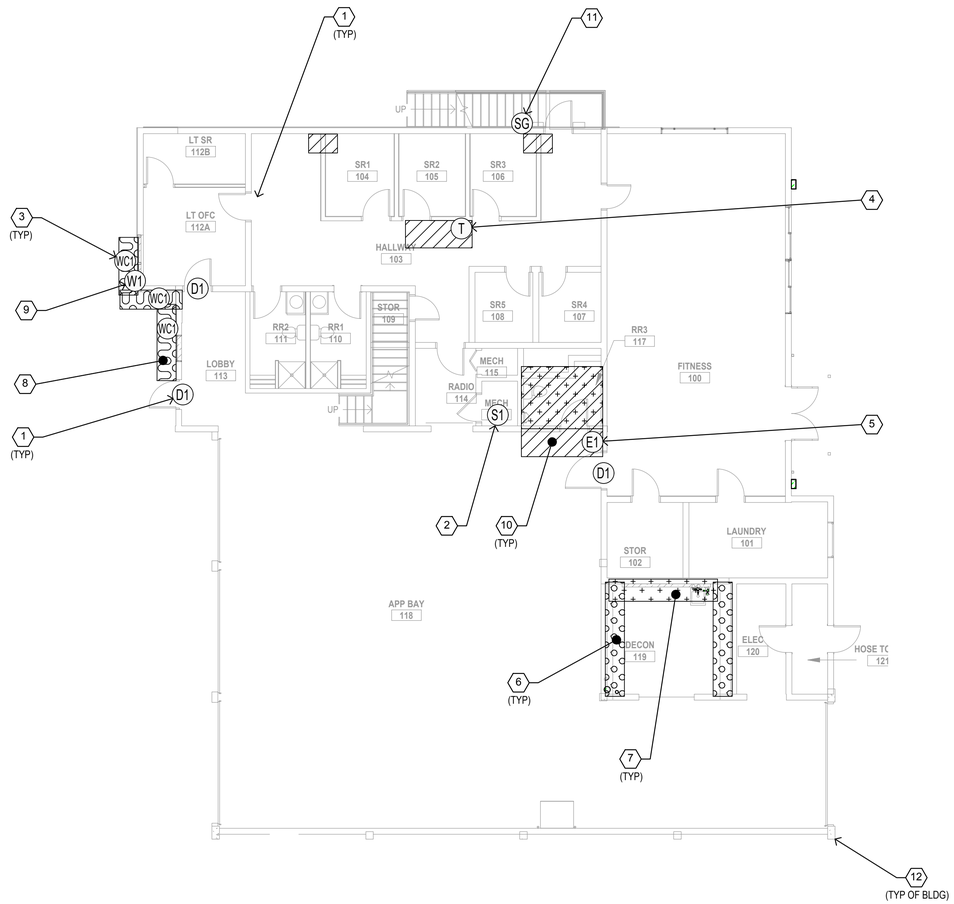
ISSUED: OCTOBER 10, 2016

REVISION SCHEDULE

GENERAL NOTES, ABBREVIATIONS, SHEET INDEX, AND MATERIALS SUMMARY

SHEET:

HA001



1 LEVEL 1 - WALL CEILING & FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

1. FOR HAZMAT GENERAL NOTES, SEE SHEET HA001.

(X) HAZMAT SHEET NOTES

1. REMOVE AND DISPOSE OF ACM GRAY DOOR FRAME CAULKING WITH PAINT (AROUND SINGLE METAL DOOR FRAME).
2. REMOVE AND DISPOSE OF ACM GRAY DUCT SEAM SEALANT (ON 5" OD METAL FURNACE FLUE).
3. REMOVE AND DISPOSE OF ACM BROWN WINDOW FRAME CAULKING (AROUND 5'x5' METAL-FRAMED WINDOW).
4. REMOVE AND RECYCLE WALL-MOUNTED MERCURY-CONTAINING THERMOSTAT.
5. REMOVE AND DISPOSE OF 2'x3' ELECTRICAL PANELS WITH ASSUMED ACM INTERNALS. COORDINATE WITH ELECTRICAL DEMOLITION DRAWINGS.
6. REMOVE AND DISPOSE OF ASSUMED ACM GLUE DOTS ASSOCIATED WITH WOOD WALL CABINETS (5'x14').
7. REMOVE AND DISPOSE OF ASSUMED ACM TSI ON SMALL BORE PIPE ELBOWS AND FITTINGS ON FIBERGLASS RUNS (CONCEALED IN PLUMBING WALLS AND CEILINGS). COORDINATE WITH PLUMBING AND MECHANICAL DEMOLITION PLANS.
8. REMOVE AND DISPOSE OF IMPACTED ASSUMED ACM MASTIC ASSOCIATED WITH 4'x9' PLASTER WALL PANELS ON BRICK WALL. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DEMOLITION PLANS.
9. REMOVE AND DISPOSE OF ASSUMED ACM WINDOWS CONCEALED UNDER 4'x9' EXTERIOR PLASTER WALL PANELS, IF IMPACTED. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DEMOLITION PLANS.
10. REMOVE AND DISPOSE OF ASSUMED ACM INSULATION ON 12"x12" METAL DUCTING CONCEALED BENEATH SLAB.
11. REMOVE AND DISPOSE OF SMALL ELECTRICAL SWITCH GEAR PANELS WITH ASSUMED ACM INTERNALS.
12. INSPECT FLUORESCENT FIXTURES, AND RECYCLE FLUORESCENT TUBES AS UNIVERSAL WASTE. COORDINATE WITH ELECTRICAL DRAWINGS.

LEGEND

- (D1) ACM GRAY DOOR FRAME CAULKING WITH PAINT (AROUND SINGLE METAL DOOR FRAME)
- (S1) ACM GRAY DUCT SEAM SEALANT (ON 5" OD METAL FURNACE FLUE)
- (WC1) ACM BROWN WINDOW FRAME CAULKING (AROUND 5'x5' METAL FRAMED WINDOW)
- (T) WALL-MOUNTED MERCURY-CONTAINING THERMOSTAT
- (E1) 2'x3' ELECTRICAL PANELS WITH ASSUMED ACM INTERNALS
- ASSUMED ACM GLUE DOTS ASSOCIATED WITH WOOD WALL CABINETS (5'x14')
- ASSUMED ACM TSI ON SMALL BORE PIPE ELBOWS AND FITTINGS ON FIBERGLASS RUNS (CONCEALED IN PLUMBING WALLS AND CEILINGS)
- ASSUMED ACM MASTIC ASSOCIATED WITH 4'x9' PLASTER WALL PANELS ON BRICK WALL
- (W1) ASSUMED ACM WINDOWS CONCEALED UNDER 4'x9' EXTERIOR PLASTER WALL PANELS
- ASSUMED ACM INSULATION ON 12"x12" METAL DUCTING CONCEALED BENEATH SLAB
- (SG) SMALL ELECTRICAL SWITCH GEAR PANELS WITH ASSUMED ACM INTERNALS

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AREA PROJECT DESIGNER
DEBORA ESCAMILLA
CERT. NO. 155282
10/10/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: OCTOBER 10, 2016

REVISION SCHEDULE

HAZMAT - LEVEL 1 WALL CEILING & FLOOR PLAN

SHEET:

HA101

GENERAL NOTES

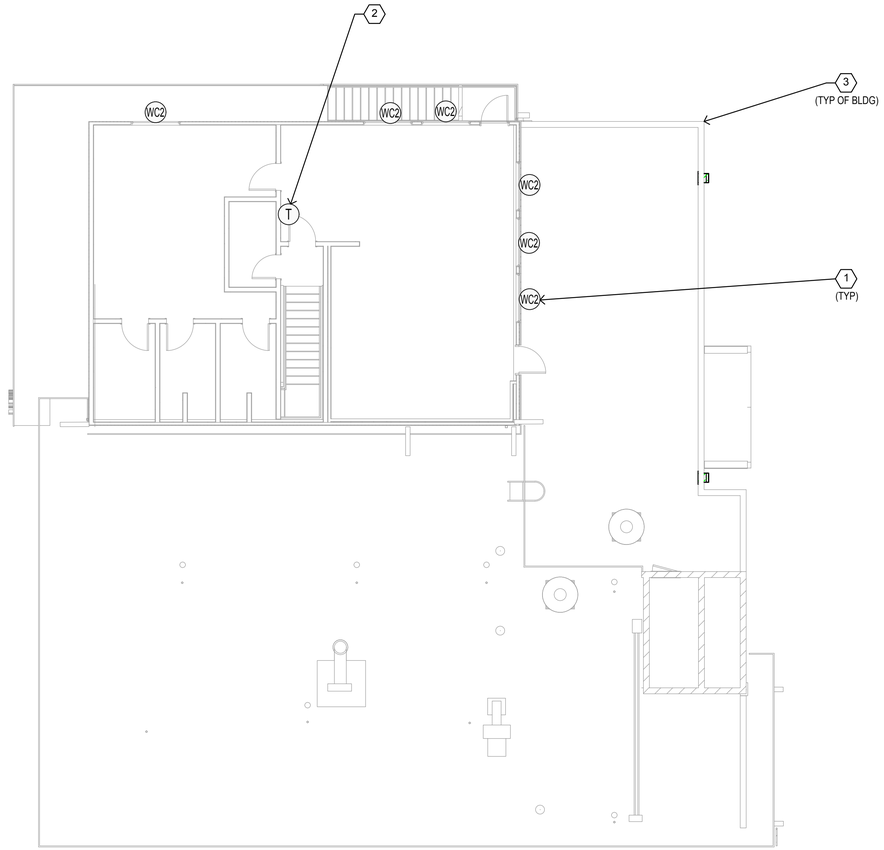
1. FOR HAZMAT GENERAL NOTES, SEE SHEET HA001.

(X) HAZMAT SHEET NOTES

1. REMOVE AND DISPOSE OF NON-ACM NEW GRAY WINDOW FRAME CAULKING ON ACM OLD GRAY WINDOW FRAME CAULKING (AROUND 6'x5' METAL FRAMED WINDOW).
2. REMOVE AND RECYCLE WALL-MOUNTED MERCURY-CONTAINING THERMOSTAT.
3. INSPECT FLUORESCENT FIXTURES, AND RECYCLE FLUORESCENT TUBES AS UNIVERSAL WASTE. COORDINATE WITH ELECTRICAL DRAWINGS.

LEGEND

WC2	NON-ACM NEW GRAY WINDOW FRAME CAULKING ON ACM OLD GRAY WINDOW FRAME CAULKING (AROUND 6'x5' METAL FRAMED WINDOW)
T	WALL-MOUNTED MERCURY-CONTAINING THERMOSTAT



1 LEVEL MEZZANINE - WALL & CEILING PLAN
1/8" = 1'-0"

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10/10/2016
10/10/2017

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: OCTOBER 10, 2016

REVISION SCHEDULE

HAZMAT - LEVEL MEZZANINE WALL & CEILING PLAN

SHEET:

HA102

GENERAL NOTES

1. FOR HAZMAT GENERAL NOTES, SEE SHEET HA001.

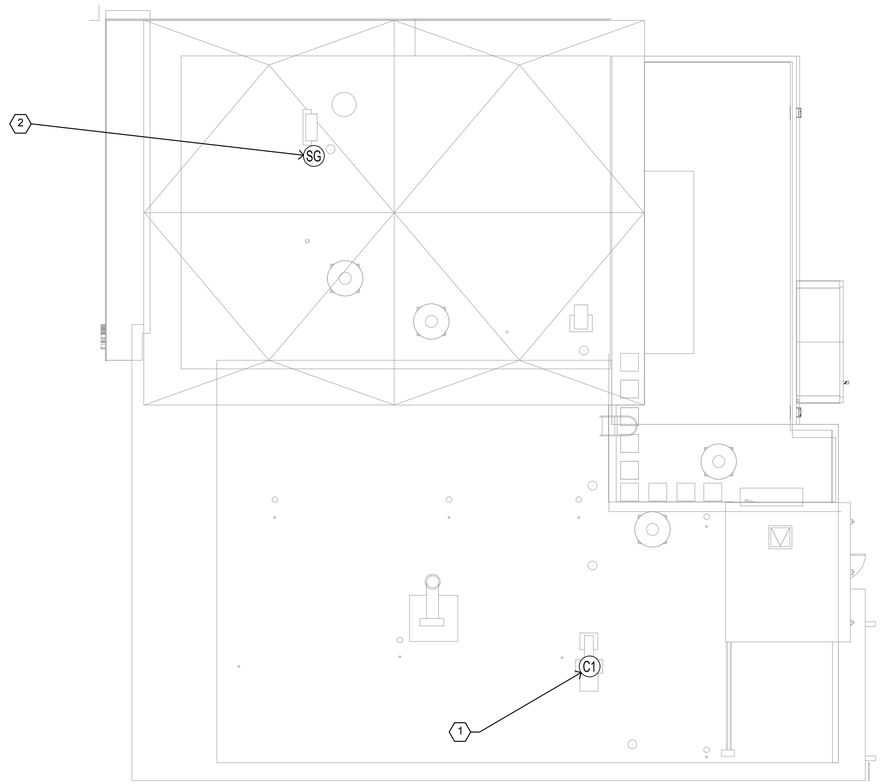
(X) HAZMAT SHEET NOTES

1. REMOVE AND DISPOSE OF NON-ACM NEW WHITE SEAM CAULKING ON ACM OLD BLACK ASPHALTIC CAULKING (ON 1'x1' METAL DUCTING ASSOCIATED WITH OLD EXHAUST FAN).
2. REMOVE AND DISPOSE OF SMALL ELECTRICAL SWITCH GEAR PANELS WITH ASSUMED ACM INTERNALS

LEGEND

(C1) NON-ACM NEW WHITE SEAM CAULKING ON ACM OLD BLACK ASPHALTIC CAULKING (ON 1'x1' METAL DUCTING ASSOCIATED WITH OLD EXHAUST FAN)

(SG) SMALL ELECTRICAL SWITCH GEAR PANELS WITH ASSUMED ACM INTERNALS



1 LEVEL ROOF PLAN
1/8" = 1'-0"

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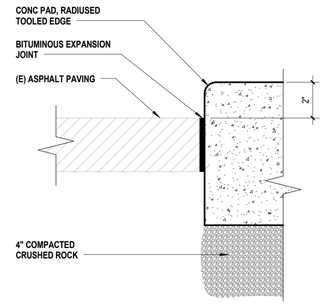
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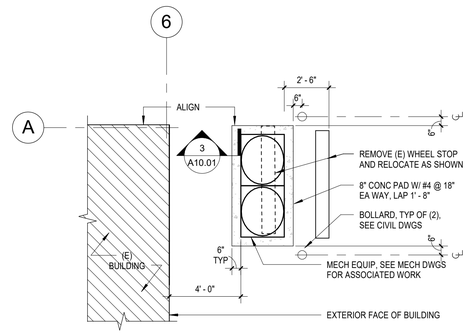
HAZMAT - LEVEL ROOF PLAN

SHEET:

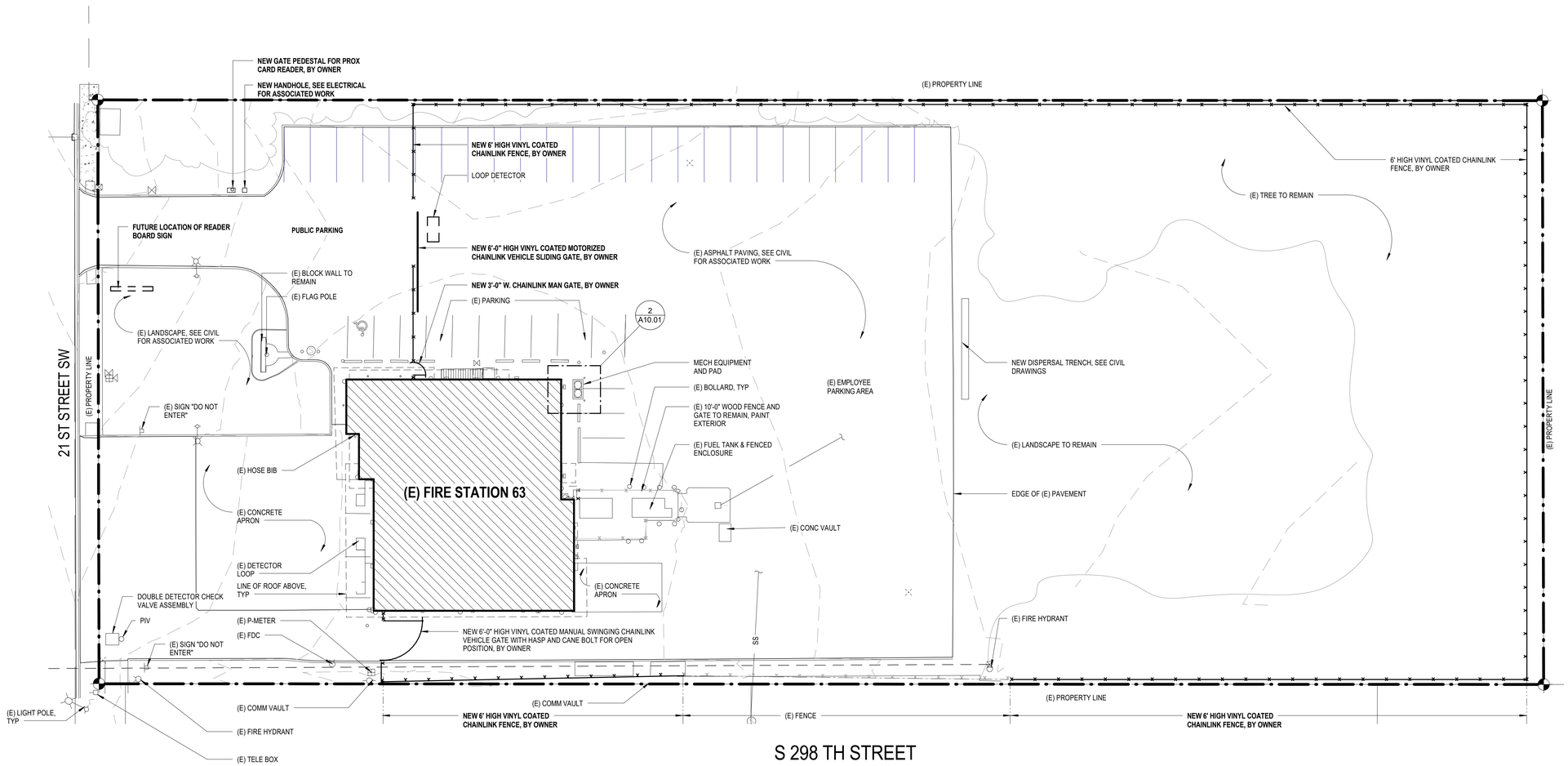
HA103



3 DETAIL - EQUIPMENT PAD EDGE
3" = 1'-0"



2 ENLARGED SITE PLAN
1/4" = 1'-0"



N
1 SITE PLAN
1" = 20'-0"

RICE ARCHITECTURE & PLANNING fergus MILLER
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4794 REGISTERED ARCHITECT
DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 2015137

BID SET

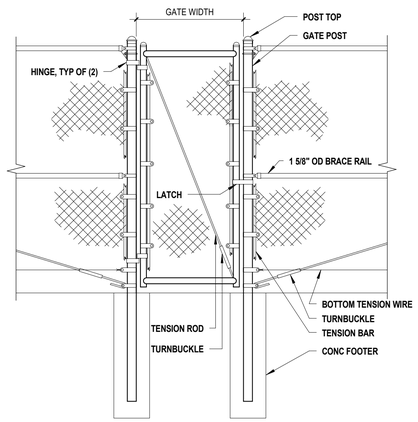
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

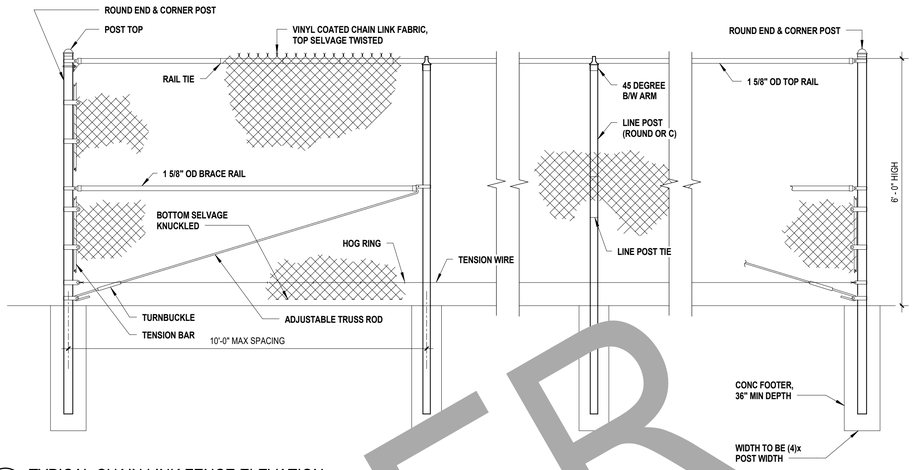
ARCHITECTURAL SITE PLAN

SHEET:

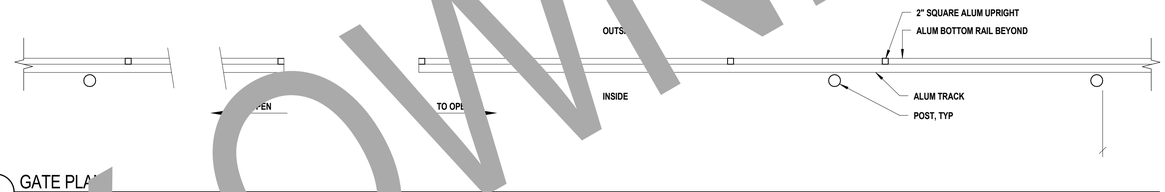
A10.01



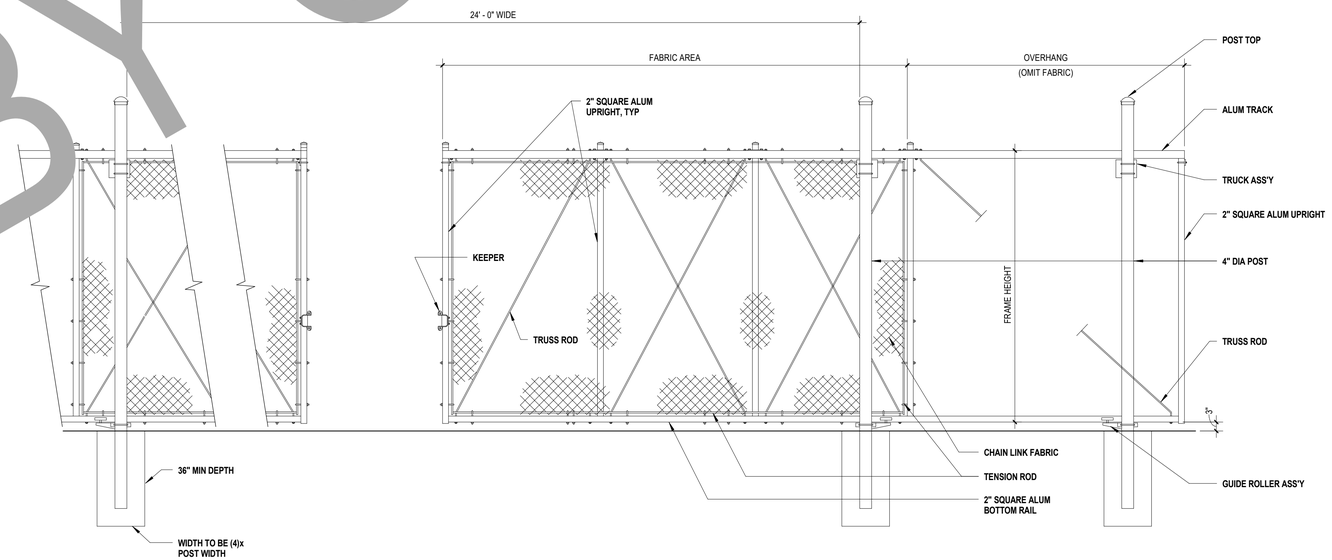
4 CHAIN LINK MANUAL GATE ELEVATION
1/2" = 1'-0"



3 TYPICAL CHAIN LINK FENCE ELEVATION
1/2" = 1'-0"



2 GATE PLA
1/2" = 1'-0"



1 CHAIN LINK GATE ELEVATION
1/2" = 1'-0"

BY OWNER

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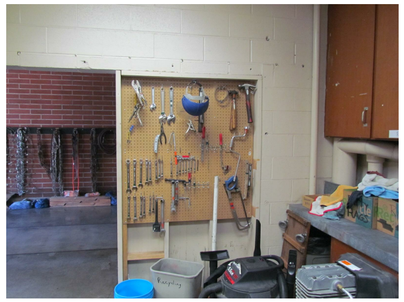
SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
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33414 S 21st AVE SOUTH
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SITE DETAILS

SHEET:
A10.02



1 (E) DECON RM - SOUTH WALL



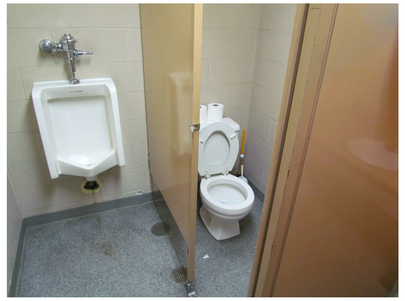
2 (E) DECON RM - WEST WALL



3 (E) DECON RM - NORTH WALL



4 (E) DECON RM - EAST WALL



5 (E) REST ROOM - TOILET PARTITION



6 (E) MEZZANINE ROOF - TOWER



7 (E) MEZZANINE ROOF - APP BAY ROOF



8 (E) MEZZANINE ROOF - LEVEL 2



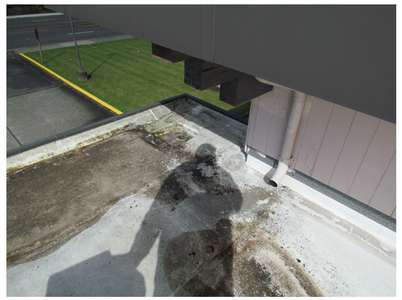
9 (E)MEZZANINE ROOF - DECK



10 (E) MEZZANINE ROOF - DRAIN



11 (E) APP BAY ROOF - LOOKING SW



12 (E) APP BAY ROOF - NW CORNER



13 (E) APP BAY ROOF - SIDE WALL



14 (E) HIGH ROOF - NORTH



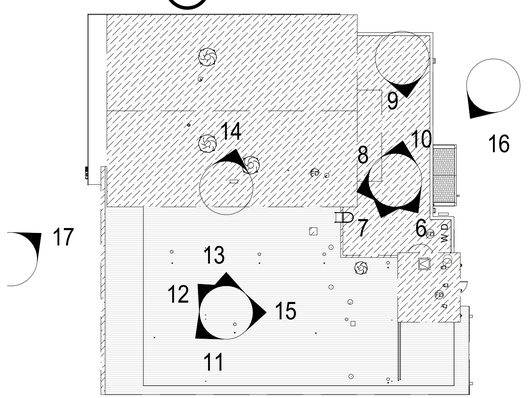
15 (E) APP BAY ROOF - TOWER



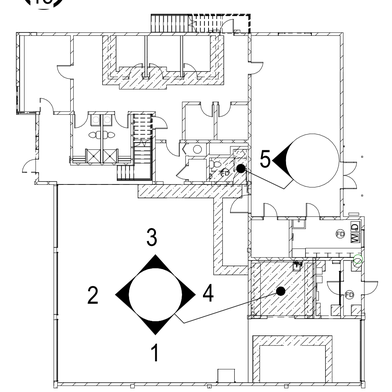
16 (E) EAST ENTRY ROOF



17 (E) WEST ENTRY CANOPY



N KEY PLAN - ROOF



N KEY PLAN - LEVEL 1

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DEMO PLAN LEGEND

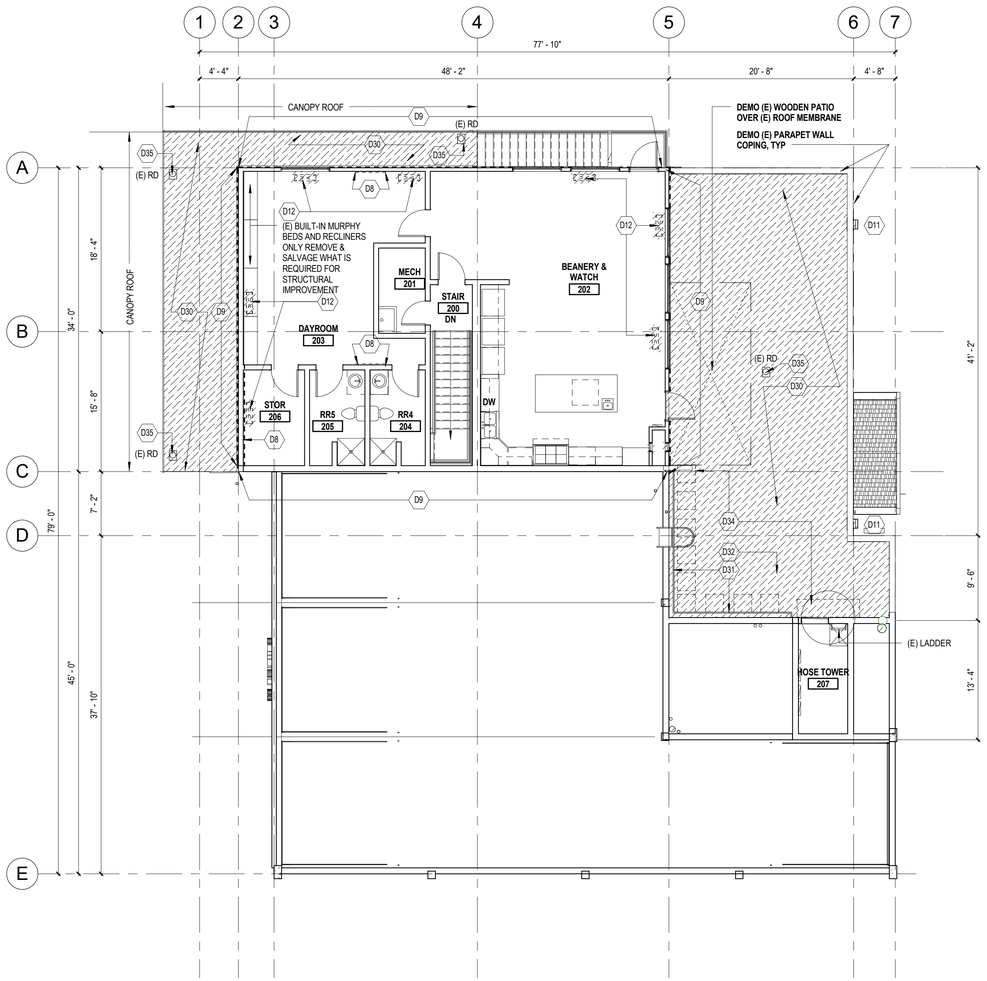
DEMO EXISTING WALL, DOOR AND/OR WINDOW PER DEMOLITION KEY NOTES

DEMO EXISTING CONSTRUCTION PER DEMOLITION KEY NOTES

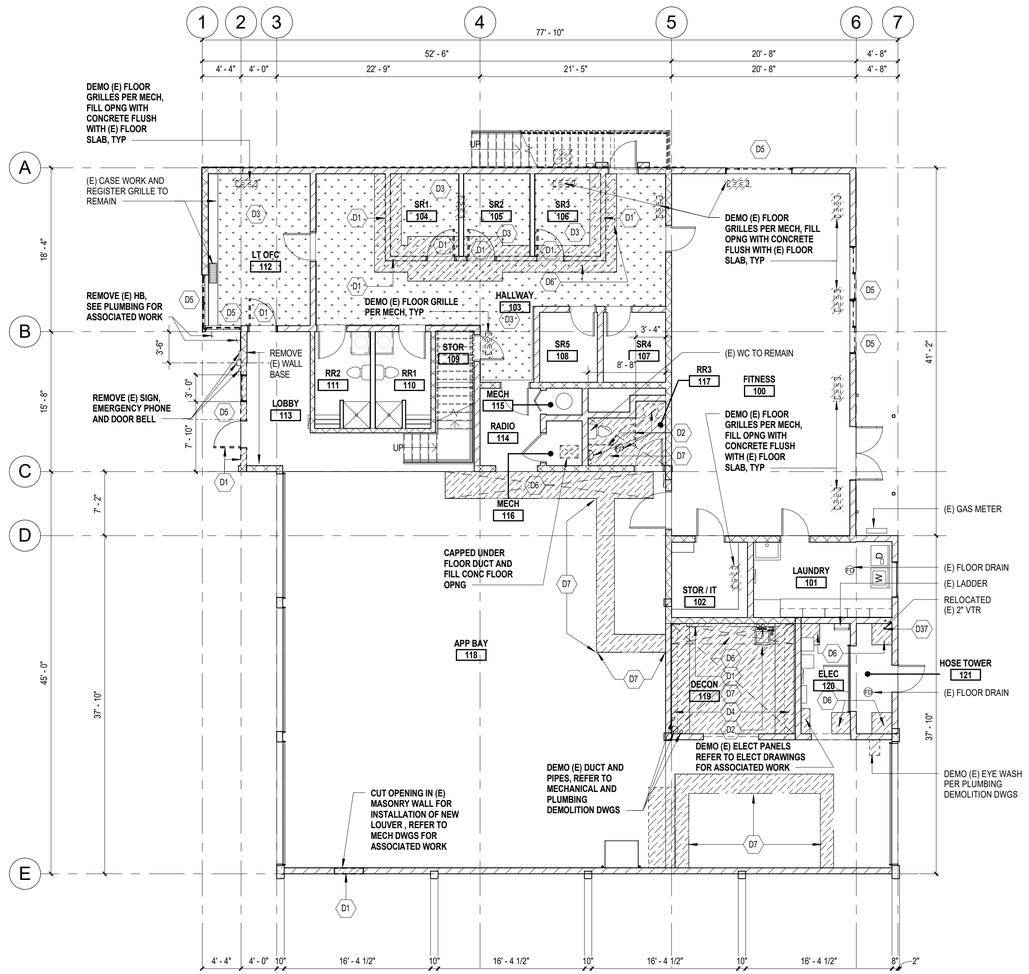
DEMO EXISTING FLOOR FINISH AND BASE

KEY NOTES - DEMO PLAN

NOTE #	DESCRIPTION
D1	DEMO (E) WALL AND WALL BASE
D2	DEMO (E) PLUMBING FIXTURES, FLOOR DRAIN, VANITY TOP AND TOILET PARTITION. CAPPED UNUSED PIPE
D3	DEMO (E) FLOOR FINISH AND (E) WALL BASE
D4	REMOVE (E) CASE WORK
D5	REMOVE (E) WINDOW
D6	SAW CUT (E) SLAB ON GRADE AND EXCAVATE FLOOR SUBSTRATE FOR EXPAND / ADD FOUNDATION, REFERENCE STRUCTURAL DRAWINGS
D7	SAW CUT (E) SLAB ON GRADE AND EXCAVATE FLOOR SUBSTRATE FOR INSTALLATION OF NEW DRAINAGE SYSTEM, REFERENCE PLUMBING DRAWINGS
D8	DEMO (E) GWB FOR STRUCTURAL IMPROVEMENTS
D9	DEMO (E) SIDING AND WRB
D10	DEMO (E) PLASTER FINISH SYSTEM INCLUDED (E) FLASHING DOWN TO (E) CONCRETE MASONRY UNIT OR (E) PLYWOOD SHEATHING
D11	DEMO (E) THRU WALL SCUPPER , SCUPPER HEAD AND DOWNSPOUT. PATCH OPENING WITH CONCRETE
D12	REMOVE AND SALVAGE EXISTING FLOOR GRILLES; WHEN DEMOLITION OF EXISTING DUCT WORK IS COMPLETED, INSTALL NEW BLANK OUT SHEETS BEFORE REINSTALL EXISTING FLOOR GRILLES
D23	CUT OPENING IN EXISTING ROOF DECK FOR INSTALLATION OF NEW MECHANICAL DUCT, REFERENCE MECHANICAL DRAWINGS FOR ASSOCIATES WORK
D30	REMOVE EXISTING ROOF MEMBRANE SYSTEM AND EXISTING RIGID INSULATION DOWN TO EXISTING STRUCTURAL DECK INCLUDING ROOF CANT, FLASHING AND COPING, EXISTING FASCIA TO REMAIN UNLESS OTHERWISE NOTED
D31	REMOVE EXISTING FASCIA WHERE INDICATED ONLY
D32	DISCONNECT AND REMOVE ALL EXISTING ROOFTOP EQUIPMENT, SALVAGE FOR REINSTALLATION AFTER THE NEW ROOFING SYSTEM IS INSTALLED
D33	DEMO EXISTING EXHAUST FAN, EXHAUST AIR FLUE, CONDENSING UNIT, ETC PER MECHANICAL
D34	DEMO EXISTING WALK PADS
D35	DEMO EXISTING ROOF DRAIN AND DOWNSPOUT / OR RAIN LEADER PER PLUMBING DEMOLITION PLANS
D37	DEMO EXISTING VENT PER PLUMBING DEMOLITION PLAN



2 LEVEL MEZZANINE - DEMO PLAN
1/8" = 1'-0"



1 LEVEL 1 - DEMO PLAN
1/8" = 1'-0"

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DEMO PLANS

SHEET:

A21.01

DEMO PLAN LEGEND

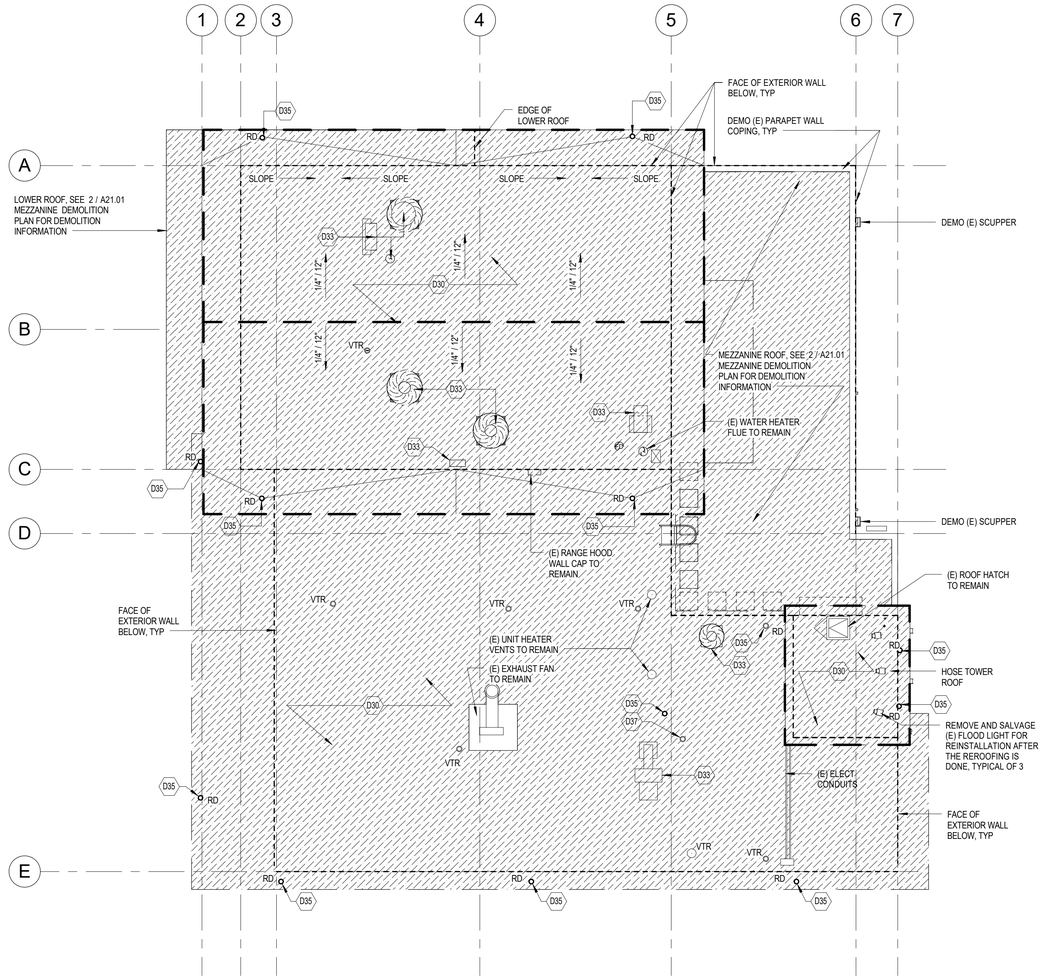
DEMO EXISTING WALL, DOOR AND/OR WINDOW PER DEMOLITION KEY NOTES

DEMO EXISTING CONSTRUCTION PER DEMOLITION KEY NOTES

DEMO EXISTING FLOOR FINISH AND BASE

KEY NOTES - DEMO ROOF PLAN

NOTE #	DESCRIPTION
D30	REMOVE EXISTING ROOF MEMBRANE SYSTEM AND EXISTING RIGID INSULATION DOWN TO EXISTING STRUCTURAL DECK INCLUDING ROOF CANT, FLASHING AND COPING, EXISTING FASCIA TO REMAIN UNLESS OTHERWISE NOTED
D31	REMOVE EXISTING FASCIA WHERE INDICATED ONLY
D32	DISCONNECT AND REMOVE ALL EXISTING ROOFTOP EQUIPMENT, SALVAGE FOR REINSTALLATION AFTER THE NEW ROOFING SYSTEM IS INSTALLED
D33	DEMO EXISTING EXHAUST FAN, EXHAUST AIR FLUE, CONDENSING UNIT, ETC PER MECHANICAL
D34	DEMO EXISTING WALK PADS
D35	DEMO EXISTING ROOF DRAIN AND DOWNSPOUT / OR RAIN LEADER PER PLUMBING DEMOLITION PLANS
D37	DEMO EXISTING VENT PER PLUMBING DEMOLITION PLAN



N

1 LEVEL ROOF - DEMO PLAN
1/8" = 1'-0"

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DEMO ROOF PLAN

SHEET:

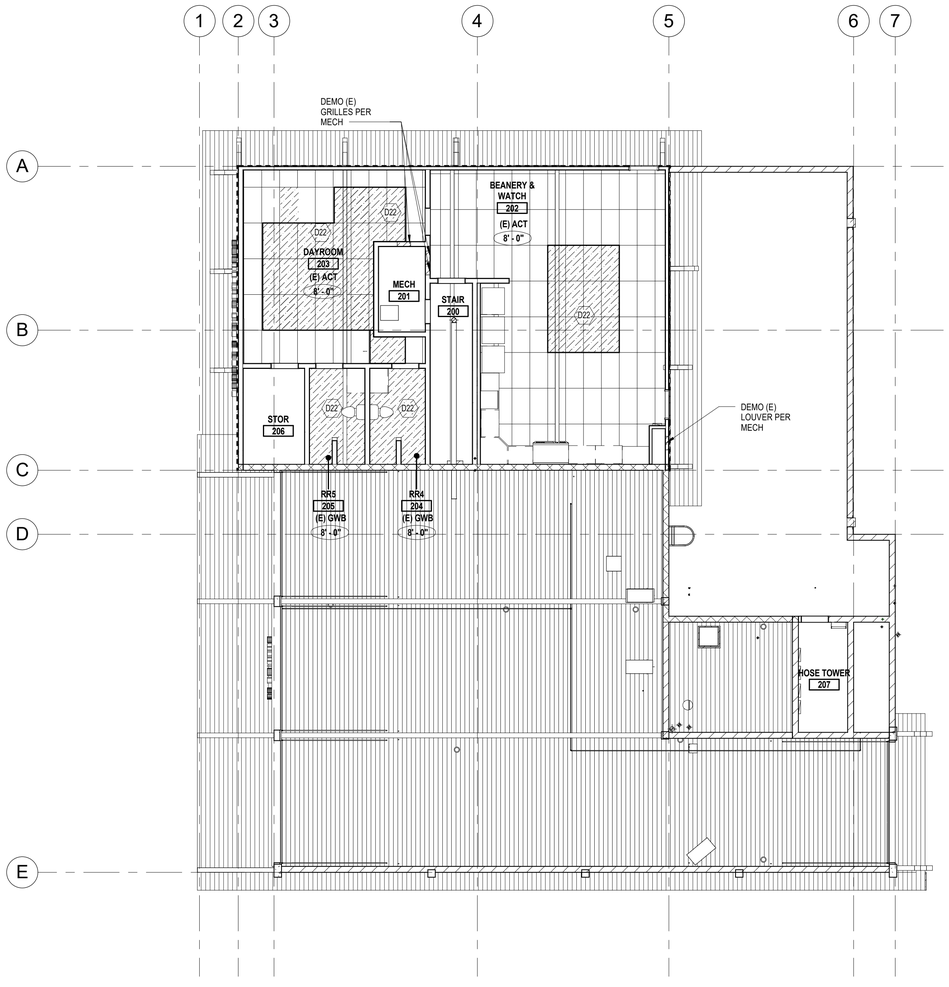
A21.02

RCP LEGEND

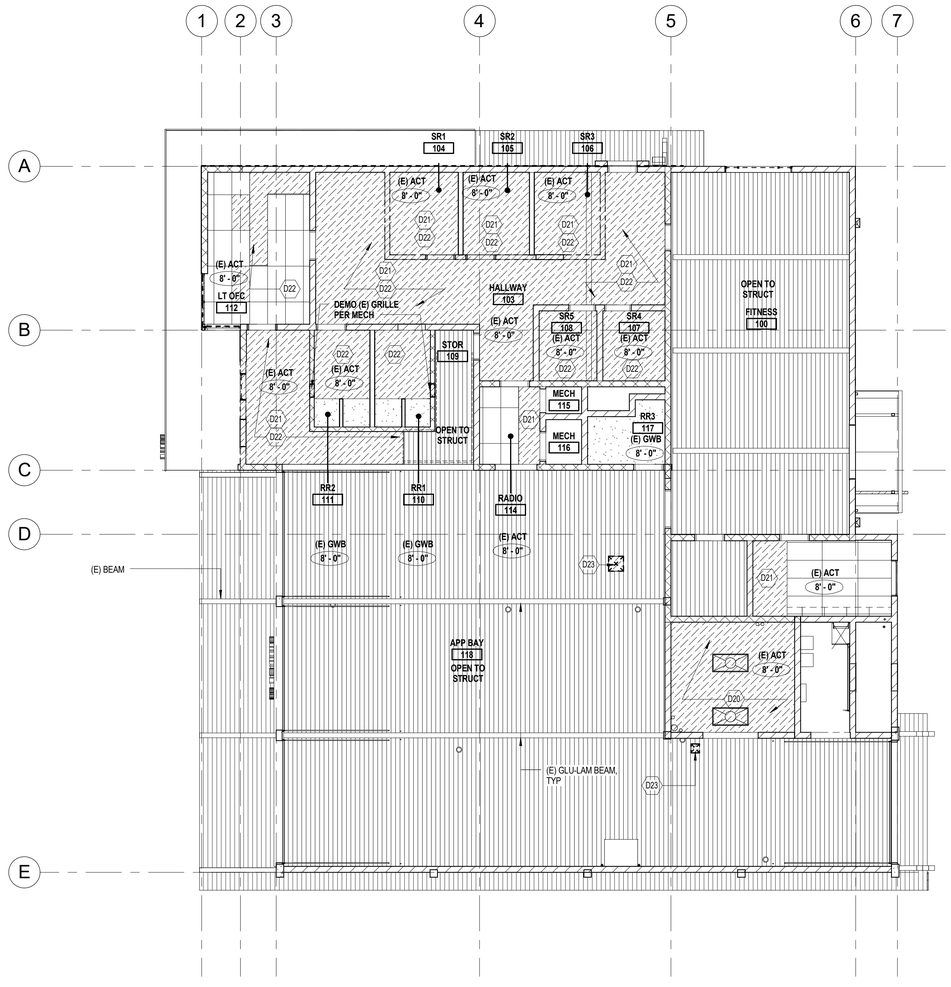
- EXISTING GWB CEILING TO REMAIN
- EXISTING SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- EXISTING 4x6 T&G ROOF DECK
- REMOVE OR DEMO EXISTING CEILING PER RCP DEMO KEY NOTES
- NEW GWB CEILING
- REPLACE ACOUSTICAL CEILING TILES
- ELECTRICAL INFRA RED HEATER
- EXHAUST, 2X2
- RETURN GRILLE, 2X2
- SUPPLY GRILLE, 2X2
- RECESSED DOWNLIGHT
- RECESSED TROFFER, 2X2
- RECESSED TROFFER, 2X4
- RECESSED TROFFER, 1X4
- SUSPENDED LIGHT
- SURFACE OR RECESSED LIGHT FIXTURE

KEY NOTES - DEMO REFLECTED CEILING PLAN

NOTE #	DESCRIPTION
D20	DEMO EXISTING CEILING SYSTEM AND ASSOCIATED WORK
D21	REMOVE AND SALVAGE EXISTING CEILING AND LIGHT FIXTURES TO GET ACCESS FOR WORK REQUIRED BY SEISMIC UPGRADE, REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK
D22	REMOVE AND SALVAGE EXISTING CEILING AND LIGHT FIXTURES TO GET ACCESS FOR WORK REQUIRED BY MECHANICAL SYSTEM UPGRADE, REFERENCE MECHANICAL DRAWINGS FOR ASSOCIATED WORK
D23	CUT OPENING IN EXISTING ROOF DECK FOR INSTALLATION OF NEW MECHANICAL DUCT, REFERENCE MECHANICAL DRAWINGS FOR ASSOCIATES WORK



N 2 MEZZANINE - REFLECTED CEILING PLAN DEMO
1/8" = 1'-0"



N 1 LEVEL 1 - REFLECTED CEILING DEMO PLAN
1/8" = 1'-0"

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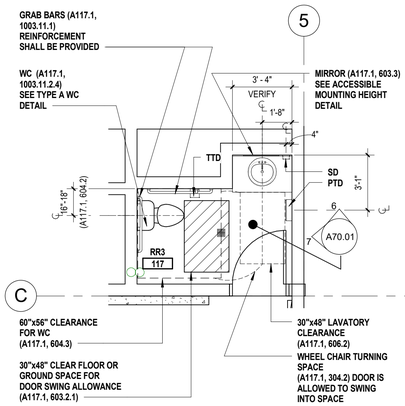
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REVISION SCHEDULE

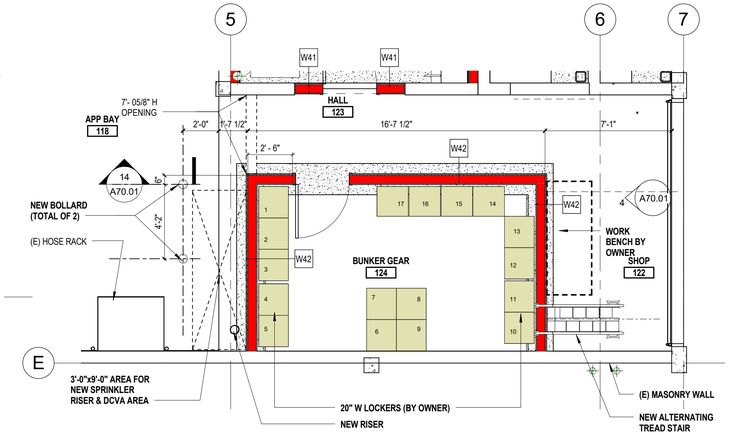
DEMO REFLECTED CEILING PLAN

SHEET:

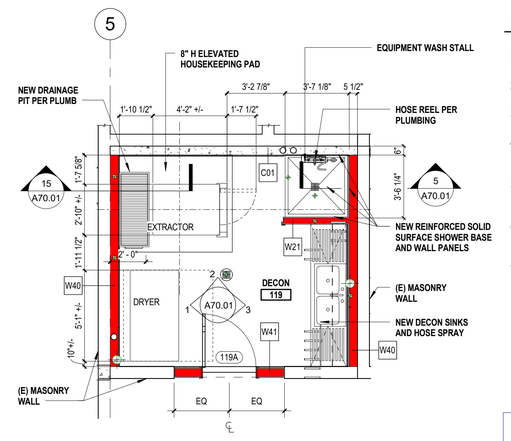
A21.03



N 5 ENLARGED PLAN - RR3 117
1/4" = 1'-0"



N 4 ENLARGED PLAN - BUNKER GEAR
1/4" = 1'-0"



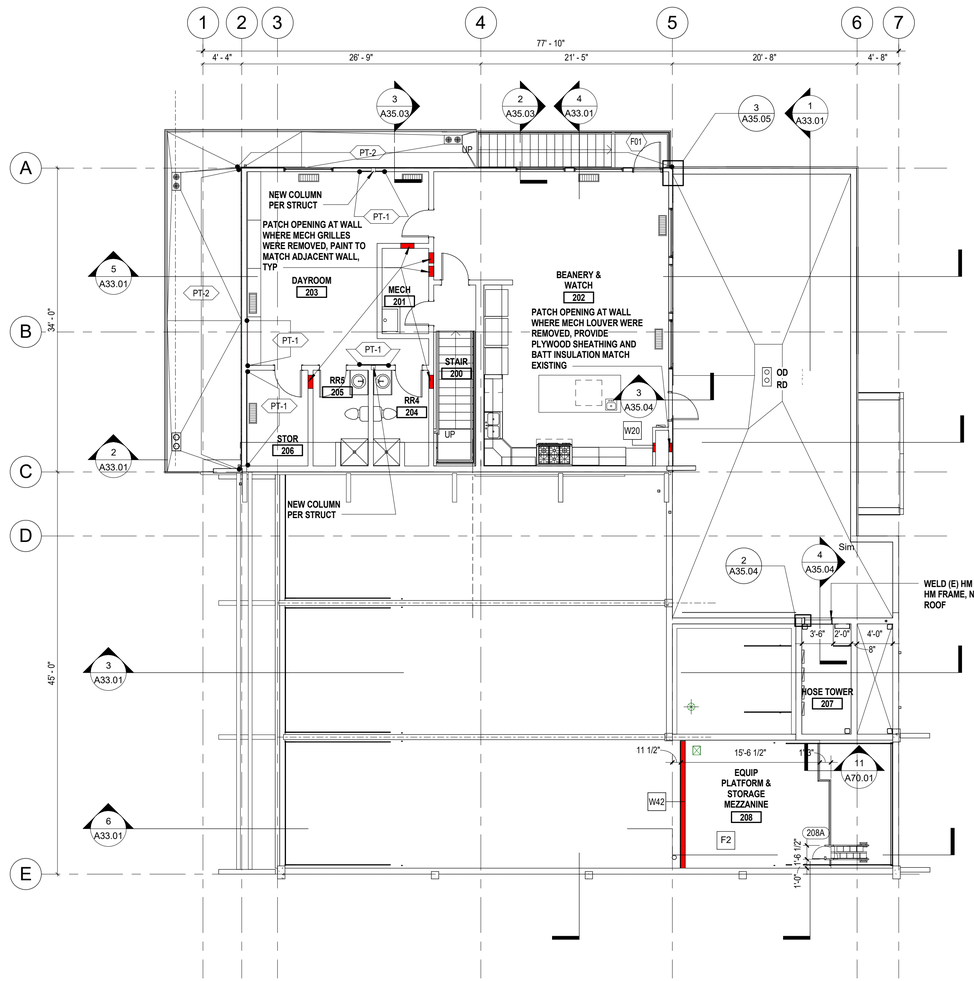
N 3 ENLARGED PLAN - DECON ROOM
1/4" = 1'-0"

GENERAL NOTES - FLOOR PLAN

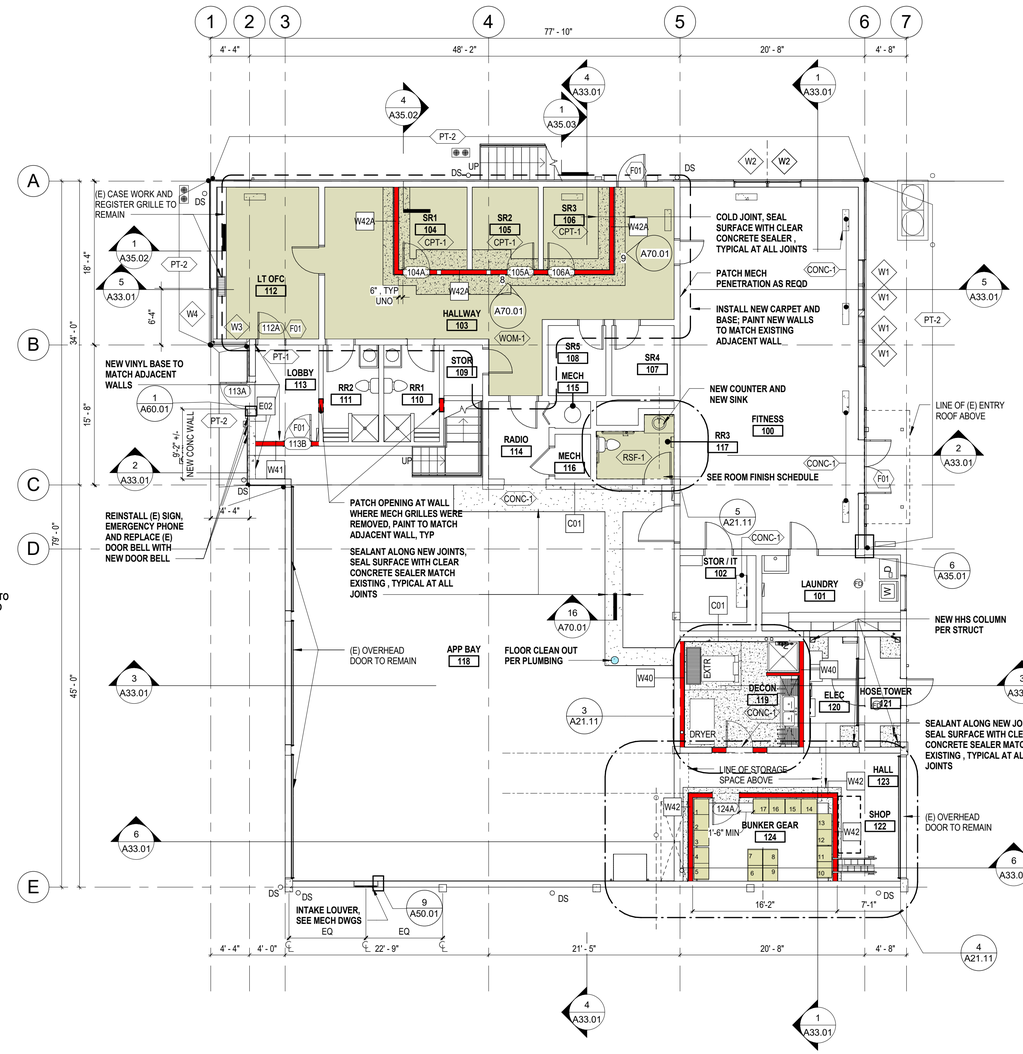
1. ALL DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE
2. FOR WALL, FLOOR AND ROOF ASSEMBLIES, SEE SHEETS A01.01
3. FOR WINDOW SCHEDULE AND DETAILS, SEE SHEET A50.01
4. FOR DOOR SCHEDULE AND DETAILS, FINISH SCHEDULE AND FINISH LEGEND, SEE SHEET A60.01
5. ALL FINISHED DOOR OPNG ARE LOCATED 6" FROM WALL UNLESS NOTED OTHERWISE
6. DIMENSIONS INDICATED AS "MIN" OR "CLEAR" ARE FROM NEAREST FINISH SURFACE INCLUDING TRIM.
7. PATCH ALL PENETRATIONS RELATED TO THE NEW OR EXISTING SPRINKLER SYSTEM. FINISH TO MATCH ADJACENT CONSTRUCTION. SEE SPRINKLER SUBMITTAL FOR ASSOCIATED WORK.

KEY NOTES - FLOOR PLAN

NOTE #	DESCRIPTION
F01	PATCH AND PAINT EXISTING WALLS AFTER THE INSTALLATION OF NEW ACCESS CONTROL SYSTEM IS COMPLETED (BY OTHERS), COORDINATE WITH THE INSTALLER



N 2 MEZZANINE
1/8" = 1'-0"



N 1 LEVEL 1 - FLOOR PLAN
1/8" = 1'-0"

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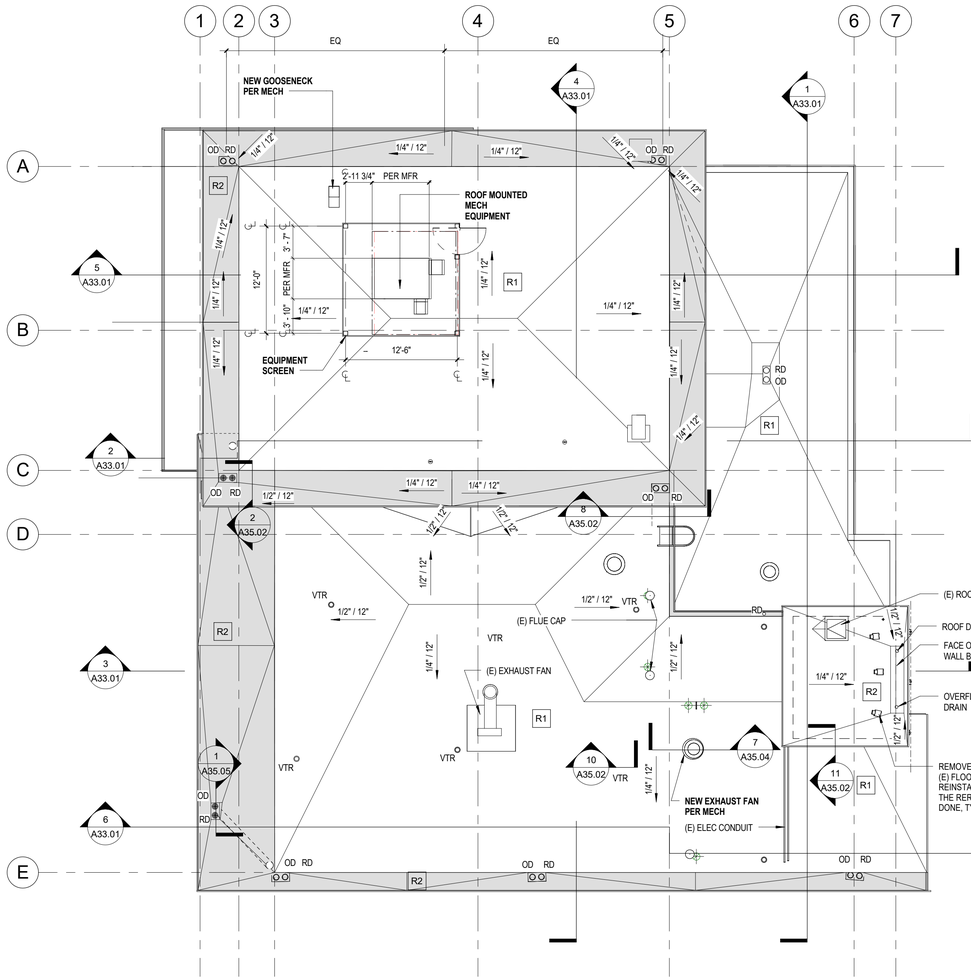
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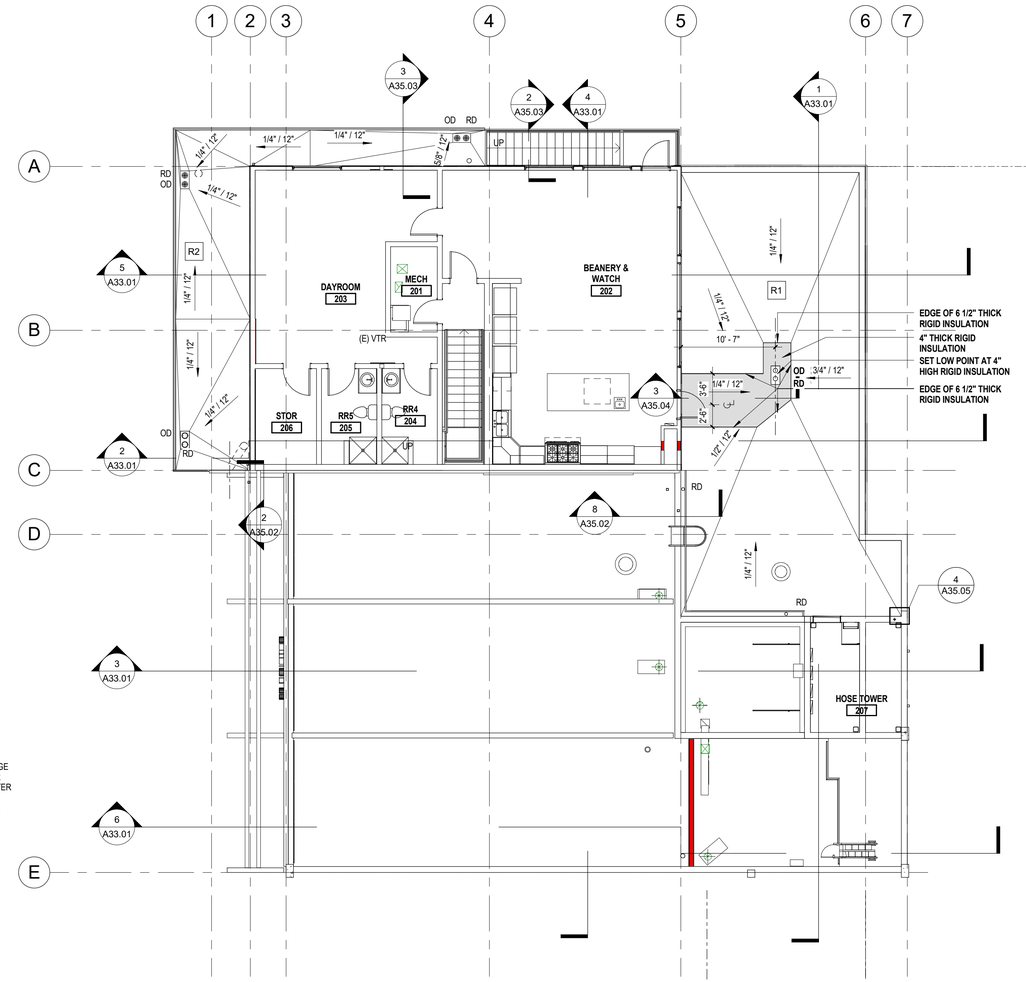
PROJECT # 2015137
BID SET
ISSUED: DECEMBER 1, 2016
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FLOOR PLANS

SHEET:
A21.11



N 2 LEVEL ROOF PLAN
1/8" = 1'-0"



N 1 LEVEL ROOF PLAN - MEZZANINE
1/8" = 1'-0"

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ROOF PLANS

SHEET:

A21.12

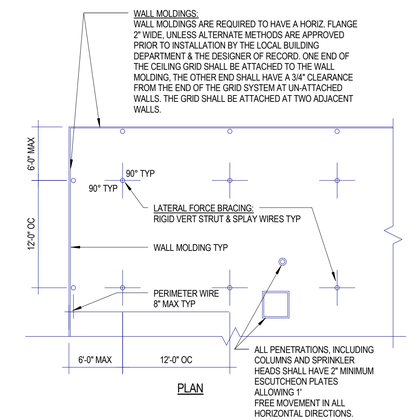
RCP LEGEND

- EXISTING GWB CEILING TO REMAIN
- EXISTING SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- EXISTING 4x6 T&G ROOF DECK
- **REMOVE OR DEMO EXISTING CEILING PER RCP DEMO KEY NOTES**
- **NEW GWB CEILING**
- **REPLACE ACOUSTICAL CEILING TILES**
- **ELECTRICAL INFRA RED HEATER**
- **EXHAUST, 2X2**
- **RETURN GRILLE, 2X2**
- **SUPPLY GRILLE, 2X2**
- **RECESSED DOWNLIGHT**
- **RECESSED TROFFER, 2X2**
- **RECESSED TROFFER, 2X4**
- **RECESSED TROFFER, 1X4**
- **SUSPENDED LIGHT**
- **SURFACE OR RECESSED LIGHT FIXTURE**

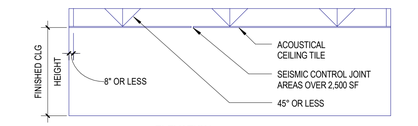
GENERAL NOTES - RCP

- ARCHITECTURAL RCP PROVIDED FOR COORDINATION PURPOSES ONLY. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR DETAILED SCOPE OF SYSTEMS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- CENTER ALL CEILING FIXTURES IN CEILING TILE, UNLESS NOTED OTHERWISE.
- REFER TO STRUCTURAL SHEETS FOR SEISMIC REQUIREMENTS
- SEISMIC BRACE ALL CEILING HUNG EQUIPMENT, SOFFITS AND ACOUSTICAL CEILINGS.
- REFER TO FINISH PLAN & FINISH SCHEDULE FOR MANUFACTURER, STYLE, COLOR, ETC.
- MAINTAIN EXISTING DRAFT STOPS WHERE OCCURRING.

