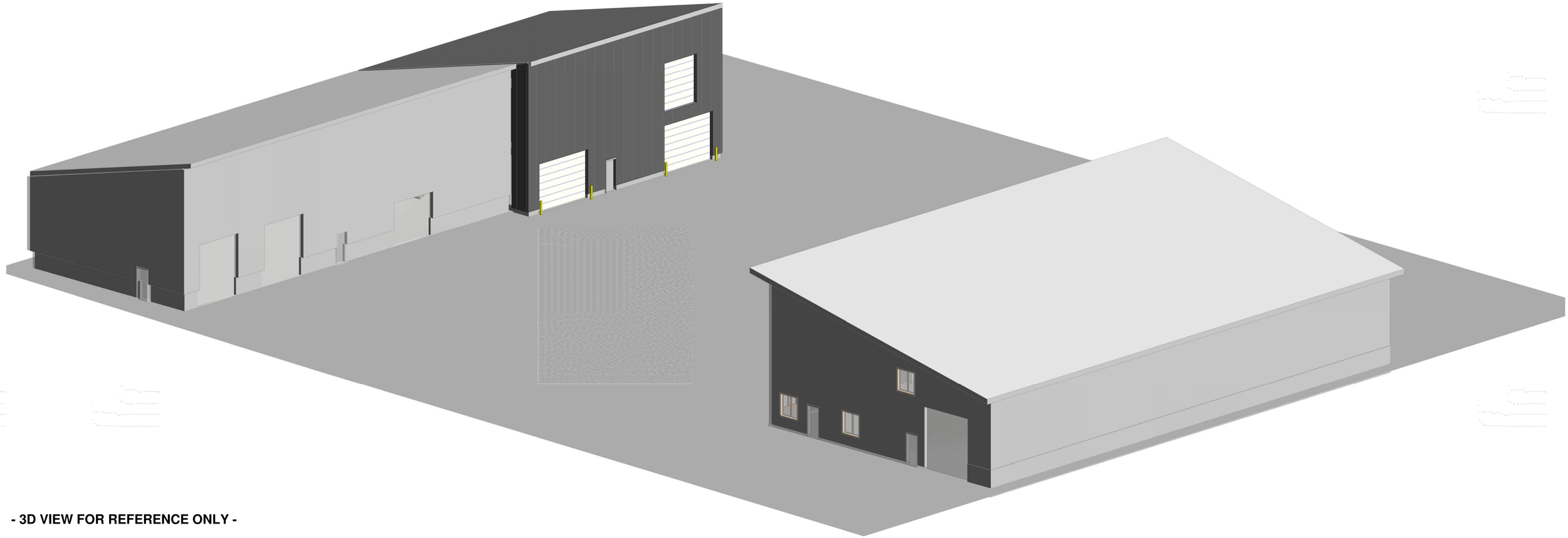
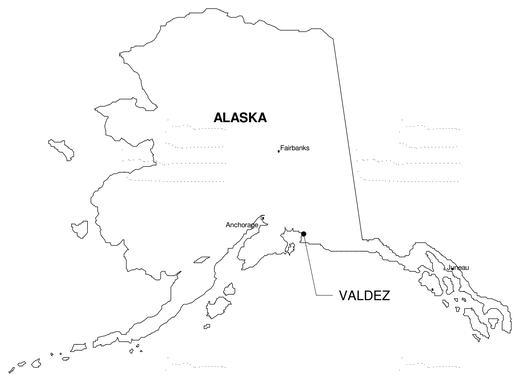
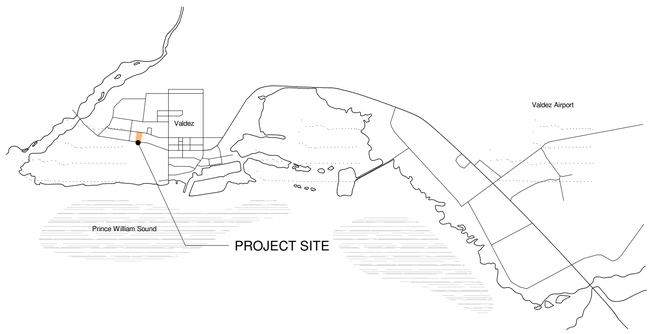


- 3D VIEW FOR REFERENCE ONLY -

LOCATION MAP



VICINITY MAP



DRAWING INDEX

ARCHITECTURAL

STRUCTURAL

MECHANICAL

ELECTRICAL

ECI
3909 ARCTIC BOULEVARD, SUITE 103
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO. 18-0011.01

TITLE SHEET

CITY OF VALDEZ

BUILDING MAINTENANCE/PARKS & RECREATION FACILITIES UPGRADES

PERMIT DOCUMENTS

ISSUE DATE: 06.11.2019

PACKAGE A

ABBREVIATIONS

ABV	ABOVE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ARCH	ARCHITECTURAL
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLW	BELOW
BO	BOTTOM OF
BOF	BOTTOM OF FINISH
CIP	CAST IN PLACE
CF	CUBIC FOOT
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
CL	CENTERLINE
CONC	CONCRETE
CONT	CONTINUOUS
CTR	CENTER
DIA	DIAMETER
DIM	DIMENSION
DWG	DRAWING
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EQUIP	EQUIPMENT
FAF	FLUID APPLIED FLOORING
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FRT	FIRE RETARDANT TREATED
FT	FOOT, FEET
FURR	FURRING
GA	GUAGE
GALV	GALVANIZED
GWB	GYPSUM WALL BOARD
GYP	GYPSUM WALL BOARD
HR	HOUR
HT	HEIGHT
ID	INSIDE DIAMETER
INCL	INCLUDE, INCLUDED
INSUL	INSULATION
INT	INTERIOR
LH	LEFT HAND
MAX	MAXIMUM
MFR	MANUFACTURER
MKBD	MARKERBOARD
MIN	MINIMUM
MIR	MIRROR
MTL	METAL
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD
OHD	OVERHEAD DOOR
PERF	PERFORATED
PLAM	PRESSURE TREATED LAMINATE
PLY	PLYWOOD
PT	PAINT
RCP	REFLECTED CEILING PLAN
REBAR/RB	REINFORCING BARS
REF	REFERENCE
REQD	REQUIRED
SECT	SECTION
SCHED	SCHEDULE
SIM	SIMILAR
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
TBD	TO BE DETERMINED
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY CERTIFIED
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
WD	WOOD

MATERIALS

- CONCRETE (SECTION)
- EARTH (SECTION)
- FINISH CARPENTRY (SECTION)
- GYPSUM BOARD (SECTION)
- INSULATION, BATT (PLAN & SECTION)
- INSULATION, RIGID (PLAN & SECTION)
- MINERAL WOOD INSULATION (PLAN & SECTION)
- METAL (SECTION)
- FILL (SECTION)
- PLYWOOD (SECTION)
- WOOD, CONTINUOUS (SECTION)
- WOOD, BLOCKING (SECTION)
- STONE (PLAN)
- PAVING (SECTION)

GENERAL NOTES

1. CONSTRUCTION IS TO BE IN COMPLIANCE WITH ALL LOCAL, STATE, & FEDERAL BUILDING CODES.
2. THE CITY OF VALDEZ 'STANDARD GENERAL PROVISIONS, DIVISION 10' APPLY TO THE PROJECT.
3. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES TO AS-BUILT CONDITIONS.
5. FOR PLUMBING AND MECHANICAL ITEMS NOTED FOR REMOVAL: REMOVE BACK TO SOURCE AND CAP.
6. REUSE FIXTURES AS DESIGNATED, ALL OTHERS, COORDINATE WITH OWNER/BUILDING MANAGER FOR SALVAGE OR DISPOSAL.
7. CONTRACTOR TO PROTECT ALL EXISTING BUILDINGS, STRUCTURES, FURNITURE, FINISHES, AND EQUIPMENT.
8. ALL DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.

SYMBOLS

GRID LINE INDICATION

ROOM IDENTIFICATION
- Room name — ROOM NAME
- 101 — ROOM NUMBER
- 150 SF — AREA

INTERIOR / EXTERIOR ELEVATION
- XX / XX — DASH INDICATES NO ELEVATION

BUILDING SECTION
- XX — SECTION NUMBER
- XX — SECTION SHEET

WALL SECTION
- XX — SECTION NUMBER
- XX — SECTION SHEET

DETAIL
- XX — DETAIL NUMBER
- XX — DETAIL SHEET

DOOR NUMBER
- 101 — REFER TO DOOR SCHEDULE

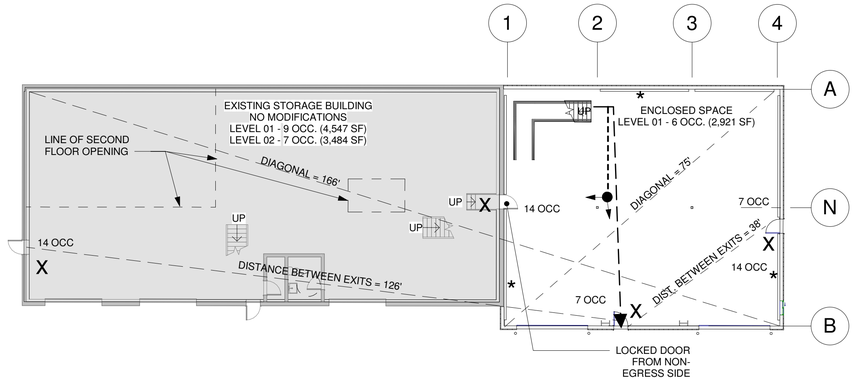
WINDOW TYPE
- J — REFER TO WINDOW SCHEDULE

KEYNOTE
- 1 — REFER TO NOTES LISTED ON SHEET

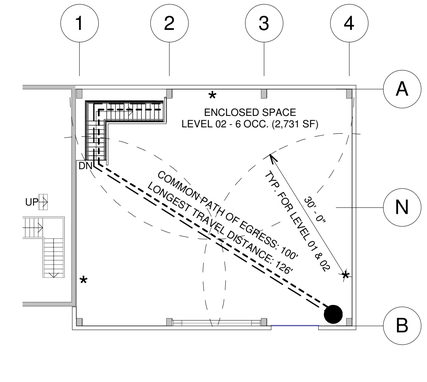
WALL TYPE INDICATOR
- A1 — REFER TO WALL LEGEND

FLOOR, CEILING, ROOF TYPE INDICATOR
- F1 — REFER TO FLOOR, CEILING, ROOF LEGEND

WORK POINT
- (CONTROL or DATUM POINT)



1 LEVEL 1 CODE PLAN
1/16" = 1'-0"



2 LEVEL 2 CODE PLAN
1/16" = 1'-0"

CODE LEGEND

- COMMON PATH OF EGRESS
- EXIT ACCESS TRAVEL DISTANCE
- EXIT ACCESS STARTING
- DECISION POINT
- EXISTING CONSTRUCTION
- * FIRE EXTINGUISHER
- X FIRE EXIT

CODE ANALYSIS

PROJECT LOCATION DATA

ADDRESS: 613 WEST EGAN DRIVE
VALDEZ, ALASKA, 99686

AUTHORITY HAVING JURISDICTION: STATE OF ALASKA FIRE MARSHAL & CITY OF VALDEZ

2012 INTERNATIONAL BUILDING CODE
2017 NATIONAL ELECTRICAL CODE
2012 INTERNATIONAL MECHANICAL CODE
2012 INTERNATIONAL FIRE CODE
2015 UNIFORM PLUMBING CODE

PROJECT SUMMARY:
- EXISTING STORAGE S-2 BUILDING WITH ADJOINING COVERED STRUCTURE. ADJOINING COVERED STRUCTURE TO BE ENCLOSED AND REMAIN UNHEATED. ADDITIONALLY, STRUCTURE TO RECEIVE NEW SECOND FLOOR FOR ADDITIONAL STORAGE.

BUILDING SUMMARY:
- EXISTING ENCLOSED STRUCTURE — LEVEL 01 - 4,547 SF; LEVEL 02 - 3,484 SF
- EXISTING CANOPY WITH NEW ENCLOSURE AND SECOND LEVEL — LEVEL 01 - 2,921 SF; LEVEL 02 - 2,731 SF; TOTAL - 13,683 SF

INTERNATIONAL BUILDING CODE ANALYSIS

IBC SECTION 302 OCCUPANCY CLASSIFICATION: S-2 - STORAGE

IBC SECTION 503 - GENERAL BUILDING HEIGHT AND AREA LIMITATIONS
- GROUP S-2/TYPE OF CONSTRUCTION: TYPE VB
- STORIES - 2; HEIGHT - 40 FT
- AREA - 13,500 SF/STORY

IBC SECTION 506.2 - BUILDING AREA MODIFICATIONS - FRONTAGE INCREASE
- {13,500 SF + [13,500 x ((209/420) - .25)(30/30))] + [13,500 x 0] = **16,843 SF PER FLOOR**

IBC SECTION 803.9 INTERIOR FINISH REQUIREMENTS BASED ON GROUP
- GROUP S-2
- EXIT PASSAGEWAYS: CLASS B
- CORRIDORS AND ENCLOSURES FOR EXIT ACCESS: CLASS B
- ROOMS AND ENCLOSED SPACES: CLASS C

IBC SECTION 906 PORTABLE FIRE EXTINGUISHERS (FE):
- MODERATE HAZARD STORAGE FACILITY
- CLASS 10-B EXTINGUISHER
- MAX. TRAVEL DISTANCE TO FE: 30 FT

IBC SECTION 1004 OCCUPANT LOAD
- WAREHOUSE: 1 OCCUPANT PER 500 GSF
- BUILDING AREA: 13,900 SF
- OCCUPANT LOAD: 28 OCCUPANTS

IBC SECTION 1005 MEANS OF EGRESS SIZING
- MAX OCCUPANT LOAD OF EGRESS: (28/2) - 14
- EGRESS WIDTH AT STAIRS: 14 X .3" = 4.2"
  1. MIN. STAIR WIDTH - 36" PER EXCEPTION 1 OF 1009.4 FOR FLOORS WITH LESS THAN 50 OCCUPANTS
- EGRESS WIDTH AT OTHER COMPONENTS: 14 X .2" = 2.8"
  1. EGRESS DOOR PROVIDED: 36"

IBC SECTION 1008: DOORS
- 1008.1.2: DOORS SHALL SWING IN DIRECTION OF TRAVEL WHERE SERVING AN OCCUPANT LOAD OF 50 OR MORE.

IBC SECTION 1009.3: EXIT ACCESS STAIRWAYS
- FLOOR OPENINGS BETWEEN STORIES CREATED BY EXIT ACCESS STAIRWAY SHALL BE ENCLOSED.
  1. EXCEPTION 1: IN OTHER THAN GROUP I-2 AND I-3 OCCUPANCIES, EXIT ACCESS STAIRWAYS THAT SERVE, OR ATMOSPHERICALLY COMMUNICATE BETWEEN, ONLY TWO STORIES ARE NOT REQUIRED TO BE ENCLOSED.
  2. REFERENCE NOTES BELOW ON IBC SECTION 1021.1 (1)

IBC SECTION 1011: EXIT SIGNS
- EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. THE PATH OF EGRESS TRAVEL TO EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL.

IBC SECTION 1014.3: COMMON PATH OF EGRESS DISTANCE
- OCCUPANCY S, EQUAL OR LESS THAN 29 OCCUPANTS: 100'

IBC SECTION 1014.2 EGRESS THROUGH INTERVENING SPACES
- EGRESS THROUGH INTERVENING SPACES SHALL COMPLY WITH THIS SECTION
  1. EGRESS FROM A ROOM OR SPACE SHALL NOT PASS THROUGH ADJOINING OR INTERVENING ROOMS OR AREAS, EXCEPT WHERE SUCH ADJOINING ROOMS OR AREAS AND THE AREA SERVED ARE ACCESSORY TO ONE OR THE OTHER, ARE NOT A GROUP H OCCUPANCY AND PROVIDE A DISCERNIBLE PATH OR EGRESS TRAVEL TO AN EXIT.
     - EXCEPTION: MEANS OF EGRESS ARE NOT PROHIBITED THROUGH ADJOINING OR INTERVENING SPACES IN A GROUP H, S, OR F OCCUPANCY WHEN THE ADJOINING OR INTERVENING ROOMS OR SPACES ARE THE SAME OR A LESS HAZARD OCCUPANCY GROUP.

IBC SECTION 1021.1: GENERAL NUMBER OF EXITS
- EACH STORY ABOVE THE SECOND STORY OF A BUILDING SHALL HAVE A MINIMUM OF ONE INTERIOR OR EXTERIOR EXIT STAIRWAY, OR INTERIOR OR EXTERIOR EXIT RAMP.
  1. THIS PROJECT DOES NOT HAVE A STORY ABOVE THE SECOND STORY, THEREFORE NEITHER AN INTERIOR OR EXTERIOR *EXIT STAIRWAY* IS REQUIRED; ONLY AN *EXIT ACCESS STAIRWAY* IS REQUIRED PER 1009.3.

IBC SECTION 1104.4: MULTILEVEL BUILDINGS AND FACILITIES
- AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT EACH ACCESSIBLE LEVEL, INCLUDING MEZZANINES, IN MULTILEVEL BUILDINGS AND FACILITIES.
  1. EXCEPTION: 1. AN ACCESSIBLE ROUTE IS NOT REQUIRED TO STORIES AND MEZZANINES THAT HAVE AN AGGREGATE AREA OF NOT MORE THAN 3,000 SQUARE FEET AND ARE LOCATED ABOVE AND BELOW ACCESSIBLE LEVELS.

PLUMBING FACILITIES

*UPC TABLE 422.1**
- *OCCUPANCY TYPE: S-2*
- *28 OCCUPANTS:* — *14 MALE* — *14 FEMALE*
  1. *WATER CLOSETS:* — *1 MALE: 1 PROVIDED* — *1 FEMALE: 1 PROVIDED*
  2. *URINALS:* — *0 MALE: 0 PROVIDED*
  3. *LAVATORIES:* — *1 MALE: 1 PROVIDED* — *1 FEMALE: 1 PROVIDED*
  4. *DRINK. FOUNTAINS:* — *1 DRINK. FOUNTAIN (0 PROVIDED)*

**EXISTING UNISEX RESTROOM PROVIDED TO ACCOMMODATE OCCUPANTS.*

ECI ARCHITECTURE DESIGN STRATEGY
3909 ARCTIC BOULEVARD, SUITE 103
ANCHORAGE, ALASKA 99503 907.561.5543

PROJECT NO.18-0011.01

CONSTRUCTION DOCUMENTS

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CODE ANALYSIS & GENERAL INFO

AUTHOR: JMS/JB CHECKED: JWS
REVISION:
ISSUE DATE: JUNE 11, 2019
OWNER PROJECT NO: -

A1.0.1

FULL SIZE PRINTED ON 22 x 34

SPECIFICATIONS

SECTION 01 10 00 - SUMMARY

1. GENERAL:
   - A. PROJECT SUMMARY:

     AT EXISTING METAL BUILDING (POLE BARN) - ENCLOSE STRUCTURE WITH INSULATED METAL PANELS. A SECOND LEVEL WITH INDEPENDENT FOUNDATION AND STRUCTURE WILL BE ADDED WITHIN THE POLE BARN. THIS WORK IS ACCOMPANIED BY LIGHTING AND POWER UPGRADES ON BOTH LEVELS

     AT THE EXISTING PARKS AND REC MAINTENANCE FACILITY - REMOVAL OF EXISTING 12'-0" WIDE OVERHEAD DOOR AND REPLACEMENT WITH A NEW 14'-0" WIDE OVERHEAD DOOR. PROVIDE A NEW EXTERIOR HOSE BIB AT SW CORNER OF EXISTING BUILDING

   - B. OWNER: CITY OF VALDEZ
   - C. ARCHITECT: ECI ALASKA
2. OWNER OCCUPANCY:
   - A. COOPERATE AND COORDINATE WITH OWNER TO MINIMIZE CONFLICT AND TO FACILITATE OWNER'S OPERATIONS
   - B. SCHEDULE THE WORK TO ACCOMMODATE OWNER OCCUPANCY
3. PROVIDE ACCESS TO AND FROM SITE AS REQUIRED BY LAW AND BY OWNER
   - A. EMERGENCY BUILDING EXITS DURING CONSTRUCTION: KEEP ALL EXITS REQUIRED BY CODE OPEN DURING CONSTRUCTION PERIOD.
   - B. DO NOT OBSTRUCT ROADWAYS, SIDEWALKS, AND OR OTHER PUBLIC WAYS WITHOUT PERMIT
   - C. EXISTING BUILDING SPACES MAY NOT BE USED FOR STORAGE UNLESS APPROVED BY OWNER
4. WORK SEQUENCE
   - A. COORDINATE CONSTRUCTION SCHEDULE AND OPERATION WITH OWNER

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

1. SUBSTITUTIONS: CHANGES FROM CONTRACT DOCUMENTS REQUIREMENTS PROPOSED BY CONTRACTOR (TBD) TO MATERIALS, PRODUCTS, ASSEMBLIES, AND EQUIPMENT
   - A. SUBSTITUTIONS FOR CAUSE: PROPOSED CHANGE DUE TO CHANGED PROJECT CIRCUMSTANCES BEYOND CONTRACTOR'S CONTROL
   - B. SUSTITUTIONS FOR CONVENIENCE: PROPOSED DUE TO POSSIBILITY OF OFFERING SUBSTANTIAL ADVANTAGE TO PROJECT
2. REFERENCE STANDARDS:
   - A. CSI/CSC FORM 1.5C - SUBSTITUTION REQUEST DURING BIDDING/NEGOTIATION
   - B. CSI/CSC FORM 13.1A - SUBSTITUTION REQUEST AFTER BIDDING/NEGOTIATION
3. GENERAL REQUIREMENTS
   - A. DOCUMENT EACH REQUEST WITH COMPLETE DATA SUBSTANTIATING COMPLIANCE OF PROPOSED SUBSTITUTION WITH CONTRACT DOCUMENTS AND EQUAL QUALITY AND PERFORMANCE TO BASIS OF DESIGN PRODUCTS. BURDEN OF PROOF IS ON PROPOSER AND ANY EXPLICITLY NON-COMPLIANT CHARACTERISTICS MUST BE NOTED.
   - B. ARCHITECT MAY REQUEST ADDITIONAL INFORMATION AND DOCUMENTATION PRIOR TO RENDERING A DECISION.

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

1. MAKE THE FOLLOWING TYPE OF SUBMITTALS TO THE ARCHITECT
   - A. REQUESTS FOR INFORMATION
   - B. REQUESTS FOR SUBSTITUTION
   - C. SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES
   - D. TEST AND INSPECTION REPORTS
   - E. DESIGN DATA
   - F. MANUFACTURER'S INSTRUCTIONS AND FIELD REPORTS
   - G. APPLICATIONS FOR PAYMENT AND CHANGE ORDER REQUESTS
   - H. PROGRESS SCHEDULES
   - I. COORDINATION DRAWINGS
   - J. CORRECTION PUNCH LIST AND FINAL CORRECTION PUNCH LIST FOR SUBSTANTIAL COMPLETION
   - K. CLOSEOUT SUBMITTALS
2. ELECTRONIC DOCUMENT SUBMITTALS
   - A. ALL DOCUMENTS TRANSMITTED FOR PURPOSES OF ADMINISTRATION OF THE CONTRACT ARE TO BE IN ELECTRONIC (PDF) FORMAT AND TRANSMITTED VIA EMAIL AND ARCHIVED ON A BOX SITE OR OTHER OPEN ACCESS PLATFORM.
   - B. PDF'S SHALL BE TITLED BY SPEC. SECTION SUBMITTED, BOOKMARKED, AND TEXT SEARCHABLE
3. PRECONSTRUCTION MEETING
   - A. OWNER OR OWNER'S REP. WILL SCHEDULE MEETING AFTER NOTICE OF AWARD
   - B. ATTENDANCE REQUIRED: OWNER, ARCHITECT, CONTRACTOR, MECHANICAL, PLUMBING, ELECTRICAL SUB-CONTRACTORS
   - C. AGENDA
     - a. EXECUTION OF OWNER-CONTRACTOR AGREEMENT
     - b. SUBMISSION OF BONDS AND INSURANCE CERTIFICATES
     - c. DISTRIBUTION OF CONTRACT DOCUMENTS
     - d. LIST OF SUBCONTRACTORS, PRODUCTS, SCHEDULE OF VALUES, AND PROGRESS SCHEDULE
     - e. DESIGNATION OF PERSONNEL REPRESENTING CONTRACTOR, OWNER, ARCHITECT
     - f. PROCEDURES AND PROCESSING OF FIELD DECISIONS, SUBMITTALS, SUBSTITUTION REQUESTS, APPLICATIONS FOR PAYMENT, PROPOSAL REQUEST, CHANGE ORDERS, AND CONTRACT CLOSEOUT PROCEDURES
     - g. SCHEDULING
     - h. SAFETY AND SECURITY PROCEDURES
     - i. PROCEDURES FOR TESTING
     - j. SPECIAL INSPECTIONS
   - D. CONTRACTOR WILL RECORD MINUTES AND DISTRIBUTE COPIES WITHIN 3 DAYS TO PARTICIPANTS AND THOSE AFFECTED BY DECISIONS MADE.
4. SITE MOBILIZATION MEETING: CONTRACTOR WILL SCHEDULE MEETING PRIOR TO CONTRACTOR OCCUPANCY
   - A. ATTENDANCE REQUIRED: CONTRACTOR, OWNER, ARCHITECT, CONTRACTOR SUPERINTENDENT, MAJOR SUBCONTRACTORS
   - B. AGENDA:
     - a. USE OF PREMISES
     - b. OWNER REQUIREMENTS AND OCCUPANCY PRIOR TO COMPLETION
     - c. CONSTRUCTION FACILITIES AND CONTROLS PROVIDED BY OWNER
     - d. TEMPORARY UTILITIES PROVIDED BY OWNER
     - e. SECURITY AND HOUSEKEEPING PROCEDURES
     - f. SCHEDULES
     - g. APPLICATION FOR PAYMENT PROCEDURES
     - h. PROCEDURES FOR TESTING
     - i. PROGRESS MEETING SCHEDULE DURING CONSTRUCTION
     - j. CONSTRUCTION REPORT SCHEDULE DURING CONSTRUCTION
   - C. CONTRACTOR WILL RECORD MINUTES AND DISTRIBUTE COPIES TO WITHIN 2 DAYS AFTER MEETING TO PARTICIPANTS AND THOSE AFFECTED BY DECISIONS MADE.
5. REQUESTS FOR INFORMATION (RFI'S)
   - A. DEFINITION: A REQUEST SEEKING ONE OF THE FOLLOWING; AN INTERPRETATION OR CLARIFICATION OF SOME REQUIREMENT OF THE CONTRACT DOCUMENTS ARISING FROM AN INABILITY TO DETERMINE DESIGN INTENT, A RESOLUTION TO AN ISSUE WHICH HAS ARISEN DUE TO FIELD CONDITIONS AND AFFECTS DESIGN INTENT
   - B. PREPARE RFI IMMEDIATELY UPON DISCOVERING OF NEED FOR INTERPRETATION. PROVIDE SEPARATE RFI FOR EACH ITEM.
   - C. CONTENT OF ANSWERED RFI'S WILL NOT CONSTITUTE IN ANY MANNER A DIRECTIVE OR AUTHORIZATION TO PERFORM EXTRA WORK OR DELAY THE PROJECT. CONTRACTOR MUST PROVIDE NOTICE TO THIS EFFECT.
6. SUBMITTALS
   - A. WHEN PRODUCTS OR FABRICATIONS ARE SPECIFIED IN INDIVIDUAL SECTIONS OR IDENTIFIED IN DRAWINGS, SUBMIT THE FOLLOWING
     - a. PRODUCT DATA
     - b. SHOP DRAWINGS
     - c. SAMPLES FOR SELECTION
     - d. SAMPLES FOR VERIFICATION
   - B. SUBMIT TO ARCHITECT FOR REVIEW FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE TO CONTRACT DOCUMENTS. SAMPLES REVIEWED FOR AESTHETIC , COLOR, OR FINISH SELECTION.
7. INFORMATION BULLETIN IS PROVIDED BY THE ARCHITECT OR OWNER TO GIVE ADDITIONAL INFORMATION TO THE CONTRACTOR.
   - A. ADDITIONAL INFORMATION MAY OR MAY NOT RESULT IN A CHANGE TO THE CONTRACT TIME OR CONTRACT SUM. IN THE EVENT THE CONTRACTOR BELIEVE THE INFORMATION BULLETIN WARRANTS CHANGE IN THE CONTRACT TIME OR SUM, THEY WILL NOTIFY OWNER AND ARCHITECT IN WRITING WITHIN 10 DAYS.

