

Craig High School New Shop Building

Craig, AK

PARTICIPANTS

CLIENT:
CRAIG CITY SCHOOL DISTRICT
PO Box 800
Craig, AK 99921
907.826.3274 EXT. 4003

ARCHITECT / CIVIL ENGINEER:
R&M ENGINEERING-KETCHIKAN, INC.
7180 REVILLA ROAD, SUITE 300
KETCHIKAN, ALASKA 99901
907.225.7917

MECHANICAL/ELECTRIC ENGINEER:
CUSHING TERRELL
306 RAILROAD ST. W, #104
MISSOULA MT, 59802
406.728.9522

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GENERAL NOTES

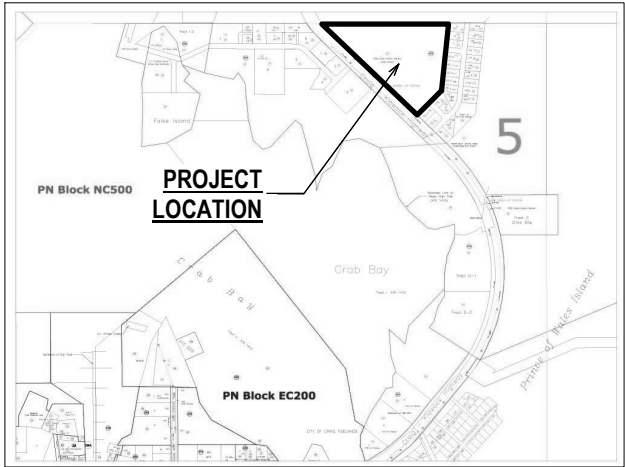
COMPLY WITH ALL PROVISIONS OF THE INTERNATIONAL CODES AS ADOPTED BY THE CITY OF CRAIG AND THE STATE OF ALASKA.

- ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, INCLUDING THE LATEST ADOPTED EDITIONS OF THE IBC, IFC, IMC, IPC, IRC, UFC, UMC, UPC, NEC, AND ADA ACCESSIBILITY GUIDELINES.
- THE ARCHITECTURAL DRAWINGS ARE A PART OF LARGER SET OF DRAWINGS WHICH, WHEN COMPLETE, CONSISTS OF ALL DRAWINGS LISTED BY THE INDEX OF DRAWINGS. THE WORK DESCRIBED BY THE DRAWINGS OF ANY ONE DISCIPLINE MAY BE AFFECTED BY THE WORK DESCRIBED ON DRAWINGS OF ANOTHER DISCIPLINE AND MAY REQUIRE REFERENCE TO THE DRAWINGS OF ANOTHER DISCIPLINE. PARTIAL SETS OF DRAWINGS ARE INCOMPLETE AND SHOULD NOT BE DISTRIBUTED OR UTILIZED BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUBCONTRACTORS, TRADES, AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS., WHICH MIGHT AFFECT THE WORK OF THAT PARTY.
- CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND BUILDING DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY VARIATION FROM THE CONDITIONS AND DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE OWNER OR ARCHITECT FOR RESOLUTION PRIOR TO CONSTRUCTION.
- CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DIMENSIONS ARE TO CENTERLINE OF COLUMNS OR TO FACE OF FRAMING, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLEAR" ARE TO FACE OF FINISH MATERIALS.
- REFER TO THE STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AD PLUMBING DRAWINGS FOR THE DETAILED DESIGN OF STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AND PLUMBING SYSTEMS, OF WHICH PORTIONS MAY BE SHOWN ON THE ARCHITECTURAL DRAWINGS.
- FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE FLOOR SLAB OR WOOD SUB-FLOOR, UNLESS OTHERWISE NOTED.
- CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES, UNLESS OTHERWISE NOTED.
- PROVIDE TWO 2A 10BC FIRE EXTINGUISHERS.

SCOPE OF WORK

CONSTRUCTION OF AN 2,400 SF PRE-MANUFACTURED METAL BUILDING FOR A WOOD (ONLY) SHOP CLASSROOM & ASSOCIATED SHOP STORAGE AREA FOR THE CRAIG HIGH SCHOOL.

LOCATION MAP



ZONING REVIEW

CRAIG MUNICIPAL CODE CHAPTER 18 REVIEW

LEGAL DESCRIPTION: Block 503, Lot 10

PARCEL NUMBER: NC-503-010

ZONING: Public

LOT SIZE: 1,305,117 SF

BUILDING GROSS AREA: 2,400 SF

BUILDING HEIGHT:
MAXIMUM: 30'
PROPOSED: 19' - 0"

SETBACKS:
MINIMUM: 10'
PROPOSED: See Site Plan

CODE REVIEW

PROJECT LOCATION:
100 Panther Way, Craig, AK 99921

IBC 2021 REVIEW

I. TYPE OF CONSTRUCTION - EXISTING/PROPOSED (Chapter 6)
V-B
SPRINKLED - NO

II. USE & OCCUPANCY CLASSIFICATION (Chapter 3)
E, Education

III. OCCUPANCY SEPARATIONS
None

IV. BUILDING AREA (508.3.2 & Table 503)
ALLOWED:
Education E: 9,500 SF/Story, 1 STORY

PROPOSED:
1 Story, 2,400 SF

V. BUILDING HEIGHT (Table 503)
ALLOWED: 40'
PROPOSED: 19' - 0"

VI. OCCUPANT LOAD (Table 1004.1.2)

WOOD SHOP:	2,082 NET SF / 50	42
STORAGE AREA:	697 GROSS SF / 300	3
	TOTAL OCCUPANCY	45

REVISIONS:

Craig High School
New Shop Building

STATUS:

CONSTRUCTION DOCUMENTS

DRAWN BY: NMG
CHECKED BY: NMG
DATE: 12.11.23
PROJECT #: 182360

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SHEET DESCRIPTION:

Cover Sheet

G100

SHEET:

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ARCHITECTURAL ABBREVIATIONS

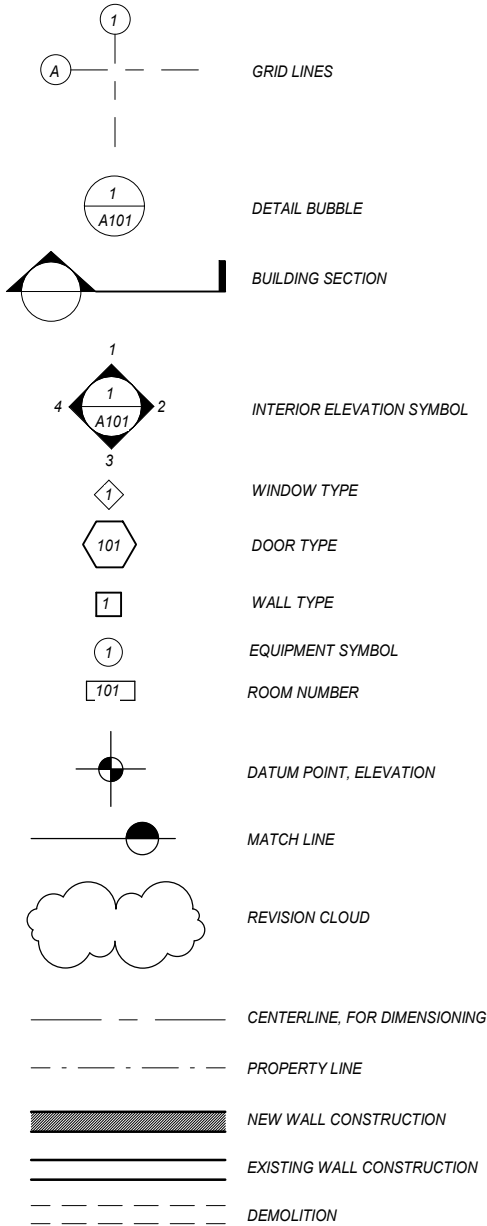
AB	ANCHOR BOLT
ABV	ABOVE
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	ABOVE FINISHED SLAB
AL	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AUTO	AUTOMATIC
BD	BOARD
BKG	BACKING
BLDG	BUILDING
BLKG	BLOCKING
BLW	BELOW
BOT	BOTTOM
BRKT	BRACKET
BSMT	BASEMENT
BTW	BETWEEN
BURS	BUILT UP ROOFING SYSTEM
CAB	CABINET
CB	CATCH BASIN
CCTV	CLOSED CIRCUIT TELEVISION
CG	CORNER GUARD
CEM	CEMENT
CER	CERAMIC
CER TILE	CERAMIC TILE
CL	CENTERLINE
CLG	CEILING
CLJ	CONTROL JOINT
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CASED OPENING
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CRPT	CARPET
CSWK	CASEWORK
CT	CARPET TILE
CUST	CUSTOM
CW	COLD WATER
DBL	DOUBLE
DEMO	DEMOLISH
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIM PT	DIMENSION POINT
DISP	DISPENSER
DIST	DISTANCE
DLV	DOOR LOUVER
DMPF	DAMPPOOFING
DN	DOWN
DR	DRAIN
DS	DOWNSPOUT
DT	DRAIN TILE
DWG	DRAWING
DWGS	DRAWINGS
DWR	DRAWER
(E)	EXISTING
E	EAST
EA	EACH
ECAB	ELECTRICAL CABINET
EG	EDGE GUARD
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EO	ELECTRICAL OUTLET
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXP	EXPANSION
EXPO	EXPOSED
EXIST	EXISTING
EXT	EXTERIOR

F/F	FACE TO FACE
F.F	FINISH FLOOR
FA	FIRE ALARM
FBD	FIBERBOARD
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FND	FOUNDATION
FDV	FIRE DEPARTMENT VALVE
FE	FIRE EXTINGUISHER
FEB	FIRE EXTINGUISHER BRACKET
FEC	FIRE EXTINGUISHER CABINET
FHY	FIRE HYDRANT
FIN	FINISH
FIN GR	FINISH GRADE
FL	FLOOR(ING)
FLASH	FLASHING
FLEX	FLEXIBLE
FLR SK	FLOOR SINK
FLUOR	FLUORESCENT
FNR	FEMININE NAPKIN RECEPTACLE
FNTD	FEMININE NAPKIN-TAMPON DISPENSER
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONARY
FOS	FACE OF STUD
FRPF	FIREPROOFING
FRZ	FREEZER
FSB	FOLDING SHOWER BENCH
FSTNR	FASTENER
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FURR	FURRING
FUS	FOLDING UTILITY SEAT
FUT	FUTURE
FXTR	FIXTURE
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GL	GLASS
GL BLK	GLASS BLOCK
GLULAM	GLUE LAMINATED
GLZ	GLAZING
GND	GROUND
GR	GRADE, GRADING
GRV	GRAVEL
GYP BD	GYPSUM BOARD
H	HIGH
HB	HOSE BIB
HC	HOLLOW CORE
HCP	HANDICAPPED
HD	HEAD
HDBD	HARDBOARD
HDWE	HARDWARE
HM	HOLLOW METAL
HNDRL	HANDRAIL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATION, AIR CONDITIONING, & COOLING
HW	HOT WATER
ID	INSIDE DIAMETER
INCAND	INCANDESCENT
INCL	INCLUDING
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JB	JUNCTION BOX
JT	JOINT
KIT	KITCHEN
KPL	KICK PLATE
KS	KNEE SPACE
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LB	POUND
LF	LINEAR FOOT
LG	LENGTH
LH	LEFT HAND
LIN	LINEAR
LKR	LOCKER
LT	LIGHT
LT WT	LIGHT WEIGHT
LTG	LIGHTING

MACH	MACHINE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MC	MEDICINE CABINET
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MOD	MODULAR
MTD	MOUNTED
MTG	MOUNTING
MULL	MULLION
(N)	NEW
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCl	OWNER FURNISHED-CONTRACTOR INSTALLED
OFCl	OWNER FURNISHED-OWNER INSTALLED
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OVHD	OVERHEAD
PBD	PARTICLE BOARD
PCF	POUNDS PER CUBIC FOOT
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PH	PANIC HARDWARE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAL FOOT
PLYWD	PLYWOOD
PNL	PANEL
PREFAB	PREFABRICATED
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTD/R	PAPER TOWEL DISPENSER W/ RECEPTACLE
PTR	PAPER TOWEL RECEPTACLE
PVMT	PAVEMENT
PWR	POWER
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	RISER
RA	RETURN AIR
RAD	RADIUS
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RESIL	RESILIENT
RET	RETURN
REV	REVISION
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
S	SOUTH
SA	SUPPLY AIR
SB	SPLASH BLOCK
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULED
SCR	SHOWER CURTAIN ROD
SD	SOAP DISPENSER
SECT	SECTION
SEP	SEPARATION
SF	SQUARE FOOT

SHR	SHOWER
SHT	SHEET(ING)
SHV	SHELVES, SHELVING
SIM	SIMILAR
SK	SINK
SP	SPACE, SPACING
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SQ IN	SQUARE INCH
SST	STAINLESS STEEL
ST	STREET
STAG	STAGGERED
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP CLG	SUSPENDED CEILING
SERV	SERVICE
SYM	SYMBOL
T	TREAD
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TB	TOWEL BAR
TEL	TELEPHONE
TEMP	TEMPORARY
THERM	THERMAL
THK	THICK, THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TOL	TOLERANCE
TYP	TYPICAL
UC	UNDER COUNTER
UNFIN	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UR	URINAL
UTIL	UTILITY
VAC	VACUUM
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VF	VERIFY IN FIELD
VNR	VENEER
VOL	VOLUME
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WHCH	WHEEL CHAIR
WO	WHERE OCCURS
WR	WATER RESISTANT
WSCT	WAINSCOTING
WT	WEIGHT
WTRPRF	WATERPROOFING
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER

DRAWING SYMBOLS



REVISIONS:

Craig High School
New Shop Building

STATUS:

CONSTRUCTION
DOCUMENTS

DRAWN BY: NMG
CHECKED BY: NMG
DATE: 12.11.23
PROJECT #: 182360

R&M
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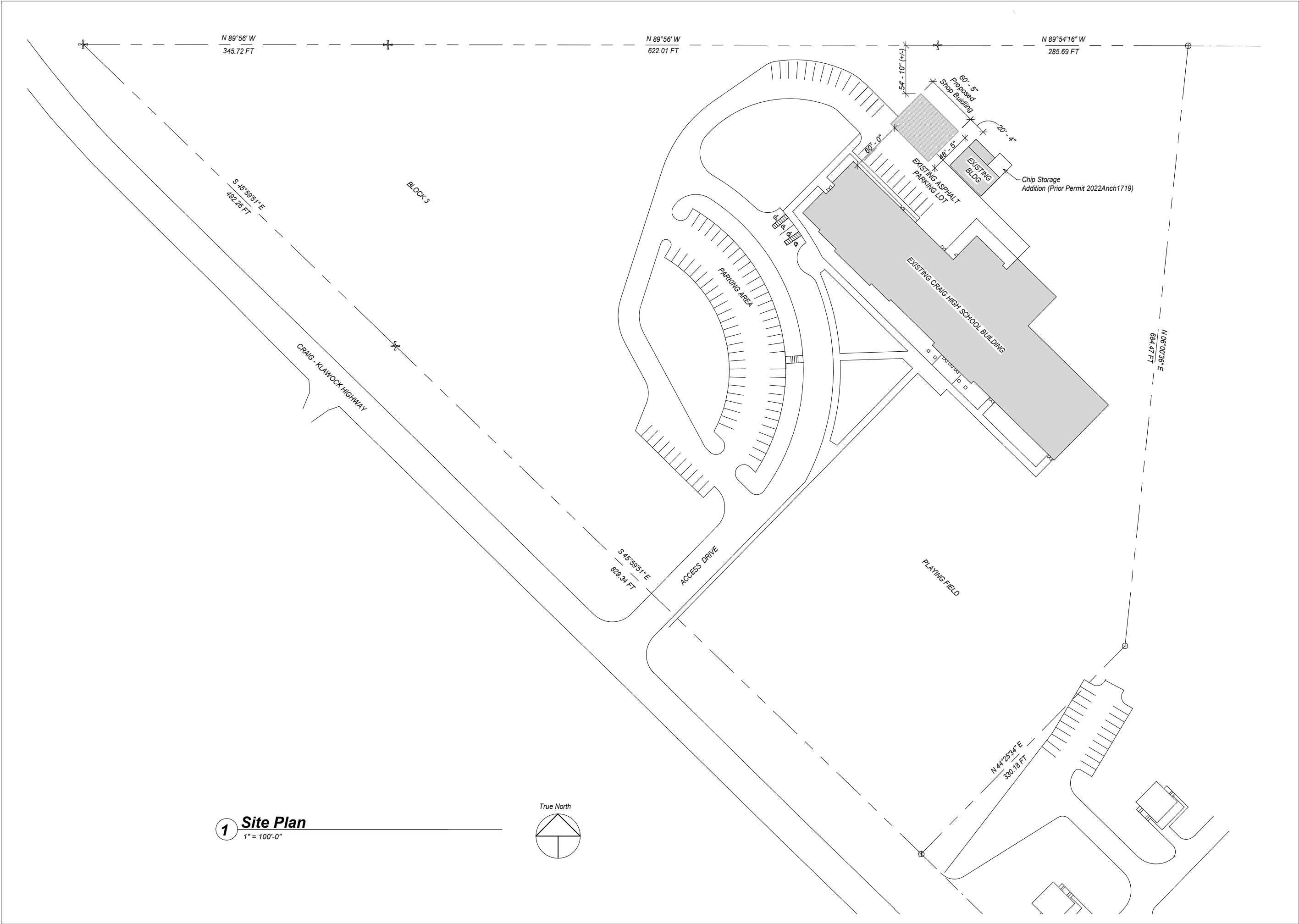
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Abbreviations & Symbols