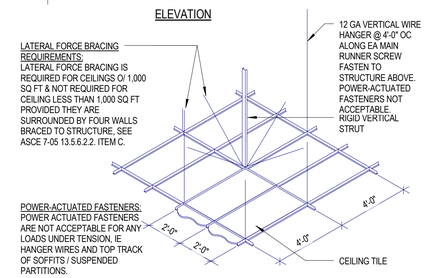
SEISMIC BRACING DETAILS



PLAN



ELEVATION



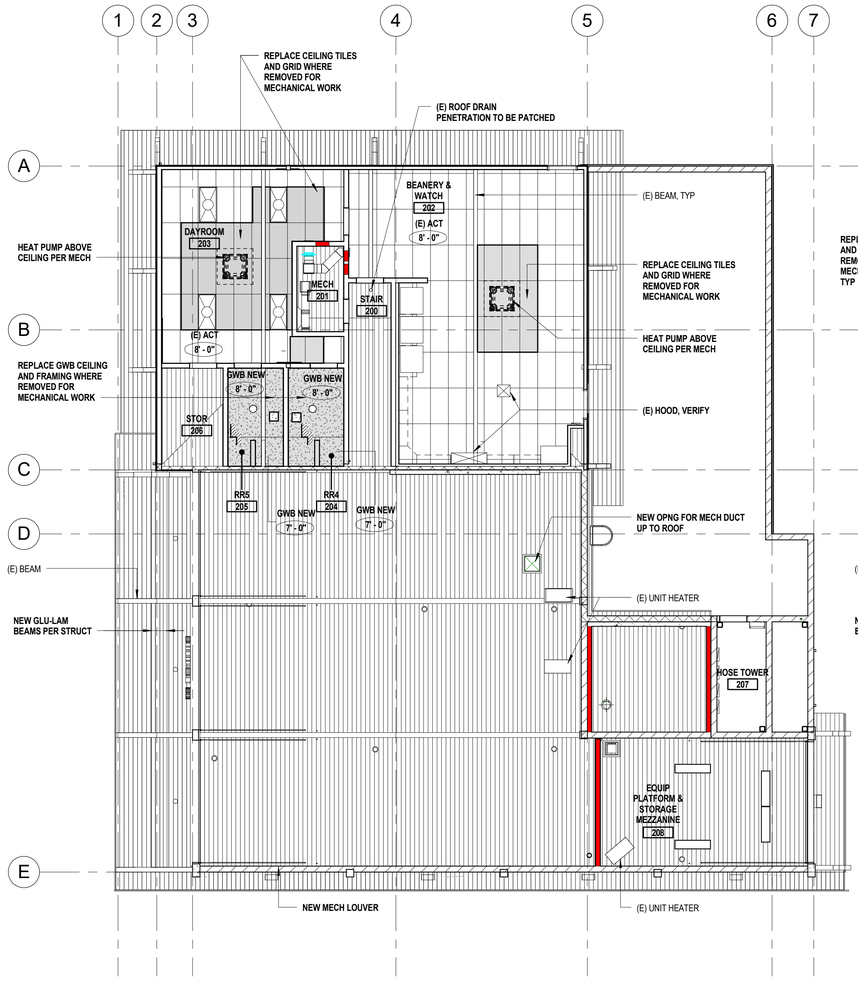
MAXIMUM RECOMMENDED LENGTHS FOR VERTICAL STRUTS FOR 1" METAL STUDS:
1 5/8" METAL STUD (25 GAGE) UP TO 6'-2"
2 1/2" METAL STUD (25 GAGE) UP TO 10'-6"

NOTES:

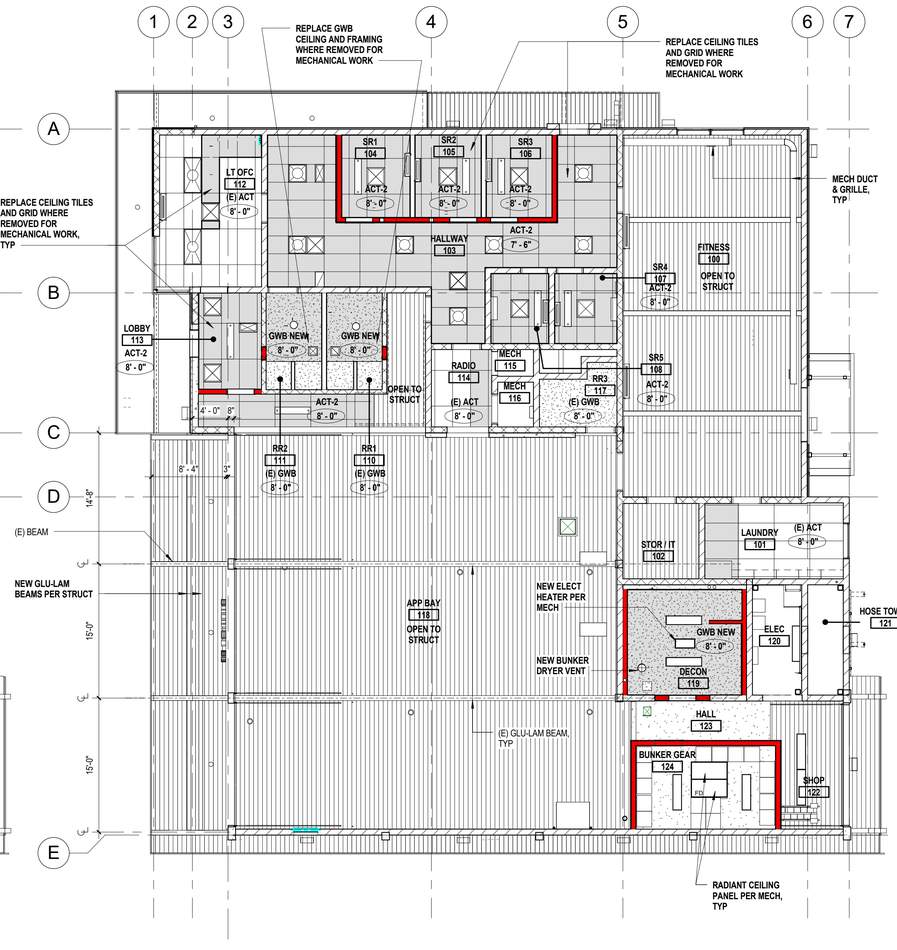
1. A STRUT, WITH STIFFNESS ADEQUATE TO RESIST THE VERTICAL LOADS IMPOSED, SHALL BE ATTACHED TO THE SUSPENSION SYSTEM & TO THE STRUCTURE ABOVE AT EACH BRACING LOCATION.
2. DIRECTION AND THE FIRST POINT SHALL BE WITHIN 6 FEET OF EACH WALL.
3. SPREADER (SPACER) BARS OR OTHER MEANS APPROVED BY THE LOCAL BUILDING DEPT. SHALL BE USED TO PREVENT ENDS OF MAIN BEAMS AT PERIMETER WALLS FROM SPREADING OPEN DURING A SEISMIC EVENT. PERIMETER WIRES SHALL NOT BE USED IN LIEU OF SPREADER BARS, SEE CISCA ZONES 3 - 4.
4. LIGHT FIXTURES & MECHANICAL SERVICES: ATTACH PER "GUIDELINES FOR SEISMIC RESTRAINT FOR DIRECT HUNG SUSPENDED CEILING ASSEMBLIES - SEISMIC ZONES 3 & 4", MAY 2004 (OR MOST CURRENT) BY CEILING & INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION (CISCA).
5. SUSPENDED CEILING INSTALLATION SHALL BE INSTALLED PER IBC 2009, ASTM C 635 & ASTM C636, ASCE 7-05 & CISCA ZONES 3-4.
6. SEISMIC SEPARATION JOINTS: FOR CEILING EXCEEDING 2,500 SQ FT, A SEISMIC JOINT OR FULL HEIGHT WALL PARTITION THAT BREAKS THE CEILING SHALL BE PROVIDED UNLESS ANALYSES ARE PERFORMED OF THE CEILING BRACING SYSTEM, CLOSURE ANGLES & PENETRATIONS TO PROVIDE SUFFICIENT CLEARANCE, SEE ASCE 7-05 13.5.6.2.2, ITEM D.

   CHANGES IN CEILINGS PLANES WILL REQUIRE POSITIVE BRACING, SEE ASCE 7-05 13.5.6.2.2 ITEM F.

   PARTITIONS THAT ARE TIED TO THE CEILING AND ALL PARTITIONS GREATER THAN 6 FEET IN HEIGHT SHALL BE LATERALLY BRACED TO THE STRUCTURE. BRACING SHALL BE INDEPENDENT OF THE CEILING SPLAY BRACING SYSTEM, SEE ASCE 7-05 13.5.8.1.



N 1 2 MEZZANINE - REFLECTED CEILING PLAN
1/8" = 1'-0"



N 1 1 LEVEL 1 - REFLECTED CEILING PLAN
1/8" = 1'-0"

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4794 REGISTERED ARCHITECT
DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 2015137

BID SET

ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

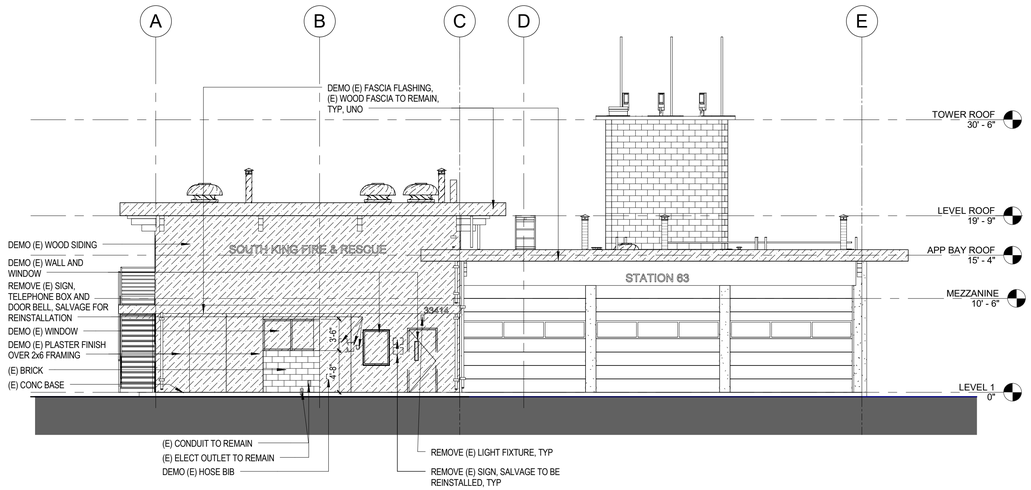
REFLECTED CEILING PLAN

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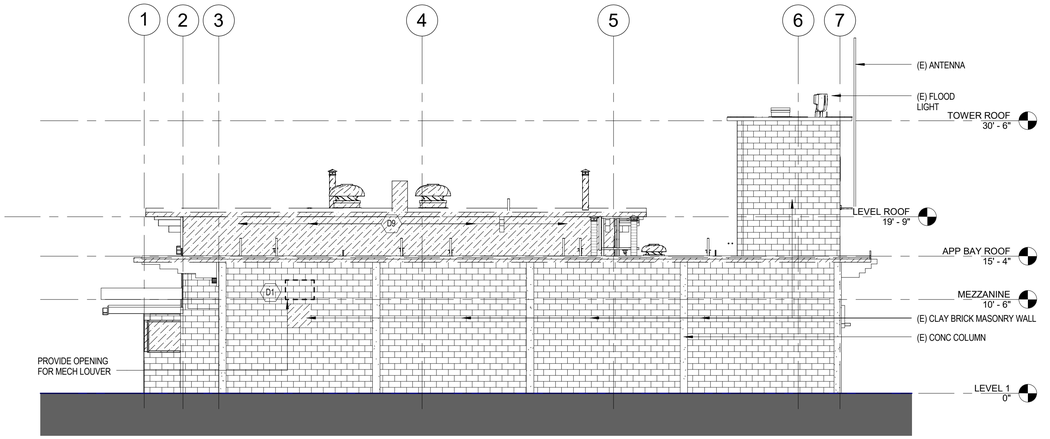
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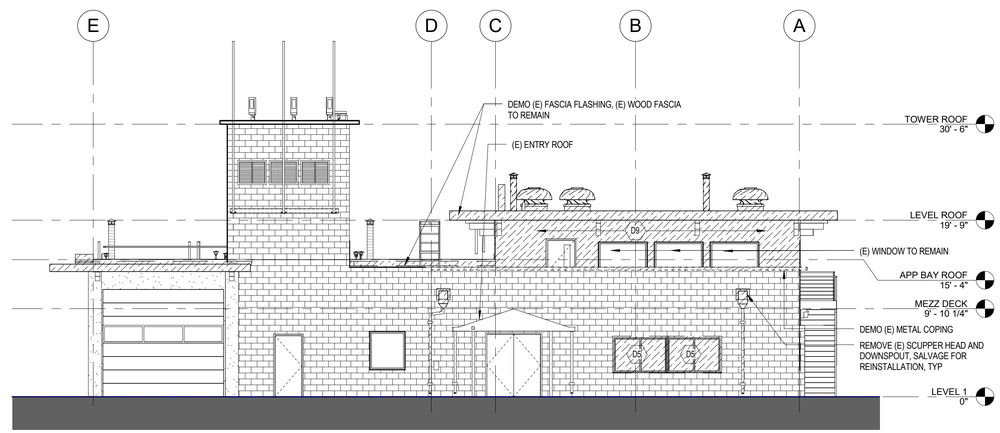
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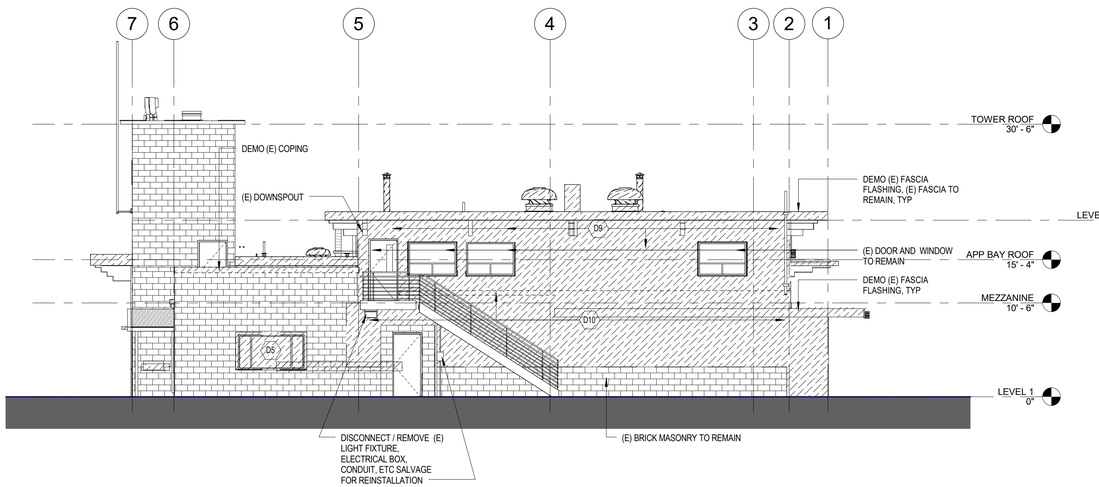
4 EXISTING EXTERIOR ELEVATION - WEST
1/8" = 1'-0"



3 DEMO EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0"



2 DEMO EXTERIOR ELEVATION - EAST
1/8" = 1'-0"



1 DEMO EXTERIOR ELEVATION - NORTH
1/8" = 1'-0"

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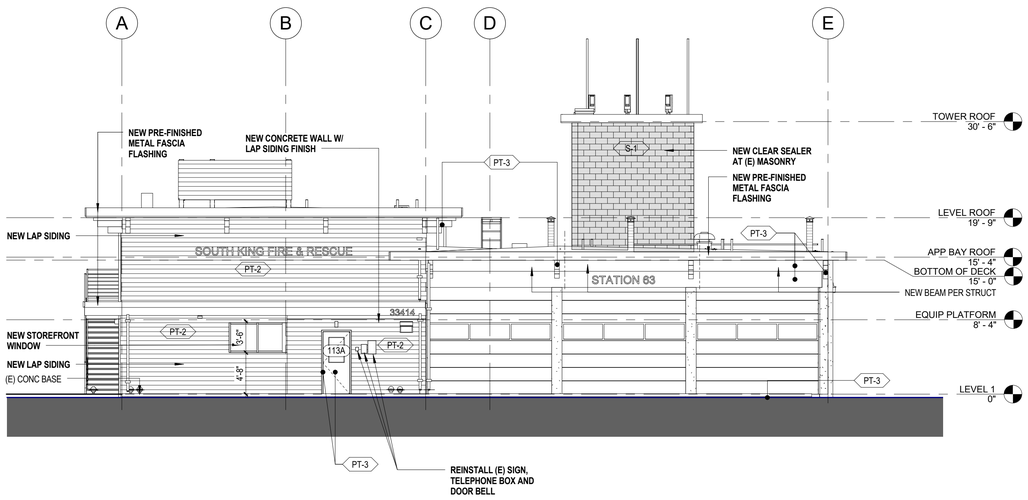
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

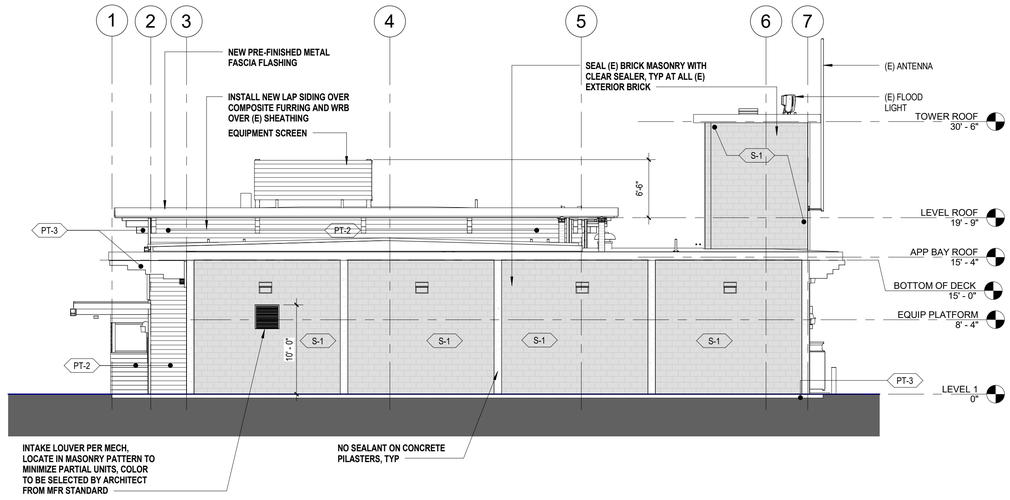
DEMO EXTERIOR ELEVATIONS

SHEET:

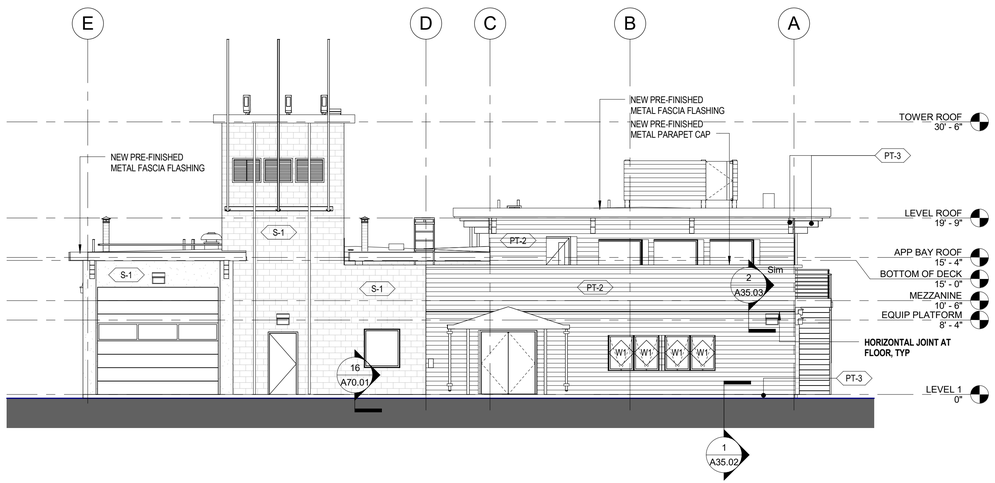
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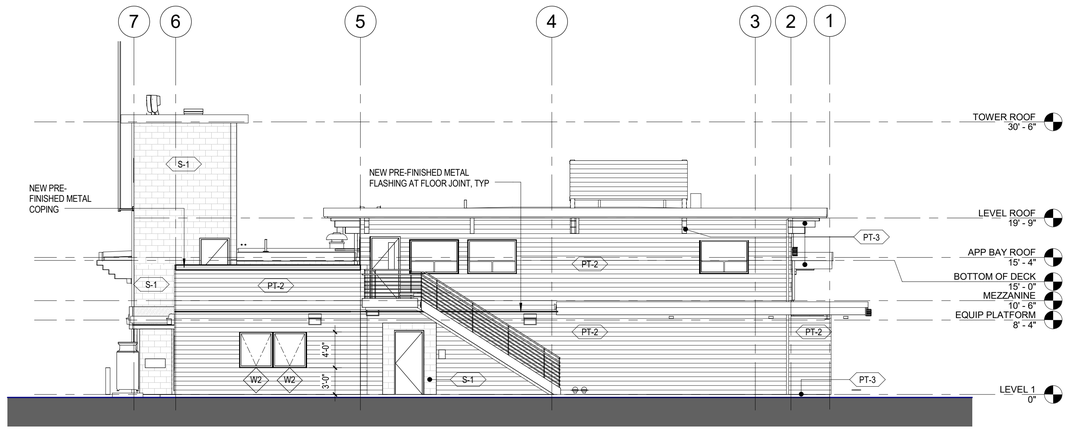
4 EXTERIOR ELEVATION - WEST
1/8" = 1'-0"



3 EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0"



2 EXTERIOR ELEVATION - EAST
1/8" = 1'-0"



1 EXTERIOR ELEVATION - NORTH
1/8" = 1'-0"

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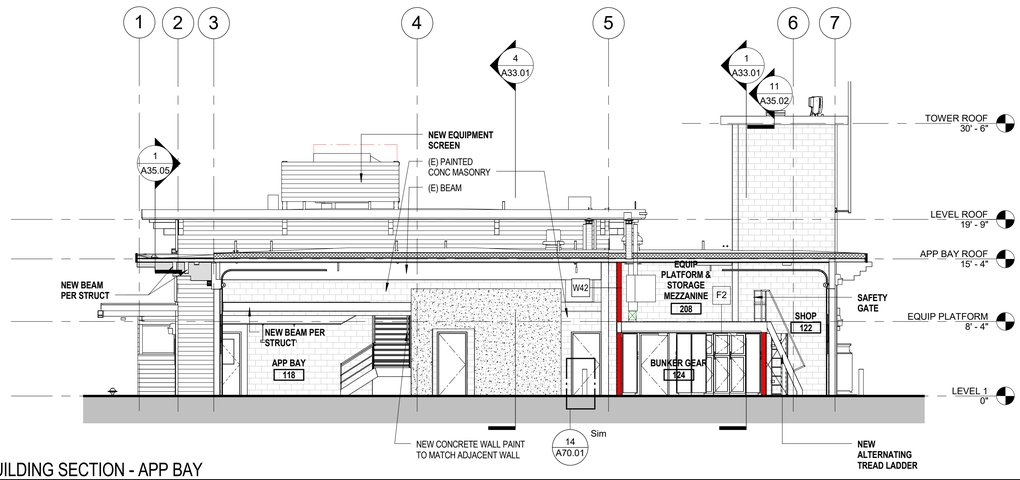
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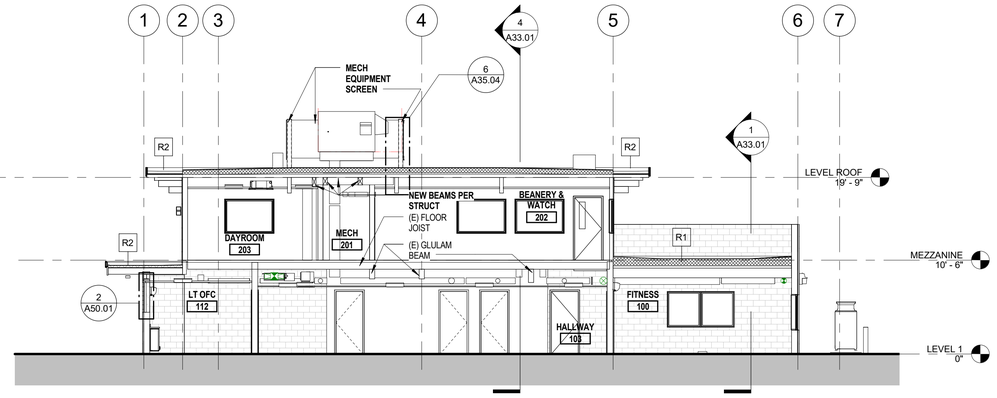
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EXTERIOR ELEVATIONS

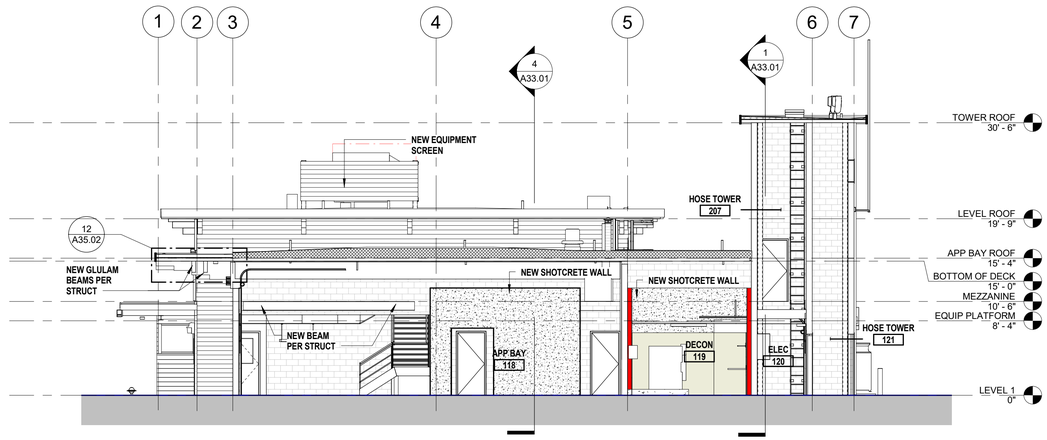
SHEET:
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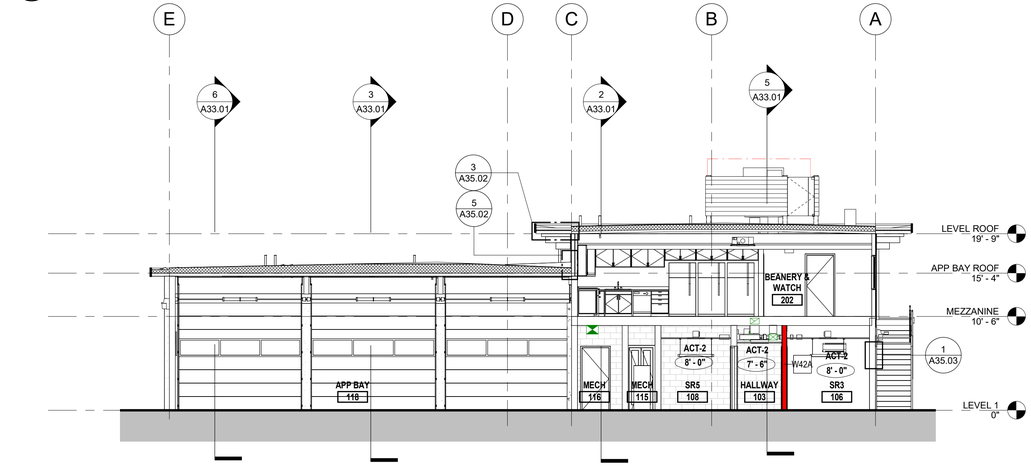
6 BUILDING SECTION - APP BAY
1/8" = 1'-0"



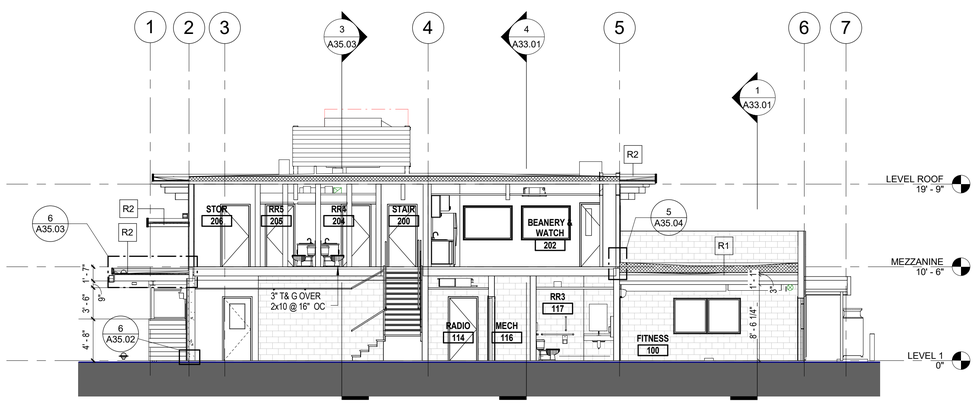
5 BUILDING SECTION - MEZZANINE HALLWAY
1/8" = 1'-0"



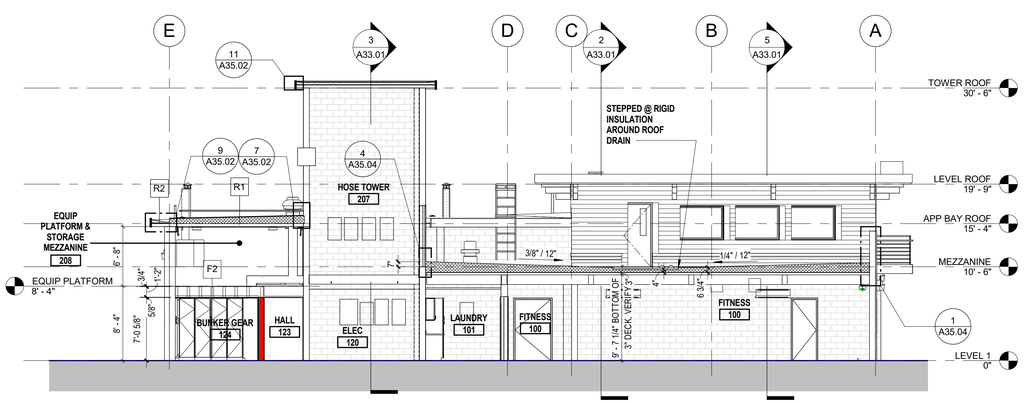
3 BUILDING SECTION - APP BAY THRU TOWER
1/8" = 1'-0"



4 BUILDING SECTION - APP BAY ROOF @ MEZZANINE WALL
1/8" = 1'-0"



2 BUILDING SECTION - MEZZANINE AT STAIR
1/8" = 1'-0"



1 BUILDING SECTION THRU TOWER
1/8" = 1'-0"

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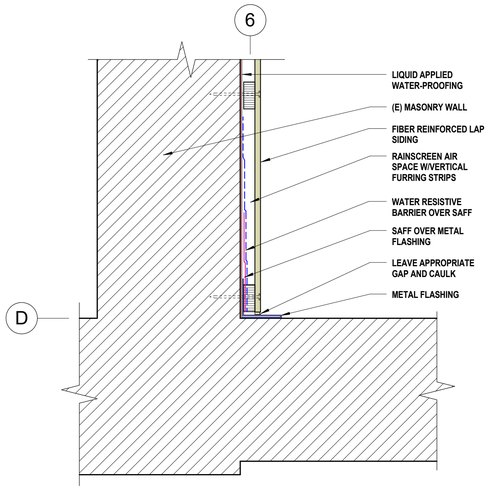
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

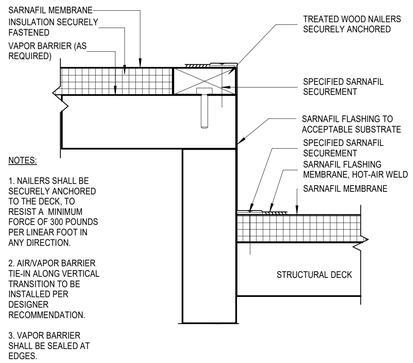
BUILDING SECTIONS

SHEET:

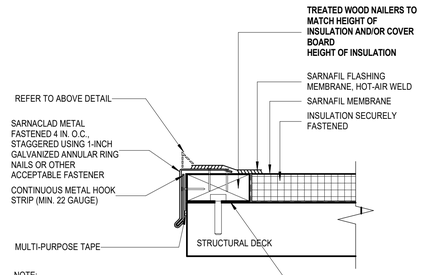
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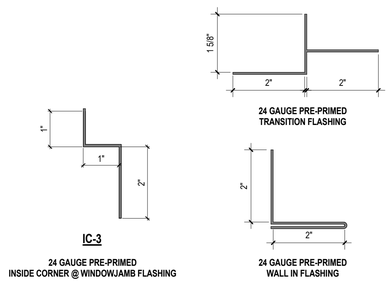
6 DETAIL - CAP SIDING
3" = 1'-0"



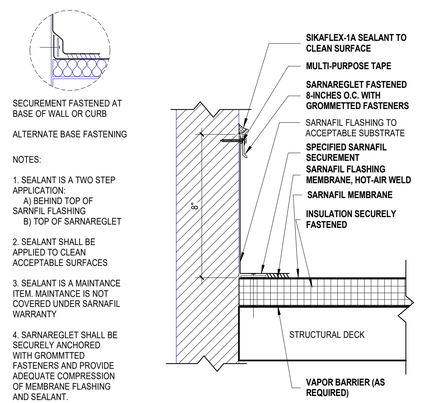
4 WALL TRANSITION
3" = 1'-0"



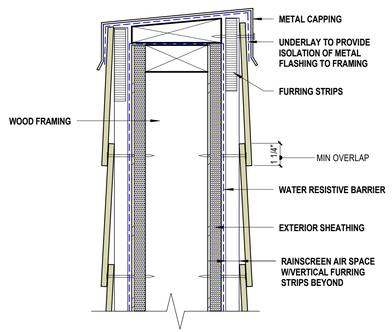
3 TYPICAL ROOF EDGE
3" = 1'-0"



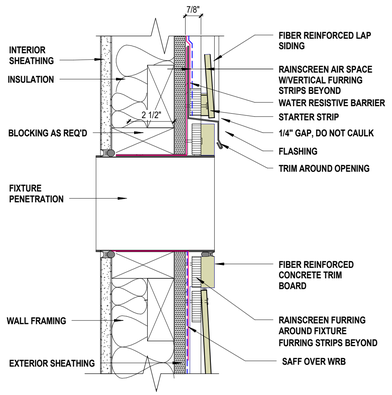
5 TYPICAL PRE-FINISHED METAL FLASHING DETAILS
6" = 1'-0"



2 TYP DETAIL - ROOFING AT WALL
3" = 1'-0"

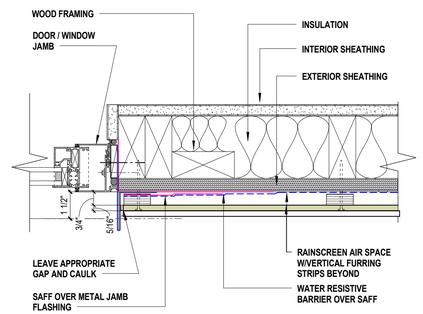


PARAPET - RAINSCREEN

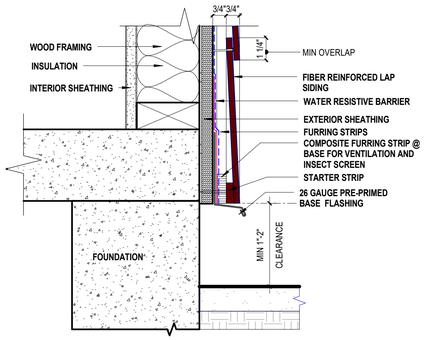


FIXTURE PENETRATION - RAINSCREEN

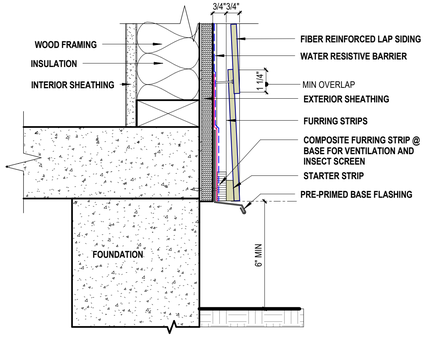
1 TYPICAL DETAIL - FRCP RAINSCREEN W/ METAL TRIMS
3" = 1'-0"



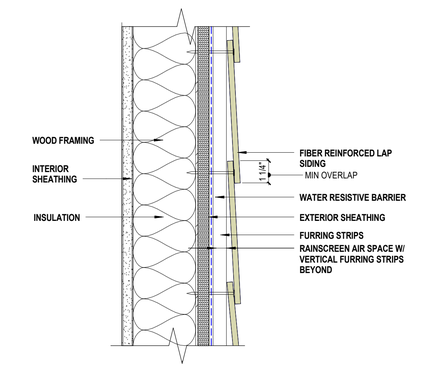
DOOR / WINDOW JAMB - RAINSCREEN



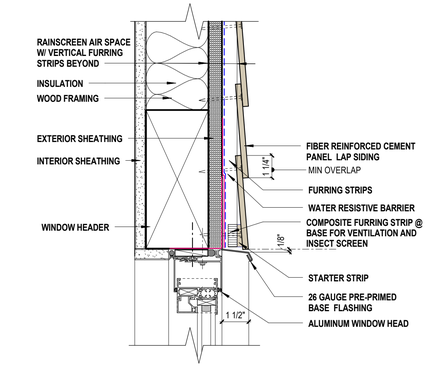
HARDSCAPE CLEARANCES



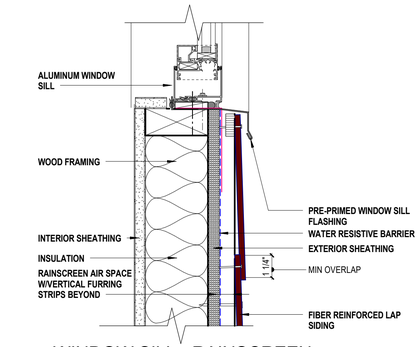
GRADE CLEARANCE - RAINSCREEN



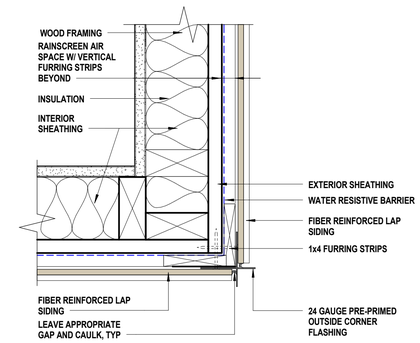
HORIZONTAL LAP VIEW - RAINSCREEN



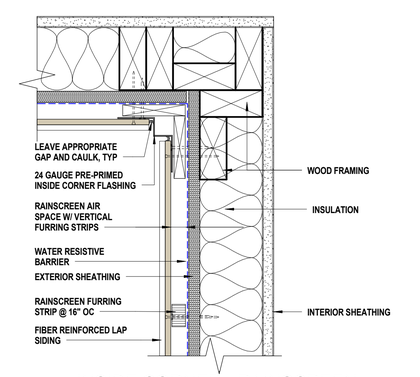
WINDOW/DOOR HEAD - RAINSCREEN



WINDOW SILL - RAINSCREEN



OUTSIDE CORNER - RAINSCREEN



INSIDE CORNER - RAINSCREEN

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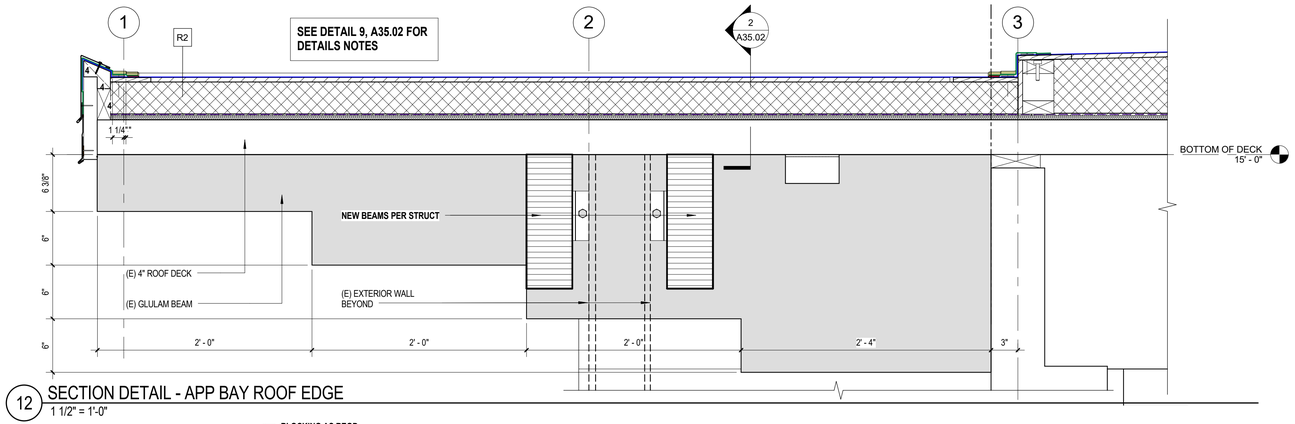
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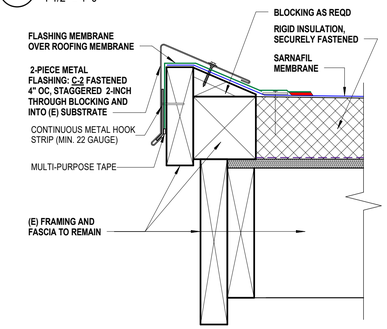
TYPICAL EXTERIOR DETAILS

SHEET:

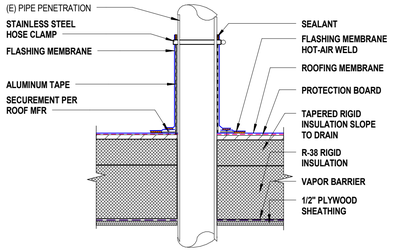
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12 SECTION DETAIL - APP BAY ROOF EDGE
1 1/2" = 1'-0"

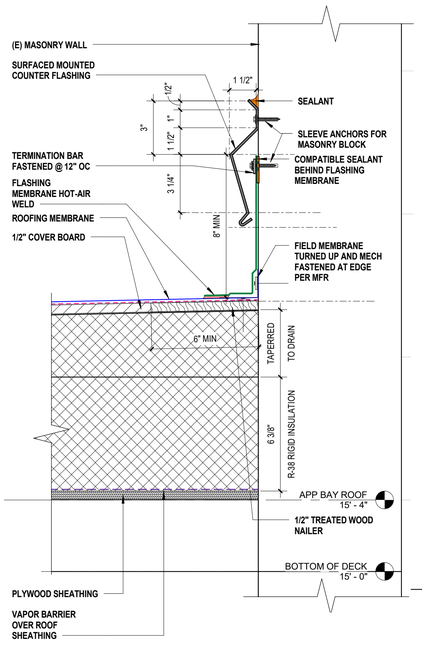


11 DETAIL - UPPER ROOF EDGE
3" = 1'-0"

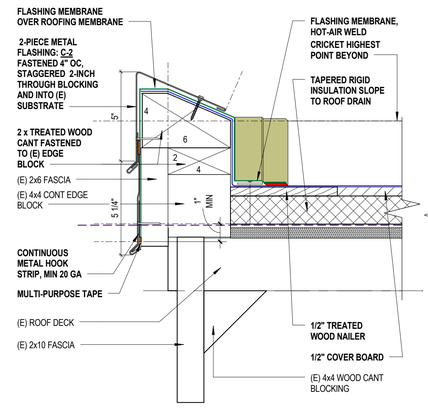


10 TYP DETAIL - FLASHING AT DUCT
1 1/2" = 1'-0"

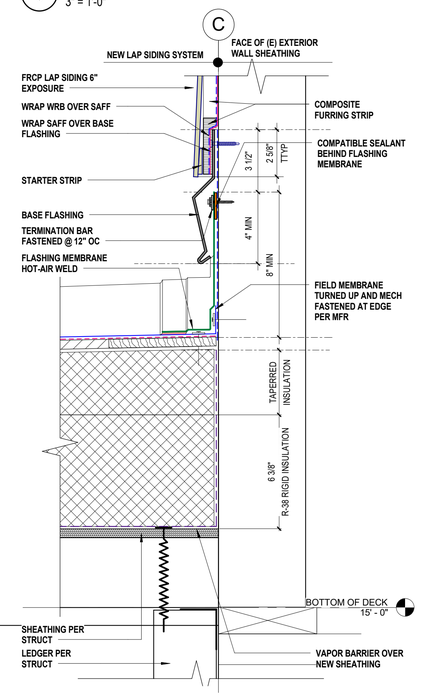
9 SECTION DETAIL - NEW ROOF DRAIN @ APP BAY ROOF
3" = 1'-0"



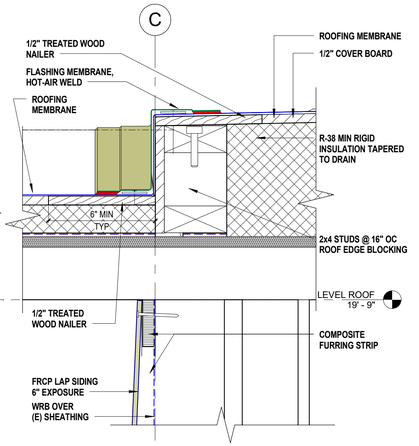
7 DETAIL - APP BAY ROOF @ WALL
3" = 1'-0"



3 SECTION DETAIL - HIGH ROOF EDGE
3" = 1'-0"

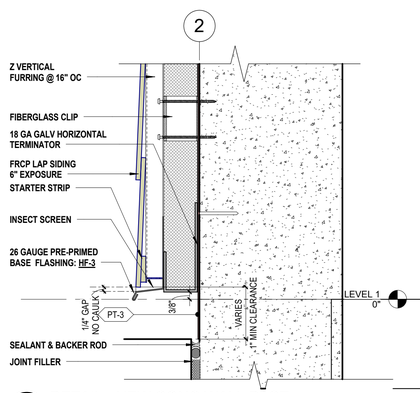


5 DETAIL - ROOF @ END WALL
3" = 1'-0"

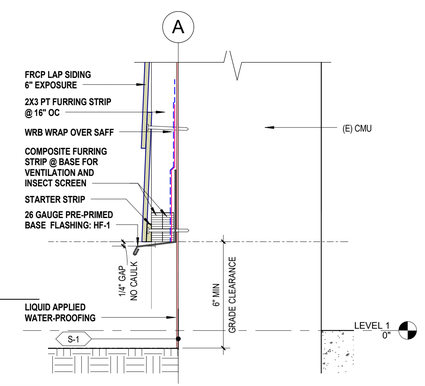


2 DETAIL - ROOF OVER HANG @ WALL
3" = 1'-0"

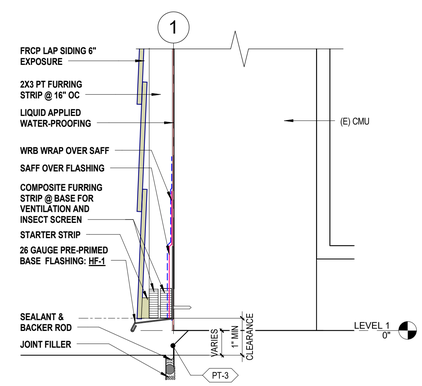
8 DETAIL - EAST APP BAY ROOF EDGE
3" = 1'-0"



6 DETAIL - NEW CONC WALL BASE
3" = 1'-0"



4 TYPICAL DETAIL - SIDING BASE @ GRADE
3" = 1'-0"



1 TYPICAL DETAIL - SIDING BASE @ PAVER
3" = 1'-0"

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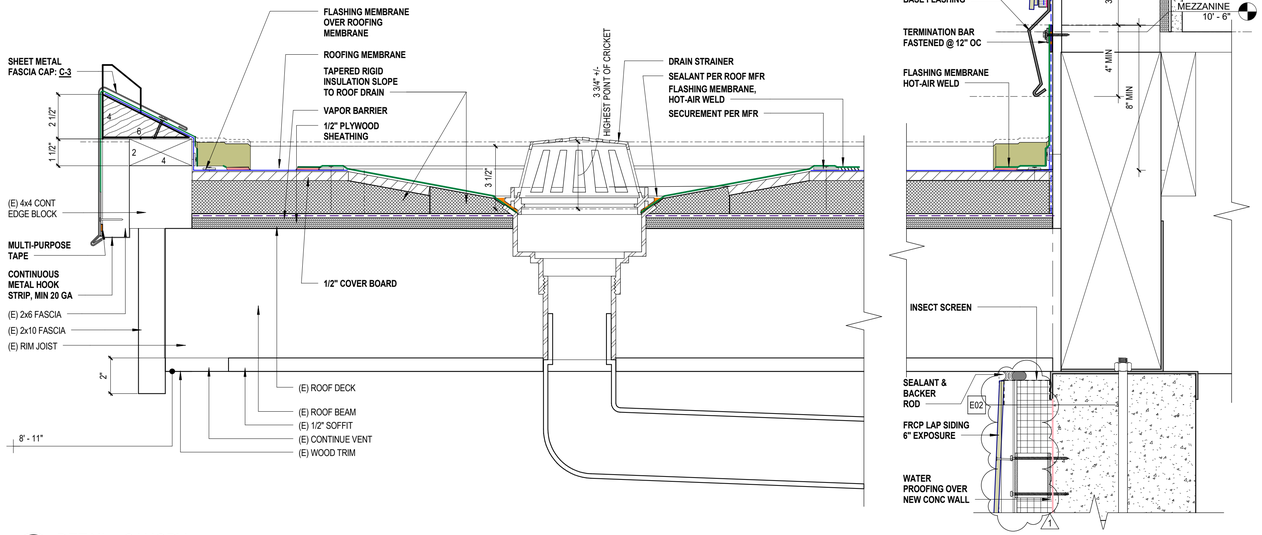
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

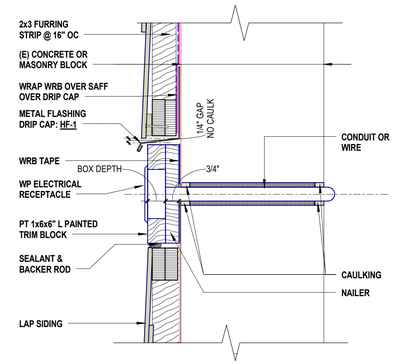
EXTERIOR DETAILS

SHEET:

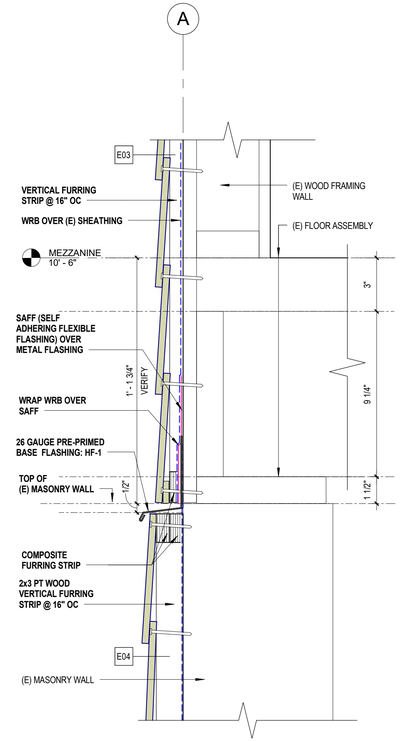
A35.02



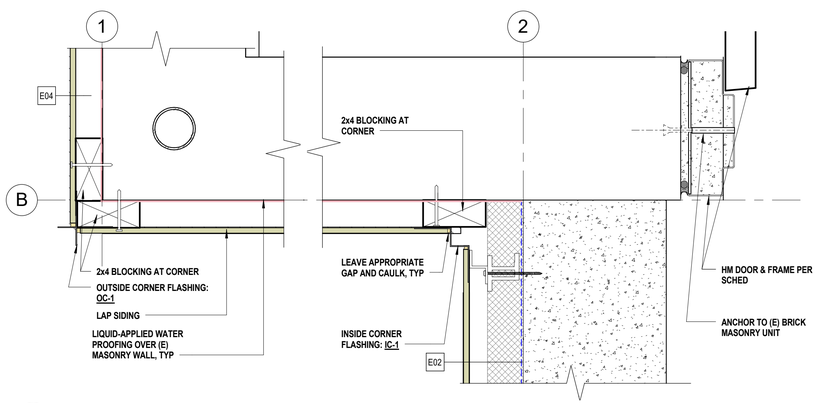
6 DETAIL - CANOPY
3" = 1'-0"



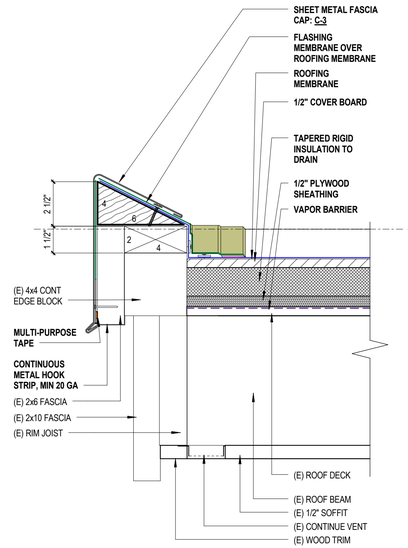
4 TYP ELECTRICAL BOX DETAIL
3" = 1'-0"

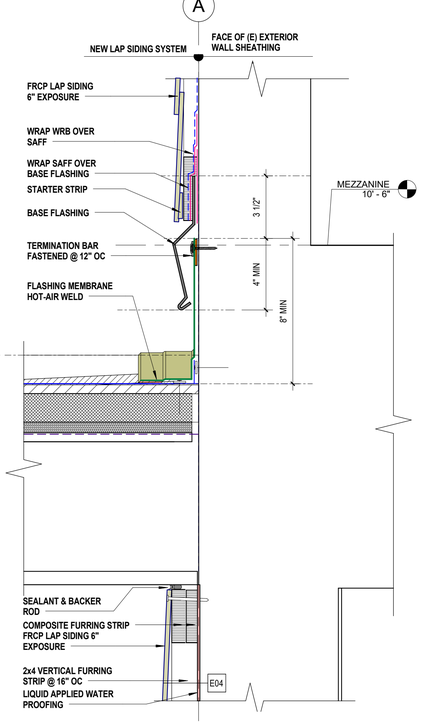


2 TYPICAL DETAIL - FLOOR JOINT
3" = 1'-0"

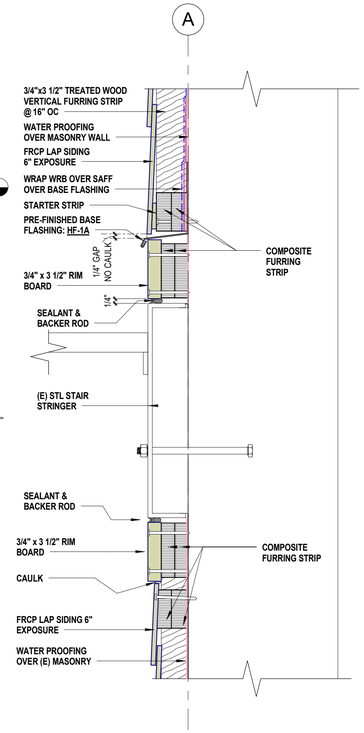


5 ENLARGED PLAN - EXTERIOR MASONRY WALL
3" = 1'-0"





3 DETAIL - CANOPY ROOF @ FLOOR
3" = 1'-0"



1 DETAIL - STAIR STRINGER
3" = 1'-0"

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4794 REGISTERED ARCHITECT
DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 2015137

BID SET

ISSUED: DECEMBER 1, 2016

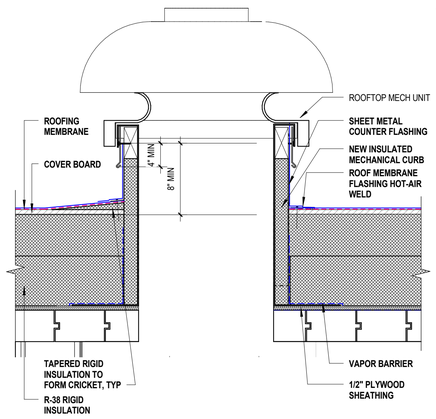
REVISION SCHEDULE

1	PERMIT REVISION	11/03/2016

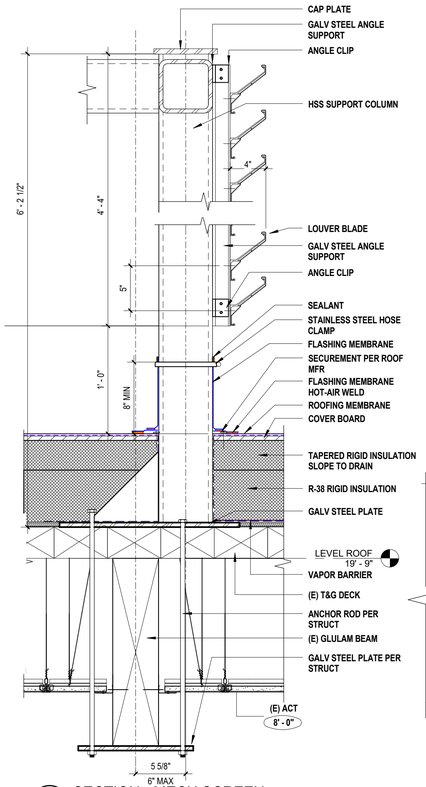
EXTERIOR DETAILS

SHEET:

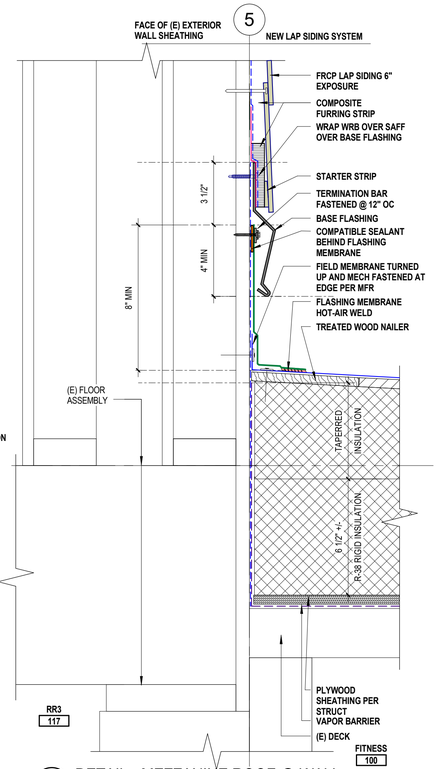
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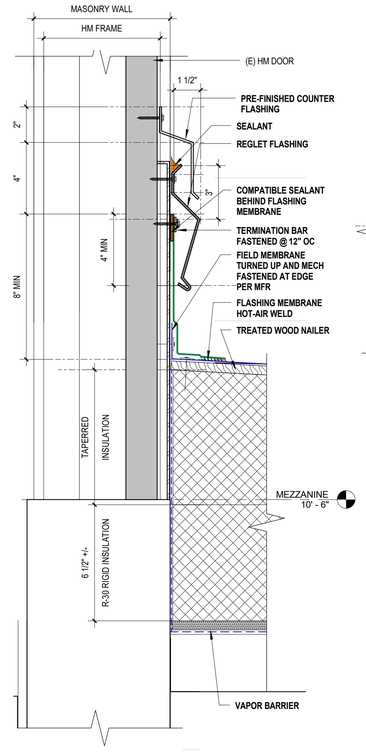
7 TYPICAL DETAIL - MECH CURB
1 1/2" = 1'-0"



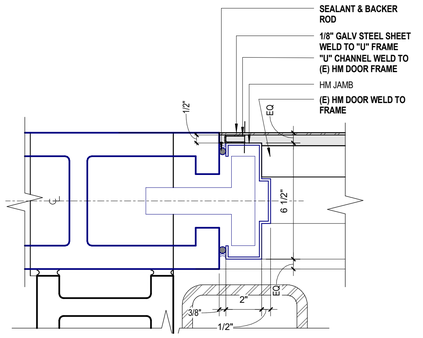
6 SECTION - MECH SCREEN
1 1/2" = 1'-0"



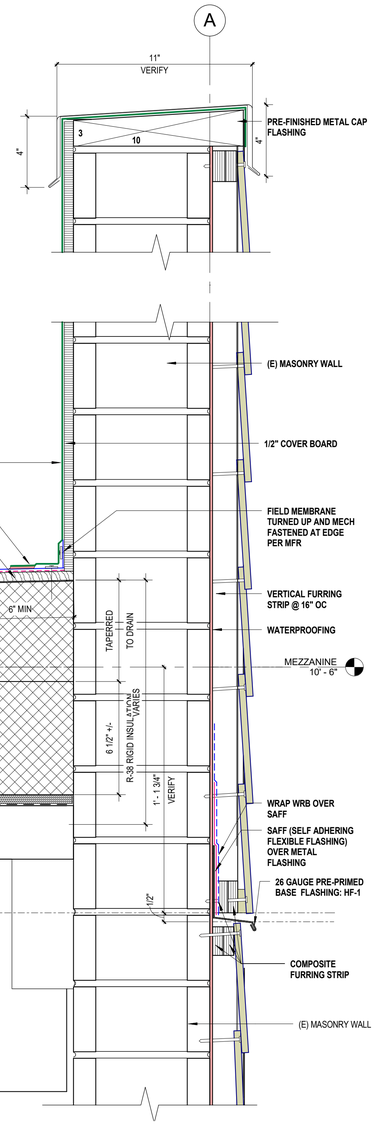
5 DETAIL - MEZZANINE ROOF @ WALL
3" = 1'-0"



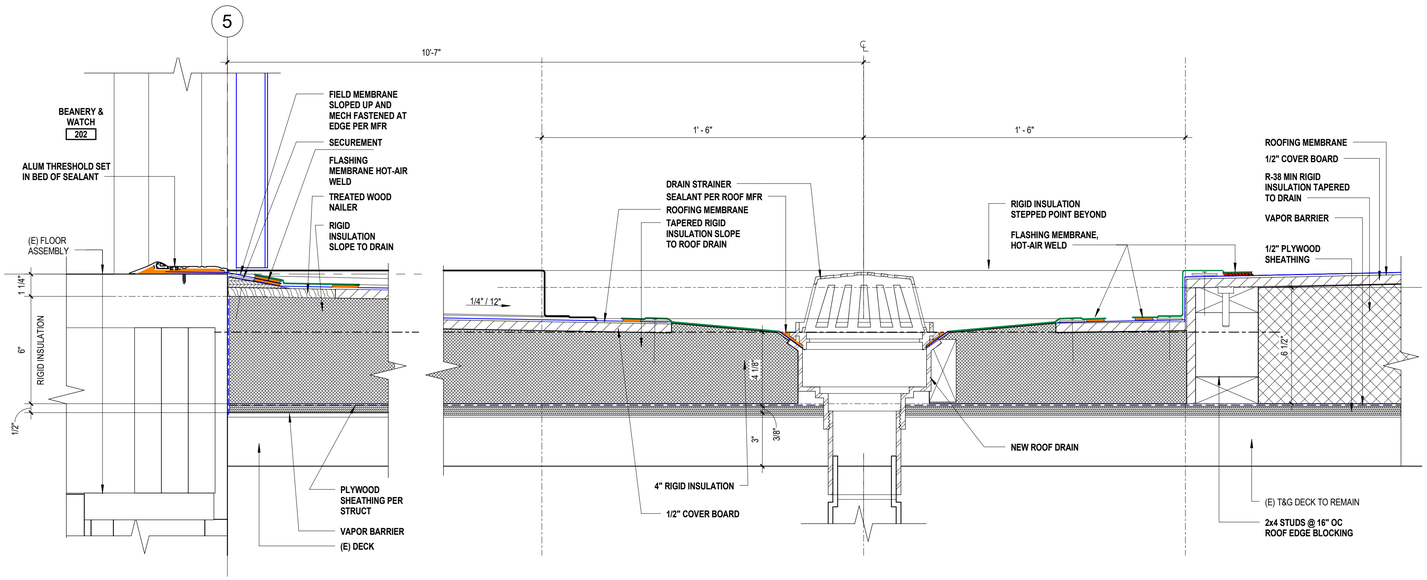
4 DETAIL - MEZZ ROOF @ TOWER WALL
3" = 1'-0"



2 TOWER - HM JAMB DETAIL
3" = 1'-0"



1 SECTION DETAIL - TYP PARAPET WALL
3" = 1'-0"



3 DETAIL - DOOR SILL
3" = 1'-0"

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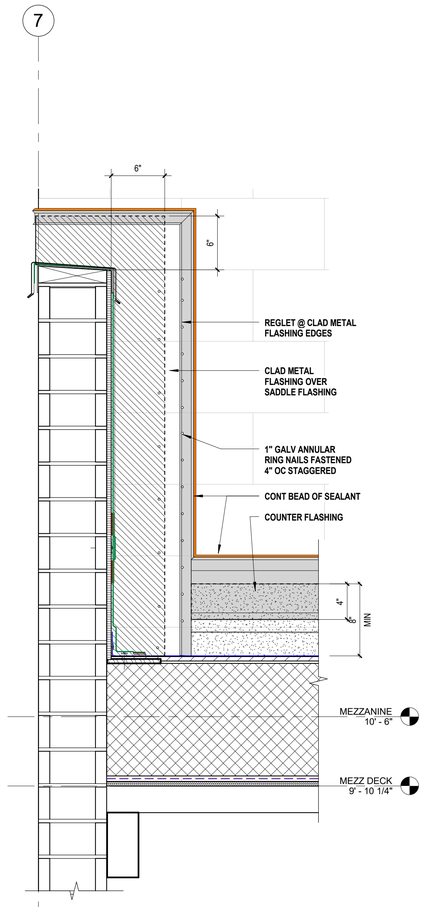
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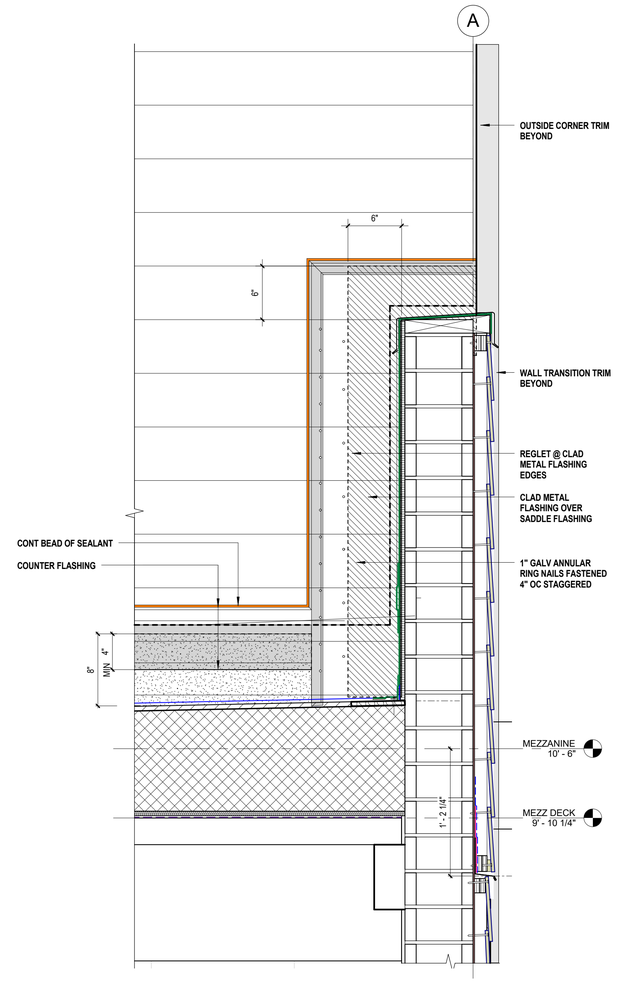
EXTERIOR DETAILS

SHEET:

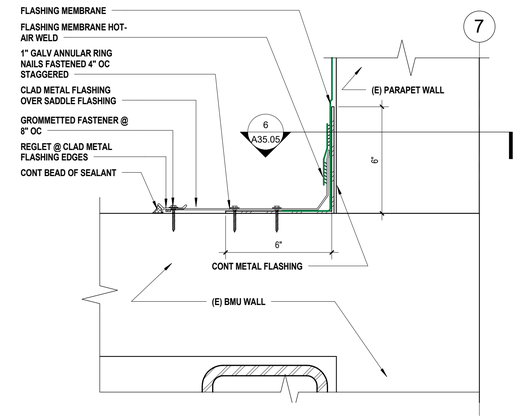
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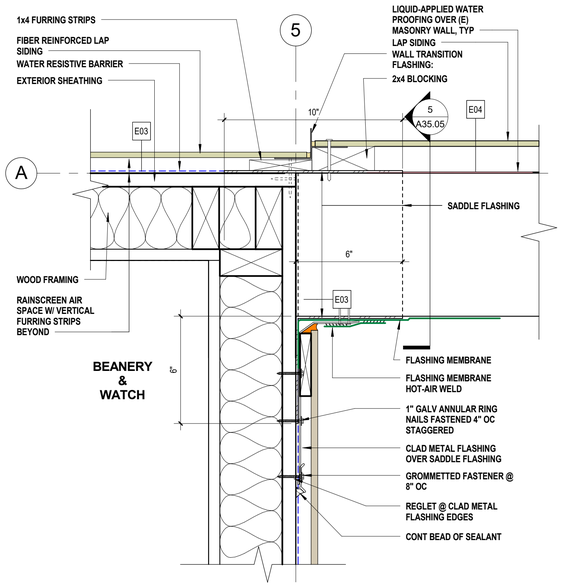
6 SADDLE FLASHING @ PARAPET WALL & MASONRY WALL
1 1/2" = 1'-0"