SECTION 01 60 00 - PRODUCT REQUIREMENTS

1. SUBMITTALS
   - A. PRODUCT DATA: SUBMIT MANUFACTURER'S STANDARD PRODUCT PUBLISHED DATA
   - B. SHOP DRAWING SUBMITTALS: PREPARED SPECIFICALLY FOR THIS PROJECT
   - C. SAMPLE SUBMITTALS: ILLUSTRATE FUNCTION AND AESTHETIC CHARACTERISTICS OF THE PRODUCT. FOR FINISHES, SUBMIT MANUFACTURER'S FULL RANGE OF COLORS

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

1. DEMOLITION PLAN: SUBMIT DEMOLITION PLAN AS SPECIFIED BY OSHA AND LOCAL AUTHORITIES.
2. CUTTING AND PATCHING: SUBMIT WRITTEN REQUEST IN ADVANCE OF CUTTING OR ALTERATION THAT AFFECTS STRUCTURAL INTEGRITY, INTEGRITY OF WEATHER PROTECTION, OPERATION OF ANY OPERATIONAL ELEMENT.
3. PROJECT RECORD DOCUMENTS: ACCURATELY RECORD ACTUAL LOCATIONS OF CAPPED AND ACTIVE UTILITIES.
4. PROJECT CONDITIONS
   - A. DUST CONTROL: EXECUTE WORK BY METHODS TO MINIMIZE RAISING DUST FROM CONSTRUCTION OPERATIONS.
5. COORDINATION
   - A. COORDINATE SCHEDULING, SUBMITTALS, AND WORK OF VARIOUS SECTIONS OF THE PROJECT MANUAL TO ENSURE EFFICIENT AND ORDERLY SEQUENCE OF INSTALLATION OF INTERDEPENDENT CONSTRUCTION ELEMENTS, WITH PROVISIONS FOR ACCOMMODATING ITEMS INSTALLED LATER.
   - B. COORDINATE COMPLETION AND CLEAN-UP OF WORK OF SEPARATE SECTIONS
   - C. AFTER OWNER OCCUPANCY OF PREMISES, COORDINATE ACCESS TO SITE FOR CORRECTION OF DEFECTIVE WORK AND WORK NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS, TO MINIMIZE DISRUPTION TO OWNER'S ACTIVITIES.
6. EXAMINATION
   - A. VERIFY THAT EXISTING SITE CONDITIONS AND SUBSTRATE SURFACES ARE ACCEPTABLE FOR SUBSEQUENT WORK. START OF WORK MEANS ACCEPTANCE OF EXISTING CONDITIONS.
   - B. VERIFY THAT EXISTING SUBSTRATE IS CAPABLE OF STRUCTURAL SUPPORT OR ATTACHMENT OF NEW WORK BEING APPLIED OR ATTACHED.
   - C. TAKE FIELD MEASUREMENTS PRIOR TO CONFIRMED PRODUCT ORDERS OR BEGINNING FABRICATION
7. PREPARATION
   - A. CLEAN SUBSTRATE SURFACES PRIOR TO APPLYING NEXT MATERIAL OR SUBSTANCE
   - B. SEAL CRACKS OR OPENINGS OF SUBSTRATE PRIOR TO APPLYING NEXT MATERIAL OR SUBSTANCE
8. PRE-INSTALLATION MEETINGS
   - A. WHEN REQUIRED IN INDIVIDUAL SPECIFICATION SECTIONS, CONVENE A PREINSTALLATION MEETING AT THE SITE PRIOR TO COMMENCING WORK OF THE SECTION.
9. LAYING OUT THE WORK
   - A. VERIFY LOCATIONS OF EXISTING CONSTRUCTION PRIOR TO STARTING WORK
10. GENERAL INSTALLATION REQUIREMENTS
    - A. IN ADDITION TO COMPLIANCE WITH REGULATORY REQUIREMENTS, CONDUCT CONSTRUCTION OPERATIONS IN COMPLIANCE WITH NFPA 241
    - B. MAKE VERTICAL ELEMENTS PLUMB AND HORIZONTAL ELEMENTS LEVEL UNLESS NOTED OTHERWISE.
    - C. MAKE NEAT TRANSITIONS BETWEEN DIFFERENT SURFACES, MAKE SEAMLESS TRANSITIONS WITH CONSISTENT TEXTURE
11. ALTERATIONS
    - A. DRAWINGS SHOWING EXISTING CONSTRUCTION ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING RECORD DOCUMENT ONLY.
      - a. VERIFY CONSTRUCTION IS AS INDICATED
      - b. REPORT DISCREPANCIES TO ARCHITECT
      - c. BEGINNING OF ALTERATION WORK CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS.
    - B. KEEP AREAS IN WHICH ALTERATIONS ARE BEING CONDUCTED SEPARATED FROM OTHER AREAS THAT ARE STILL OCCUPIED
    - C. MAINTAIN WEATHERPROOF EXTERIOR BUILDING ENVELOPE EXCEPT FOR INTERRUPTIONS REQUIRED FOR REPLACEMENT OR MODIFICATION, TAKE CARE TO PREVENT WATER AND HUMIDITY DAMAGE.
    - D. REMOVE EXISTING WORK AS INDICATED TO ACCOMPLISH NEW WORK.
    - E. PROTECT EXISTING WORK TO REMAIN
    - F. ADAPT EXISTING WORK TO FIT NEW WORK; MAKE AS NEAT AND SMOOTH A TRANSITION AS POSSIBLE.
    - G. REMOVE DEMOLITION DEBRIS AND ABANDONED ITEMS FROM ALTERATION AREA AND DISPOSE OF OFF-SITE
    - H. DO NOT BEGIN NEW CONSTRUCTION IN ALTERATIONS AREA UNTIL DEMOLITION IS COMPLETE.
12. CUTTING AND PATCHING
    - A. PERFORM WHATEVER CUTTING AND PATCHING IS NECESSARY TO; COMPLETE THE WORK, FIT PRODUCTS TOGETHER TO INTEGRATE WITH OTHER WORK, PROVIDE OPENINGS FOR MECHANICAL OR ELECTRICAL ITEMS, MATCH WORK THAT HAS CUT TO ADJACENT WORK, REPAIR AREAS ADJACENT TO CUTS TO REQUIRED CONDITION, REPAIR NEW WORK DAMAGED BY SUBSEQUENT WORK, REMOVE AND REPLACE DAMAGED AND NON-CONFIRMING WORK.
    - B. PATCHING: FINISH PATCHED SURFACES TO MATCH FINISH THAT EXISTING PRIOR TO PATCHING, MATCH COLOR, TEXTURE, AND APPEARANCE, REPAIR PATCHED SURFACES THAT ARE DAMAGED.
13. PROGRESS CLEANING: COORDINATE WITH OWNER FOR USE OF ROLL-OFF DUMPSTERS AND TO DETERMINE APPROPRIATE LANDFILL TO TRANSPORT WASTE.
14. PROTECTION OF INSTALLED WORK: PROTECT INSTALLED WORK FROM DAMAGE BY CONSTRUCTION OPERATIONS.
15. CORRECTION OF WORK: REPAIR OR REMOVE AND REPLACE DEFECTIVE CONSTRUCTION. RESTORE DAMAGED SUBSTRATES AND FINISHES. REPLACE DEFECTIVE PARTS.
16. SYSTEM START-UP: COORDINATE SCHEDULE FOR START-UP OF VARIOUS EQUIPMENT AND SYSTEMS WITH OWNER.
17. ADJUSTING: ADJUST OPERATING PRODUCTS AND EQUIPMENT TO ENSURE SMOOTH AND UNHINDERED OPERATION.
18. FINAL CLEANING: EXECUTE FINAL CLEANING PRIOR TO FINAL PROJECT ASSESSMENT.
19. MAINTENANCE: PROVIDE SERVICE AND MAINTENANCE OF COMPONENTS INDICATED IN SPECIFICATION SECTIONS.

SECTION 02 41 00 - DEMOLITION

1. REFERENCE STANDARDS: 29 CFR 1926 - US OCCUPATIONAL SAFETY AND HEALTH STANDARDS: CURRENT EDITION
2. SUBMITTALS
   - A. SEE SECTION 01 30 00 FOR SUBMITTAL PROCEDURES
   - B. PROJECT RECORD DOCUMENTS: ACCURATELY RECORD LOCATIONS OF CAPPED AND ACTIVE UTILITIES.
3. QUALITY ASSURANCE
   - A. CONFORM TO ALL APPLICABLE CODES FOR DEMOLITION.
   - B. CONFORM TO APPLICABLE CODES FOR PROCEDURES WHEN HAZARDOUS OR CONTAMINATED MATERIALS ARE DISCOVERED.
   - C. PERFORM WORK IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS.
4. SCOPE
   - A. REFER TO DRAWINGS
5. REMOVE OTHER ITEMS INDICATED FOR SALVAGE, RELOCATION, AND RECYLCING. COMPLY WITH APPLICABLE CODES AND REGULATIONS FOR DEMOLITION OPERATIONS AND SAFETY OF ADJACENT STRUCTURES AND THE PUBLIC
   - A. OBTAIN REQUIRED PERMITS
   - B. REVIEW THE NESHAP SURVEY PERFORMED BY OWNER AND SUBMIT A PLAN TO ADDRESS ALL HAZARDOUS MATERIAL REMOVAL AND DISPOSAL.
6. DO NOT BEGIN REMOVAL UNTIL RECEIPT OF NOTIFICATION TO PROCEED FROM OWNER
7. PROTECT EXISTING STRUCTURES AND OTHER ELEMENTS THAT ARE NOT TO BE REMOVED
8. HAZARDOUS MATERIALS: COMPLY WITH 29 CFR 1926 AND STATE AND LOCAL REGULATION
9. EXISTING UTILITIES
   - A. COORDINATE WORK WITH UTILTY COMPANIES; NOTIFY BEFORE STARTING WORK AND COMPLY WITH THEIR REQUIREMENTS, OBTAIN REQUIRED PERMITS.
10. SELECTIVE DEMOLITION FOR ALTERATIONS
    - A. DRAWINGS SHOWING EXISTING CONDITIONS ARE BASED ON CASUAL FIELD OBSERVATIONS AND EXISTING RECORD DOCUMENTS ONLY.
    - B. REMOVE EXISTING WORK AS INDICATED AND AS REQUIRED TO ACCOMPLISH NEW WORK
    - C. PROTECT EXISTING WORK TO REMAIN.
11. DEBRIS AND WASTE REMOVAL
    - A. REMOVE DEBRIS, JUNK, AND TRASH FROM SITE.
    - B. LEAVE SITE IN CLEAN CONDITION, READY FOR SUBSEQUENT WORK
    - C. CLEAN UP SPILLAGE AND WIND-BLOWN DEBRIS FROM PUBLIC AND PRIVATE LANDS.

SECTION 07 42 13 - WALL PANELS

1. GENERAL: SECTION INCLUDES STEEL FACE, POLYURETHANE (POLYISOCYANURATE) METAL WALL PANELS AND ASSOCIATED FASTENERS AND TRIM

2. SUBMITTALS:
   - A. PRODUCT DATA: SUBMIT MANUFACTURER CURRENT TECHNICAL LITERATURE FOR EACH TYPE OF PRODUCT
   - B. SHOP DRAWINGS: SUBMIT DETAILED DRAWING AND PANEL ANALYSIS SHOWING:
     - a. PROFILE
     - b. GAUGE OF BOTH EXTERIOR AND INTEROOR SHEET
     - c. LOCATION, LAYOUT, AND DIMENSIONS OF PANELS
     - d. SHAPE AND METHOD OF ATTACHMENT OF ALL TRIM
     - e. LOCATIONS AND TYPE OF SEALANTS
     - f. OTHER DETAILS AS MAY BE REQUIRED FOR A WEATHERTIGHT INSTALLATION
3. PRODUCTS - BASIS OF DESIGN
   - A. MANUFACTURER:KINGSPAN
   - B. PRODUCT: 200 SERIES INVERTED RIB
   - C. WIDTH: 42"
   - D. THICKNESS: VARIES PER DRAWINGS
   - E. APPLICATION: VERTICAL EXTERIOR ENCLOSURE
   - F. EMBOSSING: MATCH ADJACENT EXISTING IMP FINISH
4. ACCESSORIES
   - A. UTILIZE MANUFACTURER RECOMMENDED/PROVIDED FASTENERS, SEALANTS, AND SYSTEM TRIM COMPONENTS
5. EXECUTION
   - A. VERIFY THAT PROJECT CONDITIONS ARE APPROPRIATE FOR WORK IN THIS SECTION.

SECTION 07 90 00 - JOINT PROTECTION

1. GENERAL: SECTION COVERS SEALANT PRODUCTS FOR INCIDENTAL CONDITIONS THAT DO NOT INCLUDE TYPICAL IMP AND ROOFING PANEL INSTALLATION

2. SUBMITTALS
   - A. PRODUCT DATA: PROVIDE COMPLETE LIST OF PRODUCTS TO BE USED INCLUDING MANUFACTURER'S NAME, PRODUCT NAME, AND PRODUCT CATEGORY
   - B. MANUFACTURER INSTRUCTIONS AND MAINTENANCE DATA
3. SEALANTS
   - A. NON-STAINING SILICONE SEALANT: ASTM C920, GRADE NS, USES M AND A; NOT EXPECTED TO WITHSTAND CONTINUOUS WATER IMMERSION OR TRAFFIC.
     - a. MOVEMENT CAPABILITY: PLUS AND MINUS 50 PERCENT, MINIMUM.
     - b. NON-STAINING TO POROUS STONE: NON-STAINING TO LIGHT-COLORED NATURAL STONE WHEN TESTED INACCORDANCE WITH ASTM C1248.3. DIRT PICK-UP: REDUCED DIRT PICK-UP COMPARED TO OTHER SILICONE SEALANTS.
     - c. COLOR: MATCH ADJACENT FINISHED SURFACES

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES AND HARDWARE

1. GENERAL: SECTION COVERS HOLLOW METAL DOORS AND FRAMES
2. REFERENCES:
   - A. HMMA - HOLLOW METAL MANUFACTURERS ASSOCIATION
   - B. NAAMM - NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
   - C. SDI - STEEL DOOR INSTITUTE
   - D. UL - UNDERWRITERS LABORATORY
3. SUBMITTALS
   - A. PRODUCT DATA: MATERIAL AND DETAILS OF DESIGN AND CONSTRUCTION, HARDWARE LOCATIONS, ANCHORAGE AND FASTENING METHODS, FINISHES
   - B. SHOP DRAWINGS: DETAIL OF OPENING, ELEVATION, FRAME PROFILE, AND INDICATED FINISH REQUIREMENTS
   - C. INSTALLATION INSTRUCTIONS
4. PRODUCTS: BASIS OF DESIGN HOLLOW METAL DOOR AND FRAME MANUFACTURER: CECO DOOR
5. HOLLOW METAL DOORS
   - A. BASIS OF DESIGN: LEGION POLYSTYRENE CORE FLUSH PANEL STEEL DOORS
   - B. EXTERIOR DOOR; THERMALLY INSULATED (BASED ON SDI STANDARDS)
     - a. LEVEL 2 - HEAVY-DUTY
     - b. PHYSICAL ENDURANCE LEVEL A, 1,000,000 CYCLES, IN ACCORDANCE W/ ANSI/SDI A250.4
     - c. FACE PANEL: FULL FLUSH
     - d. DOOR FACE METAL THICKNESS - 18 GA
     - e. DOOR CORE MATERIAL: POLYSTYRENE
     - f. DOOR THICKNESS: 1 3/4 NOMINAL
     - g. DOOR FACE SHEET: FLUSH, G90, GALVANIZED STEEL
6. HOLLOW METAL FRAMES:CONFORM TO SDI GUIDE SPEC, ANSI 250.8
   - A. BASIS OF DESIGN PRODUCT: SU SERIES
   - B. MATERIALS
     - a. DUTY LEVEL: HEAVY DUTY, 16GA, G90
     - b. PHYSICAL ENDURANCE LEVEL: LEVEL A (1,000,000 CYCLES) PER ANSI 250.4
     - c. STEEL: HOT-DIPPED GALVANIZED CONFORMING TO ASTM A924 AND A653
     - d. FRAME TYPE: WELDED
     - e. PROFILE: DOUBLE RABBET
     - f. FRAME DIMENSIONS: REFER TO DRAWINGS
     - g. HANDING: REFER TO DRAWINGS
     - h. FINISH: SHOP PRIMED, PREPPED FOR FIELD PAINT
7. HARDWARE SCHEDULE: REFER TO DRAWINGS
8. EXECUTION
   - A. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK
   - B. VERIFY OPENING SIZES AND TOLERANCES ARE ACCEPTABLE
   - C. INSTALL DOOR AND FRAME IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
   - D. INSTALL DOOR AND FRAME PLUMB AND LEVEL, MAX. DIAGONAL DISTORTION OF 1/16", CORNER TO CORNER
   - E. ADJUST FOR SMOOTH AND BALANCED DOOR MOVEMENT
   - F. INCLUDE CLOSER REINFORCEMENT WHERE NOTED ON DOOR SCHEDULE

SECTION 08 36 13 - OVERHEAD SECTIONAL DOORS

1. GENERAL: SECTION INCLUDES OVERHEAD SECTIONAL STEEL DOOR SYSTEMS

2. SUBMITTALS:
   - A. PRODUCT DATA: SUBMIT MANUFACTURER CURRENT TECHNICAL LITERATURE FOR EACH TYPE OF PRODUCT
   - B. SHOP DRAWINGS: SUBMIT DETAILED DRAWINGS SHOWING
     - a. PANEL OPTIONS
     - b. DOOR PANEL DETAILS
     - c. INSTALLATION GUIDES
3. PRODUCTS - BASIS OF DESIGN DOORS PROVIDED BY OVERHEAD DOOR CORPORATION
   - A. BASIS OF DESIGN PRODUCT: MODEL 592
   - B. WIND LOADS: DESIGN AND SIZE COMPONENTS TO WITHSTAND LOADS CAUSE BY PRESSURE AND SUCTION FORCE
     - a. DESIGN PRESSURE (ASTM E330): 26.5 LBS/SF
     - b. ULTIMATE PRESSURE: 44 LBS/SF
   - C. ELECTRIC OPERATOR: MODEL RSX (EXISTING UNIT AT MAINTENANCE SHOP MAY BE SALVAGED)
     - a. OPERATOR MOUNTING STYLE: TROLLEY-TYPE
   - D. LIFT TRACK: STANDARD
   - E. NOMINAL THICKNESS: 2"
   - F. JAMB WEATHERSEALS

SECTION 09 90 00 - PAINTING

1. GENERAL: SECTION INCLUDES SURFACE PREP AND FIELD APPLICATION OF PAINT
2. REFERENCES:
   - A. MPI: MASTER PAINTER INSTITUTE
   - B. ASTM D16
3. SUBMITTALS
   - A. PRODUCT DATA: PROVIDE COMPLETE LIST OF PRODUCTS TO BE USED INCLUDING MANUFACTURER'S NAME, PRODUCT NAME, AND PRODUCT CATEGORY
   - B. SAMPLES: PROVIDE 2 DRAW DOWN SAMPLES, 8.5" X 11" ILLUSTRATING SPECIFIED COLOR
   - C. MANUFACTURER INSTRUCTIONS AND MAINTENANCE DATA
   - D. MAINTENANCE MATERIALS: 1 GALLON OF SPECIFIED COLOR, FROM SAME PRODUCT RUN
4. MANUFACTURER:
   - A. PROVIDE PAINTS AND FINISHED USED IN ANY INDIVIDUAL SYSTEM FROM THE SAME MANUFACTURER
   - B. BASIS OF DESIGN MANUFACTURER: SHERWIN WILLIAMS
5. PAINT - GENERAL
   - A. PAINT: READY MIXED
   - B. FLAMMABILITY: COMPLY WITH APPLICABLE CODE FOR SURFACE BURNING CHARACTERISTICS
   - C. SHEEN: SEMI-GLOSS
   - D. COLOR: TO MATCH PAINT COLOR ON ADJACENT CONSTRUCTION, COORDINATE WITH OWNER TO VERIFY EXISTING PAINT.
6. PAINT SYSTEMS
   - A. HM DOOR AND FRAME:
     - a. TWO TOP COATS AND ONE COAT PRIMER
     - b. TOP COAT: INTERIOR EPOXY-MODIFIED LATER; MPI #115 OR 215
     - c. PRODUCT: SHERWIN WILLIAMS WATER BASED CATALYZED EPOXY SEMI-GLOSS
   - B. SECOND FLOOR SHEATHING
     - a. ONE TOP COAT AND ONE COAT PRIMER
     - b. PRIMER BASIS OF DESIGN: SHERWIN WILLIAMS ARMORSEAL 1000 HS EPOXY
     - c. TOP COAT BASIS OF DESIGN: SHERWIN WILLIAMS ARMORSEAL 1000 HS EPOXY WITH H&C SHARKGRIP SLIP RESISTANT ADDITIVE
7. EXECUTION
   - A. PREP SURFACES TO RECIEVE PAINT PER MANUFACTURER'S INSTRUCTIONS
   - B. APPLICATION PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN 'MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL'
   - C. CLEAN WASTE THAT COULD CONSTITUTE A FIRE HAZARD
   - D. PROTECT FINISHES UNTIL COMPLETION OF PROJECT. TOUCH UP DAMAGED FINISHES

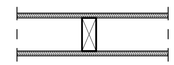
SECTION 11 13 00 - LOADING DOCK EQUIPMENT

1. GENERAL: SECTION INCLUDES SAFETY GATE FOR SECOND FLOOR LOADING AREA
2. SUBMITTALS
   - A. PRODUCT DATA: MATERIAL AND DETAILS OF DESIGN AND CONSTRUCTION, HARDWARE LOCATIONS, ANCHORAGE AND FASTENING METHODS, FINISH
   - B. INSTALLATION INSTRUCTION
3. PRODUCTS:
   - A. MANUFACTURER: PS SAFETY ACCESS
   - B. PRODUCT: EDGESAFE LOADING DOCK SAFETY GATE (LDSG-144-PCY)
   - C. WIDTH: UP TO 12'-0"

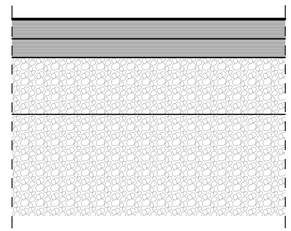
ASSEMBLIES

A1 **INSULATED METAL PANEL WALL**
2" INSULATED METAL PANEL
GIRT PER STRUCTURAL

NOTE: ALL ASPECTS OF PANEL INSTALLATION TO BE PERFORMED PER MANUFACTURER'S RECOMMENDATIONS

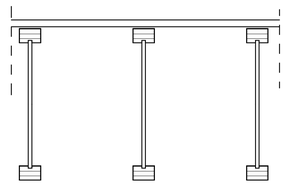


B1 **INTERIOR PARTITION WALL**
1/2" CDX PLYWOOD
2X4 WOOD FRAMING
1/2" CDX PLYWOOD



F1 **PAVING SECTION**
ASPHALT SEALER (TYPE TBD)
2" ASPHALT CONCRETE (CLASS E)
2" LEVELING COURSE
6" TYP IIA FILL
18" TYPE II FILL