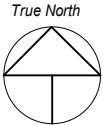
G101

SHEET:

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1 Site Plan
1" = 100'-0"




REVISIONS:

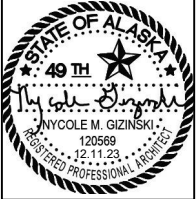
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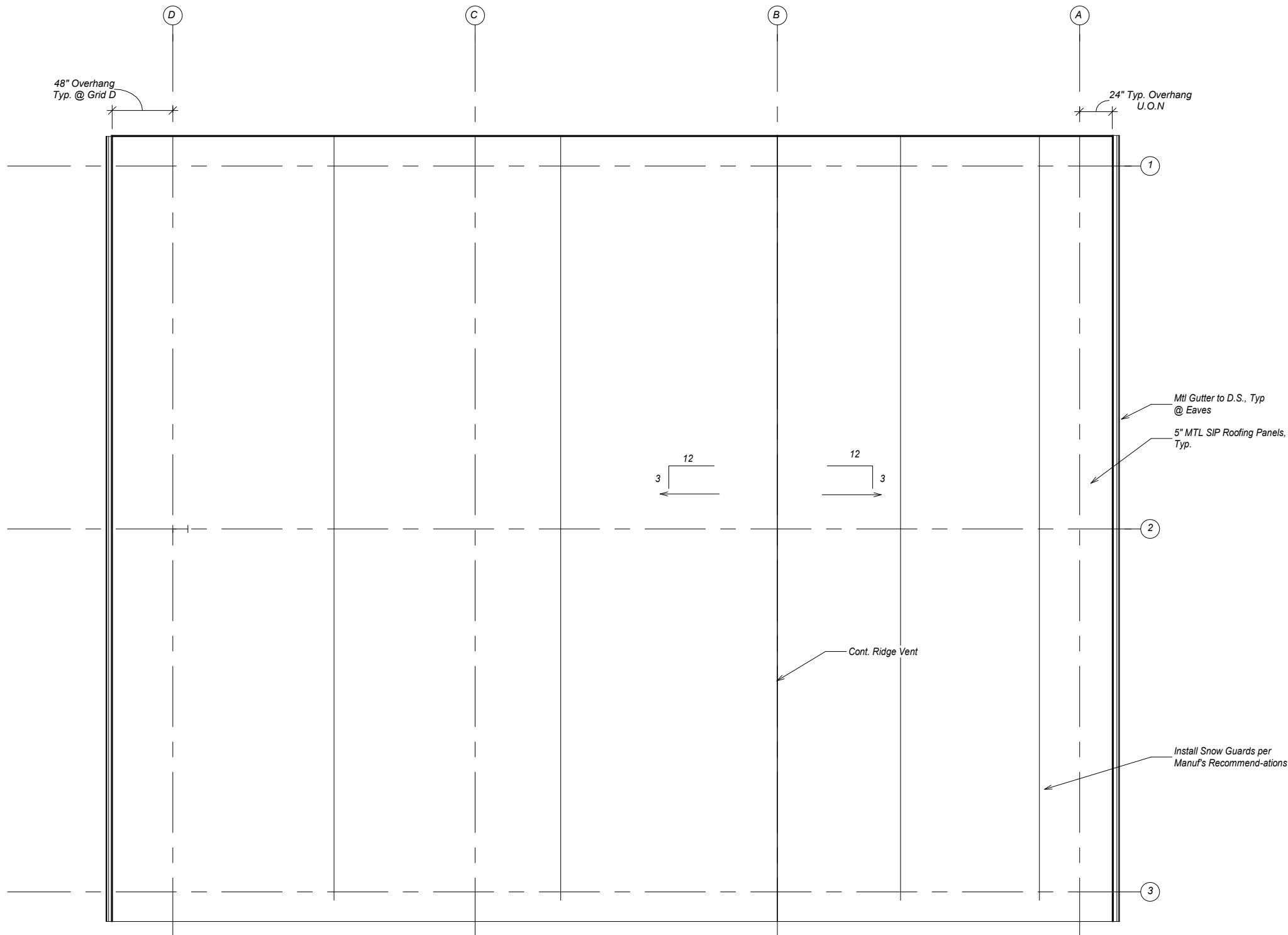


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SHEET DESCRIPTION:
Site Plan

A100
SHEET:
04 of xx



1 Roof Plan
1/8" = 1'-0"

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New Shop Building

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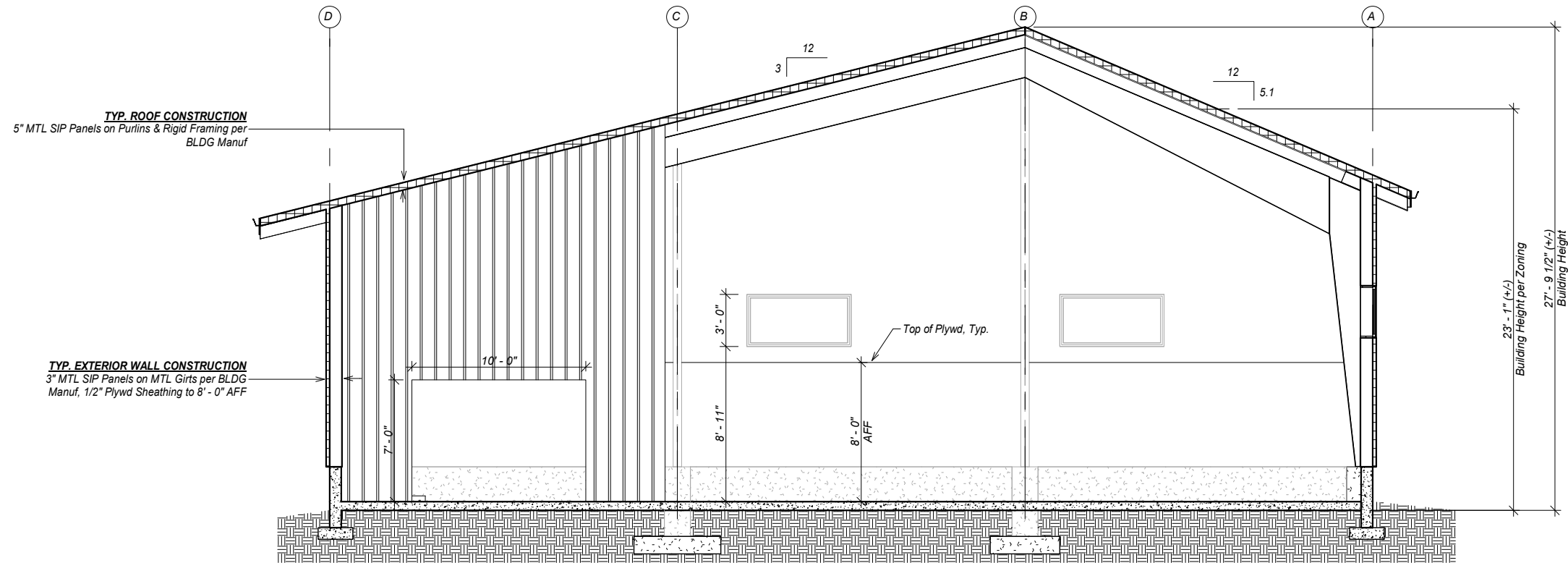
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STATE OF ALASKA
49 TH
NYCOLE M. GIZINSKI
120569
12.11.23
REGISTERED PROFESSIONAL PROJECT

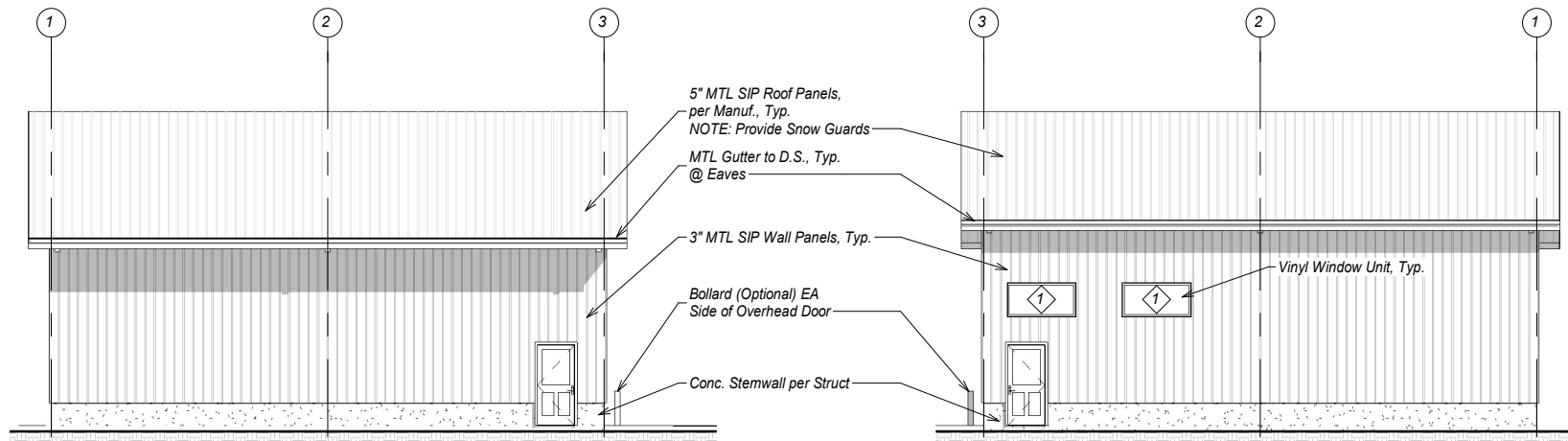
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Roof Plan

A201

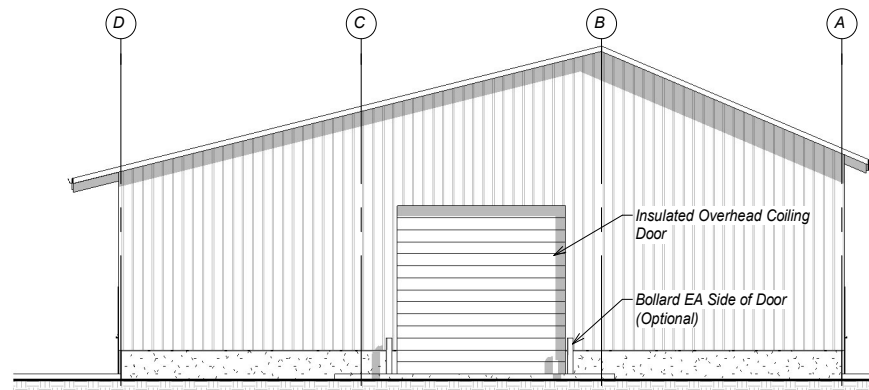
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06 of xx



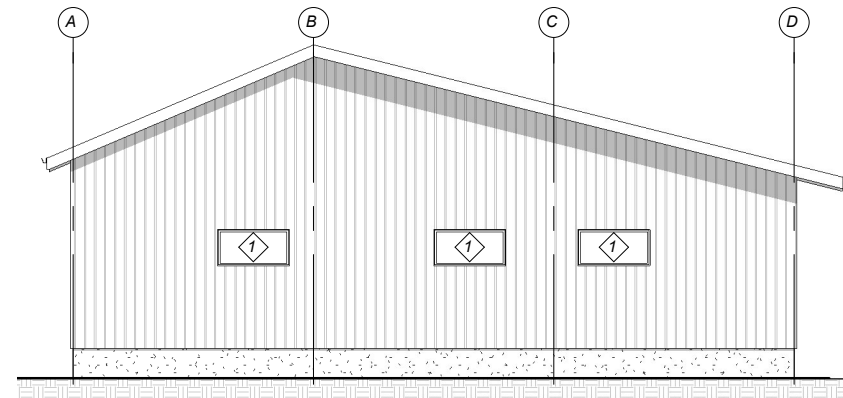
1 Section 1
1/8" = 1'-0"



2 East Elevation
1/16" = 1'-0"



4 South Elevation
1/16" = 1'-0"



3 North Elevation
1/16" = 1'-0"

5 West Elevation
1/16" = 1'-0"

REVISIONS:

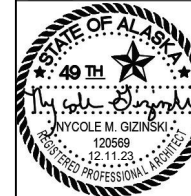
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DOCUMENTS**

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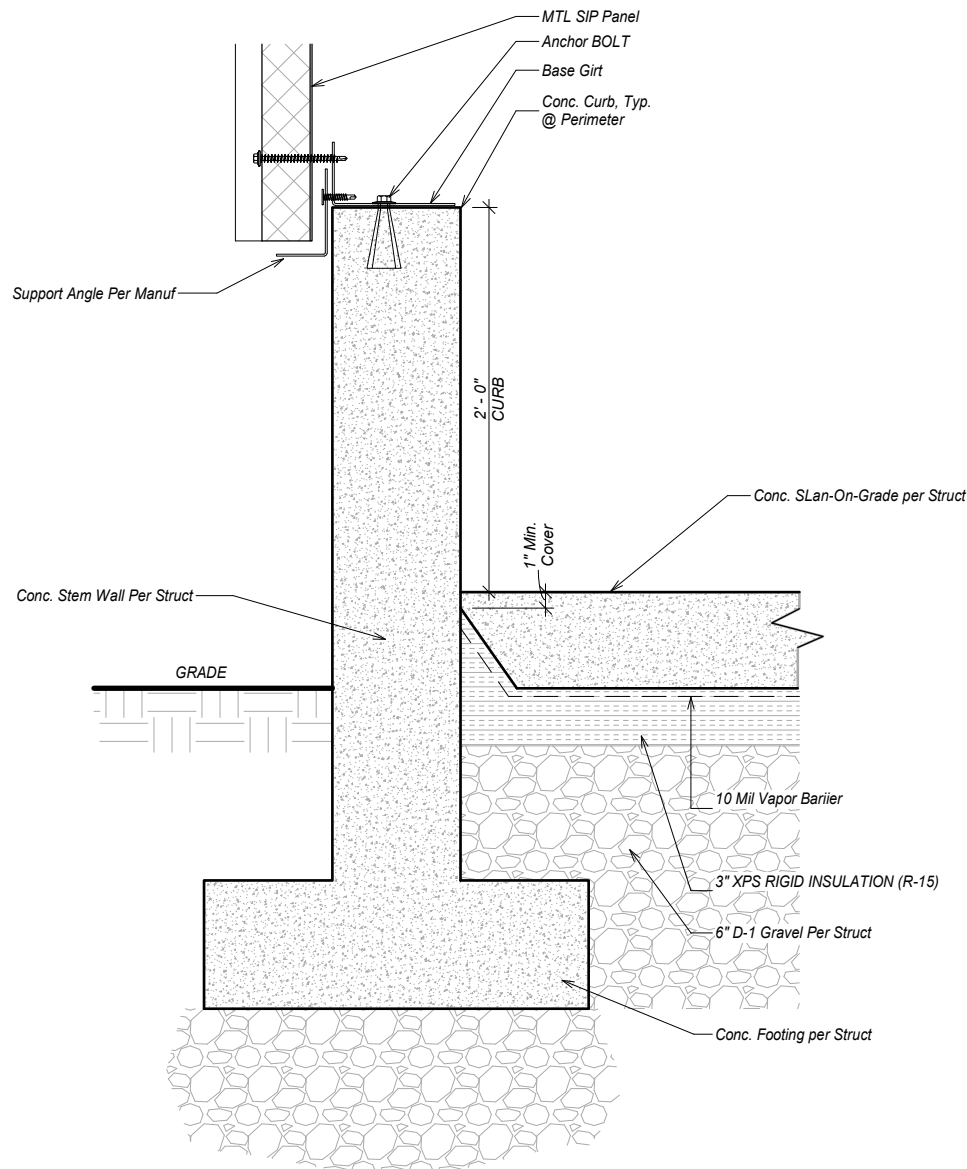
SHEET DESCRIPTION:

Sections & Elevations

A300

SHEET:

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1 **Typ. Foundation Detail**
1" = 1'-0"

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SHEET DESCRIPTION:

Details

A700

SHEET:
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GENERAL STRUCTURAL NOTES

GENERAL

BUILDING CODE: ALL MATERIALS, WORKMENSHP,DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC), 2021 EDITION.

