DEPARTMENT OF VETERANS AFFAIRS
BLACK HILLS NATIONAL CEMETERY
STURGIS, SOUTH DAKOTA

ADMINISTRATION BUILDING 1001 AND MAINTENANCE BUILDING 3001 RENOVATIONS
VA PROJECT NO. 884CM3015

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SITE DATA

BLACK HILLS NATIONAL CEMETERY

STREET ADDRESS:
20901 PLEASANT VALLEY DR.
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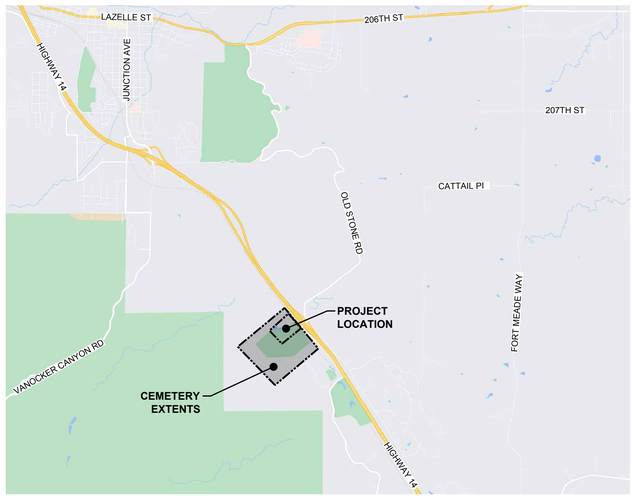
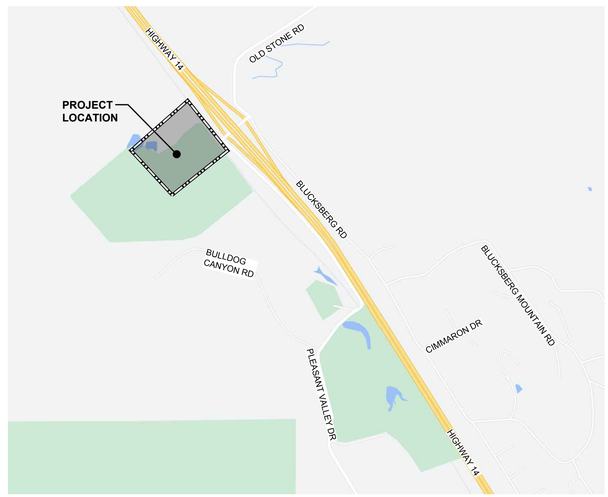
COUNTY:
MEADE COUNTY



1 SITE LOCATION MAP
NTS



2 SITE VICINITY MAP
NTS

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CALL 48 HOURS BEFORE DIGGING
Utilities Underground Location Center
DIAL 811
811
Know what's below, Call before you dig.

Revisions:	Date:

CONSULTANTS

MECHANICAL, ELECTRICAL, TECHNOLOGY & STRUCTURAL	GEOTECHNICAL	COST ESTIMATING
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U.S. Department of Veterans Affairs

Drawing Title	COVER SHEET
Phase	BID DOCUMENTS SUBMITTAL
Approved: Project Director	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10-31-22
Checked	ES
Drawn	JD
Project Number	884-CM-3015
Building Number	
Drawing Number	GI-001
	1 OF 84

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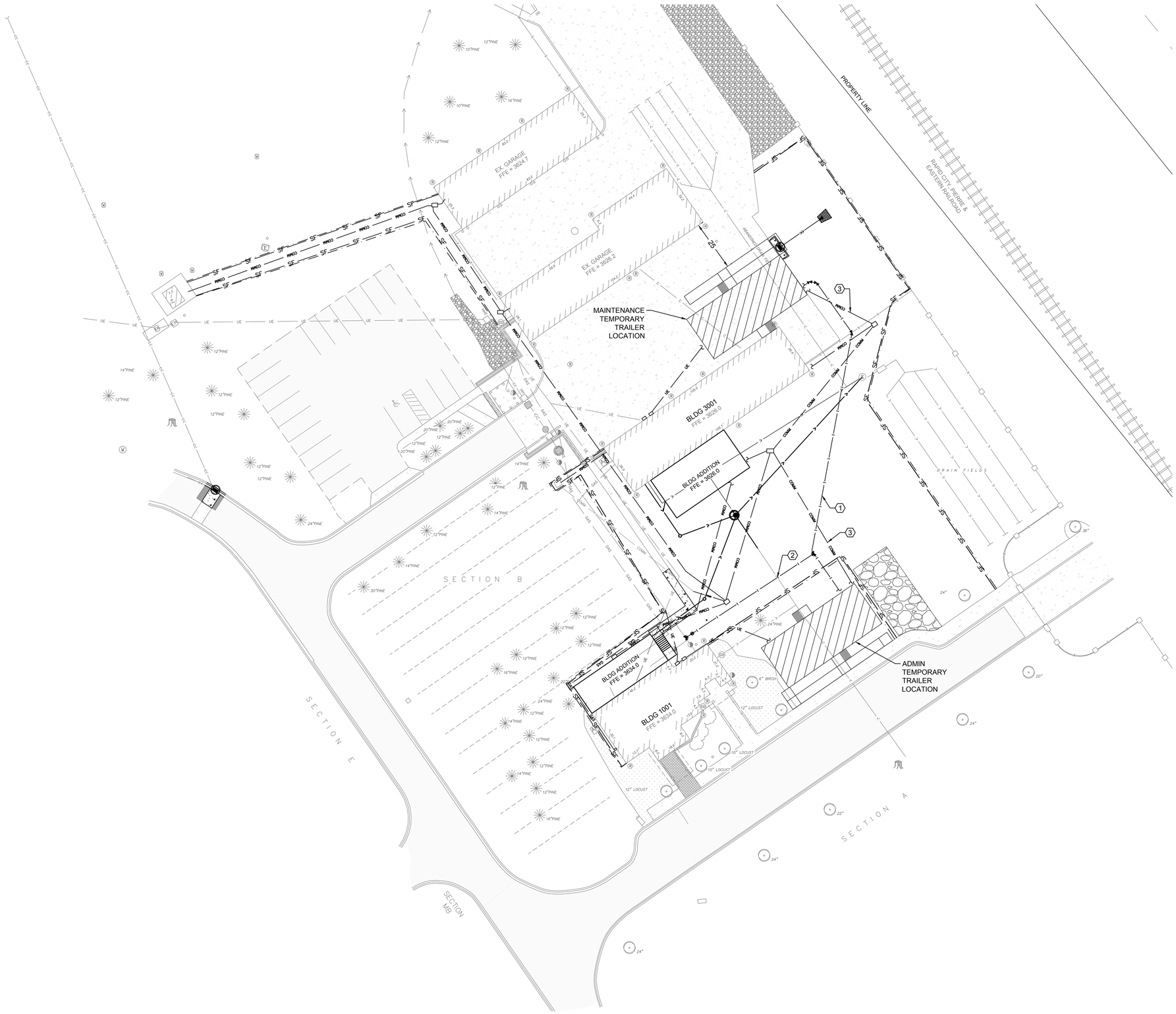

GENERAL NOTES

1. SEE ARCHITECTURE FOR TEMPORARY TRAILER DETAILS/INFORMATION.
2. CONTRACTOR CAN PERFORM WORK ON BOTH BUILDINGS SIMULTANEOUSLY.
3. CONTRACTOR TO HAVE TEMPORARY TRAILERS INSTALLED & APPROVED FOR USE PRIOR TO MOVING STAFF.
4. CONTRACTOR TO NOTIFY P.M. 14 DAYS PRIOR TO STAFF RELOCATION.
5. TIME LINE FOR TEMPORARY TRAILERS ESTIMATED AT 14 MONTHS FOR ADMIN AND 10 MONTHS FOR MAINTENANCE BUILDING WORK.
6. TRAILER LOCATION TO BE VERIFIED IN FIELD W/ P.M.
7. CONTRACTOR MAY POTENTIALLY USE EXISTING WATER SERVICE AT BUILDINGS FOR TEMPORARY TRAILERS IN LIEU OF CONNECTION TO UNDERGROUND WATER SERVICE. VERIFY CONNECTION LOCATIONS DURING WALK THROUGH. PROTECT ANY CONNECTIONS FROM DAMAGE & WEATHER.
8. AREA PROVIDED IN THE NORTHWEST PORTION OF THE CEMETERY FOR CONTRACTOR STAGING AND JOB TRAILER. VERIFY JOB TRAILER LOCATION W/ P.M.
9. REPAIR IN-KIND ANY DISTURBED AREAS DUE TO TEMPORARY FEED LINES OR TEMPORARY UTILITY SERVICES.

KEYNOTES

1. TEMPORARY WATER LINES FOR TRAILERS.
2. AVOID UTILITY CONFLICT.
3. TEMPORARY COMMUNICATION LINES FOR TRAILERS.

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DIAL 811
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Revisions:	Date:

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Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title TEMPORARY TRAILER LOCATIONS	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Approved: Project Director		**Location** STURGIS, SOUTH DAKOTA

Issue Date	Checked	Drawn
10-31-22	--	--

Project Number 884-CM-3015
Building Number
Drawing Number GI-002
2 OF 84

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ARCHITECTURAL ABBREVIATIONS

A/C	AIR CONDITION
A/C UNIT	AIR CONDITIONING UNIT
A/E	ARCHITECT/ENGINEER
AAMA	AMERICAN ARCHITECTURAL MANUFACTURERS ASSN
AAP	ALARM ANNUNCIATOR PANEL
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ACC	ACCESSIBLE
ACI	AMERICAN CONCRETE INSTITUTE
ACT	ACOUSTICAL CEILING TILE
ACS DR	ACCESS DOOR
ACS FLR	ACCESS FLOOR
ACS PNL	ACCESS PANEL
ACST	ACOUSTIC
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADC	AUTOMATIC DOOR CLOSER
ADDL	ADDITIONAL
ADDN	ADDITION
ADH	ADHESIVE
ADJ	ADJACENT, ADJOINING, OR ADJUSTABLE
ADMIN	ADMINISTRATION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	ABOVE FINISHED SLAB
AGC	ASSOCIATED GENERAL CONTRACTORS
AGGR	AGGREGATE
AHJ	AUTHORITY HAVING JURISDICTION
AHR	ANCHOR
AHU	AIR HANDLING UNIT
AIA	AMERICAN INSTITUTE OF ARCHITECTS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALT NO	ALTERNATE NUMBER
ALUM	ALUMINUM
AMT	AMOUNT
ANOD	ANODIZE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANT	ANTENNA
AP	ACCESS PANEL
APA	AMERICAN PLYWOOD ASSOCIATION
APC	ARCHITECTURAL PRECAST CONCRETE
APPD	APPROVED
APPROX	APPROXIMATE
AR	AS REQUIRED
ARCH	ARCHITECT
ASB	ASBESTOS
ASI	ARCHITECT'S SUPPLEMENTAL INSTRUCTION
ASKLR	AUTOMATIC SPRINKLER
ASPH	ASPHALT
ASSN	ASSOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATCH	ATTACHMENT
ATM	AUTOMATIC TELLER MACHINE
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AVG	AVERAGE
AW	ACID WASTE
AWI	ARCHITECTURAL WOODWORKING INSTITUTE
AWPA	AMERICAN WOOD PRESERVERS' ASSOCIATION
AWS	AMERICAN WELDING SOCIETY
B PL	BASE PLATE
BAT	BATTEN
BD	BOARD
BD FT	BOARD FEET (FOOT)
BEV	BEVEL
BHMA	BUILDER'S HARDWARE MANUFACTURER'S ASSOCIATION
BI FLD DR	BIFOLDING DOORS
BITUM	BITUMINOUS
BKG	BACKING
BLD	BUILD
BLDG	BUILDING
BM	BEAM OR BENCHMARK
BOT	BOTTOM
BRCG	BRACING
BRDG	BRIDGING
BRDG JST	BRIDGING JOIST
BRG	BEARING
BRG PL	BEARING PLATE
BRKT	BRACKET
BRZ	BRONZE
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
C CONC	CAST CONCRETE
C TO C	CENTER TO CENTER
CAB	CABINET
CAC	CEILING ATTENUATION CLASS
CB	CATCH BASIN OR CORNER BEAD
CBB	CEMENTITIOUS (BACKER) BOARD
CCD	CONSTRUCTION CHANGE DIRECTIVE
CCTV	CLOSED CIRCUIT TELEVISION
CCW	COUNTERCLOCKWISE
CD	CONSTRUCTION DOCUMENTS OR CONTRACT DOCUMENTS
CEM	CEMENT
CEM PLAS	CEMENT PLASTER
CER	CERAMIC
CF	CONTRACTOR FURNISHED
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/OWNER INSTALLED
CFLG	COUNTERFLASHING
CFMF	COLD-FORMED METAL FRAMING
CG	CORNER GUARD
CGSFU	CERAMIC GLAZED STRUCTURAL FACING UNITS
CH	COAT HOOK
CHEM	CHEMICAL
CHFR	CHAMFER
CHK	CHECK
CI	CAST IRON
CIP	CAST-IN-PLACE
CIR	CIRCLE
CIRC	CIRCULAR
CJ	CONSTRUCTION JOINT OR CONTROL JOINT
CL	CENTER LINE
CLDG	CLADDING
CLG	CEILING
CLR	CLEAR
CM	CONSTRUCTION MANAGEMENT
CMU	CONCRETE MASONRY UNIT
CNR	CORNER
CNTR	COUNTER
CRTP	COUNTERTOP
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COL	COLUMN
COM	COMMON
COMB	COMBINATION, COMBINED
COMM	COMMUNICATION
COMP	COMPONENT
CONC	CONCRETE
CONC FLR	CONCRETE FLOOR
COND	CONDENSER OR CONDITION
CONF	CONFERENCE
CONN	CONNECT
CONSTR	CONSTRUCTION
CONT	CONTINUE
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CPM	CRITICAL PATH METHOD
CPRS	COMPRESSIBLE
CR	CARD READER
CRS	COLD ROLLED STEEL
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CSB	CONCRETE SPLASH BLOCK
CSG	CASING
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
CSK	COUNTER SUNK
CSMT	CASEMENT
CSWK	CASEWORK
CTG	COATING
CTR	CENTER
CTRL	CONTROL
CTV	CABLE TELEVISION
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CU YD	CUBIC YARD
CURT	CURTAIN
CYL	CYLINDER
CYL L	CYLINDER LOCK
D	DEPTH OR PENNY (NAIL)
DAT	DATUM
DBL	DOUBLE
DBL GLZ	DOUBLE GLAZE
DCS	DIAPER CHANGING STATION
DP	DECORATIVE PANEL
DEG	DEGREE
DEL	DELETE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFERENCE OR DIFFUSER
DIM	DIMENSION
DIR	DIRECTION
DISP	DISPENSER
DIST	DISTANCE
DIV	DIVIDE OR DIVISION
DL	DEAD LOAD
DOC	DOCUMENT
DR	DOOR, DRAIN, DRESSING ROOM, OR DRIVE
DR CL	DOOR CLOSER
DR FR	DOOR FRAME
DR OPNG	DOOR OPENING
DS	DOWNSPOUT
DSGN	DESIGN
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EFF	EFFICIENCY
EFS	EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC
ELEC DR OP	ELECTRIC DOOR OPENER
ELEV	ELEVATOR
EMER	EMERGENCY
EMER SHR	EMERGENCY SHOWER
ENCL	ENCLOSURE
ENGR	ENGINEER
ENVIR	ENVIRONMENT
EO	ELECTRICAL OUTLET
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPO	EMERGENCY POWER OFF
EPS	EXPANDED POLYSTYRENE BOARD (INSULATION)
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ERD	EXISTING ROOF DRAIN
ESC	ESCAPE OR ESCUTCHEON
ESMT	EASEMENT
ESP	ESPECIALLY
EST	ESTIMATE
ETC	AND SO FORTH OR ET CETERA
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWS	EYE WASH STATION
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION OR EXPOSED
EXP BT	EXPANSION BOLT
EXST GR	EXISTING GRADE
EXT	EXTERIOR, EXTERNAL, OR EXTINGUISHER
EXT GR	EXTERIOR GRADE
F	FAHRENHEIT OR FEMALE
FA	FIRE ALARM
FAB	FABRIC
FAC	FACTOR
FACIL	FACILITY
FAS	FASCIA
FAS BD	FASCIA BOARD
FCU	FAN COIL UNIT
FCO	FLOOR CLEANOUT
FCTY	FACTORY
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FACE
FF EL	FINISH FLOOR ELEVATION
FF&E	FURNITURE, FIXTURE, AND EQUIPMENT
FHC	FIRE HOSE CABINET
FHP	FULL HEIGHT PARTITION
FIG	FIGURE
FIL	FILLET
FIN	FINISH
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FIN WD	FINISH WOOD
FIXT	FIXTURE
FL	FLOORLINE
FLASH	FLASHING
FLDG	FOLDING
FLEX	FLEXIBLE
FLG	FLOORING
FLR	FLOOR
FLR FIN	FLOOR FINISH
FLR SK	FLOOR SINK
FLUOR	FLUORESCENT
FLUOR FIX	FLUORESCENT FIXTURE
FM	FACTORY MUTUAL
FM-G	FACTORY MUTUAL GLOBAL
FO	FINISHED OPENING
FOC	FACE OF CONCRETE OR FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF SLAB OR FACE OF STUD
FOUNT	FOUNTAIN
FOW	FACE OF WALL
FP	FIRE PROTECTION OR FIREPROOF
FR	FIRE RATING, FIRE RESISTANT, OR FRAME
FR SNK	FLUSHING RIM SINK
FREQ	FREQUENCY
FRMG	FRAMING
FRP	FIBERGLASS REINFORCED PLASTIC
FRZ	FREEZER
FS	FEDERAL SPECIFICATION
FSB	FOLDING SHOWER BENCH
FSTNR	FASTENER
FT	FEET OR FOOT
FTG	FOOTING
FURG	FURRING
FURN	FURNISH OR FURNITURE
FUT	FUTURE
FVC	FIRE VALVE CABINET
GA	GAGE OR GYPSUM ASSOCIATION
GAL	GALLON
GALV	GALVANIC OR GALVANIZED
GALV STL	GALVANIZED STEEL
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GD	GUARD
GDR	GUARD RAIL
GEN	GENERAL OR GENERATOR
GFRC	GLASS-FIBER-REINFORCED CONCRETE
GFRG	GLASS-FIBER-REINFORCED GYPSUM
GFRP	GLASS-FIBER-REINFORCED PLASTIC
GI	GALVANIZED IRON
GL	GLASS
GL BLK	GLASS BLOCK
GLU LAM	GLUED LAMINATED WOOD
GP	GRAB BAR
GR FL	GROUND FLOOR
GRAN	GRANITE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GSM	GALVANIZED SHEET METAL
GSU	GLAZED STRUCTURAL UNIT
GT	GROUT
GUAR	GUARANTEE
GUT	GUTTER
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	HIGH OR HUMIDISTAT
HAZ MAT	HAZARDOUS MATERIALS
HB	HOSE BIBB
HC	HOLLOW CORE
HCWD	HOLLOW CORE WOOD DOOR
HDBD	HARDBOARD
HDO	HIGH DENSITY OVERLAY
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HEPA	HIGH EFFICIENCY PARTICULATE AIR (FILTER)
HEX	HEXAGON
HGR	HANGER
HM	HOLLOW METAL
HMD	HOLLOW METAL DOOR
HMDF	HOLLOW METAL DOOR AND FRAME
HMF	HOLLOW METAL FRAME
HNDRL	HANDRAIL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HOSP	HOSPITAL
HP	HIGH PRESSURE
HPD	HYGIENE PRODUCT DISPOSAL
HPDL	HIGH PRESSURE DECORATIVE LAMINATE
HQ	HEADQUARTERS
HS	HEAT-STRENGTHENED (GLASS) OR HIGH STRENGTH
HSE	HOUSE
HSKPG	HOUSEKEEPING
HST	HOIST
HSS	HOLLOW STRUCTURAL STEEL
HT	HEIGHT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HVY	HEAVY
HW	HOT WATER
HYD	HYDRANT
HYDR	HYDRAULIC
IAQ	INDOOR AIR QUALITY
IBC	INTERNATIONAL BUILDING CODE
IC	INFECTION CONTROL
ICW	INFECTION CONTROL WALL
ID	INSIDE DIAMETER
ID NO	IDENTIFICATION NUMBER
ILLUM	ILLUMINATION
INCL	INCLUDED
IND	INDEPENDENT OR INDUSTRIAL
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTL	INTERNATIONAL
IWH	INSTANTANEOUS WATER HEATER
JAN	JANITOR
KD	KILN DRIED OR KNOCKED DOWN
KIT	KITCHEN
KO	KNOCKOUT
KPL	KICKPLATE
∟	ANGLE
LAB	LABORATORY
LAD	LADDER
LAM	LAMINATE
LAM GL	LAMINATED GLASS
LAU	LAUNDRY
LAV	LAVATORY
LBR	LUMBER
LBS	POUND
LCS	LOCKABLE CHARTING STATION/MED CABINET
LD BRG	LOAD-BEARING
LDR	LEADER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LIB	LIBRARY
LIN	LINEAR
LIQ	LIQUID
LKR	LOCKER
LKR RM	LOCKER ROOM
LL	LEAD LINED
LMST	LIMESTONE
LRG	LARGE
LRV	LOUVERED ROOF VENT
LS	LIGHT SWITCH
LT	LIGHT
LT GA	LIGHT GAGE
LT WT	LIGHTWEIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LVD	LOUVERED
LVR	LOUVER
LWC	LIGHTWEIGHT CONCRETE
LWIC	LIGHTWEIGHT INSULATING CONCRETE
LYR	LAYER
MACH	MACHINE
MACH RM	MACHINE ROOM
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MBD	MARKER BOARD
MCB	METAL CORNER BEAD
MD	DECK
ME	MECHANICAL ENGINEER
MEAS	MEASURE
MECH	MECHANICAL
MECH RM	MECHANICAL ROOM
MED	MEDICAL, MEDIUM
MEK	METHYL ETHYL KETONE
MEMB	MEMBRANE
MEMO	MEMORANDUM
MEZZ	MEZZANINE
MF	MILL FINISH
MFD	MANUFACTURED
MFG	MANUFACTURING
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MGT	MANAGEMENT
MIC	MICROPHONE
MID	MIDDLE
MIL STD	MILITARY STANDARD
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MIT	MITER
MKR	MARKER
ML	METAL LATH
MLDG	MOLDING (MOULDING)
MLWK	MILLWORK
mm	MILLIMETER
MO	MASONRY OPENING
MOD	MODEL, MODIFY OR MODULE
MOD BIT	MODIFIED BITUMEN
MON	MONITOR
MOPR	MOP RACK
MR	MOISTURE RESISTANT
MS	MOP SINK
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION
MW	MICROWAVE
MWP	MEMBRANE WATERPROOFING
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NATL	NATIONAL
NC	NOISE CRITERIA OR NURSE CALL
NCOMBL	NONCOMBUSTIBLE
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSN
NEUT	NEUTRAL
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NR	NOISE REDUCTION
NRC	NOISE REDUCTION COEFFICIENT
NRCA	NATIONAL ROOFING CONTRACTORS ASSOCIATION
NRP	NONREMOVABLE
NS	NARROW STILE
NUM	NUMERAL
O/O	OUT TO OUT
O	OXYGEN
OA	OUTSIDE AIR OR OVERALL
OC	ON CENTER
OCC	OCCUPY
OCT	OCTAGON
OD	OUTSIDE DIAMETER, OUTSIDE DIMENSION
OD	OUTSIDE DIAMETER/OUTSIDE DIMENSION
OF/CI	OWNER FURNISHED/CONTRACTOR INSTALLED
OFD	OVERFLOW DRAIN
OFF	OFFICE
OF/OI	OWNER FURNISHED/OWNER INSTALLED
OH	OVERHANG
OH DR	OVERHEAD (COILING) DOOR
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPR	OPERABLE
OPT	OPTIONAL
OR	OPERATING ROOM OR OUTSIDE RADIUS
ORD	ORDNANCE OR OVERFLOW ROOF DRAIN
ORG	ORGANIC
ORIG	ORIGINAL
ORN	ORNAMENTAL
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINSTRATION
OUT	OUTLET
OZ	OUNCE
P	PAINT
PAR	PARALLEL OR PARAPET
PARA	PARAGRAPH
PART	PARTIAL
PAT	PATTERN
PB	PUSHBUTTON
PBD	PARTICLEBOARD
PC	PIECE, POLYCARBONATE OR PORTLAND CEMENT
PCA	PORTLAND CEMENT ASSOCIATION
PCC	PRECAST CONCRETE
PCCP	CONCRETE PAVEMENT
PCD	PAPER CUP DISPENSER
PCF	POUNDS PER CUBIC FOOT
PCP	PORTLAND CEMENT PLASTER
PCT	PRIVACY CURTAIN TRACK
PED	PEDESTAL
PEN	PENETRATE
PEND	PENDANT
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PHAR	PHARMACY
PHOTO	PHOTOGRAPH
PKG	PACKAGE
PL	PROPERTY LINE
PL GL	PLATE GLASS
PLAM	PLASTIC LAMINATE
PLAS	PLASTER OR PLASTIC
PLBG	PLUMBING
PLYWD	PLYWOOD
PMTL	PAINTED METAL
PNEU	PNEUMATIC
PNL	PANEL
PO	POST OFFICE, PURCHASE ORDER
POLY	POLYETHYLENE (PLASTIC)
PP	PUSH PLATE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATE
PREFIN	PREFINISH
PRELIM	PRELIMINARY
PREP	PREPARATION
PRESS	PRESSURE
PREV	PREVIOUS
PRKG	PARKING
PRMLD	PREMOLDED
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PORCELAIN TILE OR PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION
PVC	POLYVINYL CHLORIDE (PLASTIC)
PVG	PAVING
PWR	POWER
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QRY	QUARRY
QTR	QUARTER
QTY	QUANTITY
QUAD	QUADRANT
QUAL	QUALITY
R	RADIUS OR RISER
RA	RETURN AIR
RAD	RADIATOR
RBM	REINFORCED BRICK MASONRY
RBR	RUBBER
RC	REMOTE CONTROL
RCP	REFLECTED CEILING PLAN
RCVR	RECEIVER
RD	ROAD OR ROOF DRAIN
REC	RECESSED
RECD	RECEIVED
RECPT	RECEPTACLE
RECT	RECTANGLE
REF	REFERENCE OR REFRIGERATOR
REFR	REFRACTORY, REFRIGERATION
REG	REGISTER
REINF	REINFORCE
REP	REPAIR
REPL	REPLACE
REQ	REQUIRE
REQD	REQUIRED
RET	RETURN
REV	REVISION
RFG	ROOFING
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RFS	ROOM FINISH SCHEDULE
RL	ROOF LEADER
RLG	RAILING
RM	ROOM
RM LT	NURSE CALL LIGHT/ROOM LIGHT
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RS	ROUGH SAWN
RSV	RESILIENT SHEET VINYL
RT	RIGHT
RV	ROOF VENT
RVS	REVERSE
RWL	RAIN WATER LEADER
S	SOLID SURFACE
SA	SUPPLY AIR
SALV	SALVAGE
SAMP	SAMPLE
SAN	SANITARY
SB	SPLASH BLOCK
SBS	STYRENE BUTADIEN STYRENE
SBSTR	SUBSTRATE
SC	SHARPS CONTAINER
SCH	SCHOOL
SCHED	SCHEDULE
SCHEM	SCHEMATIC
SCP	SCUPPER
SCRN	SCREEN
SCT	SHOWER CURTAIN TRACK
SCWD	SOLID CORE WOOD DOOR
SD	SMOKE DETECTOR/SOAP DISPENSER
SDG	SIDING
SECT	SECTION
SEG	SEGMENT
SEL	SELECT
SEP	SEPARATE
SF	SQUARE FOOT (FEET)
SFTWD	SOFTWOOD
SGD	SLIDING GLASS DOOR
SGL	SINGLE
SHR	SHOWER
SHR HD	SHOWER HEAD
SHRD	SHOWER DRAIN
SHT	SHEET
SHTHG	SHEATHING
SHV	SHELVING
SIM	SIMILAR
SJ	SCORED JOINT
SJI	STEEL JOIST INSTITUTE
SK	SKETCH
SKLT	SKYLIGHT
SLDG	SLIDING
SLNT	SEALANT
SM	SHEET METAL
SMK	SMOKE
SND INS	SOUND INSULATION
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SPLY	SUPPLY
SPR	SINGLE PLY ROOF SYSTEM
SQ	SQUARE
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SST	STAINLESS STEEL
ST	STAIRS OR STREET
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STIF	STIFFENER
STL JST	STEEL JOIST
STL LNTL	STEEL LINTEL
STL PL	STEEL PLATE
STL RF DK	STEEL ROOF DECK
STL TB	STEEL TUBE
STL TR	STEEL TRUSS
STNLS	STAINLESS
STOR	STORAGE
STR	STRINGERS
STRUCT	STRUCTURAL
STRUCT STL	STRUCTURAL STEEL
SUB	SUBSTITUTE
SURF	SURFACE
SUSP	SUSPEND
SUSP CLG	SUSPENDED CEILING
SW	SWITCH
SWDR	SWING DOOR
SYM	SYMBOL
SYNTH	SYNTHETIC
SYS	SYSTEM
T	TREAD OR THERMOSTAT
T&M	TIME AND MATERIALS
TB	TOWEL BAR
TBD	TACK BOARD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE OR TEMPORARY
THERM	THERMAL
THK	THICKNESS
THRES	THRESHOLD
THRU	THROUGH
THRUOUT	THROUGHOUT
TMPD	TEMPERED
TMPD GL	TEMPERED GLASS
TN	TRUE NORTH
TO	TOP OF ___
TO FDN	TOP OF FOUNDATION
TOB	TOP OF BEAM
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TRANS	TRANSOM
TRTD	TREATED
TS	TUBE STEEL
TSTAT	THERMOSTAT
TV	TELEVISION
TYP	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UC	UNDERCUT
UGND	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
ULT	ULTIMATE
UNFIN	UNFINISH
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UR	URINAL
UTIL	UTILITY
UV	ULTRAVIOLET
VAC	VACUUM
VAR	VARIES
VEH	VEHICLE
VENT	VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
VFD	VARIABLE FREQUENCY DRIVE
VIC	VICINITY
VID	VIDEO
VIF	VERIFY IN FIELD
VNR	VENEER
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VR	VAPOR RETARDER
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WBL	WOOD BLOCKING
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WFR	WOOD FRAME
WFS	WOOD FURRING STRIPS
WH	WATER HEATER
WHSE	WAREHOUSE
WP	WATERPROOFING
WPM	WATERPROOF MEMBRANE
WR	WEATHER RESISTANT
WS	WEATHERSTRIP OR WALL SCONCE
WSCT	WAINSCOT
WT	WEIGHT OR WINDOW TREATMENT
X BRACE	CROSS BRACE
XPS	EXTRUDED POLYSTYRENE BOARD
YD	YARD

BID DOCUMENTS

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: ABBREVIATIONS

Phase: BID DOCUMENTS SUBMITTAL

Approved:

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Project Number: 884-CM-3015

Building Number: 1001

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/2022

Checked: MP

Drawn: MP

Drawing Number: GI002-1001

3 OF 84

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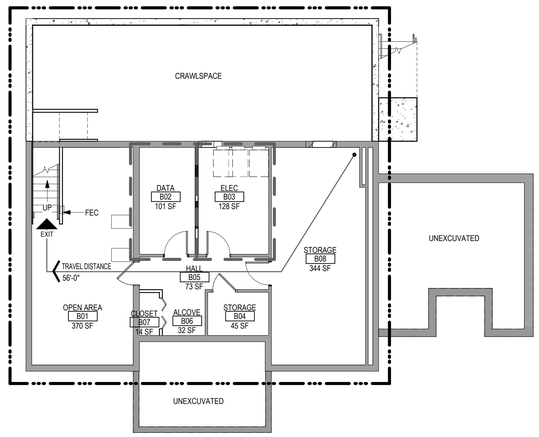
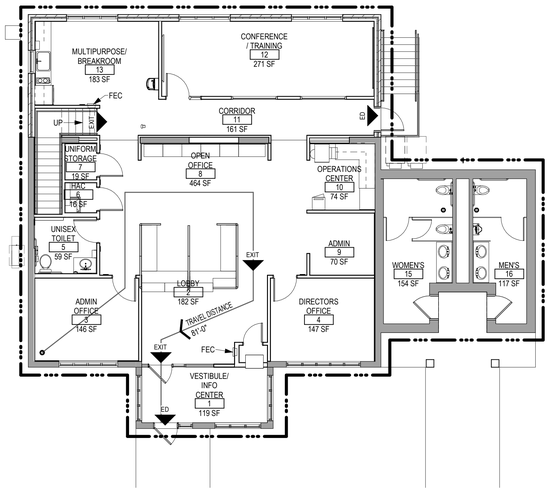


1 BASEMENT LEVEL LIFE SAFETY PLAN

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'



2 FIRST LEVEL LIFE SAFETY PLAN

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'

CODE SUMMARY

PROJECT DESCRIPTION

CONSTRUCT APPROXIMATELY 678 GSF ADDITION TO EXISTING 2,882 GSF ADMINISTRATION BUILDING. TYPE V (000) CONSTRUCTION. REMODEL 2,882 GSF IN EXISTING SPACE. TOTAL BUILDING IS 3,560 GSF. UPGRADE FACILITY TO ACCESSIBILITY STANDARDS.

GENERAL TYPE OF PROJECT	YES	NO
NEW BUILDING		●
ADDITION	●	
REMODEL	●	

AUTHORITIES HAVING JURISDICTION (AHJ's)	YES	NO
THE JOINT COMMISSION (TJC)		●
CENTER FOR MEDICARE/MEDICAID SERVICES (CMS)		●

APPLICABLE REGULATIONS

- 2018 NFPA 101 (LIFE SAFETY CODE)
- 2018 IBC
- ABA STANDARDS (2015) (ABAAS)
- VA BARRIER FREE DESIGN STANDARD (PG-18-13)
- NFPA NATIONAL FIRE CODES (EXCEPTION: NFPA 5000 & 900)
- 2018 FGI GUIDELINES
- OSHA STANDARDS
- VA SEISMIC DESIGN REQUIREMENTS H-18-8
- NATIONAL ELECTRIC CODE (NEC)
- ASME BOILER AND PRESSURE VESSEL CODE
- ASME CODE FOR PRESSURE PIPING
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AMERICAN CONCRETE INSTITUTE AND COMETARY (ACI 318)
- MANUAL OF STEEL CONSTRUCTION, LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
- ENERGY POLICY ACT OF 2005 (EPAct)
- DOE INTERIM FINAL RULE: ENERGY CONSERVATION STANDARDS FOR NEW FEDERAL, COMMERCIAL AND MULTI-FAMILY HIGH-RISE RESIDENTIAL BUILDINGS AND NEW LOW-RISE RESIDENTIAL BUILDINGS, 10 CFR PARTS 433,434 AND 435
- FEDERAL LEADERSHIP IN HIGH PERFORMANCE AND SUSTAINABLE BUILDINGS: MEMORANDUM OF UNDERSTANDING (MOU)
- EXECUTIVE ORDER 13834
- THE PROVISIONS FOR CONSTRUCTION AND SAFETY SIGNS. STATED IN THE GENERAL REQUIREMENTS SECTION 01010 OF THE VA MASTER CONSTRUCTION SPECIFICATION
- VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY - ASHRAE STANDARD 62.1-2004
- SAFETY STANDARD FOR REFRIGERATION SYSTEMS - ASHRAE STANDARD 15 -2007
- VA FIRE PROTECTION DESIGN MANUAL
- VA DIRECTIVES, DESIGN MANUALS, MASTER SPECIFICATIONS, VA NATIONAL CAD STANDARD APPLICATION GUIDE, AND OTHER GUIDANCE ON THE TECHNICAL INFORMATION LIBRARY (TIL)

OCCUPANCY CLASSIFICATION(S)

OCCUPANCIES (LSC CH 12-42)	EXISTING BUSINESS OCCUPANCY	YES	NO
CHANGE OF OCCUPANCY?	(If Remodeling)		●
SEPARATED OCCUPANCIES?	2018 LSC (TABLE 6.1.14.1)		●
FIRE BARRIER RATING(S)	(Section 8.3) SEE LIFE SAFETY PLANS		

TYPE(S) OF CONSTRUCTION

CONSTRUCTION TYPE(S)	TYPE V (000)	(NAPA 220 TABLE 4.1.1)
AREA SEPARATIONS / FIRE WALLS	NONE	

ALLOWABLE AREA PER FLOOR (IBC Section 503)

BASIC ALLOWABLE AREA (from table 503)	9000 GSF

ACTUAL AREA PER FLOOR

FIRST FLOOR	
NEW ADDITION	678 GSF
EXISTING	1,722 GSF
BASEMENT FLOOR	1,160 GSF
TOTAL	3,560 GSF

BUILDING HEIGHT

	ACTUAL HEIGHT	ALLOWABLE HEIGHT
(Table 503) FEET	(Input)	(Input)
(Table 503) STORIES	(Input)	(Input)

EGRESS	YES	NO
AREAS OF REFUGE REQUIRED		●
ACCESSIBLE MEANS OF EGRESS ("MOE") REQUIRED		●
ELEVATOR REQUIRED AS MEANS OF EGRESS		●
MEANS OF EGRESS CAPACITY (width in inches)	32"	

OCCUPANT LOAD OF BUILDING

AREA LOCATION	ACTUAL AREA	SF/OCCUPANT	OCCUPANTS
FIRST LEVEL	2,400 GSF	150	24
BASEMENT LEVEL	1,160 GSF		
TOTAL BUILDING OCCUPANT LOAD			24

PLUMBING FIXTURES

	PROVIDED	RQD	FACTOR (IBC CH 29)
TOILETS	3F, 2M	1 M, 1 F	1/25 for first 50 occupants, then 1/50
URINALS	1M	--	--
LAVATORIES	3F, 3M	1M, 1F	1/40 for first 80 occupants, then 1/80
DRINKING FOUNTAINS	1	1	1/100 occupants. 50% may be vending
SERVICE SINKS	1	--	--

FIRE-RESISTIVE REQUIREMENTS

	RATING (HRS)	TEST
STRUCTURAL FRAME		
COLUMNS	ZERO	NA
GIRDERS	ZERO	NA
TRUSSES	ZERO	NA
BEARING WALLS		
EXTERIOR BEARING WALLS	ZERO	NA
INTERIOR BEARING WALLS	ZERO	NA
NON-BEARING WALLS AND PARTITIONS		
EXTERIOR	ZERO	NA
INTERIOR	ZERO	NA
FLOOR CONSTRUCTION		
FLOOR/CEILING ASSEMBLY	ZERO	NA
PRIME & SEC. FLOOR BEAMS, JOISTS	ZERO	NA
ROOF CONSTRUCTION		NA
ROOF/CEILING ASSEMBLY	ZERO	NA
PRIME & SEC. ROOF BEAMS, JOISTS	ZERO	NA
OTHER		NA
SHAFTS AND EXIT PASSAGEWAYS	ZERO	NA
EXTERIOR DOORS AND WINDOWS	ZERO	NA

LIFE SAFETY SYMBOLS

	SMOKE TIGHT ASSEMBLY		1 HOUR FIRE & SMOKE BARRIER
	1 HOUR FIRE BARRIER		2 HOUR FIRE & SMOKE BARRIER
EXIT	EXIT	TRAVEL DISTANCE 100'-10"	TRAVEL DISTANCE
HE	HORIZONTAL EXIT	ED	EXIT DISCHARGE
FE	FIRE EXTINGUISHER	EA	EXIT ACCESS
	LIMITS OF CONSTRUCTION	FEC	FIRE EXTINGUISHER CABINET

NOTE: NOT ALL SYMBOLS MY BE USED ON EACH PLAN

BID DOCUMENTS

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FIRST & BASEMENT LEVEL LIFE SAFETY PLANS

Phase: BID DOCUMENTS SUBMITTAL

Approved:

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/2022 **Checked:** LA **Drawn:** MMM

Project Number: 884-CM-3015

Building Number: 1001

Drawing Number: GI111-1001

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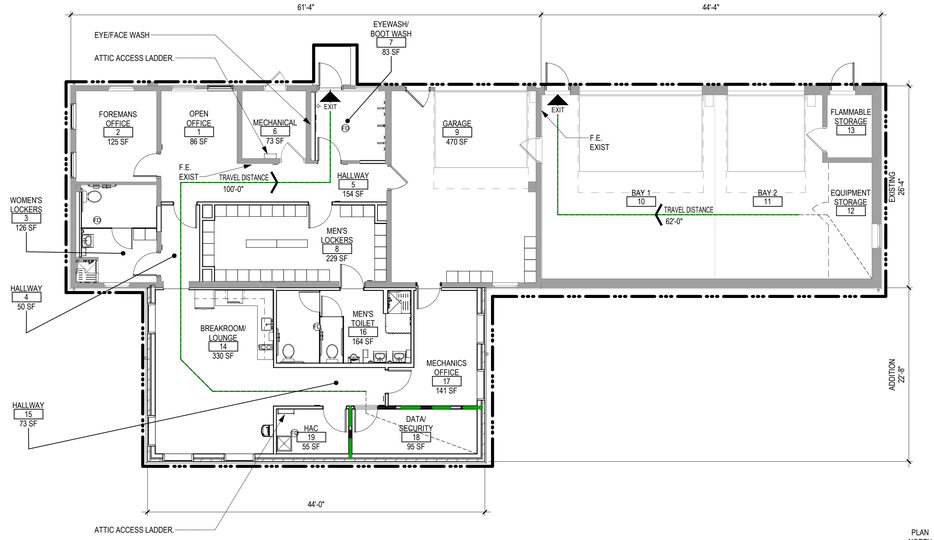
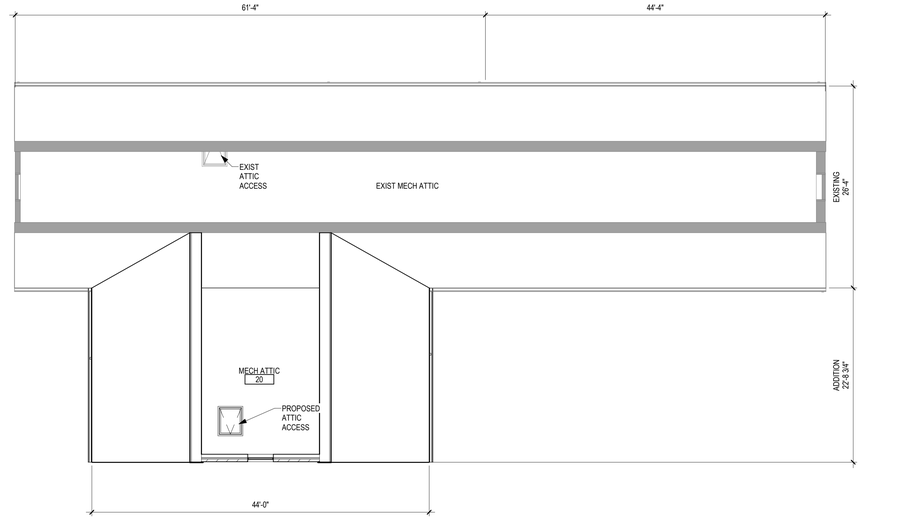


1 FIRST LEVEL LIFE SAFETY PLAN - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'



2 ATTIC LIFE SAFETY PLAN - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'

CODE SUMMARY

PROJECT DESCRIPTION

CONSTRUCT APPROXIMATELY 1,000 GSF ADDITION TO EXISTING 2,780 GSF MAINTENANCE BUILDING. TYPE V (000) CONSTRUCTION. REMODEL APPROXIMATELY 1,100 GSF IN EXISTING SPACE. UPGRADE FACILITIES TO ACCESSIBILITY CODE.

GENERAL TYPE OF PROJECT	YES	NO
NEW BUILDING		●
ADDITION		●
REMODEL		●

AUTHORITIES HAVING JURISDICTION (AHJ's)	YES	NO
THE JOINT COMMISSION (TJC)		●
CENTER FOR MEDICARE/MEDICAID SERVICES (CMS)		●
		●

APPLICABLE REGULATIONS

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- VA BARRIER FREE DESIGN STANDARD (PG-18-13)
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- VA DIRECTIVES, DESIGN MANUALS, MASTER SPECIFICATIONS, VA NATIONAL CAD STANDARD APPLICATION GUIDE, AND OTHER GUIDANCE ON THE TECHNICAL INFORMATION LIBRARY (TIL)

MISCELLANEOUS	YES	NO
FULLY SPRINKLERED BUILDING		●
FIRE RESISTIVE CORRIDORS?		●
SMOKE TIGHT CORRIDORS (SMOKE PARTITIONS)		●
INTERIOR FINISHES CLASSIFICATION	B	

OCCUPANCY CLASSIFICATION(S)

OCCUPANCIES	SPECIAL PURPOSE INDUSTRIAL	YES	NO
CHANGE OF OCCUPANCY?	(If Remodeling)		●
SEPARATED OCCUPANCIES?	2018 LSC (TABLE 6.1.14.1)		●
FIRE BARRIER RATING(S)	(Section 8.3) SEE LIFE SAFETY PLANS		

TYPE(S) OF CONSTRUCTION

CONSTRUCTION TYPE(S)	TYPE V [000] (NFPA 220 TABLE 4.1.1)
AREA SEPARATIONS / FIRE WALLS	NONE

ALLOWABLE AREA PER FLOOR (IBC Section 503)

BASIC ALLOWABLE AREA	9,000 GSF

ACTUAL AREA PER FLOOR

EXISTING	2,780 GSF
ADDITION	1,000 GSF
TOTAL	3,780 GSF

ROOM USE AREAS

RM NO.	NAME	AREA
3	WOMEN'S LOCKERS	126 SF
7	EYEWASH/ BOOT WASH	83 SF
8	MEN'S LOCKERS	229 SF
9	GARAGE	470 SF
10	BAY 1	541 SF
11	BAY 2	349 SF
0-INDUSTRIAL		1798 SF
6	MECHANICAL	73 SF
12	EQUIPMENT STORAGE	86 SF
13	FLAMMABLE STORAGE	48 SF
18	DATA/ SECURITY	95 SF
19	HAC	55 SF
1-STORAGE		357 SF
1	OPEN OFFICE	86 SF
2	FOREMANS OFFICE	125 SF
17	MECHANICS OFFICE	141 SF
2-BUSINESS CONCENTRATED		352 SF
14	BREAKROOM/ LOUNGE	330 SF
3-BUSINESS COLLABORATION		330 SF

OCCUPANT LOAD OF BUILDING

	AREA	SF/OCCUPANT	OCCUPANTS
INDUSTRIAL, SPECIAL:	1,798 GSF	MAX PROBABLE	18 OCC.
STORAGE:	357 GSF	MAX PROBABLE	5 OCC.
BUSINESS CONCENTRATED:	352 GSF	50 SF / OCC.	7 OCC.
BUSINESS COLLABORATION:	330 GSF	30 SF / OCC.	11 OCC.
TOTAL OCCUPANTS:			41 OCC.

PLUMBING FIXTURES

	PROVIDED	RQD	FACTOR (IBC CH 29)
TOILETS	4 M, 1 F	1 M, 1 F	1/25 for first 50 occupants, then 1/50
LAVATORIES	2 M, 1 F	1 M, 1 F	1/40 for first 80 occupants, then 1/80
DRINKING FOUNTAINS	1	1	1/100 occupants. 50% may be vending
SERVICE SINKS	1	1	

BUILDING HEIGHT

NO CHANGE

EGRESS

ACCESSIBLE MEANS OF EGRESS ("MOE") REQUIRED	
MEANS OF EGRESS CAPACITY (width in inches)	36 INCHES

LIFE SAFETY SYMBOLS

	SMOKE TIGHT ASSEMBLY		1 HOUR FIRE & SMOKE BARRIER
	1 HOUR FIRE BARRIER	TRAVEL DISTANCE 100'-10"	TRAVEL DISTANCE
			COMMON PATH
EXIT	EXIT		LIMITS OF CONSTRUCTION
FE	FIRE EXTINGUISHER	FEC	FIRE EXTINGUISHER CABINET

NOTE: NOT ALL SYMBOLS MY BE USED ON EACH PLAN

FIRE-RESISTIVE REQUIREMENTS

	RATING (HRS)	TEST
STRUCTURAL FRAME		
COLUMNS	ZERO	NA
GIRDERS	ZERO	NA
TRUSSES	ZERO	NA
BEARING WALLS		
EXTERIOR BEARING WALLS	ZERO	NA
INTERIOR BEARING WALLS	ZERO	NA
NON-BEARING WALLS AND PARTITIONS		
EXTERIOR	ZERO	NA
INTERIOR	ZERO / 1-HR	UL U419
FLOOR CONSTRUCTION		
FLOOR/CEILING ASSEMBLY	ZERO	NA
PRIME & SEC. FLOOR BEAMS, JOISTS	ZERO	NA
ROOF CONSTRUCTION		
ROOF/CEILING ASSEMBLY	ZERO / 1-HR	UL K506
PRIME & SEC. ROOF BEAMS, JOISTS	ZERO	NA
OTHER		
EXIT PASSAGEWAYS	ZERO	NA
EXTERIOR DOORS AND WINDOWS	ZERO	NA

Revisions:	Date:

CONSULTANT

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DALLAS, TX 75254
(309) 786-5075

GEOTECHNICAL:
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(605) 223-4397

COST ESTIMATING:
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EAGAN, MN 55121
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REGISTERED PROFESSIONAL ENGINEER THOMAS A. OLESAK SOUTH DAKOTA ARCHITECT

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	LIFE SAFETY PLAN
Phase	BID DOCUMENTS SUBMITTAL
Approved:	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10-31-22
Checked	LA
Drawn	EM
Project Number	884-CM-3015
Building Number	3001
Drawing Number	GI111-3001
	5 OF 84

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VA FORM 08 - 6231

SURVEY FOR:

National Cemetery Administration.

PROPERTY ADDRESS:

20901 Pleasant Valley Drive, Sturgis, South Dakota.

CERTIFICATION:

I hereby certify that this survey was prepared by me or under my direct supervision and that I am a duly Licensed Surveyor under the laws of the State of South Dakota.

Dated: December 14, 2021

Anderson Engineering of Minnesota, LLC

by: _____

David Anderson
South Dakota License No. 8385

SURVEY NOTES:

1. The horizontal datum and bearings are based on the South Dakota State Plane Coordinate System, South Zone NAD83(2011), U.S. Survey feet. The scaleable information depicted hereon are in grid distances. The grid distance to ground distance scale factor is 1.00151764. The coordinates depicted hereon were established using the National Geodetic Survey's Online Positioning User Service (OPUS).

2. The vertical datum is NAVD88. The site benchmark is a 5/8 inch by 18 inch rebar with a pink plastic cap stamped "CONTROL POINT", located at the tee of the entrance road at Section MA (depicted hereon). Elevation = 3,639.86 feet.

3. The location and extent of underground utilities, if shown, are based upon existing drawings provided by the National Cemetery, above ground evidence and South Dakota 811 Locate markings per ticket number 2130621634. However, lacking excavation, the exact location of underground features cannot be accurately, completely, and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requests from surveyors may be ignored or result in an incomplete response. The size and location of utilities shown should be considered approximate. Additional underground utilities may be present. Verification of the existence and location of all utilities should be obtained from the utility owners prior to any planning or design. In accordance with State Statute, the location of utilities shall be confirmed prior to any demolition or construction.

4. The tree information shown hereon was collected during the field survey by non-forestry trained Anderson Engineering of Minnesota survey personnel. Tree sizes are estimates and locations are accurate to plus or minus three feet.

5. No title work was provided for the preparation of this survey to verify the legal description or the existence of any easements or encumbrances.

LEGEND

- AIR CONDITIONER
- CATCH BASIN
- CLEAN OUT
- COMM. JUNCTION BOX
- CONTROL POINT
- CULVERT
- ELECTRIC BOX
- ELECTRIC MANHOLE
- ELECTRIC METER
- GUARD POST
- HANDICAP PARKING
- HANDHOLE
- HANDHOLE ELECTRIC
- IRRIGATION CONTROL BOX
- IRRIGATION CONTROL VALVE
- LIGHT POLE
- MANHOLE
- ROOF DRAIN
- SANITARY MANHOLE
- SIGN
- SPRINKLER HEAD
- STOP BOX
- STUMP
- WATER MANHOLE
- WATER VALVE
- CONIFEROUS TREE
- DECIDUOUS TREE
- COMMUNICATION
- FENCE
- GAS MAIN
- HANDRAIL
- SANITARY SEWER
- STORM SEWER
- UNDERGROUND ELECTRIC
- WATER MAIN
- BITUMINOUS SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- LANDSCAPE ROCK
- PAVER SURFACE
- RIP-RAP
- WALL
- REINFORCED CONCRETE PIPE

N W E S

0 30 60
SCALE IN FEET

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Revisions:	Date:

CONSULTANTS

MECHANICAL, ELECTRICAL, TECHNOLOGY & STRUCTURAL	GEOTECHNICAL	COST ESTIMATING
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Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title: EXISTING CONDITIONS SURVEY

Approved: Project Director

Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Project Number: 884-CM-3015

Building Number:

Drawing Number: VF-100

6 OF 84

Issue Date: 10-31-22 | **Checked:** ES | **Drawn:** DG

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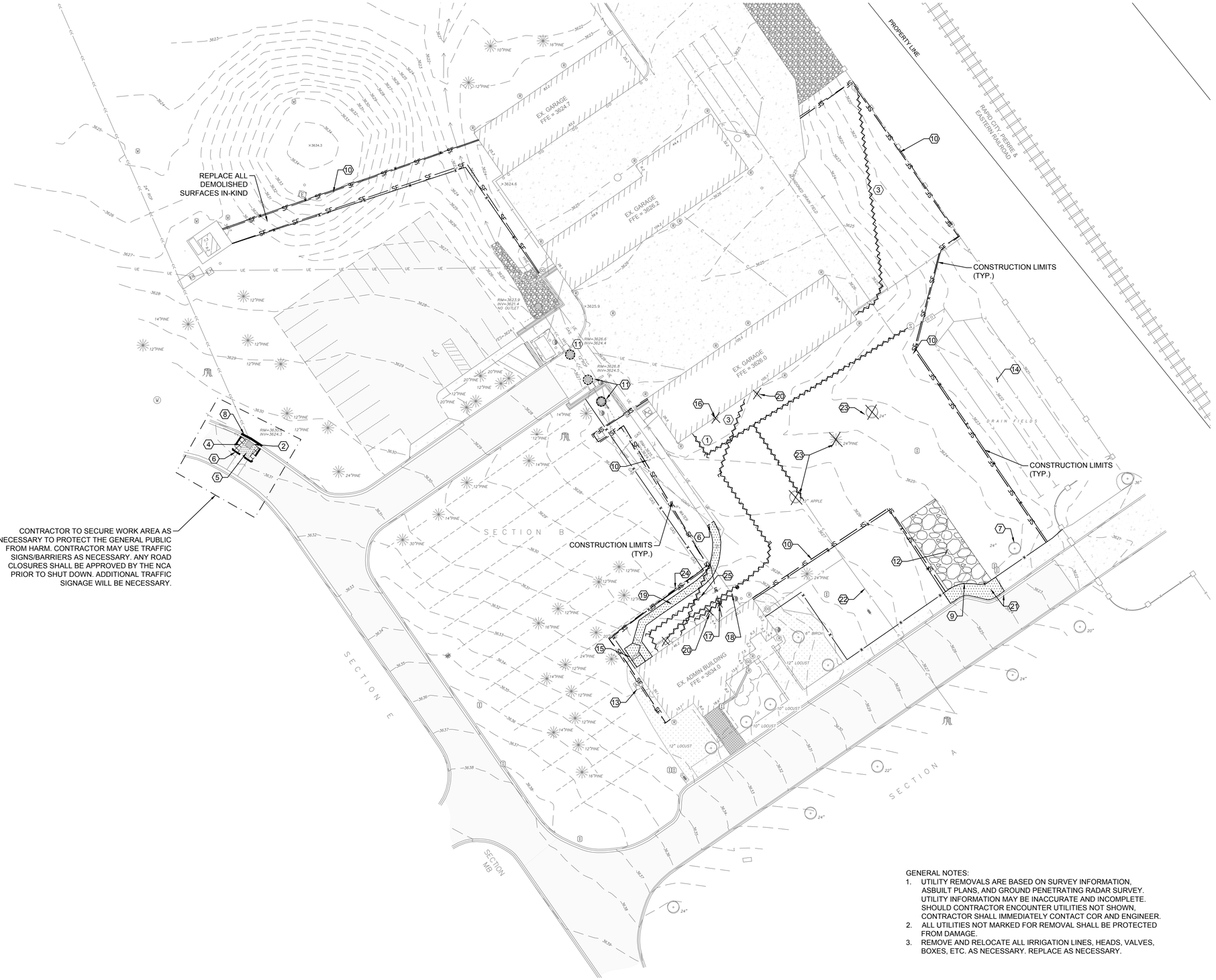
VA FORM 08 - 6231



N

0 20' 40'

LEGEND

- CONSTRUCTION LIMITS
- EXISTING SANITARY PIPE
- EXISTING STORM SEWER PIPE
- EXISTING WATERMAIN PIPE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE CONCRETE PAVEMENT
- REMOVE ASPHALT PAVEMENT
- REMOVE EXISTING UTILITY
- SAWCUT
- SF — SILT FENCE
- INLET PROTECTION
- ROCK CONSTRUCTION ENTRANCE
- REMOVE LANDSCAPE
- x — CONSTRUCTION FENCE

KEYNOTES

1. REMOVE SANITARY SEWER PIPE
2. REMOVE EXISTING STORM SEWER CASTING
3. REMOVE & REROUTE COMMUNICATION LINE
4. REMOVE ASPHALT PAVEMENT
5. REMOVE CONCRETE PAVEMENT
6. SAWCUT LINE AT NEAREST JOINT
7. PROTECT TREES (TYP)
8. REMOVE EXISTING SURMOUNTABLE CURB & GUTTER
9. TEMPORARY FENCE GATE
10. INSTALL & MAINTAIN SILT FENCE PERIMETER SEDIMENT PROTECTION IN TURF AREAS. USE BIO-ROLLS AS NEEDED IN PAVED AREAS FOR PHASING PURPOSES.
11. INSTALL & MAINTAIN INLET SEDIMENT PROTECTION.
12. INSTALL TEMPORARY ROCK ENTRANCE AT CONSTRUCTION INGRESS & EGRESS LOCATION(S) PRIOR TO EXCAVATION & TO BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. VERIFY LOCATION IN FIELD W/ P.M.
13. PROTECT EXISTING A/C UNIT
14. PROTECT EXISTING SEPTIC DRAIN FIELD. VERIFY EXTENTS OF DRAIN FIELD & ADJUST PROJECT LIMIT LINE AS NECESSARY.
15. REMOVE STAIRS
16. REMOVE & RELOCATE ELECTRICAL BOX PER ELECTRICAL PLANS.
17. REMOVE WATER VALVE.
18. REMOVE WATER MAIN & VALVES TO TEE. CAP LINE AT TEE.
19. REMOVE SIDEWALK
20. REMOVE AND REPLACE ROOFDRAIN
21. REPLACE DAMAGED CURB AND GUTTER AND SIDEWALK ONCE BLDG ADDITIONS ARE COMPLETE
22. PROTECT EXISTING SANITARY LINE. CAMERA BEFORE & AFTER TO VERIFY NO DAMAGE HAS OCCURED. CAMERA LENGTH TO STOP UNDER STREET.
23. REMOVE TREE & REPLACE. TYPE & LOCATION DETERMINED BY P.M.
24. APPROXIMATE GRAVE SITES. VERIFY CONSTRUCTION LIMITS W/ P.M. PRIOR TO WORK.
25. REMOVE GAS LINE TO OUTSIDE OF NEW BUILDING FOOTPRINT. INSTALL NEW LINE AS NECESSARY. FOLLOW MECHANICAL PLANS.

GENERAL NOTES:
1. UTILITY REMOVALS ARE BASED ON SURVEY INFORMATION, ASBUILT PLANS, AND GROUND PENETRATING RADAR SURVEY. UTILITY INFORMATION MAY BE INACCURATE AND INCOMPLETE. SHOULD CONTRACTOR ENCOUNTER UTILITIES NOT SHOWN, CONTRACTOR SHALL IMMEDIATELY CONTACT COR AND ENGINEER.
2. ALL UTILITIES NOT MARKED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE.
3. REMOVE AND RELOCATE ALL IRRIGATION LINES, HEADS, VALVES, BOXES, ETC. AS NECESSARY. REPLACE AS NECESSARY.

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DIAL 811
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Revisions:	Date:

CONSULTANTS

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REGISTERED PROFESSIONAL ENGINEER
REG. NO. 9172
ROBERT W. ANDERSON
SOUTH DAKOTA

Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title	DEMOLITION & SEDIMENT EROSION CONTROL PLAN
Phase	BID DOCUMENTS SUBMITTAL
Approved: Project Director	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10-31-22
Checked	ES
Drawn	JD
Project Number	884-CM-3015
Building Number	
Drawing Number	D-101
	7 OF 84

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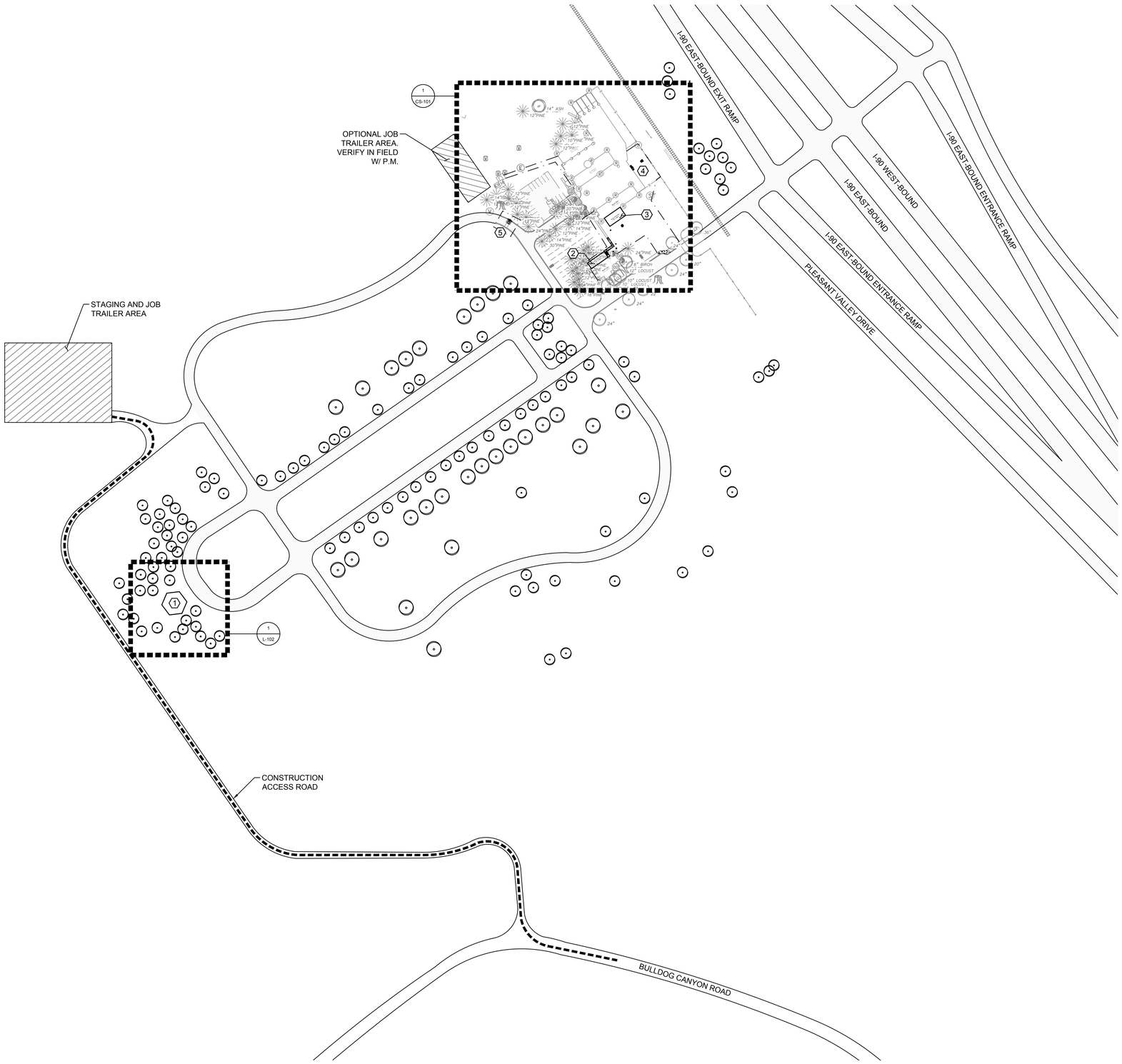

WORK ELEMENTS

1. COMMITTAL SHELTER SERVICE SEAL ADJUSTMENT
2. ADMINISTRATION BUILDING ADDITION
3. MAINTENANCE BUILDING ADDITION
4. NEW DRAINAGE STRUCTURE
5. CASTING REPLACEMENT

NOTES

1. RESTORE ALL DISTURBED TURF AREAS WITH SOD.
2. NEW TREE SPECIES AND LOCATION TO BE DETERMINED WITH P.M.

PHASING NOTES

1. SEE ARCHITECTURE FOR TEMPORARY TRAILER DETAILS/INFORMATION.
2. CONTRACTOR CAN PERFORM WORK ON BOTH BUILDINGS SIMULTANEOUSLY.
3. CONTRACTOR TO HAVE TEMPORARY TRAILERS INSTALLED & APPROVED FOR USE PRIOR TO MOVING STAFF.
4. CONTRACTOR TO NOTIFY NCA P.M. 14 DAYS PRIOR TO STAFF RELOCATION.
5. TIME LINE FOR TEMPORARY TRAILERS ESTIMATED AT 14 MONTHS FOR ADMIN AND 10 MONTHS FOR MAINTENANCE BUILDING WORK.
6. TRAILER LOCATION TO BE VERIFIED IN FIELD W/ P.M.
7. NEW DRAINAGE STRUCTURE WORK SHALL BE COMPLETED PRIOR TO PLACEMENT OF TEMPORARY TRAILERS.
8. COMMITTAL SHELTER WORK TO BE PERFORMED DURING WEEKENDS OR OTHER TIME APPROVED BY P.M.

LEGEND

SITE ACCESS & HAUL ROAD

1 SITE PLAN
SCALE: 1"=50'

N

0 100' 200'

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Revisions:	Date:

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SOUTH DAKOTA

Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title SITE & PHASING PLAN	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved: Project Director		**Location** STURGIS, SOUTH DAKOTA	**Building Number**
		Issue Date 10-31-22 / **Checked** -- / **Drawn** --	**Drawing Number** CS-100
			8 OF 84

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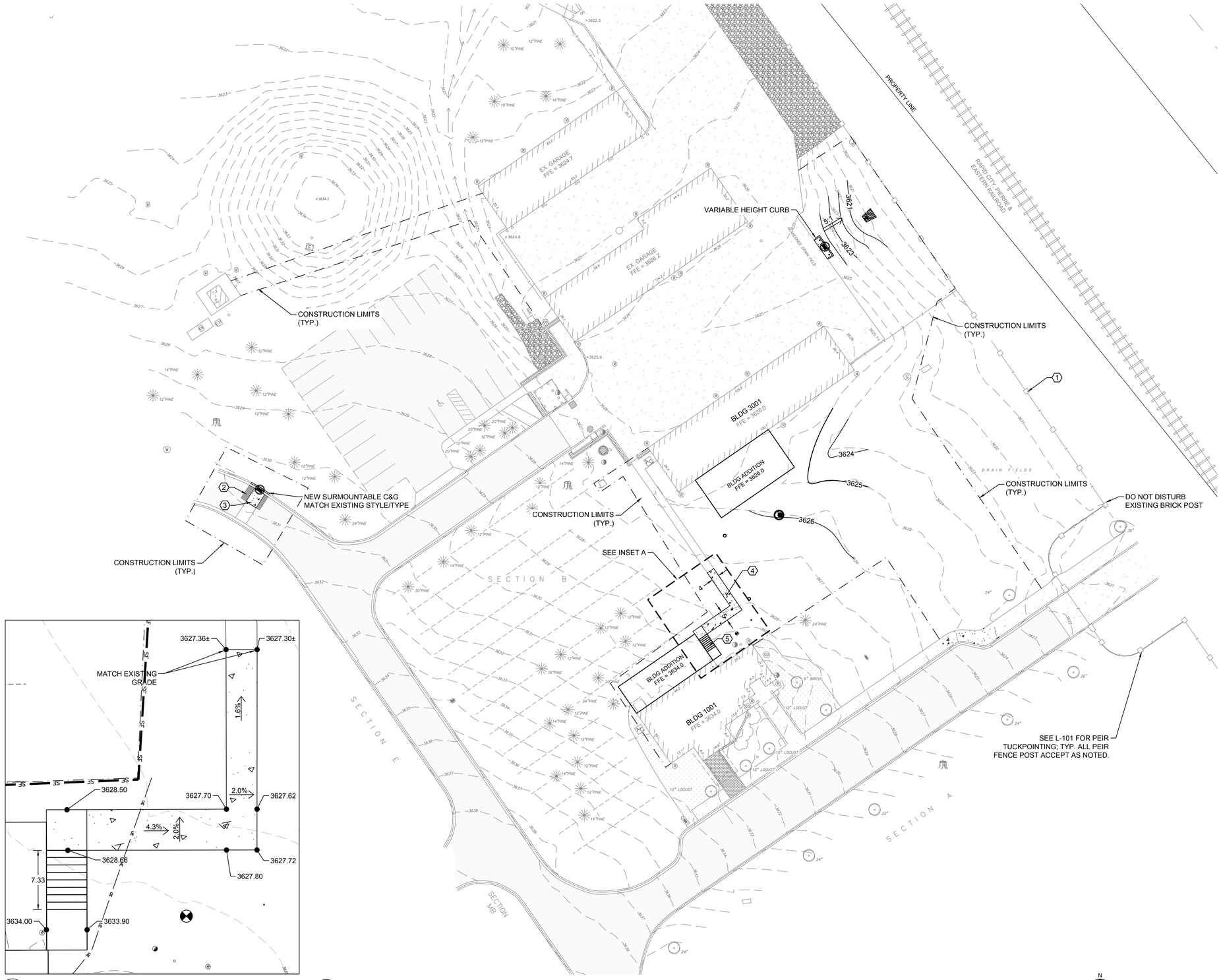

A CS-101 INSET A 1" = 5'

1 CS-101 GRADING PLAN 1" = 20'

0 5' 10'

0 20' 40'

LEGEND

- CONSTRUCTION LIMITS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED STORM INLETS
- NEW FES W/ TRASH GUARD & RIP-RAP
- PROPOSED SANITARY MANHOLE & CLEANOUT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONC. CURB & GUTTER
- DRAINAGE FLOW DIRECTION
- PROPOSED LANDSCAPE

KEYNOTES

1. SEE LANDSCAPE PLANS FOR STONE WORK
2. PROPOSED ASPHALT PAVEMENT
3. PROPOSED CONCRETE PAVEMENT
4. PROPOSED CONCRETE SIDEWALK
5. PROPOSED STAIR. SEE ARCHITECTURE FOR DETAILS.

GENERAL NOTES

1. RESTORE ALL DISTURBED TURF AREAS WITH SOD.
2. NEW TREE SPECIES AND LOCATION TO BE DETERMINED WITH C.O.R.

CALL 48 HOURS BEFORE DIGGING
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DIAL 811
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Revisions:	Date:

CONSULTANTS

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Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title GRADING PLAN	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
			Building Number
Approved: Project Director		**Location** STURGIS, SOUTH DAKOTA	**Drawing Number** CS-101
		Issue Date 10-31-22 / **Checked** -- / **Drawn** --	9 OF 84

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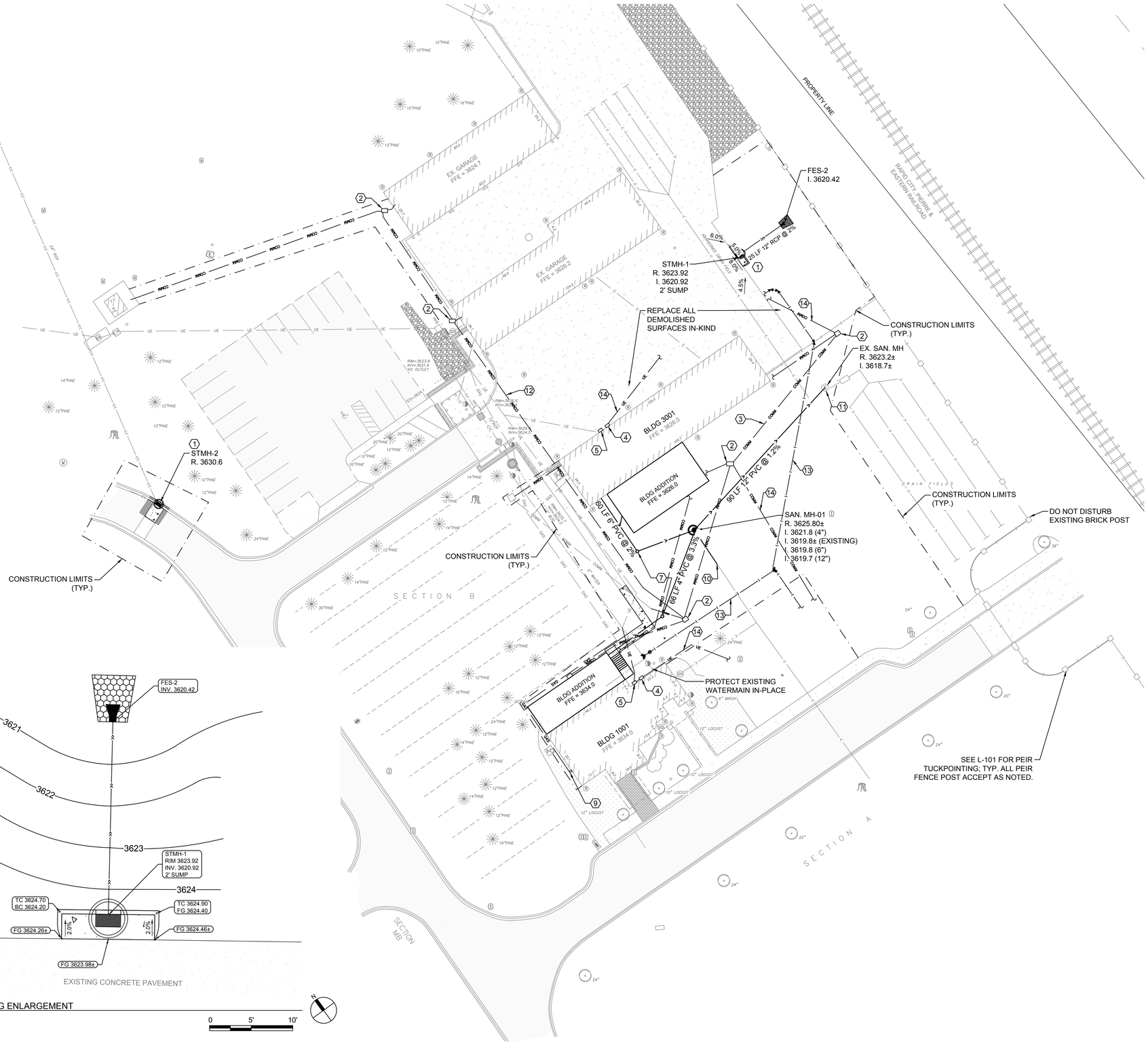

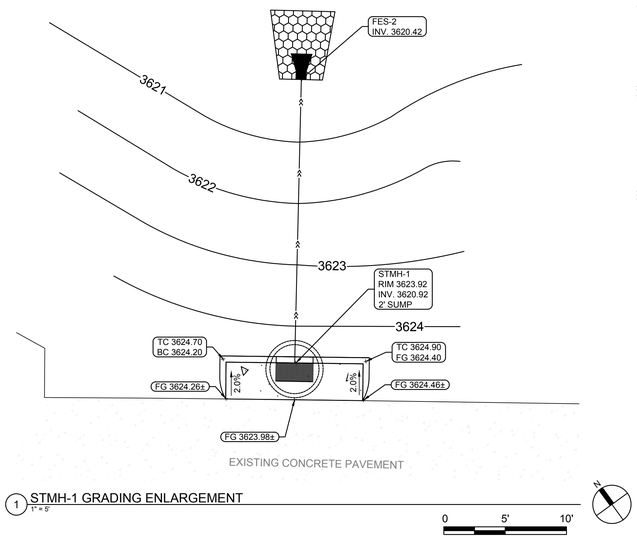

1 STMH-1 GRADING ENLARGEMENT
1" = 5'

0 5' 10'

LEGEND

- CONSTRUCTION LIMITS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED STORM INLETS
- FES W/ TRASH GUARD & RIP-RAP
- PROPOSED SANITARY MANHOLE & CLEANOUT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONC. CURB & GUTTER
- DRAINAGE FLOW DIRECTION
- NEW LANDSCAPE

KEYNOTES

1. INSTALL NEW STORM SEWER CASTING.
2. PROPOSED HAND HOLE. SEE ELECTRICAL
3. COMMUNICATION LINE REROUTE
4. PROPOSED DISCONNECT SWITCH FOR TEMPORARY TRAILER. SEE ELECTRICAL.
5. RELOCATED ELECTRICAL BOX. SEE ELECTRICAL.
6. N/A
7. INSTALL CLEANOUT & BEND
8. N/A
9. NEW GAS REGULATOR. SEE MECHANICAL DRAWINGS.
10. CONNECT TO EXISTING. VERIFY PIPE DEPTH IN FIELD. PIPE SIZE & MATERIAL UNKNOWN. MATCH EXISTING. INVERT ASSUMED TO BE 6FT± BASED ON NCA ASBUILTS. INVERTS LEAVING NEW ADDITION SHOULD BE 5FT (MIN). MAINTAIN 2% PIPE SLOPE FROM ADMIN TO NEW MANHOLE.
11. INSTALL NEW PIPE AT EXISTING OPENING. VERIFY INVERT ALLOWS PROPER FLOW AS SHOWN. NOTIFY P.M. & ENGINEER IF INVERT DOES NOT WORK WITH SHOWN ELEVATIONS PRIOR TO STARTING WORK. ADJUST INVERT AT ADMIN DEPENDING ON FIELD DEPTH OF CONNECTION POINT. NOTIFY P.M. & ENGINEER IF DEPTH IS LESS THAN 5FT±.
12. DIRECTIONALLY DRILL UTILITY LINE UNDER WALLS & PAVEMENT.
13. TEMPORARY WATER LINES FOR TRAILERS. REMOVE ONCE TRAILERS ARE GONE.
14. TEMPORARY COMMUNICATION/ELECTRIC LINES FOR TRAILERS. REMOVE ONCE TRAILERS ARE GONE.

STRUCTURE SCHEDULE

NAME	SIZE	CASTING (NEENAH OR EQUAL)
STMH-1	48"	R-3067-V
STMH-2		R-3501-P
SAN. MH-01	48"	R-1642

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Revisions:	Date:

CONSULTANTS

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SOUTH DAKOTA

Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title	UTILITY PLAN
Phase	BID DOCUMENTS SUBMITTAL
Approved: Project Director	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10-31-22
Checked	ES
Drawn	KA
Project Number	884-CM-3015
Building Number	
Drawing Number	CS-102
	10 OF 84

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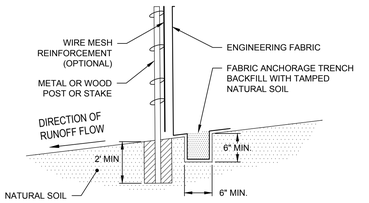
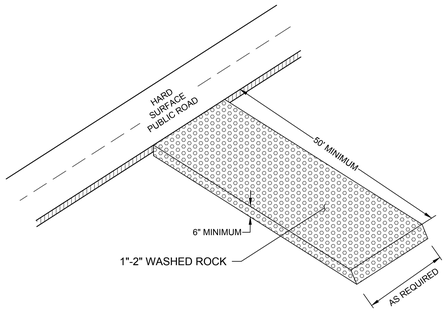
VA FORM 08 - 6231



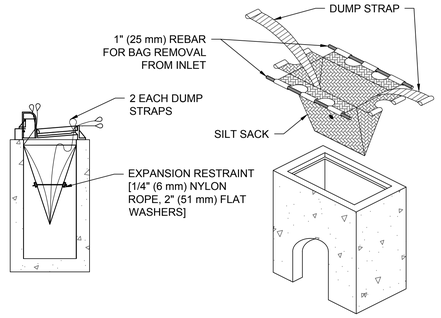
NOTE: DEPENDING UPON CONFIGURATION, ATTACH FABRIC TO WIRE MESH WITH HOG RINGS, STEEL POSTS WITH TIE WIRES, OR WOOD POSTS WITH STAPLES.

TYPICAL INSTALLATION

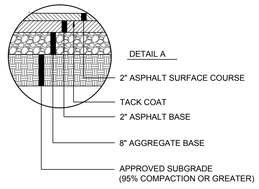
1 SILT FENCE DETAIL
NTS



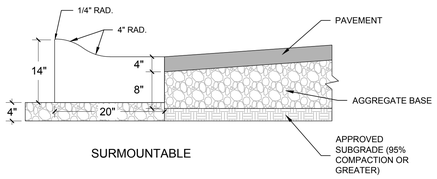
2 ROCK CONSTRUCTION ENTRANCE
NTS



3 INLET PROTECTION DETAIL
NTS

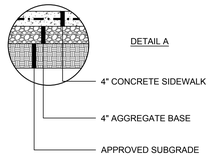


4 BITUMINOUS PAVEMENT SECTION
NTS

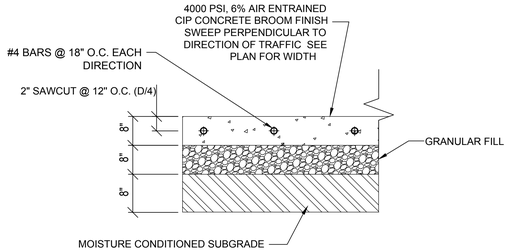


NOTES:
1. CROSS SLOPE OF GUTTER SAME AS PAVEMENT
2. CURB TYPE PER PLANS

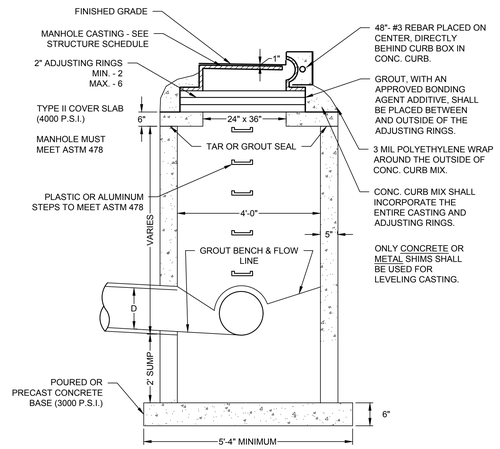
5 TYPICAL CONCRETE SURMOUNTABLE CURB
NTS



6 CONCRETE SIDEWALK SECTION
NTS

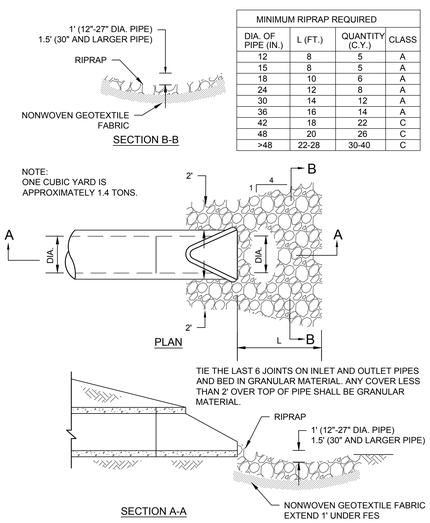


7 CONCRETE PAVEMENT SECTION
NTS

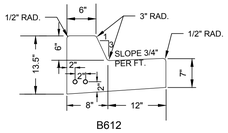


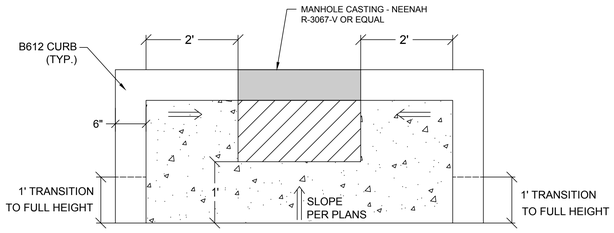
8 STANDARD CATCH BASIN W/ 2FT SUMP
NTS

MINIMUM RIPRAP REQUIRED			
DIA. OF PIPE (IN.)	L (FT.)	QUANTITY (C.Y.)	CLASS
12	8	5	A
15	8	5	A
18	10	6	A
24	12	8	A
30	14	12	A
36	16	14	A
42	18	22	C
48	20	26	C
>48	22-28	30-40	C

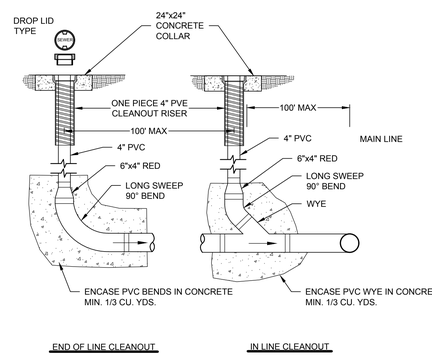


9 RIP-RAP FLARED END SECTION
NTS

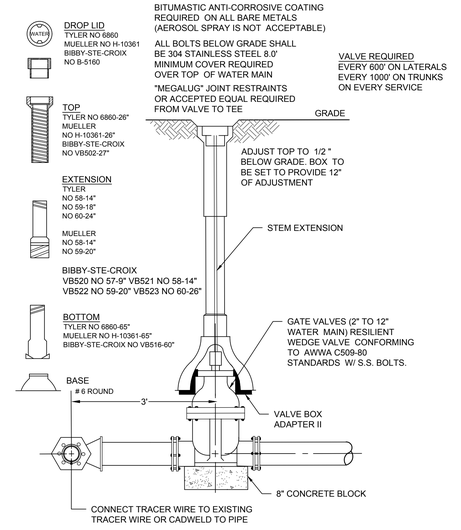




10 STMH-1
NTS



11 CLEANOUT
NTS



12 VALVE INSTALLATION
NTS

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — REG. NO. 9172 — ROBERT M. ANDERSON — SOUTH DAKOTA

Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title: SITE DETAILS	Phase: BID DOCUMENTS SUBMITTAL
Approved: Project Director	
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
Location: STURGIS, SOUTH DAKOTA	Building Number
Issue Date: 10-31-22 / Checked: ES / Drawn: JD	Drawing Number: CS-501
	11 OF 84

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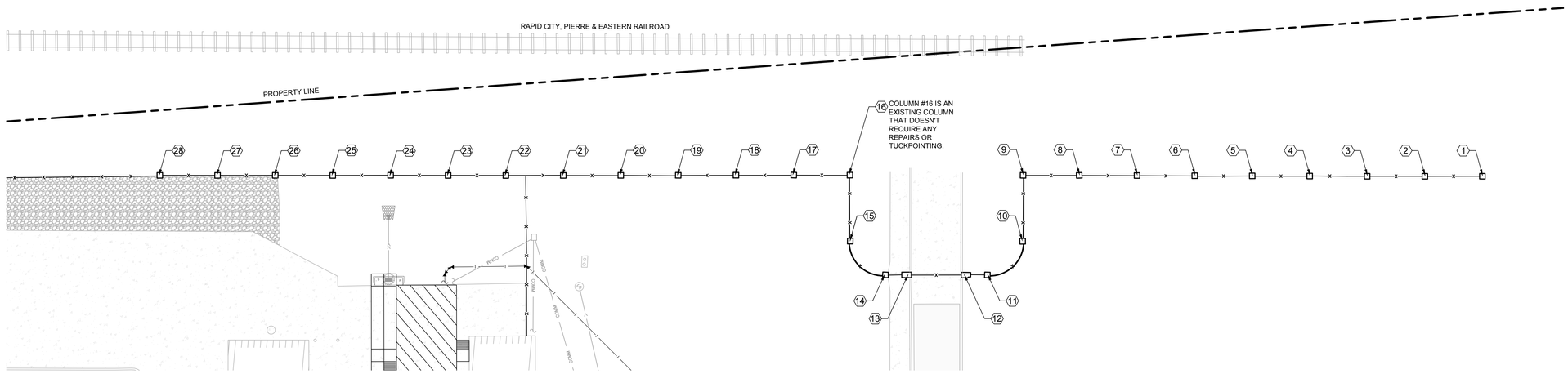


1 PERIMETER FENCE PIERS TUCKPOINTING

SCALE: 1" = 20' (30" x 42" PAPER SIZE)

0 20' 40' N

LEGEND

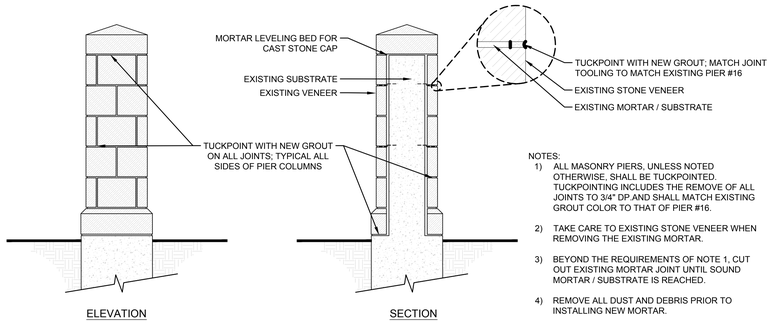
- PROPERTY LIMITS
- CONSTRUCTION LIMITS
- EXISTING FENCE
- EXISTING PIER
- (1) PIER ID

NOTES

1. COLUMN #16 IS AN EXISTING COLUMN THAT DOESN'T REQUIRE ANY REPAIRS OR TUCKPOINTING.
2. COLUMNS REQUIRE FULL TUCKPOINTED IS AS FOLLOWS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28.
3. COLUMN #16 WILL BE THE STANDARD FOR MATCHING ALL COLOR, TOOLING AND TEXTURE.
4. THE GOALS OF THIS TUCKPOINTING TASK IS TO REMOVE AND REPLACE MORTAR IN A WAY THAT WILL MAINTAIN THE STRUCTURAL PROPERTIES OF THE EXISTING FENCE PIERS AND IMPROVE THE APPEARANCE AND FORM WATER TIGHT JOINTS.
5. TUCKPOINTING FENCE PIERS INCLUDES: REMOVAL OF ALL EXISTING MORTAR IN ALL JOINTS TO A MINIMUM DEPTH OF ¾".
6. ALL MORTAR JOINTS SHALL BE REPLACED WITH NEW TO MATCH THAT OF PIER #16.
7. ONCE REPAIRS ARE STARTED, NCA REPRESENTATIVES WILL REVIEW TO ENSURE COLOR, TEXTURE AND FINISH ARE ACCEPTABLE AND MATCH RECENTLY INSTALLED MORTAR AND SEALANT AT PIER #16.
8. ANY DAMAGED STONE SHALL BE REPLACED NEW OR RESET IF ACCEPTABLE TO NCA REPRESENTATIVES. STONE SHALL MATCH THAT OF EXISTING PIER #16.