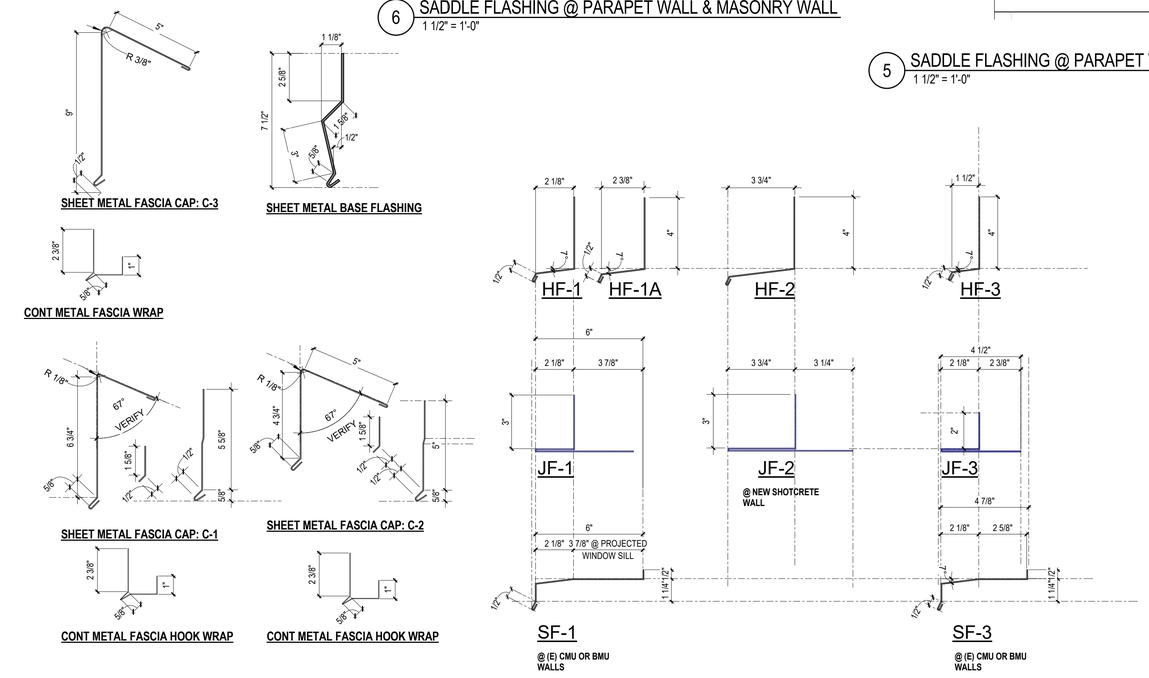
5 SADDLE FLASHING @ PARAPET WALL & FRCP
1 1/2" = 1'-0"



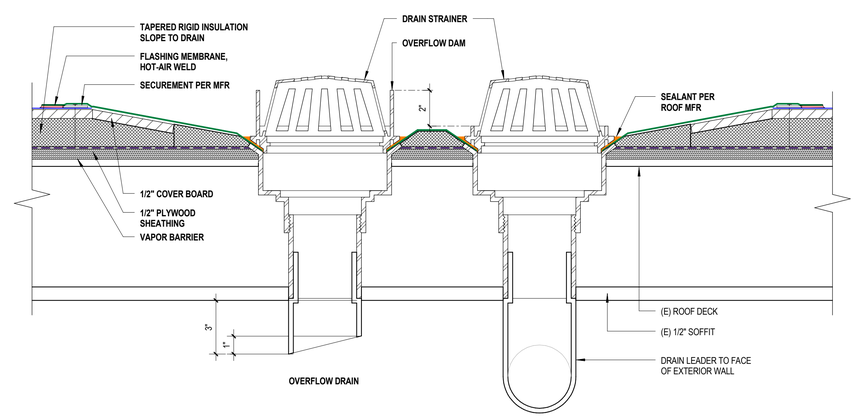
4 PLAN DETAIL - PARAPET WALL @ BRICK MASONRY WALL
3" = 1'-0"



3 PLAN DETAIL - PARAPET @ FRCP
3" = 1'-0"



2 SHEET METAL DETAILS
3" = 1'-0"



1 DETAIL - CANOPY DRAINS
3" = 1'-0"

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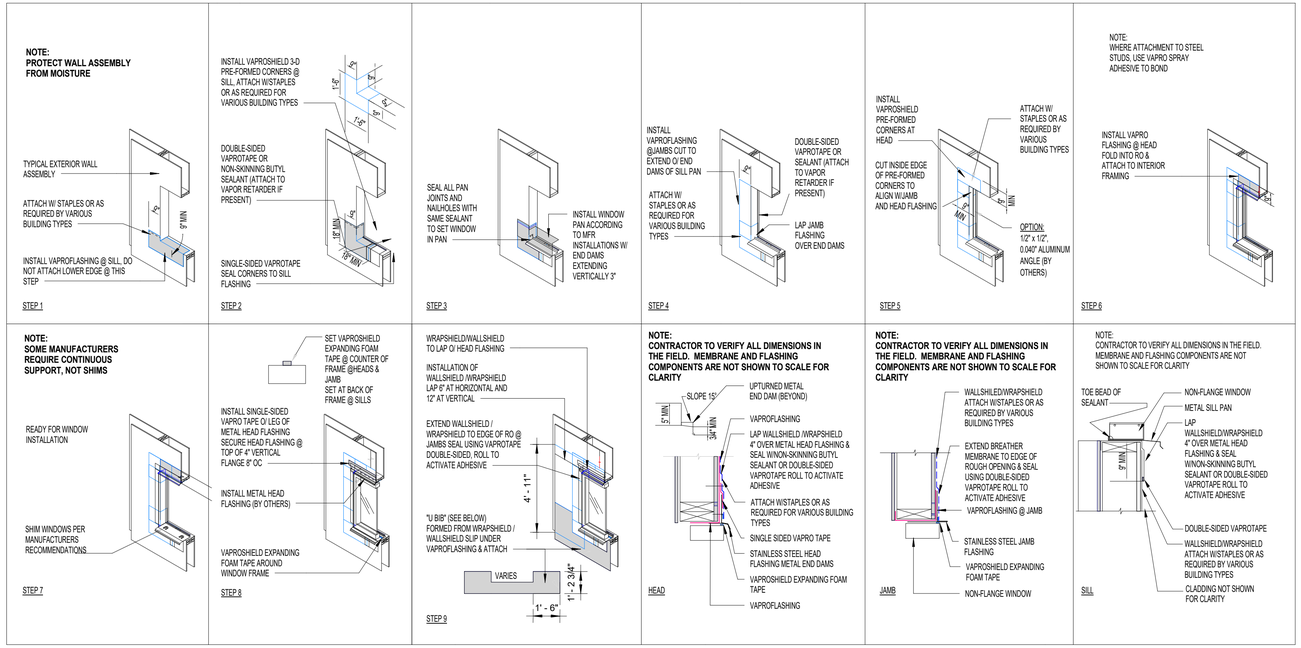
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REVISION SCHEDULE

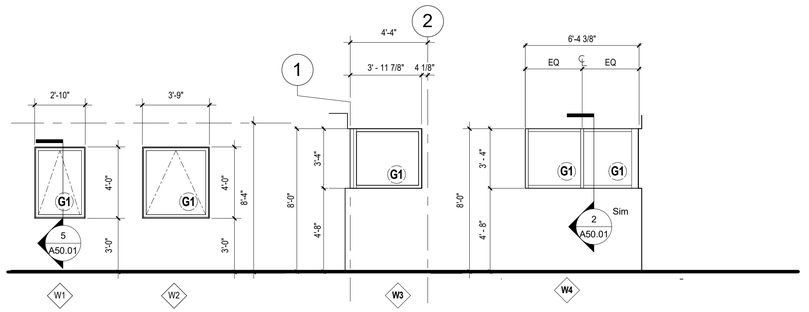
EXTERIOR DETAILS

SHEET:

A35.05



10 ROUGH OPENING FLASHING SEQUENCES
1/4" = 1'-0"

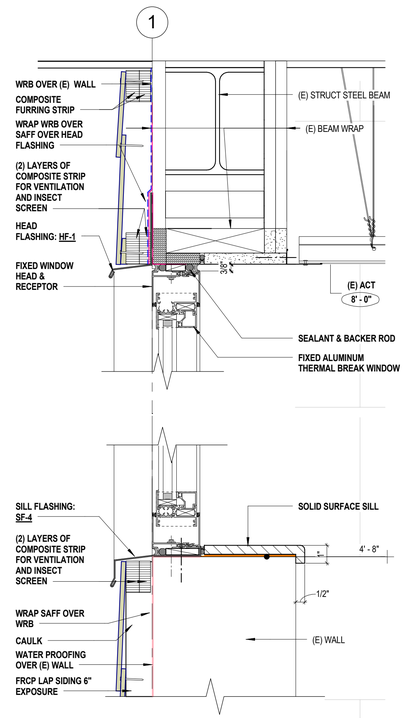


3 WINDOW ELEVATIONS
1/4" = 1'-0"

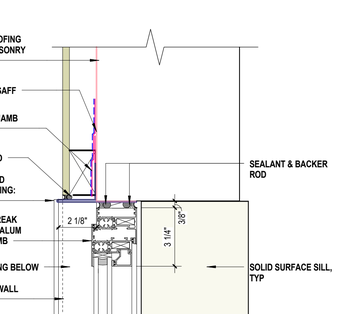
GLAZING LEGEND

G-1 **SEALED INSULATING GLASS UNITS: VISION GLAZING LOW-E, MIN U-VALUE: 0.28**

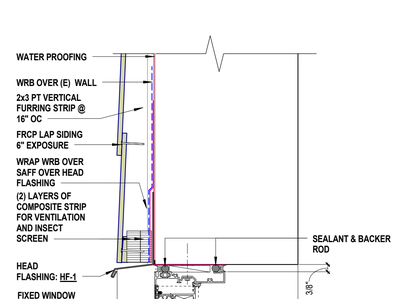
G-2 **SINGLE SAFETY GLAZING**



2 WINDOW HEAD & SILL DETAIL - FIXED
3" = 1'-0"

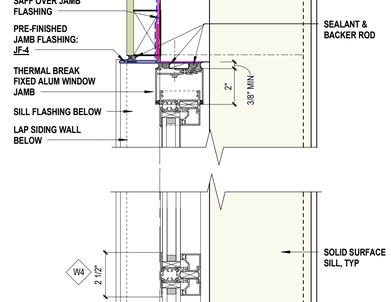


7 JAMB DETAIL - PROJECTED
3" = 1'-0"



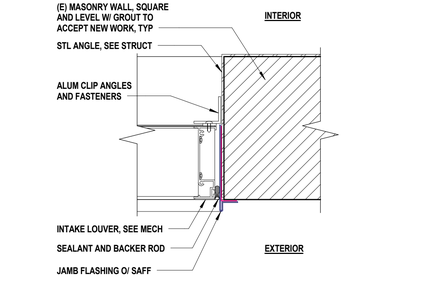
6 MULLION - PROJECTED
3" = 1'-0"

5 WINDOW HEAD & SILL - PROJECTED
3" = 1'-0"

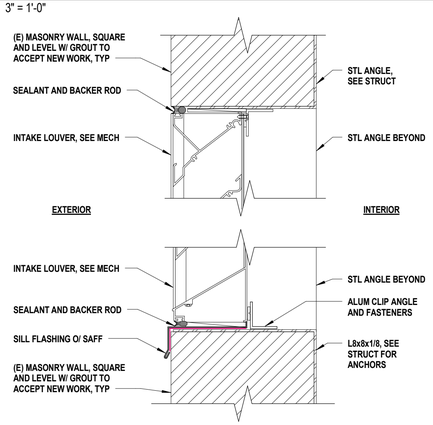


4 WINDOW JAMB DETAILS - FIXED
3" = 1'-0"

1 WINDOW JAMB DETAIL - FIXED
3" = 1'-0"



9 DETAIL - LOUVER JAMB
3" = 1'-0"



8 DETAIL - LOUVER HEAD/SILL
3" = 1'-0"

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FEDERAL WAY, WA

PROJECT # 2015137

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REVISION SCHEDULE

WINDOW SCHEDULE AND DETAILS

SHEET:

A50.01

ROOM FINISH SCHEDULE

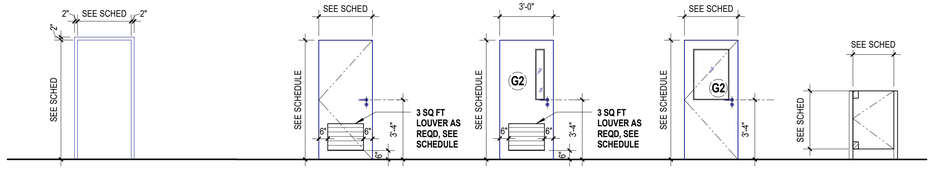
ROOM INFORMATION		FINISH INFORMATION, TYP. U.N.O.							
		WALL							
NUMBER	NAME	NORTH	EAST	SOUTH	WEST	BASE	FLOOR	CEILING	COMMENTS
100	FITNESS					EXIST	EXIST	EXIST	NO NEW WORK
101	LAUNDRY					EXIST	EXIST	EXIST	NO NEW WORK
102	STOR / IT					EXIST	EXIST	EXIST	NO NEW WORK
103	HALLWAY					RB-1	WOM-1	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED; INSTALL FLOOR TRANSITIONS AT NEW FLOORING; PAINT PT-1 WHERE ALL NEW WALLS OCCUR, SEE DRAWINGS
104	SR1	PT-1	PT-1	PT-1	PT-1	RB-1	CPT-1	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED; INSTALL FLOOR TRANSITIONS AT NEW FLOORING
105	SR2	PT-1	PT-1	PT-1	PT-1	RB-1	CPT-1	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED; INSTALL FLOOR TRANSITIONS AT NEW FLOORING
106	SR3	PT-1	PT-1	PT-1	PT-1	RB-1	CPT-1	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED; INSTALL FLOOR TRANSITIONS AT NEW FLOORING
107	SR4					EXIST	EXIST	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED
108	SR5					EXIST	EXIST	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED
109	STOR					EXIST	EXIST	EXIST	NO NEW WORK
110	RR1					EXIST	EXIST	GWB-1**	** REPLACE AND PATCH GWB CEILING, PAINT TO MATCH EXISTING
111	RR2					EXIST	EXIST	GWB-1**	* REPLACE ATC TILES AND GRID AS REQUIRED
112	LT OFC					RB-1	CPT-1	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED
113	LOBBY			PT-1	PT-1	RB-1***	EXIST	EXIST	*** WHERE INDICATED ON PLAN
114	RADIO					EXIST	EXIST	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED
115	MECH					EXIST	EXIST	EXIST	NO NEW WORK
116	MECH					EXIST	EXIST	EXIST	NO NEW WORK
117	RR3	PT-1	PT-1	PT-1	PT-1	VSF-1	VSF-1	EXIST	*** PATCH, SAND AND PAINT EXISTING WALLS; INSTALL METAL FLOOR TRANSITION, SEE DETAIL 7 ON A60.01 FOR REFERENCE
118	APP BAY					EXIST	EXIST/CONC-1	EXIST	PAINT PT-1 WHERE ALL NEW CONCRETE AND STUD WALLS OCCUR; SEE DRAWINGS
119	DECON	FRP-1/PT-1	FRP-1/PT-1	FRP-1/PT-1	FRP-1/PT-1	RB-1	CONC-1	GWB-1	
120	ELEC					EXIST	EXIST	EXIST	NO NEW WORK
121	HOSE TOWER					EXIST	EXIST/CONC-1	EXIST	
122	SHOP					EXIST/RB-1	EXIST	EXIST	
123	HALL					EXIST/RB-1	EXIST	EXIST/EXP	
124	BUNKER GEAR	PT-1	PT-1		PT-1	RB-1	EXIST	EXP	
200	STAIR					EXIST	EXIST	EXIST	NO NEW WORK
201	MECH					EXIST	EXIST	EXP	
202	BEANERY & WATCH					EXIST	EXIST	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED
203	DAYROOM					EXIST	EXIST	ATC*	* REPLACE ATC TILES AND GRID AS REQUIRED
204	RR4					EXIST	EXIST	GWB-1**	** REPLACE AND PATCH GWB CEILING, PAINT TO MATCH EXISTING
205	RR5					EXIST	EXIST	GWB-1**	** REPLACE AND PATCH GWB CEILING, PAINT TO MATCH EXISTING
206	STOR					EXIST	EXIST	EXIST	NO NEW WORK
207	HOSE TOWER					EXIST	EXIST	EXIST	
208	EQUIP PLATFORM & STORAGE MEZZANINE					RB-1	PLYWOOD STAINED	EXP	

FINISH LEGEND

TAG	MATERIAL	MANUFACTURER	PRODUCT	NOTES
EXTERIOR WALL				
PT-2	PAINT	SEE SPEC	SEE SPEC	PROVIDE PAINT SUITABLE FOR FIBER CEMENT PANELS, COLOR TO BE SELECTED BY ARCHITECT
PT-3	PAINT	SEE SPEC	SEE SPEC	PROVIDE PAINT SUITABLE FOR SUBSTRATE, COLOR TO BE SELECTED BY ARCHITECT
S-1	CLEAR SEALER	SEE SPEC SECTION 071900	SEE SPEC SECTION 071900	-
WALL				
FRP-1	FIBER REINFORCED PANEL	SEE SPEC	SEE SPEC	TOP AND BASE CAPS
HPL-1	WALL PROTECTION	DECOMETAL BY FORMICA	M5307, PLEX UMBRA	4' - 0" FROM FINISH FLOOR
PT-1	PAINT	MATCH EXISTING PAINT	-	TYPICAL WALLS
FLOOR				
CONC-1	CONCRETE SEALER	SEE SPEC	SEE SPEC	-
CPT-1	CARPET	SHAW CONTRACT	SCRIBE BROADLOOM 5A215; COLOR: BISTRE	-
RSF-1	RESILIENT SHEET FLOOR WITH 6" SELF COVE	JOHNSONITE	RUBY HETEROGENOUS SHEET; COLOR: TBD	INCLUDE METAL COVE CAP
WOM-1	WALK OFF MAT	SHAW CONTRACT	PORTAL TILE - ALL ACCESS 5T035; COLOR: EBONY	-
BASE				
RB-1	RUBBER BASE	ROPPE	700 SERIES; TYPE TP - 1/8"; COLOR: 100 BLACK	4"
COUNTERTOP				
PLAM-1	PLASTIC LAMINATE COUNTERTOP	FORMICA OR WILSONART	STANDARD COLOR SELECTED BY ARCHITECT	4" BACKSPLASH AT RESTROOM COUNTERTOP

DOOR SCHEDULE

DOOR #	ROOM NUMBER	ROOM NAME	DOOR INFORMATION TYPE	MATERIAL	FINISH	GLAZING	HEIGHT	WIDTH	THICKNESS	FRAME INFORMATION TYPE	MATERIAL	FINISH	FIRE RATING	HARDWARE GROUP	COMMENTS
104A	104	SR1	A	WD	ST-1	NA	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	20 MIN	HW-01	
105A	105	SR2	A	WD	ST-1	NA	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	20 MIN	HW-01	
106A	106	SR3	A	WD	ST-1	NA	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	20 MIN	HW-01	
112A	112	LT OFC	A	WD	ST-1	NA	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	20 MIN	HW-03	
113A	113	LOBBY	C	HM/GLAZ	PT-3	G1	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	NA	HW-05	
113B	113	LOBBY	C	HM/GLAZ	PT-3	G2	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	NA	HW-02	
119A	119	DECON	B	HM/GLAZ	PT-3	G2	7' - 0"	3' - 0"	1 3/4"	1	HM	PT-3	NA	HW-03	LOUVER
124A	124	BUNKER GEAR	A	HM	PT-3	NA	6' - 10"	3' - 0"	1 3/4"	1	HM	PT-3	NA	HW-04	LOUVER
208A	208	EQUIP PLATFORM & STORAGE MEZZANINE	D	MTL	PT-3	NA	3' - 6"	1' - 5 1/4"	1/2"	NA	NA	NA	NA	HW-06	



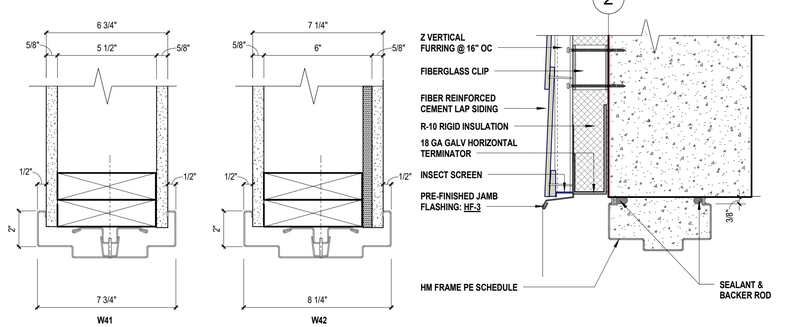
DOOR FRAME TYPES
1/4" = 1'-0"

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

GLAZING LEGEND

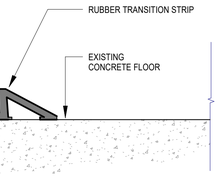
G-1 **SEALED INSULATING GLASS UNITS: VISION GLAZING LOW-E, MIN U-VALUE: 0.28**

G-2 **SINGLE SAFETY GLAZING**



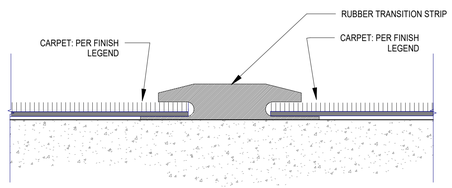
4 TYP INT DOOR JAMB DETAIL (HEAD SIM)
3" = 1'-0"

2 DOOR HEAD @ NEW CONC WALL
3" = 1'-0"



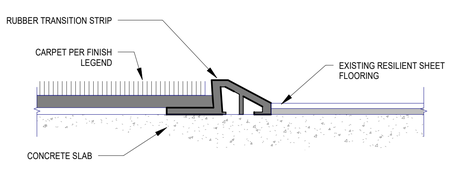
NOTE: CENTER TRANSITION UNDER DOOR, UNO

7 CPT TO CONCRETE FLOOR TRANSITION
NOT TO SCALE



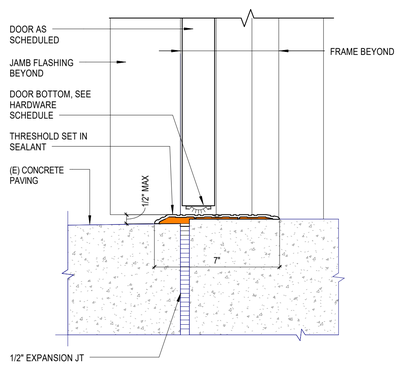
NOTE: CENTER TRANSITION UNDER DOOR, UNO

6 CPT TO CPT FLOOR TRANSITION
NOT TO SCALE

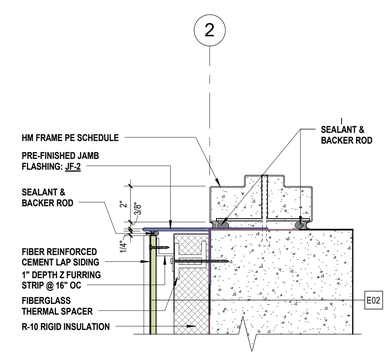


NOTE: CENTER TRANSITION UNDER DOOR, UNO

5 CPT TO RESILIENT FLOOR TRANSITION
NOT TO SCALE



3 EXTERIOR DOOR THRESHOLD
3" = 1'-0"



1 DOOR JAMB @ NEW CONC WALL
3" = 1'-0"

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SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 2015137

BID SET

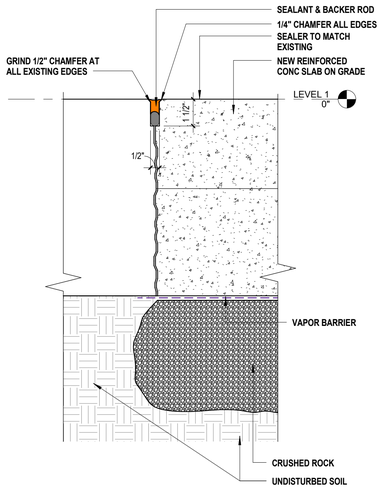
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

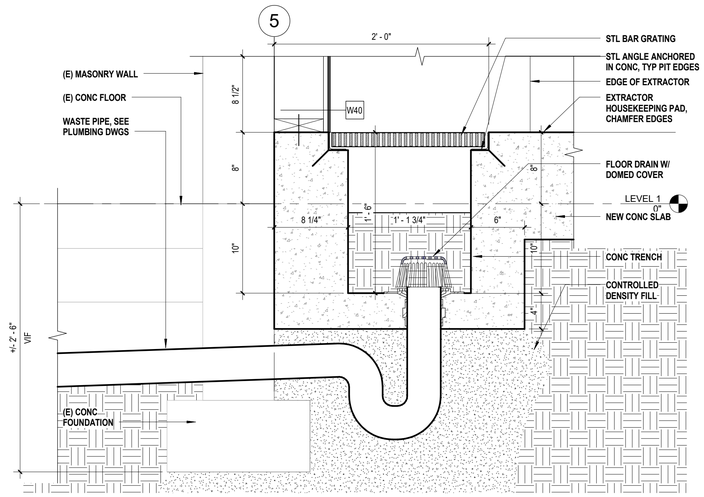
DOOR SCHEDULE AND DETAILS, FINISH SCHEDULE AND FINISH LEGEND

SHEET:

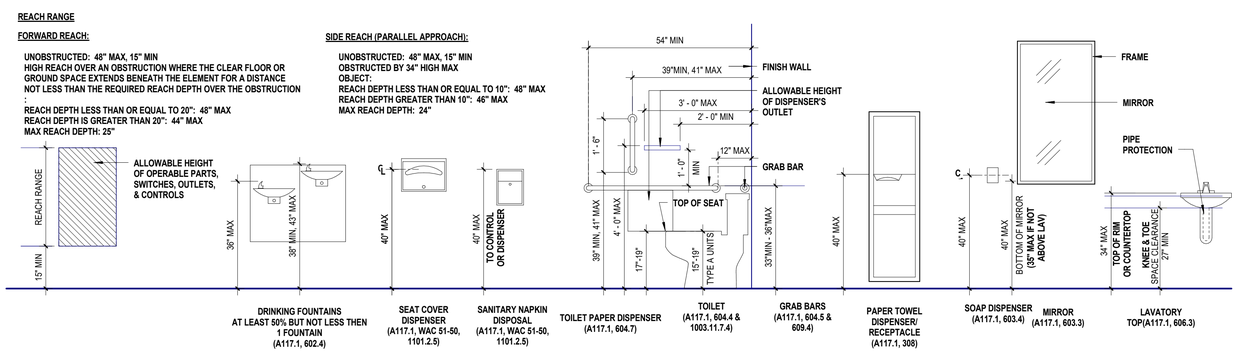
A60.01



16 TYPICAL DETAIL - SLAB JOINT
3" = 1'-0"

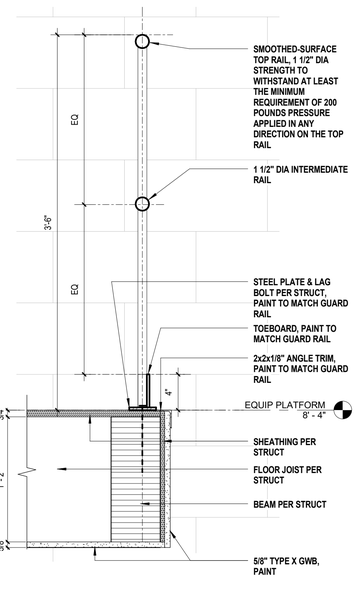


15 EXTRACTOR TRENCH DRAIN
1 1/2" = 1'-0"

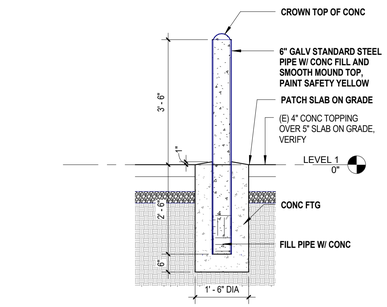


NOTE: HORIZONTAL POSITIONS OF FIXTURES NOT INDICATED IN THIS DETAIL

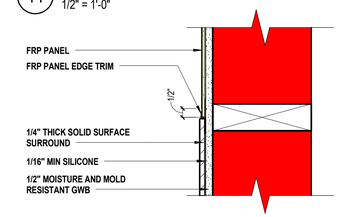
10 ACCESSIBILITY MOUNTING HEIGHT
1/2" = 1'-0"



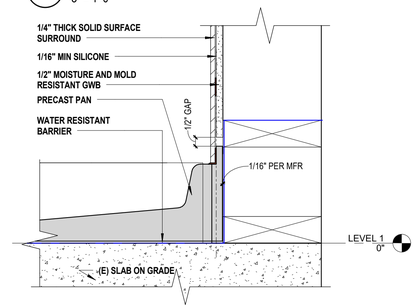
11 GUARD RAIL - EQUIPMENT PLATFORM
1 1/2" = 1'-0"



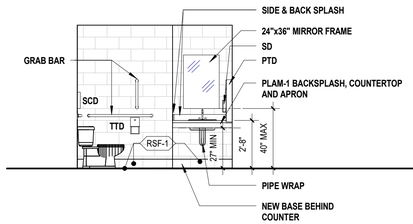
14 BOLLARD DETAIL
1/2" = 1'-0"



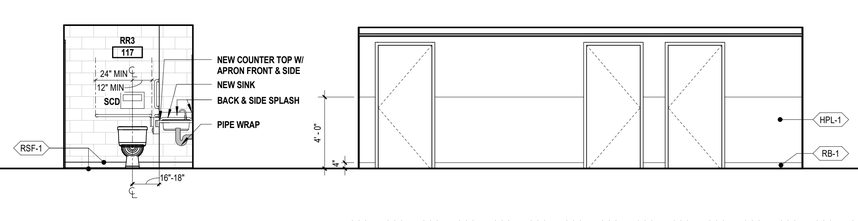
13 DECON WASH ROOM PANEL CONECTION
3" = 1'-0"



12 DECON WASH ROOM BASE DETAIL
3" = 1'-0"



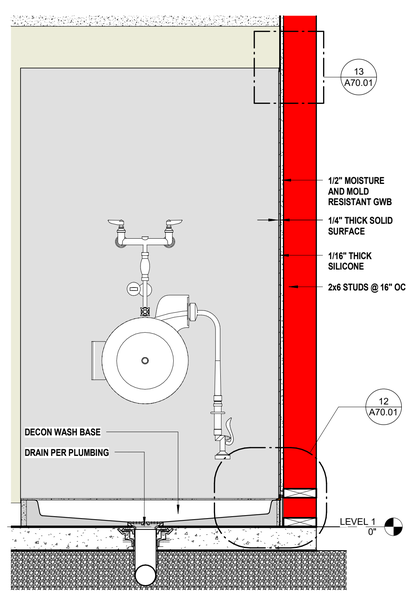
6 RR3 - NORTH ELEVATION
1/4" = 1'-0"



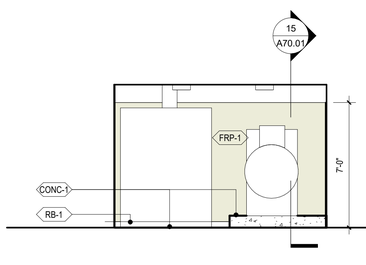
7 RR3 - WEST ELEVATION
1/4" = 1'-0"

8 NORTH ELEVATION - HALLWAY 103
1/4" = 1'-0"

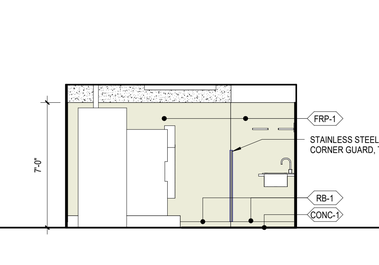
9 WEST ELEVATION - HALLWAY 103
1/4" = 1'-0"



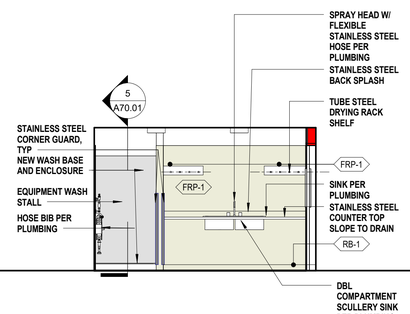
5 DECON WASH ROOM
1" = 1'-0"



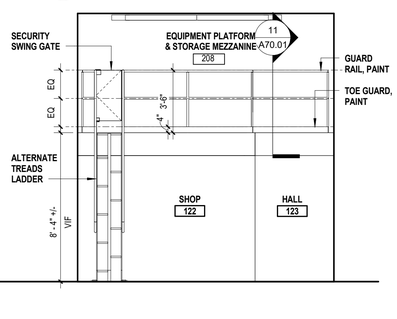
1 DECON - WEST ELEVATION
1/4" = 1'-0"



2 DECON - NORTH ELEVATION
1/4" = 1'-0"



3 DECON - EAST ELEVATION
1/4" = 1'-0"



4 EQUIPMENT PLATFORM - GUARDRAIL
1/4" = 1'-0"

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FEDERAL WAY, WA

PROJECT # 2015137

BID SET

ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

INTERIOR ELEVATIONS AND DETAILS

SHEET:

A70.01

ABBREVIATIONS

&	AND
@	AT
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJUSTABLE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ANCH	ANCHOR
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATE
AR	ANCHOR ROD
ARCH	ARCHITECT, ARCHITECTURAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BAL	BALANCE
BC	BOTTOM CHORD
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BP, B PL	BASE PLATE
BRG	BEARING
BTWN	BETWEEN
BU	BUILT-UP
C	CAMBER, CHANNEL
CA	CONCRETE (EXPANSION) ANCHOR
CANTIL	CANTILEVER
CAP	CAPACITY
CC	CENTER-TO-CENTER
CDF	CONTROL DENSITY FILL
CG	CENTER OF GRAVITY
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CJP, CP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE, CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CRSI	CONCRETE REINFORCED STEEL INSTITUTE
CTR	CENTER, CENTERED
CU YD	CUBIC YARD
d	PENNYWEIGHT (NAILS)
DB	DIVIDER BEAM, DROPPED BEAM
D-B	DESIGN-BUILD
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DEG, °	DEGREE
DEMO	DEMOLISH, DEMOLITION
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DICA	DRILLED-IN CONCRETE ANCHOR
DIM	DIMENSION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DP	DEEP
DS	DRAG STRUT
DWG	DRAWING
DWL	DOWEL
(E) EXIST	EXISTING
EA	EACH, EPOXY (ADHESIVE) ANCHOR
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBEDMENT
ENGR	ENGINEER
EQ	EARTHQUAKE, EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
ETC	ET CETERA
E-W	EAST-WEST
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
EXT GR	EXTERIOR GRADE
FD	FLOOR DRAIN
FDN	FOUNDATION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FF	FAIR FACE, FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FLG	FLANGE
FS	FAIR SIDE
FT, '	FEET
FTG	FOOTING
GA	GAGE, GAUGE
GALV	GALVANIZED
GB, GR BM	GRADE BEAM
GEN	GENERAL
GL, GLU LAM	GLUE LAMINATED WOOD
GLB	GLUE LAMINATED BEAM
GRD	GIRDER
GRND	GROUND
HDR	HEADER
HGR	HANGER
HK	HOOK
HD	HOLDOWN
HORIZ	HORIZONTAL
HPT	HIGH POINT
HSB	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN, "	INCH
INCL	INCLUDE
INFO	INFORMATION
INT	INTERIOR
IJ	ISOLATION JOINT
JST	JOIST
JT	JOINT
K	KIP (1000 LB)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	LENGTH, ANGLE
LB, #	POUND
LEV	LEVEL
LF	LINEAL FOOT
LL	LIVE LOAD
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION LOCATE
LONGIT	LONGITUDINAL
LPT	LOW POINT
LSH	LONG SLOTTED HOLE
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MF	MOMENT FRAME
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
NF	NEAR FACE
NIC	NOT IN CONTRACT
NLG	NAILING
NOM	NOMINAL
NO., #	NUMBER
N-S	NORTH-SOUTH
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSH	OVERSIZED HOLE
OWJ	OPEN WEB JOIST
PA	POWDER ACTUATED
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PEN	PENETRATION
PERP	PERPENDICULAR
PL	PLATE, PROPERTY LINE
PLCS	PLACES
PLF	POUNDS PER LINEAR FOOT
PLWD	PLYWOOD
PNL	PANEL
PP, PJP	PARTIAL JOINT PENETRATION
PRCST	PRECAST
PREFAB	PREFABRICATED
PS	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POINT, PRESSURE TREATED
P-T	POST-TENSIONED
PVC	POLYVINYL CHLORIDE
R, RAD	RADIUS
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BARS
REF	REFERENCE
REINF	REINFORCING
REM	REMAINDER
REQD	REQUIRED
RTN	RETURN
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SOG	SLAB ON GRADE
SPC	SPACE, SPACED, SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
SSH	SHORT SLOTTED HOLE
STAG	STAGGER, STAGGERED
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SPRT	SUPPORT
SW	SHEAR WALL
SWS	SHEAR WALL SCHEDULE
SYMM	SYMMETRICAL, SYMMETRY
T/	TOP OF
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP CHORD
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
THK	THICK, THICKNESS
THP	TENDON HIGH POINT
THRU	THROUGH
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TR	THREADED ROD
TRANS	TRANSVERSE
TYP	TYPICAL
TWS	THREADED WELDED STUD
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WIDTH, WIDE FLANGE
W/	WITH
WD	WOOD
WHS	WELDED HEADED STUD
WJ	WOOD I-JOIST
W/O	WITHOUT
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

SYMBOLS

GENERAL SYMBOLS

- ELEVATION DATUM
- WP — WORKPOINT
- DIRECTION OF SPAN
- LIMIT OF SPAN
- SLOPE
- SURFACE - SLOPE UP
- SURFACE - SLOPE DOWN
- SURFACE - SLOPE TWO WAYS
- SURFACE - STEPPED
- SURFACE - STEPPED AND SLOPED

CONNECTORS

PLAN	SECTION	
+		CONCRETE ANCHOR BOLT
+		DRILLED IN CONCRETE ANCHOR
+		BOLT
+		NAIL

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11/29/16

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 262016.018

BID SET

ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

ABBREVIATIONS AND SYMBOLS

SHEET:

S00.01

GENERAL STRUCTURAL NOTES

GENERAL

ALL TYPICAL DETAILS AND NOTES SHOWN ON THESE DRAWINGS ARE PART OF THE CONSTRUCTION CONTRACT AND SHALL BE PROVIDED BY THE CONTRACTOR. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS, BUT SHALL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS.

CODES

THE EXISTING STRUCTURE DOES NOT CONFORM TO PRESENT EARTHQUAKE CODE REQUIREMENTS FOR NEW BUILDINGS. THE STRENGTHENING WORK SHOWN IS A VOLUNTARY SEISMIC UPGRADE TO SEISMICALLY REINFORCE THE EXISTING BUILDING IN ACCORDANCE WITH THE INTERNATIONAL EXISTING BUILDING CODE (IEBC) AS ALLOWED BY SECTION 101.4.7 OF THE INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION, AND IS WITHIN THE CURRENT PRACTICE FOR THE RENOVATION OF EXISTING BUILDINGS OF THIS AGE AND TYPE OF CONSTRUCTION.

STANDARDS: REFERENCE TO ASTM AND OTHER STANDARDS SHALL MEAN THE LATEST EDITION IN EFFECT ON THE BID DATE, UNLESS NOTED IN THESE DOCUMENTS OR DESIGNATED BY THE GOVERNING CODE.

CRITERIA

EARTHQUAKE DESIGN DATA:

EXISTING SEISMIC-FORCE-RESISTING SYSTEM: PLYWOOD SHEATHED SHEAR WALLS (UPPER FLOOR)
MASONRY SHEAR WALLS (LOWER FLOOR)
WOOD DECKING ROOF DIAPHRAGM
PLYWOOD SHEATHED FLOOR DIAPHRAGM

ANALYSIS PROCEDURE: LINEAR STATIC PROCEDURE (LSP)

PSEUDO SEISMIC BASE SHEAR: ($V_{BSE\text{-}E}$ (N-S) = 748 KIPS; $V_{BSE\text{-}2E}$ (N-S) = 1801 KIPS
(ASCE 41-13 SECTION 7.4.1.3.1)

SEISMIC RESPONSE COEFFICIENT: CI C2 CM SA=IE = 0.76; CI C2 CM SA=2E = 1.52
(ASCE 41 SECTION 7.4.1.3.1)

SITE CLASS = D (ASCE 41-13 SECTION 2.4.1.6.2)

S6-IE = 0.49 (ASCE 41-13 SECTION 2.4.1.4)
S1-IE = 0.18 (ASCE 41-13 SECTION 2.4.1.4)
SXS-IE = 0.69 (ASCE 41-13 SECTION 2.4.1.6)
SX1-IE = 0.38 (ASCE 41-13 SECTION 2.4.1.6)

S6-2E = 0.93 (ASCE 41-13 SECTION 2.4.1.3)
S1-2E = 0.38 (ASCE 41-13 SECTION 2.4.1.3)
SXS-2E = 1.09 (ASCE 41-13 SECTION 2.4.1.6)
SX1-2E = 0.62 (ASCE 41-13 SECTION 2.4.1.6)

LEVEL OF SEISMICITY = HIGH (ASCE 41-13 SECTION 2.5)

ASCE 41-13 PERFORMANCE OBJECTIVE FOR STRENGTHENED AND NEW STRUCTURAL ELEMENTS = IMMEDIATE OCCUPANCY AT BSE-1E

GEOTECHNICAL

ALLOWABLE SOIL PRESSURE, LATERAL EARTH PRESURE, AND SOIL PROFILE TYPE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER OR INSPECTOR. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED OR FOUND TO BE EXPANSIVE, NOTIFY THE ARCHITECT OR STRUCTURAL ENGINEER FOR POSSIBLE REDESIGN.

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH OR CONTROLLED, COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT EXTERIOR FINISHED GRADE. FOOTING DEPTHS AND ELEVATIONS SHOWN ON DRAWINGS ARE MINIMUM AND FOR GUIDANCE ONLY; CONTRACTOR SHALL ESTABLISH ACTUAL ELEVATIONS IN FIELD. BACKFILL BEHIND ALL WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE IN AN APPROVED MANNER.

SOIL PROFILE TYPE: SITE CLASS "D"
ALLOWABLE VERTICAL DESIGN PRESSURE: 2,000 PSF

LATERAL EARTH PRESSURE, LEVEL BACKFILL:

UNRESTRAINED (ACTIVE): 35 PCF
RESTRAINED (AT-REST): 55 PCF

SUBMITTALS

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION OR CONSTRUCTION OF THESE ITEMS:

CONCRETE MIX DESIGN
CONCRETE REINFORCING
STRUCTURAL STEEL

CONTRACTOR SHALL REVIEW AND STAMP SUBMITTALS PRIOR TO SUBMISSION. DIMENSIONS AND QUANTITIES ARE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE REVIEWED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS PLACED PRIOR TO RECEIPT OF REVIEWED SHOP DRAWINGS. CONTRACTOR SHALL ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

DEFERRED SUBMITTALS: DRAWINGS AND CALCULATIONS FOR BIDDER-DESIGNED COMPONENTS, SEALED BY THE WASHINGTON STATE REGISTERED PROFESSIONAL STRUCTURAL ENGINEER RESPONSIBLE FOR THE DESIGN, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. DEFERRED SUBMITTALS INCLUDE:

SEISMIC BRACING AND ANCHORAGE OF MECHANICAL EQUIPMENT PER NOTES BELOW

SUBMITTALS OF BIDDER-DESIGNED COMPONENTS SHALL INCLUDE LOCATIONS, MAGNITUDES, AND DIRECTIONS OF ALL FORCES TRANSFERRED TO THE STRUCTURE. CALCULATIONS SUBMITTED FOR BIDDER-DESIGNED COMPONENTS ARE FOR INFORMATION ONLY AND WILL NOT BE REVIEWED.

SEISMIC BRACING AND ANCHORAGE OF MECHANICAL UNITS AND OTHER MECHANICAL AND ELECTRICAL FIXTURES NOT SPECIFICALLY SHOWN ON THE PROJECT DRAWINGS SHALL BE DESIGNED BY A REGISTERED.

STRUCTURAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. THE MECHANICAL AND ELECTRICAL CONTRACTORS MUST RETAIN THE SERVICES OF A STRUCTURAL ENGINEER AND IS RESPONSIBLE FOR ALL COSTS RELATED TO THE PURCHASE AND INSTALLATION OF SEISMIC BRACING AND ANCHORAGE OF THEIR SYSTEMS.

SPECIAL INSPECTION PER IBC SECTION 1704, SHALL BE PERFORMED BY AN AGENCY APPROVED BY THE BUILDING OFFICIAL AND AS OUTLINED IN THE STRUCTURAL INSPECTION SCHEDULE, SHEET S-003.

STRUCTURAL OBSERVATION SHALL BE PERFORMED PER IBC SECTION 1704.

EXISTING CONDITIONS: CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. EXISTING CONDITIONS SHOWN ON DRAWINGS ARE BASED EITHER ON SITE OBSERVATIONS, ORIGINAL DRAWINGS, OR WERE ASSUMED BASED ON EXPECTED CONDITIONS. IF EXISTING CONDITIONS DO NOT CLOSELY MATCH CONDITIONS SHOWN ON DRAWINGS, OR IF EXISTING MATERIALS ARE OF QUESTIONABLE OR SUBSTANDARD QUALITY, NOTIFY ENGINEER PRIOR TO COMMENCING ANY WORK.

CONTRACTOR-INITIATED CHANGES: SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT FOR APPROVAL AT LEAST 10 WORKING DAYS PRIOR TO FABRICATION AND CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS OR SUBMITTALS ONLY WILL NOT SATISFY THIS REQUIREMENT.

CONTRACTOR RESPONSIBILITIES: DRAWINGS REPRESENT DESIGN OF STRUCTURE IN COMPLETED FORM. CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS, SEQUENCES, AND SAFETY PRECAUTIONS REQUIRED TO PERFORM WORK.

CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION, AND SOIL EXCAVATION AS REQUIRED. SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS, AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, REFERENCE STANDARDS, OR GOVERNING CODE, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL NOTIFY THE ENGINEER OF DISCREPANCIES AND OBTAIN DIRECTION PRIOR TO PROCEEDING. NOTES ON INDIVIDUAL NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.

SPECIFICATIONS: REFER TO SPECIFICATIONS FOR INFORMATION IN ADDITION TO THESE NOTES AND DRAWINGS.

ARCHITECTURAL: REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS, SLOPES, DEPRESSIONS, NON-BEARING WALLS, FASCIA, ELEVATORS, STAIRS, CURBS, DRAINS, RAILINGS, WATERPROOFING, FINISHES, ETC.

RENOVATION

DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE SAVED WHERE POSSIBLE AND AS NOTED ON DRAWINGS. SAW-CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS SHALL BE LIMITED TO 40 PSF.

1. ALL NEW OPENINGS THROUGH EXISTING CONCRETE OR MASONRY WALLS, SLABS, AND BEAMS SHALL BE ACCOMPLISHED BY SAWCUTTING WHEREVER POSSIBLE. ALL NEW OPENINGS SHALL BE SAWCUT NEAT AND CLEAN; NO OVERCUTTING AT OPENING CORNERS SHALL BE ALLOWED UNLESS NOTED OTHERWISE. AS REQUIRED, CORE DRILL CORNERS AND CHIP, GRIND, OR CUT THE CORNERS TO PROVIDE REQUIRED DIMENSIONS.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
3. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING.

CONTRACTOR SHALL CHECK FOR DRY-ROT AT ALL EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWING WATER STAINS, AND ALL WOOD MEMBERS IN BASEMENT AND CRAWL SPACES. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE ENGINEER.

EXISTING MASONRY SHEAR TEST: ALLOWABLE UNREINFORCED MASONRY STRESSES MAY BE DETERMINED BY PERFORMING INPLACE SHEAR TESTS. ALL TESTING SHALL BE IN ACCORDANCE WITH THE IBC AND SHALL BE PERFORMED BY AN APPROVED AGENCY. AN ACCURATE RECORD OF ALL SUCH TESTS AND THEIR LOCATION IN THE BUILDING SHALL BE RECORDED AND THESE RESULTS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL AS PART OF THE STRUCTURAL ANALYSIS.

THE MINIMUM NUMBER OF TESTS SHALL BE TWO PER WALL OR LINE OF WALL ELEMENTS RESISTING A COMMON FORCE, OR ONE TEST PER 1500 S.F. OF WALL SURFACE. THE MINIMUM NUMBER OF TESTS AND EXACT TEST LOCATION SHALL BE DETERMINED AT THE BUILDING SITE BY THE STRUCTURAL ENGINEER.

THE TEST SHALL BE PERFORMED BY REMOVING THE BRICK IMMEDIATELY ADJACENT TO THE TEST BRICK ON THE SAME LEVEL AND INSERTING A HYDRAULIC RAM INTO THIS SPACE. THE MORTAR SHALL BE REMOVED AT THE VERTICAL JOINT AT THE OPPOSITE END OF THE BRICK BEING TESTED. THE LOAD SHALL BE APPLIED BY THE HYDRAULIC RAM UNTIL FAILURE OCCURS. THE LOAD SHALL BE RECORDED, ALONG WITH THE DIMENSIONS OF THE TEST BRICK, ITS LOCATIONS, AND SURCHARGE LOADS.

THE RESULTS OF THE TEST ARE TO BE SUBMITTED TO THE CONTRACTING OFFICER, ALONG WITH A LETTER FROM THE STRUCTURAL ENGINEER OUTLINING THE PROPOSED ALLOWABLE SHEAR STRESS, FACTOR OF SAFETY AND MAXIMUM ACTUAL ANTICIPATED SHEAR STRESS.

MASONRY RESTORATION: OF ALL EXTERIOR WALLS SHALL BE AS FOLLOWS: SCRAPE ALL LOOSE AND WEAKENED MORTAR OUT TO FULL DEPTH OF THE DETERIORATION, REMOVE AND REPLACE ANY LOOSE MASONRY UNITS. CHECK FOR LOOSE FACING BRICK VENEER AND TUCK-POINT ALL JOINTS SOLID. RESTORATION AND REPAIR SHALL BE PERFORMED SUCH THAT THE EXISTING STRUCTURE IS NOT WEAKENED OR LEFT UNSUPPORTED DURING PROCESS OF WORK. ALL EXTERIOR APPENDAGES, SUCH AS FIRE ESCAPES, CORNICES, AND EYEBROWS, SHALL BE EVALUATED FOR STRUCTURAL INTEGRITY AND THE CONDITION OF CONNECTIONS TO THE STRUCTURE. CONTRACTOR SHALL NOTIFY ENGINEER AS TO THE FINDINGS.

CONCRETE

REFERENCE STANDARDS: CONCRETE SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING DOCUMENTS, EXCEPT AS MODIFIED BELOW:

ACI 308 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
ACI 311 "GUIDE FOR CONCRETE INSPECTION"
ACI SP-15* "FIELD REFERENCE MANUAL"

*A COPY SHALL BE KEPT IN THE CONTRACTOR'S FIELD OFFICE AT ALL TIMES.

MATERIALS

CEMENT ASTM C150, C595
* AGGREGATES ASTM C33
ADMIXTURES ASTM C260, C494, C1017
**FLY ASH ASTM C618, CLASS F OR C

* AGGREGATES THAT EXHIBIT DELETERIOUS ACTIVITY WHEN EVALUATED IN ACCORDANCE WITH ASTM C33 APPENDIX XI SHALL NOT BE USED. SAND EQUIVALENT FOR FINE AGGREGATE SHALL NOT EXCEED 75.

** MAXIMUM LOSS ON IGNITION SHALL BE 1%.

CONCRETE SHALL BE PROPORTIONED TO ACHIEVE A WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. MIX DESIGNS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BY ENGINEER PRIOR TO USE. COMPLY WITH IBC SECTION 1904. MIXES SHALL MEET OR EXCEED THE FOLLOWING CRITERIA:

TYPE OF CONSTRUCTION	SPECIFIED COMPRESSIVE STRENGTH (f'c)	TEST AGE	MAXIMUM WATER / CEMENT RATIO	EXPOSURE CLASS (ACI 318-11 TABLES 4.2.1 AND 4.3.1)
CONCRETE EXPOSED TO WEATHER	4,500 PSI	28 DAYS	0.5	F1, S0, P0, C1
CONCRETE EXPOSED TO EARTH	4,000 PSI	28 DAYS	0.4**	F0, S0, P0, C1
COLUMNS AND SHEAR WALLS	6,000 PSI	28 DAYS		AS INDICATED ABOVE
ALL OTHER CONCRETE (UNLESS SPECIFIED BELOW)	4,000 PSI	28 DAYS	**	F0, S0, P0, C0

** WATER-CEMENTITIOUS MATERIAL RATIO FOR INTERIOR SLABS SHALL BE 0.4 UNLESS OTHERWISE NOTED.

ADMIXTURES: ALL CONCRETE, INCLUDING SLABS ON GRADE, SHALL HAVE A WATER-REDUCING ADMIXTURE COMPLYING WITH ASTM C494 ADDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CALCIUM CHLORIDE OR OTHER CHLORIDE ADMIXTURES SHALL NOT BE USED.

ALL HORIZONTAL SURFACES EXPOSED TO WEATHER SHALL CONTAIN AN AIR-ENTRAINING AGENT COMPLYING WITH ASTM C260. THE AMOUNT OF ENTRAINED AIR SHALL BE IN ACCORDANCE WITH TABLE 1 OF ASTM C94 FOR MODERATE EXPOSURE. TESTS FOR AIR CONTENT SHALL BE MADE AT THE DISCHARGE END OF THE TRUCKS PLACING HOSE IN ACCORDANCE WITH ASTM C173.

WATER/CEMENT RATIO: SHALL BE MEASURED BY WEIGHT AND BE BASED ON TOTAL CEMENTITIOUS MATERIAL, INCLUDING CEMENT AND POZZOLANS SUCH AS FLY ASH AND SILICA FUME.

MAXIMUM AGGREGATE SIZE: SHALL BE 1-1/2", BUT NOT MORE THAN 3/4 TIMES THE CLEAR DISTANCE BETWEEN REINFORCING BARS NOR 1/5 TIMES THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS. MAXIMUM AGGREGATE SIZE FOR SLABS ON GRADE SHALL BE 1/3 TIMES THE SLAB THICKNESS.

SLUMP: REQUIRED FOR PROPER PLACEMENT SHALL BE DETERMINED BY CONTRACTOR AND SUPPLIER, AND INCLUDED IN MIX DESIGN SUBMITTALS. FIELD MEASURED SLUMP SHALL CONFORM TO SUBMITTED CONCRETE MIX DESIGN. SLUMP SHALL CONFORM TO ASTM C94.

SHOTCRETE: MAY BE USED IN LIEU OF CAST-IN-PLACE AS INDICATED ON THE DRAWINGS OR WHERE APPROVED BY THE STRUCTURAL ENGINEER. CONTRACTOR SHALL OBTAIN THE APPROVALS, TESTS, AND INSPECTIONS REQUIRED BY THE BUILDING DEPARTMENT FOR SHOTCRETE INSTALLATIONS.

SHOTCRETE PROCEDURE: MATERIALS, EQUIPMENT, PROPORTIONS, BATCHING AND MIXING, AND PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 506R-90 AND IBC SECTION 1910. REINFORCING LAP SPLICES SHALL BE DETAILED ON SHOP DRAWINGS AS NON-CONTACT LAP SPLICES WITH A MINIMUM OF 2" CLEARANCE BETWEEN BARS.

EMBEDDED ITEMS: CONDUIT AND SLEEVES SHALL NOT BE EMBEDDED IN OR PASS THROUGH CONCRETE WITHOUT APPROVAL. ALUMINUM ITEMS SHALL NOT BE EMBEDDED IN CONCRETE. SUBMIT CONDUIT LAYOUT AND EMBEDDED ITEM PLANS TO THE ARCHITECT FOR REVIEW BY ENGINEER PRIOR TO PLACING CONCRETE.

BONDING AGENT: SHALL BE "CONCRESIVE 1080 LIQUID" BASF, OR APPROVED EQUAL, AND SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE. PLACE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, INCLUDING PREPARATION OF EXISTING SURFACES.

NON-SHRINK GROUT: SHALL BE "CONSTRUCTION GROUT" BY BASF, OR APPROVED EQUAL, AND SHALL BE MIXED AND PLACED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3,000 PSI MINIMUM).

CONSTRUCTION JOINTS IN WALLS SHALL BE KEYED IN ACCORDANCE WITH TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON DRAWINGS OR, AT CONTRACTOR'S OPTION, SHALL BE AN INTENTIONALLY ROUGHENED CONSTRUCTION JOINT DEFINED BY THE FOLLOWING:

1. SURFACE OF JOINT SHALL BE SAND BLASTED OR ROUGHENED WITH A CHIPPING HAMMER TO EXPOSE AGGREGATE EMBEDDED IN PREVIOUS POUR.
2. EXPOSED AGGREGATE SHALL PROTRUDE 1/4" MINIMUM.
3. JOINT SURFACE SHALL BE CLEANED AND LAITANCE REMOVED.
4. JOINT SHALL BE WETTED AND STANDING WATER REMOVED IMMEDIATELY BEFORE NEW CONCRETE IS PLACED.

SUBMIT CONSTRUCTION JOINT LAYOUT PLAN TO THE ARCHITECT FOR REVIEW BY ENGINEER PRIOR TO PLACING CONCRETE.

COORDINATION: SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT EXPOSED CONCRETE SURFACES.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: CONCRETE REINFORCEMENT SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS, EXCEPT AS MODIFIED BELOW:

ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI SP-66 "ACI DETAILING MANUAL"
ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
CRSI "PLACING REINFORCING BARS"
CRSI "MANUAL OF STANDARD PRACTICE" MSP-1
WRI "WELDED WIRE FABRIC MANUAL OF STANDARD PRACTICE"

MATERIALS:

DEFORMED BARS: ASTM A615, GRADE 60
SEISMIC DEFORMED BARS * : ASTM A706, GRADE 60 LOW ALLOY
SMOOTH WELDED WIRE: ASTM A185, F_u = 56 KSI (< W1.2) & 65 KSI (> W1.2)
DEFORMED BAR ANCHORS: ASTM A496, 75 KSI YIELD
BAR SUPPORTS: CONFORM TO CHAPTER 3, CRSI MSP-1
WELDED HEADED STUDS: ASTM A108

* SEISMIC DEFORMED BARS SHALL BE USED FOR LONGITUDINAL REINFORCEMENT IN COLUMNS, PILES, STRUT MEMBERS, COUPLING BEAMS, VERTICAL REINFORCEMENT IN SHEAR WALLS. ASTM A615, GRADE 60 BARS MAY BE USED IF:
(1) ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED STRENGTH BY MORE THAN 18 KSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3 KSI) AND
(2) RATIO OF ACTUAL TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
IF MILL TEST REPORTS ARE NOT AVAILABLE, REINFORCEMENT SHALL BE TESTED PER THE SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

REINFORCEMENT SHALL BE PLACED AND SUPPORTED IN ACCORDANCE WITH CRSI MSP-1. REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH ACI SP-66. NO BENDING OR STRAIGHTENING OF REINFORCEMENT WILL BE PERMITTED AFTER PARTIAL EMBEDMENT IN CONCRETE.

LAP ALL CONTINUOUS REINFORCEMENT (#5 AND SMALLER) 40 BAR DIAMETERS OR 2'-0" MINIMUM UNLESS OTHERWISE NOTED. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS (#5 AND SMALLER) 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-08, CLASS B. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 1 CROSS WIRE SPACING + 2" OR 8" WHICHEVER IS GREATER.

MECHANICAL SPLICING OF REINFORCING BARS SHALL BE THE FOLLOWING SYSTEMS AND SHALL DEVELOP A MINIMUM OF 125% OF THE SPECIFIED YIELD STRENGTH OF THE BARS:

LENTON (ER-3967), DAYTON/RICHMOND (ER-4028), OR BAR-LOCK (ESR-2495)

CONCRETE COVER: UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE:

SLABS ON GRADE: 2" BOTTOM
INTERIOR WALL FACES: 3/4" (#11 AND SMALLER), 1 1/2" (#14 AND #18)
EXPOSED FORMED WALL FACES: 1 1/2" (#5 AND SMALLER), 2" (#6 AND LARGER)
FOOTINGS: 3" (EXCEPT 2" TOP AND FORMED SIDES)
BEAMS, COLUMNS: 1 1/2" (ALL REINFORCEMENT INCLUDING TIES, SPIRALS, STIRRUPS)

CONCRETE ANCHORAGE

POST-INSTALLED ANCHORS INTO NORMAL-WEIGHT CONCRETE SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND NOTED ICC-ES REPORTS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BY ENGINEER WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. ANCHORS SHALL BE THE FOLLOWING TYPES:

EXPANSION ANCHORS: SHALL BE HILTI "KWIK BOLT TZ" (ESR-1917) OR SIMPSON STRONG BOLT (ESR-1771) OR POWERS "POWER STUD+ SD2".

UNDERCUT ANCHORS: SHALL BE USP DUC (ESR-1970) OR HILTI HDA (ESR-1546).

ADHESIVE ANCHORS: SHALL BE HILTI HIT-RE 500-V3 (ESR-3814) OR SIMPSON SET-XP (ESR-2508) OR POWERS PE1000+.

SCREW ANCHORS INTO CONCRETE SHALL BE SIMPSON TITEN HD (ESR-2713) OR POWERS SNAKE+ (ESR-2272).

DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE ITW RAMSET/RED HEAD (ESR-1799).

NO REINFORCING BARS SHALL BE CUT TO INSTALL ANCHORS. ALL DEFECTIVE ANCHOR HOLES SHALL BE GROUTED WITH EPOXY ADHESIVE AND A NEW HOLE DRILLED A MINIMUM OF 3 BOLT DIAMETERS AWAY.

STEEL

REFERENCE STANDARDS: STRUCTURAL STEEL SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING DOCUMENTS:

AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"
AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
AWS D1.1 "STRUCTURAL WELDING CODE - STEEL"
AISC 348 "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS"
AISC 358 "PREQUALIFIED CONNECTIONS FOR SPECIAL AND INTERMEDIATE STEEL MOMENT FRAMES FOR SEISMIC APPLICATIONS"

STRUCTURAL STEEL, INCLUDING PLATES, ANGLES, CHANNELS, AND RODS, SHALL CONFORM TO ASTM A36; F_y = 36 KSI. WIDE FLANGE AND WT STEEL SHAPES SHALL CONFORM TO ASTM A992, F_y = 50 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, F_y = 35 KSI. STRUCTURAL TUBING (HSS) SHALL CONFORM TO ASTM A500, GRADE B, F_y = 46 KSI. ANCHOR BOLTS AND CONNECTION BOLTS SHALL CONFORM TO ASTM A307.

WELDING: ALL WELDS SHALL COMPLY WITH AWS D1.1. WELDS SHALL BE MADE USING LOW HYDROGEN E70XX ELECTRODES. ONLY AWS PREQUALIFIED WELDED JOINTS SHALL BE USED. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 STANDARD SYMBOLS. WELDS SHOWN ON DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. WELDS NOT SPECIFIED SHALL BE CONTINUOUS 3/16" FILLET WELDS.

WELDS SHOWN ON DRAWINGS ARE FOR FINAL CONNECTIONS. UNLESS FIELD WELD SYMBOLS ARE SHOWN, CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE STEEL ERECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOINT PREPARATIONS AND WELDING PROCEDURES, INCLUDING ROOT OPENINGS AND FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, TAPERS, AND SURFACE ROUGHNESS.

WELDER CERTIFICATION: AWS OR WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO).

COLD-FORMED STEEL FRAMING: SHALL COMPLY WITH ASTM A653, TYPE SS, GRADE 33, UNLESS NOTED OTHERWISE. FOR SIZES SHOWN ON DRAWINGS, REFER TO ICC-ES ER-4943 DESIGNATIONS. ALL STUDS, TRACKS, AND JOISTS SHALL BE GALVANIZED PER ASTM A924, G60. FASTENINGS NOT SHOWN ON DRAWINGS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

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11/29/16

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 262016.018

BID SET

ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

GENERAL NOTES

SHEET:

S00.02

GENERAL STRUCTURAL NOTES

MASONRY ANCHORAGE

POST-INSTALLED MASONRY ANCHORS INTO SOLID GROUTED MASONRY SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND NOTED ICC-ES REPORTS. SUBSTITUTES PROPOSED BY CONTRACTOR

SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BY ENGINEER WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. ANCHORS SHALL BE THE FOLLOWING TYPES:

EXPANSION ANCHORS SHALL BE SIMPSON WEDGE-ALL (ESR-1396) OR HILTI KWIK BOLTS (ICC-ESR 1385).

ADHESIVE ANCHORS SHALL BE SIMPSON SET (ESR-1772) OR HILTI HY-150 (ESR-2678).

WOOD

REFERENCE STANDARDS: WOOD SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING DOCUMENTS:

AITC	"TIMBER CONSTRUCTION MANUAL"
NDS	"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"
AF AND PA SDPWS	"SUPPLEMENT SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC"
AITC A190.1	"STRUCTURAL GLUED LAMINATED TIMBER"
AITC A117	"STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBER OF SOFTWOOD SPECIES"
TPI 1	"NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION"

PLYWOOD: WOOD STRUCTURAL PANELS SHALL CONFORM TO REQUIREMENTS OF US DEPARTMENT OF COMMERCE PS-1 OR PS-2. EACH PANEL SHALL BEAR THE AMERICAN PLYWOOD ASSOCIATION (APA) GRADE MARK. SEE DRAWINGS FOR GRADE, GLUE TYPE AND THICKNESS.

SHEATHING: UNLESS NOTED OTHERWISE ROOF AND FLOOR PANELS SHALL BE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS AND CONTINUOUS OVER 2 OR MORE SPANS. PLACE NAILS 3/8" FROM PANEL ENDS AND EDGES. DRIVE ALL NAILS (AND STAPLES) FLUSH WITH SHEATHING SURFACE.

SAWN LUMBER: SAWN LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY APPROVED BY AN ACCREDETITATION BODY COMPLYING WITH US DEPARTMENT OF COMMERCE PS20. SAWN LUMBER SPECIES AND GRADES SHALL BE AS FOLLOWS:

USE	SIZE	SPECIES	GRADE
WALL STUDS	2x 3x	DOUG-FIR	#3 OR STUD
SILL PLATES	2x 3x	DOUG-FIR	#3 OR STUD
JOISTS	2x	DOUG-FIR	#2
JOISTS	3x 4x	DOUG-FIR	#2
BEAMS / POSTS	4x	DOUG-FIR	#2
BEAMS / POSTS	6x	DOUG-FIR	#2

GLUE LAMINATED MEMBERS (GLULAMS) SHALL BE MANUFACTURED IN CONFORMANCE WITH AITC 117 AND ASTM D3737. EACH MEMBER SHALL BEAR AN AITC OR APA IDENTIFICATION MARK AND BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. GLULAMS SHALL BE ARCHITECTURAL GRADE WITH STRENGTH GRADES AS NOTED BELOW:

SIMPLE SPAN BEAMS: 24F-V4 (Fbx2400 PSI, Fv=240 PSI, E=1800 KSI)

GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON-CORROSIVE, APPROVED PRESERVATIVE

PREFABRICATED WOOD I-JOISTS: DESIGN SHOWN ON DRAWINGS IS BASED ON JOISTS MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ES ESR-1153. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES OR IAPMO EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. JOISTS SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURERS INSTRUCTIONS. ALL NECESSARY ACCESSORIES, SUCH AS BRIDGING, BLOCKING AND STIFFENERS, SHALL BE FURNISHED BY THE MANUFACTURER. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH ENGINEERED WOOD I-JOISTS PROVIDED.

ALL I-JOIST HANGERS SHALL BE ITS' SERIES, UNLESS OTHERWISE NOTED.

STRUCTURAL COMPOSITE LUMBER: DESIGN SHOWN ON DRAWINGS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ES ESR-1387. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL.

BEAMS: LAMINATED STRAND LUMBER (LSL)
Fb = 2250 PSI, E = 1500 KSI, Fv = 400 PSI (DEPTH > 9 1/2")
Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI (DEPTH < 9 1/2")

LAMINATED VENEER LUMBER (LVL)
Fb = 2600 PSI, E = 1900 KSI, Fv = 285 PSI

PARALLEL STRAND LUMBER (PSL)
Fb = 2900 PSI, E = 2000 KSI, Fv = 290 PSI

RIM BOARD: LAMINATED STRAND LUMBER (LSL)
Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI

STUDS: LAMINATED STRAND LUMBER (LSL)
Fb = 2250 PSI, E = 1500 KSI, Fv = 400 PSI, Fc = 1350 PSI (WIDTH > 7 1/4")
Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI, Fc = 1400 PSI (WIDTH < 7 1/4")

POSTS: PARALLEL STRAND LUMBER (PSL)
Fb = 2400 PSI, E = 1800 KSI, Fv = 290 PSI, Fc = 2300 PSI

CONNECTORS: DESIGN SHOWN ON DRAWINGS IS BASED ON CONNECTORS MANUFACTURED BY SIMPSON STRONG-TIE IN ACCORDANCE WITH CATALOG C-C-2015. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. CONNECTORS SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL TIMBER JOISTS AND MULTIPLE JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "HU" SERIES JOIST HANGERS, UNLESS OTHERWISE NOTED.