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

LOADS AND CRITERIA

GRAVITY: IN ADDITION TO THE SELF WEIGHT, THE FOLLOWING WERE USED FOR DESIGN:

SNOW DESIGN DATA:

GROUND SNOW LOAD
FLAT-ROOF SNOW LOAD
SNOW EXPOSURE FACTOR
SNOW LOAD IMPORTANCE FACTOR
THERMAL FACTOR
RAIN-ON-SNOW SURCHARGE
SLOPED ROOF SNOW LOAD
DESIGN SNOW LOAD

P_g = 40 PSF
P_f = 25.2 psf
C_e = 0.9
I_s = 1.0
C_t = 1.0
= 0 PSF
P_s = 25.2 PSF
=40 PSF

WIND DESIGN DATA (GOVERNS DESIGN OF LATERAL FORCE RESISTING SYSTEM):

BASIC WIND SPEED (3-SECOND GUST)
WIND RISK CATEGORY
SURFACE ROUGHNESS
EXPOSURE CATEGORY
INTERNAL PRESSURE COEFFICIENT
COMPONENT AND CLADDING PRESSURE

V = 150 MPH
I_w = II
= B
= d
GC = 0.18 : ENCLOSED
P_{o1} = +/- 41 PSF

SEISMIC DESIGN DATA

MAPPED SPECTRAL RESPONSE
SPECTRAL RESPONSE COEFFICIENTS
SEISMIC DESIGN CATEGORY

S_s = 0.468 %g
S₁ = 0.361 %g
S_{ds} = 0.448 %g
S_{d1} = 0.467 %g
D

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

CONCRETE MIX DESIGN
CONCRETE REINFORCING

CONTRACTOR SHALL REVIEW AND STAMP SUBMITTALS PRIOR TO SUBMISSION. IF SHOP DRAWINGS DIFFER FROM DESIGN SHOWN ON STRUCTURAL DRAWINGS, THEY SHALL BE SEALED BY THE ALASKA STATE REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN. DIMENSIONS AND QUANTITIES ARE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE REVIEWED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS PLACED PRIOR TO RECEIPT OF REVIEWED SUBMITTALS. CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOR REVIEW.

NOTE:
SUBMIT TRUSS CALCULATIONS AND LAYOUT PLAN TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO SUBMITTAL TO CITY. PLANS AND CALCULATIONS TO BE APPROVED BY CITY PRIOR TO REQUESTING FRAME INSPECTION.

SOIL BEARING PRESSURE: 3000 PSF (IBC TABLE 1804.2)
SOIL BEARING IS BASED ON THREE TEST PITS EXCAVATED TO THE NATIVE BEACH GRAVEL WHICH CONFIRMED THE SITE WAS FILLED WITH SHOT ROCK FILL.

SPECIAL INSPECTION
CONTRACTOR SHALL PROVIDE SPECIAL INSPECTION FOR THE FOLLOWING:
SOIL SUBGRADE
GENERAL FRAMING
REBAR PLACEMENT
CONCRETE PLACEMENT
STRUCTURAL HOLD DOWNS
ROCK BOLTS (SEE NOTE BELOW)
SUMMARY OF BUILDING INSPECTION (PUR-102)

CONCRETE

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

ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
ACI 311 "GUIDE FOR CONCRETE INSPECTION"

MATERIALS:
CEMENT ASTM C150, C595
AGGREGATE ASTM C33
ADMIXTURES ASTM C260, C494, & C1017
FLY ASH ASTM C618, CLASS "F" OR "C"

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

MAXIMUM LOSS ON IGNITION SHALL BE 1%.

CONCRETE SHALL BE PROPORTIONED TO ACHIEVE A WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW PRIOR TO USE. COMPLY WITH IBC SECTION 1905. MIXES SHALL MEET OR EXCEED THE FOLLOWING CRITERIA:

TYPE OF CONSTRUCTION	COMPRESSIVE STRENGTH (f _c)	TEST AGE	MAXIMUM WATER/CEMENT RATIO
FOOTINGS, TOPPING SLABS, RETAINING AND FOUNDATION WALLS, CONCRETE ON METAL DECK, WALLS	4,000 PSI	28 DAYS	0.50

ADMIXTURES: ALL CONCRETE, INCLUDING SLAB ON GRADE, SHALL HAVE A WATER-REDUCING ADMIXTURE COMPLYING WITH ASTM C-494 ADDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CALCIUM CHLORIDE OR OTHER CHLORIDE ADMIXTURES SHALL NOT BE USED.

ALL HORIZONTAL SURFACE EXPOSED TO WEATHER SHALL CONTAIN AN AIR-ENTRAINING AGENT COMPLYING WITH ASTM C260. THE AMOUNT OF ENTRAINED AIR SHALL BE 5% +/- 1 1/2% BY VOLUME. TESTS FOR AIR CONTENT SHALL BE MADE AT THE DISCHARGE END OF THE PLACING HOSE IN ACCORDANCE WITH ASTM C173.

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

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

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

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

CONSTRUCTION JOINTS IN WALLS SHALL BE KEYED IN ACCORDANCE WITH TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON DRAWINGS OR, AT CONTRACTOR'S OPTION, SHALL BE AN INTENTIONALLY ROUGHENED CONSTRUCTION JOINT DEFINED BY THE FOLLOWING:
1. SURFACE OF JOINT SHALL BE SAND BLASTED OR ROUGHENED WITH A CHIPPING HAMMER TO EXPOSE AGGREGATE EMBEDDED IN PREVIOUS POUR.
2. EXPOSED AGGREGATE SHALL BE CLEANED AND LAITANCE REMOVED.
3. JOINT SURFACE SHALL BE CLEANED AND LAITANCE REMOVED.
4. JOINT SHALL BE WETTED AND STANDING WATER REMOVED IMMEDIATELY BEFORE NEW CONCRETE IS PLACED.

CONSTRUCTION JOINTS WHEN REQUIRED SHALL BE IN ACCORDANCE WITH ACI 6.4. SUBMIT JOINT LAYOUT PLAN FOR REVIEW PRIOR TO PLACING CONCRETE.

CONCRETE REINFORCEMENT

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

ACI 301
ACI SP-66
ACI 318
CRSI
CRSI
WRI

MATERIALS:

DEFORMED BARS ASTM A615, GRADE 60
SMOOTH WELDED WIRE ASTM A185, 65 KSI YIELD
BAR SUPPORTS CONFORM TO CHAPTER 3, CRSI MSP-1

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

LAP ALL CONTINUOUS REINFORCEMENT IN ACCORDANCE WITH THE SECTIONS AND DETAILS. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 1 CROSS WIRE SPACING + 2" OR 8" WHICHEVER IS GREATER.

BAR SIZE	#4	#5
L	30"	37.5"
L _D 18"	22.5"	

WELDING OR TACK WELDING OF REINFORCING BARS TO OTHER BARS OR TO PLATES, ANGELS, ETC IS PROHIBITED, EXCEPT WHERE SPECIFICALLY APPROVED. WHERE WELDING IS APPROVED, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E9018 ELECTRODES. WELDING PROCEDURES SHALL COMPLY WITH AWS-D1.4.

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

ELEVATED SLABS 3/4" (1" AT FIRE-RESISTIVE RATING ≥ 2 HOURS)
SLABS ON GRADE 2" BOTTOM
INTERIOR WALL FACES 3/4"
EXPOSED FORMED WALL FACES 1 1/2" (#5 AND SMALLER), 2" (#6 & LARGER)
FOOTINGS 3" (2" TOP AND FORMED SIDES)
BEAMS, COLUMNS 1 1/2" (TO TIES, SPIRALS, STIRRUPS)

FIBROUS REINFORCEMENT: POLYPROPYLENE FIBROUS REINFORCEMENT ("FIBERMESH", "GRACE FIBERS", OR APPROVED EQUAL) SHALL BE USED WHERE NOTED ON THE DRAWINGS. SUBMIT PROPOSED PRODUCT DATA AND SPECIFICATIONS FOR REVIEW. ADD FIBERS TO CONCRETE MIX AND FINISH IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COMPLY WITH ASTM C116, TYPE III, PERFORMANCE LEVEL 1. MINIMUM APPLICATION RATE SHALL BE 1.5 LB/CY.

ANCHORAGE

POST-INSTALLED ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND NOTED ICC-ES REPORTS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. ALLOWABLE EPOXY PRODUCTS INCLUDE HILTI HY-150 OR APPROVED EQUAL.

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

WOOD

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

AITC
AF & PA

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

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

USE	SIZE	SPECIES	GRADE
WALL STUDS	2x 3x	HEM-FIR	#2
SILL PLATES	2x 3x	HEM-FIR	#2
JOISTS	2x	HEM-FIR	#2
JOISTS	3x 4x	HEM-FIR	#2
BEAMS/POSTS	4x	HEM-FIR	#2
BEAMS/POSTS	6x	HEM-FIR	#1
T&G DECKING	2x	HEM-FIR	#2

GLUE LAMINATED MEMBERS (GLULAMS) SHALL BE FABRICATED IN CONFORMANCE WITH U.S. PRODUCT STANDARD PS 56-73 AND AITC STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING REQUIREMENTS AITC 117-93. EACH MEMBER SHALL BEAR AN AITC OF CONFORMANCE. GLULAMS SHALL BE ARCHITECTURAL GRADE WITH STRENGTH GRADES AS NOTED BELOW:

BEAMS: 24F-E11 (Fb=2400 PSI, Fv=195 PSI, E=1800 KSI)

ENGINEERED WOOD JOISTS: DESIGN SHOWN ON DRAWINGS IS BASED ON JOISTS MANUFACTURED BY BOISE CASCADE. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. JOIST SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURERS INSTRUCTIONS. ALL NECESSARY ACCESSORIES, SUCH AS BRIDGING, BLOCKING AND STIFFENERS, SHALL BE FURNISHED BY THE MANUFACTURER.

ENGINEERED LUMBER: DESIGN SHOWN ON DRAWINGS IS BASED ON LUMBER MANUFACTURED BY BOISE CASCADE. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL.

CONNECTORS: DESIGN SHOWN ON DRAWINGS IS BASED ON CONNETEERS MANUFACTURED BY SIMPSON STRONG-TIE IN ACCORDANCE WITH CATALOG C-2004. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. CONNECTORS SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.

NAILING NOT SHOWN SHALL BE AS SHOWN IN IBC TABLE 2304.9.1 OR CURRENT ICC-ES REPORT NER-272. MINIMUM NAIL DIMENSIONS SHALL BE AS FOLLOWS:

SIZE	DIAMETER	LENGTH
6d	0.113"	2"
8d	0.131"	2 1/2"
10d	0.148"	3"
12d	0.148"	3 1/4"
16d	0.162"	3 1/2"
20d	0.192"	4"

BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307.

WOOD PROTECTION: ALL WOOD MEMBERS EXPOSED TO WEATHER AND SPECIFIED AS "PT" ON THE DRAWINGS SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE. FASTENERS IN TREATED WOOD SHALL BE HOT DIPPED ZINC COATED GALVANIZED PER ASTM A153, STAINLESS STEEL, SILICON BRONZE OR COPPER.

FLOOR FRAMING: ALL FLOOR FRAMING TO HAVE A MINIMUM LIVE LOAD DEFLECTION LIMIT OF L/480.

REVISIONS:									
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Craig High School
New Shop Building

STATUS:
CONSTRUCTION DOCUMENTS

DRAWN BY: NMG
CHECKED BY: TSS
DATE: 12.11.23
PROJECT #: 182360

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7180 REVILLA ROAD, SUITE 300

KETCHIKAN, ALASKA 99901

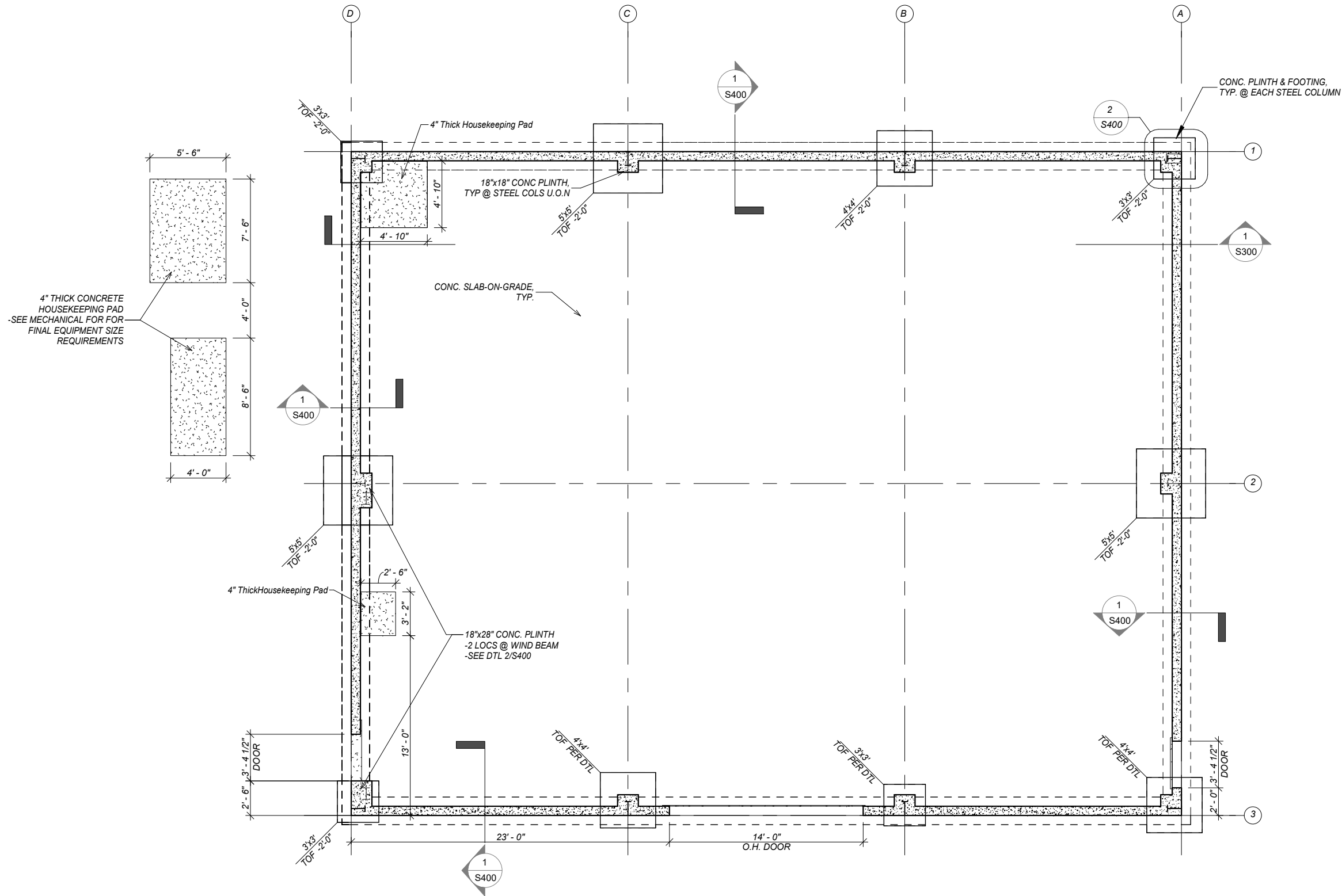
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SHEET DESCRIPTION:
Structural Notes

S100
SHEET:
09 of xx



1 Foundation Plan
1/8" = 1'-0"

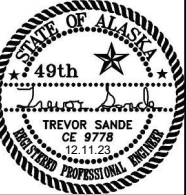
REVISIONS:

Craig High School
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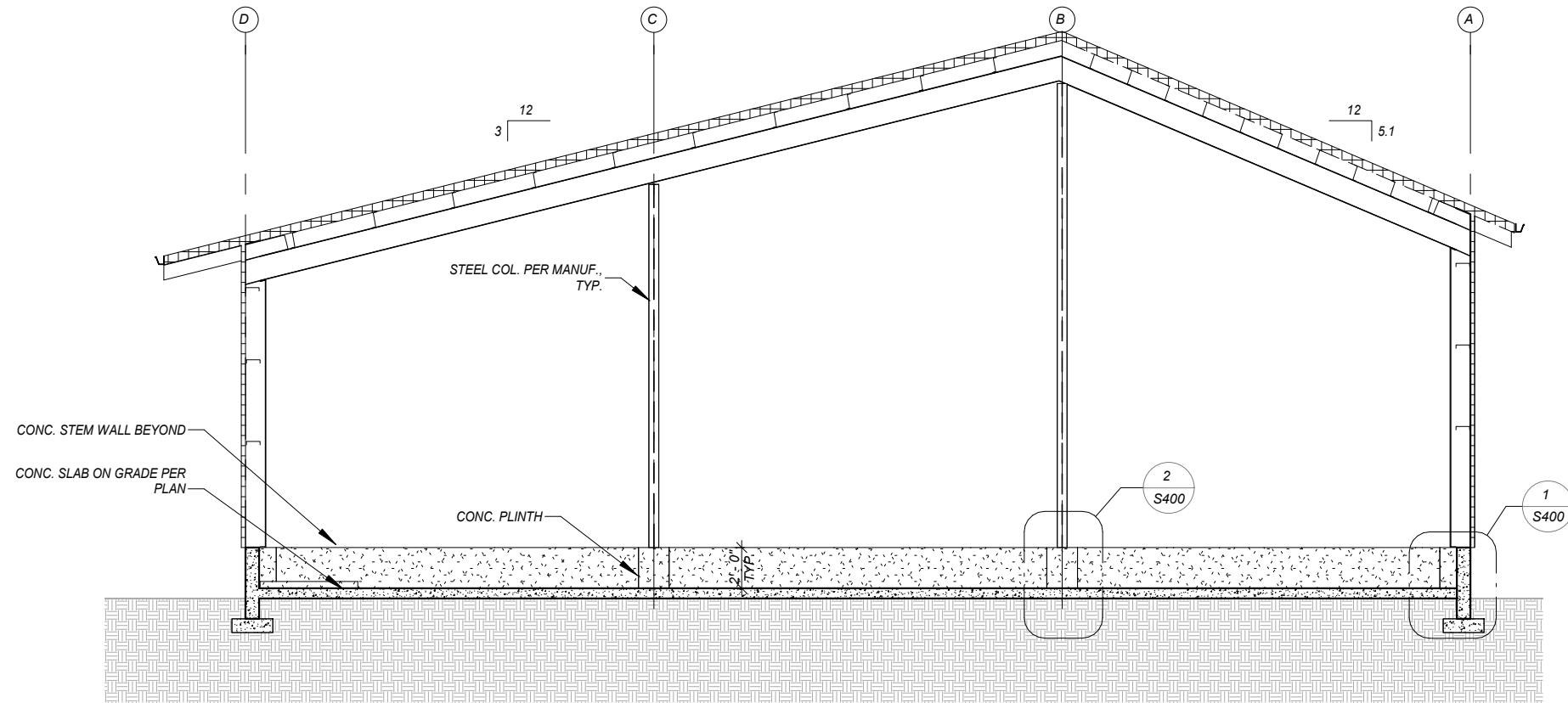
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SHEET DESCRIPTION:
Foundation Plan