2 EXISTING COLUMN #16

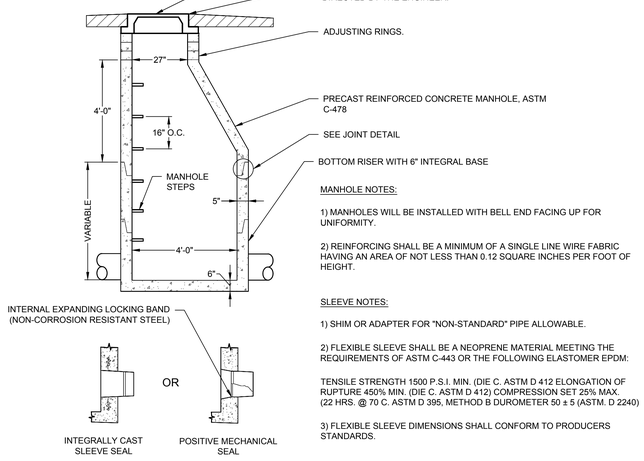
SCALE: N.T.S. (30" x 42" PAPER SIZE)



NOTES:
1) ALL MASONRY PIERS, UNLESS NOTED OTHERWISE, SHALL BE TUCKPOINTED. TUCKPOINTING INCLUDES THE REMOVE OF ALL JOINTS TO 3/4" DP.AND SHALL MATCH EXISTING GROUT COLOR TO THAT OF PIER #16.
2) TAKE CARE TO EXISTING STONE VENEER WHEN REMOVING THE EXISTING MORTAR.
3) BEYOND THE REQUIREMENTS OF NOTE 1, CUT OUT EXISTING MORTAR JOINT UNTIL SOUND MORTAR / SUBSTRATE IS REACHED.
4) REMOVE ALL DUST AND DEBRIS PRIOR TO INSTALLING NEW MORTAR.

3 TYPICAL FENCE PIER TUCKPOINTING DETAIL

SCALE: 1/2" = 1' (30" x 42" PAPER SIZE)



MANHOLE NOTES:

1) MANHOLES WILL BE INSTALLED WITH BELL END FACING UP FOR UNIFORMITY.

2) REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQUARE INCHES PER FOOT OF HEIGHT.

SLEEVE NOTES:

1) SHIM OR ADAPTER FOR "NON-STANDARD" PIPE ALLOWABLE.

2) FLEXIBLE SLEEVE SHALL BE A NEOPRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM C-443 OR THE FOLLOWING ELASTOMER EPDM:

TENSILE STRENGTH 1500 P.S.I. MIN. (DIE C. ASTM D 412 ELONGATION OF RUPTURE 450% MIN. (DIE C. ASTM D 412) COMPRESSION SET 25% MAX. (22 HRS. @ 70 C. ASTM D 395, METHOD B DUROMETER 50 ± 5 (ASTM. D 2240)

3) FLEXIBLE SLEEVE DIMENSIONS SHALL CONFORM TO PRODUCERS STANDARDS.

4 SANITARY MANHOLE

SCALE:NTS

Revisions:	Date:

CONSULTANTS

MECHANICAL, ELECTRICAL, TECHNOLOGY & STRUCTURAL	GEOTECHNICAL	COST ESTIMATING
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REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT — REG. NO. 13908 — SCOTT M. CASEY — SOUTH DAKOTA

Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title PERIMETER FENCE PIERS TUCKPOINTING	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved: Project Director		**Location** STURGIS, SOUTH DAKOTA	**Building Number**
		Issue Date 10-31-22 / **Checked** CC / **Drawn** JF	**Drawing Number** L-101
			12 OF 84

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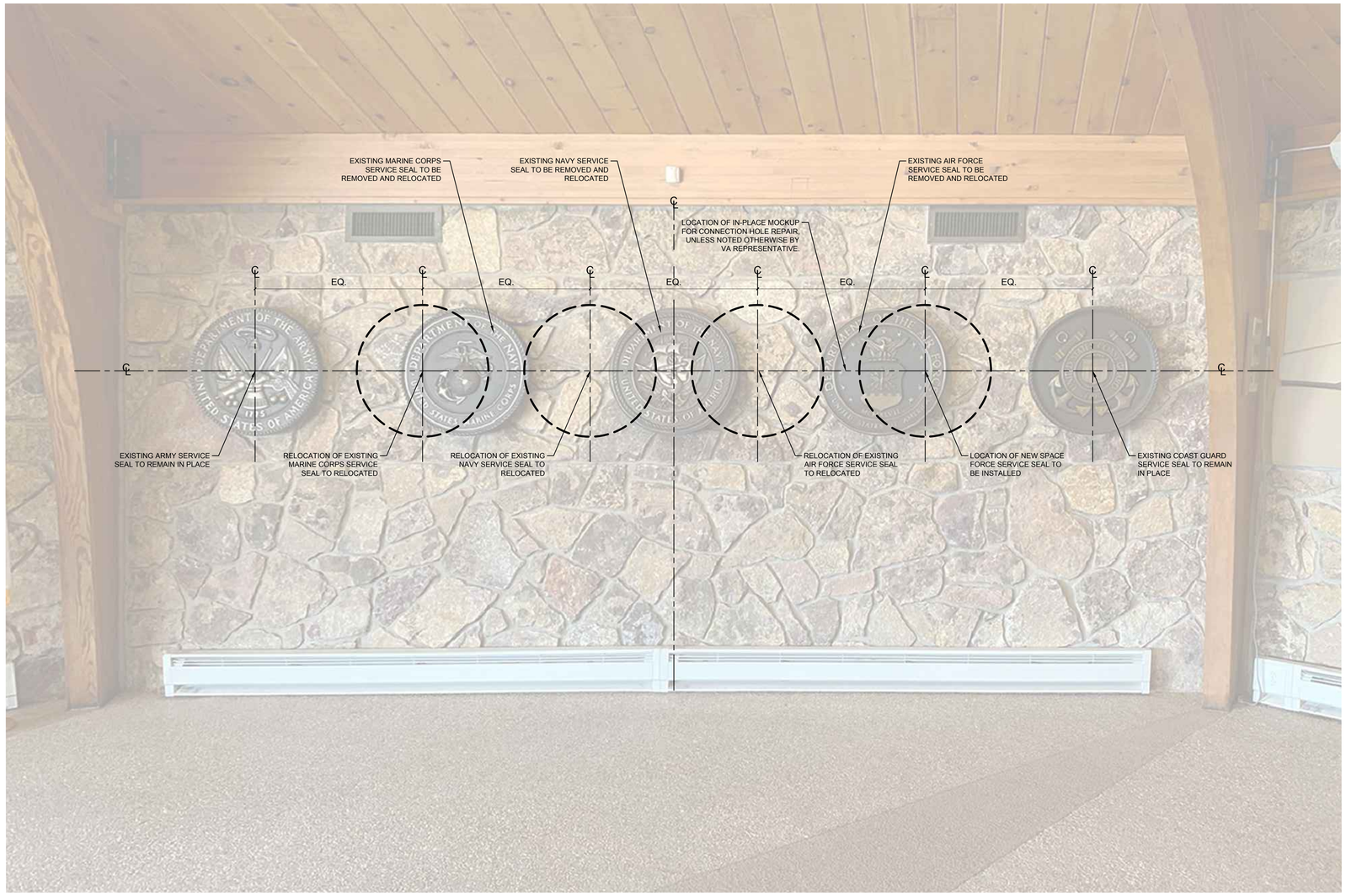
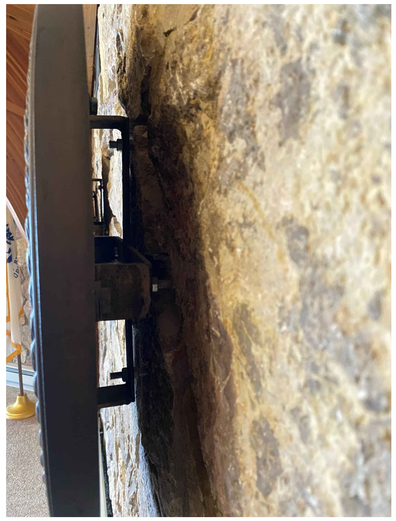


1 SERVICE SEALS
SCALE:N.T.S. (30" x 42" PAPER SIZE)

GENERAL NOTES

1. ARMY SEAL & COAST GUARD SEAL TO REMAIN IN PLACE.
2. REMOVE & SALVAGE EXISTING (3) SEALS AS FOLLOWS: MARINE CORPS, NAVY & AIR FORCE SEALS.
3. CLEAN STONE PRIOR TO SEAL INSTALLATION. REPAIR CONNECTION HOLES AND REMOVE DEBRIS PRIOR TO REINSTALLATION OF THE SERVICE SEALS AT THE NEW LOCATIONS PER THE PLAN.
   - 3.1. PROVIDE AN IN-PLACE MOCK-UP OF THE CONNECTION ATTACHMENT REPAIR WORK FOR NCA APPROVAL BEFORE CONTINUING WORK. MOCK-UP LOCATION TO BE PROVIDED IN STONE VENEER FOR APPROVAL, NOT IN GROUT.
     - 3.1.1. SHOULD REPAIR/PATCHING OF CONNECTION HOLE NOT PROVIDE QUALITY ACCEPTABLE TO NCA THEN INDIVIDUAL STONE VENEER REPLACEMENT OR SECTION OF STONE VENEER REPLACEMENT MAY NEED TO TAKE PLACE TO ENSURE QUALITY IS BEING MET AND THAT THE VISUAL APPEARANCE OF THE CONNECTION HOLE IS ELIMINATED. SHOULD STONE VENEER NEED TO BE REPLACED THEN TEXTURE, COLOR AND THE LIKES TO MATCH TO EXISTING.
4. INSTALL SEALS IN NEW LOCATION AS SHOWN ON PLAN.
5. ORDER OF SEALS (LEFT TO RIGHT): ARMY, MARINE CORPS, NAVY, AIR FORCE, SPACE FORCE, COST GUARD.



NOTE:

1. CONNECTION HOLE REPAIR WORK SHALL MATCH IN COLOR, TEXTURE & APPEARANCE TO THE ADJOINING MORTAR OR STONE VENEER .
2. ALL CONNECTION HOLES FROM THE EXISTING SEAL INSTALLATIONS SHALL BE REPAIRED TO MATCH ADJACENT STONE IN APPEARANCE AND STRUCTURAL INTEGRITY.
3. ONCE REPAIRS ARE STARTED, NCA REPRESENTATIVES WILL REVIEW TO ENSURE COLOR, TEXTURE AND FINISH ARE ACCEPTABLE AND MATCH ADJOINING MATERIAL.
4. ANY DAMAGED STONE SHALL BE REPLACED NEW OR RESET IF ACCEPTABLE TO NCA REPRESENTATIVES. STONE SHALL MATCH THAT OF EXISTING STONE.

2 EXISTING SEAL / WALL CONNECTION TO BE REPAIRED, TYP.
SCALE:N.T.S. (30" x 42" PAPER SIZE)

Revisions:	Date:

CONSULTANTS

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REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT — REG. NO. 13908 — STATE OF SOUTH DAKOTA

Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title SERVICE SEALS	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved: Project Director			**Building Number**
		Location STURGIS, SOUTH DAKOTA	**Drawing Number** L-102
		Issue Date 10-31-22 / **Checked** CC / **Drawn** JF	13 OF 84

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DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:
   IBC 2021 AND IEBC 2021
   ASCE 7-16
   ACI 318-19
   AISC 360-16
   AWS D1.1
   NDS-18 AND SDPWS-21
2. RISK CATEGORY II
3. SUPERIMPOSED LOADS ARE LISTED ON PLANS.
4. LIVE LOADS:

TYPICAL ROOF	20 PSF (REDUCIBLE)
TYPICAL FLOOR	50 PSF (REDUCIBLE)
MECHANICAL	150 PSF (UNREDUCIBLE)
CORRIDORS, STAIRS & PUBLIC AREAS	100 PSF (UNREDUCIBLE)
PARTITION LOAD	20 PSF (UNREDUCIBLE)

5. SNOW:

GROUND SNOW	40 PSF
SNOW EXPOSURE FACTOR	0.9
THERMAL FACTOR	1.0
IMPORTANCE FACTOR	1.0
FLAT-ROOF SNOW	25.2 PSF
DESIGN SNOW	SEE TRUSS DIAGRAMS

6. SEISMIC:

SEISMIC DESIGN CATEGORY	A
IMPORTANCE FACTOR	1.0
SOIL CLASS	C
Ss	0.125 g
S1	0.040 g
Sds	0.108 g
Sd1	0.040 g
SEISMIC FORCE RESISTING SYSTEM	LIGHT FRAMED WOOD WALLS SHEATHED WITH STRUCTURAL WOOD PANELS
R	6.5
ANALYSIS PROCEDURE	GENERAL STRUCTURAL INTEGRITY
DESIGN BASE SHEAR, STRENGTH LEVEL	V = Cs x W = 0.01 x W

7. WIND:

BASIC WIND SPEED	V ULT = 115 MPH
IMPORTANCE FACTOR	1.0
EXPOSURE CLASS	C
WIND PRESSURE, STRENGTH LEVEL	30 PSF

8. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY SHEAR WALLS IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE ROOF SHEATHING SERVES AS HORIZONTAL DIAPHRAGM DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER, ARCHITECT, OR STRUCTURAL ENGINEER OF RECORD (SEOR).
3. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO CONSTRUCTION, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL SO CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
11. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.

EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:
   a. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS DATED 30 JUNE 1972 BY U.S. CORPS OF ENGINEERS.
   b. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
   c. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT OR STRUCTURAL ENGINEER SO PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
2. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY SO AS TO NOT DAMAGE EXISTING ELEMENTS WHICH ARE TO REMAIN.
3. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. EXISTING ELEMENTS ARE TO BE PROTECTED TO THE FULLEST EXTENT POSSIBLE TO REDUCE SUCH DAMAGE TO A MINIMUM.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT DATED FEBRUARY 8, 2022 BY AMERICAN ENGINEERING TESTING. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES PER THE GEOTECHNICAL REPORT:
   ALLOWABLE NET SOIL BEARING PRESSURE:

FOOTINGS	1500 PSF
FROST DEPTH	4 FT

3. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED.
4. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. SHORING IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN.
5. CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
6. ALL FOOTINGS AND SLABS ON GRADE SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL, REMOVING ANY EXISTING FILL, ORGANIC MATERIAL, OR UNSUITABLE SOILS, AS RECOMMENDED BY THE GEOTECHNICAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
7. FOUNDATION ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH WHERE AN ADEQUATE SOIL BEARING PRESSURE IS EXPECTED. FOOTINGS, PIERS AND/OR WALLS SHALL BE LOWERED OR EXTENDED AS REQUIRED TO REACH SOIL MEETING THE DESIGN BEARING PRESSURE.
8. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN 8" LAYERS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND TO THE APPROVAL OF THE INSPECTION AGENCY.
9. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
10. ANY REQUIRED IMPORT FILL SOIL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL" (SP-066) EXCEPT AS OTHERWISE SHOWN, NOTED OR SPECIFIED.
2. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

DEFORMED BARS	ASTM A615, GR 60	Fy = 60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy = 65 KSI

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
#6 BARS OR LARGER	2"
#5 BARS OR SMALLER	1 1/2"

4. BAR SPLICES SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS. ALL SPLICES SHALL BE CLASS "B" AS DEFINED IN ACI 318. IF SPLICE LENGTH IS NOT GIVEN ON THE DRAWINGS, PROVIDE LAP LENGTH (IN INCHES) AS FOLLOWS:

	3000 PSI CONCRETE		4000 PSI CONCRETE	
BAR SIZE	**OTHER**	**TOP**	**OTHER**	**TOP**
#3	29	38	25	33
#4	36	47	31	41
#5	43	56	37	49
#6	63	81	54	71
#7	72	93	62	81

LAP LENGTHS ASSUME CLEAR SPACING BETWEEN BARS OF 2 BAR DIAMETERS, AND A MINIMUM COVER OF 1 BAR DIAMETER. FOR DEVELOPMENT LENGTHS, DIVIDE BY 1.3. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 1'-0" OF FRESH CONCRETE BELOW.

5. SUPPORTS FOR REINFORCEMENT SHALL HAVE CLASS 2 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
6. ALL WELDED WIRE REINFORCING (WWR) SHALL BE LAPPED 2 PANELS AT EDGES AND ENDS.
7. DOWELS BETWEEN FOOTINGS AND WALLS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND SPACING OF WALL OR COLUMN REINFORCEMENT. EXTEND DOWELS A LAP SPLICE LENGTH INTO WALL OR COLUMN AND TERMINATE WITH STANDARD HOOK AT BOTTOM OF FOOTING, UNLESS OTHERWISE NOTED.
8. CUTTING OF REINFORCING WHICH CONFLICTS WITH EMBEDDED OBJECTS OR SLEEVES IS NOT ACCEPTABLE.
9. REINFORCING BARS SHALL BE BENT COLD, AND NO METHOD OF FABRICATION SHALL BE USED WHICH WOULD BE INJURIOUS TO THE MATERIAL. HEATING OF BARS FOR BENDING IS NOT PERMITTED.
10. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE CORRESPONDING EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 117, ACI 301, ACI 305.1, ACI 306.1, ACI 308.1, ACI 318 AND SP-066, UNLESS OTHERWISE NOTED.
2. CONCRETE MATERIALS SHALL CONFORM TO:

CEMENT	ASTM C150, TYPE I OR II
FLY ASH	ASTM C618, TYPE C OR F
FINE AND COARSE AGGREGATE	ASTM C33
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

CONCRETE STRENGTHS SHALL CONFORM TO:

INTENDED USE	STRENGTH (PSI)	EXPOSURE CLASS
FOOTINGS	3000	N/A
FOUNDATION WALLS	4000	N/A
SLAB ON GRADE	4000	N/A
UNLESS OTHERWISE NOTED	4000	N/A

NORMAL-WEIGHT 28-DAY STRENGTH UNLESS OTHERWISE NOTED.

3. SLAB-ON-GRADE CONSTRUCTION: LOCATE SAW-CUT CONTROL JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW, UNLESS OTHERWISE NOTED. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5:1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR SPECIAL CASES.

THICKNESS (IN)	MAXIMUM JOINT SPACING EACH WAY (FT)
4	12

4. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ENSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, AND EDGES OF WALLS/FOUNDATIONS PRIOR TO PLACING CONCRETE.
5. UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS.
6. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.
7. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL PENETRATIONS THROUGH CONCRETE BEFORE PLACING. SECURE SLEEVES TO PREVENT MOVEMENT DURING PLACING OPERATIONS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS.
8. CONFIRM WITH ARCHITECT THAT MATERIALS TO BE EMBEDDED ARE SUITABLE FOR EMBEDMENT IN CONCRETE.
9. INTERNALLY VIBRATE ALL CAST-IN-PLACE CONCRETE.
10. CONCRETE SHALL NOT BE PERMITTED TO DROP MORE THAN 5 FEET.
11. IF CONCRETE IS PLACED BY PUMPING, SUPPORT SHALL BE PROVIDED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING AND OTHER EMBEDDED ITEMS.
12. THE DESIGN AND ENGINEERING OF FORMWORK, SHORING AND RESHORING, AS WELL AS THEIR CONSTRUCTION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
13. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
14. NO CONCRETE SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST, ICE OR SNOW.
15. DURING WINTER CONSTRUCTION, ALL FOOTINGS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL THE BUILDING IS ENCLOSED AND TEMPORARY HEAT IS PROVIDED.

LINTELS

1. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION. LINTELS ARE NOT REQUIRED OVER OPENINGS 12" WIDE OR LESS THAT IS AT LEAST 1 COURSE BELOW THE BOND BEAM AT THE TOP OF WALL.
2. PENETRATIONS NOT IDENTIFIED ON THE DOCUMENTS ARE TO BE TREATED IN A MANNER SIMILAR TO THE IDENTIFIED LOCATIONS.
3. LINTELS IN NON-BEARING WALLS AND BRICK VENEER SHALL BE SIZED PER THE FOLLOW**SPAN, L**

STEEL OPTION (FOR EA 4" OF MASONRY) *
L3 1/2x3 1/2x1/4
L4x3 1/2x5/16 (LLV)
L5x3 1/2x5/16 (LLV)
L6x3 1/2x3/8 (LLV)

*ALL ANGLES THAT ARE BACK-TO-BACK SHALL BE WELDED TOP AND BOTTOM 3" @ 12" OC MINIMUM.

4. ALL LINTELS SHALL HAVE A MINIMUM OF 8" END BEARING AND DO NOT REQUIRE BEARING PLATES, UNLESS OTHERWISE NOTED.
5. ALL STEEL LINTELS IN EXTERIOR WALL CONSTRUCTION SHALL BE HOT-DIP GALVANIZED UNLESS OTHERWISE NOTED.

STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

ANGLES	ASTM A36	Fy = 36 KSI
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

3. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
4. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING CALLED FOR. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
5. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO BE MADE.
6. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.

WOOD

1. STRUCTURAL SHEATHING
   A. ALL PANELS TO BE PLYWOOD OF MINIMUM 5 PLY CONSTRUCTION. EACH PANEL SHALL BEAR THE QUALITY TRADEMARK STAMP OF THE AMERICAN PLYWOOD ASSOCIATION (APA).
   B. ROOFS:
      i. GRADE:
         a. 3/4", "C-D", GROUP 1, SPAN INDEX 40/20, EXPOSURE 1
      ii. PANEL EDGE SUPPORT SHALL BE EITHER TONGUE-AND-GROOVE EDGE, PANEL EDGE CLIP MIDWAY BETWEEN SUPPORTS, OR LUMBER BLOCKING (MIN 2x4 SIZE).
   C. FLOORS:
      i. GRADE:
         a. 3/4", "C-D", GROUP 1, SPAN INDEX 48/24, EXPOSURE 1
      ii. FLOORS SHALL BE NAILED AND GLUED PER APA GLUED FLOOR SYSTEM REQUIREMENTS. THE GLUE SHALL CONFORM TO PERFORMANCE SPECIFICATION ASTM D3498. FOLLOW MANUFACTURER'S SPECIFIC APPLICATION RECOMMENDATIONS.
   D. WALLS:
      i. SEE ARCHITECTURAL DRAWINGS FOR TYPICAL WALL SHEATHING, UNLESS OTHERWISE NOTED. SEE PLANS FOR SHEAR WALL SHEATHING.
   E. MINIMUM NAILING REQUIREMENTS UNLESS OTHERWISE NOTED:
      i. ROOF:
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
            3) BOUNDARY AND SHEAR COLLECTORS @ 6" OC
      ii. FLOOR:
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
            3) SHEAR COLLECTORS @ 2" OC
      iii. WALL (AT SHEAR WALL, PROVIDE NAILING PER SCHEDULE OR MINIMUM LISTED BELOW):
         a. NAIL SIZE: USE 0.131" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
      iv. PROVIDE MINIMUM 2x SOLID BLOCKING AT PANEL EDGES OF WALL SHEATHING WHERE REQUIRED BY SHEAR WALL SCHEDULE OR AT PANEL EDGES OF ROOF/FLOOR SHEATHING WHERE REQUIRED ON PLAN.
      v. SHEATHING FASTENERS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE FACE PLY.
      vi. HOT-DIP GALVANIZED NAILS SHALL BE USED WHEN NAILING TO PRESSURE TREATED MEMBERS.
   F. PANEL LAYOUT:
      i. LONG DIMENSION OF PANEL TO BE PERPENDICULAR TO FRAMING MEMBERS, EXCEPT PANELS AT WALLS MAY BE INSTALLED WITH LONG DIMENSION PARALLEL TO STUDS UNLESS OTHERWISE NOTED.
      ii. END JOINTS IN ADJACENT RUNS SHALL BE STAGGERED 4 FEET.
      iii. MINIMUM PANEL WIDTH SHALL BE 12".
      iv. EDGES OF ALL PANELS LESS THAN 24" WIDE SHALL BE BACKED BY BLOCKING (MIN 2x4 SIZE).
      v. PROVIDE 1/8" GAP AT ALL SHEATHING JOINTS FOR FLOORS AND WALLS UNLESS OTHERWISE NOTED ON PLAN OR DETAILS.
   G. IF SHEATHING PANELS EXHIBIT SWELLING, NAIL HEAD PULL-THROUGH, SOFT SPOTS OR OTHER CONDITIONS WHEREBY REDUCING THE STRUCTURAL CAPACITY, REMOVE AND REPLACE.
2. LUMBER:
   A. COMPLY WITH ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
   B. ALL FRAMING LUMBER SHALL BE SPRUCE PINE FIR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:

2" THICK - 4" TO 6" WIDE (WALL STUD ONLY)	NO. 2 Fb = 875 PSI, E = 1,400,000 PSI
2" TO 4" THICK - 6" AND WIDER	NO. 2 Fb = 875 PSI, E = 1,400,000 PSI
5" THICK - 5" AND WIDER	NO. 1 Fb = 900 PSI, E = 1,300,000 PSI

   C. ALL LUMBER STRESSES SHOWN ABOVE ARE FOR VISUALLY STRESS-RATED LUMBER USED AT MAXIMUM MOISTURE CONTENT WHEN BUILDING IS ENCLOSED, SINGLE MEMBER USE. ALL LUMBER SHALL BE GRADE MARKED.
   D. PROVIDE A MINIMUM OF 1 1/2" JOIST BEARING UNLESS OTHERWISE NOTED.
   E. NOTCHING OR DRILLING HOLES IN LUMBER FRAMING MEMBERS MUST BE AS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
3. MANUFACTURED WOOD PRODUCTS:
   A. WOOD I-JOISTS
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. JOISTS BY OTHER MANUFACTURERS MAY BE USED PROVIDED THEY HAVE THE SAME DEPTH AND EQUIVALENT ICC APPROVED LOAD CAPACITIES AND STIFFNESS. SUBMIT SUBSTITUTION REQUEST FOR STRUCTURAL ENGINEER APPROVAL.
   B. LAMINATED VENEER LUMBER (LVL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:

MODULUS OF ELASTICITY, E	2000 KSI
BENDING STRENGTH, Fb	2900 PSI
SHEAR STRENGTH, Fv	285 PSI

   C. NOTCHING OR DRILLING HOLES IN MANUFACTURED WOOD PRODUCTS THAT ARE DIFFERENT FROM THE MANUFACTURER'S GUIDELINES MUST BE AS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
   D. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION PER DETAILED INSTALLATION RECOMMENDATIONS AND GUIDELINES OF THE MANUFACTURER.
   E. NAILING INTO THE SIDE FACE OF AN I-JOIST TOP/BOTTOM CHORD IS NOT PERMITTED.
   F. PROVIDE SLOPED SEAT HANGERS FOR SLOPING I-JOIST INSTALLATIONS.
   G. ALL HANGERS SELECTED SHALL MATCH THE SIZE OF SUPPORTED MEMBER AND SHALL HAVE FULL NAILING AS SHOWN IN THE ICC REPORT.
   H. SUBSTITUTIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER AND HAVE ICC APPROVED LOAD CAPACITIES EQUAL TO OR GREATER THAN THE SIMPSON STRONG-TIE CONNECTORS.
   I. SIMPSON HANGERS AT PRESSURE TREATED MEMBERS SHALL HAVE ZMAX COATING.
   J. SEE ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR MATERIAL TYPES AND FINISHES.
   K. PROVIDE STANDARD CAMBERS FOR ALL ROOF BEAMS AND PURLINS UNLESS OTHERWISE NOTED.
   L. SEE MANUFACTURER REQUIREMENTS FOR MINIMUM BEARING LENGTHS.
4. FASTENING:
   A. ALL NAILS SHALL BE COMMON WIRE NAILS. AT ALL EXPOSED NAILING TO WEATHER OR INSTALLED IN PRESSURE TREATED WOOD (E.G.-DECKING & SIDING), USE HOT-DIP GALVANIZED NAILS. USE OF PLASTIC COATED OR CASING NAILS IS NOT ALLOWED. NAIL DESIGNATIONS SHALL MEET THE FOLLOWING LENGTHS AND DIAMETERS:
      i. 6d - 2" x 0.113"
      ii. 8d - 2 1/2" x 0.131"
      iii. 10d - 3" x 0.148"
      iv. 12d - 3 1/4" x 0.148"
      v. 16d - 3 1/2" x 0.162"
      vi. 20d - 4" x 0.192"
   B. THE NAILING SCHEDULE AND STRUCTURAL DETAILS ARE BASED ON THE USAGE OF "COMMON" WIRE NAILS EXCEPT THAT 16d "SINKER" NAILS (3 1/4" x 0.148") MAY BE USED WHERE 16d IS SPECIFIED. IF GUN NAILS ARE USED, THE CONTRACTOR SHALL SUBMIT NAIL DATA FOR REVIEW PRIOR TO BEGINNING CONSTRUCTION.
   C. THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THE FOLLOWING SCHEDULE:

CONNECTION	**FASTENING**
JOIST TO SILL TOP PLATE OR GIRDER	(3) 8d TOENAILS
BRIDGING OR BLOCKING BETWEEN JOISTS OR TRUSSES NOT AT WALL TOP PLATE	(2) 8d TOENAILS, EACH END OR (2) 16d END NAILS
SILL PLATE TO JOIST, RIM JOIST OR BLOCKING	16d @ 16" OC, FACE NAIL
TOP PLATE TO STUD AND STUD TO SILL	(2) 16d END NAILS FOR 2x (3) 16d END NAILS FOR 3x
2x STUD TO TOP OR SILL PLATE	(4) 8d TOENAILS OR (2) 16d END NAILS
3x STUD TO SOLE PLATE	(6) 8d TOENAILS OR (3) 16d END NAILS
STUD TO STUD	16d @ 24" OC, FACE NAIL
DOUBLE TOP PLATES	16d @ 16" OC, FACE NAIL
DOUBLE TOP PLATES, LAP SPLICE	(12) 16d EACH SIDE OF SPLICE
BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE	(3) 8d TOENAILS
RIM JOIST TO TOP PLATE OR FRAMING BELOW	8d @ 6" OC, TOENAIL
JOIST TO RIM JOIST	(3) 16d END NAILS
TOP PLATE LAPS AT CORNERS AND INTERSECTIONS	(2) 16d, FACE NAIL
BUILT-UP HEADER	16d @ 16" OC ALONG EACH EDGE
CEILING JOIST TO TOP PLATE	(3) 8d TOENAILS
CONTINUOUS HEADER TO STUD	(4) 8d, TOENAIL
CEILING JOIST, LAPS OVER PARTITIONS	(3) 16d FACE NAILS
CEILING JOISTS TO PARALLEL RAFTERS	SEE TABLE 2308.7.3.1
RAFTER OR ROOF TRUSS TO PLATE	(3) 10d TOENAILS
BUILT-UP CORNER STUDS	16d @ 24" OC
BUILT-UP GIRDER AND BEAMS, 2x LUMBER LAYERS	20d FACE NAILS @ 32" OC ALONG T&B, STAGGERED OPPOSITE SIDES, AND (2) 20d AT ENDS AND AT EACH SPLICE
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d @ 16" OC, FACE NAIL
MULTI-PLY LAMINATED VENEER LUMBER (LVL)	SEE PLAN

   D. PILOT HOLES SHALL BE PROVIDED FOR ALL NAILS 20d AND LARGER. PILOT HOLES SHALL HAVE A DIAMETER OF APPROXIMATELY 75% OF THE NAIL SHANK DIAMETER.
   E. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION AND THE APPROVAL OF THE ARCHIT

TESTING, INSPECTIONS, AND OBSERVATIONS

1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
   a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
   b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
   c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
   d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
   a. POST-INSTALLED ANCHORS - INSPECTION
5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
CONCRETE CONSTRUCTION				
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT		X	ACI 318: CH 20, 25.2, 25.3, 26.2.1-26.6.3	1908.4
2. MATERIAL IDENTIFICATION OF REINFORCING (TYPE/GRADE)		X		
3. REINFORCING STEEL HAS NOT BEEN REBENT IN THE FIELD		X		
4. REINFORCING STEEL HAS BEEN TIED AND SUPPORTED AS REQUIRED		X		
5. REINFORCING STEEL CLEARANCES HAVE BEEN PROVIDED		X		
6. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
7. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 7.a		X	ACI 318: 17.8.2	
8. VERIFY USE OF REQUIRED DESIGN MIX		X	ACI 318: CH 19, 26.4.2, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
9. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1907.10
10. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
11. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
WOOD FRAMING				
1. PREFABRICATED WOOD STRUCTURAL ELEMENTS		X		1704.2.5
a. METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FEET OR GREATER:				
b. TEMPORARY AND PERMANENT INSTALLATION RESTRAINT/BRACING		X		1705.5.3
2. HIGH-LOAD DIAPHRAGMS:				
a. SHEATHING GRADE AND THICKNESS		X		1705.5.1
b. MEMBER SIZES AT ADJOINING PANEL EDGES		X		1705.5.1
c. DIAPHRAGM NAILING		X		1705.5.1
3. LATERAL FORCE RESISTING SYSTEM (SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLDOWNS, WHERE FASTENER SPACING AT PANEL EDGES IS 4" OR LESS):				
a. GLUING OF ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM	X			1705.12.1, 1705.13.2
b. NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHER ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM		X		1705.12.1, 1705.13.2

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
SOILS				
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
3. PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL		X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		

STRUCTURAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS
@	AT
°	DEGREE
Ø	DIAMETER
ARCH	ARCHITECT, -URE, -URAL
BLKG	BLOCKING
B.N.	BOUNDARY NAILING
CLR	CLEAR
CL	CENTERLINE
CONT	CONTINUOUS
DIA	DIAMETER
EL	ELEVATION
E.N.	EDGE NAILING
EQ	EQUAL
(E)	EXISTING
EXT	EXTERIOR
f 'c	CONCRETE COMPRESSIVE STRENGTH
Fy	YIELD STRESS
GALV	GALVANIZED
K, KIP	KILOPOUND (1,000 POUNDS)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
OC	ON CENTER
OH	OPPOSITE HAND
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
SIM	SIMILAR
SP	SPACE(S)
SPEC	SPECIFICATION(S)
T.O.	TOP OF
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
VWA	VERIFY WITH ARCHITECTURAL DRAWINGS
W/	WITH
WWR	WELDED WIRE REINFORCING

STRUCTURAL SYMBOL LIST

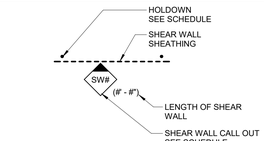
GENERAL SYMBOLS:

SYMBOL	DESCRIPTION	DETAIL REFERENCE
(+16'-3")	TOP OF STRUCTURAL FRAMING ABOVE ELEVATION (+0'-0")	N/A
(-2'-0")	TOP OF STRUCTURAL FOUNDATION BELOW ELEVATION (+0'-0")	N/A

FOUNDATION SYMBOLS:

SYMBOL	DESCRIPTION	DETAIL REFERENCE
S	STEP IN FOOTING	2/S-300
(+ A) / (+ B)	TOP OF WALL STEP	N/A

SHEAR WALL SYMBOLS:



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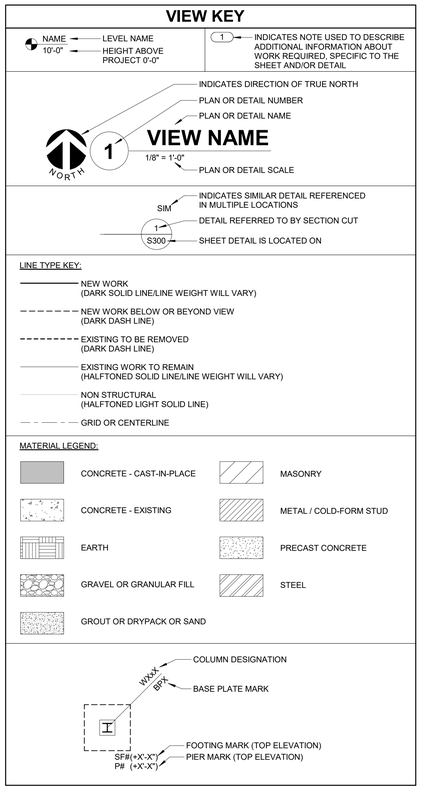

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: TESTING AND INSPECTION TABLES	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS			Project Number: 884-CM-3015
			Building Number:
Location: STURGIS, SOUTH DAKOTA			Drawing Number: S-002
Issue Date: 10/31/2022	Checked: DANBAR	Drawn: MEHNAK	Dwg. 15 OF 84

VA FORM 08 - 6231

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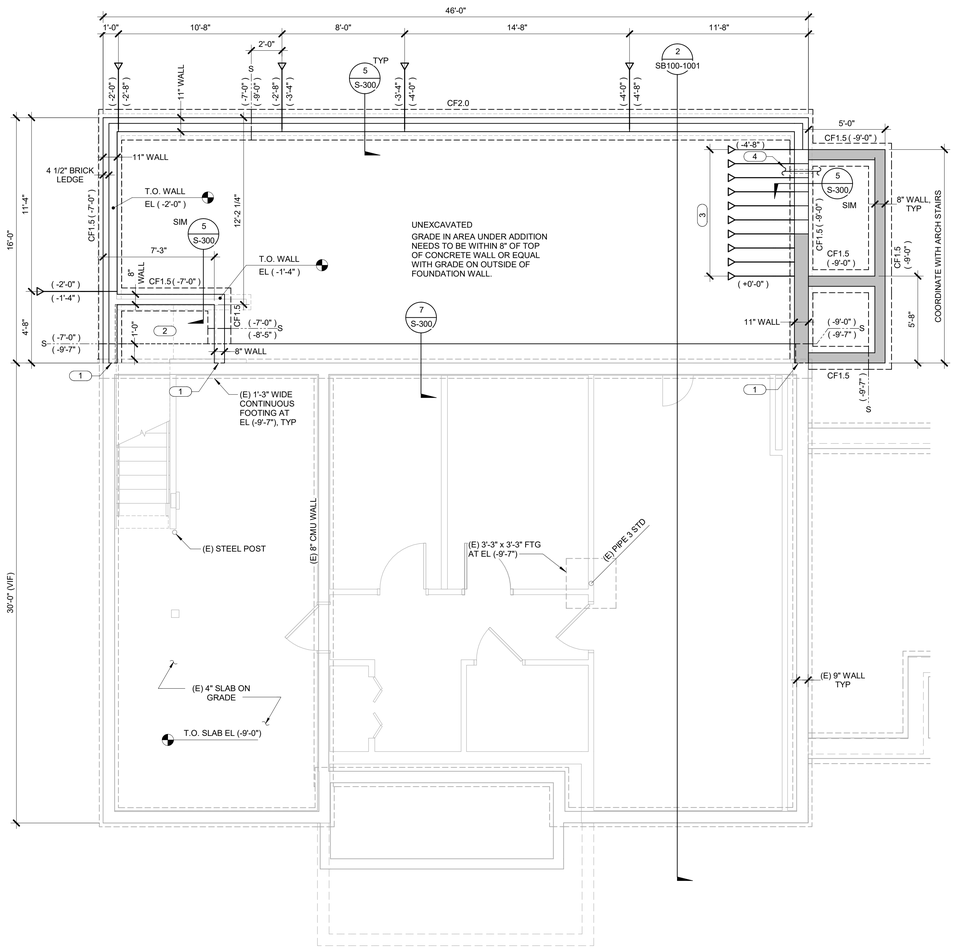
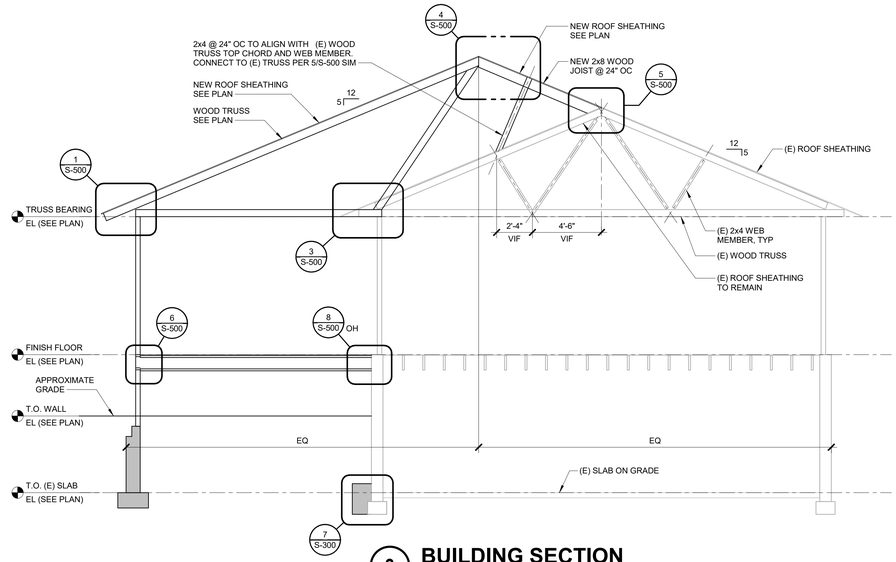
NOTES:
1. CF# INDICATES CONTINUOUS FOOTING. SEE SCHEDULE ON THIS SHEET FOR MORE INFORMATION.
2. PROVIDE 2'-6"x2'-6" CORNER BARS AT FOOTINGS AND WALLS. MATCH HORIZONTAL BAR SIZE AND SPACING.
3. SEE 1/S-300 FOR TYPICAL SLAB ON GRADE DETAILS.

KEYNOTES: (#)
1. DOWEL FOOTING AND WALL HORIZONTAL BARS INTO EXISTING WALL. EMBED 4" WITH EPOXY PER GENERAL NOTES.
2. 4" CONCRETE SLAB ON GRADE REINFORCED WITH 6x6 W1.4xW1.4 WWR. T.O. SLAB EL (-4'-0").
3. STEP TOP OF FOUNDATION WALL TO MATCH STAIR TREAD RISE AND RUN. SEE ARCH DRAWINGS FOR STAIR DIMENSIONS.
4. SEE 2/SB100-3001 FOR UNDERFLOOR UTILITY COORDINATION.



1 FOUNDATION PLAN
1/4" = 1'-0"



2 BUILDING SECTION
1/4" = 1'-0"

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING	
			LONG DIRECTION	SHORT DIRECTION
CF1.5	1'-6"	1'-0"	(2) #5	NONE
CF2.0	2'-0"	1'-0"	(3) #5	NONE

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Drawing Title: ADMINISTRATION FOUNDATION PLAN	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number: 1001
Location: STURGIS, SOUTH DAKOTA	Drawing Number: SB100-1001
Issue Date: 10/31/2022	Checked: DANBAR
	Drawn: MEHNAK
	Dwg. 16 OF 84

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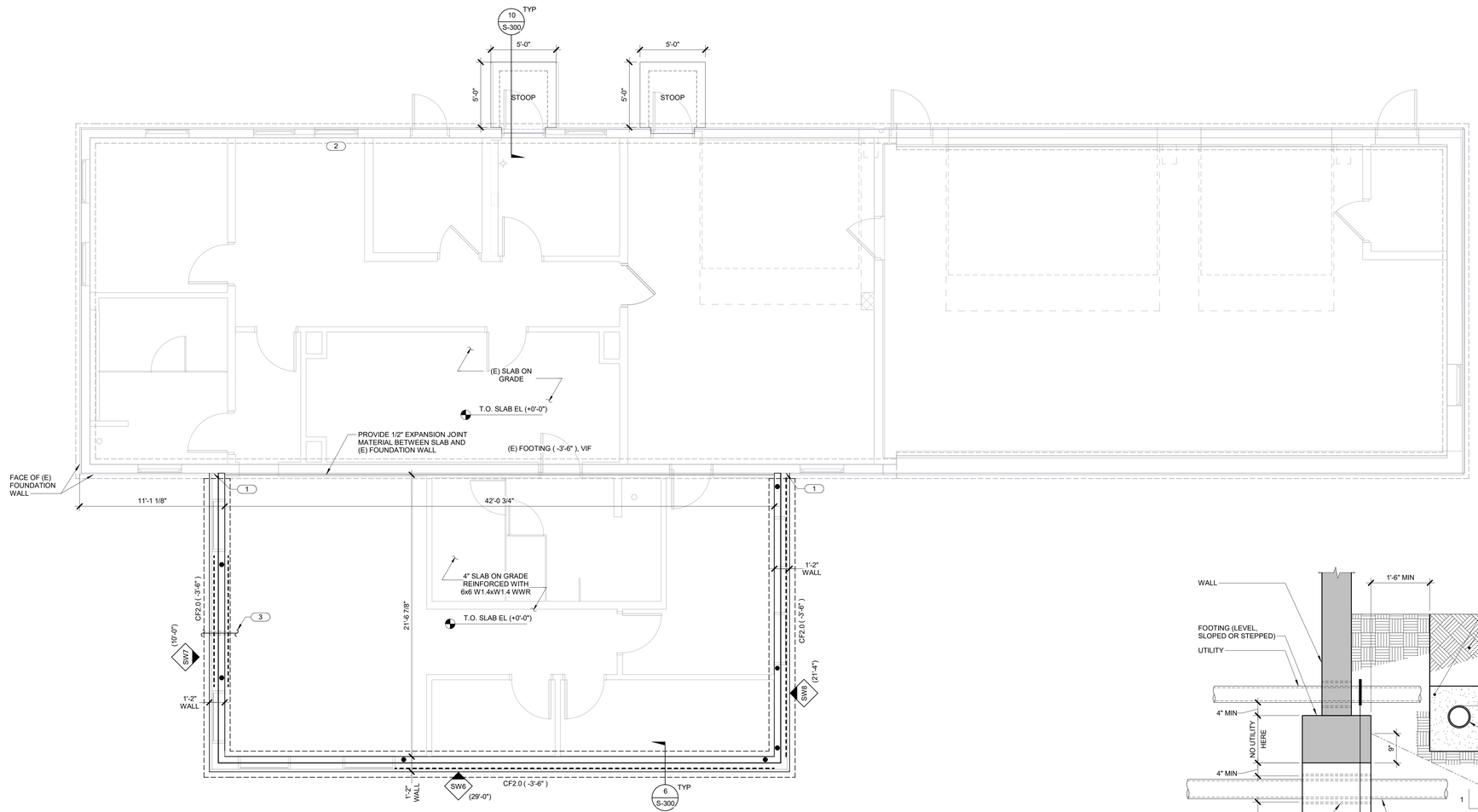
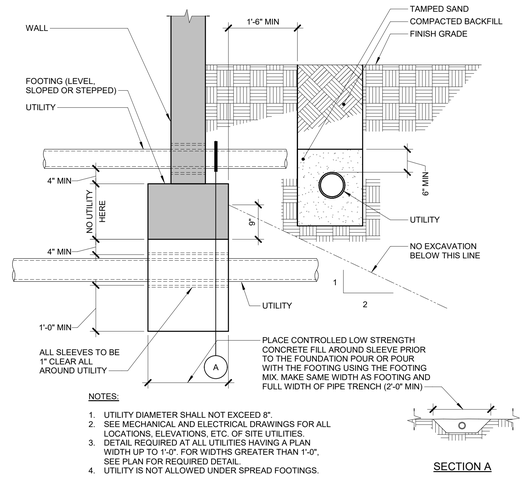
NOTES:
1. CF# INDICATES CONTINUOUS FOOTING. SEE SCHEDULE ON SHEET SB100-1001 FOR MORE INFORMATION.
2. PROVIDE 2'-6"x2'-6" CORNER BARS AT FOOTINGS AND WALLS. MATCH HORIZONTAL BAR SIZE AND SPACING.
3. SEE 1/S-300 FOR TYPICAL SLAB ON GRADE DETAILS.
4. IN EXISTING BUILDING AT AREAS OF FLOOR REPAIR, PROVIDE 4" CONCRETE SLAB ON GRADE REINFORCED WITH 6x6 W1.4xW1.4 WWR. SEE DETAIL 1/S-300 FOR VAPOR RETARDER AND DOWELS. COORDINATE AMOUNT OF PATCH AND LOCATIONS WITH MECHANICAL.
5. SEE SF100-1001 FOR SHEAR WALL AND HOLDOWN SCHEDULES

KEYNOTES: (#)
1. DOWEL FOOTING AND WALL HORIZONTAL BARS INTO EXISTING WALL. EMBED 4" WITH EPOXY PER GENERAL NOTES.
2. INFILL OPENING WITH 2x6 WOOD FRAMING WITH STUDS 16" OC AND 5/8" WALL SHEATHING. USE TREATED SILL PLATE AND STUDS ANCHORED TO BRICK ON EACH SIDE OF (E) OPENING. ANCHOR WITH 1/4" DIA HILTI KWIK CON SCREWS @ 12" OC WITH 1" EMBEDMENT INTO CONCRETE / BRICK.
3. SEE 2/SB100-3001 FOR UNDERFLOOR UTILITY COORDINATION.



1 FOUNDATION PLAN
1/4" = 1'-0"



NOTES:
1. UTILITY DIAMETER SHALL NOT EXCEED 8".
2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS, ELEVATIONS, ETC. OF SITE UTILITIES.
3. DETAIL REQUIRED AT ALL UTILITIES HAVING A PLAN WIDTH UP TO 1'-0". FOR WIDTHS GREATER THAN 1'-0", SEE PLAN FOR REQUIRED DETAIL.
4. UTILITY IS NOT ALLOWED UNDER SPREAD FOOTINGS.

SECTION A

2 TYPICAL UTILITY TRENCH DETAIL
3/4" = 1'-0"

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Office of Construction and Facilities Management
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Drawing Title: MAINTENANCE FOUNDATION PLAN	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number: 3001
Location: STURGIS, SOUTH DAKOTA	Drawing Number: SB100-3001
Issue Date: 10/31/2022	Checked: DANBAR
	Drawn: MEHNAK
	Dwg. 17 OF 84

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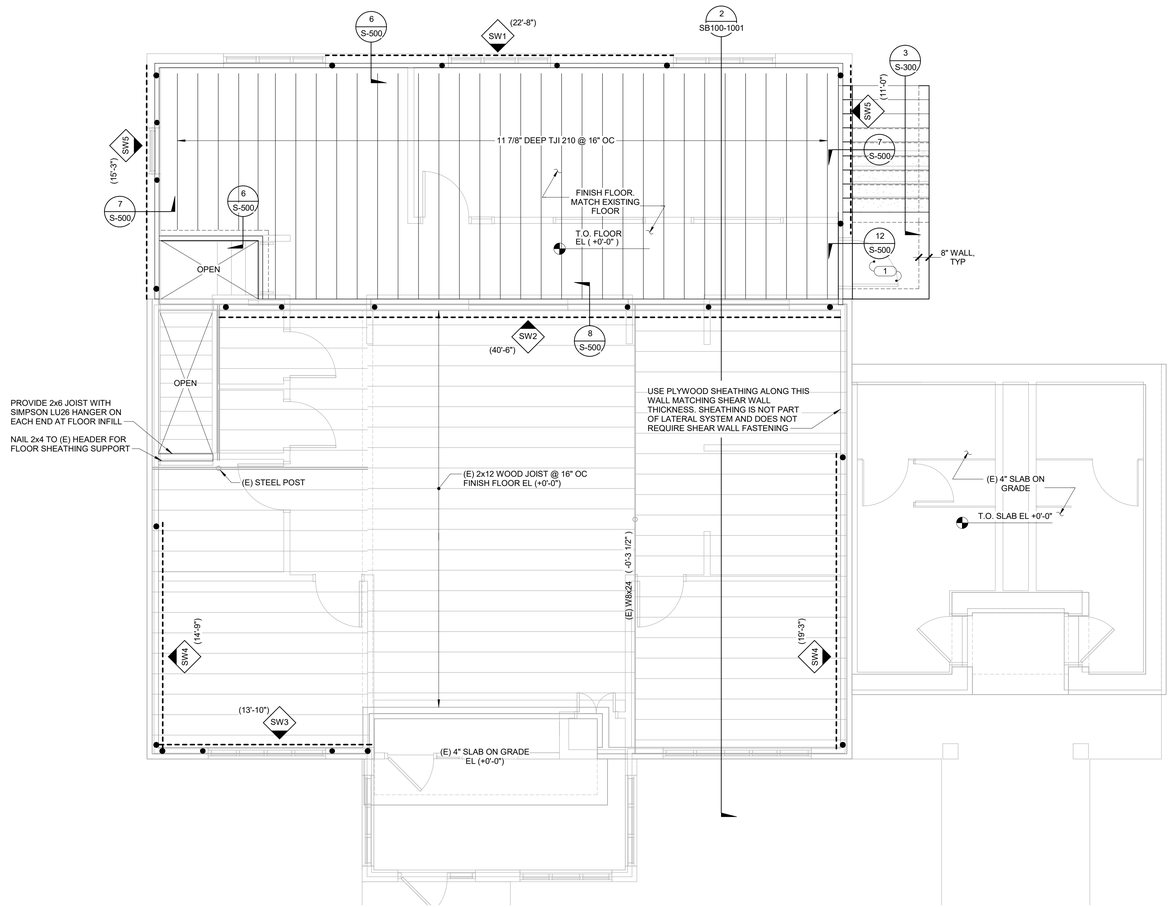

1 FIRST FLOOR FRAMING PLAN

1/4" = 1'-0"

NOTES:
1. EXTERIOR WALL STUD AND WALLS AT INTERIOR STAIRS ARE 2x4 WOOD STUDS AT 16" ON CENTER. ALIGN WOOD JOIST WITH STUD WALL BELOW.
2. FLOOR SHEATHING IS 3/4" PLYWOOD, UON.

KEYNOTES: (#)
1. 6" CONCRETE SLAB ON GRADE REINFORCED WITH #5 @ 12" OC EACH WAY, CENTERED IN SLAB. T.O. SLAB EL (-0'-0 1/2") AT FACE OF BUILDING AND SLOPE 1/8" PER FOOT AWAY FROM BUILDING.

HOLDOWN SCHEDULE

MARK (SW#)	MODEL NO.	CONNECTION TO POST	HOLDOWN POST	ANCHOR ROD			REMARKS
		SCREWS		DIAMETER (IN)	MATERIAL	EMBEDMENT 'E' (IN) - NOTE 3	
SW1	HDU2-SDS2.5	(6) 1/4x2 1/2 SDS	(2) 2x4	5/8	A36	6	NOTE 4
SW2	HDU2-SDS2.5	(6) 1/4x2 1/2 SDS	(2) 2x4	5/8	A36	8	NOTES 5,6
SW3	HDU8-SDS2.5	(20) 1/4x2 1/2 SDS	(2) 2x4	7/8	A36	NOTE 7	NOTE 5
SW4	HDU8-SDS2.5	(20) 1/4x2 1/2 SDS	(2) 2x4	7/8	A36	NOTE 7	NOTE 5
SW5	HDU4-SDS2.5	(10) 1/4x2 1/2 SDS	(2) 2x4	5/8	A36	8	NOTE 4
SW6	HDU2-SDS2.5	(6) 1/4x2 1/2 SDS	(2) 2x6	5/8	A36	6	-
SW7	(2) HDU8-SDS2.5	(20) 1/4x2 1/2 SDS	(4) 2x6	7/8	A36	8	-
SW8	(2) HDU8-SDS2.5	(20) 1/4x2 1/2 SDS	(4) 2x6	7/8	A36	8	-

NOTES:
1. BASIS OF DESIGN IS SIMPSON STRONG-TIE. SUBSTITUTIONS REQUIRE WRITTEN AUTHORIZATION FROM STRUCTURAL ENGINEER.
2. SEE SHEET S-501 FOR DETAILS AND 8/S-300 FOR TYPICAL HOLDOWN DETAIL.
3. DESIGN BASIS IS SIMPSON SET-3G EPOXY.
4. SEE 3/S-501 FOR HOLDOWN ACROSS FRAMING AT FLOOR LEVEL AT ALL HOLDOWNS.
5. SHEAR WALL IS ON INSIDE OF (E) WALL. SEE 4/S-501 FOR EXISTING WALL MODIFICATIONS.
6. SEE 9/S-300 FOR HOLDOWN DETAIL.
7. SEE 11/S-300 FOR HOLDOWN DETAIL.

WOOD SHEAR WALL SCHEDULE

MARK (SW#)	APA RATED SHEATHING			PANEL NAIL SIZE AND SPACING	FRAMING SIZE AT ADJOINING PANEL EDGES, MIN	JOIST/BLOCKING TO TOP PLATE CONN WITH SIMPSON A35 OR LTP4, UON	SILL PLATE CONN AT FLOOR WITH SIMPSON SCREWS	SILL PLATE ANCHORS AT CONCRETE		REMARKS
	THICKNESS	GRADE	SPAN RATING	SIZE E.N. F.N.				SIZE AND SPACING	EMBEDMENT (IN)	
SW1	7/16"	NOTE 9	32/16	8d @ 3" OC, 12" OC	2x	48" OC	SDS25412 @ 16" OC	1/2"Ø @ 32" OC	3 1/2"	NOTE 9
SW2	1/2"	STRUCT 1	32/16	8d @ 6" OC, 12" OC	2x	48" OC	SDS25412 @ 16" OC	-	-	-
SW3	1/2"	STRUCT 1	32/16	8d @ 3" OC, 12" OC	2x	-	SDS25412 @ 16" OC	-	-	NOTE 11
SW4	1/2"	STRUCT 1	32/16	8d @ 3" OC 12" OC	2x	-	SDS25412 @ 16" OC	-	-	NOTE 11
SW5	7/16"	NOTE 9	32/16	8d @ 3" OC 12" OC	2x	24" OC	SDS25412 @ 16" OC	1/2"Ø @ 32" OC	3 1/2"	NOTE 9
SW6	1/2"	STRUCT 1	32/16	8d @ 6" OC 12" OC	2x	48" OC	-	1/2"Ø @ 32" OC	3 1/2"	-
SW7	1/2"	STRUCT 1	32/16	10d @ 3" OC 12" OC	2x	12" OC	-	1/2"Ø @ 32" OC	3 1/2"	NOTE 10
SW8	1/2"	STRUCT 1	32/16	8d @ 3" OC 12" OC	2x	12" OC	-	1/2"Ø @ 32" OC	3 1/2"	-

NOTES:
1. SHEATHING SHALL BE OSB ONLY.
2. SILL PLATE ANCHORS ARE BASED UPON SIMPSON TITEN HD SCREW ANCHORS.
3. ALL PANEL EDGES ARE TO BE BLOCKED.
4. SEE PLAN FOR HOLDOWN ANCHOR AND POST SIZE.
5. ALL NAILS SHALL BE COMMON WIRE NAILS WITH 1 1/2" PENETRATION. SINKER OR BOX NAILS ARE NOT PERMITTED.
6. OVERDRIVEN NAILS INTO SHEATHING ARE NOT ACCEPTABLE. ANY SHEATHING AND STUDS DAMAGED DUE TO OVERDRIVEN NAILS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
7. WHERE PANELS ARE APPLIED TO BOTH SIDES AND NAIL SPACING IS LESS THAN 6", PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING, EACH SIDE OF WALL. CONTRACTOR OPTION TO PROVIDE NOMINAL 3" WIDE, OR GREATER, FRAMING MEMBERS WITH STAGGERED NAILS.
8. SEE S-501 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
9. WALL SHEATHING IS R-12 ZIP SYSTEM R-SHEATHING TYPE. SEE ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
10. WALL SHEATHING IS ON BOTH SIDES OF WALL.
11. SHEAR WALL IS ON INSIDE OF (E) WALL. SEE 4/S-501 FOR EXISTING WALL MODIFICATIONS.

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Revisions:	Date:

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EXP 12-31-23

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VA | U.S. Department of Veterans Affairs

Drawing Title: ADMINISTRATION FIRST FLOOR FRAMING PLAN
Approved:
Phase: BID DOCUMENTS
NON-SPRINKLERED
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10/31/2022
Checked: DANBAR
Drawn: MEHNAK
Project Number: 884-CM-3015
Building Number: 1001
Drawing Number: SF100-1001
Dwg. 18 OF 84

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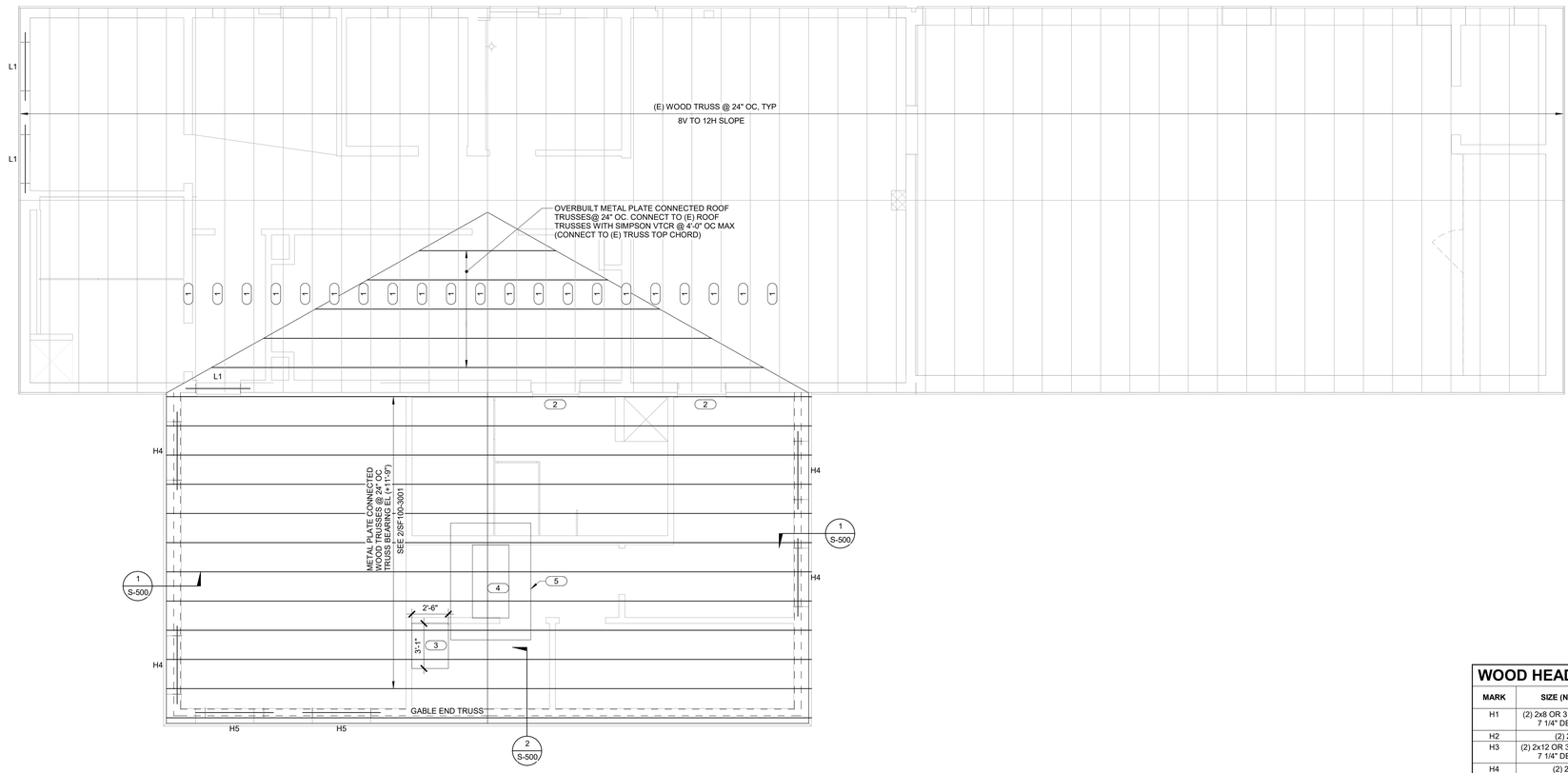
NOTES:
1. ROOF SHEATHING = 3/4" PLYWOOD, UON.
2. EXTERIOR WALL STUD IS 2x6 WOOD STUDS AT 16" ON CENTER.
3. H# INDICATES WOOD HEADER, SEE THIS SHEET FOR SCHEDULE.
4. L# INDICATES CMU LINTEL, SEE THIS SHEET FOR SCHEDULE.
5. SEE GENERAL NOTES (S-001) FOR BRICK VENEER STEEL LINTELS.

KEYNOTES: (#)
1. REINFORCE (E) ROOF FRAMING PER 4/SF100-3001.
2. OPENING IN (E) WINDOW. NO NEW LINTEL NEEDED WITH OPENING MATCHING (E) WINDOW WIDTH.
3. HATCH OPENING IN BOTTOM CHORD OF TRUSS. TRUSS MANUFACTURER TO DESIGN SYSTEM AROUND OPENING. COORDINATE OPENING LOCATION WITH ARCH DRAWINGS.
4. AHU IN ATTIC SPACE. DESIGN BOTTOM CHORD TRUSSES FOR UNIT WEIGHING 200 LBS WITH AREA OF 5'-0" x 2'-6". CONTRACTOR TO COORDINATE FINAL WEIGHT AND SIZE WITH TRUSS MANUFACTURER AND LOCATION WITH MECHANICAL. TRUSS MANUFACTURER TO KEEP WEB MEMBERS AWAY FROM BOTTOM CHORD AT THIS AREA.
5. UNIT MAINTENANCE AREA. DESIGN BOTTOM CHORD FOR 5 PSF DEAD LOAD AND 20 PSF LIVE LOAD. AREA TO BE 1'-6" BEYOND UNIT ON ALL SIDES.



1 ROOF FRAMING PLAN
1/4" = 1'-0"

WOOD HEADER SCHEDULE

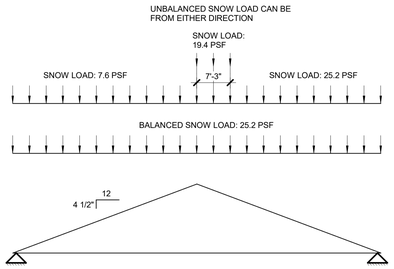
MARK	SIZE (NOTE 2)	SHOULDER STUDS	FULL HEIGHT STUDS	REMARKS
H1	(2) 2x8 OR 3 1/2" WIDE x 7 1/4" DEEP LVL	(1) 2x4	(2) 2x4	-
H2	(2) 2x6	(1) 2x4	(1) 2x4	-
H3	(2) 2x12 OR 3 1/2" WIDE x 7 1/4" DEEP LVL	(2) 2x4	(1) 2x4	-
H4	(2) 2x10	(1) 2x6	(1) 2x6	-
H5	(2) 2x6	(1) 2x6	(1) 2x6	-

NOTES:
1. SEE 9/S-500 FOR TYPICAL DETAIL.
2. PROVIDE PLYWOOD SHIMS BETWEEN 2x HEADER PIECES TO GET HEADER TO MATCH WALL WIDTH.

LINTEL SCHEDULE

MARK	MEMBER SIZE	REFERENCE DETAIL	REMARKS
L1	(2) L3 1/2x3 1/2x1/4	3/SF100-3001	-

NOTE:
1. BEARING LENGTH EACH END = 8" UON.

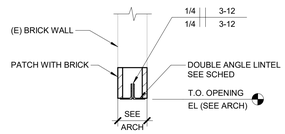


NOTES:
1. TRUSS SUPPLIER TO DESIGN FOR THE FOLLOWING UNFACTORED LOADS:

DL (TOP CHORD):	15 PSF
DL (BOTTOM CHORD):	10 PSF
ROOF LIVE LOAD:	20 PSF
WIND LOAD:	PER CODE
SNOW LOAD:	SEE ABOVE

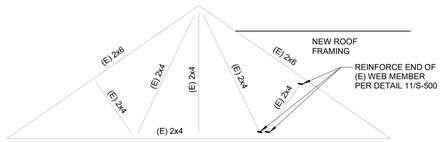
2. SEE PLAN FOR ADDITIONAL BOTTOM CHORD LOADS.

2 TRUSS LOAD DIAGRAM
NO SCALE



NOTE:
1. (E) WALL TO BE SHORED AS REQUIRED FOR INSTALLATION OF NEW LINTEL.

3 LINTEL DETAIL
3/4" = 1'-0"



4 TRUSS ELEVATION
1/4" = 1'-0"

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Exp 12-31-23

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VA | U.S. Department of Veterans Affairs

Drawing Title: MAINTENANCE ROOF FRAMING PLAN	Phase: BID DOCUMENTS	Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
Approved:	NON-SPRINKLERED	Location: STURGIS, SOUTH DAKOTA	Building Number: 3001
		Issue Date: 10/31/2022 / Checked: DANBAR / Drawn: MEHNAK	Drawing Number: SF100-3001 Dwg. 19 OF 84

BIM 360://170010048-23 - NCA-Black Hills NC- Admin - Maint Bldg/4521_170010048-23_NCA-Black Hills NC- Admin - Maint Bldg_C.rvt
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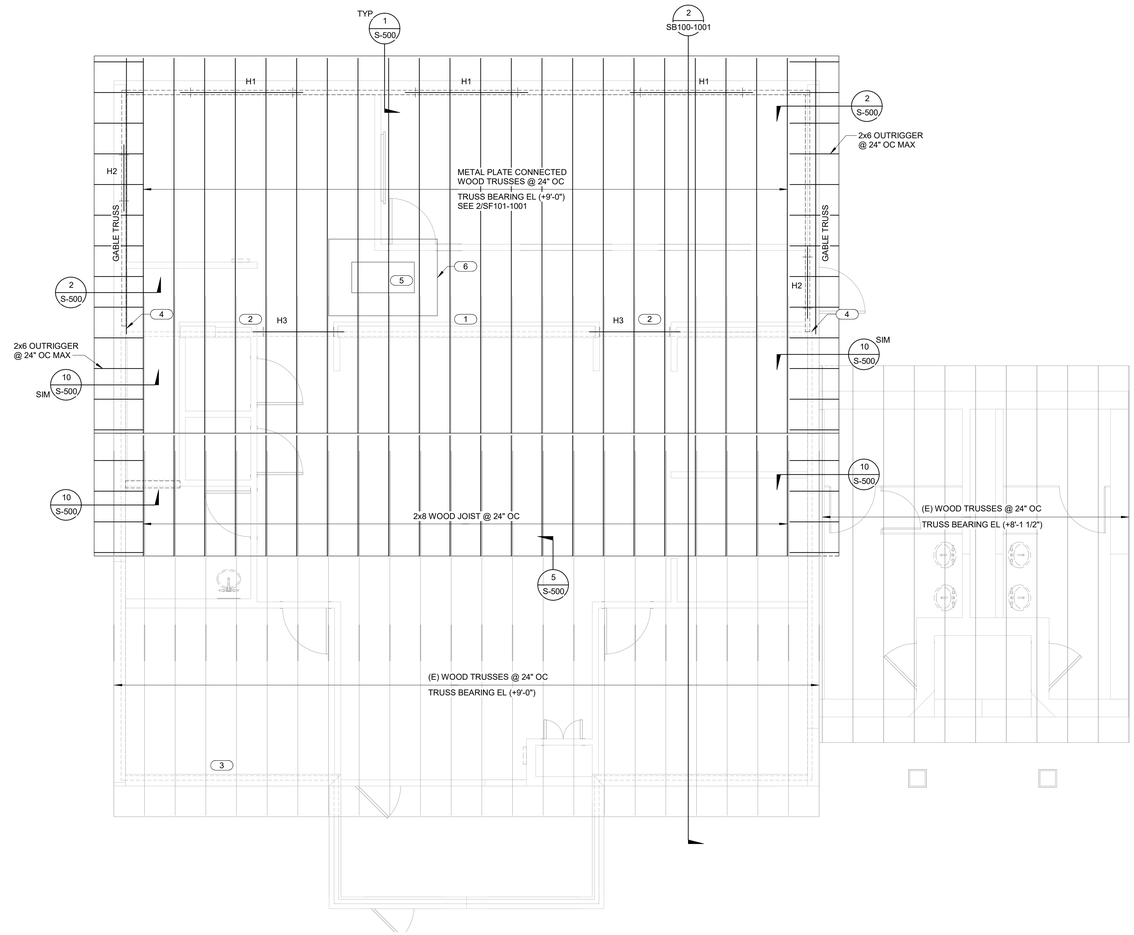
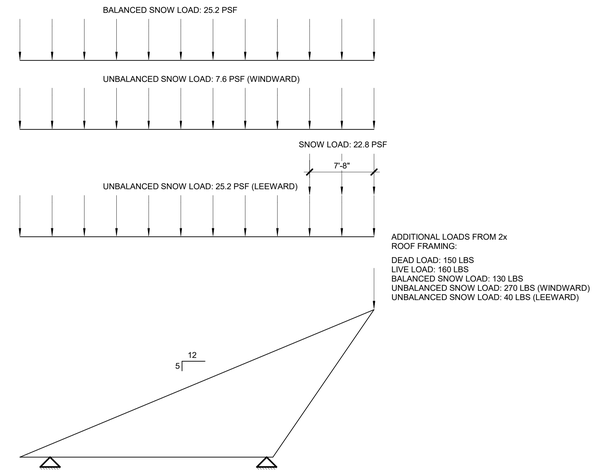


1 ROOF FRAMING PLAN
1/4" = 1'-0"

NOTES:
1. ROOF SHEATHING = 3/4" PLYWOOD, UON.
2. EXTERIOR WALL STUD IS 2x4 WOOD STUDS AT 16" ON CENTER. ALIGN STUD ON TOP OF JOIST BELOW.
3. H# INDICATES WOOD HEADER, SEE THIS SHEET FOR SCHEDULE.
4. SEE GENERAL NOTES (S-001) FOR BRICK VENEER STEEL LINTELS.

KEYNOTES: (#)
1. INFILL (E) OPENING WITH 2x4 @ 16" OC, ALIGN STUDS WITH CRIPPLE STUDS BELOW WINDOW SILL.
2. SHORE (E) ROOF TO INSTALL NEW HEADER. DEMOLISH (E) HEADER AND INSTALL NEW FULL HEIGHT 2x4 STUDS AT 16" OC AT INFILLED OPENING.
3. ORIGINAL CONSTRUCTION DOCUMENTS INDICATE AN EXISTING 9'-0" WIDE OPENING AT THIS NEW OPENING LOCATION. EXISTING HEADER TO REMAIN. DEMOLISH WALL DOWN TO NEW ROUGH OPENING AND INSTALL NEW 2x4 SILL SIMILAR TO 9/S-500.
4. CONNECT NEW DOUBLE TOP PLATE TO (E) DOUBLE TOP PLATE WITH MSTC28 STRAP.
5. AHU IN ATTIC SPACE. DESIGN BOTTOM CHORD TRUSSES FOR UNIT WEIGHING 200 LBS WITH AREA OF 4'-1" x 2'-0". CONTRACTOR TO COORDINATE FINAL WEIGHT AND SIZE WITH TRUSS MANUFACTURER AND LOCATION WITH MECHANICAL. TRUSS MANUFACTURER TO KEEP WEB MEMBERS AWAY FROM BOTTOM CHORD AT THIS AREA.
6. UNIT MAINTENANCE AREA. DESIGN BOTTOM CHORD FOR 5 PSF DEAD LOAD AND 20 PSF LIVE LOAD. AREA TO BE 1'-6" BEYOND UNIT ON ALL SIDES.



NOTES:
1. TRUSS SUPPLIER TO DESIGN FOR THE FOLLOWING UNFACTORED LOADS:
   - DL (TOP CHORD): 15 PSF
   - DL (BOTTOM CHORD): 10 PSF
   - ROOF LIVE LOAD: 20 PSF
   - WIND LOAD: PER CODE
   - SNOW LOAD: SEE ABOVE
2. SEE PLAN FOR ADDITIONAL BOTTOM CHORD LOADS.

2 TRUSS LOAD DIAGRAM
NO SCALE

WOOD HEADER SCHEDULE

MARK	SIZE (NOTE 2)	SHOULDER STUDS	FULL HEIGHT STUDS	REMARKS
H1	(2) 2x8 OR 3 1/2" WIDE x 7 1/4" DEEP LVL	(1) 2x4	(2) 2x4	-
H2	(2) 2x6	(1) 2x4	(1) 2x4	-
H3	(2) 2x12 OR 3 1/2" WIDE x 7 1/4" DEEP LVL	(2) 2x4	(1) 2x4	-
H4	(2) 2x10	(1) 2x6	(1) 2x6	-
H5	(2) 2x6	(1) 2x6	(1) 2x6	-

NOTES:
1. SEE 9/S-500 FOR TYPICAL DETAIL.
2. PROVIDE PLYWOOD SHIMS BETWEEN 2x HEADER PIECES TO GET HEADER TO MATCH WALL WIDTH.

BID DOCUMENTS

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Drawing Title: ADMINISTRATION ROOF FRAMING PLAN	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number: 1001
Location: STURGIS, SOUTH DAKOTA	Drawing Number: SF101-1001
Issue Date: 10/31/2022	Checked: DANBAR
	Drawn: MEHNAK
	Dwg. 20 OF 84

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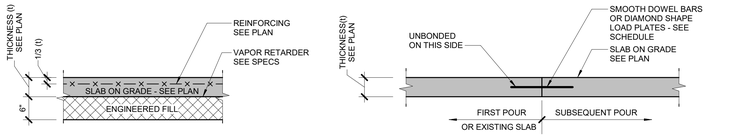
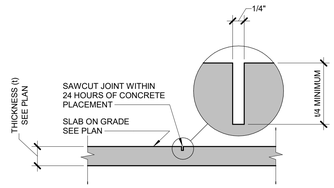


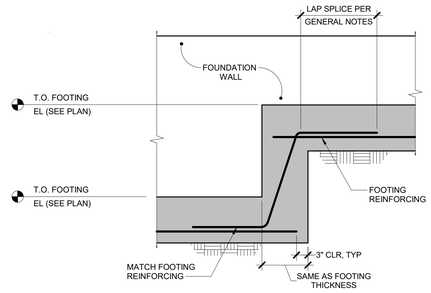
SLAB THICKNESS	SMOOTH DOWEL BAR	DIAMOND SHAPE LOAD PLATES
4"	1/2"Ø x 1'-4" @ 18" OC	1/4"x4 1/2" x 0'-4 1/2" @ 18" OC



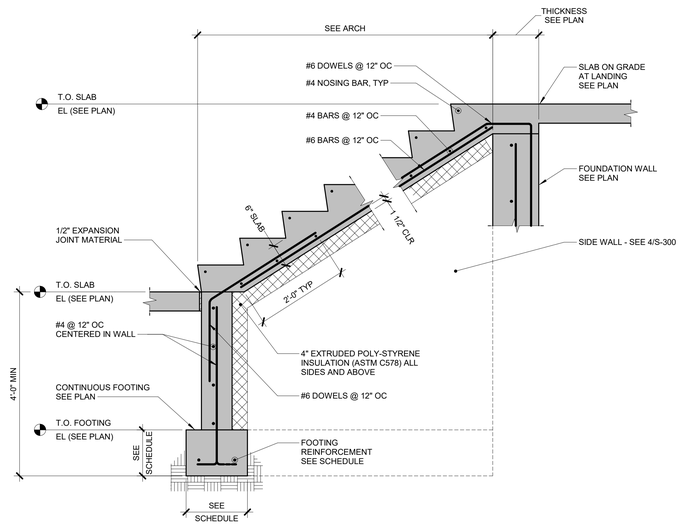
NOTE:

1. REFERENCE SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.

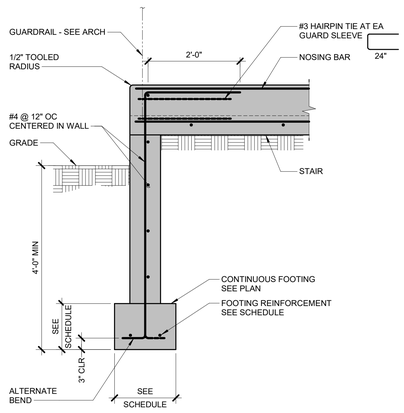
1 TYPICAL SLAB ON GRADE DETAILS
3/4" = 1'-0"

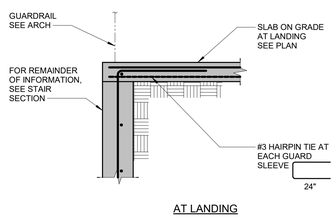


2 TYPICAL STEPPED FOOTING DETAIL
3/4" = 1'-0"



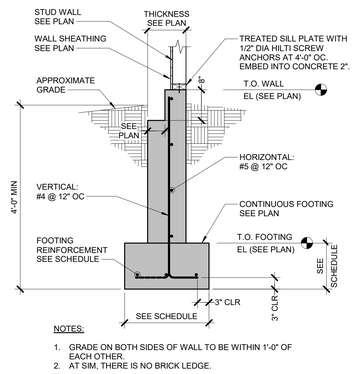
3 TYPICAL FROST STAIR DETAIL
3/4" = 1'-0"





AT LANDING

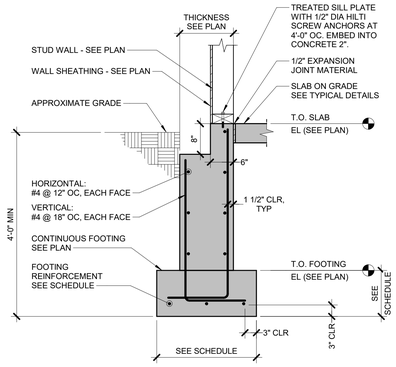
4 TYPICAL STAIR ON GRADE SIDE WALL DETAILS
3/4" = 1'-0"



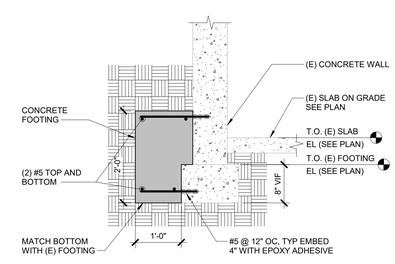
NOTES:

1. GRADE ON BOTH SIDES OF WALL TO BE WITHIN 1'-0" OF EACH OTHER.
2. AT SIM, THERE IS NO BRICK LEDGE.

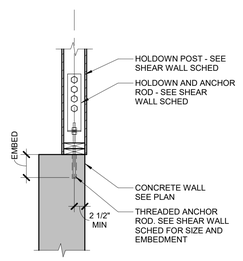
5 FOUNDATION SECTION
3/4" = 1'-0"



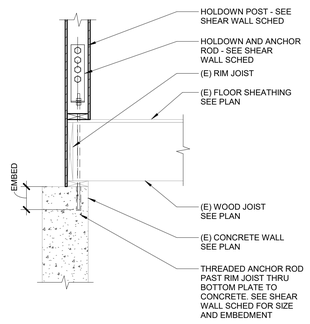
6 FOUNDATION SECTION
3/4" = 1'-0"



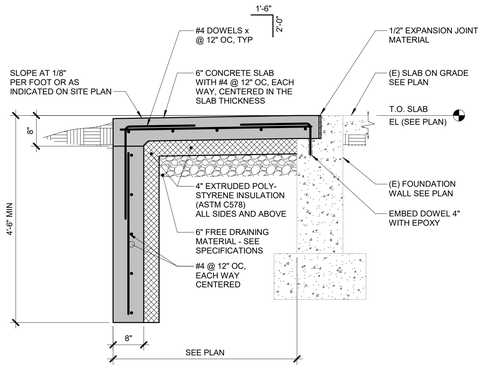
7 FOUNDATION SECTION
3/4" = 1'-0"



HOLDOWN DETAIL AT FOUNDATION WALL
3/4" = 1'-0"



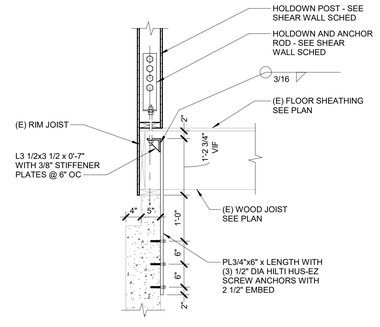
HOLDOWN DETAIL AT EXISTING FOUNDATION WALL
3/4" = 1'-0"



NOTE:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT STOOP LAYOUT AND LOCATIONS.