ALL TIMBER CONNECTORS IN CONTACT WITH PRESSURE-TREATED WOOD THAT USES PRESERVATIVE CHEMICALS SHALL BE MANUFACTURED FROM ZMAX STEEL BY SIMPSON (G185 STEEL PER ASTM A653), OR TYPE 304 OR 316 STAINLESS STEEL. ALTERNATIVELY, CONNECTORS CAN BE POST HOT DIP GALVANIZED PER ASTM A123 OR MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55 OR GREATER. STAINLESS STEEL FASTENERS SHALL BE USED WITH STAINLESS STEEL CONNECTORS, AND HOT DIP GALVANIZED FASTENERS PER ASTM A153 SHALL BE USED WITH GALVANIZED CONNECTORS.

NAILING: NOT SHOWN SHALL BE AS SHOWN IN IBC TABLE 2304.9.1. NAILS SHALL COMPLY WITH ASTM F1667. MINIMUM NAIL DIMENSIONS SHALL BE AS FOLLOWS:

SHEATHING NAILS		
SIZE	DIAMETER	LENGTH
8d	0.131"	2 1/4"
10d	0.148"	2 1/2"

FRAMING NAILS		
SIZE	DIAMETER	LENGTH
10d	0.148"	3"
12d	0.148"	3 1/4"
16d	0.162"	3 1/2"

BOLTS SHALL CONFORM TO ASTM A307. LAG SCREWS SHALL CONFORM TO ASME B18.2.1. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO 2012 NDS SECTION 11.1.4, AND INSTALLATION OF BOLTS SHALL CONFORM TO 2012 NDS SECTION 11.1.3.

PRESERVATIVE TREATED WOOD: ALL WOOD MEMBERS EXPOSED TO WEATHER AND SPECIFIED AS "PT" ON THE DRAWINGS SHALL BE PRESERVATIVE-TREATED IN ACCORDANCE WITH AWPA U1. EACH MEMBER SHALL BE IDENTIFIED BY THE QUALITY MARK OF AN INSPECTION AGENCY LISTED BY THE AMERICAN LUMBER STANDARDS TREATED WOOD PROGRAM, AND COMPLYING WITH IBC SECTION 2303.1.8.1. FASTENERS IN PRESERVATIVE OR FIRE TREATED WOOD MEMBERS SHALL BE HOT DIPPED ZINC COATED GALVANIZED PER ASTM A153.

SEE GENERAL STRUCTURAL NOTE REGARDING CONNECTORS FOR MATERIAL REQUIREMENTS OF CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE-TREATED MEMBERS. INSTALL 2 LAYERS OF ASPHALT-IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC., AND CONCRETE OR MASONRY.

GENERAL WOOD FRAMING NOTES: THE FOLLOWING APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS:

A. ALL WOOD FRAMING DETAILS SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO IBC TABLE 2304.9.1 OR CURRENT ICC-ES REPORT NER-272, UNLESS OTHERWISE NOTED. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

B. WALL FRAMING: TWO STUDS MINIMUM SHALL BE INSTALLED AT THE ENDS OF ALL WALLS, UNLESS OTHERWISE NOTED. INSTALL SOLID BLOCKING FOR WOOD COLUMNS THROUGH FLOOR SPACES TO SUPPORTS BELOW.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" OC STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" OC PER IBC SECTION 2308.6 (EMBED 7") UNLESS OTHERWISE NOTED. 3" x 3" x 0.229" PLATE WASHERS SHALL BE USED WITH ALL SILL PLATE ANCHOR BOLTS PER SDPWS SECTION 4.3.6.4.3. INDIVIDUAL MEMBERS OF BUILT-UP STUD POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12" OC STAGGERED.

C. FLOOR AND ROOF FRAMING: INSTALL DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS. INSTALL SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16d @ 12" OC STAGGERED.

ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AS SHOWN ON THE DRAWINGS. INSTALL APPROVED PANEL EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND- GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" OC. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS, INSTALL FLAT 2x BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.

SPECIAL INSPECTION SCHEDULE

ITEM	CI	PI	REFERENCE STANDARD	IBC 2015 REFERENCE	REMARK
CONCRETE:					
REINFORCEMENT		X	ACI 318 20.2, CH 25	1908.4	
WELDING OF REINFORCING BARS			AWS D1.4, ACI 318 26.6.4	1705.3.1	
MECHANICAL SPLICES OF REINFORCEMENT			ACI 318 25.5.7		PER EVALUATION REPORT
ANCHOR RODS, EMBEDDED BOLTS AND INSERTS	X		ACI 318 17.8.2		PRIOR TO & DURING CONCRETE PLACEMENT
ANCHORS		X	ACI 318 17.8.2		IN HARDENED CONCRETE
USE OF REQUIRED DESIGN MIX		X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	
CONCRETE SLUMP, AIR CONTENT AND TEMPERATURE	X		ASTM C172, C31, ACI 318 26.4 - 26.12	1908.10	WHILE MAKING SPECIMENS FOR STRENGTH TESTS
CONCRETE & SHOTCRETE PLACEMENT	X		ACI 318 26.5	1908.6-1908.8	
CONCRETE CURING		X	ACI 318 26.5.3 - 26.5.5	1908.9	
IN-SITU CONCRETE STRENGTH FOR FORM REMOVAL OR POST-TENSIONING		X	ACI 318 26.11.2		
POST-INSTALLED ANCHORS		X	ACI 318 17.8.2, 17.8.2.4		PER EVALUATION REPORT
STEEL:					
HIGH-STRENGTH BOLTS, NUTS, AND WASHERS		X	ASTM A5 NOTED, AISC 360 A3.3	1705.2, 1705.12.1	ID MARKS, MFR CERTIFICATION OF COMPLIANCE
HIGH-STRENGTH BOLTING:					
BEARING TYPE CONNECTIONS		X	AISC 360 M2.5		
STRUCTURAL STEEL MATERIALS			ASTM A6, A568, A5 NOTED		ID MARKS, MFR CERT MILL TEST REPORTS
WELD FILLER MATERIALS			AISC 360 A3.5		ID MARKS, MFR CERTIFICATION OF COMPLIANCE
WELDING:					
CJP & PJP GROOVE WELDS	X		AWS D1.1	1705.2, 1705.12.1	
MULTI-PASS FILLET WELDS	X		AWS D1.1		
SINGLE PASS FILLET WELDS > 5/16"	X				
SINGLE PASS FILLET WELDS ≤ 5/16"		X			
WOOD:					
FASTENERS, BOLTS, STRAPS, HOLDOWNS, ETC		X		1705.11, 1705.12.2	
SOILS:					
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHEIVE THE DESIGN BEARING CAPACITY		X		1705.6	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		1705.6	

INSPECTION SCHEDULE NOTES:

1. ITEMS MARKED WITH AN "X" INDICATE WHETHER THE INSPECTION IS CONTINUOUS OR PERIODIC AS DEFINED IN IBC SECTION 202 FOR ITEMS NOT MARKED WITH AN "X", COMPLY WITH IBC CHAPTER 17.
2. CI = CONTINUOUS INSPECTION.
3. PI = PERIODIC INSPECTION.
4. TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, AND CONTRACTOR.

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COMMONWEALTH OF WASHINGTON CHARLES MICHAEL FERGUS 43107 REGISTERED PROFESSIONAL ENGINEER
11/29/16

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 262016.018

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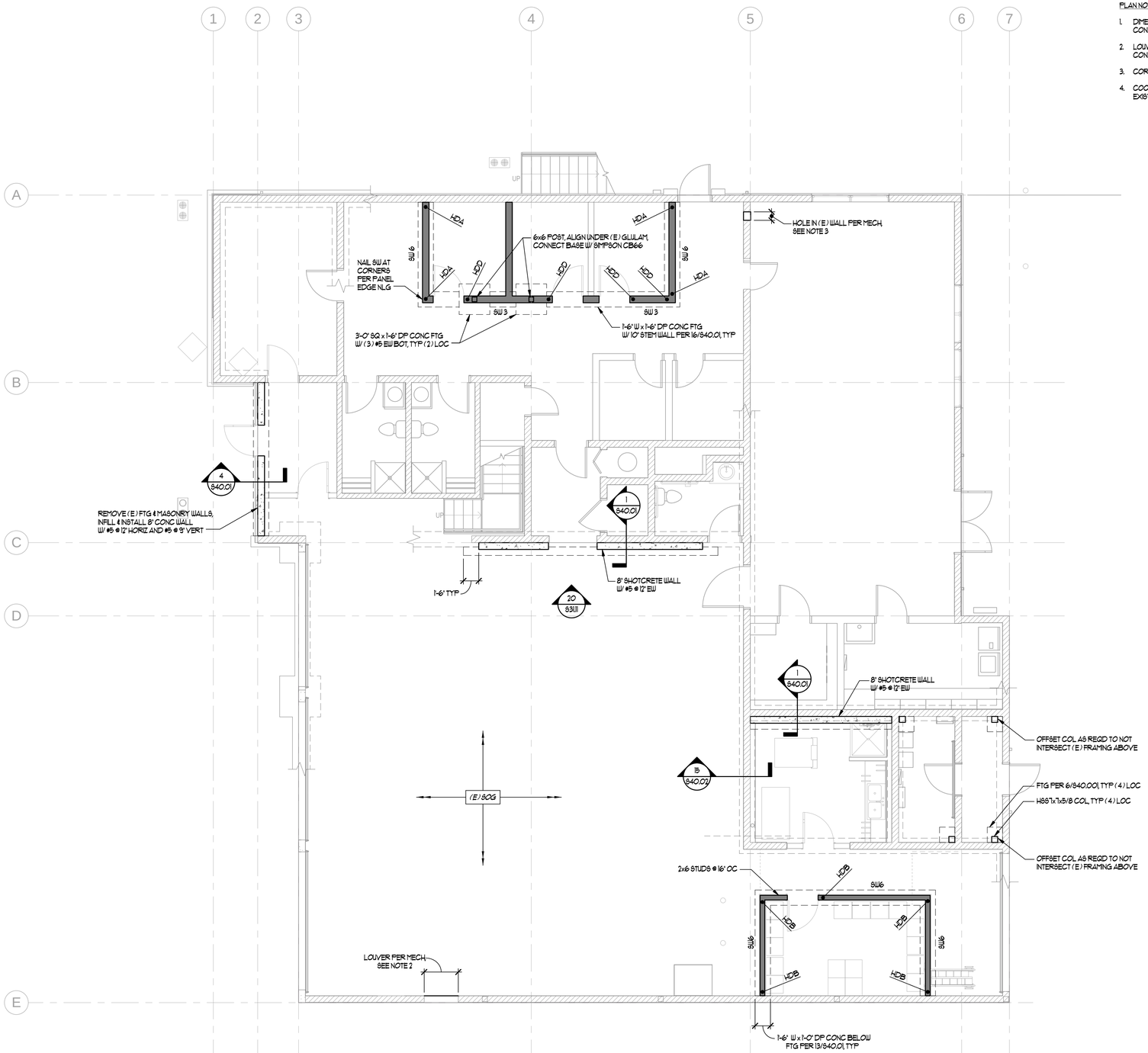
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REVISION SCHEDULE

GENERAL NOTES AND SPECIAL INSPECTION SCHEDULE

SHEET:

S00.03



FOUNDATION AND FIRST FLOOR PLAN

3/16" = 1'-0"

PLAN NOTES:

1. DIMENSION IS TO LOCATION OF ORIGINAL WALL OPENING PER ORIGINAL WALL OPENING PER ORIGINAL BUILDING DRAWINGS DATED 7-24-64. CONTRACTOR TO VERIFY LOCATION OF INFILL.
2. LOUVER TO BE LOCATED BETWEEN EXISTING REINFORCED VERTICAL CELLS (8'SPACED AT APPROXIMATELY 48' OC PER RECORD DRAWINGS). CONTRACTOR TO LOCATE REINFORCING PRIOR TO DEMO FOR LOUVER INSTALLATION. SEE 9/S40.01 FOR OPENING SUPPORT.
3. CORE DRILL HOLE. HOLE TO BE LOCATED AS TO NOT DAMAGE VERTICAL REINFORCING AND TO NOT BE LOCATED IN SOLID GROUTED CELLS.
4. COORDINATE SLAB INFILL EXTENTS WITH ARCHITECTURAL DRAWINGS. SLAB DEPTH TO MATCH EXISTING. PROVIDE #5 @ 12" EW, UNO. DOWEL TO EXISTING SLAB PER 2/S50.01, UNO.

LEGEND

(SEE S00.01 FOR ABBREVIATIONS)

- EXISTING MASONRY WALL THIS LEVEL
- EXISTING CONCRETE COLUMN
- SHOTCRETE WALLS
- WOOD WALLS

SHEET NOTE:

ALL DIMENSIONS, ELEVATION AND LOCATIONS OF EXISTING STRUCTURAL COMPONENTS ARE BASED ON INFORMATION GATHERED FROM ORIGINAL DRAWINGS OR CURSORY FIELD MEASUREMENTS AND ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FILED MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING ANY WORK. NOTIFY ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN.

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11/29/16

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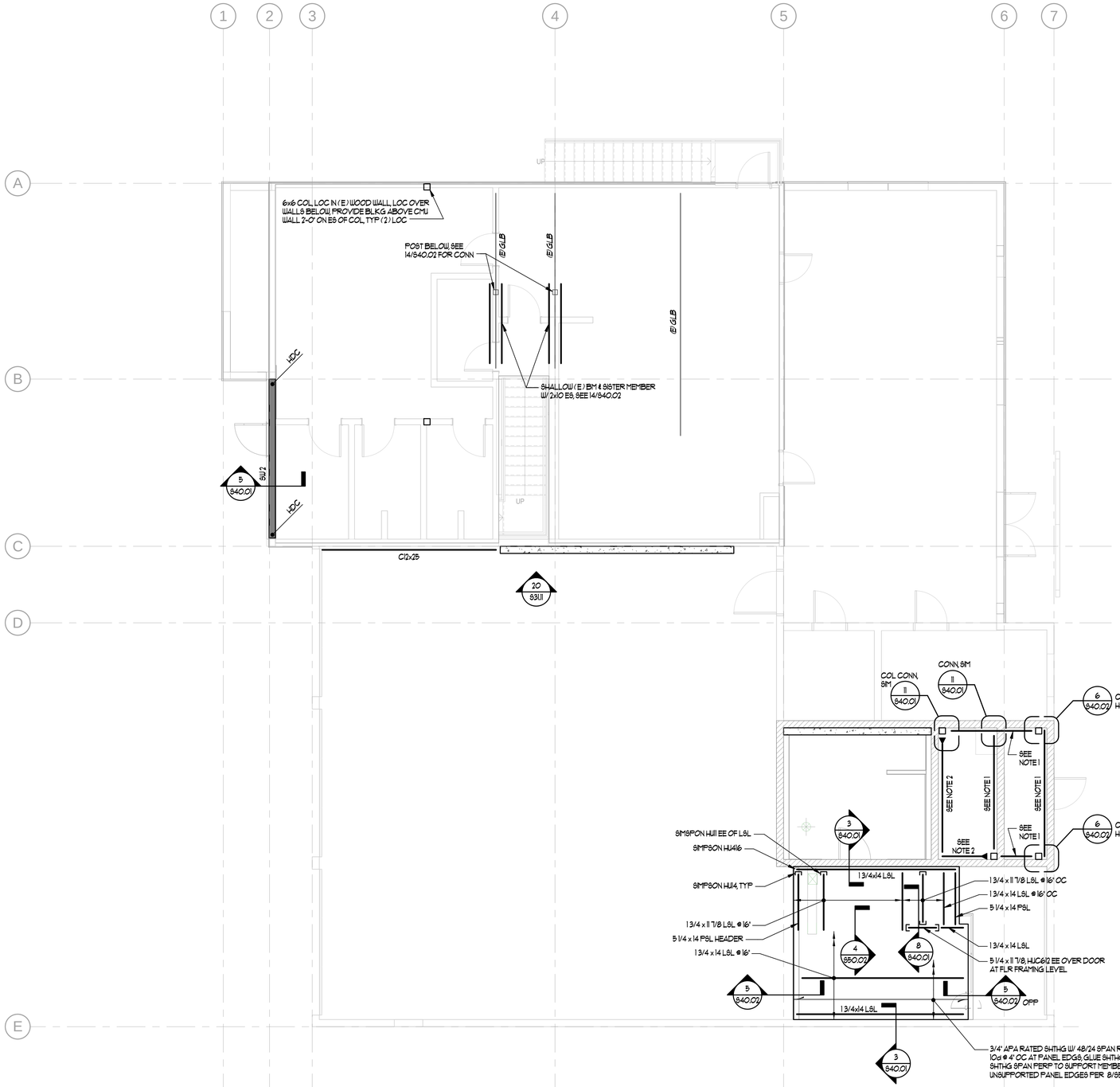
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REVISION SCHEDULE

FOUNDATION AND FIRST FLOOR PLAN

SHEET:

S21.11



MEZZANINE FRAMING PLAN

3/16" = 1'-0"

PLAN NOTES:

1. C10x15.3 BEAM @ 10'-0" MAX SPACE, EQUALLY FULL HEIGHT OF HOSE TOWER WALLS. LOCATE ONE AT TOP OF WALL.
2. HSS5.5x3/8 @ 10'-0" SPACE, SPACING TO MATCH C10.

LEGEND

(SEE S00.01 FOR ABBREVIATIONS)

- EXISTING MASONRY WALL THIS LEVEL
- EXISTING CONCRETE COLUMN
- SHOTCRETE WALLS
- WOOD WALLS

SHEET NOTE:

ALL DIMENSIONS, ELEVATION AND LOCATIONS OF EXISTING STRUCTURAL COMPONENTS ARE BASED ON INFORMATION GATHERED FROM ORIGINAL DRAWINGS OR CURSORY FIELD MEASUREMENTS AND ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FILED MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING ANY WORK. NOTIFY ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN.

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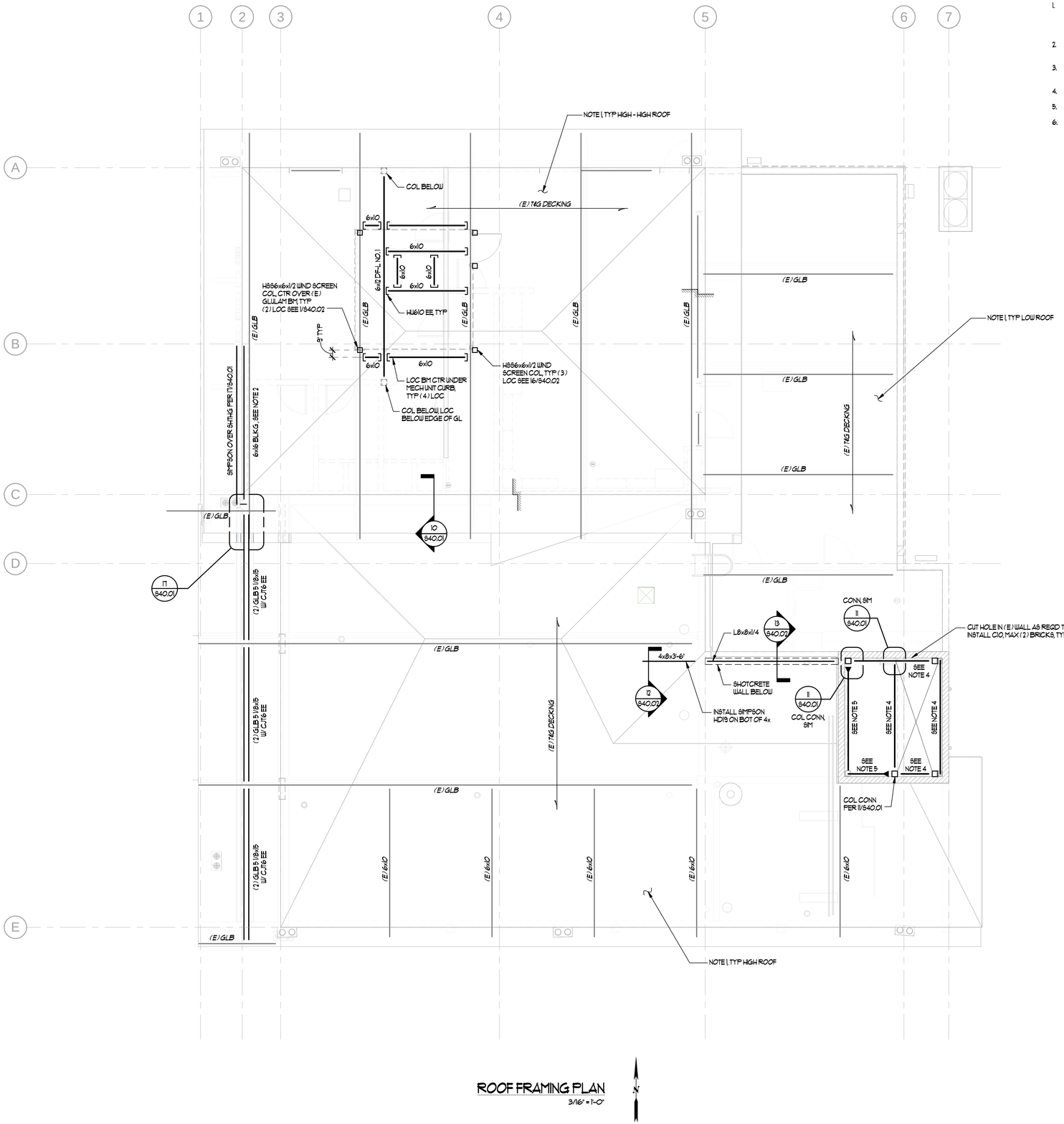
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MEZZANINE FRAMING PLAN

SHEET:

S22.11

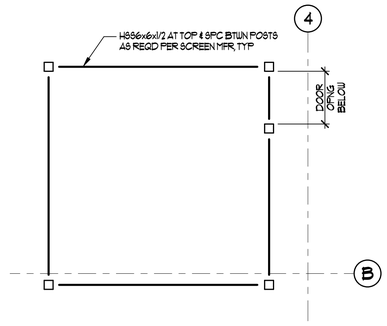


ROOF FRAMING PLAN

3/16" = 1'-0"

PLAN NOTES:

1. INSTALL 19/32" PLYWOOD SHEATHING (PANEL SPAN RATING 32/16) OVER EXISTING TONGUE AND GROOVE DECKING. NAIL PLYWOOD SHEATHING AT ALL PANEL EDGES WITH 10d @ 2 1/2" OC. NAIL PANEL FIELD WITH 10d @ 4" OC EACH WAY. CONTRACTOR SHALL VERIFY THICKNESS OF EXISTING TONGUE AND GROOVE DECKING AND VERIFY THAT NAILS DO NOT PENETRATE THROUGH UNDERSIDE OF DECKING AND BECOME EXPOSED.
2. BLOCKING SHALL BE IN WALL AS TO BE IN LINE WITH GLULAM BEAMS AT HIGH ROOF PER 19/S40.01. EXISTING STUDS TO REMAIN. INSTALL POSTS FOR HOLDOWNS AS REQUIRED.
3. NEW 6x BEAMS TO BE INSTALLED FLUSH WITH UNDERSIDE OF DECK. INSTALLATION SEQUENCING PER CONTRACTOR. NOTE THAT 6x12 MAY NEED TO BE INSTALLED LAST.
4. C10x15.3 BEAM, PER S22.11.
5. HS85x5x3/8, SPACE TO MATCH C10.
6. PROVIDE A35 @ 11-6" OC EACH SIDE OF ALL 6x10 AND 6x12 MEMBERS, TYPICAL



NOTE:

1. SEE 2/S40.02 FOR TYPICAL BEAM TO COLUMN CONNECTION.

WIND SCREEN PARTIAL PLAN 1

1/4" = 1'-0"

LEGEND

(SEE S00.01 FOR ABBREVIATIONS)

- SPAN DIRECTION OF MTL DECK / FRAMING MEMBERS
- EXISTING MASONRY WALL THIS LEVEL
- SLAB STEP
- SHEAR WALL OR SHOTCRETE WALL BELOW THIS LEVEL
- EXISTING WALL BELOW

SHEET NOTE:

ALL DIMENSIONS, ELEVATION, AND LOCATIONS OF EXISTING STRUCTURAL COMPONENTS ARE BASED ON INFORMATION GATHERED FROM ORIGINAL DRAWINGS OR CURSORY FIELD MEASUREMENTS AND ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FILED MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING ANY WORK. NOTIFY ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN.

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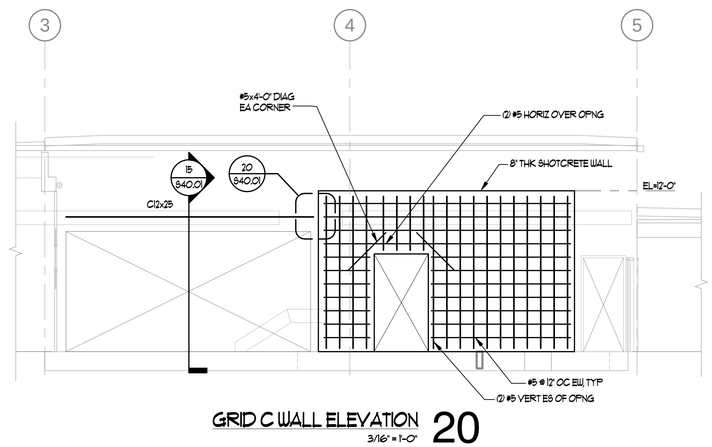
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ROOF FRAMING PLAN

SHEET:

S23.11



GRID C WALL ELEVATION 20

3/16" = 1'-0"

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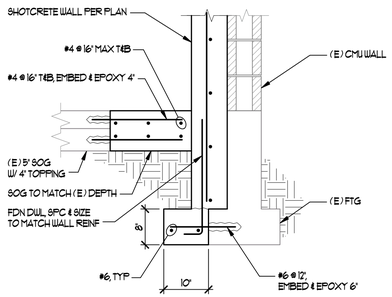
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WALL ELEVATION

SHEET:

S31.11

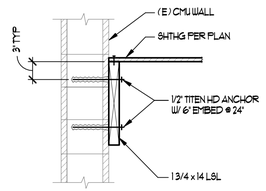


NOTE:

1. SHOTCRETE WALL DOWELS TO EXISTING CMU WALL AND FOUNDATION WALL NOT SHOWN.

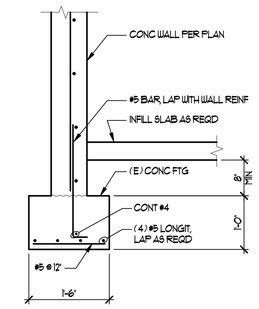
SHOTCRETE WALL FOUNDATION 1

3/4" = 1'-0"



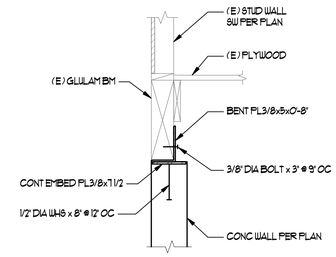
LEDGER CONNECTION TO CMU WALL 3

1" = 1'-0"



CONCRETE WALL SECTION 4

3/4" = 1'-0"

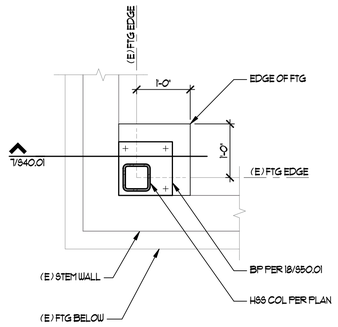


NOTE:

1. CONTRACTOR TO VERIFY EXISTING GLULAM BEAM IS PRESENT FULL LENGTH OF WALL.

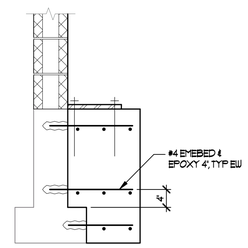
CONCRETE WALL TO WOOD BEAM 5

3/4" = 1'-0"



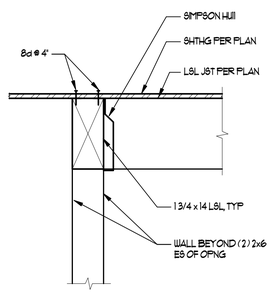
COLUMN FOUNDATION - PLAN 6

3/4" = 1'-0"



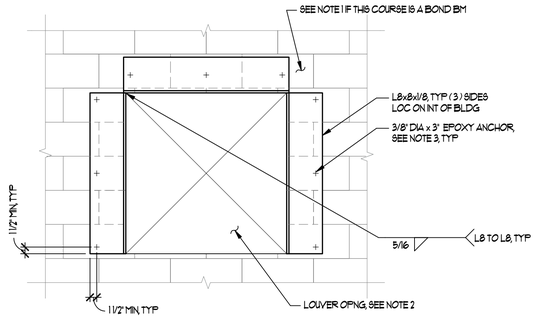
COLUMN FOUNDATION - SECTION 7

3/4" = 1'-0"



HEADER DETAIL 8

1" = 1'-0"

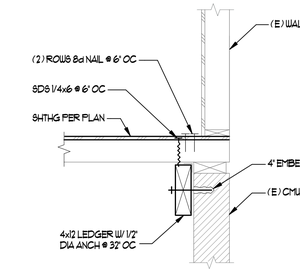


NOTES:

1. STEEL FRAME NOT REQUIRED IF COURSE ABOVE OPENING IS A BOND BEAM.
2. LOUVER OPENING TO BE LOCATED BETWEEN VERTICALLY GROUTED CELLS.
3. WHERE CELL IS NOT GROUTED INSTALL SCREEN PER GENERAL NOTES. INSTALL (1) ANCHOR PER CMU BLOCK IN CENTER OF BLOCK HEIGHT.

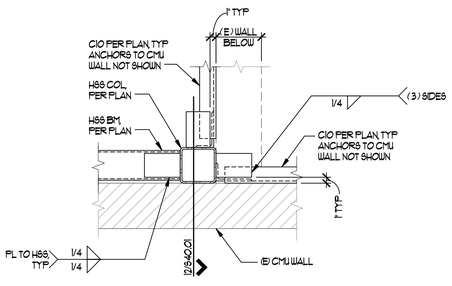
LOUVER OPENING SUPPORT 9

3/4" = 1'-0"



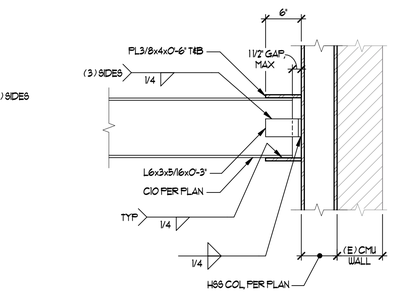
NORTH APP BAY WALL 10

3/4" = 1'-0"



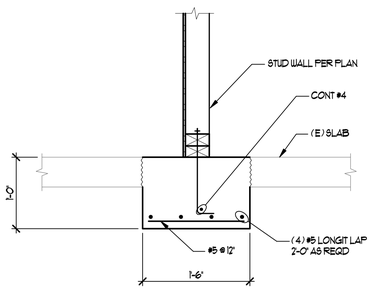
C10 TO HSS COLUMN AT HOSE TOWER CENTER 11

1" = 1'-0"



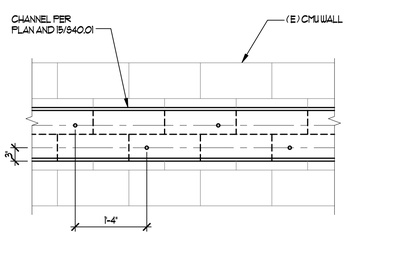
SECTION - C10 TO HSS COLUMN 12

1" = 1'-0"



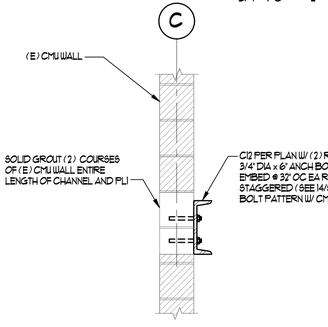
12x18 CONCRETE FOOTING 13

1" = 1'-0"



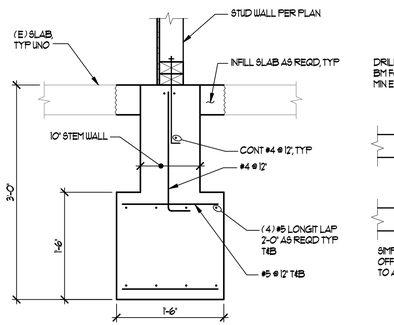
CHANNEL BOLT LOCATIONS 14

3/4" = 1'-0"



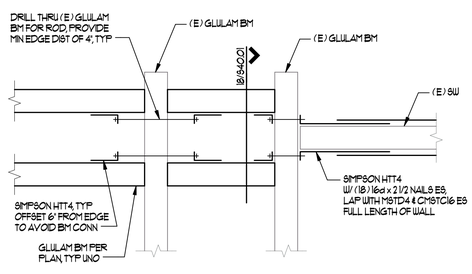
CHANNEL AT GRID C 15

3/4" = 1'-0"



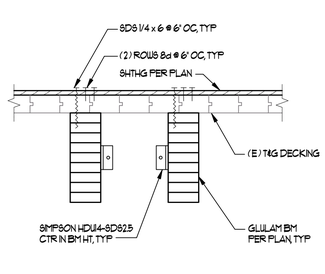
12x36 CONCRETE FOOTING 16

1" = 1'-0"



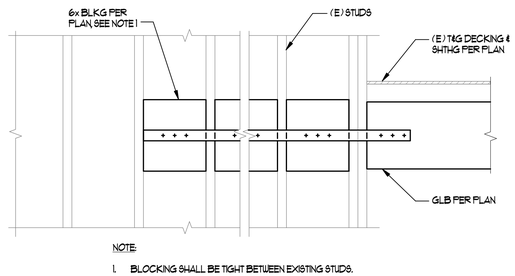
GLULAM DRAG ELEMENT 17

3/4" = 1'-0"



SECTION - GLULAM DRAG ELEMENT 18

1" = 1'-0"

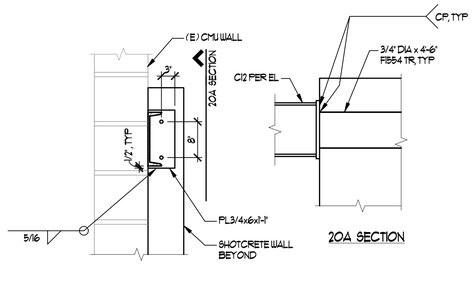


NOTE:

1. BLOCKING SHALL BE TIGHT BETWEEN EXISTING STUDS.

DRAG STRUT BLOCKING 19

3/4" = 1'-0"



GRID C CHANNEL TO SHOTCRETE WALL 20

3/4" = 1'-0"

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11/29/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

STATION 63

33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 262016.018

BID SET

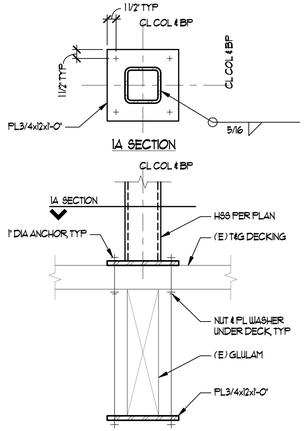
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REVISION SCHEDULE

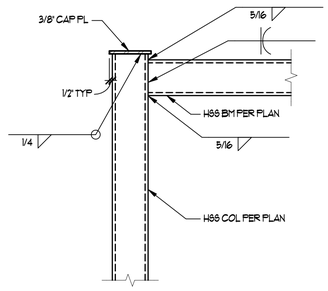
SECTIONS AND DETAILS

SHEET:

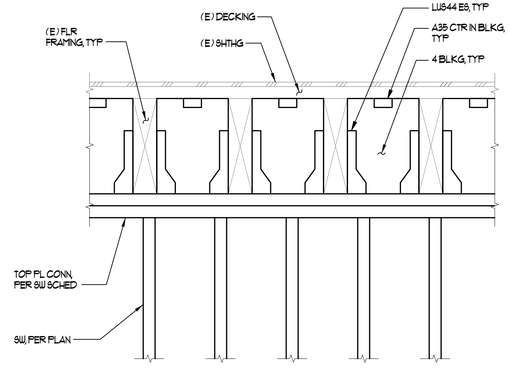
S40.01



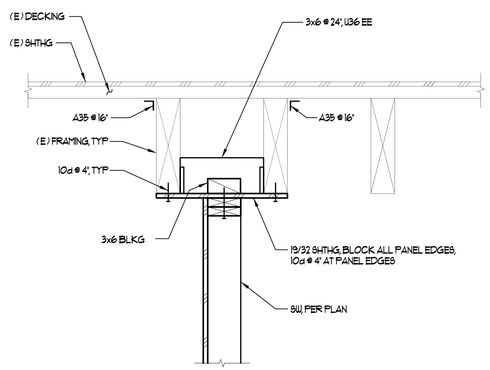
SCREEN COLUMN BASE ANCHORAGE 1
1" = 1'-0"



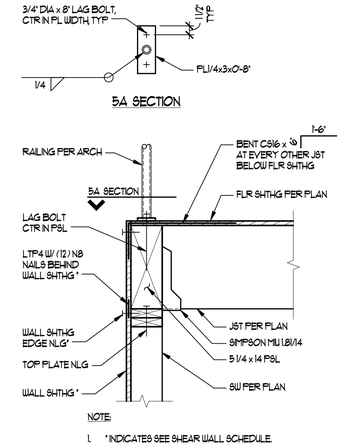
SCREEN ANGLE CONNECTION 2
1" = 1'-0"



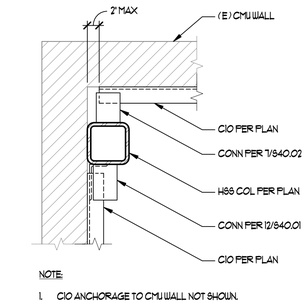
TYPICAL SHEAR WALL TO 2ND FLOOR CONNECTION PERPENDICULAR TO EXISTING FRAMING 3
NTS



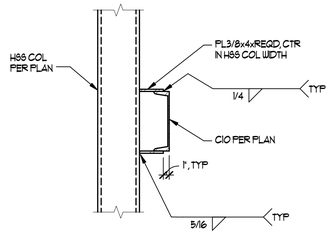
TYPICAL SHEAR WALL TO 2ND FLOOR CONNECTION PARALLEL TO EXISTING FRAMING 4
NTS



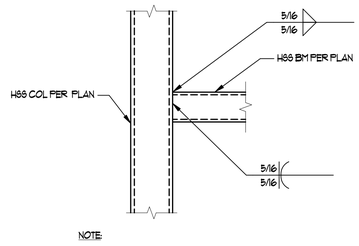
MEZZANINE SHEAR WALL AND RAILING 5
1" = 1'-0"



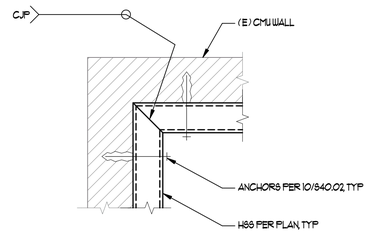
C10 TO HSS AT HOSE TOWER CORNER 6
1" = 1'-0"



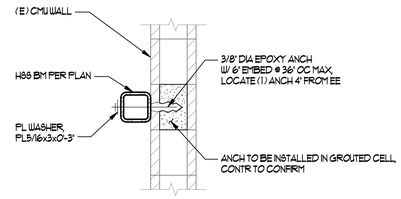
SECTION OFFSET C10 TO HSS COLUMN 7
1" = 1'-0"



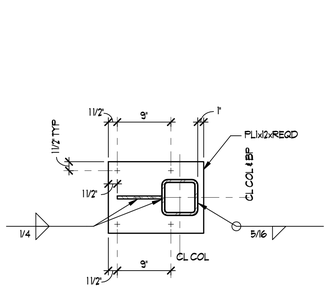
TYPICAL HSS BEAM TO COL CONNECTION 8
1" = 1'-0"



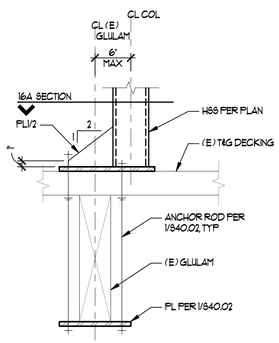
HOSE TOWER HSS BEAMS CORNER 9
1" = 1'-0"



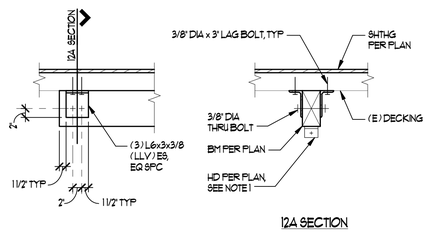
HSS TO CMU WALL 10
1" = 1'-0"



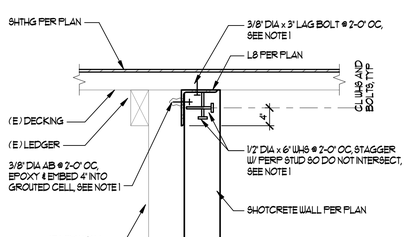
16A SECTION



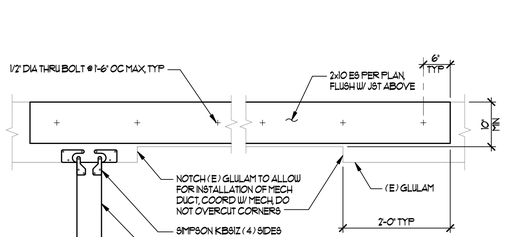
OFFSET SCREEN COLUMN BASE ANCHORAGE 16
1" = 1'-0"



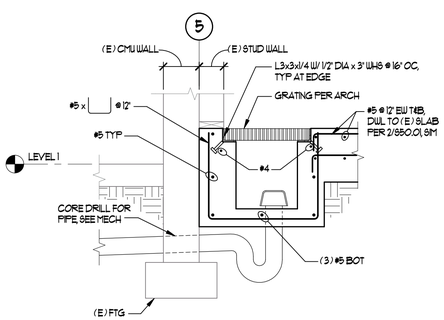
DRAG BEAM DETAIL 12
3/4" = 1'-0"



SHOTCRETE TOP ANGLE 13
3/4" = 1'-0"



SISTERED GLULAM BEAM 14
3/4" = 1'-0"



SECTION AT DRAIN 15
3/4" = 1'-0"

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11/29/16

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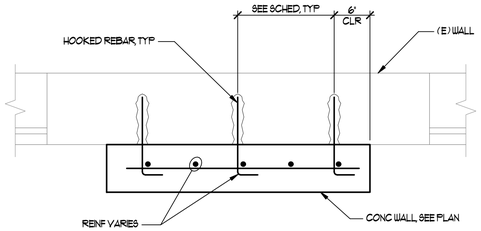
ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

SECTIONS AND DETAILS

SHEET:

S40.02



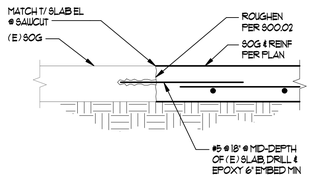
PLAN

SCHEDULE				
(E) WALL	DETAIL	MAX SPACING	MIN EMBED	BAR SIZE
FILLED CMU	6/S50.01	1'-6" EW	4"	3/4" DIA TR
HOLLOW CMU	6/S50.01 SIM	1'-6" EW	PER 6/S50.01	3/4" DIA TR

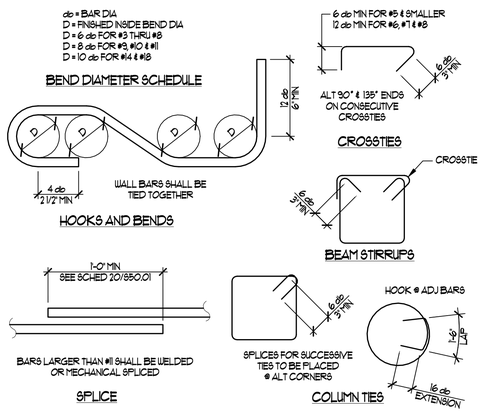
NOTE:

1. THIS OCCURS AT ALL CONCRETE, MASONRY, AND URM WALLS.

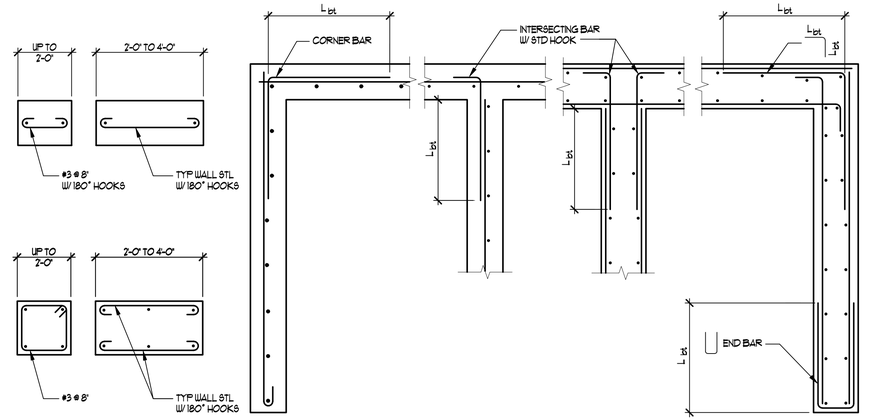
CONCRETE WALL DETAIL AND SCHEDULE 1
NTS



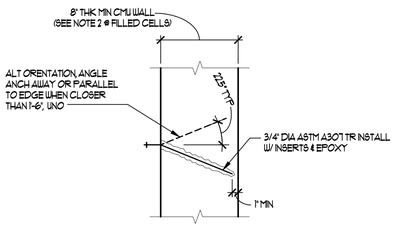
SOG TO EXISTING CONNECTION 2
NTS



TYPICAL REINFORCING BAR BEND AND LAP DETAILS 3
NTS



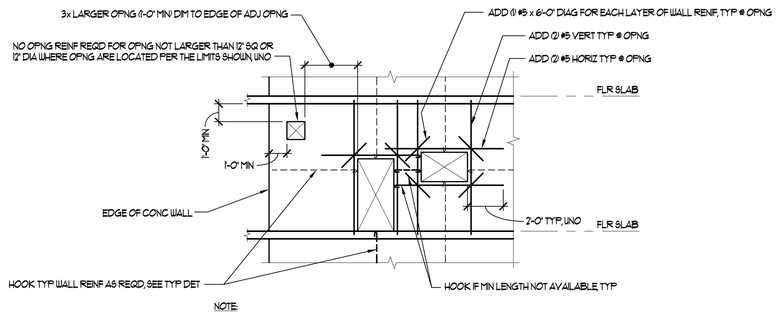
TYPICAL CONCRETE WALL PLAN DETAILS 5
NTS



NOTES:

1. INSTALL ANCHOR WITH REBAR WHERE REQUIRED. SEE DETAILS FOR REBAR SIZE.
2. 22.5° HOLE ANGLE NOT REQUIRED FOR REBAR INSTALLED IN EXISTING FILLED CELLS. 1" DISTANCE TO EXISTING SIDE IS NOT APPLICABLE AT EXISTING CONCRETE WALLS. 4" MINIMUM EMBED PER 1/S50.01 REQUIRED.
3. DRILLING METHODS SHALL BE SELECTED TO AVOID DAMAGE TO THE WALL.

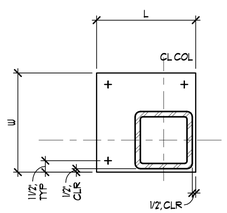
ANCHOR IN EXISTING WALLS 6
NTS



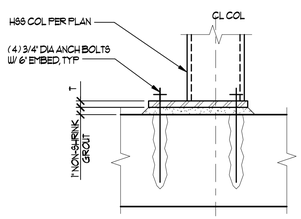
NOTE:

1. TYPICAL WALL REINFORCING NOT SHOWN FOR CLARITY, EXCEPT AS NOTED.

CONCRETE WALL ELEVATION DETAIL 7
NTS



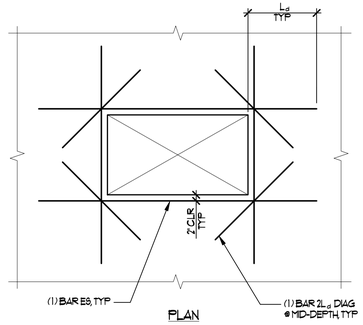
PLAN



SECTION

BASE PLATE SCHEDULE		
COLUMN SIZE	PLATE SIZE LxW	PLATE THICK T
HSS7x7	12"x12"	1"
-	-	-

TYPICAL BASE PLATE DETAIL 18
NTS

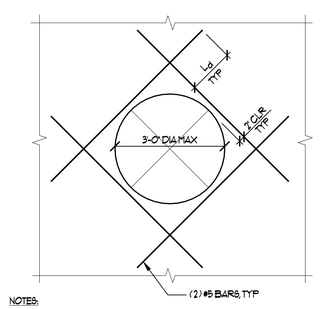


PLAN

NOTES:

1. BAR SIZE TO MATCH SLAB REINFORCING.
2. IF TWO LAYERS OF STEEL IN SLAB, PROVIDE OPENING REINFORCEMENT FOR EACH LAYER.

TYPICAL REINFORCING AT WALL OPENING 14
NTS



NOTES:

1. HORIZONTAL AND VERTICAL WALL REINFORCING NOT SHOWN FOR CLARITY.
2. TERMINATE INTERRUPTED HORIZONTAL AND VERTICAL REINFORCEMENT WITH A STANDARD HOOK.
3. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR LOCATIONS OF PIPE PENETRATIONS.

REINFORCING AT PIPE PENETRATION IN WALL 19
NTS

Fc = 4,000 PSI								
SIZE	L_s (2,3,4) & L_{cl} (2,3,4)	L_b (2,3,4)	L_{dh}	L_c	L_{cl}	L_{ds} (4,5,6)	L_{bs} (4,5,6)	L_{dhs}
3	15	19	8	8	12	15	20	6
4	19	25	10	10	15	19	24	8
5	24	31	12	12	19	23	30	10
6	29	37	15	15	23	28	36	11
7	42	54	17	17	27	32	42	13
8	48	62	19	19	30	37	48	15
9	54	70	22	22	34	42	54	17
10	61	78	25	25	39	47	61	19
11	67	87	27	27	43	52	67	21

Fc = 6,000 PSI								
SIZE	L_s (2,3,4) & L_{cl} (2,3,4)	L_b (2,3,4)	L_{dh}	L_c	L_{cl}	L_{ds} (4,5,6)	L_{bs} (4,5,6)	L_{dhs}
3	12	16	6	8	12	15	20	6
4	16	21	8	9	15	15	20	6
5	20	26	10	12	19	19	25	8
6	24	31	12	14	23	23	29	9
7	34	45	14	16	27	27	34	11
8	39	51	16	18	30	30	39	12
9	44	57	18	21	34	34	44	14
10	50	64	20	23	39	38	50	16
11	55	71	22	26	43	42	55	17

NOTES:

1. USE THE LENGTHS IN THIS SCHEDULE UNLESS NOTED OTHERWISE.
2. FOR BARS WITH LOW COVER OR SPACING, INCREASE LENGTH BY 50%. IF BARS ARE ENCLOSED IN STIRRUPS OR TIES, INCREASE APPLIES WHEN BAR COVER OR CLEAR BAR SPACING IS LESS THAN d_b. IF BARS ARE NOT ENCLOSED IN STIRRUPS OR TIES, INCREASE APPLIES WHEN BAR COVER IS LESS THAN d_b OR CLEAR BAR SPACING IS LESS THAN $2d_b$.
3. FOR TOP BARS INCREASE LENGTH BY 30%. A TOP BAR IS A HORIZONTAL BAR WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW IT.
4. FOR EPOXY COATED REINFORCING, INCREASE STRAIGHT BAR LENGTHS BY 50% AND HOOKED BAR LENGTHS BY 20%.
5. FOR PORTIONS NOT WITHIN A CONFINED COLUMN OR BOUNDARY ZONE CORE, INCREASE LENGTH BY 60%.
6. FOR SEISMIC TOP BARS INCREASE LENGTH BY 40%. SEISMIC TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW.

ABBREVIATIONS:

d_b	BAR DIAMETER
L_{cl}	TENSION DEVELOPMENT LENGTH
L_{clt}	TENSION DEVELOPMENT LENGTH FOR A TOP BAR (SEE NOTE 3)
L_s	CLASS A LAP SPLICE LENGTH
L_{st}	CLASS A LAP SPLICE LENGTH FOR A TOP BAR (SEE NOTE 3)
L_b	CLASS B LAP SPLICE LENGTH
L_{bt}	CLASS B LAP SPLICE LENGTH FOR A TOP BAR (SEE NOTE 3)
L_{dh}	TENSION DEVELOPMENT LENGTH FOR A STANDARD HOOK
L_c	COMPRESSION DEVELOPMENT LENGTH
L_{cl}	COMPRESSION LAP SPLICE LENGTH
L_{ds}	SEISMIC TENSION DEVELOPMENT LENGTH
L_{dts}	SEISMIC TENSION DEVELOPMENT LENGTH FOR A TOP BAR (SEE NOTE 6)
L_{bs}	SEISMIC LAP SPLICE LENGTH
L_{bts}	SEISMIC LAP SPLICE LENGTH FOR A TOP BAR (SEE NOTE 6)
L_{dhs}	SEISMIC DEVELOPMENT LENGTH FOR A STANDARD HOOK

REINF BAR DEVELOPMENT & SPLICE LENGTH TABLES 20
NTS

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11/29/16

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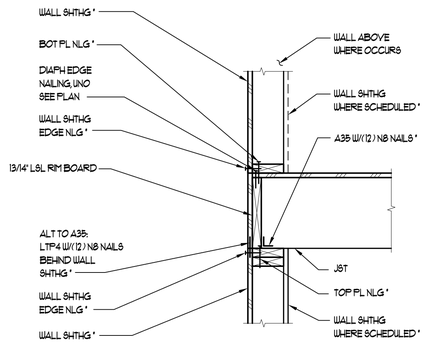
ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

TYPICAL DETAILS

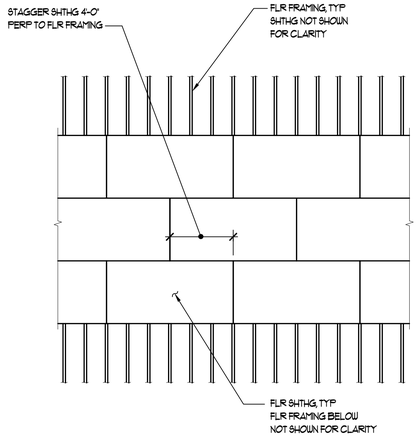
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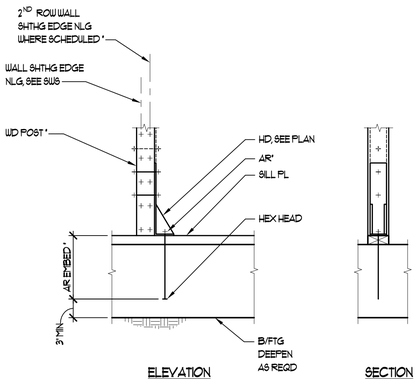


NOTES:
1. ' INDICATES SEE SHEAR WALL SCHEDULE.
2. ALTERNATE LOCATION FOR LTP4; OVER WALL SHEATHING, INSTALL WITH (12) 8d NAILS.

ALIGNED SHEAR WALLS - JOIST PERP 1
NTS

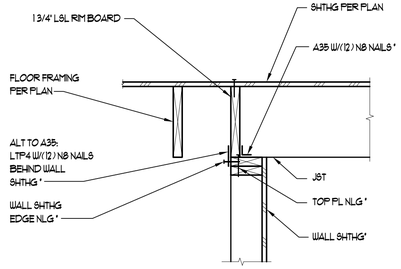


TYPICAL FLOOR SHEATHING PLAN 2
NTS



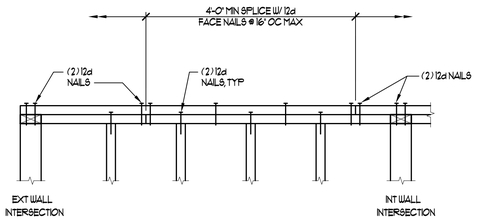
NOTES:
1. ' INDICATES SEE HOLDOWN SCHEDULE.
2. WALL SHEATHING AND CONCRETE REINFORCING NOT SHOWN FOR CLARITY.

HOLD DOWN AT FOOTING 3
NTS

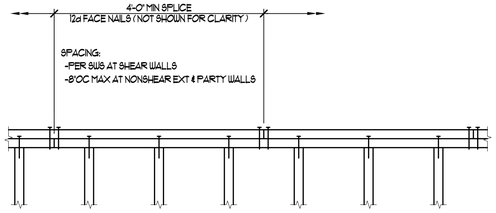


NOTES:
1. ' INDICATES SEE SHEAR WALL SCHEDULE.
2. ALTERNATE LOCATION FOR LTP4; OVER WALL SHEATHING, INSTALL WITH (12) 8d NAILS.

SHEAR WALLS - JOIST PERPENDICULAR 4
NTS

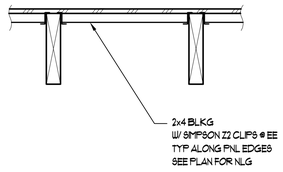


MINIMUM TOP PLATE SPLICE 6
NTS



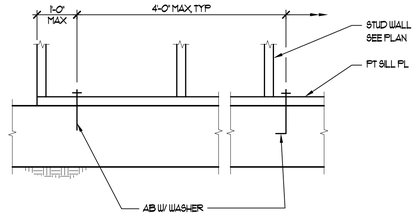
NOTES:
1. SEE 6/S50.02 FOR ADDITIONAL INFORMATION.
2. SPLICE AND NAIL TOP PLATE AS SHOWN AT ALL EXTERIOR, PARTY AND SHEAR WALLS.
3. SEE SHEAR WALL SCHEDULE 'TOP PLATE NAILING' FOR SPACING OF FACE NAILS AT SHEAR WALLS.

TOP PLATE SPLICE 7
NTS



NOTE:
1. TYPICAL AT ALL PANEL EDGES WHERE BLOCKING IS REQUIRED, SEE PLAN FOR LOCATIONS.

TYPICAL PANEL EDGE BLOCKING DETAIL 8
NTS



NOTES:
1. USE 5/8" DIAMETER ANCHOR BOLTS WITH 4 1/2" MINIMUM EMBEDMENT INTO CONCRETE OR 5/8" DIAMETER HOLLOW SET DROP-IN EXPANSION ANCHOR WITH 2 1/4" EMBEDMENT.
2. EACH SILL PLATE PIECE SHALL HAVE (2) BOLTS MINIMUM.
3. LOCATE BOLTS WITHIN 12" OF SILL PLATE PIECE ENDS AND AT 4'-0" ON CENTER MAXIMUM.
4. USE 2"x2"x3/16" SQUARE PLATE WASHER AT EACH BOLT.
5. DO NOT OVERSIZE HOLES DRILLED THROUGH SILL PLATE. USE 11/16" DRILL BIT.
6. SEE SHEAR WALL SCHEDULE FOR SILL PLATE THICKNESS AND FASTENING REQUIRED AT SHEAR WALLS.

SILL PLATE ANCHORAGE TO CONCRETE 9
NTS

HOLD DOWN SCHEDULE - WITH SCREWS

MARK	MODEL (NOTE 1)	WOOD POST (NOTE 2)	2x POST NAILING (NOTE 3)	# OF SDS25 TO POST (NOTE 1)	SECOND ROW EDGE NAILING	AB TO CONCRETE (NOTES 4 AND 8) TR AT WOOD FLOOR (NOTES 5 AND 8) DIA			AB IN FTG (NOTES 6 AND 8)	AB IN FDN OR SHOTCRETE WALL (NOTES 7, 8, AND 9)
HDA	HDU4-SDS25	(2) 2x	12d @ 8"OC	10	YES	5/8"			PAB5	S5TB20
HDB	HDU5-SDS25	(2) 2x	12d @ 7"OC	14	YES	5/8"			PAB5	-
HDC	HDU8-SDS25	4x	-	20	YES	7/8"			PAB7	S5TB28
HDD	HDU14-SDS25	6x	-	36	YES	1"			PAB8	SBTX30

NOTES:
1. "SDS25" IS 1/4" DIA x 2 1/2" STRONG-DRIVE WOOD SCREW (MODEL SDS25212), MANUFACTURED BY SIMPSON STRONG-TIE.
2. SIZES LISTED IN THE SCHEDULE ARE FOR THE NOMINAL THICKNESS OF WOOD POST PERPENDICULAR TO THE HOLD DOWN. WIDTH OF THE POST IS THE SAME AS THE WIDTH OF THE WALL IN WHICH THE HOLD DOWN IS LOCATED.
3. FASTEN TOGETHER 2x MEMBERS OF POST AT THE SPECIFIED SPACING. "12d" NAIL IS 0.148" DIA x 3 1/4" AT (3) 2x POSTS, FASTEN SECOND TO FIRST STUD AND THIRD TO SECOND STUD AT THE SPECIFIED SPACING.
4. "AB" IS A STRAIGHT, HEX-HEADED, CARBON STEEL ANCHOR BOLT COMPLYING WITH ASTM F1554, GRADE 36, CLASS 2A.
5. "TR" IS A CARBON STEEL STUD (e.g. THREADED ROD) COMPLYING WITH ASTM A307, GRADE A.
6. "PAEx" IS A PRE-ASSEMBLED ANCHOR BOLT MANUFACTURED BY SIMPSON STRONG-TIE. INSTALL AT SAME EMBEDMENT LENGTHS AS SPECIFIED IN THE 'AB CONCRETE EMBED' COLUMNS.
7. "S5TBxx" AND "SBx" ARE PROPRIETARY ANCHOR BOLTS COMPLYING WITH ICC-ES ESR-2611 AND MANUFACTURED BY SIMPSON STRONG-TIE. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
8. INSTALL A CARBON STEEL HEX NUT COMPLYING WITH ASTM A563, GRADE A, AT EACH BOLT, EXCEPT FOR HDU14-SDS2.5 AND HHDQ14-SDS2.5 WHERE A HEAVY HEX NUT IS NEEDED.
9. INSTALL A SIMPSON STRONG-TIE CNW 7/8 TO EXTEND ANCHOR BOLT THRU CENTER OF GLULAM SO S5TB28 IS INSTALLED IN SHOTCRETE WALL.

HOLD DOWN SCHEDULE - WITH SCREWS 19
NTS

SHEAR WALL SCHEDULE

WALL MARK	WALL SHEATHING	PANEL EDGE NAILING	FRAMING AT ADJ PANEL EDGES	(2) 2x FRAMING NAILING	BOTTOM PLATE NAILING	TOP PLATE CONNECTION A35	TOP PLATE CONNECTION LTP4	FDN SILL PLATE	SILL PL AR / BRG PL TR
	NOTE #1, #8	NOTE #2	NOTES #5, #6	NOTE #6	NOTES #3, #12	NOTES #4, #11	NOTES #4, #11	NOTE #3	NOTE #3
SW6	15/32" (1) SIDE	0.148 x 2 1/2 @ 6" OC	2x	-	0.148 x 3 1/4 @ 8" OC	@ 2-8"OC	@ 2-6"OC	2x	5/8" DIA @ 4'-8"OC
SW4	15/32" (1) SIDE	0.148 x 2 1/2 @ 4" OC	2x	-	0.148 x 3 1/4 @ 6" OC	@ 1-10"OC	@ 1-10"OC	2x	5/8" DIA @ 3'-2"OC
SW3	15/32" (1) SIDE	0.148 x 2 1/2 @ 3" OC	3x ((2) 2x)	0.148 x 3 1/4 @ 4 1/2" OC	0.148 x 3 1/4 @ 4 1/2" OC	@ 1-4"OC	@ 1-4"OC	2x	5/8" DIA @ 2'-6"OC
SW2	15/32" (1) SIDE	0.148 x 2 1/2 @ 2" OC	3x ((2) 2x)	(2) ROWS 0.148 x 3 1/4 @ 7" OC	(2) ROWS 0.148 x 3 1/4 @ 7" OC	@ 1-0"OC	@ 1-0"OC	2x (3x)	5/8" DIA @ 1'-10" OC (@ 2'-4" OC)

SHEAR WALL NOTES:
1. WALL SHEATHING SHALL BE APA RATED SHEATHING, C-D INT (CDX), EXP 1 24/16 (7/16"), WALL PANELS MAY BE INSTALLED VERTICALLY OR HORIZONTALLY.
2. THE SPECIFIED PANEL EDGE NAILING IS REQUIRED AT ALL PANEL EDGES AND ENDS. INSTALL 2x SOLID BLOCKING AT ALL UNSUPPORTED PANEL EDGES AND ENDS WITH MINIMUM 2x SOLID BLOCKING (UNO (SEE NOTES 5 AND 6). MAXIMUM SPACING OF NAILING AT INTERMEDIATE FRAMING MEMBERS IS 12" OC. SPACE NAILS MINIMUM 3/8" FROM EDGES AND ENDS OF WALL PANELS, WALL STUDS, TOP AND BOTTOM PLATES, AND BLOCKING.
3. TOP AND BOTTOM PLATE NAILS ARE 0.148" DIA x 3 1/4", SPACE BOTTOM PLATE NAILS 1/2" MINIMUM FROM EDGES AND 2" MINIMUM FROM ENDS OF THE BLOCKING (OR JOIST OR RIM BOARD) BELOW. INSTALL THE TOP AND BOTTOM PLATE NAILS AT THE TOP AND BOTTOM, RESPECTIVELY, OF THE SCHEDULED SHEAR WALL AT THE SPECIFIED SPACING. INSTALL THE BOTTOM PLATE NAILS SO THAT THEY ARE CENTERED IN THE BLOCKING (OR JOIST OR RIM BOARD) BELOW.
4. SEE WOOD DETAILS FOR LOCATION OF TOP PLATE CONNECTIONS. INSTALL AT THE TOP OF THE SCHEDULED SHEAR WALL AT THE SPECIFIED SPACING. "N8 NAIL" IS 0.131" DIA x 11/2" LONG. "N10 NAIL" IS 0.148" DIA x 11/2" LONG.
5. WHERE 3x WALL STUDS ARE SPECIFIED, INSTALL 3x WALL STUDS AT ADJOINING PANEL EDGE AND ENDS. INSTALL 3x SOLID BLOCKING AT ALL UNSUPPORTED PANEL EDGES AND ENDS WITH STAGGER PANEL EDGES NAILING 1/2" AT ALL WALL STUDS, PLATES AND BLOCKING. MAINTAIN SUFFICIENT EDGE DISTANCE TO AVOID SPLITTING OF WOOD.
6. (2) 2x WALL STUDS ARE PERMITTED TO BE SUBSTITUTED FOR 3x STUDS WHERE SPECIFIED IN ( ) INSTALL (2) 2x WALL STUDS AT ADJOINING PANEL EDGES AND ENDS. FASTEN STUDS TOGETHER WITH 0.148" DIA x 3 1/4" NAILS AT THE SPECIFIED SPACING. WHERE (2) ROWS OF NAILS ARE SPECIFIED, PLACE THE ROWS 1 1/2" APART, SEE WSUM-1. PROVIDE ALL UNSUPPORTED PANEL EDGES AND ENDS WITH MINIMUM 3x SOLID BLOCKING. (2) 2x SOLID BLOCKING PERMITTED PROVIDED THE 2x BLOCKS ARE FASTENED TOGETHER AS SPECIFIED ABOVE FOR THE (2) 2x STUDS. STAGGER PANEL EDGE NAILING 1/2" AT ALL WALL STUDS, PLATES AND BLOCKING. MAINTAIN SUFFICIENT EDGE DISTANCE TO AVOID SPLITTING OF WOOD.
7. SEE WTP-3 FOR STEEL STRAPS AT TOP PLATES FOR CUTS, NOTCHES AND BORED HOLES.
8. NAIL SHEATHING AT INTERMEDIATE FRAMING WITH SAME SIZE NAILS AS PANEL EDGE NAILING @ 12" OC. WHERE SHEATHING IS 7/16" THICK AND STUD SPACING IS 24" OC, NAIL SHEATHING TO INTERMEDIATE FRAMING @ 6" OC.
9. AT SILL PLATES, EMBED ANCHOR RODS A MINIMUM OF 7" INTO CONCRETE. SEE DETAILS. INSTALL 3"x3"x0.229" STEEL PLATE WASHER BETWEEN THE SILL PLATE AND NUT AT EACH ANCHOR ROD. HOLE IN PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A MAXIMUM WIDTH 3/16" > BOLT DIAMETER, AND MAXIMUM LENGTH OF 1 3/4". PROVIDED STANDARD CUT WASHER INSTALLED BETWEEN PLATE WASHER AND NUT.
10. INSTALL LSL BLOCKING/RIM BOARD FOR TOP PLATE CONNECTION. SEE WOOD DETAILS.
11. TOP PLATE CONNECTIONS IDENTIFIED AS "A35", AND "LTP4" ARE MANUFACTURED BY SIMPSON STRONG-TIE. SEE GENERAL STRUCTURAL NOTES FOR FURTHER INFORMATION.
12. WHERE (2) ROWS OF NAILS ARE SPECIFIED, PLACE THE ROWS 1 1/2" APART. 3 1/2" LSL BLOCKING/RIM BOARD IS REQUIRED. SEE WDBLF-1 AND WDBLF-2.