S200

SHEET:
10 of xx



1 Structural Section
1/8" = 1'-0"

REVISIONS:

Craig High School
New Shop Building

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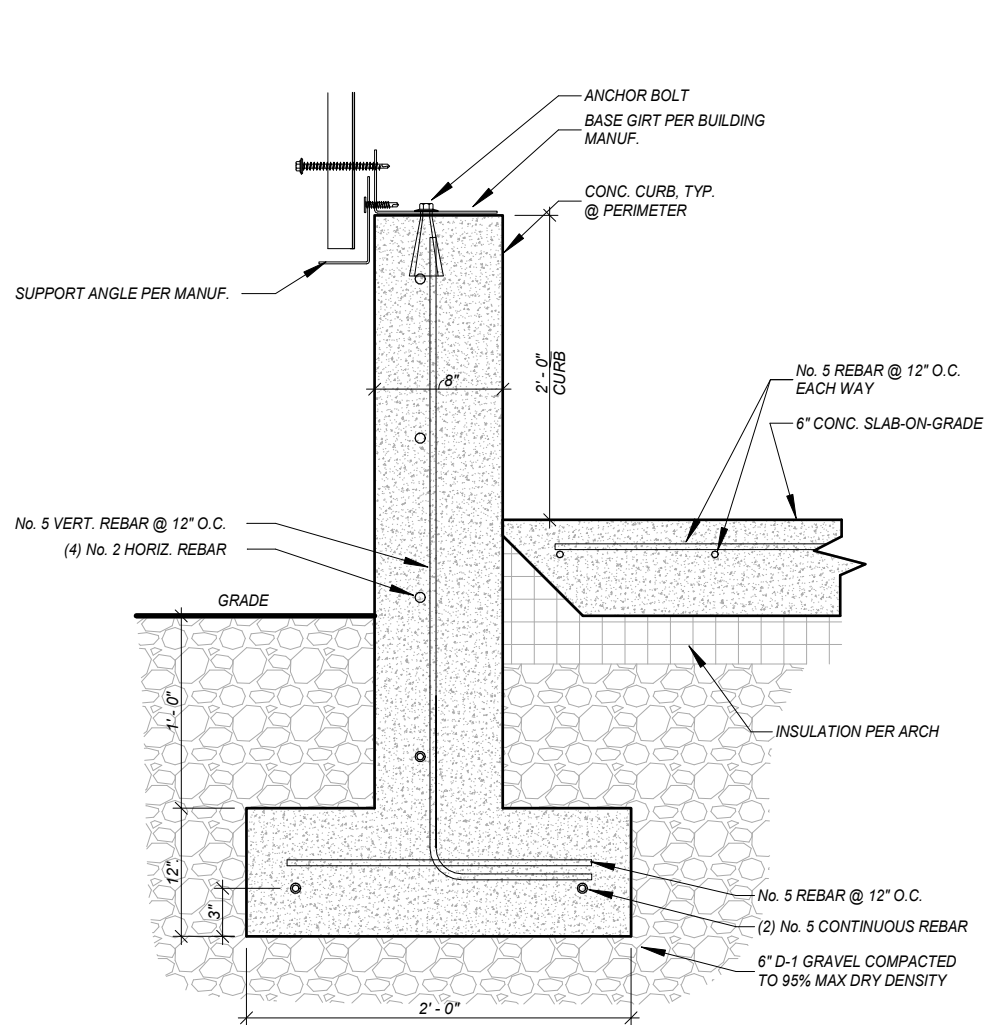
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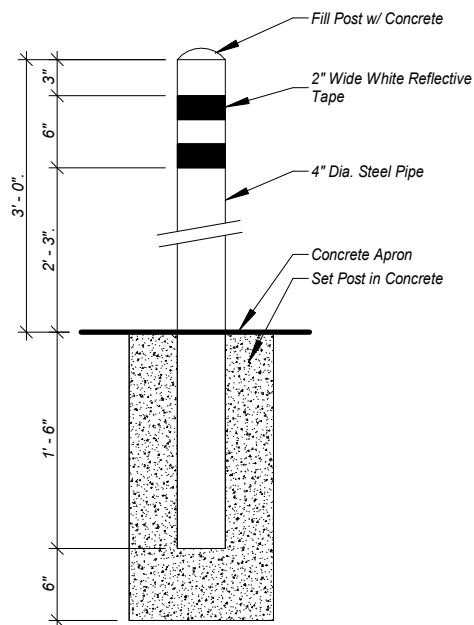
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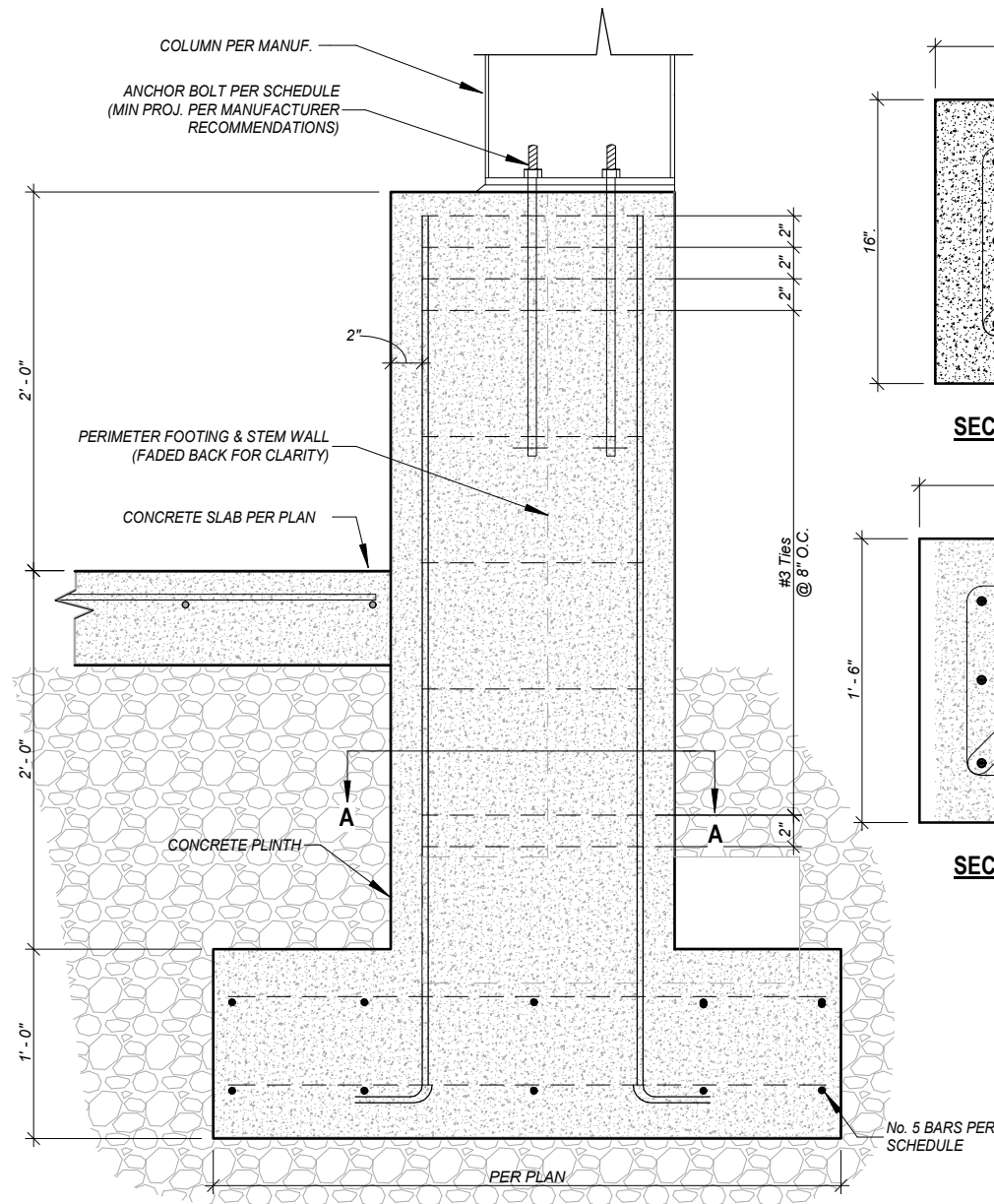
11 of xx



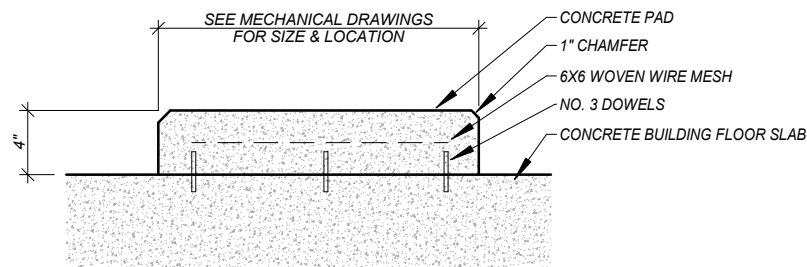
1 Typical Perimeter Footing
1" = 1'-0"



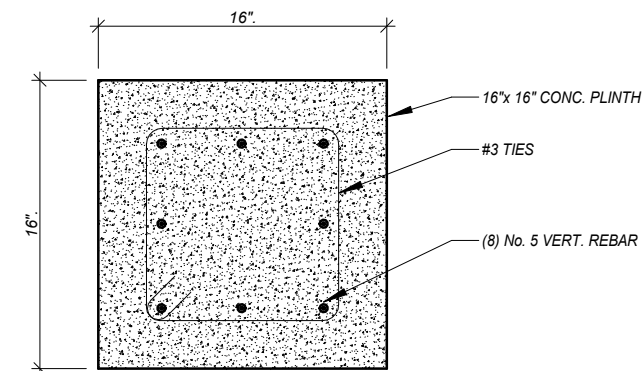
3 Typ. Bollard Detail
3/4" = 1'-0"



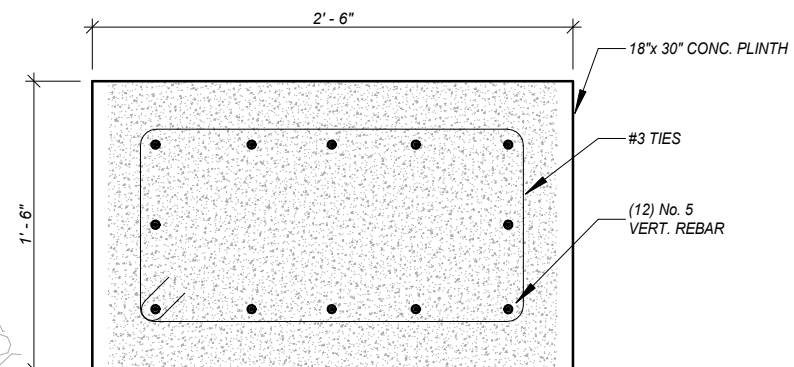
2 Typ. Building Column Footing
1" = 1'-0"



4 Typ. Housekeeping Pad
1" = 1'-0"



SECTION A-A THRU TYP. PLINTH



SECTION A-A THRU WIND BEAM PLINTH

FOOTING SCHEDULE - SIZE & THICKNESS PER PLAN

SIZE	THICKNESS	FOOTING REINFORCING
3'-0" x 3'-0"	12"	(4) #5 EW TB
4'-0" x 4'-0"	12"	(5) #5 EW TB
5'-0" x 5'-0"	12"	(6) #5 EW TB

ANCHOR BOLT SCHEDULE

SIZE	LENGTH
5/8"	12"
3/4"	17"
1"	24"

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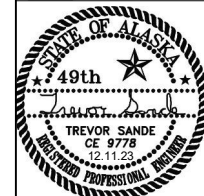
Craig High School
New Shop Building

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SHEET DESCRIPTION:

Structural Details

S400


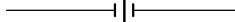
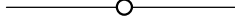
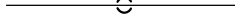







SHEET:

12 of xx

HVAC ABBREVIATIONS

%	PERCENT	MAX	MAXIMUM
ACFM	ACTUAL CFM	MBH	BTU PER HOUR (THOUSAND)
AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AMP	AMPERE (AMP, AMPS)	MIN	MINIMUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	N/A	NOT APPLICABLE
APD	AIR PRESSURE DROP	NC	NORMALLY CLOSED
BHP	BRAKE HORSEPOWER, BOILER HORSEPOWER	NO	NORMALLY OPEN
BOD	BOTTOM OF DUCT	NTS	NOT TO SCALE
BTU	BRITISH THERMAL UNIT	OA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE	OBD	OPPOSED BLADE DAMPER
DBT	DRY-BULB TEMPERATURE	PH	PHASE (ELECTRICAL)
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
EAT	ENTERING AIR TEMPERATURE	RA	RETURN AIR
EC	ELECTRICAL CONTRACTOR	RH	RELATIVE HUMIDITY
ESP	EXTERNAL STATIC PRESSURE	RPM	REVOLUTIONS PER MINUTE
F	FAHRENHEIT	SA	SUPPLY AIR
FPM	FEET PER MINUTE	SCFM	CFM, STANDARD CONDITIONS
FPS	FEET PER SECOND	SPEC	SPECIFICATION
FT	FOOT OR FEET	STD	STANDARD
GA	GAGE OR GUAGE	SUCT	SUCTION
GAL	GALLONS	T STAT	THERMOSTAT
GC	GENERAL CONTRACTOR	TC	TEMPERATURE CONTROL
GPD	GALLONS PER DAY	TEMP	TEMPERATURE
GPM	GALLONS PER MINUTE	V	VOLT
HD	HEAD	VAV	VARIABLE AIR VOLUME
HP	HORSEPOWER	VEL	VELOCITY
HZ	FREQUENCY	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATT	VOL	VOLUME
LAT	LEAVING AIR TEMPERATURE	W/	WITH
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAR FEET		

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	BALL VALVE
	UNION
	TEE UP
	TEE DOWN
	ELBOW UP
	ELBOW DOWN
	PIPE SIZE CHANGE
	THERMOSTAT/TEMPERATURE SENSOR
	MANUAL BALANCING DAMPER
	FLEX CONNECTOR
	TURNING VANE ELBOW

NOTE:
ALL SCHEDULED EQUIPMENT IS BASIS OF DESIGN. EQUIVALENT PRODUCTS FROM OTHER MANUFACTURERS ARE ACCEPTABLE PENDING APPROVAL FROM ENGINEER.

BOOSTER PUMP SCHEDULE

PLAN CODE	SERVICE	MANUFACTURER	MODEL	TYPE	PERFORMANCE					REMARKS
					INLET PRESSURE RANGE (PSI)	MINIMUM SHUTOFF PRESSURE (PSI)	MAXIMUM WORKING PRESSURE (PSI)	PUMP (HP)	ELECTRICAL (V / PH / HZ)	
BP-1	SPARK ARRESTER	A.Y. MCDONALD	DURAMAC	INLINE	0-5	60	75	1	230 / 1 / 60	NOTES 1,2,3
NOTES: 1 - FACTORY ASSEMBLED UNIT WITH 2.1 GALLON PRESSURE TANK, PRESSURE GAUGE, AND PUMP CONTROLLER. 2 - PUMP CONTROLLER SHALL BE MODEL 15000 PC2. 3 - RUN PUMP IN PRESSURE MODE, SET START PRESSURE AT 50 PSI.										

STORAGE TANK SCHEDULE

PLAN CODE	MFGR	MODEL NO.	FLUID	DIAMETER (IN)	HEIGHT (IN)	TANK VOL. (GAL)	EMPTY WEIGHT (LBS)	FULL WEIGHT (LBS)	CONNECTION SIZE (IN)	REMARKS
ST-1	DURACAST	DC-900400	WATER	43	72	400	81	3420	1.25	NOTES 1,2,3
NOTES: 1 - PROVIDE WITH (2) 2" FEMALE NPT CONNECTION FOR VENT AND PUMP CONNECTION. SEE 3/M003 FOR STORAGE TANK CONNECTION DETAIL. 2 - PROVIDE WITH 18" MANWAY AT TOP OF TANK. 3 - TANK SHALL BE CONSTRUCTED OF UV STABILIZED POLYETHYLENE RESIN.										