10 TYPICAL STOOP DETAIL
3/4" = 1'-0"



HOLDOWN DETAIL AT EXISTING FOUNDATION WALL
3/4" = 1'-0"

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Drawing Title: FOUNDATION DETAILS	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number:
Location: STURGIS, SOUTH DAKOTA	Drawing Number: S-300
Issue Date: 10/31/2022	Checked: DANBAR
Drawn: MEHNAK	Dwg. 21 OF 84

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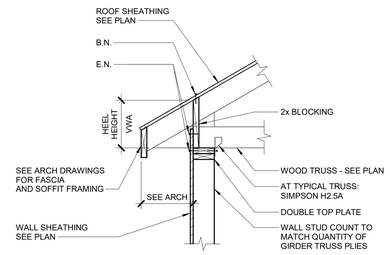
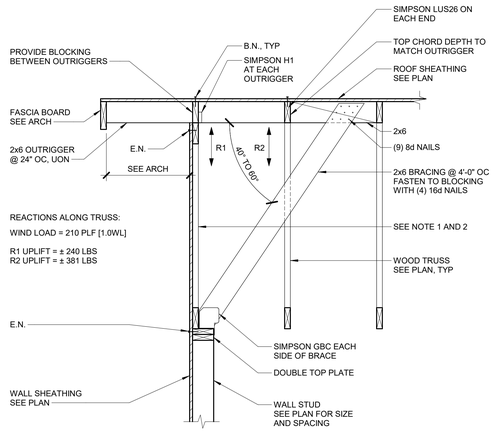


TRUSS BEARING AT EXTERIOR WALL DETAIL

1 — 3/4" = 1'-0"

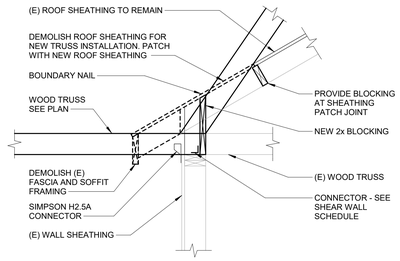


NOTES:

1. GABLE END TRUSS TO HAVE VERTICAL @ 24" OC MAX. TRUSS SUPPLIER TO DESIGN FOR COMPONENTS AND CLADDING WIND LOADS.
2. TRUSS SUPPLIER TO DESIGN FOR LOADS GIVEN ABOVE.

GABLE END WALL DETAIL

2 — 3/4" = 1'-0"

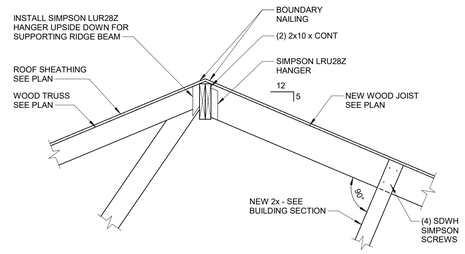


NOTE:

1. FASTEN NEW AND EXISTING ROOF SHEATHING TO BLOCKING WITH NAILS AT 6" OC. SEE GENERAL NOTES FOR ADDITIONAL FASTENING.

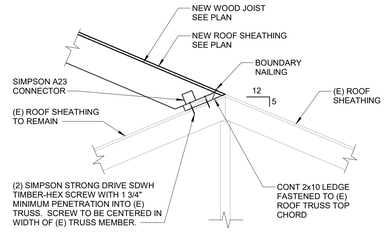
FRAMING DETAIL

3 — 3/4" = 1'-0"



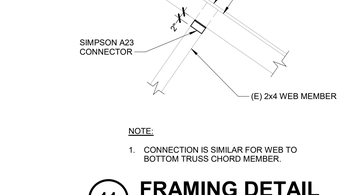
FRAMING DETAIL

4 — 3/4" = 1'-0"



FRAMING DETAIL

5 — 3/4" = 1'-0"



WOOD I-JOIST BEARING AT EXTERIOR WALL

6 — 3/4" = 1'-0"

NOTE:

1. PLYWOOD SPLICE: WHERE SPLICE OCCURS AT TOP OF RIM JOIST, PROVIDE SIMPSON LPT4 PER SHEAR WALL SCHEDULE AND PROVIDE END NAILING FROM SHEATHING TO SILL PLATE.

WOOD I-JOIST PARALLEL TO EXTERIOR WALL

7 — 3/4" = 1'-0"

WOOD I-JOIST BEARING AT EXISTING WALL

8 — 3/4" = 1'-0"

TYPICAL STUD WALL FRAMING DETAIL

9 — 1/2" = 1'-0"

FRAMING DETAIL

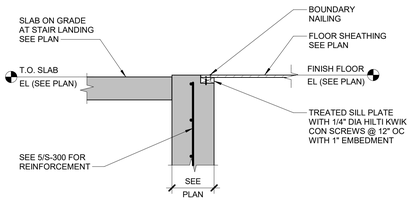
10 — 3/4" = 1'-0"

NOTE:

1. CONNECTION IS SIMILAR FOR WEB TO BOTTOM TRUSS CHORD MEMBER.

FRAMING DETAIL

11 — 3/4" = 1'-0"



FRAMING DETAIL

12 — 3/4" = 1'-0"

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Drawing Title: FRAMING DETAILS	Phase: BID DOCUMENTS	Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
Approved:	NON-SPRINKLERED	Location: STURGIS, SOUTH DAKOTA	Building Number:
		Issue Date: 10/31/2022 / Checked: DANBAR / Drawn: MEHNAK	Drawing Number: S-500 Dwg. 22 OF 84

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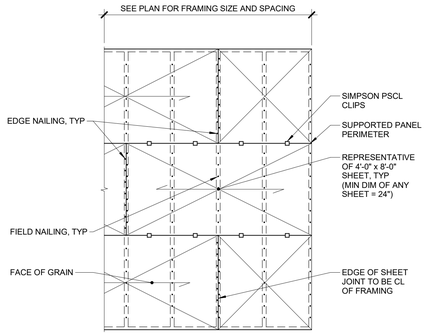
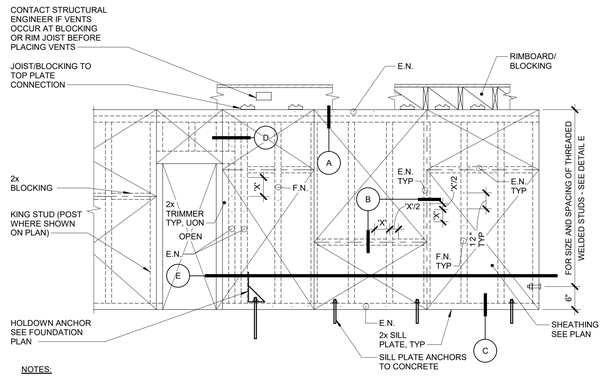


1 TYPICAL UNBLOCKED SHEATHING DETAIL

3/8" = 1'-0"



NOTES:

A. STRUCTURAL SHEATHING:

1. FOR SHEATHING TYPE (PLYWOOD, RATED SHEATHING, ETC.), SEE FRAMING PLANS AND SHEAR WALL SCHEDULE.
2. WHEN SHEATHING IS NOTED AS 'LET-IN' ON PLANS OR SECTIONS, ALL STUDS AND BLOCKING ARE TO BE RIPPED TO MAINTAIN CONTINUOUS PLANE ON FACE OF WALL.
3. USE 4'-0" x 8'-0" MINIMUM SIZE SHEATHING WHEREVER POSSIBLE AND STAGGER ADJACENT HORIZONTAL JOINTS IN ALL CASES AS SHOWN.
4. MINIMUM DIMENSION OF ANY PIECE OF SHEATHING SHALL BE 2'-0".
5. LEAVE A 1/8" GAP BETWEEN ALL PIECES OF SHEATHING AT EACH STUD AND BLOCKING WHERE SHEATHING SPLICE OCCURS TYP.
6. WHERE SHEATHING OCCURS ON BOTH SIDES OF WALL, SHEATHING SPLICES SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS AND ALL BLOCKING AND STUDS AT ADJOINING PANEL EDGES SHALL BE 3x MEMBERS.

B. NAILING:

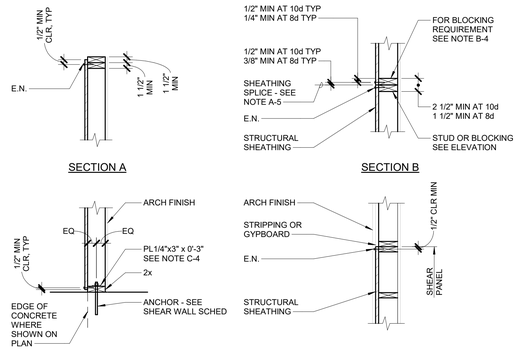
1. E.N. = EDGE NAILING F.N. = FIELD NAILING
2. 'X' REPRESENTS THE SPACING OF NAILS. SIZE OF NAILS AND SPECIFIC SPACING ARE SHOWN ON SCHEDULE.
3. THE MINIMUM EDGE DISTANCE FOR NAILING OF SHEATHING SHALL BE: 1/2" FOR 10d, 3/8" FOR 8d.
4. MINIMUM STUDS AND BLOCKING SIZES AT SHEATHING SPLICES SHALL BE PER SHEAR WALL SCHEDULE.
5. ALL EDGE NAILING SHALL BE STAGGERED AT ADJOINING PANEL EDGES. SEE TYPICAL SHEAR PANEL ELEVATION

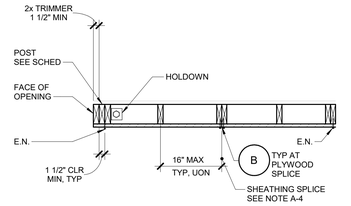
C. GENERAL:

1. ALL SILL PLATES AND STUDS BOLTED TO CMU OR CONCRETE ARE TO BE PRESERVATIVE TREATED.
2. SEE SHEAR WALL SCHED FOR ADDITIONAL REQUIREMENTS.
3. WASHER PLATES AT SILL SHALL BE TIGHTENED UNTIL WASHER BEGINS TO DEFORM OR WOOD JUST STARTS TO CRUSH.

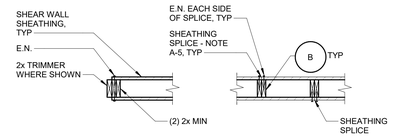
2 SINGLE STORY SHEAR WALL ELEVATION

3/4" = 1'-0"

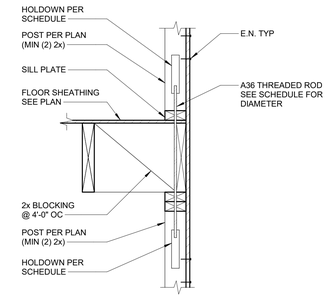




SHEAR WALL SHEATHING ONE SIDE (PLAN VIEW) E

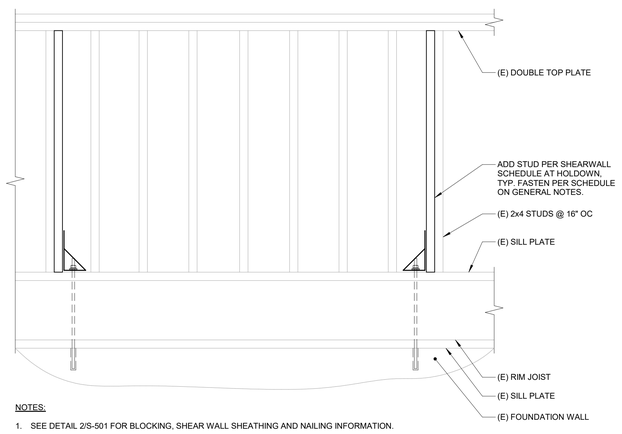


SHEAR WALL SHEATHING TWO SIDES (PLAN VIEW) E



3 HOLDOWN DETAIL ACROSS FRAMING

3/4" = 1'-0"



NOTES:

1. SEE DETAIL 2/S-501 FOR BLOCKING, SHEAR WALL SHEATHING AND NAILING INFORMATION.

4 SHEARWALL ELEVATION IN EXISTING WALL

SCHEMATIC

BID DOCUMENTS

Revisions:	Date:

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10-31-22
Exp 12-31-23

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FRAMING DETAILS	Phase: BID DOCUMENTS	Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS			Project Number: 884-CM-3015
					Building Number:
Approved:	NON-SPRINKLERED	Location: STURGIS, SOUTH DAKOTA			Drawing Number: S-501 Dwg. 23 OF 84
		Issue Date: 10/31/2022	Checked: DANBAR	Drawn: MEHNAK	

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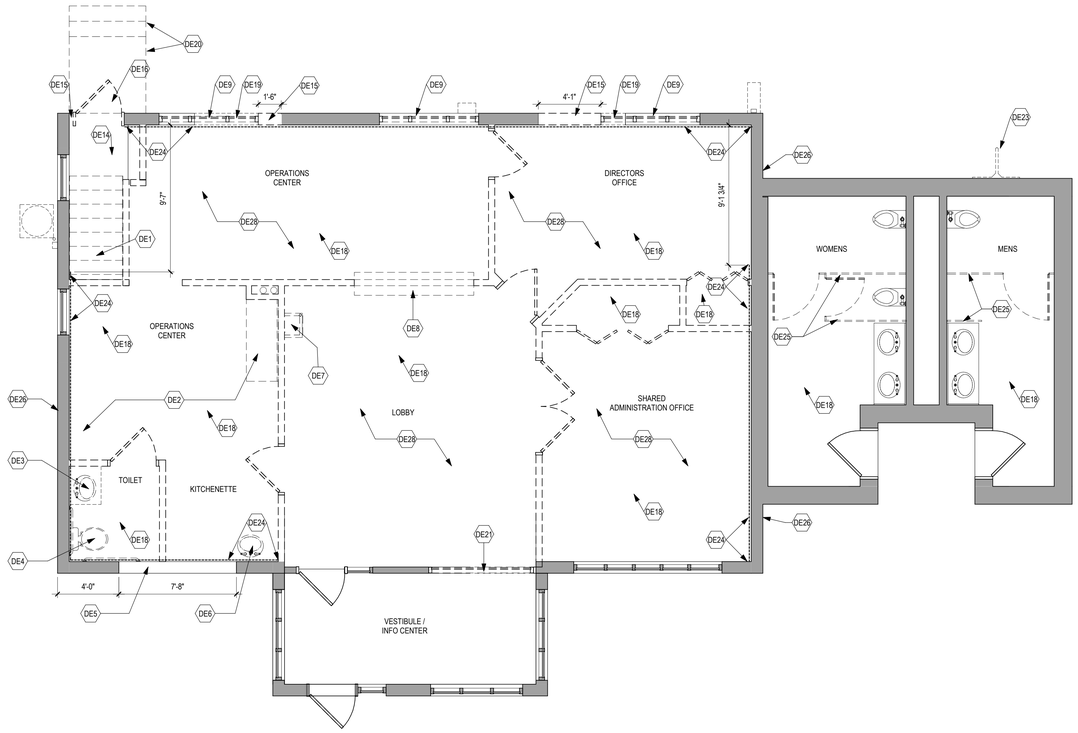
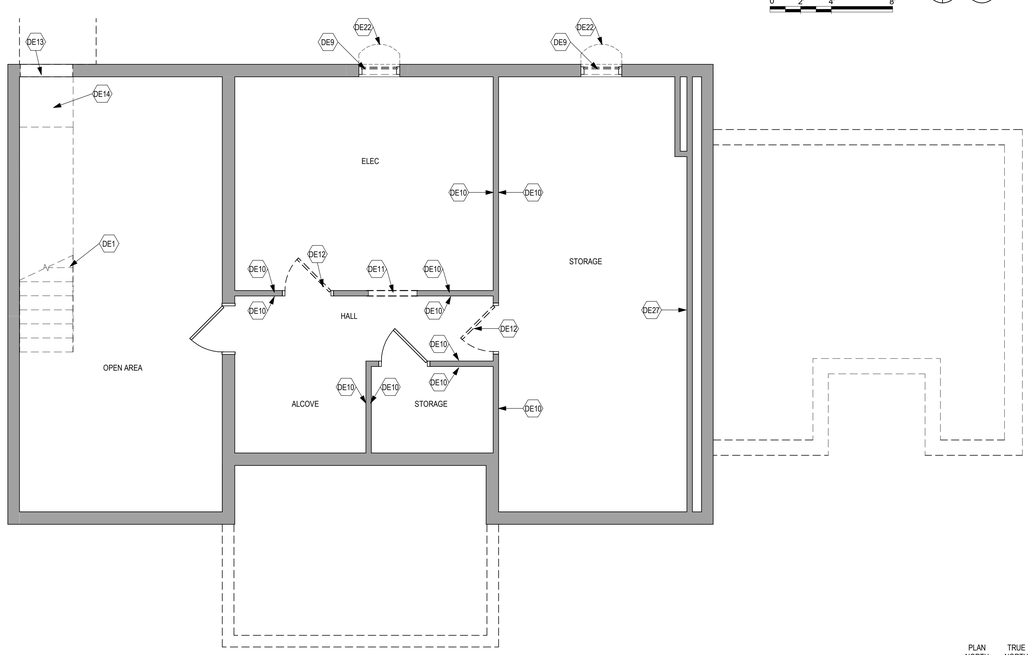


1 FIRST LEVEL DEMOLITION PLAN
1/4" = 1'-0"

PLAN NORTH TRUE NORTH

0 2' 4' 8'



2 BASEMENT LEVEL DEMOLITION PLAN
1/4" = 1'-0"

PLAN NORTH TRUE NORTH

0 2' 4' 8'

DEMOLITION PLAN KEYED NOTES

- DE1 DEMO EXISTING WOOD STAIRS AND ALL ASSOCIATED RAILING ETC.
- DE2 DEMO CASEWORK
- DE3 DEMO SINK AND ASSOCIATED CASEWORK
- DE4 DEMO WATER CLOSET
- DE5 DEMO EXTERIOR BRICK/STUD WALL AS REQUIRED TO PREPARE FOR WDW OPENING. SALVAGE EXISTING BRICK TO BE REUSED AT WDW INSTALL.
- DE6 DEMO SINK AND ASSOCIATED CASEWORK
- DE7 DEMO WATER COOLER
- DE8 DEMO TRANSACTION COUNTER
- DE9 DEMO WINDOW ASSEMBLY & BRICK WINDOW SILL. VERIFY EXISTNG WINDOW HEAD ELEVATIONS
- DE10 DEMO ENTIRELY GYPBD ON STUD WALL TO BE REPLACED WITH GYPBD
- DE11 DEMO STUD WALL AS REQUIRED FOR NEW DOOR INSTALLATION
- DE12 DEMO STORAGE ROOM DOOR & FRAME. PREP FOR DOOR
- DE13 DEMO PORTION OF FOUNDATION TO ACCOMMODATE STAIRCASE
- DE14 DEMO PORTION OF FLOOR STRUCTURE TO ACCOMMODATE STAIRCASE
- DE15 DEMO EXTERIOR BRICK/STUD WALL TO PROVIDE FOR NEW OPENING - SEE STRUCTURAL FOR ADDITIONAL INFO
- DE16 DEMO EXTERIOR DOOR & FRAME
- DE17 DEMO WALL FINISH. PREP FOR FINISH
- DE18 DEMO FLOOR FINISH TO SUB FLOOR. PREP FOR FINISH
- DE19 DEMO EXTERIOR BRICK/STUD WALL BELOW WINDOW TO PROVIDE FOR OPENING
- DE20 DEMO (SAWCUT & REMOVE) CONCRETE STAIR & LANDING
- DE21 DEMO WINDOW ASSEMBLY AND BRICK WINDOW SILL TO ACCOMMODATE NEW WALL. WINDOW HEADER TO REMAIN
- DE22 REMOVE METAL WINDOW WELL
- DE23 DEMO ANTENNAE POLE & SUPPORT BRACKET ATTACHMENT TO BUILDING BRICK WALL
- DE24 DEMO EXISTING LAYER OF GYPSUM WALLBOARD (EXTENT SHOWN WITH DASHED LINE). SEE STRUCTURAL DRAWINGS
- DE25 REMOVE TOILET STALL PARTITIONS & ACCESSORIES IN IT'S ENTIRETY
- DE26 GABLE END WALL BELOW ROOF - REMOVE ENTIRELY VERTICAL WOOD SIDING AT GABLE END WALL
- DE27 DEMO ENTIRELY GYPBD ON STUD WALL TO BE REPLACED WITH NEW GYPBD COORDINATE WITH MECHANICAL WORK
- DE28 CONTRACTOR TO REMOVE EXISTING FURNITURE, MOVE TO TEMPORARY FACILITIES AND RE-INSTALL

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

DEMOLITION GENERAL NOTES

1. GENERAL CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK, PHASING AND SEQUENCING WITH THE OWNER. ANY INFORMATION REGARDING SEQUENCING PROVIDED IN THESE DOCUMENTS IS FOR ARCHITECT - OWNER PLANNING PURPOSES ONLY, UNLESS NOTED OTHERWISE.
2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL TRADES FOR THE DEMOLITION WORK REQUIRED FOR THIS PROJECT.
3. WHERE PARTITIONS ARE INDICATED TO BE REMOVED, REMOVE PARTITION ALONG WITH ALL ITEMS CONTAINED WITHIN, INCLUDING DOORS, FRAMES, HARDWARE, SIDELIGHTS, WINDOWS, MECHANICAL AND ELECTRICAL EQUIPMENT, ETC. TO STRUCTURE ABOVE, UNLESS NOTED OTHERWISE.
4. WHERE FLOOR FINISH IS INDICATED TO BE DEMOLISHED, REMOVE FINISH TO FLOOR SLAB AS REQUIRED AND PREPARE SLAB SURFACE FOR SCHEDULED FINISHES WITHIN AREA TO BE REMODELED, UNLESS NOTED OTHERWISE. SEE FINISH SCHEDULE FOR EXISTING FLOOR FINISHES TO REMAIN UNDISTURBED.
5. WHERE CEILING IS INDICATED TO BE DEMOLISHED, REMOVE CEILING SUSPENSION SYSTEM ALONG WITH ALL ASSOCIATED MECHANICAL AND ELECTRICAL ITEMS, UNLESS NOTED OTHERWISE. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF CONDUIT, PIPING AND DUCTWORK DEMOLITION WITHIN AREA TO BE REMODELED.
6. WHERE INDICATED, REMOVE ALL WALL/PARTITION EXISTING FINISHES AND PREPARE THE SURFACES FOR SCHEDULED FINISHES, SEE FINISH SCHEDULE FOR FINISHES.
7. ALL DISTURBED AREAS, WALLS, PARTITIONS, FLOORS, ETC, DAMAGED BY DEMOLITION WORK SHALL BE PATCHED TO MATCH ADJACENT AREA.
8. OWNER RESERVES THE RIGHT OF FIRST REFUSAL OF ALL SALVAGED ITEMS SUCH AS: DOORS, LIGHT FIXTURES, PLUMBING FIXTURES ETC.
9. SALVAGED ITEMS SCHEDULED FOR REUSE SHALL BE CLEANED, RESTORED AND/OR REFINISHED TO LIKE NEW CONDITION, UNLESS NOTED OTHERWISE.
10. DO NOT REMOVE ANY EXISTING STRUCTURAL SUPPORT MEMBERS SUCH AS COLUMNS, BEAMS, JOISTS, LOAD-BEARING PARTITIONS ETC, UNTIL ADEQUATE PERMANENT OR TEMPORARY SUPPORT IS IN PLACE. ALL EXISTING STRUCTURAL MEMBERS SHALL BE ADEQUATELY PROTECTED, COORDINATE WITH STRUCTURAL ENGINEER.
11. SEE STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR RELATED DEMOLITION AND PREP WORK.
12. WITHIN ALL EXISTING ROOMS/SPACES RECEIVING SCHEDULED FLOOR, OR WALL, OR CEILING FINISHES, REMOVE ALL EXISTING FLOOR, OR WALL, OR CEILING FINISHES DOWN TO THE SUBSTRATE. INCLUDE THE REMOVAL OF ALL ITEMS LOCATED WITHIN THE EXISTING FINISH REMOVALS U/NO PATCH AND PREP ALL SUBSTRATES TO RECEIVE SCHEDULED FINISHES. FOR ADDITIONAL INFORMATION, SEE KEYNOTED ITEMS, FINISH PLANS AND/OR SCHEDULES, STRUCTURAL, MECHANICAL AND ELECTRICAL.
13. INTERIOR WALL CONSTRUCTION IS ASSUMED TO BE GYPSUM BOARD CONSTRUCTION UNLESS NOTED OTHERWISE. DOORS ARE WOOD DOORS UNLESS NOTED OTHERWISE

DEMOLITION PLAN SYMBOLS

	EXISTING WALL TO REMAIN		EXISTING DOOR AND FRAME TO REMAIN
	WALL OR PARTITION TO BE REMOVED		EXISTING DOOR AND FRAME TO BE DEMOLISHED
	DASHED LINE INDICATES ITEM TO BE REMOVED (UNO)	DE10	KEY NOTE
A	GRIDLINE		

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

BID DOCUMENTS

Revisions:	Date:

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DATE: 10/31/2022
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	BASEMENT & FIRST LEVEL DEMOLITION PLANS
Phase	BID DOCUMENTS SUBMITTAL
Approved:	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/2022
Checked	LA
Drawn	MMM
Project Number	884-CM-3015
Building Number	1001
Drawing Number	AD111-1001
	24 OF 84

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REFLECTED CEILING KEYED NOTES

- RC1 GYPBD BULKHEAD @ 6'-11" AFF
- RC2 GYPBD BULKHEAD @ 8'- 0" AFF
- RC3 EXIST GYPBD CEILING TO REMAIN. PATCH CEILING AS REQUIRED DUE TO SPECIFIED WORK.
- RC4 EXPOSED WOOD JOIST CEILING
- RC5 CEILING RECESS CAB HEATER - SEE MECH DRAWINGS

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

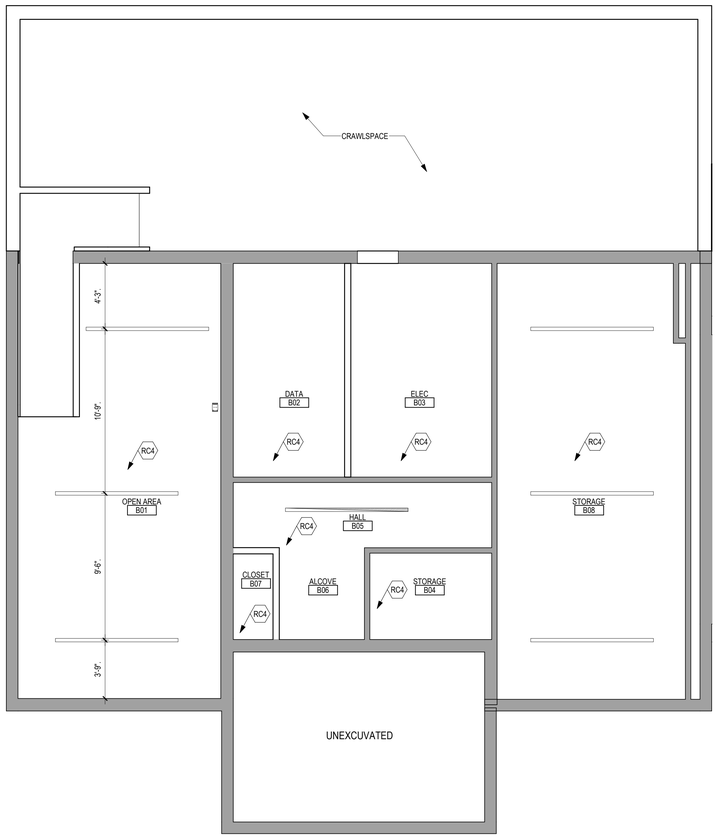
RCP GENERAL NOTES

1. GENERAL CONTRACTOR TO COORDINATE ALL CEILING MOUNTED EQUIPMENT SUPPORT REQUIREMENTS, LOCATIONS, DIMENSIONS, ETC WITH EQUIPMENT SUPPLIER AND OWNER, PRIOR TO INSTALLATION.
2. ALL CEILING MOUNTED ITEMS SUCH AS LIGHT FIXTURES, GRILLES, DIFFUSERS, SPEAKERS, EXIT LIGHTS, COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS.
3. FINISHED GYP BD SOFFITS SHALL EXTEND 1" BEYOND FACE AND EXPOSED ENDS OF WALL CABINETS, FULL-HEIGHT CABINETS, ETC UNLESS NOTED OTHERWISE. COORDINATE CABINET DIMENSIONS WITH SUPPLIER. GYP BD FASCIA/SOFFIT DETAILS ARE REFERENCED FROM THE REFLECTED CEILING PLAN.
4. GYP BOARD ATTACHED TO UNDERSIDE OF ROOF FRAMING STRUCTURE - TYPICAL CEILINGS ARE AT APPROXIMATELY 9'-0" AFF U.O.N.
5. PROVIDE L.E.D. LIGHT FIXTURES, UNO. SEE ELECTRICAL DRAWINGS FOR LIGHTING TYPES AND LOCATIONS.
6. LIGHT FIXTURES WITHIN A ROOM SHALL ALIGN AND BE ORIENTED PERPENDICULAR OR PARALLEL TO PARTITIONS AND WALLS. ENSURE COMMON CENTERLINE ALIGNMENT AND EQUAL SPACING. COORDINATE PLACEMENT WITH MECHANICAL, ELECTRICAL, PLUMBING, AND LOW VOLTAGE.
7. RECESS LIGHT FIXTURES WITHIN A ROOM SHALL CENTER BETWEEN AND BE ORIENTED PARALLEL TO ROOF JOISTS ABOVE CEILING.

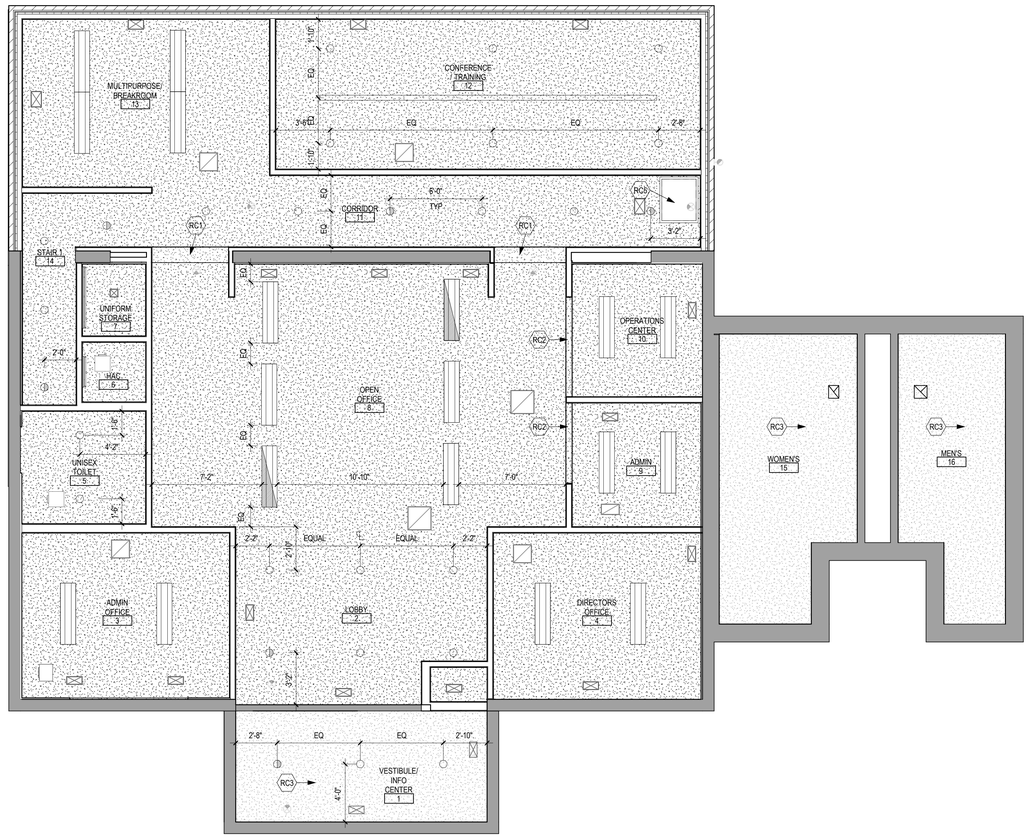
REFLECTED CEILING PLAN SYMBOLS

	GBPD CEILING / SOFFIT		2'-0" x 4'-0" LIGHT FIXTURE
	ACT CEILING SYSTEM		2'-0" x 2'-0" LIGHT FIXTURE
	EXISTING ACT CEILING SYSTEM		PENDANT STRIP LIGHT FIXTURE
	IV TRACK		PENDANT STRIP LIGHT FIXTURE
	CUBICLE CURTAIN TRACK		RECESED LIGHT FIXTURE
	ACCESS PANEL		WALL SCONCE LIGHT FIXTURE
	MECHANICAL SUPPLY GRILL		MECHANICAL LINEAR SUPPLY GRILL
	MECHANICAL RETURN GRILL	9'-0" AFF ACT	CEILING ELEVATION AND FINISH

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN



1 BASEMENT LEVEL REFLECTED CEILING PLAN
1/4" = 1'-0"



2 FIRST LEVEL REFLECTED CEILING PLAN
1/4" = 1'-0"

PLAN NORTH / TRUE NORTH

0 2" 4" 8"

BID DOCUMENTS

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
BASEMENT & FIRST LEVEL REFLECTED CEILING PLAN

Phase
BID DOCUMENTS SUBMITTAL

Approved:

Project Title
BLACK HILLS NATIONAL CEMETERY
RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location
STURGIS, SOUTH DAKOTA

Project Number 884-CM-3015
Building Number 1001
Drawing Number AC111-1001
25 OF 84

Issue Date 10/31/2022 | **Checked** LA | **Drawn** MMM

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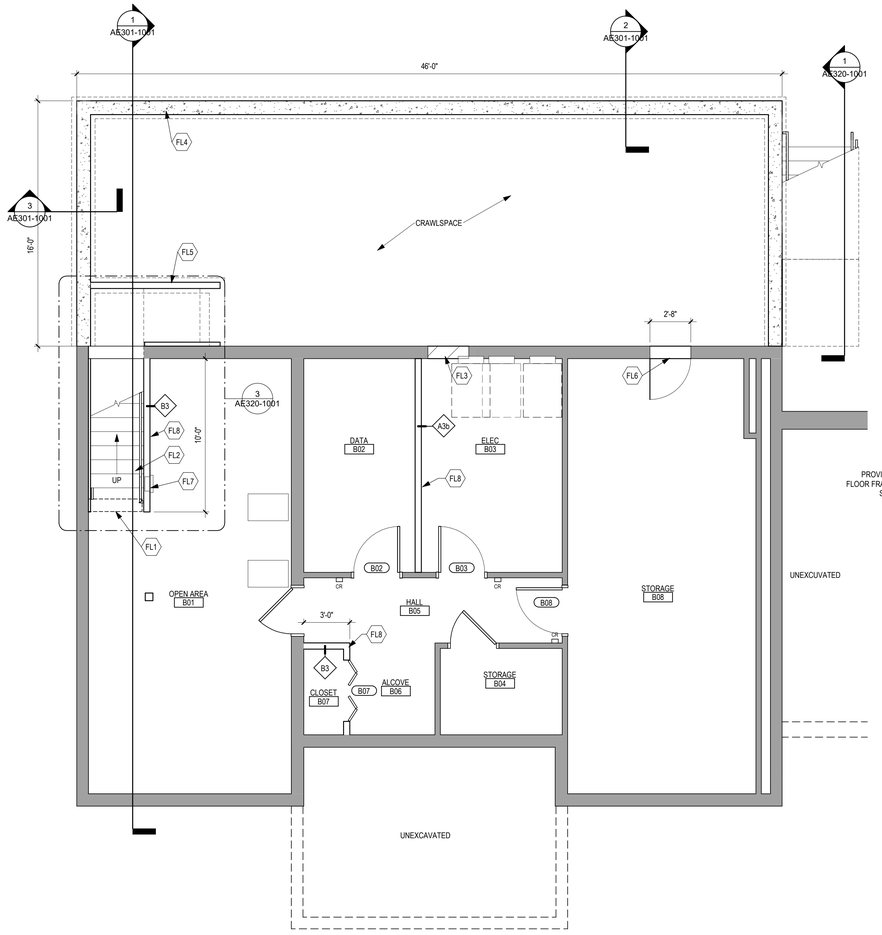


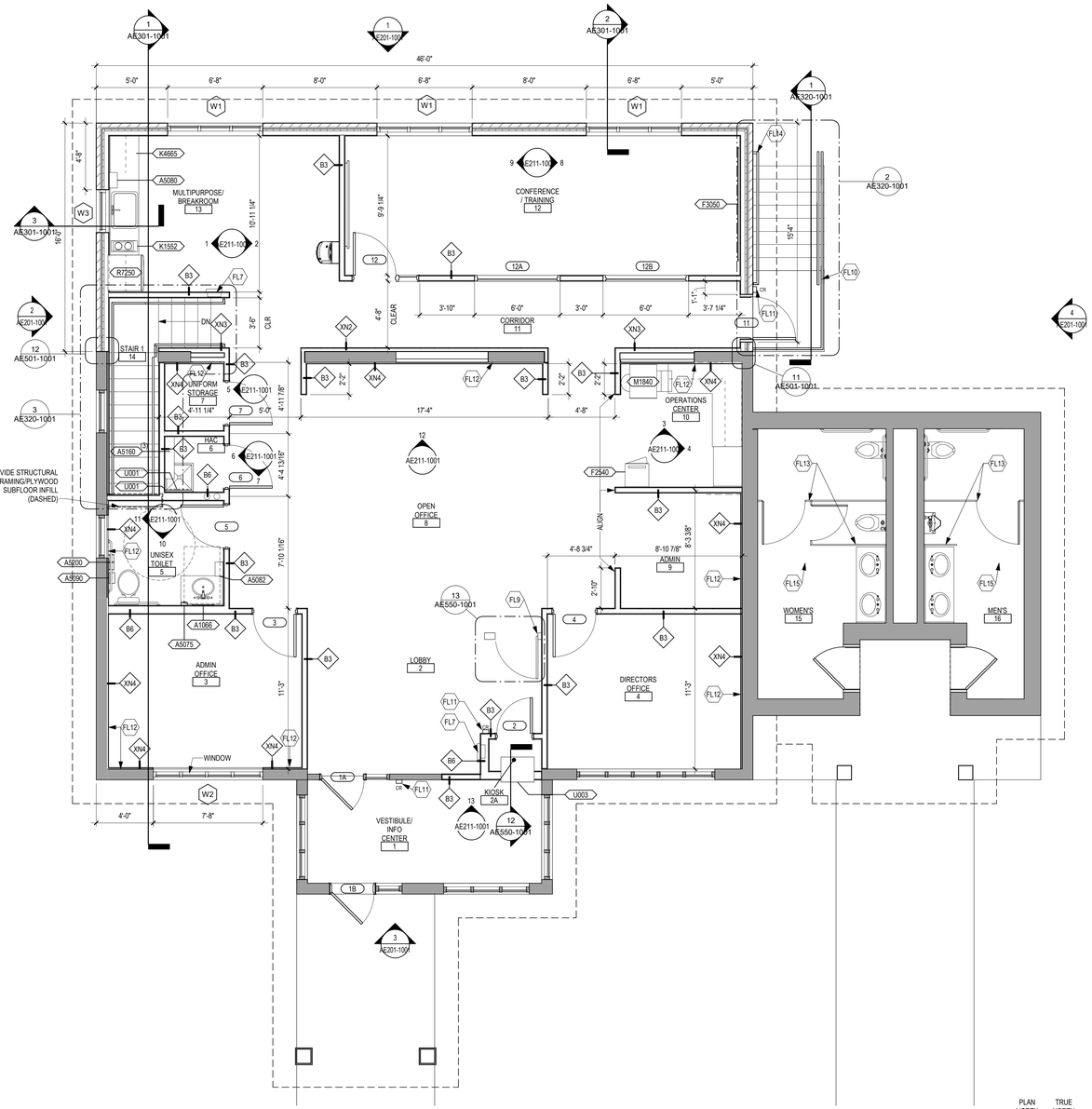
1 BASEMENT LEVEL FLOOR PLAN

1/4" = 1'-0"

PLAN NORTH

TRUE NORTH

0 2' 4' 8'



2 FIRST LEVEL FLOOR PLAN

1/4" = 1'-0"

PLAN NORTH

TRUE NORTH

0 2' 4' 8'

GENERAL NOTES

1. THE ARCHITECTURAL DRAWINGS SHOW PRINCIPAL AREAS AND LIMITS OF CONSTRUCTION WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY BE NECESSARY IN AREAS NOT SHOWN ON ARCHITECTURAL DRAWINGS DUE TO CHANGES AFFECTING ELECTRICAL, MECHANICAL AND PLUMBING ALONG WITH OTHER SYSTEMS. THIS INCIDENTAL WORK SHALL BE PART OF THIS CONTRACT, AND ALL TRADES SHALL INSPECT THESE AREAS, ASCERTAIN WORK REQUIRED AND DO THE WORK IN ACCORDANCE OF CONTRACT REQUIREMENTS AT NO ADDITIONAL COST.

2. CONTRACTORS SHALL VISIT THE SITE DURING BIDDING TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHALL LOCATE, INSPECT AND FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO DEMOLITION AND CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

3. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

4. WHEREVER OPENINGS ARE CUT THROUGH FIRE RATED PARTITIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR WHOM THE HOLE IS CUT TO PATCH AND REPAIR ANY OPENING TO MAINTAIN THE INTEGRITY OF THE FIRE RATING.

5. GENERAL CONTRACTOR TO CHECK MECHANICAL DRAWINGS FOR EXISTING PIPES AND DUCTS FURRED IN WALLS. VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO PROCEEDING WITH REMODELING.

6. FIREPROOFING SHALL BE UNPIERCED. ANY SUBCONTRACTOR PENETRATING THE FIREPROOFING SHALL BE REQUIRED TO REPLACE FIREPROOFING TO THE ORIGINAL CONDITION AND FIRE RATING, AT THE SUBCONTRACTORS EXPENSE.

7. EQUIPMENT UNIT DIMENSIONS ARE FOR PRODUCT DESCRIPTION ONLY, VERIFY SIZE WITH MANUFACTURER.

8. ALL DIMENSIONS PERTAINING TO MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT SHALL BE VERIFIED WITH THE RESPECTIVE TRADE.

9. ALL CONTRACTORS THAT PENETRATE AND/OR DISTURB ANY AREAS AT EXISTING CONDITIONS SHALL PATCH AREA TO MATCH EXISTING ADJACENT AREA OR SURFACE AND PREPARE FOR SCHEDULED FINISH APPLICATION. COORDINATE WORK WITH GENERAL CONTRACTOR PRIOR TO PROCEEDING.

10. VERIFY HEIGHTS AND LOCATIONS OF ACCESS PANELS (AP) AND COORDINATE TYPES WITH TRADES WHICH REQUIRE THEM.

11. PROVIDE LINTELS AND FRAMING FOR GRILLES, LOUVERS, AND ROOF VENTS AS REQUIRED BY MECHANICAL CONTRACTOR, VERIFY SIZE AND LOCATION.

12. STRUCTURAL, MECHANICAL, AND ELECTRICAL ABBREVIATIONS AND SYMBOLS MAY DIFFER FROM ARCHITECTURAL. SEE RESPECTIVE SECTIONS AND/OR DRAWINGS FOR DEFINITIONS.

13. AT MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, PROVIDE 3/4" FRT PLYWOOD BACKING BEHIND ALL SURFACE MOUNTED FIXTURES AND EQUIPMENT, UNLESS NOTED OTHERWISE.

14. CONTRACTOR SHALL EVALUATE INTEGRITY OF ALL PARTITIONS INDICATED BY SYMBOLS ON THE LIFE SAFETY PLAN(S) WITHIN THE PROJECT SCOPE AND UPGRADE AS REQUIRED. ALL FIRE RESISTIVE RATED WALLS SHALL BE CONSTRUCTED OF MATERIALS / ASSEMBLIES MEETING THE RATING INDICATED, TERMINATE AT THE DECK ABOVE WITH A TESTED HEAD OF WALL ASSEMBLY AND ALL PENETRATIONS SHALL BE SEALED WITH A TESTED ASSEMBLY. ALL SMOKE PARTITIONS SHALL BE CONSTRUCTED OF MATERIALS THAT RESIST THE PASSAGE OF SMOKE, TERMINATE AT THE DECK ABOVE WITH A JOINT SEALED WITH FIRE CAULK AND ALL PENETRATIONS SHALL BE SEALED WITH FIRE CAULK.

FLOOR PLAN SYMBOLS

	EXISTING WALL TO REMAIN	8'-0"	DIMENSION LINE, NOMINAL
	WALL	8'-0"	EXTENDED DIMENSION LINE, NOMINAL
	EXISTING DOOR AND FRAME TO REMAIN	1A AE211 2B	INTERIOR ELEVATION INDICATOR TAG
101A	DOOR	1A AE201	EXTERIOR ELEVATION INDICATOR TAG
101B	INTERIOR BORROWED LIGHT	203	EQUIPMENT TAG
B3	WALL TAG	100	FLOOR SPOT ELEVATION
OFFICE 101	ROOM NAME AND NUMBER	1A AE501	DETAIL REFERENCE TAG
FP10	KEY NOTE		
1A AE2O1	INTERIOR SECTION REFERENCE TAG	1A AE2O1	EXTERIOR SECTION REFERENCE TAG
PR01	REVISION TAG		REVISION CLOUD
A	GRIDLINE		

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

FLOOR PLAN KEYED NOTES

FL1	PROVIDE FLOOR FRAMING @ FLOOR ABOVE AS REQUIRED
FL2	WOOD FRAMED STAIR
FL3	INFILL EXISTING WINDOW OPG WITH CMU, FACE FLUSH WITH INTERIOR WALL
FL4	ADDITION FOUNDATION WALL- SEE STRUCTURAL
FL5	STUD FRAMING ON CONC FOOTING TO SUPPORT STAIR RUN & LANDING ABOVE
FL6	PROVIDE LOCKABLE ACCESS PANEL TO CRAWLSPACE
FL7	SEMI RECESSED FIRE EXTINGUISHER CABINET
FL8	FINISH BOTH SIDES OF PARTITION WITH P-1
FL9	GATE WITH GRAVITY HINGES AND STOP BY MILLWORK
FL10	GALVINIZED STEEL GUARDRAIL W/ HANDRAIL.
FL11	CARD READER. COORDINATE WITH DOOR HARDWARE AND TECHNOLOGY
FL12	ADD 3/4" PLYMOOD AND 5/8" GYPSUM BOARD TO EXISTING STUD FRAMING. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL NOTES & INFORMATION
FL13	PROVIDE NEW TOILET STALL PARTITION
FL14	WALL MOUNTED GALVINIZED STEEL HANDRAIL
FL15	PREP FLOOR FOR SCHEDULED FINISH
FL16	PATCH EXIST FOUNDATION WALL FROM DEMO

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

EQUIPMENT SCHEDULE

JSN #	EQUIPMENT NAME	ACQUISITION CODE	QTY
A5075	SOAP DISPENSER	CC	1
A5080	PAPER TOWEL DISPENSER	CC	1
A5082	HANDS FREE PAPER TOWEL DISPENSER	CC	1
A5090	DISPENSER, SANITARY NAPKIN	CC	1
A5160	8" X 36" SHELF, STAINLESS STEEL	CC	3
A5200	DISPENSER, TOILET PAPER	CC	1
F2540	SHRED BIN	R	1
F3050	5X8 WHITEBOARD, DRY ERASE	CC	1
K1552	BREWER, COFFEE, AUTO	CC	1
K4665	OVEN, MICROWAVE	CC	1
M1840	PRINTER, FLOOR	R	1
R7250	REFERIGERATOR/FREEZER	CC	1
U001	MOP HOLDER	CC	1
U003	GRAVESITE LOCATOR	VC	1

VA ACQUISITION CODE LEGEND

CONTRACTOR FURNISHED AND INSTALLED	CC
VA FURNISHED - CONTRACTOR INSTALLED	VC
VA FURNISHED AND INSTALLED	V V
VA FURNISHED - CONTRACTOR INSTALLED WITH CONSTRUCTION FUNDS	VC(CF)
VA FURNISHED - VA INSTALLED WITH CONSTRUCTION FUNDS	V V(CF)
RELOCATED	R

SEE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED (CC) EQUIPMENT NOT INDICATED ON EQUIPMENT SCHEDULE.

BID DOCUMENTS

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — SOUTH DAKOTA

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

U.S. Department of Veterans Affairs

Drawing Title: FIRST & BASEMENT LEVEL FLOOR PLANS	Phase: BID DOCUMENTS SUBMITTAL
Approved:	

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number: 1001
Location: STURGIS, SOUTH DAKOTA	Drawing Number: AE111-1001
Issue Date: 10/31/2022 / Checked: LA / Drawn: MMM	26 OF 84

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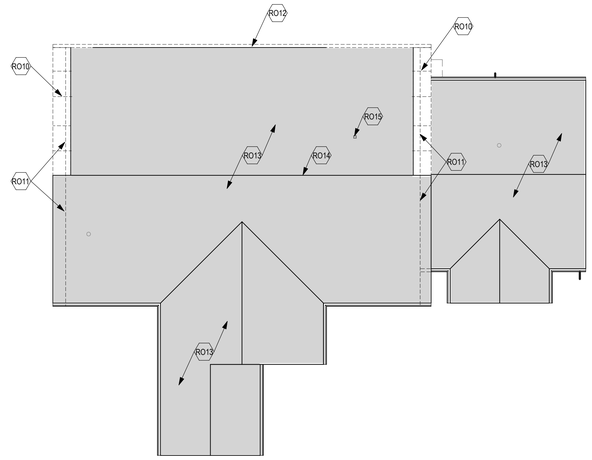
VA FORM 08 - 6231

ROOF KEYED DEMO NOTES

- RO10 REMOVE ROOF TRUSS OUTRIGGERS BACK TO GABLE END WALL
- RO11 GABLE END WALL BELOW - REMOVE ENTIRELY VERTICAL WOOD SIDING AT GABLE END WALL
- RO12 REMOVE GUTTER & DOWNSPOUTS
- RO13 REMOVE SHINGLES & UNDERLAYMENT. ROOF SHEATHING TO REMAIN. (SHADED AREA)
- RO14 EXISTING ROOF RIDGE
- RO15 REMOVE ROOF ANTENNAE

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN



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

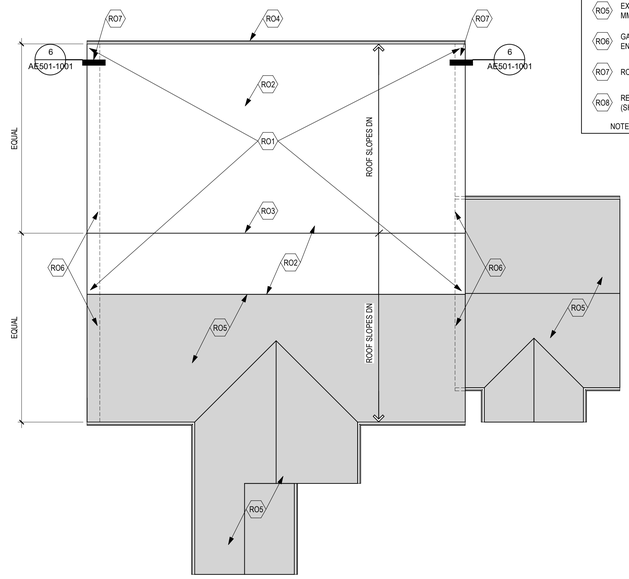
PLAN NORTH TRUE NORTH

0 2' 4' 8'

ROOF KEYED NOTES

- RO1 ROOF TRUSS STRUCTURE - SEE STRUCTURAL DRAWINGS
- RO2 ASPHALT SHINGLE ROOF OVER MMB & PLYWOOD
- RO3 ROOF RIDGE LINE
- RO4 GUTTER - PROVIDE SUFFICIENT SIZE, LENGTH AND DOWNSPOUT QUANTITY. COORDINATE W/ MECH
- RO5 EXISTING ROOF STRUCTURE- PROVIDE ASPHALT SHINGLE ROOF OVER MMB & PLYWOOD (SHADED AREA TYP)
- RO6 GABLE END WALL BELOW - PROVIDE VERTICAL WOOD SIDING AT GABLE END WALL - SEE EXTERIOR ELEVATIONS
- RO7 ROOF BOX CORNICE TO MATCH EXISTING CONSTRUCTION
- RO8 REMOVE SHINGLES & UNDERLAYMENT. ROOF SHEATHING TO REMAIN. (SHADED AREAS)

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN



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

PLAN NORTH TRUE NORTH

0 2' 4' 8'

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REGISTERED PROFESSIONAL ENGINEER THOMAS A. OLESAK SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title ROOF PLAN
Approved:
Phase BID DOCUMENTS SUBMITTAL
Project Title BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location STURGIS, SOUTH DAKOTA
Issue Date 10/31/2022
Checked LA
Drawn MMM
Project Number 884-CM-3015
Building Number 1001
Drawing Number AE112-1001
27 OF 84

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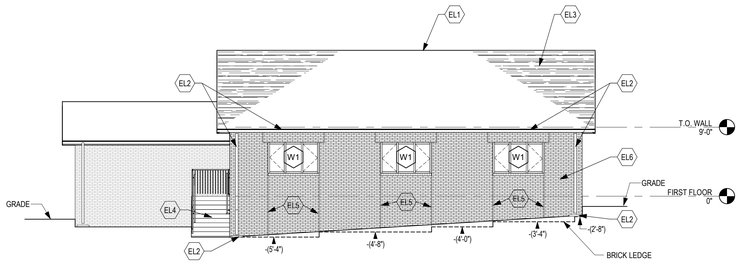
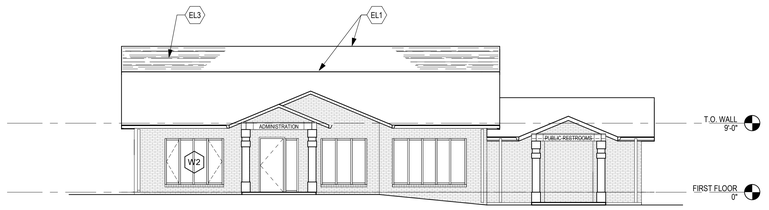


1 EXTERIOR ELEVATION - NORTH

1/8" = 1'-0"

0 4' 8' 16'



3 EXTERIOR ELEVATION - SOUTH

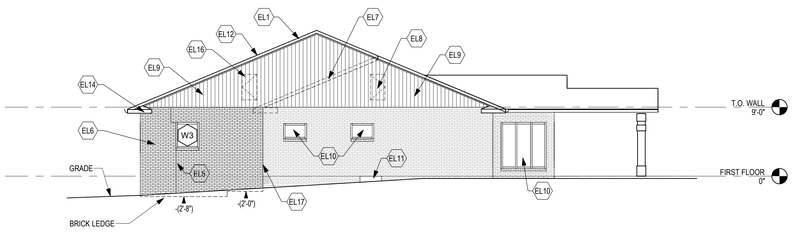
1/8" = 1'-0"

0 4' 8' 16'

ELEVATION KEYED NOTES

- EL1 ROOF ADDITION
- EL2 ROOF GUTTER WITH DOWNSPOUT & SPLASH BLOCK
- EL3 ASPHALT SHINGLED ROOF
- EL4 CONCRETE STAIR WITH GUARDRAIL AND HANDRAIL
- EL5 BRICK EXPANSION JOINT
- EL6 FACE BRICK TO MATCH EXISTNG
- EL7 REMOVE EXISTING ROOF OUTRIGGERS BACK TO GABLE END WALL
- EL8 EXISTING ATTIC ACCESS DOOR TO REMAIN
- EL9 WOOD VERTICAL GROVED SIDING PANELS ON GABLE END WALL
- EL10 EXISTING WINDOWS TO REMAIN
- EL11 WINDOW WELL FOR MECH USE- SEE MECH PLANS
- EL12 FASCIA BOARD - PAINT TO MATCH EXISTING COLOR
- EL13 WALL MOUNTED LIGHT FIXTURE - SEE ELECTRICAL
- EL14 BOX CORNICE TO MATCH EXISTING
- EL15 FOUNDATION WALL ELEVATION - SEE STRUCTURAL
- EL16 2'-0" x 3'-0" ATTIC ACCESS DOOR, HINGED 2x WOOD FRAMED WITH SIDING AND LOCKABLE HEAVY-DUTY BARREL BOLT LOCKSET. PROVIDE WEATHER PROOFING SEAL AS REQUIRED-COORDINATE LOCATION WITH MECH
- EL17 BRICK EXPANSION JOINT BETWEEN EXISTING AND NEW BRICK

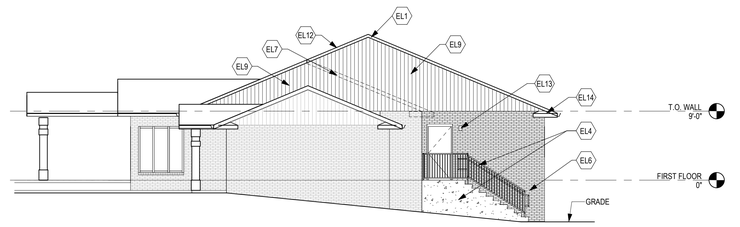
NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN



2 EXTERIOR ELEVATION - WEST

1/8" = 1'-0"

0 4' 8' 16'



4 EXTERIOR ELEVATION - EAST

1/8" = 1'-0"

0 4' 8' 16'

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Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — 22555 — THOMAS A. OLESAK — SOUTH DAKOTA — ARCHITECT

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title EXTERIOR ELEVATIONS	**Phase** BID DOCUMENTS SUBMITTAL
Approved:	

Project Title BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS			**Project Number** 884-CM-3015
			Building Number 1001
Location STURGIS, SOUTH DAKOTA			**Drawing Number** AE201-1001 28 OF 84
Issue Date 10/31/2022	**Checked** LA	**Drawn** MMM	

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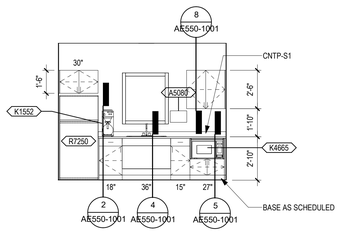
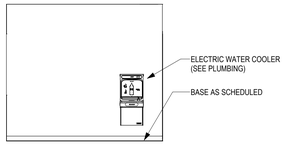
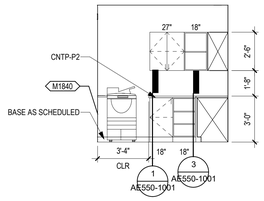


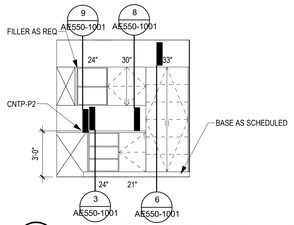
1 ELEVATION - MULTIPURPOSE/BREAKROOM 13 - WEST
1/4" = 1'-0"



2 ELEVATION - MULTIPURPOSE/BREAKROOM 13 - EAST
1/4" = 1'-0"

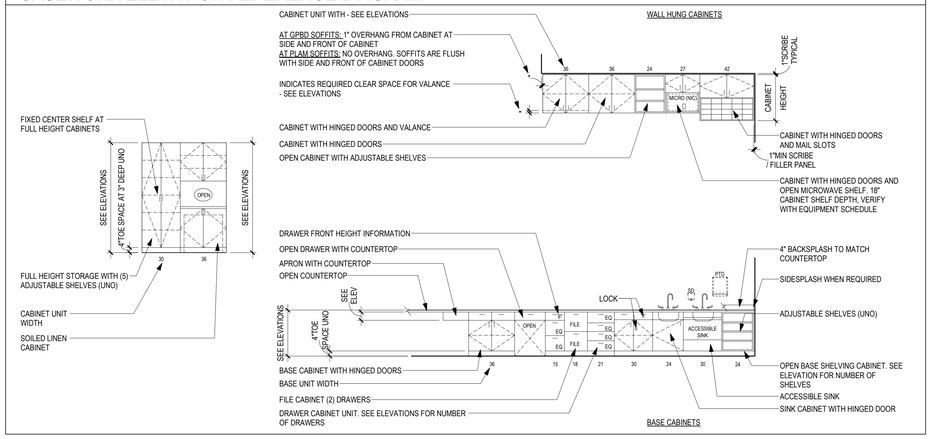


3 ELEVATION - OPERATIONS CENTER 10 - NORTH
1/4" = 1'-0"



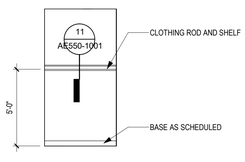
4 ELEVATION - OPERATIONS CENTER 10 - EAST
1/4" = 1'-0"

CASEWORK ELEVATION REFERENCE DIAGRAM

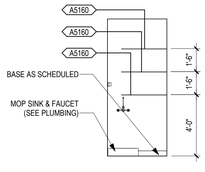


CASEWORK GENERAL NOTES

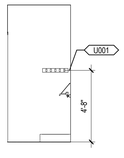
1. FULL HEIGHT STORAGE CABINETS (UNO)
   - SHALL BE 2'-0" DEEP
   - 2'-0" MAX DOOR WIDTH
   - WARDROBE CABINETS TO BE 2'-0" DEEP
   - PROVIDE (5) FIVE ADJ PLAM SHELVES
2. BASE AND WALL CABINETS (UNO)
   - WALL CABINETS 1'-0" DEEP CLEAR INSIDE MINIMUM
   - BASE CABINETS 2'-0" DEEP
   - (1) ADJ PLAM SHELF AT 2'-0" HIGH WALL CABINETS
   - (2) ADJ PLAM SHELVES AT 2'-6" HIGH WALL CABINETS, AND
   - (3) ADJ PLAM SHELVES AT 3'-0" HIGH WALL CABINETS
3. SEE INTERIOR ELEVATIONS FOR PLAM FILLERS AND SLOPED TOPS.
4. WHERE FILLER STRIPS ARE REQUIRED, THEY SHALL BE EQUAL IN SIZE AT BOTH ENDS OF CASEWORK (UNO).
5. PROVIDE LOCKS ON INDIVIDUAL DOORS AND DRAWERS WHERE INDICATED.
6. PROVIDE CONTINUOUS SEALANT AT TOP OF BACKSPLASH/SIDESPLASHES.
7. PROVIDE 1" THICK SHELVES WHERE CABINETS ARE OVER 3'-0" WIDE.
8. PROVIDE GROMMETS AT WORKSTATIONS, INCLUDING NURSE STATIONS, RECEPTION DESKS AND OTHER WORK COUNTERS. CUT IN FIELD-PROVIDE ONE PER ELECTRICAL DEVICE BELOW COUNTER-COORDINATE LOCATIONS WITH OWNER. COLOR TO BE SELECTED BY ARCHITECT. SEE SPECIFICATION FOR GROMMET TYPES AND SIZES.
9. PROVIDE A 2" RADIUSED EDGE (IN PLAN) AT ALL OUTSIDE, EXPOSED COUNTERTOP CORNERS (UNO). ALL PLAM COUNTERTOPS SHALL HAVE A 1 1/4" THICK PLAM SQUARE EDGE NOSING (UNO)
10. ALL COUNTERTOPS ARE 2'-1" DEEP (UNO)
11. PROVIDE PLYWOOD BACKING AT ALL SOLID SURFACE COUNTERTOPS.
12. COUNTERTOP SUPPORT BRACKETS ARE PROVIDED BY THE CASEWORK SUPPLIER. PROVIDE WALL BLOCKING AT EACH SUPPORT. SPACE AT 3'-0" OC MAX.
13. COORDINATE LOCATION OF ALL UNDERCOUNTER SUPPORT WITH OWNER FURNISHED/OWNER INSTALLED EQUIPMENT.
14. NO EXPOSED FASTENERS ON CASEWORK (UNO)
15. ALL EXPOSED METAL CLIP ANGLES AND BRACKETS TO BE PAINTED TO MATCH CASEWORK.
16. ALL EXPOSED AND SEMI-EXPOSED SURFACES OF CASEWORK, SHELVING, BASE, FULL HEIGHT AND UPPER WALL CABINETS, AND FINISHED END PANELS ARE PLAM (UNO)
17. FIELD VERIFY SPACE AVAILABLE AT CABINET LOCATIONS PRIOR TO CASEWORK FABRICATION.
18. RETURN BACKSPLASH AT SIDEWALLS (UNO).
19. TUCK WALL COVERING BEHIND ALL BACKSPLASHES.
20. ALL CABINETS TO RECEIVE BASE SCHEDULED FOR ROOM (UNO).
21. COORDINATE ALL SWITCHES, UNDER-CABINET LIGHT FIXTURES AND UNDERCOUNTER RECEPTACLES WITH THE ELECTRICAL CONTRACTOR.
22. PROVIDE HANGING FILE EDGE/HARDWARE WHERE FILE DRAWERS ARE INDICATED
23. PROVIDE A 1/4" GAP BETWEEN BOTTOM EDGE OF COUNTERTOP AND TOP EDGE OF DOOR FRONTS/DOORS OF CABINETS.
24. REFER TO FINISH PLAN GENERAL NOTES FOR CASEWORK FINISHES (UNO)
25. BASE AS SCHEDULED (UNO)
26. PLAM COUNTERTOPS TO RECEIVE 3mm FLAT PVC EDGE (UNO).
27. NUMBERS SHOWN BELOW BASE CABINETS AND ABOVE WALL CABINETS REFER TO NOMINAL WIDTH DIMENSIONS, IN INCHES, FOR THAT CABINET. SEE REFERENCE DETAILS FOR ADDITIONAL INFORMATION.



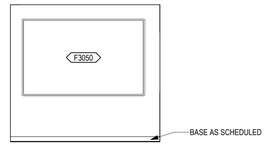
5 ELEVATION - UNIFORM STORAGE 7 - WEST
1/4" = 1'-0"



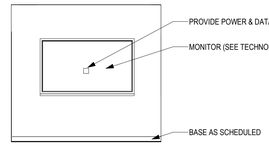
6 ELEVATION - HAC 6 - WEST
1/4" = 1'-0"



7 ELEVATION - HAC 6 - SOUTH
1/4" = 1'-0"



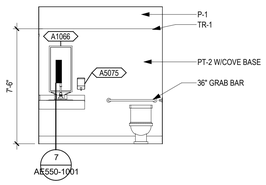
8 ELEVATION - CONFERENCE/TRAINING 12 - EAST
1/4" = 1'-0"



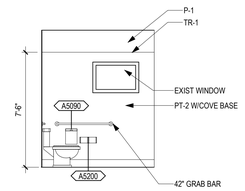
9 ELEVATION - CONFERENCE/TRAINING 12 - WEST
1/4" = 1'-0"

ELEVATION GENERAL NOTES

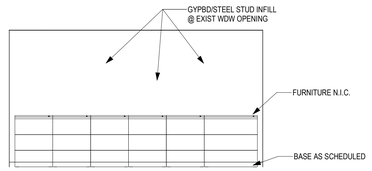
1. SEE RCP FOR SOFFIT AND BULKHEAD LOCATIONS AND DETAILS
2. INSTALL CERAMIC TILE (CT) BEHIND ALL WALL MOUNTED ITEMS WHERE CT IS CALLED OUT IN FINISH PLAN AND SCHEDULE. WHERE ANY TOILET ACCESSORY OVERLAPS OR EXTENDS BEYOND A CT WAINSCOT AND PROJECTS ONTO THE ADJACENT WALL, INSTALL A HARDBOARD BACKER FULL SIZE OF THE OVERLAP AREA AND OF A THICKNESS TO ALIGN FLUSH WITH THE FACE OF THE CT. HOLD FACE OF HARDBOARD BACK 3/8" FROM THE FACE OF THE ACCESSORY ON ALL SIDES. PROVIDE SANITARY SEALANT AROUND ALL EDGES OF HARDBOARD BACKING PIECE.
3. COORDINATE ALL PLUMBING FIXTURES, CONTROLS AND VENTILATION REQUIREMENTS WITH MECHANICAL CONTRACTOR
4. COORDINATE ALL ELECTRICAL FIXTURES, OUTLETS, SWITCHES AND POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR
5. VERIFY OPENING SIZES AND LOCATIONS OF OWNER FURNISHED, OWNER INSTALLED EQUIPMENT AND FURNISHINGS TO ASSURE NO INTERFERENCE WITH COUNTER SUPPORT BRACKETS, APRONS, ETC.



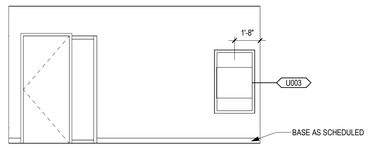
10 ELEVATION - UNISEX TOILET 5 - SOUTH
1/4" = 1'-0"



11 ELEVATION - UNISEX TOILET 5 - WEST
1/4" = 1'-0"



12 ELEVATION - OPEN OFFICE 8 - NORTH
1/4" = 1'-0"



13 ELEVATION - VESTIBULE/INFO CENTER 1 - NORTH
1/4" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER THOMAS A. OLESAK
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management
VA | U.S. Department of Veterans Affairs

Drawing Title INTERIOR ELEVATIONS	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved:		**Location** STURGIS, SOUTH DAKOTA	**Building Number** 1001
		Issue Date 10/31/2022 / **Checked** MRP / **Drawn** CZ	**Drawing Number** AE211-1001 29 OF 84

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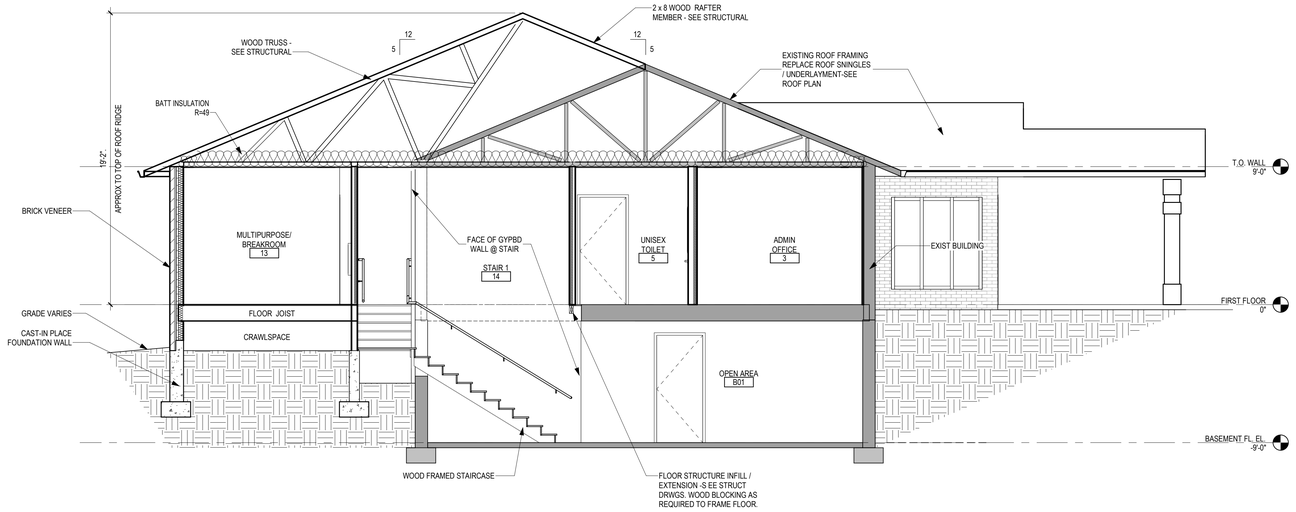
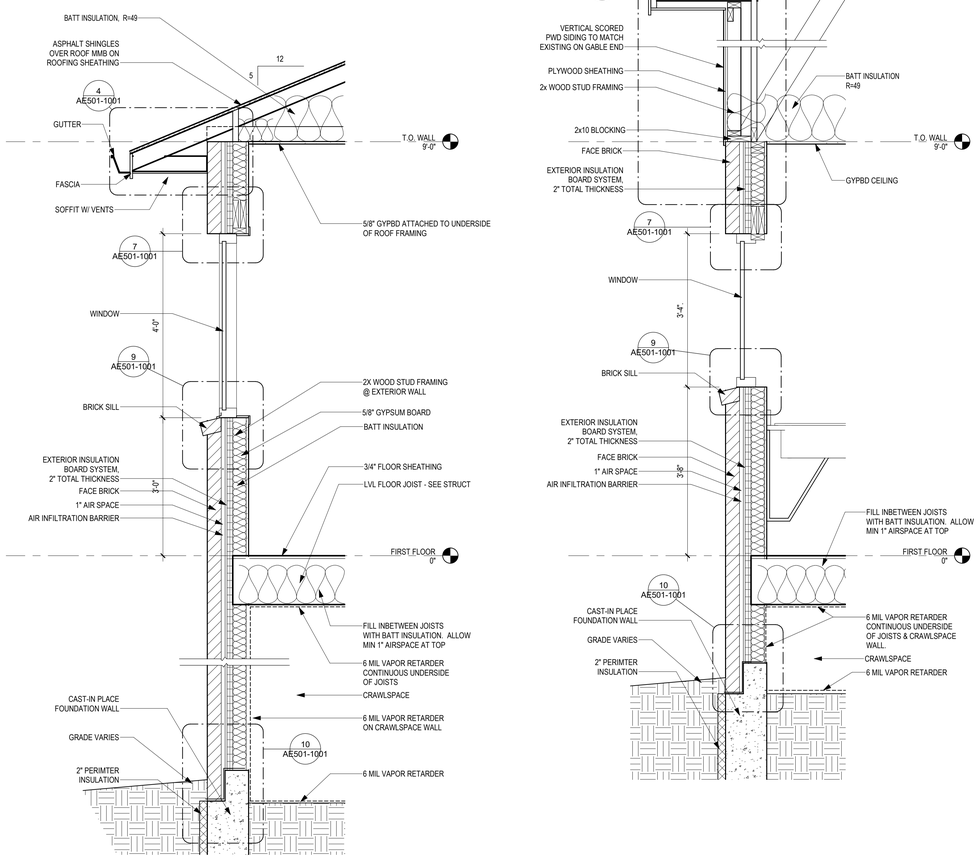
VA FORM 08 - 6231



1 BUILDING SECTION - NORTH / SOUTH
1/4" = 1'-0"

0 4' 8' 16'



2 WALL SECTION 1
3/4" = 1'-0"

0 8" 1'-4" 2'-8"

3 WALL SECTION 2
3/4" = 1'-0"

0 8" 1'-4" 2'-8"

BID DOCUMENTS

Revisions:	Date:

CONSULTANT

MECHANICAL, ELECTRICAL, TECHNOLOGY & STRUCTURAL:
IMEG CORP.
14755 PRESTON RD STE 845
DALLAS, TX 75254
(309) 786-5075

GEOTECHNICAL:
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1745 SAMCO RD
RAPID CITY, SD 57702
(605) 223-4397

COST ESTIMATING:
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3265 NORTHWOOD CIR STE 170
EAGAN, MN 55121
(952) 854-3663

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13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
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REGISTERED PROFESSIONAL ENGINEER THOMAS A. OLESAK SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management
VA | U.S. Department of Veterans Affairs

Drawing Title
WALL & BUILDING SECTIONS

Phase
BID DOCUMENTS SUBMITTAL

Project Title
BLACK HILLS NATIONAL CEMETERY
RENOVATE AND EXPAND
ADMINISTRATION AND
MAINTENANCE BUILDINGS

Project Number
884-CM-3015

Building Number
1001

Approved:

Location
STURGIS, SOUTH DAKOTA

Issue Date
10/31/2022

Checked
LA

Drawn
MMM

Drawing Number
AE301-1001
30 OF 84

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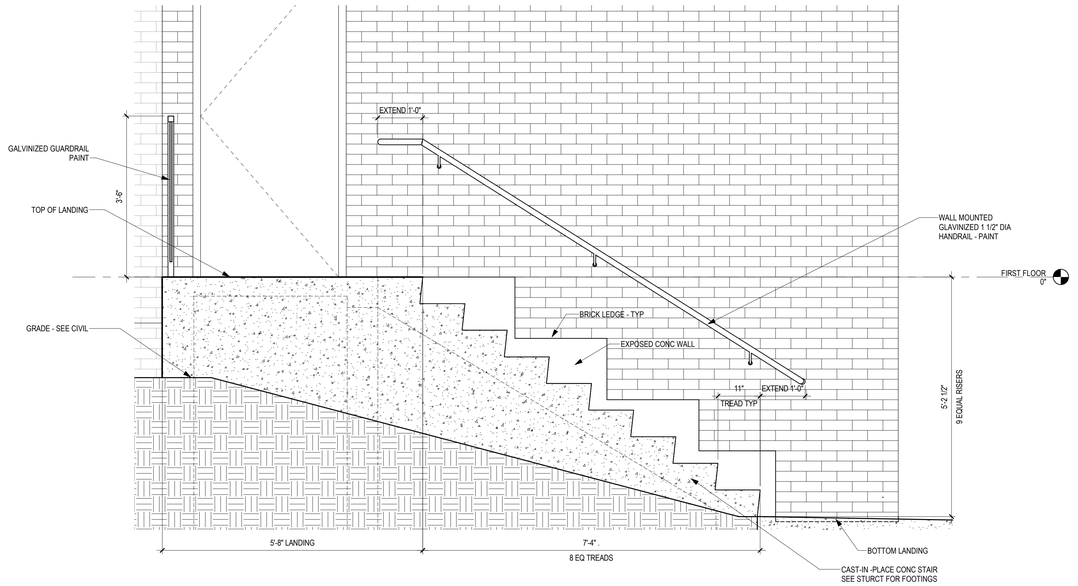
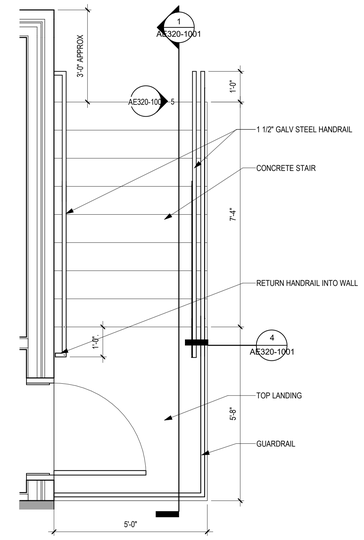


1 STAIR SECTION

3/4" = 1'-0"

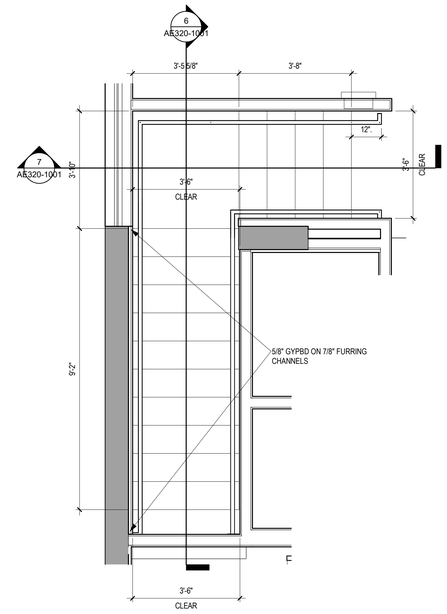
0 8" 1'-4" 2'-8"



2 ENLARGED EXTERIOR STAIR PLAN

1/2" = 1'-0"

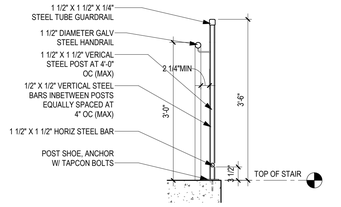
0 1' 2' 4'



3 ENLARGED STAIR PLAN

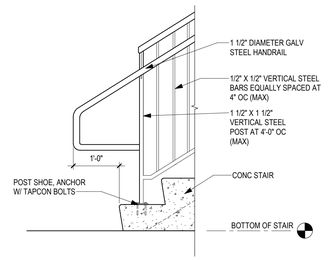
1/2" = 1'-0"

0 1' 2' 4'



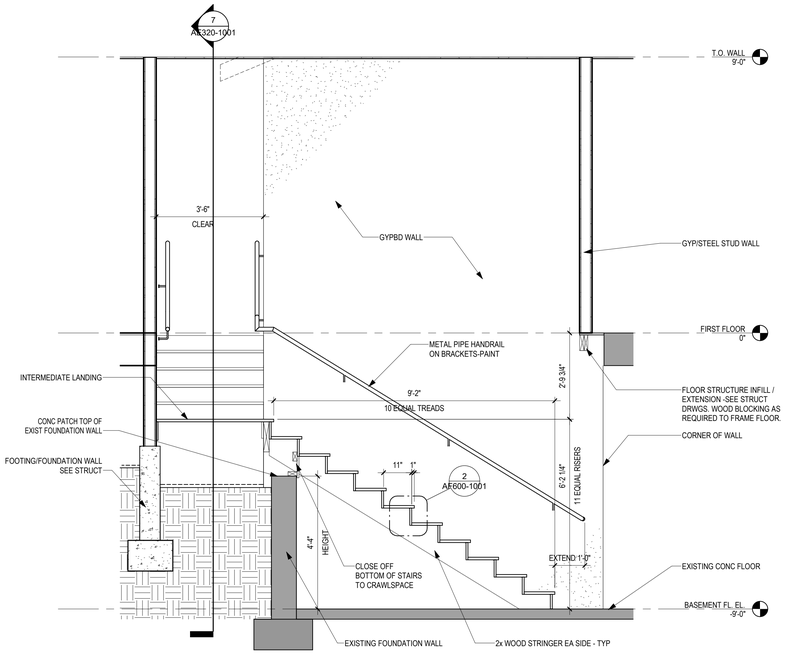
4 STAIR GUARDRAIL / HANDRAIL SECTION

3/4" = 1'-0"



5 STAIR BOTTOM GUARDRAIL ELEVATION

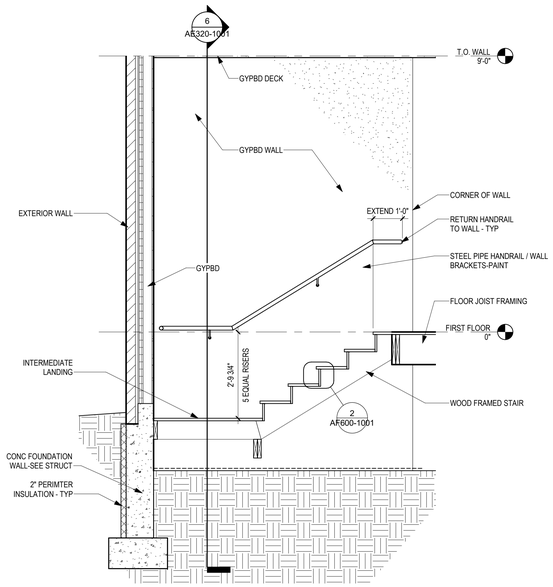
3/4" = 1'-0"



6 STAIR SECTION 1

1/2" = 1'-0"

0 1' 2' 4'



7 STAIR SECTION 2

1/2" = 1'-0"

0 1' 2' 4'

BID DOCUMENTS

Revisions:	Date:

CONSULTANT

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IMEG CORP.
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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: STAIR SECTIONS AND ENLARGED PLANS

Approved:

Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/2022 | **Checked:** LA | **Drawn:** MMM

Project Number: 884-CM-3015

Building Number: 1001

Drawing Number: AE320-1001

31 OF 84

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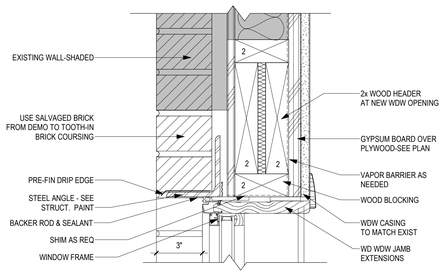
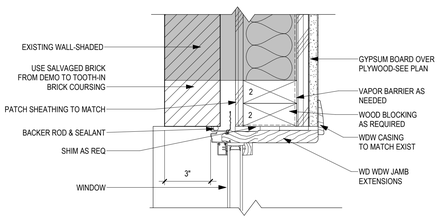
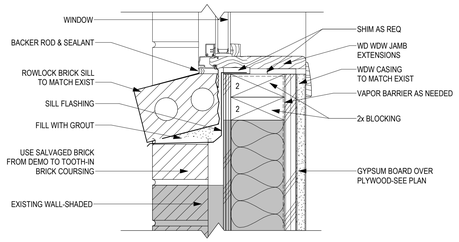


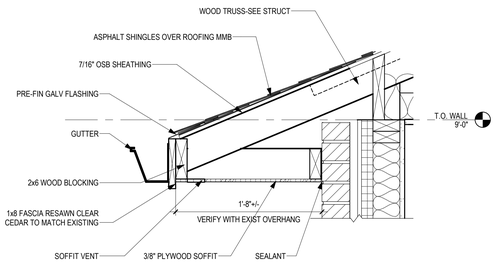
1 WDW HEAD AT OPENING
3" = 1'-0"



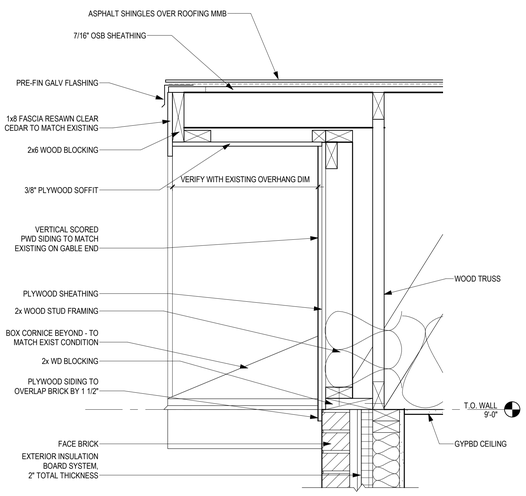
2 WDW JAMB AT OPENING
3" = 1'-0"



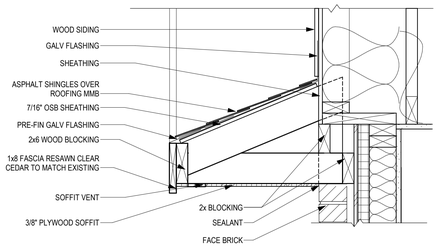
3 WDW SILL AT OPENING
3" = 1'-0"



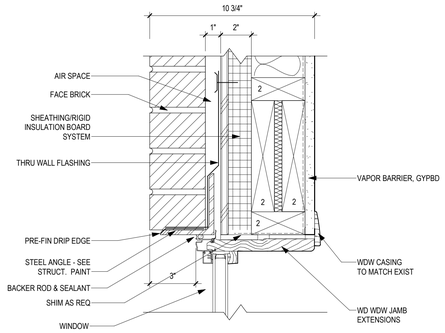
4 ROOF OVERHANG
1 1/2" = 1'-0"



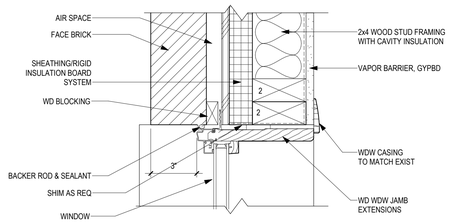
5 GABLE END WALL
1 1/2" = 1'-0"



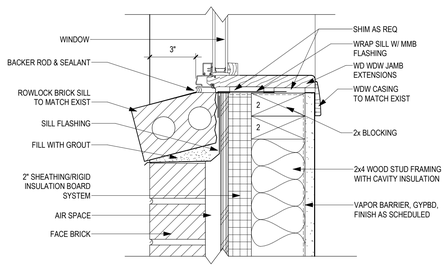
6 BOX CORNICE
1 1/2" = 1'-0"



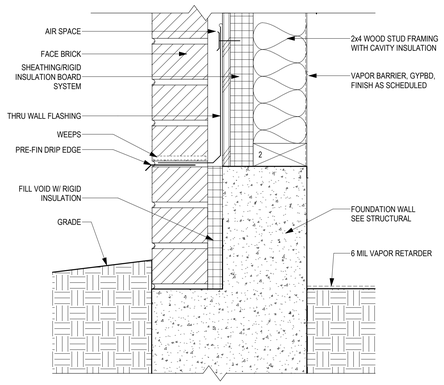
7 WDW HEAD DETAIL
3" = 1'-0"