SHEAR WALL SCHEDULE 20
NTS

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11/29/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS
STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 262016.018
BID SET
ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

TYPICAL DETAILS

SHEET:
S50.02

MECHANICAL SYMBOLS LEGEND

HYDRONIC SYSTEM LABELS

- PIPE BREAK (CONTINUATION)
- HYDRONIC SUPPLY
- HYDRONIC RETURN
- DIRECTION OF FLOW
- CAP
- HEAT TRACED PIPING

HYDRONIC VALVES AND SPECIALTIES

- F.O. / F.C. — 2-WAY ELECTRIC CONTROL VALVE, FAIL OPEN / FAIL CLOSED
- 3-WAY ELECTRIC CONTROL VALVE
- 4-WAY CONTROL VALVE

DUCTWORK LABELS

- INTERNALLY LINED DUCT
- HIDDEN DUCT
- 16X12 — DUCT (1ST DIMENSION SIDE SHOWN, 2ND DIMENSION OTHER SIDE)
- REMOVE DUCT, PIPE OR MECH. EQUIPMENT
- FLEX DUCT
- RECTANGULAR SUPPLY DUCT OUT OF PAGE
- RECTANGULAR SUPPLY DUCT INTO PAGE
- SUPPLY DIFFUSER
- RECTANGULAR RETURN DUCT OUT OF PAGE
- RECTANGULAR RETURN DUCT INTO PAGE
- OR — RETURN OR EXHAUST GRILLE
- TURNING VANES
- STRAIGHT TAP
- TAPERED FITTING
- BELL MOUTH FITTING
- CONICAL FITTING
- 45 DEG. ANGLE TAP
- ROUND ELBOW OUT OF PAGE
- ROUND ELBOW INTO PAGE
- ROUND DUCT OUT OF PAGE
- ROUND DUCT INTO PAGE
- ROUND DUCT BREAK (CONTINUATION)
- RECTANGULAR DUCT BREAK (CONTINUATION)
- FLEX CONNECTION

REFERENCE SYMBOLS

- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- AHU-1 — MECHANICAL EQUIPMENT
- D / 0 — DIFFUSER/GRILLE TYPE / CFM
- 1 — SECTION NUMBER / SHEET NUMBER

LIFE SAFETY SYMBOLS

- CEILING RADIATION DAMPER
- OR — COMBINATION SMOKE/FIRE DAMPER
- HORIZONTAL SMOKE DAMPER
- FIRE DAMPER

CONTROL SYMBOLS

- VOLUME DAMPER
- M — MOTORIZED CONTROL DAMPER
- T — THERMOSTAT IN DUCT
- REMOTE OPERATED VOLUME DAMPER
- BACKDRAFT DAMPER
- PRESSURE INDEPENDENT VOLUME DAMPER (TROX VFL)
- PRESSURE INDEPENDENT VOLUME CONTROLLER (TROX VFC)
- PRESSURE INDEPENDENT VOLUME CONTROLLER W/ ACTUATOR (TROX VFC EØ / MØ)
- T — THERMOSTAT, MOUNT @ 4'-0" A.F.F.
- S — SENSOR
- CO / GEF-1 — CARBON MONOXIDE DETECTOR WITH FAN INDICATED
- CO2 — CARBON DIOXIDE DETECTOR

PIPING SYSTEM LABELS

- G — NATURAL GAS OR PROPANE
- BALL VALVE MANUAL LEVER
- BUTTERFLY VALVE MANUAL LEVER
- BUTTERFLY GEAR VALVE
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (CIRCUIT SETTER)
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PIPE TO DRAIN
- PRESSURE SAFETY VALVE
- AAV — AUTOMATIC AIR VENT
- MAV — MANUAL AIR VENT
- WYE STRAINER
- WYE STRAINER WITH VALVE AND HOSE END CAP
- HEAT TRACE PIPING
- HOSE END AND CAP
- EXPANSION LOOP

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL/ARCHITECT
AS	AIR SEPARATOR
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMBUSTION AIR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COND	CONDENSATE
CW	COLD WATER
CX	CONNECT TO EXISTING
dB	DECIBEL
DB °F	DRY BULB TEMPERATURE
° OR DEG.	DEGREE
Ø OR DIA	DIAMETER
D/L	DOOR LOUVER
DN	DOWN
DWG(S)	DRAWING(S)
DWV	DRAIN, WASTE, VENT
EX	EXISTING/EXISTING TO REMAIN
EA	EACH
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EXP	EXPANSION
FC	FAIL CLOSED
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FP	FIRE PROTECTION
FPM	FEET PER MINUT
FPS	FEET PER SECOND
FT	FEET/FOOT
FTG	FOOTING
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
G.C.	GENERAL CONTRACTOR
GSM	GALVANIZED SHEET METAL
H	HEIGHT
HD	HEAD
HP	HORSEPOWER
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER/DIMENSION
IN	INCH/INCHES
IN WC	INCHES WATER COLUMN
KW	KILOWATT/KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LF	LINEAL FOOT
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNIT PER HOUR
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL & PLUMBING
MEZZ	MEZZANINE
MIN	MINIMUM OR MINUTE
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPEN BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ΔP	PRESSURE DIFFERENTIAL
PERF	PERFORATED
Φ OR PH	PHASE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER INCH GAUGE
PTAC	PACKAGE TERMINAL AIR CONDITIONER
QTY	QUANTITY
REQD	REQUIRED
RH	RELATIVE HUMIDITY
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RLX	RELOCATE EXISTING
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
RX	REMOVE EXISTING
SD	SMOKE DETECTOR
SF	SQUARE FOOT
S.L.	SOUND LINER
SP	STATIC PRESSURE
SPEC	SPECIFICATION
S/S, OR SS	STAINLESS STEEL
STD	STANDARD
SYM	SYMBOL
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF SLAB/TOP OF STEEL
T&P	TEMPERATURE & PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VAV	VARIABLE AIR VOLUME
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE-IN-BOX
VOL	VOLUME
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WB °f	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WT	WEIGHT

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PROJECT # 16006

BID SET

ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

COVER SHEET

SHEET:

M00.01

HVAC GENERAL NOTES

1. THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET, WHICH MAY BE REQUIRED. THE HVAC CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES AND IS TO VERIFY ALL CLEARANCES BEFORE COMMENCING WORK.
2. MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF THE LATEST EDITION OF THE SEATTLE MECHANICAL CODE, SEATTLE BUILDING CODE, SEATTLE FIRE CODE AND LOCAL CODES AND ORDINANCES.
3. DUCT CONSTRUCTION AND HANGING SHALL COMPLY WITH THE LATEST SMC AND WITH CURRENT SMACNA STANDARDS.
4. JOINTS OF DUCT SYSTEM SHALL BE SEALED WITH GASKETS OR LISTED MASTIC TYPE DUCT SEALANT.
5. DUCTS SHALL BE INSULATED AS INDICATED ON PLANS TO MEET THE REQUIREMENTS OF THE CURRENT SEATTLE ENERGY CODE AND SPECIFICATION.
6. FLEXIBLE DUCTS SHALL ONLY BE USED WHERE SHOWN AND SHALL NOT EXCEED 6 FT IN LENGTH UNLESS NOTED OTHERWISE.
7. PROVIDE EARTHQUAKE RESTRAINT FOR HVAC EQUIPMENT IN ACCORDANCE WITH THE CURRENT SBC.
8. PIPING PENETRATIONS OF FIRE RATED WALLS OR FLOOR SHALL BE SLEEVED AND FIRE STOPPED WITH LISTED MATERIALS SO AS TO MAINTAIN THE INTEGRITY AND RATING OF THE FLOOR OR WALL.
9. PROVIDE RETURN DUCT SMOKE DETECTOR(S) FOR AUTOMATIC SHUT DOWN OF ALL HEATING OR COOLING EQUIPMENT DELIVERING IN EXCESS OF 2000 CFM IN ACCORDANCE WITH THE CURRENT SEATTLE MECHANICAL CODE. POWER WIRING AND INTERLOCK WIRING WITH THE BUILDING FIRE ALARM SYSTEM IS BY THE ELECTRICAL CONTRACTOR.
10. HVAC EQUIPMENT, VALVES AND DAMPERS SHALL BE LOCATED IN EASILY ACCESSIBLE LOCATIONS, UNLESS SHOWN ON ARCHITECTURAL DRAWINGS. REQUIRED ACCESS PANELS SHALL BE PROVIDED BY THE HVAC CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
11. HVAC CONTRACTOR MUST COORDINATE WITH LIGHTING FIXTURES PRIOR TO DUCT AND PIPING INSTALLATION.

HVAC ENERGY CODE NOTES

1. SEE SCHEDULES FOR EQUIPMENT TYPE, CAPACITY AND EFFICIENCY. ALL EQUIPMENT SHALL MEET MINIMUM EFFICIENCY PER C403.2.3.
2. THERMOSTATIC CONTROLS IN THE SAME ZONE OR IN NEIGHBORING ZONES CONNECTED BY OPENINGS LARGER THAN 10% OF THE FLOOR AREA OF EITHER ZONE SHALL BE INTERLOCKED TO NOT ALLOW SIMULTANEOUS HEATING AND COOLING.
3. HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC HEAT SHALL INCLUDE MICROPROCESSOR CONTROLS THAT MINIMIZE ELECTRIC HEAT USAGE DURING START-UP, SET-UP, AND DEFROST CONDITIONS. CONTROLS SHALL ANTICIPATE NEED FOR HEAT AND USE COMPRESSION HEATING AS THE FIRST STAGE. CONTROLS SHALL INDICATE WHEN ELECTRIC HEAT IS BEING USED THROUGH VISUAL MEANS. ELECTRIC HEAT SHALL NOT OPERATE ABOVE 40 F OUTSIDE AIR TEMPERATURE.
4. THERMOSTATIC CONTROLS SHALL BE CONFIGURED WITH AT LEAST A 5F DEADBAND BETWEEN HEATING AND COOLING SETPOINTS.
5. THERMOSTATS (OTHER THAN GROUP R) SHALL BE 7-DAY PROGRAMMABLE WITH AUTOMATIC SETBACK CONTROLS SET DOWN TO 55F AND UP TO 85F. CONTROLS SHALL MAINTAIN PROGRAMMING FOR AT LEAST 10 HOURS DURING LOSS OF POWER. CONTROLS SHALL HAVE A MANUAL 2 HR OVERRIDE FOR TEMPORARY OPERATION. CONTROLS SHALL ADJUST THE DAILY START TIME FOR MORNING WARMUP PRIOR TO SCHEDULED OCCUPANCY.
6. PROVIDE AMCA CLASS 1 MOTORIZED CONTROL DAMPERS FOR OUTSIDE AIR INTAKES, EXHAUST OUTLETS, RELIEF OPENINGS, STAIRWAY AND SHAFT VENTS AND RETURN SIDE OF AIRSIDE ECONOMIZERS.
7. AIR-COOLED UNITARY DIRECT-EXPANSION UNITS WITH A COOLING CAPACITY OF 54 MBH OR GREATER THAT ARE EQUIPPED WITH AN ECONOMIZER SHALL INCLUDE FAULT DETECTION AND DIAGNOSTICS (FDD).
8. PROVIDE GAS-FIRED HEATING EQUIPMENT WITH MODULATING OR STAGED COMBUSTION CONTROL FOR ALL EQUIPMENT OVER 225 MBH.
9. THERMOSTATS (GROUP R) SHALL BE 5-2 PROGRAMMABLE SCHEDULE WITH AT LEAST 2 SETBACK PERIODS PER DAY.
10. PROVIDE DUCT, SHAFT AND PLENUM INSULATION PER C403.2.8 AND SPECIFICATION SECTION 23 07 00.
11. SEAL ALL TRANSVERSE AND LONGITUDINAL SEAMS, JOINTS AND CONNECTIONS OF ALL DUCTWORK WITH WELDS, GASKETS OR MASTICS.
12. PROVIDE PIPE INSULATION PER ENERGY CODE SECTION C403.2.9 AND SPECIFICATION SECTION 23 07 00.
13. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE AND WIND. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED.
14. SINGLE FAN OR MULTIPLE FANS IN PARALLEL WITH COMBINED MOTOR NAMEPLATE OVER 5HP SHALL HAVE A FAN EFFICIENCY GRADE (FEG) OF 67 OR HIGHER AND SHALL BE SELECTED TO OPERATE WITHIN 15% OF THE MAXIMUM TOTAL EFFICIENCY OF THE FAN.
15. COOLING SYSTEMS 65 MBH AND GREATER SHALL HAVE TWO SPEED FAN CONTROL OR MODULATING FAN CONTROL.
16. FAN AND PUMP MOTORS 7.5 HP AND GREATER SHALL BE PROVIDED WITH A VFD.
17. ECONOMIZERS SHALL BE INTEGRATED WITH MECHANICAL COOLING AND SHALL BE CAPABLE OF PROVIDING PARTIAL ECONOMIZER COOLING EVEN WHEN ADDITIONAL MECHANICAL COOLING IS REQUIRED.
18. AIR ECONOMIZERS SHALL HAVE FIXED DRY-BULB HIGH-LIMIT SHUTOFF CONTROL NOT TO EXCEED 75 DEG. F.
19. ALL ELECTRIC MOTORS SHALL MEET THE EFFICIENCY REQUIREMENTS OF TABLES C405.8(1) THROUGH C405.8(4).
20. FAN MOTORS 1/12 HP UP TO 1 HP SHALL BE ECM.
21. PROVIDE A MEANS OF BALANCING EVERY AIR INLET AND OUTLET AND EVERY AIR OR WATER TERMINAL DEVICE.
22. ALL PIPE AND DUCT INSULATION SHALL BE LABELLED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).

COMMISSIONING NOTES

1. BUILDING COMMISSIONING SHALL BE COMPLETED FOR THE MECHANICAL SYSTEMS, SERVICE WATER HEATING SYSTEMS AND PLUMBING SYSTEMS ON THIS PROJECT IN ACCORD WITH SPECIFICATION SECTION 230800. THE GOAL OF COMMISSIONING IS TO VERIFY THAT EQUIPMENT, CONTROLS AND THE SEQUENCING OF SUCH OPERATE AS INTENDED. THE COMMISSIONING DOCUMENTATION THAT IS REQUIRED IS THE PROOF OF THIS OPERATION. THE FOLLOWING TASKS ARE REQUIRED FOR COMMISSIONING. SEE SECTION 230800 FOR ADDITIONAL REQUIREMENTS.

2. COMMISSIONING PLAN: A PLAN WHICH OUTLINES THE ORGANIZATION, SCHEDULE, ALLOCATION OF RESOURCES AND DOCUMENTATION REQUIREMENTS OF THE COMMISSIONING PROCESS. PLAN SHALL BE SUBMITTED WITH THE MECHANICAL SUBMITTALS.

3. PRELIMINARY COMMISSIONING REPORT: REPORT SHALL NOTE DEFICIENCIES FOUND DURING TESTING, CORRECTIVE ACTION TAKEN OR THE ANTICIPATED DATE OF CORRECTION, CONDITIONS UNDER WHICH THE TESTING WAS PERFORMED AND STATUS OF ANY DEFERRED TESTS.
   A. SUBMISSION OF THIS REPORT IS REQUIRED PRIOR TO SUBSTANTIAL COMPLETION.

4. WITHIN 90 DAYS OF RECEIPT OF THE BUILDING CERTIFICATE OF OCCUPANCY, THE PROJECT RECORD DRAWINGS, O&M MANUALS, FINAL BALANCING REPORT, FINAL COMMISSIONING REPORT AND DOCUMENTATION OF COMPLETED OWNER TRAINING SHALL BE SUBMITTED FOR REVIEW.

5. RECORD DRAWINGS: LOCATION AND PERFORMANCE DATA ON EACH PIECE OF INSTALLED EQUIPMENT, AS-INSTALLED CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM, INCLUDING SIZES, AND THE TERMINAL AIR AND WATER DESIGN FLOW RATES OF THE ACTUAL INSTALLATION.

6. OPERATION & MAINTENANCE MATERIALS: SUBMIT ALL OF THE FOLLOWING.
   A. EQUIPMENT SIZE, SELECTED OPTIONS, AND REQUIRED MAINTENANCE.
   B. MANUFACTURER'S O&M MANUAL FOR EACH PIECE OF EQUIPMENT.
   C. NAME AND ADDRESS OF SERVICE AGENCY.
   D. CONTROLS MAINTENANCE AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, SCHEMATICS, RECORD DRAWINGS AND CONTROL SEQUENCES. SETPOINTS SHALL BE PERMANENTLY RECORDED IN THESE DOCUMENTS.
   E. NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

7. SYSTEM ADJUSTING & BALANCING: ALL HVAC, HYDRONIC AND SERVICE HOT WATER SYSTEMS SHALL BE BALANCED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH ACCEPTED ENGINEERING STANDARDS AND SECTION 230593. FINAL FLOW RATES SHALL BE WITHIN TOLERANCES SPECIFIED. EACH AIR INLET OR OUTLET AND HYDRONIC COIL SHALL BE EQUIPPED WITH A MEANS FOR BALANCING.

8. FUNCTIONAL PERFORMANCE TESTING (FPT): PROVIDE AND EXECUTE WRITTEN PROCEDURES WHICH CLEARLY DESCRIBE THE INDIVIDUAL SYSTEMATIC TEST PROCEDURES, THE EXPECTED SYSTEMS' RESPONSE, ACCEPTANCE CRITERIA FOR EACH PROCEDURE, THE ACTUAL RESPONSE OR FINDINGS AND ANY NOTES. TESTING SHALL AFFIRM OPERATION DURING ACTUAL OR SIMULATED WINTER AND SUMMER CONDITIONS AND DURING FULL OUTSIDE AIR CONDITIONS.
   A. EQUIPMENT FPT SHALL DEMONSTRATE THE CORRECT INSTALLATION AND OPERATION OF EACH COMPONENT, SYSTEM, AND SYSTEM-TO-SYSTEM INTERTIE RELATIONSHIP. TESTING SHALL INCLUDE ALL MODES AND SEQUENCE OF OPERATIONS, INCLUDING FULL-LOAD, PART-LOAD, EMERGENCY, ALARMS AND LOSS OF POWER.
   B. CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. SEQUENCE OF OPERATION SHALL BE FUNCTIONALLY TESTED TO DOCUMENT THEY OPERATE AS REQUIRED.
   C. ECONOMIZERS SHALL UNDERGO A FUNCTIONAL TEST TO DETERMINE THAT THEY OPERATE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

9. OWNER TRAINING: PROVIDE SYSTEM/EQUIPMENT OVERVIEW (WHAT IT IS, WHAT IT DOES AND WHICH OTHER SYSTEMS AND OR EQUIPMENT DOES IT INTERFACE WITH). REVIEW THE AVAILABLE O&M MATERIALS. REVIEW THE PROJECT RECORD DRAWINGS. PROVIDE HANDS-ON DEMONSTRATION OF ALL NORMAL MAINTENANCE PROCEDURES, NORMAL OPERATING MODES, AND ALL EMERGENCY SHUTDOWN AND START-UP PROCEDURES. INCLUDE WRITTEN DOCUMENTATION THAT ALL THE PREVIOUS HAS BEEN COMPLETED.

10. FINAL COMMISSIONING REPORT: REPORT SHALL INCLUDE:
    A. DISPOSITION OF ALL DEFICIENCIES FOUND DURING TESTING, INCLUDING DETAILS OF CORRECTIVE MEASURES USED OR PROPOSED.
    B. ALL FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE, PROVIDED HEREIN FOR REPEATABILITY.

11. THE MECHANICAL CONTRACTOR SHALL NOT BE CONSIDERED SUBSTANTIALLY COMPLETE UNTIL THE PRELIMINARY COMMISSIONING REPORT HAS BEEN APPROVED BY THE ENGINEER.

SEQUENCE OF OPERATIONS

1. CONTROL SYSTEM.

   PROVIDE ELECTRIC/ELECTRONIC CONTROLS TO PERFORM FUNCTIONS IN ACCORD WITH THE FOLLOWING.

2. VRFZ SPLIT SYSTEMS: CM-1, BC-1 & FC-1 TO FC-11

   THE FOLLOWING CONTROL BY UNIT MANUFACTURER DIGITAL CONTROL SYSTEM INCLUDED WITH EQUIPMENT.

   SMART ME ZONE REMOTE CONTROLLER PROVIDES START/STOP, TEMPERATURE CONTROL & FAN SPEED CONTROL FOR EACH ZONE.

   CENTRAL AE-200 CONTROLLER PROVIDES SETBACK SCHEDULING, TEMPERATURE LIMIT SETTINGS, ZONE CONTROL & ERROR MESSAGES FOR EACH ZONE. SINGLE CONTROLLER COMMUNICATES WITH CM-1, BC-1 AND ALL FAN COILS.

   FAN COIL FANS ARE GENERALLY OFF DURING OCCUPIED MODE AND CYCLE ON HEAT/COOL WHICH MODULATES TO MAINTAIN ROOM SETPOINT. FAN COILS CYCLE DURING UNOCCUPIED SCHEDULE TO MAINTAIN UNOCCUPIED HEAT SETPOINT.

   ALL FAN COILS (FC-1 THROUGH FC-11) SCHEDULE OCCUPIED 24/7.

3. ENERGY RECOVERY VENTILATOR: ERV

   UNIT CONTROL BY MANUFACTURER'S MICROPROCESSOR CONTROL PANEL WITH REMOTE INTERFACE.

   ERV OPERATES CONTINUOUSLY IN OCCUPIED MODE, SCHEDULED 24/7.

   SUPPLY AND EXHAUST FANS OPERATE CONTINUOUSLY DURING OCCUPIED SCHEDULE AND ARE OFF DURING UNOCCUPIED. OUTSIDE AIR AND RELIEF DAMPERS ARE OPEN DURING NORMAL OPERATION AND CLOSE WHEN FANS ARE OFF OR IF UNIT FANS FAIL.

   ELECTRIC POST HEATING MODULATES TO MAINTAIN SUPPLY AIR TEMPERATURE SET-POINT OF 58 F (ADJ).

   UNIT FANS SHUT DOWN, MOTORIZED DAMPERS CLOSE AND CONTROLS ALARM IF UNIT SUPPLY TEMPERATURE DROPS BELOW 40 F (ADJ).

4. BUNKER GEAR / DECON EXHAUST FAN: EF-1

   FAN OPERATES CONTINUOUSLY.

5. APPARATUS BAY EXHAUST FAN: EF-2

   FAN OPERATES WITH 2-HR WALL TIMER SWITCH (BY M.C.) OR RELAY FROM CO/NO2 SENSORS. FAN ACTIVATES ON CARBON MONOXIDE (CO) LEVEL OF 50 PPM (ADJ) OR NITROGEN DIOXIDE (NO2) LEVEL OF 3 PPM (ADJ).
   FAN STATER INTERLOCK OPENS ASSOCIATED LOUVER MOTORIZED DAMPER WHEN FAN IS OPERATING.
   ON A CO LEVEL OF 100 PPM (ADJ) OR A NO2 LEVEL OF 5 PPM RELAYS TO ACTIVATE AUDIBLE WARNING ALARM (BY E.C.)

6. ELECTRIC INFRARED HEATERS (DDC): EIH

   UNIT OPERATES WITH ELECTRONIC LINE/LOW VOLTAGE HEATING ONLY WALL THERMOSTAT. SPACE TEMPERATURE SETPOINT OF 60F (ADJ).

7. RADIANT CEILING PANELS: RCP

   UNITS OPERATE WITH ELECTRONIC LINE/LOW VOLTAGE HEATING ONLY WALL THERMOSTATS. SPACE TEMPERATURE SETPOINT OF 60F (ADJ).

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SOUTH KING FIRE & RESCUE
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FIRE STATION 63
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FEDERAL WAY, WA

PROJECT # 16006

BID SET

ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

SCHEDULES

SHEET:

M00.02

DIFFUSER AND GRILLE SCHEDULE

ITEM	MAKE	MODEL	DESCRIPTION	SIZE	MARK
SUPPLY REGISTER	THERMAL CORE	HCRH	HIGH INDUCTION PERFORATED FACE, 1 HOLE PER SQUARE INCH. EXTRUDED ALUMINUM MOUNTING FRAME.	10" X 8"	R-1
SUPPLY DIFFUSER	TITUS	MCD	24" x 24" SQUARE FACE SQ. NECK PER PLANS 4 ADJ. CORES STEEL WHITE ENAMEL	6"X6" 8"X8" 10"X10"	D-1 D-2 D-3
SUPPLY DIFFUSER	TROX SWIRL	TDF-SA -Q-Z-H	24" SQUARE FACE, INLET SIZE PER PLANS. SIDE INLET PLENUM. FIXED HORIZONTAL DISCHARGE. STEEL, WHITE	24X12X24 24X20X24	D-11 D-12
SUPPLY DIFFUSER	TITUS	TJD	24" x 24" SQUARE FACE INDUCTION NOZZLES STEEL, WHITE ENAMEL	8"	D-21
SUPPLY DIFFUSER	TROX SWIRL	VDW -Q-Z-H	24" SQUARE FACE, INLET SIZE PER PLANS. SIDE INLET PLENUM. ADJUSTABLE DISCHARGE PATTERN. STEEL, WHITE BLACK PATTERN CONTROLLERS	24X16X16	D-31
RETURN GRILLE	TITUS	50F	1/2" EGG CRATE, ALUM., WHITE ENAMEL	12" X 24"	G-1
EXHAUST GRILLE	TITUS	355RL	1/2" BLADE SPACING, 35 DEG DEFLECTION, BLADES PARALLEL TO LONG DIMENSION, STEEL, WHITE	10" X 10" 16" X 16"	G-11 G-12

NOTES:
1. CEILING UNIT FRAME SHALL BE COMPATIBLE WITH CEILINGS; FLAT FRAME SURFACE MOUNT (TITUS BORDER TYPE 1) FOR DRYWALL CEILINGS AND WITH LAY-IN PANEL FOR EXPOSED GRID CEILINGS (TITUS BORDER TYPE 3). SEE ARCHITECTURAL PLANS FOR CEILING TYPES.
2. BEVELED DROP FACE DIFFUSERS (TITUS BORDER TYPE 6) ARE NOT ACCEPTABLE.
3. SIZE INDICATES DUCT COLLAR.

ENERGY RECOVERY VENTILATOR SCHEDULE

				SUPPLY				EXHAUST				HEAT EXCHANGER		HEAT			ELECTRICAL				WGT.	
MARK	MAKE	MODEL	TYPE	CFM	ESP	BHP	HP	CFM	ESP	BHP	HP	MATERIAL	WINTER EFF.	INPUT	OUTPUT	EFF	MCA	MOCP	VOLT/PH	SCCR	LBS	NOTES
ERV	GREENHECK	ERCH-20-15L	OUTDOOR	1,200	0.75	0.6	3/4	1,100	0.75	0.64	3/4	WHEEL	74.8%	8.3 KW	SCR	---	38.3	40	208/3	NOTE B	1450	ALL

NOTES:
1. SCR ELECTRIC HEAT CONTROL WITH SINGLE POINT POWER
2. MERV 8 AND MERV 13 SUPPLY FILTERS; MERV 8 EXHAUST FILTERS
3. MOTORIZED INSULATED LOW LEAK SUPPLY AND EXHAUST DAMPERS
4. SPRING ISOLATION CURB
5. INTERNAL NEOPRENE ISOLATION

A. MICROPROCESSOR UNIT CONTROL WITH REMOTE INTERFACE
B. PROVIDE RATING PER SPECIFICATIONS AND ELECTRICAL.

FAN SCHEDULE

MARK	SERVES	MAKE	MODEL	TYPE	CFM	LOW SPEED	ESP INCH WC	RPM	BHP	MOTOR HP (W)	ELEC VOLT/PH	WGT. LBS	MAX SOUND	NOTES:
EF-1	DECON, BUNKER GEAR	GREENHECK	G-095-VG	ROOF CENT	500	150	0.375	1307	0.07	1/6	115 / 1	50	52 DBA	A, 1, 2, 3, 4
EF-2	APP BAY	GREENHECK	G-163-VG	ROOF CENT	2,000	N/A	0.5	943	0.15	1	208 / 3	150	61 DBA	B, C, 1, 2, 3, 5

NOTES:
1. SPEED CONTROL
2. FACTORY INSULATED CURB, MATCH ROOF SLOPE
3. ALUMINUM BIRDSCREEN, CURB SEAL, AND HINGE KIT
4. GRAVITY BACKDRAFT DAMPER
5. MOTORIZED INSULATED CONTROL DAMPER

A. RUNS CONTINUOUSLY
B. 2 HOUR WALL TIMER
C. INTERLOCK WITH CO/NO2 SENSORS

RADIANT CEILING PANEL SCHEDULE

				ELECTRICAL			
MARK	MFR.	MODEL	SIZE	WATTS	VOLT/PH	WEIGHT	NOTES:
RCP	MARKEL	RCP-807	24"X48"	750	208/1	20	ALL

NOTES:
1. PROVIDE LINE VOLTAGE WALL THERMOSTAT.
2. PROVIDE MOUNTING FRAME FOR GWB CEILINGS.
3. SEE PLANS FOR UNIT QUANTITY.

ELECTRIC INFRARED HEATER SCHEDULE

				ELECTRICAL			
MARK	MAKE	MODEL	LENGTH	WATTS	VOLT/PH	WEIGHT	NOTES:
EIH	BLACK BODY THERMAZONE	21-2000U	24"	2000	208/1	20	ALL

NOTES:
1. PROVIDE LINE VOLTAGE WALL THERMOSTAT.
2. PROVIDE SEISMIC RESTRAINT PER MANUFACTURERS RECOMMENDATIONS.
3. SEE PLANS FOR UNIT QUANTITY.

LOUVER SCHEDULE

MARK	MAKE	MODEL	WIDTH	HEIGHT	FREE AREA	MATERIAL	FINISH	NOTES:
L-1	GREENHECK	ESD-403	32"	32"	3.24	ALUMINUM	KYNAR	1, 2, 3

NOTES:
1. COLOR TO BE SELECTED BY ARCHITECT.
2. PROVIDE ALUMINUM BIRDSCREEN.
3. PROVIDE INSTALLATION HARDWARE AS REQUIRED.

BRANCH CIRCUIT CONTROLLER SCHEDULE

MARK	MAKE	MODEL	NUMBER OF BRANCHES	POWER SOURCE	MCA	WEIGHT	NOTES:
BC-1	MITSUBISHI	CMB-P1013NU-GA	13	208/1	1.08	160	1

NOTES:
1. CONDENSATE DRAINAGE SHALL BE PIPED TO NEAREST INDIRECT WASTE.
2. PROVIDE WITH BLUEDIAMOND CONDENSATE PUMP.

SPLIT SYSTEM HEAT PUMP & A/C SCHEDULE

INDOOR UNIT																OUTDOOR UNIT												
				SUPPLY		COOLING						HEATING	ELECTRICAL		SOUND					COOLING		HEATING		ELECTRICAL				SOUND		
MARK	MAKE	MODEL	SERVES	TOTAL CFM	ESP W.C.	TOTAL MBH	SENS MBH	EAT DB / WB	OAT DB	ECONO (Y/N)	ECONO EXCEPT	HEATING MBH OUTPUT @ 20F OAT	VOLT/PH	MCA	LEVEL dBA	OP. WT. LBS.	MARK	MAKE	MODEL	TOTAL MBH	IEER	EER	TOTAL MBH	COP AT 47 F	VOLT/PH	MCA	MOCP	SCCR kA	LEVEL dbA	OP. WT. LBS.	NOTES:
																	CM-1	MITSUBISHI	PURY-P144TLMU-A	144	24.3	14	160	3.72	208 / 3	52	80	NOTE C	61	700	1, 2
FC-1	MITSUBISHI	PLFY-P30NEMU-E	BEANERY	800	-	28.3	20.7	75/63	88	N	403.6	21.7	208/1	0.7	38	60															A, D, 4, 5
FC-2	MITSUBISHI	PLFY-P24NEMU-E	DAY ROOM	700	-	22.6	16.5	75/63	88	N	403.6	17.3	208/1	0.51	37	60															A, D, 4, 5
FC-3	MITSUBISHI	PKFY-P06NBMU-E2	SLEEP ROOM 1	200	-	5.6	4.1	75/63	88	N	403.6	4.2	208/1	0.19	35	30															A, B, 4
FC-4	MITSUBISHI	PKFY-P06NBMU-E2	SLEEP ROOM 2	200	-	5.6	4.1	75/63	88	N	403.6	4.2	208/1	0.19	35	30															A, B, 4
FC-5	MITSUBISHI	PKFY-P06NBMU-E2	SLEEP ROOM 3	200	-	5.6	4.1	75/63	88	N	403.6	4.2	208/1	0.19	35	30															A, B, 4
FC-6	MITSUBISHI	PKFY-P06NBMU-E2	SLEEP ROOM 4	200	-	5.6	4.1	75/63	88	N	403.6	4.2	208/1	0.19	35	30															A, B, 4
FC-7	MITSUBISHI	PKFY-P06NBMU-E2	SLEEP ROOM 5	200	-	5.6	4.1	75/63	88	N	403.6	4.2	208/1	0.19	35	30															A, B, 4
FC-8	MITSUBISHI	PKFY-P18NHMU-E2	FITTNESS	400	-	17.0	11.7	75/63	88	N	403.6	12.7	208/1	0.38	41	35															A, B, 4
FC-9	MITSUBISHI	PKFY-P18NHMU-E2	FITTNESS	400	-	17.0	11.7	75/63	88	N	403.6	12.7	208/1	0.38	41	35															A, B, 4
FC-10	MITSUBISHI	PKFY-P12NHMU-E2	LT OFFICE AND SLEEP	370	-	11.3	8.6	75/63	88	N	403.6	8.6	208/1	0.38	38	35															A, B, 4
FC-11	MITSUBISHI	PEFY-P15NMAU-E3	LOBBY AND CORRIDOR	400	0.5	14.1	11.1	75/63	88	N	403.6	10.8	208/1	1.45	34	75															A, B, 3

NOTES:
1. MANUFACTURER'S DIGITAL CONTROL SYSTEM WITH AE-200A CENTRAL CONTROLLER.
2. CONTROL POWER SUPPLY UNIT.
3. 2" PLEATED MERV 8 FILTER INSTALLED IN FACTORY FBM FILTER BOX.
4. FACTORY PROVIDED WASHABLE FILTER.
5. CEILING TRIM PANEL

A. SMART ME REMOTE CONTROLLER.
B. PROVIDE WITH BLUEDIAMOND CONDENSATE PUMP
C. SEE SPECIFICATIONS AND ELECTRICAL
D. INTEGRAL CONDENSATE PUMP

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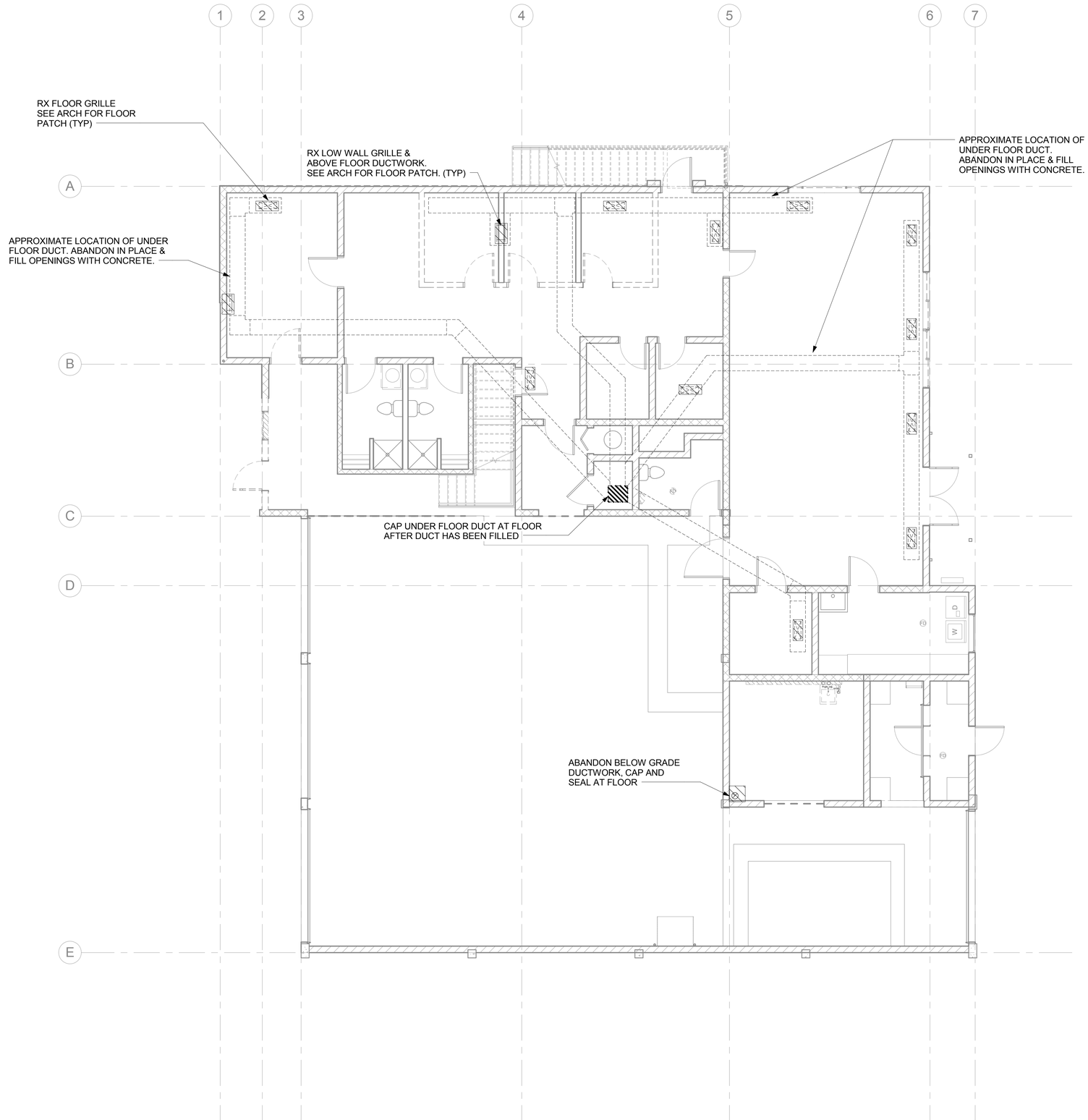
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SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 16006
BID SET
ISSUED: DECEMBER 1, 2016
REVISION SCHEDULE

SCHEDULES

SHEET:
M00.03



1 MECHANICAL BELOW FLOOR DEMOLITION
3/16" = 1'-0"

GENERAL NOTES:

1. VERIFY QUANTITY AND LOCATION OF UNDER FLOOR DUCT GRILLES. REMOVE ALL FLOOR GRILLES AND PATCH FLOOR.

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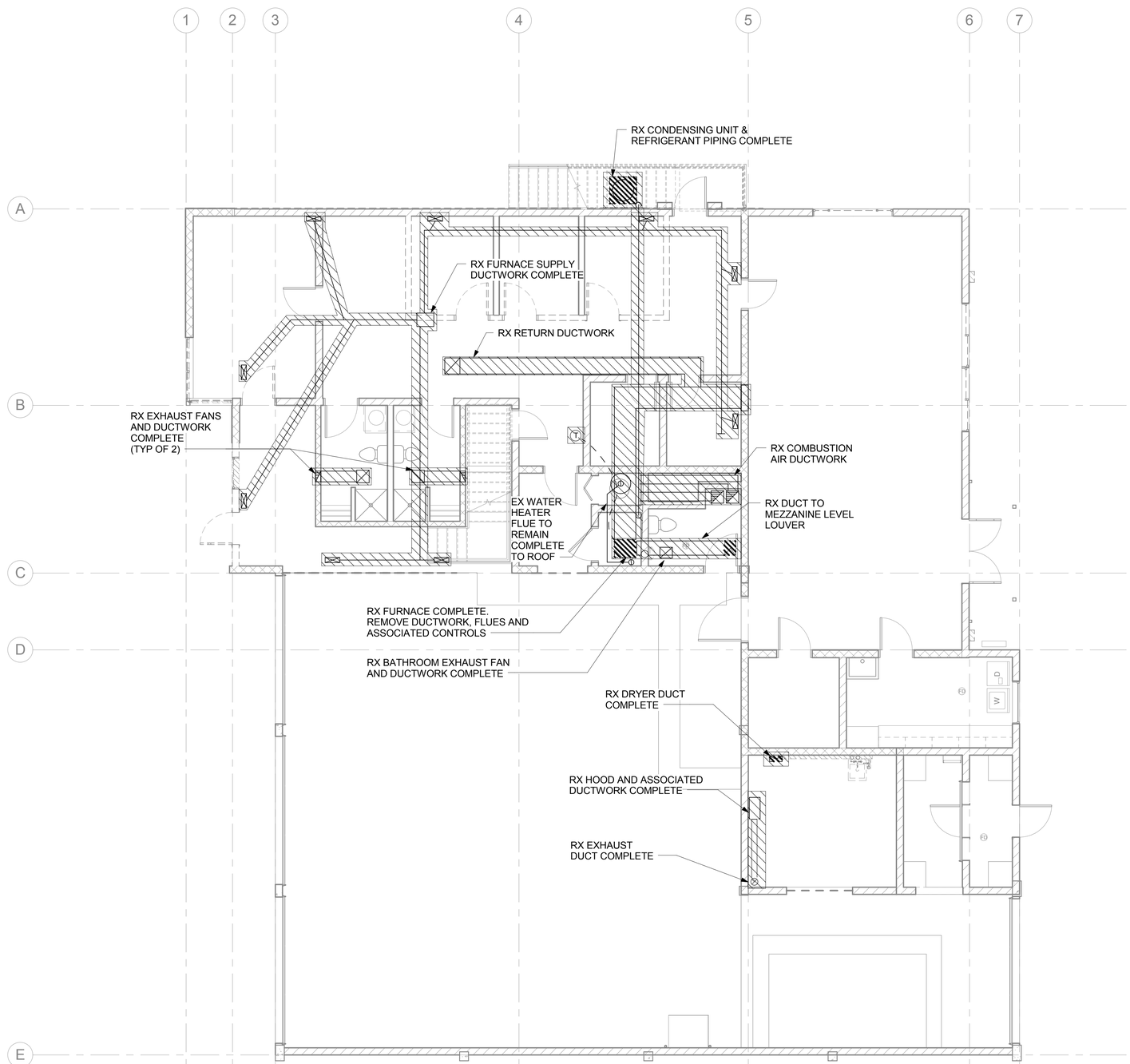
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REVISION SCHEDULE

MECHANICAL
BELOW FLOOR
DEMOLITION

SHEET:

M20.10



1 MECHANICAL LEVEL 1 DEMOLITION
3/16" = 1'-0"

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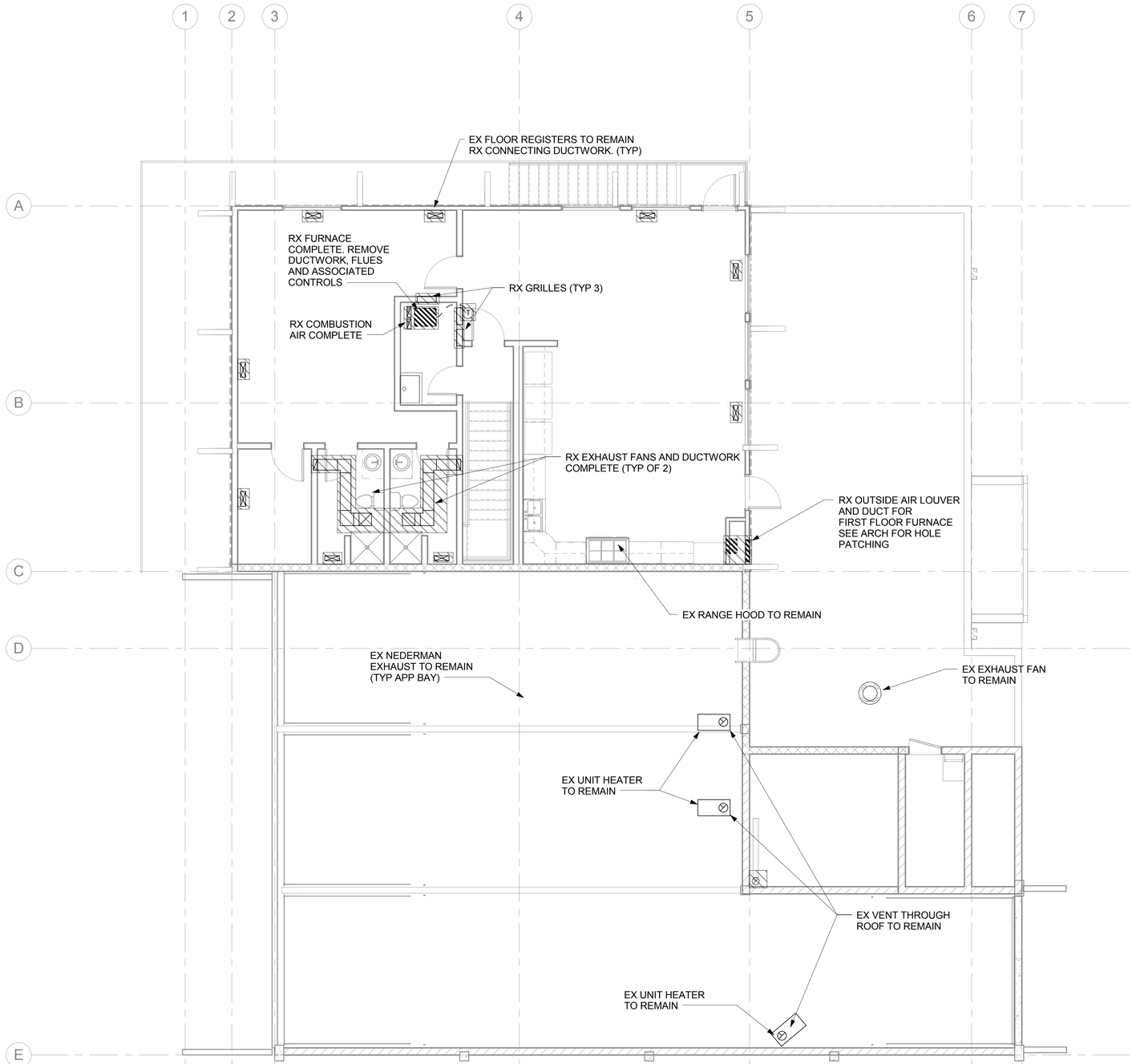
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

MECHANICAL LEVEL 1 DEMOLITION

SHEET:

M20.11



1 MECHANICAL MEZZANINE DEMOLITION
3/16" = 1'-0"

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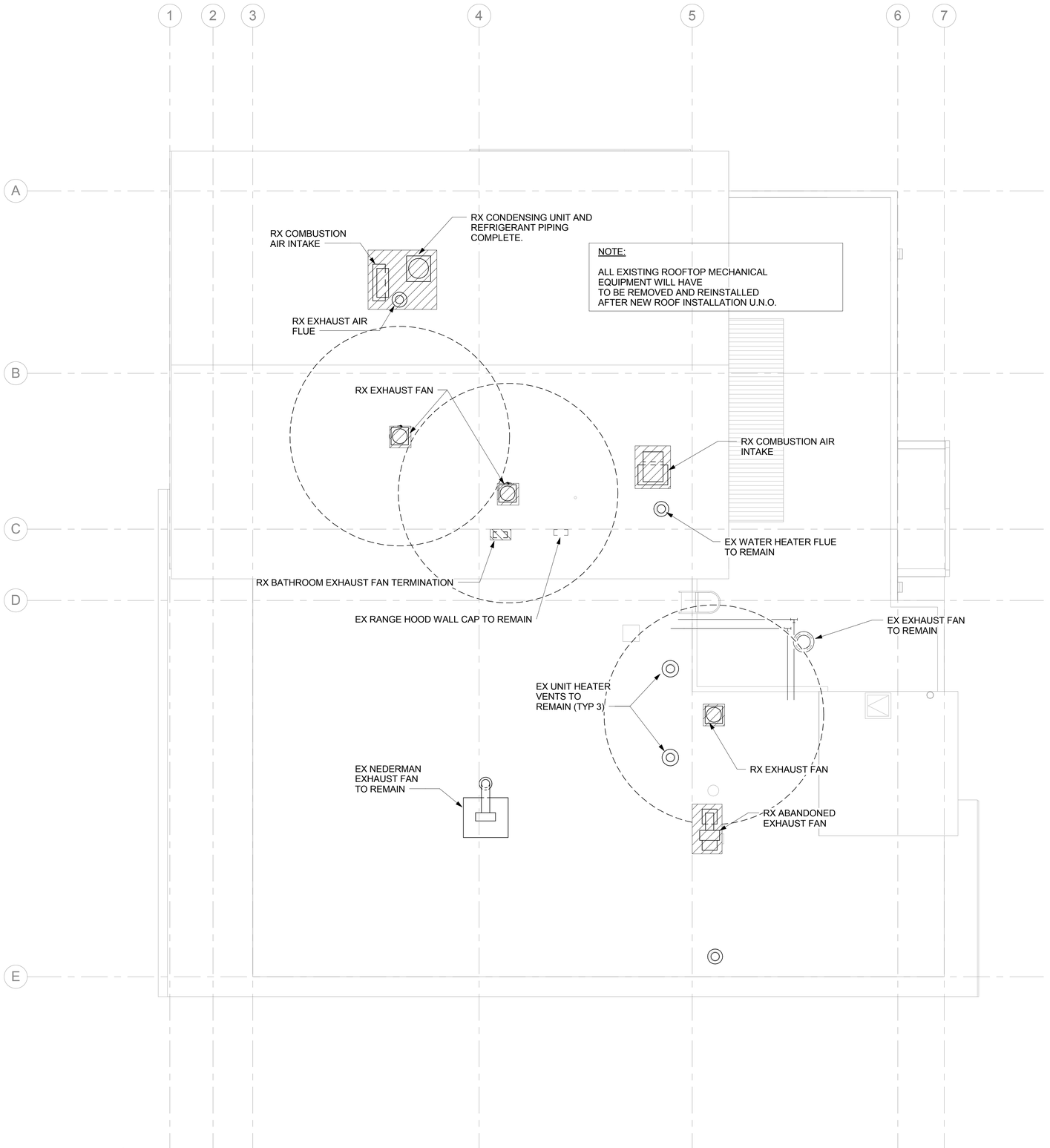
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

MECHANICAL
MEZZANINE
DEMOLITION

SHEET:

M20.12



1 MECHANICAL ROOF DEMOLITION
3/16" = 1'-0"

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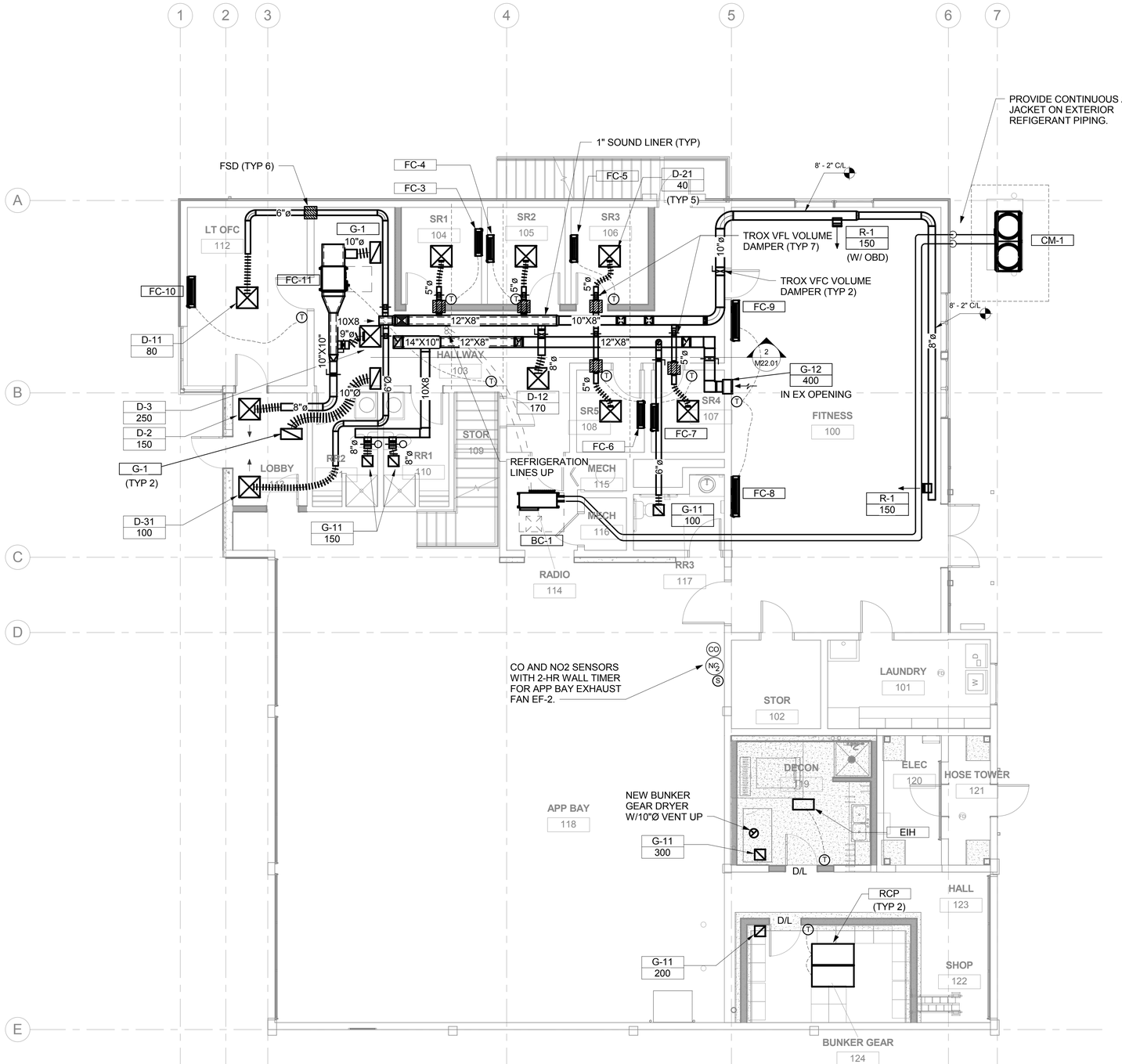
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REVISION SCHEDULE

MECHANICAL ROOF DEMOLITION

SHEET:

M20.13



GENERAL NOTES:

1. REFRIGERANT PIPING REPRESENATION SHOWS ONE LINE FOR EACH PIPE (HARD COPPER) BETWEEN THE CM AND BC. ROUTING OF PIPE (FLEXIBLE LINE SETS) FROM THE DC TO THE FC IS NOT SHOWN. DETERMINE ROUTING. SEE PIPING SCHEMATIC ON M40.01.

2. PROVIDE EQUIPMENT ANCHORING AND SEISMIC BRACING PER ASCE 7-05.

1 MECHANICAL LEVEL 1
3/16" = 1'-0"

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INFO@RFMARCH.COM

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MECHANICAL ENGINEERS
192 Nickerson, Suite #300
Seattle, Washington 98109
Phone: 206.285.2966
Fax: 206.285.1045

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 16006

BID SET

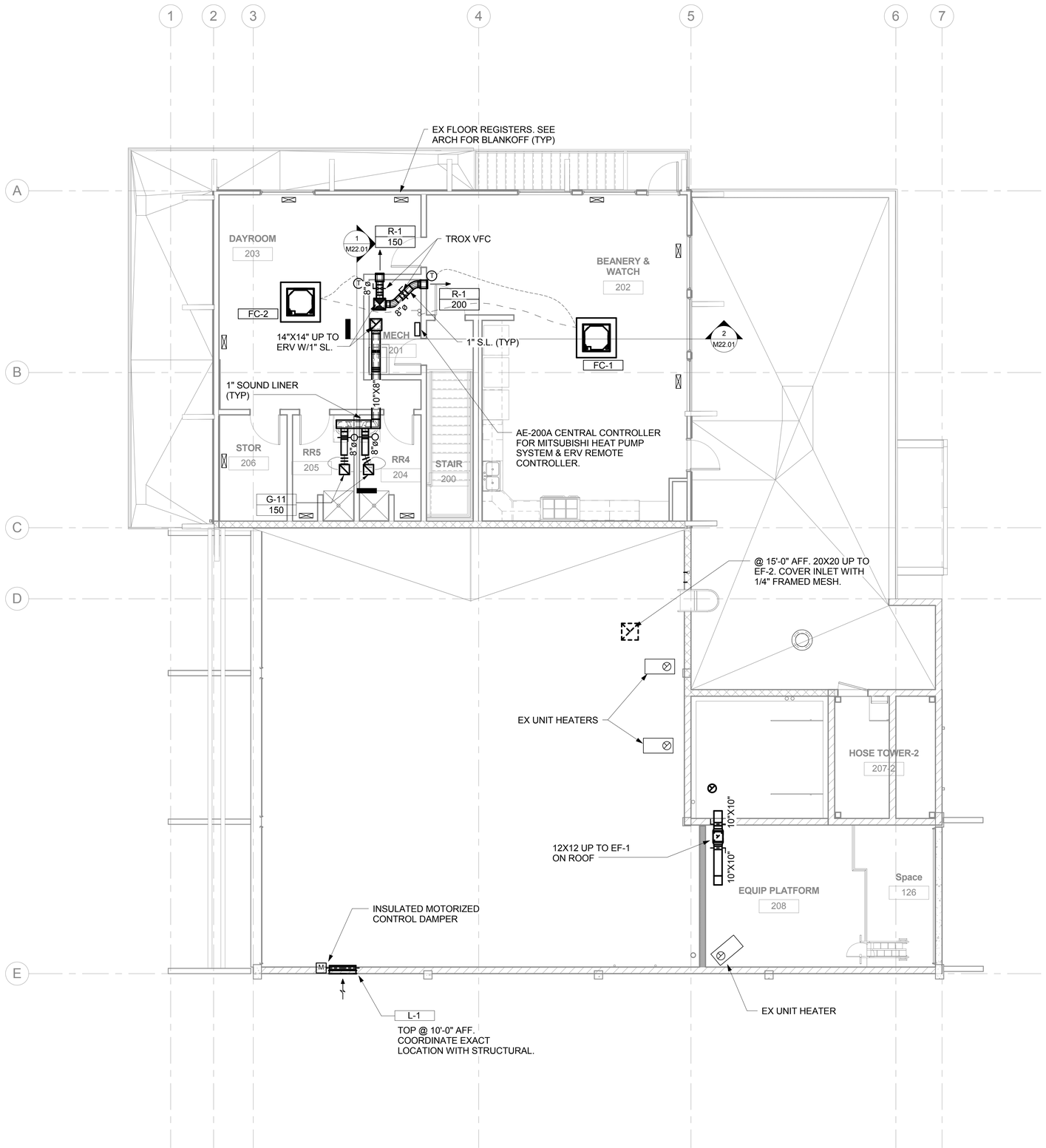
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

MECHANICAL LEVEL 1

SHEET:

M21.11



1 MECHANICAL MEZZANINE
3/16" = 1'-0"

GENERAL NOTES:

1. REFRIGERANT PIPING REPRESENATION SHOWS ONE LINE FOR EACH PIPE (HARD COPPER) BETWEEN THE CM AND BC. ROUTING OF PIPE (FLEXIBLE LINE SETS) FROM THE DC TO THE FC IS NOT SHOWN. DETERMINE ROUTING. SEE PIPING SCHEMATIC ON M40.01.

2. PROVIDE EQUIPMENT ANCHORING AND SEISMIC BRACING PER ASCE 7-05.

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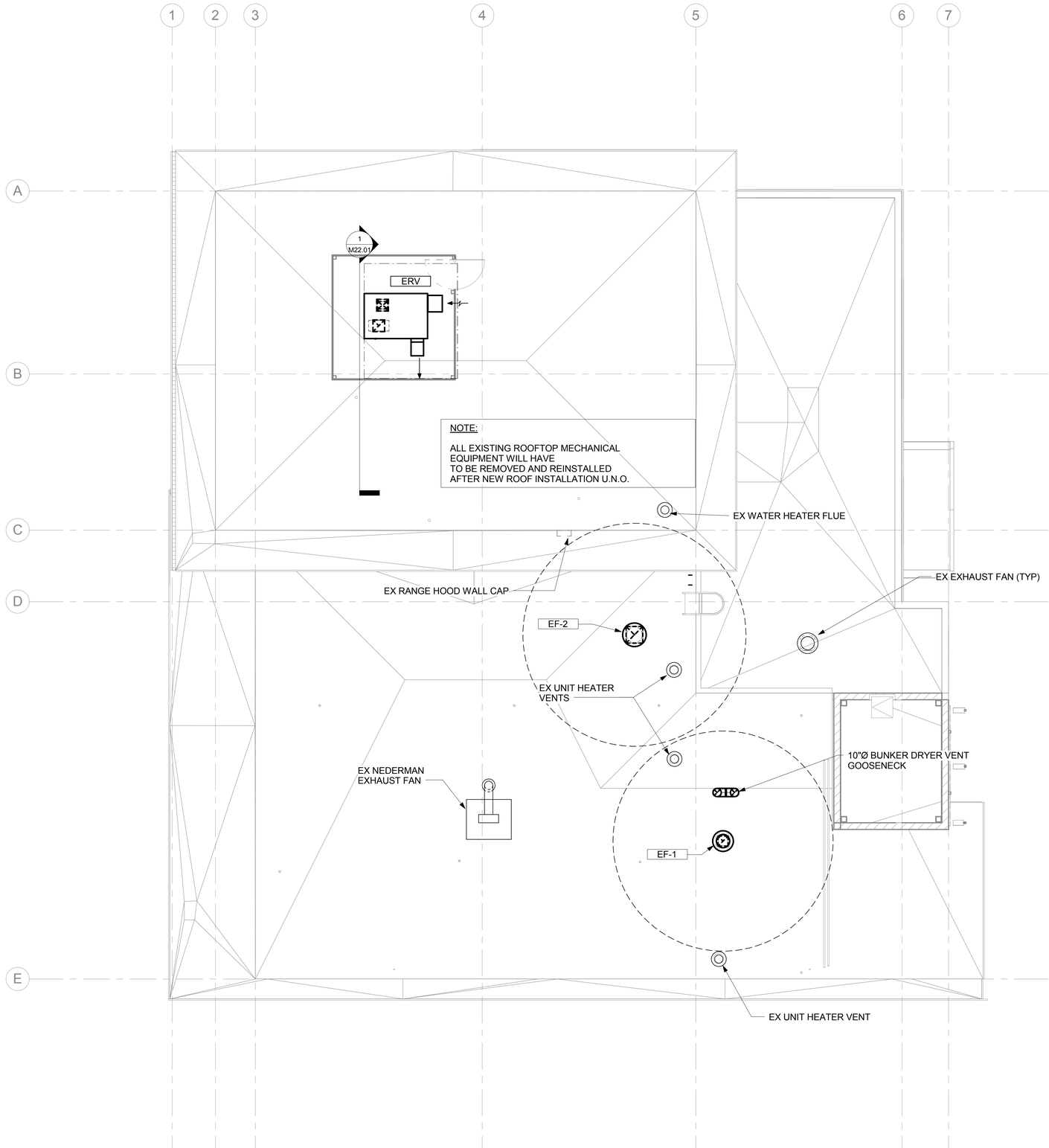
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

MECHANICAL
MEZZANINE

SHEET:

M21.12



1 MECHANICAL ROOF
3/16" = 1'-0"

GENERAL NOTES:

1. REFRIGERANT PIPING REPRESENATION SHOWS ONE LINE FOR EACH PIPE (HARD COPPER) BETWEEN THE CM AND BC. ROUTING OF PIPE (FLEXIBLE LINE SETS) FROM THE DC TO THE FC IS NOT SHOWN. DETERMINE ROUTING. SEE PIPING SCHEMATIC ON M40.01.

2. PROVIDE EQUIPMENT ANCHORING AND SEISMIC BRACING PER ASCE 7-05.

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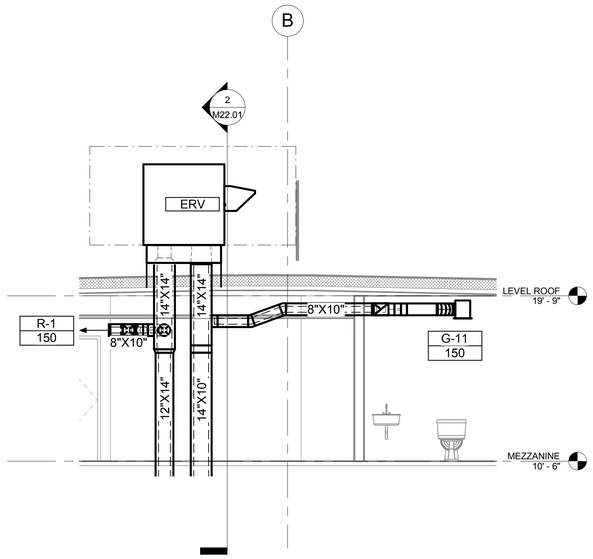
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

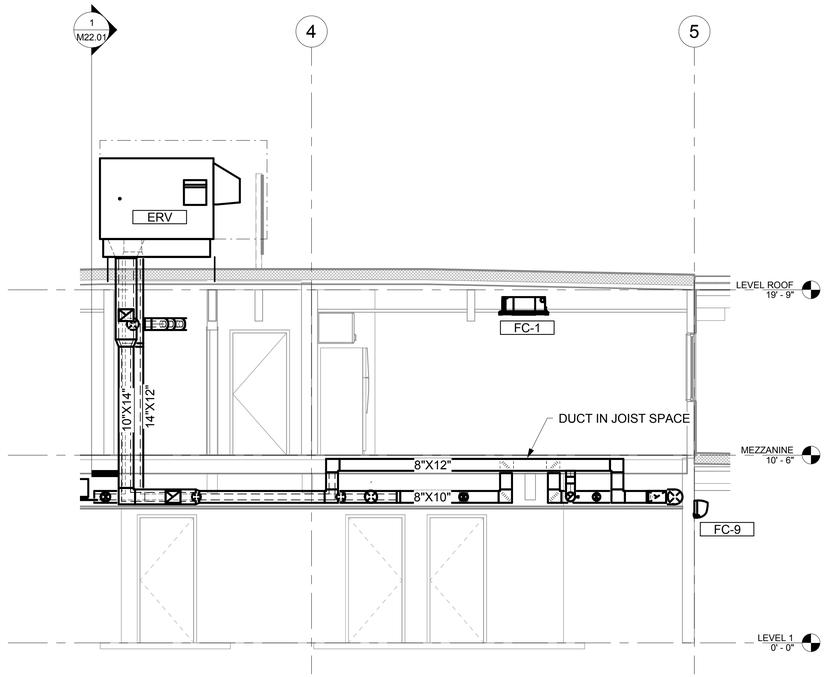
MECHANICAL ROOF

SHEET:

M21.13



1 ERV 2ND FLOOR
1/4" = 1'-0"



2 1ST FLOOR
1/4" = 1'-0"

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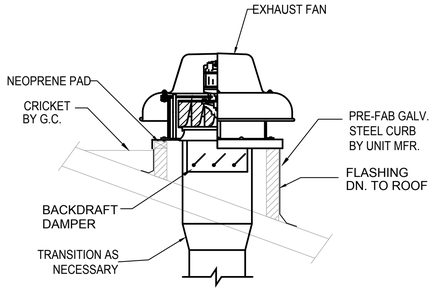
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

MECHANICAL
SECTIONS

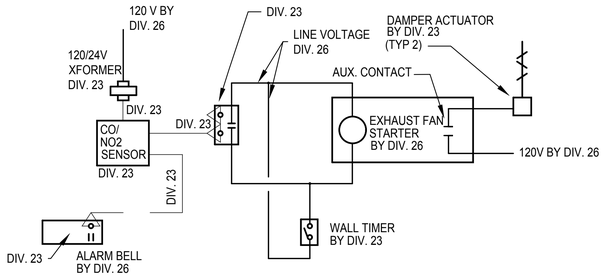
SHEET:

M22.01



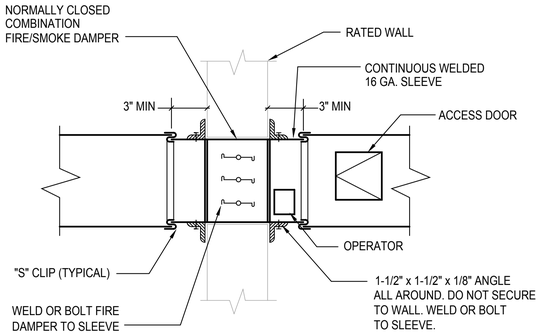
ROOF EXHAUST FAN DETAIL

1 / M30.01 **Scale: NONE**



CO/NO2 (EF-2) SENSOR CONTROL SCHEMATIC

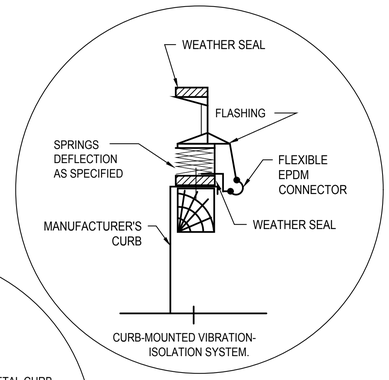
2 / M30.01 **Scale: NONE**

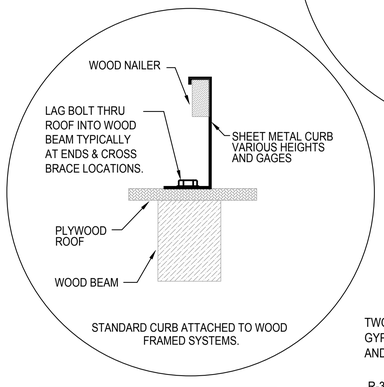


NOTE
ELECTRICAL POWER CONNECTION REQUIRED
COORDINATE W/ ELECTRICAL SECTION OF WORK

U.L. LISTED COMBINATION FIRE/SMOKE DAMPER

3 / M30.01 **N.T.S.**

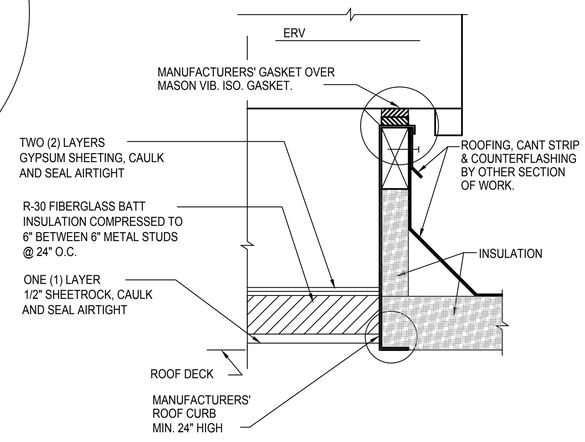




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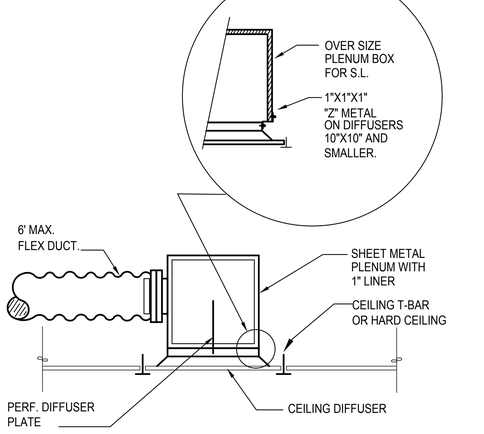
MECH. CONTRACTOR TO HIRE THIRD PARTY STRUCTURAL ENGINEER TO PROVIDE EXACT NUMBER AND SIZE OF BOLTS/FASTENERS AND PROVIDE EQUIPMENT SEISMIC CALCULATIONS.