NOTE: FINAL ASSEMBLY TO BE CONFIRMED WITH CIVIL ENGINEER



F2 **SECOND I LEVEL FLOOR**
FINISH AS SPECIFIED
SHEATHING PER STRUCTURAL
JOISTS PER STRUCTURAL

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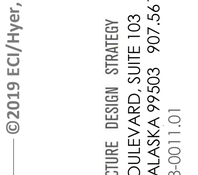
PROJECT NO.18-0011.01

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS



SPECIFICATIONS AND ASSEMBLIES

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REVISION:
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A1.0.2

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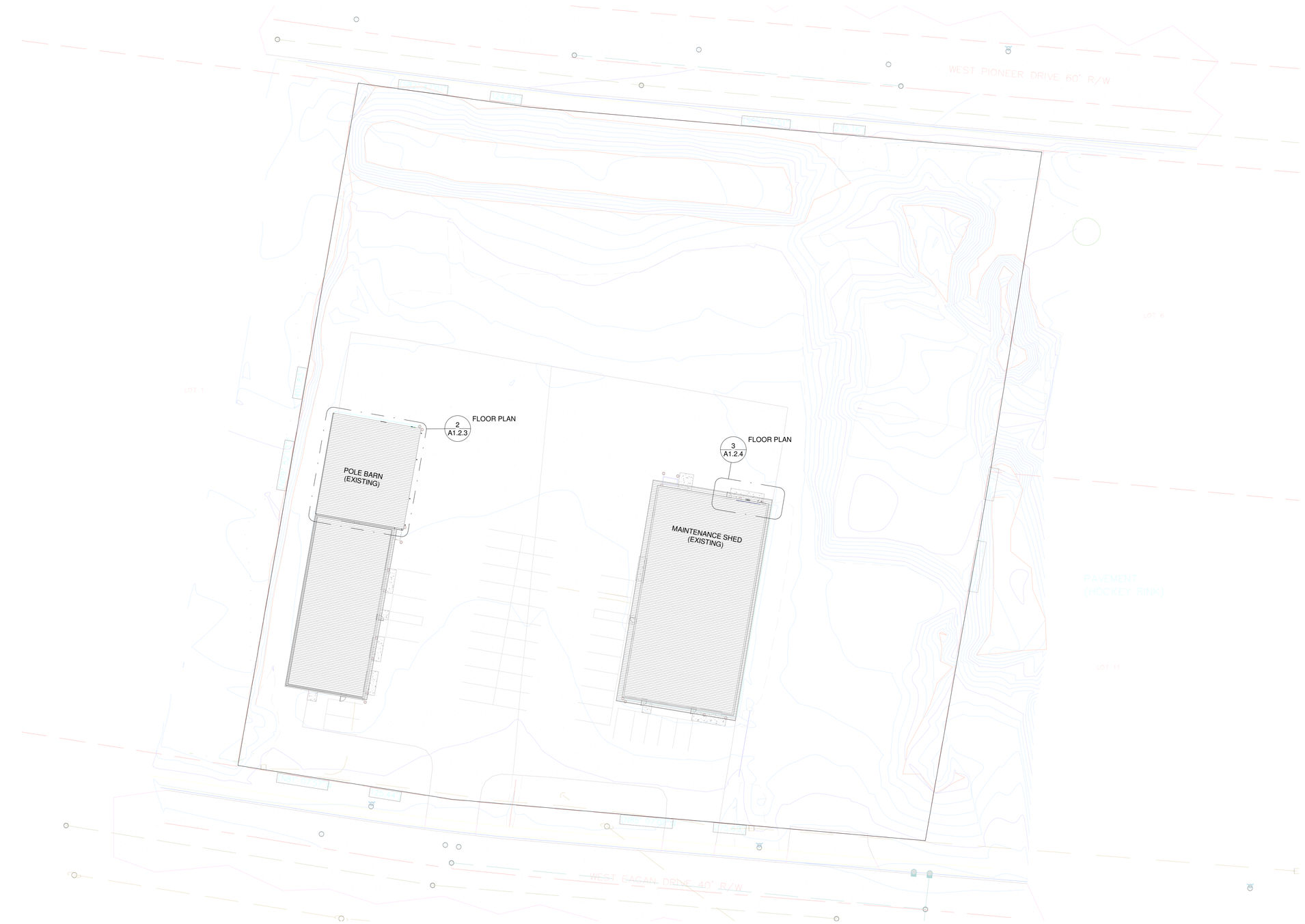

1 SITE PLAN
1" = 30'-0"

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

ECI ARCHITECTURE DESIGN STRATEGY
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PROJECT NO.18-0011.01

STATE OF ALASKA
49TH
JASON W. SWIFT
A-12332
6.11.2019

SITE PLAN

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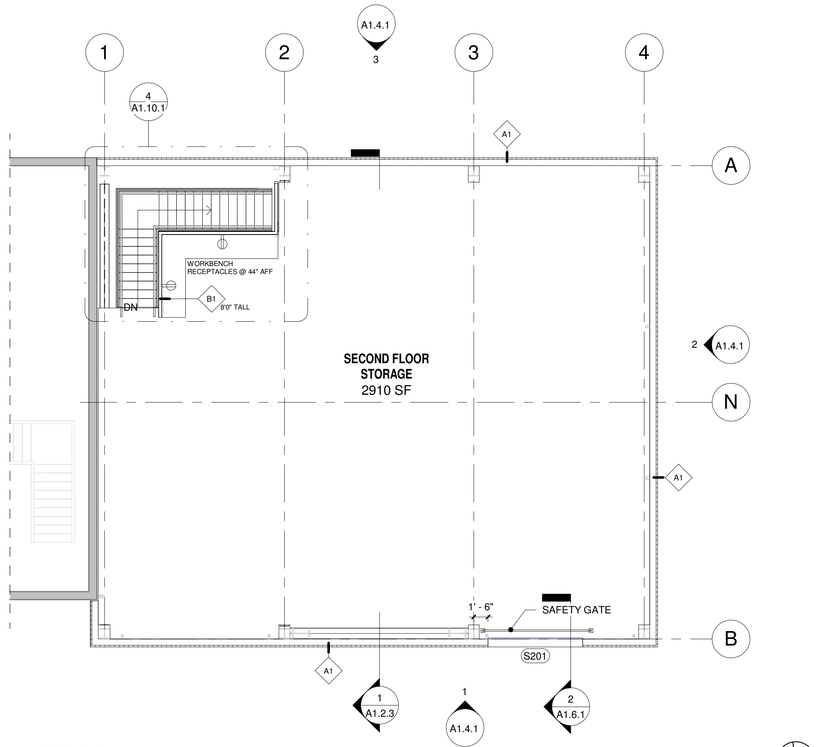
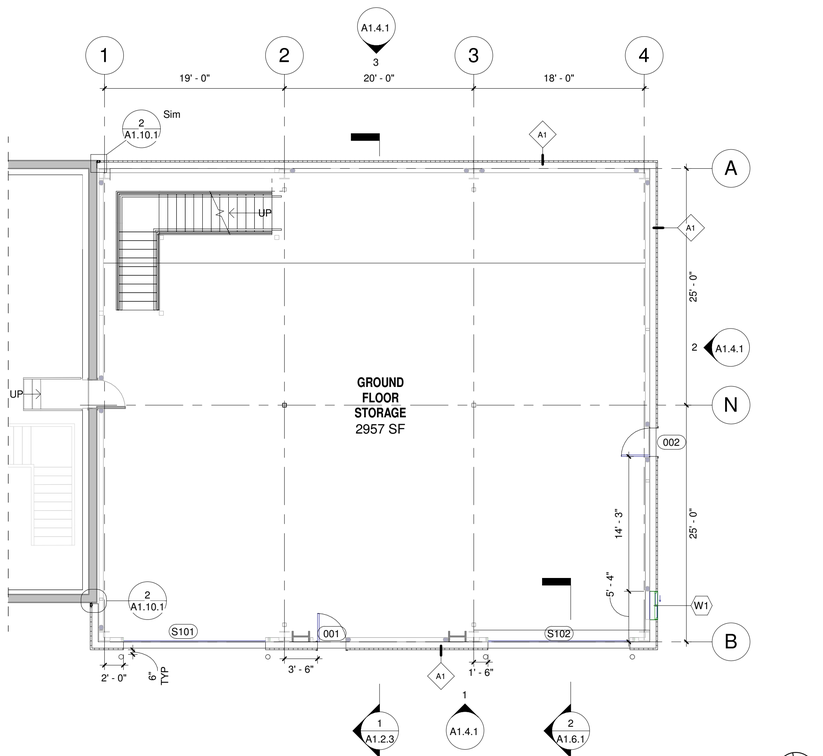
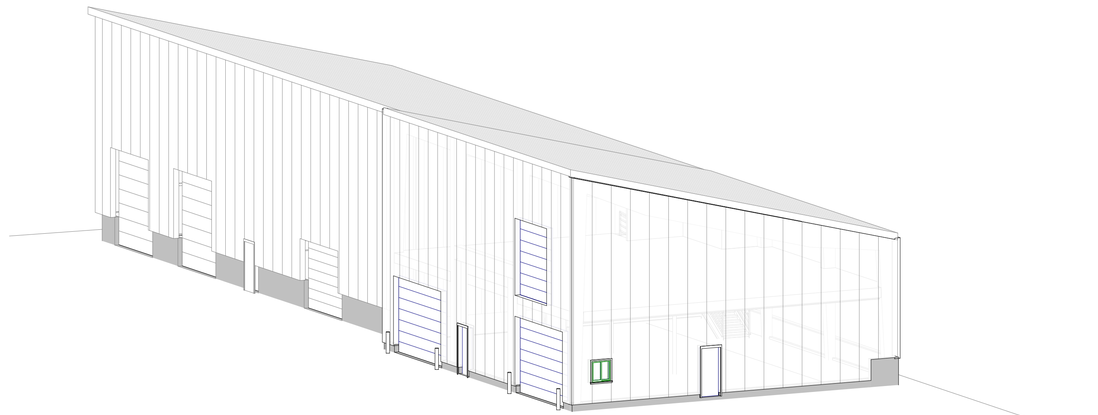


4 MEZZANINE
1/8" = 1'-0"

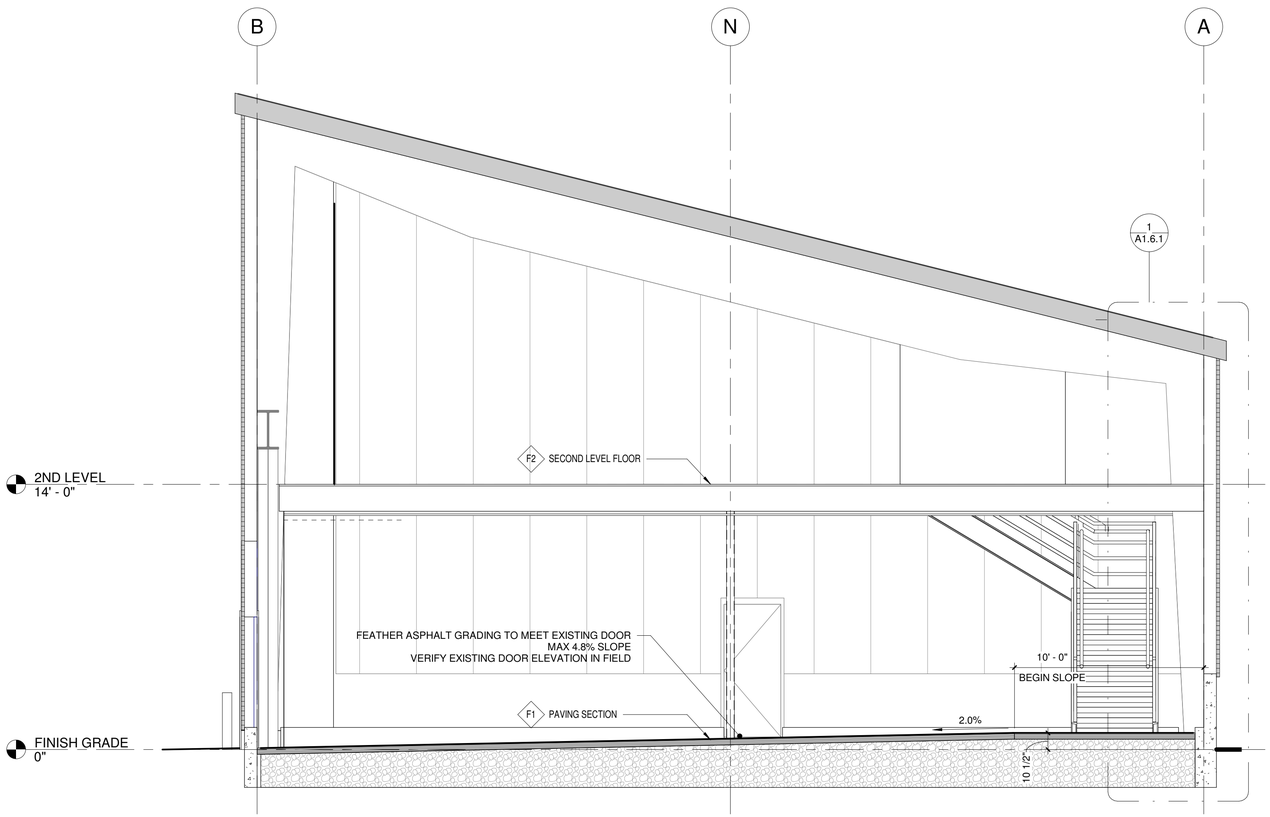


2 POLE BARN FLOOR PLAN
1/8" = 1'-0"



- 3D VIEW FOR REFERENCE ONLY -

3 AXONOMETRIC VIEW - POLE BARN



1 POLE BARN SECTION
1/4" = 1'-0"

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CONSTRUCTION DOCUMENTS

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49TH
JASON W. SWIFT
A-12332
6.11.2019

POLE BARN - PLANS AND SECTION

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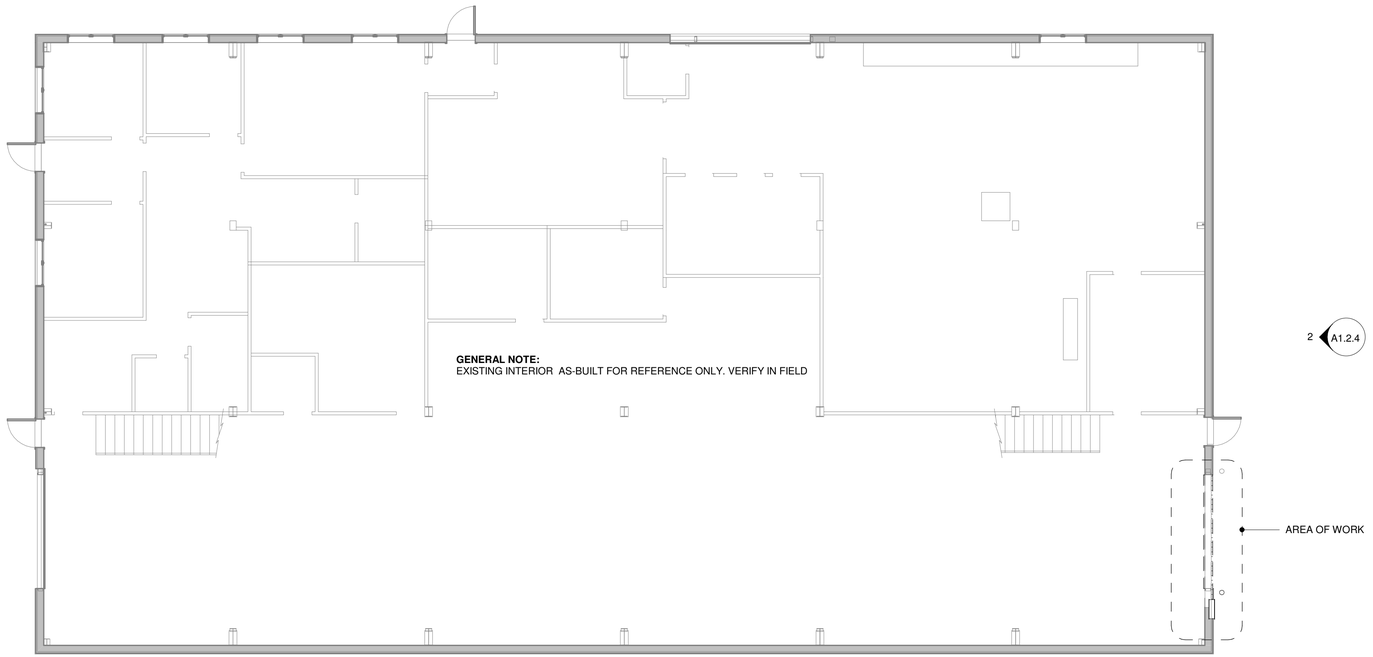
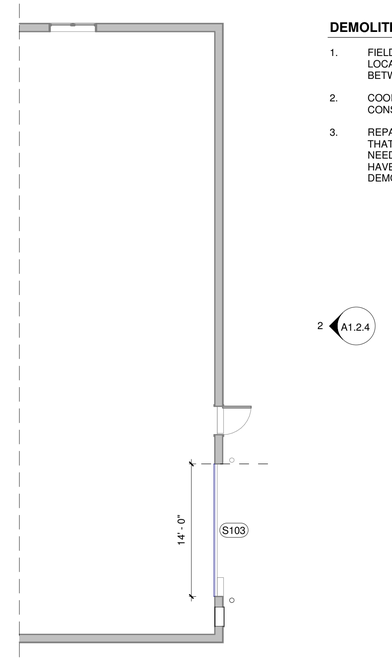


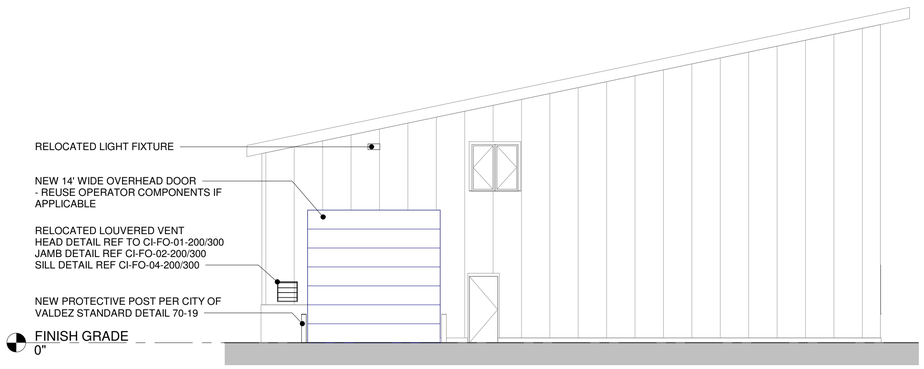
4 SHOP PLAN - DEMOLITION
1/8" = 1'-0"



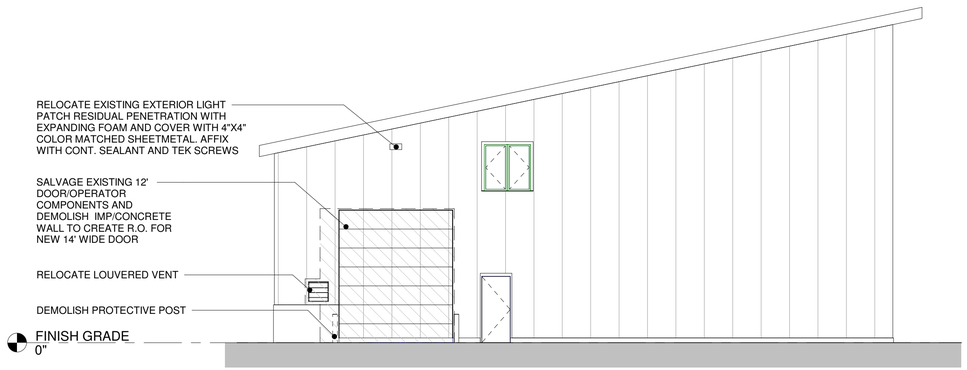
3 SHOP PLAN - NEW CONSTRUCTION
1/8" = 1'-0"

DEMOLITION GENERAL NOTES

1. FIELD VERIFY ALL DIMENSIONS AND EQUIPMENT LOCATIONS. NOTIFY ARCHITECT OF DISCREPANCIES BETWEEN THE DOCUMENTS AND FIELD CONDITIONS
2. COORDINATE DEMOLITION WORK WITH NEW CONSTRUCTION
3. REPAIR DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED, REPAIR, PATCH, AND PAINT AS NEEDED. SURFACES WHICH ARE TO REMAIN BUT HAVE BECOME SOILED OR DAMAGED BY DEMOLITION WORK, TO LIKE NEW CONDITION



2 MAINTENANCE SHOP - NORTH ELEVATION
1/8" = 1'-0"



MAINTENANCE SHOP - NORTH ELEVATION
1 EXISTING/DEMOLITION
1/8" = 1'-0"

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CITY OF VALDEZ
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CONSTRUCTION DOCUMENTS

STATE OF ALASKA 49TH
JASON W. SWIFT
A-12932
6.11.2019

SHOP BUILDING - PLANS AND ELEVATIONS

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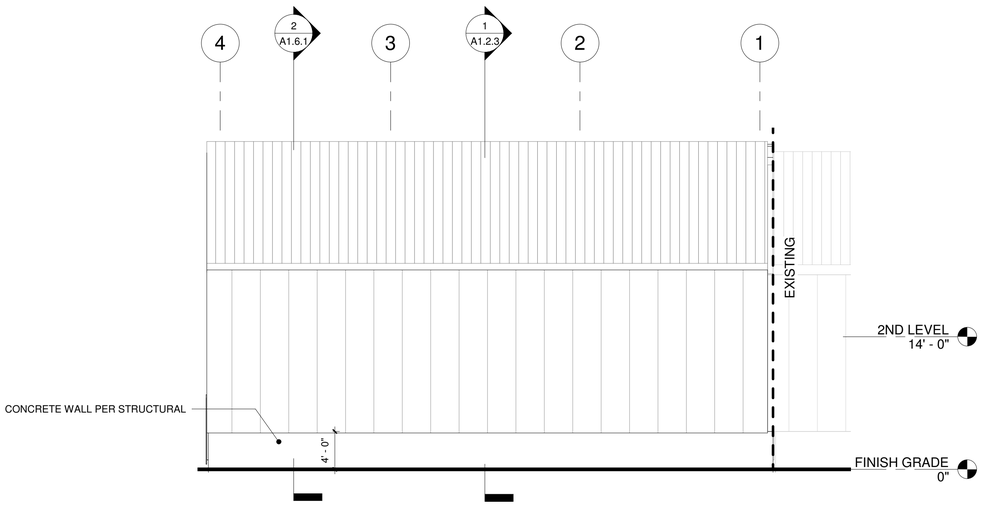
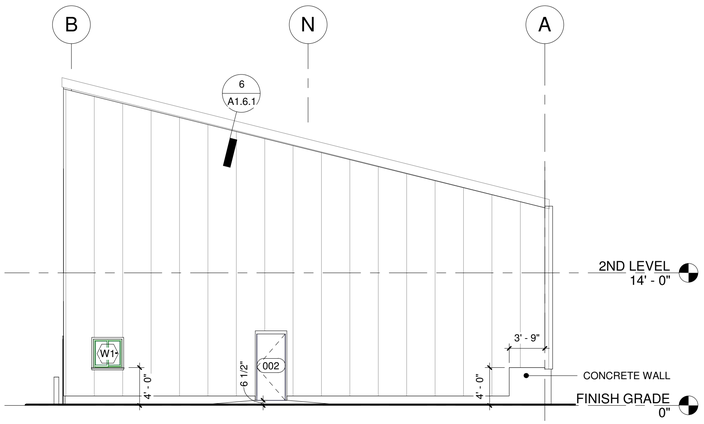
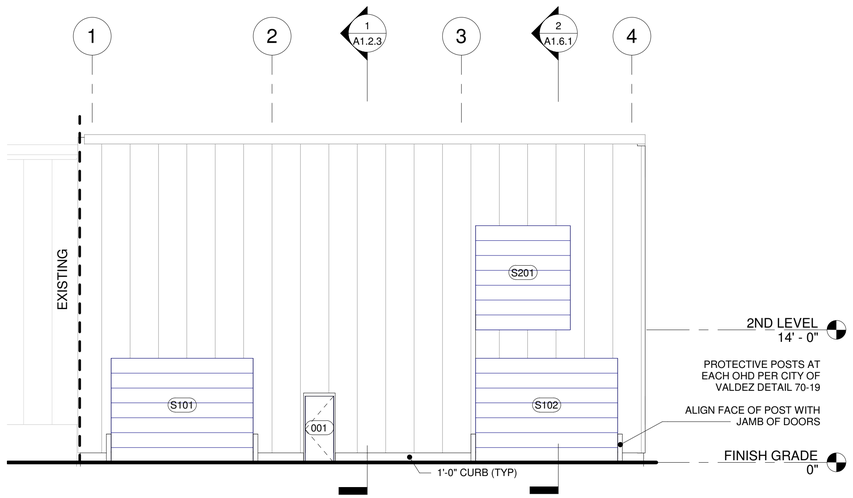


3 WEST ELEVATION
1/8" = 1'-0"



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



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

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CITY OF VALDEZ
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CONSTRUCTION DOCUMENTS