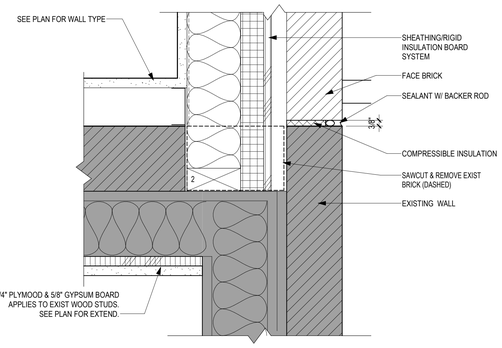
8 WDW JAMB DETAIL
3" = 1'-0"



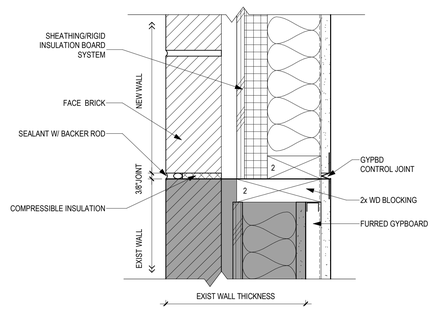
9 WDW SILL DETAIL
3" = 1'-0"



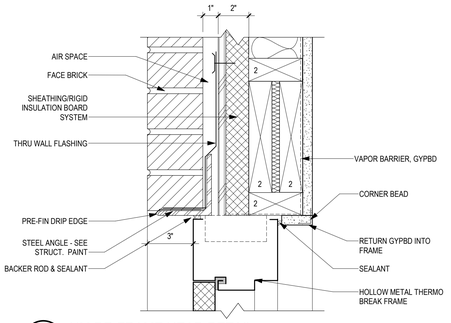
10 WALL/FLOOR DETAIL
3" = 1'-0"



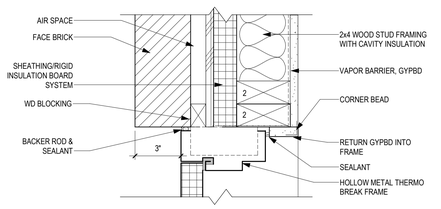
11 DETAIL - WALL CONNECTION ..
3" = 1'-0"



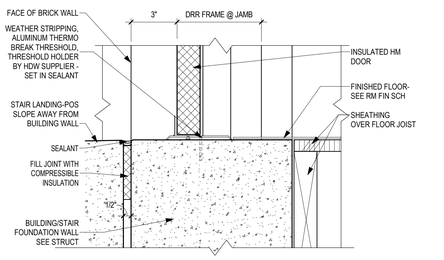
12 DETAIL - EXTERIOR WALL CONNECTION .
3" = 1'-0"



13 HM DR FRAME HEAD DETAIL
3" = 1'-0"



14 HM DR FRAME JAMB DETAIL
3" = 1'-0"



15 HM DR FRAME SILL DETAIL
3" = 1'-0"

BID DOCUMENTS

Revisions:	Date:

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MINNESOTA REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — DATE: 10/31/2022 — License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: DETAILS
Approved:
Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10/31/2022 | **Checked:** LA | **Drawn:** MMM

Project Number: 884-CM-3015
Building Number: 1001
Drawing Number: AE501-1001
32 OF 84

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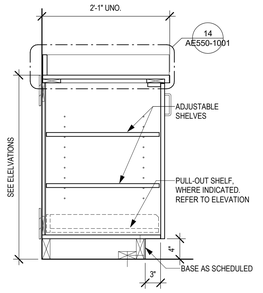
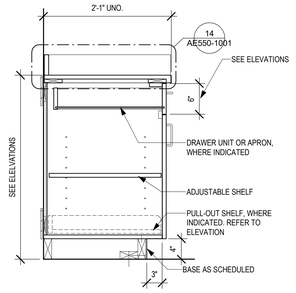
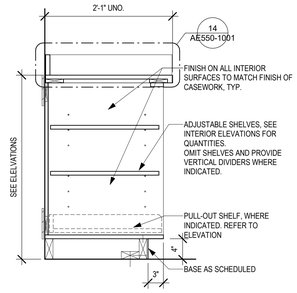


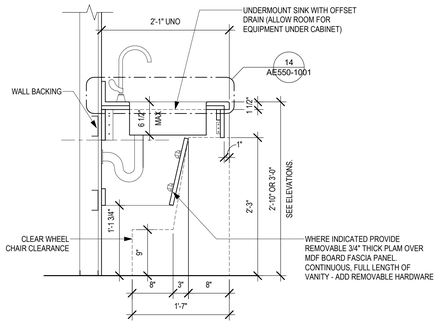
1 BASE CABINET
1" = 1'-0"



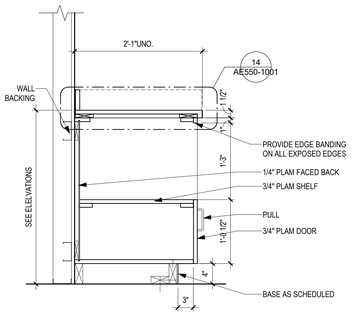
2 BASE CABINET DRAWER & DOOR
1" = 1'-0"



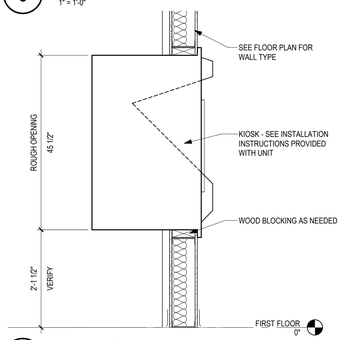
3 BASE CABINET OPEN
1" = 1'-0"



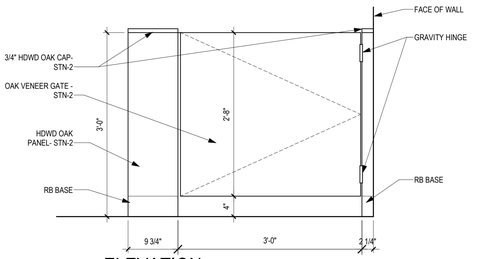
4 CABINET WITH SINK AND APRON
1" = 1'-0"



5 SECTION - BASE CABINET WITH DOOR & OPEN SHELF
1" = 1'-0"

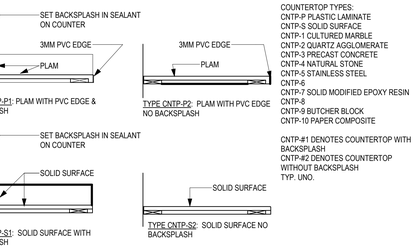


6 TALL CABINET TWO DOORS HORIZONTAL
1" = 1'-0"

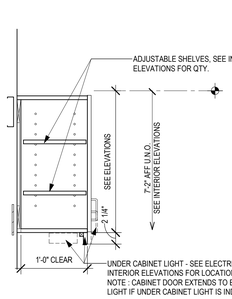


13 RECEPTION GATE
1" = 1'-0"

12 SECTION THRU KIOSK
3/4" = 1'-0"

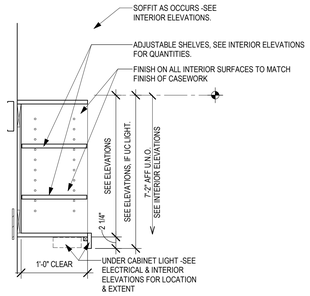


14 COUNTERTOP TYPES (CNTP)
1" = 1'-0"

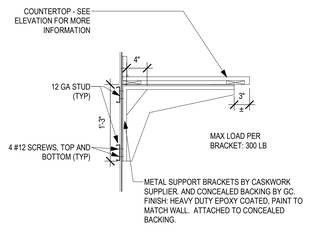


7 SECTION @ LAVATORY TOP
1" = 1'-0"

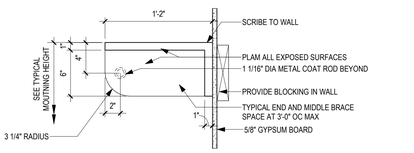
8 WALL CABINET WITH DOOR
1" = 1'-0"



9 WALL CABINET OPEN SHELF
1" = 1'-0"

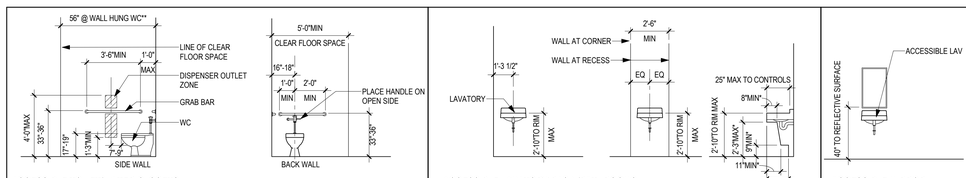


10 COUNTERTOP SUPPORT BRACKET AND BACKING
1" = 1'-0"

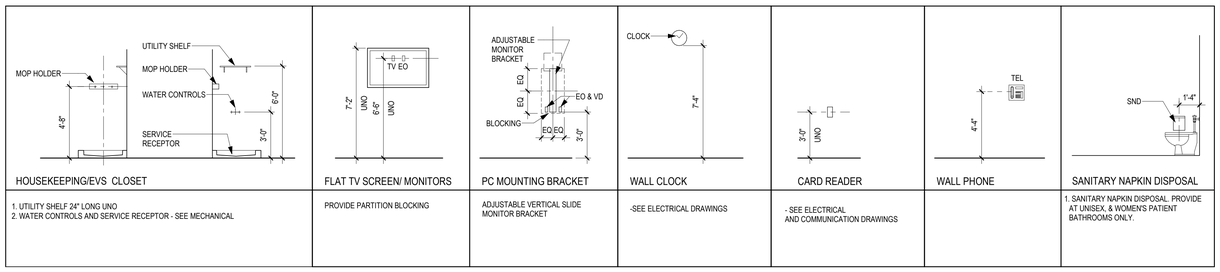


TYPICAL ROD AND SHELF

11 SECTION DETAIL INTERIOR - TYPICAL ROD AND SHELF
1 1/2" = 1'-0"



ACCESSIBLE TOILET/WATER CLOSETS	ACCESSIBLE LAVATORY BASIN/BATHROOMS	ACCESSIBLE MIRROR	ACCESSIBLE SOAP AND HAND SANITIZER DISPENSER	ACCESSIBLE PTD	ACCESSIBLE URINAL
1. SANITARY NAPKIN DISPOSAL. PROVIDE AT UNISEX, & WOMEN'S PATIENT BATHROOMS ONLY. 2. DISPENSERS MAY NOT BE LOCATED BEHIND GRAB BARS. * AT TOILET COMPARTMENTS ** AT TOILET COMPARTMENTS AND SINGLE OCCUPANCY	1. SEE PLAN FOR SPECIFIC LOCATION CONDITION 2. SDISD & PTC - VC 3. * KNEE CLEARANCE 4. SEE ACCESSIBLE MIRROR AT LAV FOR ADDITIONAL INFORMATION	1. SEE INTERIOR ELEVATIONS FOR MIRROR SIZE			



TYPICAL MOUNTING HEIGHTS

BID DOCUMENTS

Revisions:	Date:

CONSULTANT

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — NORTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title	Phase	Project Title	Project Number
INTERIOR DETAILS AND TYPICAL MOUNTING HEIGHTS	BID DOCUMENTS SUBMITTAL	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	884-CM-3015
Approved:		Location: STURGIS, SOUTH DAKOTA	Building Number: 1001
		Issue Date: 10/31/2022 · Checked: LA · Drawn: MRP	Drawing Number: AE550-1001, 33 OF 84

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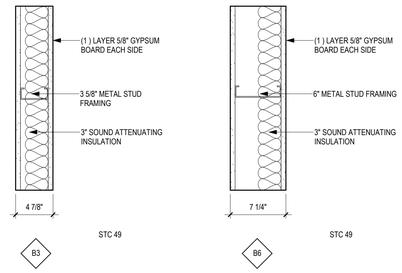
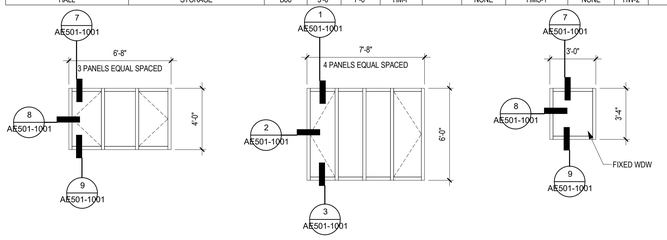
VA FORM 08 - 6231

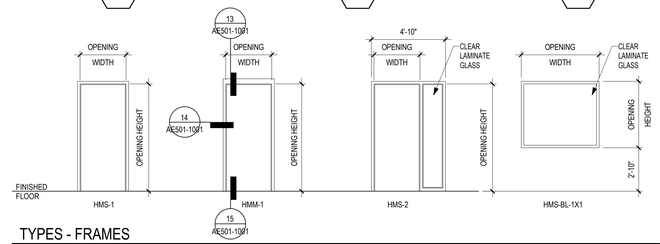


TYPES - PARTITIONS

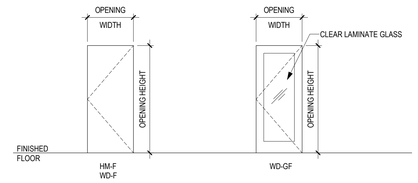
OPENING SCHEDULE

ASSOCIATED ROOMS		OPENING			PANEL INFORMATION			FRAME INFORMATION		HDW GROUP	FIRE LABEL (MIN)	GASKET	ELECTRICAL	S LABEL	COMMENTS
FROM ROOM NAME	TO ROOM NAME	NUMBER	WIDTH	HEIGHT	PANEL TYPE	2ND PANEL TYPE	PANEL GLAZING	FRAME TYPE	FRAME GLAZING						
LOBBY	VESTIBULE/ INFO CENTER	1A	3'-0"	7'-0"	EXISTING		--	EXIST	--	HW-3			X		MODIFY EXIST DOOR HDWE TO ACCOMMODATE CARD READER
VESTIBULE/ INFO CENTER	EXTERIOR	1B	3'-0"	7'-0"	EXISTING		--	EXIST	--	HW-14					
LOBBY	KIOSK	2	2'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-2			X		PROVIDE CARD READER
OPEN OFFICE	ADMIN OFFICE	3	3'-0"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-11					
OPEN OFFICE	DIRECTORS OFFICE	4	3'-0"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-11					
OPEN OFFICE	UNISEX TOILET	5	3'-0"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-13					
OPEN OFFICE	HAC	6	3'-0"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-7					
OPEN OFFICE	UNIFORM STORAGE	7	3'-0"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-7					
CORRIDOR	EXTERIOR	11	3'-0"	7'-0"	HM-F		NONE	HMM-1	NONE	HW- 2.1			X		PROVIDE CARD READER
CORRIDOR	CONFERENCE / TRAINING	12	3'-0"	7'-0"	WD-GF		NONE	HMS-2	NONE	HW-11.1					
CORRIDOR	CONFERENCE / TRAINING	12A	6'-0"	4'-0"	NO PANEL		NONE	WD-BL-1X1	FG-X						BORROWED LITE
CORRIDOR	CONFERENCE / TRAINING	12B	6'-0"	4'-0"	NO PANEL		NONE	WD-BL-1X1	FG-X						BORROWED LITE
HALL	DATA	B02	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW-2	45	X			PROVIDE CARD READER
HALL	ELEC	B03	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW-2	45	X			PROVIDE CARD READER
HALL	STORAGE	B08	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW-2		X			PROVIDE CARD READER

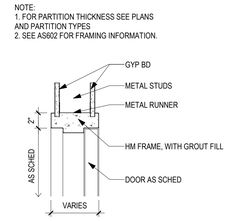




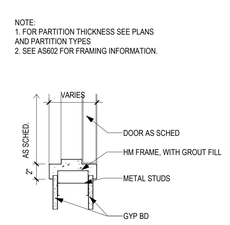
TYPES - FRAMES



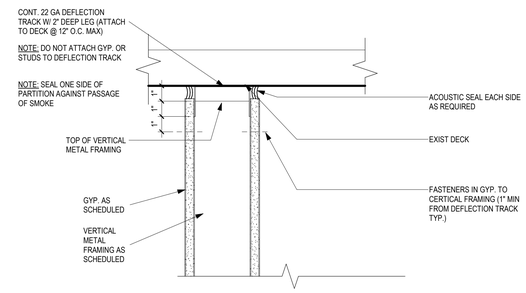
TYPES - PANELS



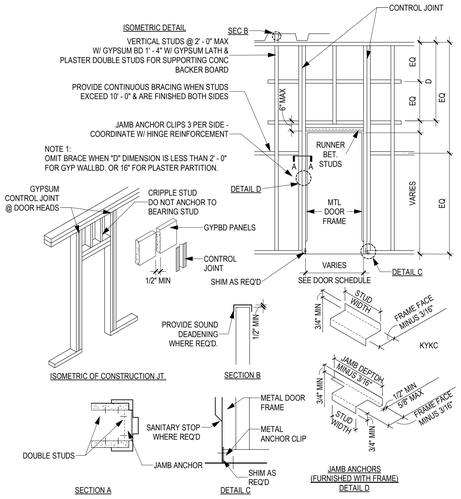
4 HM DR FRAME IN METAL STUD PARTITION - HEAD
1 1/2" = 1'-0"



5 HM DR FRAME IN METAL STUD PARTITION - JAMB
1 1/2" = 1'-0"



6 NON-RATED & SMOKE RESISTANT WALL TERMINATION @ DECK
3" = 1'-0"



TYPICAL PARTITION CONTROL JOINT FRAMING AT DOORS

DOOR PANEL NAMING

NOTE: ACTUAL PANELS MAY VARY FROM DESCRIPTIONS BELOW, REFER TO PANEL TYPE ELEVATIONS

HM-GF

PANEL PREFIXES

- AL- ALUMINUM
- CG- COILING GRILLE
- CS- COILING SLATS
- HM- HOLLOW METAL
- OS- OVERHEAD SECTIONAL
- RD3- REVOLVING DOOR 3 PANEL
- RD4- REVOLVING DOOR 4 PANEL
- VL- VERTICAL LIFT
- WD- WOOD

PANEL SUFFIXES

- AG ALL GLASS
- BF BIFOLD
- BFGBIFOLD GLASS
- D DUTCH
- DG DUTCH GLASS
- DSDUTCH W/SHELF
- F FLUSH
- G2GLASS 2 LIGHT
- G3GLASS 3 LIGHT
- GFGLASS FULL
- GH GLASS HALF
- LF LOUVER FULL
- LGHLOUVER GLASS HALF
- LHLOUVER HALF
- LNV LOUVER NARROW VISION
- NVNARROW VISION
- NV2 NARROW VISION 2 LIGHT
- NV3 NARROW VISION 3 LIGHT
- NVCNARROW VISION CENTERED
- RP2 RAISED PANEL 2 PANEL
- RP4 RAISED PANEL 4 PANEL
- RP6 RAISED PANEL 6 PANEL
- RP8 RAISED PANEL 8 PANEL
- VVISION
- W WINDOWS (1 ROW)
- WT WINDOWS THROUGHOUT

DOOR FRAME NAMING

NOTE: ACTUAL FRAMES MAY VARY FROM DESCRIPTIONS BELOW, REFER TO FRAME TYPE ELEVATIONS

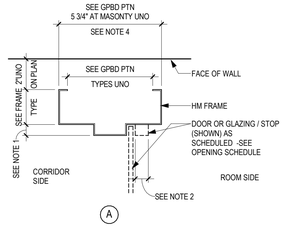
HMS-2

FRAME PREFIXES

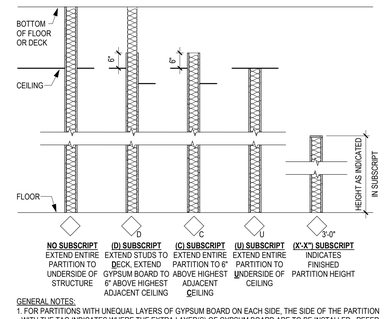
- AL- ALUMINUM
- AL-BL- ALUMINUM BORROWED LIGHT
- AL-SL- ALUMINUM SLIDING
- ALR- ALUMINUM REVOLVING
- CW## CURTAINWALL
- HMM- HOLLOW METAL MASONRY
- HMM-BL- HMM BORROWED LIGHT
- HMM-DE- HMM DOUBLE EGRESS
- HMS- HOLLOW METAL STUD
- HMS-BL- HMS BORROWED LIGHT
- HMS-DE- HMS DOUBLE EGRESS
- OC- OVERHEAD COILING
- OS- OVERHEAD SECTIONAL
- VL- VERTICAL LIFT
- WD- WOOD
- WD-BL- WOOD BORROWED LIGHT
- WDP- WOOD POCKET

FRAME SUFFIXES

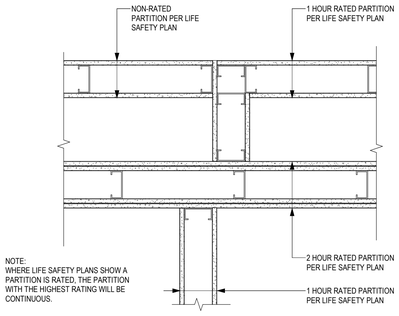
- 0 FRAMED-CASED OPENING
- 1 DOOR ONLY
- 2 SIDELIGHT(S) 1 SIDE
- 3 SIDELIGHT(S) 1 SIDE W/HORIZONTAL
- 4 SIDELIGHT(S) BOTH SIDES
- 5 SIDELIGHT(S) BOTH SIDES W/HORIZONTAL
- 6 DOOR W/TRANSOM
- 7 DOOR W/TRANSOM W/SIDELIGHT(S) 1 SIDE
- 8 TRANSOM W/SIDELIGHT(S) 1 SIDE W/HORIZONTAL
- 9 TRANSOM W/SIDELIGHT(S) BOTH SIDES
- 10 TRANSOM W/SIDELIGHT(S) BOTH SIDES W/HORIZONTAL
- 11 FULL WIDTH TRANSOM W/SIDELIGHT(S) 1 SIDE
- 1X1 1 LIGHT WIDE AND 1 LIGHT HIGH
- 2X2 2 LIGHTS WIDE AND 2 LIGHTS HIGH
- 3X3 3 LIGHTS WIDE AND 3 LIGHTS HIGH
- (NOTE: OTHER COMBINATIONS POSSIBLE)
- OX FIXED PANEL, ACTIVE PANEL
- OXO FIXED PANEL, ACTIVE PANEL, FIXED PANEL
- OXX FIXED, ACTIVE, ACTIVE
- OXXO FIXED, ACTIVE, ACTIVE, FIXED
- OXXXXO FIXED, ACTIVE, ACTIVE, ACTIVE, ACTIVE, FIXED



7 HOLLOW METAL FRAME PROFILES
3" = 1'-0"



INTERIOR PARTITION TAG SUBSCRIPT KEY



GUIDELINE - RATED WALL INTERSECTIONS

BID DOCUMENTS

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

U.S. Department of Veterans Affairs

Drawing Title: DOOR SCHEDULE AND ELEVATIONS	Phase: BID DOCUMENTS SUBMITTAL
Approved:	

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS		Project Number: 884-CM-3015
		Building Number: 1001
Location: STURGIS, SOUTH DAKOTA		Drawing Number: AE602-1001 34 OF 84
Issue Date: 10/31/2022	Checked: LA	Drawn: MMM

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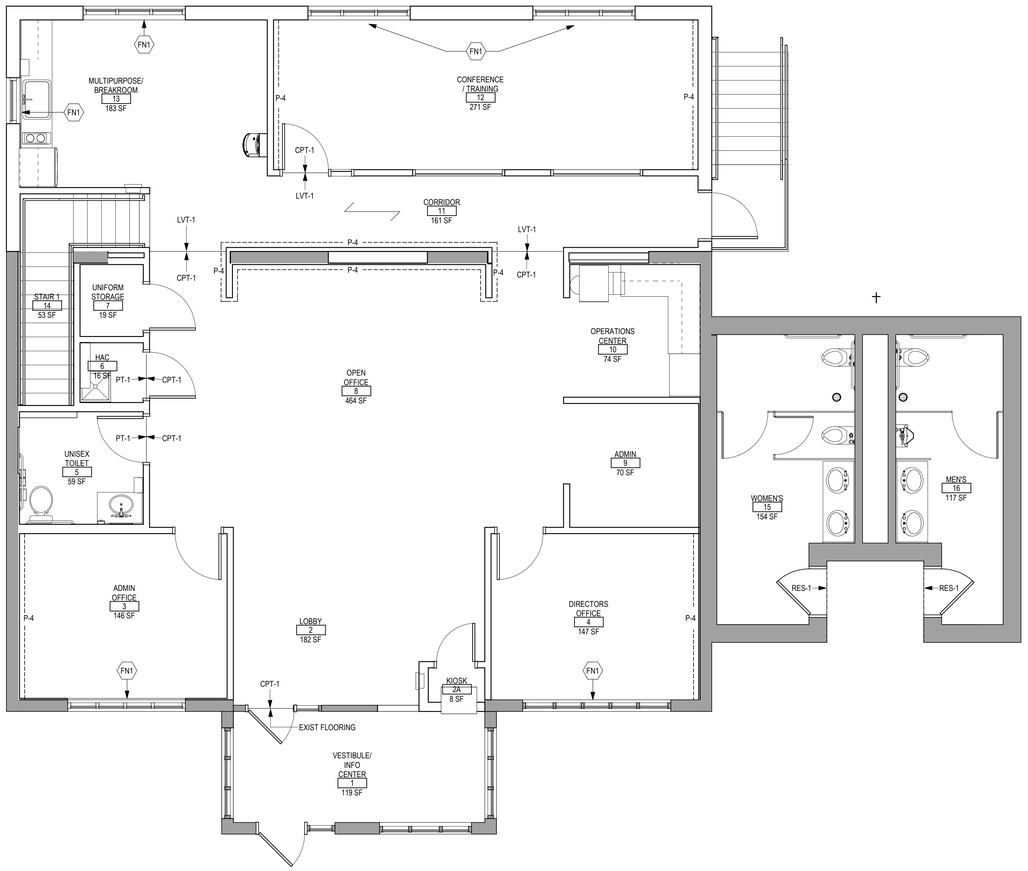

1 FIRST LEVEL FINISH PLAN
1/4" = 1'-0"

PLAN NORTH TRUE NORTH

0 2' 4' 8'

FINISH PLAN GENERAL NOTES

1. REFER TO PROJECT MANUAL SPECIFICATION SECTION 09 06 00 'SCHEDULE FOR FINISHES" FOR SPECIFIC PRODUCT SELECTION BASIS OF DESIGN AND OTHER REQUIREMENTS
2. FIELD FINISH VENTS, GRILLES, ACCESS PANELS, PLUG STRIP, BASEBOARD RADIATION ENCLOSURES, ELECTRICAL PANEL BOARDS (IN FINISHED SPACES) TO MATCH SURFACE ON WHICH THEY OCCUR UNLESS OTHERWISE INDICATED. EXCEPTION: ITEMS WITH FACTORY WHITE FINISH, OCCURRING ON WHITE ACT OR WHITE GYPSUM BOARD CEILING SHALL NOT BE PAINTED. STAINLESS STEEL ITEMS SHALL NOT BE PAINTED
3. FIELD VERIFY ALL NEW CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION
4. LOCATE CHANGES IN FLOOR FINISH MATERIAL UNDER CENTERLINE OF CLOSED DOOR UNLESS OTHERWISE INDICATED
5. PROVIDE CLEAR SILICONE SEALANT AT PERIMETER OF PLUMBING FLOOR DRAINS, CLEAN OUTS, ETC IN RESILIENT AND CERAMIC TILE FLOORS
6. PROVIDE SEALANT TO HORIZONTAL AND VERTICAL INTERIOR CERAMIC TILE CORNERS, COLOR TO MATCH GROUT COLOR
7. PROVIDE SEALANT AT JOINT BETWEEN COUNTER TOP, BACK OR SIDE SPLASH AND WALLS
8. PROVIDE CLEAR SILICONE SEALANT AT THE BASE OF DOOR FRAME TO RESILIENT AND CT FLOORING, TYP. SEE PLANS AND ROOM FINISH SCHEDULE FOR FLOOR FINISH LOCATIONS
9. HOLLOW METAL DOORS AND FRAMES TO BE PAINTED ___, UNLESS NOTED OTHERWISE IN THE OPENING SCHEDULE
10. WOOD: PRE-FINISHED TO MATCH BUILDING STANDARD, REFER TO SPECIFICATION
11. CEILING HEIGHTS AND MATERIALS/FINISHES CALLED OUT IN ROOM FINISH SCHEDULE ARE FOR ENTIRE CEILING OR MAJORITY OF THAT ROOM, UNLESS OTHERWISE INDICATED. SEE REFLECTED CEILING PLAN FOR CHANGES IN CEILING MATERIAL AND CEILING HEIGHT. PAINT ALL SURFACES OF SOFFIT SAME COLOR AS INDICATED
12. COLOR SELECTIONS ARE BASED ON USE OF PRODUCTS INDICATED IN THE PROJECT MANUAL SPECIFICATION. IF MANUFACTURERS OTHER THAN THOSE INDICATED ARE USED, ARCHITECT MAY REVISE COLOR SELECTIONS OF OTHER FINISHES TO ENSURE PROPER COORDINATION
13. PAINT ALL FIRE EXTINGUISHER CABINETS TO MATCH COLOR OF THE ADJACENT WALLS
14. CEILING HEIGHTS ARE MEASURED FROM FINISH FLOOR
15. FOR FLOOR FINISH MATERIALS AND PATTERN, SEE FINISH PLAN
16. SEE INTERIOR ELEVATIONS FOR MORE FINISH INFO

ROOM FINISH LEGEND & ABBREVIATIONS

NC-01	SIGN TAG	AF10	KEYNOTE
CPT — VCT	FLOORING CHANGE		MATERIAL INSTALL DIRECTION
ACCENT PAINT			

ACT	ACOUSTICAL CEILING (TILE)
CPT	MODULAR CARPET TILE
GWB	(SC)GYPSUM WALLBACK SYSTEMS (SPECIAL COATING)
LVT	LUXURY VINYL TILE
P	PAINT
PLAM	PLASTIC LAMINATE
PT	PORCELAIN TILE (FLOOR AND BASE)
RB	RESILIENT BASE
RES	RESINOUS EPOXY FLOORING
RES-W	RESINOUS/EPOXY WALL/CEILING
RF	RUBBER FLOORING
RST	RUBBER STAIR TREADS
S	SOLID SURFACE
SC	SPECIAL COATING
SP	SPECIAL FACED
WS	WINDOW SHADE
WSF	WELDED SEAM SHEET FLOORING (HEAT WELDED WITH ROD)

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

FINISH PLAN KEYED NOTES

FN1 INSTALL VERTICAL BLINDS

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

BID DOCUMENTS

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FIRST LEVEL FINISH PLAN
Phase: BID DOCUMENTS SUBMITTAL
Approved:

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10/07/2022
Checked: MRP
Drawn: CZ

Project Number: 884-CM-3015
Building Number: 1001
Drawing Number: AF101-1001
35 OF 84

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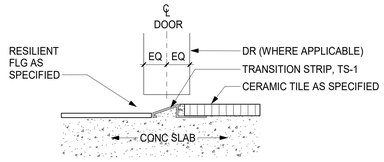
MATERIAL SCHEDULE

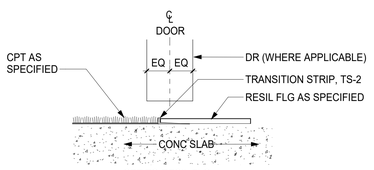
SPEC...	CODE	MATERIAL	MANUFACTURER	STYLE	COLOR	SIZE	REMARKS
09 30 00							
	TS-1	METAL TRANSITION STRIP	SCHLUTER SYSTEMS	RENO-U	SATIN NICKEL ANODIZED	TBD BY INSTALLER	
	TS-2	METAL TRANSITION STRIP	POWERHOLD	NO LIP RAMP	EA ALUMINUM	TBD BY INSTALLER	
	TS-3	METAL TRANSITION STRIP	POWERHOLD	LVT BEVEL CAP	EA ALUMINUM	TBD BY INSTALLER	
	TS-4	METAL TRANSITION STRIP	ANY	TERRAZO TYPE DIVIDER STRIP	MILL FINISH	TBD BY INSTALLER	
	TR-1	METAL TRANSITION STRIP	SCHLUTER SYSTEMS	QUADEC	SATIN NICKEL ANODIZED	TBD BY INSTALLER	INSTALL ABOVE COVE BASE
09 30 13							
	PT-1	PORCELAIN CERAMIC TILE	CROSSVILLE	PORTUGAL	MADIERA RESERVE PTG06.11224UPS	12" X 24"	GROUT: BOSTIK DELOREAN GRAY H160
	PT-2	PORCELAIN CERAMIC TILE	CROSSVILLE	JAVA JOINT	TWO SUGARS JAV01.11224UPS	12" X 24"	GROUT: BOSTIK WHITE H152
	PT-3	PORCELAIN CERAMIC TILE	CROSSVILLE	PORTUGAL	MADIERA RESERVE MOSAIC PTG06.1020UMOS	2" X 2"	GROUT: BOSTIK DELOREAN GRAY H160
09 65 13							
	RB-1	RESILIENT BASE	TARKETT	JOHNSONITE TRADITIONAL WALL BASE	32 PEBBLE	4"	RUBBER
	RB-2	RESILIENT BASE	TARKETT	JOHNSONITE TRADITIONAL WALL BASE	TB1 PEPPERCORN	4"	RUBBER
09 65 19							
	LVT-1	LUXURY VINYL TILE	MANNINGTON COMMERCIAL	ACTIVE LINES - CRISSCROSS	FLASH ALC101	18" X 18"	
	LVT-2	LUXURY VINYL TILE	TARKETT	CONTOUR PCCD C-STAMPED	0925 ODYSSEY	18" X 18"	
09 67 23							
	RES-1	RESINOUS FLOORING	SHERWIN WILLIAMS	RESUFLOR DECO QUARTZ BC23	FOGGY MORNING		
09 68 00							
	CPT-1	MODULAR CARPET TILE	MANNINGTON COMMERCIAL	ARROYO	MESA 84167	12" X 48"	INSTALLATION: 3-STEP VERTICAL ASHLAR
09 91 00							
	P-1	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	SW 6070 HERON PLUME		
	P-2	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	SW 7558 MEDICI IVORY		
	P-3	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	MATCH BENJAMIN MOORE - 2108-50 SILVER FOX		
	P-4	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	SW 6257 GIBRALTAR		
	P-5	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - FLAT	SW 7007 CEILING BRIGHT WHITE		
	P-6	PAINT	SHERWIN WILLIAMS	PROMAR 200 ALKYD - SEMI GLOSS	MATCH BENJAMIN MOORE - 2108-50 SILVER FOX		HOLLOW METAL DOORS AND FRAMES
	C	CONCRETE SEALER	ARDEX	HIGH PERFORMANCE, WATERBOURNE ACRYLIC CONCRETE SEALER	CLEAR		
	STN-1	WOOD STAIN	SHERWIN WILLIAMS	WOOD CLASSICS INTERIOR OIL STAIN	SW 3133-B RUSTIC GRAY		
	STN-2	WOOD STAIN	SHERWIN WILLIAMS	WOOD CLASSICS INTERIOR OIL STAIN	MATCH INTERIOR WOOD DOORS AT ADMIN BLDG		
10 21 13		TOILET PARTITION	SCRANTON	HINY HIDERS PARTITIONS	SHALE		
10 51 13							
		METAL LOCKER	LYON	SINGLE TIER STANDARD METAL LOCKER	6Y BRILLIANT BLUE		
12 24 00	WS	WINDOW SHADES	HUNTER DOUGLAS...	FR ALUMINUM HORIZONTAL BLINDS - MODEL CD80	001 GLACIER WHITE		
12 32 00							
	PLAM-1	PLASTIC LAMINATE	LAMINART	ISLAND BIRCH	3076		VELLUM FINISH
12 36 00							
	S-1	SOLID SURFACE	DUPONT	CORIAN	CARRARA LINO		MATTE FINISH
	PLAM-2	PLASTIC LAMINATE	WILSONART	MAGNOLIA	5012K-19		19 LENO WEAVE FINISH

ROOM FINISH SCHEDULE

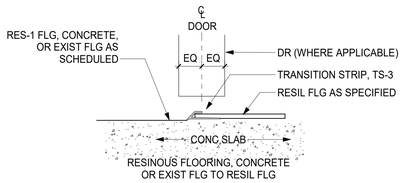
NO.	NAME	FLOOR FINISH	BASE FINISH	WALL FINISH				CEILING FINISH	REMARKS
				NORTH	EAST	SOUTH	WEST		
1	VESTIBULE/ INFO CENTER	EXIST	RB-2	P-1	P-1	P-1	P-1	GWB (P-5)	
2	LOBBY	CPT-1	RB-2	P-2	P-2	P-2	P-4	GWB (P-5)	SEE FINISH PLAN FOR ADDITIONAL INFORMATION
2A	KIOSK	CPT-1	RB-2	P-2	P-2	P-2	P-2	GWB (P-5)	
3	ADMIN OFFICE	CPT-1	RB-2	P-2	P-2	P-2	P-4	GWB (P-5)	SEE FINISH PLAN FOR ADDITIONAL INFORMATION
4	DIRECTORS OFFICE	CPT-1	RB-2	P-2	P-4	P-2	P-2	GWB (P-5)	SEE FINISH PLAN FOR ADDITIONAL INFORMATION
5	UNISEX TOILET	PT-1	RB-2	P-1 / PT-2	P-1 / PT-2	P-1 / PT-2	P-1 / PT-2	GWB (P-5)	
6	HAC	PT-1	RB-2	P-1	P-1	P-1	P-1	GWB (P-5)	
7	UNIFORM STORAGE	CPT-1	RB-2	P-1	P-1	P-1	P-1	GWB (P-5)	
8	OPEN OFFICE	CPT-1	RB-2	P-2	P-2	P-4	P-2	GWB (P-5)	SEE FINISH PLAN FOR ADDITIONAL INFORMATION
9	ADMIN	CPT-1	RB-2	P-2	P-2	P-2	P-2	GWB (P-5)	
10	OPERATIONS CENTER	CPT-1	RB-2	P-2	P-2	P-2	P-2	GWB (P-5)	
11	CORRIDOR	LVT-1	RB-2	P-2/P-4	P-2	P-2	P-2	GWB (P-5)	
12	CONFERENCE / TRAINING	CPT-1	RB-2	P-1	P-4	P-1	P-4	GWB (P-5)	
13	MULTIPURPOSE/ BREAKROOM	LVT-1	RB-2	P-2	P-2	P-2	P-2	GWB (P-5)	
14	STAIR 1	RF-1 / RST-1	RB-2	P-2	P-2	P-2	P-2	GWB (P-5)	
15	WOMEN'S	RES-1	RES-1	EXIST	EXIST	EXIST	EXIST	EXIST	
16	MEN'S	RES-1	RES-1	EXIST	EXIST	EXIST	EXIST	EXIST	



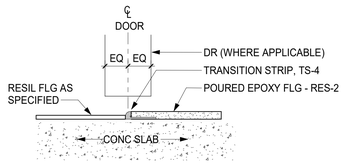
TS-1 - LVT TO CT



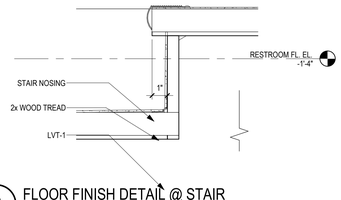
CPT TO RESIL FLG



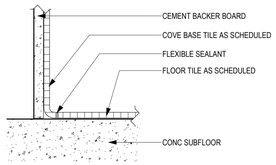
RESINOUS FLOORING, CONCRETE OR EXIST FLG TO RESIL FLG



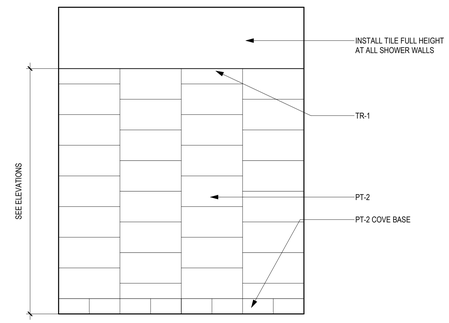
1 FLOORING TRANSITION STRIPS
6" = 1'-0"



2 FLOOR FINISH DETAIL @ STAIR
3" = 1'-0"



3 COVE BASE DETAIL
3" = 1'-0"



4 TILE PATTERN -TYP
1/2" = 1'-0"

BID DOCUMENTS

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — MECHANICAL

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MATERIAL AND ROOM FINISH SCHEDULE AND INTERIOR DETAILS
Approved:

Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10/07/22
Checked: MRP
Drawn: CZ

Project Number: 884-CM-3015
Building Number: 1001
Drawing Number: AF600-1001
36 OF 84

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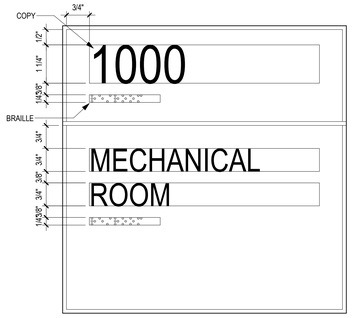
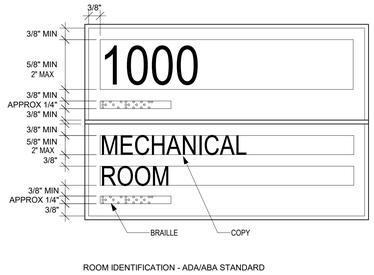
VA FORM 08 - 6231

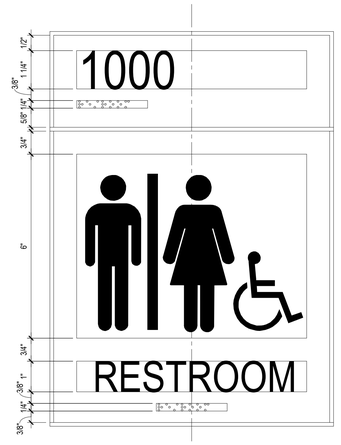


1 NC-14.01 PRIMARY ROOM ID
6" = 1'-0"

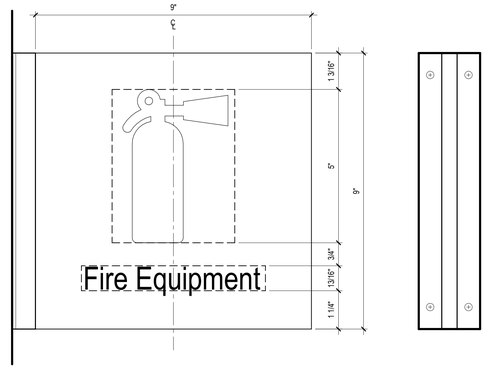


ROOM IDENTIFICATION - ADA/ABA STANDARD

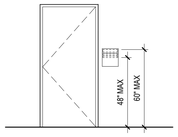
2 SIGNAGE ADA STANDARDS
6" = 1'-0"



3 NC-15.03 RESTROOM ID
6" = 1'-0"



4 IN-01.31 FIRE EQUIPMENT
6" = 1'-0"



5 SIGN WALL ELEVATION
1/4" = 1'-0"

6 SIGNAGE - PLAN VIEW
1/4" = 1'-0"

SIGNAGE GENERAL NOTES

1. ALL SIGNAGE IDENTIFYING PERMANENT ROOMS SHALL COMPLY WITH 2010 STANDARD FOR ACCESSIBLE DESIGN.
2. ALL PERMANENT ROOM SIGNAGE TO HAVE TOP SECTION RAISED TEXT AND LOWER SECTION BRAILLE. BRAILLE TO BE GRADE 2.
3. ALL SIGNS TO BE MOUNTED ON LATCH SIDE OF DOOR UNLESS NOTED OTHERWISE. IF NO SPACE EXISTS ON LATCH SIDE MOUNT SIGN TO THE NEAREST ADJACENT WALL. SIGNS MUST BE 2" FROM DOOR JAMB WITH 18" CLEAR FLOOR SPACE FROM CENTER OF SIGN.
4. ALL SIGN TEXT AND NUMBERING SUBJECT TO FINAL APPROVAL BY OWNER.
5. ALL SIGNS MOUNTED TO GLASS TO HAVE GLASS BACKER.
6. SIGNS TO BE MOUNTED ACCORDING TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND MATERIALS.
7. SIGN DETAILS ARE FOR REFERENCE ONLY. ACTUAL DESIGN TO BE PROVIDED BY THE VENDOR, FOLLOWING FACILITY STANDARD, AND SUBJECT TO OWNER APPROVAL.

SIGN MESSAGE SCHEDULE

LOCATION	SIGN MESSAGE	SIGN TYPE	COUNT	REMARKS
2	ADMIN OFFICE	NC-14.01	1	
4	DIRECTORS OFFICE	NC-14.01	1	
5	UNISEX TOILET	NC-15.03	1	
6	HAC	NC-14.01	1	
7	UNIFORM STORAGE	NC-14.01	1	
13	FIRE EQUIPMENT	IN-01.31	1	

BID DOCUMENTS

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER
THOMAS A. OLESAK
NORTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
WAYFINDING MESSAGE SCHEDULES & SIGNAGE DETAILS

Phase
BID DOCUMENTS SUBMITTAL

Approved:

Project Title
BLACK HILLS NATIONAL CEMETERY
RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location
STURGIS, SOUTH DAKOTA

Issue Date 10/07/2022
Checked MRP
Drawn CZ

Project Number 884-CM-3015
Building Number 1001
Drawing Number AW601-1001
37 OF 84

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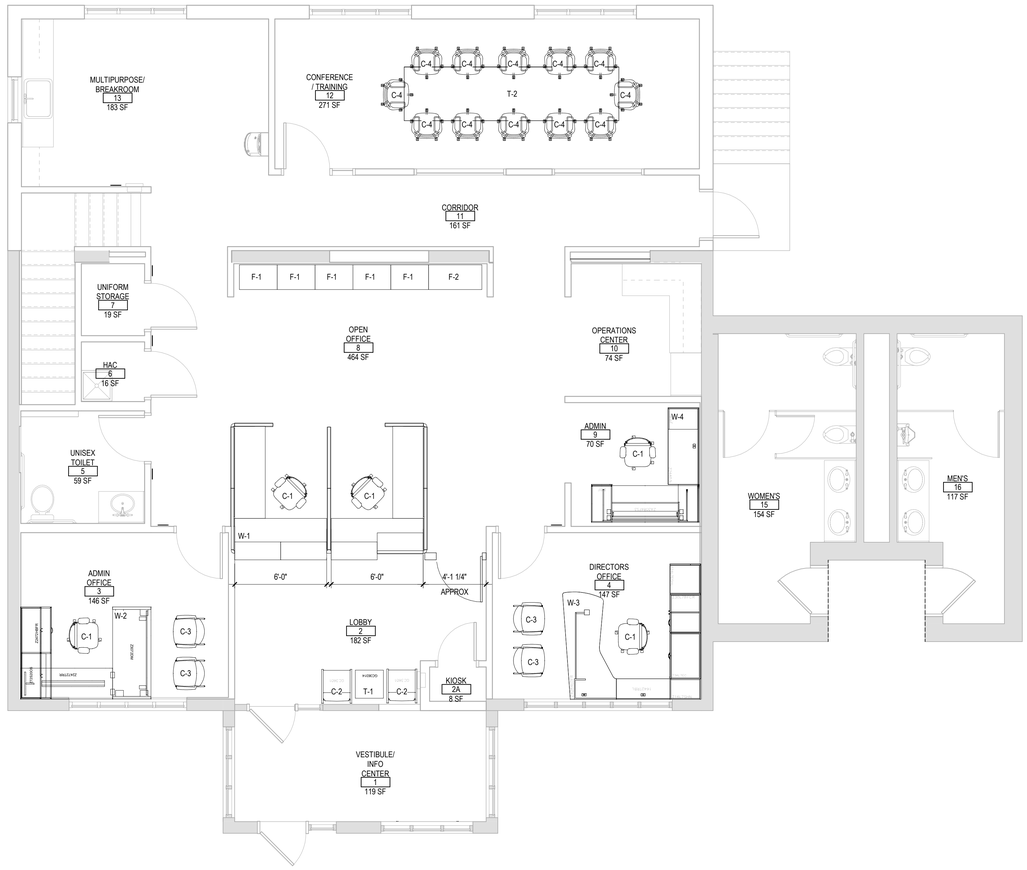

NOTE: FURNITURE PLAN IS FOR REFRENCE ONLY. ALL FURNITURE IS TO BE PROVIDED UNDER SEPARATE CONTRACT.

NOTE: CONTRACTOR TO REMOVE EXITING FURNITURE AND RE-INSTALL IN TEMPORARY FACILITIES.

1 FIRST LEVEL FURNITURE PLAN
1/4" = 1'-0"

PLAN NORTH TRUE NORTH

0 2' 4' 8'

BID DOCUMENTS

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER THOMAS A. OLESAK SOUTH DAKOTA

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	FIRST LEVEL FURNITURE PLAN
Phase	BID DOCUMENTS SUBMITTAL
Approved:	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/07/2022
Checked	MRP
Drawn	CZ
Project Number	884-CM-3015
Building Number	1001
Drawing Number	IF110-1001
	38 OF 84

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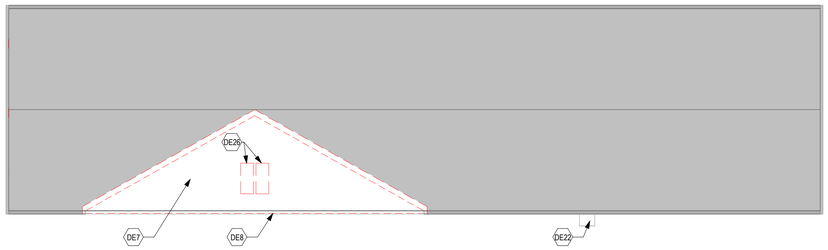
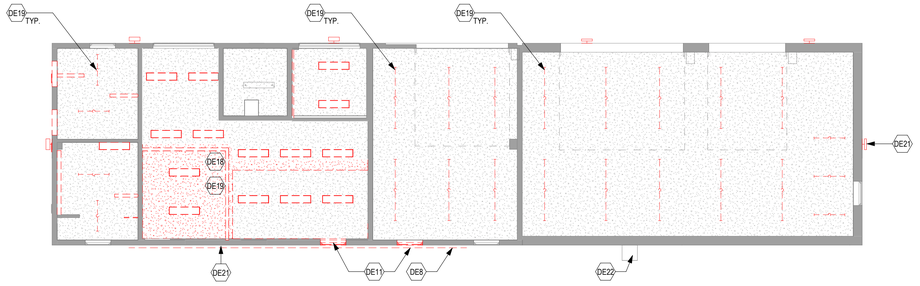




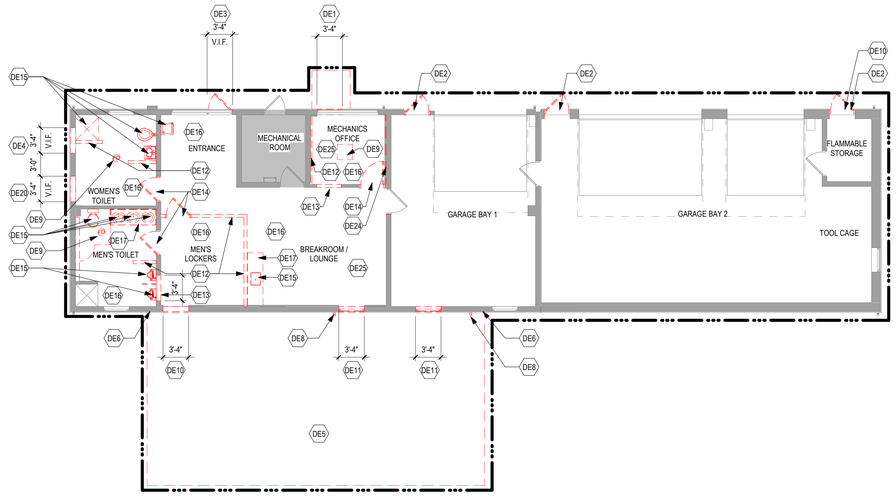
1 A8.311-3001

2 ROOF PLAN - DEMOLITION - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH / TRUE NORTH

0 4' 8' 16'

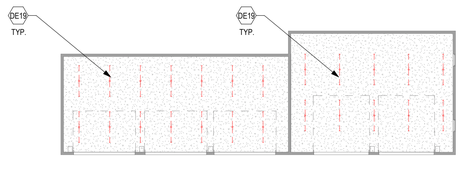


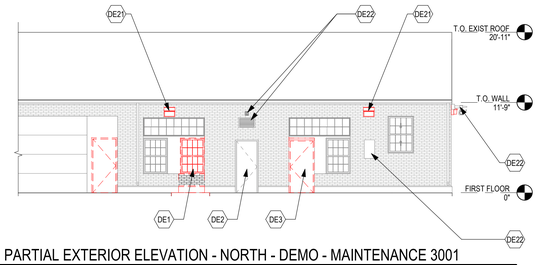
3 REFLECTED CEILING PLAN - DEMOLITION - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH / TRUE NORTH

0 4' 8' 16'





4 RCP - DEMOLITION - MAINTENANCE 3002

1/16" = 1'-0"

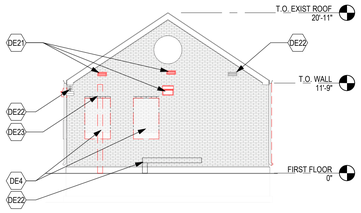
PLAN NORTH / TRUE NORTH

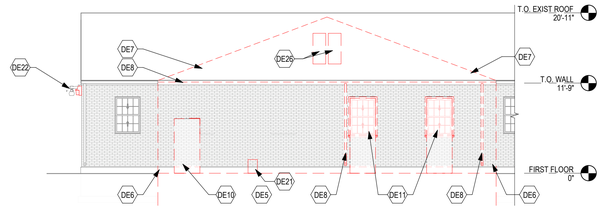
0 8' 16' 32'

5 PARTIAL EXTERIOR ELEVATION - NORTH - DEMO - MAINTENANCE 3001

1/8" = 1'-0"

0 4' 8' 16'





6 EXTERIOR ELEVATION - WEST - DEMO - MAINTENANCE 3001

1/8" = 1'-0"

0 4' 8' 16'

7 PARTIAL EXTERIOR ELEVATION - SOUTH - DEMO - MAINTENANCE 3001

1/8" = 1'-0"

0 4' 8' 16'

1 DEMOLITION PLAN - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH / TRUE NORTH

0 4' 8' 16'

DEMOLITION GENERAL NOTES

1. GENERAL CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK, PHASING AND SEQUENCING WITH THE OWNER. ANY INFORMATION REGARDING SEQUENCING PROVIDED IN THESE DOCUMENTS IS FOR ARCHITECT - OWNER PLANNING PURPOSES ONLY, UNLESS NOTED OTHERWISE.
2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL TRADES FOR THE DEMOLITION WORK REQUIRED FOR THIS PROJECT.
3. WHERE PARTITIONS ARE INDICATED TO BE REMOVED, REMOVE PARTITION ALONG WITH ALL ITEMS CONTAINED WITHIN, INCLUDING DOORS, FRAMES, HARDWARE, SIDELIGHTS, WINDOWS, MECHANICAL AND ELECTRICAL EQUIPMENT, ETC. TO STRUCTURE ABOVE, UNLESS NOTED OTHERWISE.
4. WHERE FLOOR FINISH IS INDICATED TO BE DEMOLISHED, REMOVE FINISH TO FLOOR SLAB AS REQUIRED AND PREPARE SLAB SURFACE FOR SCHEDULED FINISHES WITHIN AREA TO BE REMODELED, UNLESS NOTED OTHERWISE. SEE FINISH SCHEDULE FOR EXISTING FLOOR FINISHES TO REMAIN UNDISTURBED.
5. WHERE CEILING IS INDICATED TO BE DEMOLISHED, REMOVE CEILING SUSPENSION SYSTEM ALONG WITH ALL ASSOCIATED MECHANICAL AND ELECTRICAL ITEMS, UNLESS NOTED OTHERWISE. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF CONDUIT, PIPING AND DUCTWORK DEMOLITION WITHIN AREA TO BE REMODELED.
6. WHERE INDICATED, REMOVE ALL WALL/PARTITION EXISTING FINISHES AND PREPARE THE SURFACES FOR SCHEDULED FINISHES, SEE FINISH SCHEDULE FOR FINISHES.
7. ALL DISTURBED AREAS, WALLS, PARTITIONS, FLOORS, ETC, DAMAGED BY DEMOLITION WORK SHALL BE PATCHED TO MATCH ADJACENT AREA.
8. OWNER RESERVES THE RIGHT OF FIRST REFUSAL OF ALL SALVAGED ITEMS SUCH AS: DOORS, LIGHT FIXTURES, PLUMBING FIXTURES ETC.
9. SALVAGED ITEMS SCHEDULED FOR REUSE SHALL BE CLEANED, RESTORED AND/OR REFINISHED TO LIKE NEW CONDITION, UNLESS NOTED OTHERWISE.
10. DO NOT REMOVE ANY EXISTING STRUCTURAL SUPPORT MEMBERS SUCH AS COLUMNS, BEAMS, JOISTS, LOAD-BEARING PARTITIONS ETC, UNTIL ADEQUATE PERMANENT OR TEMPORARY SUPPORT IS IN PLACE. ALL EXISTING STRUCTURAL MEMBERS SHALL BE ADEQUATELY PROTECTED, COORDINATE WITH STRUCTURAL ENGINEER.
11. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS FOR RELATED DEMOLITION AND PREP WORK.
12. WITHIN ALL EXISTING ROOMS/SPACES RECEIVING SCHEDULED FLOOR, OR WALL, OR CEILING FINISHES, REMOVE ALL EXISTING FLOOR, OR WALL, OR CEILING FINISHES DOWN TO THE SUBSTRATE. INCLUDE THE REMOVAL OF ALL ITEMS LOCATED WITHIN THE EXISTING FINISH REMOVALS UNO PATCH AND PREP ALL SUBSTRATES TO RECEIVE SCHEDULED FINISHES. FOR ADDITIONAL INFORMATION, SEE KEYNOTED ITEMS, FINISH PLANS AND/OR SCHEDULES, STRUCTURAL, MECHANICAL AND ELECTRICAL.
13. MOVE EXISTING FURNITURE INTO THE TEMPORARY TRAILER DURING CONSTRUCTION. REMOVE FURNITURE AT COMPLETION OF PROJECT.

DEMOLITION KEYED NOTES

- (DE1) REMOVE WINDOW AND SALVAGE FOR REUSE. PARTIALLY REMOVE WALL. PREPARE OPENING AND GROUND FOR STOOP AND DOOR INFILL. SEE CIVIL AND STRUCTURAL.
- (DE2) REMOVE DOOR AND SALVAGE FOR REUSE. PREPARE EXISITNG DOOR OPENING FOR DOOR WITH SECURITY UPGRADE
- (DE3) REMOVE DOOR AND SALVAGE FOR REUSE. PREPARE OPENING TO REUSE WINDOW FROM KEYED NOTE 1 AND REMAINING OPENING INFILLED WITH WALL TO MATCH ADJACENT EXISTING CONSTRUCTION
- (DE4) PARTIALLY REMOVE WALL TO WINDOW LIMITS - MATCH NORTH ELEVATION. USE EXISTING LINTEL AND REUSE WINDOW FROM DEMOLTION ON SOUTH ELEVATION. PATCH AND REPAIR WALL.
- (DE5) PREPARE GROUND FOR ADDITION. SEE CIVIL AND STRUCTURAL.
- (DE6) PREPARE EXTERIOR WALLS FOR ADDITION.
- (DE7) PREPARE ROOF FOR ADDITION.
- (DE8) REMOVE DOWNSPOUT AND PARTIALLY REMOVE GUTTER. PREPARE TO TIE INTO GUTTERS AT ADDITION.
- (DE9) PARTIALLY REMOVE CONCRETE FLOOR TO PREPARE FOR FLOOR DRAIN MODIFICATIONS. COORDINATE WITH PLUMBING. PREPARE FOR INFILL, MATCH ADJACENT FLOOR.
- (DE10) PARTIALLY REMOVE WALL FOR OPENING. COORDINATE LOCATION SIZE WITH MECH. SEE STRUCTURAL FOR LINTEL. PATCH AND REPAIR WALL.
- (DE11) REMOVE WINDOW AND SALVAGE FOR REUSE. PARTIALLY REMOVE WALL. PREPARE OPENING FOR DOOR INFILL.
- (DE12) REMOVE PARTITION/FURRING IN ITS ENTIRETY. PREPARE ADJACENT SURFACES TO ACCOMODATE PLAN.
- (DE13) PARTIALLY REMOVE PARTITION FOR OPENING. PREPARE ADJACENT SURFACES TO ACCOMODATE PLAN.
- (DE14) REMOVE DOOR AND SALVAGE FOR REUSE. PREPARE OPENING FOR INFILL. SEE PLAN.
- (DE15) REMOVE PLUMBING FIXTURE. SEE MECHANICAL.
- (DE16) PREPARE FLOOR FOR FINISH. SEE FINISH PLAN.
- (DE17) REMOVE EXISTING COUNTER/CABINETRY.
- (DE18) REMOVE CEILING AS REQUIRED AND PREPARE ADJACENT SURFACES TO ACCOMODATE PLAN.
- (DE19) REMOVE LIGHT FIXTURE, SALVAGE. PREPARE CEILING FOR FIXTURE/CEILING INFILL TO MATCH EXISTING ADJACENT MATERIAL. PREPARE ALL CEILINGS FOR PAINT. SEE ELECTRICAL FOR LIGHTING PLAN.
- (DE20) PARTIALLY REMOVE WALL TO WINDOW LIMITS, SEE STRUCTURAL FOR LINTEL INFORMATION. REUSE WINDOW FROM DEMOLTION ON SOUTH ELEVATION. PATCH AND REPAIR WALL.
- (DE21) COORDINATE WITH MEP. REMOVE MEP FIXTURE/EQUIPMENT. PREPARE EXIST MASONRY FOR WALL INFILL
- (DE22) MEP FIXTURE TO REMAIN
- (DE23) COORDINATE WITH MEP, RELOCATE CONDUIT. PREPARE EXIST MASONRY FOR PATCH
- (DE24) PARTIAL FURRING REMOVAL TO ACCOMODATE PLAN, PREPARE TO ADJACENT SURFACE FOR PATCH AND FINISH APPLICATIONS
- (DE26) PARTIAL REMOVAL OF EXISTING ROOF DECK SHEATHING. PREPARE FOR WALL VENT INSTALLATION. COORDINATE OPENINGS WITH EXISTING FRAMING.

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH DRAWING

DEMOLITION PLAN SYMBOLS

EXISTING WALL TO REMAIN			EXISTING DOOR AND FRAME TO REMAIN
WALL OR PARTITION TO BE REMOVED			EXISTING DOOR AND FRAME TO BE DEMOLISHED
DASHED LINE INDICATES ITEM TO BE REMOVED (UNO)		(DE10)	KEY NOTE

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. QUESAK — 9335 — STATE OF SOUTH DAKOTA

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: DEMOLITION PLANS AND ELEVATIONS

Phase: BID DOCUMENTS SUBMITTAL

Approved:

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10-31-22 | **Checked:** LA | **Drawn:** EM

Project Number: 884-CM-3015

Building Number: 3001

Drawing Number: AD111-3001
39 OF 84

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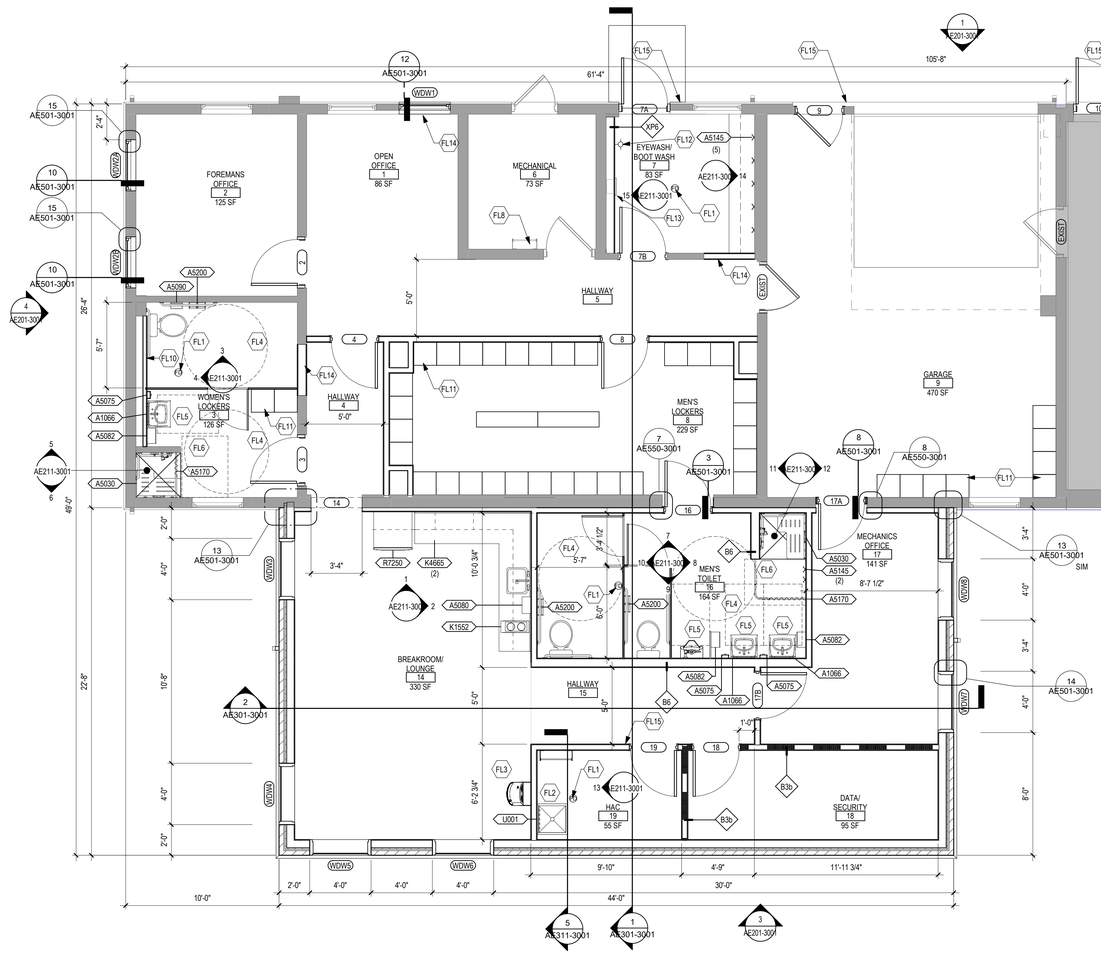
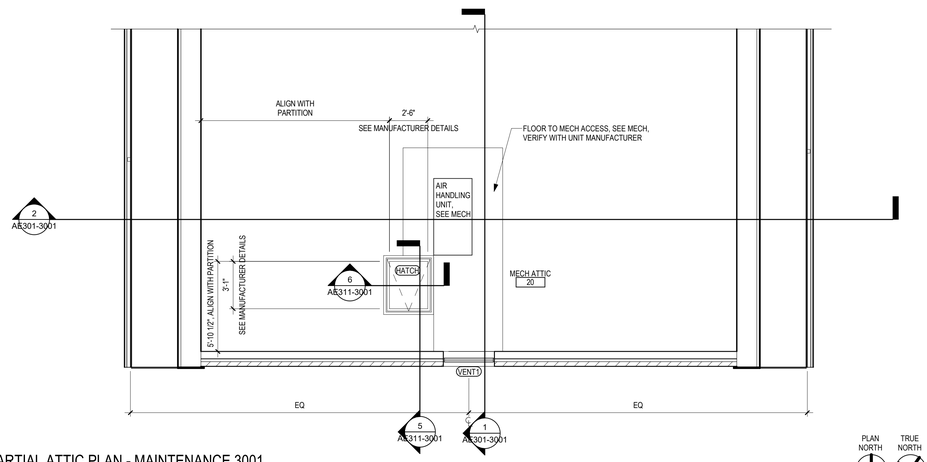


1 FIRST LEVEL FLOOR PLAN - MAINTENANCE 3001

1/4" = 1'-0"



2 PARTIAL ATTIC PLAN - MAINTENANCE 3001

1/4" = 1'-0"

PLAN NORTH TRUE NORTH

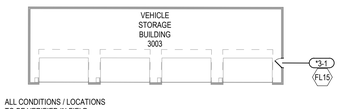
0 2" 4" 8"

EQUIPMENT SCHEDULE - MAINTENANCE 3001

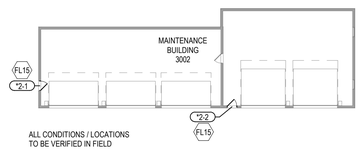
EQUIPMENT #	EQUIPMENT NAME	ACQUISITION CODE	QTY
A5030	FOLDING SHOWER SEAT	CC	2
A5075	SOAP DISPENSER	CC	3
A5080	PAPER TOWEL DISPENSER	CC	1
A5082	HANDS FREE PAPER TOWEL DISPENSER	CC	3
A5090	DISPENSER, SANITARY NAPKIN	CC	1
A5145	HOOK, GARMENT, DOUBLE	CC	7
A5170	ROD, SHOWER CURTAIN	CC	2
A5200	DISPENSER, TOILET PAPER	CC	3
K1552	BREWER, COFFEE, AUTO	CC	1
K4665	OVEN, MICROWAVE	CC	2
R7250	REFERIGERATOR/FREEZER	CC	1
U001	MOP HOLDER	CC	1

27

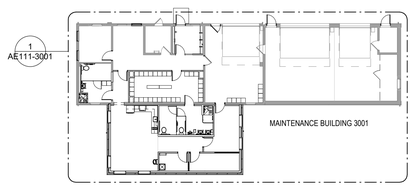
VA ACQUISITION CODE LEGEND	
CONTRACTOR FURNISHED AND INSTALLED	CC
VA FURNISHED - CONTRACTOR INSTALLED	VC
VA FURNISHED AND INSTALLED	V V
VA FURNISHED - CONTRACTOR INSTALLED WITH CONSTRUCTION FUNDS	VC(CF)
VA FURNISHED - VA INSTALLED WITH CONSTRUCTION FUNDS	V V(CF)
RELOCATED	R
SEE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED (CC) EQUIPMENT NOT INDICATED ON EQUIPMENT SCHEDULE.	



ALL CONDITIONS / LOCATIONS TO BE VERIFIED IN FIELD



ALL CONDITIONS / LOCATIONS TO BE VERIFIED IN FIELD



3 ARCH SITE PLAN

1" = 20'-0"

PLAN NORTH TRUE NORTH

0 10' 20' 40'

GENERAL NOTES

1. THE ARCHITECTURAL DRAWINGS SHOW PRINCIPAL AREAS AND LIMITS OF CONSTRUCTION WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY BE NECESSARY IN AREAS NOT SHOWN ON ARCHITECTURAL DRAWINGS DUE TO CHANGES AFFECTING ELECTRICAL, MECHANICAL AND PLUMBING ALONG WITH OTHER SYSTEMS. THIS INCIDENTAL WORK SHALL BE PART OF THIS CONTRACT, AND ALL TRADES SHALL INSPECT THESE AREAS, ASCERTAIN WORK REQUIRED AND DO THE WORK IN ACCORDANCE OF CONTRACT REQUIREMENTS AT NO ADDITIONAL COST.
2. CONTRACTORS SHALL VISIT THE SITE DURING BIDDING TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHALL LOCATE, INSPECT AND FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO DEMOLITION AND CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
3. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
4. GENERAL CONTRACTOR TO CHECK MECHANICAL DRAWINGS FOR EXISTING PIPES AND DUCTS FURRED IN WALLS. VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO PROCEEDING WITH REMODELING.
5. EQUIPMENT UNIT DIMENSIONS ARE FOR PRODUCT DESCRIPTION ONLY, VERIFY SIZE WITH MANUFACTURER.
6. ALL DIMENSIONS PERTAINING TO MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT SHALL BE VERIFIED WITH THE RESPECTIVE TRADE.
7. ALL CONTRACTORS THAT PENETRATE AND/OR DISTURB ANY AREAS AT EXISTING CONDITIONS SHALL PATCH AREA TO MATCH EXISTING ADJACENT AREA OR SURFACE AND PREPARE FOR SCHEDULED FINISH APPLICATION. COORDINATE WORK WITH GENERAL CONTRACTOR PRIOR TO PROCEEDING.
8. VERIFY HEIGHTS AND LOCATIONS OF ACCESS PANELS (AP) AND COORDINATE TYPES WITH TRADES WHICH REQUIRE THEM.
9. PROVIDE LINTELS AND FRAMING FOR GRILLES, LOUVERS, AND ROOF VENTS AS REQUIRED BY MECHANICAL CONTRACTOR, VERIFY SIZE AND LOCATION.
10. STRUCTURAL, MECHANICAL, AND ELECTRICAL ABBREVIATIONS AND SYMBOLS MAY DIFFER FROM ARCHITECTURAL. SEE RESPECTIVE SECTIONS AND/OR DRAWINGS FOR DEFINITIONS.
11. AT MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, PROVIDE 3/4" FRT PLYWOOD BACKING BEHIND ALL SURFACE MOUNTED FIXTURES AND EQUIPMENT, UNLESS NOTED OTHERWISE.
12. CONTRACTOR SHALL EVALUATE INTEGRITY OF ALL PARTITIONS INDICATED BY SYMBOLS ON THE LIFE SAFETY PLAN(S) WITHIN THE PROJECT SCOPE AND UPGRADE AS REQUIRED. ALL FIRE RESISTIVE RATED WALLS SHALL BE CONSTRUCTED OF MATERIALS / ASSEMBLIES MEETING THE RATING INDICATED, TERMINATE AT THE DECK ABOVE WITH A TESTED HEAD OF WALL ASSEMBLY AND ALL PENETRATIONS SHALL BE SEALED WITH A TESTED ASSEMBLY. ALL SMOKE PARTITIONS SHALL BE CONSTRUCTED OF MATERIALS THAT RESIST THE PASSAGE OF SMOKE, TERMINATE AT THE DECK ABOVE WITH A JOINT SEALED WITH FIRE CAULK AND ALL PENETRATIONS SHALL BE SEALED WITH FIRE CAULK.

FLOOR PLAN SYMBOLS

	EXISTING WALL TO REMAIN	8'-0"	DIMENSION LINE, NOMINAL
	WALL	8'-0"	EXTENDED DIMENSION LINE, NOMINAL
	EXISTING DOOR AND FRAME TO REMAIN	1A AE211 2B	INTERIOR ELEVATION INDICATOR TAG
101A	DOOR	1A AE201	EXTERIOR ELEVATION INDICATOR TAG
101B	INTERIOR BORROWED LIGHT	203	EQUIPMENT TAG
B3	WALL TAG	100	FLOOR SPOT ELEVATION
OFFICE 101	ROOM NAME AND NUMBER	1A AE501	DETAIL REFERENCE TAG
FP10	KEY NOTE		
1A AE201	INTERIOR SECTION REFERENCE TAG	1A AE201	EXTERIOR SECTION REFERENCE TAG
PR01	REVISION TAG		REVISION CLOUD

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

FLOOR PLAN KEYED NOTES

- FL1 FLOOR DRAIN. SEE PLUMBING. PATCH AND REPAIR CONCRETE FLOOR AT EXIST FLOOR LOCATIONS, MATCH ADJACENT CONSTRUCTION.
- FL2 JANITOR SINK. SEE PLUMBING.
- FL3 COMBINATION DRINKING FOUNTAIN AND WATER BOTTLE FILLER. SEE PLUMBING.
- FL4 66" DIAMETER TURNING RADIUS CLEAR FLOOR SPACE.
- FL5 30"X48" CLEAR FLOOR SPACE AT PLUMBING FIXTURE.
- FL6 36"X48" CLEAR FLOOR SPACE AT TRANSFER TYPE SHOWER.
- FL7 MANEUVERING CLEARANCE AT MANUAL SWINGING DOOR.
- FL8 EXISTING ATTIC ACCESS LADDER.
- FL9 DOWNSPOUT.
- FL10 FUR OUT WALL TO ACCOMODATE PLUMBING AND EXISTING PILASTER. VERIFY IN FIELD FOLLOWING DEMOLITION.
- FL11 FULL HEIGHT, 18"W x 21" D LOCKER. TYPICAL. SEE PLAN.
- FL12 HOSE BIB. SEE PLUMBING.
- FL13 EYE/FACE WASH - BARRIER-FREE CABINET CONCEALED SWING-DOWN. COORDINATE WITH PLUMBING. MOUNT 20 1/8" AFF FOR BARRIER FREE COMPLIANCE
- FL14 INFILL OPENING, MATCH ADJACENT CONSTRUCTION
- FL15 CARD READER. COORDINATE WITH DOOR HARDWARE AND TECHNOLOGY

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title FLOOR PLANS

Phase BID DOCUMENTS SUBMITTAL

Approved:

Project Title BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location STURGIS, SOUTH DAKOTA

Project Number 884-CM-3015

Building Number 3001

Issue Date 10-31-22 | **Checked** LA | **Drawn** EM

Drawing Number AE111-3001
40 OF 84

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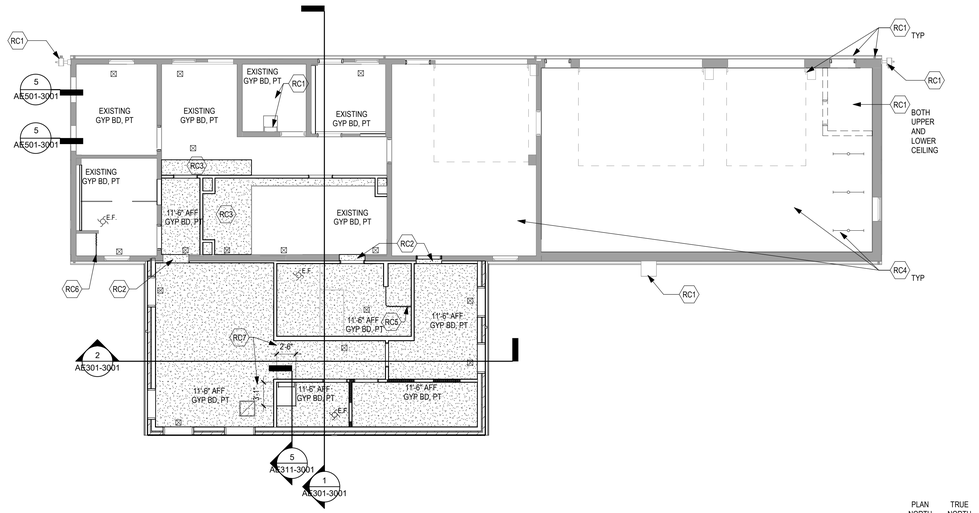
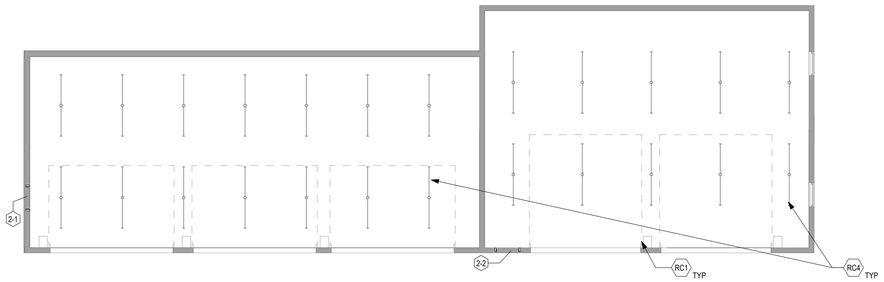


2 REFLECTED CEILING PLAN - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'

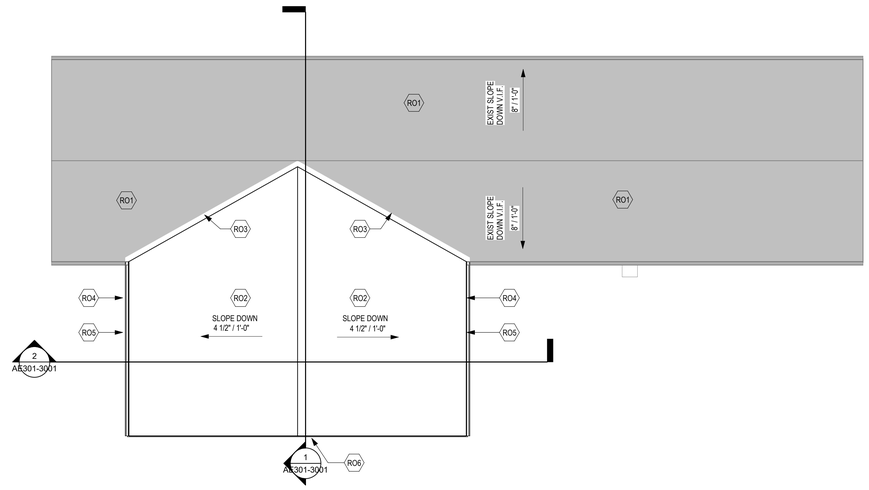


3 REFLECTED CEILING PLAN - MAINTENANCE 3002

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'



1 ROOF PLAN - MAINTENANCE 3001

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

0 4' 8' 16'

ROOF KEYED NOTES

- RO1 EXISTING SHINGLE ROOF WITH GABLE VENT. VERIFY IN FIELD.
- RO2 ASPHALT SHINGLE ROOF OVER PLYWOOD. MATCH EXISTING.
- RO3 VALLEY FLASHING. SEE SPECIFICATIONS.
- RO4 GUTTER EXTENSION. TIE INTO EXISTING. PROVIDE SUFFICIENT SIZE, LENGTH AND DOWNSPOUT QUANTITY.
- RO5 DOWNSPOUT. SEE SPECIFICATION AND CIVIL DRAWINGS.
- RO6 GABLE VENT / LOUVERS. PROVIDE DEMOUNTABLE SYSTEM TO PROVIDE ACCESS FOR ATTIC HVAC. SEE MECHANICAL.

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

RCP GENERAL NOTES

1. GENERAL CONTRACTOR TO COORDINATE ALL CEILING MOUNTED EQUIPMENT SUPPORT REQUIREMENTS, LOCATIONS, DIMENSIONS, ETC WITH EQUIPMENT SUPPLIER AND OWNER, PRIOR TO INSTALLATION.
2. ALL CEILING MOUNTED ITEMS SUCH AS LIGHT FIXTURES, GRILLES, DIFFUSERS, SPEAKERS, EXIT LIGHTS, ETC SHALL BE LOCATED IN THE CENTER OF GYP BD SOFFITS UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS.
3. PROVIDE L.E.D. LIGHT FIXTURES, UNO. SEE ELECTRICAL DRAWINGS FOR LIGHTING TYPES AND LOCATIONS.
4. SEE MECHANICAL DRAWINGS FOR SPRINKLER HEAD TYPES AND LOCATIONS.
5. **CEILINGS TO MATCH CONSTRUCTION AND ELEVATION OF EXISTING.** PATCH AND REPAIR AS REQUIRED. PAINT.
6. LIGHT FIXTURES WITHIN A ROOM SHALL ALIGN AND BE ORIENTED PERPENDICULAR OR PARALLEL TO PARTITIONS AND WALLS. ENSURE COMMON CENTERLINE ALIGNMENT AND EQUAL SPACING. COORDINATE PLACEMENT WITH MECHANICAL, ELECTRICAL, PLUMBING, AND LOW VOLTAGE.
7. GYP CEILING INFILL REPRESENTED WITH BORDER "SEAMS" TO DEPICT POSSIBLE EXTENT OF INFILL. EXTENT OF INFILL DEPENDENT ON DEMOLITION. CONSTRUCT, PATCH, AND FINISH CEILINGS TO BE SEAMLESS.