NOTE:
1. PROVIDE SLOPED CURB TO MATCH ROOF PITCH.



ERV CURB DETAIL

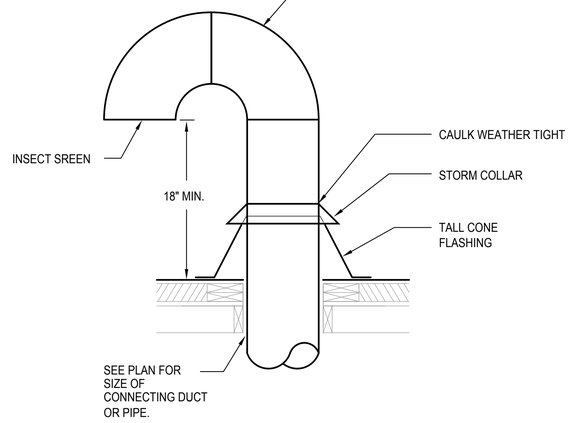
4 / M30.01 **Scale: N.T.S.**



NOTES:
1. SEE ARCHITECTURAL PLANS FOR CEILING TYPES.
2. SUPPLY SHOWN, DETAIL WITHOUT PERF PLATE IS TYPICAL FOR CEILING RETURN OR EXHAUST GRILLE INSTALLATION.

CEILING INSTALLATION TYPICAL DIFFUSER DETAIL

5 / M30.01 **Scale: NONE**



ROUND GOOSENECK DETAIL

6 / M30.01 **N.T.S.**

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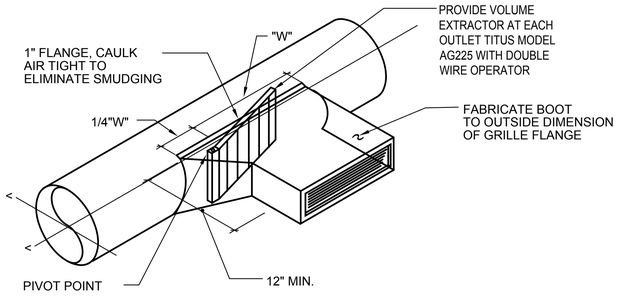
ISSUED: DECEMBER 1, 2016

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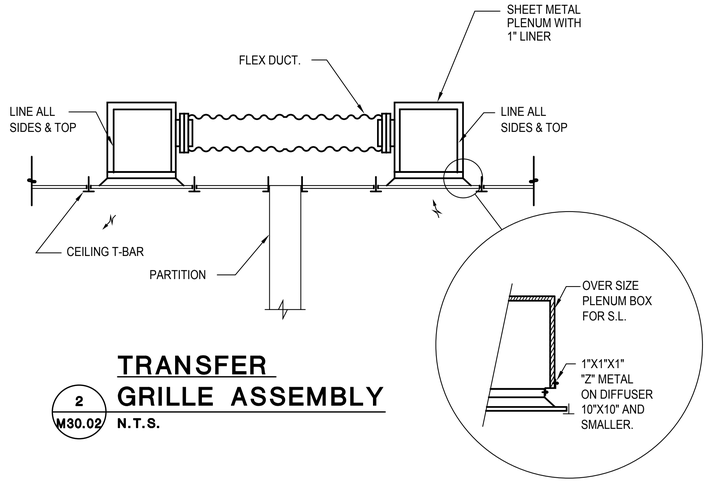
SHEET:

M30.01



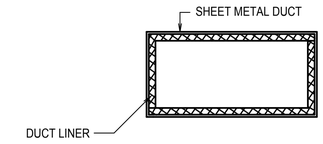
SIDE WALL SUPPLY GRILLE DETAIL

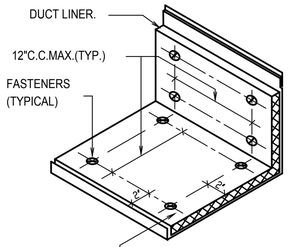
1 / M30.02 N.T.S.



TRANSFER GRILLE ASSEMBLY

2 / M30.02 N.T.S.



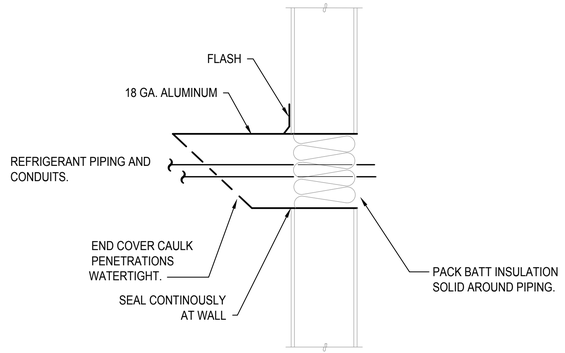


NOTES:

1. PROVIDE S/M NOSING AT EXPOSED EDGES OF INSULATION.
2. ALL TRANSVERSE AND LONGITUDINAL ENDS OF LINER TO BE COATED WITH ADHESIVE.

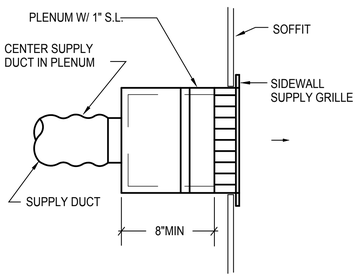
DUCT LINER DETAIL

3 / M30.02 N.T.S.



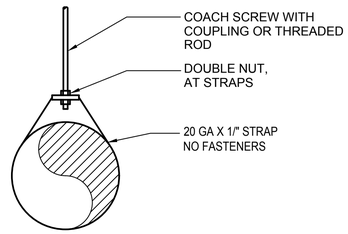
WALL PIPE PENETRATION

4 / M30.02 N.T.S.



SIDEWALL SUPPLY GRILLE

5 / M30.02 N.T.S.



EXPOSED SPIRAL DUCT HANGING DETAIL

6 / M30.02 Scale: NONE

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PROJECT # 16006

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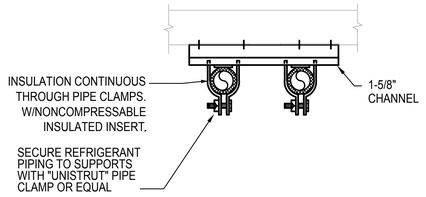
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DETAILS

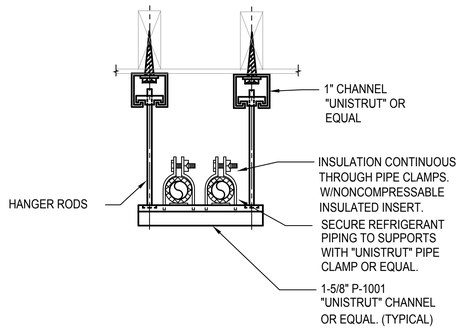
SHEET:

M30.02



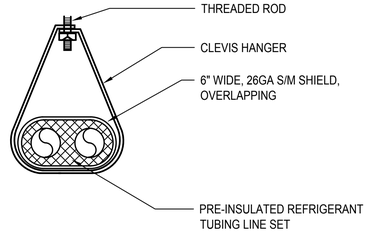
NOTE:
QUANTITY OF PIPES SHOWN REPRESENATIVE ONLY, PROVIDE QUANITY OF PIPES REQUIRED.

1 M30.03 REFRIGERANT PIPE SUPPORT
N.T.S.

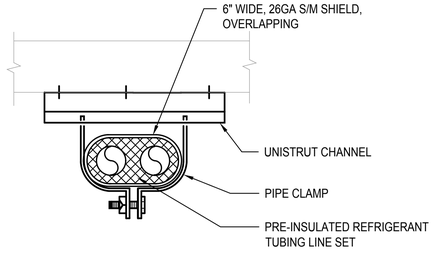


NOTE:
QUANTITY OF PIPES SHOWN REPRESENATIVE ONLY, PROVIDE QUANITY OF PIPES REQUIRED.

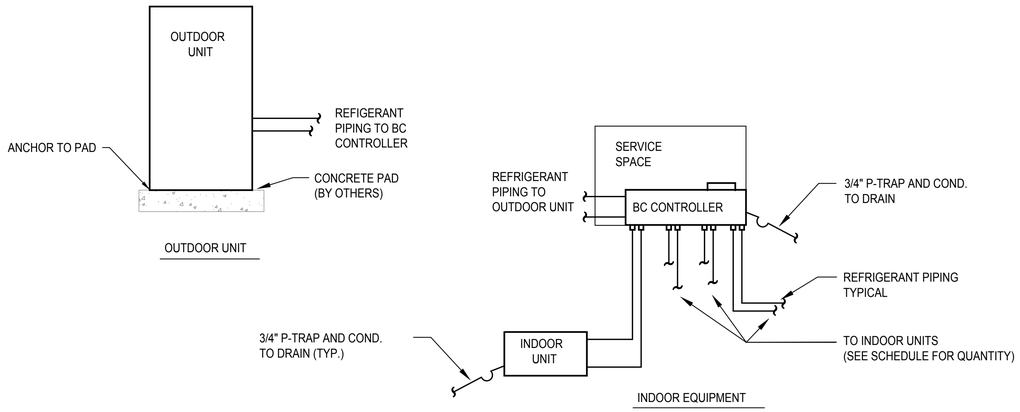
2 M30.03 SUSPENDED REFRIGERANT PIPE SUPPORT
N.T.S.



3 M30.03 REFRIGERANT PIPE SUPPORT
N.T.S.



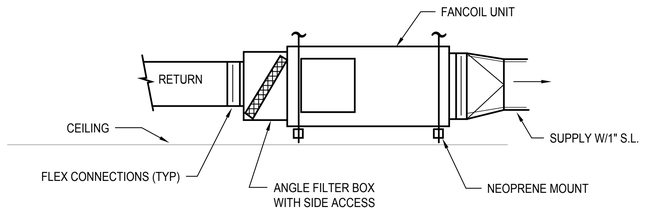
4 M30.03 REFRIGERANT PIPE SUPPORT
N.T.S.



NOTE:

1. INSULATE BOTH LIQUID AND VAPORS LINES THROUGH OUT SYSTEM.
2. SECURE OUTDOOR UNIT TO SUPPORT.
3. SIZE REFRIGERANT LINES BASED ON MITSUBISHI SYSTEM CALCULATIONS. SEE M4.2
4. VERIFY ROUTING FOR REFRIGERANT PIPING AND CONDENSATE DRAINS.

5 M30.03 VRFZ SYSTEM
N.T.S.

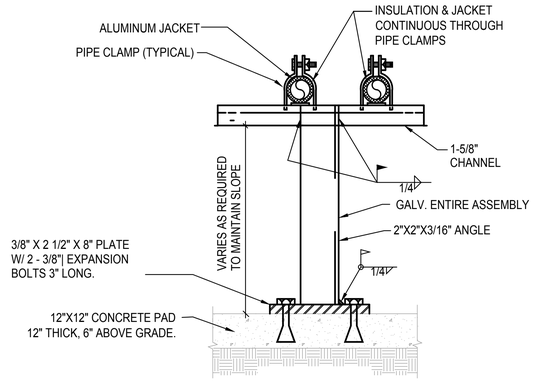


6 M30.03 FAN COIL DETAIL
N.T.S.

NOTES:

RUN ALUMINUM PIPE JACKET CONTINUOUS FROM CONDENSING UNITS TO PENETRATIONS AT BUILDING WALL. SEAL PENETRATIONS AND PROVIDE FLASHING AT POINT OF ENTRY.

PROVIDE ADDITIONAL WIDTH ON PIPE SUPPORT FOR ELEC. CONDUITS AND CONTROL CONDUITS. COORDINATE WITH ELECTRIC AND CONTROL CONTRACTORS.



7 M30.03 EXTERIOR REFRIGERANT PIPE SUPPORT DETAIL
N.T.S.

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SHEET:
M30.03

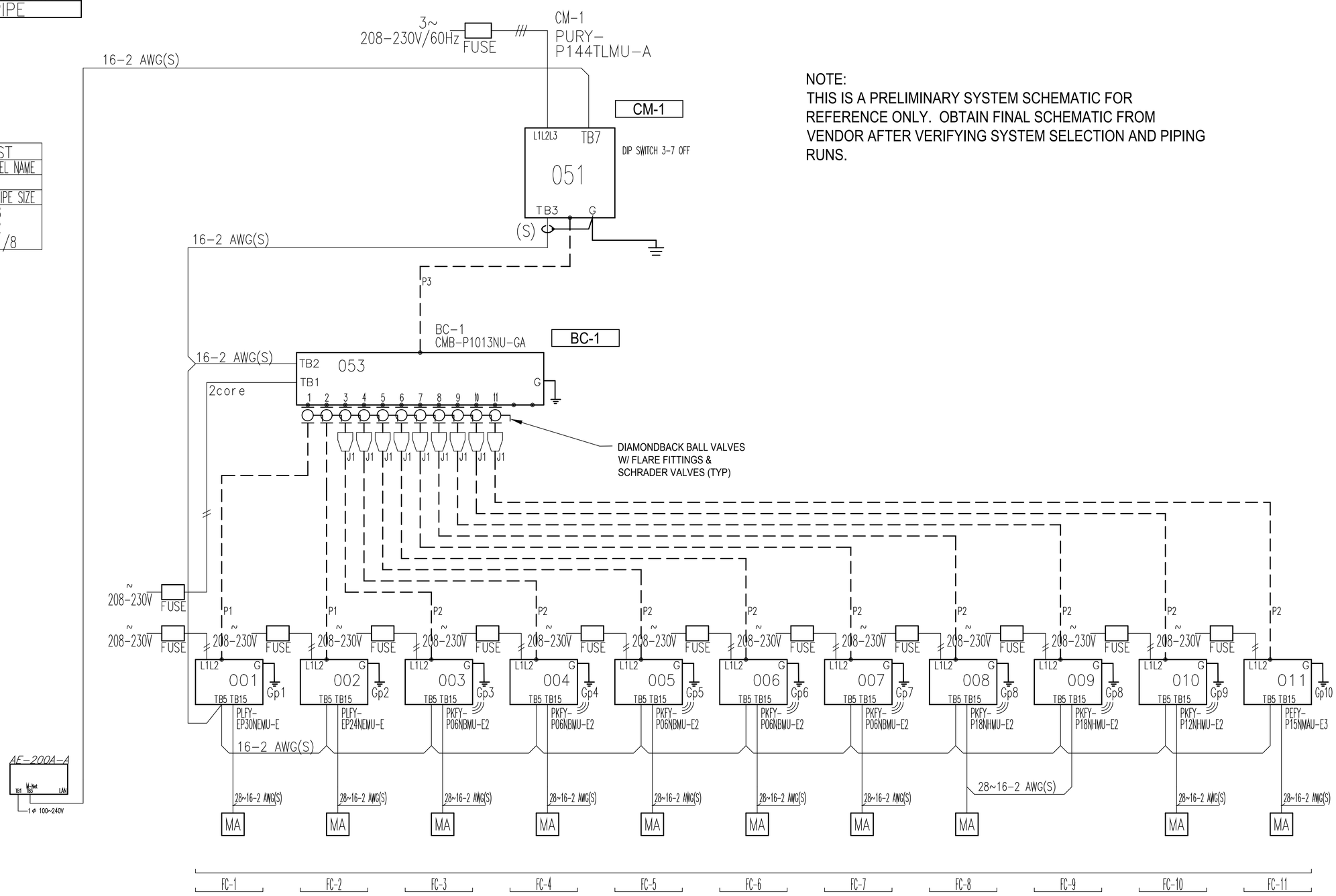
DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
——///——	POWER WIRE
————	CONTROL WIRE
— — — —	REF. PIPE

CONT.No		PAGE	

CITY MULTI
SYSTEM SCHEMATIC DWG.

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING LIST		
SYMBOL	BRANCH PIPE MODEL NAME	
J1	Reducer	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE	
P1	3/8	/ 5/8
P2	1/4	/ 1/2
P3	7/8	/ 1-1/8



NOTE:
THIS IS A PRELIMINARY SYSTEM SCHEMATIC FOR REFERENCE ONLY. OBTAIN FINAL SCHEMATIC FROM VENDOR AFTER VERIFYING SYSTEM SELECTION AND PIPING RUNS.

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VRF DIAGRAM

SHEET:
M40.01

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- BUTTERFLY VALVE MANUAL LEVER
- BUTTERFLY GEAR VALVE
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.6 GPF
   B. PUBLIC LAVATORY FAUCETS. 0.5 GPM
   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. INSTALL WATER HAMMER ARRESTORS ON HOT & COLD WATER PIPING OF EACH FIXTURE GROUP AND AT ALL FIXTURES W/QUICK ACTING VALVES. UNITS SHALL BE ZURN "SHOKTROLL" OR EQUAL. SELECT UNIT SIZE AND LOCATION PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORD WITH PDI STANDARD WH-201. PROVIDE ACCESS PANELS AT ARRESTORS ABOVE GWB CEILINGS. ALL ACCESS PANELS AND DOORS SHALL BE ELMDOR FAB. STEEL SLK SERIES OR EQUAL WITH 14 GAUGE DOOR AND FRAME. PROVIDE WITH CYLINDER LOCK, CONTINUOUS PIANO HINGE AND PRIME COATED READY FOR PAINTING.
4. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
5. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
6. WHEN CONNECTING TO EXISTING BURIED WASTE PIPING VERIFY PROPER FLOW CONDITIONS BEFORE COVERING. BURIED WASTE & VENT PIPING SHALL BE MIN. 2" DIA. & SLOPED 1/4"/FT., UNLESS OTHERWISE NOTED. PVC OR ABS PIPING SHALL BE USED ONLY IF APPROVED BY ADMINISTRATIVE AUTHORITY, SEE SPECIFICATIONS FOR FURTHER INFO.
7. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS EXCEPT IN SHOWER STALLS OR OTHERWISE NOTED ON DWGS. CONTRACTOR SHALL INSTALL ACCESS PANELS WHERE PRIMERS ARE CONCEALED IN WALLS.
8. COORDINATE VENT THROUGH ROOF (VTR) LOCATIONS WITH HVAC UNITS. MAINTAIN MIN. 10'-0" CLEARANCE. OFFSET VTR AS NECESSARY. COORDINATE PIPE ROUTING WITH HVAC AND SPRINKLER CONTRACTORS.
9. SITE WATER PRESSURE IS 85 PSI PER LAKEHAVEN UTILITY DISTRICT.
10. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRED FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED. ALL WASTE PIPING INCLUDING RISERS ON RESIDENTIAL LEVELS TO BE CAST IRON.
11. PROVIDE ELECTRIC HEAT TRACE UNDER PIPING INSULATION FOR ALL WATER PIPING INSTALLED IN UNHEATED GARAGE SPACES.
12. CONFIGURE PIPING FOR SUDS RELIEF AS REQUIRED BY THE UPC.
13. ALL LEVER CONTROLLED WATER CLOSETS TO BE INSTALLED WITH THE LEVER ON THE OPEN SIDE OF THE BATHROOM.

ENERGY CODE NOTES

1. PUBLIC LAVATORIES SHALL BE EQUIPPED WITH AN ASSE 1070 MIXING VALVE SET TO DELIVERY 110 F HOT WATER.
2. NONCIRCULATING HOT WATER SYSTEMS WITHOUT AN INTEGRAL HEAT TRAP SHALL BE PROVIDED WITH HEAT TRAPS ON THE SUPPLY AND DISCHARGE PIPING.
3. PROVIDE PIPE INSULATION PER ENERGY CODE SECTION C403.2.9 AND SPECIFICATION SECTION 22 07 00.
4. INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE AND WIND. PROVIDE JACKET AND ALUMINUM COVERS. ADHESIVE TAPE IS NOT PERMITTED.
5. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).
6. THE MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF HOT WATER TO THE TERMINATION OF THE FIXTURE SUPPLY SHALL COMPLY WITH C404.3

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LB	LAUNDRY BOX	WPD	WATER PRESSURE DROP
LBS	POUNDS	WT	WEIGHT
LF	LINEAL FOOT		
LTG	LIGHTING	YCO	YARD CLEANOUT
LWT	LEAVING WATER TEMPERATURE		

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SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 16006

BID SET

ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

COVER SHEET

SHEET:

P00.01

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
LAV-1	LAVATORY	KOHLER: 2196-4	17" X 20" OVAL, COUNTER TOP, SELF RIM, VIT. CHINA, 4" CTRS, WHITE.
	FAUCET	SYMMONS: S-20-2-0.5	4 1/2" SPOUT, 0.5 GPM AERATOR, SGL. LEVER HANDLE, 4" CTRS, CHROME PLATE, POP-UP DRAIN, VANDAL RES. ADA
	LAVATORY MIXING VALVE	SYMMONS: 7-210-CK-B	THERMOSTATIC MIXING VALVE, INTEGRAL CHECKS, 3/8" INLETS AND OUTLET, PROVIDE WHITE ENAMEL WALL CABINET AND MOUNT BELOW LAVATORIES. MUST COMPLY WITH ASSE 1070. SET OUTLET TEMPERATURE TO 110° F PER WSEC SECTION C404.3 REQUIREMENTS.
	DRAIN		INSULATE DRAIN AND STOPS PER ADA REQUIREMENTS
WC-1	WATER CLOSET (ADA)	KOHLER: K-3493-T-0	FLOOR-MOUNT, TANK TYPE, PRESSURE ASSIST, ELONGATED BOWL 30 1/8" X 21 1/4" X 31 1/4. TWO PIECE, 1.6 GPF, ADA. INSTALL FLUSH HANDLE TOWARDS OPEN SIDE OF RESTROOM PER ADA
	SEAT	BEMIS: 1955C	WHITE PLASTIC, OPEN FRONT, W/O COVER.
S-1	DECON SINK	ELKAY: CUSTOM	94" LONG X 27-1/2" DEEP, 14 GAUGE 304 STAINLESS STEEL, FULL LENGTH 8" HIGH BACKSPLASH, 24" X 18" X 14" DEEP BOWLS, LEFT AND RIGHT END DRAINBOARDS, DRAINBOARDS SLOPE TO SINK. CENTERED DRAINS, STAINLESS STEEL TUBULAR LEGS. PROVIDE FAUCET HOLES ON BACKSPLASH ABOVE BOTH BOWLS TO MATCH SCHEDULED FAUCETS. PROVIDE HOLE ON BACKSPLASH ABOVE RIGHT DRAINBOARD FOR THE EYEWASH. CONFIRM ALL DIMENSIONS WITH ARCHITECT PRIOR TO ORDERING.
	FAUCET	T & S BRASS: B-2187	WALL MOUNTED FITTING, 10" SWING SPOUT W/AERATOR, INDEXED LEVER HANDLES, 8" CTRS., PRE-RINSE FAUCET W/ RUBBER HOSE & SPRAY VALVE. CHROME FINISH.
	EMERGENCY EYE WASH	HAWS: 7610	BACKSPLASH MOUNTED, ABS PLASTIC HEADS, 2.5 GPM FLOW CONTROLS,PULL DOWN ACTIVATIONS, UNIVERSAL EMERGENCY SIGN. PROVIDE WITH HAWS PREPACKAGED TEMPERED WATER SYSTEM MODEL 9201EFE. MOUNT EYEWASH ON BACKSPLASH ABOVE RIGHT DRAINBOARD.
	DRAIN	ELKAY: LK25RT	2" DIAMETER TAILPIECE, ROTARY LEVER OPERATED DRAIN OUTLET

MARK	ITEM	MFR: MODEL	DESCRIPTION
HB	HOSE BIBB (HOT & COLD)	LEONARD: CW75-VBD	RECESSED CABINET, INTERNAL VACUUM BREAKER, 16 GA. SS, 3/4" HOSE THREAD. MOUNT NEXT TO SS-1 DIRECTLY TO CMU WALL
	HOSE	LEONARD: 20-HDH	20' HEAVY DUTY HOSE
	NOZZLE	LEONARD: N-2	STANDARD NOZZLE
FD	FLOOR DRAIN	ZURN: Z-415-S	2" C.I. BODY, 5" SQ. ADJ. NICKEL BRONZE STRAINER, TRAP PRIMER TAPPING. PROVIDE TRAP PRIMER FOR ALL INSTALLATIONS EXCEPT SHOWERS.
TD	TRENCH DRAIN	ZURN: Z874-E1-DGC	12" WIDE X 48" LONG X 16" DEEP SECTIONAL DRAIN. HIGH-DENSITY COMPOSITE CONST. W/ HEAVY-DUTY STEEL TOP FRAME & DUCTILE IRON SLOTTED GRATE. PROVIDE OPENING IN GRATE FOR EXTRACTOR DRAIN PROVIDE BOTTOM DOME STRAINER.
AR	AIR HOSE REEL	GROVER: 1550 SN	ONE AIR REEL ON MOUNTING CHANNEL TO INCLUDE: 1 STS REEL W/ 50' OF 1/2" HOSE, #1100 K END PLATES, # 3000 / 7811 CONTROL (COUPLING), 300 PSI-RATED, BALL STOP, W/ 9491A MOUNTING RAIL.
GOB	GAS OUTLET BOX	BURNABY: BBQ-SS-50	BRUSHED STAINLESS STEEL BOX WITH LOW PRESSURE GAS CONNECTION. 1/2" NPT PIPE CONNECTION AND 1/2" QUICK DISCONNECT PLUG INCLUDED.
RD-1	ROOF DRAIN	ZURN: Z-100-C-R	15" DIAMETER C.I. BODY, 2" PIPE SIZE, ALUM. DOME, UNDER- DECK CLAMP.
OD-1	ROOF DRAIN	ZURN: Z-100-C-R-W2	15" DIA. C.I. BODY, 2" PIPE SIZE, ALUM. DOME, UNDER- DECK CLAMP. 2" HIGH DAM.
RD-2	ROOF DRAIN	ZURN: Z-100-C-R	15" DIAMETER C.I. BODY, 3" PIPE SIZE, ALUM. DOME, UNDER- DECK CLAMP.
OD-2	ROOF DRAIN	ZURN: Z-100-C-R-W2	15" DIA. C.I. BODY, 3" PIPE SIZE, ALUM. DOME, UNDER- DECK CLAMP. 2" HIGH DAM.

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W	H.W	WASTE	VENT	WATER FIXTURE UNITS	WASTE FIXTURE UNITS	REMARKS
LAV-1	LAVATORY	1/2"	1/2"	1-1/4"	1-1/4"	1	1	OVAL, COUNTER TOP
WC-1	WATER CLOSET	1"	-	4"	2"	5	4	FLOOR MOUNT, TANK TYPE, PRESSURE ASSIST
S-1	SINK	1/2"	1/2"	2"	1-1/2"	2	2	DECON SINK
HB	HOSE BIBB	3/4"	3/4"	-	-	2.5	-	HOT AND COLD, DECON.
FD	FLOOR DRAIN	-	-	2"	2"	-	2	
TD	TRENCH DRAIN	-	-	4"	-	-	8	EXTRACTOR TRENCH DRAIN

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FIRE STATION 63
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PROJECT # 16006

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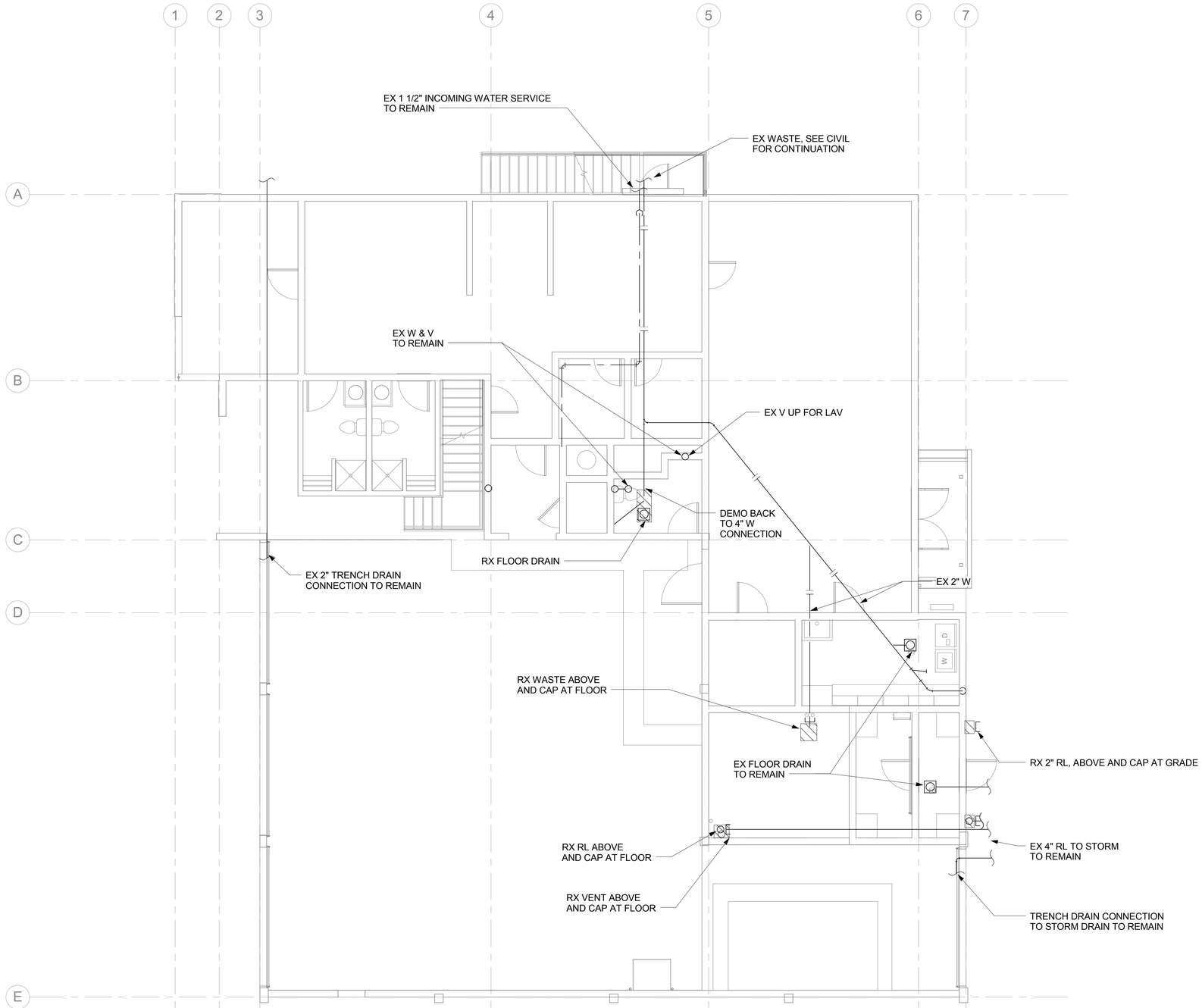
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REVISION SCHEDULE

SCHEDULES

SHEET:

P00.02



1 PLUMBING FOUNDATION DEMOLITION
3/16" = 1'-0"

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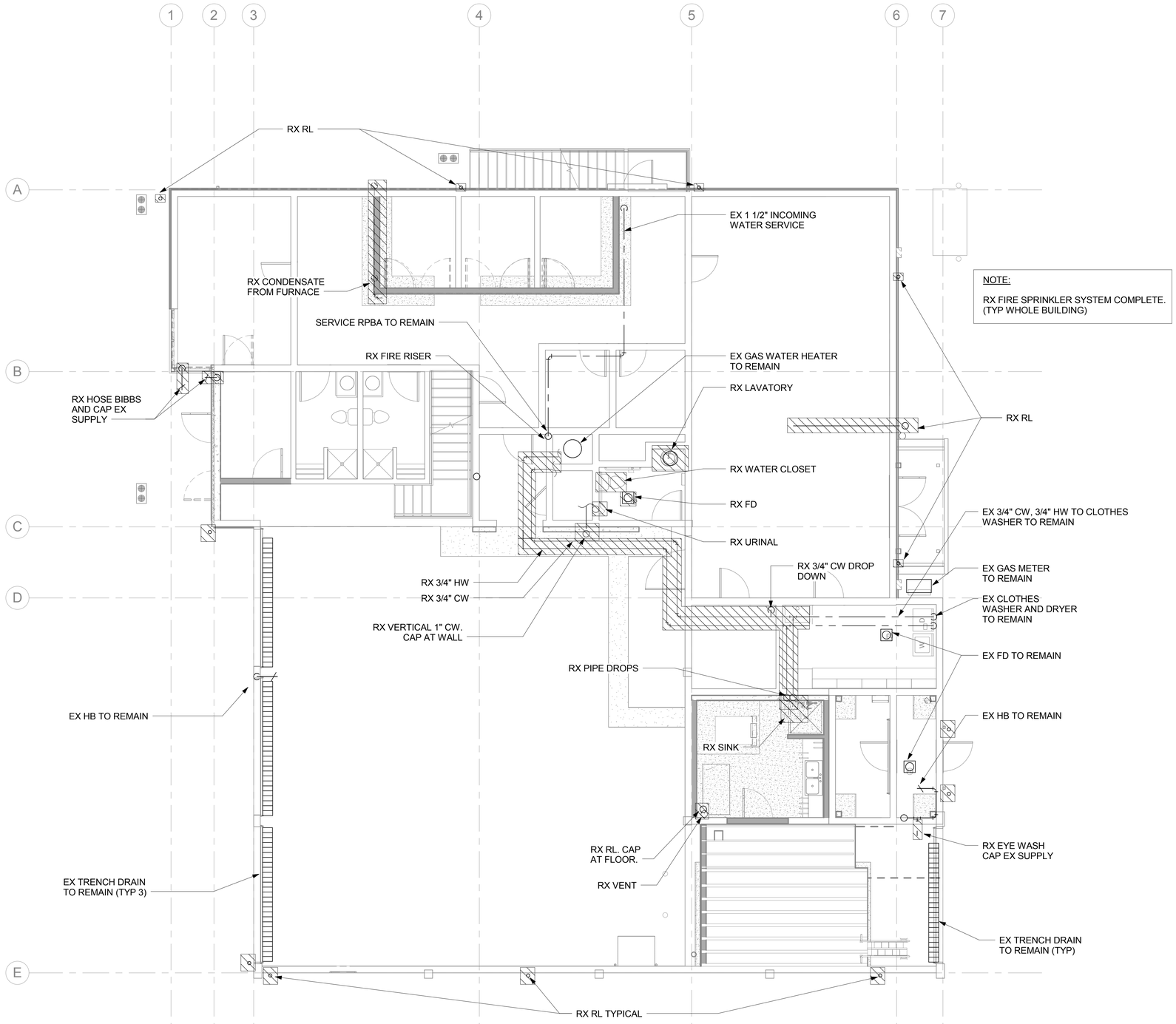
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PLUMBING
FOUNDATION
DEMOLITION

SHEET:

P20.10



1 PLUMBING LEVEL 1 DEMOLITION
3/16" = 1'-0"

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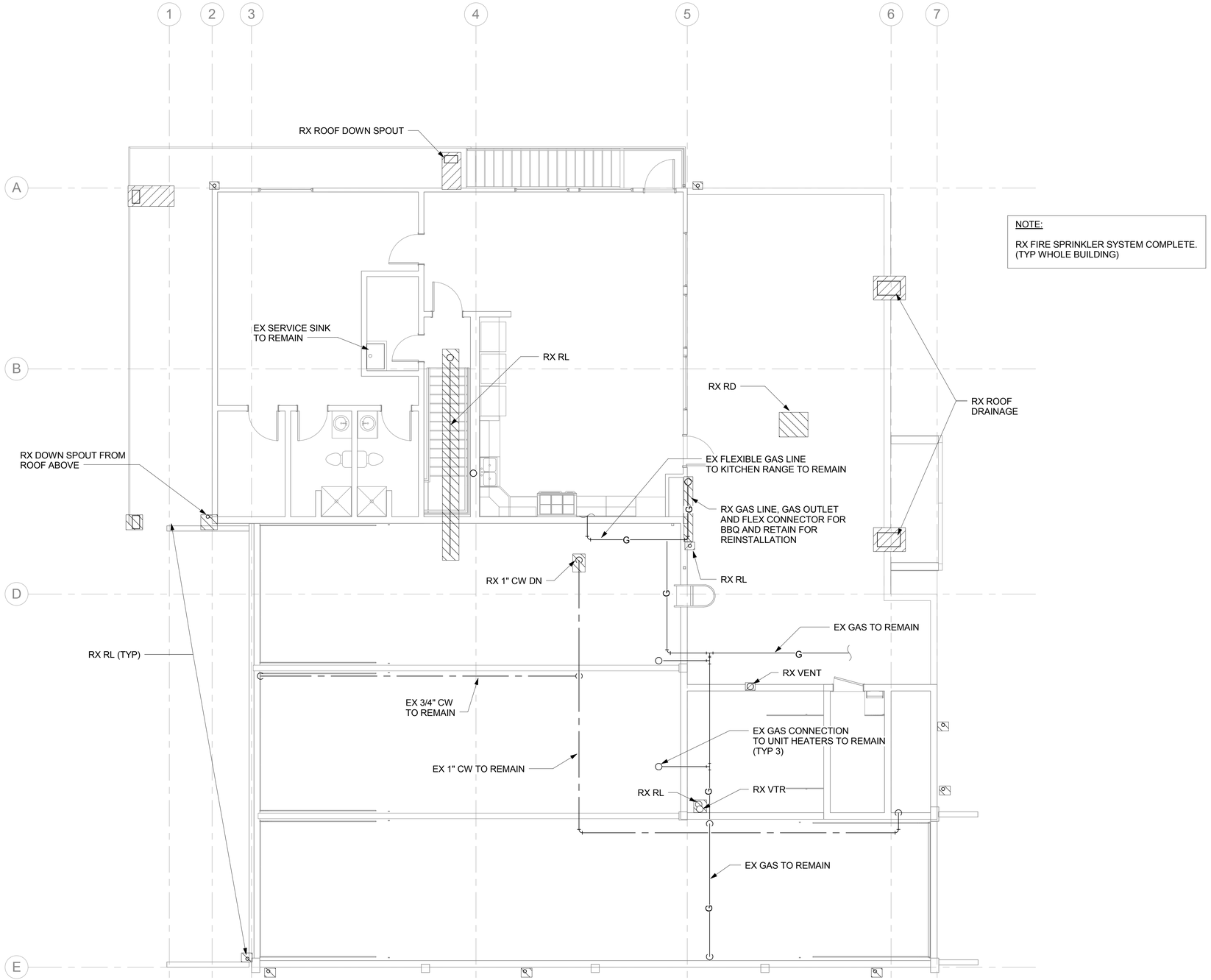
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PLUMBING LEVEL 1 DEMOLITION

SHEET:

P20.11



NOTE:

RX FIRE SPRINKLER SYSTEM COMPLETE.
(TYP WHOLE BUILDING)

1 PLUMBING MEZZANINE DEMOLITION
3/16" = 1'-0"

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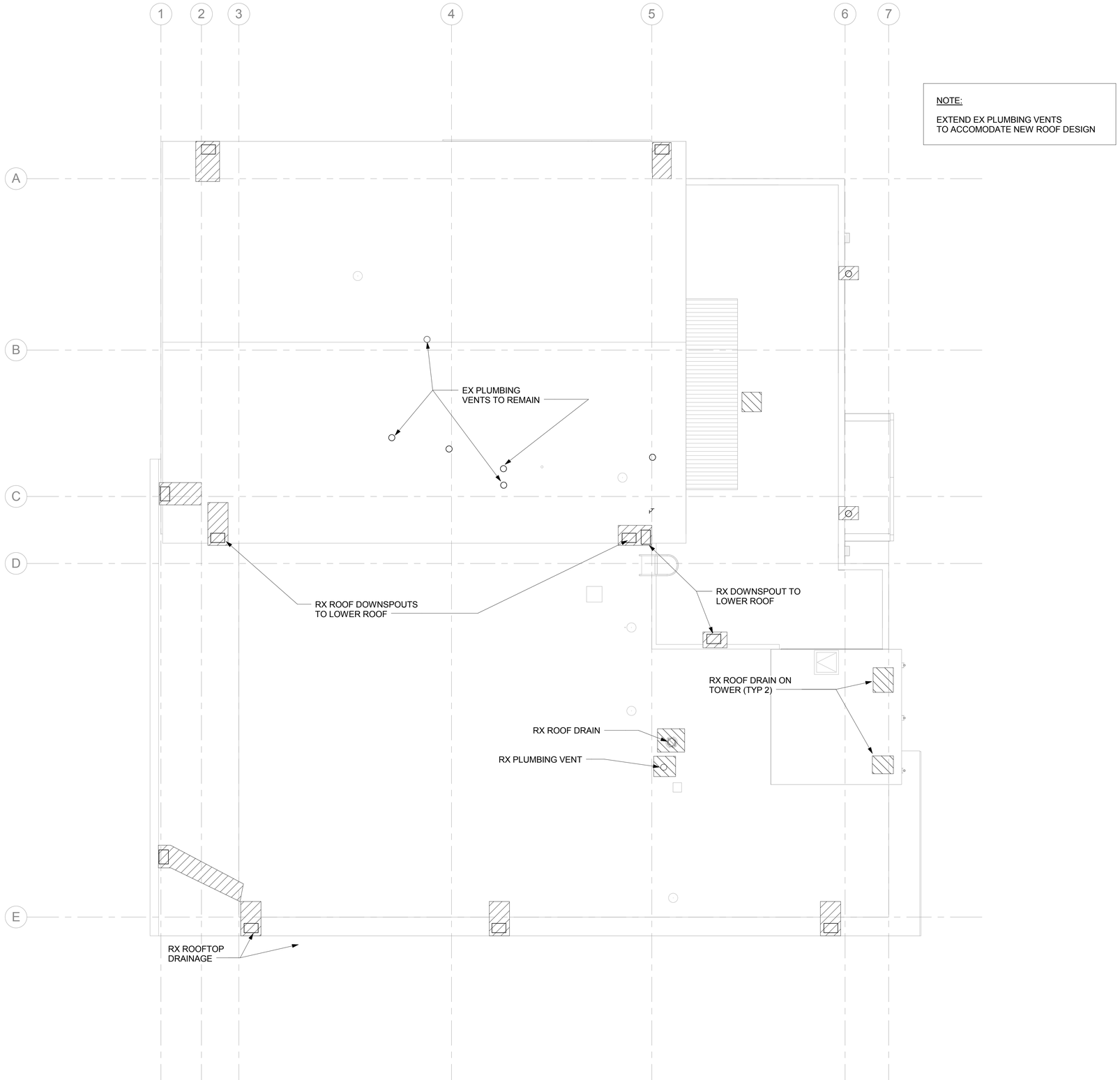
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PLUMBING
MEZZANINE
DEMOLITION

SHEET:

P20.12



NOTE:

EXTEND EX PLUMBING VENTS
TO ACCOMODATE NEW ROOF DESIGN

1 PLUMBING ROOF DEMOLITION
3/16" = 1'-0"

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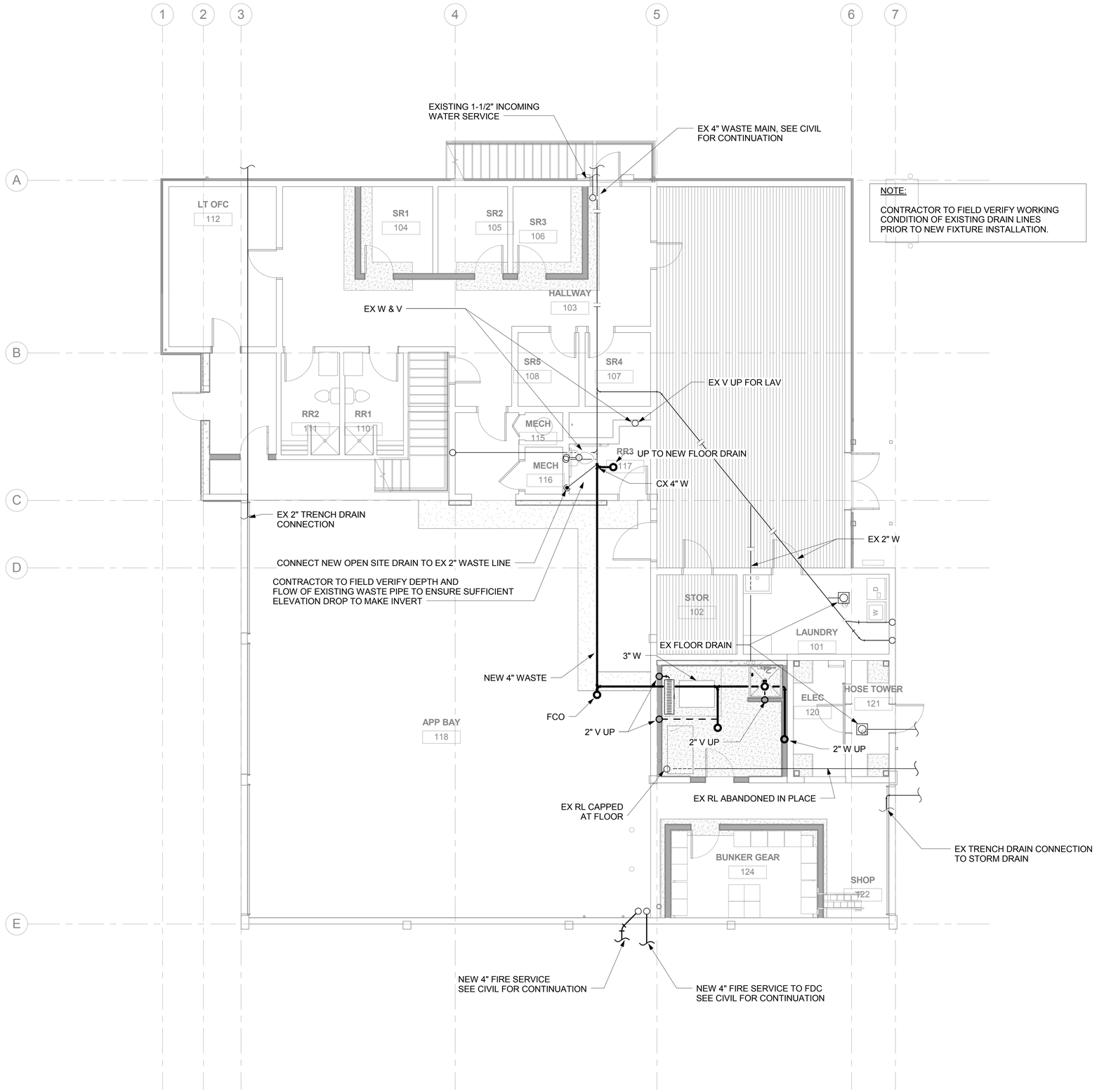
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REVISION SCHEDULE

PLUMBING ROOF DEMOLITION

SHEET:

P20.13



NOTE:

CONTRACTOR TO FIELD VERIFY WORKING CONDITION OF EXISTING DRAIN LINES PRIOR TO NEW FIXTURE INSTALLATION.

1 PLUMBING FOUNDATION PLAN
3/16" = 1'-0"

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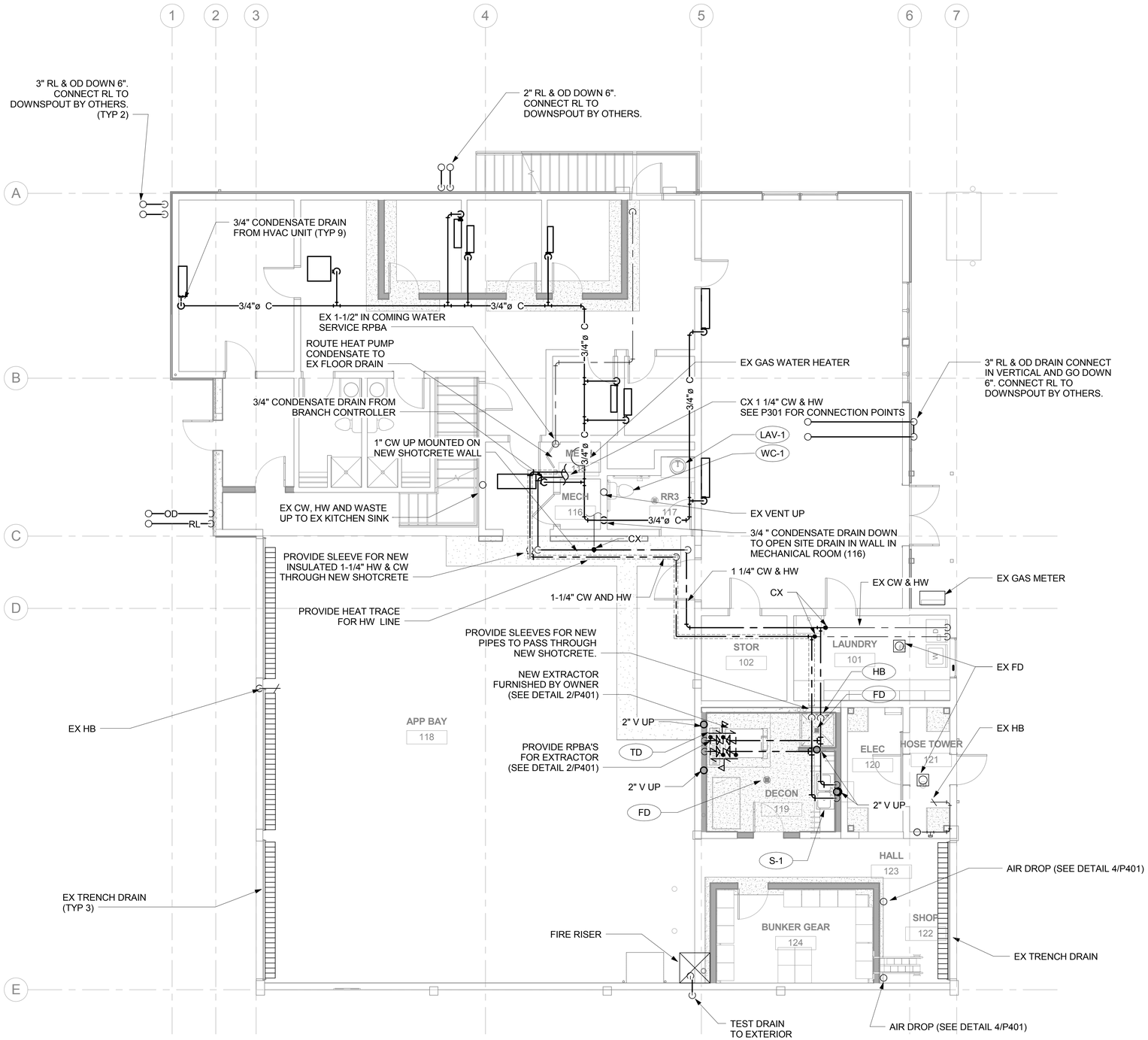
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REVISION SCHEDULE

PLUMBING FOUNDATION PLAN

SHEET:

P21.10



1 PLUMBING LEVEL 1
3/16" = 1'-0"

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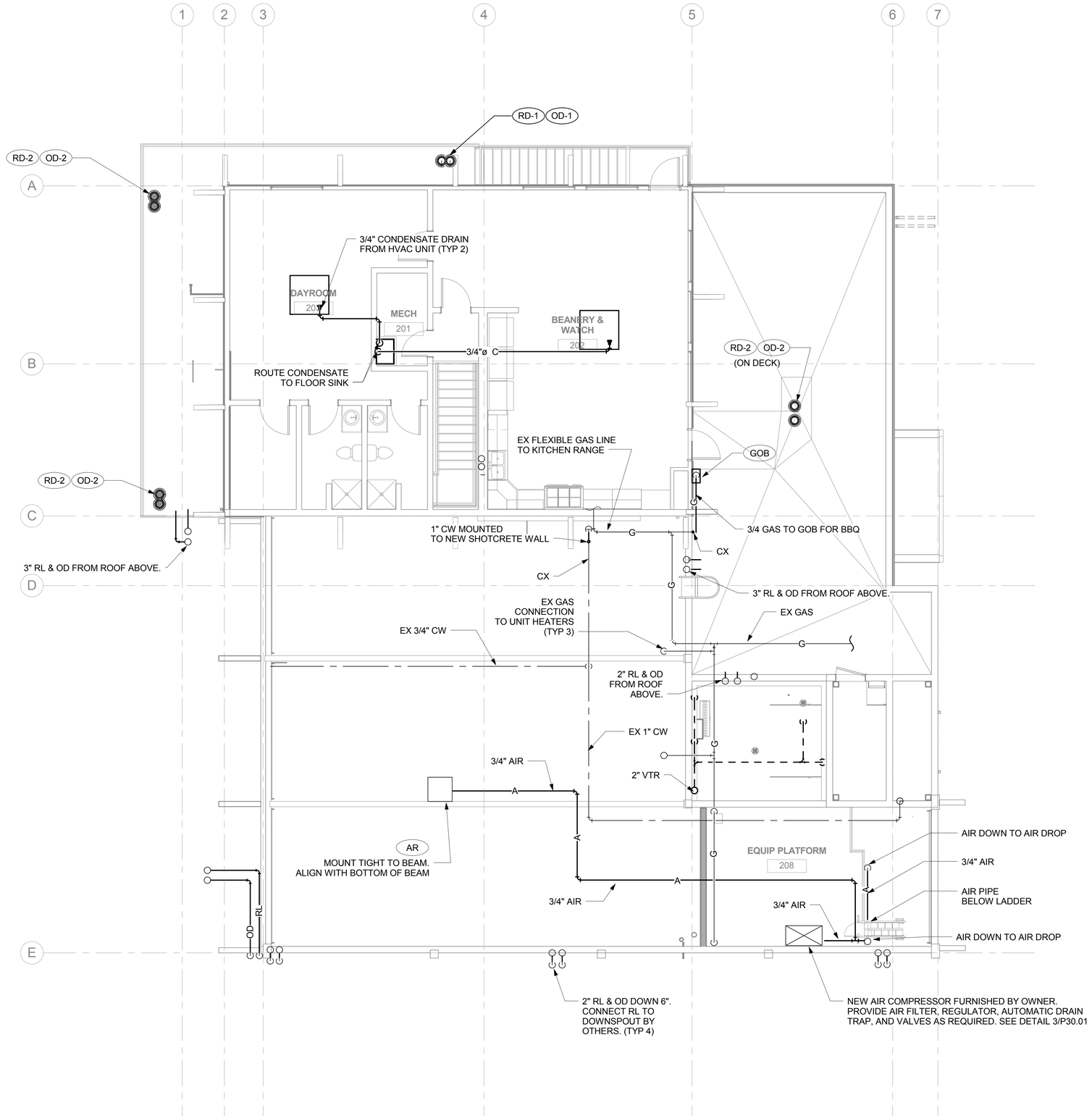
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REVISION SCHEDULE

PLUMBING LEVEL 1

SHEET:

P21.11



1 PLUMBING MEZZANINE
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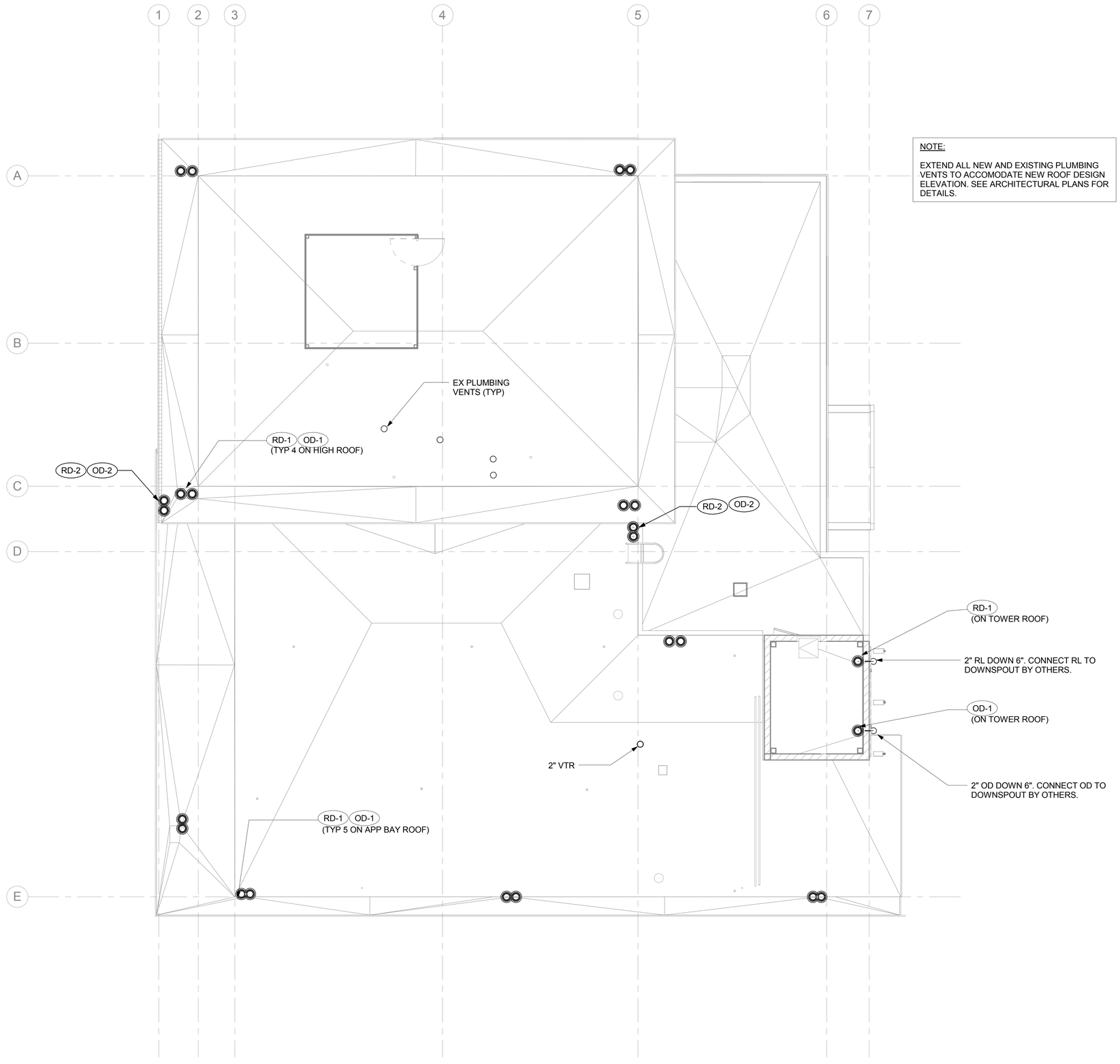
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REVISION SCHEDULE

PLUMBING
MEZZANINE

SHEET:

P21.12



NOTE:

EXTEND ALL NEW AND EXISTING PLUMBING VENTS TO ACCOMODATE NEW ROOF DESIGN ELEVATION. SEE ARCHITECTURAL PLANS FOR DETAILS.

1 PLUMBING ROOF
3/16" = 1'-0"

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SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH
FEDERAL WAY, WA

PROJECT # 16006

BID SET

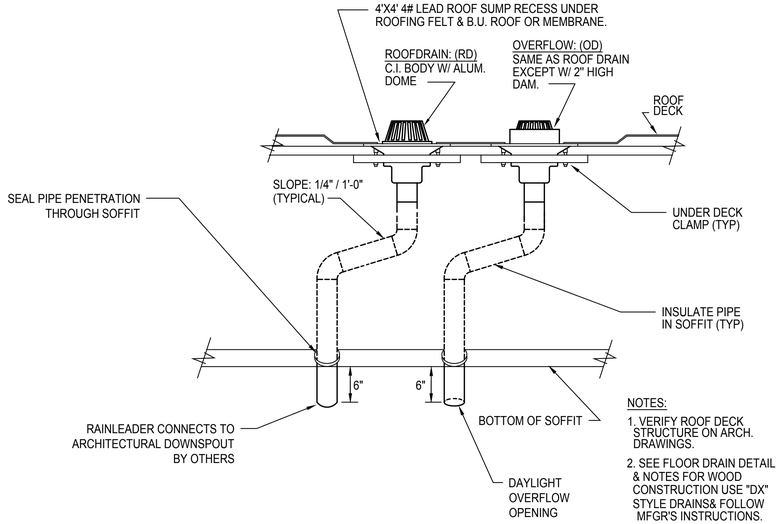
ISSUED: DECEMBER 1, 2016

REVISION SCHEDULE

PLUMBING ROOF

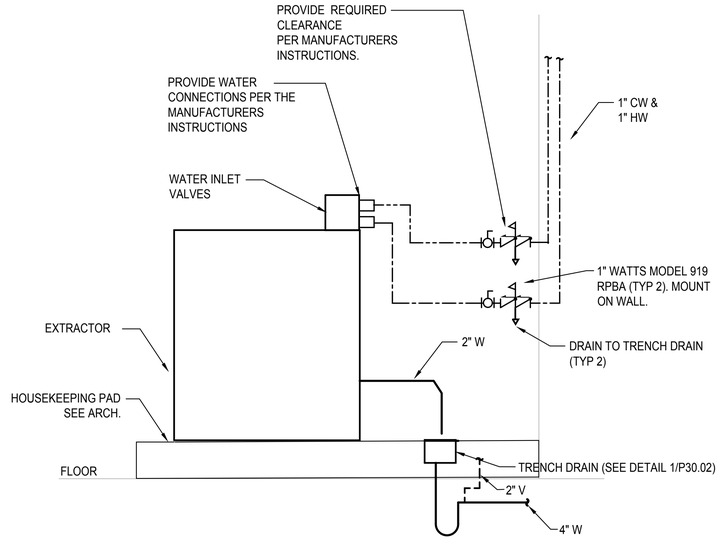
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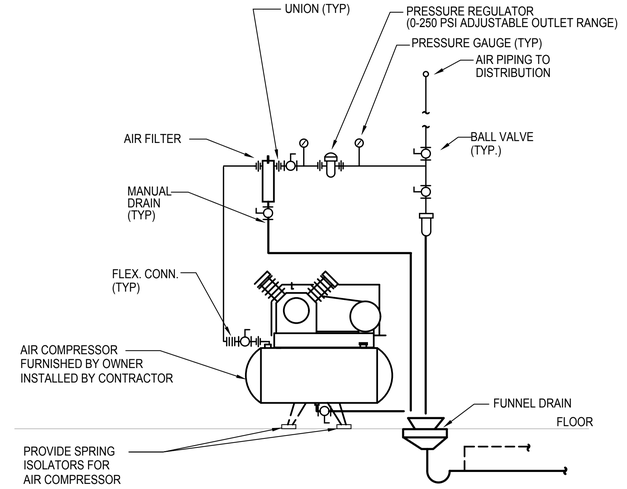
1 P30.01 ROOF DRAIN PIPING SCHEMATIC

N.T.S.



2 P30.01 EXTRACTOR DETAIL

N.T.S.



3 P30.01 AIR COMPRESSOR DETAIL

N.T.S.

4 P30.01 AIR DROP DETAIL

N.T.S.

A CONCRETE INSTALLATION W/ MEMBRANE

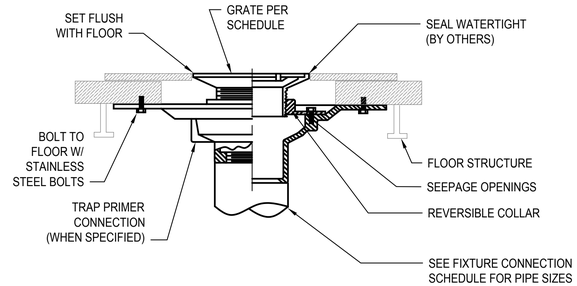
B CONCRETE INSTALLATION WO/ MEMBRANE

NOTES:
1. VERIFY FLOORING CONSTRUCTION BEFORE ORDERING DRAINS.
2. FLOOR DRAINS SHALL BE FLUSH TO 1/4" BELOW FIN. FLOOR. FLOOR SINKS SHALL BE 1/2" ABOVE TO 1/4" BELOW FIN. FLOOR VERIFY W/ LOCAL PLUMBING INSPECTOR.

NOTES FOR WOOD FLOOR INSTALLATION
1. VERIFY ASSEMBLY PROCEDURE W/ FLOORING MANUFACTURER.
2. ONLY INSTALL FLOOR DRAINS COMPATIBLE WITH WOOD CONSTRUCTION.
3. VERIFY FLOOR ASSEMBLY WITH ARCHITECT TO DETERMINE APPROPRIATE INSTALLATION METHOD.

5 P30.01 FLOOR DRAIN / SINK INSTALLATION STYLES

N.T.S.



C FOR USE W/ SINGLE WOOD FLOORS

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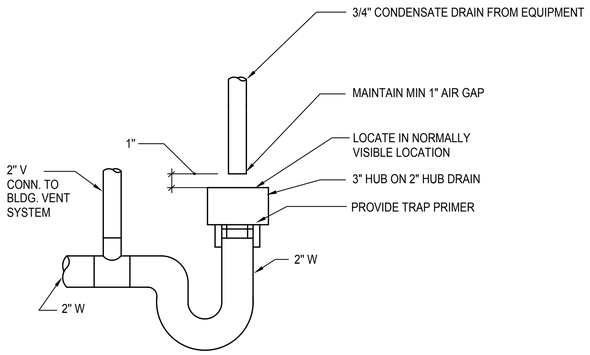
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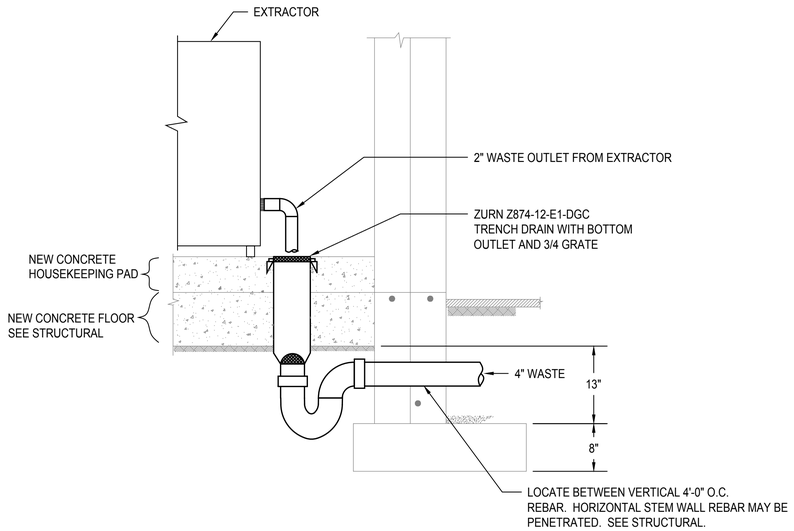
DETAILS

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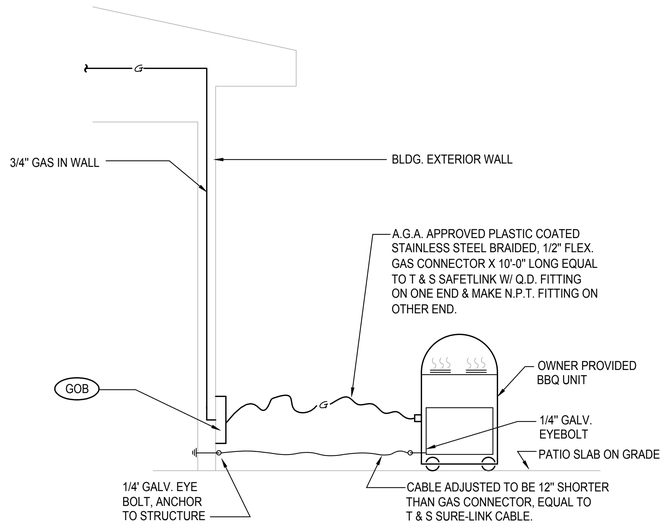
P30.01



2 P30.02 **OPEN SITE DRAIN DETAIL**
N.T.S.



1 P30.02 **EXTRACTOR TRENCH DRAIN DETAIL**
N.T.S.



3 P30.02 **GAS BBQ DETAIL**
N.T.S.

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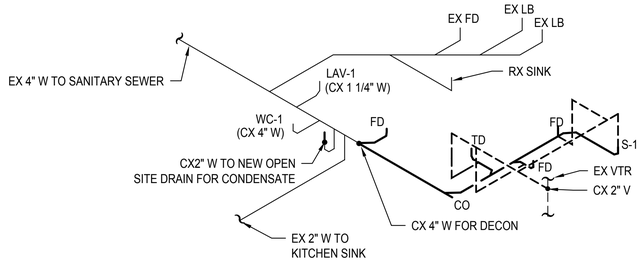
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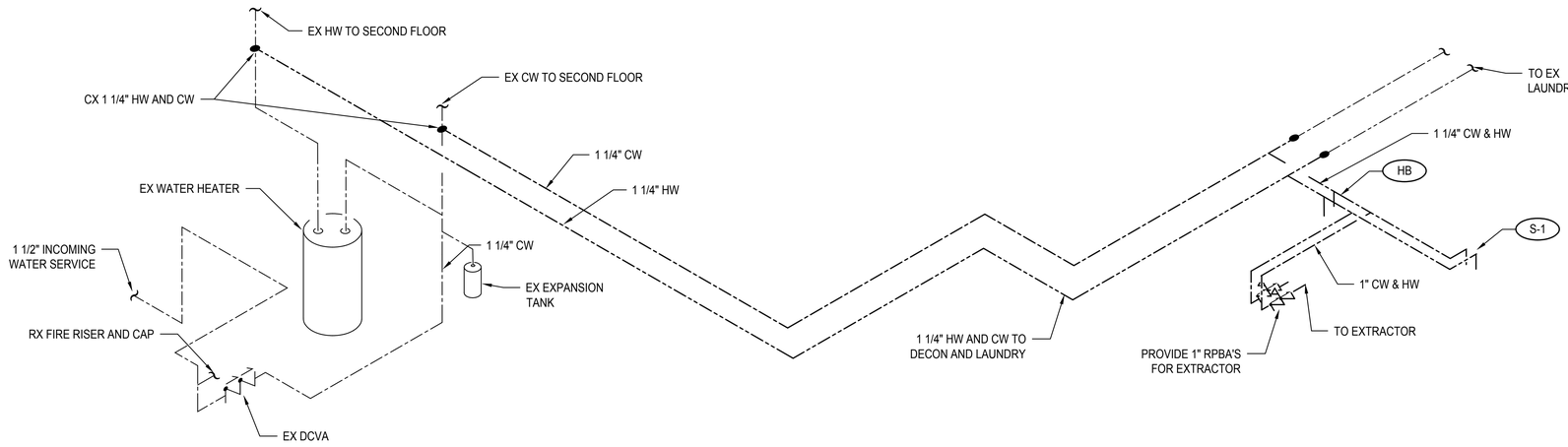
DETAILS

SHEET:
P30.02



1 P40.01 WASTE AND VENT RISER

N.T.S.