POLE BARN EXTERIOR ELEVATIONS

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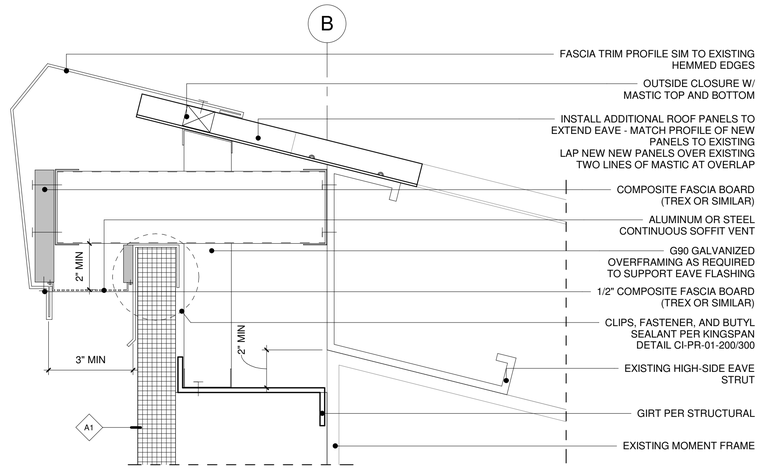
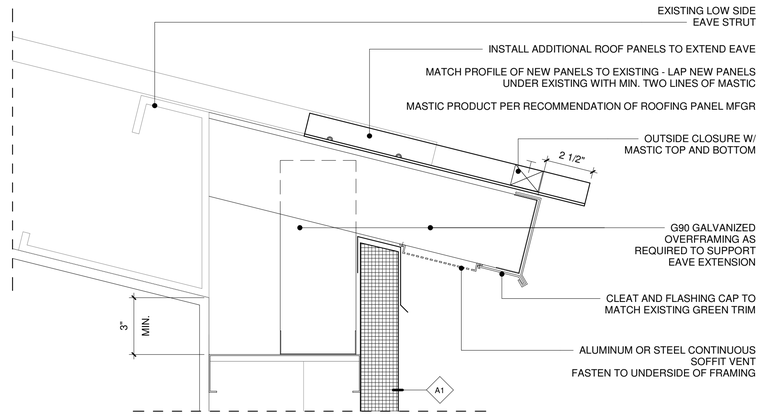
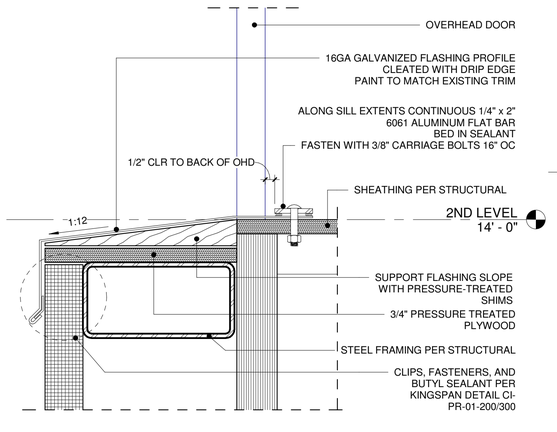


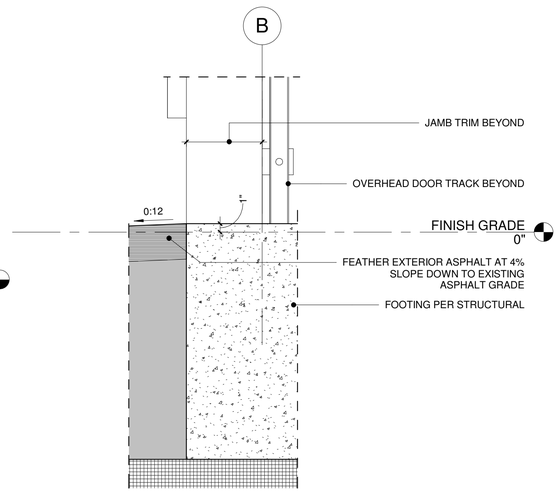
7 HIGH-SIDE EAVE - SECTION DETAIL
3" = 1'-0"



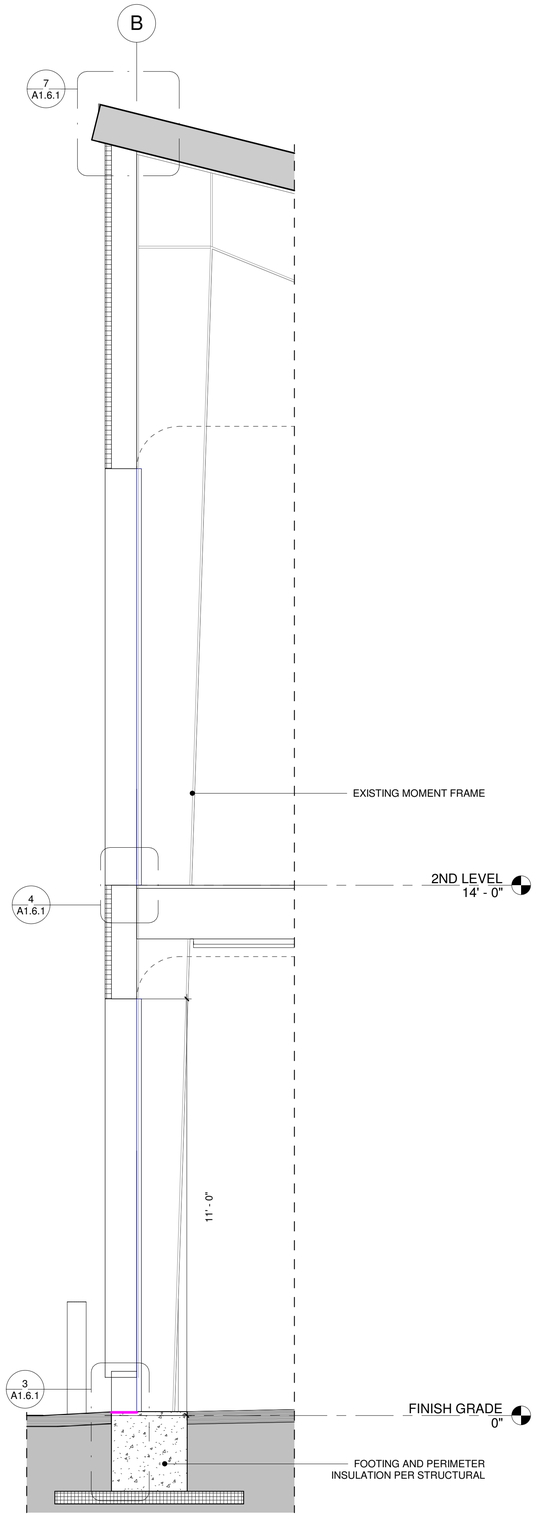
5 LOW-SIDE EAVE - SECTION DETAIL
3" = 1'-0"



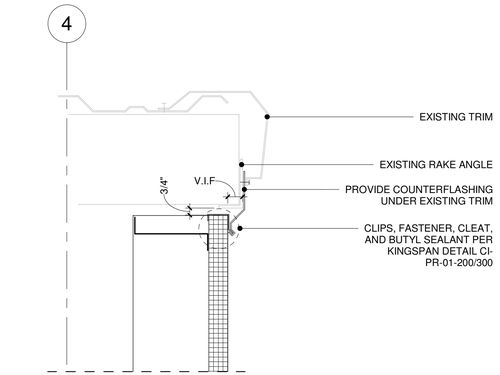
4 SILL DETAIL - LEVEL 2 OHD
3" = 1'-0"



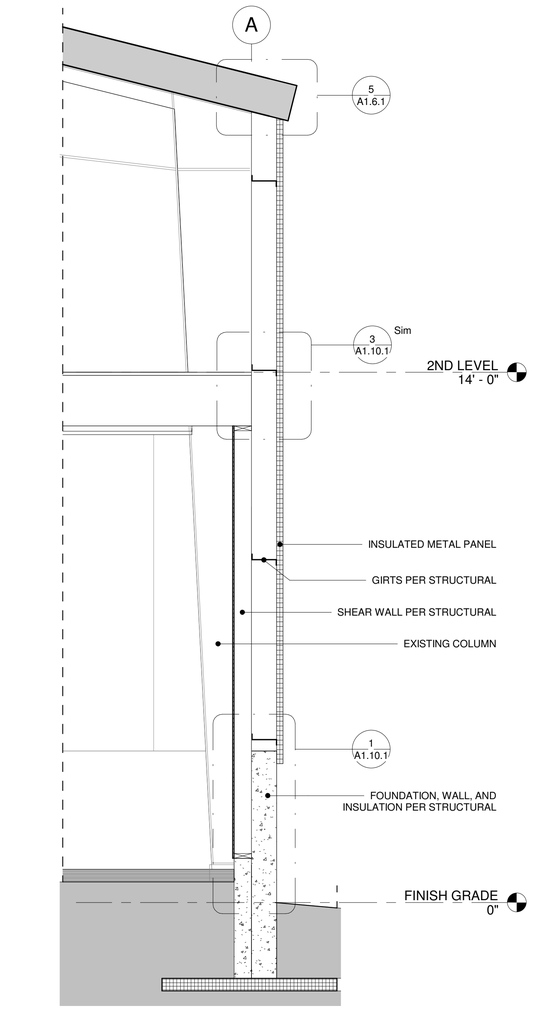
3 TYP OVERHEAD DOOR SILL
1 1/2" = 1'-0"



2 OHD SECTION
1/2" = 1'-0"



6 TYPICAL RAKE - SECTION DETAIL
1 1/2" = 1'-0"



1 POLE BARN SECTION - WEST WALL
1/2" = 1'-0"

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

ECI ARCHITECTURE DESIGN STRATEGY
3909 ARCTIC BOULEVARD, SUITE 103
ANCHORAGE, ALASKA 99503 907.561.5543

PROJECT NO.18-0011.01

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
JASON W. SWIFT
A-12932
6.11.2019

WALL SECTIONS AND DETAILS

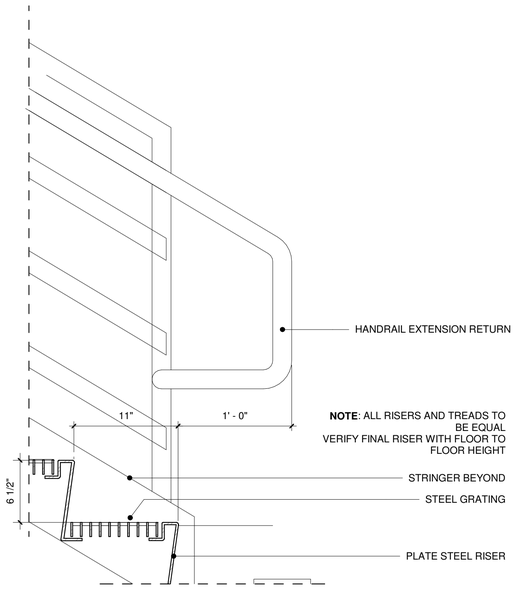
AUTHOR: JDB CHECKED:
REVISION:
ISSUE DATE: JUNE 11, 2019
OWNER PROJECT NO: -

A1.6.1

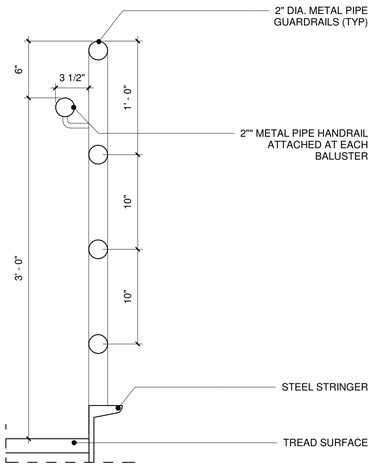
FULL SIZE PRINTED ON 22 x 34

WINDOW SCHEDULE			
Mark	Width	Height	Comments
W1	3' - 0"	3' - 0"	BASIS-OF-DESIGN: WAUSAU 410I-HS SERIES SINGLE SLIDE - COLOR/FINISH TBD - REFERENCE KINGSPAN DETAILS "CI-FO-01-200/300" AND "CI-FO-03-200/300" AND "CI-FO-04-200/300" FOR HEAD, JAMB, AND SILL CONDITIONS

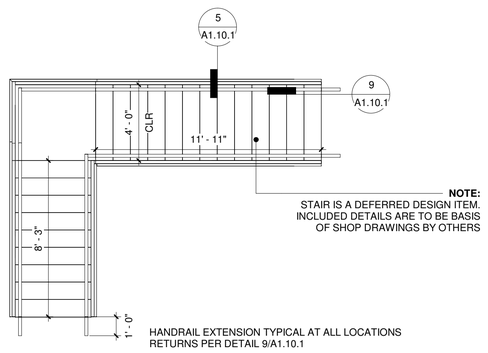
DOOR SCHEDULE					
Mark	Width	Height	Door Finish	Hardware Group	Comments
001	3' - 0"	7' - 0"	PT TO MATCH EXISTING DOORS ONSITE	TBD - COORDINATE WITH OWNER	REFERENCE KINGSPAN DETAIL"CI-FO-01-200/300" AND "CI-FO-03-200/300" FOR JAMB AND HEAD CONDITIONS
002	3' - 0"	7' - 0"	PT TO MATCH EXISTING DOORS ONSITE	TBD - COORDINATE WITH OWNER	REFERENCE KINGSPAN DETAIL"CI-FO-01-200/300" AND "CI-FO-03-200/300" FOR JAMB AND HEAD CONDITIONS
S101	15' - 0"	11' - 0"	OVERHEAD DOOR MFGR FINISH - WHITE		REFERENCE KINGSPAN DETAIL "CI-FO-06-200/300" AND "CI-FO-07-200/300" FOR HEAD AND JAMB - INCLUDE JAMB AND HEADER TRIM
S102	15' - 0"	11' - 0"	OVERHEAD DOOR MFGR FINISH - WHITE		REFERENCE KINGSPAN DETAIL "CI-FO-06-200/300" AND "CI-FO-07-200/300" FOR HEAD AND JAMB - INCLUDE JAMB AND HEADER TRIM
S103	14' - 0"	14' - 0"	OVERHEAD DOOR MFGR FINISH - WHITE		REFERENCE KINGSPAN DETAIL "CI-FO-06-200/300" AND "CI-FO-07-200/300" FOR HEAD AND JAMB - INCLUDE JAMB AND HEADER TRIM
S201	10' - 0"	11' - 0"	OVERHEAD DOOR MFGR FINISH - WHITE		REFERENCE KINGSPAN DETAIL "CI-FO-06-200/300" AND "CI-FO-07-200/300" FOR HEAD AND JAMB - INCLUDE JAMB AND HEADER TRIM



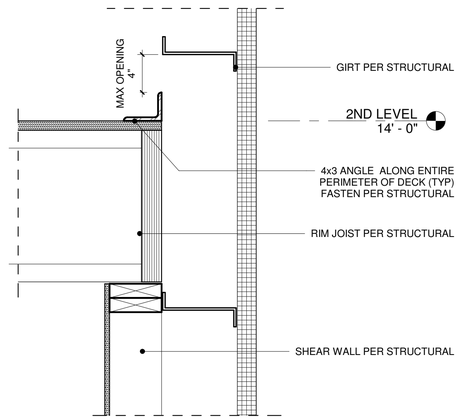
9 STAIR TREAD AND RISER DETAIL
1 1/2" = 1'-0"



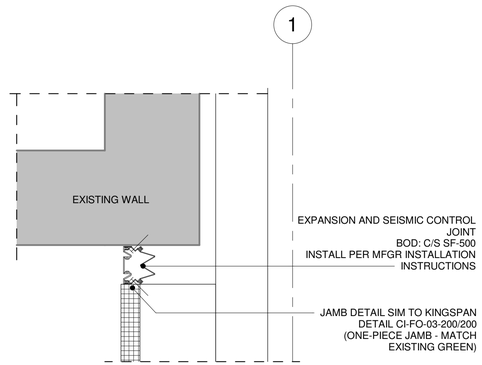
5 STAIR RAIL DETAIL
1 1/2" = 1'-0"



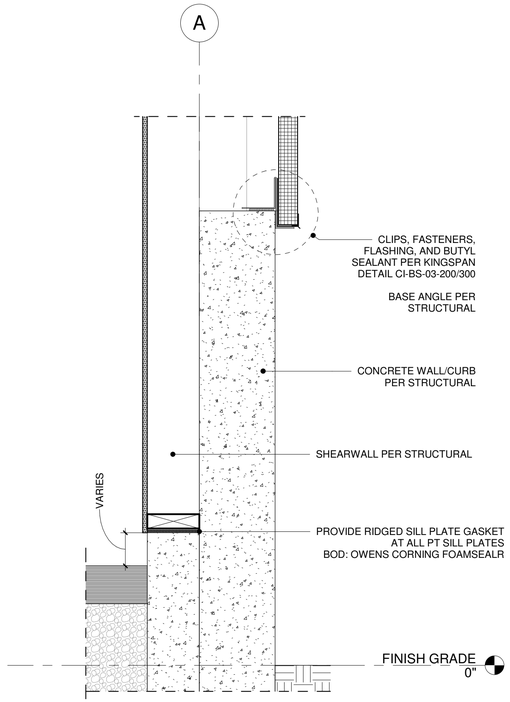
4 ENLARGED PLAN - STAIR
1/4" = 1'-0"



3 TYPICAL DECK EDGE - SECTION DETAIL
1 1/2" = 1'-0"



2 SEISMIC JOINT - PLAN DETAIL
1 1/2" = 1'-0"



1 CONCRETE TO IMP TRANSITION - SECTION DTL
1 1/2" = 1'-0"

ECI ARCHITECTURE DESIGN STRATEGY
3909 ARCTIC BOULEVARD, SUITE 103
ANCHORAGE, ALASKA 99503 907.561.5543

PROJECT NO.18-0011.01

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA 49TH
JASON W. SWIFT
A-12932
6.11.2019

DETAILS AND SCHEDULES

AUTHOR: JDB CHECKED: JWS
REVISION:
ISSUE DATE: JUNE 11, 2019
OWNER PROJECT NO: -

A1.10.1

FULL SIZE PRINTED ON 22 x 34

STRUCTURAL - GENERAL NOTES

GENERAL REQUIREMENTS

GOVERNING CODE: The design and construction of this project is governed by the **"International Building Code (IBC)", 2012 Edition**, hereafter referred to as the IBC, as adopted and modified by the City of **Valdez, AK** understood to be the Authority Having Jurisdiction (AHJ).

REFERENCE STANDARDS: Refer to Chapter 35 of 2012 IBC. Where other Standards are noted in the drawings, use the latest edition of the standard unless a specific date is indicated. Reference to a specific section in a code does not relieve the contractor from compliance with the entire standard.

DEFINITIONS: The following definitions cover the meanings of certain terms used in these notes:

"**Architect/Engineer**" – The Architect of Record and the Structural Engineer of Record.

- "**Structural Engineer of Record" (SER)** – The structural engineer who is licensed to stamp & sign the structural documents for the project. The SER is responsible for the design of the Primary Structural System.
- "**Submit for review**" - Submit to the Architect/Engineer for review prior to fabrication or construction.
- "**Per Plan**" – Indicates references to the structural plans, elevations and structural general notes.

OTHER DRAWINGS: Refer to the architectural, mechanical, electrical, civil and plumbing drawings for additional information including but not limited to: dimensions, elevations, slopes, door and window openings, non-bearing walls, stairs, finishes, drains, waterproofing, railings, mechanical unit locations, and other nonstructural items.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work. Use entire detail sheets and specific details referenced in the plans as "typical" wherever they apply. Similarly, use details on entire sheets with "typical" in the name wherever they apply.

STRUCTURAL RESPONSIBILITIES: The structural engineer (SER) is responsible for the strength and stability of the primary structure in its completed form.

COORDINATION: The Contractor is responsible for coordinating details and accuracy of the work; for confirming and correlating all quantities and dimensions; for selecting fabrication processes; for techniques of assembly; and for performing work in a safe and secure manner.

MEANS, METHODS and SAFETY REQUIREMENTS: The contractor is responsible for the means and methods of construction and all job related safety standards such as OSHA and DOSH (Department of Occupational Safety and Health). The contractor is responsible for means and methods of construction related to the intermediate structural conditions (i.e. movement of the structure due to moisture and thermal effects; construction sequence; temporary bracing, etc).

TEMPORARY SHORING, BRACING: The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is complete. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads as noted in DESIGN CRITERIA & LOADS below or the capacity of partially completed construction as determined by the Contractor's SSE for Bracing/Shoring.

CHANGES IN LOADING: The contractor has the responsibility to notify the SER of any architectural, mechanical, electrical, or plumbing load imposed onto the structure that differs from, or that is not documented on the original Contract Documents (architectural / structural / mechanical / electrical or plumbing drawings). Provide documentation of location, load, size and anchorage of all undocumented loads in excess of 400 pounds. Provide marked-up structural plan indicating locations of any new equipment or loads. Submit plans to the Architect/Engineer for review prior to installation.

NOTE PRIORITIES: Plan and detail notes and specific loading data provided on individual plans and detail drawings supplements information in the Structural General Notes.

DISCREPANCIES: In case of discrepancies between the General Notes, Specifications, Plans/Details or Reference Standards, the Architect/Engineer shall determine which shall govern. Discrepancies shall be brought to the attention of the Architect/Engineer before proceeding with the work. Should any discrepancy be found in the Contract Documents, the Contractor will be deemed to have included in the price the most expensive way of completing the work, unless prior to the submission of the price, the Contractor asks for a decision from the Architect as to which shall govern. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site. Conflicts between the drawings and actual site conditions shall be brought to the attention of the Architect/Engineer before proceeding with the work.

ADJACENT UTILITIES: The contractor shall determine the location of all adjacent underground utilities prior to earthwork, foundations, shoring, and excavation. Any utility information shown on the drawings and details is approximate and not necessarily complete.

ALTERNATES: Alternate products of similar strength, nature and form for specified items may be submitted with adequate technical documentation (proper test report, etc.) to the Architect/Engineer for review. Alternate materials that are submitted without adequate technical documentation or that significantly deviate from the design intent of materials specified may be returned without review. Alternates that require substantial effort to review will not be reviewed unless authorized by the Owner.

DESIGN CRITERIA AND LOADS

OCCUPANCY:	Risk Category of Building per 2012 IBC Table 1604.5 =	II

WIND DESIGN:	MAIN WIND FORCE RESISTING SYSTEM	
	Ultimate Design Wind Speed, V_{ULT} (MPH)	138
	Exposure Category	C
	Internal Pressure Coefficient Cpi =	+/- 0.18
	Topographic Factor Kzt =	1.0
	Wind Analysis procedure used:	Directional

MEZZANINE SEISMIC DESIGN:	Seismic Design Category: SDC =	D
	Basic Structural System	Bearing Wall
	Seismic Force Resisting System	Shear Walls
	Response Modification Factor: R =	6.5
	System Over strength Factor Omega =	3
	Deflection Amplification Factor Cd =	4
	Site Classification per IBC 1613.3.2 & ASCE 7-10, Ch. 20 **Site Class =**	D
	Seismic Importance Factor per ASCE 7-10 Table 1.5-2 Ie =	1.0
	Spectral Response Acceleration (Short Period) S_s =	1.500
	Spectral Response Acceleration (1-Second Period) S_1 =	0.771
	Spectral Design Response Coefficient (Short Period) S_{DS} =	1.000 g
	Spectral Design Response Coefficient (1-Second Period) S_{D1} =	0.771 g
	Seismic response coefficient(s) Cs =	0.154
	Redundancy Factor (North/South Direction) N/S rho=	1.0
	Redundancy Factor (East / West Direction) E/W rho=	1.0
	Seismic Analysis procedure used:	Equivalent Lateral Force (ELF)

SNOW LOAD: (1)	Flat Roof Snow Load, (PSF) p_f =	120
	Snow Drift Loading required by Authority Having Jurisdiction?	Yes
	Snow Load Importance Factor I_s =	1.0 (1)
	Ground Snow Load, (PSF) p_g =	160

1) Snow Load Importance Factor per ASCE 7-10 Table 1.5-2.

DESIGN LIVE LOADS	AREA	LIVE LOADS (PSF) UNO	REMARKS & FOOTNOTES
	Handrails & Pedestrian Guardrails	50 PLF or 200 LB	(1)
	Stairs & Exits	100 PSF or 300 LB	Stair treads per note (2)
	MEZZANINE (Light Storage Area)	125	

(1) Top rail shall be designed to resist 50 PLF line load or 200 lb point load applied in any direction at any point. Intermediate rails (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 LB on an area not to exceed 1 ft square. These three loads are to be considered separately with worst case used for design.
(2) Place 300 lb concentrated load over 2"x2" area at any point to produce maximum stress. Area load and concentrated load are to be considered separately with worst case used for design.

SUBMITTALS

SUBMIT FOR REVIEW: SUBMITTALS of shop drawings, and product data are required for items noted in the individual materials sections and for *bidder designed* elements.

SUBMITTAL REVIEW PERIOD: Submittals shall be made in time to provide a minimum of TWO WEEKS or 10 WORKING DAYS for review by the Architect/Engineer prior to the onset of fabrication.

GENERAL CONTRACTOR'S PRIOR REVIEW: Prior to submission to the Architect/Engineer, the Contractor shall review the submittal for completeness. Dimensions and quantities are not reviewed by the SER, and therefore, must be verified by the General Contractor. Contractor shall provide any necessary dimensional details requested by the Detailer and provide the Contractor's review stamp and signature before forwarding to the Architect/Engineer.

SHOP DRAWING REVIEW: Once the contractor has completed his review, the SER will review the submittal for general conformance with the design concept and the contract documents of the building and will stamp the submittal accordingly. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departures there from. The SER will return submittals in the form they are submitted in (either hard copy or electronic). For hard copy submittals, the contractor is responsible for submitting the required number of copies to the SER for review.

SHOP DRAWING DEVIATIONS: When shop drawings (component design drawings) differ from or add to the requirements of the structural drawings they shall be designed and stamped by the responsible SSE.

INSPECTIONS, QUALITY ASSURANCE VERIFICATIONS AND TEST REQUIREMENTS

INSPECTIONS: Foundations, footings, under slab systems and framing are subject to inspection by the Building Official in accordance with IBC 110.3. Contractor shall coordinate all required inspections with the Building Official.