REFLECTED CEILING PLAN SYMBOLS

	GBPD CEILING / SOFFIT		1'-0" x 4'-0" LIGHT FIXTURE
	ACCESS PANEL		CEILING MOUNTED HVAC, SEE MECH
	MECHANICAL SUPPLY GRILL		STRIP LIGHT FIXTURE
	MECHANICAL RETURN GRILL		PENDANT STRIP LIGHT FIXTURE
	MECHANICAL LINEAR SUPPLY GRILL		RECESED LIGHT FIXTURE
9'-0" AFF ACT	CEILING ELEVATION AND FINISH		WALL SCONCE LIGHT FIXTURE
E.F.	EXHAUST FAN		

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

REFLECTED CEILING KEYED NOTES

- RC1 EXIST BUILDING COMPONENT, TO REMAIN.
- RC2 GYP SOFFIT. PATCH AND REPAIR AS REQUIRED. PAINT.
- RC3 GYP CEILING INFILL TO MATCH CONSTRUCTION AND ELEVATION OF EXISTING. PATCH AND REPAIR AS REQUIRED. PAINT.
- RC4 REPLACE TUBE FLUORESCENT FIXTURES WITH L.E.D. FIXTURES. SEE ELECTRICAL. PROVIDE CEILING TOUCH UP REPAIRS AS NECESSARY. PAINT CEILING.
- RC5 CHROME SHOWER CURTAIN ROD AND XL SHOWER CURTAIN, 84" AFF. WALL MOUNT ENDS AND SUSPEND FROM ABOVE STRUCTURE WITH XL SUSPENSION ROD
- RC6 CHROME SHOWER CURTAIN ROD AND XL SHOWER CURTAIN, 84" AFF. WALL MOUNT ENDS.
- RC7 ALIGN TO ROOF HATCH

CEILING FINISH SCHEDULE

RM NO.	NAME	CEILING FINISH
	MAINTENANCE BUILDING 3002	GWB (P-5)
1	OPEN OFFICE	GWB (P-5)
2	FOREMANS OFFICE	GWB (P-5)
3	WOMEN'S LOCKERS	GWB (P-5)
4	HALLWAY	GWB (P-5)
5	HALLWAY	GWB (P-5)
6	MECHANICAL	GWB (P-5)
7	EYEWASH/ BOOT WASH	GWB (P-5)
8	MEN'S LOCKERS	GWB (P-5)
9	GARAGE	GWB (P-5)
10	BAY 1	GWB (P-5)
11	BAY 2	GWB (P-5)
12	EQUIPMENT STORAGE	GWB (P-5)
13	FLAMMABLE STORAGE	GWB (P-5)
14	BREAKROOM/ LOUNGE	GWB (P-5)
15	HALLWAY	GWB (P-5)
16	MEN'S TOILET	GWB (P-5)
17	MECHANICS OFFICE	GWB (P-5)
18	DATA/ SECURITY	GWB (P-5)
19	HAC	GWB (P-5)

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management
VA | U.S. Department of Veterans Affairs

Drawing Title: ROOF PLAN AND REFLECTED CEILING PLANS
Approved:
Phase: BID DOCUMENTS SUBMITTAL
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10-31-22
Checked: LA
Drawn: EM
Project Number: 884-CM-3015
Building Number: 3001
Drawing Number: AE112-3001
41 OF 84

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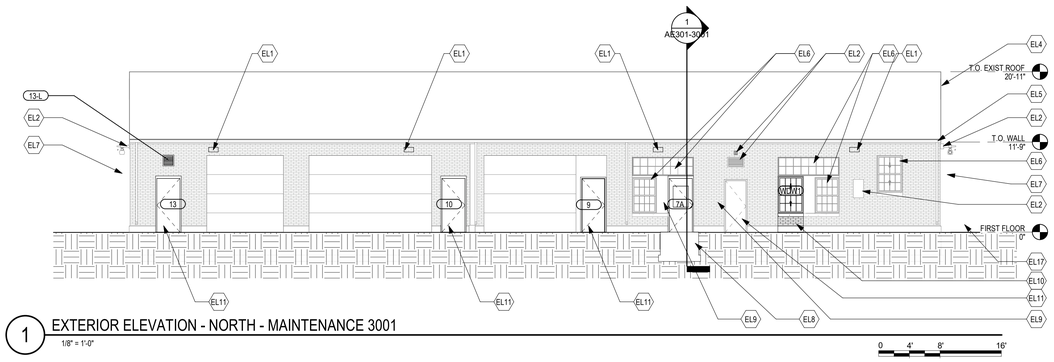
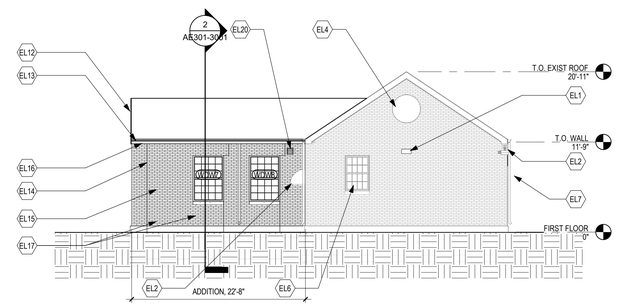


1 EXTERIOR ELEVATION - NORTH - MAINTENANCE 3001

1/8" = 1'-0"

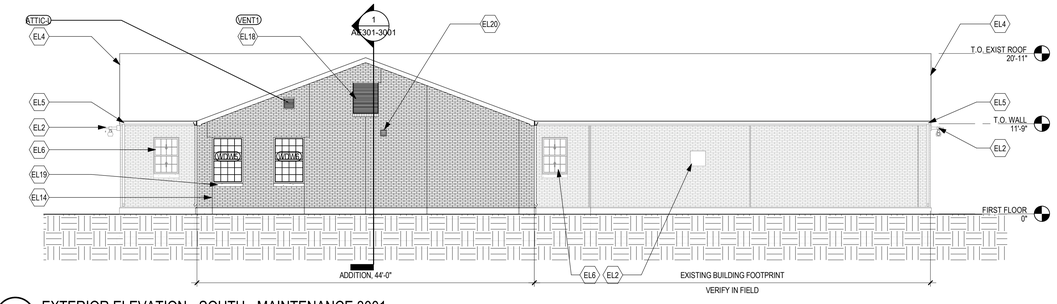
0 4' 8' 16'



2 EXTERIOR ELEVATION - EAST - MAINTENANCE 3001

1/8" = 1'-0"

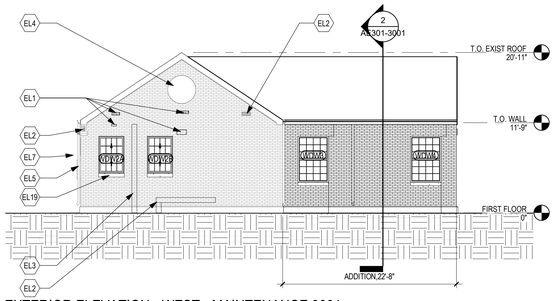
0 4' 8' 16'



3 EXTERIOR ELEVATION - SOUTH - MAINTENANCE 3001

1/8" = 1'-0"

0 4' 8' 16'



4 EXTERIOR ELEVATION - WEST - MAINTENANCE 3001

1/8" = 1'-0"

0 4' 8' 16'

ELEVATION KEYED NOTES

EL1 PATCH EXIST MASONRY WITH SALVAGED MASONRY AT REMOVED FIXTURE	EL9 CARD READER, TYPICAL. SEE ELECTRICAL	EL17 ON GRADE MECHANICAL EQUIPMENT, SEE MECHANICAL
EL2 FIXTURE TO REMAIN	EL10 INFILL WALL OPENING TO MATCH EXISTING ADJACENT WALL CONSTRUCTION. REUSE SALVAGED MASONRY. SEE DETAIL 12 / AE501-3001	EL18 GABLE VENT/ LOUVER DEMOUNTABLE FOR EQUIPMENT DELIVERY
EL3 COORDINATE WITH MEP, RELOCATED CONDUIT	EL11 DOOR WITH CARD READER. MATCH OPENING SIZE TO EXISTING. COORDINATE DOOR HARDWARE.	EL19 CAST STONE SILL, TYPICAL. MATCH EXIST
EL4 EXIST SHINGLE ROOF WITH GABLE VENT	EL12 ASPHALT SHINGLE ROOF WITH GABLE VENT, MATCH EXISTING	EL20 WALL CAP, SEE MECHANICAL
EL5 EXIST ALUMINUM GUTTER AND DOWNSPOUT	EL13 GUTTER AND DOWNSPOUT, MATCH EXISTING	
EL6 EXIST DOUBLE HUNG WINDOW	EL14 EXPANSION JOINT, TYPICAL	
EL7 WALL MOUNTED LIGHT FIXTURE, TYPICAL. SEE ELECTRICAL	EL15 BRICK EXTERIOR WALL FINISH, TO MATCH EXISTING	
EL8 STRUCTURAL STOOP, SEE STRUCTURAL	EL16 PAINT ALL TRIM WHITE, TO MATCH EXISTING	

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH DRAWING

Revisions:	Date:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: EXTERIOR ELEVATIONS

Phase: BID DOCUMENTS SUBMITTAL

Approved:

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10-31-22 | **Checked:** LA | **Drawn:** EM

Project Number: 884-CM-3015

Building Number: 3001

Drawing Number: AE201-3001

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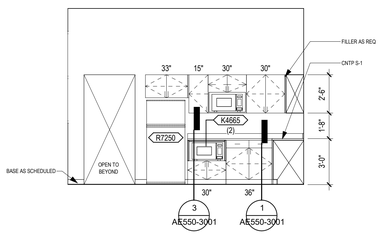
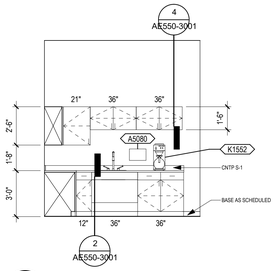
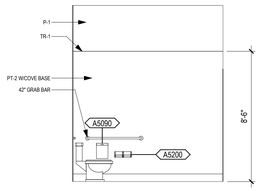


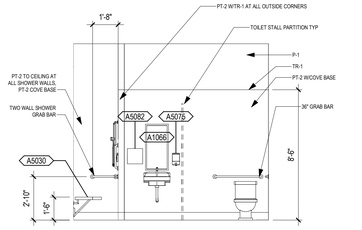
1 ELEVATION - BREAKROOM/LOUNGE 14 - NORTH
1/4" = 1'-0"



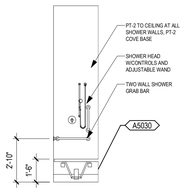
2 ELEVATION - BREAKROOM/LOUNGE 14 - EAST
1/4" = 1'-0"



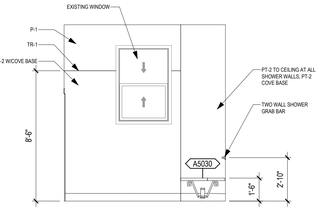
3 ELEVATION - WOMEN'S LOCKERS 3 - NORTH
1/4" = 1'-0"



4 ELEVATION - WOMEN'S LOCKERS 3 - WEST
1/4" = 1'-0"



5 ELEVATION - WOMEN'S LOCKERS 3 SHOWER - NORTH
1/4" = 1'-0"



6 ELEVATION - WOMEN'S LOCKERS 3 SHOWER - SOUTH
1/4" = 1'-0"

7 ELEVATION - MEN'S TOILET 16 - NORTH
1/4" = 1'-0"

8 ELEVATION - MEN'S TOILET 16 - EAST
1/4" = 1'-0"

9 ELEVATION - MEN'S TOILET 16 - SOUTH
1/4" = 1'-0"

10 ELEVATION - MEN'S TOILET 16 - WEST
1/4" = 1'-0"

11 ELEVATION - MEN'S TOILET 16 SHOWER - WEST
1/4" = 1'-0"

12 ELEVATION - MEN'S TOILET 16 SHOWER - EAST
1/4" = 1'-0"

13 ELEVATION - HAC 19 - WEST
1/4" = 1'-0"

14 ELEVATION - BOOTWASH / EYEWASH 7 - EAST
1/4" = 1'-0"

15 PARTIAL ELEVATION - EYEWASH 7 - WEST
1/4" = 1'-0"

INTERIOR ELEVATION GENERAL NOTES

1. SEE RCP FOR SOFFIT AND BULKHEAD LOCATIONS AND DETAILS
2. INSTALL CERAMIC TILE (CT) BEHIND ALL WALL MOUNTED ITEMS WHERE CT IS CALLED OUT IN FINISH PLAN AND SCHEDULE. WHERE ANY TOILET ACCESSORY OVERLAPS OR EXTENDS BEYOND A CT WAINSCOT AND PROJECTS ONTO THE ADJACENT WALL, INSTALL A HARDBOARD BACKER FULL SIZE OF THE OVERLAP AREA AND OF A THICKNESS TO ALIGN FLUSH WITH THE FACE OF THE CT. HOLD FACE OF HARDBOARD BACK 3/8" FROM THE FACE OF THE ACCESSORY ON ALL SIDES. PROVIDE SANITARY SEALANT AROUND ALL EDGES OF HARDBOARD BACKING PIECE.
3. COORDINATE ALL PLUMBING FIXTURES, CONTROLS AND VENTILATION REQUIREMENTS WITH MECHANICAL CONTRACTOR
4. COORDINATE ALL ELECTRICAL FIXTURES, OUTLETS, SWITCHES AND POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR
5. VERIFY OPENING SIZES AND LOCATIONS OF OWNER FURNISHED, OWNER INSTALLED EQUIPMENT AND FURNISHINGS TO ASSURE NO INTERFERENCE WITH COUNTER SUPPORT BRACKETS, APRONS, ETC.

EQUIPMENT SCHEDULE - MAINTENANCE 3001

EQUIPMENT #	EQUIPMENT NAME	ACQUISITION CODE	QTY
A5030	FOLDING SHOWER SEAT	CC	2
A5075	SOAP DISPENSER	CC	3
A5080	PAPER TOWEL DISPENSER	CC	1
A5082	HANDS FREE PAPER TOWEL DISPENSER	CC	3
A5090	DISPENSER, SANITARY NAPKIN	CC	1
A5145	HOOK, GARMENT, DOUBLE	CC	7
A5170	ROD, SHOWER CURTAIN	CC	2
A5200	DISPENSER, TOILET PAPER	CC	3
K1552	BREWER, COFFEE, AUTO	CC	1
K4665	OVEN, MICROWAVE	CC	2
R7250	REFERIGERATOR/FREEZER	CC	1
U001	MOP HOLDER	CC	1
27			

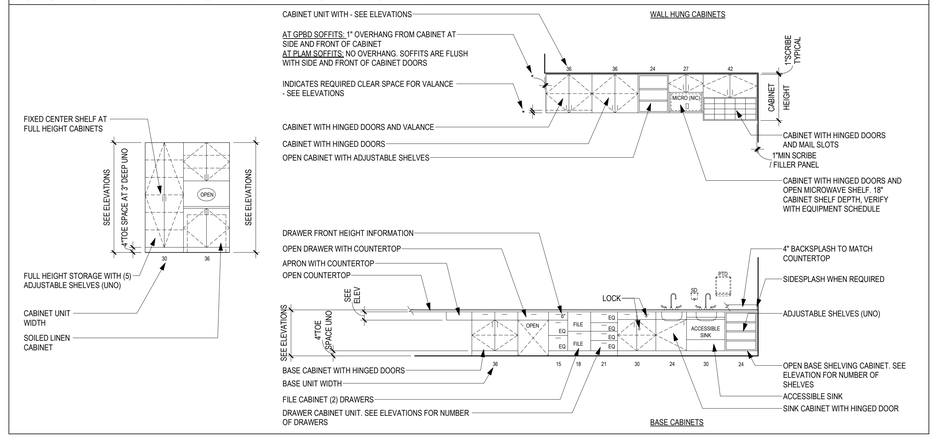
CASEWORK GENERAL NOTES

1. FULL HEIGHT STORAGE CABINETS (UNO)
   - SHALL BE 2'-0" DEEP
   - 2'-0" MAX DOOR WIDTH
   - WARDROBE CABINETS TO BE 2'-0" DEEP
   - PROVIDE (5) FIVE ADJ PLAM SHELVES
2. BASE AND WALL CABINETS (UNO)
   - WALL CABINETS 1'-0" DEEP CLEAR INSIDE MINIMUM
   - BASE CABINETS 2'-0" DEEP
   - (1) ADJ PLAM SHELF AT 2'-0" HIGH WALL CABINETS
   - (2) ADJ PLAM SHELVES AT 2'-6" HIGH WALL CABINETS, AND
   - (3) ADJ PLAM SHELVES AT 3'-0" HIGH WALL CABINETS
3. SEE INTERIOR ELEVATIONS FOR PLAM FILLERS AND SLOPED TOPS.
4. WHERE FILLER STRIPS ARE REQUIRED, THEY SHALL BE EQUAL IN SIZE AT BOTH ENDS OF CASEWORK (UNO).
5. PROVIDE LOCKS ON INDIVIDUAL DOORS AND DRAWERS WHERE INDICATED.
6. PROVIDE CONTINUOUS SEALANT AT TOP OF BACKSPLASH/SIDESPLASHES.
7. PROVIDE 1" THICK SHELVES WHERE CABINETS ARE OVER 3'-0" WIDE.
8. PROVIDE GROMMETS AT WORKSTATIONS, INCLUDING NURSE STATIONS, RECEPTION DESKS AND OTHER WORK COUNTERS. CUT IN FIELD-PROVIDE ONE PER ELECTRICAL DEVICE BELOW COUNTER-COORDINATE LOCATIONS WITH OWNER. COLOR TO BE SELECTED BY ARCHITECT. SEE SPECIFICATION FOR GROMMET TYPES AND SIZES.
9. PROVIDE A 2" RADIUSED EDGE (IN PLAN) AT ALL OUTSIDE, EXPOSED COUNTERTOP CORNERS (UNO). ALL PLAM COUNTERTOPS SHALL HAVE A 1 1/4" THICK PLAM SQUARE EDGE NOSING (UNO)
10. ALL COUNTERTOPS ARE 2'-1" DEEP (UNO)
11. PROVIDE PLYWOOD BACKING AT ALL SOLID SURFACE COUNTERTOPS.
12. COUNTERTOP SUPPORT BRACKETS ARE PROVIDED BY THE CASEWORK SUPPLIER. PROVIDE WALL BLOCKING AT EACH SUPPORT, SPACE AT 3'-0" OC MAX.
13. COORDINATE LOCATION OF ALL UNDERCOUNTER SUPPORT WITH OWNER FURNISHED/OWNER INSTALLED EQUIPMENT.
14. NO EXPOSED FASTENERS ON CASEWORK (UNO)
15. ALL EXPOSED METAL CLIP ANGLES AND BRACKETS TO BE PAINTED TO MATCH CASEWORK.
16. ALL EXPOSED AND SEMI-EXPOSED SURFACES OF CASEWORK, SHELVING, BASE, FULL HEIGHT AND UPPER WALL CABINETS, AND FINISHED END PANELS ARE PLAM (UNO)
17. FIELD VERIFY SPACE AVAILABLE AT CABINET LOCATIONS PRIOR TO CASEWORK FABRICATION.
18. RETURN BACKSPLASH AT SIDEWALLS (UNO).
19. TUCK WALL COVERING BEHIND ALL BACKSPLASHES.
20. ALL CABINETS TO RECEIVE BASE SCHEDULED FOR ROOM (UNO).
21. COORDINATE ALL SWITCHES, UNDER-CABINET LIGHT FIXTURES AND UNDERCOUNTER RECEPTACLES WITH THE ELECTRICAL CONTRACTOR.
22. PROVIDE HANGING FILE EDGE/HARDWARE WHERE FILE DRAWERS ARE INDICATED
23. PROVIDE A 1/4" GAP BETWEEN BOTTOM EDGE OF COUNTERTOP AND TOP EDGE OF DOOR FRONTS/DOORS OF CABINETS
24. REFER TO FINISH PLAN GENERAL NOTES FOR CASEWORK FINISHES (UNO)
25. BASE AS SCHEDULED (UNO)
26. PLAM COUNTERTOPS TO RECEIVE 3mm FLAT PVC EDGE (UNO).
27. NUMBERS SHOWN BELOW BASE CABINETS AND ABOVE WALL CABINETS REFER TO NOMINAL WIDTH DIMENSIONS, IN INCHES, FOR THAT CABINET. SEE REFERENCE DETAILS FOR ADDITIONAL INFORMATION.
28. ALL CASEWORK TO BE PLAM-1(UNO).

VA ACQUISITION CODE LEGEND	
CONTRACTOR FURNISHED AND INSTALLED	CC
VA FURNISHED - CONTRACTOR INSTALLED	VC
VA FURNISHED AND INSTALLED	V V
VA FURNISHED - CONTRACTOR INSTALLED WITH CONSTRUCTION FUNDS	VC(CF)
VA FURNISHED - VA INSTALLED WITH CONSTRUCTION FUNDS	V V(CF)
RELOCATED	R

SEE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED (CC) EQUIPMENT NOT INDICATED ON EQUIPMENT SCHEDULE.

CASEWORK ELEVATION REFERENCE DIAGRAM



Revisions:	Date:

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Anderson Engineering of Minnesota, LLC | Proj # 16409

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REGISTERED PROFESSIONAL ENGINEER — STATE OF SOUTH DAKOTA — 9335 — NICHOLAS A. OLESIAK
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management
VA | U.S. Department of Veterans Affairs

Drawing Title INTERIOR ELEVATIONS	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved:		**Location** STURGIS, SOUTH DAKOTA	**Building Number** 3001
		Issue Date 10-31-22 / **Checked** MRP / **Drawn** CZ	**Drawing Number** AE211-3001 43 OF 84

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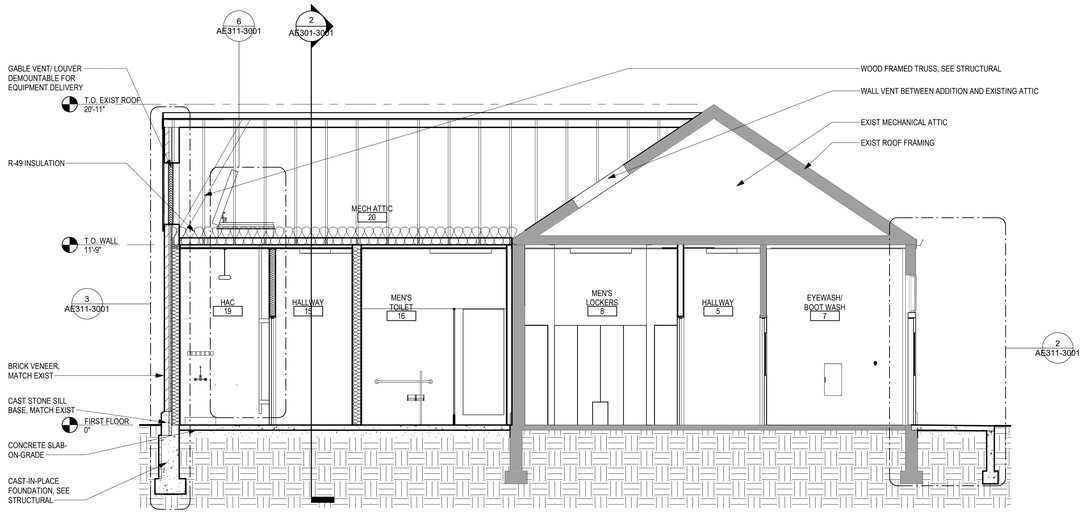
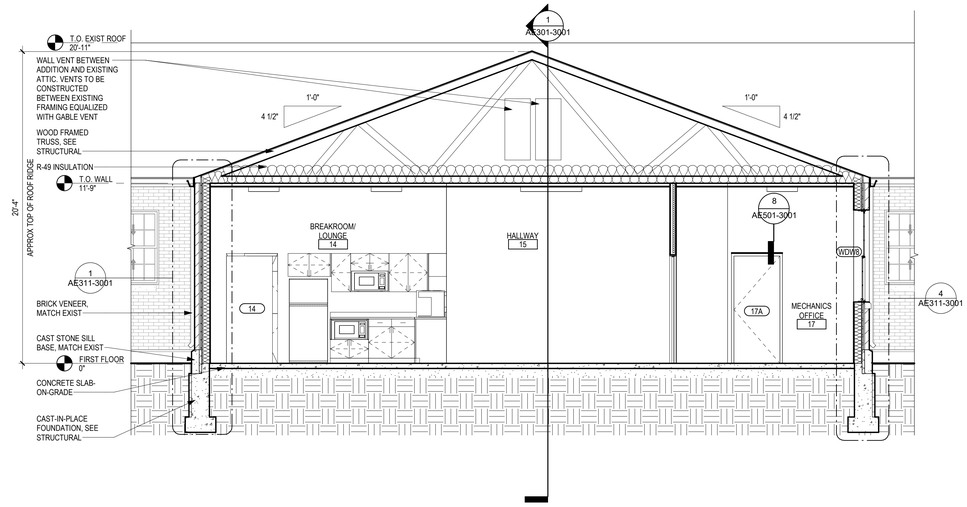


1 BUILDING SECTION - NORTH / SOUTH - MAINTENANCE 3001

1/4" = 1'-0"

0 2' 4' 8'



2 BUILDING SECTION - WEST / EAST - MAINTENANCE 3001

1/4" = 1'-0"

0 2' 4' 8'

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Revisions:	Date:

CONSULTANT

MECHANICAL, ELECTRICAL, TECHNOLOGY & STRUCTURAL:	GEOTECHNICAL:	COST ESTIMATING:
IMEG CORP.	**AET**	**CPMI**
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Anderson Engineering of Minnesota, LLC | Proj # 16409

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESIAK — SOUTH DAKOTA

DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

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Drawing Title BUILDING SECTIONS	**Phase** BID DOCUMENTS SUBMITTAL	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved:		**Location** STURGIS, SOUTH DAKOTA	**Building Number** 3001
		Issue Date 10-31-22 / **Checked** LA / **Drawn** EM	**Drawing Number** AE301-3001 44 OF 84

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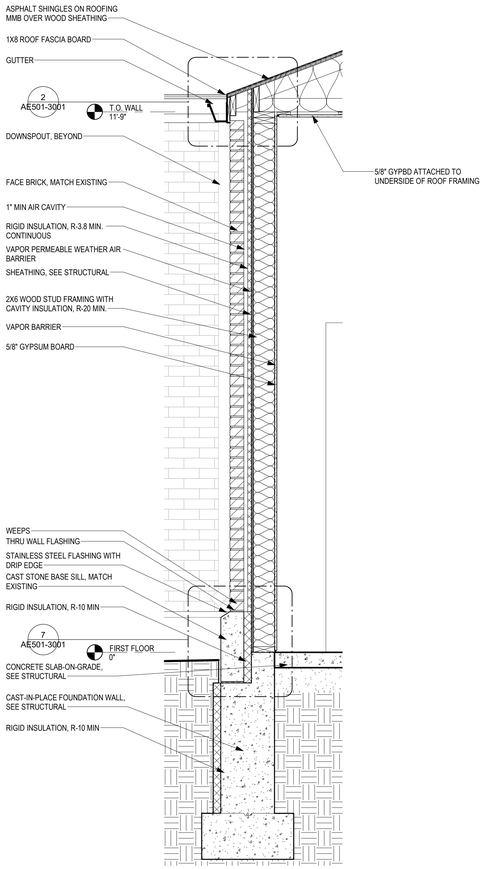

1 WALL SECTION - TYPICAL - MAINTENANCE 3001
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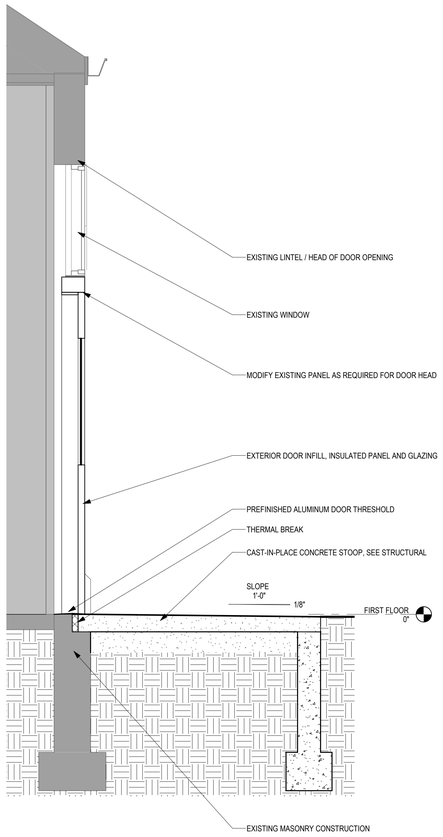

2 WALL SECTION AT DOOR
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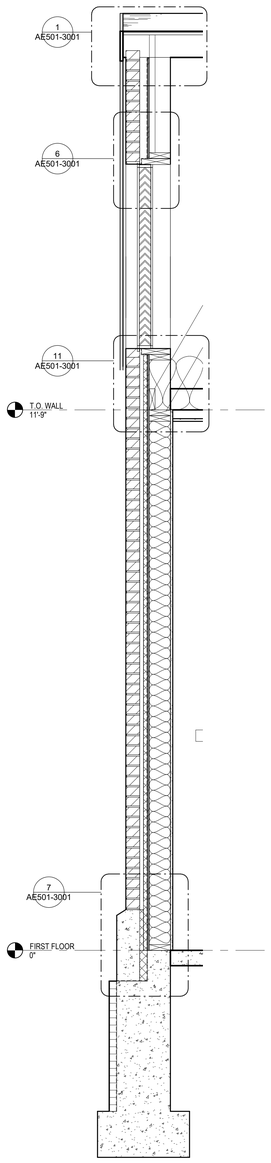
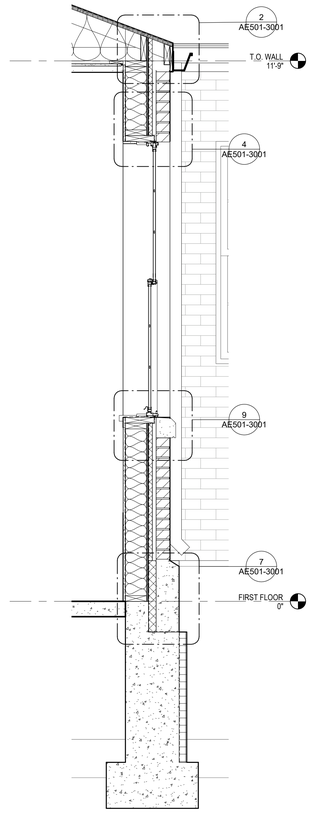
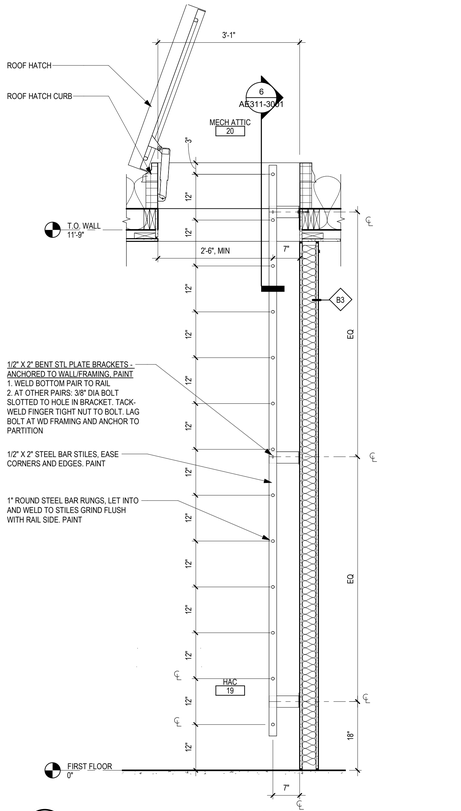


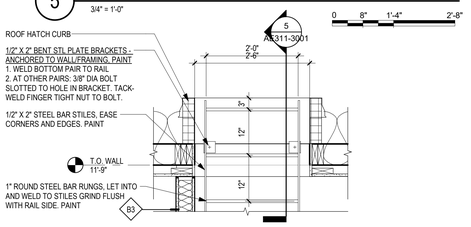
3 WALL SECTION AT GABLE
3/4" = 1'-0"



4 WALL SECTION AT WDW
3/4" = 1'-0"



5 SECTION- THROUGH ATTIC ACCESS
3/4" = 1'-0"



6 SECTION - THROUGH ATTIC HATCH
3/4" = 1'-0"

Revisions:	Date:

CONSULTANT

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REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESIAK — 9335 — SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title WALL SECTIONS	**Phase** BID DOCUMENTS SUBMITTAL
Approved:	

Project Title BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS		**Project Number** 884-CM-3015
		Building Number 3001
Location STURGIS, SOUTH DAKOTA		**Drawing Number** AE311-3001 45 OF 84
Issue Date 10-31-22	**Checked** LA	**Drawn** EM

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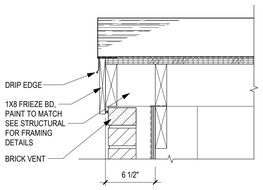
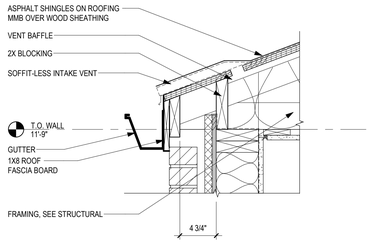


1 SECTION DETAIL - GABLE RAKE
1 1/2" = 1'-0"



2 SECTION DETAIL - ROOF FASCIA
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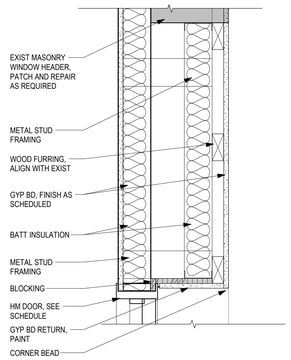
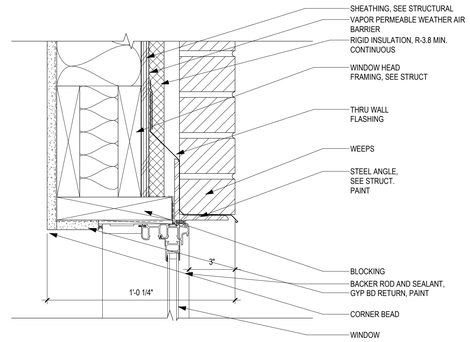
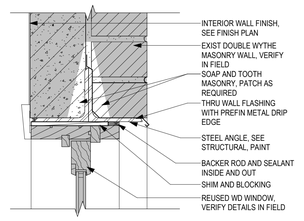


3 SECTION DETAIL - DOOR HEAD 16
1 1/2" = 1'-0"



4 SECTION DETAIL - WDW HEAD
3" = 1'-0"



5 SECTION DETAIL - WOOD WDW HEAD
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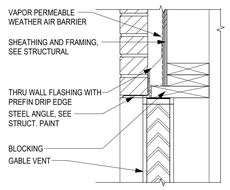

6 SECTION DETAIL - GABLE VENT HEAD
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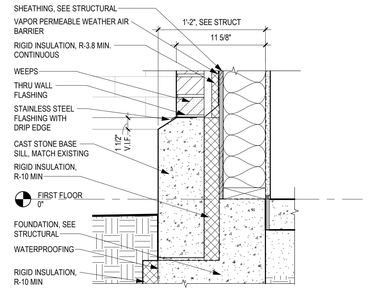

7 SECTION DETAIL - WALL BASE
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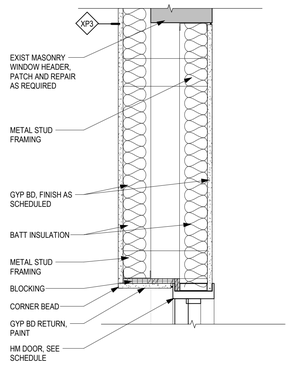
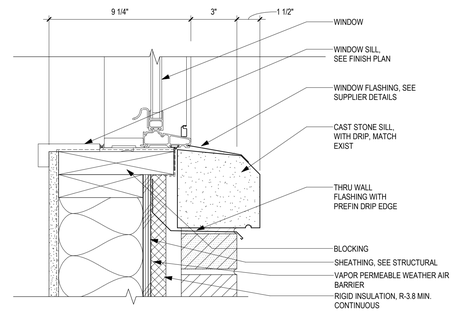
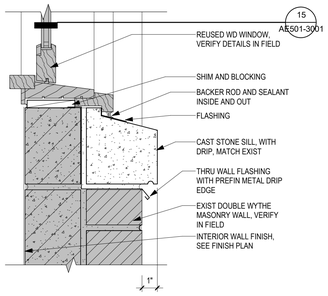


8 SECTION DETAIL - DOOR HEAD 17A
1 1/2" = 1'-0"



9 SECTION DETAIL - WDW SILL
3" = 1'-0"



10 SECTION DETAIL - WD WDW SILL
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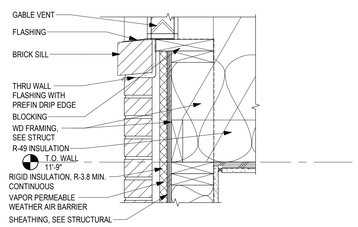

11 SECTION DETAIL - GABLE VENT SILL
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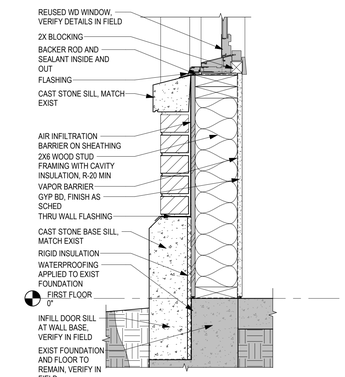
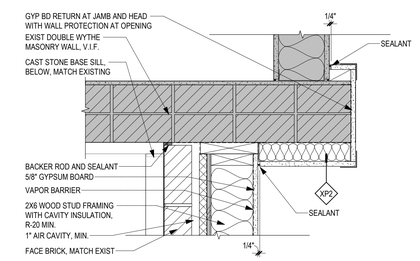
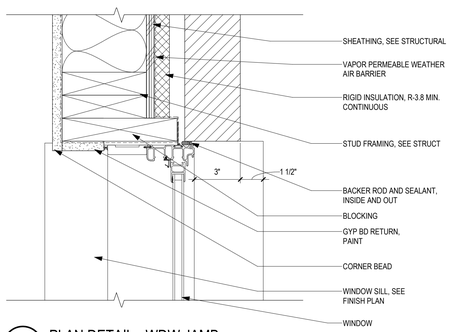


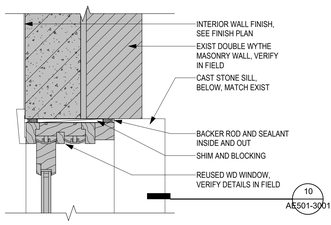
12 SECTION DETAIL - AT DOOR INFILL
1 1/2" = 1'-0"



13 PLAN DETAIL - WD FRAMED WALL TO EXIST
1 1/2" = 1'-0"



14 PLAN DETAIL - WDW JAMB
3" = 1'-0"



15 PLAN DETAIL - WD WDW JAMB
3" = 1'-0"

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: DETAILS
Approved:
Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10-31-22
Checked: LA
Drawn: EM
Project Number: 884-CM-3015
Building Number: 3001
Drawing Number: AE501-3001
46 OF 84

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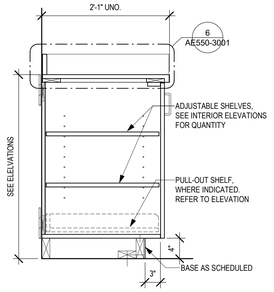
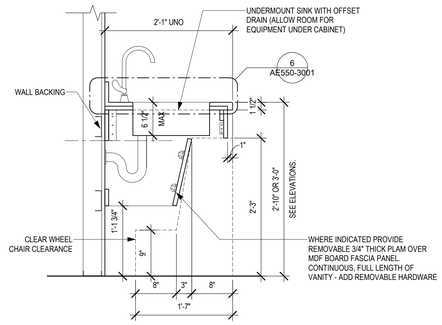
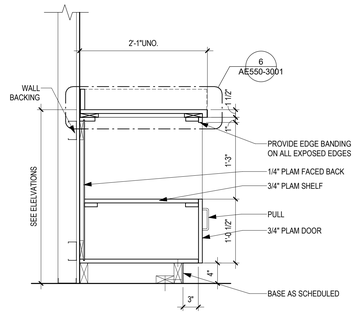
VA FORM 08 - 6231



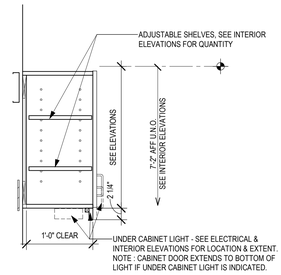
1 BASE CABINET
1" = 1'-0"



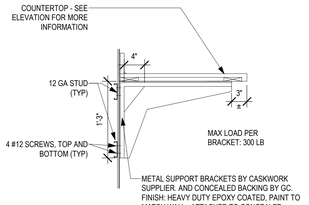
2 CABINET WITH SINK AND APRON
1" = 1'-0"



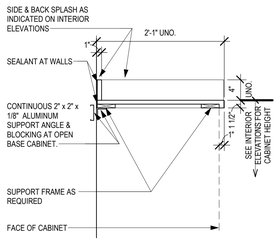
3 SECTION - BASE CABINET WITH DOOR & OPEN SHELF
1" = 1'-0"

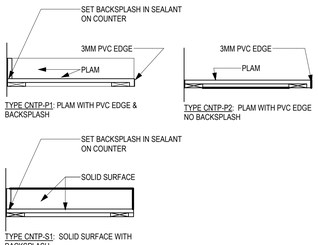


4 WALL CABINET WITH DOOR
1" = 1'-0"



5 COUNTERTOP SUPPORT BRACKET AND BACKING
1" = 1'-0"

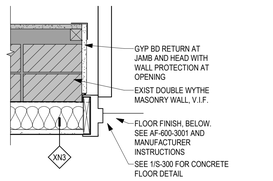




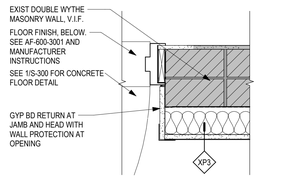
COUNTERTOP TYPES:
CNTP-P PLASTIC LAMINATE
CNTP-S SOLID SURFACE
CNTP-1 CULTURED MARBLE
CNTP-2 QUARTZ AGGLOMERATE
CNTP-3 PRECAST CONCRETE
CNTP-4 NATURAL STONE
CNTP-5 STAINLESS STEEL
CNTP-6
CNTP-7 SOLID MODIFIED EPOXY RESIN
CNTP-8
CNTP-9 BUTCHER BLOCK
CNTP-10 PAPER COMPOSITE

CNTP-#1 DENOTES COUNTERTOP WITH BACKSPLASH
CNTP-#2 DENOTES COUNTERTOP WITHOUT BACKSPLASH
TYP. UNO.

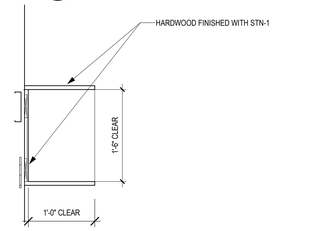
6 COUNTERTOP TYPES (CNTP)
1" = 1'-0"



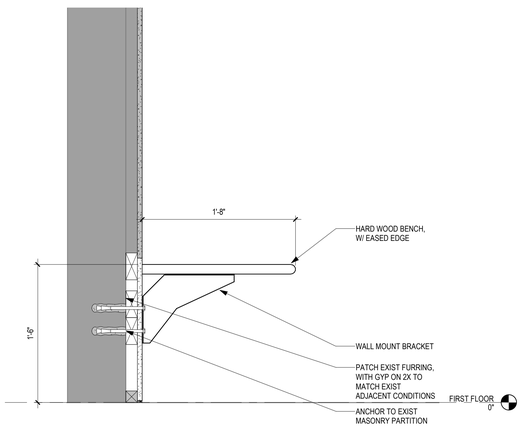
7 PLAN DETAIL - DOOR JAMB 16
1 1/2" = 1'-0"



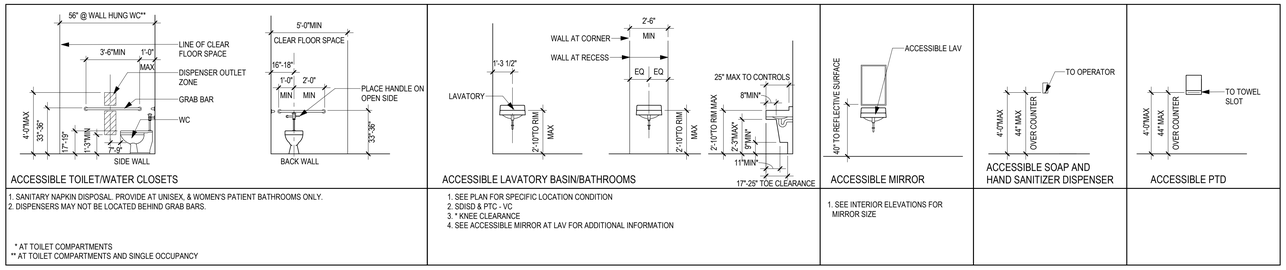
8 PLAN DETAIL - DOOR JAMB 17
1 1/2" = 1'-0"

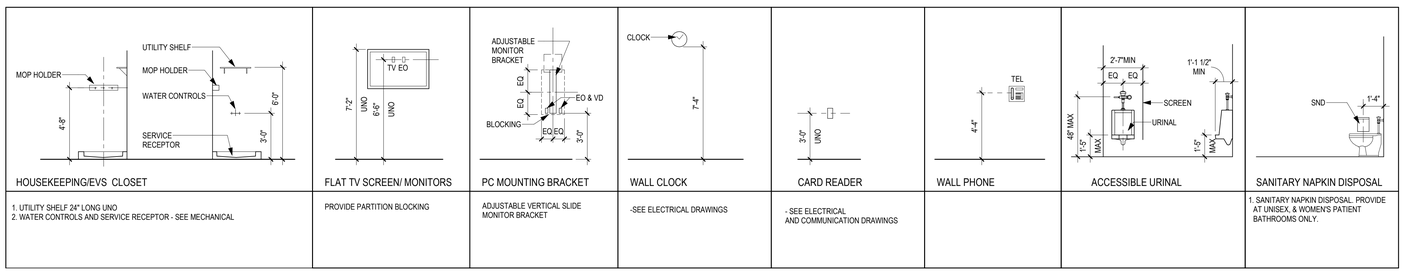


9 WALL CUBBY
1" = 1'-0"



10 WALL-MOUNTED BENCH - BOOT / EYEWASH 7
1 1/2" = 1'-0"





TYPICAL MOUNTING HEIGHTS

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title
INTERIOR DETAILS AND TYPICAL MOUNTING HEIGHTS

Phase
BID DOCUMENTS SUBMITTAL

Approved:

Project Title
BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location
STURGIS, SOUTH DAKOTA

Project Number
884-CM-3015

Building Number
3001

Drawing Number
AE550-3001
47 OF 84

Issue Date
10-31-22

Checked
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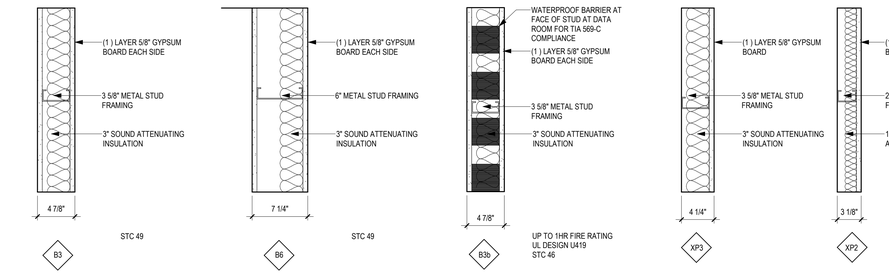
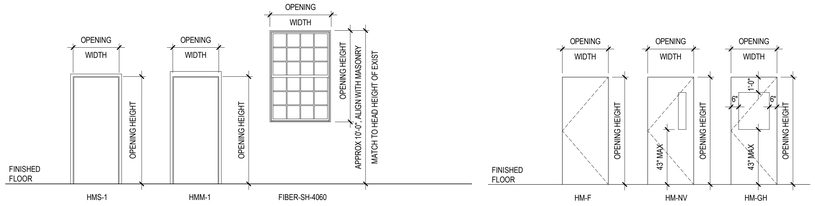
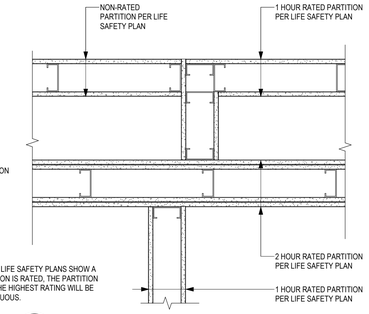


TYPES - PARTITION - MAINTENANCE 3001

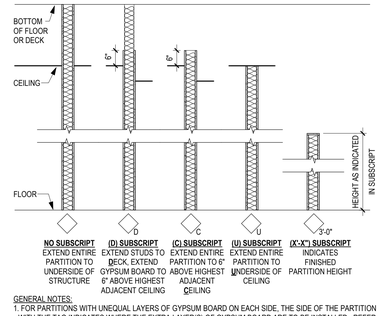


TYPES - FRAMES - MAINTENANCE 3001

TYPES - PANELS - MAINTENANCE 3001



1 GUIDELINE - RATED WALL INTERSECTIONS



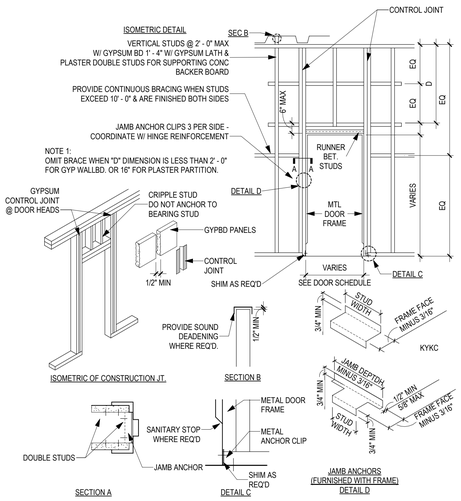
GENERAL NOTES:
1. FOR PARTITIONS WITH UNEQUAL LAYERS OF GYPSUM BOARD ON EACH SIDE, THE SIDE OF THE PARTITION WITH THE TAG INDICATES WHERE THE EXTRA LAYER(S) OF GYPSUM BOARD ARE TO BE INSTALLED. REFER TO PARTITION TYPES FOR MORE INFORMATION
2. DIMENSIONS TO METAL STUD PARTITIONS ARE MEASURED TO FINISH FACE UNLESS NOTED OTHERWISE
3. AT INFILL WITHIN OR EXTENSIONS ONTO EXISTING PARTITIONS, THE PARTITION TAG NOTED IS FOR INTENT ONLY. FINISHED PARTITION FACES ARE TO ALIGN WITH ADJACENT EXISTING PARTITION FACES
4. SUBSCRIPTS MAY BE USED WITH ANY PARTITION TYPE

PARTITION GENERAL NOTES:

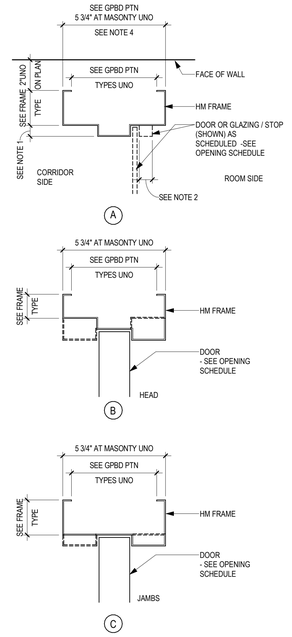
1. SEE LIFE SAFETY PLANS FOR REQUIRED PARTITION FIRE RATINGS.
2. GYPSUM BOARD AND METAL STUDS USED IN FIRE RATED SEPARATION PARTITIONS SHALL EXTEND FROM FLOOR TO UNDERSIDE OF STRUCTURE, UNLESS NOTED OTHERWISE.
3. CONTRACTORS TO VERIFY CONDITIONS ABOVE CEILING AT EXISTING PARTITIONS IDENTIFIED WITH FIRE/SMOKE PARTITION SYMBOLS. REPAIR CONDITIONS THAT DO NOT MEET REQUIREMENTS OF THE INDICATED FIRE/SMOKE RATING SHOWN, SUCH AS BUT NOT LIMITED TO OPENINGS IN PARTITIONS, GAPS AROUND DUCTWORK, PIPES AND CONDUIT, MISSING SMOKE DAMPERS, ETC
4. DIMENSIONS TO METAL STUD PARTITION ARE MEASURED TO FINISH FACE OF PARTITION UNLESS NOTED OTHERWISE
5. THE DIMENSION SHOWING THE LOCATION OF A DOOR FRAME IN GYPSUM BOARD WALLS IS TO THE INSIDE OF THE DOOR FRAME (DOOR OPENING). PROVIDE 4" TYPICAL DIMENSION IF NO DIMENSION IS SHOWN.
6. SOUND ATTENUATING INSULATION MEANS GLASS FIBER OR MINERAL WOOL BATTS OR BLANKETS BEARING THE UL LABEL FOR FIRE RESISTANCE. VERIFY TYPE AND DENSITY (PCF) WITH FIRE TEST NUMBER SHOWN ON PARTITION TYPE.
7. FOR PARTITION HEIGHTS SEE PARTITION TAG LEGEND AND TAG SUBSCRIPTS ON PLANS.
8. ALL FURRING TO BE PARTITION TYPE XP3, ALL PARTITIONS ARE TO BE PARTITION TYPE B3, UNLESS NOTED OTHERWISE.
9. FOR PARTITION TYPES WITH GYPSUM BOARD ON ONE SIDE ONLY, INSTALL GYPSUM BOARD ON ROOM SIDE, UNLESS NOTED OR DETAILED OTHERWISE. FOR SHAFTWALL PARTITION TYPES, INSTALL LINER PANEL ON NON-ACCESSIBLE SIDE, UNLESS NOTED OR DETAILED OTHERWISE.
10. PROVIDE 1" DEFLECTION SPACE AT THE TOP OF STUDS AT ALL PARTITIONS EXTENDING TO STRUCTURE, UNLESS NOTED OTHERWISE.
11. GENERAL CONTRACTOR SHALL PROVIDE AND COORDINATE ALL IN-WALL BLOCKING FOR WALL MOUNTED CASEWORK AND EQUIPMENT SUPPLIED BY THIS CONTRACT, OWNER FURNISHED OR BY VENDORS. CONTRACTORS OPTION TO PROVIDE 3/4" FIRE TREATED PLYWOOD OR SHEET METAL BLOCKING FOR WALL MOUNTED EQUIPMENT, CASEWORK, DOOR STOPS, ACCESSORIES, ETC, UNLESS NOTED OTHERWISE.
12. IN WET AREAS SUCH AS BUT NOT LIMITED TO SHOWER, JANITOR CLOSETS, ETC, USE TILE BACKER BOARD BEHIND THE CERAMIC TILE AND EXTEND TO 2'-0" BEYOND ALL SIDES OF THE PLUMBING FIXTURE. IN DOUBLE LAYER WALLS WHERE THE TILE BACKER BOARD IS INSTALLED OVER A BASE LAYER OF GYPSUM BOARD, APPLY A WATER BARRIER (BUILDING WRAP) NOT A VAPOR RETARDER, OVER THE BASE LAYER OF GYPSUM BOARD. IN HIGH HUMIDITY AREAS SUCH AS SAUNAS, STEAM ROOMS AND SWIMMING POOLS, WHERE WALLS ARE EXPOSED TO CONSTANT MOISTURE, USE TILE BACKER BOARD BEHIND CERAMIC TILE.
13. IN WET AREAS SUCH AS JANITOR CLOSETS, ETC, USE 5/8" WATER RESISTANT GYPSUM BOARD OR 5/8" FR WATER RESISTANT GYPSUM BOARD.
14. FOR ALL REMODELING PROJECTS, ALL PARTITIONS NOTED AT INFILLS WITHIN, OR EXTENSIONS ONTO EXISTING PARTITIONS, ARE NOTED AS SUCH FOR INTENT ONLY. ALL EXPOSED PARTITION FACES ARE TO ALIGN.

OPENING SCHEDULE: MAINTENANCE 3001, 3002, & 3003

ASSOCIATED ROOMS		OPENING			PANEL INFORMATION			FRAME INFORMATION							
FROM ROOM NAME	TO ROOM NAME	NUMBER	WIDTH	HEIGHT	PANEL TYPE	2ND PANEL TYPE	PANEL GLAZING	FRAME TYPE	FRAME GLAZING	HDW GROUP	FIRE LABEL (MIN)	GASKET	ELECTRICAL	S LABEL	COMMENTS
	MAINTENANCE BUILDING 3002	*2-1	3'-0"	6'-8"	HM-GH		NONE	HMM-1	NONE	HW 2.1B		Y	Y		VERIFY DIMENSION AND DETAILS ON SITE. CARD READER
	MAINTENANCE BUILDING 3002	*2-2	3'-0"	6'-8"	HM-GH		NONE	HMM-1	NONE	HW 2.1B		Y	Y		VERIFY DIMENSION AND DETAILS ON SITE. CARD READER
	VEHICLE STORAGE BUILDING 3003	*3-1	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 2.1B		Y	Y		VERIFY DIMENSION AND DETAILS ON SITE. CARD READER
HALLWAY	FOREMANS OFFICE	2	3'-0"	7'-0"	HM-F		NONE	HMM-1	NONE	HW 11					
HALLWAY	WOMEN'S LOCKERS	3	3'-0"	7'-0"	HM-F		NONE	HMM-1	NONE	HW 15.1					
HALLWAY	HALLWAY	4	3'-0"	7'-0"	HM-GH		MG-1	HMS-1	NONE	HW 11					
	EYEWASH/ BOOT WASH	7A	3'-0"	7'-0"	HM-GH		IG-1	HMM-1	NONE	HW 2.1A		Y	Y		CARD READER
HALLWAY	EYEWASH/ BOOT WASH	7B	3'-0"	7'-0"	HM-GH		MG-1	HMS-1	NONE	HW 11.1		Y			
HALLWAY	MEN'S LOCKERS	8	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 15.2					
	GARAGE	9	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 2.1A		Y	Y		CARD READER
	BAY 1	10	3'-0"	7'-0"	HM-F		NONE	HMM-1	NONE	HW 2.1A		Y	Y		CARD READER
	FLAMMABLE STORAGE	13	3'-0"	7'-0"	HM-F		NONE	HMM-1	NONE	HW 2.1A		Y	Y		CARD READER
	FLAMMABLE STORAGE	13-L	1'-4"	1'-4"											OPENING FOR LOUVER THROUGH EXIST WALL FOR EXHAUST. COORDINATE WITH STRUCT AND MECH
BREAKROOM/ LOUNGE	HALLWAY	14	3'-4"	7'-2"						HW 0					FINISHED WALL OPENING
	MEN'S TOILET	16	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 15.2					
GARAGE	MECHANICS OFFICE	17A	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 19					
HALLWAY	MECHANICS OFFICE	17B	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 11					
HALLWAY	DATA/ SECURITY	18	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 4	45MIN	Y	Y	Y	CARD READER
HALLWAY	HAC	19	3'-0"	7'-0"	HM-F		NONE	HMS-1	NONE	HW 7					
	MECH ATTIC	ATTIC-L	1'-4"	1'-4"											LOUVER FOR AHU. COORDINATE WITH STRUCT AND MECH
		HATCH	3'-1"	1'-2"											37"L X 30"W ATTIC ACCESS HATCH FOR AHU MAINT
	MECH ATTIC	VENT1	3'-4"	4'-0"											GABLE VENT/ LOUVER DEMOUNTABLE FOR EQUIPMENT DELIVERY
	OPEN OFFICE	WDW1	3'-4"	4'-10"											REUSE FROM EXISTING NORTH ELEVATION. VERIFY DIMENSION AND DETAILS ON SITE.
	FOREMANS OFFICE	WDW2A	3'-4"	4'-10"											REUSE FROM EXISTING SOUTH ELEVATION. VERIFY DIMENSION AND DETAILS ON SITE.
	FOREMANS OFFICE	WDW2B	3'-4"	4'-10"											REUSE FROM EXISTING SOUTH ELEVATION. VERIFY DIMENSION AND DETAILS ON SITE.
	BREAKROOM/ LOUNGE	WDW3	4'-0"	6'-0"	NO PANEL		NONE	FIBER-SH-4060	IG-1						
	BREAKROOM/ LOUNGE	WDW4	4'-0"	6'-0"	NO PANEL		NONE	FIBER-SH-4060	IG-1						
	BREAKROOM/ LOUNGE	WDW5	4'-0"	6'-0"	NO PANEL		NONE	FIBER-SH-4060	IG-1						
	BREAKROOM/ LOUNGE	WDW6	4'-0"	6'-0"	NO PANEL		NONE	FIBER-SH-4060	IG-1						
	MECHANICS OFFICE	WDW7	4'-0"	6'-0"	NO PANEL		NONE	FIBER-SH-4060	IG-1						
	MECHANICS OFFICE	WDW8	4'-0"	6'-0"	NO PANEL		NONE	FIBER-SH-4060	IG-1						



2 TYPICAL PARTITION CONTROL JOINT FRAMING AT DOORS



3 HM FRAME PROFILES
3" = 1'-0"

DOOR PANEL NAMING

NOTE: ACTUAL PANELS MAY VARY FROM DESCRIPTIONS BELOW. REFER TO PANEL TYPE ELEVATIONS

HM-GF

PANEL PREFIXES

AL- ALUMINUM
CG- COILING GRILLE
CS- COILING SLATS
HM- HOLLOW METAL
OS- OVERHEAD SECTIONAL
RD3- REVOLVING DOOR 3 PANEL
RD4- REVOLVING DOOR 4 PANEL
VL- VERTICAL LIFT
WD- WOOD

PANEL SUFFIXES

AG ALL GLASS
BF BIFOLD
BFGB BIFOLD GLASS
D DUTCH
DG DUTCH GLASS
DSD DUTCH W/SHELF
F FLUSH
G2 GLASS 2 LIGHT
G3 GLASS 3 LIGHT
GF GLASS FULL
GH GLASS HALF
LF LOUVER FULL
LGH LOUVER GLASS HALF
LH LOUVER HALF
LNV LOUVER NARROW VISION
NV NARROW VISION
NV2 NARROW VISION 2 LIGHT
NV3 NARROW VISION 3 LIGHT
NVC NARROW VISION CENTERED
RP2 RAISED PANEL 2 PANEL
RP4 RAISED PANEL 4 PANEL
RP6 RAISED PANEL 6 PANEL
RP8 RAISED PANEL 8 PANEL
V VISION
W WINDOWS (1 ROW)
WT WINDOWS THROUGHOUT

DOOR FRAME NAMING

NOTE: ACTUAL FRAMES MAY VARY FROM DESCRIPTIONS BELOW. REFER TO FRAME TYPE ELEVATIONS

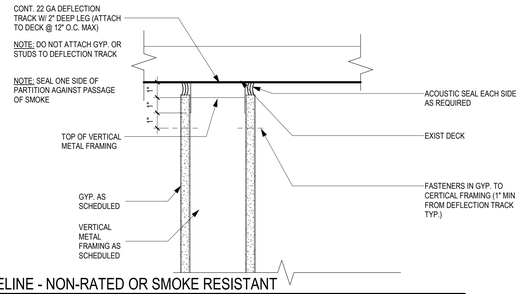
HMS-2

FRAME PREFIXES

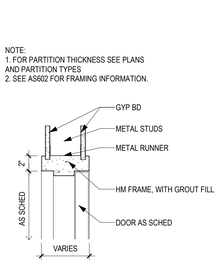
AL- ALUMINUM
AL-BL- ALUMINUM BORROWED LIGHT
AL-SL- ALUMINUM SLIDING
ALR- ALUMINUM REVOLVING
CW## CURTAINWALL
HMM- HOLLOW METAL MASONRY
HMM-BL- HMM BORROWED LIGHT
HMM-DE- HMM DOUBLE EGRESS
HMS- HOLLOW METAL STUD
HMS-BL- HMS BORROWED LIGHT
HMS-DE- HMS DOUBLE EGRESS
OC- OVERHEAD COILING
OS- OVERHEAD SECTIONAL
VL- VERTICAL LIFT
WD- WOOD
WD-BL- WOOD BORROWED LIGHT
WDP- WOOD POCKET

FRAME SUFFIXES

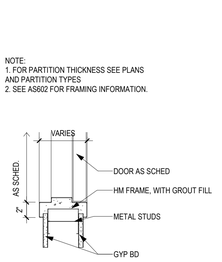
0 FRAMED-CASED OPENING
1 DOOR ONLY
2 SIDELIGHT(S) 1 SIDE
3 SIDELIGHT(S) 1 SIDE W/HORIZONTAL
4 SIDELIGHT(S) BOTH SIDES
5 SIDELIGHT(S) BOTH SIDES W/HORIZONTAL
6 DOOR W/TRANSOM
7 DOOR W/TRANSOM W/SIDELIGHT(S) 1 SIDE
8 TRANSOM W/SIDELIGHT(S) 1 SIDE W/HORIZONTAL
9 TRANSOM W/SIDELIGHT(S) BOTH SIDES
10 TRANSOM W/SIDELIGHT(S) BOTH SIDES W/HORIZONTAL
11 FULL WIDTH TRANSOM W/SIDELIGHT(S) 1 SIDE
1X1 1 LIGHT WIDE AND 1 LIGHT HIGH
2X2 2 LIGHTS WIDE AND 2 LIGHTS HIGH
3X3 3 LIGHTS WIDE AND 3 LIGHTS HIGH
(NOTE: OTHER COMBINATIONS POSSIBLE)
OX FIXED PANEL, ACTIVE PANEL
OXO FIXED PANEL, ACTIVE PANEL, FIXED PANEL
OXX FIXED, ACTIVE, ACTIVE
OXXO FIXED, ACTIVE, ACTIVE, FIXED
OXXXXO FIXED, ACTIVE, ACTIVE, ACTIVE, ACTIVE, FIXED



4 GUIDELINE - NON-RATED OR SMOKE RESISTANT
3" = 1'-0"



5 HM DOOR FRAME IN METAL STUD PARTITION - HEAD
1 1/2" = 1'-0"



6 HM DOOR FRAME IN METAL STUD PARTITION - JAMB
1 1/2" = 1'-0"

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
PARTITION TYPES AND OPENING SCHEDULE AND DETAILS

Phase
BID DOCUMENTS SUBMITTAL

Approved:

Project Title
BLACK HILLS NATIONAL CEMETERY
RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location
STURGIS, SOUTH DAKOTA

Issue Date	Checked	Drawn
10-31-22	LA	EM

Project Number 884-CM-3015
Building Number 3001
Drawing Number AE601-3001
48 OF 84

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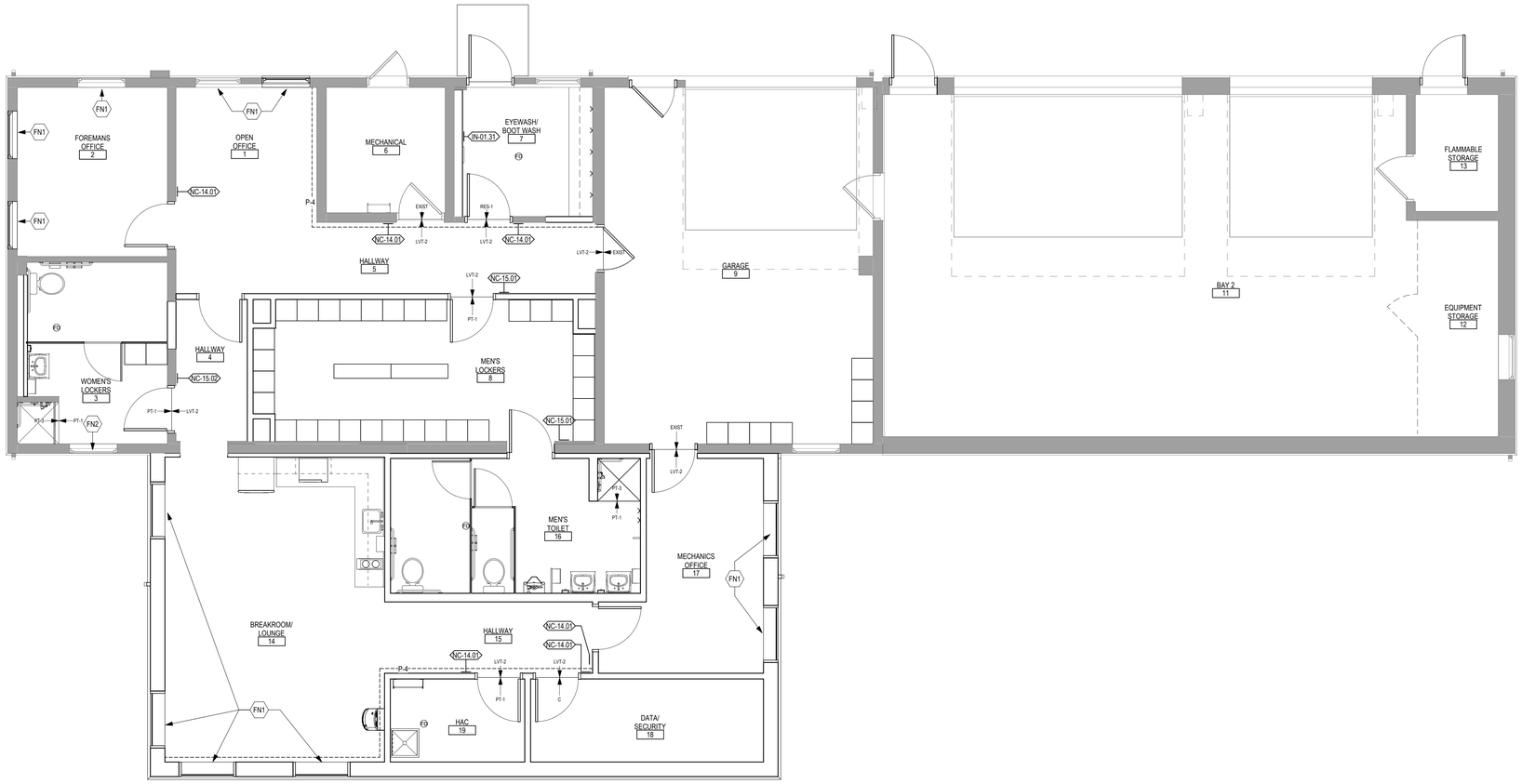

1 FIRST LEVEL FINISH PLAN - MAINTENANCE 3001

1/4" = 1'-0"

PLAN NORTH / TRUE NORTH

0 2' 4' 8'

FINISH PLAN GENERAL NOTES

1. REFER TO PROJECT MANUAL SPECIFICATION SECTION 09 06 00 'SCHEDULE FOR FINISHES" FOR SPECIFIC PRODUCT SELECTION BASIS OF DESIGN AND OTHER REQUIREMENTS
2. FIELD FINISH VENTS, GRILLES, ACCESS PANELS, PLUG STRIP, BASEBOARD RADIATION ENCLOSURES, ELECTRICAL PANEL BOARDS (IN FINISHED SPACES) TO MATCH SURFACE ON WHICH THEY OCCUR UNLESS OTHERWISE INDICATED. EXCEPTION: ITEMS WITH FACTORY WHITE FINISH, OCCURRING ON WHITE ACT OR WHITE GYPSUM BOARD CEILING SHALL NOT BE PAINTED. STAINLESS STEEL ITEMS SHALL NOT BE PAINTED
3. FIELD VERIFY ALL NEW CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION
4. LOCATE CHANGES IN FLOOR FINISH MATERIAL UNDER CENTERLINE OF CLOSED DOOR UNLESS OTHERWISE INDICATED
5. PROVIDE CLEAR SILICONE SEALANT AT PERIMETER OF PLUMBING FLOOR DRAINS, CLEAN OUTS, ETC IN RESILIENT AND CERAMIC TILE FLOORS
6. PROVIDE SEALANT TO HORIZONTAL AND VERTICAL INTERIOR CERAMIC TILE CORNERS, COLOR TO MATCH GROUT COLOR
7. PROVIDE SEALANT AT JOINT BETWEEN COUNTER TOP, BACK OR SIDE SPLASH AND WALLS
8. PROVIDE CLEAR SILICONE SEALANT AT THE BASE OF DOOR FRAME TO RESILIENT AND CT FLOORING, TYP. SEE PLANS AND ROOM FINISH SCHEDULE FOR FLOOR FINISH LOCATIONS
9. HOLLOW METAL DOORS AND FRAMES TO BE PAINTED ___, UNLESS NOTED OTHERWISE IN THE OPENING SCHEDULE
10. WOOD: PRE-FINISHED TO MATCH BUILDING STANDARD, REFER TO SPECIFICATION
11. CEILING HEIGHTS AND MATERIALS/FINISHES CALLED OUT IN ROOM FINISH SCHEDULE ARE FOR ENTIRE CEILING OR MAJORITY OF THAT ROOM, UNLESS OTHERWISE INDICATED. SEE REFLECTED CEILING PLAN FOR CHANGES IN CEILING MATERIAL AND CEILING HEIGHT. PAINT ALL SURFACES OF SOFFIT SAME COLOR AS INDICATED
12. COLOR SELECTIONS ARE BASED ON USE OF PRODUCTS INDICATED IN THE PROJECT MANUAL SPECIFICATION. IF MANUFACTURERS OTHER THAN THOSE INDICATED ARE USED, ARCHITECT MAY REVISE COLOR SELECTIONS OF OTHER FINISHES TO ENSURE PROPER COORDINATION
13. PAINT ALL FIRE EXTINGUISHER CABINETS TO MATCH COLOR OF THE ADJACENT WALLS
14. CEILING HEIGHTS ARE MEASURED FROM FINISH FLOOR
15. FOR FLOOR FINISH MATERIALS AND PATTERN, SEE FINISH PLAN
16. SEE INTERIOR ELEVATIONS FOR MORE FINISH INFO

ROOM FINISH LEGEND & ABBREVIATIONS

	ACCENT PAINT	AF10	KEYNOTE
CPT — VCT	FLOORING CHANGE		MATERIAL INSTALL DIRECTION
NC-14.01	SIGN TAG		

ACT	ACOUSTICAL CEILING (TILE)
C	CONCRETE SEALER
GWB (SC)	GYPSUM WALLBACK SYSTEMS (SPECIAL COATING)
LVT	LUXURY VINYL TILE
P	PAINT
PT	PORCELAIN TILE (FLOOR AND BASE)
RB	RESILIENT BASE
RES	RESINOUS EPOXY FLOORING
RES-W	RESINOUS/EPOXY WALL/CEILING
RF	RUBBER FLOORING
S	SOLID SURFACE
SC	SPECIAL COATING
SP	SPECIAL FACED
WS	WINDOW SHADES
WSF	WELDED SEAM SHEET FLOORING (HEAT WELDED WITH ROD)

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

FINISH PLAN KEYED NOTES

FN1 INSTALL VERTICAL BLINDS

FN2 FROSTED GLASS WINDOW, TO REMAIN

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

Revisions:	Date:

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FIRST LEVEL FINISH PLAN

Approved:

Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10-31-22 | **Checked:** MRP | **Drawn:** CZ

Project Number: 884-CM-3015

Building Number: 3001

Drawing Number: AF101-3001

49 OF 84

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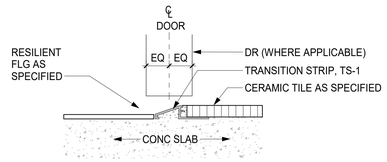
MATERIAL SCHEDULE

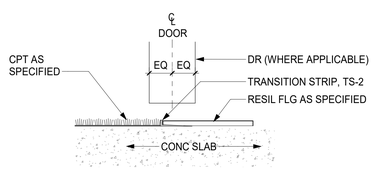
SPEC...	CODE	MATERIAL	MANUFACTURER	STYLE	COLOR	SIZE	REMARKS
09 30 00							
	TS-1	METAL TRANSITION STRIP	SCHLUTER SYSTEMS	RENO-U	SATIN NICKEL ANODIZED	TBD BY INSTALLER	
	TS-2	METAL TRANSITION STRIP	POWERHOLD	NO LIP RAMP	EA ALUMINUM	TBD BY INSTALLER	
	TS-3	METAL TRANSITION STRIP	POWERHOLD	LVT BEVEL CAP	EA ALUMINUM	TBD BY INSTALLER	
	TS-4	METAL TRANSITION STRIP	ANY	TERRAZO TYPE DIVIDER STRIP	MILL FINISH	TBD BY INSTALLER	
	TR-1	METAL TRANSITION STRIP	SCHLUTER SYSTEMS	QUADEC	SATIN NICKEL ANODIZED	TBD BY INSTALLER	INSTALL ABOVE COVE BASE
09 30 13							
	PT-1	PORCELAIN CERAMIC TILE	CROSSVILLE	PORTUGAL	MADIERA RESERVE PTG06.11224UPS	12" X 24"	GROUT: BOSTIK DELOREAN GRAY H160
	PT-2	PORCELAIN CERAMIC TILE	CROSSVILLE	JAVA JOINT	TWO SUGARS JAV01.11224UPS	12" X 24"	GROUT: BOSTIK WHITE H152
	PT-3	PORCELAIN CERAMIC TILE	CROSSVILLE	PORTUGAL	MADIERA RESERVE MOSAIC PTG06.10202UMOS	2" X 2"	GROUT: BOSTIK DELOREAN GRAY H160
09 65 13							
	RB-1	RESILIENT BASE	TARKETT	JOHNSONITE TRADITIONAL WALL BASE	32 PEBBLE	4"	RUBBER
	RB-2	RESILIENT BASE	TARKETT	JOHNSONITE TRADITIONAL WALL BASE	TB1 PEPPERCORN	4"	RUBBER
09 65 19							
	LVT-1	LUXURY VINYL TILE	MANNINGTON COMMERCIAL	ACTIVE LINES - CRISSCROSS	FLASH ALC101	18" X 18"	
	LVT-2	LUXURY VINYL TILE	TARKETT	CONTOUR PCCD C-STAMPED	0925 ODYSSEY	18" X 18"	
09 67 23							
	RES-1	RESINOUS FLOORING	SHERWIN WILLIAMS	RESUFLOR DECO QUARTZ BC23	FOGGY MORNING		
09 68 00							
	CPT-1	MODULAR CARPET TILE	MANNINGTON COMMERCIAL	ARROYO	MESA 84167	12" X 48"	INSTALLATION: 3-STEP VERTICAL ASHLAR
09 91 00							
	P-1	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	SW 6070 HERON PLUME		
	P-2	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	SW 7558 MEDICI IVORY		
	P-3	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	MATCH BENJAMIN MOORE - 2108-50 SILVER FOX		
	P-4	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - EG SHEL	SW 6257 GIBRALTAR		
	P-5	PAINT	SHERWIN WILLIAMS	PROMAR 200 LOW VOC - FLAT	SW 7007 CEILING BRIGHT WHITE		
	P-6	PAINT	SHERWIN WILLIAMS	PROMAR 200 ALKYD - SEMI GLOSS	MATCH BENJAMIN MOORE - 2108-50 SILVER FOX		HOLLOW METAL DOORS AND FRAMES
	C	CONCRETE SEALER	ARDEX	HIGH PERFORMANCE, WATERBOURNE ACRYLIC CONCRETE SEALER	CLEAR		
	STN-1	WOOD STAIN	SHERWIN WILLIAMS	WOOD CLASSICS INTERIOR OIL STAIN	SW 3133-B RUSTIC GRAY		
	STN-2	WOOD STAIN	SHERWIN WILLIAMS	WOOD CLASSICS INTERIOR OIL STAIN	MATCH INTERIOR WOOD DOORS AT ADMIN BLDG		
10 21 13							
		TOILET PARTITION	SCRANTON	HINY HIDERS PARTITIONS	SHALE		
10 51 13							
		METAL LOCKER	LYON	SINGLE TIER STANDARD METAL LOCKER	6Y BRILLIANT BLUE		
12 24 00	WS	WINDOW SHADES	HUNTER DOUGLAS...	FR ALUMINUM HORIZONTAL BLINDS - MODEL CD80	001 GLACIER WHITE		
12 32 00							
	PLAM-1	PLASTIC LAMINATE	LAMINART	ISLAND BIRCH	3076		VELLUM FINISH
12 36 00							
	S-1	SOLID SURFACE	DUPONT	CORIAN	CARRARA LINO		MATTE FINISH
	PLAM-2	PLASTIC LAMINATE	WILSONART	MAGNOLIA	5012K-19		19 LENO WEAVE FINISH

ROOM FINISH SCHEDULE - MAINTENANCE 3001

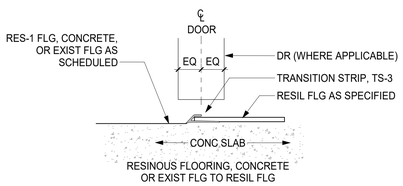
NO.	NAME	FLOOR FINISH	BASE FINISH	WALL FINISH				CEILING FINISH	REMARKS
				NORTH	EAST	SOUTH	WEST		
1	OPEN OFFICE	LVT-2	RB-1	P-3	P-3	P-3	P-3	GWB (P-5)	
2	FOREMANS OFFICE	LVT-2	RB-1	P-3	P-3	P-3	P-3	GWB (P-5)	
3	WOMEN'S LOCKERS	PT-1	PT-1	P-1/PT-2	P-1/PT-2	P-1/PT-2	P-1/PT-2	GWB (P-5)	
4	HALLWAY	LVT-2	RB-1	P-1	P-1	P-1	P-1	GWB (P-5)	
5	HALLWAY	LVT-2	RB-1	P-1	P-1	P-1	P-1	GWB (P-5)	
6	MECHANICAL	EXIST	RB-1	P-1	P-1	P-1	P-1	GWB (P-5)	
7	EYEWASH/ BOOT WASH	RES-1	RES-1	P-1	P-1	P-1	P-1	GWB (P-5)	
8	MEN'S LOCKERS	PT-1	PT-1	P-1	P-1	P-1	P-1	GWB (P-5)	
14	BREAKROOM/ LOUNGE	LVT-2	RB-1	P-1	P-1/P-4	P-4	P-1	GWB (P-5)	SEE FINISH PLAN FOR ADDITIONAL INFORMATION
15	HALLWAY	LVT-2	RB-1	P-2	P-2	P-2	P-2	GWB (P-5)	
16	MEN'S TOILET	PT-1	PT-1	P-1/PT-2	P-1/PT-2	P-1/PT-2	P-1/PT-2	GWB (P-5)	
17	MECHANICS OFFICE	LVT-2	RB-1	P-3	P-3	P-3	P-3	GWB (P-5)	
18	DATA/ SECURITY	C	RB-1	P-1	P-1	P-1	P-1	GWB (P-5)	
19	HAC	PT-1	RB-1	P-1	P-1	P-1	P-1	GWB (P-5)	



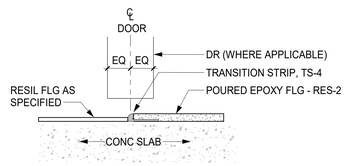
TS-1 - LVT TO CT



CPT TO RESIL FLG

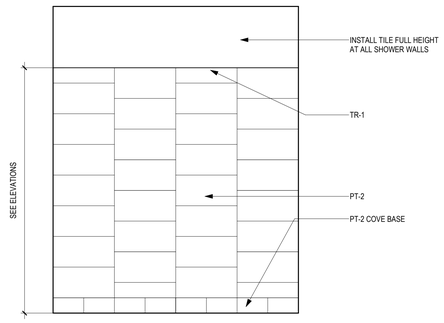


RESINOUS FLOORING, CONCRETE OR EXIST FLG TO RESIL FLG



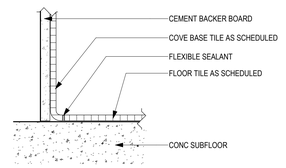
1 FLOORING TRANSITION STRIPS1

6" = 1'-0"



2 TILE PATTERN - TYP

1/2" = 1'-0"



3 COVE BASE DETAIL

3" = 1'-0"

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DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
MATERIAL AND ROOM FINISH SCHEDULE

Approved:

Phase
BID DOCUMENTS SUBMITTAL

Project Title
BLACK HILLS NATIONAL CEMETERY
RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location
STURGIS, SOUTH DAKOTA

Issue Date
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CZ

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AF600-3001
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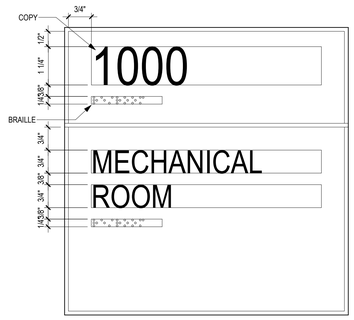
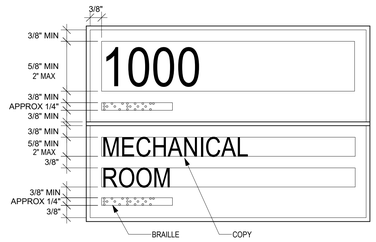
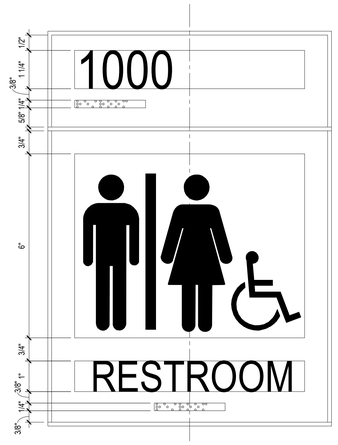


1 NC-14.01 PRIMARY ROOM ID
6" = 1'-0"

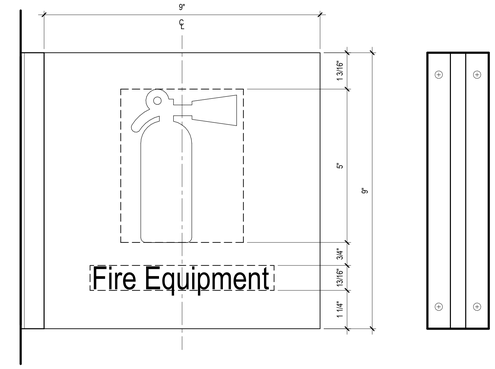


ROOM IDENTIFICATION - ADA/ABA STANDARD

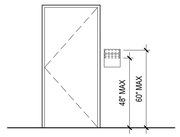
2 SIGNAGE ADA STANDARDS
6" = 1'-0"



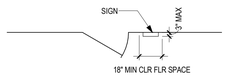
3 NC-15.03 RESTROOM ID
6" = 1'-0"



4 IN-01.31 FIRE EQUIPMENT
6" = 1'-0"



5 SIGN WALL ELEVATION
1/4" = 1'-0"



6 SIGNAGE - PLAN VIEW
1/4" = 1'-0"

SIGNAGE GENERAL NOTES

1. ALL SIGNAGE IDENTIFYING PERMANENT ROOMS SHALL COMPLY WITH 2010 STANDARD FOR ACCESSIBLE DESIGN.
2. ALL PERMANENT ROOM SIGNAGE TO HAVE TOP SECTION RAISED TEXT AND LOWER SECTION BRAILLE. BRAILLE TO BE GRADE 2.
3. ALL SIGNS TO BE MOUNTED ON LATCH SIDE OF DOOR UNLESS NOTED OTHERWISE. IF NO SPACE EXISTS ON LATCH SIDE MOUNT SIGN TO THE NEAREST ADJACENT WALL. SIGNS MUST BE 2" FROM DOOR JAMB WITH 18" CLEAR FLOOR SPACE FROM CENTER OF SIGN.
4. ALL SIGN TEXT AND NUMBERING SUBJECT TO FINAL APPROVAL BY OWNER.
5. ALL SIGNS MOUNTED TO GLASS TO HAVE GLASS BACKER.
6. SIGNS TO BE MOUNTED ACCORDING TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND MATERIALS.
7. SIGN DETAILS ARE FOR REFERENCE ONLY. ACTUAL DESIGN TO BE PROVIDED BY THE VENDOR, FOLLOWING FACILITY STANDARD, AND SUBJECT TO OWNER APPROVAL.

SIGN MESSAGE SCHEDULE

LOCATION	SIGN MESSAGE	SIGN TYPE	COUNT	REMARKS
2	FOREMAN'S OFFICE	NC-14.01	1	
3	WOMEN'S LOCKERS	NC-15.02	1	
6	MECHANICAL	NC-14.01	1	
7	BOOTWASH	NC-14.01	1	
7	FIRE EQUIPMENT	IN-01.31	1	
8	MEN'S LOCKERS	NC-15.01	1	
16	MEN'S TOILET	NC-15.01	1	
17	MECHANICS OFFICE	NC-14.01	1	
18	DATA/SECURITY	NC-14.01	1	
19	HAC	NC-14.01	1	

Revisions:	Date:

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STAMP

REGISTERED PROFESSIONAL ENGINEER — THOMAS A. OLESAK — SOUTH DAKOTA
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
WAYFINDING MESSAGE SCHEDULES & SIGNAGE DETAILS

Phase
BID DOCUMENTS SUBMITTAL

Approved:

Project Title
BLACK HILLS NATIONAL CEMETERY
RENOVATE AND EXPAND
ADMINISTRATION AND
MAINTENANCE BUILDINGS

Location
STURGIS, SOUTH DAKOTA

Issue Date 10-31-22
Checked MRP
Drawn CZ

Project Number 884-CM-3015
Building Number 3001
Drawing Number AW601-3001
51 OF 84

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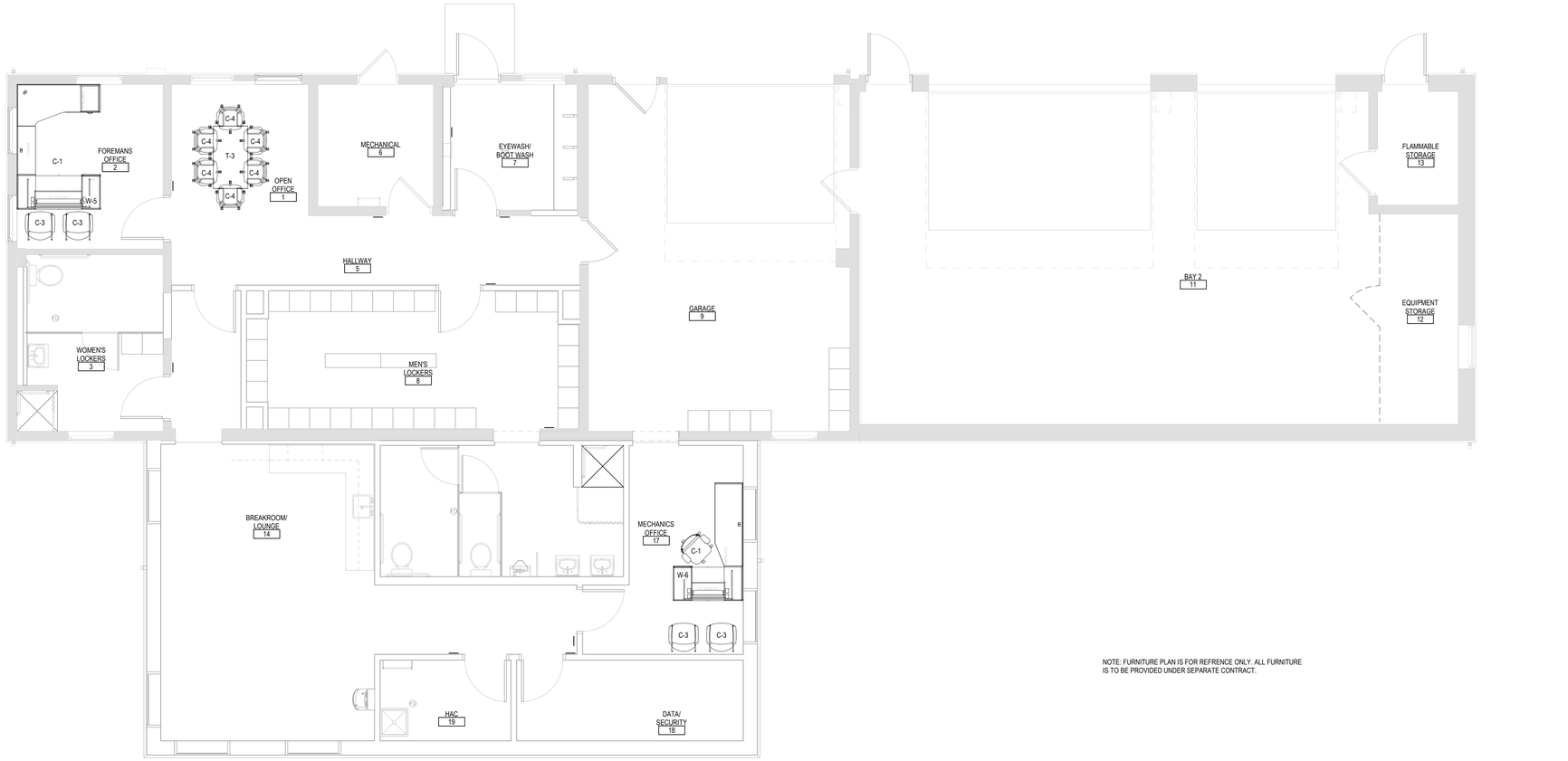

NOTE: FURNITURE PLAN IS FOR REFRENCE ONLY. ALL FURNITURE IS TO BE PROVIDED UNDER SEPARATE CONTRACT.