REVISIONS:

Craig City School District
New Shop Building

STATUS:
Construction Documents

DRAWN BY: HERBST
CHECKED BY: RATZ
DATE: 12.08.2023
PROJECT #: CHS_BOMASS_Shop

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STATE OF ALASKA
NATHAN H. RATZ
ME 13554
REGISTERED PROFESSIONAL ENGINEER

12.8.23

Cushing Terrell

cushingterrell.com
800.757.9522

SHEET DESCRIPTION:
MECHANICAL SCHEDULE
AND LEGENDS

M001

SHEET:
01 of 05

DUST COLLECTOR SCHEDULE										
PLAN CODE	MFGR	MODEL	CFM	TSP (IN W.G.)	FAN MOTOR (BHP / HP)	POWER V/PH/HZ	WEIGHT (LBS)	SERVES	STORAGE CAPACITY	REMARKS
DC-1	CAMFIL	GS6	4,400	14.0	11 / 15	208 / 3 / 60	3,200	WOOD SHOP	1 @ 55 GAL	1, 2, 3, 4, 5, 6, 7, 8
NOTES: 1) PROVIDE NFPA COMPLIANT EXPLOSION ISOLATION VALVE. INSTALL WHERE INDICATED ON PLANS AND PER MANUFACTURERS RECOMMENDATIONS. 2) PROVIDE 90 PSI COMPRESSED AIR HEADER WITH DIAPHRAGM VALVES, PRESSURE GAUGE, AND THERMOSTATICALLY CONTROLLED SOLENOID HEATER (120/60/1). 3) PROVIDE NFPA COMPLAINT EXPLOSION VENT WITH BURST DETECTOR AND VERTICAL EXPLOSION VENT PLENUM/WEATHERHOOD. 4) PROVIDE FACTORY PROGRAMMED VFD WITH INTEGRAL DISCONNECT AND DUCT PRESSURE TRANSDUCER. 5) PROVIDE NEMA 4X ENCLOSURE FOR DUST COLLECTOR TIMER CONTROLS (120-240/60/1) WITH DIGITAL AND ANALOG DISPLAY, FILTER MONITORING, AND AUTOMATIC PULSE FILTER CLEANING. 6) PROVIDE WITH CARTRIDGE OVER-BAGS, DUST LEVEL INDICATOR(S) FOR DRUM(S), AND 55 GALLON DRUM(S). 7) PROVIDE WITH INTEGRATED RIGA-FLO SAFETY MONITORING FILTERS 8) SEE SPECIFICATIONS FOR INTERCONNECTION DETAILS										

ENERGY RECOVERY VENTILATOR SCHEDULE														
PLAN CODE	MFGR	MODEL	CFM		MIN ESP (IN WC)		WINTER DESIGN (DB / WB, °F)		SENSIBLE EFFECTIVENESS (%)	LATENT EFFECTIVENESS (%)	POWER			REMARKS
			VENT	EXHAUST	VENT	EXHAUST	OA	RA			MCA	MOP	V / PH / HZ	
ERV-1	ALDES	E1800L-Fi-EC-N	1,470	1,370	0.40	0.40	17.5 / 17.5	65	65	60	10.2A	15A	208 / 1 / 60	1, 2, 3, 4, 5, 6
NOTES: 1) EC FAN MOTORS 2) MOTORIZED OA DAMPER 3) MERV 8 OUTDOOR AIR AND MERV 8 RETURN AIR FILTER BOTH UPSTREAM OF THE HEAT EXCHANGER 4) BACKDRAFT DAMPER 5) UNIT TO RUN DURING OCCUPIED HOURS DETERMINED BY OWNER. CONTROLLED BY TIMER 6) PROVIDE WITH ALDES DIGITAL MULTIFUNCTION CONTROLLER														

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE															
PLAN CODE	MFGR	MODEL	FACE SIZE			NECK SIZE			MAX CFM	NOISE CRITERIA (NC)	TOTAL PRESSURE (IN WC)	STYLE	MATERIAL	FINISH	REMARKS
			WIDTH	HEIGHT	Ø	WIDTH	HEIGHT	Ø							
S-1	PRICE	520	38	16		36	14		1,800	30	0.08	SURFACE	STEEL	WHITE	1, 2, 3
S-2	PRICE	520	22	22		20	20		1,280	26	0.06	SURFACE	STEEL	WHITE	1, 2, 3
R-1	PRICE	530	38	16		36	14		1,700	24	0.09	SURFACE	STEEL	WHITE	1, 2
NOTES: 1) FRAME STYLE 31 2) 45 DEGREE DEFLECTION 3) DOUBLE DEFLECTION GRILLE															

LOUVER SCHEDULE												
PLAN CODE	MFGR	MODEL	SERVICE	FRAME TYPE	FREE AREA (SF)	SIZE (IN)		CFM	VELOCITY (FPM)	APD (IN WC)	MATERIAL	REMARKS
						WIDTH	HEIGHT					
L-1	RUSKIN	ELF6375DX	INTAKE	FLANGE	3.5	42	24	1,800	515	0.1	ALUMINUM	1, 2
L-2	RUSKIN	ELF6375DX	EXHAUST	FLANGE	3.5	42	24	1,700	485	0.1	ALUMINUM	1, 2
NOTES: 1) PROVIDE BAKED ENAMEL FINISH FACTORY COLOR TO BE SELECTED BY ARCHITECT 2) PROVIDE WITH BIRDSCREEN												

DESTRATIFICATION FAN SCHEDULE								
PLAN CODE	MFGR	MODEL	DRIVE	RPM	MOTOR HP	POWER V / PH / HZ	TYPE	REMARKS
DF-1	AIRIUS	A-25-SP-STD	DIRECT	1,670	37 W	120 / 1 / 60	THERMAL EQUALIZATION	1, 2, 3
NOTES: 1) PROVIDE WITH TRIAC CONTROLLER TO CONTROL BOTH FANS. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR. 2) MANUFACTURER'S MOUNTING HARDWARE 3) PROVIDE WITH FACTORY CORD AND PLUG								

REVISIONS:									
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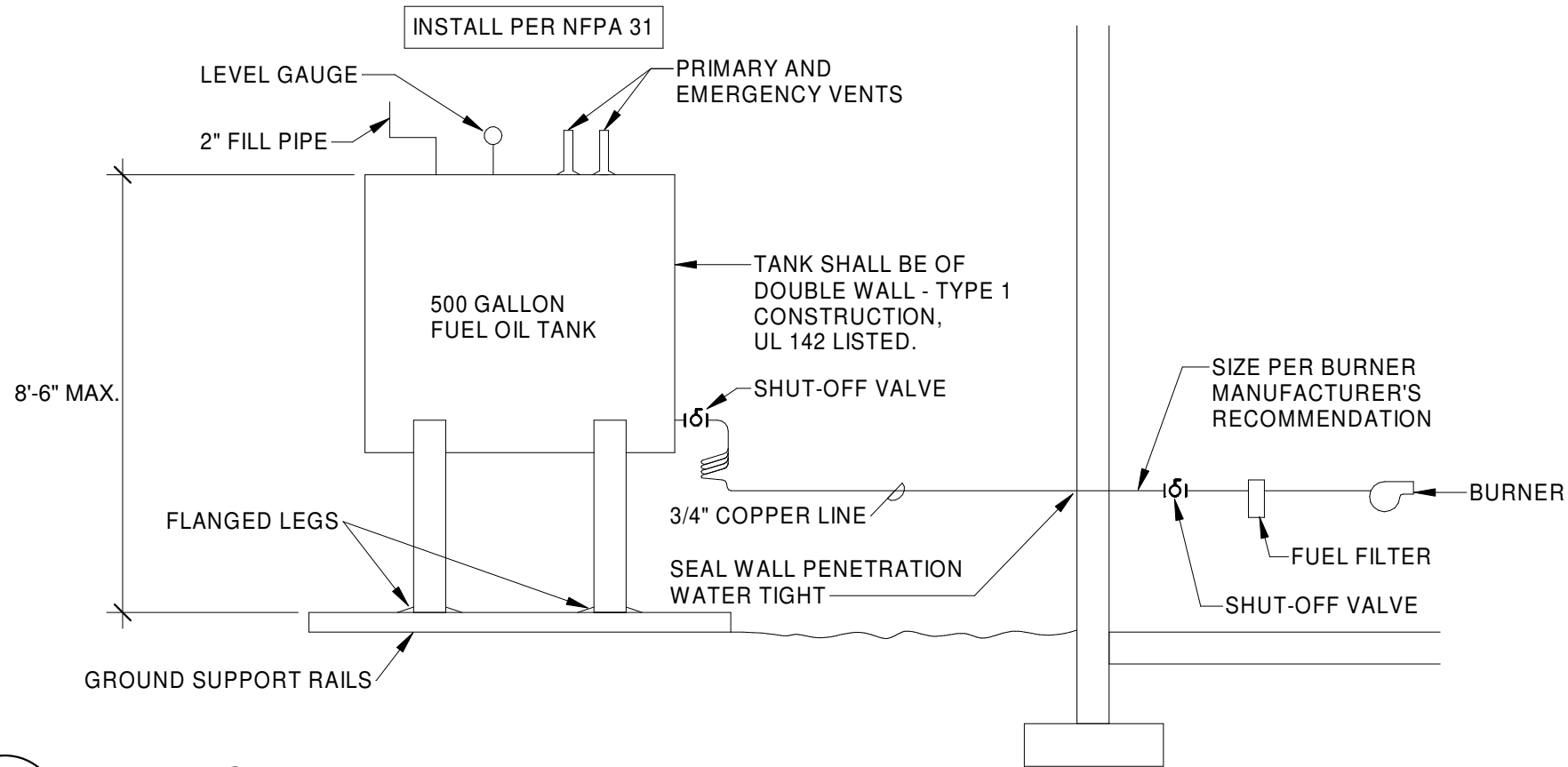
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SHEET DESCRIPTION:
MECHANICAL SCHEDULES

M002

SHEET:
02 of 05

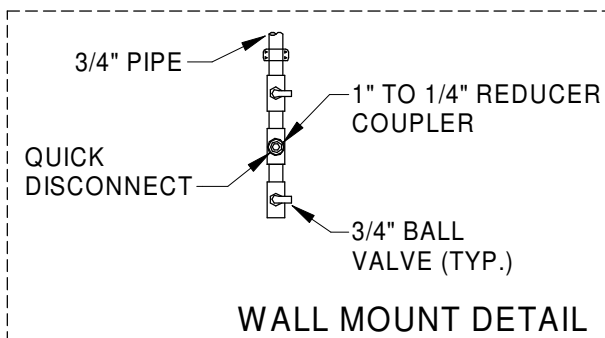
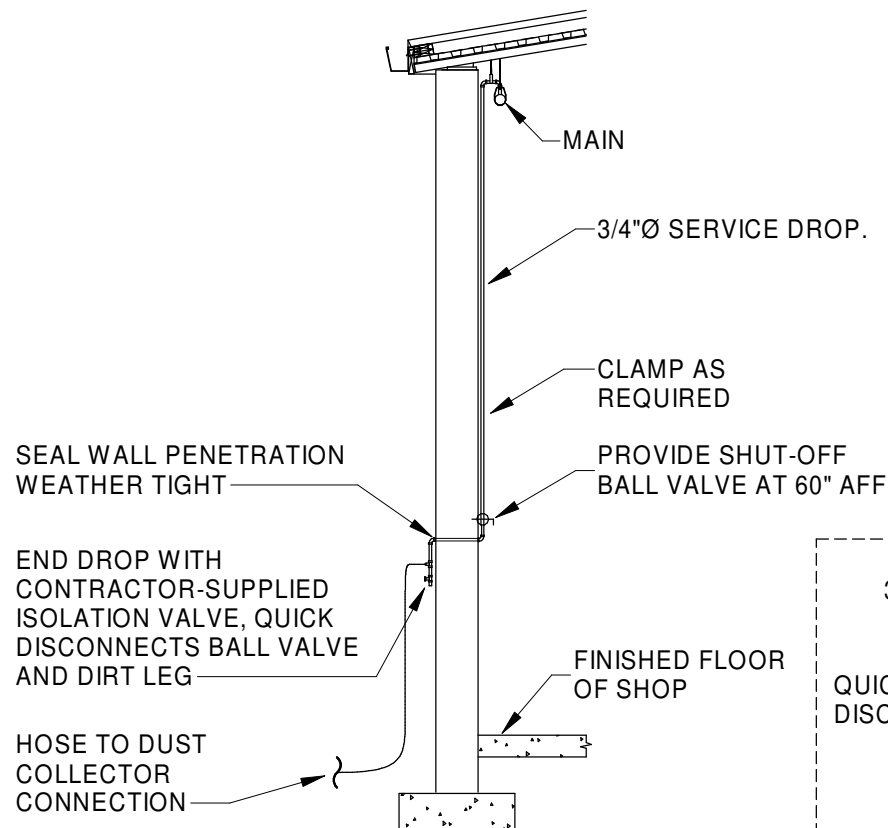


1

FUEL OIL TANK DETAIL

M003

NOT TO SCALE



2

AIR DROP DETAIL

M003

NOT TO SCALE

FUEL OIL FURNACE SCHEDULE

PLAN CODE	F-1
MANUFACTURER	TRANE
MODEL	XP80-THV1M087A
CONFIGURATION	UPFLOW VERTICAL
SUPPLY FAN SECTION	
TYPE	4-SPEED DIRECT DRIVE
CFM	1,280
ESP W/ FILTERS (IN WC)	1.0
HP	1/2
POWER (V/PH/HZ)	120 / 1 / 60
MCA	12.1
HEATING SECTION	
TYPE	#2 FUEL OIL
INPUT (MBH)	119.0
OUTPUT (MBH)	98.0
AFUE	82.6
FUEL FLOW RATE (GPH)	0.85
FILTER SECTION	
TYPE / THICKNESS	MERV 8 / 1-INCH
REMARKS	1, 2, 3, 4, 5, 6

NOTES:

- 1) FILTER RACK.
- 2) ANTI-SHORT CYCLE TIMER.
- 3) 24V 7- OR 5/2-DAY PROGRAMMABLE THERMOSTAT.
- 4) UL LISTED
- 5) FLEXIBLE CONNECTOR ON SUPPLY DUCT.
- 6) TOP FLUE CONNECTION.

REVISIONS:

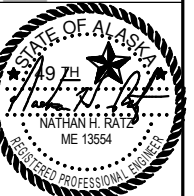
Craig City School District
New Shop Building

STATUS:

Construction
Documents

DRAWN BY: HERBST
CHECKED BY: RATZ
DATE: 12.08.2023
PROJECT #: CHRIS, BOMASS - Shop

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SHEET DESCRIPTION:
MECHANICAL SCHEDULES
AND DETAILS

M003

SHEET:

03 of 05

GENERAL NOTES

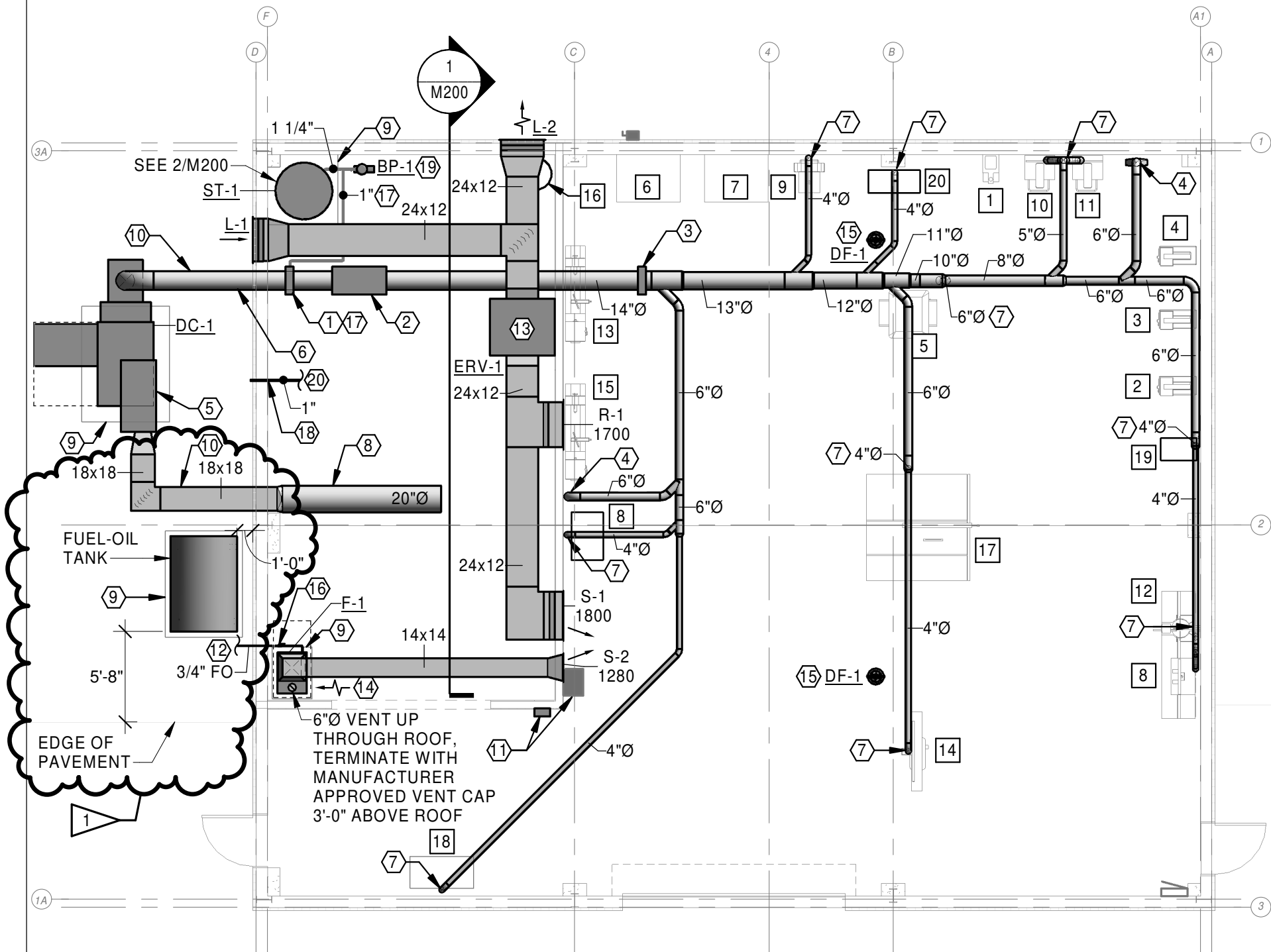
- A. DO NOT RUN DUCTWORK OR PIPING OVER ELECTRICAL PANELS FROM PANEL TO STRUCTURE ABOVE AND FROM ACCESS SPACE TO 80-INCHES ABOVE FLOOR.
- B. NO DUCTWORK SHALL BE FABRICATED PRIOR TO FIELD VERIFICATION OF DUCT SIZES AND ROUTING BY MECHANICAL CONTRACTOR.
- C. ALL OUTSIDE AIR DUCTWORK SHALL BE INSULATED.