SPECIAL INSPECTIONS, VERIFICATIONS and TESTS: Special Inspections, Verifications and Testing shall be done in accordance with IBC Chapter 17 and the STATEMENT OF SPECIAL INSPECTIONS herein per IBC Sections 1704 and 1705, including 1705.11 and 1705.12 for seismic resistance for projects in Seismic Design Categories C, D, E and F, including 1705.10 for high wind regions as applicable.

SPECIAL INSPECTION AGENCY and SPECIAL INSPECTORS: Owner shall retain an "approved agency" per IBC 1703 to provide Special Inspections for the project. Special Inspectors shall be qualified persons per IBC 1704.2.1.

STATEMENT OF SPECIAL INSPECTIONS. Special Inspections and Testing per IBC Sections 1704 and 1705 are required for the following:

FABRICATION SHOP INSPECTION: Where off-site Fabrication of gravity LOAD BEARING MEMBERS & ASSEMBLIES is performed, Special Inspector shall verify that the fabricator complies with IBC 1704.2.5

SOILS & FOUNDATION CONSTRUCTION per IBC Section 1705.6

- **Periodic** inspection of soils earthwork per Table 1705.6 is required for:
  - Footing soil bearing surfaces prior to placing any reinforcing steel
  - Excavation depth and bearing layer prior to placing any reinforcing steel.
  - Compacted fill material classification.
  - Subgrade preparation prior to filling.
- **Continuous** inspection per Table(s) 1705.6, **1705.7 and 1705.8** required for:
  - Filling operations to satisfy requirements of IBC Table 1705.6 and the geotechnical report listed under SOILS & FOUNDATIONS section.
  - Compacted fill density testing of each lift, proper lift thickness and material classification.
  - Installation of Helical Pile Foundations per IBC Section 1705.9.

CONCRETE CONSTRUCTION per IBC Section 1705.3 and Table 1705.3 including:

- **Periodic** inspection required for:
  - Size & placement of all reinforcing steel prior to the pour.
  - Placement clearances around reinforcing steel at embedded conduit.
  - Placing & size of cast-in-place bolts and embedded fabrications prior to the pour.
  - Shape, location & dimensions of members formed.
  - Use of the required design concrete mix.
  - Maintenance of specified curing temperature and techniques.
  - Verification of in-situ concrete strength prior to removal of shores and forms from beams and structural slabs.
- **Continuous** inspection required during the:
  - Placing of reinforced concrete for proper application techniques.
  - Placing of concrete around cast-in-place bolts and embeds.
  - Sampling of fresh concrete.
  - Determinations of slump, air content and temperature.
  - Grouting operation of post-installed bolts or rebar dowels.

STRUCTURAL STEEL per IBC 1704.2.5.1

A qualified Special Inspector of an "approved agency" providing Quality Assurance (QA) Special Inspections for the project shall review and confirm the Fabricator and Erector's Quality Control (QC) procedures for completeness and adequacy relative to AISC 360-10 Chapter N, the AISC 303 Code of Standard Practice, AWS D1.1-2010 Structural Welding Code, and 2012 IBC code requirements for the fabricator's scope of work.

- QA Agency providing Special Inspections shall provide personnel meeting the minimum qualification requirements for Inspection and Nondestructive Testing NDT per AISC 360-10 Section N4.
- Verify Fabricator and Erector Quality Control Program per AISC 360-10 Section N2.
- Visual Welding Inspection of welds by both QC and QA personnel shall be per tables listed in AISC 360 Section N5.
- Inspection Tasks for Welding
  - Prior to Welding per AISC 360-10 Table N5.4-1
  - During Welding per AISC 360-10 Table N5.4-2
  - After Welding per AISC 360-10 Table N5.4-3
- Nondestructive Testing (NDT) of welds:
  - Non-Destructive Testing (NDT) of welded joints per AISC 360-10 N.5.
  - Risk Category for determination of extent of NDT per AISC 360 N5.5b is noted in the Design Criteria and Loads section of these General Requirements.
  - NDT performed shall be documented and reports shall identify the tested weld by piece mark and location in the piece.
  - For field work, the NDT report shall identify the tested weld by location in the structure, piece mark and location in the piece.
- Inspection Tasks for Bolting per AISC 360-10 Section N5.6
  - Prior to Bolting per AISC 360-10 Table N5.6-1. Not required for snug-tight joints.
  - During Bolting per AISC 360-10 Table N5.6-2. Not required for snug-tight joints.
  - After Bolting per AISC 360-10 Table N5.6-3.
- Additional Inspection tasks per AISC 360-10 Section N5.7.

WOOD CONSTRUCTION per IBC Section 1705.5, 1705.10.1, & 1705.11.2:

- **Periodic** inspection required for verification of:
  - Shear Walls: Anchor Bolts, Hold-downs (HD) and Continuous Rod Tie-Down Systems (TDS) including squash blocks, LPT shear connectors, strap connectors, boundary edge nailing, plate nailing and panel edge shear nailing for size & spacing.
  - Diaphragms: blocking, strap connections, boundary edge and panel shear nailing size & spacing.
  - Moisture content of wood studs, plates, beams, decking, and joists.
  - Proper bottom plates sizes (2x and 3x) and plate washers.

INSPECTION SUBMITTALS: Special inspection reports shall be provided on a weekly basis. Final special inspection reports will be required by each special inspection firm per IBC 1704.2.4. Submit copies of all inspection reports to the Architect/Engineer and the Authority Having Jurisdiction for review.

CONTRACTOR RESPONSIBILITY: Prior to issuance of the building permit, the Contractor is required to provide the Authority Having Jurisdiction a signed, written acknowledgement of the Contractor's responsibilities associated with the above Statement of Special Inspections addressing the requirements listed in IBC Section 1704.4. Contractor is referred to IBC Sections 1705.11.5 and 1705.11.6 for architectural and MEP building systems that may be subject to additional inspections (based on the building's designated Seismic Design Category listed in the CRITERIA), including anchorage of HVAC ductwork containing hazardous materials, piping systems and mechanical units containing flammable, combustible or highly toxic materials, electrical equipment used for emergency or standby power, exterior wall panels and suspended ceiling systems.

PREFABRICATED CONSTRUCTION: All prefabricated construction shall conform to IBC Section 1703.

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

GEOTECHNICAL REPORT: Recommendations contained in Geotechnical Engineering Report Parks and Recreation Site Improvements Valdez, Alaska by Shannon & Wilson, Inc. dated April 2019 were used for design.

CONTRACTOR'S RESPONSIBILITIES: Contractor shall be responsible to review the Geotechnical Report and shall follow the recommendations specified therein including, but not limited to, subgrade preparations, pile installation procedures, ground water management and steep slope Best Management Practices."

GEOTECHNICAL SUBGRADE INSPECTION: The Geotechnical Engineer shall inspect all sub-grades and prepared soil bearing surfaces, prior to placement of foundation reinforcing steel and concrete. Geotechnical Engineers shall provide a letter to the owner stating that soils are adequate to support the "Allowable Foundation Bearing Pressure(s)" shown below.

DESIGN SOIL VALUES:
Allowable Foundation Bearing Pressure .... 2000 PSF

FOUNDATIONS and FOOTINGS: Foundations shall bear on either competent native soil or compacted structural fill as per the geotechnical report. Exterior perimeter footings shall bear not less than **60** inches below finish grade, unless otherwise specified by the geotechnical engineer and/or the building official, UNO on structural drawings.

FOOTING DEPTH: Tops of footings shall be as shown on plans with vertical changes as indicated with steps in the footings; locations of steps shown as approximate and shall be coordinated with the civil grading plans to ensure that the exterior perimeter footings bear no less than 60 inches below finish grade, or as otherwise indicated by the geotechnical engineer or building official, UNO on structural drawings.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conform to:
(1) ACI 301-10 "Specifications for Structural Concrete"
(2) IBC Chapter 19 "Concrete"
(3) ACI 318-11/318R-11 "Building Code Requirements for Structural Concrete"
(4) ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conform to ACI 301 Section 4 "Concrete Mixtures" and IBC Section 1904.2.

MATERIALS: Conform to ACI 301 Section 4.2.1 "Materials" for requirements for cementitious materials, aggregates, mixing water and admixtures.

SUBMITTALS: Provide all submittals required by ACI 301 Section 4.1.2. Submit mix designs for each mix in the table below. Substantiating strength results from past tests shall not be older than 24 months per ACI 318 Section 5.3.

TABLE OF MIX DESIGN REQUIREMENTS

Member Type/Location	Strength f'c (psi)	Test Age (days)	Maximum Aggregate	Exposure Class	Max W/C Ratio	Air Content	Notes (1 to 8 Typical UNO)
Footings	4500	28	1"	F1,C1	0.45	5%	-

Table of Mix Design Requirements Notes:

(1) W/C Ratio: Water–cementitious material ratios shall be based on the total weight of cementitious materials. Maximum ratios are controlled by strength noted in the Table of Mix Design Requirements and durability requirements given in ACI 318 Section 4.3.

(2) Cementitious Materials:
a. The use of fly ash, other pozzolans, silica fume, or slag shall conform to ACI 318 Sections 4.3.1 and 4.4.2. Maximum amount of fly ash shall be 25% of total cementitious content unless reviewed and approved otherwise by SER.
b. Cementitious materials shall conform to the relevant ASTM standards listed in ACI 318 Section 3.2.1.

(3) Air Content: Conform to ACI 318 Section 4.4.1. Minimum standards for exposure class are noted in the table. If freezing and thawing class is not noted, air content given is that required by the SER. Tolerance is ±1-½%. Air content shall be measured at point of placement.

(4) Aggregates shall conform to ASTM C33.

(5) Slump: Conform to ACI 301 Section 4.2.2.2. Slump shall be determined at point of placement.

(6) Chloride Content: Conform to ACI 318 Section 4.3.1.

(7) Non- chloride accelerator: Non-chloride accelerating admixture may be used in concrete placed at ambient temperatures below 50°F at the contractor's option.

(8) ACI 318, Section 4.2.1 exposure classes shall be assumed to be F0, S0, P0, and C0 unless different exposure classes are listed in the Table of Mix Design Requirements that modify these base requirements.

FORMWORK & RESHORING: Conform to ACI 301 Section 2 "Formwork and Form Accessories." Removal of Forms shall conform to Section 2.3.2 except strength indicated in Section 2.3.2.5 shall be 0.75 f' c.

MEASURING, MIXING, AND DELIVERY: Conform to ACI 301 Section 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: Conform to ACI 301 Section 5. In addition, hot weather concreting shall conform to ACI 305.1-06 and cold weather concreting shall conform to ACI 306.1-90.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and non-structural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing and architectural drawings and coordinate other embedded items.

GROUT: Use 7000 psi non-shrink grout under column base plates.

STRENGTH TESTING AND ACCEPTANCE:

Testing: Obtain samples and conduct tests in accordance with ACI 301 Section 1.6.3.2. Additional samples may be required to obtain concrete strengths at alternate intervals than shown below.

- Cure 4 cylinders for 28-day test age, test 1 cylinder at 7 days, test 2 cylinders at 28 days, and hold 1 cylinder in reserve for use as the Engineer directs. After 56 days, unless notified by the Engineer to the contrary, the reserve cylinder may be discarded without being tested for specimens meeting 28-day strength requirements.
- The number of cylinders indicated above reference 6 by 12 in cylinders. If 4 by 8 in cylinders are to be used, additional cylinders must be cured for testing of 3 cylinders at test age per the table of mix design requirements.

Acceptance. Strength is satisfactory when:

(1) The averages of all sets of 3 consecutive tests equal or exceed the specified strength.

(2) No individual test falls below the specified strength by more than 500 psi.

A "test" for acceptance is the average strength of two 6 by 12 in. cylinders or three 4 by 8 in. cylinders tested at the specified test age.

CONCRETE PLACEMENT TOLERANCE: Conform to ACI 117-10 for concrete placement tolerance.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to:
(1) ACI 301-10 "Standard Specifications for Structural Concrete", Section 3 "Reinforcement and Reinforcement Supports."
(2) ACI SP-66-04 "ACI Detailing Manual" including ACI 315-99 "Details and Detailing of Concrete Reinforcement."
(3) CRSI MSP-09, 28th Edition, "Manual of Standard Practice."
(4) IBC Chapter 19-Concrete.
(5) ACI 318-11 "Building Code Requirements for Structural Concrete."
(6) ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

SUBMITTALS: Conform to ACI 301 Section 3.1.1 "Submittals, data and drawings." Submit placing drawings showing fabrication dimensions and locations for placement of reinforcement and reinforcement supports.

MATERIALS:
Reinforcing Bars ....ASTM A615, Grade 60, deformed bars.
Bar Supports...CRSI MSP-09, Chapter 3 "Bar Supports."
Tie Wire ....16 gage or heavier, black annealed.

FABRICATION: Conform to ACI 301, Section 3.2.2. "Fabrication", and ACI SP-66 "ACI Detailing Manual."

WELDING: Bars shall not be welded unless authorized. When authorized, conform to ACI 301, Section 3.2.2.2. "Welding", AWS D1.4, and provide ASTM A706, grade 60 reinforcement.

PLACING: Conform to ACI 301, Section 3.3.2 "Placement." Placing tolerances shall conform to ACI 117.

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CIVIL / STRUCTURAL

PROJECT NO.17-0009

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
49TH
PAUL D. ROGNESS
No. SE13924
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/19

FOR PERMIT
These drawings are sufficiently complete for submission to the jurisdiction having authority for permit. The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the jurisdiction having authority and DCI Engineers.

STRUCTURAL GENERAL NOTES

AUTHOR: JS CHECKED: JR
REVISION:
ISSUE DATE: JUNE 7, 2019
OWNER PROJECT NO: -

S1.1.1

FULL SIZE PRINTED ON 22 x 34

CONCRETE COVER: Conform to the following cover requirements unless noted otherwise in the drawings.
Concrete cast against earth................................. 3"
Concrete exposed to earth or weather .... 2"

SPLICES: Conform to ACI 301, Section 3.3.2.7, "Splices". Refer to "Typical Lap Splice and Development Length Schedule" for typical reinforcement splices. Splices indicated on individual sheets shall control over the schedule. Mechanical connections may be used when approved by the SER
FIELD BENDING: Conform to ACI 301 Section 3.3.2.8. "Field Bending or Straightening." Bar sizes #3 through #5 may be field bent cold the first time. Other bars require preheating. Do not twist bars. Bars shall not be bent past 45 degrees.

STRUCTURAL STEEL

REFERENCE STANDARDS: Conform to:
1) IBC Chapter 22 – "Steel"
2) ANSI/AISC 303-10 – "Code of Standard Practice for Steel Buildings & Bridges"
3) AISC – "Manual of Steel Construction", Fourteenth Edition (2010)
4) ANSI/AISC 360-10 – "Specification for Structural Steel Buildings"
5) AWS D1.1:2010 – "Structural Welding Code – Steel"

SUBMITTALS: Submit the following documents to the SER for review:

(1) SHOP DRAWINGS complying with AISC 360 Sections M1and N3 and AISC 303 Section 4.
(2) ERECTION DRAWINGS complying AISC 360 Sections M1and N3 and AISC 303 Section 4.

Make copies of the following documents "Available upon Request" to the SER or Owner's Inspection Agency in electronic or printed form prior to fabrication per AISC 360 Section N3.2 requirements:

(1) Fabricator's written Quality Control Manual that includes, as a minimum:
    a. Material Control Procedures
    b. Inspection Procedures
    c. Non-conformance Procedures
(2) Steel & Anchor Rod suppliers' Material Test Reports (MTR's) indicating the compliance with specifications.
(3) Fastener manufacturer's Certification documenting conformance with the specification.
(4) Filler metal manufacturer's product data for SMAW, FCAW and GMAW indicating:
    a. Product specification compliance
    b. Recommended welding parameters
    c. Recommended storage and exposure requirements including baking
    d. Limitations of use
(5) Weld Procedure Specifications (WPS's) for shop and field welding.
(6) Manufacturer's Certificates of Conformance for electrodes, fluxes and gases (welding consumables).
(7) Procedure Qualification Records (PQR's) for WPS's that are not prequalified in accordance with AWS.
(8) Welding personnel Performance Qualification Records (WPQR) and continuity records conforming to AWS standards.

MATERIALS:
Structural steel materials shall conform to materials and requirements listed in AISC 360 section A3 including, but not limited to:
Wide Flange (W), Tee (WT) Shapes .... ASTM A992 Fy = 50 ksi
Channel (C) & Angle (L) Shapes .... ASTM A36, Fy = 36 ksi
Structural Plate (PL) .... ASTM A36, Fy = 36 ksi
Hollow Structural Section – Square/Rect (HSS) . ASTM A500, Grade B Fy = 46 ksi
Washers (Hardened Flat or Beveled) .... ASTM F436, Grade and Finish per RCSC Table 2.1
Anchor Rods (Anchor Bolts, typical) .... ASTM F1554, Gr. 36

ANCHORAGE to CONCRETE:

1) COLUMN ANCHOR RODS and BASE PLATES: All columns (vertical member assemblies weighing over 300 pounds) shall be provided with a **minimum of four ¾" diameter anchor rods**. Column base plates shall be at least ¾" thick, unless noted otherwise. Cast-in-place anchor rods shall be provided unless otherwise approved by the Engineer. Unless noted otherwise, embedment of cast-in-place anchor rods shall be 12 times the anchor diameter (12D).

FABRICATION:

1) Conform to AISC 360 Section M2 "Fabrication" and AISC 303 Section 6 "Shop Fabrication".
2) Quality Control (QC) shall conform to:
    a. AISC 360 Chapter N "Quality Control and Quality Assurance" and
    b. AISC 303 Section 8 "Quality Control".
    c. Fabricator and Erector shall establish and maintain written Quality Control (QC) procedures per AISC 360 section N3.
    d. Fabricator shall perform self-inspections per AISC 360 section N5 to ensure that their work is performed in accordance with Code of Standard Practice, the AISC Specification, Contract Documents and the Applicable Building Code.
    e. QC inspections may be coordinated with Quality Assurance inspections per Section N5.3 where fabricators QA procedures provide the necessary basis for material control, inspection, and control of the workmanship expected by the Special Inspector.

WELDING:

1) Welding shall conform to AWS D1.1 with Prequalified Welding Processes except as modified by AISC 360 section J2 and AISC 341 as applicable. Welders shall be qualified in accordance with AWS D1.1 requirements.
2) Use 70ksi strength, low-hydrogen type electrodes (E7018) or E71T as appropriate for the process selected.

ERECTION:

1) Conform to AISC 360 Section M4 "Erection" and AISC 303 Section 7 "Erection".
2) Conform to AISC 360 Chapter N "Quality Control and Quality Assurance" and AISC 303 Section 8.
    a. The Erector shall maintain detailed erection quality control procedures that ensure that the work is performed in accordance with these requirements and the Contract Documents.
3) Steel work shall be carried up true and plumb within the limits defined in AISC 303 Section 7.13.
4) The contractor shall provide temporary bracing and safety protection required by AISC 360 Section M4.2 and AISC 303 Section 7.10 and 7.11.

PROTECTIVE COATING REQUIREMENTS:

1) SHOP PAINTING: Conform to AISC 360 Section M3 and AISC 303 Section 6.5 unless otherwise specified by the project specifications.

2) INTERIOR STEEL:
    a. Unless noted otherwise, ***do not paint*** any of the steel surfaces meeting the following conditions:
        - Concealed by the interior building finishes,
        - Fireproofed,
        - Embedded in concrete,
        - Specially prepared as a "faying surface" for Type-SC "slip-critical" connections including bolted connections that form a part of the Seismic Force Resisting System governed by AISC 341 unless the coating conforms to requirements of the RCSC Bolt Specification and is approved by the Engineer.
        - Welded; if area requires painting, do not paint until after weld inspections and non-destructive testing requirement, if any, are satisfied.

    b. Interior steel, exposed to view, shall be painted with one coat of shop primer unless otherwise indicated in the project specifications. Field touch-ups to match the finish coat or as otherwise indicated in the project specifications.

COLD-FORMED STEEL FRAMING

REFERENCE STANDARDS: Conform to:
(1) AISI "North American Specification for the Design of Cold-Formed Steel Structural Members - 2007 Edition."
(2) AISI "Standard for Cold Formed Steel Framing – General Provisions"
(3) AISI "Standard for Cold Formed Steel Framing – Header Design"
(4) AISI "Standard for Cold Formed Steel Framing – Wall Stud Design"
(5) AWWC "Wall and Ceiling Standards" Sec. 9.8 "Exterior Steel Studs Wall Systems."

MATERIALS:

Structural Sections	54, 68 and 97-mil; ASTM A653 Grade D or ASTM A1011 Grade 50, Min Fy=50 KSI, 33 and 43-mil; ASTM A653 Grade A, or ASTM A1011 Grade 33, Min Fy=33 KSI
Sheet Metal Screws	Grabber or Buildex TEK-Self-Drilling, #10 screws unless noted otherwise on drawings; ASTM C1513 or SER approved alternate
Fasteners to Steel	Hilti X-U 0.157" Diameter Power Actuated Fasteners – ICC ESR-2269
Fasteners to Concrete	Hilti X-U 0.157" Diameter Power Actuated Fasteners with ¾" embedment– ICC ESR-2269
Weld Material	E60XX electrodes conforming to AWS D1.3

GALVANIZED MATERIAL: Studs and track shall be galvanized in accordance with ASTM A653, G60, unless in contact with pressure treated wood. If in contact with pressure treated wood, use G90 or greater coatings. Fastenings not shown on the drawings shall be as recommended by the manufacturer.

SIZE AND PROFILE: Cold-formed steel framing members shall be as specified by the Steel Stud Manufacturer's Association (SSMA) ICC Evaluation Report ESR-3064P and of the size and profile as shown on the drawings. Alternate members equivalent in shape, size, and strength by manufacturers not members of the Steel Stud Manufacturer's Association shall be subject to review and approval by the Architect / Engineer.

CONNECTORS and FASTENERS: Connectors shall be installed per the manufacturer's instructions. All screws shall be snug with steel surface and screws shall penetrate into steel studs by a minimum of three exposed threads. Connections shall not be stripped. Screws shall be installed a minimum of 3/8" from steel edges and no less than ¾" o.c. spacing. Where connector straps connect two members, place one-half of the screws in each member.

When fastening to steel, Powder Actuated Fasteners shall be installed a minimum of 1/2" from steel edges and with no less than 1" o.c. spacing. When fastening to concrete, Powder Actuated Fasteners shall be installed a minimum of 3" from concrete edges and with no less than 4" o.c. spacing.

MEMBER CONDITION: All structural cold-formed framing members must be in good condition. Damaged members, members with cracking in the steel at the bend radius locations, and members with significant red rusting or scaling of the protective coating are unacceptable and must be replaced, unless approved by the SER. Handling and lifting of prefabricated panels shall not cause permanent distortion to any member or collateral material. Members not meeting tolerances listed below shall be replaced prior to loading.

FIELD CUTS AND NOTCHES: Field cuts and notches of any kind (including widening pre-punched holes) are NOT allowed in any structural cold-formed steel member without prior approval from SER.

PERMANENT WALL BRACING AND BRIDGING: Double flat strap or channel bridging as specified on the structural drawings shall be installed at 4'-0" oc maximum unless noted otherwise, and adequately braced prior to loading studs. Bridging anchorage design to be based on "All Steel Design" (mechanically braced) or "Sheathing Braced Design" per AISI S212-07 - "North American Standard for Cold-Formed Steel Framing – Wall Stud Design 2007". Reference the floor framing plan notes for type of design used on that floor.

TEMPORARY BRACING: Reference "Temporary Shoring and Bracing" section above.

WOOD FRAMING

REFERENCE STANDARDS: Conform to:
(1) IBC Chapter 23 "WOOD"
(2) NDS - "2012 National Design Specification (NDS) for Wood Construction"
(3) ANSI/AF&PA – SDPWA-08: Special Design Provisions for Wind and Seismic
(4) APA PDS—04 Plywood Design Specification
(5) APA Report TT-045B "Minimum Nail Penetration for Wood Structural Panel Connections Subject to Lateral Loads"

IDENTIFICATION: All sawn lumber and pre-manufactured wood products shall be identified by the grade mark or a certificate of inspection issued by the certifying agency.

MATERIALS:

- Sawn Lumber: Conform to grading rules of WWPA, WCLIB or NLGA and Table below. Finger jointed studs acceptable at interior walls only.

TABLE of SOLID SAWN LUMBER

Member Use	Size	Species	Grade
Wall Stud	2x6	Doug Fir Larch/HF	No. 2, UNO on plans
Sill Plate	2x6, 3x6	PT Doug Fir Larch/HF	No. 2
Post or Timber	6x6, 8x8	Doug-Fir Larch	No. 1

- Wood Structural Sheathing (Plywood): Wood APA-rated structural sheathing includes: all veneer plywood, oriented strand board, waferboard, particleboard, T1-11 siding, and composites of veneer and wood based material with T&G joint. **Architect** may disallow OSB. Confirm with **Architect**. Conform to "Construction and Industrial Plywood" based on Product Standard PS 1-07 by the U.S. Dept. of Commerce, and "Performance Standard for Wood-Based Structural-Use Panels" based on Product Standard PS 2-04 by the U.S. Dept. of Commerce and "Plywood Design Specification" based on APA PDS—04 by the American Plywood Association. Unless noted otherwise, sheathing shall comply with the following table:

TABLE of SHEATHING - Use, Minimum Thickness and Minimum APA Rating

Location	Thickness	Span Rating	Plywood Grade	Exposure
Floor	23/32" T&G	24 OC	STURD-I-FLOOR	1
Walls	15/32"	32/16	C-D	1

Unless noted otherwise on drawings, install roof and floor panels with long dimension across supports and with panel continuous over two or more spans. End joints shall occur over supports.