1 FIRST LEVEL FURNITURE PLAN - MAINTENANCE 3001
1/4" = 1'-0"

PLAN NORTH TRUE NORTH

0 2" 4" 8"

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Revisions:	Date:

CONSULTANT

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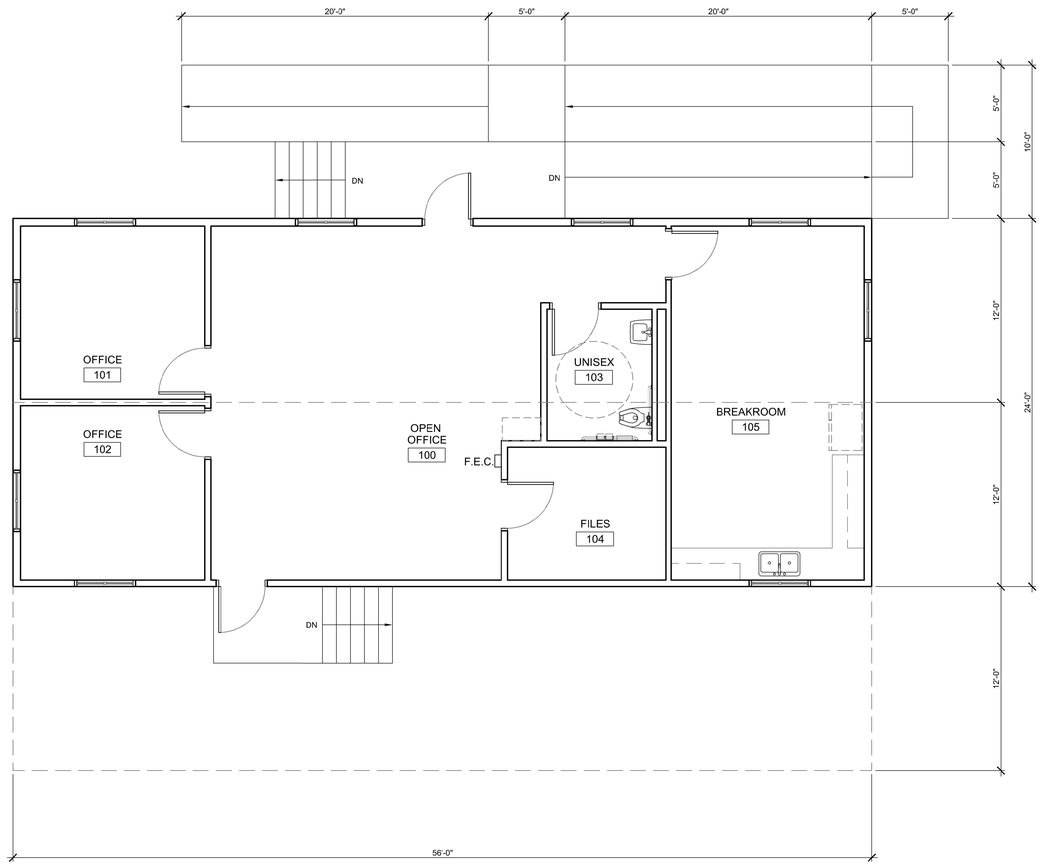
DATE: 10/31/2022
License # 9335

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	FIRST LEVEL FURNITURE PLAN
Phase	BID DOCUMENTS SUBMITTAL
Approved:	
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10-31-22
Checked	MRP
Drawn	CZ
Project Number	884-CM-3015
Building Number	3001
Drawing Number	IF110-3001
	52 OF 84

VA FORM 08 - 6231



1 ADMINISTRATION TEMPORARY TRAILER - FLOOR PLAN

SCALE: 1/4" = 1' 0"

N

0 2' 4' 8'

GENERAL NOTES

1. THIS TEMPORARY FACILITY IS DESIGNED FOR USE BY EMPLOYEES AND IS INTENDED FOR USE BY OR SERVICE TO THE PUBLIC. THE PRIMARY ENTRANCE AND REQUIRED EXITS MUST BE ACCESSIBLE. ALL FACILITY ELEMENTS INCLUDING FIXTURES, CONTROLS, AND ACCESSORIES, SHALL BE ACCESSIBLE IN ACCORDANCE WITH REFERENCED ACCESSIBILITY STANDARDS.
2. ALL EXTERIOR DOORS TO BE INSULATED 20 GA. HOLLOW METAL DOORS WITH 2'-0" X 2'-0" SAFETY LAMINATE INSULATING GLASS WITH GLASS BOTTOM AT 43" AFF. ALL EXTERIOR FRAMES TO BE 18 GA. THERMALLY BROKEN HOLLOW METAL. ALL DOORS SHALL BE 3'-0" X 7'X 0" WITH ACCESSIBLE HARDWARE INCLUDING LEVER HANDLES. ALL INTERIOR DOORS TO BE PAINTED SOLID CORE WOOD WITH WOOD FRAMES.
3. REQUIRED ACCESSIBLE TOILET SIGNAGE SHALL BE PROVIDED AND SITE INSTALLED BY CONTRACTOR PRIOR TO OCCUPATION. PORTABLE FIRE EXTINGUISHER SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PRIOR TO OCCUPATION WHERE INDICATED ON DRAWINGS.
4. ALL CONSTRUCTION, MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CURRENT BUILDING CODES AND LAWS. ALL PARTIES EMPLOYED BY THE MANUFACTURER RESPONSIBLE FOR DESIGN WORK SHALL BE QUALIFIED AND LICENSED AS REQUIRED BY THE JURISDICTION HAVING AUTHORITY OR SHALL RETAIN QUALIFIED AND LICENSED ENTITIES TO PERFORM SUCH WORK.
5. THE FLOOR PLAN INCLUDES DESIGN INFORMATION FOR THE FACTORY BUILT PORTION OF THE MODULAR TRAILER STRUCTURE AND PORTIONS OF THE SITE BUILT CONSTRUCTION INCLUDING RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING BY THE CONTRACTOR.
6. PROVIDE STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES.
7. ANY AIR GAPS BETWEEN MODULES AT FLOOR AND CEILING LINES AND ANY OTHER PENETRATIONS THROUGH THE BUILDING ENVELOPE SHALL BE GASKETED, WEATHER-STRIPPED, WRAPPED OR OTHERWISE SEALED WITH APPROPRIATE SEALANT TO LIMIT UNCONTROLLED AIR MOVEMENT
8. TRANSPORTATION, ERECTION AND REMOVAL OF THIS MODULAR TRAILER STRUCTURES IS INCLUDED IN THE CONTRACT, AS WELL AS USE CHARGES FOR THE TEMPORARY FACILITIES. ANY TRANSPORTATION AND/OR LIFTING AND PLACING REQUIREMENTS MUST BE EVALUATED BY TRANSPORTATION AND ERECTION DESIGNER FOR SUITABILITY. TRANSPORTATION OF THE MODULAR TRAILERS TO AND FROM SITE, INCLUDING ACCEPTABLE CAMPUS ROUTES, SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL CEMETERY @ FT. SAM HOUSTON.
9. RODENT PROOFING IN ACCORDANCE WITH IBC APPENDIX F SHALL BE INSTALLED. RODENT PROOFING WILL BE PROVIDED BY THE CONTRACTOR, SITE INSTALLED AND SUBJECT TO THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION (AHJ).
10. CONTRACTOR TO REMOVE FURNITURE FROM EXISTING ADMINISTRATION BUILDING AND RE-INSTALL IN TEMPORARY FACILITY PER GUIDANCE BY OWNER.
11. FOR ADDITIONAL INFORMATION SEE SPECIFICATIONS SECTION 01 00 10 TEMPORARY FACILITIES.

FINISH NOTES

1. OFFICE AND CONFERENCE ROOM FLOOR COVERINGS TO BE CARPET. ALL OTHER SPACES TO HAVE COMMERCIAL GRADE FLOOR TILE. BASE MATERIAL TO BE 4" CONTINUOUS VINYL COVE.
2. TOILET ROOMS WALLS WILL BE WHITE FIBERGLASS REINFORCED PANELS INSTALLED OVER ½" WATER RESISTANT GYPSUM BOARD. ALL OTHER WALLS TO BE VINYL COVERED ½" GYPSUM BOARD WITH WRAPPED BATTENS.
3. CEILING TO BE STANDARD 2 X 4 T-GRID AT 8'-0" AFF INSTALLED AT THE FACTORY. ACT TO BE ACT-1.
4. WOOD DOORS AND FRAMES SHALL BE PAINTED.

Revisions:	Date:

CONSULTANTS

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Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title: ADMINISTRATION TEMPORARY TRAILER
Approved: Project Director
Phase: BID DOCUMENTS SUBMITTAL
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10-31-22
Checked: LA
Drawn: PC
Project Number: 884-CM-3015
Building Number: TT01
Drawing Number: ATT.01
53 OF 84

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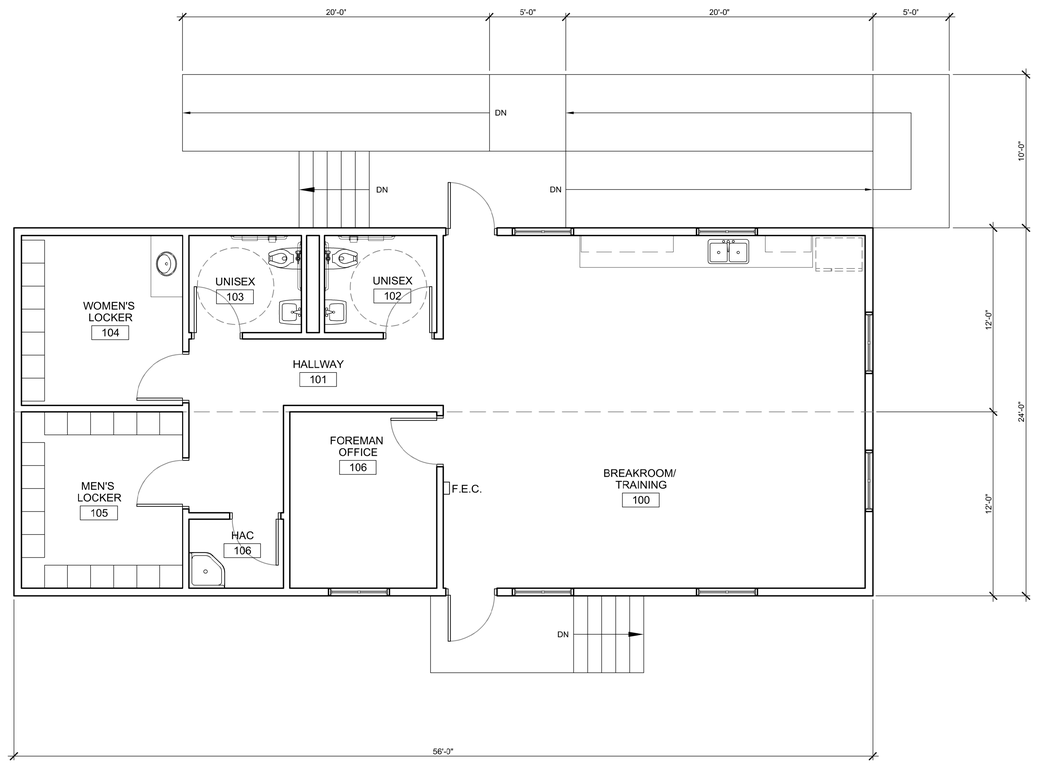

1 MAINTENANCE TEMPORARY TRAILER - FLOOR PLAN

SCALE: 1/4" = 1' 0"

N

0 2' 4' 8'

GENERAL NOTES

1. THIS TEMPORARY FACILITY IS DESIGNED FOR USE BY EMPLOYEES AND IS NOT INTENDED FOR USE BY OR SERVICE TO THE PUBLIC. THE PRIMARY ENTRANCE AND REQUIRED EXITS MUST BE ACCESSIBLE. ALL FACILITY ELEMENTS INCLUDING FIXTURES, CONTROLS, AND ACCESSORIES, SHALL BE ACCESSIBLE IN ACCORDANCE WITH REFERENCED ACCESSIBILITY STANDARDS.
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   ALL INTERIOR DOORS TO BE PAINTED SOLID CORE WOOD WITH WOOD FRAMES.
3. REQUIRED ACCESSIBLE TOILET SIGNAGE SHALL BE PROVIDED AND SITE INSTALLED BY CONTRACTOR PRIOR TO OCCUPATION. PORTABLE FIRE EXTINGUISHER SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PRIOR TO OCCUPATION WHERE INDICATED ON DRAWINGS.
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5. THE FLOOR PLAN INCLUDES DESIGN INFORMATION FOR THE FACTORY BUILT PORTION OF THE MODULAR TRAILER STRUCTURE AND PORTIONS OF THE SITE BUILT CONSTRUCTION INCLUDING RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING BY THE CONTRACTOR.
6. PROVIDE STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES.
7. ANY AIR GAPS BETWEEN MODULES AT FLOOR AND CEILING LINES AND ANY OTHER PENETRATIONS THROUGH THE BUILDING ENVELOPE SHALL BE GASKETED, WEATHER-STRIPPED, WRAPPED OR OTHERWISE SEALED WITH APPROPRIATE SEALANT TO LIMIT UNCONTROLLED AIR MOVEMENT
8. TRANSPORTATION, ERECTION AND REMOVAL OF THIS MODULAR TRAILER STRUCTURES IS INCLUDED IN THE CONTRACT, AS WELL AS USE CHARGES FOR THE TEMPORARY FACILITIES. ANY TRANSPORTATION AND/OR LIFTING AND PLACING REQUIREMENTS MUST BE EVALUATED BY TRANSPORTATION AND ERECTION DESIGNER FOR SUITABILITY. TRANSPORTATION OF THE MODULAR TRAILERS TO AND FROM SITE, INCLUDING ACCEPTABLE CAMPUS ROUTES, SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL CEMETERY @ FT. SAM HOUSTON.
9. RODENT PROOFING IN ACCORDANCE WITH IBC APPENDIX F SHALL BE INSTALLED. RODENT PROOFING WILL BE PROVIDED BY THE CONTRACTOR, SITE INSTALLED AND SUBJECT TO THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION (AHJ).
10. CONTRACTOR TO SALVAGE LOCKERS FROM EXISTING MAINTENANCE BUILDING LOCKEROOMS AND INSTALL IN TEMPORARY FACILITIES ON SITE. CONTRACTOR TO RELOCATE EXISTING FURNITURE FROM EXISTING MAINTENANCE BUILDING AND INSTALL IN TEMPORARY FACILITIES.
11. FOR ADDITIONAL INFORMATION SEE SPECIFICATIONS SECTION 01 00 10 TEMPORARY FACILITIES.

FINISH NOTES

1. OFFICE AND CONFERENCE ROOM FLOOR COVERINGS TO BE CARPET. ALL OTHER SPACES TO HAVE COMMERCIAL GRADE FLOOR TILE. BASE MATERIAL TO BE 4" CONTINUOUS VINYL COVE.
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Office of Design and Construction (TYP)

VA U.S. Department of Veterans Affairs

Drawing Title: MAINTENANCE TEMPORARY TRAILER
Approved: Project Director

Phase: BID DOCUMENTS SUBMITTAL

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10-31-22
Checked: LA
Drawn: PC

Project Number: 884-CM-3015
Building Number: TT02
Drawing Number: ATT.02
54 OF 84

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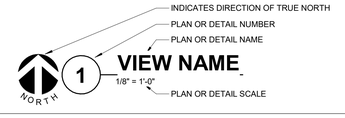
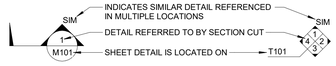
VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

BUILDING CODE:	IBC 2015 EDITION
FIRE CODE:	IFC 2015 EDITION
PLUMBING CODE:	IPC 2015 EDITION
MECHANICAL CODE:	IMC 2015 EDITION
ELECTRICAL CODE:	NFPA 70 (NEC) 20** EDITION
LIFE SAFETY CODE:	NFPA 101 20** EDITION
ENERGY CONSERVATION CODE:	IECC 2015
HEALTH DEPARTMENT CODE:	CURRENT EDITION
LOCAL BUILDING CODE:	CURRENT EDITION

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.C.	ASBESTOS ABATEMENT CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR
R.E.	RESIDENT ENGINEER

MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
	DIRECTION OF AIR FLOW
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
R	RISE IN DIRECTION OF AIR FLOW
D	DROP IN DIRECTION OF AIR FLOW
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
	4-WAY DIFFUSER WITH BLANKOFF IN ONE DIRECTION
SD-1 6/115	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
	OPPOSED BLADE DAMPER (REFER TO SCHEDULE)
	PARALLEL BLADE DAMPER (REFER TO SCHEDULE)
	DIFFERENTIAL PRESSURE SENSOR
H	HUMIDISTAT SENSOR
H	HUMIDISTAT / SENSOR
C	CARBON MONOXIDE SENSOR
C_2	CARBON DIOXIDE SENSOR
O	OCCUPANCY SENSOR
P	PRESSURE SENSOR/MONITOR
P	PRESSURE SENSOR (DUCT MOUNTED)
T	THERMOSTAT/SENSOR
T	TEMPERATURE SENSOR
XX-Y	AIRFLOW MEASUREMENT SYMBOL XX - AHU SYMBOL Y - SEQUENTIAL NUMBER

MECHANICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
C	COMMON
CO	CLEANOUT
CFSD	CONTROL/FIRE/SMOKE DAMPER
DPG (0-2")	DIFFERENTIAL PRESSURE GAUGE (RANGE)
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EXHAUST/RELIEF AIR
ECFSD	EXISTING CONTROL FIRE SMOKE DAMPER
EFD	EXISTING FIRE DAMPER
EFSD	EXISTING FIRE SMOKE DAMPER
EP	ELECTRICAL TO PNEUMATIC VALVE
ESD	EXISTING SMOKE DAMPER
FD	FIRE DAMPER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FSD	FIRE/SMOKE DAMPER
MA	MIXED AIR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PS	PRESSURE SWITCH
RA	RETURN AIR
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
TAB	TERMINAL AIR BOX
TD	TRANSFER DUCT
TYP	TYPICAL
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UON	UNLESS OTHERWISE NOTES

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. EACH CONTRACTOR SHALL CUT AND PATCH ROOFS, WALLS, AND FLOORS ASSOCIATED WITH THEIR WORK.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

TAB POST-CONSTRUCTION NOTES:

1. AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE, TESTING, ADJUSTING (TAB) AND BALANCING CONTRACTOR SHALL REBALANCE AIR-HANDLING UNITS AND EXHAUST FANS AS REQUIRED TO ACHIEVE THE NEW AIRFLOW VALUES SHOWN ON THE CONSTRUCTION DRAWINGS.
2. AREAS SERVED BY THIS EQUIPMENT WHICH WERE NOT RENOVATED SHALL BE RE-BALANCED TO THE AIRFLOW RATES MEASURED BEFORE THE RENOVATION OCCURRED (REFER TO THE FINAL PRE- DEMOLITION REPORT).
3. IF DUCT TRAVERSE LOCATION AS MARKED ON THE DRAWINGS IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR GRILLE READINGS AS REQUIRED TO DETERMINE THE FLOW RATE. IN THE EVENT TRAVERSES ARE TAKEN AT AN ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
4. A DUCT STATIC PRESSURE READING SHALL BE TAKEN AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND SHALL BE INCLUDED IN THE FINAL POST-CONSTRUCTION TAB REPORT.
5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT COPIES OF THE FINAL POST-CONSTRUCTION TAB REPORT AS REQUIRED BY SECTION 23 05 93.
6. THE FINAL POST CONSTRUCTION REPORT SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.

VENTILATION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO A TERMINAL AIR BOX (TAB) SHALL MATCH THE INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6FEET IN LENGTH, IN WHICH CASE THE BRANCH DUCT SHALL BE SIZED AT A PRESSURE DROP OF 0.07"W.C. PER 100' OF DUCTWORK.
2. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL MATCH THE INLET SIZE.
3. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
4. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
5. EXISTING AIR INLET AND OUTLET CFM SHOWN ON DRAWINGS ARE FROM EXISTING DRAWINGS, AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL USE PRE-BALANCE VALUES, AND NOT EXISTING CFM SHOWN ON DRAWINGS.
6. CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSURE CLASSES ARE CORRECT. DUCT IS THOROUGHLY CLEANED AND FREE OF DEFECTS, AND ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, AND DUCT WALL PENETRATIONS ARE SEALED AS SPECIFIED FOR NEW DUCTWORK.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. (PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC-SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING; DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

MECHANICAL DESIGN CONDITIONS:

DESIGN CONDITIONS: — **BASED ON WEATHER DATA FOR: STURGIS, SD**

SUMMER:	96.6°F DRY BULB, 66.1°F WET BULB
WINTER:	-8.4°F DRY BULB

TYPICAL ROOM SETPOINTS:

SUMMER DESIGN:	75°F DRY BULB, NO HUMIDITY REQUIREMENT
WINTER DESIGN:	70°F DRY BULB, NO HUMIDITY REQUIREMENT
SUMMER SETBACK:	81°F DRY BULB, NO HUMIDITY REQUIREMENT
WINTER SETBACK:	64°F DRY BULB, NO HUMIDITY REQUIREMENT

REFER TO CONTROL DIAGRAMS FOR ROOM SPECIFICS.

MECHANICAL SHEET INDEX

M000	MECHANICAL COVERSHEET
M101	FIRST FLOOR DEMOLITION - MECHANICAL - ADMINISTRATION & MAINTENANCE
M201	FIRST FLOOR - MECHANICAL - ADMINISTRATION & MAINTENANCE
M400	MECHANICAL DETAILS
M600	MECHANICAL SCHEDULES
GRAND TOTAL: 5	

Revisions:	Date:

CONSULTANT

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REGISTERED PROFESSIONAL ENGINEER — STATE OF SOUTH DAKOTA — 15708 — Exp. 1-31-2023
10-31-2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL COVERSHEET	**Phase:** BID DOCUMENTS	**Project Title:** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number:** 884-CM-3015
			Building Number:
Approved:	NON-SPRINKLERED	**Location:** STURGIS, SOUTH DAKOTA	**Drawing Number:** M000
		Issue Date: 10/31/22 — **Checked:** IMEG — **Drawn:** BRAGAR	**Dwg.** 55 OF 84

BIM 360://17001048-23 - NCA-Black Hills NC- Admin - Maint Bgs/MEP21_17001048-23_Black Hills NCA Maintenance - Admin Bgs_C.rvt
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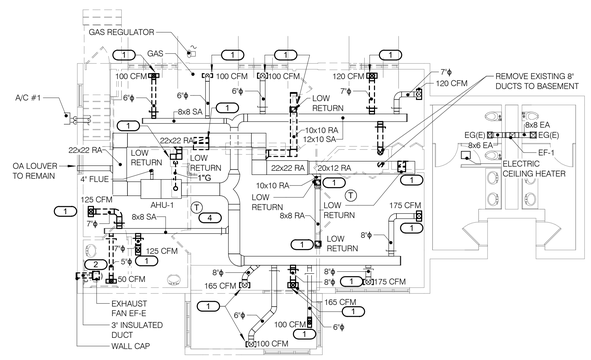
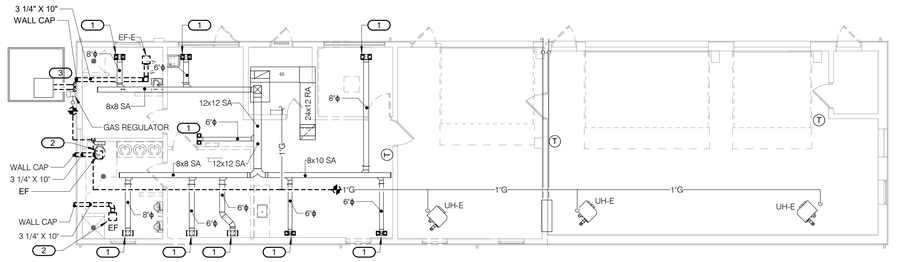
KEYNOTES: (#)

1. REMOVE EXISTING GRILLE AND DUCT AS SHOWN. CAP OR PREPARE FOR NEW CONNECTION.
2. REMOVE EXISTING FAN AND ASSOCIATED DUCTWORK AND WALL CAP.
3. REMOVE EXISTING REFRIGERANT PIPING AND CONTROL WIRING FROM CONDENSING UNIT UP THE EXTERIOR WALL AND INTO ATTIC SPACE TO EXISTING FURNACE. PATCH WALL AS REQUIRED.
4. RELOCATE EXISTING THERMOSTAT AND RE-WIRE.



2 FIRST FLOOR DEMOLITION - MECHANICAL - ADMINISTRATION

1/8" = 1'-0"



3 FIRST FLOOR DEMOLITION - MECHANICAL - MAINTENANCE

1/8" = 1'-0"

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — 15506 — STATE OF SOUTH DAKOTA — Exp: 1-31-2024 — 10-31-2022

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title: FIRST FLOOR DEMOLITION - MECHANICAL - ADMINISTRATION & MAINTENANCE

Approved:

Phase: BID DOCUMENTS

NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/22 | Checked: IMEG | Drawn: BRAGAR

Project Number: 884-CM-3015

Building Number:

Drawing Number: M101

Dwg. 56 OF 84

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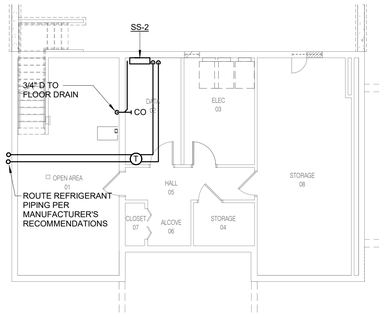
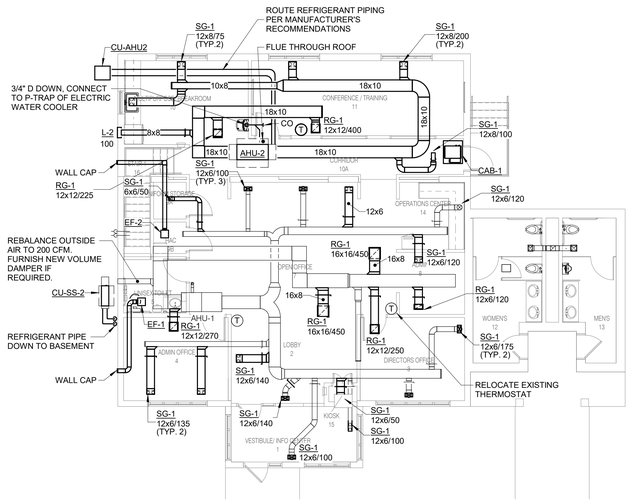


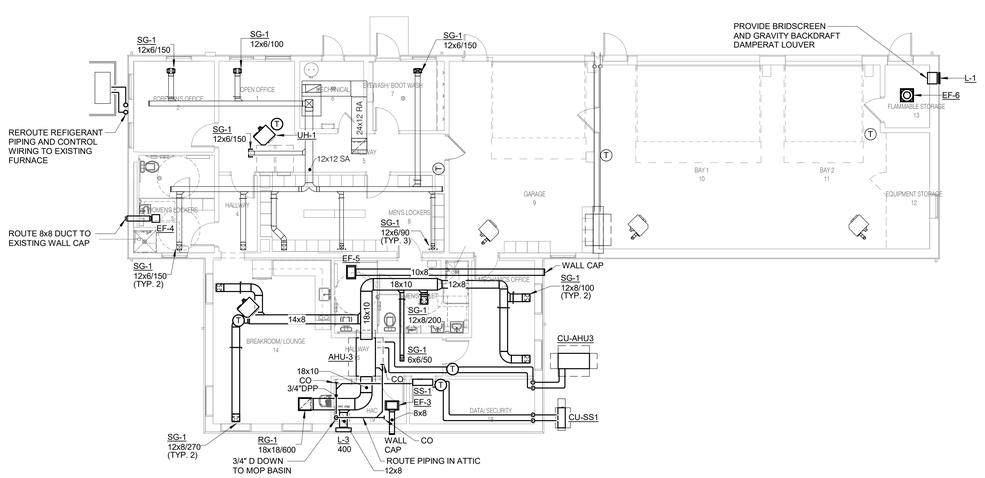
1 BASEMENT FLOOR - MECHANICAL - ADMINISTRATION

1/8" = 1'-0"



2 FIRST FLOOR - MECHANICAL - ADMINISTRATION

1/8" = 1'-0"



3 FIRST FLOOR - MECHANICAL - MAINTENANCE

1/8" = 1'-0"

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — 15586 — DANIEL J. SMITH — Dec. 1-31-2022
10-31-2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FIRST FLOOR - MECHANICAL - ADMINISTRATION & MAINTENANCE

Approved:

Phase: BID DOCUMENTS

NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/22 | **Checked:** IMEG | **Drawn:** BRAGAR

Project Number: 884-CM-3015

Building Number:

Drawing Number: M201

Dwg. 57 OF 84

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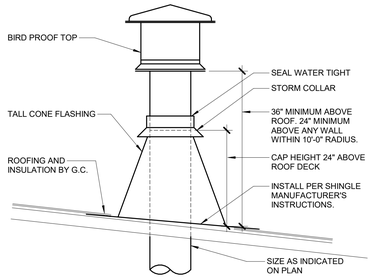
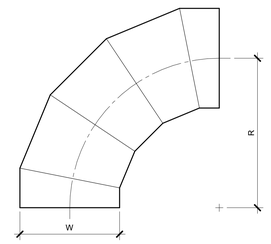


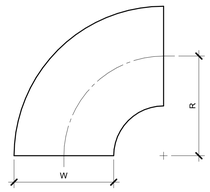
1 GAS VENT THRU ROOF (SHINGLE ROOF)

NO SCALE



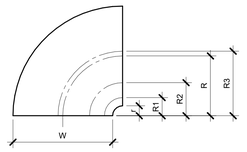
OVAL / ROUND RADIUS ELBOW SMOOTH OR 5 GORE (MINIMUM)

R/W = 1.5 (MINIMUM)



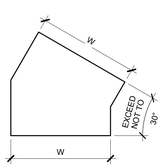
RECTANGULAR RADIUS ELBOW TYPE RE1

R/W = 1.0 (MINIMUM)
R/W < 1.0 SHALL BE TYPE RE3



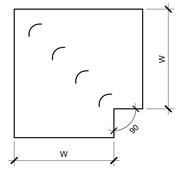
RECTANGULAR RADIUS ELBOW WITH VANES TYPE RE3

REFER TO SMACNA HVAC SYSTEMS DUCT DESIGN MANUAL, FOURTH EDITION, SECTION 5.14 "SPLITTER VANES" AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS, THIRD EDITION, FIGURES 4-2 AND 4-9 AND CHARTS 4-1 AND 4-1M. ELBOW SHALL HAVE THREE SPLITTER VANES AND r/W = 0.10 (R/W = 0.60) UNLESS NOTED OTHERWISE.

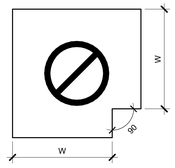


RECTANGULAR MITERED ELBOW TYPE RE6

USE ONLY AS PART OF OFFSETS AND TRANSITIONS PER FIGURE 4-7 TYPE 2 OR AS SHOWN ON DRAWINGS. OFFSETS ABOVE 30° SHALL BE TYPE RE1.

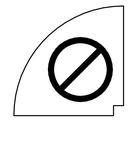


RECTANGULAR MITERED ELBOW WITH VANES TYPE RE2



RECTANGULAR / OVAL / ROUND MITERED ELBOW WITHOUT VANES TYPE RE4

NOT ALLOWED



RECTANGULAR RADIUS ELBOW WITH SQUARE THROAT

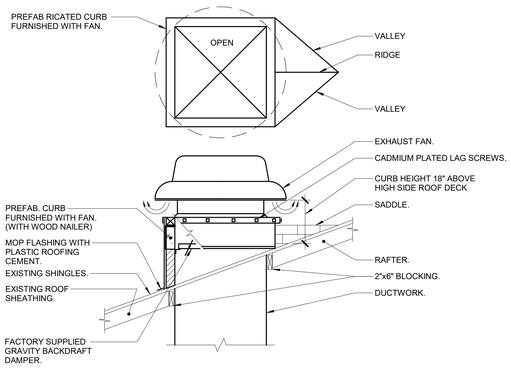
NOT ALLOWED

2 ELBOW CONSTRUCTION

NO SCALE

NOTES:

1. BEAD, CROSSBREAK, AND REINFORCE FLAT SURFACES AS IN STRAIGHT DUCT.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. DEFAULT ELBOW SHALL BE TYPE "RE1".
4. ELBOW TYPES SHALL BE INSTALLED AS SHOWN AND NOT BE SUBSTITUTED WITHOUT PERMISSION. EXCEPTION: RE1 OR RE3 MAY BE SUBSTITUTED FOR RE2.

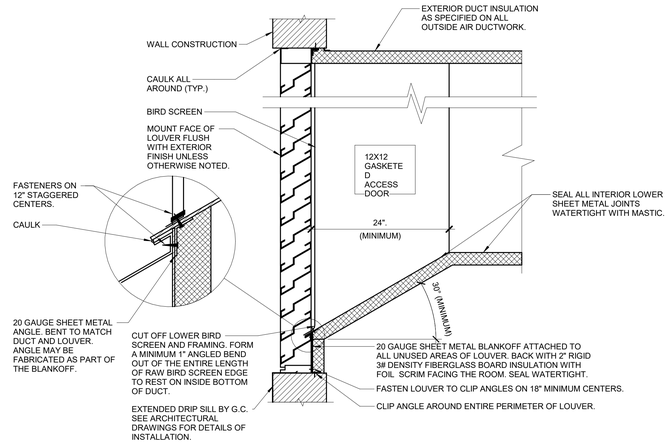


3 ROOF SUPPORT - FAN/HOOD CURB - SHINGLE ROOF

NO SCALE

NOTES:

1. NEW SADDLE TO BE FABRICATED WITH 2X4 WOOD FRAMING AND 1/2" CDX PLYWOOD. SHINGLES TO MATCH EXISTING SHINGLES VALLEY TO BE SEMI-LACED SHINGLES.



4 LOUVER INSTALLATION DETAIL

NO SCALE

NOTES:

1. SEAL ALL JOING ON BOTTOM INTERIOR SURFACE OF DUCT WITHIN 6'-0" OF THE LOUVER WATER TIGHT.
2. MOUNT BOTTOM OF INTAKE LOUVERS AT LEAST 40" ABOVE GRADE OR ROOF ELEVATION TO MINIMIZE CHANCES OF SNOW DRIFTING INTO THE LOUVER.
3. CAULK SHEETMETAL SCREWS WHERE THE PENETRATE METAL.

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER 15626 KEVIN BARSTAD MINNESOTA
Exp: 1-31-2023
10-31-2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	MECHANICAL DETAILS
Phase	BID DOCUMENTS
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Project Number	884-CM-3015
Building Number	
Approved:	
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	IMEG
Drawn	BRAGAR
Drawing Number	M400
Dwg.	58 OF 84

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FAN SCHEDULE

NOTES:
1. CABINET FAN WITH WALL CAP AND GRAVITY BACKDRAFT DAMPER.
2. FAN TO BE CONTROLLED WITH LIGHTS.
3. FAN TO RUN CONTINUOUSLY.
4. ROOF EXHAUST FAN WITH CUSTOM 18" CURB. FURNISH WITH FRAVITY BACKDRAFT DAMPER.
5. FAN SHALL BE SPARK B RESISTANT.

TAG NAME	AREA SERVED	CFM	S.P. IN. W.C.	DRIVE TYPE	MAX. AMCA SONES	BACKDRAFT DAMPER TYPE	ELECTRICAL (NOTE 1)								WEIGHT	MANUFACTURER	MODEL	NOTES
							BHP (W)	MHP	VOLTAGE	PHASES	DISCONNECT		CONTROLLER/ STARTER					
											BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)				
EF-1	ADMIN TLT	100	0.25	DIRECT	0.7	GRAVITY	7.45	0.025	110	1	MFR	NF	MFR	FV	17	GREENHECK	SP-A125	NOTE 1, 2
EF-2	ADMIN HAC	100	0.25	DIRECT	0.7	GRAVITY	7.45	0.025	110	1	MFR	NF	MFR	FV	17	GREENHECK	SP-A125	NOTE 1, 2
EF-3	MAINT. HAC	100	0.25	DIRECT	0.7	GRAVITY	7.45	0.025	110	1	MFR	NF	MFR	FV	17	GREENHECK	SP-A125	NOTE 1, 2
EF-4	MAINT. W TLT	200	0.25	DIRECT	2.5	GRAVITY	22.4	0.064	110	1	MFR	NF	MFR	FV	24	GREENHECK	SP-A200	NOTE 1, 2
EF-5	MAINT. M TLT	300	0.25	DIRECT	3	GRAVITY	45	0.16	110	1	MFR	NF	MFR	FV	31	GREENHECK	SP-A410	NOTE 1, 3
EF-6	STORAGE	300	0.25	DIRECT	5.6	GRAVITY	37	0.166667	110	1	MFR	NF	MFR	FV	49	GREENHECK	G-098-B	NOTE 3, 4, 5

AIR TERMINAL SCHEDULE

NOTES:
1.CONTRACTOR SHALL DETERMINE PROPER BORDER TYPE TO MATCH CEILING CONSTRUCTION.
2.REFER TO DRAWINGS FOR NECK SIZE. ALL BRANCH DUCTWORK TO AIR TERMINALS SHALL BE NECK SIZE UNLESS NOTED OTHERWISE.

TAG NAME	FACE SIZE (IN.) (NOTE 2)	TYPE	BORDER (NOTE 1)	MATERIAL	FINISH	VOLUME DAMPER REQUIRED	MANUFACTURER	MODEL	NOTES
EG-2	INLET +2	35 DEGREE DEFLECTION	1 1/4"	ALUMINUM	WHITE	NO	TITUS	350F	
RG-1	INLET +2	35 DEGREE DEFLECTION	1 1/4"	STEEL	WHITE	NO	TITUS	350R	
SG-1	INLET +2	DOUBLE DEFLECTION	1 1/4"	STEEL	WHITE	NO	TITUS	300R	FRONT BLADES VERTICAL UNLESS NOTED OTHERWISE

CABINET HEATER SCHEDULE - ELECTRIC

NOTES:
1.COORDINATE COLOR SELECTION WITH ARCHITECT.
2. PROVIDE WITH INTERNAL SPEED SELECTOR SWITCH AND THERMOSTAT.

TAG NAME	AREA SERVED	CONFIGURATION	NOMINAL CFM	CABINET (NOTE 1)			FAN	HEATING ELEMENT		ELECTRICAL (NOTE 4)				WEIGHT	MANUFACTURER	MODEL	NOTES
				HEIGHT	WIDTH	DEPTH	MHP	NUMBER OF STAGES	TOTAL KW (QTY * KW) KW	VOLTAGE	PHASES	DISCONNECT BY (NOTE A)	DISCONNECT TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)				
CAB-1	ENTRY	HORIZONTAL RECESSED	300	10"	36"	30"	0.04	2	6	240	1	MFR	NF	MFR	80	TRANE	FFE030	NOTE 1, 2

FURNACE SCHEDULE

NOTES:
1. FURNISH WITH THERMOSTAT AND ASSOCIATED CONTROLS.
2. HORIZONTAL GAS FIRED UNIT WITH MATCHING DX COIL. LOCATED IN ATTIC SPACE.

TAG NAME	AREA SERVED	EXT. S.P. IN. W.C.	FAN/BLOWER			ELECTRICAL				HEATING		EVAPORATOR				WEIGHT	MANUFACTURER	MODEL	EVAPORATOR COIL MODEL	NOTES
			CFM (HIGH SPEED)	HP	VOLTAGE	PHASES	DISCONNECT BY (NOTE A)	DISCONNECT TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)	MINIMUM EFFICIENCY AFUE	MINIMUM OUTPUT MBH	MAX. LAT °F	EAT DB °F	EAT WB °F	TOTAL MBH					
AHU-2	ADMIN ADD.	0.5	910	0.5	115 V	1	MFR	NF	MFR	96	38.4	54.6	73.5	62.9	22.1	189	DAIKIN	DM96VC	CHPE3	NOTE 1, 2
AHU-3	MAINT ADD.	0.5	1,010	0.5	115 V	1	MFR	NF	MFR	96	76.8	53.4	76.1	63.6	26.6	189	DAIKIN	DM96VC	CHPE3	NOTE 1, 2

CONDENSING UNIT SCHEDULE

NOTES:
1.REFER TO SPECIFICATION SECTION 23 62 13 FOR ADDITIONAL REQUIREMENTS.

TAG NAME	AREA SERVED	NOMINAL DESIGN TONS	REFRIGERANT	AMBIENT TEMP °F	MBH	ELECTRICAL								WEIGHT	MANUFACTURER	MODEL	NOTES
						VOLTAGE	PHASES	MCA	MOCP	DISCONNECT BY (NOTE A)	DISCONNECT TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)	CONTROLLER/ STARTER SCCR	OPERATING			
CU-AHU2	AHU-2	2	R-410A	100.0	22.1	208	1	17	20	MFR	NF	MFR	0	112	DAIKIN	DX1724	NOTE 1
CU-AHU3	AHU-3	2.5	R-410A	100.0	26.6	208	1	23	25	MFR	NF	MFR	0	121	DAIKIN	DX1730	NOTE 1

LOUVER SCHEDULE

NOTES:
1.FINISH TYPES: TYPE 1 - MILL FINISH, TYPE 2 - 204-R1 SATIN ANODIZED, TYPE 3 - BAKED ENAMEL FINISH ON PRETREATED PRIME PAINT. STANDARD COLOR - SELECTION BY ARCHITECT. TYPE 4 - BAKED EPOXY FINISH ON PRIME COATED METAL. STANDARD COLOR - SELECTION BY ARCHITECT. TYPE 5 - DURANODIC BRONZE - LIGHT, MEDIUM, DARK. TYPE 6 - PVDF (KYNAR 500, HYLAR 5000, OR DURANAR). STANDARD COLOR - SELECTION BY ARCHITECT. TYPE 7 - REFER TO SPECIFICATIONS.

TAG NAME	AREA SERVED	CFM	SIZE (INCHES)		FREE AREA VELOCITY	S.P. IN. W.C.	FINISH (NOTE 1)	MANUFACTURER	MODEL	NOTES
			WIDTH	HEIGHT						
L-1	STORAGE	365	16	16	539	0.06	TYPE 7	RUSKIN	ELF375	NONE
L-2	AHU-2	100	12	12	424	0.04	TYPE 7	RUSKIN	ELF375	NONE
L-3	AHU-3	400	16	16	591	0.06	TYPE 7	RUSKIN	ELF375	NONE

SPLIT SYSTEM UNIT SCHEDULE

NOTES:
1. WALL MOUNTED INDOOR UNIT. FURNISH WITH CONDENSATE PUMP.
2. FURNISH WITH THERMOSTAT AND ASSOCIATED CONTROLS.
3. INDOOR UNIT POWERED FROM OUTDOOR UNIT.

TAG NAME	AREA SERVED	INDOOR UNIT								OUTDOOR UNIT						ELECTRICAL						MANUFACTURER	NOTES
		CFM	COOLING MBH	HEATING MBH	MAX. DIMENSIONS LENGTH	WIDTH	HEIGHT	WEIGHT	MODEL	SEER	MAX. DIMENSIONS HEIGHT	LENGTH	WIDTH	WEIGHT	MODEL	VOLTAGE	PHASE	MCA	MOCP AMPS	DISCONNECT BY (NOTE A)	DISCONNECT TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)		
SS-1	DATA	350	17000	1900	36	9	13	29	MSZ-FS18	21	2'-11"	2'-9"	1'-1"	120	MUZ-FS18	230	1	19.0	20	MFR	NF	MFR	MITSUBISHI	NOTE 1, 2, 3
SS-2	DATA	350	17000	1900	36	9	13	29	MSZ-FS18	21	2'-11"	2'-9"	1'-1"	120	MUZ-FS18	230	1	19.0	20	MFR	NF	MFR	MITSUBISHI	NOTE 1, 2, 3

UNIT HEATER SCHEDULE - GAS FIRED

NOTES:
1. FURNISH WITH INTEGRAL THERMOSTAT.

TAG NAME	AREA SERVED	CFM	HEATING (MBH)		ELECTRICAL							GAS PRESSURE	MANUFACTURER	MODEL	NOTES
			INPUT	OUTPUT	HP	RPM	VOLTAGE	PHASES	DISCONNECT BY (NOTE A)	DISCONNECT TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)				
UH-1	ATTIC	740	60	50	1/12	1050	110	1	MFR	NF	MFR	7"	TRANE	GTNE006	NOTE 1

Revisions:	Date:

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STAMP

REGISTERED PROFESSIONAL ENGINEER 15409 BRIAN R. ANDERSON
Exp: 1-31-2023
10-31-2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title	MECHANICAL SCHEDULES
Phase	BID DOCUMENTS
Approved:	
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	IMEG
Drawn	BRAGAR
Project Number	884-CM-3015
Building Number	
Drawing Number	M600
Dwg.	59 OF 84

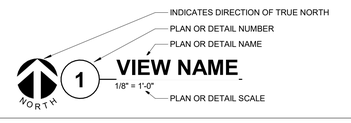
VA FORM 08 - 6231

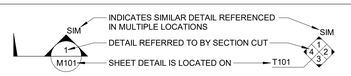
BIM 360://17001048-23 - NCA-Black Hills NC- Admin - Maint Bldg/MEP21_17001048-23_Black Hills NCA Maintenance - Admin Bldg_C.rvt
10/28/2022 10:18:00 AM

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
———— NEW
- - - - - - - - - EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
— — — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
———— EXISTING
- - - - - - - - - EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
— — — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

BUILDING CODE:	IBC 2015 EDITION
FIRE CODE:	IFC 2015 EDITION
PLUMBING CODE:	IPC 2015 EDITION
MECHANICAL CODE:	IMC 2015 EDITION
ELECTRICAL CODE:	NFPA 70 (NEC) 20** EDITION
LIFE SAFETY CODE:	NFPA 101 20** EDITION
ENERGY CONSERVATION CODE:	IECC 2015
HEALTH DEPARTMENT CODE:	CURRENT EDITION
LOCAL BUILDING CODE:	CURRENT EDITION

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.C.	ASBESTOS ABATEMENT CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR
R.E.	RESIDENT ENGINEER

PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
—CW—	COLD WATER - POTABLE
—D—	DRAIN
—G—	NATURAL GAS
—GRV—	GAS REGULATOR VENT
—HW—	HOT WATER - POTABLE
—HWC—	HOT WATER CIRCULATING - POTABLE
—PD—	PUMPED DISCHARGE
—SAN—	SANITARY DRAINAGE
—ST(1,000)—	STORM DRAINAGE (ROOF SQUARE FOOTAGE)
—STS—	STORM DRAINAGE (SECONDARY)
—V—	VENT
—VAC—	LAB VACUUM
—W—	SERVICE WATER - POTABLE
	PIPE CONTINUATION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
FD	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	ROUTE TO DRAIN
RD-1 6"(1000)	ROOF DRAIN PROPERTIES SYMBOL / SIZE (ROOF SQ. FT.)
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
GPM	BALANCING VALVE (NUMBER INDICATES GPM)
	CHECK VALVE
	BACKFLOW PREVENTER
	SOLENOID VALVE
	SAFETY/RELIEF VALVE
	VACUUM BREAKER
P	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
P	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
T	TEMPERATURE SENSOR WITH WELL
T	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PUMP
M	METER
	ALIGNMENT GUIDE
	PIPE ANCHOR
EJ-# (#.#")	EXPANSION JOINT #.#" IS THE EXPANSION TRAVEL INCHES
	AIR ADMITTANCE VALVE

PLUMBING ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BT	BATHTUB
CB	CATCH BASIN
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
DB	DIALYSIS BOX
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
E	EXISTING
EE	EMERGENCY EYEWASH
ES	EMERGENCY SHOWER
ESE	EMERGENCY SHOWER/EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FM	FLOW METER
FS	FLOOR SINK
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
HB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
LAV	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MIXING VALVE
NIC	NOT IN CONTRACT
NT	NEUTRALIZATION TANK
OS	OIL SEPARATOR
RD	ROOF DRAIN
SCCR	SHORT CIRCUIT CURRENT RATING
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WM	WATER METER
WS	WATER SOFTENER
UB	UTILITY BOX
UON	UNLESS OTHERWISE NOTES
YCO	YARD CLEANOUT

PLUMBING FIXTURE ROUGH-IN SCHEDULE

FIXTURE DESCRIPTION	DOMESTIC C.W. (NOTE 3)	DOMESTIC H.W. (NOTE 3)	SANITARY (NOTE 3)	VENT (NOTE 3)	REMARKS
WATER CLOSET	1 1/4"	-	4"	2"	
URINAL	1"	-	2"	1 1/2"	
LAVATORY	1/2"	1/2"	1 1/4"	1 1/4"	NOTE 1 & 2
KITCHEN SINK	1/2"	1/2"	1 1/2"	1 1/4"	NOTE 1 & 2
CLINICAL SINK	1"	3/4"	4"	2"	-
MOP BASIN	3/4"	3/4"	3"	1 1/2"	-
SHOWER	1/2"	1/2"	NOTE 4	NOTE 4	NOTE 2
ELECTRIC WATER COOLER	1/2"	-	1 1/2"	1 1/4"	NOTE 1 & 2
FLOOR DRAIN/FLOOR SINK	-	-	2"	1 1/2"	-
HOSE BIBB	3/4"	-	-	-	-
EMERGENCY EYEWASH	3/4"	3/4"	1/2"	1/2"	-

NOTES:
1. SANITARY RISER UP IN WALL TO FIXTURE SHALL BE A MINIMUM OF 2".
2. 1/2" CW AND HW APPLIES ONLY TO THE FINAL VERTICAL RISE-DROP TO EACH FIXTURE. BRANCH PIPING TO VERTICAL RISE-DROP SHALL BE A MINIMUM OF 3/4" INCH UNLESS NOTED OTHERWISE.
3. SIZES SHOWN ARE MINIMUMS. SIZES SHOWN ON THE DRAWING THAT ARE LARGER THAN THE SIZES LISTED IN THE SCHEDULE SHALL DICTATE THE ROUGH-IN SIZE.

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. EACH CONTRACTOR SHALL CUT AND PATCH ROOFS, WALLS, AND FLOORS ASSOCIATED WITH THEIR WORK.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

PLUMBING GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
3. CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
4. ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874
5. INVERT ELEVATIONS ARE FROM EXISTING DRAWINGS AND MAY NOT BE ACCURATE. VERIFY ALL ELEVATIONS BEFORE BEGINNING WORK.
6. VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
7. REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
8. EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL DEMOLITION INFORMATION.
9. P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. [PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

PLUMBING SLOPE REQUIREMENTS:

BASED ON PLUMBING CODE: IPC-2015

INTERIOR:	
SANITARY WASTE:	≤2-1/2"ø=1/4" PER FOOT ≥3"ø = 1/8" PER FOOT ≥8"ø = 1/16" PER FOOT
GREASE WASTE:	1/4" PER FOOT
STORM (GRAVITY):	1/8" PER FOOT
CONDENSATE AND INDIRECT DRAINAGE:	1/8" PER FOOT
SANITARY AND GREASE VENT:	NO SPECIFIC PITCH, PITCH TO FIXTURES
DOMESTIC WATER:	NO SPECIFIC PITCH, PITCH TO FIXTURES

PLUMBING SHEET INDEX

P000	PLUMBING COVERSHEET
P101	FIRST FLOOR DEMOLITION - PLUMBING - ADMINISTRATION & MAINTENANCE
P201	FIRST FLOOR - PLUMBING - ADMINISTRATION & MAINTENANCE
P400	PLUMBING DETAILS
GRAND TOTAL: 4	

Revisions:	Date:

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Anderson Engineering of Minnesota, LLC | Proj # 16409

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REGISTERED PROFESSIONAL ENGINEER — JEREMY R. ANDERSON — 19554 — SOUTH DAKOTA
Exp: 1-31-2023
10-31-2022

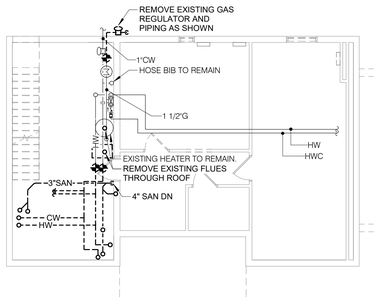
Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	PLUMBING COVERSHEET
Phase	BID DOCUMENTS
Approved:	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	IMEG
Drawn	BRAGAR
Project Number	884-CM-3015
Building Number	
Drawing Number	P000
Dwg.	60 OF 84

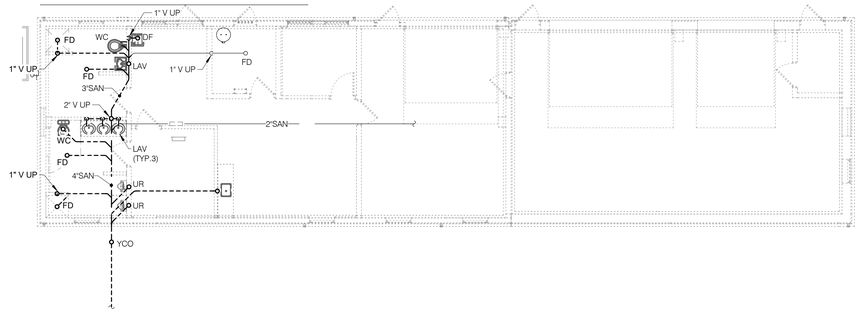
BIM 360://17001048-23 - NCA-Black Hills NC- Admin - Maint Bldg/MEP21 - 17001048-23_Black Hills NCA Maintenance - Admin Bldg_C.rvt
10/28/2022 10:18:04 AM

VA FORM 08 - 6231



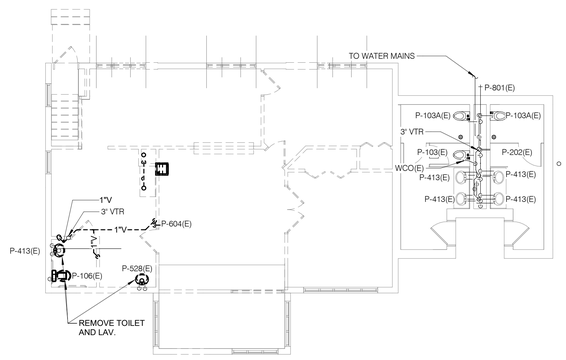
1 BASEMENT FLOOR DEMOLITION - PLUMBING - ADMINISTRATION

1/8" = 1'-0"



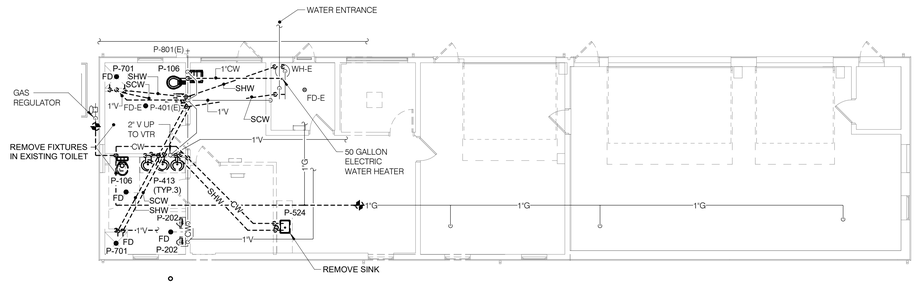
2 UNDERFLOOR DEMOLITION - PLUMBING - MAINTENANCE

1/8" = 1'-0"



3 FIRST FLOOR DEMOLITION - PLUMBING - ADMINISTRATION

1/8" = 1'-0"



4 FIRST FLOOR DEMOLITION - PLUMBING - MAINTENANCE

1/8" = 1'-0"

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MECHANICAL, ELECTRICAL, TECHNOLOGY & STRUCTURAL:	GEOTECHNICAL:	COST ESTIMATING:
IMEG CORP.	**AET**	**CPMI**
14755 PRESTON RD STE 845	1745 SAMCO RD	3265 NORTHWOOD CIR STE 170
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REGISTERED PROFESSIONAL ENGINEER 15628 KEVIN BARSTAD
Exp: 1-31-2023
10-31-2022

Office of Construction and Facilities Management

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Drawing Title	FIRST FLOOR DEMOLITION - PLUMBING - ADMINISTRATION & MAINTENANCE
Approved:	
Phase	BID DOCUMENTS
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	IMEG
Drawn	BRAGAR
Project Number	884-CM-3015
Building Number	
Drawing Number	P101
Dwg.	61 OF 84

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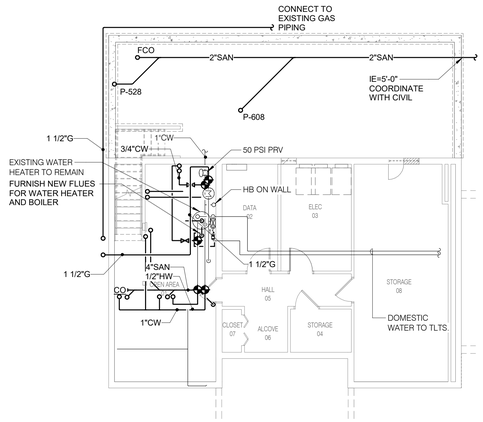
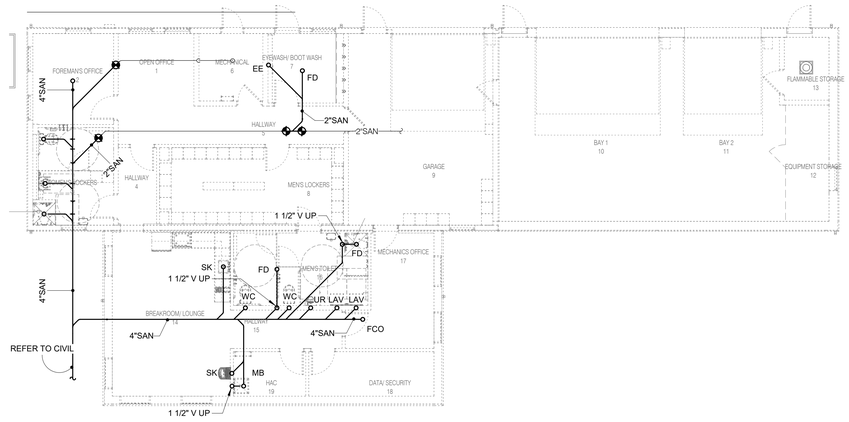
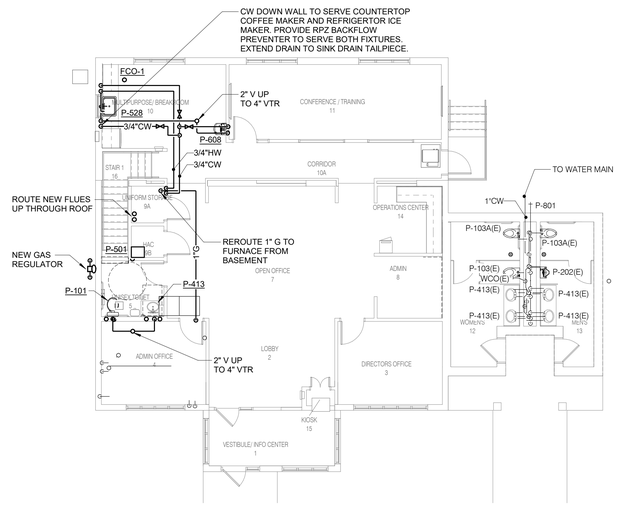


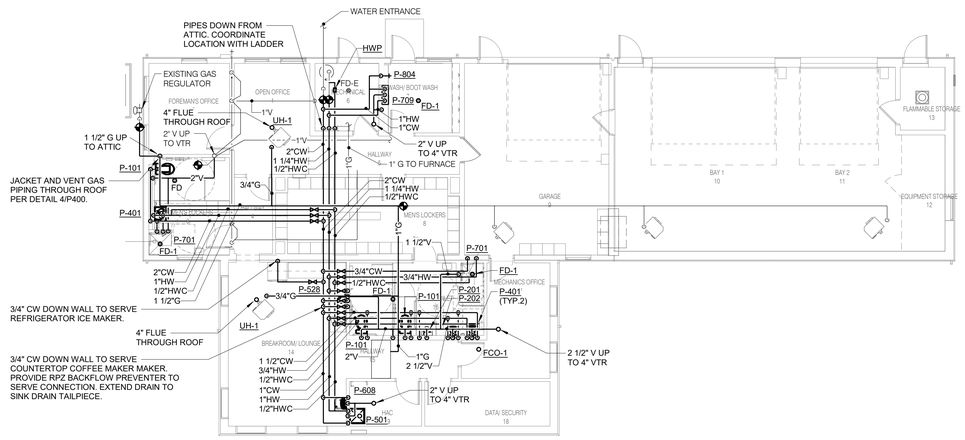
NORTH 1 **BASEMENT FLOOR - PLUMBING - ADMINISTRATION**
1/8" = 1'-0"



NORTH 2 **UNDERFLOOR - PLUMBING - MAINTENANCE**
1/8" = 1'-0"



NORTH 3 **FIRST FLOOR - PLUMBING - ADMINISTRATION**
1/8" = 1'-0"



NORTH 4 **FIRST FLOOR - PLUMBING - MAINTENANCE**
1/8" = 1'-0"

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER 15556 SOUTH DAKOTA
Exp. 1-31-2023
10-31-2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title FIRST FLOOR - PLUMBING - ADMINISTRATION & MAINTENANCE	**Phase** BID DOCUMENTS	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
			Building Number
Approved:	NON-SPRINKLERED	**Location** STURGIS, SOUTH DAKOTA	**Drawing Number** P201
		Issue Date 10/31/22 · **Checked** IMEG · **Drawn** BRAGAR	**Dwg.** 62 OF 84

BIM 360://17001048.23 - NCA-Black Hills NC- Admin - Maint Bldg/MEP2-L-17001048-23_Black Hills NCA Maintenance - Admin Bldg_C.rvt
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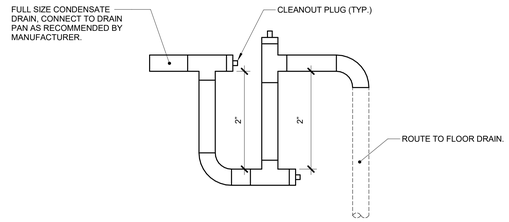
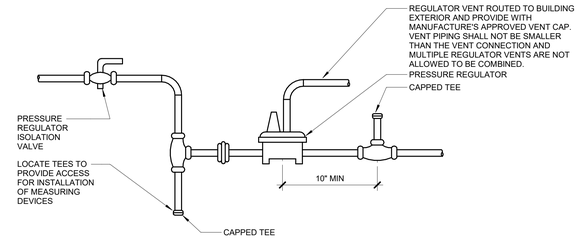


1 CONDENSATE TRAP DETAIL (BLOW-THROUGH)
NO SCALE



2 GAS PRESSURE REGULATOR DETAIL
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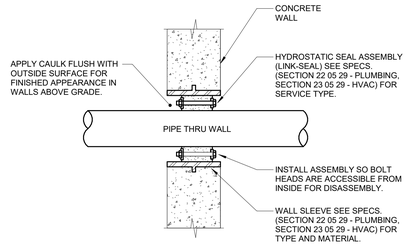
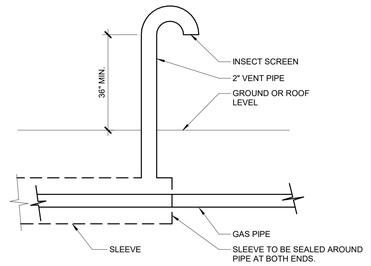


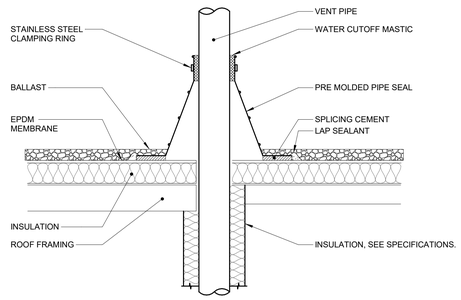
NOTES:

1. CONTRACTOR MAY FABRICATE PIPE SLEEVE.
2. SEAL SELECTION BASED ON O.D. OF PIPE THRU WALL AND I.D. OF SLEEVE.
3. SLEEVE NOT REQUIRED FOR CORE DRILLED PENETRATIONS.

3 WALL PENETRATION - EXTERIOR - PIPING
NO SCALE



4 GAS VENT DETAIL
NO SCALE



NOTES:

1. VENT PIPE SHALL BE A MINIMUM OF 3" DIAMETER UNLESS NOTED LARGER ON FLOOR PLANS. INCREASERS, IF REQUIRED TO TRANSITION TO THE LARGER VTR SIZE, MUST BE INSTALLED AT LEAST 12 INCHES BELOW THE THERMAL ENVELOPE OF THE BUILDING.
2. EXTEND VENT PIPE AT LEAST 7 FEET ABOVE ROOF LEVEL WHEN ROOF AREA IS INTENDED TO BE USED BY THE GENERAL PUBLIC. THIS INCLUDES PROMENADES, OBSERVATION DECKS, ETC. THIS IS NOT REQUIRED FOR ROOFS THAT ARE ACCESSIBLE BY MAINTENANCE PERSONEL ONLY.

5 VENT PIPE FLASHING
NO SCALE

Revisions:	Date:

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Drawing Title: PLUMBING DETAILS	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
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Project Number	884-CM-3015
Building Number	
Drawing Number	P400
Dwg.	63 OF 84

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CONDUIT INSTALLATION SCHEDULE

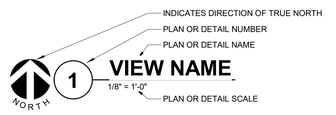
THE FOLLOWING SCHEDULE SHALL BE ADHERED TO UNLESS THEY CONSTITUTE A VIOLATION OF APPLICABLE CODES OR ARE NOTED OTHERWISE ON THE DRAWINGS. THE INSTALLATION OF RMC CONDUIT WILL BE PERMITTED IN PLACE OF ALL CONDUIT SPECIFIED IN THIS SCHEDULE. REFER TO CONDUIT AND BOXES SPECIFICATION 26 05 33 FOR ADDITIONAL INFORMATION.

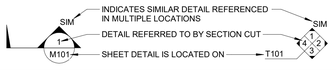
INSTALLATION TYPE	RMC	IMC	EMT	RTRC	PVC COATED RMC	PVC	PVC CONCRETE ENCASED	HDPE	ASR
FEEDERS: SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, ETC.		X	X						
BRANCH CIRCUITS: LIGHTING, RECEPTACLES, CONTROLS, ETC.		X	X						
MECHANICAL EQUIPMENT FEEDERS: PUMPS, CHILLERS, AIR HANDLING UNITS, ETC.		X	X						
FLOOR MOUNTED EQUIPMENT FEEDERS: PUMPS, ETC. (INCLUDE NO MORE THAN 6 FEET OF LFMC TO PUMP)		X	X						
CONTROLS (LIGHTING, POWER, BUILDING AUTOMATION, ETC.)		X	X						
FINISHED SPACES / CONCEALED			X						
WET AND DAMP LOCATIONS: (CONDUIT, BOXES, FITTINGS, INSTALLED AND EQUIPPED TO PREVENT WATER ENTRY)	X			X					
CORROSIVE LOCATIONS				X	X				
ELEVATED CONCRETE SLABS (ABOVE GRADE)	X					X			
INTERIOR LOCATIONS: CONCEALED			X						
INTERIOR LOCATIONS: EXPOSED		X	X						
INTERIOR LOCATIONS: EXISTING WALLS AND EXPOSED INSTALLATION (FINISHED SPACES)			X						X
UNDERGROUND / SLABS ON GRADE (IN OR UNDER SLABS ON GRADE)									
WITHIN 5' FROM THE PERIMETER OF THE BUILDING	X					X			
WITHIN 5' FROM THE PERIMETER OF THE BUILDING WHEN PASSING THROUGH THE PERIMETER OF THE BUILDING FOUNDATION:	X			X			X		
UNDERGROUND SITE CONDUITS:									
WITHIN 5' FROM THE PERIMETER OF A BUILDING FOUNDATION	X			X			X		
5' OR GREATER FROM THE PERIMETER OF A BUILDING FOUNDATION	X			X		X			
UNDER ROADS, DRIVES, AND VEHICLE TRAVELED WAYS. WHEN HDPE DIRECTIONAL BORING IS ALLOWED: PROVIDE PRESSURIZED GROUT					X	X		X	
DUCTBANKS (REFER TO DUCTBANK DETAILS WHEN APPLICABLE)									
REINFORCING SHALL CONSIST OF ONE-HALF INCH DEFORMED BARS SPACED 12 INCHES ON CENTER, PARALLELING THE DUCTS ON BOTTOM, WITH ONE-HALF INCH DEFORMED TIE BARS SPACED TWELVE INCHES ON CENTERS.							X		
BARS SHALL OVERLAP 40 DIAMETERS AND SHALL EXTEND 5' BEYOND ROADS, DRIVES, TRAVELED WAYS, ETC.							X		
PROVIDE MINIMUM 3" CONCRETE COVER ON ALL SIDES OF REINFORCING.							X		
ENTIRE DUCTBANK SHALL BE INSTALLED ON PRECAST CONCRETE PAVERS ON 3' CENTERS.							X		
HAZARDOUS (CLASSIFIED LOCATIONS AS DEFIED BY THE NATIONAL ELECTRICAL CODE. COMPLETE WITH SCREWED FITTINGS AND CONDUIT SEALS	X								
FIRE RATED ASSEMBLIES: FIRE RATED ASSEMBLIES LISTED WITH PHENOLIC RTRC RACEWAY				X					
DEFINITIONS:									
CONCRETE ENCASEMENT: CONDUIT WITH A MINIMUM OF 3" THICKNESS BETWEEN THE SURFACE OF THE CONCRETE AND THE NEAREST CONDUIT. CONCRETE TO BE DOWELED INTO THE FOUNDATION.									

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

ELECTRICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
GFI	GROUND FAULT INTERRUPTER
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
SV	SOLENOID VALVE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED

LUMINAIRE SYMBOL KEY

SYMBOL:	DESCRIPTION:
	NORMAL BRANCH LUMINAIRE
	EMERGENCY BATTERY LUMINAIRE

ELECTRICAL SHEET INDEX

E000	ELECTRICAL COVERSHEET
E100	SITE PLAN - ELECTRICAL - DEMOLITION
E101	SITE PLAN - ELECTRICAL
E200	FIRST FLOOR - DEMOLITION - ADMINISTRATION & MAINTENANCE
E300	FIRST FLOOR - LIGHTING - ADMINISTRATION & MAINTENANCE
E400	FIRST FLOOR - POWER - ADMINISTRATION & MAINTENANCE
E401	BLACK HILLS AUXILLARY BUILDINGS - POWER
E500	ELECTRICAL DETAILS
E600	ELECTRICAL SCHEDULES
GRAND TOTAL: 9	

ELECTRICAL SYMBOL LIST

SYMBOL:	SPEC SECTION:	DESCRIPTION:
GB	26 05 26	GROUND BUS
IBT	26 05 26	INTERSYSTEM BONDING TERMINATION
E / E	26 05 33	ELECTRICAL CONNECTION
J / J	26 05 33	JUNCTION BOX
	26 27 26	FLOOR BOX or POKE THROUGH
	26 05 33	TECHNOLOGY OUTLET ROUGH-IN
	26 24 16	PANELBOARD - RECESS MOUNT
	26 24 16	PANELBOARD - SURFACE MOUNT
	26 22 00	TRANSFORMER
	26 28 16	DISCONNECT SWITCH
HD	ARCH	HAND DRYER
	26 27 26	DUPLEX RECEPTACLE, 125V
	26 27 26	DUPLEX GFI RECEPTACLE, 125V
G	26 27 26	GROUND FAULT DEVICE
WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V
	26 27 26	QUAD RECEPTACLE, 125V
	26 27 26	QUAD GFI RECEPTACLE, 125V

ELECTRICAL SYMBOL LIST

SYMBOL:	SPEC SECTION:	DESCRIPTION:
	REFER TO LUMINAIRE SCHEDULE	LINEAR LUMINAIRES
		TROFFER
		WALL SCONCE LUMINAIRE
		DOWNLIGHT LUMINAIRE
		AIMABLE OR WALL WASH LUMINAIRE
		INDUSTRIAL LUMINAIRE
		WALL BRACKET LUMINAIRE
		POLE MOUNTED LUMINAIRE
		SINGLE FACE EXIT SIGN
		DOUBLE FACE EXIT SIGN
		WALL/CEILING EMERGENCY EXIT SIGN
		EMERGENCY UNIT

ELECTRICAL SYMBOL LIST

SYMBOL:	SPEC SECTION:	DESCRIPTION:
$	26 09 33	SWITCH - SINGLE POLE
$T	26 09 33	SWITCH - LOCAL TIMER - USER ADJUSTABLE
$LV	26 09 33	SWITCH -LOW VOLTAGE ON/OFF EQUAL TO ACUITY CONTROLS nPODM-WH
$O	26 09 33	SWITCH -LOW VOLTAGE OCCUPANCY SENSOR SWITCH EQUAL TO ACUITY CONTROLS WSX PDT-WH
$O2	26 09 33	SWITCH -2 CHANNEL LOW VOLTAGE OCCUPANCY SENSOR SWITCH EQUAL TO ACUITY CONTROLS WSX PDT 2P-WH
$V	26 09 33	SWITCH -LOW VOLTAGE VACANCY SENSOR SWITCH EQUAL TO ACUITY CONTROLS WSX PDT-SA-WH
$DV	26 09 33	SWITCH -LOW VOLTAGE VACANCY SENSOR SWITCH WITH DIMMING EQUAL TO ACUITY CONTROLS WSX-PDT-D-WH
$D	26 09 33	SWITCH -LOW VOLTAGE ON/OFF WITH DIMMING EQUAL TO ACUITY CONTROLS nPODM-DM-WH
VS	26 09 33	VACANCY SENSOR - DUAL TECHNOLOGY (MANUAL ON, AUTO OFF)
OS	26 09 33	OCCUPANCY SENSOR - DUAL TECHNOLOGY (AUTO ON, AUTO OFF)
PC	26 09 33	PHOTOCELL

ELECTRICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, AND SYSTEMS.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING EQUIPMENT, LUMINAIRES, AND CONDUIT ARE SHOWN. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS WITH NEW WORK BEFORE STARTING WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR CABLE TRAY, BUSWAY AND CONDUITS BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
6. WHERE EXISTING ELECTRICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, CONDUIT, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING ELECTRICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

ELECTRICAL PHASING NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, AND SYSTEMS.

1. REFER TO ARCHITECTURAL DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO ARCHITECT'S INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
2. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
3. PROVIDE TEMPORARY LIGHTING, POWER, SYSTEMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
4. INSTALL TEMPORARY LIGHTING, CIRCUITS, ETC. AS NECESSARY TO KEEP ALL OCCUPIED SPACES OPERATIONAL THROUGHOUT ALL PHASES OF THE PROJECT
5. PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.

ELECTRICAL GENERAL NOTES:

1. "NL" INDICATES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT.
2. SHADED LUMINAIRE OR DEVICE INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY BATTERY.
3. VACANCY/OCCUPANCY SENSOR LAYOUT: SENSORS ARE SHOWN ON THE PLANS FOR DESIGN INTENT AND MAY NOT REPRESENT EVERY DEVICE. PROVIDE MANUFACTURER SPECIFIC FLOOR PLAN LAYOUTS SHOWING LOCATION, ORIENTATION, AND COVERAGE AREA OF EACH CONTROL DEVICE, SENSOR, AND CONTROLLER/INTERFACE. AREAS REQUIRING MULTIPLE SENSOR DEVICES FOR APPROPRIATE COVERAGE, SUBMIT SPECIFIC MANUFACTURER-APPROVED SENSOR LAYOUT AS AN OVERLAY DIRECTLY ON THE PROJECT DRAWINGS, EITHER IN PRINT OR APPROVED ELECTRONIC FORM.

LUMINAIRE KEY:

LUMINAIRE — F1 = FIXTURE TAG; 1 = CIRCUIT NUMBER; a = SWITCH DESIGNATION; NL = SUBSCRIPT (IF APPLICABLE); Z = ZONE DESIGNATION

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: F1 / 1 / a / NL

DEVICE KEY:

DEVICE — A = MOUNTING (IF APPLICABLE); 1 = CIRCUIT NUMBER

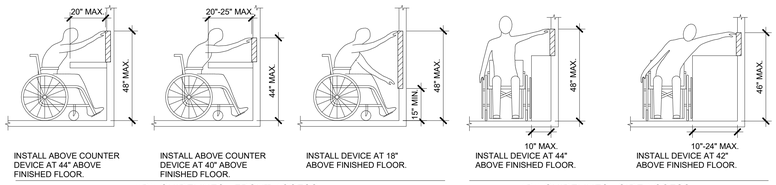
*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:

A	MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
C	MOUNT AT CEILING
H	MOUNT ORIENTED HORIZONTALLY
L	MOUNT IN CASEWORK
M	MOUNT IN MODULAR FURNITURE
R	MOUNT IN SURFACE RACEWAY
EWC	ELECTRIC WATER COOLER

ELECTRICAL INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
4. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED. MOUNT EXTERIOR LOCATED RECEPTACLES WITH WHILE-IN-USE COVERS AT +20" FROM FINISHED GRADE (CENTER DIMENSIONS) TO MAINTAIN INSTALLATION ADA COMPLIANCE.
5. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 26 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
6. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE OR BE A GFI RECEPTACLE LOCATED DIRECTLY BELOW AND CENTERED ON EWC. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
7. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION) EXCEPT WHERE OTHERWISE NOTED.
8. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE.
9. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
10. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
11. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
13. ALL WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER CERTIFICATES QUALIFYING EACH WELDER, PRIOR TO START OF WORK. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT THE CONTRACTOR'S EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.
14. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
15. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
16. ELECTRICAL IDENTIFICATION. REFER TO SPECIFICATION SECTION 26 05 53 FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.



INSTALL ABOVE COUNTER DEVICE AT 44" ABOVE FINISHED FLOOR.
INSTALL ABOVE COUNTER DEVICE AT 40" ABOVE FINISHED FLOOR.
INSTALL DEVICE AT 18" ABOVE FINISHED FLOOR.
INSTALL DEVICE AT 44" ABOVE FINISHED FLOOR.
INSTALL DEVICE AT 42" ABOVE FINISHED FLOOR.

ADA GUIDELINES - FRONT ACCESS
ADA GUIDELINES - SIDE ACCESS

ADA STANDARDS FOR ACCESSIBLE DESIGN

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Drawing Title: ELECTRICAL COVERSHEET	Phase: BID DOCUMENTS	Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
Approved:	NON-SPRINKLERED	Location: STURGIS, SOUTH DAKOTA	Building Number
		Issue Date: 10/31/22 / Checked: Checker / Drawn: Author	Drawing Number: E000 Dwg. 64 OF 84

BIM 360://17001048.23 - NCA-Black Hills NC - Admin - Maint Bldg/MEP2I_17001048.23_Black Hills NCA Maintenance - Admin Bldg_C.rvt
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KEYED NOTES:

1. EXISTING UNDERGROUND COMMUNICATION CONDUITS TO BE DEMOLISHED. DISCONNECT AND REMOVE ALL ASSOCIATED WIRE AND CONDUIT AS TO NOT INTERFERE WITH NEW CONSTRUCTION. CONDUIT THAT DOES NOT INTERFERE WITH NEW CONSTRUCTION MAY BE ABANDONED.

1 SITE PLAN - ELECTRICAL - DEMOLITION

3/64" = 1'-0"

Revisions:	Date:

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10/31/2022

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Drawing Title: SITE PLAN - ELECTRICAL - DEMOLITION	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number:
Location: STURGIS, SOUTH DAKOTA	Drawing Number: E100
Issue Date: 10/31/22	Checked: Checker
	Drawn: Author
	Dwg. 65 OF 84

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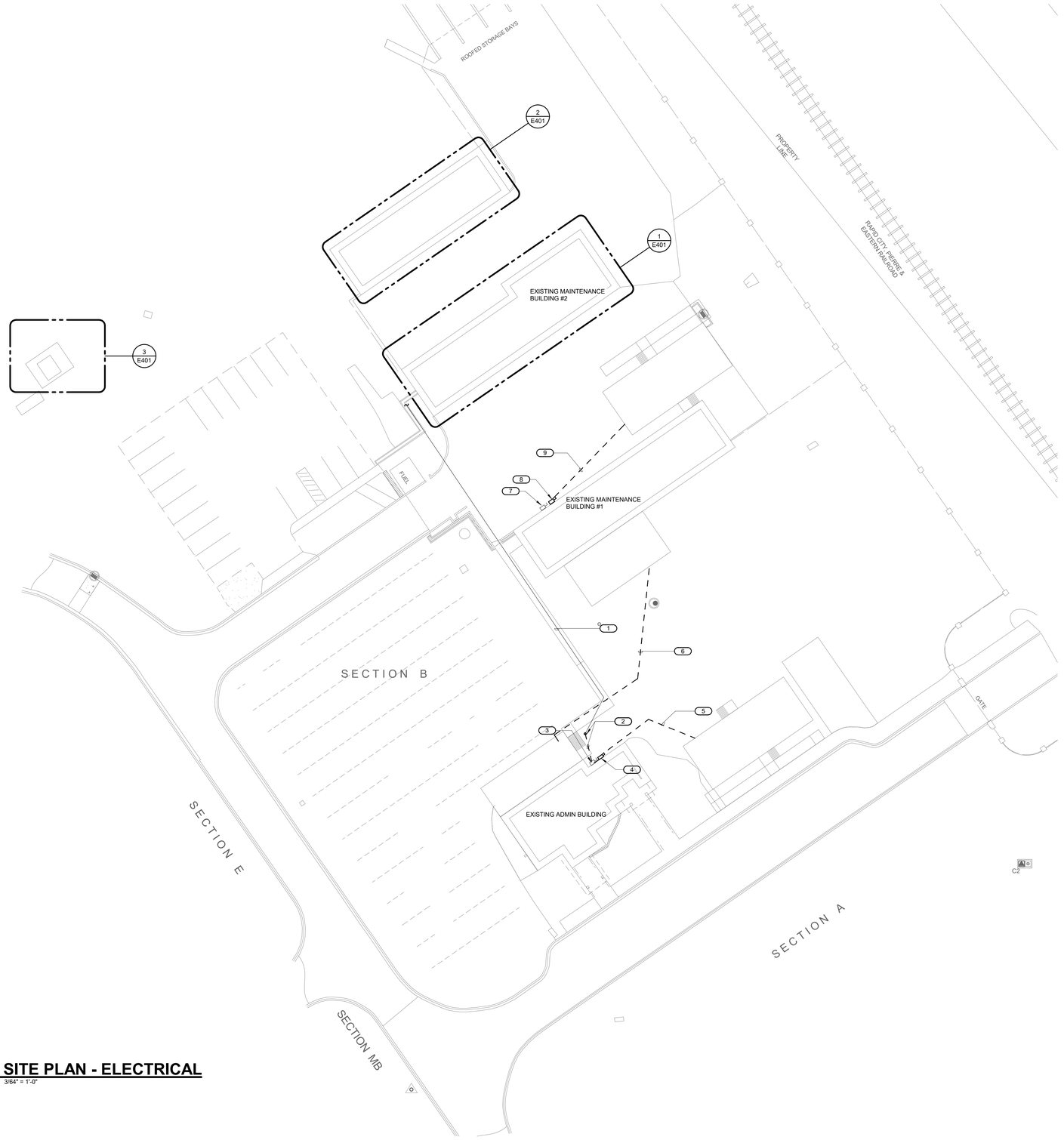

KEYED NOTES:

1. EXISTING UNDERGROUND ELECTRICAL SERVICE FOR ADMIN BUILDING TO REMAIN.
2. INTERCEPT EXISTING UNDERGROUND ELECTRICAL SERVICE AND EXTEND TO NEW LOCATION AS SHOWN.
3. NEW LOCATION OF EXISTING MAIN DISCONNECT SWITCH FOR ADMIN BUILDING. REFER TO 1/E400 FOR EXACT LOCATION.
4. NEW 2P/200AS/125AF/NEMA 3R DISCONNECT SWITCH FOR TEMPORARY TRAILER.
5. UNDERGROUND FEED TO NEW TEMPORARY TRAILER LOCATION. VERIFY TERMINATION LOCATION WITH PRE-FAB TRAILER MANUFACTURER. REFER TO 3/E500 FOR MORE INFORMATION.
6. 2" UNDERGROUND CONDUIT FOR FIRE ALARM CABLING FROM FIRE ALARM CONTROL PANEL IN ADMIN BUILDING TO DEVICES IN MAINTENANCE BUILDING. RE-CONNECT DEVICES TO EXISTING FIRE ALARM CONTROL PANEL IN ADMIN BUILDING.
7. EXISTING MAIN DISCONNECT FOR MAINTENANCE BUILDING #1.
8. NEW 2P/200AS/125AF/NEMA 3R DISCONNECT SWITCH FOR TEMPORARY TRAILER.
9. UNDERGROUND FEED TO NEW TEMPORARY TRAILER LOCATION. VERIFY TERMINATION LOCATION WITH PRE-FAB TRAILER MANUFACTURER. REFER TO 4/E500 FOR MORE INFORMATION.