2 P40.01 HW AND CW SUPPLY LINES

N.T.S.

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RISERS

SHEET:

P40.01

FIRE ALARM SYSTEM LEGEND

SYMBOL	DESCRIPTION
P	MANUAL PULL STATION - WALL MOUNT OPERABLE PART BETWEEN 42" AND 48" ABOVE FINISH FLOOR
	SMOKE DETECTOR (CEILING MOUNTED)
	DUCT SMOKE DETECTOR
	HEAT DETECTOR (CEILING MOUNTED)
	HEAT DETECTOR (WALL MOUNTED)
TS	SPRINKLER SYSTEM TAMPER SWITCH
FS	SPRINKLER SYSTEM FLOW SWITCH
C/O	CARBON MONOXIDE SENSOR
	SPRINKLER SYSTEM ALARM BELL (24 VOLTS D.C.)
	FIRE ALARM CLEAR (WHITE) STROBE ONLY - WALL MOUNTED WITH THE ENTIRE STROBE LENS NOT LESS THAN 80" OR MORE THAN 96" ABOVE THE FINISHED FLOOR OR NOT MORE THAN 6" BELOW THE CEILING, WHICHEVER IS LOWER
	COMBINATION HORN / STROBE - WALL MOUNTED WITH THE ENTIRE STROBE LENS NOT LESS THAN 80" OR MORE THAN 96" ABOVE THE FINISHED FLOOR OR NOT MORE THAN 6" BELOW THE CEILING, WHICHEVER IS LOWER
	COMBINATION HORN / STROBE - CEILING MOUNTED
AES	AES WIRELESS TRANSCEIVER
	WEATHERPROOF OMNI-DIRECTIONAL ANTENNA
GMAP	GRAPHIC MAP

FIRE ALARM FLOOR PLAN GENERAL NOTES

1. PROVIDE ALL MATERIALS, EQUIPMENT, LABOR, DESIGN AND PROGRAMMING FOR A COMPLETE, INTELLIGENT (ANALOG) AND ADDRESSABLE (DIGITAL) LOW VOLTAGE 24 VOLT D.C., FULLY OPERATIONAL FIRE ALARM SYSTEM. ALL EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE NEW, CURRENTLY MANUFACTURED, AND SHALL BE DELIVERED TO THE PROJECT SITE WITH THE ORIGINAL FACTORY SEAL INTACT. MATERIALS AND WORKMANSHIP SHALL FULLY COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (N.F.P.A. #70), NATIONAL FIRE ALARM AND SIGNALING CODE (N.F.P.A. #72), AND THE LAWS AND REGULATIONS OF WASHINGTON STATE.
2. CORE DRILLED HOLES SHALL NOT PENETRATE THROUGH ANY STRUCTURAL BEAMS, REBAR CONCRETE SLABS, AND / OR WALLS THAT MAY COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING.
3. WHEN PENETRATING FIRE RATED WALLS, FLOORS, OR CEILINGS, THE CONTRACTOR SHALL UTILIZE APPROVED FIRE RATED PENETRATION METHODS. THE FIRE RATING OF THE WALLS, FLOORS, OR CEILINGS SHALL BE MAINTAINED AFTER THE CONDUIT HAS BEEN INSTALLED.
4. PRIOR TO ROUGH-IN, COORDINATE EXACT LOCATIONS OF FIRE ALARM APPLIANCES AND DEVICES WITH THE GENERAL ELECTRICAL CONTRACTORS.
5. EXISTING CONDUITS MAY BE REUSED BY THE FIRE ALARM SYSTEM CONTRACTOR IF DEEMED NECESSARY.
6. THE DEMOLITION PLANS DELINEATE THE BASIC SCOPE OF WORK FOR THE REMOVAL OF EXISTING FIRE ALARM SYSTEM EQUIPMENT, APPLIANCES, AND DEVICES. THE DEMOLITION DRAWINGS AND NOTES ARE PROVIDED WITH THE INTENT TO GENERALLY DESCRIBE THE WORK AREA. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND SHALL NOT RELY SOLELY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF DEMOLITION WORK REQUIRED.
7. FIRE ALARM SYSTEM CONTRACTOR SHALL REMOVE AND COORDINATE THE DELIVERY OF THE EXISTING HEAT DETECTORS IDENTIFIED ON THE CONTRACT DOCUMENTS. THE FIRE ALARM CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE FIRE ALARM SYSTEM CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF SITE.
8. REMOVE ALL FIRE ALARM WIRES, CABLES, SURFACE MOUNT RACEWAYS ETC. THAT SERVE EXISTING DEVICES THAT ARE BEING REMOVED AND THE LOCATION IS NOT BEING REUSED. USE CARE TO PRESERVE EXISTING CABLES AND CONDUITS THAT ARE TO REMAIN.
9. CONDUIT TO BE REMOVED SHALL BE CUT FLUSH TO CEILING OR WALL WHERE CONCEALED, AND SEALED OFF WITH SPRAY FOAM.
10. CONDUIT TO BE REMOVED SHALL BE CUT FLUSH TO FLOOR AND SEALED OFF WITH GROUT.
11. THE GENERAL CONTRACTOR AND FIRE ALARM SYSTEM CONTRACTOR SHALL COORDINATE ALL CUTTING, PATCHING AND FINISH WORK.
12. ALL MANUAL PULL STATIONS SHALL BE DUAL ACTION, KEY OPERABLE. THE USE OF BREAK GLASS FRONT STATIONS ARE NOT ALLOWED.
13. THE BASIS FOR THE VISUAL NOTIFICATION APPLIANCES (STROBES) INDICATED ON THE CONTRACT DOCUMENTS IS THE UTILIZATION OF (75) CANDELA (C.D.) AT A 44'-0" X 44'-0" SPACING FOR CEILING MOUNTED APPLIANCES AND 45'-0" X 45'-0" SPACING FOR WALL MOUNTED APPLIANCES. IF THE FIRE ALARM SYSTEM CONTRACTOR DECIDES TO INSTALL LOWER OUTPUT VISUAL APPLIANCES, IT BECOMES THE RESPONSIBILITY OF THE FIRE ALARM SYSTEM CONTRACTOR TO MEET THE MINIMUM CANDELA (C.D.) RATING AT THE LISTED MAXIMUM ROOM SIZE INDICATED IN TABLE 18.5.5.4.1(A) FOR WALL MOUNTED VISIBLE APPLIANCES OR TABLE 18.5.5.4.1(B) FOR CEILING MOUNTED VISIBLE APPLIANCES IN THE 2013 EDITION OF N.F.P.A. #72.
14. PROVIDE NEW CIRCUIT LABELS AND DIRECTORY CARDS FOR PANELS ALTERED AND / OR ADDED BY THIS CONTRACT.
15. ALL ADDRESSABLE DEVICES AND DETECTOR BASES SHALL BE PERMANENTLY AND CLEARLY LABELED WITH THE DEVICE ADDRESS IN A READILY VISIBLE LOCATION DIRECTLY ON THE DEVICE.
16. WHERE A DUCT SMOKE DETECTOR IS NOT READILY ACCESSIBLE FROM THE FLOOR, THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE A COMBINATION REMOTE TEST SWITCH WITH A REMOTE LIGHT EMITTING DIODE (LED) THAT IS VISIBLE FROM THE FLOOR IN A READILY ACCESSIBLE LOCATION.
17. THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE CARBON MONOXIDE DETECTION IN SPACES WITH FOSSIL FUEL BURNING APPLIANCES, EQUIPMENT, STOVES, OR FIRE PLACES.

CABLING AND CONDUIT REQUIREMENTS

1. ALL INITIATING AND NOTIFICATION CIRCUITS SHALL BE "CLASS B" WIRING.
2. ALL "CLASS B" WIRING CIRCUITS SHALL BE PROVIDED WITH AN "END-OF-LINE" RESISTOR INSTALLED AT THE END OF EACH CIRCUIT.
3. THE USE OF T-TAPPING WILL BE ALLOWED.
4. THE USE OF CRIMPED CONNECTORS, TWISTING OF WIRES, ETC. SHALL NOT BE ALLOWED IN J-BOXES, TERMINAL CABINETS, OR ENCLOSURES.
5. ALL WIRES OUTSIDE OF J-BOXES, TERMINAL CABINETS, OR ENCLOSURES SHALL BE FREE OF SPLICES.
6. CONDUITS SHALL BE CONCEALED IN CEILING SPACES, WALLS, AND OTHER AREAS WHEREVER POSSIBLE.
7. ALL CONDUIT SHALL BE INSTALLED IN A PARALLEL OR PERPENDICULAR FASHION THAT IS TIGHT TO STRUCTURE. THE CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH OTHER TRADES.
8. FIRE ALARM CABLING INSTALLED ABOVE ACCESSIBLE CEILINGS SHALL BE ALLOWED TO BE INSTALLED AS OPEN CABLING. PROVIDE "D" RING HANGER FOR ALL OPEN CABLING AT A MAXIMUM SPACING OF 5'-0" ON CENTER.
9. CABLING THAT IS INSTALLED IN WALLS, CABLING THAT IS INSTALLED BELOW 8'-0" IN ELEVATION THAT IS SUBJECT TO DAMAGE, AND CABLING THAT IS INSTALLED ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT.
10. ALL EXPOSED SURFACE MOUNTED RACEWAYS IN FINISHED SPACES BELOW 8'-0" IN ELEVATION SHALL BE A MINIMUM OF SERIES 700 METAL WIREMOLD OR EQUAL. THE INSTALLATION OF EXPOSED ELECTRICAL METALLIC TUBING (EMT) IN FINISHED SPACES BELOW 8'-0" IN ELEVATION WILL NOT BE ALLOWED.
11. CONDUITS SHALL NOT EXCEED FILL RATING OF 40% AS DEFINED BY THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (N.F.P.A. #70). PROVIDE SIZES AND QUANTITIES AS REQUIRED.
12. CONDUIT SHALL HAVE RED 3/4" WIDE BANDS WITHIN 1'-0" OF EACH SIDE OF A FLOOR OR A WALL PENETRATION.
13. WHERE EXPOSED TO VIEW IN FINISHED SPACES, PAINT ALL NEW CONDUITS, MOUNTING HARDWARE, AND RACEWAYS TO MATCH THE ADJACENT SURFACES.
14. ALL NEW FIRE ALARM SYSTEM JUNCTION BOXES SHALL BE PAINTED RED AND ANNOTATED "FA" ON THE COVER IN BLACK BOLD PRINT HAVING MINIMUM CHARACTER FONT SIZE 2" TAIL X 1" WIDE.

MISCELLANEOUS

SYMBOL	DESCRIPTION
1	CONSTRUCTION NOTES
1	RISER CONSTRUCTION NOTES
$	ALL NEW DEVICES INDICATED WITH A DARK CONTINUOUS LINE TYPE
$	ALL EXISTING DEVICES THAT ARE TO BE RETAINED ARE INDICATED WITH A LIGHT CONTINUOUS LINE TYPE
$	ALL DEVICES THAT ARE TO BE REMOVED ARE INDICATED WITH A DARK DASH LINE TYPE
FA	FA INDICATES FIRE ALARM
LF	LF INDICATES LOW FREQUENCY HORN (520Hz)
SB	SB INDICATES SOUNDER BASE
W	W INDICATES WEATHERPROOF DEVICE
RR	RR INDICATES RATE OF RISE TYPE

FIRE ALARM FLOOR PLAN CONSTRUCTION NOTES

1. THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE PLYWOOD BACK BOARD(S) ON WALLS THAT ARE NOT CMU OR CONCRETE AND USED TO MOUNT ENCLOSURES OF ANY KIND. PLYWOOD BACKING BOARD(S) SHALL BE SECURELY FASTENED TO THE WALL, BE A MINIMUM OF ¾", APA EXTERIOR GRADE ACX, VOID-FREE (MOUNTED WITH THE SMOOTH SIDE OUT), AND FIRE RETARDANT WITH A FLAME SPREAD RATING NOT MORE THAN 25 WHEN TESTED ACCORDING TO ASTM E-84. SUBMIT A PICTURE OF THE INSTALLED PLYWOOD TO THE ARCHITECT / ENGINEER FOR APPROVAL PRIOR TO APPLYING (3) COATS OF EGG SHELL WHITE FIRE RETARDANT PAINT.
2. SEE THE FIRE ALARM RISER DIAGRAM ON SHEET FA0.01 FOR MORE INFORMATION.
3. FIRE SPRINKLER SYSTEM SWITCHES SHALL BE PROVIDED AND INSTALLED BY SPRINKLER SYSTEM CONTRACTOR. THE SWITCHES SHALL BE WIRED AND CONNECTED TO THE FIRE ALARM SYSTEM BY THE ELECTRICAL CONTRACTOR. SEE THE FIRE SPRINKLER SYSTEM DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS OF ALL FIRE SPRINKLER SWITCHES, WHICH SHALL BE MONITORED BY THE FIRE ALARM SYSTEM.
4. THE 24 VOLTS D.C. SPRINKLER SYSTEM ALARM BELL SHALL BE PROVIDED BY THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL WIRE AND CONNECT THE ALARM BELL TO THE FIRE ALARM SYSTEM CONTROL PANEL (FMCP) AND THE FIRE ALARM CONTRACTOR SHALL PROGRAM THE ALARM BELL TO ACTIVATE UPON THE FLOW OF WATER.
5. THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE A RELAY MODULE TO INITIATE CLOSURE OF THE GAS SOLENOID VALVE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
6. FIRE ALARM SYSTEM CONTRACTOR SHALL REMOVE THE EXISTING HEAT DETECTOR AND TURN OVER TO THE FIRE ALARM DESIGNER ONCE DEMOLITION IS COMPLETE.
7. PROVIDE WEATHERPROOF OMNI-DIRECTIONAL ANTENNA AND LIGHTNING ARRESTOR FOR AES TRANSMITTER ON EXTERIOR OF HOSE TOWER. COORDINATE FINAL LOCATION WITH CALL CENTER FOR OPTIMIM SIGNAL STRENGTH.

FIRE ALARM SYSTEM EQUIPMENT REQUIREMENTS

1. THE FIRE ALARM SYSTEM SHALL BE FULLY FUNCTIONAL WITHOUT THE USE OF PRIMARY POWER. THE FIRE ALARM SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF 24 HOURS OF STANDBY OPERATION FOLLOWED BY AN ADDITIONAL 5 MINUTES OF ALARM OPERATION.
2. ALL BATTERIES SHALL PROVIDE AT LEAST 25% SPARE CAPACITY.
3. FIRE ALARM SYSTEMS: THE FIRE ALARM SYSTEM CONTROL PANEL (FACP) MAY INCLUDE INTERNAL POWER SUPPLIES. THE FIRE ALARM SYSTEM POWER SUPPLIES (FAPS) ARE SHOWN FOR REFERENCE ONLY. PROVIDE ADDITIONAL QUANTITIES OF POWER SUPPLIES AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. THE FIRE ALARM SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ELECTRICAL CONTRACTOR FOR ALL POWER CONNECTION. THE FIRE ALARM SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL COSTS ASSOCIATED WITH ALL NON-COORDINATED POWER CONNECTIONS.
4. PROVIDE 25% SPARE CAPACITY FOR NOTIFICATION POWER SUPPLIES.
5. PROVIDE MULTIPLE INITIATING DEVICE CIRCUITS AND SIGNALING LINE CIRCUITS SO THAT FAILURE OF ONE CIRCUIT DOES NOT CAUSE THE FACILITY TO LOOSE OVER 50% OF ITS DETECTION CAPABILITY PER FLOOR.
6. PROVIDE A MINIMUM OF 2 ISOLATION MODULES PER CIRCUIT.
7. PROVIDE BATTERY CALCULATIONS FOR ALL FIRE ALARM SYSTEMS.

FIRE ALARM AUDIBILITY REQUIREMENTS

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PERFORM AUDIBILITY TESTING IN EACH SPACE OF THE BUILDING PRIOR TO ACCEPTANCE TESTING. DOCUMENTATION OF DECIBEL (dB) VALUES RECORDED IN ALL SPACES SHALL BE PROVIDED TO THE ARCHITECT / ENGINEER PRIOR TO ACCEPTANCE TESTING.

1. DECIBEL READINGS SHALL BE TAKEN AT A POINT 10'-0" FROM THE APPLIANCE AT AN ELEVATION OF 5'-0" ABOVE FINISHED FLOOR.
2. THE SOUND LEVEL SHALL BE A MINIMUM OF 15 DECIBELS (dBs) ABOVE THE AVERAGE AMBIENT SOUND LEVEL.
3. THE SOUND LEVEL SHALL BE A MINIMUM OF 5 DECIBELS (dBs) ABOVE THE MAXIMUM SOUND LEVEL HAVING A MINIMUM DURATION OF 60 SECONDS.
4. IN SPACES THAT DO NOT MEET THE MINIMUM AUDIBLE (dB) VALUES, THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE ADDITIONAL AUDIBLE NOTIFICATION APPLIANCES UNTIL THE MINIMUM DECIBEL (dB) VALUES ARE OBTAINED.

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11/29/2016

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PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

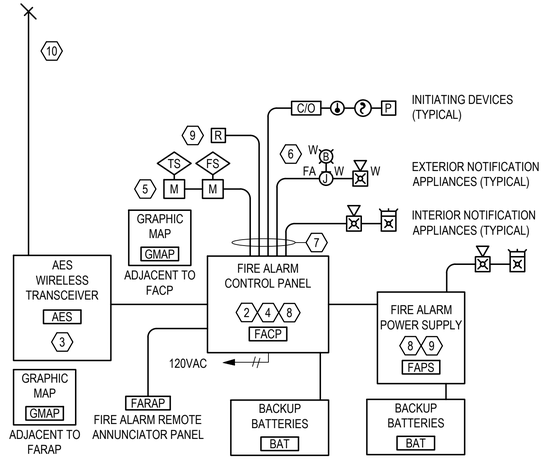
FIRE ALARM SYSTEM LEGEND AND NOTES

SHEET:

FA0.01

FIRE ALARM SYSTEM RISER DIAGRAM CONSTRUCTION NOTES

1. THE RISER DIAGRAM IS DIAGRAMMATIC IN NATURE. IT DOES NOT SHOW ALL DEVICES AND DOES NOT REPRESENT ACTUAL CONDUIT OR CABLE ROUTING.
2. THE FIRE ALARM SYSTEM SHALL BE FULLY FUNCTIONAL WITHOUT THE USE OF PRIMARY POWER. THE FIRE ALARM SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF 24 HOURS OF STANDBY OPERATION FOLLOWED BY AN ADDITIONAL 15 MINUTES OF ALARM OPERATION. ALL BATTERIES SHALL BE SIZED TO PROVIDE AT LEAST 20% ADDITIONAL SPARE CAPACITY. SEE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. PROVIDE ALL NECESSARY EQUIPMENT, INTERFACES, OTHER APPURTENANCES, AND PROGRAMMING AS REQUIRED FOR COMMUNICATION TO THE CENTRAL STATION MONITORING COMPANY OR MONITORING STATION.
4. PROVIDE SYSTEM POWER SUPPLIES, WHERE REQUIRED.
5. FIRE SPRINKLER SYSTEM SWITCHES SHALL BE PROVIDED AND INSTALLED BY SPRINKLER SYSTEM CONTRACTOR. THE SWITCHES SHALL BE WIRED AND CONNECTED TO THE FIRE ALARM SYSTEM BY THE ELECTRICAL CONTRACTOR. SEE THE FIRE SPRINKLER SYSTEM DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS OF ALL FIRE SPRINKLER SWITCHES, WHICH SHALL BE MONITORED BY THE FIRE ALARM SYSTEM.
6. THE 24 VOLTS D.C. SPRINKLER SYSTEM ALARM BELL SHALL BE PROVIDED BY THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL WIRE AND CONNECT THE ALARM BELL TO THE FIRE ALARM SYSTEM CONTROL PANEL (FMCP) AND THE FIRE ALARM CONTRACTOR SHALL PROGRAM THE ALARM BELL TO ACTIVATE UPON THE FLOW OF WATER.
7. PROVIDE SYSTEM CABLES FOR A FULLY FUNCTIONAL SYSTEM, AS REQUIRED.
8. PROVIDE SURGE PROTECTION ON ALL INCOMING PRIMARY POWER SUPPLIES SERVING FIRE ALARM SYSTEM PANELS.
9. THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE A RELAY MODULE TO INITIATE CLOSURE OF THE GAS SOLENOID VALVE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
10. PROVIDE WEATHERPROOF OMNI-DIRECTIONAL ANTENNA AND LIGHTNING ARRESTOR FOR AES TRANSMITTER ON EXTERIOR OF HOSE TOWER. COORDINATE FINAL LOCATION WITH CALL CENTER FOR OPTIMIM SIGNAL STRENGTH.



FIRE ALARM SYSTEM RISER DIAGRAM 1

DIAGRAMMATIC

FIRE ALARM SYSTEM SEQUENCE OF OPERATIONS MATRIX

Notes:

1. If "Sequence of Operations" indicated here conflicts with specification, this "Sequence of Operations" supersedes specification sequence.
2. Provide a complete "Sequence of Operations" in accordance with N.F.P.A. #72 and contract documents.
3. This "Sequence of Operations" is considered to be the minimum amount of items required for this project. Provide additional Inputs and/or Outputs as required by the Authority Having Jurisdiction.

System Inputs	System Outputs: Fire Alarm System Control Panel	Annunciate "Alarm Condition" at the Fire Alarm System Control Panel	Annunciate "Alarm Condition" at the Fire Alarm System Remote Annunciator	Transmit "Alarm Signal" to the Central Station Monitoring Company.	Annunciate "Trouble Condition" at the Fire Alarm Control Panel	Annunciate "Trouble Condition" at the Fire Alarm Remote Annunciator	Transmit "Trouble Signal" to the Central Station Monitoring Company.	Annunciate "Supervisory Condition" at the Fire Alarm Control Panel	Annunciate "Supervisory Condition" at the Fire Alarm Remote Annunciator	Transmit "Supervisory Signal" to the Central Station Monitoring Company.	Audible / Visual Notification Appliances	Activate All Fire Alarm System Audible Notification Appliances	Activate All Fire Alarm System Visual Notification Appliances	Visual Notification Appliances Operation Maintained until Fire Alarm System Reset	Activation of Carbon Monoxide Detection Sensor shall Initiate a Signal that is Distinctly Different from a Fire Alarm and Transmit a Unique Signal / Message to the Constantly Attended Location.	Residential / Sleeping Units	Activate Smoke Detector Low Frequency Sounder Base Alarm in Sleeping Rooms	Fire Sprinkler Systems	Local Sprinkler System Electric Bell Activation Upon the Flow of Sprinkler System Water	Kitchens	Natural Gas solenoid shutoff for Kitchen Cooking Appliances
Fire Alarm System:																						
Fire Alarm System Control Panel in Alarm Condition		X	X	X								X	X	X				X				X
Manual Pull Station		X	X	X								X	X	X				X				X
Smoke Detector		X	X	X								X	X	X				X				X
Heat Detector		X	X	X								X	X	X				X				X
Fire Alarm System Control Panel in Trouble Condition					X	X	X															
Notification Circuit Short					X	X	X															
Single Break (Open) in Fire Alarm Circuit					X	X	X															
Single Ground Fault in Fire Alarm Circuit					X	X	X															
Fire Alarm Panel Primary Power Failure					X	X	X															
Fire Alarm Panel Battery Failure					X	X	X															
Missing Addressable Device					X	X	X															
Dirty Smoke Detector					X	X	X															
Fire Alarm System Control Panel in Supervisory Condition								X	X	X												
Carbon Monoxide Sensor in Commons Area		X	X	X								X	X	X	X			X				X
Carbon Monoxide Sensor in Kitchens with Fossil Fuel Burning Equipment		X	X	X								X	X	X	X			X				X
Residential / Sleeping Unit Smoke Detectors:																						
Dirty Smoke Detector					X	X	X															
Smoke Detector with Sounder Base (Residential / Sleeping Unit)		X	X	X														X				
Tampering of any Sleeping Unit Smoke Detector with Sounder Base								X	X	X												
Wet Pipe Automatic Fire Protection Sprinkler Systems:																						
Water Flow Switch		X	X	X								X	X	X				X			X	X
Control Valve Tamper Switch								X	X	X												
Post Indicating Valve Tamper Switch								X	X	X												

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SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63

33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

BID SET

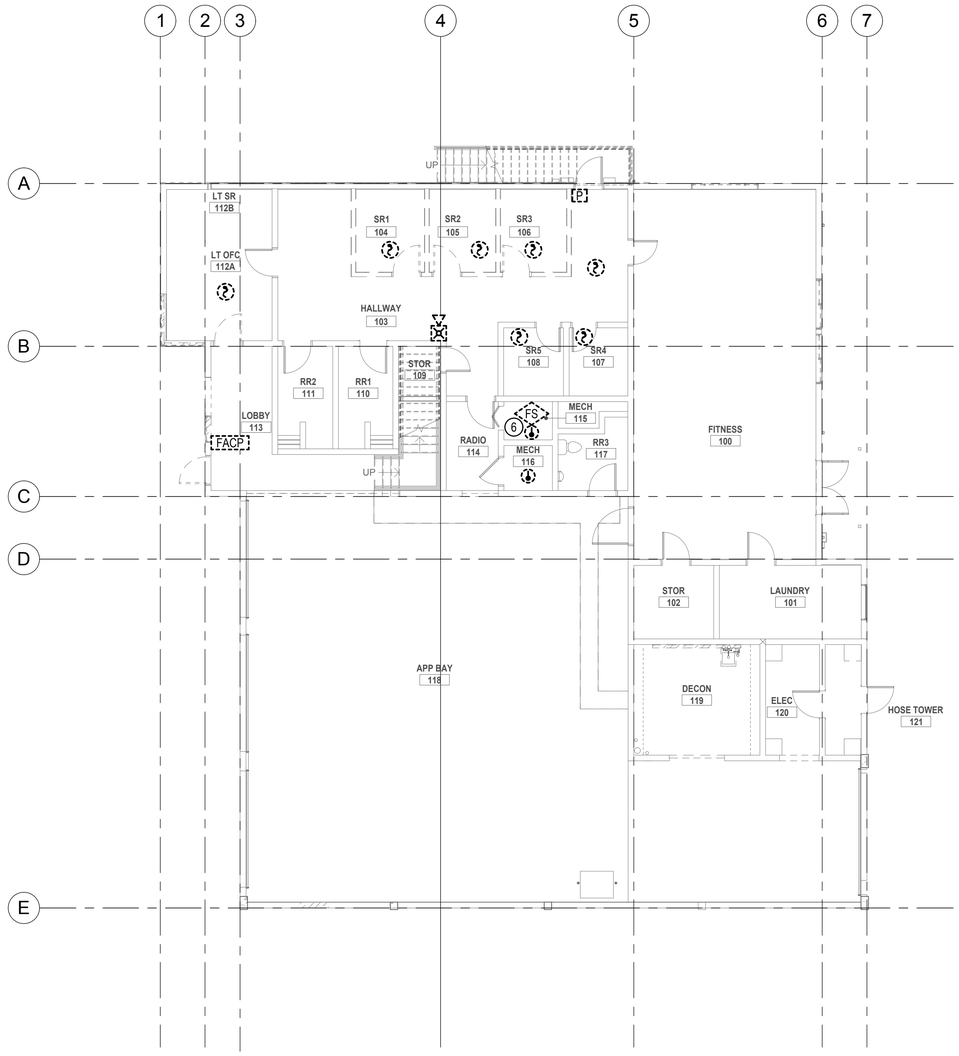
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REVISION SCHEDULE

FIRE ALARM RISER DIAGRAM AND SEQUENCE OF OPERATIONS MATRIX

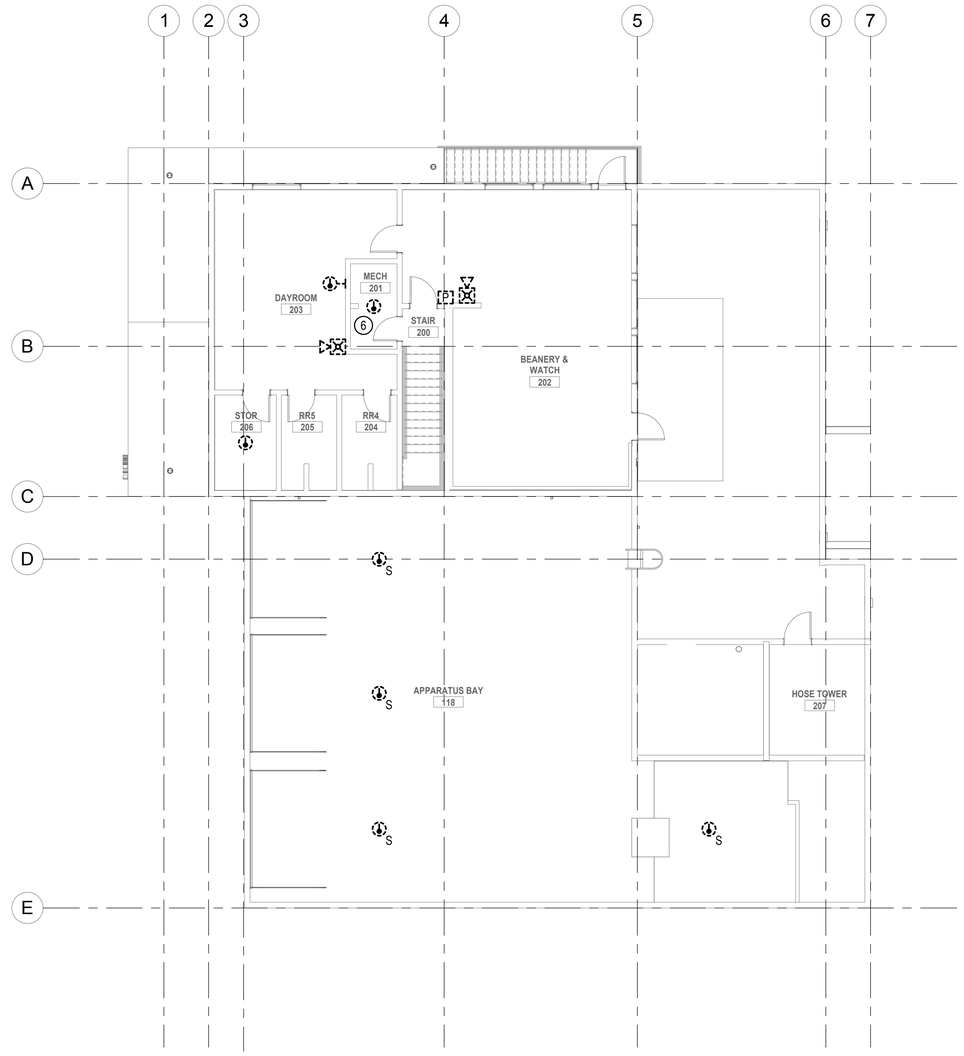
SHEET:

FA0.02



1 FIRE ALARM DEMOLITION FIRST FLOOR PLAN

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



2 FIRE ALARM DEMOLITION SECOND FLOOR PLAN

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

GENERAL NOTES

1. SEE SHEET FA0.01 FOR FIRE ALARM SYSTEM FLOOR PLAN GENERAL AND CONSTRUCTION NOTES.
2. SEE SHEET FA0.01 FOR CABLING AND CONDUIT REQUIREMENTS AND FIRE ALARM SYSTEM REQUIREMENTS.
3. CEILING TYPES ARE SHOWN FOR REFERENCE ONLY AND ARE NOT PROVIDED TO INDICATE EXACT LAYOUTS.
4. EXISTING DEVICES SHOWN DASHED IN A LIGHT LINE WEIGHT ARE TO BE REMOVED AND SHOWN IN APPROXIMATE LOCATIONS FOR REFERENCE ONLY.

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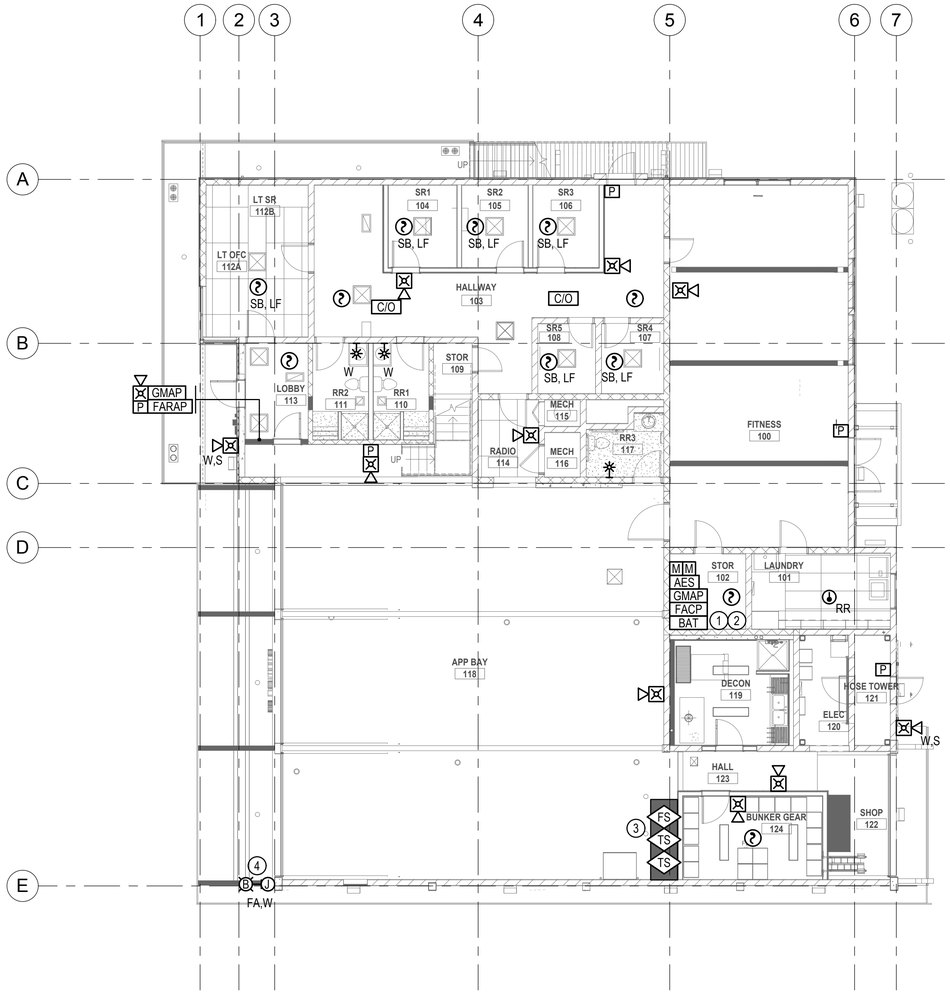
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REVISION SCHEDULE

FIRE ALARM DEMOLITION FIRST & SECOND FLOOR PLAN

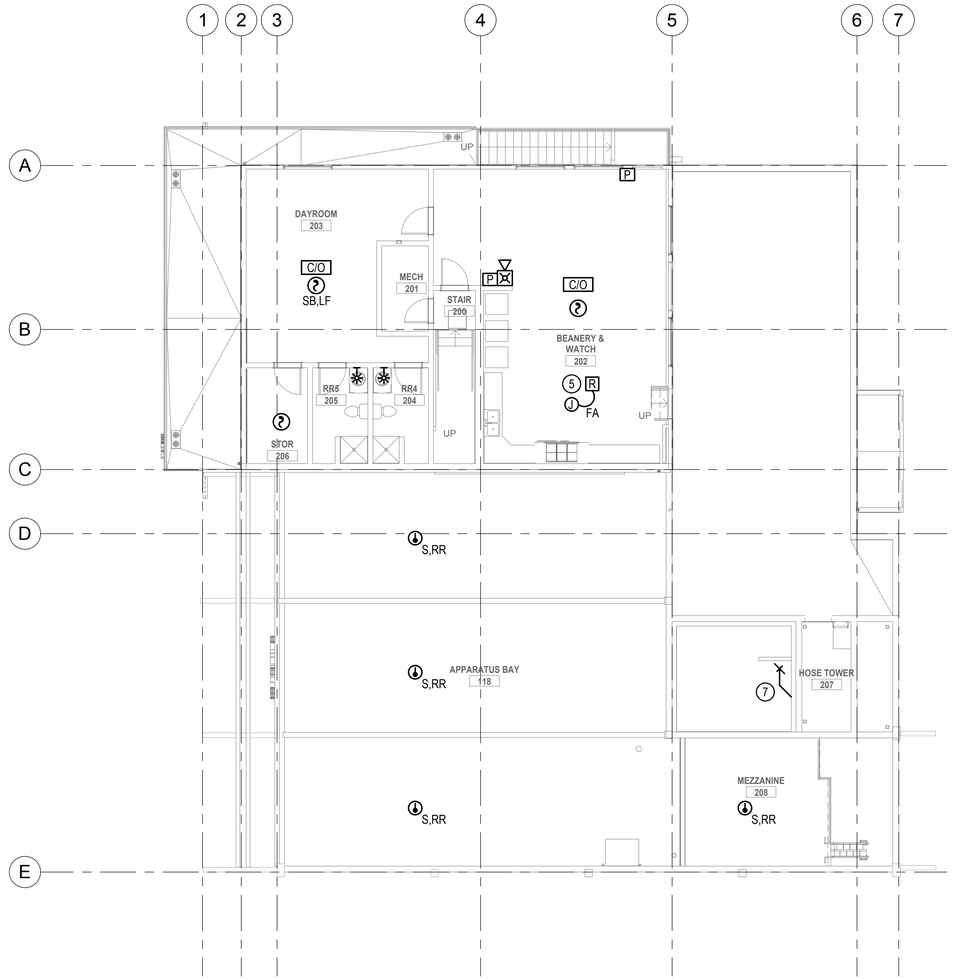
SHEET:

FA1.01



1 FIRE ALARM FIRST FLOOR PLAN

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



2 FIRE ALARM SECOND FLOOR PLAN

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

GENERAL NOTES

1. SEE SHEET FA0.01 FOR FIRE ALARM SYSTEM FLOOR PLAN GENERAL AND CONSTRUCTION NOTES.
2. SEE SHEET FA0.01 FOR CABLING AND CONDUIT REQUIREMENTS AND FIRE ALARM SYSTEM REQUIREMENTS.
3. CEILING TYPES ARE SHOWN FOR REFERENCE ONLY AND ARE NOT PROVIDED TO INDICATE EXACT LAYOUTS.
4. CEILING MOUNTED DEVICES SHALL BE INSTALLED AT THE QUARTER POINT OR CENTER POINT OF 4'X2' ACOUSTICAL CEILING TILES AND CENTER POINT OF 2'X2' OR 1'X1' ACOUSTICAL CEILING TILES. CONSTRUCTION DOCUMENT FA401 THRU FA402 MAY NOT DEPICT THIS INSTALLATION DUE TO REFLECTED CEILING PLAN SHOWN BEING DIAGRAMMATICAL TO INDICATE CEILING TYPES, NOT EXACT ACOUSTICAL TILE LAYOUTS.
5. THE FIRE ALARM SYSTEM CONTRACTOR SHALL COORDINATE THE FIRE ALARM SYSTEM INSTALLATION WITH EXISTING ARCHITECTURAL FEATURES, H.V.A.C. GRILLES, ELECTRICAL LIGHTS, FIRE PROTECTION SPRINKLER HEADS, AND / OR EXISTING CONDITIONS.

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REVISION SCHEDULE

FIRE ALARM
FIRST &
SECOND
FLOOR PLAN

SHEET:

FA2.01

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	LIGHTING
	RECESSED LIGHT FIXTURE
	SURFACE OR PENDANT MOUNT LIGHT FIXTURE (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)
	WALL MOUNT LIGHT FIXTURE
	WALL SCONCE LIGHT FIXTURE
	SURFACE OR RECESSED LIGHT FIXTURE
	SURFACE OR RECESSED LIGHT FIXTURE
	SURFACE OR PENDANT MOUNT STRIP LIGHT (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)
	EGRESS FIXTURE WITH EMERGENCY BATTERY PACK. PROVIDE UNSWITCHED HOT LEG.
	EXIT LIGHT FIXTURE (PROVIDE DIRECTION ARROWS AS INDICATED) PROVIDE UNSWITCHED HOT LEG.
	WALL MOUNTED EXIT LIGHT FIXTURE (PROVIDE DIRECTION ARROWS AS INDICATED) PROVIDE UNSWITCHED HOT LEG.
	RECEPTACLES
	DUPLEX RECEPTACLE (E INDICATES EXISTING TO BE REPLACED)
G	DUPLEX RECEPTACLE (G INDICATES GROUND FAULT CIRCUIT INTERRUPTER)
C	DUPLEX RECEPTACLE (C INDICATES ABOVE COUNTER)
	FOURPLEX RECEPTACLE
	SPECIAL PURPOSE OUTLET - 1Ø, VOLTAGE AND AMPERES AS INDICATED
	EQUIPMENT, WIRING AND RACEWAYS
	CONDUIT STUB OUT (PROVIDE CONCRETE MARKER ON EXTERIOR)
	DEDICATED CONDUIT HOMERUN TO PANEL & CIRCUIT NUMBERS AS INDICATED ON PLANS
	RACEWAY CONCEALED IN WALL OR CEILING
	RACEWAY CONCEALED UNDERGROUND
	MARKS INDICATE NUMBER OF #12 AWG UNLESS NOTED OTHERWISE
	GROUNDING CONDUCTOR
	FLEXIBLE CONDUIT
	GROUNDING SYSTEM PER CODE
J	JUNCTION BOX - SIZE PER CODE (F INDICATES FIRE ALARM SYSTEM)
	MOTOR CONNECTION
M	MANUAL STARTER
	FUSED DISCONNECT SWITCH
	120/208 VOLT PANELBOARD (OR AT RATED VOLTAGE AS NOTED)
	EXISTING PANELBOARD TO BE RETAINED
	MAIN DISTRIBUTION BOARD
	ENCLOSED CIRCUIT BREAKER, AMPERES AS INDICATED
M	METER

SYMBOL	DESCRIPTION
	SWITCHES
$	SINGLE POLE SWITCH
$K	SINGLE POLE KEYED SWITCH
$L	LIGHTED SWITCH (LIT WHEN OFF)
$P	SWITCH WITH PILOT LIGHT (LIT WHEN ON)
$D	DIMMING SWITCH - SINGLE POLE
$T	TIMER SWITCH
$VS	COMBINATION SWITCH / VACANCY SENSOR
$3	THREE WAY SWITCH
$4	FOUR WAY SWITCH
a $$ b	MULTI-GANGED SWITCH (LOWER CASE LETTERS INDICATES SWITCHING)
	PUSH BUTTON EMERGENCY SHUTOFF SWITCH
	PUSH-BUTTON CONTROLLER
PC	PHOTOCELL CONTROL
TC	TIME CLOCK CONTROL
OS	WALL MOUNTED OCCUPANCY SENSOR (LIGHTING CONTROL)
OS	CEILING MOUNTED OCCUPANCY SENSOR (LIGHTING CONTROL)
	INTERCOM/ALERTING SYSTEM
S	SPEAKER, FLUSH MOUNT ROUND WITH VOLUME CONTROL
	NOTIFICATION LIGHT
DB	DOOR BELL
	MISCELLANEOUS
1	CONSTRUCTION NOTES
1	DEMOLITION NOTES
1	FLAG NOTE
W	W INDICATES WEATHERPROOF FOR ALL DEVICES, PROVIDE LOCKING COVER ON RECEPTACLES.
WG	WG INDICATES WIRE GUARD
$	ALL DEVICES WITH LIGHT LINE WEIGHT INDICATES EXISTING TO BE RETAINED
$	ALL DEVICES WITH DASH LINE INDICATES EXISTING TO BE REMOVED
A / X	DETAIL CALL OUT - A INDICATES DETAIL IDENTIFICATION, X INDICATES SHEET DRAWN ON
AH1 / 1	MECHANICAL EQUIPMENT CONNECTION

ABBREVIATIONS

G	GROUND FAULT CIRCUIT INTERRUPTER	UC	UNDERCOUNTER
C	MOUNT ABOVE COUNTER	UG	UNDERGROUND
DW	DISHWASHER	C.	CONDUIT
EC	ELECTRICAL CONTRACTOR	CO	CONDUIT ONLY
MC	MECHANICAL CONTRACTOR	GR	GROUND
REQ'D	REQUIRED	SPD	SURGE PROTECTIVE DEVICE
TTB	TELEPHONE TERMINAL BOARD	CU	COPPER
MW	MICROWAVE	XFMR	TRANSFORMER
REF	REFRIGERATOR	GC	GENERAL CONTRACTOR

GENERAL NOTES

1. PRIOR TO BIDING, THE CONTRACTOR/INSTALLING VENDOR SHALL VERIFY ALL CMU/CONCRETE WALLS, BRICK WALLS, EXISTING UNDERGROUND CONDUIT CAPACITIES, CABLE ROUTING AND ALL WORK REQUIRED TO FACILITATE A COMPLETE AND FULLY FUNCTIONAL SYSTEM. ALL WALLS SHALL BE CORE DRILLED AS REQUIRED.
2. BIDS SHALL INCLUDE ALL CORE DRILLING REQUIRED TO FACILITATE ALL CONDUIT WORK. THE CONTRACTOR/INSTALLING VENDOR SHALL X-RAY THE EXISTING CONCRETE SLABS AND WALLS PRIOR TO CORE DRILLING. CORE DRILLED HOLES SHALL NOT PENETRATE THROUGH ANY EXISTING REBAR AND/OR CONDUIT CONTAINED IN THE EXISTING CONCRETE SLAB AND WALLS. CORE DRILL LOCATIONS MAY NEED TO BE MODIFIED TO ACCOMMODATE EXISTING OBSTRUCTIONS CONTAINED WITHIN THE FLOOR AND WALLS. NEVER CORE DRILL A STRUCTURAL BEAM OR MODIFY THE STRUCTURAL INTEGRITY OF THE BUILDING.
3. CONTRACTOR SHALL REFER TO STRUCTURAL DRAWINGS FOR BRACE FRAMED WALLS. CONTRACTOR SHALL MOUNT DEVICES AND ROUTE CONDUIT SO AS NOT TO INTERFERE WITH THE STRUCTURAL INTEGRITY OF THE WALL.
4. CONDUITS ARE NOT ALLOWED TO BE ROUTED IN ANY CONCRETE SLAB. CONDUITS MAY BE ROUTED UNDER THE SLAB ONLY.
5. ALL CONDUITS ROUTED UNDER THE CONCRETE SLAB SHALL BE ROUTED PARALLEL TO ONE ANOTHER AND MAY NOT CROSS OVER EACH OTHER UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER.
6. ALL SPARE CONDUITS (FOR FUTURE USE) SHALL BE LABELED "SPARE/FUTURE CONDUIT" AT EACH END OF THE CONDUIT WITH 1/2" TALL LETTERS, USING A PERMANENT MARKER.
7. ALL CABLING SHALL BE RUN IN CONDUIT AND CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE STRUCTURE. THE CONTRACTOR/INSTALLING VENDOR SHALL COORDINATE ALL CONDUIT ROUTING WITH THE OWNER. NEATLY SURFACE MOUNT EXPOSED CONDUIT.
8. ALL OUTLETS, SWITCHES, AND DEVICES MOUNTED BACK TO BACK IN A WALL MUST BE SPACED A MINIMUM OF 24" APART TO MEET ACOUSTICAL REQUIREMENTS.
9. THE CABLING AND EQUIPMENT REQUIREMENTS FOR ALL SYSTEMS SHALL BE INCLUDED IN THE CONTRACTOR'S/INSTALLING VENDOR'S BID.
10. WHEN PENETRATING FIRE RATED WALLS, FLOORS, OR CEILINGS, THE CONTRACTOR/ INSTALLING VENDOR SHALL UTILIZE FIRE RATED PENETRATION METHODS. THE FIRE RATING OF THE WALL SHALL BE MAINTAINED AFTER THE CONDUIT OR WIREWAY HAS BEEN INSTALLED.
11. REPAIRS FOR ANY DAMAGE DONE DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO REPAIRS WHERE EXISTING DEVICES ARE REMOVED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/INSTALLING VENDOR AT NO ADDITIONAL COST TO THE OWNER.
12. CONTRACTOR/INSTALLING VENDOR MAY UTILIZE ANY SPARE OR ABANDONED CONDUIT PER OWNERS APPROVAL.

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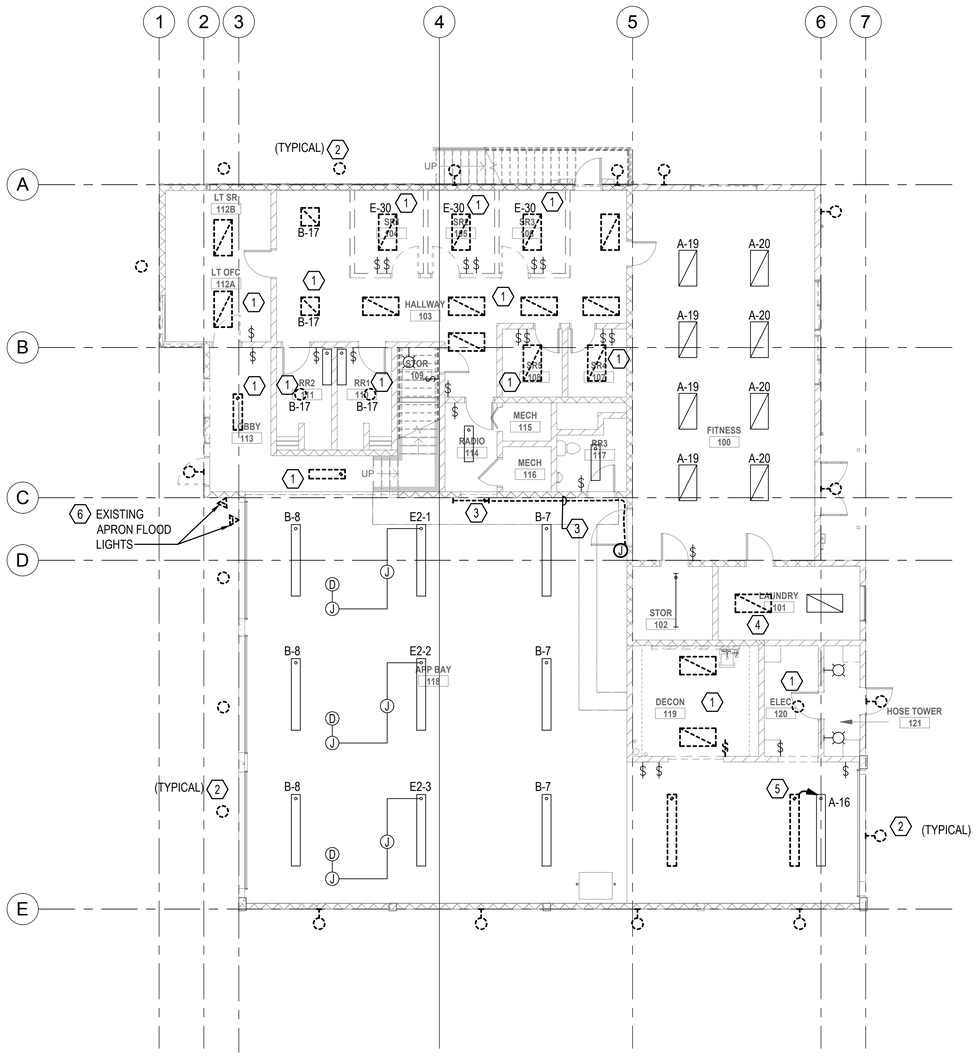
ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

ELECTRICAL LEGEND

SHEET:

E-001



1 LEVEL 1 - EXISTING LIGHTING PLAN

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

DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES IN THIS AREA TO ALLOW FOR NEW DUCTWORK, STRUCTURAL AND CEILING. MAINTAIN EXISTING LIGHTING CIRCUIT FOR REUSE. REINSTALL AFTER STRUCTURAL WORK IS COMPLETE.
2. EXISTING EXTERIOR LIGHTS TO BE DISCONNECTED AND REMOVED. NEW LIGHT FIXTURES TO REPLACE EXISTING. MAINTAIN EXISTING LIGHTING CIRCUIT. REINSTALL AFTER STRUCTURAL WORK IS COMPLETE.
3. DISCONNECT AND REMOVE EXISTING WALL LIGHT AND CONDUIT TO ALLOW FOR STRUCTURAL WORK. REINSTALL AFTER STRUCTURAL WORK IS COMPLETE.
4. TEMPORARILY DISCONNECT AND REMOVE EXISTING LIGHT TO ACCOMMODATE CEILING REMOVAL AND REPLACEMENT. REINSTALL EXISTING LIGHT AFTER COMPLETION OF WORK.
5. RELOCATE EXISTING LIGHT TO NEW LOCATION TO AVOID THE MEZZANINE. EXTEND EXISTING CIRCUIT.
6. DISCONNECT, REMOVE AND SALVAGE EXISTING LIGHTS TO ALLOW FOR STRUCTURE UPGRADE. MAINTAIN EXISTING CIRCUIT. REINSTALL EXISTING LIGHTS AFTER WORK IS COMPLETED.

GENERAL DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLIMENTED BY THE CONTRACT DOCUMENTS. DASHED LINES INDICATE EXISTING DEVICES AND EQUIPMENT TO BE REMOVED.
2. THESE PLANS DELINEATE THE BASIC SCOPE OF WORK FOR THE REMOVAL OF EXISTING MATERIAL. THE DEMOLITION DRAWINGS AND NOTES ARE PROVIDED WITH THE INTENT TO GENERALLY DESCRIBE AREAS AND LIMITS OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND CONDITIONS THERE AND SHALL NOT RELY SOLELY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF DEMOLITION WORK REQUIRED. COORDINATION OF THESE DRAWINGS WITH REQUIREMENTS FOR CONTRACT WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. DISCREPANCIES BETWEEN OR WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL PROVIDE CLARITY SKETCHES, DIAGRAMS, AND FIELD DIMENSTIONS OF EXISTING CONDITIONS AT THE REQUEST OF THE ENGINEER IF/WHEN CONFLICTS ARE IDENTIFIED.
3. E.C. TO REMOVE ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT TO BE DEMOLISHED. E.C. SHALL CHECK ALL DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS FOR UNIT LOCATIONS. ALL CONDUITS PENETRATING THROUGH THE ROOF AND ACCESSIBLE SHALL BE REMOVED.
4. THE DEMOLITION PLANS HAVE NO INTENT TO SHOW ALL ELECTRICAL DEVICES TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL VERIFY DEMOLITION WORK INVOLVED PRIOR TO BID.
5. REMOVE ALL ELECTRICAL AND SIGNALING DEVICES (INCLUDING, BUT NOT LIMITED TO REMOVAL OF ALL ELECTRICAL PANELS, LIGHTING FIXTURES, RECEPTACLES, MOTOR DISCONNECTS, FIRE ALARM AND OTHER LOW VOLTAGE DEVICES). UNLESS NOTED OTHERWISE.
6. REMOVE ALL WIRES, CABLES AND SURFACE MOUNT RACEWAYS AND APPURTENANCES WHICH SERVE DEVICES BEING REMOVED, CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT. PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL CUTTING, PATCHING AND FINISH WORK.
8. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSE OF OFF SITE.
9. FIELD VERIFY EXISTING CONDITIONS AND RACEWAYS CAST IN CONCRETE.

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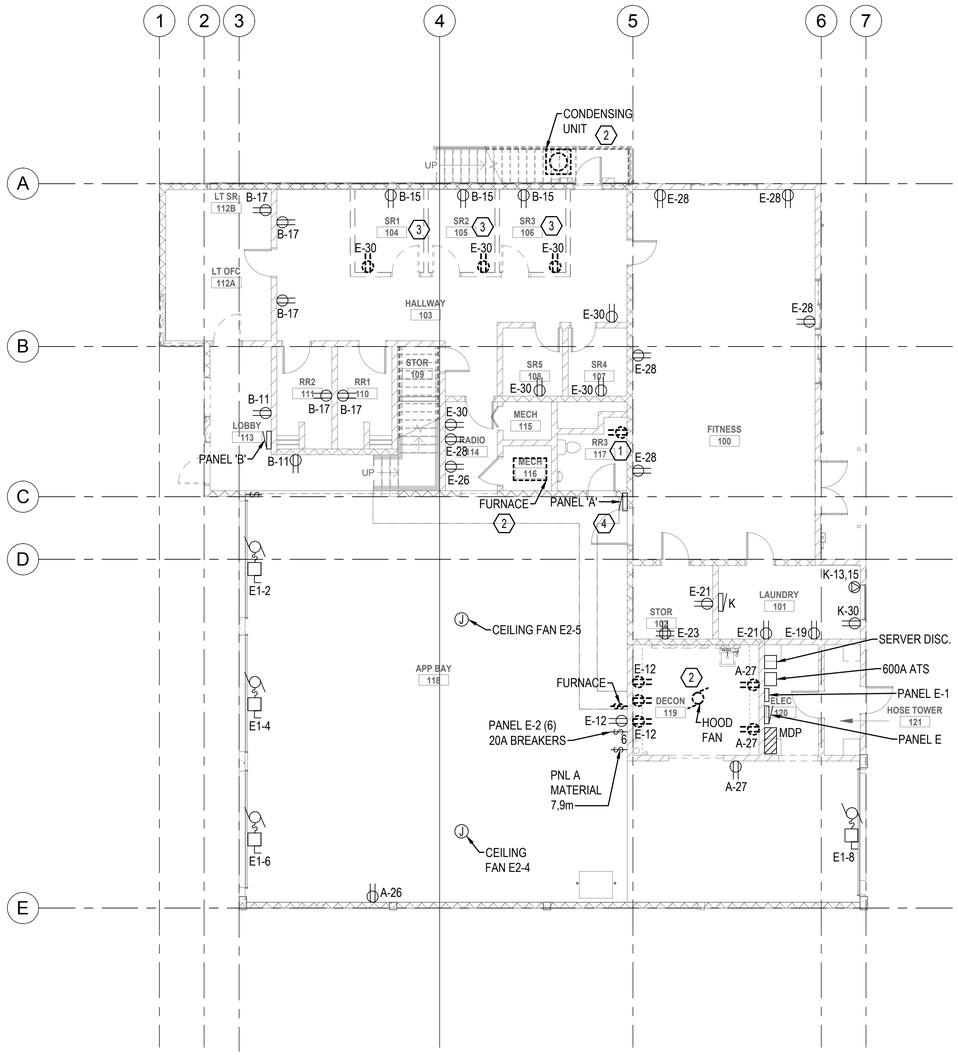
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REVISION SCHEDULE

LEVEL 1 - EXISTING LIGHTING PLAN

SHEET:

ED111



1 LEVEL 1 - EXISTING POWER AND DEMOLITION PLAN

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

DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXISTING DEVICE. MAINTAIN EXISTING CIRCUIT FOR REUSE.
2. DISCONNECT EXISTING MECHANICAL EQUIPMENT.
3. DISCONNECT, REMOVE AND REPLACE ELECTRICAL SYSTEMS LOCATED ABOVE THE SLEEP ROOM PERIMETER WALLS TO ALLOW FOR THE INSTALLATION OF STRUCTURE.
4. REPLACE PANEL 'A' WITH NEW.

GENERAL DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLIMENTED BY THE CONTRACT DOCUMENTS. DASHED LINES INDICATE EXISTING DEVICES AND EQUIPMENT TO BE REMOVED.
2. THESE PLANS DELINEATE THE BASIC SCOPE OF WORK FOR THE REMOVAL OF EXISTING MATERIAL. THE DEMOLITION DRAWINGS AND NOTES ARE PROVIDED WITH THE INTENT TO GENERALLY DESCRIBE AREAS AND LIMITS OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND CONDITIONS THERE AND SHALL NOT RELY SOLELY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF DEMOLITION WORK REQUIRED. COORDINATION OF THESE DRAWINGS WITH REQUIREMENTS FOR CONTRACT WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. DISCREPANCIES BETWEEN OR WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL PROVIDE CLARITY SKETCHES, DIAGRAMS, AND FIELD DIMENSTIONS OF EXISTING CONDITIONS AT THE REQUEST OF THE ENGINEER IF/WHEN CONFLICTS ARE IDENTIFIED.
3. E.C. TO REMOVE ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT TO BE DEMOLISHED. E.C. SHALL CHECK ALL DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS FOR UNIT LOCATIONS. ALL CONDUITS PENETRATING THROUGH THE ROOF AND ACCESSIBLE SHALL BE REMOVED.
4. THE DEMOLITION PLANS HAVE NO INTENT TO SHOW ALL ELECTRICAL DEVICES TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL VERIFY DEMOLITION WORK INVOLVED PRIOR TO BID.
5. REMOVE ALL ELECTRICAL AND SIGNALING DEVICES (INCLUDING, BUT NOT LIMITED TO REMOVAL OF ALL ELECTRICAL PANELS, LIGHTING FIXTURES, RECEPTACLES, MOTOR DISCONNECTS, FIRE ALARM AND OTHER LOW VOLTAGE DEVICES). UNLESS NOTED OTHERWISE.
6. REMOVE ALL WIRES, CABLES AND SURFACE MOUNT RACEWAYS AND APPURTENANCES WHICH SERVE DEVICES BEING REMOVED, CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT. PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL CUTTING, PATCHING AND FINISH WORK.
8. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSE OF OFF SITE.
9. FIELD VERIFY EXISTING CONDITIONS AND RACEWAYS CAST IN CONCRETE.

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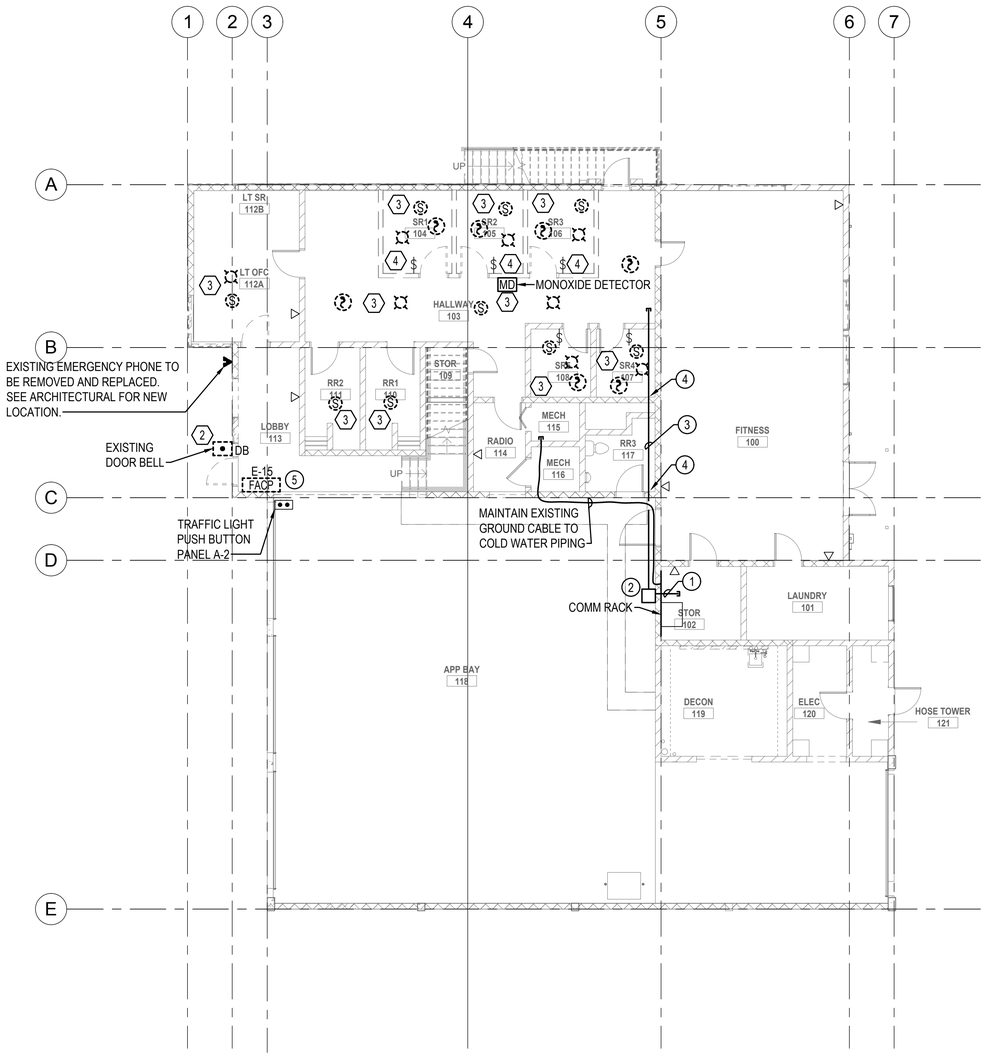
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REVISION SCHEDULE

LEVEL 1 - EXISTING POWER AND DEMOLITION PLAN

SHEET:

ED112



1 LEVEL 1 - EXISTING SYSTEMS PLAN

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

DEMOLITION NOTES

1. DISCONNECT EXISTING FIRE ALARM CONTROL PANEL AFTER INSTALLATION OF NEW FIRE ALARM CONTROL PANEL.
2. DISCONNECT AND REMOVE EXISTING DOOR BELL. RETAIN FOR REINSTALLATION.
3. DISCONNECT, REMOVE AND KEEP EXISTING DEVICES FOR REINSTALLATION IN NEW CEILING.
4. DISCONNECT, REMOVE AND KEEP EXISTING SELECTOR SWITCH FOR REINSTALLATION IN NEW WALL.

CONSTRUCTION NOTES

1. PROVIDE (2) 4" CONDUIT STUBS INTO STORAGE RM. 102. CORE DRILL THROUGH CMU WALL.
2. PROVIDE 18" X 18" X 6" DEEP PULL BOX UP HIGH ON WALL TO ACCOMMODATE NEW CONDUITS.
3. PROVIDE (2) 4" CONDUITS ABOVE CEILINGS INTO HALLWAY 103.
4. PROVIDE CORE DRILLING THROUGH EXISTING CMU WALLS.
5. EXISTING FIRE ALARM PANEL TO BE DISCONNECTED AND REMOVED AFTER INSTALLATION OF NEW SYSTEM.