- Timber Connectors: Shall be "Strong Tie" by Simpson Company as specified in their latest catalog. Alternate connectors by other manufacturers may be substituted provided they have current ICC approval for equivalent or greater load capacities and are reviewed and approved by the SER prior to ordering. Connectors shall be installed per the manufacturer's instructions. Where connector straps connect two members, place one-half of the nails or bolts in each member. Where straps are used as hold-downs, nail straps to wood framing just prior to drywall application, as late as possible in the framing process to allow the wood to shrink and the building to settle. Premature nailing of the strap may lead to strap buckling and potential finish damage.

  Where connectors are in exposed exterior applications in contact with preservative treated wood (PT) other than CCA, connectors shall be either batch hot-dipped galvanized (HDG), mechanically galvanized (ASTM B695, Class 55 minimum) stainless steel, or provided with 1.85 oz/sf of zinc galvanizing equal to or better than Simpson ZMAX finish.

  Nail straps to wood framing as late as possible in the framing process to allow the wood to shrink and the building to settle. Premature nailing of the strap may lead to strap buckling and potential finish damage.

- Fasteners (nails, bolts, screws, etc) attaching timber connectors (joist hangers, post caps and bases, etc) to PT wood shall have similar corrosion resistance properties (matching protective treatments) as the protected connector. Fasteners (nails, bolts, screws, etc) attaching sawn timber members or sheathing (shear walls) to PT wood be corrosion resistant; nails and lag bolts shall be either HDG (ASTM A153) or stainless steel. Verify the suitability of the fastener protection/coating with the wood treatment chemical manufacturer/supplier.

  Provide washers under the heads and nuts of all bolts and lag screws bearing on wood.

- Lag Bolts/Bolts: Conform to ASTM A307 and IBC Section 2304.9.

- Engineered Wood Products (TrusJoist): The following materials are based on lumber manufactured by TrusJoist and were used for the design as shown on the plans. Alternate products by other manufacturers may be substituted provided they have current ICC approval for equivalent or greater load and stiffness properties and are reviewed and approved by the Structural Engineer.

    a. Parallel Strand Lumber (PSL): Conform to **ICC ES Report No. ESR-1387** or CCMC Report No. 11161–R.

    b. Laminated Strand Lumber (LSL): Conform to **ICC ES Report No. ESR-1387** or CCMC Report No. 12627–R.

TABLE of ENGINEERED WOOD Requirements

Type	Use	Widths	**E(10^6)**	**Fb**	**Fv**	**Fc//**
			PSI	PSI	PSI	PSI
LSL Rimboard	Rimboard or Stair Stringer	1 ½"	1.3E	1,700	400	1,400
Parallam PSL	Header, Beam	3 ½", 5 ¼", 7"	2.0E	2,900	290	2,900

NAILING REQUIREMENTS: Conform to IBC Section 2304.9 "Connections and fasteners." Unless noted on plans, nail per Table 2304.9.1. Nailing for roof/floor diaphragms/shear walls shall be per drawings. Nails shall be driven flush and shall not fracture the surface of sheathing. Alternate nails may be used but are subject to review and approval by the Structural Engineer. Substitution of staples for the nailing of rated sheathing is subject to review by the structural engineer prior to construction.

STANDARD LIGHT-FRAME CONSTRUCTION: Unless noted on the plans, construction shall conform to IBC Section 2308 "Conventional Light-Frame Construction."

NAILERS ON STEEL COLUMNS and BEAMS: Wood 3x nailers are generally required on all HSS columns and steel beams abutting or embedded within wood framing. Unless noted otherwise, attach with 5/8" diameter bolts or welded studs at 16" on centers. Wood nailers on beams supporting joist hangers shall not overhang the beam flange by more than ¼".

WOOD SHRINKAGE AND EXPANSION: Wood materials will expand or contract based on relative changes in moisture. The contractor is responsible for means and methods of construction related to mitigating and managing the effects of changes in moisture.

MOISTURE CONTENT: Wood material used for this project shall have maximum moisture content of 19% except for the pressure-treated wood sill plate. Refer to TESTING & INSPECTIONS for the verification of these limits. The maximum moisture content required may be less than 19% when based on a particular cladding/insulation system. Refer to the Architect's drawings, and project specifications, or with cladding installer for maximum recommended moisture content.

SHRINKAGE COMPENSATION FOR MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS: MEP systems, including ductwork, pipes, and other elements that run continuously between levels shall be installed/designed in such a manner to accommodate shrinkage in the wood framing. Wood shrinkage amounts will vary depending on the construction process and materials used. The anticipated shrinkage under typical conditions is expected to range between 1/8" and 1/4" per floor.

CLADDING COMPATIBILTY: The Architect/Owner shall review the cladding and insulation systems proposed for the project with respect to their performance over wood studs with moisture contents greater than 19%. EIFS systems should be avoided on wood-framed projects due to problems with moisture proofing.

PRESERVATIVE TREATMENT (PT): Wood materials are required to be "treated wood" in accordance with IBC Section 2304.11. "Decay and Termite Protection" shall conform to the appropriate standards of the American Wood-Preservers Association (AWPA) for sawn lumber, glued laminated timber, round poles, wood piles and marine piles. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Products shall bear the appropriate mark. Fasteners or anchors in treated wood shall be of stainless steel or hot-dipped galvanized or as per IBC 2304.9.5.

Always verify the suitability of the fastener protection/coating with the wood treatment chemical manufacturer/supplier.

DRAWING LEGEND

MARK	DESCRIPTION	MARK	DESCRIPTION
F2.0	FOOTING SYMBOL (REFER TO SPREAD FOOTING SCHEDULE)		INDICATES DIRECTION OF DECK SPAN
1P	PILE CAP SYMBOL (REFER TO PILE CAP SCHEDULE)		INDICATES WIDE FLANGE COLUMN
1	TILT-UP/PRECAST CONCRETE WALL CONNECTION SYMBOL (REFER TO CONNECTION DETAIL)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR TUBE STEEL (TS) COLUMN
2W4	SHEAR WALL SYMBOL (REFER TO SHEAR WALL SCHEDULE)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR STEEL PIPE COLUMN
0	REVISION TRIANGLE		INDICATES WOOD POST
1	TILT-UP/PRECAST CONCRETE WALL PANEL NUMBER (REFER TO TILT-UP/ PRECAST CONCRETE WALL ELEVATIONS)		INDICATES BUNDLED STUDS
1	CMU WALL REINFORCING SYMBOL (REFER TO CMU WALL REINFORCING SCHEDULE)		INDICATES CONCRETE COLUMN
1	ROOF/FLOOR DIAPHRAGM NAILING SYMBOL (REFER TO DIAPHRAGM NAILING SCHEDULE)		INDICATES PRECAST CONCRETE COLUMN
C1 XX"xXX"	STEEL/CONCRETE COLUMN SYMBOL (REFER TO STEEL COLUMN SCHEDULE)		INDICATES MOMENT FRAME CONNECTION
T/FTG = X'-X"	ELEVATION SYMBOL (T/ REFERS TO COMPONENT THAT THE ELEVATION REFERENCES)		INDICATES CANTILEVER CONNECTION
3	STUD BUBBLE (INDICATES NUMBER OF STUDS REQUIRED IF EXCEEDS NUMBER SPECIFIED IN PLAN NOTE)		INDICATES DRAG CONNECTION
	INDICATES STEP IN FOOTING (REFER TO TYPICAL STEP IN FOOTING DETAIL)		INDICATES WOOD OR STEEL STUD WALL
X S X.X	DETAILS OR SECTION CUT (DETAIL NUMBER/SHEET NUMBER)		INDICATES MASONRY/CMU WALL
00 S0.0	DETAILS OR SECTION CUT IN PLAN VIEW (DETAIL NUMBER/SHEET NUMBER)		INDICATES CONCRETE/TILT-UP CONCRETE WALL
XX/SXX.XX	INDICATES LOCATION OF CONCRETE WALLS, SHEAR WALLS OR BRACED FRAME ELEVATIONS		INDICATES WOOD OR STEEL STUD SHEAR WALL
	STRUCTURAL EXTENT SYMBOL SINGLE ARROW - END OF EXTENT DOUBLE ARROW - CONTINUOUS EXTENT ALONG THE ELEMENT LINE UNTIL THE ELEMENT IS INTERRUPTED		INDICATES BEARING WALL BELOW
			INDICATES EXISTING WALL

ABBREVIATIONS

L	Angle	EXT	Exterior	PREFAB	Prefabricated
AB	Anchor Bolt	FD	Floor Drain	PSF	Pounds per Square Foot
ADDL	Additional	FDN	Foundation	PSI	Pounds Per Square Inch
ADH	Adhesive	FIN	Finish	PSL	Parallel Strand Lumber
ALT	Alternate	FLR	Floor	P-T	Post-Tensioned
ARCH	Architectural	FRP	Fiberglass Reinforced Plastic	PT	Pressure Treated
B or BOT	Bottom	FRT	Fire Retardant Treated	R	Radius
B/	Bottom Of	FTG	Footing	RD	Roof Drain
BLDG	Building	F/	Face of	REF	Refer/Reference
BLKG	Blocking	GA	Gage	REINF	Reinforcing
BMU	Brick Masonry Unit	GALV	Galvanized	REQD	Required
BP	Baseplate	GEOTECH	Geotechnical	RET	Retaining
BRBF	Buckling Restrained Braced Frame	GL	Glue Laminated Timber	SCBF	Special Concentric Braced Frame
		GWB	Gypsum Wall Board		
BRG	Bearing	HDR	Header	SCHED	Schedule
BTWN	Between	HF	Hem-Fir	SER	Structural Engineer of Record
C	Camber	HGR	Hanger		
CB	Castellated Beam	HD	Hold-down	SFRS	Seismic Force-Resisting System
C'BORE	Counterbore	HORIZ	Horizontal		
CL	Centerline	HP	High Point	SHTHG	Sheathing
CLT	Cross-Laminated Timber	HSS = TS	(Hollow Structural Section)	SIM	Similar
CIP	Cast in Place	IBC	International Building Code	SLBB	Short Leg Back-to-Back
CJ	Construction or Control Joint	ID	Inside Diameter	SMF	Special Moment Frame
		IE	Invert Elevation	SOG	Slab on Grade
CJP	Complete Joint Penetration	IF	Inside Face	SP	Southern Pine
		INT	Interior	SPEC	Specification
CLR	Clear	k	Kips	SQ	Square
CLG	Ceiling	KSF	Kips Per Square Foot	SR	Studrail
CMU	Concrete Masonry Unit	LF	Lineal Foot	SF	Square Foot
COL	Column	LL	Live Load	SST	Stainless Steel
CONC	Concrete	LLBB	Long Leg Back-to-Back	STAGG	Stagger/Staggered
CONN	Connection	LLH	Long Leg Horizontal	STD	Standard
CONST	Construction	LLV	Long Leg Vertical	STIFF	Stiffener
CONT	Continuous	LP	Low Point	STL	Steel
C'SINK	Countersink	LONGIT	Longitudinal	STRUCT	Structural
CTRD	Centered	LSL	Laminated Strand Lumber	SWWJ	Solid Web Wood Joist
DIA	Diameter	LVL	Laminated Veneer Lumber	SYM	Symmetrical
DB	Drop Beam	MAS	Masonry	T	Top
DBA	Deformed Bar Anchor	MAX	Maximum	T/	Top Of
DBL	Double	MECH	Mechanical	T&B	Top & Bottom
DEMO	Demolish	MEZZ	Mezzanine	TC AX LD	Top Chord Axial Load
DEV	Development	MFR	Manufacturer	TCX	Top Chord Extension
DF	Douglas Fir	MIN	Minimum	TDS	Tie Down System
DIAG	Diagonal	MISC	Miscellaneous	T&G	Tongue & Groove
DIST	Distributed	NIC	Not In Contract	THKND	Thickened
DL	Dead Load	NLT	Nail-Laminated Timber	THRD	Threaded
DN	Down	NTS	Not To Scale	THRU	Through
DO	Ditto	OC	On Center	TRANSV	Transverse
DP	Depth/Deep	OCBF	Ordinary Concentric Braced Frame	TYP	Typical
DWG	Drawing			UBC	Uniform Building Code
(E)	Existing	OD	Outside Diameter	UNO	Unless Noted Otherwise
EA	Each	OF	Outside Face	URM	Unreinforced Masonry Unit
EF	Each Face	OPNG	Opening		
EL	Elevation	OPP	Opposite	VERT	Vertical
ELEC	Electrical	OWSJ	Open Web Steel Joist	W	Wide
ELEV	Elevator	OWWJ	Open Web Wood Joist	W/	With
EMBED	Embedment	PL	Plate	W/O	Without
EQ	Equal	PAF	Powder Actuated Fastener	WHS	Welded Headed Stud
EQUIP	Equipment	PC	Precast	WP	Working Point
EW	Each Way	PERP	Perpendicular	WWF	Welded Wire Fabric
EXP	Expansion	PLWD	Plywood	±	Plus or Minus
EXP JT	Expansion Joint	PJP	Partial Joint Penetration		

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CIVIL / STRUCTURAL

PROJECT NO.17-0009

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
49TH
PAUL D. ROGNESS
No. SE13924
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/19

STRUCTURAL GENERAL NOTES

AUTHOR: JS CHECKED: JR
REVISION:
ISSUE DATE: JUNE 7, 2019
OWNER PROJECT NO.: -

FOR PERMIT

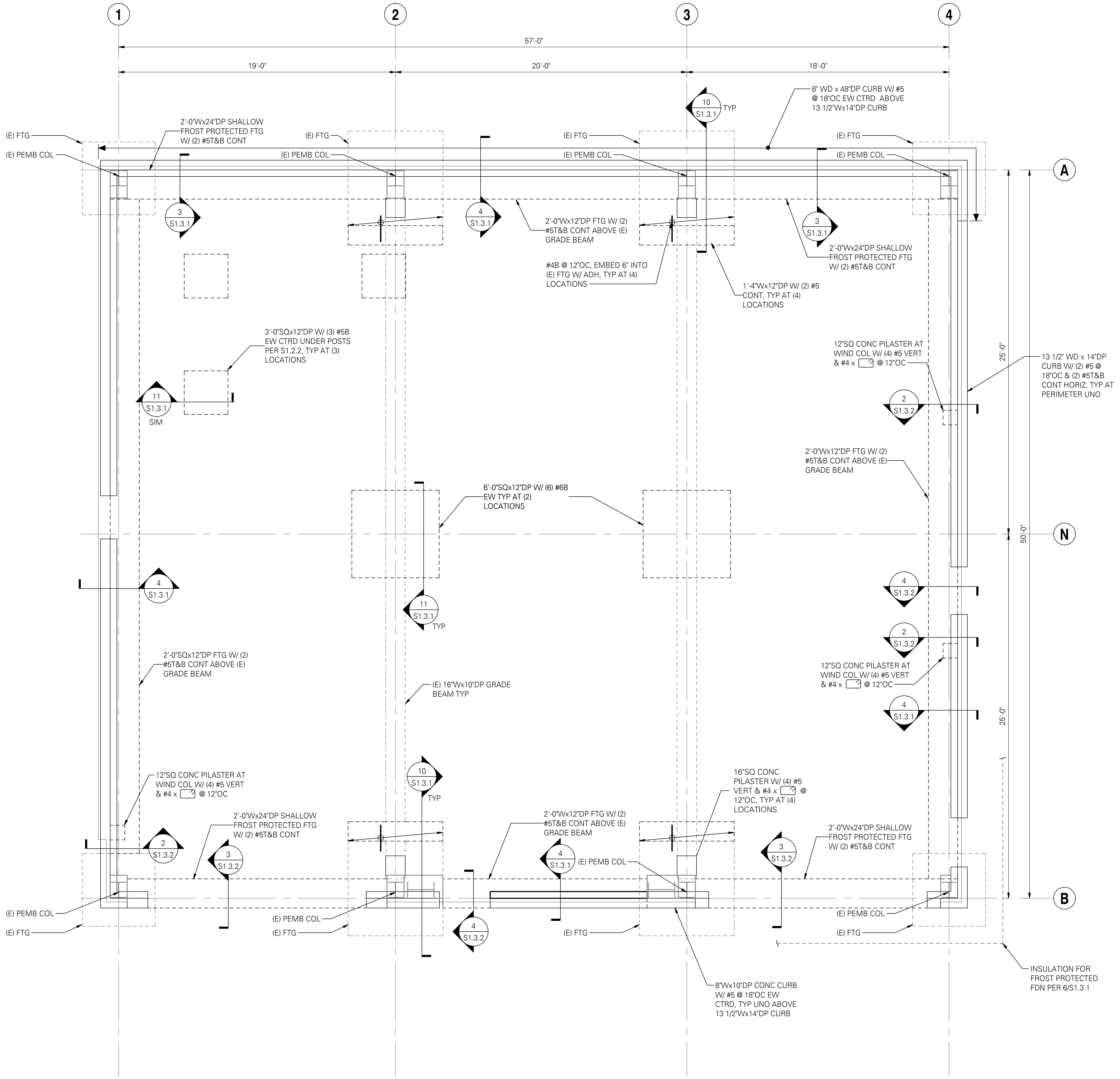
S1.1.2

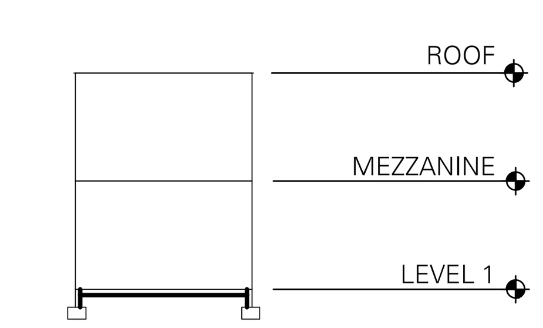
FULL SIZE PRINTED ON 22 x 34

FOUNDATION PLAN NOTES:

1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1.1 & S1.1.2.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED.
3. ALL FOOTINGS AND SLABS TO BEAR ON COMPETENT NATIVE SOIL AND/OR STRUCTURAL FILL. SUBGRADE PREPARATION, STRUCTURAL FILL, FOOTING DRAINS, AND OTHER REQUIREMENTS PER GEOTECH REPORT AS NOTED IN THE STRUCTURAL GENERAL NOTES.
4. ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE-TREATED.
5. MOISTURE PROOF ALL CONCRETE STEM AND BASEMENT WALLS PER ARCHITECT.
6. TYPICAL TOP OF INTERIOR FOOTING SHALL BE 12" BELOW PAVING (BY OTHERS).
7. TYPICAL DETAILS PER:

12/S1.3.1	TYPICAL BASEPLATE CONFIGURATIONS
11/S1.3.2	LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE
8/S1.3.2	PLAN - TYPICAL CORNER REINFORCING AT CONCRETE FOOTINGS
12/S1.3.2	STANDARD HOOKS AND BAR BENDS





NOTE:
DARKENED LINES DESIGNATE AREA OF WORK.

LEVEL 1 FOUNDATION PLAN

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

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PROJECT NO.17-0009

CITY OF VALDEZ BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA 49TH PAUL D. ROGNESS No. SE13924 REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/19

FOR PERMIT
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AUTHOR: JS CHECKED: JR
REVISION:
ISSUE DATE: JUNE 7, 2019
OWNER PROJECT NO.: -

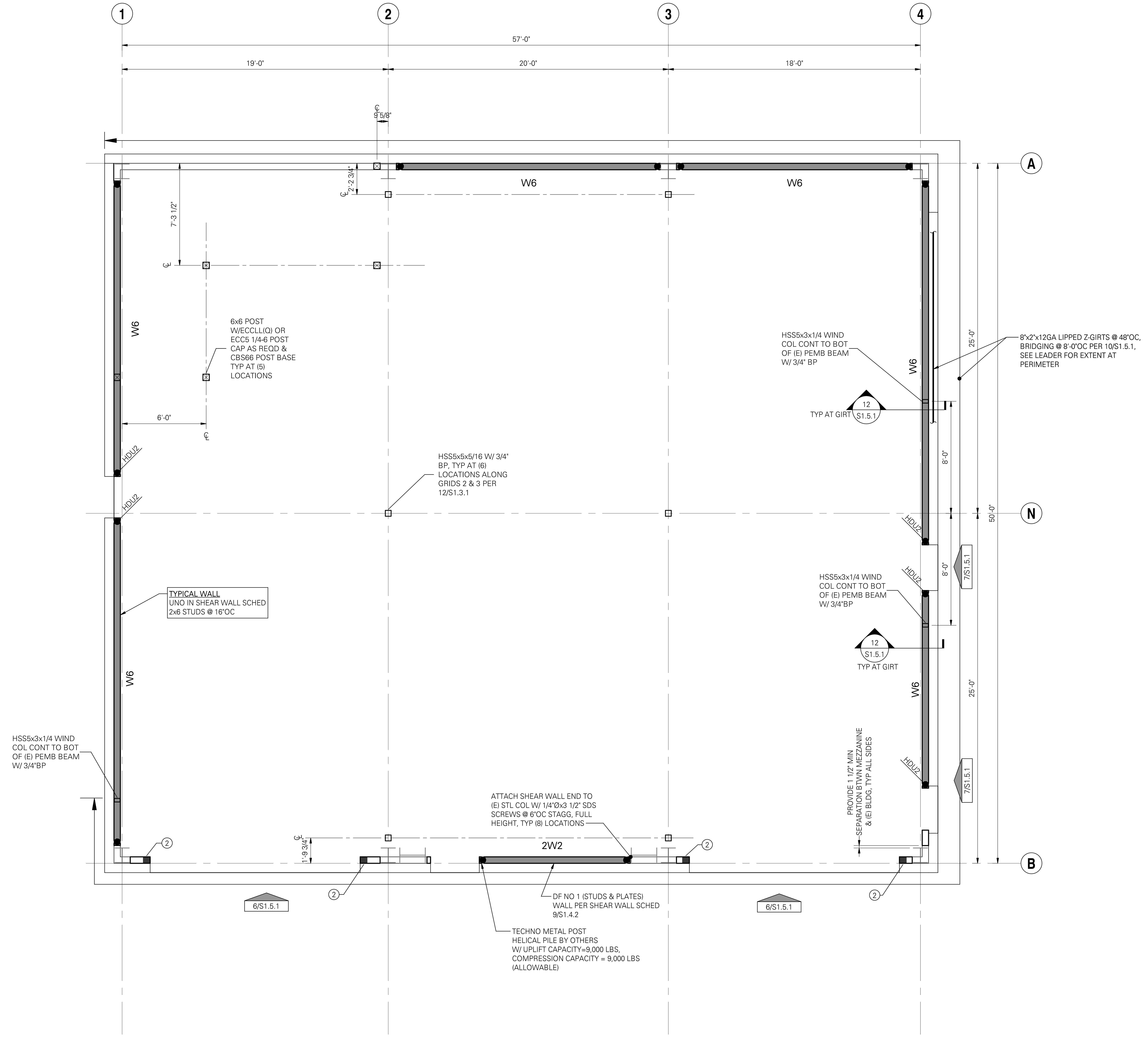
S1.2.1

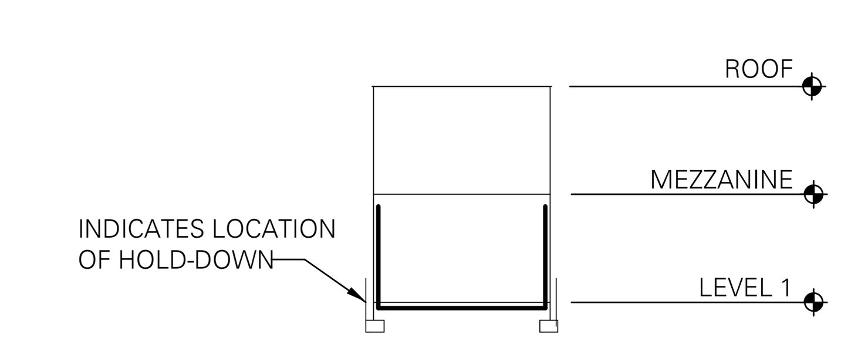
FULL SIZE PRINTED ON 22 x 34

STUD AND SHEAR WALL NOTES:

1. LUMBER GRADE PER STRUCTURAL GENERAL NOTES.
2. ALL INTERIOR NON-BEARING, NON-STRUCTURAL WALL STUD REQUIREMENTS PER STRUCTURAL GENERAL NOTES.
3. HEADERS SHOWN ON FRAMING PLAN SHALL BE SUPPORTED BY (1) TRIMMER AND (1) KING STUD MINIMUM, UNO. WHERE MORE THAN (1) TRIMMER IS REQUIRED, THE NUMBER OF TRIMMER STUDS SHALL BE NOTED THUS: ■ (2) . TRIMMERS TO BE CONTINUOUS TO THE FOUNDATION.
4. BEAMS SHOWN ON FRAMING PLAN SHALL BE SUPPORTED BY (2) BUNDLED STUDS MINIMUM, UNO. WHERE MORE THAN (2) BUNDLED STUDS ARE REQUIRED, THE NUMBER OF BUNDLED STUDS SHALL BE NOTED THUS: ■ (3) . BUNDLED STUDS TO BE CONTINUOUS TO THE FOUNDATION. BLOCK SOLID AT FLOOR FRAMING.
5. SHEAR WALL AND NAILING REQUIREMENTS PER SHEAR WALL SCHEDULE 11/S1.4.2 TYP UNO.
6. ALL EXTERIOR WALLS REQUIRING WOOD SHEATHING PER THE ARCHITECT SHALL BE SHEAR WALL TYPE UNO.
7. AT STAGGERED STUD WALLS, BUNDLED STUDS, TRIMMER STUDS, KING STUDS, AND SHEAR WALL COMPRESSION STUDS ARE TO MATCH THE WIDTH OF THE WALL PLATES.
8. HD (2) 2x (-) INDICATES HOLD-DOWN TYPE PER HOLD-DOWN SCHEDULE 3/S1.4.2. CIRCLED NUMBER INDICATES NUMBER OF TRIM STUDS REQUIRED AND BOTTOM NUMBER INDICATES NUMBER OF FULL HEIGHT (KING)STUDS REQUIRED IN ADDITION TO BUNDLED OR TRIM STUDS OR POSTS SHOWN ON PLAN.
9. TYPICAL HOLD-DOWN ELEVATION PER 9/S1.3.1.
10. ANCHOR BOLTS TO BE 5/8" DIA x 7" MINIMUM EMBEDMENT PER 7/S1.3.1. PROVIDE HOT-DIPPED GALVANIZED ANCHOR BOLTS AT PRESSURE-TREATED SILL PLATES.
11. TYPICAL DETAILS PER:

1/S1.4.2	TYPICAL SHEAR WALL ELEVATION
4/S1.4.1	TYPICAL STUD WALL OPENING (HEADER) DETAIL
3/S1.4.1	TYPICAL TOP PLATE SPLICE DETAIL
9/S1.4.1	TYPICAL HOLES AND NOTCHES IN WOOD STUDS





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STRUCTURAL LEVEL 1 STUD AND SHEAR WALL PLAN

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

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STATE OF ALASKA
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PAUL D. ROGNESS
No. SE13924
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/19

STRUCTURAL LEVEL 1 STUD AND SHEAR WALL PLAN
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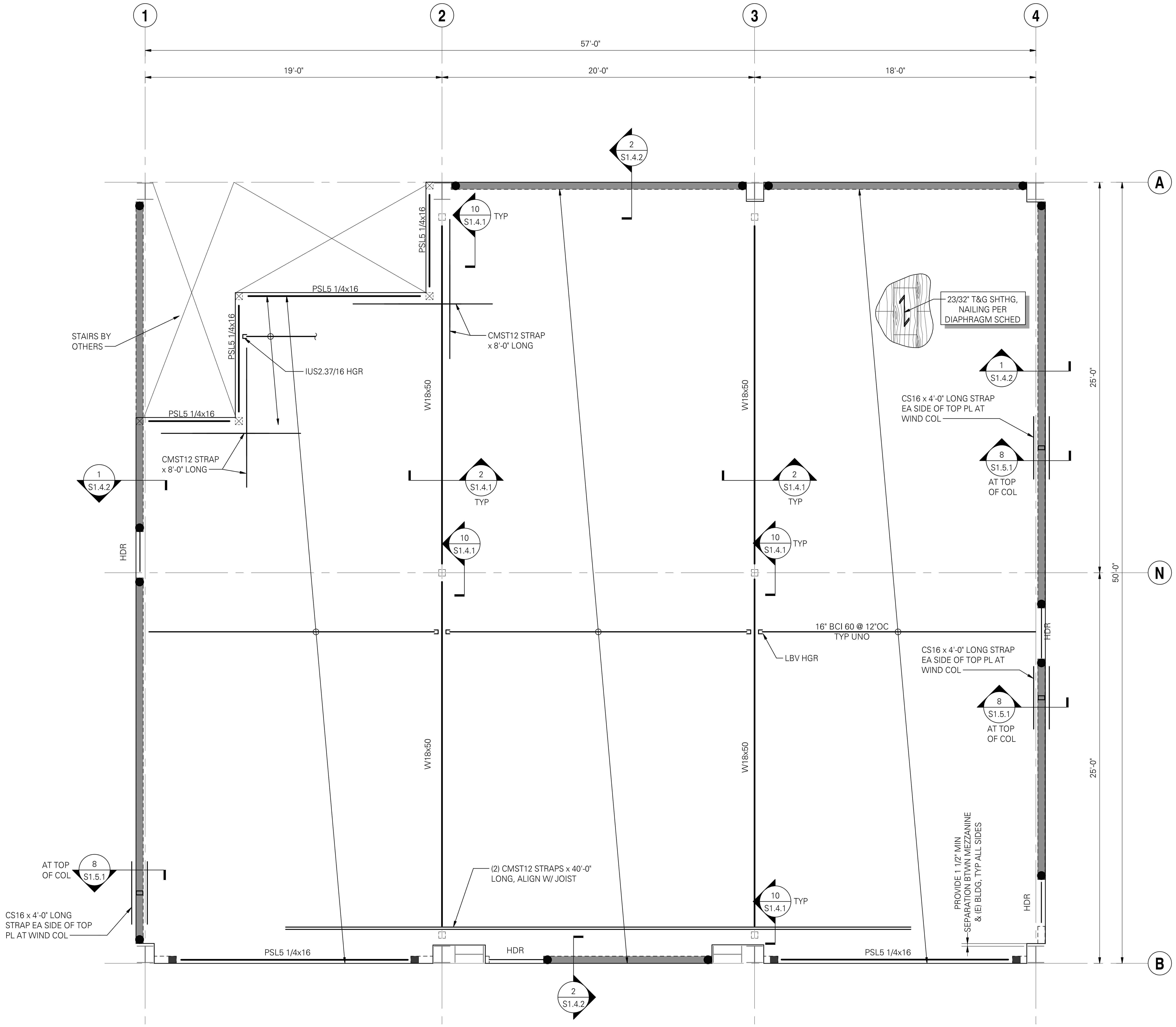


STRUCTURAL MEZZANINE FLOOR FRAMING PLAN

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

FLOOR FRAMING PLAN NOTES:

1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1.1 AND S1.1.2.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED.
3. FLOOR SHEATHING PER PLAN AND STRUCTURAL GENERAL NOTES. SHEATHING TO BE GLUED AND NAILED TO FRAMING PER DIAPHRAGM SCHEDULE. SHEATHING WITH FACE GRAIN (LONG DIRECTION) PERPENDICULAR TO SUPPORTS AND STAGGER PANEL END JOINTS. ALLOW 1/8" SPACE BETWEEN PANEL ENDS AND EDGES.
4. ALL DUCTS, CHASES AND PIPES SHALL BE PER MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS. STAIR DETAILS AND GUARDRAILS PER ARCHITECTURAL DRAWINGS.
5. ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE-TREATED.
6. WOOD "I" JOIST HANGERS SHALL BE "I" JOIST HANGERS TO BE TOP FLANGE BEARING SIMPSON MIT OR ITS TYPE, UNO.
7. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (2) 2x8 MINIMUM. HEADER SUPPORTS PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW.
8. BEAMS ARE FLUSH FRAMED WITH JOISTS UNLESS NOTED OTHERWISE ON DETAILS, OR ON PLANS AS "DB" INDICATING THAT DROPPED BEAM FRAMING IS REQUIRED. BEAM SUPPORTS PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW. PROVIDE A35 CLIP EACH SIDE OF FLUSH BEAMS THAT BEAR ON DOUBLE TOP PLATES.
9. PROVIDE FULL HEIGHT SOLID BLOCKING OR DOUBLE JOISTS UNDER ALL SHEAR WALLS AND BEARING WALLS. AT SHEAR WALLS PARALLEL TO FRAMING, ALIGN (1) JOIST OVER SHEAR WALL (ADDITIONAL JOISTS MAY BE REQUIRED).
10. ALL RIM JOISTS AND BLOCKING TO BE 1 1/2" LSL MINIMUM UNO.
11. PROVIDE DOUBLE JOISTS AROUND ALL FLOOR AND ROOF OPENINGS GREATER THAN 24" ON ONE SIDE.
12. BEARING STUD, SHEAR WALL, HOLD-DOWN, POST SIZE, AND POST CAP AND BASE REQUIREMENTS BELOW PER STUD AND SHEAR WALL PLAN ON FLOOR BELOW.

01440A

DIAPHRAGM SCHEDULE 1

FOR 0.131"Øx2 1/2" NAILS IN 3x DOUG-FIR LARCH [1, 4]

TYPE	NAILING AT BOUNDARY AND CONTINUOUS PANEL EDGES	NAILING AT OTHER PANEL EDGES	NAILING AT INTERIOR PANEL EDGES	CAPACITY (LBS/FT)	MIN PLYWOOD THICKNESS	BLOCKING	NOTES
1	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 12"OC	200/265	23/32"	NO	[2]
2	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 12"OC	300	23/32"	YES	---
3	0.131"Øx2 1/2" NAILS @ 4"OC	0.131"Øx2 1/2" NAILS @ 6"OC	0.131"Øx2 1/2" NAILS @ 12"OC	400	23/32"	YES	---
4	0.131"Øx2 1/2" NAILS @ 2 1/2"OC STAGGERED	0.131"Øx2 1/2" NAILS @ 4"OC	0.131"Øx2 1/2" NAILS @ 12"OC	600	23/32"	YES	[3]
5	0.131"Øx2 1/2" NAILS @ 2"OC STAGGERED	0.131"Øx2 1/2" NAILS @ 3"OC	0.131"Øx2 1/2" NAILS @ 12"OC	675	23/32"	YES	[3]

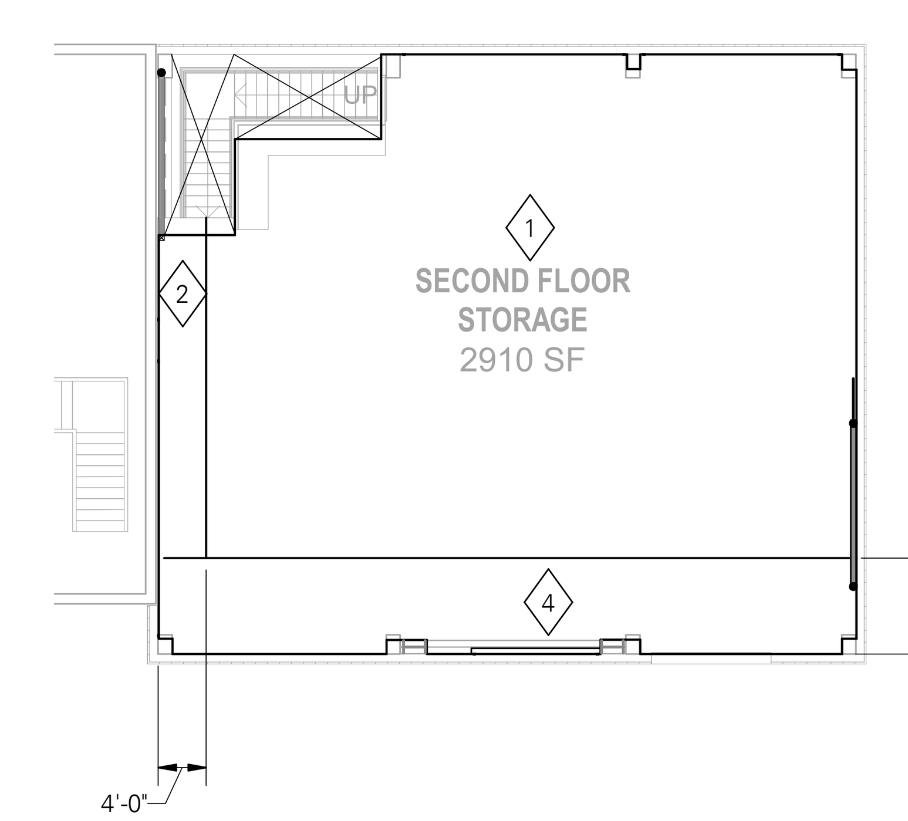
NOTES:

[1] SOME DIAPHRAGM TYPES NOTED MAY NOT BE USED ON THIS PROJECT.

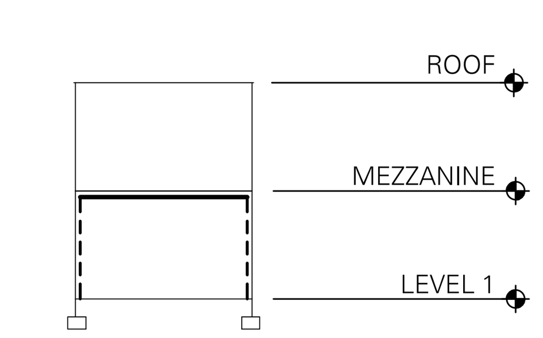
[2] CAPACITY PARALLEL (200) AND PERPENDICULAR (265) TO CONTINUOUS PANEL JOINTS.

[3] FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER.

[4] SCHEDULE NOT FOR USE WITH RESIDENTIAL I-JOISTS.



MEZZANINE DIAPHRAGM PLAN



NOTE:
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STRUCTURAL MEZZANINE FLOOR FRAMING PLAN

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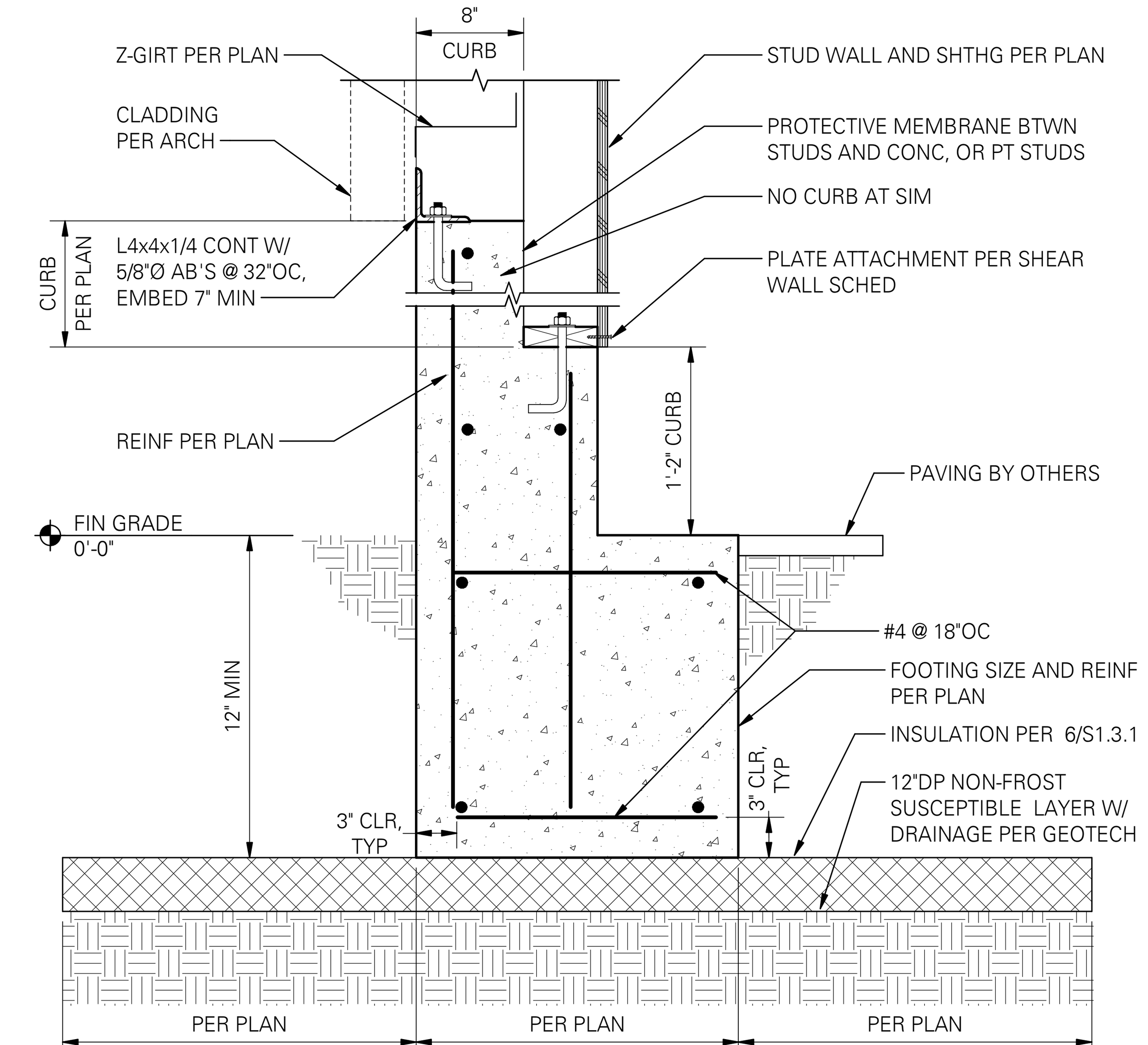
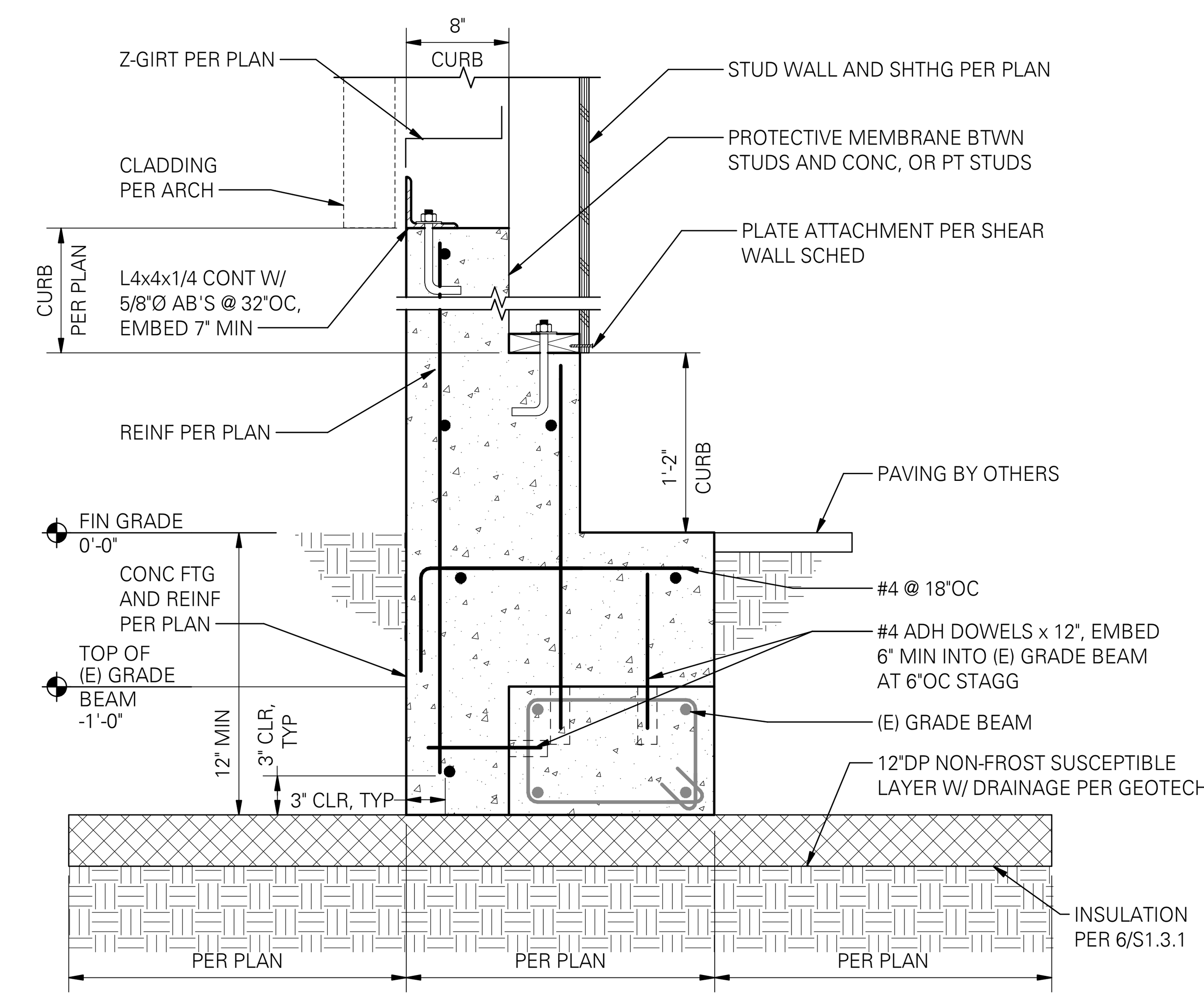
S1.2.3

FULL SIZE PRINTED ON 22 x 34



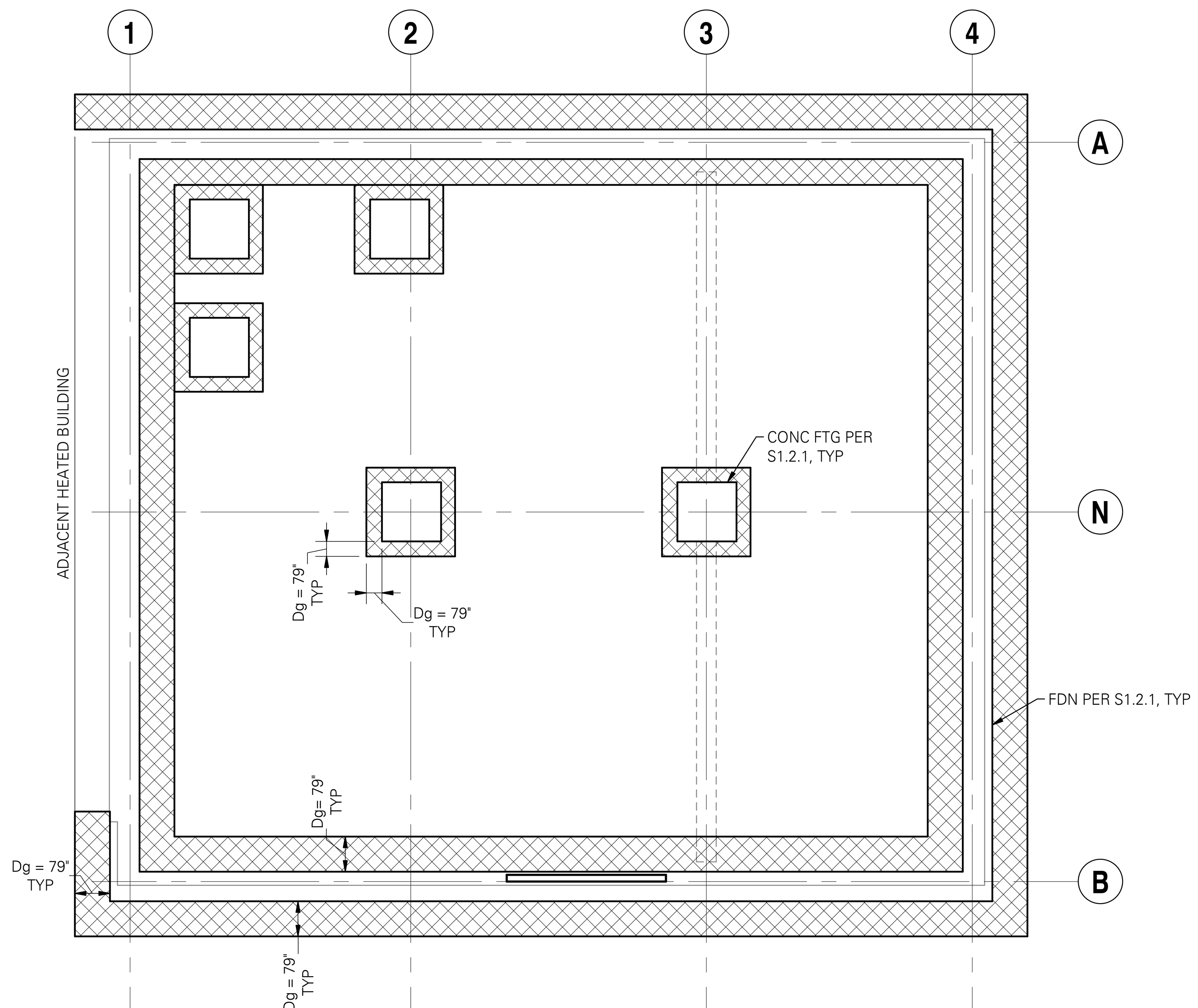
3 SHALLOW FROST PROTECTED FOOTING

SCALE: 1" = 1'-0"



4 FOOTING AT EXISTING GRADE BEAM

SCALE: 1" = 1'-0"

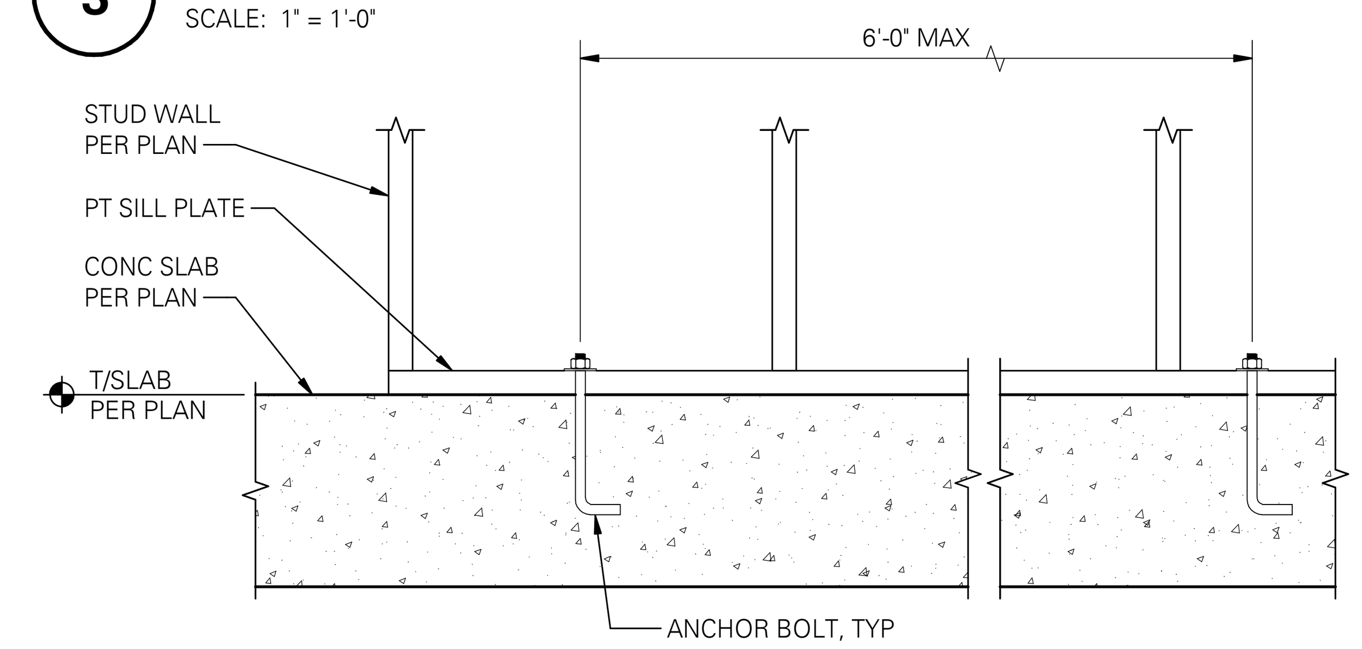


NOTES:

1. INSULATION & SUBGRADE REQUIREMENTS PER ASCE 32-01.
2. INSULATION TO HAVE A MINMUM R-VALUE OF Rg = 21.0.
3. INSULATION TO BE TYPE VI, VII OR V PER ASTM C578.