NORTH

1 SITE PLAN - ELECTRICAL

3/64" = 1'-0"

Revisions:	Date:

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VA U.S. Department of Veterans Affairs

Drawing Title: SITE PLAN - ELECTRICAL	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number:
Location: STURGIS, SOUTH DAKOTA	Drawing Number: E101
Issue Date: 10/31/22	Checked: Checker
	Drawn: Author
	Dwg. 66 OF 84

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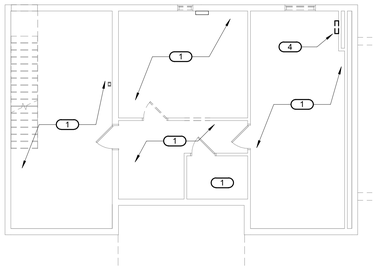
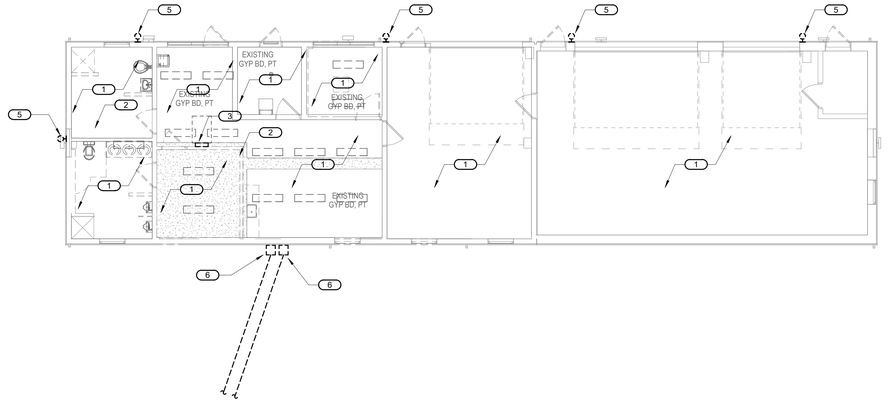


3 BASEMENT FLOOR DEMOLITION - ELECTRICAL - ADMINISTRATION

1/8" = 1'-0"



2 FIRST FLOOR DEMOLITION - ELECTRICAL - MAINTENANCE

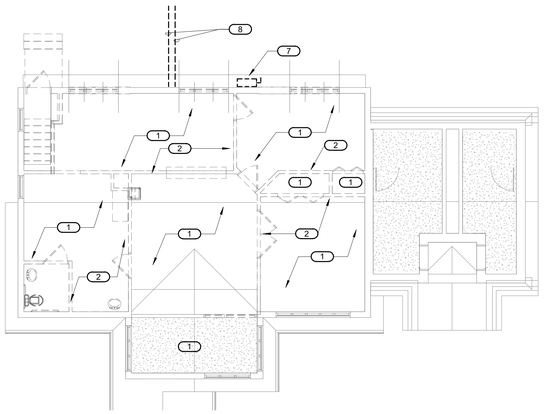
1/8" = 1'-0"

DEMOLITION GENERAL NOTES:

1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE FROM DOCUMENTS PROVIDED TO THE ENGINEER. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF DEMOLITION THAT WILL BE REQUIRED. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK. DEVICES ON EXISTING WALLS TO REMAIN OR TO BE REMOVED MAY NOT APPEAR ON DRAWINGS DUE TO EXISTING FURNITURE, BOOKCASES, EQUIPMENT, ECT. BLOCKING VIEW DURING SITE VISIT.
2. CONTRACTOR SHALL STUDY ALL PLANS AND UNDERSTAND THE FULL SCOPE OF CONSTRUCTION PRIOR TO BIDS AND BEGINNING ANY WORK. CONTRACTOR SHALL UNDERSTAND THAT THE BUILDING WILL BE RENOVATED IN PHASES AND THAT ELECTRICAL EQUIPMENT SERVING THOSE ARES THAT WILL BE RENOVATED IN LATER PHASES SHALL BE RECONNECTED AND RE-ENERGIZED TO MAINTAIN POWER TO THOSE AREAS IF DISRUPTED DURING PHASED CONSTRUCTION. CONTRACTOR SHALL UNDERSTAND THAT THE ELECTRICAL EQUIPMENT SERVING PORTIONS OF THE BUILDING THAT ARE OUTSIDE OF THIS PROJECT'S SCOPE SHALL REMAIN AND BE RECONNECTED AND RE-ENERGIZED TO MAINTAIN POWER TO THOSE AREAS IF DISRUPTED DURING PHASED CONSTRUCTION.
3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT WILL AFFECT OTHER SYSTEMS WITHIN THE LIMIT OF NEW CONSTRUCTION OR OTHER AREAS OF THE BUILDING. CONTRACTOR SHALL VERIFY WITH THE OWNER IF THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION, AND THEREFORE UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
4. PRIOR TO THE REMOVAL OF ANY EQUIPMENT, CONTRACTOR MUST VERIFY THE ORIGIN AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN DOWNUP STREAM. (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACTOR LIMITS). IF REMOVAL OF ANY ITEMS DOES DISRUPT OTHER SYSTEMS DOWNUP STREAM, CONTRACTOR SHALL EXTEND, RECONNECT TO NEW OR RELOCATED EQUIPMENT, AND MAINTAIN FULL FUNCTIONALITY OF SYSTEM.
5. REFER TO HVAC & PLUMBING DRAWINGS FOR OTHER DEMOLITION INFORMATION. DISCONECT AND REMOVE ALL WIRE, CONDUIT, AND DISCONNECT SWITCHES SERVING EQUIPMENT TO BE REMOVED AND LABEL CIRCUIT BREAKER 'SPARE'.
6. REFER TO TECHNOLOGY DRAWINGS FOR EXISTING DATA AND TELEPHONE OUTLETS TO BE DISCONNECTED AND REMOVED.

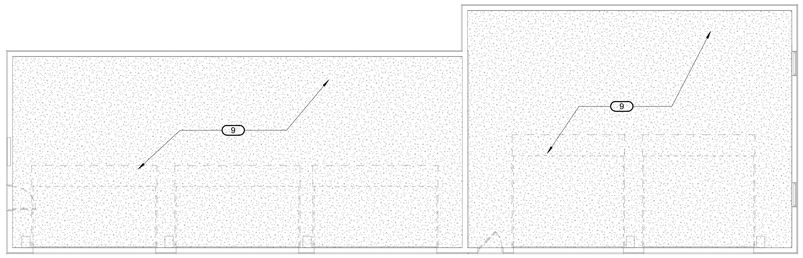
DEMOLITION KEYED NOTES:

1. EXISTING LIGHT FIXTURES THIS AREA TO BE DISCONNECTED AND REMOVED. DISCONNECT AND REMOVE ALL ASSOCIATED WIRE, CONDUIT, AND CONTROLS.
2. ALL ELECTRICAL DEVICES IN PARTITIONS TO BE REMOVED SHALL BE DISCONNECTED AND REMOVED. DISCONNECT AND REMOVE ALL ASSOCIATED WIRE AND CONDUIT.
3. EXISTING PANEL 'B' TO BE RELOCATED. REFER TO SHEET E211 FOR NEW LOCATION. EXTEND ALL LIVE EXISTING CIRCUITS TO NEW LOCATION AND RE-CONNECT.
4. EXISTING BASEMENT PANEL TO BE DISCONNECTED. ALL LIVE EXISTING CIRCUITS TO BE EXTENDED TO NEW PANEL LOCATED IN MECHDATA ROOM. REFER TO 1/E400FOR NEW LOCATION AND NOTE BY SYMBOL #1 SHEET E400 FOR MORE INFORMATION.
5. EXISTING EXTERIOR LIGHT FIXTURES TO BE DISCONNECTED AND REMOVED. DISCONNECT AND REMOVE ALL ASSOCIATED WIRE AND CONDUIT. MAINTAIN CIRCUIT AND CONTROLS FOR RE-USE.
6. EXISTING INCOMING CONDUITS AND PULL BOXES TO BE RELOCATED TO NEW LOCATION. REFER TO 3/E211 FOR NEW LOCATION. DEMOLISH EXISTING CONDUITS LOCATED UNDER NEW ADDITION AS TO NOT INTERFERE WITH NEW CONSTRUCTION.
7. EXISTING MAIN DISCONNECT SWITCH FOR ADMINISTRATIVE BUILDING TO BE RELOCATED. REFER TO SHEET E211 NOTE BY SYMBOL #7 FOR NEW LOCATION.
8. EXISTING COMMUNICATION AND FIRE ALARM CONDUITS FROM ADMINISTRATIVE BUILDING TO BE DEMOLISHED.
9. EXISTING SHOP LIGHTING THIS AREA TO BE DISCONNECTED AND REMOVED. DISCONNECT AND REMOVE ALL ASSOCIATED WIRE, CONDUIT, AND CONTROLS.



1 FIRST FLOOR DEMOLITION - ELECTRICAL - ADMINISTRATION

1/8" = 1'-0"



4 FIRST FLOOR DEMOLITION - ELECTRICAL - MAINTENANCE 2

1/8" = 1'-0"

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Drawing Title	FIRST FLOOR - DEMOLITION - ADMINISTRATION & MAINTENANCE
Approved:	
Phase	BID DOCUMENTS
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	Checker
Drawn	Author
Project Number	884-CM-3015
Building Number	
Drawing Number	E200
Dwg.	67 OF 84

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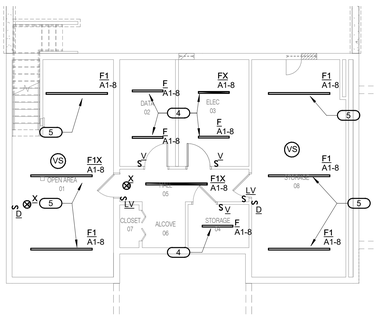
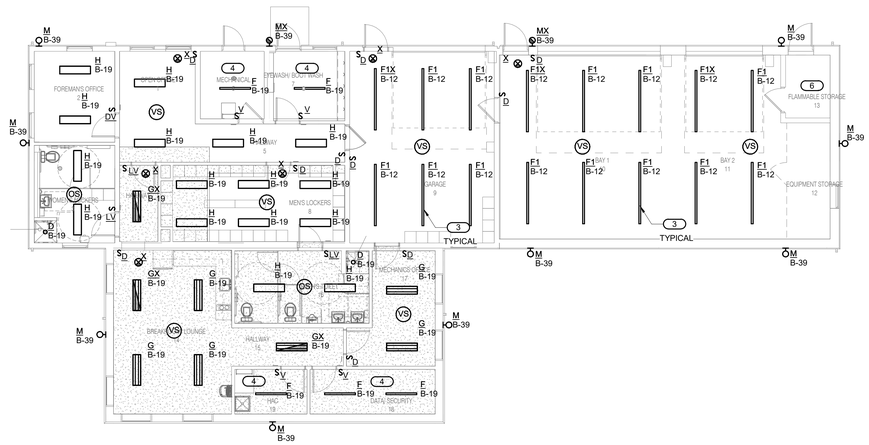


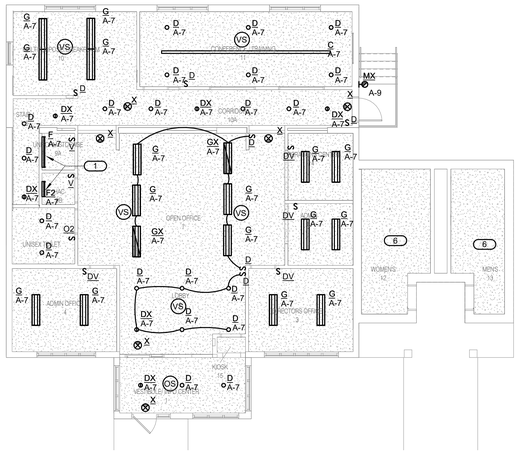
1 BASEMENT FLOOR - LIGHTING - ADMINISTRATION

1/8" = 1'-0"



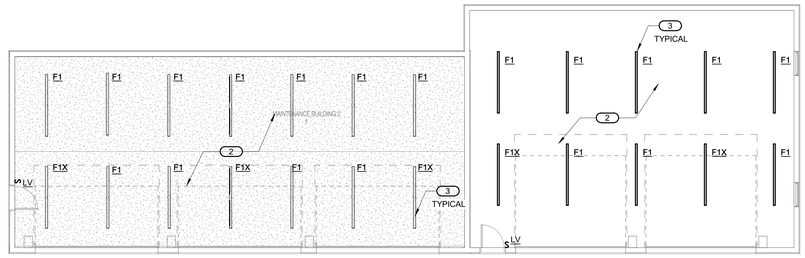
3 FIRST FLOOR - LIGHTING - MAINTENANCE

1/8" = 1'-0"



2 FIRST FLOOR - LIGHTING - ADMINISTRATION

1/8" = 1'-0"



4 FIRST FLOOR - LIGHTING - MAINTENANCE BUILDING 2

1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHT FIXTURES.
2. ALL EMERGENCY BATTERY DRIVERS AND EMERGENCY LIGHTS I.E. FIXTURES DESIGNATED WITH AN 'X' SUFFIX (SUCH AS 'AX') AND TYPE 'EM' AND EXIT SIGNS SHALL BE CIRCUITED TO UNSWITCHED HOT LEG OF ADJACENT LIGHTING CIRCUIT PER N.E.C. ARTICLES 700 AND 701, UNLESS OTHERWISE NOTED.

KEYED NOTES:

1. FIXTURE SHALL BE WALL MOUNTED AT 7'0" ABOVE FINISHED FLOOR TO BOTTOM OF FIXTURE.
2. CONNECT TO EXISTING LIGHTING CIRCUIT SERVING AREA WITH (2)#12,# 12G-3/4"C.
3. TYPE 'F1' LIGHT FIXTURES TO BE CHAIN HUNG AT 9'0" ABOVE FINISHED FLOOR TO BOTTOM OF FIXTURE.
4. TYPE 'F' LIGHT FIXTURES TO BE CHAIN HUNG AT 9'0" ABOVE FINISHED FLOOR TO BOTTOM OF FIXTURE.
5. TYPE 'F1' FIXTURES TO BE SURFACE MOUNTED.
6. EXISTING DEVICES THIS AREA TO REMAIN.

Revisions:	Date:

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Anderson Engineering of Minnesota, LLC | Proj # 16409

STAMP

REGISTERED PROFESSIONAL ENGINEER — 14630 ALEXANDER QUAST — SOUTH DAKOTA
10/31/2022

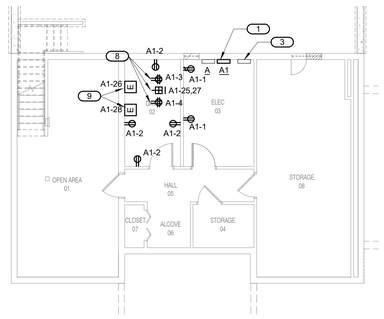
Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	FIRST FLOOR - LIGHTING - ADMINISTRATION & MAINTENANCE
Approved:	
Phase	BID DOCUMENTS
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	Checker
Drawn	Author
Project Number	884-CM-3015
Building Number	
Drawing Number	E300
Dwg.	68 OF 84

BIM 360://17001048.23 - NCA-Black Hills NC- Admin - Maint Bldg/MEP21_17001048.23_Black Hills NCA Maintenance - Admin Bldg_C.rvt
10/31/2022 2:28:28 PM

VA FORM 08 - 6231



NORTH 1

BASEMENT FLOOR - POWER - ADMINISTRATION

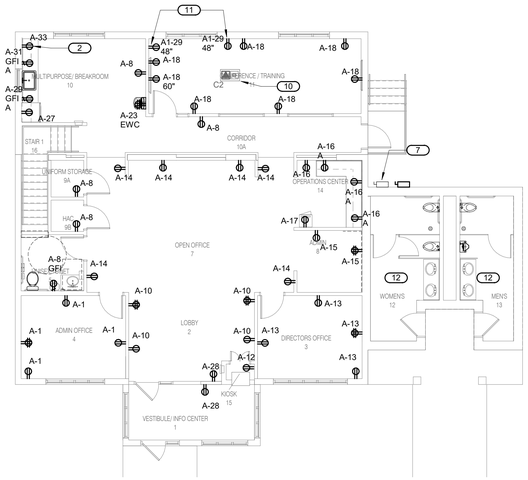
1/8" = 1'-0"

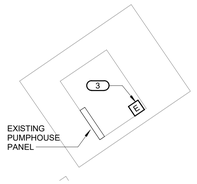
GENERAL NOTES:

1. REFER TO SHEET E000 FOR LEGEND, ABBREVIATIONS, AND PROJECT NOTES.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE GENERAL EXTENT OF WORK. THE CONTRACTOR SHALL PROVIDE ALL PULL BOXES, JUNCTION BOXES, AND ALL MATERIALS AND LABOR FOR A COMPLETE AND FUNCTIONAL SYSTEM.
3. REFER TO HVAC CIRCUITING SCHEDULE FOR MECHANICAL EQUIPMENT CONNECTIONS, DISCONNECT, AND BRANCH CIRCUIT REQUIREMENTS.
4. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH APPROVED SHOP DRAWING SUBMITTALS PRIOR TO ROUGH IN. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND CONTRACT DRAWINGS.
5. COORDINATE MOUNTING HEIGHTS AND ROUGH IN REQUIREMENTS OF DEVICES MOUNTED OVER COUNTERTOPS, IN MILLWORK, AND PROVIDED TO POWER EQUIPMENT PROVIDED BY OTHERS WITH ARCHITECTURAL ELEVATIONS AND OTHER TRADES INSTALLING THE WORK.
6. CONTRACTOR SHALL DERATE CONDUCTORS AS REQUIRED BY N.E.C. WHEN GROUPED IN COMMON RACEWAY.
7. ALL DEVICES WITH GFI SHALL BE INDEPENDENT GFI DEVICES. WIRING THROUGH IS NOT PERMITTED.
8. REFER TO TECHNOLOGY DRAWINGS AND DETAILS FOR REQUIREMENTS FOR GROUNDING REQUIREMENTS, ADDITIONAL BACKBOXES AND SIZES, CONDUITS AND SIZES, CONDUIT SLEEVES AND SIZES FOR DATA CABLES, CABLE TRAYS AND ROUTING, AND ADDITIONAL INFRASTRUCTURE REQUIREMENTS FOR THE COMPLETE INSTALLATION OF THE DATA NETWORK SYSTEMS, PROJECTOR SYSTEMS, FLAT PANEL DISPLAYS, SURVEILLANCE CAMERAS SYSTEMS, DOOR ACCESS SYSTEMS, ETC..
9. ELECTRICAL DEVICES MOUNTED ABOVE COUNTERS SHALL BE MOUNTED ABOVE BACKSPLASH.
10. ALL RECEPTACLES WITHIN 6'-0" OF SINKS, IN RESTROOMS AND KITCHEN AREA SHALL BE GFI PROTECTED.
11. ALL LOW VOLTAGE WIRING IN EXPOSED CEILING AREAS SHALL BE IN CONDUIT.

KEYNOTES:

1. NEW PANEL 'A1'. EXTEND ALL LIVE CIRCUITS IN BASEMENT PANEL TO BE DEMOLISHED AND RECONNECT.
2. RECEPTACLE MOUNTED IN CASEWORK FOR MICROWAVE. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS AND DETAILS PRIOR TO ROUGH IN.
3. EXISTING SIMPLEX 4007 FIRE ALARM CONTROL PANEL TO REMAIN.
4. EXISTING CONDUIT SERVING OUTDOOR CONDENSING UNIT TO BE RELOCATED TO NEW LOCATION. EXTEND WIRE AND CONDUIT AS REQUIRED AND RE-CONNECT.
5. NEW LOCATION OF RELOCATED CONDUIT AND PULLBOX FOR FIRE ALARM CABLING. EXTEND EXISTING WIRE AND CONDUIT AND RECONNECT TO EXISTING SYSTEMS INSIDE MAINTENANCE BUILDING.
6. CONNECT NEW RECEPTACLE TO EXISTING CIRCUIT SERVING RECEPTACLE TO REMAIN WITH (2)#12,#12G-3/4"C. CONTRACTOR TO VERIFY EXISTING LOAD NO MORE THAN 7 RECEPTACLE PER CIRCUIT.
7. EXISTING MAIN DISCONNECT FOR ADMINISTRATIVE BUILDING TO BE RE-LOCATED TO NEW LOCATION AS SHOWN. EXTEND ALL EXISTING WIRE AND CONDUIT TO NEW LOCATION AND RE-CONNECT.
8. QUAD RECEPTACLES AND NEMA L6-30R RECEPTACLE MOUNTED TO TOP OF LADDER RACK.
9. ELECTRICAL CONNECTIONS FOR INTRUSION PANEL AND ACCESS CONTROL PANEL. VERIFY FINAL LOCATION WITH RESIDENT ENGINEER.
10. FLOOR BOX WITH (1) DUPLEX RECEPTACLE. REFER TO TECHNOLOGY PLANS FOR DATA CONDUIT REQUIREMENTS.
11. RECEPTACLE MOUNTED AT 48" ABOVE FINISHED FLOOR FOR AV DEVICES. REFER TO TECHNOLOGY PLANS FOR ADDITIONAL INFORMATION.
12. EXISTING DEVICES THIS AREA TO REMAIN.


11
A-33
2
A-31
GFI
A
A-29
GFI
A
A-27
A1-29
48"
A1-29
48"
A-18
A-18
A-18
A-8
A-18
60"
A-18
A-18
A-18
A-8
A-23
EWC
C-2
10
MULTIPURPOSE/ BREAKROOM
10
CONFERENCE / TRAINING
11
STAIR 1
16
CORRIDOR
10A
7
A-16
A
A-16
A
A-16
A



3 FIRST FLOOR - POWER- PUMP HOUSE

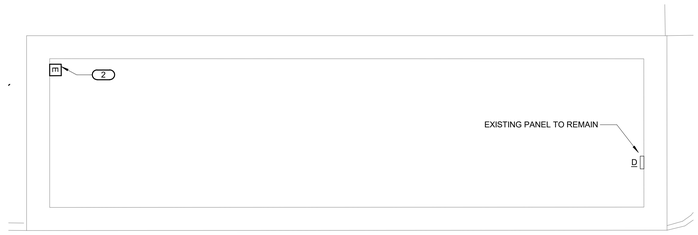
1/8" = 1'-0"

1 FIRST FLOOR - POWER - MAINTENANCE BUILDING 2

1/8" = 1'-0"

KEYNOTES:

1. ELECTRICAL CONNECTIONS FOR SECURITY PANEL. VERIFY FINAL LOCATION WITH RESIDENT ENGINEER. CONNECT TO EXISTING SPARE 20A/1P CIRCUIT BREAKER IN PANEL 'C' WITH (2)#12,#12G-3/4"C.
2. ELECTRICAL CONNECTIONS FOR SECURITY PANEL. VERIFY FINAL LOCATION WITH RESIDENT ENGINEER. CONNECT TO NEW 20A/1P CIRCUIT BREAKER (MATCH EXISTING) IN PANEL 'D' WITH (2)#12,#12G-3/4"C.
3. ELECTRICAL CONNECTIONS FOR SECURITY PANEL. VERIFY FINAL LOCATION WITH RESIDENT ENGINEER. CONNECT TO NEW 20A/1P CIRCUIT BREAKER (MATCH EXISTING) IN EXISTING PUMPHOUSE PANEL WITH (2)#12,#12G-3/4"C.



2 FIRST FLOOR - POWER - VEHICLE STORAGE

1/8" = 1'-0"

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER
14680
ALEXANDER QUAST
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: BLACK HILLS AUXILLARY BUILDINGS - POWER

Approved:

Phase: BID DOCUMENTS

NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/22

Checked: Checker

Drawn: Author

Project Number: 884-CM-3015

Building Number:

Drawing Number: E401

Dwg. 70 OF 84

VA FORM 08 - 6231

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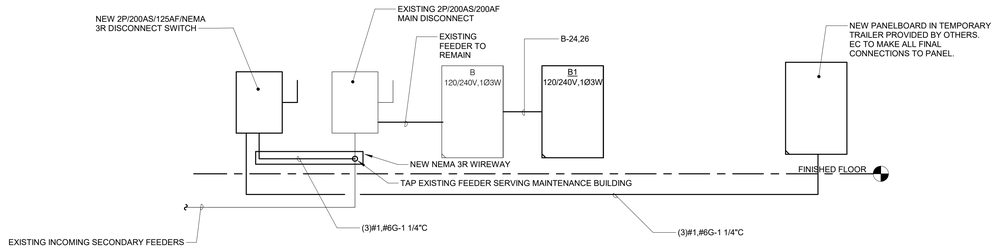
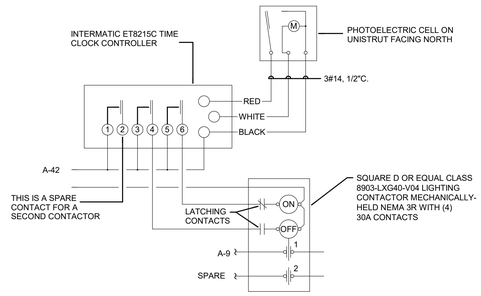


4 PARTIAL ELECTRICAL RISER DIAGRAM - MAINTENANCE BUILDING

12" = 1'-0"

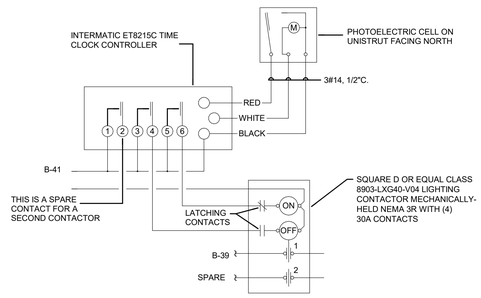


NOTES:

1. NEUTRALS AND GROUNDS NOT SHOWN FOR CLARITY
2. CONTACTOR MOUNTED IN NEMA 3R ENCLOSURE.
3. PROVIDE OVERRIDE SWITCH TO OVERRIDE LIGHTS "ON/OFF. LOCATION TO BE VERIFIED WITH OWNER.
4. CONTACTOR CONTROLLED VIA PHOTO-CELL "ON" AND TIMECLOCK OFF. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

5 LIGHTING CONTROL DETAIL ADMIN BUILDING

NO SCALE

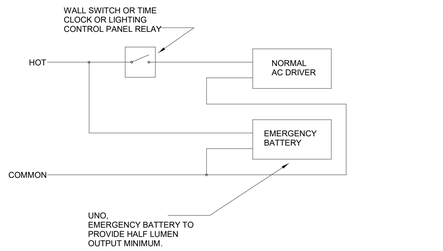


NOTES:

1. NEUTRALS AND GROUNDS NOT SHOWN FOR CLARITY
2. CONTACTOR MOUNTED IN NEMA 3R ENCLOSURE.
3. PROVIDE OVERRIDE SWITCH TO OVERRIDE LIGHTS "ON/OFF. LOCATION TO BE VERIFIED WITH OWNER.
4. CONTACTOR CONTROLLED VIA PHOTO-CELL "ON" AND TIMECLOCK OFF. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

6 LIGHTING CONTROL DETAIL MAINT. BUILDING

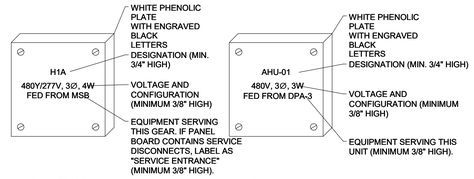
NO SCALE



NOTE:
LAMP LEADS NOT SHOWN.

1 EMERGENCY BATTERY WIRING DETAIL

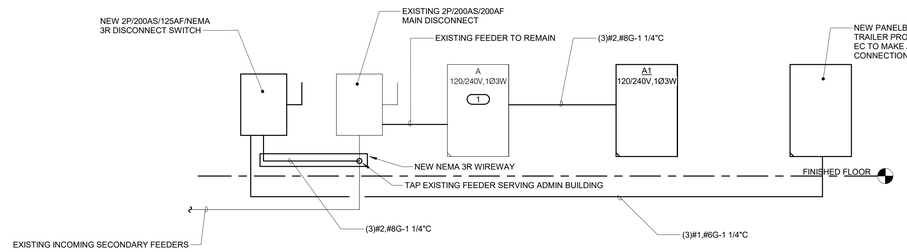
NO SCALE



NOTE:
ATTACH SECURELY WITH STAINLESS STEEL SCREWS. NON-CORROSIVE POP RIVETS ARE ACCEPTABLE. ADHESIVE ATTACHMENT IS NOT ACCEPTABLE.

2 EQUIPMENT IDENTIFICATION DETAIL

NO SCALE



KEYNOTES:
1. CONNECT NEW PANEL 'A1' TO EXISTNG 100A/2P CIRCUIT BREAKER MADE AVAILABLE THROUGH DEMOLITION OF EXISTING BASEMENT PANEL.

3 PARTIAL ELECTRICAL RISER DIAGRAM - ADMIN BUILDING

NO SCALE

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER 14680 ALEXANDER QUAST SOUTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL DETAILS	Phase: BID DOCUMENTS	Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
Approved:	NON-SPRINKLERED	Location: STURGIS, SOUTH DAKOTA	Building Number:
		Issue Date: 10/31/22 / Checked: Checker / Drawn: Author	Drawing Number: E500
			Dwg. 71 OF 84

VA FORM 08 - 6231

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HVAC & PLUMBING CIRCUITING SCHEDULE

DESIGNATION	CIRCUIT	DISCONNECT
CAB-1	A-34/36	NOTE #2
AHU-2	A-35/37	NOTE #2
AHU-3	B-38	NOTE #2
CU-AHU-2	A-38/40	2P/30AS/NF/NEMA 3R & NOTE #3
CU-AHU-3	B-40/42	2P/30AS/NF/NEMA 3R & NOTE #3
SS-1	B-32/34	2P/30AS/NF/NEMA 3R & NOTE #3
SS-2	A-39/41	2P/30AS/NF/NEMA 3R & NOTE #3
EF-1	A-30	NOTE #2
EF-2	A-30	NOTE #2
EF-3	B-18	NOTE #2
EF-4	B-18	NOTE #2
EF-5	B-18	NOTE #2
EF-6	B-36	NOTE #2
UH-1	B-37	NOTE #2

NOTES:
1. REFER TO MECHANICAL PLANS FOR EXACT LOCATION OF ALL EQUIPMENT.
2. DISCONNECT SWITCH FURNISHED WITH UNIT.
3. ASSOCIATED FAN COIL/CASSETTE UNIT BELOW SERVED VIA POWER FEED PROVIDED FOR CONDENSING UNIT/HEAT PUMP. FROM CU/HP ROUTE 1" CONDUIT TO FCU/CASETTE BELOW AND INTERWIRE AS REQUIIRED. VERIFY REQUIREMENTS WITH MECHANICAL CONTRACTOR AND REFER TO MECHANICAL PLANS FOR UNIT LOCATION BELOW.

BRANCH CIRCUIT SCHEDULE

OCP	CIRCUIT	DISTANCE	OCP	CIRCUIT	DISTANCE
20/1	2 #12, #12G -3/4"C	55	70/1	2 #4, #8G -1"C	126
20/2	2 #12, #12G -3/4"C	97	70/2	2 #4, #8G -1"C	173
20/2N	3 #12, #12G -3/4"C	97	70/2N	3 #4, #8G -1"C	173
20/3	3 #12, #12G -3/4"C	112	70/3	3 #4, #8G -1"C	253
20/3N	4 #12, #12G -3/4"C	112	70/3N	4 #4, #8G -1 1/4"C	253
30/1	2 #10, #10G -3/4"C	59	80/1	2 #4, #8G -1"C	139
30/2	2 #10, #10G -3/4"C	64	80/2	2 #4, #8G -1"C	191
30/2N	3 #10, #10G -3/4"C	64	80/2N	3 #4, #8G -1"C	191
30/3	3 #10, #10G -3/4"C	119	80/3	3 #4, #8G -1"C	280
30/3N	4 #10, #10G -3/4"C	119	80/3N	4 #4, #8G -1 1/4"C	280
40/1	2 #8, #10G -3/4"C	71	90/1	2 #3, #8G -1"C	156
40/2	2 #8, #10G -3/4"C	77	90/2	2 #3, #8G -1 1/4"C	215
40/2N	3 #8, #10G -3/4"C	77	90/2N	3 #3, #8G -1 1/4"C	215
40/3	3 #8, #10G -3/4"C	143	90/3	3 #3, #8G -1 1/4"C	312
40/3N	4 #8, #10G -1"C	143	90/3N	4 #3, #8G -1 1/4"C	312
50/1	2 #8, #10G -3/4"C	88	100/1	2 #3, #8G -1"C	177
50/2	2 #8, #10G -3/4"C	99	100/2	2 #3, #8G -1 1/4"C	243
50/2N	3 #8, #10G -3/4"C	99	100/2N	3 #3, #8G -1 1/4"C	243
50/3	3 #8, #10G -3/4"C	176	100/3	3 #3, #8G -1 1/4"C	354
50/3N	4 #8, #10G -1"C	176	100/3N	4 #3, #8G -1 1/4"C	354
60/1	2 #6, #10G -3/4"C	116			
60/2	2 #6, #10G -3/4"C	127			
60/2N	3 #6, #10G -1"C	127			
60/3	3 #6, #10G -1"C	233			
60/3N	4 #6, #10G -1"C	233			

NOTES:
1. ALL BRANCH CIRCUITS ARE COPPER.
2. VOLTAGE DROP IS BASED ON 3% FOR BRANCH CIRCUITS.
3. FOR OCPS NOT LISTED, USE NEXT LARGER SIZE.
4. 'N' DENOTES A NEUTRAL LINE.
5. ALL DISTANCES ARE CALCULATED AT 120/208V. FOR 277/480V, DOUBLE VALUES FOR AN ESTIMATED DISTANCE.

EXISTING PANEL NAME: A

TYPE: NEMA PB 1
MOUNTING: SURFACE
FED FROM: UTILITY
SCCR: EXISTING
LOCATION: BASEMENT

SOLID NEUTRAL
GROUND BUS

CONNECTED 45 kVA
MAIN: 225A MLO
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
DEMAND: 39.12 kVA

Panel Notes: PANELBOARD IS EXISTING TO REMAIN. PROVIDE NEW BREAKERS AS REQUIRED TO SERVE NEW LOADS. PROVIDE UPDATED TYPEWRITTEN PANEL SCHEDULE AT COMPLETION OF PROJECT.

	CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P		A			B			OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
E	1	RECEPT. ADMIN OFFICE	20 A	1		900	0				--	1	20 A	EXISTING EXHAUST FAN	2	
	3	EXISTING RR. HEAT	40 A	2	--			2000	0		--	1	20 A	EXISTING LIGHTS	4	
--	5	--	--	--	--	2000	0				--	1	20 A	EXISTING LIGHTS	6	
E	7	LIGHTING	20 A	1				1569	900			1	20 A	RECEPT. CORRIDOR/RR	8	E
	9	EXISTING CANOPY LIGHTS	20 A	1	--	1000	1080					1	20 A	RECEPT. LOBBY	10	E
	11	EXISTING ENTRY RECEPTACLES	20 A	1	--			180	180			1	20 A	RECEPT. KIOSK	12	E
E	13	RECEPT. DIRECTOR OFFICE	20 A	1		900	1080					1	20 A	RECEPT. OPEN OFFICE	14	E
E	15	RECEPT. ADMIN	20 A	1				540	720			1	20 A	RECEPT. OPS CENTER	16	E
E	17	RECEPT. OP CENTER	20 A	1		180	1260					1	20 A	RECEPT. CONFERENCE	18	E
	19	EXISTING AC UNIT	20 A	2	--			3750	0		--	1	20 A	EXISTING CIRC PUMP	20	
--	21	--	--	--	--	3750	0				--	1	20 A	EXISTING BOILER	22	
E	23	EWC (NOTE #1)	20 A	1				360	7920			2	100 A	PANEL 'A1'	24	E
	25	EXISTING SPARE	20 A	1	--	0	7428				--	--	--	--	26	--
E	27	REFRIGERATOR (NOTE #1)	20 A	1				180	360			1	20 A	RECEPT. LOBBY	28	E
E	29	RECEPT. BREAK ROOM	20 A	1		180	400					1	20 A	EF-1, EF-2	30	E
	31	RECEPT. BREAK ROOM	20 A	1				180	500		--	1	20 A	EXISTING FIRE ALARM PANEL	32	
N	33	MICROWAVE (NOTE #1)	20 A	1		180	2500					2	30 A	CAB-1	34	N
N	35	AHU-2	20 A	2				0	2500		--	--	--	--	36	--
--	37	--	--	--	--	0	0					2	20 A	CU-AHU-2	38	N
N	39	SS-2	20 A	2				0	0		--	--	--	--	40	--
--	41	--	--	--	--	0	300				--	1	20 A	LIGHTING CONTACTOR	42	
			Total Load:			23.14 kVA		21.84 kVA								
			Total Amps:			192.81		181.99								

[Key*:]
1. PROVIDE GFI BREAKER
2. 'E' INDICATES EXISTING BREAKER TO BE RE-USED. 'N' INDICATES FURNISH AND INSTALL NEW BREAKER (MATCH EXISTING)

PANEL NAME: A1

TYPE: NEMA PB 1
MOUNTING: SURFACE
FED FROM: PANEL 'A'
SCCR: 10 kA
LOCATION: ELEC 03

SOLID NEUTRAL
GROUND BUS

CONNECTED 15.3 kVA
MAIN: 100A MLO
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
DEMAND: 12.85 kVA

Panel Notes: EXTEND ALL LIVE EXISTING LOADS TO REMAIN TO NEW PANEL LOCATION AND RE-CONNECT.

	CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P		A			B			OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
	1	RECEPT. ELEC ROOM	20 A	1		360	720					1	20 A	RECEPT. DATA ROOM	2	
	3	RECEPT. DATA RACK	20 A	1				360	360			1	20 A	RECEPT. DATA RACK	4	
	5	EXISTING RECEPTACLES	20 A	1	--	360	360				--	1	20 A	EXISTING RECEPTACLES	6	
	7	EXISTING RECEPTACLES	20 A	1	--			360	718		--	1	20 A	BASEMENT LIGHTING	8	
	9	EXISTING RECEPTACLES	20 A	1	--	360	500				--	1	20 A	EXISTING FIRE ALARM PANEL	10	
	11	EXISTING RECEPTACLES	20 A	1	--			540	540		--	1	20 A	EXISTING RECEPTACLES	12	
	13	EXISTING AIR HANDLER	20 A	2	--	2000	0				--	1	20 A	EXISTING SPARE	14	
--	15	--	--	--	--			2000	0		--	1	20 A	EXISTING SPARE	16	
	17	EXISTING RECEPTACLE	20 A	1	--	360	540				--	1	20 A	EXISTING RECEPTCLES	18	
	19	EXISTING LOAD	20 A	1	--			330	360		--	1	20 A	EXISTING RECEPTCLES	20	
	21	EXISTING TELECOM EQUIPMENT	20 A	1	--	500	1500				--	2	20 A	EXISTING CONDENSING UNIT	22	
	23	EXISTING RECEPTACLES	20 A	1	--			360	1500		--	--	--	--	24	--
	25	RACK TWIST LOCK	20 A	2		0	0					1	20 A	ACCESS CONTROL PANEL	26	
--	27	--	--	--	--			0	0			1	20 A	INTRUSION PANEL	28	
	29	AV CONFERENCE ROOM	20 A	1		360	0				--	1	20 A	SPARE	30	
	31	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	32	
	33	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	34	
	35	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	36	
	37	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	38	
	39	SPARE	20 A	1	--			0	0		--	1	20 A	SPARE	40	
	41	SPARE	20 A	1	--	0	0				--	1	20 A	SPARE	42	
			Total Load:			7.92 kVA		7.43 kVA								
			Total Amps:			66		61.9								

[Key*:]

EXISTING PANEL NAME: B

TYPE: NEMA PB 1
MOUNTING: RECESSED
FED FROM: UTILITY
SCCR: EXISTING
LOCATION: MAINTENANCE

SOLID NEUTRAL
GROUND BUS

CONNECTED 16.9 kVA
MAIN: 200A MLO
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
DEMAND: 16.87 kVA

Panel Notes: PANELBOARD IS EXISTING TO REMAIN. PROVIDE NEW BREAKERS AS REQUIRED TO SERVE NEW LOADS. PROVIDE UPDATED TYPEWRITTEN PANEL SCHEDULE AT COMPLETION OF PROJECT.

	CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P		A			B			OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
	1	EXISTING LIGHTING	20 A	1	--	0	0				--	1	20 A	EXISTING LIGHTING	2	
	3	EXISTING UNIT HEATERS	20 A	1	--			0	0		--	1	20 A	EXISTING RECEPTACLES	4	
	5	EXISTING RECEPTACLES	20 A	1	--	0	0				--	1	20 A	EXISTING RECEPTACLES	6	
	7	EXISTING WELDER...	20 A	2	--			0	0		--	1	20 A	EXISTING OH DOOR	8	
--	9	--	--	--	--	0	0				--	1	20 A	EXISTING OH DOOR	10	
	11	EXISTING RECEPTACLES	20 A	1	--			0	1209			1	20 A	LIGHTING	12	E
	13	EXISTING OH DOOR	20 A	1	--	0	720					1	20 A	RECEPT. MECH OFICE	14	E
E	15	RECEPT. MENS TOILET	20 A	1				180	180			1	20 A	RECEPT. WOMEN LOCKER	16	E
	17	EXISTING RECEPTACLES	20 A	1	--	0	0					1	20 A	EF-3, EF-4, EF-5	18	E
E	19	LIGHTING	20 A	1				1460	1260			1	20 A	RECEPT. MENS LOCKER	20	E
	21	SPARE	20 A	1	--	0	720					1	20 A	RECEPT. FOREMAN OFFICE	22	E
	23	EXISTING AC UNIT	20 A	2	--			0	5556			2	100 A	PANEL 'B1'	24	N
--	25	--	--	--	--	0	4476				--	--	--	--	26	--
	27	EXISTING FURNACE	20 A	1	--			0	0		--	2	20 A	EXISTING AIR COMPRESSOR	28	
	29	EXISTING WELDING HOOD	20 A	1	--	0	0				--	--	--	--	30	--
	31	EXISTING OH DOOR RELAY	20 A	1	--			0	0			2	20 A	SS-1	32	N
	33	EXISTING WATER HEATER	20 A	2	--	0	0				--	--	--	--	34	--
--	35	--	--	--	--			0	0			1	20 A	EF-6	36	N
N	37	UH-1	20 A	1		500	0					1	20 A	AHU-3	38	N
	39	EXTERIOR LIGHTING	20 A	1				367	0			2	20 A	CU-AHU3	40	N
	41	LIGHTING CONTACTOR	20 A	1	--	300	0				--	--	--	--	42	--
			Total Load:			6.72 kVA		10.21 kVA								
			Total Amps:			55.97		85.1								

[Key*:]
1. PROVIDE GFI BREAKER
2. 'E' INDICATES EXISTING BREAKER TO BE RE-USED. 'N' INDICATES FURNISH AND INSTALL NEW BREAKER (MATCH EXISTING)

PANEL NAME: B1

TYPE: NEMA PB 1
MOUNTING: RECESSED
FED FROM: PANEL B
SCCR: 10 KAIC
LOCATION: MAINTENANCE

SOLID NEUTRAL
GROUND BUS

CONNECTED 10 kVA
MAIN: 100A MLO
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
DEMAND: 10.03 kVA

Panel Notes:

	CKT NO.	LOAD DESCRIPTION	OVERCURRENT PROTECTION AMPS	P		A			B			OVERCURRENT PROTECTION P	AMPS	LOAD DESCRIPTION	CKT NO.	
	1	RECEPT. BREAK ROOM	20 A	1		180	0				--	1	20 A	SPARE	2	
	3	RECEPT. BREAK ROOM	20 A	1				180	0		--	1	20 A	SPARE	4	
	5	RECEPT. BREAK ROOM	20 A	1		360	0				--	1	20 A	SPARE	6	
	7	RECEPT. BREAK ROOM	20 A	1				180	0		--	1	20 A	SPARE	8	
	9	RECEPT. BREAKROOM	20 A	1		720	0				--	1	20 A	SPARE	10	
	11	EWH (NOTE #1)	20 A	1				360	0		--	1	20 A	SPARE	12	
	13	RECEPT. DATA	20 A	1		900	--				--	1	--	SPACE	14	--
	15	RECEPT. DATA RACK	20 A	1				360	--		--	1	--	SPACE	16	--
	17	DATA RACK TWIST LOCK	30 A	2		2496	--				--	1	--	SPACE	18	--
--	19	--	--	--	--			2496	--		--	1	--	SPACE	20	--
	21	INTRUSION PANEL	20 A	1		900	--				--	1	--	SPACE	22	--
	23	ACCESS CONTROL PANEL	20 A	1				900	--		--	1	--	SPACE	24	--
			Total Load:			5.56 kVA		4.48 kVA								
			Total Amps:			46.3		37.3								

[Key*:]

LED LUMINAIRE SCHEDULE

(DESC) DOOR:
FA - FLAT ALUMINUM
FS - FLAT STEEL
RA - REGRESSED ALUMINUM
RS - REGRESSED STEEL
FINISH:
PAF - PAINT AFTER FABRICATION
CFSA - COLOR-FINISH SELECTION BY ARCHITECT

DISTRIBUTION:
II - ANSI/IES TYPE 2 DISTRIBUTION
III - ANSI/IES TYPE 3 DISTRIBUTION
IV - ANSI/IES TYPE 4 DISTRIBUTION
V - ANSI/IES TYPE 5 DISTRIBUTION

BEAMWIDTH:
NSP - VERY NARROW SPOT
SP - SPOT
MD - MEDIUM
WD - WIDE
VWD - VERY WIDE
WW - WALL WASH

(L/L) LENS/LOUVER:
A - .125" ACRYLIC
B - BAFFLE/LOUVER
C - CLEAR ALZAK
F - FROSTED ACRYLIC
G - TEMPERED GLASS
K - KSH12 .125" ACRYLIC
K19 - KSH19 .156" ACRYLIC
M - MATTE DIFFUSE CLEAR
N - NONE
P - POLYCARBONATE
R - HIGH IMPACT DR ACRYLIC
SS - SEMI-SPECULAR CLEAR
O - OTHER (SEE DESCRIPTION)
[DESIGN SPECIFIC BLANKS]

(MTG) MOUNTING:
CL - CEILING SURFACE
CV - COVE
FR - FLANGED RECESSED
P - PERIMETER
PL - POLE
RE - RECESSED
SP - SUSPENDED
SU - SURFACE
UC - UNDER CABINET
WL - WALL
O - OTHER (SEE DESCRIPTION)

(WATT) PER: FIX - FIXTURE, FT - FOOT, LAMP

(TYPE) LED
LED - LIGHT EMITTING DIODE
TLED - TUBULAR LED LAMP
OLED - ORGANIC LED
DLED - DYNAMIC TUNABLE LED
RGB - COLOR CHANGING LED
RGBW - COLOR CHANGING + WHITE
RGBA - COLOR CHANGING + AMBER
RLED - RETROFIT LED
WLED - WARM DIM LED

(TYPE) DRIVER:
0-10V - 0-10V DIMMING
DALI - DIGITAL ADDRESSABLE
DMX - DIGITAL MULTIPLEX
EB - ELECTRONIC
ELV - ELECTRONIC LOW VOLTAGE
EM - EMERGENCY BATTERY
HL - HIGH/LOW (100%/50%) STEP DIM
LINE - LINE VOLTAGE DIMMING
ML - MULTI-LEVEL SWITCHING
MV - MULTI-VOLTAGE ELECTRONIC
REM - REMOTE
O - OTHER (SEE DESCRIPTION)

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE MOUNTING HEIGHTS.

INTERIOR CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.
EXTERIOR CORRELATED COLOR TEMPERATURE4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.

ITEM	DESCRIPTION	L/L	MTG	DIMENSIONS L	W	H	DIA.	WATT ANSI WATTS	PER	LED TYPE	LED DELIVERED LUMENS (MIN)	DRIVER VOLTS	DRIVER TYPE	MANUFACTURER AND MODEL
C	RECESSED LINEAR LED, 479 LUMENS PER FOOT, FLUSH LENS, ALUMINUM HOUSING, FLANGE KIT FOR GYPBOARD CEILING MOUNTING AND DIMMING LED DRIVER.		RE	22'-0"	4"	2"		5 W	FT	LED	479 L/FT	120 V	0-10V	FINELITE #HP4R-D-22'-B-840-F-120-SC-FC-10%-SF
D	6" DIAMETER RECESSED LED DOWNLIGHT, 2000LUMEN OUTPUT, SEMI-SPECULAR ALZAK REFLECTOR, WHITE TRIM RING, ALUMINUM MOUNTING FRAME, AND DIMMABLE LED DRIVER		RE			9 1/2"	6"	20 W	FIX	LED	2000	120 V	0-10V	GOTHAM #EV06-40/20-AR-MWD-LSS-MVOLT-EZ10
DX	SIMILIAR TO TYPE 'D' EXCEPT WITH EMERGENCY BATTERY PACK		RE			9 1/2"	6"	20 W	FIX	LED	2000	120 V	0-10V	GOTHAM #EV06-40/20-AR-MWD-LSS-MVOLT-EZ10-ELSD
F	PENDANT MOUNTED LED LIGHT FIXTURE, FROSTED DIFFUSED LENS, STEEL HOUSING, WHITE FINISH, AIRCRAFT CABLE SUSPENSION AND DIMMABLE LED DRIVER		SP	4'-0"	2 3/4"	2 3/4"		34 W	FIX	LED	5000	120 V	0-10V	LITHONIA #ZLIN-L48-5000LM-FST-MVOLT-40K-80CRI-WH-ZACVH M100
F1	SIMILAR TO TYPE 'F' EXCEPT 8' LONG		SP	8'-0"	2 3/4"	2 3/4"		68 W	FIX	LED	10000	120 V	0-10V	LITHONIA #ZL1N-L96-10000LM-FST-MVOLT-40K-80CRI-WH-ZACVH
F1X	SIMILAR TO TYPE 'F1' EXCEPT WITH EMERGENCY BATTERY PACK		SP	8'-0"	2 3/4"	2 3/4"		68 W	FIX	LED	10000	120 V	0-10V	LITHONIA #ZL1N-L96-10000LM-FST-MVOLT-40K-80CRI-E15WLCP-WH-ZACVH
F2	SIMILAR TO TYPE 'F' EXCEPT 2' LONG		SP	2'-0"	2 3/4"	2 3/4"		17 W	FIX	LED	2500	120 V	0-10V	LITHONIA #ZL1N-L24-2500LM-FST-MVOLT-40K-80-WH
FX	SIMILIAR TO TYPE 'F' EXCEPT WITH EMERGENCY BATTERY PACK		SP	4'-0"	2 3/4"	2 3/4"		34 W	FIX	LED	5000	120 V	0-10V	LITHONIA #ZLIN-L48-5000LM-FST-MVOLT-40K-80CRI-E15WLCP-WH-ZACVH
G	RECESSED 1X4 INDIRECT LIGHT FIXTURE, 4800 LUMEN, ACRYLIC DIFFUSER, STEEL HOUSING, FLANGE KIT FOR MOUTING IN GYPBOARD CEILING AND DIMMABLE LED DRIVER.		RE	4'-0"	1'-0"	5 1/2"		40 W	FIX	LED	4800	120 V	0-10V	LITHONIA #BLT4-RB-A-48L-ADP-EZ1-LP840-DGA
GX	SIMILAR TO TYPE 'G' EXCEPT WITH EMERGENCY BATTERY PACK		RE	4'-0"	1'-0"	5 1/2"		40 W	FIX	LED	4800	120 V	0-10V	LITHONIA #BLT4-RB-A-48L-ADP-EZ1-LP840-DGA-EL14L
H	SURFACE MOUNTED 1X4 LOW PROFILE WRAPAROUND FIXTURE, POLYCARBONATE DIFFUSER, STEEL HOUSING, 5000 LUMEN PACKAGE AND DIMMING LED DRIVER.		RE	4'-0"	1'-0"	4 1/2"		49 W	FIX	LED	5000	120 V	0-10V	LITHONIA #FML4W-48-ALO6-SEF-840-MVOLT
M	LED WALL PACK, ACRYLIC LENS, DIE-CAST ALUMINUM HOUSING, 3000 LUMENS, LED DRIVER, BRONZE FINISH AND LED DRIVER		WL			1'-0"	6"	30 W	FIX	LED	3000	120 V		LITHONIA #WSTLED-P2-40K-VW-MVOLT-DDBXD
MX	SIMILAR TO TYPE 'M' EXCEPT WITH REMOTE EMERGENCY BATTERY PACK		WL			1'-0"	6"	30 W	FIX	LED	3000	120 V		LITHONIA #WSTLED-P2-40K-VW-MVOLT-E32WHR-DDBXD
X	SINGLE-FACE EXIT SIGN, [WHITE/BLACK] THERMOPLASTIC BODY, [RED/GREEN] LETTERS, EMERGENCY NI-CAD BATTERY INSIDE OF SIGN, UNIVERSAL ARROWS/MOUNTING. [SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS]	O	CL	1'-1"	2"	9"		3 W	FIX	LED	-	120 V	EM	LITHONIA #LQC-1-R-ELN

Revisions:	Date:

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STAMP

REGISTERED PROFESSIONAL ENGINEER — REG. NO. 14650 — ALEXANDER QUAST — NORTH DAKOTA
10/31/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL SCHEDULES
Phase: BID DOCUMENTS
Approved:
NON-SPRINKLERED
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10/31/22
Checked: Checker
Drawn: Author
Project Number: 884-CM-3015
Building Number:
Drawing Number: E600
Dwg. 72 OF 84

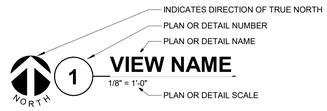
BIM 360://17001048.23 - NCA-Black Hills NC- Admin - Maint Bldg/MEP21 - 17001048.23_Black Hills NCA Maintenance - Admin Bldg_C.rvt
10/31/2022 2:28:34 PM

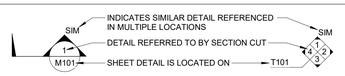
VA FORM 08 - 6231

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
——— NEW
- - - - - - EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
— — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
——— EXISTING
- - - - - - EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
— — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

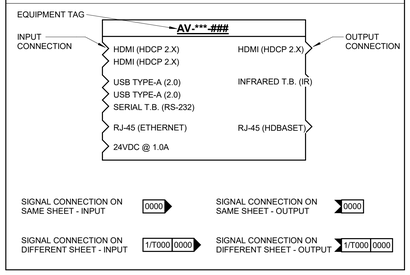
CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.C.	ASBESTOS ABATEMENT CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR
R.E.	RESIDENT ENGINEER

TELECOM ROOM REFERENCES

TELECOM ROOM	DETAIL / SHEET REFERENCE	FLOOR PLAN REFERENCE	ARCH ROOM NUMBER	BUILDING
IDF-1	3/T103	2/T103	DATA/SECURITY 18	MAINTAINANACE BLDG
MDF-1	3/T101	2/T101	DATA 02	ADMINISTRATION BLDG

AV FUNCTIONAL DIAGRAM KEY



SIGNAL CONNECTION ON SAME SHEET - INPUT — 0000
SIGNAL CONNECTION ON SAME SHEET - OUTPUT — 0000
SIGNAL CONNECTION ON DIFFERENT SHEET - INPUT — 1/T000 0000
SIGNAL CONNECTION ON DIFFERENT SHEET - OUTPUT — 1/T000 0000

TECHNOLOGY SHEET INDEX

T000	TECHNOLOGY COVERSHEET
T100	TECHNOLOGY SITE PLAN
T101	BASEMENT FLOOR ADMIN. - DEMO AND NEW
T102	FIRST FLOOR ADMIN. - DEMO AND NEW
T103	FIRST FLOOR MAINTENANCE - DEMO AND NEW
T104	PUMP HOUSE, VEHICLE STORAGE & SECONDARY MAINTENANCE BUILDINGS NEW
T400	TECHNOLOGY DETAILS
T500	TECHNOLOGY DIAGRAMS
T501	TECHNOLOGY DIAGRAMS
T502	TECHNOLOGY DIAGRAMS
T600	TECHNOLOGY SCHEDULES
T601	TECHNOLOGY SCHEDULES
GRAND TOTAL: 12	

TECHNOLOGY SYMBOL LIST

SYMBOL:	EQUIPMENT LIST ABBREV.:	DESCRIPTION:	NOTE:
C#	SC-IO-F	INFORMATION OUTLET IN FLOOR BOX	4., 5.
C#	SC-IO-W	INFORMATION OUTLET (WALL)	1.
C#	SC-IO-C	INFORMATION OUTLET (CEILING)	1.
CSS	N/A	CONTROLLED SECURITY SCHEME SCHEDULE IDENTIFIER	2.
CR1	AC-CR1-W	SECURITY CREDENTIAL READER (WALL) TYPE 1	.
CM-#	VS-CM-#	VIDEO SURVEILLANCE CAMERA 180° FOV (WALL/VERTICAL SURFACE)	3.
CM-#	VS-CM-#	VIDEO SURVEILLANCE CAMERA 270° FOV (WALL/VERTICAL SURFACE)	3.
CM-#	VS-CM-#	VIDEO SURVEILLANCE CAMERA 360° FOV (CEILING/HORIZONTAL SURFACE)	3.
CM-#	VS-CM-#	VIDEO SURVEILLANCE CAMERA SINGLE LENS FOV (CEILING/HORIZONTAL SURFACE)	3.
CM-#	VS-CM-#	VIDEO SURVEILLANCE CAMERA SINGLE LENS FOV (WALL/VERTICAL SURFACE)	3.
AA	AC-AA-1	INTRUSION DETECTION AUDIBLE ALARM (WALL)	.
IKP	ID-IKP-W	INTRUSION DETECTION SECURITY KEYPAD (WALL)	.
MD	ID-MD-C	INTRUSION DETECTION MOTION DETECTOR (CEILING)	.
S SB#	AV-SB#-W	AV SOUND BAR (WALL)	.
T TP#	AV-TP#-W	AV TOUCH PANEL (WALL)	.
###	AV-###-W	AV WALLPLATE/BACKBOX (WALL)	.
WIDTH X HEIGHT		LADDER RACK	
DIAMETER		CONDUIT	
		CONDUIT DOWN	
		CONDUIT UP OR UP/DOWN	
		CONDUIT SLEEVE	
		CONTINUATION	

GENERAL NOTES:

1. ALL SYMBOLS AND ABBREVIATIONS LISTED MAY NOT BE APPLICABLE TO THIS PROJECT. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE FOR MORE COMPLETE DESCRIPTION AND ITEMS.
2. ALL SYMBOLS AND ABBREVIATIONS REFER TO TECHNOLOGY SHEETS ONLY AS DEFINED ON THE SHEET INDEX. REFER TO THE GENERAL TECHNOLOGY NOTES FOR ADDITIONAL INFORMATION.
3. ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION.
4. REFER TO RISER DIAGRAMS ON SHEET(S): T500 , T501 & T502.

TECHNOLOGY SYMBOL NOTES:

1. "C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR ADDITIONAL INFORMATION.
2. REFER TO CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE ON T600 FOR ADDITIONAL INFORMATION.
3. "CM-#" ON FLOOR PLANS INDICATES CAMERA TYPE AND IS ASSOCIATED WITH THE CORRESPONDING "VS-CM-#" EQUIPMENT SCHEDULE ABBREVIATION. "##-###" SUBSCRIPT INDICATES FLOOR NUMBER-CAMERA NUMBER. REFER TO INDIVIDUAL CAMERA REQUIREMENT SCHEDULE FOR ADDITIONAL INFORMATION.
4. INFORMATION OUTLET INSTALLED IN E.C. PROVIDED FLOOR BOX. "C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR ADDITIONAL INFORMATION. REFER TO THE ELECTRICAL FLOOR PLANS AND ELECTRICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
5. FLOOR BOX FOR INFORMATION OUTLET PROVIVDED AS PART OF THE TECHNOLOGY DOCUMENTS."C#" INDICATES FLOOR BOX TYPE.REFER TO INFORMATION OUTLET SCHEDULE

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFC	BELOW FINISHED CEILING
C	CONDUIT
DE	DELAYED EGRESS
DPDT	DOUBLE POLE DOUBLE THROW
FOV	FIELD OF VIEW
J-BOX	JUNCTION BOX
POE	POWER OVER ETHERNET
PTZ	PAN TILT ZOOM
SIM	SIMILAR
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR
EF-#	ENTRANCE FACILITY
MC-#	MAIN CROSS-CONNECT
MDF-#	MAIN TELECOMMUNICATION ROOM
IDF-#	TELECOMMUNICATION ROOM

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	WADE ROSS
MECHANICAL	WADE ROSS
ELECTRICAL	SCOTT KOCIAN
TECHNOLOGY	JAYSON STICKROD

TECHNOLOGY GENERAL NOTES:

1. ###-### INDICATES TECHNOLOGY EQUIPMENT SCHEDULE ITEM LABELED AS "EQUIPMENT LIST ABBREVIATION"
2. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

TECHNOLOGY MOUNTING SUBSCRIPT KEY:
- A MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
- H MOUNT ORIENTED HORIZONTALLY
- L MOUNT IN CASEWORK
- M MOUNT IN MODULAR FURNITURE
- S MOUNT IN SURFACE RACEWAY

A SLASH IS USED BETWEEN TWO SUBSCRIPTS, E.G., A/H.

TECHNOLOGY INSTALLATION NOTES:

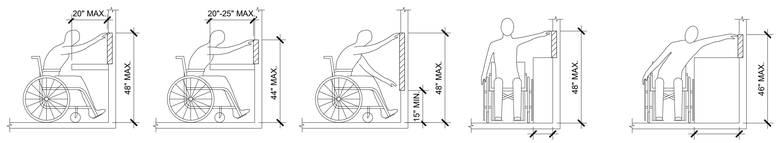
1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
3. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
4. VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL TELECOMMUNICATIONS INSTALLATION, ADJUST OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
5. TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TELECOMMUNICATION DEVICES ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
7. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO DIVISION 7 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
8. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF THE CEILINGS, CEILING TILES, AND CEILING GRID ASSOCIATED WITH THE AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.

TECHNOLOGY OUTSIDE PLANT NOTES

1. THE LOCATION OF THE CONDUIT, HAND HOLES AND/OR MAINTENANCE HOLES SHOWN ARE APPROXIMATE LOCATIONS. FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIVATE AND/OR PUBLIC PRIOR TO THE INSTALLATION OF THE COMPONENT. FIELD COORDINATE THE FINAL LOCATION WITH THE OWNER AND ENGINEER PRIOR TO INSTALLATION.
2. POTHOLING TO LOCATE EXISTING UNDERGROUND UTILITIES, IF APPLICABLE, SHALL BE INCLUDED IN THE CONTRACTOR'S BID. CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT OF HAND HOLES AND/OR MAINTENANCE HOLES AND SHALL NOTIFY THE ENGINEER OF FINAL LOCATIONS PRIOR TO INSTALLATION.
3. HAND HOLES AND/OR MAINTENANCE HOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE GROUND LINE.
4. REMOVAL AND REPLACEMENT OF THE EXISTING UNDERGROUND UTILITIES THAT ARE REQUIRED TO COMPLETE THE INSTALLATION SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
5. CONTRACTOR SHALL INCLUDE IN THEIR BID ANY REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK, PAVEMENT, GRASS, SHRUBS, TREES, ETC. THAT WILL BE IMPACTED BY THE INSTALLATION OF THE NEW CONDUITS SHOWN ON THE DRAWINGS. IF TREES ARE REQUIRED TO BE REMOVED THE CONTRACTOR SHALL CONTACT THE OWNER AND DISCUSS OPTIONS PRIOR TO CUTTING DOWN ANY TREE OR SHRUB OVER 5" IN HEIGHT.
6. NO ADDITIONAL COST SHALL BE APPROVED FOR PLACING CONDUITS DEEPER THAN REQUIRED MINIMUM DEPTH TO AVOID EXISTING UNDERGROUND UTILITIES.
7. PROVIDE A MINIMUM OF 25'-0" SLACK LOOP WITHIN EACH HAND HOLES AND/OR MAINTENANCE HOLES. SLACK LOOP SHALL BE SECURE SO COPPER OR FIBER IS NOT RESTING ON EARTH AFTER FINAL INSTALLATION.

TECHNOLOGY DEMOLITION NOTES

1. THE DRAWINGS INDICATE EXISTING ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
2. ITEMS (I.e. SPEAKERS, SWITCHES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN. (i.e., FOR MAINTENANCE PUIRPOSES).
3. EXISTING TO REMAIN DEVICES WITHIN OR ADJACENT TO THE PATH OF CONSTRUCTION SHALL BE PROTECTED IN PLACE. DEVICES THAT MUST BE REMOVED SHALL BE TESTED PRIOR TO REMOVAL, PROTECTED FROM DAMAGE, AND RE-INSTALLED IN ITS ORIGINAL LOCATION DURING THE NEW CONSTRUCTION PHASE OF THE PROJECT.
4. OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF THE POWER TO EQUIPMENT, SYSTEMS, PANELS, ETC. COORDINATE ALL OUTAGES WITH OWNER. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
5. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE, AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC., SHALL ALSO BE REMOVED.
6. COORDINATE ALL WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING EQUIPMENT AND INSTALLING NEW ITEMS.
7. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATING EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
8. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
9. DEVICES TO BE REMOVED SHALL HAVE ALL CONNECTED WIRING REMOVED TO THE SOURCE.
10. DEVICES NOT TO BE REMOVED SHALL BE PROTECTED FROM THE ENVIRONMENT, AND ALL ASSOCIATED CABLE/RACEWAYS ARE TO REMAIN AND BE PROTECTED. T.C. SHALL BE RESPONSIBLE FOR REPAIR OF ANY INTERRUPTIONS TO PROTECTED DEVICES.
11. THE INTENT OF THIS PROJECT IS TO REMOVE AND REPLACE ALL ACCESS CONTROL, INTRUSION DETECTION, AND VIDEO SURVEILLANCE SYSTEMS. ALL BUILDING SECURITY DEVICES SHALL BE DEMOLISHED INCLUDING BUT NOT LIMITED TO ROUGH IN, CONDUIT, PATHWAY, CABLING, AND ALL OTHER DEVICES BACK TO THE SOURCE. CONTRACTOR SHALL FIELD VERIFY QUANTITIES OF DEVICES FOR ACCESS CONTROL, INTRUSION DETECTION, AND VIDEO SURVEILLANCE PRIOR TO BIDDING AND INCLUDE THE DEMOLITION OF THESE SYSTEMS IN THEIR BID. CONTRACTOR SHALL PROVIDE BLANK PLATES FOR ALL UNUSED ROUGH-IN. EXISTING ROUGH IN AND PATHWAY CAN BE USED FOR NEW SECURITY DEVICES WHERE APPROPRIATE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION



INSTALL ABOVE COUNTER DEVICE AT 44" ABOVE FINISHED FLOOR.
INSTALL ABOVE COUNTER DEVICE AT 40" ABOVE FINISHED FLOOR.
INSTALL DEVICE AT 18" ABOVE FINISHED FLOOR.
10" MAX. INSTALL DEVICE AT 44" ABOVE FINISHED FLOOR.
10"-24" MAX. INSTALL DEVICE AT 42" ABOVE FINISHED FLOOR.

ADA GUIDELINES - FRONT ACCESS
ADA GUIDELINES - SIDE ACCESS

ADA STANDARDS FOR ACCESSIBLE DESIGN

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TBPE# F-18032

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10/31/2022

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title	TECHNOLOGY COVERSHEET
Phase	BID DOCUMENTS
Approved:	
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Project Number	884-CM-3015
Building Number	
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	JAYSON STICKROD
Drawn	JOSHUA LADESMA
Drawing Number	T000
Dwg.	73 OF 84

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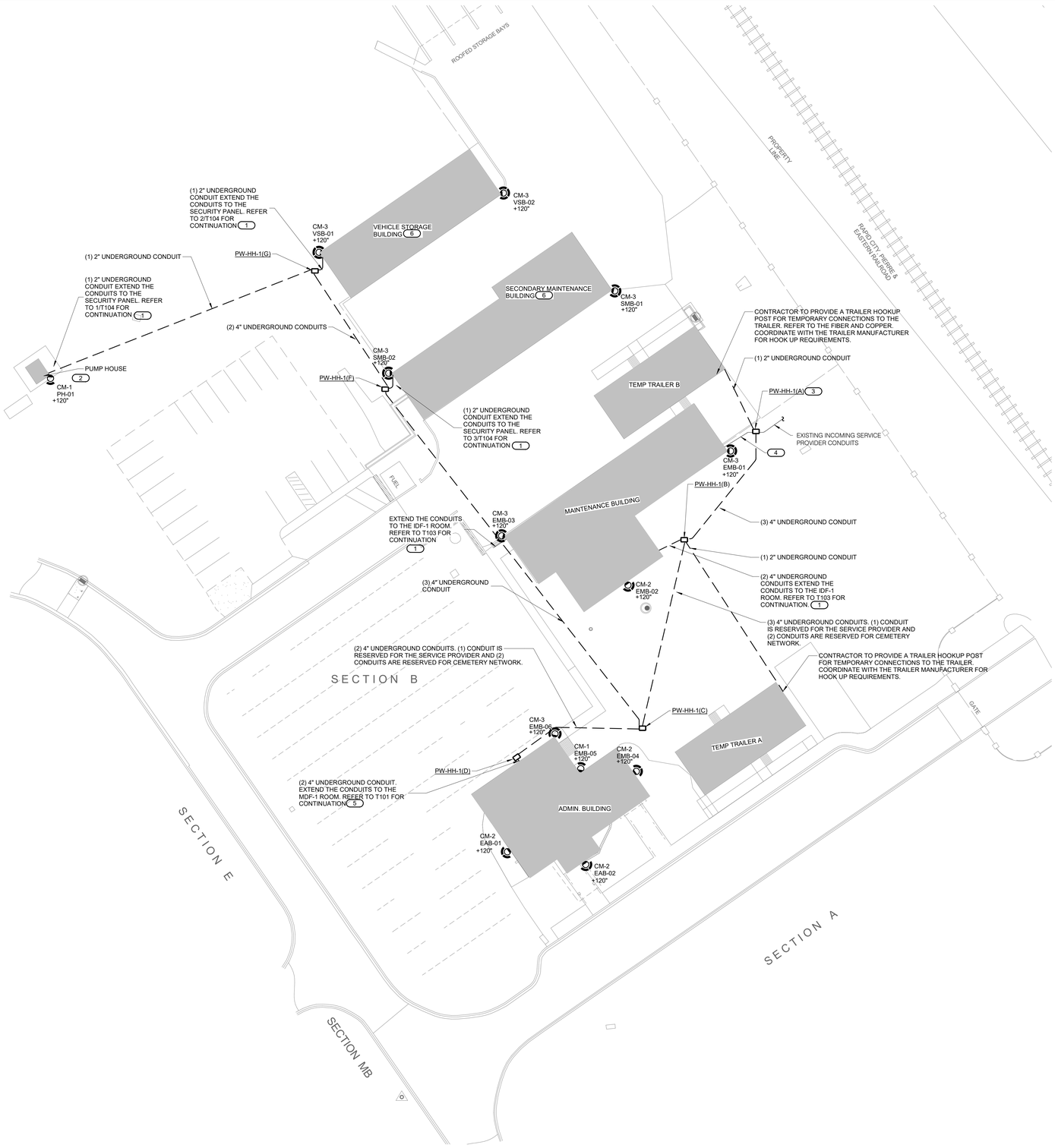

TECHNOLOGY SITE PLAN

3/64" = 1'-0"

NORTH

GENERAL SHEET NOTES:

1. THE SITE PLAN IS BASED ON INFORMATION BY OTHERS AND INTENDED TO CLARIFY SCOPE OF WORK AND INTENDED CONDUIT SIZE/QUANTITIES TO BE INSTALLED BY EACH LOCATION. THE CONTRACTOR SHALL COORDINATE WITH THE SITE UTILITIES PLAN, MECHANICAL PLAN, CIVIL PLANS, ARCHITECTURAL PLANS, ELECTRICAL PLANS, AND STRUCTURAL PLANS. FOR ADDITIONAL INFORMATION TO INSTALL CONDUITS AND ADDITIONAL SCOPE REQUIREMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. ALL CONDUITS SHALL BE INSTALLED AS CAST-IN-PLACE. REFER TO DETAIL 4/T400 FOR ADDITIONAL INFORMATION. ADJUST AS REQUIRED FOR THE QUANTITY

KEYNOTES: (#)

1. CONDUITS SHALL ROUTE UP THE SIDE OF THE BUILDING TO ABOVE THE ACCESSIBLE CEILING ON THE FIRST LEVEL. SECURE CONDUITS TO THE WALL AND SEAL ALL PENETRATIONS WITH WEATHER PROOF SEALS AS REQUIRED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. CAMERA IS INSTALLED ON THE DOOR SIDE OF THE BUILDING FOR COVERAGE ON APPROACH AND DOOR ACCESS. COORDINATE THE EXACT LOCATION OF THE CAMERA WITH THE RESIDENT ENGINEER (RE) PRIOR TO THE INSTALLATION OF THE CAMERA.
3. NEW HANDHOLE WILL INTERCEPT THE INCOMING CONDUITS TO THE MAINTENANCE BUILDING. COORDINATE WITH THE SERVICE PROVIDER AND RESIDENT ENGINEER (RE) ON THE CONDUIT INTERCEPTION AND A PHASING PLAN TO BRING THE TEMPORARY TRAILERS AND NEW SERVICES THAT WILL BE SERVED FROM THE ADMINISTRATION BUILDING.
4. ONCE THE CONTRACTORS HAVE ROUTED CONDUIT PATHWAY FOR INCOMING SERVICES TO THE TEMPORARY TRAILERS, EXISTING CONDUITS SHALL BE DEMOLISHED OR ABANDONED BASED ON THE LOCATION SHOWN.
5. CONDUITS ROUTE UNDERGROUND DIRECTLY THROUGH THE WALL TO THE MDF-1 ON THE BASEMENT LEVEL. CONTRACTOR SHALL SEAL ALL PENETRATIONS WITH UNDERGROUND WATERPROOF SEALS AS REQUIRED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. ALL SECURITY DEVICES WITHIN THIS BUILDING SHALL BE DEMOLISHED INCLUDING BUT NOT LIMITED TO ROUGH IN, CONDUIT, PATHWAY, CABLING, AND ALL OTHER DEVICES BACK TO THE SOURCE. CONTRACTOR SHALL FIELD VERIFY QUANTITIES OF DEVICES FOR ACCESS CONTROL, INTRUSION DETECTION, AND VIDEO SURVEILLANCE PRIOR TO BIDDING AND INCLUDE THE DEMOLITION OF THESE SYSTEMS IN THEIR BID. CONTRACTOR SHALL PROVIDE BLANK PLATES FOR ALL UNUSED ROUGH-IN. EXISTING ROUGH IN AND PATHWAY CAN BE USED FOR NEW SECURITY DEVICES WHERE APPROPRIATE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — 14650 ALEXANDER QUAST — SOUTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: TECHNOLOGY SITE PLAN	Phase: BID DOCUMENTS
Approved:	NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	Project Number: 884-CM-3015
	Building Number:
Location: STURGIS, SOUTH DAKOTA	Drawing Number: T100
Issue Date: 10/31/22	Checked: JAYSON STICKROD
	Drawn: JOSHUA LADESMA
	Dwg. 74 OF 84

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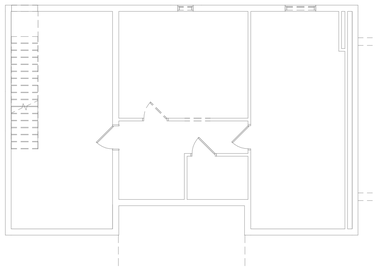
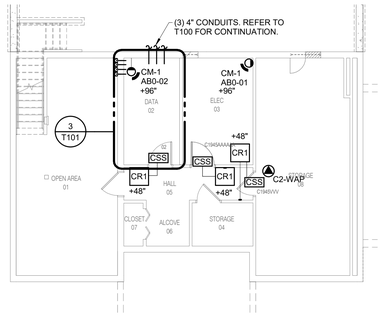


1 BASEMENT FLOOR DEMOLITION - TECHNOLOGY - ADMINISTRATION

1/8" = 1'-0"

GENERAL NOTES:

1. ALL LOW VOLTAGE CABLING IN THIS AREA WILL BE DEMOLISHED. DEMOLITION WILL INCLUDE ALL CABLING, ROUGH-IN, CONDUIT, PATHWAY,AND ALL OTHER DEVICES BACK TO THE SOURCE. ALL ACTIVE COMPONENETS WILL BE RETURNED TO THE CEMETERY. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. ALL SECURITY DEVICES INCLUDING BUT NOT LIMITED TO ROUGH IN, CONDUIT, PATHWAY, CABLING, AND ALL OTHER DEVICES BACK TO THE SOURCE SHALL BE DEMOLISED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

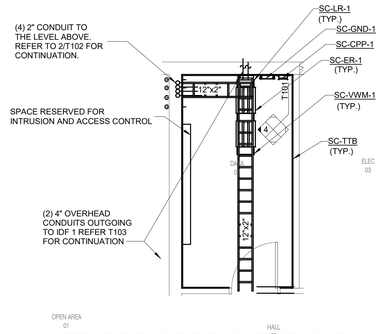


2 BASEMENT FLOOR - TECHNOLOGY - ADMINISTRATION

1/8" = 1'-0"

GENERAL NOTES:

1. ALL SECURITY CABLING INCLUDEING ACCESS CONTROL AND INTRUSION DETECTION SHALL ROUTE TO THE MAIN TELECOM ROOM MDF-1 LOCATED ON THIS FLOOR.
2. ALL LOW VOLTAGE CABLING SHALL ROUTE TO THE MAIN TELECOM ROOM MDF-1 LOCATED ON THIS FLOOR.

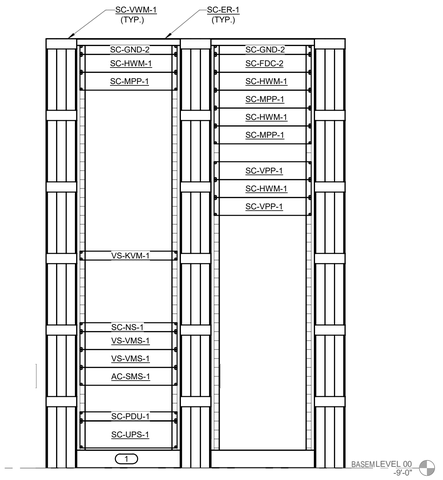


3 MAIN TELECOM ROOM - TECHNOLOGY (MDF-1)

1/4" = 1'-0"

NOTES:

1. THE FIRE RATED TELEPHONE TERMINAL BOARD (SC-TTB) SHALL COVER ALL THE WALLS IN THE TELECOMMUNICATIONS ROOM AS SHOWN ABOVE. SHOULD THE WALLS REQUIRE TO BE PAINTED, THE PAINT SHALL BE "FIRE SAFE" PAINT. IF PAINTED THE FIRE RATED LABEL ON EACH BOARD SHALL NOT BE PAINTED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO 3/T400 FOR LADDER RACK MOUNTING DETAIL.
3. REFER TO 2/T400 FOR THE BONDING BUS BAR DETAIL SC-GND-1.



4 EQUIPMENT RACK ELEVATION MDF-1

1" = 1'-0"

NOTES:

1. ALL EQUIPMENT SHALL BE LOCATED IN ITS DESIGNATED SPOT AS DEFINED BY THIS LAYOUT UNLESS OTHERWISE NOTED. ALL EQUIPMENT IS SIZED (BY RACK UNITS) ACCORDING TO THE BASIS OF DESIGN MANUFACTURE AND MODEL. THE FINAL LAYOUT AND EQUIPMENT SIZE MAY VARY BASED ON THE FINAL SELECTION OF THE EQUIPMENT. ANY CHANGES TO THE LAYOUT SHOWN ABOVE SHALL BE COORDINATED WITH THE ENGINEER AND OWNER PRIOR TO INSTALLATION.

KEYNOTES: (#)

1. EQUIPMENT RACK RESERVED FOR SECURITY.

Revisions:	Date:

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10/31/2022

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VA U.S. Department of Veterans Affairs

Drawing Title: BASEMENT FLOOR ADMIN. - DEMO AND NEW

Approved:

Phase: BID DOCUMENTS

NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Project Number: 884-CM-3015

Building Number:

Drawing Number: T101

Issue Date: 10/31/22

Checked: JAYSON STICKROD

Drawn: JOSHUA LADESMA

Dwg. 75 OF 84

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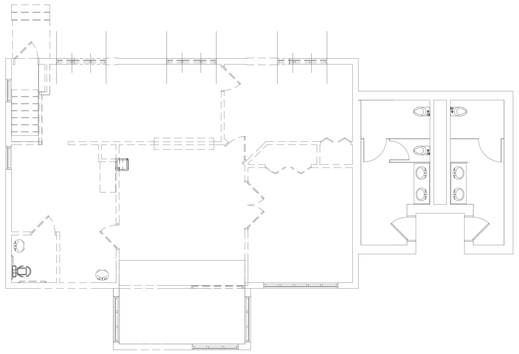
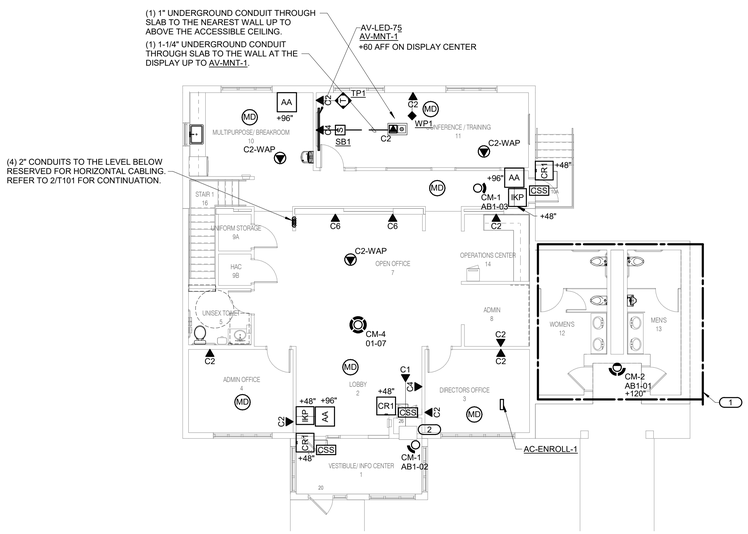


1 FIRST FLOOR DEMOLITION - TECHNOLOGY - ADMINISTRATION

1/8" = 1'-0"

GENERAL NOTES:

1. ALL LOW VOLTAGE CABLING IN THIS AREA WILL BE DEMOLISHED. DEMOLITION WILL INCLUDE ALL CABLING, ROUGH-IN, CONDUIT, PATHWAY, AND ALL OTHER DEVICES BACK TO THE SOURCE. ALL ACTIVE COMPONENETS WILL BE RETURNED TO THE CEMETERY. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. ALL SECURITY DEVICES INCLUDING BUT NOT LIMITED TO ROUGH IN, CONDUIT, PATHWAY, CABLING, AND ALL OTHER DEVICES BACK TO THE SOURCE SHALL BE DEMOLISED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



2 FIRST FLOOR - TECHNOLOGY - ADMINISTRATION

1/8" = 1'-0"

GENEREAL NOTES:

1. ALL LOW VOLTAGE CABLING SHALL ROUTE TO THE TELECOM ROOM IDF-1 LOCATED ON THE LEVEL BELOW. REFER TO T101 DOR ADDITIONAL INFORMATION.
2. ALL SECURITY CABLING INCLUDING ACCESS CONTROL AND INTRUSION DETECTION SHALL ROUTE TO THE TELECOM ROOM IDF-1 LOCATED ON THIS FLOOR.

KEYNOTES: (#)

1. CONDUIT TO EXTEND TO OPEN OFFICE FOR ALL DEVICES IN THIS AREA.
2. RESERVE THE DATA FOR THE GRAVE SITE LOCATOR AND COORDINATE WITH THE GRAVE SITE LOCATOR CONTRACTOR FOR CONNECTION.

Revisions:	Date:

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10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title FIRST FLOOR ADMIN. - DEMO AND NEW	**Phase** BID DOCUMENTS	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved:	NON-SPRINKLERED	**Location** STURGIS, SOUTH DAKOTA	**Building Number**
		Issue Date 10/31/22 · **Checked** JAYSON · **Drawn** JOSHUA	**Drawing Number** T102
			Dwg. 76 OF 84

STICKRODLADESMA

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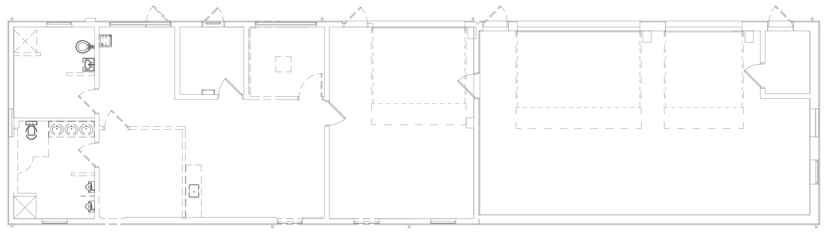
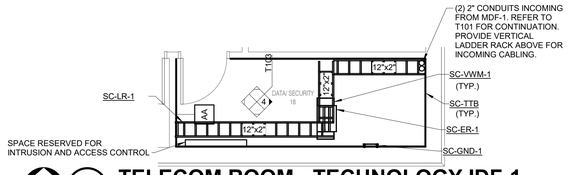




3 TELECOM ROOM - TECHNOLOGY IDF-1

1/4" = 1'-0"

NOTES:

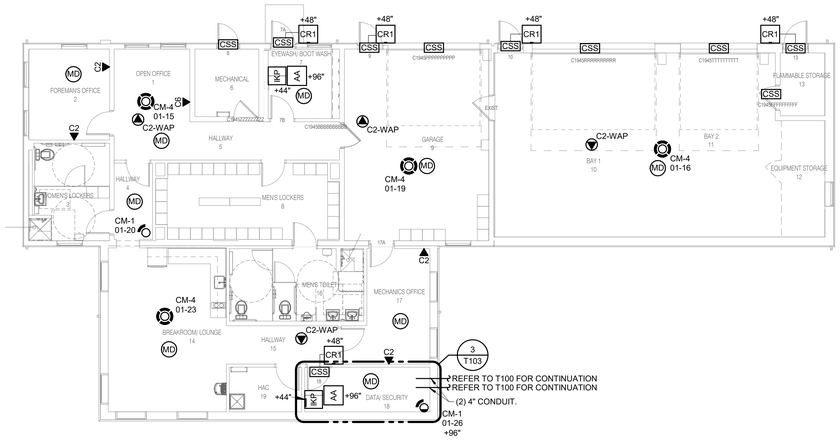
1. ALL EQUIPMENT SHALL BE LOCATED IN ITS DESIGNATED SPOT AS DEFINED BY THIS LAYOUT UNLESS OTHERWISE NOTED. ALL EQUIPMENT IS SIZED (BY RACK UNITS) ACCORDING TO THE BASIS OF DESIGN MANUFACTURE AND MODEL. THE FINAL LAYOUT AND EQUIPMENT SIZE MAY VARY BASED ON THE FINAL SELECTION OF THE EQUIPMENT. ANY CHANGES TO THE LAYOUT SHOWN ABOVE SHALL BE COORDINATED WITH THE ENGINEER AND OWNER PRIOR TO INSTALLATION.
2. REFER TO 3/T400 FOR LADDER RACK MOUNTING DETAIL.
3. REFER TO 2/T400 FOR THE BONDING BUS BAR DETAIL SC-GND-1.