GENERAL DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLIMENTED BY THE CONTRACT DOCUMENTS. DASHED LINES INDICATE EXISTING DEVICES AND EQUIPMENT TO BE REMOVED.
2. THESE PLANS DELINEATE THE BASIC SCOPE OF WORK FOR THE REMOVAL OF EXISTING MATERIAL. THE DEMOLITION DRAWINGS AND NOTES ARE PROVIDED WITH THE INTENT TO GENERALLY DESCRIBE AREAS AND LIMITS OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND CONDITIONS THERE AND SHALL NOT RELY SOLELY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF DEMOLITION WORK REQUIRED. COORDINATION OF THESE DRAWINGS WITH REQUIREMENTS FOR CONTRACT WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. DISCREPANCIES BETWEEN OR WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL PROVIDE CLARITY SKETCHES, DIAGRAMS, AND FIELD DIMENSTIONS OF EXISTING CONDITIONS AT THE REQUEST OF THE ENGINEER IF/WHEN CONFLICTS ARE IDENTIFIED.
3. E.C. TO REMOVE ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT TO BE DEMOLISHED. E.C. SHALL CHECK ALL DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS FOR UNIT LOCATIONS. ALL CONDUITS PENETRATING THROUGH THE ROOF AND ACCESSIBLE SHALL BE REMOVED.
4. THE DEMOLITION PLANS HAVE NO INTENT TO SHOW ALL ELECTRICAL DEVICES TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL VERIFY DEMOLITION WORK INVOLVED PRIOR TO BID.
5. REMOVE ALL ELECTRICAL AND SIGNALING DEVICES (INCLUDING, BUT NOT LIMITED TO REMOVAL OF ALL ELECTRICAL PANELS, LIGHTING FIXTURES, RECEPTACLES, MOTOR DISCONNECTS, FIRE ALARM AND OTHER LOW VOLTAGE DEVICES). UNLESS NOTED OTHERWISE.
6. REMOVE ALL WIRES, CABLES AND SURFACE MOUNT RACEWAYS AND APPURTENANCES WHICH SERVE DEVICES BEING REMOVED, CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT. PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL CUTTING, PATCHING AND FINISH WORK.
8. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSE OF OFF SITE.
9. FIELD VERIFY EXISTING CONDITIONS AND RACEWAYS CAST IN CONCRETE.

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SOUTH KING FIRE & RESCUE
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33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

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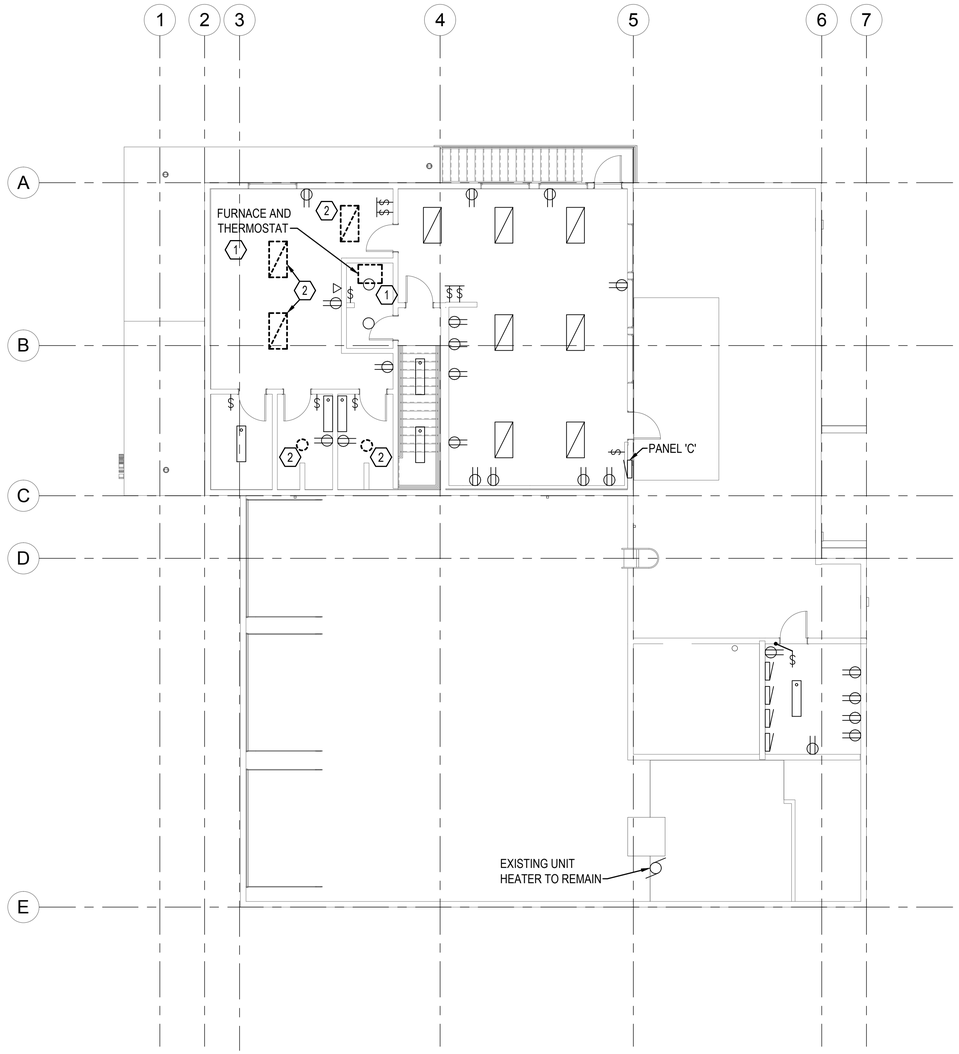
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REVISION SCHEDULE

LEVEL 1 - EXISTING SYSTEMS PLAN

SHEET:

ED113



1 LEVEL 2 - EXISTING ELECTRICAL PLAN

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

N

DEMOLITION NOTES

1. DISCONNECT EXISTING MECHANICAL EQUIPMENT.
2. TEMPORARILY DISCONNECT EXISTING LIGHTS AND RETAIN. RELOCATE TO ACCOMMODATE MECHANICAL DUCTWORK INSTALLATION.

GENERAL DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLIMENTED BY THE CONTRACT DOCUMENTS. DASHED LINES INDICATE EXISTING DEVICES AND EQUIPMENT TO BE REMOVED.
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3. E.C. TO REMOVE ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT TO BE DEMOLISHED. E.C. SHALL CHECK ALL DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS FOR UNIT LOCATIONS. ALL CONDUITS PENETRATING THROUGH THE ROOF AND ACCESSIBLE SHALL BE REMOVED.
4. THE DEMOLITION PLANS HAVE NO INTENT TO SHOW ALL ELECTRICAL DEVICES TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL VERIFY DEMOLITION WORK INVOLVED PRIOR TO BID.
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6. REMOVE ALL WIRES, CABLES AND SURFACE MOUNT RACEWAYS AND APPURTENANCES WHICH SERVE DEVICES BEING REMOVED, CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT. PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL CUTTING, PATCHING AND FINISH WORK.
8. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSE OF OFF SITE.
9. FIELD VERIFY EXISTING CONDITIONS AND RACEWAYS CAST IN CONCRETE.

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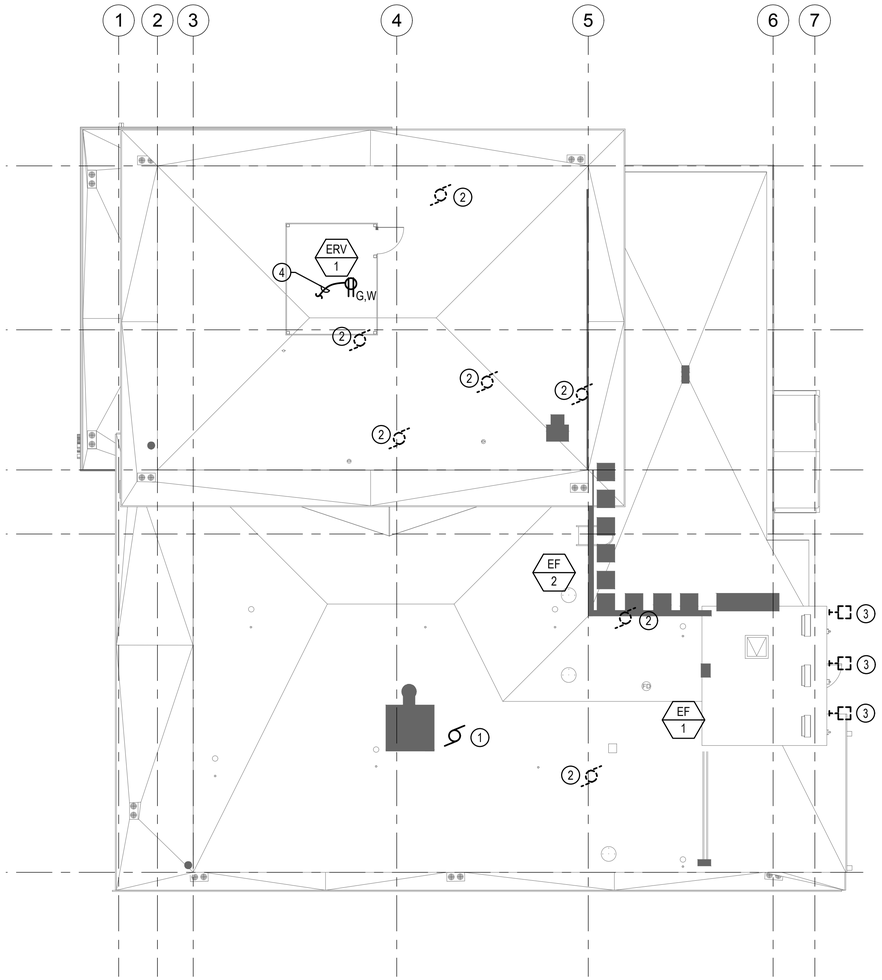
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REVISION SCHEDULE

LEVEL 2 - EXISTING ELECTRICAL PLAN

SHEET:

ED131



CONSTRUCTION NOTES

1. E.C. TO DISCONNECT ALL ROOFTOP MECHANICAL EQUIPMENT SO EQUIPMENT CAN BE REMOVED AND REINSTALLED AFTER NEW ROOF INSTALLATION. RECONNECT EXISTING EQUIPMENT AFTER NEW ROOF.
2. EXISTING ROOF TOP EQUIPMENT TO BE DISCONNECTED. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. DISCONNECT, REMOVE AND SALVAGE EXISTING FLOOD LIGHTS ON HOSE TOWER TO ALLOW FOR RE-ROOFING. REINSTALL EXISTING LIGHTS AFTER ROOF WORK IS COMPLETE.
4. PROVIDE CONNECTION TO NEAREST 120-VOLT CIRCUIT.

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

N

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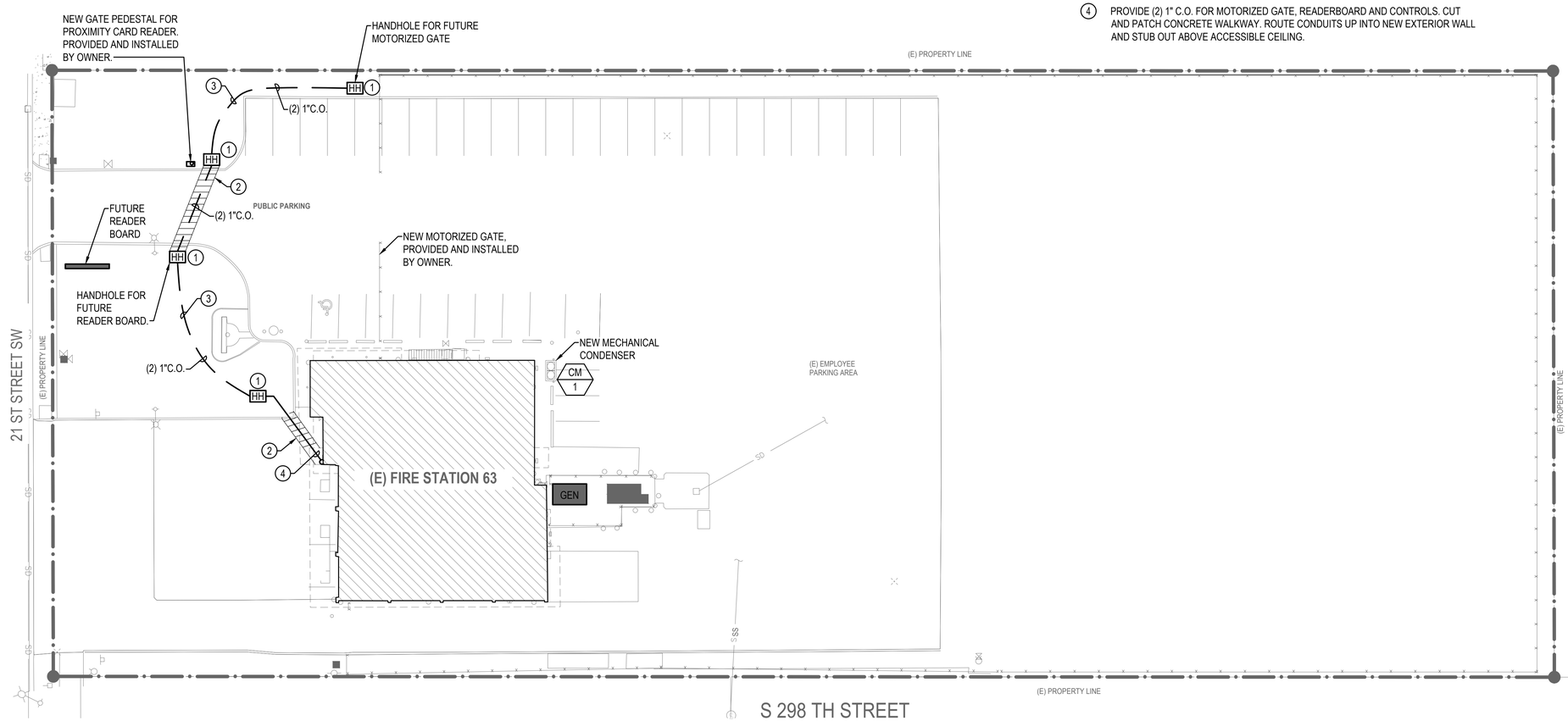
ELECTRICAL
ROOF PLAN

SHEET:

ED141

CONSTRUCTION NOTES

1. PROVIDE FOG TITE TYPE 2 HANDHOLE W/GALVAIZED LID. PROVIDE WITH DIVIDER TO SEPARATE LOW AND HIGH VOLTAGE.
2. PROVIDE CUTTING, PATCHING, TRENCHING AND BACKFILL OF EXISTING ASPHALT DRIVEWAY.
3. PROVIDE TRENCHING AND BACKFILL IN LAWN AREA.
4. PROVIDE (2) 1" C.O. FOR MOTORIZED GATE, READERBOARD AND CONTROLS. CUT AND PATCH CONCRETE WALKWAY. ROUTE CONDUITS UP INTO NEW EXTERIOR WALL AND STUB OUT ABOVE ACCESSIBLE CEILING.



1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"

N

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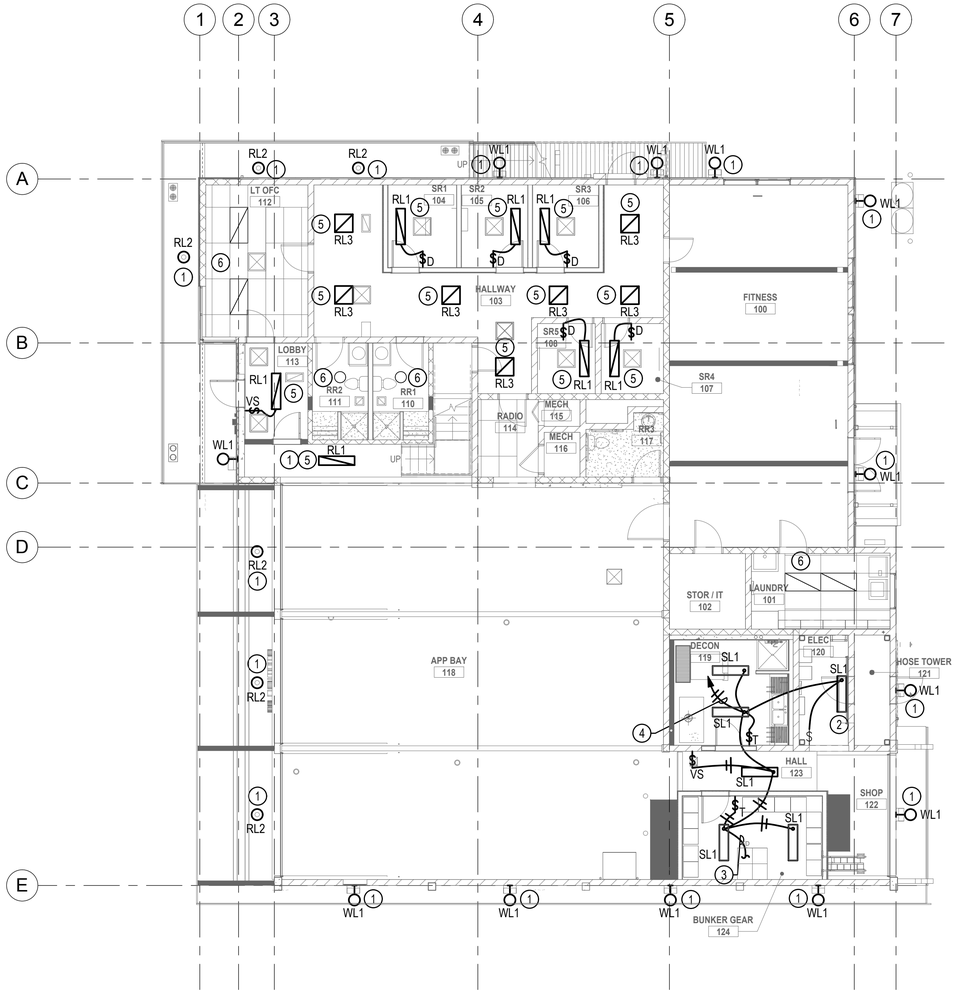
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REVISION SCHEDULE

ELECTRICAL SITE PLAN

SHEET:

E-101



1 LEVEL 1 - LIGHTING PLAN

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

N

GENERAL NOTES FOR LIGHTING FIXTURE SCHEDULE

1. SEE DRAWINGS FOR EMERGENCY LIGHTING FIXTURES.

2. FOR LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT, OCCUPANCY SENSORS AND TIME CLOCK CONTROLS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TESTING OF THE CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS TO MAKE SURE THEY ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED IN THE PRESENCE OF THE ENGINEER. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.

3. FIXTURE TYPES LISTED ARE TO INDICATE THE TYPE OF STYLE, LAMPING CHARACTERISTICS AND MOUNTING REQUIRED TO FACILITATE THE DESIGN. OTHER FIXTURE MANUFACTURERS MEETING THE LIGHT FIXTURE TYPE CRITERIA ARE ACCEPTABLE UPON EVALUATION BY THE ENGINEER.

4. ALL LIGHT FIXTURE COLORS AND FINISHES SHALL BE COORDINATED AND SELECTED BY THE ARCHITECT.

LIGHTING FIXTURE SCHEDULE

DESIGNATION	FIXTURE DESCRIPTION	MANUFACTURER/MODEL #	LAMPS	LUMENS	V	W	MOUNTING & REMARKS
RL1	1X4 LED RECESSED ACT	COLUMBIA LIGHTING #LZPT-14-35-VW-G-LSR-0-ED-U/ZPTSMK14	LED - 35K	3401	120	33	PROVIDE WITH SURFACE MOUNTING KIT IN CASE FIELD CONDITIONS DO NOT ALLOW FOR RECESSING INTO THE CEILING.
SL1	1X4 SURFACE MOUNT WITH OCCUPANCY SENSOR	LITHONIA LIGHTING #WL4-30L-SLD-LP835-NESPDT7	LED - 35K	3095	120	28.2	
PL1	1X4 PENDANT MOUNT	LITHONIA LIGHTING #WL4-30L-SLD-LP835-NESPDT7	LED - 35K	3095	120	28.2	PROVIDE WITH CHAIN MOUNTING HARDWARE. MOUNT AT +8'-0" ABOVE PLATFORM
WL1	EXTERIOR WALL MOUNT LED	LITHONIA LIGHTING #WSTMLED-2A-40K-120-*	LED - 40K	1277	120	17	ARCHITECT TO SELECT COLOR
RL2	EXTERIOR RETROFIT IC RATED DOWNLIGHT	LITHONIA LIGHTING #WF6-LED-40K-MW	LED - 40K	1200	120	13.6	
RL3	2X2 LED RECESSED ACT	COLUMBIA LIGHTING #LZPT-22-35-MW-G-LSR-S-ED-U/ZPTSMK22	LED-35K	2500	120	21	PROVIDE WITH SURFACE MOUNTING KIT IN CASE FIELD CONDITIONS DO NOT ALLOW FOR RECESSING INTO THE CEILING.

CONSTRUCTION NOTES

1. REPLACE EXISTING LIGHT WITH NEW. CONNECT TO EXISTING CIRCUIT.
2. REINSTALL EXISTING WALL MOUNTED LIGHT ON NEW STRUCTURAL WALL.
3. CONNECT TO LIGHTS ON MEZZANINE.
4. CONNECT TO EXISTING CIRCUIT A-12.
5. RECONNECT NEW LIGHTS TO EXISTING LIGHTING CIRCUIT AND SWITCHING CONTROL.
6. REINSTALL EXISTING LIGHTS IN NEW LOCATION TO AVOID ABOVE CEILING DUCTWORK.

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SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
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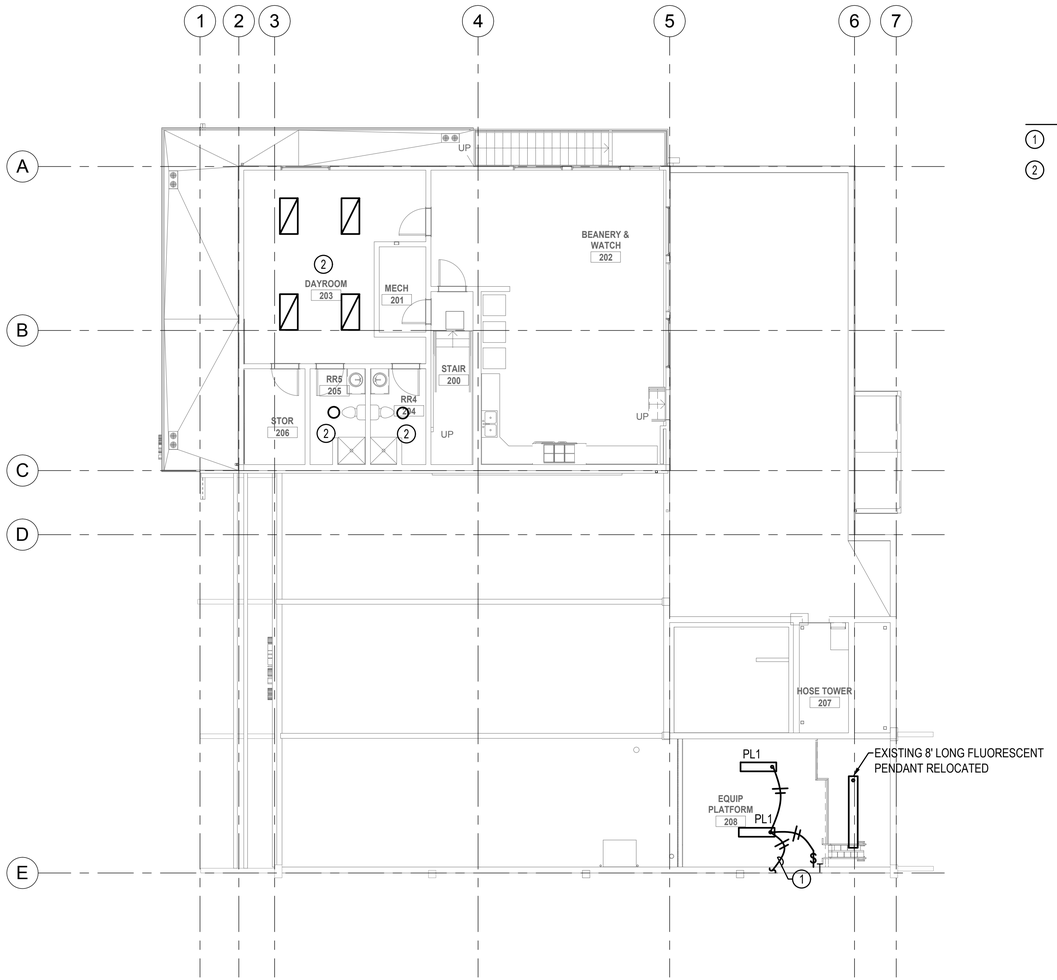
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REVISION SCHEDULE

LEVEL 1 - LIGHTING PLAN

SHEET:

E-121



CONSTRUCTION NOTES

1. ROUTE CIRCUIT DOWN TO LIGHTS IN BUNKER GEAR ROOM.
2. REINSTALL EXISTING LIGHTS IN NEW CEILING. CONNECT TO EXISTING CIRCUIT.

1 LEVEL 2 - LIGHTING PLAN

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

N

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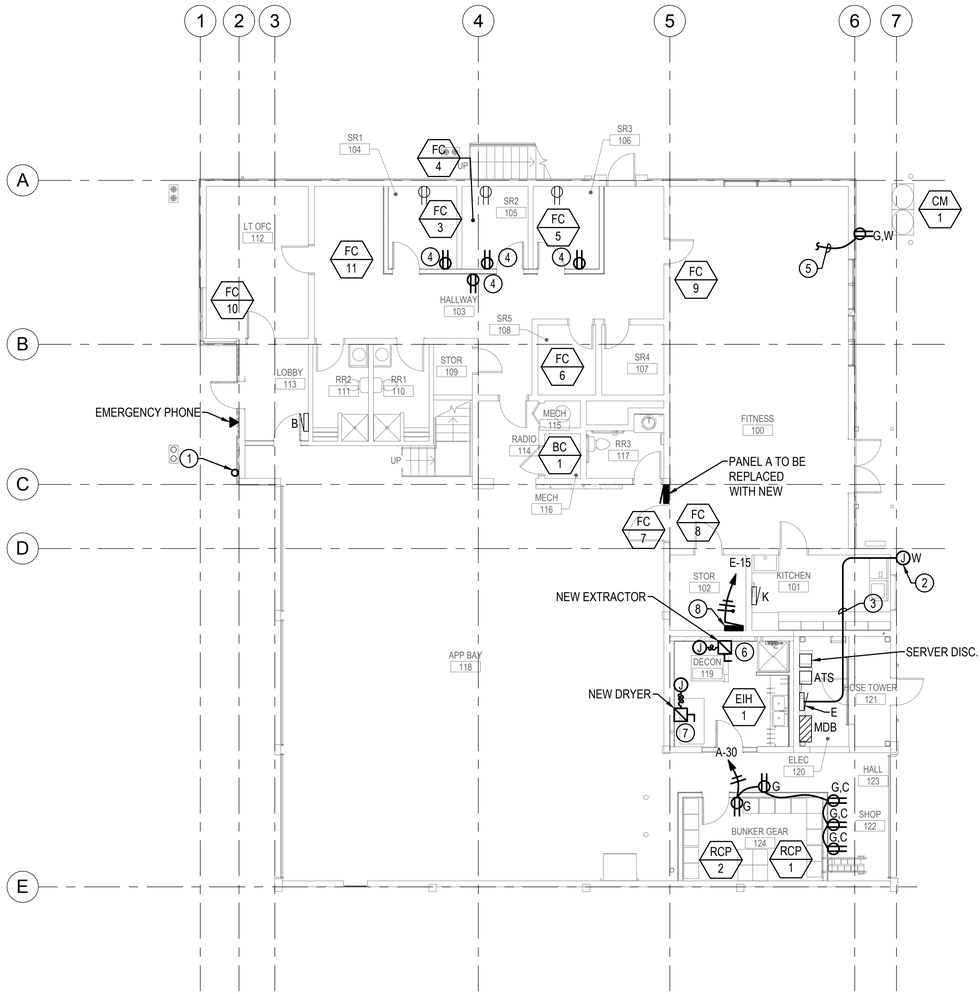
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REVISION SCHEDULE

LEVEL 2 - LIGHTING PLAN

SHEET:

E-122



1 LEVEL 1 - POWER PLAN

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

N

CONSTRUCTION NOTES

1. ROUTE (1) 1" C.O. UP IN CONCRETE WALL AND OVER CEILING TO PANEL B FOR FUTURE READERBOARD AND MOTORIZED GATE. ROUTE (1) 1" C.O. UP IN CONCRETE WALL TO ABOVE CEILING FOR CONTROLS.
2. PROVIDE WEATHERPROOF 1G JUNCTION BOX W/GASKETED COVER FOR FUTURE FUEL PUMP. CORE DRILL THROUGH EXTERIOR WALL.
3. ROUTE 1" C.O. TO PANEL E FOR FUTURE FUEL PUMP. CORE DRILL THROUGH EXISTING WALL.
4. RECONNECT NEW DEVICES TO EXISTING CIRCUIT.
5. CONNECT TO THE NEAREST 120V CIRCUIT. CORE DRILL THROUGH EXISTING WALL.
6. PROVIDE 100 AMP - 3 POLE DISCONNECT SWITCH FOR EXTRACTOR. PROVIDE 1-1/4"C., (4) #4 AND (1) #8 GROUND FROM NEW BREAKER IN MDB.
7. PROVIDE 60 AMP - 2 POLE DISCONNECT SWITCH FOR NEW DRYER. PROVIDE 1"C., (3) #6 AND (1) #10 GROUND FROM NEW BREAKER IN PANEL 'K'.
8. NEW FIRE ALARM CONTROL PANEL.

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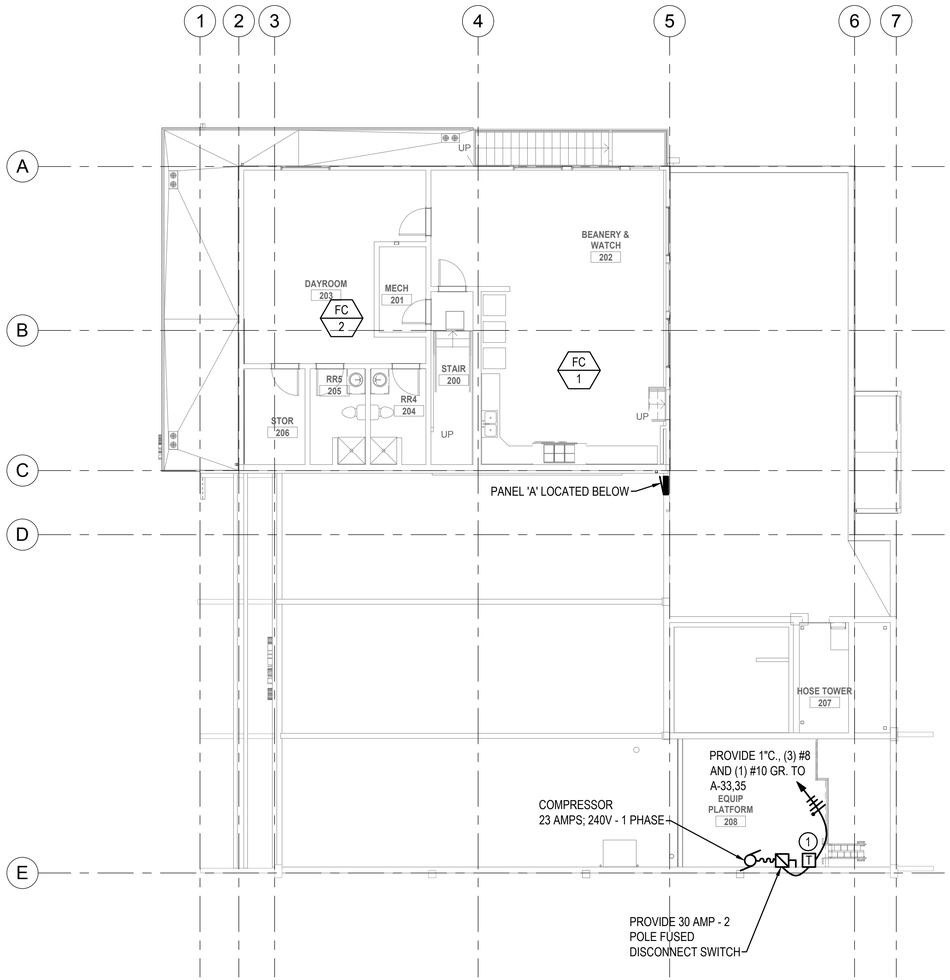
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REVISION SCHEDULE

LEVEL 1 - POWER PLAN

SHEET:

E-131



1 LEVEL 2 - POWER PLAN

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

N

CONSTRUCTION NOTES

1. PROVIDE A 7.5KVA STEP-UP TRANSFORMER FROM 208V, 1 PHASE TO 240V, 1 PHASE. MOUNT TRANSFORMER ON WALL BESIDE COMPRESSOR.

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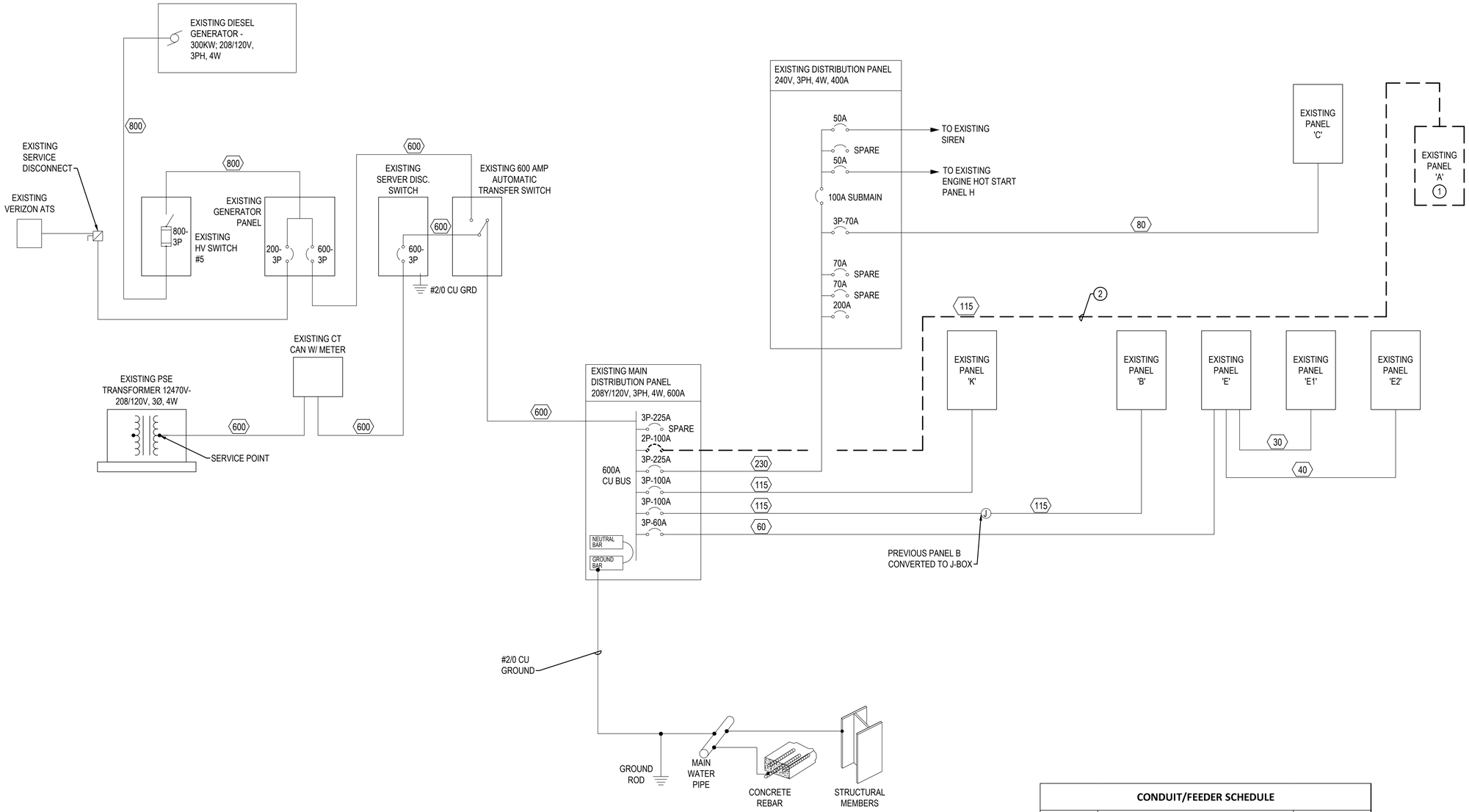
LEVEL 2 - POWER PLAN

SHEET:

E-132

CONSTRUCTION NOTES

1. EXISTING PANEL A TO BE REPLACED WITH NEW.
2. EXISTING FEEDER AND CONDUIT TO BE REPLACED WITH NEW.



CONDUIT/FEEDER SCHEDULE

FEEDER NO.	CONDUIT/FEEDER DESCRIPTION	FEEDER AMPACITY
30	3/4"C., (3) #10 CU.	30
40	1"C., (3) #8 CU	50
60	1"C., (4) #6 CU	65
80	1-1/4"C., (4) #4 CU	85
115	1-1/4" C., (4) #2 CU.	115
200	2"C., (4) #3/0 CU & (1) #6 GR	200
230	2-1/2., (3) #4/0 & (1) #2/0 CU NEUTRAL	230
600	(2) SETS OF 2"C., (3) #4/0 CU & (1) #2/0 NEUTRAL	660
800	(2) SETS OF 4"C., (4) 600 MCM CU	840

1 EXISTING ELECTRICAL ONE-LINE DIAGRAM

SCALE: DIAGRAMMATIC

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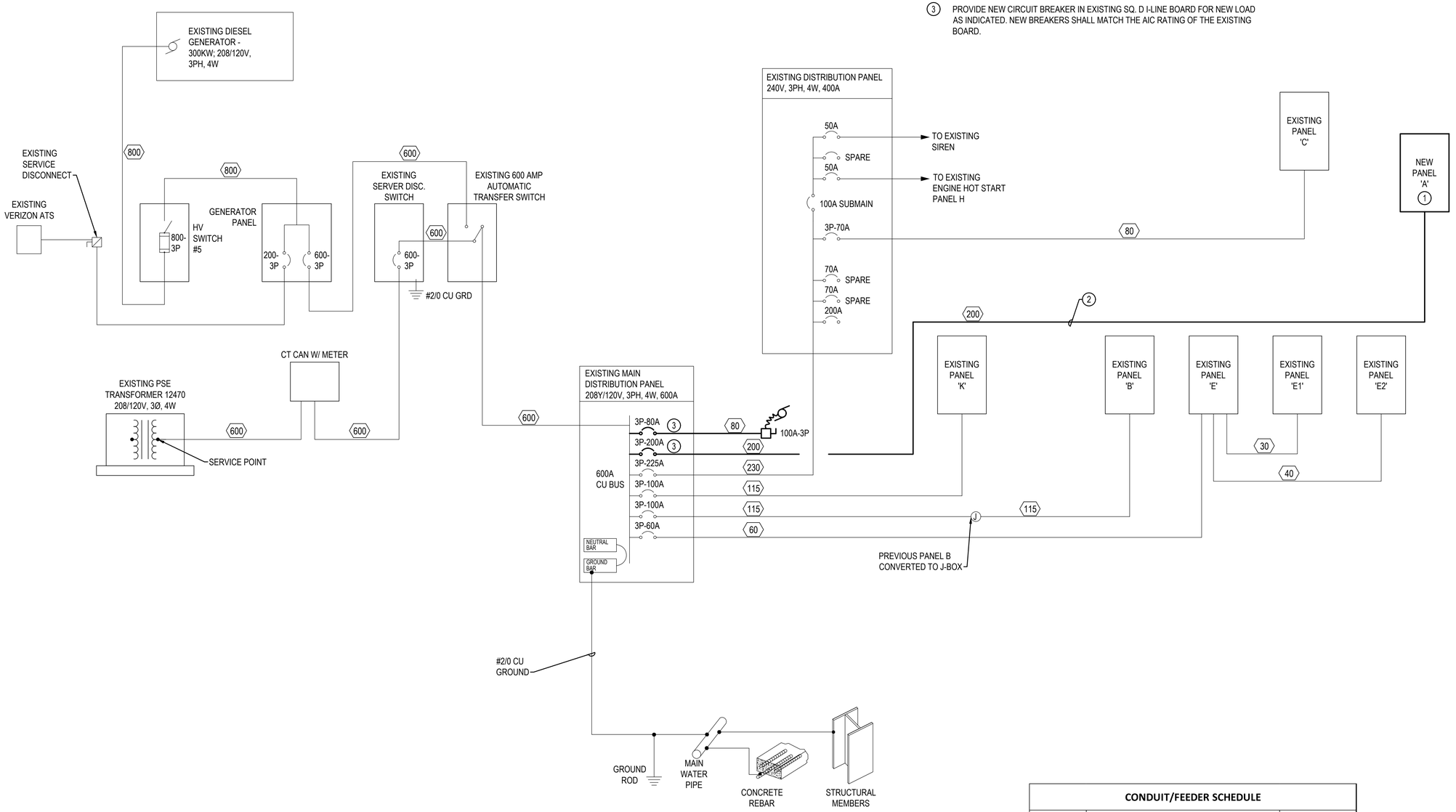
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:

E-500

CONSTRUCTION NOTES

1. PROVIDE NEW PANEL A. MOUNT IN EXISTING LOCATION OF EXISTING PANEL A.
2. PROVIDE NEW FEEDER AND CONDUIT.
3. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SQ. D I-LINE BOARD FOR NEW LOAD AS INDICATED. NEW BREAKERS SHALL MATCH THE AIC RATING OF THE EXISTING BOARD.



CONDUIT/FEEDER SCHEDULE

FEEDER NO.	CONDUIT/FEEDER DESCRIPTION	FEEDER AMPACITY
30	3/4"C., (3) #10 CU.	30
40	1"C., (3) #8 CU	50
60	1"C., (4) #6 CU	65
80	1-1/4"C., (4) #4 CU	85
115	1-1/4" C., (4) #2 CU.	115
200	2"C., (4) #3/0 CU & (1) #6 GR	200
230	2-1/2., (3) #4/0 & (1) #2/0 CU NEUTRAL	230
600	(2) SETS OF 2"C., (3) #4/0 CU & (1) #2/0 NEUTRAL	660
800	(2) SETS OF 4"C., (4) 600 MCM CU	840

1 REVISED ELECTRICAL ONE-LINE DIAGRAM
SCALE: DIAGRAMMATIC

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REVISION SCHEDULE

REVISED ELECTRICAL ONE-LINE DIAGRAM

SHEET:

E-501

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (EXHAUST FANS, AIR HANDLING UNITS, ETC)

EQUIP.	VOLT/PH	LOAD VA	LOAD MCA	LOAD HP	CIRCUIT PANEL	CIRCUIT BKR	CONDUIT/WIRE SIZE	MANUAL STARTER (NOTE 1)	MAGNETIC STARTER (NOTE 1)	FUSED DISC. (NOTE 1)	REMARKS
RCP 1	208/1	750	4.5		A	7,9	3/4" C., (3)#12 & (1) #12 GR.	---	---	---	
RCP 2	208/1	750	4.5		A	7,9	3/4" C., (3)#12 & (1) #12 GR.	---	---	---	
EIH	208/1	2000	9.6		A	21,23	3/4" C., (3)#12 & (1) #12 GR.				
EF- 1	120/1	528	4.4	1/6	A	13	1/2" C., (2)#12 & (1) #12 GR.	EC		EC	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS
EF- 2	208/3	1723	4.8	1	B	26,28,30	3/4" C., (4)#12 & (1) #12 GR.		EC	EC	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS
BC- 1	208/1	225	1.08		A	40,42	1/2" C., (3)#12 & (1) #12 GR.			EC	
ERV	208/3	2446	6.8		B	33,35,37	3/4" C., (4)#12 & (1) #12 GR.		EC	EC	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS
FC- 1	208/1	260	1.25		B	29, 31	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 2	208/1	133	0.64		B	29, 31	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 3	208/1	40	0.19		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 4	208/1	40	0.19		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 5	208/1	40	0.19		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 6	208/1	40	0.19		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 7	208/1	40	0.19		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 8	208/1	79	0.38		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 9	208/1	79	0.38		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 10	208/1	251	1.21		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
FC- 11	208/1	301	1.45		A	40,42	3/4" C., (3)#12 & (1) #12 GR.			EC	
CM- 1	208/3	14964	52		A	32,34,36	1-1/4" C., (4)#4 & (1) #8 GR.			EC	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS

NOTE: 1. THE LISTED CONTRACTOR SHALL FURNISH AND INSTALL THE DEVICES INDICATED.

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CHARLES A. HEATON
STATE OF WASHINGTON
33006
REGISTERED
PROFESSIONAL ENGINEER
11/29/2016

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

SHEET:

E-601

PANEL: MDP (EXISTING) | **3 PH** | **4 WIRE** | **VOLTAGE:** 208Y/120V | **600A MLO**
LOC: ELEC RM | **MOUNT:** FLUSH | **FEED:** BOTTOM
TYPE: NEMA 1; SQ. D I-LINE | **POLES:** 18 | **SF MAINS:** | **65,000AIC MINIMUM**

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	5150		1	3		7878			3		2		2728	SF
SF	7892	PANEL E	3				12102				4	PANEL C	4210	SF
SF	5580		5		60			8376		100	6		2796	SF
SF	9130		7	3		14016			2		8		4886	SF
SF	7270	PANEL B	9				13634			100	10	PANEL A	6364	SF
SF	14798		11		100			14798			12			
SF	13000		13	3		13000					14			
SF	8240	PANEL K	15				8240				16			
SF	10256		17		100			10256			18			
	81316	TOTAL			THIS PANEL->	34894	33976	33430				TOTAL	20984	
						34894	33976	33430						

LIGHTING(125%) = 8742.50
RECEPTS<=10000(100%) = 10000.00
RECEPTS>10000(50%) = 2630.00
RECEPTS TOTAL = 12630.00
ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 7500.00
OTHER MOTORS(100%) = 27780.00
MOTOR TOTAL = 35280.00
WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00
APPLIANCES(100%) = 39306.00
DEDICATED(100%) = 6960.00
MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 102,300.00
TOTAL CONNECTED CURRENT (A): 283.96
TOTAL DEMAND LOAD (VA): 102,918.50
TOTAL DEMAND CURRENT (A) 285.67

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: A (Exist) | **1 PH** | **3 WIRE** | **VOLTAGE:** 120/240V | **200A MLO**
LOC: | **MOUNT:** FLUSH | **FEED:** BOTT | **BUS**
TYPE: NEMA 1 | **POLES:** 42 | **SF MAINS:** | **10,000AIC MINIMUM**

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	200	NT LIGHTS	1	1	20	200		1	20	2	SPARE		
			3	1	20		100	1	20	4	EXIT LIGHTS	100	L
L	200	EXIT LIGHTS	5	1	20	300		1	20	6	EXIT LIGHTS	100	L
		SPARE	7	1	20			1	20	8	SPARE		
		SPARE	9	1	20	116		1	20	10	FRONT BAY LIGHTS	116	L
L	232	MIDDLE BAY LIGHTS	11	1	20		348	1	20	12	BACK BAY LIGHTS	116	L
		SPARE	13	1	20			1	20	14	SPARE		
		SPARE	15	1	20		232	1	20	16	LIGHTING SHOP/STORAGE	232	L
D	600	MSA ROOM	17	1	20	600		1	20	18	SPARE		
L	224	LIGHTING - TRAINING ROOM	19	1	20		448	1	20	20	LIGHTING - TRAINING ROOM	224	L
		SPARE	21	1	20	540		1	20	22	RECEPTS - DISPATCH OFFICE/BDRM	540	R
		SPARE	23	1	20			1	20	24	SPARE		
A	450	WASHER RECEPTS	25	1	20	630		1	20	26	RECEPTS - EAST & S.WALL - APP	180	R
R	540	RECEPTS - RM 119	27	1	20		1080	1	20	28	RECEPTS - APP & SHOP	540	R
		SPARE	29	1	20			1	20	30	SPARE		
ML	1656	MOTOR DOOR FRONT BAY	31	1	20		1656	1	20	32	SPARE		
		SPARE	33	1	20			1	20	34	SPARE		
		SPARE	35	1	20			1	20	36	SPARE		
		SPARE	37	1	20			1	20	38	SPARE		
D	2500	RECEPTS - SHOP	39	2			2500	2		40	SPARE		
D	2500		41		50	2500			30	42			
	9102	TOTAL			THIS PANEL->	4886	6364				TOTAL	2148	
						4886	6364						

LIGHTING(125%) = 2180.00
RECEPTS<=10000(100%) = 1800.00
RECEPTS>10000(50%) = 0.00
RECEPTS TOTAL = 1800.00
ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 2070.00
OTHER MOTORS(100%) = 0.00
MOTOR TOTAL = 2070.00
WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00
APPLIANCES(100%) = 450.00
DEDICATED(100%) = 5600.00
MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 11,250.00
TOTAL CONNECTED CURRENT (A): 46.88
TOTAL DEMAND LOAD (VA): 12,100.00
TOTAL DEMAND CURRENT (A): 50.42

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: B (EXISTING) | **3 PH** | **4 WIRE** | **VOLTAGE:** 208Y/120V | **100A MLO**
LOC: | **MOUNT:** FLUSH | **FEED:** BOTTOM
TYPE: SQ. D | **POLES:** 42 | **SF MAINS:** | **10,000AIC MINIMUM**

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	800	LIGHTING - KITCHEN	1	1	20	1340			1	20	2	RECEPTS - BUNK RM.	540	R
		SPARE	3	1	20		540		1	20	4	RECEPTS - BUNK RM.	540	R
R	360	BUNK - FLR. 2	5	1	20			560	1	20	6	EXIT LIGHTS N. SIDE	200	L
L	288	LIGHTING - RM 118	7	1	20	576			1	20	8	LIGHTING - RM 118	288	L
R	540	BUNK - FLR. 1	9	1	20		990		1	20	10	REF - SECOND FLOOR	450	A
R	360	RECEPTS - RM 110, 111	11	1	20			570	1	20	12	BATH - SECOND FLOOR	210	ML
R	540	BUNK - FLR. 1	13	1	20	750			1	20	14	BATH - FIRST FLOOR	210	ML
R	540	RECEPTS - RM 104, 105, 106	15	1	20		740		1	20	16	LIGHTING - FRONT RAMP	200	L
R	1012	LIGHTING, RECEPTS - RM 110, 111, 112	17	1	20			1012	1	20	18	SPARE		
L	232	LIGHTING FITNESS	19	1	20	464			1	20	20	LIGHTING - FITNESS	232	L
		SPACE	21						1	20	22	SPARE		
		SPACE	23						1	20	24	SPARE		
		SPACE	25								26	SPACE		
		SPACE	27								28	SPACE		
ML	3000	FAN - ROOF	29	2				3000			30	SPACE		
ML	3000		31		50	3000					32	SPACE		
		SPACE	33								34	SPACE		
ML	3000	FAN - ROOF	35	2				4656	1	20	36	EXAUST FAN - ROOF	1656	ML
ML	3000		37		50	3000			1	20	38	RECEPTS - BUNK RM.		
ML	3000	FAN - ROOF	39	2			5000		2		40	HOTPLATE	2000	A
ML	3000		41		50			5000		30	42		2000	A
	22672	TOTAL			THIS PANEL->	9130	7270	14798				TOTAL	8526	
						9130	7270	14798						

LIGHTING(125%) = 3090.00
RECEPTS<=10000(100%) = 4320.00
RECEPTS>10000(50%) = 0.00
RECEPTS TOTAL = 4320.00
ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 7500.00
OTHER MOTORS(100%) = 13956.00
MOTOR TOTAL = 21456.00
WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00
APPLIANCES(100%) = 4450.00
DEDICATED(100%) = 0.00
MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 31,198.00
TOTAL CONNECTED CURRENT (A): 86.60
TOTAL DEMAND LOAD (VA): 33,316.00
TOTAL DEMAND CURRENT (A) 92.48

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: MDP (EXISTING) REVISED | **3 PH** | **4 WIRE** | **VOLTAGE:** 208Y/120V | **600A MLO**
LOC: ELECT RM | **MOUNT:** FLUSH | **FEED:** BOTTOM
TYPE: NEMA 1; SQ. D I-LINE | **POLES:** 18 | **SF MAINS:** | **65,000AIC MINIMUM**

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	5150		1	3		7878			3		2		2728	SF
SF	7892	PANEL E	3				12102				4	PANEL C	4210	SF
SF	5580		5		60			8376		100	6		2796	SF
SF	**4652**		7	3		13852			**3**		8		**9200**	SF
SF	**5659**	PANEL B	9				19991				10	**PANEL A (NOTE 1)**	**14332**	SF
SF	**7447**		11		100			21037		**200**	12		**13590**	SF
SF	**12500**		13	3		21000			**3**		14		**8500**	A
SF	**10240**	PANEL K	15				18740				16	**WASHER - EXTRACTOR**	**8500**	A
SF	**7756**		17		100			16256		**80**	18	**(NOTE 1)**	**8500**	A
	66876	TOTAL			THIS PANEL->	42730	50833	45669				TOTAL	72356	
						42730	50833	45669						

LIGHTING(125%) = 8818.75
RECEPTS<=10000(100%) = 10000.00
RECEPTS>10000(50%) = 3080.00
RECEPTS TOTAL = 13080.00
ELECTRIC HEAT(100%) = 3500.00
LARGEST MOTOR(125%) = 18705.00
OTHER MOTORS(100%) = 26787.00
MOTOR TOTAL = 45492.00
WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00
APPLIANCES(100%) = 63806.00
DEDICATED(100%) = 6960.00
MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 139,232.00
TOTAL CONNECTED CURRENT (A): 386.47
TOTAL DEMAND LOAD (VA): 141,656.75
TOTAL DEMAND CURRENT (A) 393.20

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
1. PROVIDE NEW BREAKER; SIZE AS INDICATED. BOLD INDICATES REVISED LOAD

PANEL: A (NEW) | **3 PH** | **4 WIRE** | **VOLTAGE:** 208Y/120V | **225A MLO**
LOC: APP BAY | **MOUNT:** SURFACE | **FEED:** BOTTOM
TYPE: | **POLES:** 42 | **SF MAINS:** | **10,000AIC MINIMUM**

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	200	NT LIGHTS	1	1	20	200			1	20	2	SPARE		
			3	1	20		100		1	20	4	EXIT LIGHTS	100	L
L	200	EXIT LIGHTS	5	1	20			300	1	20	6	EXIT LIGHTS	100	L
H	**750**	**RCP-1, RCP-2**	7	2		750			1	20	8	SPARE		
H	**750**		9		20		866		1	20	10	FRONT BAY LIGHTS	116	L
L	232	MIDDLE BAY LIGHTS	11	1	20			525	1	20	12	**BACK BAY LIGHTS**	**293**	L
MO	**528**	**EF-1**	13	1	20	528			1	20	14	SPARE		
		SPARE	15	1	20		116		1	20	16	**LIGHTING SHOP/STORAGE**	**116**	L
D	600	MSA ROOM	17	1	20			600	1	20	18	SPARE		
L	224	LIGHTING - TRAINING ROOM	19	1	20	448			1	20	20	LIGHTING - TRAINING ROOM	224	L
H	**1000**	**EIH**	21	2			1540		1	20	22	RECEPTS - DISPATCH OFFICE/BDRM	540	R
H	**1000**		23		20			1000	1	20	24	SPARE		
A	450	WASHER RECEPTS	25	1	20	630			1	20	26	RECEPTS - EAST & S.WALL - APP	180	R
R	540	RECEPTS - RM 119	27	1	20		1080		1	20	28	RECEPTS - APP & SHOP	540	R
		SPARE	29	1	20			900	1	20	30	**RECEPTS - BUNKER GEAR, SHOP**	**900**	R
ML	1656	MOTOR DOOR FRONT BAY	31	1	20	6644			3		32		**4988**	ML
ML	**2392**	**AIR COMPRESSOR**	33	2			7380				34	**CM-1**	**4988**	ML
ML	**2392**		35		40			7380		80	36		**4988**	ML
		SPARE	37	1	20						38	SPACE		
D	2500	RECEPTS - SHOP	39	2			3250		2		40	**FC-7, 8, 9, 10, 11**	**750**	ML
D	2500		41		50			2885		20	42	**FC-3, 4, 5 ,6; BC-1**	**385**	ML
	17914	TOTAL			THIS PANEL->	9200	14332	13590				TOTAL	19208	
						9200	14332	13590						

LIGHTING(125%) = 2256.25
RECEPTS<=10000(100%) = 2700.00
RECEPTS>10000(50%) = 0.00
RECEPTS TOTAL = 2700.00
ELECTRIC HEAT(100%) = 3500.00
LARGEST MOTOR(125%) = 18705.00
OTHER MOTORS(100%) = 8103.00
MOTOR TOTAL = 26808.00
WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00
APPLIANCES(100%) = 450.00
DEDICATED(100%) = 5600.00
MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 37,122.00
TOTAL CONNECTED CURRENT (A): 103.04
TOTAL DEMAND LOAD (VA): 41,314.25
TOTAL DEMAND CURRENT (A) 114.68

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
BOLD INDICATES REVISED LOAD; ALL CIRCUIT BREAKERS ARE NEW

PANEL: B (EXISTING) REVISED | **3 PH** | **4 WIRE** | **VOLTAGE:** 208Y/120V | **100A MLO**
LOC: | **MOUNT:** FLUSH | **FEED:** BOTTOM
TYPE: SQ. D | **POLES:** 42 | **SF MAINS:** | **10,000AIC MINIMUM**

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	800	LIGHTING - KITCHEN	1	1	20	1340			1	20	2	RECEPTS - BUNK RM.	540	R
		SPARE	3	1	20		540		1	20	4	RECEPTS - BUNK RM.	540	R
R	360	BUNK - FLR. 2	5	1	20			560	1	20	6	EXIT LIGHTS N. SIDE	200	L
L	288	LIGHTING - RM 118	7	1	20	576			1	20	8	LIGHTING - RM 118	288	L
R	540	BUNK - FLR. 1	9	1	20		990		1	20	10	REF - SECOND FLOOR	450	A
R	360	RECEPTS - RM 110, 111	11	1	20			570	1	20	12	BATH - SECOND FLOOR	210	ML
R	540	BUNK - FLR. 1	13	1	20	750			1	20	14	BATH - FIRST FLOOR	210	ML
R	540	RECEPTS - RM 104, 105, 106	15	1	20		740		1	20	16	LIGHTING - FRONT RAMP	200	L
R	1012	LIGHTING, RECEPTS - RM 110, 111, 112	17	1	20			1012	1	20	18	SPARE		
L	232	LIGHTING FITNESS	19	1	20	464			1	20	20	LIGHTING - FITNESS	232	L
		SPACE	21						1	20	22	SPARE		
		SPACE	23						1	20	24	SPARE		
		SPACE	25			574			**3**		26		**574**	ML
		SPACE	27				574				28	**EF-2 (NOTE 1)**	**574**	ML
ML	**260**	**HP-1, HP-2 (NOTE 1)**	29	**2**				834		**20**	30		**574**	ML
ML	**133**		31		**20**	133					32	SPACE		
ML	**815**		33	**3**			815				34	SPACE		
ML	**815**	**ERV (NOTE 1)**	35					2471	1	20	36	EXAUST FAN - ROOF	1656	ML
ML	**815**		37		**20**	815			1	20	38	RECEPTS - BUNK RM.		
		SPARE	39	2			2000		2		40	HOTPLATE	2000	A
			41		50			2000		30	42		2000	A
	7510	TOTAL			THIS PANEL->	4652	5659	7447				TOTAL	10248	
						4652	5659	7447						

LIGHTING(125%) = 3090.00
RECEPTS<=10000(100%) = 4320.00
RECEPTS>10000(50%) = 0.00
RECEPTS TOTAL = 4320.00
ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 2152.50
OTHER MOTORS(100%) = 4794.00
MOTOR TOTAL = 6946.50
WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00
APPLIANCES(100%) = 4450.00
DEDICATED(100%) = 0.00
MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 17,758.00
TOTAL CONNECTED CURRENT (A): 49.29
TOTAL DEMAND LOAD (VA): 18,806.50
TOTAL DEMAND CURRENT (A) 52.20

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
1. PROVIDE CIRCUIT BREAKER, SIZE AS INDICATED. BOLD INDICATES NEW REVISED LOAD.

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CHARLES A. HEATON — STATE OF WASHINGTON — 23006 — REGISTERED PROFESSIONAL ENGINEER
11/29/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 63
33414 S 21st AVE SOUTH, FEDERAL WAY, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 29, 2016

REVISION SCHEDULE

PANEL SCHEDULES

SHEET:

E-610

PANEL: C (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 100A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: SQ. D — POLES: 24 — SF MAINS: — 65,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
MO	696	EXHAUST HOOD	1	1	20	1146			1	20	2	REF - NORTH	450	A
L	64	LIGHTING - DECK	3	1	20		514		1	20	4	REF - CENTER	450	A
R	540	RECEPTS - COUNTER	5	1	20			900	1	20	6	RECEPTS - COUNTER	360	R
R	540	RECEPTS - COUNTER	7	1	20	990			1	20	8	REF - SOUTH	450	A
A	600	RECEPTS - OVEN	9	1	20		1296		1	20	10	DISPOSAL	696	ML
MO	696	DISPOSAL BAR SINK	11	1	20			1896	1	20	12	DISHWASHER	1200	A
L	232	LIGHTING	13	1	20	592			1	20	14	RECEPTS - COUNTER	360	R
A	1200	MICROWAVE	15	1	20		2400		1	20	16	MICROWAVE	1200	A
		SPARE	17								18	SPARE		
		SPACE	19								20	SPACE		
		SPACE	21								22	SPACE		
		SPACE	23								24	SPACE		
	4568	TOTAL			THIS PANEL->	2728	4210	2796				TOTAL	5166	

LIGHTING(125%) = 370.00 — 2728 — 4210 — 2796
RECEPTS<=10000(100%) = 1800.00 — LARGEST MOTOR(125%) = 870.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 1392.00 — APPLIANCES(100%) = 5550.00
RECEPTS TOTAL = 1800.00 — MOTOR TOTAL = 2262.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 9,734.00
TOTAL CONNECTED CURRENT (A): 27.02
TOTAL DEMAND LOAD (VA): 9,982.00
TOTAL DEMAND CURRENT (A) 27.71

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: E (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 100A MLO
LOC: — MOUNT: SURFACE — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 30 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	232	LIGHTING - APP	1	1	20	1888			1	20	2	N. BAY DOOR	1656	ML
ML	756	LIGHTING/FAN - BATH	3	1	20		2412		1	20	4	CENETER BAY DOOR	1656	ML
L	280	FLAG LIGHTS	5	1	20			1936	1	20	6	S. BAY DOOR	1656	ML
SF	174	PANEL E1	7	2		1830			1	20	8	E. BAY DOOR	1656	ML
SF	2408		9		30		2408		1	20	10	UHTV		
L	56	LIGHTING - RM 114	11	1	20			596	1	20	12	RECEPTS - RM 119 - TRUCK BAY	540	R
D	360	RADIO MEZZ.	13	1	20	480			1	20	14	LIGHTING - CENTER TOWER	120	L
D	500	FACP	15	1	20		1100		1	20	16	FURNACE - FIRST FLOOR	600	ML
		SPARE	17	1	20			600	1	20	18	FURNACE - SECOND FLOOR	600	ML
R	180	RECEPTS - RM 101	19	1	20	472			2		20	PANEL E2	292	SF
R	360	RECEPTS - RM 101, 102	21	1	20		556			40	22		196	SF
R	360	RECEPTS - RM 102 - TTB	23	1	20			480	1	20	24	LIGHTING - N.& S. TOWER	120	L
L	300	LIGHING - RAMP	25	1	20	480			1	20	26	RECEPTS - RM 114	180	R
L	336	LIGHTING - EMERGENCY	27	1	20		1416		1	20	28	RECEPTS - RM 100, 114	1080	R
R	540	RECEPTS - MSA REPAIR	29	1	20			1968	1	20	30	LIGHTING, RECEPTS - RM 104, 105, 106	1428	R
	6842	TOTAL			THIS PANEL->	5150	7892	5580				TOTAL	11780	

LIGHTING(125%) = 3102.50 — 5150 — 7892 — 5580
RECEPTS<=10000(100%) = 4700.00 — LARGEST MOTOR(125%) = 2070.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 8424.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 4700.00 — MOTOR TOTAL = 10494.00 — DEDICATED(100%) = 1360.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 18,622.00
TOTAL CONNECTED CURRENT (A): 51.69
TOTAL DEMAND LOAD (VA): 19,656.50
TOTAL DEMAND CURRENT (A) 54.56

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: E1 (EXISTING) — 1 PH 3 WIRE — VOLTAGE: 120/208V — 30A MLO
LOC: — MOUNT: SURFACE — FEED: BOTT — BUS
TYPE: NEMA 1 — POLES: 8 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
		SPACE	1							2	SPACE		
L	348	LIGHTING - KITCHEN	3	1	20		348			4	SPACE		
L	174	BUNK ROOM - FLR. 2	5	1	20	174				6	SPACE		
D	500	PUMP DIESEL & EM. SWITCH	7	1	20		2060	1	20	8	FUEL PUMP	1560	ML
	1022	TOTAL			THIS PANEL->	174	2408				TOTAL	1560	

LIGHTING(125%) = 652.50 — 174 — 2408
RECEPTS<=10000(100%) = 0.00 — LARGEST MOTOR(125%) = 1950.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 0.00 — MOTOR TOTAL = 1950.00 — DEDICATED(100%) = 500.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 2,582.00
TOTAL CONNECTED CURRENT (A): 12.41
TOTAL DEMAND LOAD (VA): 3,102.50
TOTAL DEMAND CURRENT (A): 14.92

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: E2 (EXISTING) — 1 PH 3 WIRE — VOLTAGE: 120/208V — 40A MLO
LOC: — MOUNT: SURFACE — FEED: BOTT — BUS
TYPE: NEMA 1 — POLES: 8 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	96	LIGHTING - RM 118	1	1	20	192		1	20	2	LIGHTING - RM 118	96	L
L	96	LIGHTING - RM 118	3	1	20		196	1	20	4	CEILING FAN	100	R
R	100	CEILING FAN	5	1	20	100				6	SPACE		
		SPACE	7							8	SPACE		
	292	TOTAL			THIS PANEL->	292	196				TOTAL	196	

LIGHTING(125%) = 360.00 — 292 — 196
RECEPTS<=10000(100%) = 200.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 200.00 — MOTOR TOTAL = 0.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 488.00
TOTAL CONNECTED CURRENT (A): 2.35
TOTAL DEMAND LOAD (VA): 560.00
TOTAL DEMAND CURRENT (A): 2.69

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: K (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 100A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 30 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
		SPACE	1						1	20	2	SPACE		
		SPACE	3						1	20	4	SPACE		
		SPACE	5						1	20	6	SPACE		
		SPACE	7						1	20	8	SPACE		
		SPACE	9						1	20	10	SPACE		
		SPACE	11						1	20	12	SPACE		
A	2500	DRYER	13	2		2500			1	20	14	SPACE		
A	2500		15		30		2500		1	20	16	SPACE		
A	2500	DRYER IN SHOP	17	2				4156	1	20	18	DRYER FAN	1656	A
A	2500		19		30	6500			2		20	WASHER IN SHOP	4000	A
A	1200	WASHER IN SHOP	21	1	20		5200			60	22		4000	A
R	540	RECEPTS - NEAR COOKTOP	23	1	20			4540	2		24	COOKTOP	4000	A
		SPARE	25	1	20	4000				60	26		4000	A
		SPARE	27	1	20		540		1	20	28	RECEPTS - S. WALL WORK OUT RM.	540	R
R	360	RECEPTS	29	1	20			1560	1	20	30	DISHWASHER	1200	R
	12100	TOTAL			THIS PANEL->	13000	8240	10256				TOTAL	19396	

LIGHTING(125%) = 0.00 — 13000 — 8240 — 10256
RECEPTS<=10000(100%) = 2640.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 28856.00
RECEPTS TOTAL = 2640.00 — MOTOR TOTAL = 0.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 31,496.00
TOTAL CONNECTED CURRENT (A): 87.42
TOTAL DEMAND LOAD (VA): 31,496.00
TOTAL DEMAND CURRENT (A) 87.42

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: K (EXISTING) REVISED — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 100A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 30 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
		SPACE	1								2	SPACE		
		SPACE	3								4	SPACE		
		SPACE	5								6	SPACE		
		SPACE	7								8	SPACE		
		SPACE	9								10	SPACE		
		SPACE	11								12	SPACE		
A	2500	DRYER	13	2		2500					14	SPACE		
A	2500		15		30		2500				16	SPACE		
		SPARE	17	2				1656	1	20	18	DRYER FAN	1656	A
			19		30	6000			2		20	**NEW DRYER IN SHOP**	**6000**	A
A	1200	WASHER IN SHOP	21	1	20		7200			60	22		**6000**	A
R	540	RECEPTS - NEAR COOKTOP	23	1	20			4540	2		24	COOKTOP	4000	A
		SPARE	25	1	20	4000				60	26		4000	A
		SPARE	27	1	20		540		1	20	28	RECEPTS - S. WALL WORK OUT RM.	540	R
R	360	RECEPTS	29	1	20			1560	1	20	30	DISHWASHER	1200	R
	7100	TOTAL			THIS PANEL->	12500	10240	7756				TOTAL	23396	

LIGHTING(125%) = 0.00 — 12500 — 10240 — 7756
RECEPTS<=10000(100%) = 2640.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 27856.00
RECEPTS TOTAL = 2640.00 — MOTOR TOTAL = 0.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 30,496.00
TOTAL CONNECTED CURRENT (A): 84.65
TOTAL DEMAND LOAD (VA): 30,496.00
TOTAL DEMAND CURRENT (A) 84.65

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
BOLD INDICATES REVISED LOAD

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PROJECT # 2015137
BID SET
ISSUED: NOVEMBER 29, 2016
REVISION SCHEDULE

PANEL SCHEDULES

SHEET:
E-611