SHEET NOTES

- 1. LOCATION OF SUPPRESSION NOZZLE.
- 2. LOCATION OF EXPLOSION ISOLATION VALVE.
- 3. LOCATION OF DETECTION EYE, 23-FT MINIMUM CENTERLINE DISTANCE TO SUPPRESS NOZZLE. EYE SHALL BE DOWNSTREAM OF ALL BRANCHES.
- 4. DUCT TIGHT TO WALL AND DOWN TO FLOOR SWEEP.
- 5. FAN WITH SILENCER.
- 6. 12 GA. DUCT BETWEEN ISOLATION VALVE AND INLET OF DUST COLLECTOR.
- 7. ROUTE DUCTWORK DOWN AND PROVIDE 5-FEET OF HIGH TEMPERATURE THERMOPLASTIC RUBBER FLEX DUCT TO SHOP EQUIPMENT. KEEP AS VERTICAL AS POSSIBLE.
- 8. 10-FEET PERFORATED PIPE. FIRST 5-FEET WRAPPED WITH 1-INCH LINER.
- 9. HOUSEKEEPING PAD. COORDINATE WITH STRUCTURAL TO CONFIRM SIZE AND LOCATION.
- 10. PROVIDE 2-INCH ARMAFLEX FLEXIBLE ELASTOMERIC THERMAL INSULATION WITH A WHITE 17.5 MILS LAMINATED COVERING FOR EXTERIOR DUCTWORK, OR EQUAL.
- 11. INTENDED LOCATION FOR DUST COLLECTION AND SPARK DETECTION AND EXTINGUISHING SYSTEM CONTROLLERS.
- 12. CONNECT TO FUEL OIL TANK SEE 1/M003 FOR DETAIL.
- 13. ERV-1 TO BE WALL-MOUNTED ON BRACKET AT 12'6" AFF. COORDINATE WITH STRUCTURAL.
- 14. F-1 FILTER BOX MOUNTED TO UNIT AT RETURN AIR CONNECTION. NO GRILLE.
- 15. DF-1 TO BE MOUNTED NEAR CEILING PEAK. FACTORY STANDARD ON/OFF CONTROLS. TYPICAL.
- 16. SHUT-OFF VALVE, TYPICAL.
- 17. PROVIDE 1-INCH WATER CONNECTION TO DUST COLLECTOR SUPPRESSION NOZZLE. MINIMUM WATER REQUIREMENTS ARE 17 GPM AT 44 PSI. PIPING FROM TANK TO SUPPRESSION NOZZLE MAY BE PEX OR COPPER.
- 18. PROVIDE AIR DROP FOR DUST COLLECTOR. SEE 2/M003 FOR AIR DROP DETAIL.
- 19. INSTALL BOOSTER PUMP BP-1 PER MANUFACTURER'S INSTRUCTIONS.
- 20. CONNECT COMPRESSED AIR TO SHOP COMPRESSED AIR SYSTEM. COMPRESSED AIR PIPING INSTALLED BY OWNER. COORDINATE DUST COLLECTOR COMPRESSED AIR CONNECTION WITH OWNER. MINIMUM REQUIRED PRESSURE IS 90 PSI.

WOOD SHOP EQUIPMENT LIST

#	EQUIPMENT
1	JET DRILL PRESS
2	EXCALIBUR SCROLL SAW
3	EXCALIBUR SCROLL SAW
4	EXCALIBUR SCROLL SAW
5	GRIZZLY VARIABLE SPEED PLANER
6	GRIZZLY VACCUM SANDING TABLE
7	GRIZZLY VACCUM SANDING TABLE
8	ROUTER / TABLE
9	JET OSCILLATING SPINDLE SANDER
10	JET BAND SAW
11	JET BAND SAW
12	BOSCH MITER SAW
13	JET MINI LATHE
14	JET 8" JOINTER
15	DELTA LATHE
16	AIR COMPRESSOR
17	SAW STOP TABLE SAW
18	CNC ROUTER TABLE
19	KREG POCKET HOLE MACHINE
20	JET BELT / DISC SANDER



1 HVAC PLAN
1/8" = 1'-0"

REVISIONS:
REV #1 - 2.1.24

Craig City School District
New Shop Building

STATUS:
Construction Documents

DRAWN BY: HERBST
CHECKED BY: RATZ
DATE: 12.08.2023
PROJECT #: CRHS_BOMASS_Shop

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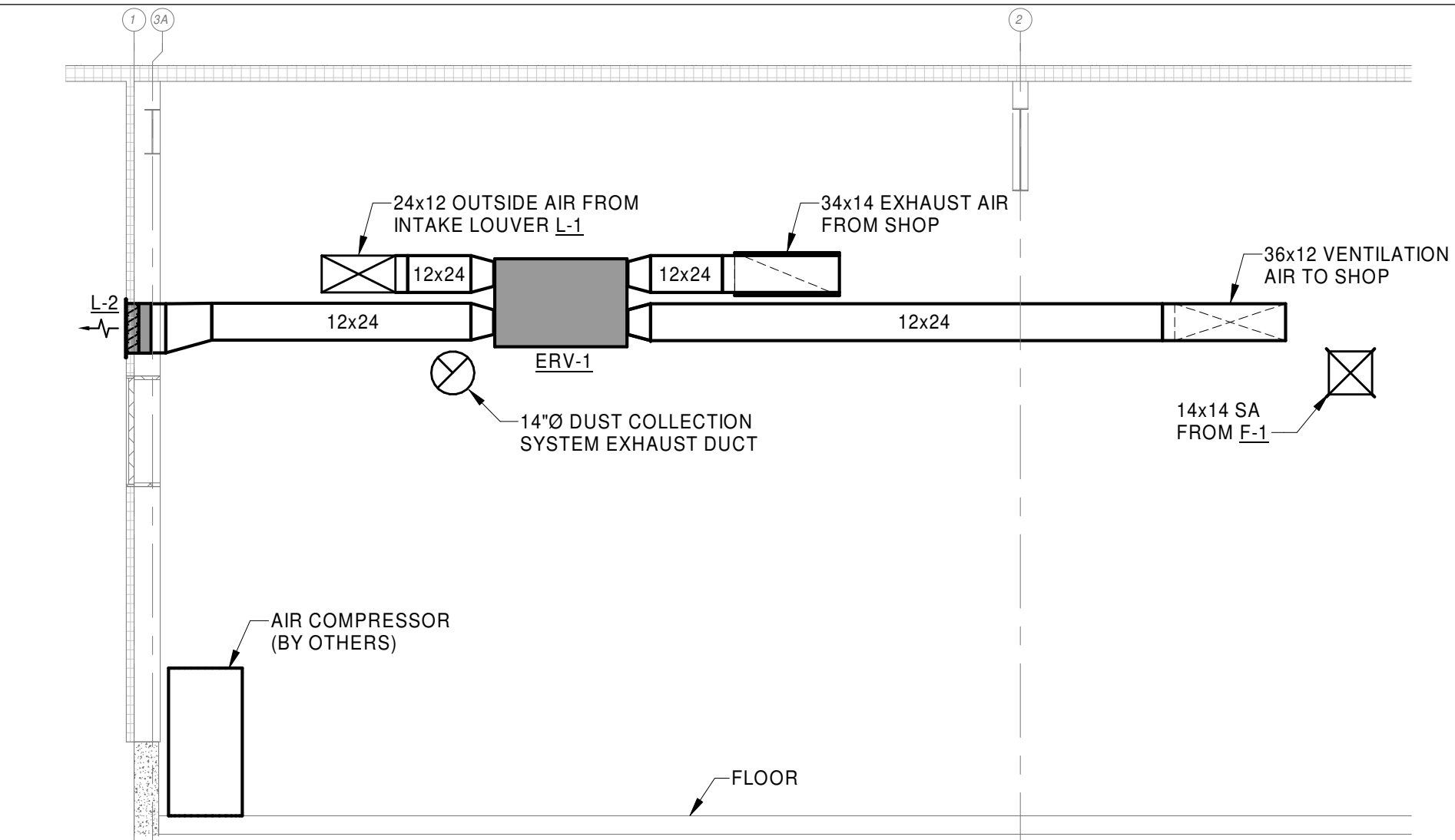
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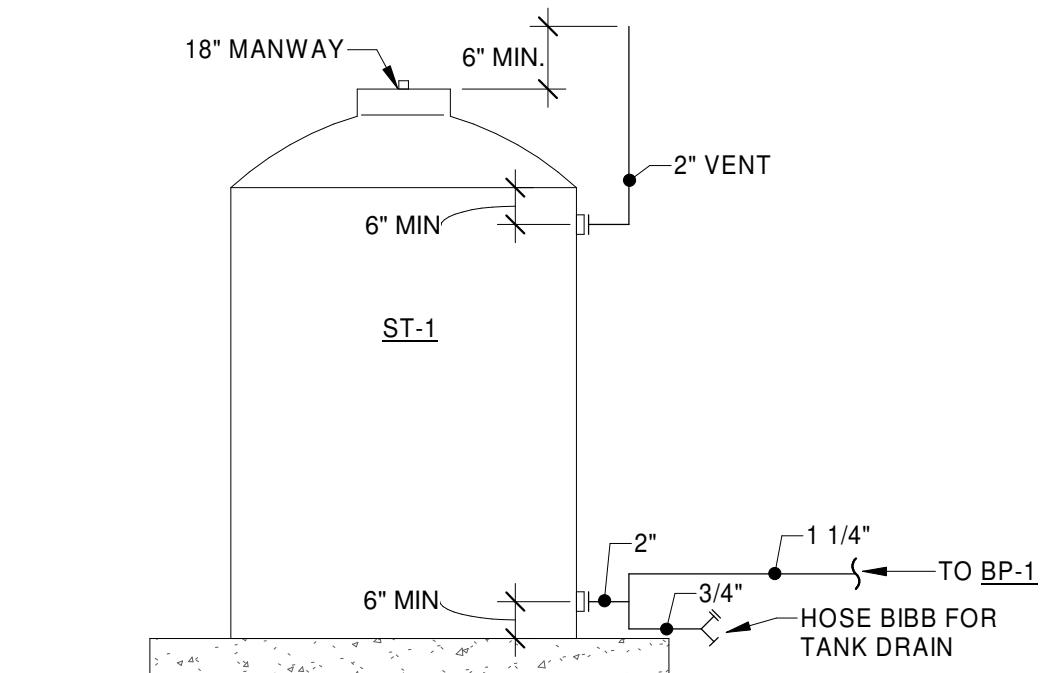
SHEET DESCRIPTION:
HVAC PLAN

M100

SHEET:
04 of 05



1
M200
ERV-1 SECTION
1/4" = 1'-0"



2
M200
STORAGE TANK CONNECTIONS DETAIL
NOT TO SCALE

REVISIONS:

Craig City School District
New Shop Building

STATUS:
Construction Documents

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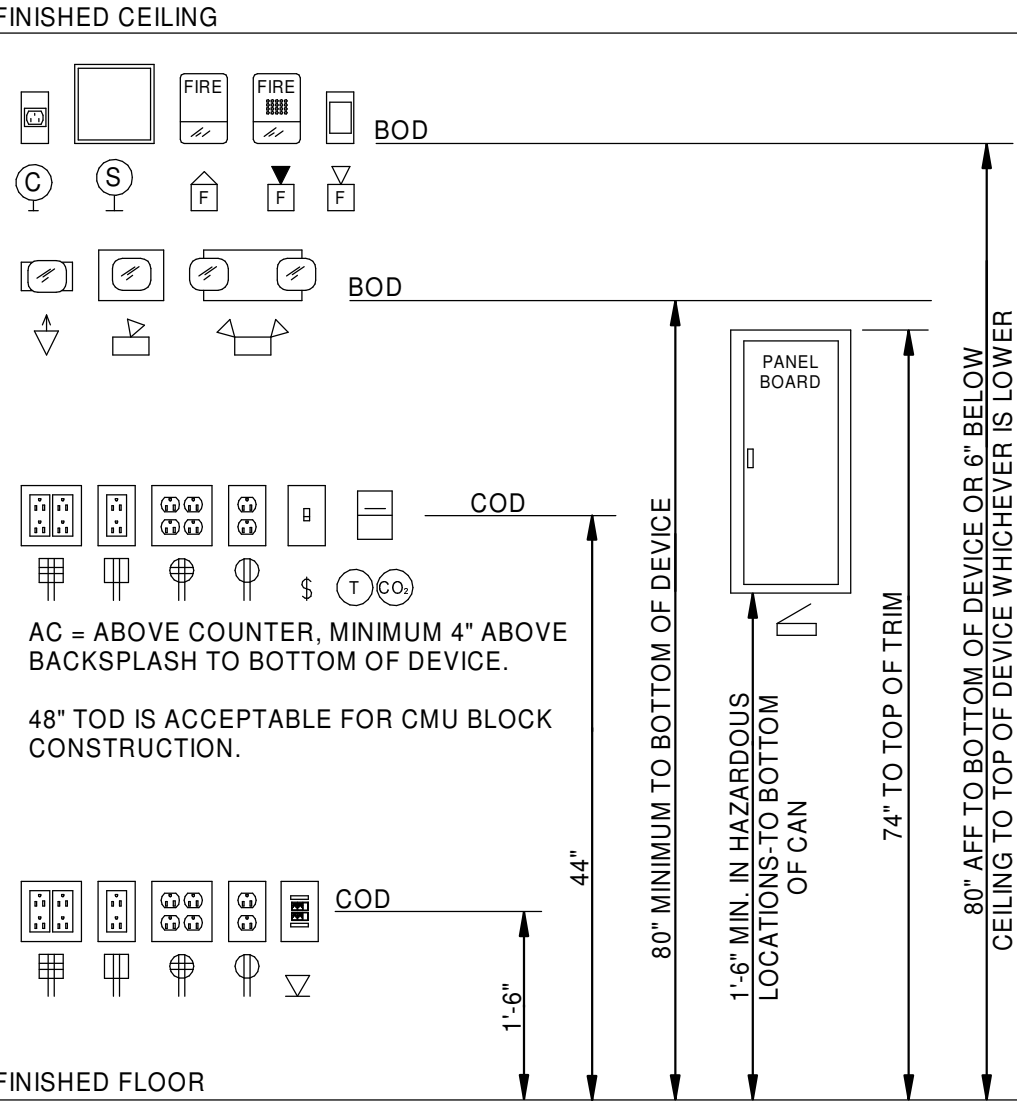
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SHEET DESCRIPTION:
MECHANICAL SECTIONS &
DETAIL

M200

SHEET:
05 of 05

INTERIOR BOX MOUNTING HEIGHTS



ELECTRICAL SHEET INDEX

E001	LEGENDS, SCHEDULES AND PANELS
E002	ONE LINE DIAGRAM AND LIGHTING FIXTURE SCHEDULE
E003	ELECTRICAL PANEL SCHEDULE
E100	SITE PLAN
E200	ELECTRICAL LIGHTING PLANS
E300	POWER PLANS

ELECTRICAL LEGEND

LIGHTING

SYMBOL	DESCRIPTION
	PENDANT OR SURFACE MOUNTED FIXTURE
	CEILING MOUNTED, WALL MOUNTED EXIT LIGHT (W/ DIRECTIONAL ARROWS)
	1 HEAD REMOTE EMERGENCY LIGHT

ABBREVIATIONS AND MISCELLANEOUS

SYMBOL	DESCRIPTION
AC	ABOVE COUNTER, 4" BACK SPLASH
ATS	AUTOMATIC TRANSFER SWITCH
AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR
BLG	BELOW GRADE
BOD	BOTTOM OF DEVICE
C	CONDUIT
CLG	CEILING
COD	CENTER OF DEVICE
CU	COPPER
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
GC	GENERAL CONTRACTOR
GND	GROUND
MC	MECHANICAL CONTRACTOR
(N)	NEW
QTY	QUANTITY
(R)	RELOCATED
SF	SURFACE
TC	TEMPERATURE CONTROL CONTRACTOR
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
W/	WITH
WP	WEATHER PROOF (WHILE IN USE)
XFMR	TRANSFORMER
a,b,c etc	SWITCH DESIGNATION
BN1L-2,4,6	CIRCUIT DESIGNATION, PANEL BN1L, CIRCUITS 2,4,6

1/E501	INDICATES DETAIL 1 ON SHEET E501
	SHEET WORK NOTE
	HOME RUN TO PANEL
	CONDUIT CONCEALED IN CEILING OR WALL
	CONDUIT CONCEALED UNDER FLOOR
	CIRCUIT, NUMBER OF HASH MARKS INDICATES NUMBER OF CONDUCTORS IN CABLE/RACEWAY. GROUND WIRE IS NOT SHOWN BUT SHALL BE INCLUDED. NO HASH MARKS INDICATES 2 CONDUCTORS PLUS GROUND.