1 FIRST FLOOR DEMOLITION - TECHNOLOGY - MAINTENANCE

1/8" = 1'-0"

GENERAL NOTES:

1. ALL LOW VOLTAGE CABLING IN THIS AREA WILL BE DEMOLISHED. DEMOLITION WILL INCLUDE ALL CABLING, ROUGH-IN, CONDUIT, PATHWAY, AND ALL OTHER DEVICES BACK TO THE SOURCE. ALL ACTIVE COMPONENETS WILL BE RETURNED TO THE CEMETERY. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. ALL SECURITY DEVICES INCLUDING BUT NOT LIMITED TO ROUGH IN, CONDUIT, PATHWAY, CABLING, AND ALL OTHER DEVICES BACK TO THE SOURCE SHALL BE DEMOLISED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

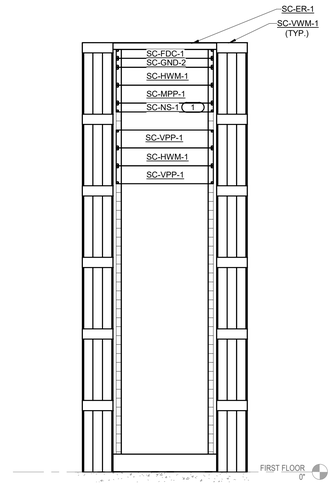


2 FIRST FLOOR - TECHNOLOGY - MAINTENANCE

1/8" = 1'-0"

GENERAL NOTES:

1. ALL LOW VOLTAGE CABLING SHALL ROUTE TO THE TELECOM ROOM IDF-1 LOCATED ON THIS FLOOR.
2. ALL SECURITY CABLING INCLUDING ACCESS CONTROL AND INTRUSION DETECTION SHALL ROUTE TO THE TELECOM ROOM IDF-1 LOCATED ON THIS FLOOR.



4 EQUIPMENT RACK ELEVATION - IDF-1

1" = 1'-0"

NOTES:

1. ALL EQUIPMENT SHALL BE LOCATED IN ITS DESIGNATED SPOT AS DEFINED BY THIS LAYOUT UNLESS OTHERWISE NOTED. ALL EQUIPMENT IS SIZED (BY RACK UNITS) ACCORDING TO THE BASIS OF DESIGN MANUFACTURE AND MODEL. THE FINAL LAYOUT AND EQUIPMENT SIZE MAY VARY BASED ON THE FINAL SELECTION OF THE EQUIPMENT. ANY CHANGES TO THE LAYOUT SHOWN ABOVE SHALL BE COORDINATED WITH THE ENGINEER AND OWNER PRIOR TO INSTALLATION.

KEYNOTES: (#)

1. NETWORK SWITCH RESERVED FOR SECURITY ONLY.

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — 14650 ALEXANDER QUAST — SOUTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FIRST FLOOR MAINTENANCE - DEMO AND NEW

Approved:

Phase: BID DOCUMENTS

NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Project Number: 884-CM-3015

Building Number:

Drawing Number: T103

Issue Date: 10/31/22

Checked: JAYSON STICKROD

Drawn: JOSHUA LADESMA

Dwg. 77 OF 84

VA FORM 08 - 6231

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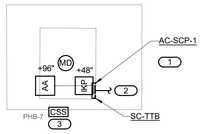


1 PUMP HOUSE FLOOR PLAN

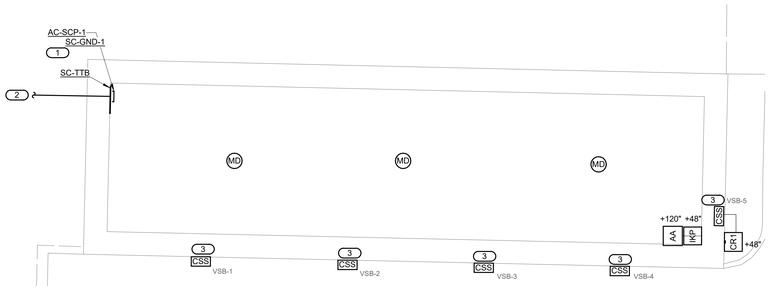
1/8" = 1'-0"

NOTES:

1. ALL SECURITY CABLING FOR THIS BUILDING WILL ROUTE TO THE SECURITY PANEL.
2. ALL SECURITY CABLING WILL ROUTE IN CONDUIT FROM THE EDGE DEVICE BACK TO THE SECURITY PANEL.

KEYNOTES: (#)

1. COORDINATE WITH THE LOCAL RE FOR THE FINAL LOCATION OF THE SECURITY PANEL PRIOR TO THE PURCHASE AND INSTALLATION OF THE SECURITY PANEL.SECURITY PANEL WILL SIZED TO SUPPORT ALL ACCESS CONTROL,INTRUSION AND VIDEO SURVEILLANCE EQUIPMENT. REFER TO 4/T104 FOR ADDITIONAL INFORMATION.
2. (1) 2" CONDUIT FROM THE SECURITY PANEL TO THE HANDHOLEOUTSIDE THE BUILDING TO PW-HH-1 (G) LOCATED OUTSIDE THE MAINTENANCE BUILDING. REFER TO T100 FOR LOCATION OF THE HANDHOLE. CONDUIT IS RESERVED FOR BACKBONE CABLING ONLY. REFER TO SPECIFICATIONSFOR ADDITIONAL INFERMATION.
3. DOOR CONTACT CONNECTS TO THE INTRUSION SYSTEM ONLY. REFER TO SPECFICATIONS FOR THE ADDITIONAL INFORMATION AND CONNECTIVITY REQUIREMENTS.



2 VEHICLE STORAGE BUILDING FLOOR PLAN

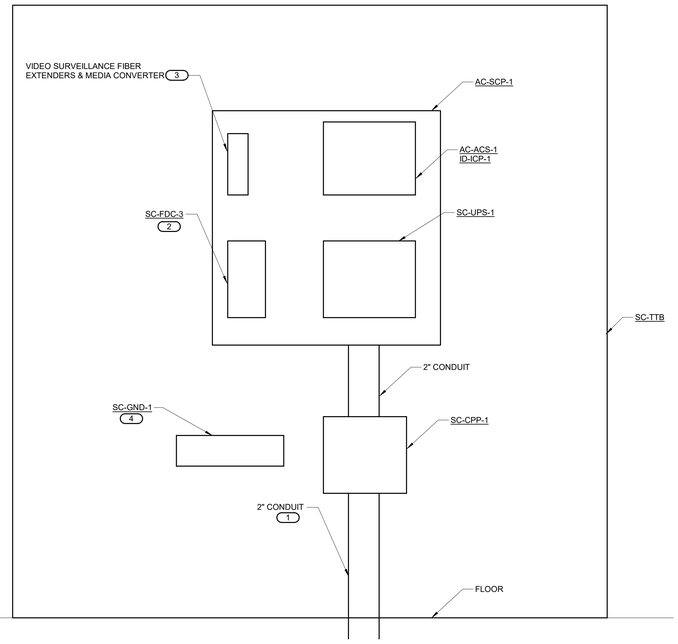
1/8" = 1'-0"

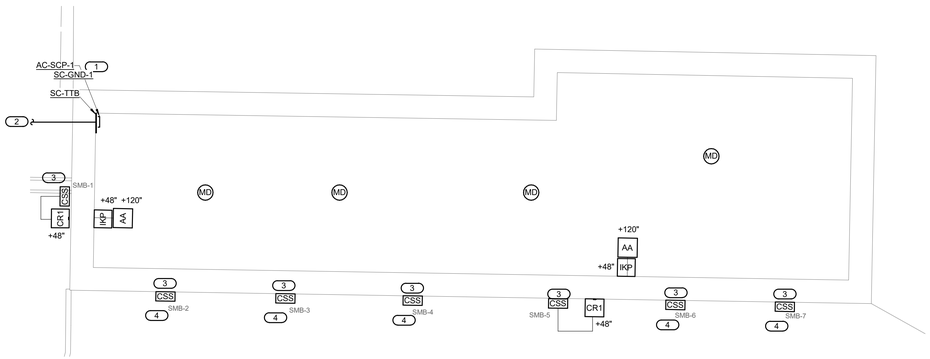
NOTES:

1. ALL SECURITY CABLING FOR THIS BUILDING WILL ROUTE TO THE SECURITY PANEL.
2. ALL SECURITY CABLING WILL ROUTE IN CONDUIT FROM THE EDGE DEVICE BACK TO THE SECURITY PANEL.
3. CONTRACTOR SHALL FIELD VERIFY THE ALL DOOR LOCATIONS BEFORE BID. ACCESS CONTROL HARDWARE SHALL BE INSTALLED ON DOOR LOCATIONS ONCE VERIFIED.
4. ALL INTRUSION DETECTION DEVICES INCLUDING THE MOTION DETECTORS AND DOOR POSITION SWITCHES AT ROLL UP DOOR LOCATIONS SHALL ROUTE IN CONDUIT TO THE SUPPORTING INTRUSION SYSTEM. MOTION LOCATIONS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY FINAL QUNATITY OF MOTION DETECTORS BASED ON DETECTION COVERAGE. REFER TO THE ACCESS CONTROL & INTRUSION DETECTION DIAGRAM 2/T501 FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. COORDINATE WITH THE LOCAL RE FOR THE FINAL LOCATION OF THE SECURITY PANEL PRIOR TO THE PURCHASE AND INSTALLATION OF THE SECURITY PANEL.SECURITY PANEL WILL SIZED TO SUPPORT ALL ACCESS CONTROL,INTRUSION AND VIDEO SURVEILLANCE EQUIPMENT. REFER TO 4/T104 FOR ADDITIONAL INFORMATION.
2. (1) 2" CONDUIT FROM THE SECURITY PANEL TO THE HANDHOLEOUTSIDE THE BUILDING TO PW-HH-1 (F) LOCATED OUTSIDE THE MAINTENANCE BUILDING. REFER TO T100 FOR LOCATION OF THE HANDHOLE. CONDUIT IS RESERVED FOR BACKBONE CABLING ONLY. REFER TO SPECIFICATIONSFOR ADDITIONAL INFERMATION.
3. DOOR HARDWARE IS INSTALLED ON ALL DOOR LOCATION. COORDINATE THE EXACT LOCATION OF THE DOOR HARDWARE WITH THE RESIDENT ENGINEER (RE) PRIOR TO THE ISTALLATION OF THE DOOR HARDWARE.





3 SECONDARY MAINTENANCE BUILDING FLOOR PLAN

1/8" = 1'-0"

NOTES:

1. ALL SECURITY CABLING FOR THIS BUILDING WILL ROUTE TO THE SECURITY PANEL.
2. ALL SECURITY CABLING WILL ROUTE IN CONDUIT FROM THE EDGE DEVICE BACK TO THE SECURITY PANEL.
3. CONTRACTOR SHALL FIELD VERIFY THE ALL DOOR LOCATIONS BEFORE BID. ACCESS CONTROL HARDWARE SHALL BE INSTALLED ON DOOR LOCATIONS ONCE VERIFIED.
4. ALL INTRUSION DETECTION DEVICES INCLUDING THE MOTION DETECTORS AND DOOR POSITION SWITCHES AT ROLL UP DOOR LOCATIONS SHALL ROUTE IN CONDUIT TO THE SUPPORTING INTRUSION SYSTEM. MOTION LOCATIONS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY FINAL QUNATITY OF MOTION DETECTORS BASED ON DETECTION COVERAGE. REFER TO THE ACCESS CONTROL & INTRUSION DETECTION DIAGRAM 2/T501 FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. COORDINATE WITH THE LOCAL RE FOR THE FINAL LOCATION OF THE SECURITY PANEL PRIOR TO THE PURCHASE AND INSTALLATION OF THE SECURITY PANEL.SECURITY PANEL WILL SIZED TO SUPPORT ALL ACCESS CONTROL,INTRUSION AND VIDEO SURVEILLANCE EQUIPMENT. REFER TO 4/T104 FOR ADDITIONAL INFORMATION.
2. (1) 2" CONDUIT FROM THE SECURITY PANEL TO THE HANDHOLEOUTSIDE THE BUILDING TO PW-HH-1 (G) LOCATED OUTSIDE THE MAINTENANCE BUILDING. REFER TO T100 FOR LOCATION OF THE HANDHOLE. CONDUIT IS RESERVED FOR BACKBONE CABLING ONLY. REFER TO SPECIFICATIONSFOR ADDITIONAL INFERMATION.
3. DOOR HARDWARE IS INSTALLED ON ALL DOOR LOCATION. COORDINATE THE EXACT LOCATION OF THE DOOR HARDWARE WITH THE RESIDENT ENGINEER (RE) PRIOR TO THE ISTALLATION OF THE DOOR HARDWARE.
4. DOOR CONTACT CONNECTS TO THE INTRUSION SYSTEM ONLY. REFER TO SPECFICATIONS FOR THE ADDITIONAL INFORMATION AND CONNECTIVITY REQUIREMENTS.

NORTH

4 SECURITY PANEL ELEVATION

3" = 1'-0"

NOTES:

1. THE ABOVE LAYOUT FOR THE SECURITY PANEL IS DIAGRAMMATIC AND DOES NOT REPRESENT THE FINAL LAYOUT. THE SECURITY CONTRACTOR SHALL PROVIDE A FINAL LAYOUT OF THE PANEL DURING THE SHOP DRAWING PROCESS TO VERIFY THE SIZE OF THE SECURITY PANEL. REFER TO THE ACCESS CONTROL AND INTRUSION DETECTION DIAGRAM FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. CONDUIT PW-HH-1(). REFER TO 6/T400 FOR ADDITIONAL INFORMATION.
2. FIBER WILL EXTEND THROUGH THE 2" CONDUIT WITH THE COPPER BACKBONE CABLE. REFER TO 1/T501 FOR ADDITIONAL INFORMATION.
3. VIDEO SURVELLIANCE IS SERVED OUT OF THE DATA ROOM IN THE P.I.C. BUILDING AND EXTENDED OVER FIBER. CONTRACTOR SHALL PROVIDE A MEDIA CONVERTER TO EXTEND THE NETWORK CONNECTIVITY FROM THE MAINTENANCE BUILDING TO THE P.I.C. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. REFER TO 2/T400 & 2/T500 FOR ADDITIONAL GROUNDING REQUIREMENTS.

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER
14680
ALEXANDER QUAST
SOUTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: PUMP HOUSE, VEHICLE STORAGE & SECONDARY MAINTENANCE BUILDINGS NEW

Approved:

Phase: BID DOCUMENTS

NON-SPRINKLERED

Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS

Location: STURGIS, SOUTH DAKOTA

Issue Date: 10/31/22

Checked: Checker

Drawn: Author

Project Number: 884-CM-3015

Building Number:

Drawing Number: T104

Dwg. 78 OF 84

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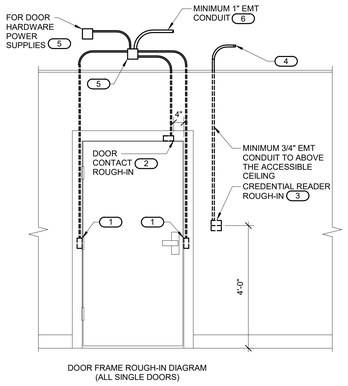


DOOR FRAME ROUGH-IN DIAGRAM
(ALL SINGLE DOORS)

1 CONTROLLED SECURITY SCHEME DOOR ROUGH-IN DETAIL

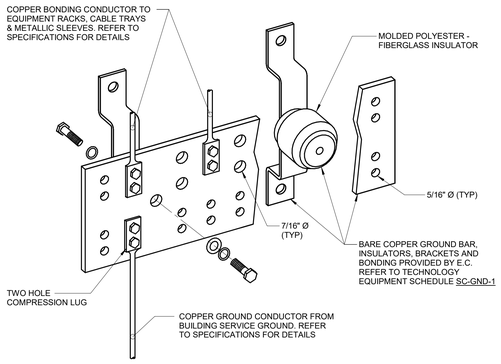
NO SCALE

NOTES:

1. CONFIGURATIONS SHOWN IN THE DETAIL ABOVE ARE DIAGRAMMATIC, INTENDED TO DESCRIBE THE CONTROLLED SECURITY SCHEME ROUGH-IN REQUIREMENTS OF THE DOORS. DETAILS ABOVE MAY NOT ACCURATELY REPRESENT DOOR SIZE, DOOR SWING, DOOR HARDWARE, OR DOOR FUNCTIONALITY. REFER TO ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE GROUPS AND DOOR HARDWARE SPECIFICATIONS FOR COMPLETE INFORMATION. MIRROR THE DETAIL AS REQUIRED.
2. ROUGH IN SHOWN IN THE DETAIL ABOVE REPRESENTS THE MINIMUM REQUIREMENTS FOR ALL CONTROLLED SECURITY SYSTEM DEVICES AND CABLING UNLESS OTHERWISE NOTED. COORDINATE EXACT REQUIREMENTS WITH SELECTED DOOR MATERIALS, DOOR HARDWARE, AND CONTROLLED SECURITY DEVICES AND CABLING PRIOR TO INSTALLATION.
3. ALL CABLING IN WALLS AND WHERE EXPOSED ON VERTICAL SURFACES SHALL BE INSTALLED IN EMT CONDUIT OR SURFACE MOUNT RACEWAY. CABLING ROUTED HORIZONTALLY ABOVE THE ACCESSIBLE CEILING WILL BE INSTALLED IN CONDUIT FROM THE DOOR TO THE NEAREST SECURITY PANEL.
4. THE CONTRACTOR SHALL NOT MODIFY ANY FIRE RATED DOOR AND/OR DOOR FRAME. REFER TO THE ARCHITECTURAL DOOR SCHEDULE, DOOR HARDWARE SCHEDULE, AND DOOR HARDWARE SPECIFICATION FOR ADDITIONAL INFORMATION. MODIFICATION TO ANY FIRE RATED DOOR AND/OR FRAME WILL REQUIRE A RE-CERTIFICATION OF THE DOOR AND FRAME WITH THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
5. INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR ALL CONTROLLED SECURITY SCHEME ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
6. REFER TO THE ACCESS CONTROL AND INTRUSION DETECTIN CONNECTIVITY DIAGRAM ON FOR CABLING REQUIREMENTS FOR ADDITIONAL INFORMATION.
7. INSTALLATION SHALL INCLUDE ALL POWER REQUIRED FOR SYSTEM OPERATION INCLUDING +120VAC. REFER TO THE SUGGESTED MATRIX OF SCOPE RESPONSIBILITY FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. PROVIDE JUNCTION BOXES IN THE DOOR FRAME WHERE SHOWN ON THIS DETAIL. ROUGH-IN SHALL BE PROVIDED WHETHER THE CURRENT SECURITY SCHEME UTILIZES THEM OR NOT. ALL CONDUITS SHALL BE EMT CONDUIT UNLESS OTHERWISE NOTED. FLEXIBLE CONDUIT OF ANY TYPE WILL NOT BE ACCEPTED. COORDINATE INSTALLATION WITH ON-SITE DOOR FRAME INSTALLATION CONTRACTOR.
2. ALL DOOR POSITION SWITCHES ARE REQUIRED TO BE RECESSED UNLESS OTHERWISE NOTED. ELECTRIC HINGE MONITORS ARE NOT AN ACCEPTABLE REPLACEMENT FOR THE RECESSED DOOR POSITION SWITCH.
3. REFER TO FLOOR PLAN(S) FOR ACTUAL CREDENTIAL READER TYPE AND ROUGH-IN LOCATIONS. REFER TO THE FLOOR PLANS AND GENERAL TECHNOLOGY EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
4. CONDUIT SHALL ROUTE FROM THE CREDENTIAL READER TO THE SECURE SIDE OF THE DOOR. CONDUIT SHALL ROUTE TO THE NEAREST SECURITY PANEL.
5. MOUNT A MINIMUM 4" SQUARE 2-1/8" DEEP JUNCTION BOX WITH BLANK COVER PLATE ON THE SECURE SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING. INSTALLING CONTRACTOR SHALL SIZE THE JUNCTION BOXES PER SYSTEM INSTALLATION REQUIREMENTS AND APPLICABLE CODES. MAINTAIN ACCESS TO THE JUNCTION BOX.
6. CONDUIT SHALL ROUTE TO THE NEAREST SECURITY PANEL TELECOM ROOM.

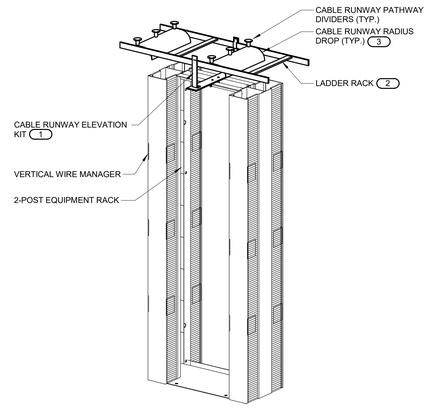


2 BONDING BUS BAR DETAIL

NO SCALE

NOTES:

1. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE SC-GND-1 FOR WIDTH REQUIREMENTS.



3 LADDER RACK MOUNTING DETAIL

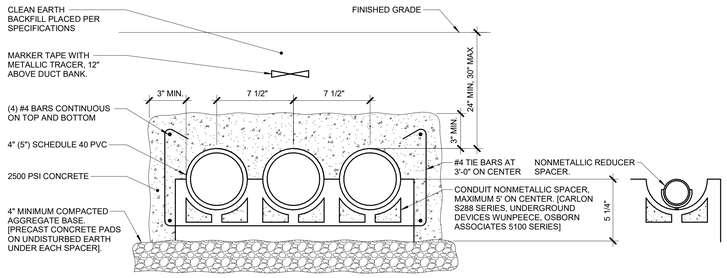
NO SCALE

NOTES:

1. ALL LADDER RACK AND ACCESSORIES TO BE INSTALLED FOR A COMPLETE INSTALLATION SHALL BE FROM THE SAME MANUFACTURER.

KEYNOTES: (#)

1. MOUNT THE LADDER RACK NO MORE THAN +6" ABOVE THE FLOOR MOUNTED RACK. ADJUST THE CABLE RUNWAY ELEVATION KIT AS REQUIRED.
2. REFER TO THE INDIVIDUAL PATHWAY DRAWINGS FOR THE LADDER RACK SIZE.
3. A MINIMUM OF (1) RADIUS DROP INTO EACH VERTICAL WIRE MANAGER. REFER TO THE INDIVIDUAL TELECOM ROOM LAYOUTS, PATHWAY LAYOUTS, AND RACK ELEVATIONS FOR QUANTITY OF WIRE MANAGERS AND ADDITIONAL INFORMATION.

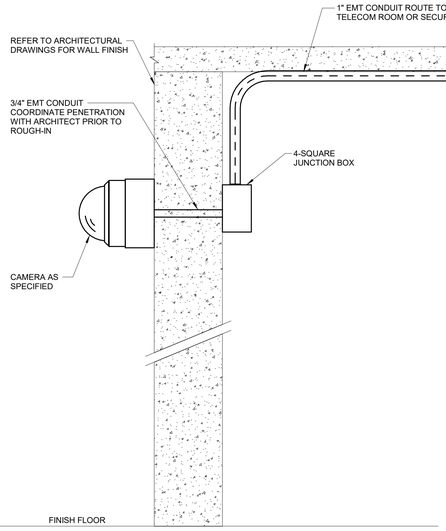


7 DUCT BANK DETAIL (3x1)

NO SCALE

NOTES:

1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
3. MINIMUM OF 4'-0" CLEAR BETWEEN ADJACENT DUCTBANKS.
4. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.
5. THE DETAIL ABOVE REPRESENTS 3 CONDUITS. CONTRACTOR SHALL ADJUST THE SPACER AS NECESSARY. REFER TO THE SITE PLAN FOR CONDUIT QUANTITY.

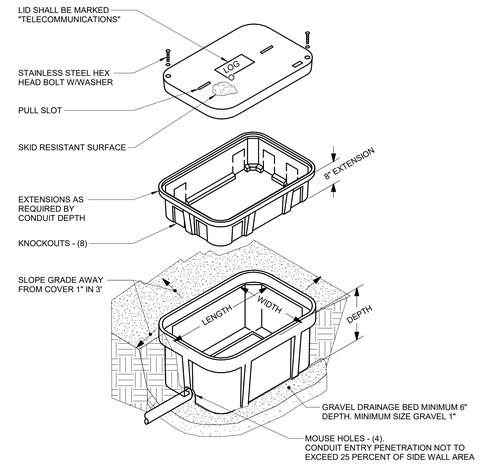


5 EXTERIOR WALL MOUNT CAMER ROUGH-IN DETAIL

NO SCALE

NOTES:

1. COORDINATE EXACT LOCATION ON SITE WITH WORK BY OTHER TRADES TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
2. INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
3. PROVIDE CAMERA MOUNTING ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED.
4. SEAL WALL MOUNT BASE PLATE TO FACADE TO PREVENT WATER INFILTRATION.



6 EXTERIOR HAND HOLE DETAIL

NO SCALE

NOTES:

1. ALL DIMENSIONS ARE NOMINAL INSIDE CLEARANCES.
2. ANY SPLICES OR DEVICES IN HANDHOLE SHALL BE SUBMERGIBLE.

Revisions:	Date:

CONSULTANT

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REGISTERED PROFESSIONAL ENGINEER — REG. NO. 14650 — ALEXANDER QUAST — NORTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	TECHNOLOGY DETAILS
Approved:	
Phase	BID DOCUMENTS
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	JAYSON STICKROD
Drawn	JOSHUA LADESMA
Project Number	884-CM-3015
Building Number	
Drawing Number	T400
Dwg.	79 OF 84

VA FORM 08 - 6231

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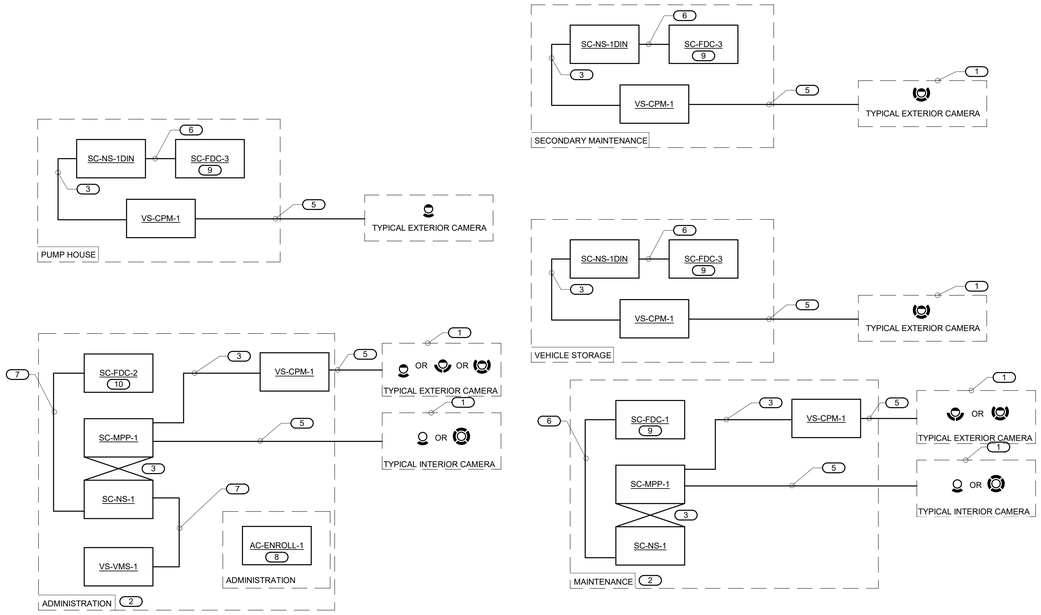
10/31/2022 10:38:29 AM



1 VIDEO SURVEILLANCE CONNECTIVITY DIAGRAM

12" = 1'-0"

NOTES:

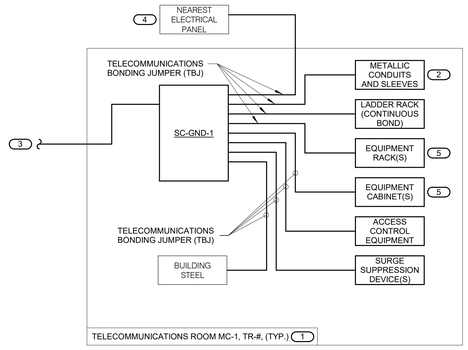
1. THIS RISER IS A DIAGRAMATIC ND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIAL SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION(S), LOCATIONS, AND CABLE TYPE. ALL INFOMRATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO THE FLOOR PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. REFER TO THE FLOOR PLANS FOR QUANTITITY OF CABLES AND JACKS TO BE INSTALLED FOR EACH INFORMATION OUTLET.
3. VIDEO SURVEILLANCE CAMERAS WILL BE CONNECTED TO PROVIDED NETWORK SWITCHES. CONTRACTOR IS RESPONSIBLE TO PROVIDE LIST OF IP ADDRESSES AND ASSIST WITH PROGRAMMING OF CAMERAS.

KEYNOTES: (#)

1. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND INSTALLATION REQUIREMENTS.
2. CABINET AS DEFINED ON THE TELECOM ROOM LAYOUT.REFER TO THE TELECOM ROOM REFERENCES MATRIX ON THE COVERPAGE FOR LOCATION.
3. CONTRACTOR PROVIDED AND INSTALLED PATCH CABLE.
4. FIBER OPTIC CABLE. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS.
5. CATEGORY 6 UNSHEILDED, OSP CABLE. REFER TO THE SPECFICATIONS FOR ADDITIONAL INFORMATION.
6. CONTRACTOR PROVIDED AND INSTALLED FIBER PATCH CORD. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. (2) CATEGORY 6 PATCH CORDS FROM NETWORK SWITCH TO VMS SERVER.
8. CONTRACTOR PROVIDED AND ISTALLED WORKSTATION FOR THE ACCESS CONTROL AND VIDEO SURVELLIANCE SYSTEM.REFER TO THE SPECFICATIONS FOR ADDITIONAL INFORMATION.
9. REFER TO THE BACKBONECOPPER/FIBER DIAGRAM ON 1/T501 AND THE FLOOR PLANS FOR ADDITIONAL INFORMATION AND NETWORK CONNECTIVITY REQUIREMENTS.

BONDING CONDUCTOR SIZING SCHEDULE

CONDUCTOR LENGTH IN FEET	MINIMUM ACCEPTABLE SIZE - AWG
LESS THAN 13'	6
14' - 20'	4
21' - 26'	3
27' - 33'	2
34' - 41'	1
42' - 52'	1/0
53' - 66'	2/0
67' - 84'	3/0
85' - 105'	4/0
106' - 125'	250 kcmil
126' - 150'	300 kcmil
151' - 175'	350 kcmil
176' - 250'	500 kcmil
251' - 300'	600 kcmil
GREATER THAN 301'	750 kcmil



2 TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM

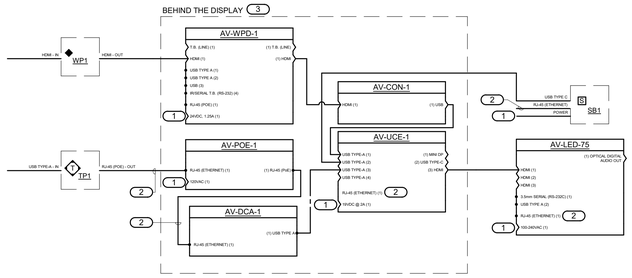
NO SCALE

NOTES:

1. THIS FLOW DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS FLOW DIAGRAM IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CONDUCTOR TYPE. ALL CONNECTIONS AND SYSTEM DEVICES SHOWN ARE TYPICAL AND NOT REPRESENTATIVE OF ACTUAL PROJECT QUANTITIES. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR ACTUAL QUANTITIES AND LOCATIONS OF DEVICES AND MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL CONDUCTORS IN THE TECHNOLOGY BONDING SYSTEM SHALL BE MINIMUM SIZE OF 3/0 AWG PLENUM RATED COPPER (GREEN OR MARKED WITH A DISTINCTIVE GREEN COLOR) UNLESS CONDUCTOR LENGTH IS LESS THAN 66 FEET. REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING CRITERIA FOR CONDUCTORS LESS THAN 66 FEET IN LENGTH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. ALL BONDING CONDUCTORS AND BONDING JUMPERS SHALL BE CONNECTED BY COMPRESSION LUGS, EXOTHERMIC WELDING, OR IRREVERSIBLE COMPRESSION CONNECTORS. SOLDER IS NOT AN ACCEPTABLE MEANS OF CONNECTION. SHEET METAL SCREWS SHALL NOT BE USED TO CONNECT COMMUNICATIONS BONDING CONDUCTORS TO EQUIPMENT. WHERE NECESSARY, REMOVE PAINT AND/OR USE PAINT-PIERCING WASHERS TO PROVIDE PROPER ELECTRICAL BOND AT ALL CONNECTIONS.
4. REFER TO 2/T400 FOR BONDING BUS BAR DETAIL AND ADDITIONAL INFORMATION AND REQUIREMENTS FOR SC-GND-1.

KEYNOTES:

1. REFER TO TELECOM ROOM REFERENCES SCHEDULE ON DRAWING T000 FOR TELECOMMUNICATIONS ROOM NUMBER AND LOCATION INFORMATION.
2. INCLUDES HORIZONTAL AND VERTICAL CONDUIT SLEEVES FOR TECHNOLOGY CABLING.
3. BONDING CONDUCTOR FOR TELECOMMUNICATIONS (BCT), TO EXISTING ELECTRICAL ENTRANCE INTERSYSTEM BONDING TERMINATION.
4. REFER TO THE ELECTRICAL DRAWINGS FOR LOCATION.
5. PROVIDE SC-GND-2 RACK MOUNT TELECOMMUNICATIONS BONDING BUSBAR AT EACH EQUIPMENT RACK AND CABINET.



4 HUDDLE AND TEAM AV DIAGRAM

NO SCALE

NOTES:

1. THIS ROOM UTILIZES AN ALL-IN-ONE TEAMS ROOM SYSTEM THAT PROVIDES FULL CONTROL OF ALL EQUIPMENT TO SUPPORT AUDIO AND VIDEO THROUGH A COMMON VIDEO CONFERENCING PLATFORM. THIS INCLUDES A TOUCH INTERFACE TO CONTROL THE SYSTEM, AN HDMI CONNECTION, FLAT PANEL DISPLAY, WIRELESS PRESENTATION AND WIRELESS VIDEO CONFERENCING UC PLATFORM, WITH AN IN ROOM SOUND BAR TO SUPPORT PROGRAM AUDIO, MICROPHONE AND CAMERA.
2. THIS FUNCTIONAL DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING, QUANTITIES, OR ALL CABLING REQUIRED FOR A COMPLETE TURN KEY INSTALLATION. THIS DIAGRAM IS SHOWN FOR CLARIFICATION OF CONNECTIONS, LOCATIONS AND CABLING TYPE AND REQUIREMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. THE INTENT OF THIS DIAGRAM IS TO SHOW CONNECTION REQUIREMENTS AND DOES INCLUDE ALL CABLING AS SHOWN FOR A COMPLETE TURN KEY SYSTEM. ALL STRUCTURED (DATA) CABLING SHALL BE PROVIDED BY THE STRUCTURED CABLING CONTRACTOR AND BE FROM THE SAME MANUFACTURE. ALL OTHER CABLING (HDMI, USB, ETC.) SHALL BE APPROVED BY THE AV VENDOR (I.E. CRESTRON).
4. AV CONTRACTOR SHALL VERIFY POWER REQUIREMENTS, CONNECTIONS, AND LOCATIONS FOR ALL AV DEVICES WITH THE ELECTRICAL CONTRACTOR.

KEYNOTES: (#)

1. PLUG DEVICE(S) INTO E.C. PROVIDED POWER RECEPTACLE.
2. CONTRACTOR PROVIDED AND INSTALLED PATCH CABLE. REFER TO THE FLOOR PLANS FOR ADDITIONAL INFORMATION.
3. MOUNT ALL EQUIPMENT IN THE IN-WALL DISPLAY MOUNT AV-MNT-1. PROVIDE WITH MOUNTING BRACKETS AS REQUIRED TO SECURE THE EQUIPMENT TO THE DISPLAY MOUNT.

Revisions:	Date:

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10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title TECHNOLOGY DIAGRAMS	**Phase** BID DOCUMENTS	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS	**Project Number** 884-CM-3015
Approved:			**Building Number**
	NON-SPRINKLERED	**Location** STURGIS, SOUTH DAKOTA	**Drawing Number** T500
		Issue Date 10/31/22 **Checked** JAYSON STICKROD **Drawn** JOSHUA LADESMA	**Dwg.** 80 OF 84

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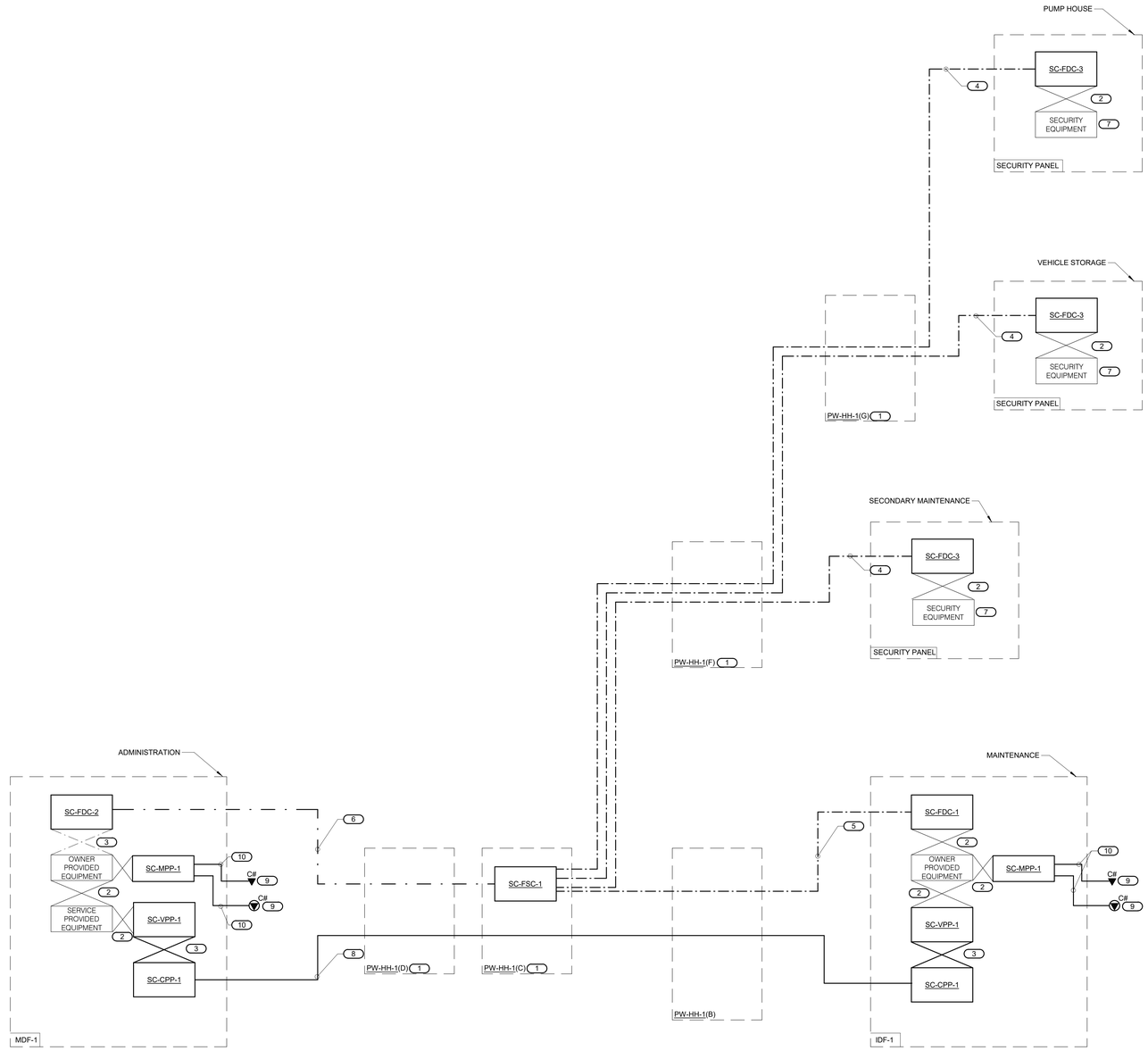

1 BACKBONE COPPER/FIBER CONNECTIVITY & NETWORK CABLING DIAGRAM

NO SCALE

NOTES:

1. THIS RISER IS A DIAGRAMATIC ND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIAL SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION(S), LOCATIONS, AND CABLE TYPE. ALL INFOMRATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO THE FLOOR PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. REFER TO THE FLOOR PLANS FOR QUANTITITY OF CABLES AND JACKS TO BE INSTALLED FOR EACH INFORMATION OUTLET.
3. ALL FIBER OPTIC CABLES SHALL TERMINATE ON LC CONNECTORS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. PROVIDE A 25'-0" COIL SLACK LOOP COIL SLACK LOOP FOR BOTH FIBER AND COPPER IN THE HANDHOLE.
2. COPPER OR FIBER PATCH CABLE BY OTHERS.
3. CONTRACTOR PROVIDED AND INSTALLED 25-PAIR CROSS CONNECT COPPER CABLE. TERMINATE ONE PAIR PER PORT ON PORTS 1-24 AND COIL THE 25TH PAIR TO BE TERMINATED ON ANY PORT.
4. 6 STRAND SINGLE MODE FIBER OPTIC CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. 12 STRAND SINGLE MODE FIBER OPTIC CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. 72 STRAND SINGLE MODE FIBER OPTIC CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. REFER TO THE ACCESS CONTROL DIAGRAM AND VIDEO SURVEILLANCE DIAGRAM FOR ADDITIONAL INFORMATION.
8. 25-PAIR CATEGORY 3 COPPER BACKBONE CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. CATEGORY 6A PLENUM RATED HORIZONTAL CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. REFER TO THE INFORMATION OUT SCHEDULE ON T600 AND THE FLOOR PLANS FOR THE QUANTITY OF CABLES AND JACKS TO BE INSTALLED AT EACH LOCATION.

Revisions:	Date:

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10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	TECHNOLOGY DIAGRAMS
Phase	BID DOCUMENTS
Approved:	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	JAYSON STICKROD
Drawn	LADESMA
Project Number	884-CM-3015
Building Number	
Drawing Number	T501
Dwg.	81 OF 84

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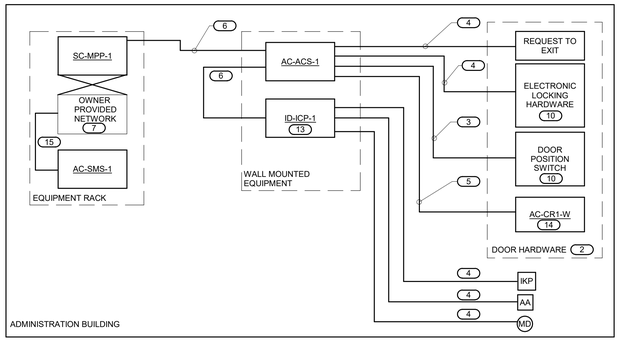

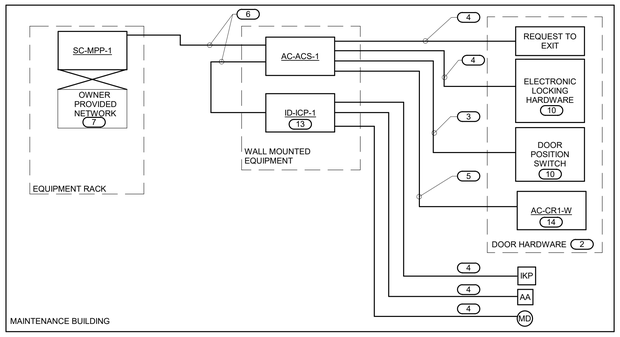

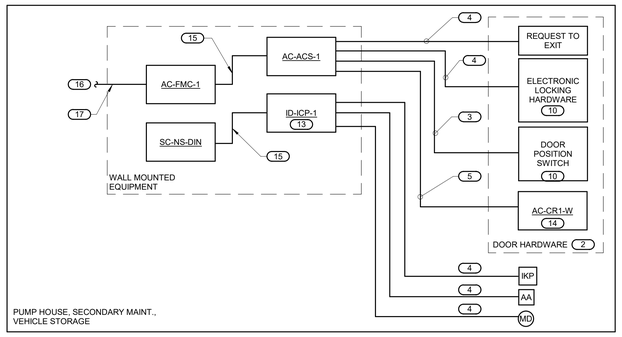

1 ACCESS CONTROL & INTRUSION DETECTION CONNECTIVITY DIAGRAM

NO SCALE

NOTES:

1. THIS RISER IS A DIAGRAMATIC ND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIAL SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION(S), LOCATIONS, AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO THE FLOOR PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. THIS INTEGRATED SYSTEM INCLUDES DEVICES FOR AN INTRUSION DETECTION SYSTEM AND AN ACCES CONTROL SYSTEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. ALL CABLING LISTEDD HERE ARE MINIMUM REQUIREMENTS. FINAL GUAGE AND QUANTITY IS BASED ON THE DISTANCE FROM THE NEAREST CONTROL PANEL AND THE NUMBER OF DOORS AT EACH LOCATION. CREDENTIAL READERS WILL OPEN A SINGLE DOOR WITH THE SECOND DOOR BEING MONITORED BY THE SYSTEM.
4. ALL ACCESS CONTROL EQUIPMENT AND DOOR HARDWARE WILL REQUIRE TO BE ON A MINIMUM OF 8 HOURS OF BATTERY TIME IN THE EVENT OF A POWER FAILURE. THIS INCLUDES ALL OF THE INPUT/OUTPUT CARDS, DOOR CONTROLLERS, ENDPOINTS (SUCH AS CARD READERS, MOTION DETECTIONS, AND DOOR POSITIONS SWITCHES), DOOR POWER SUPPLIES AND ALL OTHER DEVICES REQUIRED TO SUPPORT THE SYSTEM FUNCTIONALITY. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL DOORS REQUIRE ROUGH-IN AT ALL LOCATIONS. REFER TO 1/ T400 FOR ROUGH-IN REQUIREMENTS.
6. THIS SYSTEM INCLUDES A SINGLE SYSTEM THAT IS CAPABLE OF PROVIDING CARD ACCESS AND INTRUSION DETECTION. COORDINATE WITH THE CONTRACTOR FOR PROGRAMMING REQUIREMENTS TO DISABLE THE ALARM SYSTEM. THE ALARM SYSTEM WILL BE DISABLED VIA A DEDICATED KEYPAD AND THE KEYPAD ON NAY CREDENTIAL READER.

KEYNOTES: (#)

1. REFER TO THE FLOOR PLANS FOR SECURITY PANEL LOCATIONS.
2. TYPICAL OF ALL DOORS AS SHOWN ON THE DRAWINGS. REFER TO THE CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE AND SPECIFICATIONS FOR QUANTITY OF DEVICES AT EACH LOCATION.
3. A MINIMUM OF 18 AWG 4-CONDUCTOR, UNSHIELDED CABLE. 2 CONDUCTORS WILL CONNECT TO THE ACCESS CONTROL SYSTEM AND THE REMAINING 2 CONDUCTORS WILL CONNECT TO THE INTRUSION DETECTION SYSTEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. A MINIMUM OF 18 AWG 4-CONDUCTOR, SHIELDED CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION
5. A MINIMUM OF 18 AWG 6-CONDUCTOR, UNSHIELDED CABLE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. CATEGORY 6 PATCH CABLE FROM THE ACCESS CONTROL SYSTEM TO THE SECURITY NETWORK. PATCH PANEL INSTALLED IN THE NEAREST TELECOM ROOM. REFER TO TELECOM ROOM LAYOUTS ON 3/T101 AND 3/103 FOR PATCH PANEL DEDICATED TO THE ACCESS CONTROL SYSTEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. OWNER PROVIDED NETWORK SWITCH SHARED WITH THE VIDEO SURVEILLANCE SYSTEM. REFER TO THE VIDEO SURVEILLANCE SYSTEM DIAGRAM ON 3/T500 FOR ADDITIONAL INFORMATION.
8. COORDINATE WITH THE CONTRACTOR FOR THE LOCATION OF THE ENROLLMENT STATION.
9. THE SECURITY MANAGEMENT SERVER WILL BE INSTALLED IN THE MDF-1 IN THE ADMINISTRATION BUILDING. COORDINATE FOR CONNECTION AND INSTALLATION REQUIREMENTS.
10. PROVIDED AND INSTALLED BY THE DOOR HARDWARE CONTRACTOR.
11. THE CONTRACTOR IS TO PROVIDE AND INSTALL SOFTWARE ON A NEW CONTRACTOR PROVIDED AND INSALLED PC FOR AN ENROLLMENT STATION. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. REFER TO THE DRAWINGS FOR QUANTITIY OF DOORS AND PROVIDE ONE CONNECTION FOR EACH LEAF DOOR.
12. CONTRACTOR SHALL ADD ALL ADDITIONAL EXPANSION MODULES REQUIRESD TO EXPAND THE INTRUSION DETECTION SYSTEM TO EACH BUILDING. THE ADMINISTRATION BUILDING WILL BE THE MAIN INTRUSION PANEL. EXPANSION CAN UTILIZE THE COPPER AND FIBER BACKBONE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORAMTION AND REQUIREMENTS.
13. CONTRACTOR SHALL COORDIANTE WITH THE RESIDENT ENGINEER (RE) ON THE CONNECTION TO THE MONITORING SERVICE. PROVIDE ALL REQUIRED DEVICES TO NOTIFY THE MONITORING SERVICE PER THE MONITORING SERVICE REQUIREMENTS .
14. REFER TO THE FLOOR PLANS FOR CREDENTIAL READER TYPE AND LOCATIONS.
15. CATEGORY 6 PATCH CORD, REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
16. REFER TO BACKBONE COPPER/FIBER CONNECTIVITY RISER, 1/T501, FOR CONTINUATION.
17. 2 STRAND LC-LC FIBER OPTIC PATCH CORD.

Revisions:	Date:

CONSULTANT

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Office of Construction and Facilities Management

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Drawing Title TECHNOLOGY DIAGRAMS	**Phase** BID DOCUMENTS	**Project Title** BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS		**Project Number** 884-CM-3015
				Building Number
Approved:	NON-SPRINKLERED	**Location** STURGIS, SOUTH DAKOTA		**Drawing Number** T502
		Issue Date 10/31/22	**Checked** Checker	**Drawn** Author
				Dwg. 82 OF 84

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INDIVIDUAL CAMERA REQUIREMENTS SCHEDULE

CAMERA #	CAMERA TYPE	CAMERA ENVIRONMENT	TELECOM ROOM #	LOCATION	FIELD OF VIEW DESCRIPTION	MOUNTING TYPE	ADDITIONAL INFORMATION	NOTES
01-05	CM-1	EXTERIOR	MDF-1	OUTDOOR	MAINTENANCE BUILDING	CORNER		
01-07	CM-4	INTERIOR	MDF-1	OPEN OFFICE 7	OFFICE	ACCESSIBLE CEILING		
01-08	CM-2	EXTERIOR	MDF-1	OUTDOOR	TEMP TRAILER A / MAIN. BLDG.	SURFACE WALL		
01-15	CM-4	INTERIOR	IDF-1	OPEN OFFICE 1	OPEN OFFICE	INACCESSIBLE CEILING		
01-16	CM-4	INTERIOR	IDF-1	BAY 1/BAY 2	BAY	INACCESSIBLE CEILING		
01-19	CM-4	INTERIOR	IDF-1	GARAGE 9	GARAGE	ACCESSIBLE CEILING		
01-20	CM-1	INTERIOR	IDF-1	HALLWAY	WOMEN'S LOCKERS	ACCESSIBLE CEILING		
01-23	CM-4	INTERIOR	IDF-1	BREAKROOM/LOUNGE 14	BREAKROOM	ACCESSIBLE CEILING		
01-26	CM-1	INTERIOR	IDF-1	DATA/SECURITY 18	ENTRANCE GATE OF DATA/SECURITY ROOM	SURFACE WALL		
AB0-01	CM-1	INTERIOR	MDF-1	ELEC 03	ENTRANCE GATE OF ELEC 03 ROOM	SURFACE WALL		
AB0-02	CM-1	INTERIOR	MDF-1	DATA 02	ENTRANCE GATE OF DATA 02 ROOM	ACCESSIBLE CEILING		
AB1-01	CM-2	EXTERIOR	MDF-1	OUTDOOR	OUTSIDE OF ADMIN BUILDING	SURFACE WALL		
AB1-02	CM-1	INTERIOR	MDF-1	VESTIBLE/INFO CENTER 1	ENTRANCE OF INFO CENTER	ACCESSIBLE CEILING		
AB1-03	CM-1	INTERIOR	MDF-1	COORIDOR 10A	ENTRANCE OF ADMIN BUILDING	ACCESSIBLE CEILING		
EAB-01	CM-2	EXTERIOR	MDF-1	OUTDOOR	OUTSIDE OF ADMIN BUILDING	SURFACE WALL		
EAB-02	CM-2	EXTERIOR	MDF-1	OUTDOOR	OUTSIDE OF ADMIN BUILDING	SURFACE WALL		
EMB-01	CM-3	EXTERIOR	IDF-1	OUTDOOR	OUTSIDE OF MAINTENANCE BUILDING	CORNER		
EMB-02	CM-2	EXTERIOR	IDF-1	OUTDOOR	TEMP TRAILER A	SURFACE WALL		
EMB-03	CM-3	EXTERIOR	IDF-1	OUTDOOR	SECONDARY MAINTENANCE BUILDING/TEMP TRAILER B	CORNER		
EMB-04	CM-2	EXTERIOR	MDF-1	OUTDOOR	TEMP TRAILER A	SURFACE WALL		
EMB-05	CM-1	EXTERIOR	MDF-1	OUTDOOR	MAINTENANCE BUILDING	CORNER		
EMB-06	CM-3	EXTERIOR	IDF-1	OUTDOOR	MAINTENANCE BUILDING	CORNER		
PH-01	CM-1	EXTERIOR	SECURITY PANEL	OUTDOOR	OUTSIDE OF PUMP HOUSE	CORNER		
SMB-01	CM-3	EXTERIOR	SECURITY PANEL	OUTDOOR	TEMP TRAILER B	CORNER		
SMB-02	CM-3	EXTERIOR	SECURITY PANEL	OUTDOOR	PUMP HOUSE	CORNER		
VSB-01	CM-3	EXTERIOR	SECURITY PANEL	OUTDOOR	PUMP HOUSE	CORNER		
VSB-02	CM-3	EXTERIOR	SECURITY PANEL	OUTDOOR	SECONDARY MAINTENANCE BUILDING	CORNER		

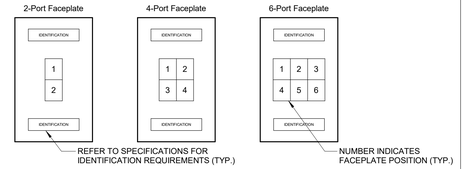
CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE

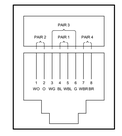
ELECTRONIC DOOR HARDWARE SUCH AS ELECTRIC STRIKES, ELECTRIC LATCH RETRACTION, ETC. SHALL BE PROVIDED AND INSTALLED BY OTHERS. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE ON X/XXX FOR CREDENTIAL READER TYPE INFORMATION.

		CREDENTIAL READER	INTEGRATION						REQUEST TO EXIT			DOOR HARDWARE								OTHER (REFER TO NOTES)				
DOOR #	ROUGH-IN ONLY	CREDENTIAL READER TYPE	MULTIPLE CREDENTIAL READERS OPERATES SINGLE DOOR	AUTOMATIC DOOR OPERATOR	LOCKED BY EMERGENCY DURESS SEQUENCE	REMOTE UNLOCK VIA INTERCOM MASTER	REMOTE UNLOCK VIA PUSHBUTTON	INTRUSION DETECTION	VIDEO SURVEILLANCE	INTERNAL ELECTRIFIED HARDWARE CONNECTION	LOCAL PUSHBUTTON DOOR HARDWARE OVERRIDE	MOTION DETECTOR	ELECTRONIC LOCKING HARDWARE (BY OTHERS)	LATCH STATUS DETECTION	LOCAL ALARM HORN	MONITOR LATCH BOLT	MONITOR DOOR POSITION SWITCH SPDT	MONITOR DOOR POSITION SWITCH DPDT	MONITOR DOOR POSITION SWITCH FOR OVERHEAD DOOR	DELAYED EGRESS	LOCAL 12/24VAC POWER SUPPLY	SCHEDULE BASED LOCKING	VISUAL STROBE	NOTES
02		CR1						•	•				•						•						
6		N/A						•											•						
7A		CR1						•	•				•						•						
9		CR1						•	•				•						•						
10A		CR1						•	•				•						•						
18		CR1						•	•				•						•						
21		CR1						•	•				•						•				•		
26		CR1						•	•				•						•						
C1945A		CR1						•	•				•						•						
C1945F		N/A						•											•						
C1945H		CR1						•	•				•						•						
C1945J		CR1						•	•				•						•						
C1945P		CR1						•	•				•						•						
C1945R		N/A						•											•						
C1945T		N/A						•											•						
C1945V		CR1						•	•				•						•						
PHB-7		N/A						•											•						
SMB-1		CR1						•	•				•						•						
SMB-2		N/A						•												•					
SMB-3		N/A						•												•					
SMB-4		N/A						•												•					
SMB-5		CR1						•	•				•						•						
SMB-6		N/A						•												•					
SMB-7		N/A						•												•					
VSB-1		N/A						•												•					
VSB-2		N/A						•												•					
VSB-3		N/A						•												•					
VSB-4		N/A						•												•					
VSB-5		CR1						•	•				•						•						

INFORMATION OUTLET SCHEDULE

SINGLE GANG WALLPLATES





ANSI/TIA/EIA T568B
PIN/PAIR ASSIGNMENT

NOTES:
1. PROVIDE REMOVABLE BLANK INSERT(S) FOR ALL UNUSED PORTS.
2. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON LABELING REQUIREMENTS.

SCHEDULE NOTES:
1. LOCATION OF FUTURE OR OWNER PROVIDED WIRELESS ACCESS POINT. PROVIDE A 20' SLACK COIL AT THE NEAREST CABLE SUPPORT FOR POSSIBLE RELOCATION AFTER WIRELESS SURVEY.

LEGEND

DATA	CAT 6 RJ-45
VOICE	CAT 6 RJ-45
BLANK	BLANK FILLER MODULE
TV	F-CONNECTOR
VGA	HD-15 CONNECTOR
HDMI	HDMI CONNECTOR

CONFIGURATION	FACEPLATE PORTS	FACEPLATE PORT IDENTIFICATION						NOTES
		POSITION 1 JACK TYPE	POSITION 2 JACK TYPE	POSITION 3 JACK TYPE	POSITION 4 JACK TYPE	POSITION 5 JACK TYPE	POSITION 6 JACK TYPE	
C1	1	DATA						
C2	2	DATA	DATA					
C2-WAP	2	DATA	DATA					
C4	4	VOICE	VOICE	DATA	DATA			
C6	6	VOICE	VOICE	DATA	DATA	DATA	DATA	

Revisions:	Date:

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STAMP

REGISTERED PROFESSIONAL ENGINEER
14680
ALEXANDER QUAST
SOUTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: TECHNOLOGY SCHEDULES
Approved:
Phase: BID DOCUMENTS
NON-SPRINKLERED
Project Title: BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location: STURGIS, SOUTH DAKOTA
Issue Date: 10/31/22
Checked: JAYSON STICKROD
Drawn: JOSHUA LADESMA
Project Number: 884-CM-3015
Building Number:
Drawing Number: T600
Dwg. 83 OF 84

VA FORM 08 - 6231

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10/31/2022 10:36:35 AM

TECHNOLOGY EQUIPMENT SCHEDULE.

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EQUIPMENT LIST ABBREVIATION	EQUIPMENT LIST DESCRIPTION	EQUIPMENT LIST MANUFACTURER AND MODEL
AC-AA-1	WALL MOUNTED AUDIBLE SIREN TO NOTIFY OF A BREACH. INSTALL DEVICE IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO THE NEAREST SUPPORTING SECURITY PANEL	WBOX OE-1GANGSIRN OR PRE-APPROVED EQUAL
AC-ACS-1	ELECTRONIC ACCESS CONTROL SECURITY PANEL. PROVIDE ALL SOFTWARE, DOOR CONTROLLERS, CARD READER MODULES, INPUT MODULES, OUTPUT MODULES, POWER SUPPLIES AND BATTERIES TO SUPPORT A MINIMUM OF 8 HOURS OF DOWN TIME. REFER TO THE SPECIFICATION FOR ADDITIONAL INFORMATION.	GENETEC OR PRE-APPROVED EQUAL
AC-CR1-W	CARD READER. PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM. REFER TO CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE ON T600 FOR ADDITIONAL INFORMATION. CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	HID PIV CLASS: RK40 SERIES
AC-ENROLL-1	LAPTOP WITH KEYBOARD AND 16" 1080P MONITOR. INCLUDE WITH A CREDENTIAL READER ENROLLER. THE LAPTOP WILL BE SIZED TO SUPPORT THE VIEWING OF ALL VIDEO SURVEILLANCE CAMERAS ON THE PROJECT, BE USED FOR THE ENROLLMENT STATION, AND SUPPORT THE MONITORING AND ENROLLMENT ON THE ACCESS CONTROL SYSTEM. PROVIDE WITH THE LAPTOP WITH AN ENROLLER. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. COORDINATE WITH THE RESIDENT ENGINEER ON THE EXACT LOCATION OF THE WORKSTATION PC PRIOR TO INSTALLATION.	LAPTOP: DELL HP ENROLLER: RFIDeas PC PROX ENROLL FIPS201 OR PRE-APPROVED EQUAL
AC-FMC-1	FIBER MEDIA CONVERTER SUITABLE FOR RS-232 OR RS-422/485 INTERFACES. POWER: 12V-48V.	HONEYWELL TCF-142-M
AC-SCP-1	SECURITY PANEL. PROVIDED AS AN ENCLOSURE FOR LOW VOLTAGE SUPPORTING DEVICES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	NEMA 4X ENCLOSURE
AC-SMS-1	ELECTRONIC ACCESS CONTROL SERVER. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	DELL HP
AV-CON-1	AV HDMI TO USB CONVERTER	CRESTRON HD-CONV-USB-200
AV-DCA-1	DIRECT CONNECTION ADAPTER	CRESTRON PROVIDED WITH FLEX KIT
AV-LED-75	75" LED FLAT PANEL DISPLAY, 4K RESOLUTION, 24/7 OPERATION. INPUTS: DVI-D DISPLAY PORT 1.2 (1), HDMI 2.0 (2), HDCP2.2, STEREO MINI JACK, USB 2.0 X 2. OUTPUTS:HDMI 2.0 (LOOP OUT), STEREO MINI JACK. EXTERNAL CONTROL: RS-232C(IN/OUT) THRU STEREO JACK, RJ45. POWER SUPPLY: VAC 100 - 240 V~ (+/- 10 %), 50/60 HZ. MOUNT AT 60" AFF TO CENTER. DIMENSION: 37"Wx66"Hx2"D. WEIGHT: 85" lbs.	SAMSUNG QM75R CHRISTIE LG
AV-MNT-1	AV X-ARM FLAT PANEL MOUNT WITH BUILD-IN BACK BOX, WALL MOUNTED. DIMENSIONS: 30.38" X 23.34" X 3.81", PROVIDE CRESTRON FLEX PLATE, PROVIDE 1-1/4" CONDUIT STUBBED UP ABOVE CEILING FOR AV CABLING. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	RPVISUAL WALLMATE32, FLEX PLATE
AV-POE-1	1 PORT POWER OVER ETHERNET INJECTOR	CRESTRON 6502429
AV-SB1-W	AV SOUNDBAR WITH BUILT-IN CAMERA FOR VIDEO CONFERENCING.	JABRA PANACAST 50 VIDEO BAR
AV-TP1-W	AV TOUCH PLATE, WALL MOUNTED. PROVIDE 2-GANG BOX WITH 1" CONDUIT STUBBED UP ABOVE THE CEILING FOR AV CABLING. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	CRESTRON TSW-1070
AV-UCE-1	UNIFIED COMMUNICATIONS ENGINE FOR TEAMS	CRESTRON UC-BRKT-200-S-T-ASSY
AV-WP1-W	AV WALL PLATE/BACKBOX, WALL MOUNTED. PROVIDE1 GANG BOX WITH 1-1/4" CONDUIT STUBBED UP ABOVE THE CEILING FOR AV CABLING. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	CRESTRON MP-WP152
AV-WPD-1	WIRELESS PRESENTATION DEVICE.	CRESTRON AM-3200
ID-ICP-1	INTRUSION DETECTION CONTROLLER. PROVIDES UP TO 40 POINTS INCLUDING MOTION DETECTORS, KEYPADS, GLASS BREAKS, ETC. PROVIDE WITH INPUT CARDS AS REQUIRED TO SUPPORT THE CONNECTED DEVICES. PROVIDE AN INTERFACE MODULE FOR UP TO (2) TELEPHONE LINES, A LOCKABLE CABINET, AND BATTERY BACKUP FOR A MINIMUM OF 6 HOURS.	HONEYWELL VISTA 128BPT SERIES OR PRE-APPROVED EQUAL
ID-IKP-W	INTRUSION DETECTION KEYPAD. ILLUMINATED 4-LINE PANEL DISPLAY LCD SHOWS ZONE INFORMATION. ECP BUS COMPATIBLE. INSTALL KEYPAD IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING WITH (1) 1" CONDUIT TO NEAREST TELECOM ROOM.	HONEYWELL VISTA 6160 OR PRE-APPROVED EQUAL
ID-MD-C	INTRUSION DETECTION MOTION SENSOR, CEILING MOUNTED. DIMENSION: 3.5" X 5.25" (H X Dia.) REQUIRE INPUT POWER 6-15 VDC; 8mA STANDBY, 60mA IN ALARM WITH LEDs ENABLED. DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.	BOSCH ISC-CDL1-WA15G OR PRE-APPROVED EQUAL
PW-HH-1	HANDHOLE COMPOSITE POLYMER CONCRETE BODY AND COVER. STAINLESS STEEL HARDWARE BOLTED NON-SKID COVER RATED FOR 15,000LB. DESIGN LOAD OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC. STACK UNITS TO ACHIEVE DEPTH SHOWN ON PLANS. UNITS IN LANDSCAPED AREAS SHALL BE GREEN IN COLOR. COMMUNICATIONS LOGO ON HANDHOLE COVER. CONTRACTOR SHALL FIELD VERIFY QUANTITY AND LOCATIONS. REFER TO 6/T400 FOR DETAIL. PW-HH-1 = 24"W X 24"L.	HUBBELL/QUAZITE: PG2424BB24 PG2424HA00
SC-CPP-1	COPPER PROTECTOR PANEL, UP TO 100-PAIR SURGE PROTECTION MODULE, 110 TYPE INPUT/OUTPUT TERMINATIONS. PROVIDE WITH FIBER GLASS HOUSING AND POPULATE WITH DIGITAL SOLID STATE PROTECTOR UNITS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	CIRCA PANEL: 1800ECA10100 PROTECTOR UNITS: 483S-75 OR PRE-APPROVED EQUA
SC-ER-1	STANDARD 19" EQUIPMENT RACK, 84"H X 19"W X 15"D, FEATURING PASS-THRU HOLES ON FRONT AND SIDES FOR CABLE MANAGEMENT (CHATSWORTH 11374-503), DURABLE BLACK POWDER COAT FINISH, MEETS EIA-310-E REQUIREMENT AND PROVIDES (45) 19" X 1.75" MOUNTING SPACES. PROVIDE WITH TOP CENTER WATERFALL, TOP CHANNEL PATHWAY FOR LADDER RACK, AND ANY ADDITIONAL HARDWARE FOR COMPLETE INSTALLATION. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	CHATSWORTH PRODUCTS 46353-503
SC-FDC-1	OPTICAL FIBER DISTRIBUTION CABINET. 24 FIBER MAXIMUM CAPACITY FOR LC CONNECTORS, FRONT LOCKING DOOR, SLIDE OUT RAILS TO FACILITATE FRONT ACCESS, JUMPER TROUGHS IN CONNECTOR PANELS TO REDUCE MOUNTING SPACE. REQUIRES (4) 19" X 1.75" RACK MOUNTING SPACES. PROVIDE WITH CLAMP AND GROUNDING KIT, COUPLING PANEL(S), LC CONNECTOR, COUPLINGS, JUMPERS, AND REAR MOUNTED CLOSET HOUSING PANEL(S). REFER TO SPECIFICATIONS SECTION FOR ADDITIONAL INFORMATION	CORNING ENCLOSURE: CCH-04U CASSETTE: CCH LC CASSETTE OR PRE-APPROVED EQUAL
SC-FDC-2	OPTICAL FIBER DISTRIBUTION CABINET. 144 FIBER MAXIMUM CAPACITY FOR LC CONNECTORS, FRONT LOCKING DOOR, SLIDE OUT RAILS TO FACILITATE FRONT ACCESS, JUMPER TROUGHS IN CONNECTOR PANELS TO REDUCE MOUNTING SPACE. REQUIRES (1) 19" X 1.75" RACK MOUNTING SPACES. PROVIDE WITH CLAMP AND GROUNDING KIT, COUPLING PANEL(S), LC CONNECTOR, COUPLINGS, JUMPERS, AND REAR MOUNTED CLOSET HOUSING PANEL(S). REFER TO SPECIFICATIONS SECTION FOR ADDITIONAL INFORMATION	CORNING ENCLOSURE: CCH-01U CASSETTE: CCH LC CASSETTE OR PRE-APPROVED EQUAL
SC-FDC-3	DIN MOUNTED SINGLE PANEL HOUSING FOR DIN RAIL MOUNTABLE SPLICE PANEL. HOLDS A SINGLE CONNECTOR PANEL. PROVIDE WITH CLAMP AND GROUNDING	CORNING ENCLOSURE: CCH-01U CONNECTOR PANEL: CCH LC DUPLEX 24 OR APPROVED EQUAL
SC-FSC-1	FIBER OPTIC SPLICE CASE FOR EXTERIOR USE. PROVIDES UP TO (3) FIBER ENTRANCE PORTS FOR FIBER SPLICING OF UP TO 36 SINGLE FUSION SPLICES AND 72 WITH AN EXPANDED OPTION. INCLUDES MOUNTING IN HANDHOLES, LOCK-TAPE SEALING SYSTEM, PERMANENT NEOPRENE GASKET SYSTEM, STANDARD COVER AND INTEGRATED AIR VALVE. PROVIDE FUSION SPLICING AND SPLICE TRAYS FOR THE QUANTITY OF INSTALLED FIBER OPTIC CABLES. PROVIDE BONDING AS REQUIRED PER THE LATEST NEC REQUIREMENTS	PREFORMED LINE PRODUCTS COYOTE RUNT CLOSURE KIT OR PRE-APPROVED EQUAL
SC-GND-1	GROUNDING BUSBAR, WALL MOUNT. 4" H X 12" L X 1/4" D COPPER, ELECTRICALLY ISOLATED BY INSULATORS INTEGRAL TO MOUNTING BRACKETS. COPPER GROUND BAR IS 1/4" THICK AND STAND OFF 2.75" FROM WALL. THE 12" BUSBAR PROVIDES CONNECTION FOR EIGHTEEN (18) 2-HOLE COMPRESSION LUGS RESPECTIVELY WITH 5/8" OR 1" CENTERS. ANSI/TIA-607 AND BICSI COMPLIANT. UL LISTED. REFER TO GROUND BAR DETAIL ON 2/T400 AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	CHATSWORTH 40153-012 PANDUIT ERICO HARGER
SC-GND-2	GROUNDING BUSBAR, HORIZONTAL RACK-MOUNT. 1/4" H X 19" L X 3/4" D SOLID COPPER, ELECTRICALLY ISOLATED BY INSULATORS INTEGRAL TO STAINLESS STEEL MOUNTING BRACKETS. PROVIDE UNIT CONFIGURED WITH 15 SETS OF 5/16" HOLES SPACED 5/8" ON CENTER TO ACCOMMODATE "A" SPACED TWO-HOLE COMPRESSION LUGS AND 3 SETS OF 7/16" HOLES SPACED 1" ON CENTER TO ACCOMMODATE "C" SPACED TWO-HOLE COMPRESSION LUGS. ANSI/EIA/TIA-607 AND BICSI COMPLIANT. UL LISTED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	HUBBELL HBBBHR19
SC-HWM-1	HORIZONTAL WIRE MANAGEMENT, 3" X 3" RIGID FRONT FINGERS WITH FLEXIBLE RETENTION TABS, 2" X 5" FLEXIBLE REAR FINGERS. REMOVABLE FRONT COVER HINGES 180 UP OR DOWN. INTEGRAL BEND RADIUS CONTROL. PASS THROUGH HOLES ALLOW FRONT TO REAR CABLING. REQUIRES (2) 1.75" MOUNTING SPACES.	HUBBELL HM277C
SC-IO-C	INFORMATION OUTLET, CEILING MOUNT, 2-PORT COVERPLATE AS INDICATED ON DRAWINGS AND INFORMATION OUTLET SCHEDULE. REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR PIN CONFIGURATION INFORMATION. " # " INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE DRAWINGS. REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR ADDITIONAL INFORMATION. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. ---(MOUNT TO CLOSEST STRUCTURE ELEMENTS (EX. COLUMN). INSTALL A DELXE CORD GRIP FOR STRAIN RELIEF ON UTP CABLE. INSTALL A 1" EMT CONDUIT TO THE NEAREST TELECOM ROOM AS INDICATED ON THE DRAWINGS OR UNLESS OTHERWISE NOTED. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	HUBBELL COVER PLATE: IFP1* SERIES JACK: (CAT6) HXJ6 SERIES OR PRE-APPROVED EQUAL
SC-IO-F	FLOORBOX, 2-COMPARTMENT BOX FOR USE IN EITHER CONCRETE OR WOOD FLOORS	*
SC-IO-W	INFORMATION OUTLET, WALL MOUNT. 1-, 2-, 4-, 6-PORT COVERPLATE AS INDICATED ON DRAWINGS AND INFORMATION OUTLET SCHEDULE, REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR PIN CONFIGURATION INFORMATION. " # "INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE DRAWINGS. REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR ADDITIONAL INFORMATION. " W " PROVIDE (1) RJ-45 JACK FOR VOICE AT +48" AFF FOR WALL HUNG PHONE. PROVIDE WITH STAINLESS STEEL FACEPLATE, MATING LUGS. REFER TO INFORMATION OUTLET SCHEDULE ON T600 FOR ADDITIONAL INFORMATION. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO THE NEAREST TELECOM ROOM OR UNLESS OTHERWISE NOTED. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	HUBBELL COVER PLATE: IFP1* SERIES JACK: (CAT6) HXJ6 SERIES OR PRE-APPROVED EQUAL

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SC-LR-1	LADDER RACK, (12"W x 1.5"H x 9.71'L) TUBULAR STEEL CONSTRUCTION. RUST RESISTANT ENAMEL FINISH. REMOVE SHARP BURRS FROM LADDER RACK AND REPAINT ALL AREAS THAT HAVE BEEN FIELD MODIFIED, CUT, OR EXPOSED. UL LISTED. PROVIDE WITH ALL NECESSARY MOUNTING BRACKETS, RACK ELEVATION KITS, AND (2) CABLE RADIUS DROPS PER RACK.	CHATSWORTH LADDER RACK: 11275-712 RACK ELEVATION KIT: 10506-706 CABLE RADIUS DROP: 12100-712
SC-MPP-1	MODULAR PATCH PANEL, 48 MODULAR RJ-45 TERMINATIONS, MOUNTS DIRECTLY TO EIA/TIA STANDARD 19" RELAY RACK, PORT IDENTIFICATION NUMBERS, PROVIDED WITH COLOR CODING AND LABEL HOLDER KITS, U.L. LISTED. REQUIRES (2) 1.75" MOUNTING SPACES.	HUBBELL CAT6A: HP6A48
SC-NS-1	48-PORT LAYER 2/3/4 10/100/1000 GIGABIT SWITCH - POE. 48 RJ-45 CONNECTORS FOR 10BASE - T/100BASE-TX/1000 BASE-T WITH 4 GIGABIT COMBO PORTS SHARED BETWEEN MINI-GBIC PORTS: CONSOLE PORT: AUTO MEDIUM DEPENDENT INTER FACE (MDI) AND MDI CROSSOVER (MDI-X); AUTO	CISCO 5500 SERIES OR PRE-APPROVED EQUAL
SC-NS-1DIN	EXTERIOR DIN-MOUNTED INDUSTRIAL RATED SWITCH. DIN MOUNTED, LAYER 2/3 SWITCH, (4) PORTS 10/100, (2) DUAL PORT SFP MODULES, POE, POE+, PROVIDE WITH SINGLE MODE SFP MODULE, POWER SUPPLY, AND ALL ACCESSORIES FOR A COMPLETE INSTALLATION. PROVIDE ADDITIONAL EXP	CISCO IE-3000 SERIES OR PRE-APPROVED EQUAL
SC-PDU-1	20A POWER CONDITIONER. SURGE PROTECTION, NOISE FILTRATION, VOLTAGE PROTECTION, DELIVERS 120V OF AC POWER, INPUT VOLTAGE, 97V-137VAND CONSTANT OUTPUT VOLTAGE 120V, +/-5V. REQUIRES (2) RACK UNIT OF MOUNTING SPACE. REFER TO THE SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.	FURMAN P-2400 AR OR PRE-APPROVED EQUAL
SC-TTB	TELECOMMUNICATIONS TERMINAL BOARD, 4"X8"X3/4" A-C GRADE FIRE-RATED PLYWOOD. EXPOSED SIDE SHALL BE SMOOTH. MOUNT VERTICALLY WITH TOP OF PLYWOOD AT 8'-6" AFF. IN THE EVENT THE MANUFACTURER'S RATING STAMP IS NOT VISIBLE ON THE SMOOTH SIDE, THE CONTRACTOR SHALL PROVIDE A LAMINATED LETTER FROM THE MANUFACTURER OR SUPPLIER CERTIFYING THAT THE PLYWOOD IS FIRE-RATED AND ATTACH THE LETTER WITH A PICTURE OF THE RATING STAMP, TO THE PLYWOOD. FIRE RATED PLYWOOD SHALL NOT BE PAINTED OR TREATED WITH ANY TYPE OF SEALANT THAT WOULD LESSEN THE INTEGRITY OF THE FIRE RATING.	*
SC-UPS-1	UNINTERRUPTIBLE POWER SUPPLY, 208 VOLT NOMINAL INPUT WITH 120 STEPDOWN TRANSFORMER, FULL LOAD BACKUP TIME: 3 MINUTES (2700W). NEMA L6-30R, (1) NEMA L14-30R, AND (8) NEMA 5-20R , (2) YEAR WARRANTY, REQUIRES 4U OF RACK SPACE FOR THE HEADEND UNIT. PROVIDE WITH ENOUGH BATTERIES TO SUPPORT A MINIMUM OF 96 HOURS AT FULL LOAD FOR ALL SECURITY AND IT EQUIPMENT IN THE INSTALLED ROOM. FOR BIDDING PURPOSES, PROVIDE A MINIMUM OF 1 UPS HEADEND AND (10) BATTERIES. COORDINATE WITH THE RESIDENT ENGINEER FOR THE EXACT NUMBER OF BATTERIES TO SUPPORT THE EXISTING IT EQUIPMENT AND SECURITY EQUIPMENT	APC UPS: SMART-UPS SRT 3000VA 208/240V BATTERIES: APC SMART-UPS SRT 96V 3KVA BP OR PRE-APPROVED EQUAL
SC-VPP-1	MODULAR PATCH PANEL, 24 MODULAR RJ-45 TERMINATIONS, MOUNTS DIRECTLY TO EIA/TIA STANDARD 19" RELAY RACK, PORT IDENTIFICATION NUMBERS, PROVIDED WITH COLOR CODING AND LABEL HOLDER KITS, U.L. LISTED. REQUIRES (2) 1.75" MOUNTING SPACES.	COMMSCOPE "SYSTIMAX" CAT 6: 1100AGS3-24 OR PRE-APPROVED EQUAL
SC-VWM-1	DOUBLE-SIDED VERTICAL WIRE MANAGER, 7"H X 8"W X 24.5"D. REMOVABLE FRONT COVER HINGES ON LEFT OR RIGHT. SPOOLS FOR INTEGRAL BEND RADIUS CONTROL.	CHATSWORTH 35522-703
VS-CM-1	SINGLE LENS FIXED SINGLE VARIFOCAL LENS, INTERIOR IP CAMERA. CEILING MOUNTED. 2 MEGAPIXEL, VARIFOCAL: 3.4-8.9 mm, [MIN ILLUMINATION: COLOR: 0.10 LUX, B/W: 0.00 LUX. FEATURES: FORENSIC WIDE DYNAMIC RANGE, LIGHTFINDER 2.0, AND OPTIMIZED IR. VIDEO COMPRESSION: H.264, H.265, MOTION JPEG; CASING: IP66-RATED; IK RATING; IK10 IMPACT-RESISTANT CASING WITH HARD-COATED DOME; POWER: TYPICAL 4.8W, MAX 10.7W; OPERATING CONDITIONS: 0-50 DEG C.; INCLUDES VANDAL RESISTANT SCREWS. CAMERA COLOR: WHITE. INFORMATION OUTLET FOR CAMERA SHALL BE TERMINATED IN AN RJ-45 PLUG. REFER TO THE INFORMATION OUTLET SCHEDULE ON SHEET T600 FOR ADDITIONAL INFORMATION PIN CONFIGURATION. REFER TO T400 FOR CAMERA MOUNTING AND ROUGH-IN DETAIL REQUIREMENTS.	CAMERA: AXIS P3265-LVE TERMINATION: CAT6: HXJ6 SERIES OR PRE-APPROVED EQUAL
VS-CM-2	MULTI-DIRECTIONAL 180 DEG. MULTI-SENSOR MULTI-LENS VARIFOCAL LENS EXTERIOR IP CAMERA. WALL MOUNTED. 4 x 5 MEGAPIXEL SENSORS, VARIFOCAL: 5.9 mm, MIN ILLUMINATION: COLOR: 0.16 LUX, B/W: 0.06 LUX. FEATURES: FORENSIC WIDE DYNAMIC RANGE AND LIGHTFINDER, VIDEO COMPRESSION: H.264, H.265, MOTION JPEG; CASING: IP66-/IP67-RATED; IK RATING; IK10 IMPACT-RESISTANT CASING WITH HARD-COATED DOME; POWER: TYPICAL 12W, MAX 22.5W; OPERATING CONDITIONS: -40-50 DEG C.; INCLUDES VANDAL RESISTANT SCREWS. CAMERA COLOR: WHITE. INFORMATION OUTLET FOR CAMERA SHALL BE TERMINATED IN AN RJ-45 PLUG. REFER TO THE INFORMATION OUTLET SCHEDULE ON SHEET T600 FOR ADDITIONAL INFORMATION PIN CONFIGURATION. REFER TO 5/T400 FOR CAMERA MOUNTING AND ROUGH-IN DETAIL.	CAMERA: AXIS Q3819-PVE TERMINATION: CAT6: HXJ6 SERIES OR PRE-APPROVED EQUAL
VS-CM-3	MULTI-DIRECTIONAL 270 DEG. EXTERIOR CORNER MOUNTED CAMERA. 270° OVERVIEW IN CHALLENGING LIGHT CONDITIONS. THREE SENSORS, ONE CAMERA AND ONE IP ADDRESS. 3 X QUAD HD AT 30 FPS OR 15 MP AT 20 FPS. ADJUST THE CAMERA TO 270 DEGREE AND A CORNER MOUNT. PROVIDE A PROPER MOUNT BASED ON THE INSTALLED APPLICATIONS ON THE WALL OR CEILING. FOR WALL APPLICATIONS, PROVIDE A 4" SQUARE BACKBOX WITH CONDUIT TO ABOVE THE NEAREST ACCESSIBLE CEILING. ALL CABLING SHALL BE EITHER ABOVE THE ACCESSIBLE CEILING OR INSTALLED IN CONDUIT. NO CABLING SHALL BE EXPOSED. FOR OPEN CEILINGS, INSTALL IN CONDUIT. REFER TO THE DRAWINGS 5/T400 FOR ADDITIONAL INFORMATION	CAMERA: AXIS COMMUNICATIONS P3719-PLE OR PRE-APPROVED EQUAL
VS-CM-4	MULTI-DIRECTIONAL 360 DEG.MULTI-SENSOR MULTI-LENS VARIFOCAL LENS INTERIOR IP CAMERA. CEILING MOUNTED. 4 x 2.5 MEGAPIXEL SENSORS, VARIFOCAL: 3-6 mm, MIN ILLUMINATION: COLOR: 0.20 LUX, B/W: 0.00 LUX. FEATURES: WIDE DYNAMIC RANGE AND IR ILLUMINATION. VIDEO COMPRESSION: H.264, H.265; CASING: IP66-/IP67-RATED; IK RATING; IK09 IMPACT-RESISTANT CASING WITH HARD-COATED DOME; POWER: TYPICAL 16.3W, MAX 25.5W; OPERATING CONDITIONS: -30-50 DEG C.; INCLUDES VANDAL RESISTANT SCREWS. CAMERA COLOR: WHITE. INFORMATION OUTLET FOR CAMERA SHALL BE TERMINATED IN AN RJ-45 PLUG. REFER TO THE INFORMATION OUTLET SCHEDULE ON SHEET T600 FOR ADDITIONAL INFORMATION PIN CONFIGURATION. REFER TO 4/T400 FOR CAMERA MOUNTING AND ROUGH-IN DETAIL.	CAMERA: AXIS P3719-PLE TERMINATION: CAT6: HXJ6 SERIES OR PRE-APPROVED EQUAL
VS-CPM-1	SINGLE CHANNEL ETHERNET SURGE PROTECTOR. PROVIDES SURGE PROTECTION FOR (1) ETHERNET 10/100/1000 CONNECTION AND SEPARATE 12V OR 24V @ 5AMPS POWER CONNECTION. PoE+, SINGLE POINT GROUND WIRE 0.9"x 2.5"x 1.8"(H x W x D).	NITEK IPPWR1 OR PRE-APPROVED EQUAL
VS-KVM-1	17" LCD RACK MOUNT SLIDE OUT MONITOR WITH KEYBOARD AND TWO BUTTON TOUCH PAD MOUSE AND BUILT IN 8 PORT DVI/USB KVM. COORDINATE WITH OWNER ON MONITOR HEIGHT IN RACK. REQUIRES (1) 1.75 MOUNTING SPACE. PROVIDE WITH ALL NECESSARY CABLES TO CONNECT TO ALL CCTV EQUIPMENT. PROVIDE WITH CHATSWORTH 4-POST.	NTI RACKMUX-D17-N-8DVIHD OR PRE-APPROVED EQUAL
VS-VMS-1	VIDEO MANAGEMENT SERVER. REQUIRES (2) RACK UNITS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	MILESTONE xPROTECT PROFESSIONAL OR PRE-APPROVED EQUAL

Revisions:	Date:

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REGISTERED PROFESSIONAL ENGINEER — 14680 ALEXANDER QUAST — NORTH DAKOTA
10/31/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	TECHNOLOGY SCHEDULES
Phase	BID DOCUMENTS
Approved:	
	NON-SPRINKLERED
Project Title	BLACK HILLS NATIONAL CEMETERY RENOVATE AND EXPAND ADMINISTRATION AND MAINTENANCE BUILDINGS
Location	STURGIS, SOUTH DAKOTA
Issue Date	10/31/22
Checked	Checker
Drawn	Author
Project Number	884-CM-3015
Building Number	
Drawing Number	T601
Dwg.	84 OF 84

VA FORM 08 - 6231

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