SYMBOLS APPLY ONLY WHEN USED ON DRAWINGS

DEVICES AND POWER

SYMBOL	DESCRIPTION
\$	SWITCH - SPST
2	SINGLE POLE, DOUBLE THROW
3	THREEWAY
WP	WEATHERPROOF
OS	OCCUPANCY SENSOR
D	DIMMER
LV	LOW VOLTAGE
	OCCUPANCY SENSOR (CEILING) - SUBSCRIPT IS TYPE
	RECEPTACLE - SIMPLEX
	RECEPTACLE - DUPLEX, MOUNTING IN CEILING
	GFI RECEPTACLE - DUPLEX, MOUNTING IN CEILING
	RECEPTACLE - DUPLEX
	GFI RECEPTACLE - DUPLEX (GROUND FAULT INTERRUPT)
USB	DEVICE RECEPT W/2 USB PORTS
DC	DROP CORD
WP	WEATHERPROOF COVER & WEATHER RESISTANT RECEPTACLE
S	SURGE PROTECTED
	FILLED CENTER INDICATES HOSPITAL GRADE EMERGENCY RECEPTACLE
	RECEPTACLE - 208V
R	RANGE - NEMA 14-50R
D	DRYER - NEMA 14-30R
W	WELDER - NEMA 14-50R
*	NEMA CONFIGURATION AS NOTED
	208V RECEPTACLE IN RECESSED FLOORBOX
	DUPLEX RECEPTACLE/GFI IN RECESSED FLOORBOX
	DOUBLE DUPLEX RECEPTACLE/GFI IN RECESSED FLOORBOX
	J-BOX - BOX INDICATES FLOOR MOUNTING - 4"X4"X2-1/8" DEEP UNLESS OTHERWISE NOTED
	THERMOSTAT/TEMPERATURE SENSOR BY MC OR TC, J-BOX AND CONDUIT TO CEILING BY EC
\$M	MANUAL MOTOR DISCONNECT/STARTER SWITCH
	EMERGENCY PUSHBUTTON
	SPECIAL PURPOSE CONNECTION - BOX INDICATES FLOOR MOUNTING - WORK AS NOTED
	ELECTRIC MOTOR CONNECTION
	COMBINATION STARTER/DISCONNECT SWITCH
	DISCONNECT SWITCH
	CONTACTOR
	CIRCUIT BREAKER
	PANELBOARD, SURFACE MOUNTED

REVISIONS:

Craig City School District
New Shop Building

STATUS:

Construction
Documents

DRAWN BY: KAUFMAN
CHECKED BY: BRONEC
DATE: 12.08.2023
PROJECT #: CHS_BOMASS_Shop

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SHEET DESCRIPTION:
LEGENDS, SCHEDULES
AND PANELS

E001

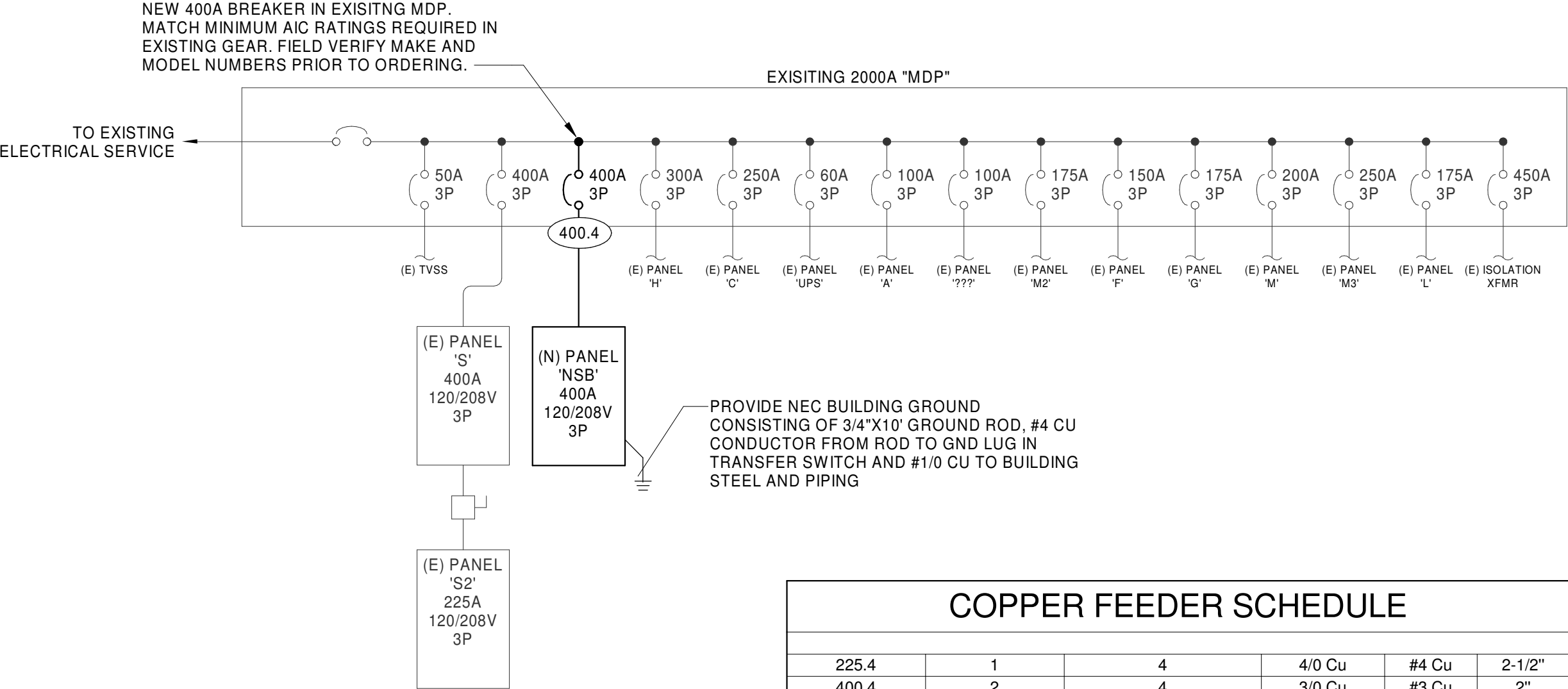
SHEET:

01 of 06

LIGHTING FIXTURE SCHEDULE

FIXTURE							MOUNTING	
TYPE	DESCRIPTION	MFG.	CATALOG NUMBER	NOTES	VOLTS	WATTS	TYPE	HEIGHT
S1	LED STRIP LIGHT WITH CABLE HANGING KIT	LITHONIA	ZL1D-48-7000LM-FST-MVOLT-35K-ZACVHM100		120	41	CABLE	12FT
EX	LED EXIT SIGN WITH BATTERY AND EGRESS HEADS	LITHONIA	LHQM-LED-R-HO-M6 W/ELA-QWP REMOTE HEAD	1	120	4.3	WALL	6" ABOVE DOOR
W1	WALL MOUNTED LED FIXTURE WITH PHOTOCELL	LITHONIA	WDGE2LED-P3-40K-80CRI-T3M-MVOLT		120	32	WALL	10FT

NOTES:
1. MOUNT REMOTE HEAD ON EXTERIOR OF BUILDING



COPPER FEEDER SCHEDULE

225.4	1	4	4/0 Cu	#4 Cu	2-1/2"
400.4	2	4	3/0 Cu	#3 Cu	2"

1

E002

ONE LINE DIAGRAM

NOT TO SCALE

REVISIONS:

Craig City School District
New Shop Building

STATUS:
Construction Documents

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DATE: 12.08.2023
PROJECT #: CHS_BOMASS_Shop

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STATE OF ALASKA
49TH
Alan R. Bronec
No. EE11453
REGISTERED PROFESSIONAL

Cushing Terrell

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SHEET DESCRIPTION:
ONE LINE DIAGRAM AND
LIGHTING FIXTURE
SCHEDULE

E002

SHEET:
02 of 06

PANEL: NSB

LOCATION:	Janitor 4	AMPS:	400 A	TYPE OF MAIN:	MCB
MOUNTING TYPE:	SURFACE	VOLTAGE:	120/208 Wye	MINIMUM AIC RATING:	10K AIC
MANUFACTURER:	SEE SPECIFICATIONS	PHASES:	3	FED FROM:	
MODEL TYPE:	PANELBOARD	WIRES:	4	ENCLOSURE:	NEMA 1
NOTES:					

LOAD NAME	CKT NO	BKR AMP	POLE	A		B		C		POLE	BKR AMP	CKT NO	LOAD NAME
RECEPTACLE MITER SAW	1	20	1	1800	180					1	20	2	RECEPTACLE SCROL SAW
RECEPTACLE SCROL SAW	3	20	1			180	180			1	20	4	RECEPTACLE SCROL SAW
RECEPTACLE VARIABLE SPEED PLANER	5	20	1					180	180	1	20	6	RECEPTACLE BAND SAW
RECEPTACLE DRILL PRESS	7	20	1	1080	1008					1	20	8	RECEPTACLE SPINDLE SANDER
RECEPTACLE BELT/DISK SANDER	9	20	1			528	528			1	20	10	RECEPTACLE SANDING TABLE
RECEPTACLE LATHE	11	20	1					960	960	1	20	12	RECEPTACLE LATHE
RECEPTACLES	13	20	1	540	900					2	20	14	RECEPTACLE PLANER
RECEPTACLE TABLE SAW	15	30	2			2364	900			--	--	16	--
--	17	--	--					2364	816	2	20	18	RECEPTACLE JOINTER
RECEPTACLES	19	20	1	360	816					--	--	20	--
SPARE	21	20	1			0	250			1	20	22	LIGHTING
RECEPTACLES	23	20	1					1800	51	1	20	24	LIGHTING
RECEPTACLE AIR COMP	25	20	2	1800	360					1	20	26	RECEPTACLES
--	27	--	--			1800	360			1	20	28	RECEPTACLES
RECEPTACLE ROUTER TABLE	29	--	1					--	76	1	20	30	DF-1 FAN
DUST COLLECTOR	31	70	3	5544	1620					1	20	32	FURNACE
--	33	--	--			5544	1584			2	20	34	PUMP BP-1
--	35	--	--					5544	1584	--	--	36	--
ERV-1	37	20	2	1056	1800					1	20	38	RECEPTACLE ROUTER TABLE
--	39	--	--			1056	1440			1	20	40	RECEPTACLE CNC ROUTER TABLE
SPARE	41	20	1					0	1800	1	20	42	RECEPTACLE ROUTER/TABLE
SPARE	43	20	1	0	536					1	20	44	RECEPTACLE BELT/DISK SANDER
SPARE	45	20	1			0	600			1	20	46	RECEPTACLE POCKET HOLE MACHINE
SPARE	47	20	1					0	0	1	20	48	SPARE
SPARE	49	20	1	0	0					1	20	50	SPARE
SPARE	51	20	1			0	0			1	20	52	SPARE
SPARE	53	20	1					0	0	1	20	54	SPARE
SPARE	55	20	1	0	0					1	20	56	SPARE
SPARE	57	20	1			0	0			1	20	58	SPARE
SPARE	59	20	1					0	0	1	20	60	SPARE

				19400	17314	16315.4	TOTAL CONNECTED PHASE VA
				162.9	145.6	136	TOTAL CONNECTED PHASE AMPS

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIPMENT	23608	100.00%	23608	TOTAL CONNECTED LOAD:	53029.4
LIGHTING	301	125.00%	377	TOTAL CONNECTED AMPS:	147.2
RECEPTACLES	29120	67.17%	19560		
				TOTAL EST. DEMAND:	43544.7
				TOTAL EST. DEMAND AMPS:	120.9

NOTES:

REVISIONS:									
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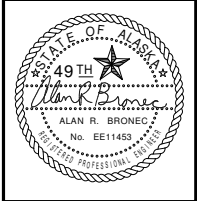
Craig City School District
New Shop Building

STATUS:
Construction Documents

DRAWN BY: KAUFMAN
CHECKED BY: BRONEC
DATE: 12.08.2023
PROJECT #: CHS_BOMASS_Shop

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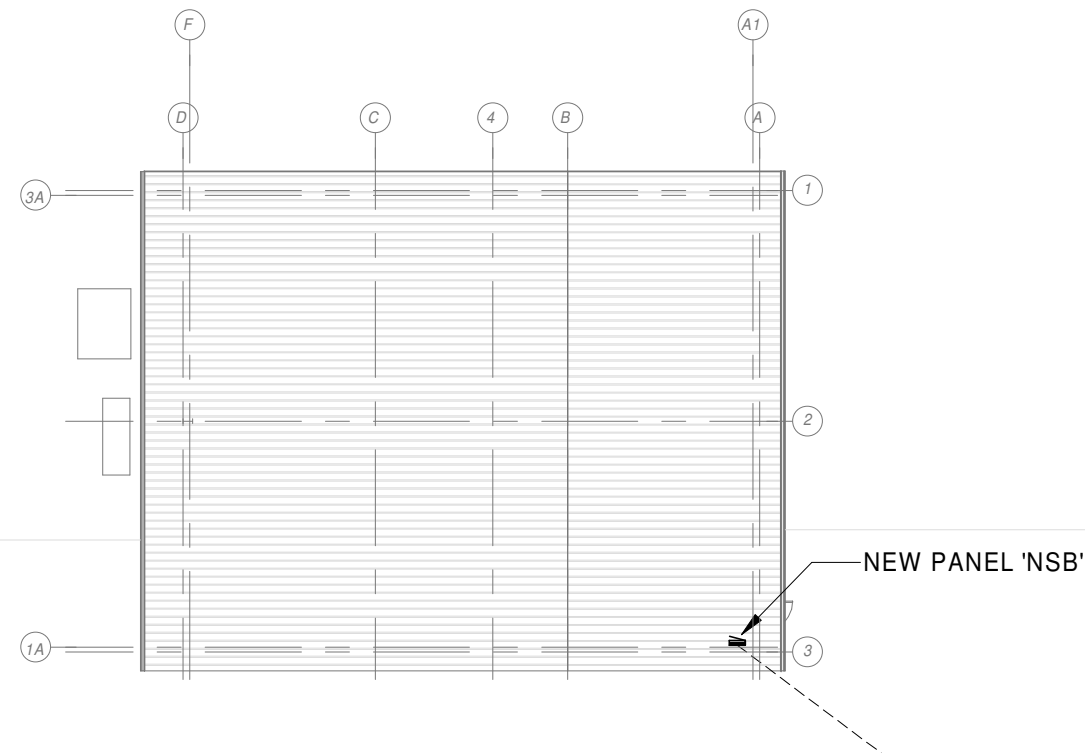
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SHEET DESCRIPTION:
ELECTRICAL PANEL
SCHEDULE

E003

SHEET:
03 of 06

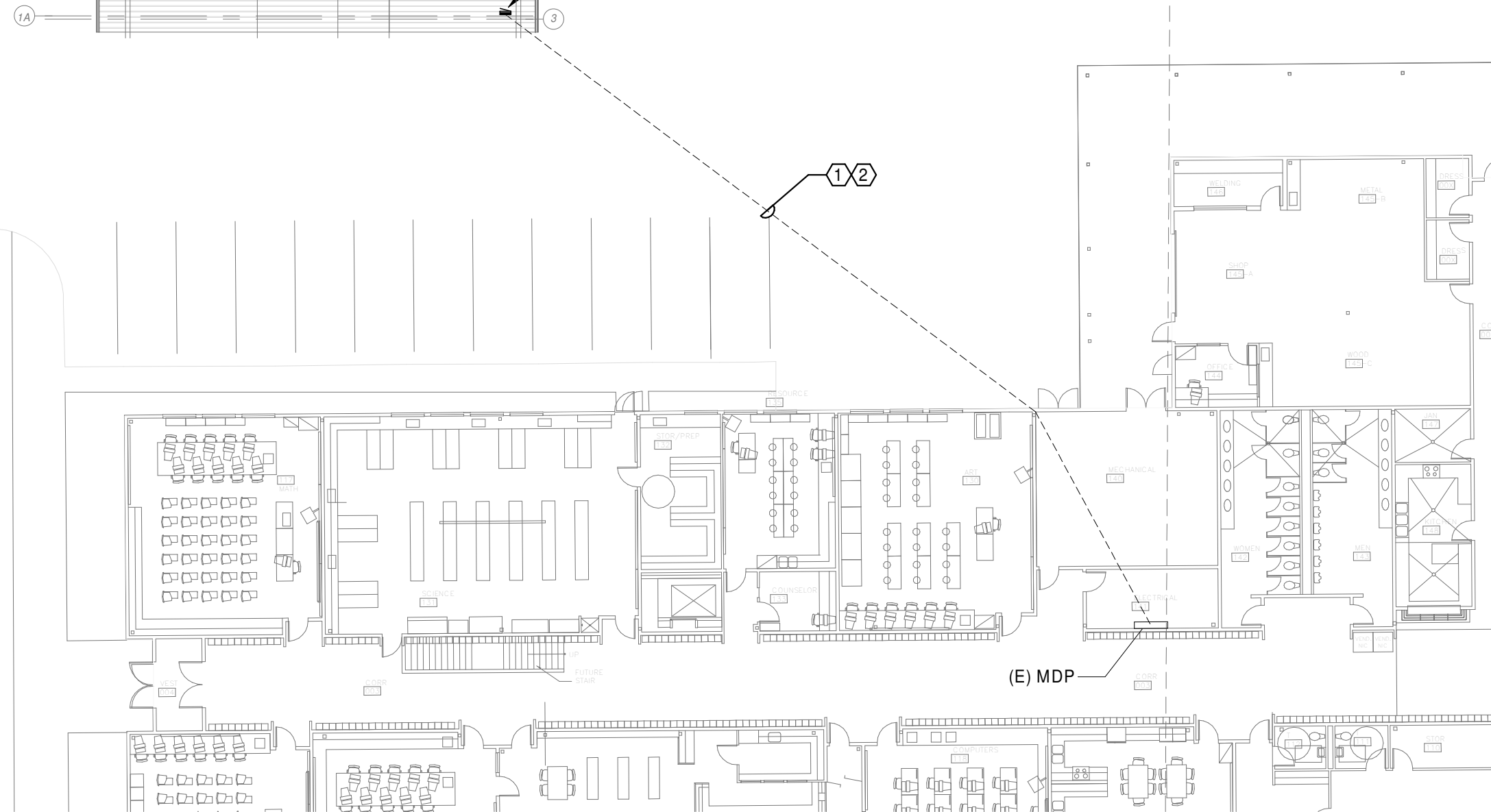


GENERAL NOTES

- COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.
- SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

KEYNOTES

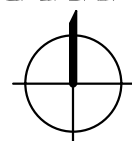
- NEW SERVICE TO NEW WOODSHOP BUILDING. VERIFY ROUTING TO EXISTING MDP IN SCHOOL PRIOR TO BID.
- INSTALL A SPARE 1-1/2" CONDUIT FOR FUTURE TELE/DATA TO THE SHOP.



1
E100

ELECTRICAL SITE PLAN

1" = 20'-0"



NORTH REF

REVISIONS:

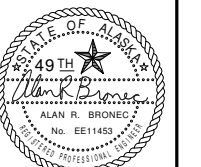
Craig City School District
New Shop Building

STATUS:

Construction
Documents

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CHECKED BY: BRONEC
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PROJECT #: CHS_BCMAS - Shop

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SHEET DESCRIPTION:

SITE PLAN

E100

SHEET:

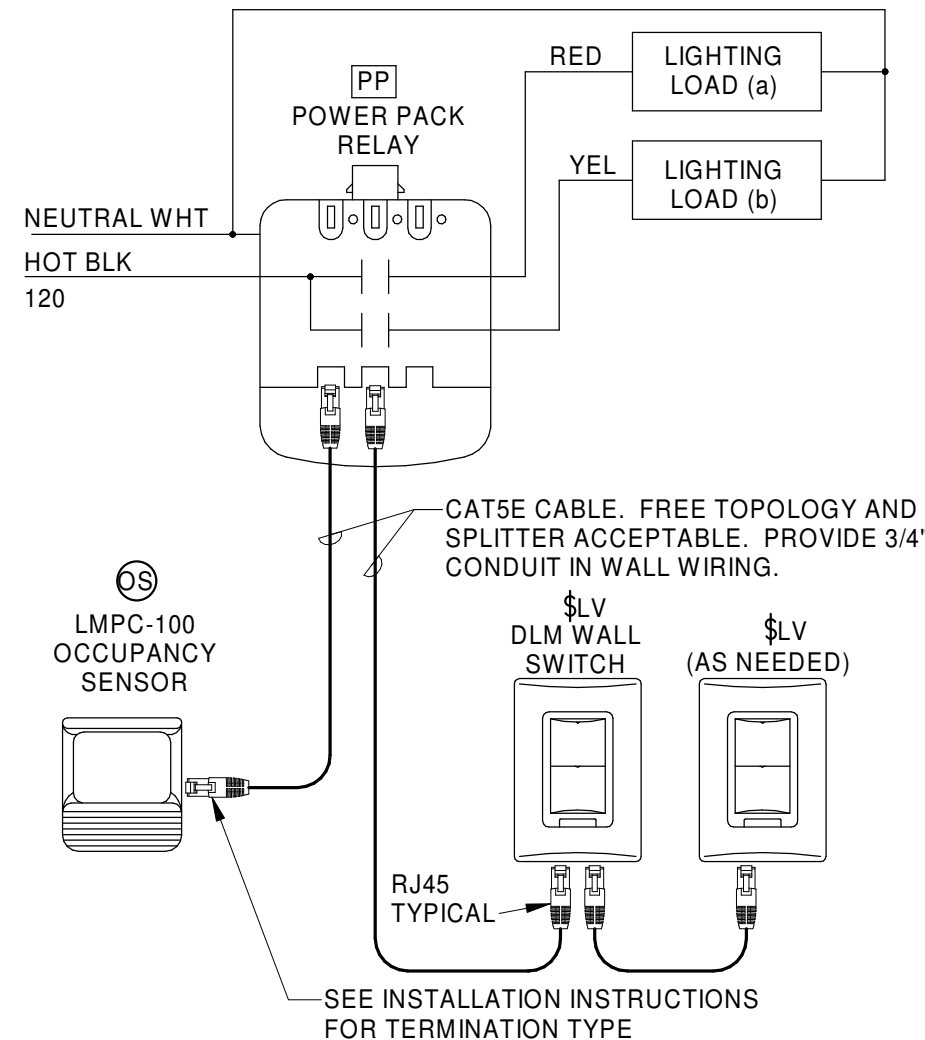
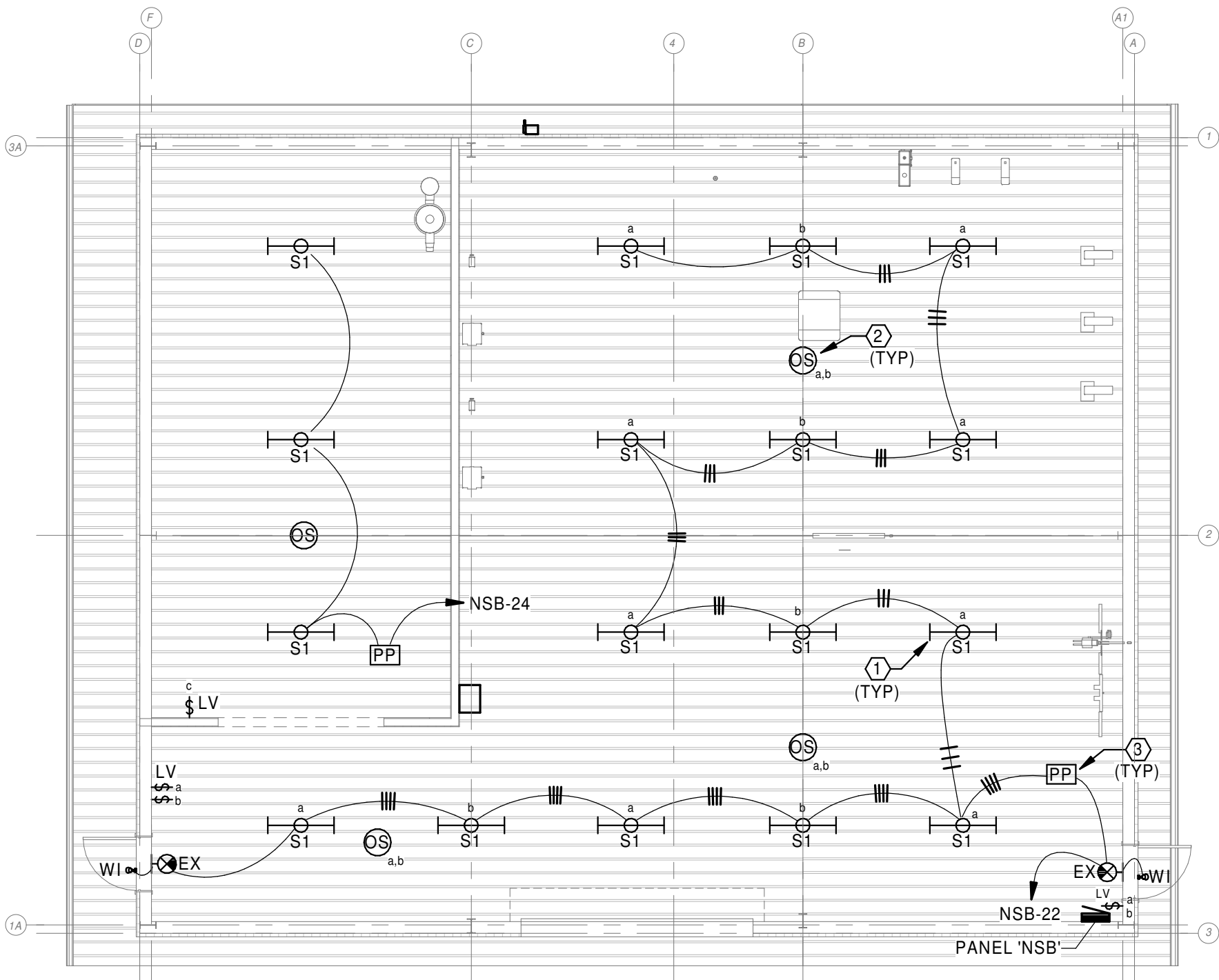
04 of 06

GENERAL NOTES

- A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.
- B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

KEYNOTES

- 1. CHAIN HANG LIGHT FIXTURE APPROX. 12 FT ABOVE FLOOR
- 2. MOUNT OCCUPANCY SENSOR 12FT AFF. WATTSTOPPER # LMPC-100
- 3. POWER PACK RELAY WATTSTOPPER # LMRC-102



1

LIGHTING PLAN

E200

1/8" = 1'-0"

2

OCCUPANCY SENSOR DETAIL

E200

NOT TO SCALE

REVISIONS:

Craig City School District
New Shop Building

STATUS:

Construction
Documents

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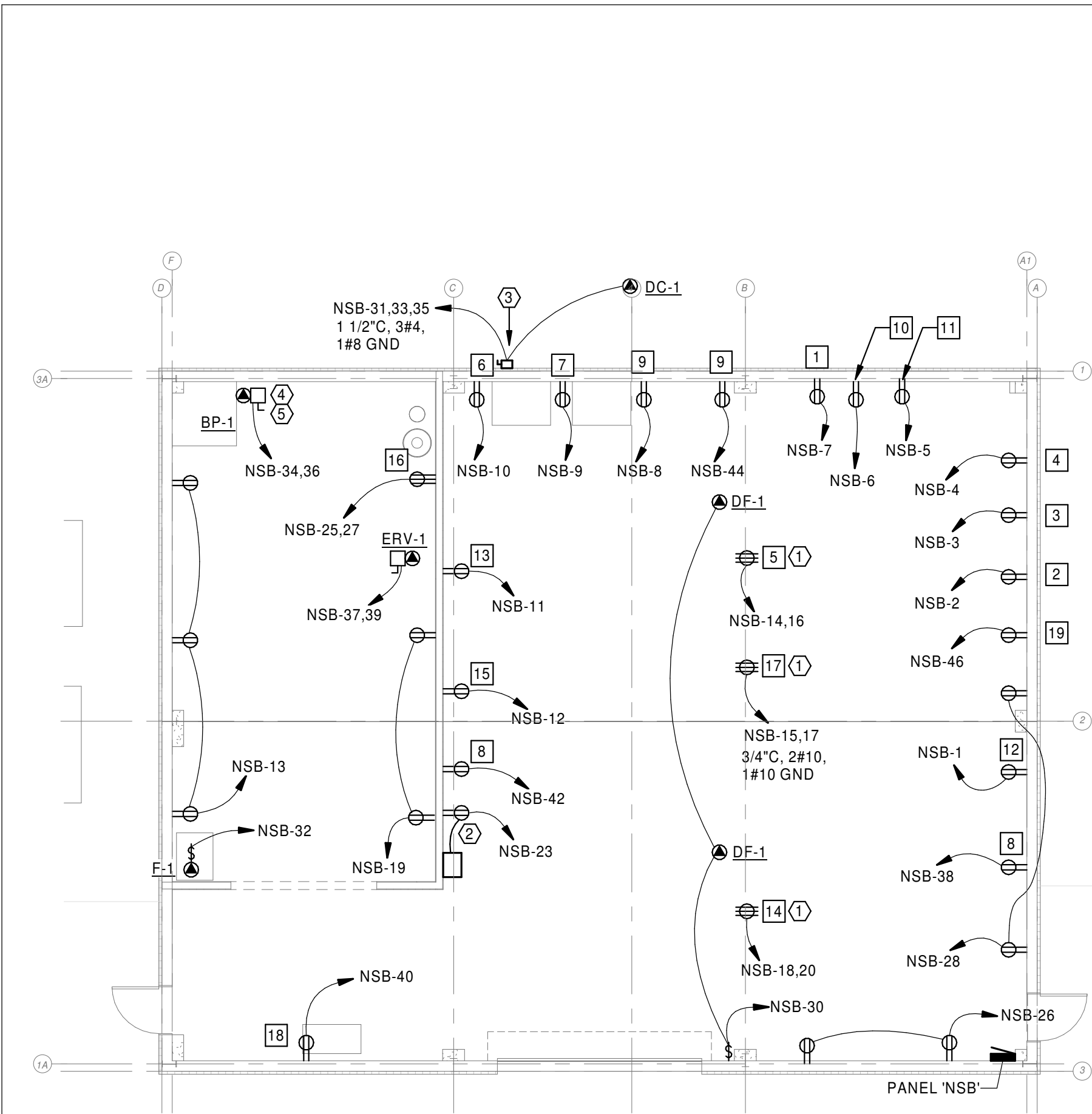
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SHEET DESCRIPTION:
ELECTRICAL LIGHTING
PLANS

E200

SHEET:

05 of 06



GENERAL NOTES

- A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.
- B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

KEYNOTES

1. CORP DROP RECEPTACLE. COORDINATE RECEPTACLE WITH EXISTING EQUIPMENT.
2. DUST COLLECTOR CONTROL PANEL. PROVIDE CONDUIT/WIRE FROM CONTROL PANEL TO DUST COLLECTOR AND SPARK/EXTINGUISHING SYSTEM AS REQUIRED PER MFG DATA SHEETS.
3. 100A/3P/NEMA 3R DISC SWITCH.
4. 30A/3P/NEMA 1 DISC SWITCH.
5. PROVIDE BUCK/BOOST TRANSFORMER TO BOOST 208V TO 230V FOR PUMP POWER.

WOODSHOP EQUIPMENT SCHEDULE				
ID #	EQUIPMENT	VOLTAGE	PHASE	AMPS
1	JET DRILL PRESS	115/230	1	9/4.5
2	EXCALIBUR SCROLL SAW	120	1	1.3
3	EXCALIBUR SCROLL SAW	120	1	1.3
4	EXCALIBUR SCROLL SAW	120	1	1.3
5	GRIZZLY VARIABLE SPEED PLANER	220	1	7.5
6	GRIZZLY VACCUM SANDING TABLE	110	1	4.4
7	GRIZZLY VACCUM SANDING TABLE	110	1	4.4
8	ROUTER / TABLE	120	1	15
9	JET OSCILLATING SPINDLE SANDER	115	1	8.4
10	JET BAND SAW	115/230	1	7.5/3.75
11	JET BAND SAW	115/230	1	7.5/3.75
12	BOSCH MITER SAW	120	1	15
13	JET MINI LATHE	115	1	5
14	JET 8" JOINTER	230	1	6.8
15	DELTA LATHE	120	1	8
16	AIR COMPRESSOR	240	1	15
17	SAW STOP TABLE SAW	230	1	19.7
18	CNC ROUTER TABLE	120	1	12
19	KREG POCKET HOLE MACHINE	120	1	5
20	JET BELT SANDER / DISK SANDER	115/230	1	12.8/6.2

REVISIONS:

Craig City School District
New Shop Building

STATUS:
Construction Documents

DRAWN BY: KAUFMAN
CHECKED BY: BRONEC
DATE: 12.08.2023
PROJECT #: CHS_BOMASS_Shop

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800.757.9522

SHEET DESCRIPTION:
POWER PLANS

E300

SHEET:
06 of 06