6 PLAN - UNHEATED BUILDING INSULATION REQUIREMENTS FOR FROST PROTECTED FOUNDATION

SCALE: 1" = NTS



NOTES:

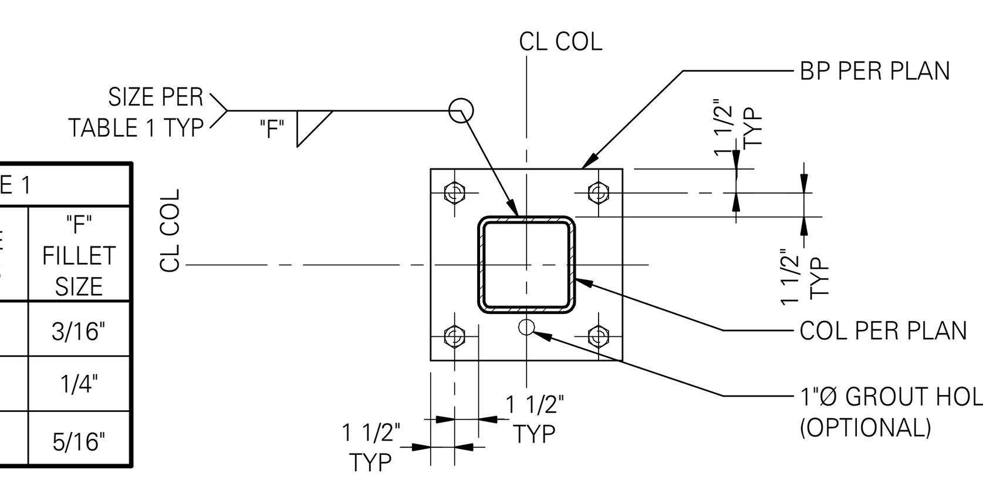
1. USE 5/8"Ø ANCHOR BOLTS WITH 7" MINIMUM EMBEDMENT INTO CONCRETE SLAB.
2. EACH SILL PLATE PIECE SHALL HAVE (2) BOLTS MINIMUM. HOLD-DOWN ANCHORS ARE NOT TO BE CONSIDERED AN ANCHOR BOLT.
3. LOCATE BOLTS WITHIN 1'-0" OF SILL PLATE PIECE ENDS AND AT 6'-0"OC MAXIMUM.
4. USE PLATE WASHER PER SHEAR WALL SCHEDULE AT EACH BOLT. STANDARD CUT WASHERS ARE ACCEPTABLE AT NON-SHEAR WALLS.
5. DO NOT DRILL OVERSIZE HOLES THRU SILL PLATE. USE 11/16"Ø DRILL BIT.
6. SILL PLATE THICKNESS AND FASTENING AT SHEAR WALLS PER SHEAR WALL SCHEDULE.
7. CONTACT THE ENGINEER-OF-RECORD FOR POST INSTALLED ANCHOR OPTIONS.

7 TYPICAL SILL PLATE ANCHORAGE TO CONCRETE

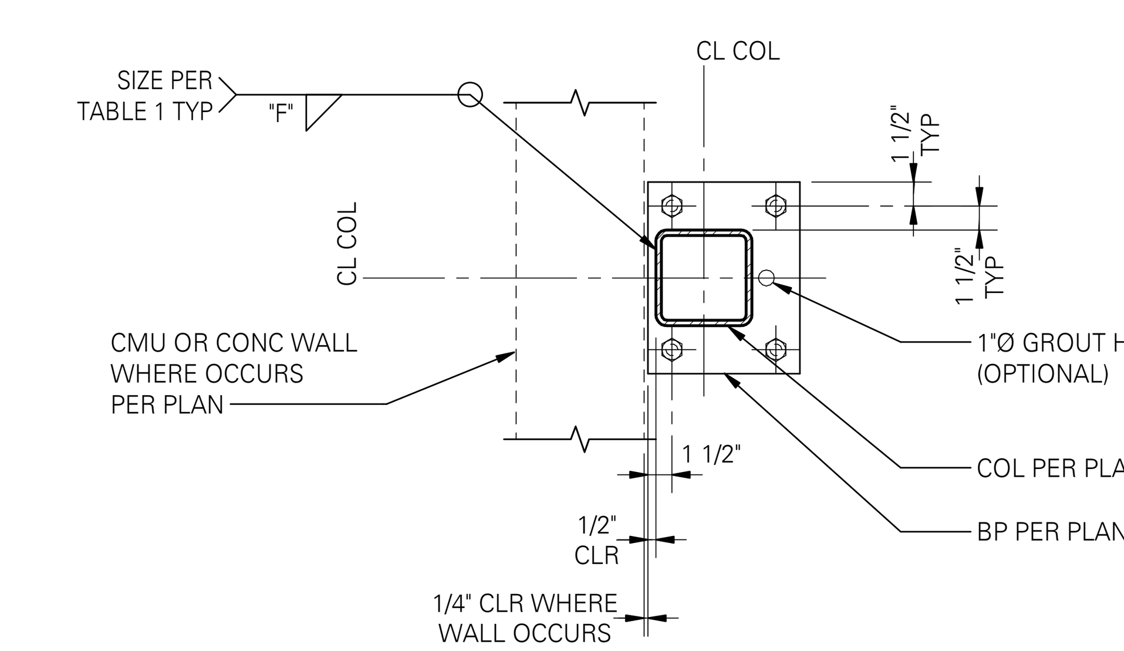
SCALE: 1" = 1'-0" (06910M)

TABLE 1

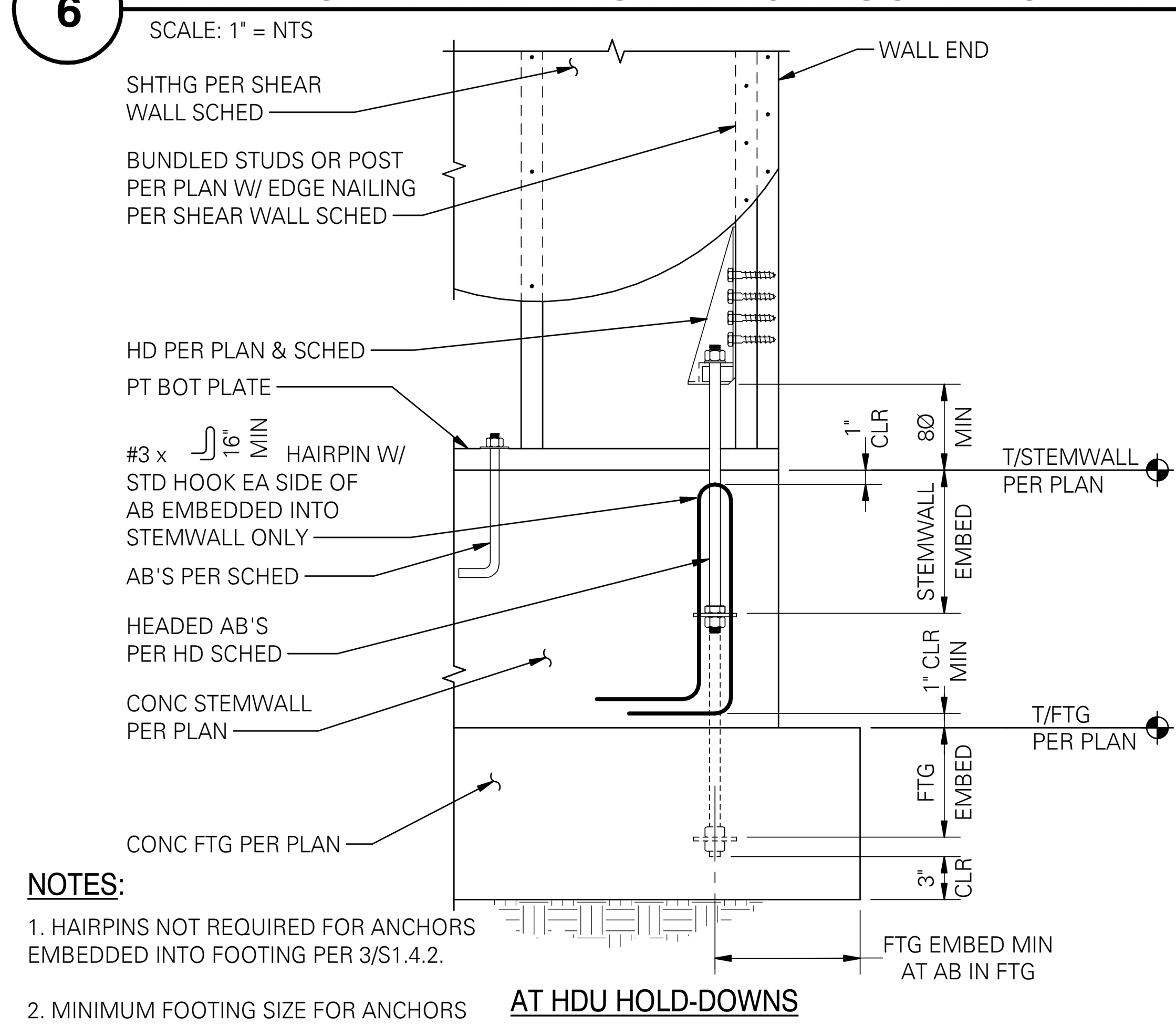
BASEPLATE THICKNESS	"F" FILLET SIZE
3/8" , 1/2"	3/16"
5/8" , 3/4"	1/4"
> = 7/8"	5/16"



PLAN - INTERIOR COLUMN



PLAN - EDGE COLUMN

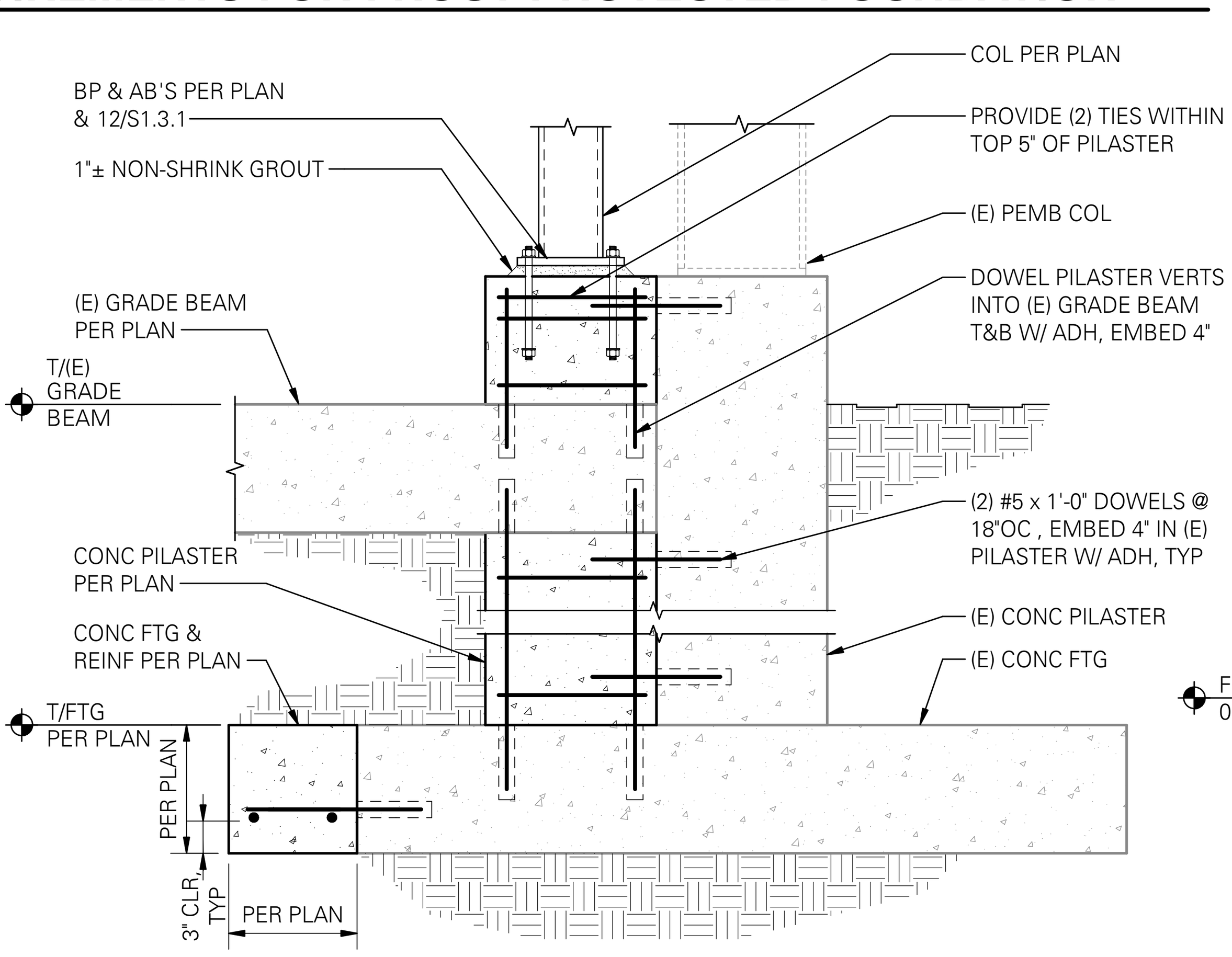


NOTES:

1. HAIRPINS NOT REQUIRED FOR ANCHORS EMBEDDED INTO FOOTING PER 3/S1.4.2.
2. MINIMUM FOOTING SIZE FOR ANCHORS EMBEDDED INTO FOOTING IS 2x EMBED SQUARE WITH DEPTH AS INDICATED.

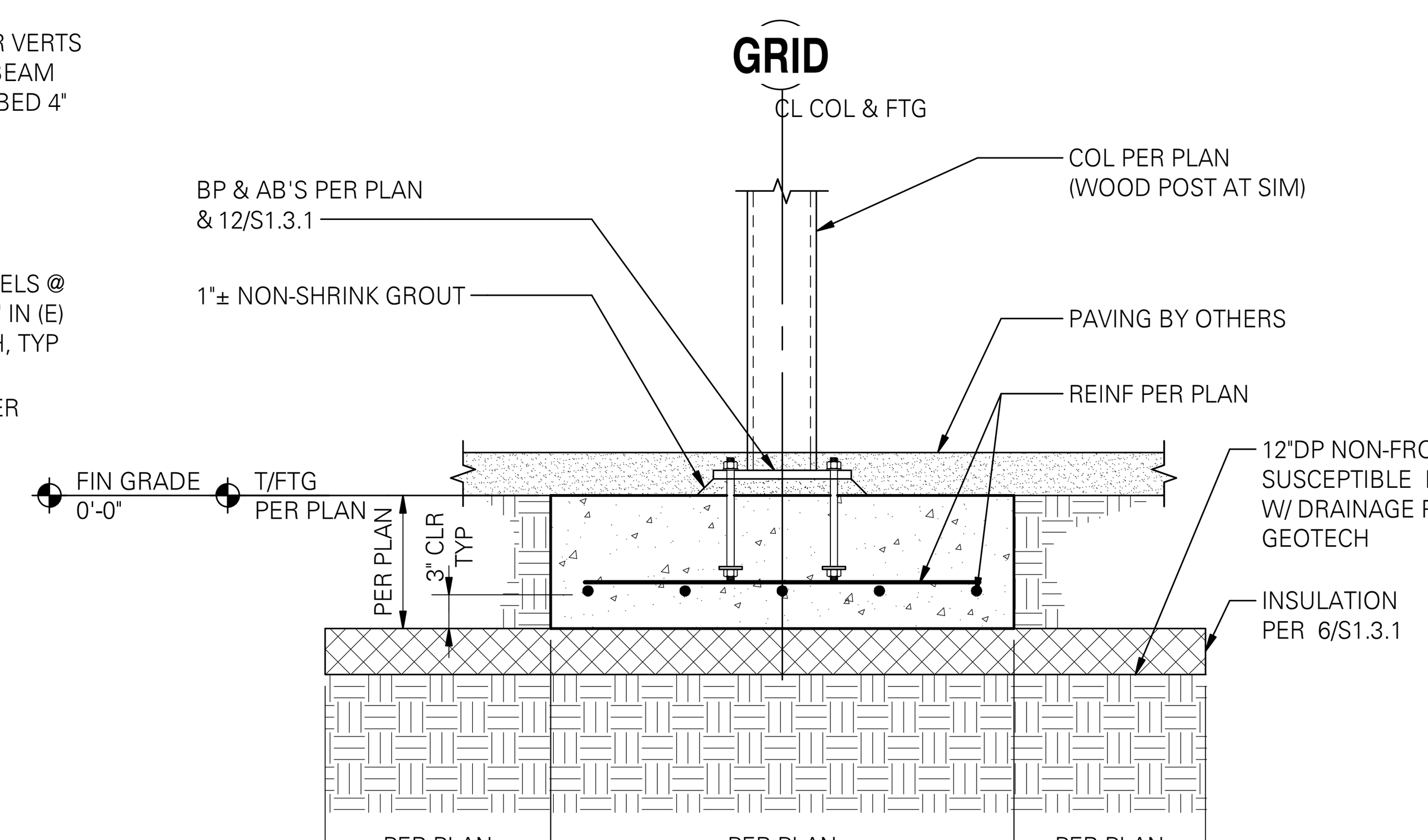
9 TYPICAL HOLD-DOWN AT FOUNDATION - CONCRETE STEMWALL

SCALE: 1" = 1'-0" (06091M)



10 PILASTER AT STEEL COLUMN

SCALE: 3/4" = 1'-0"

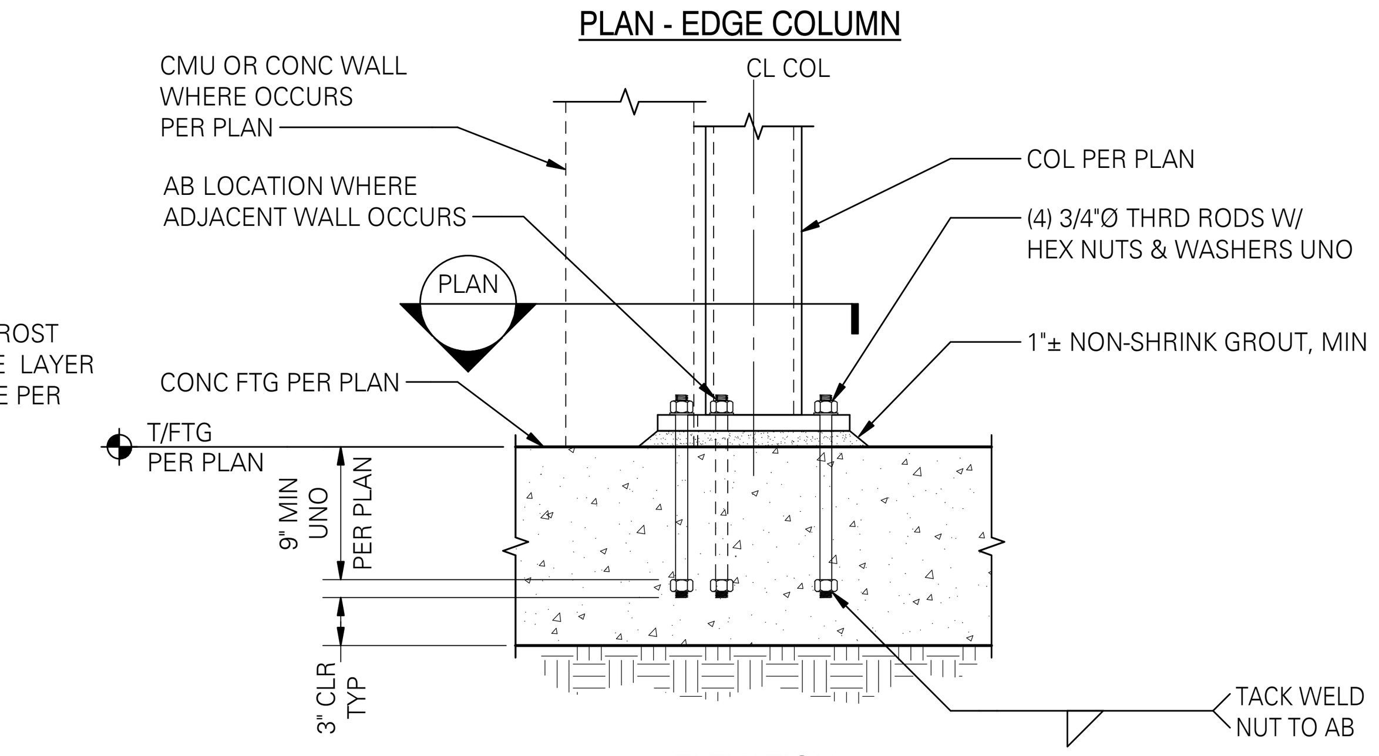


NOTES:

1. WHERE (E) CONC GRADE BEAM OCCURS, DOWEL FTG REINF INTO (E) GRADE BEAM W/ ADH, EMBED 4".

11 INTERIOR SPREAD FOOTING AT STEEL COLUMN

SCALE: 3/4" = 1'-0" (03005M)



ELEVATION

12 TYPICAL BASEPLATE TO FOUNDATION CONNECTION - HSS COLUMN

SCALE: 1" = 1'-0" (05030)

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STRUCTURAL FOUNDATION DETAILS

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S1.3.1

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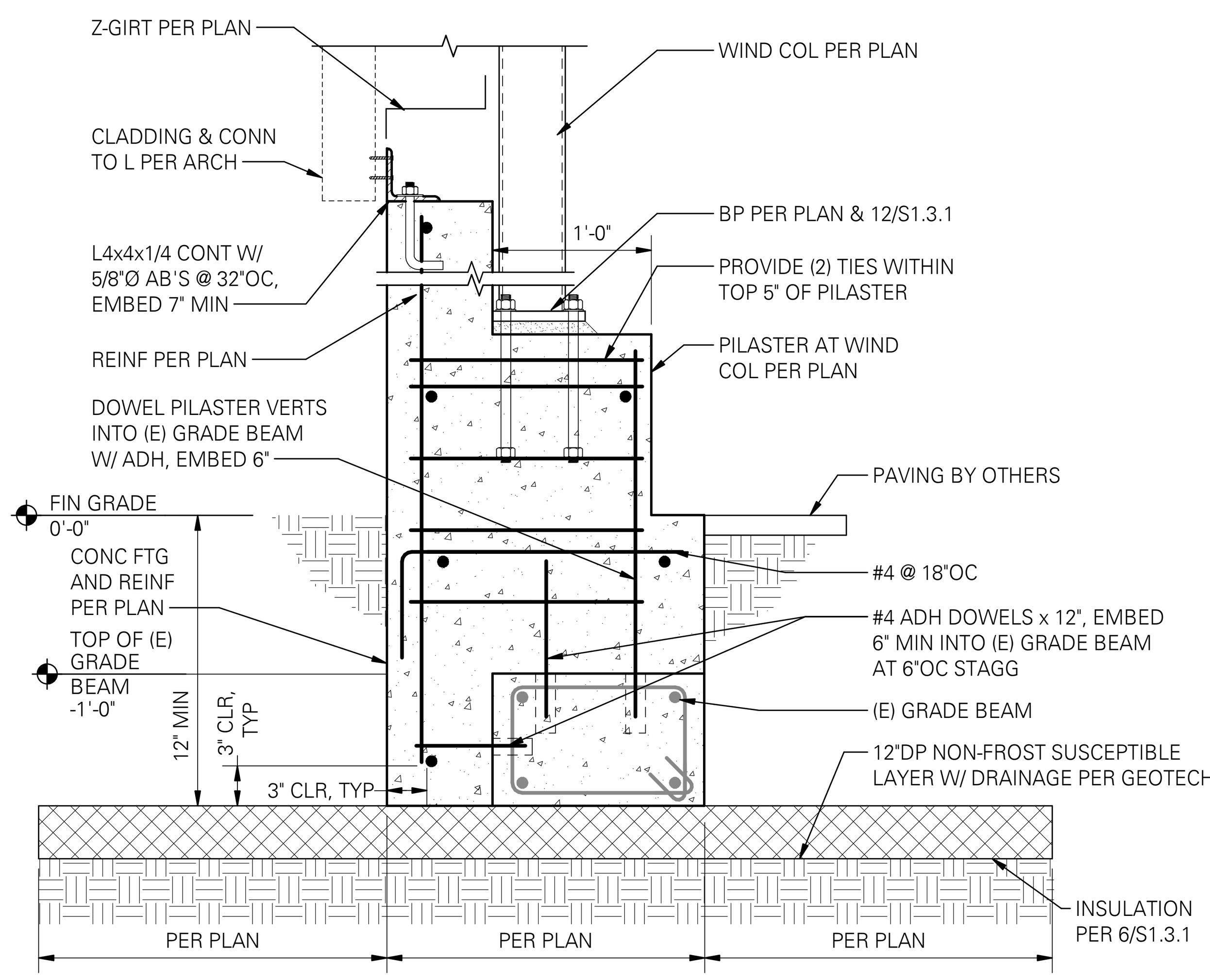
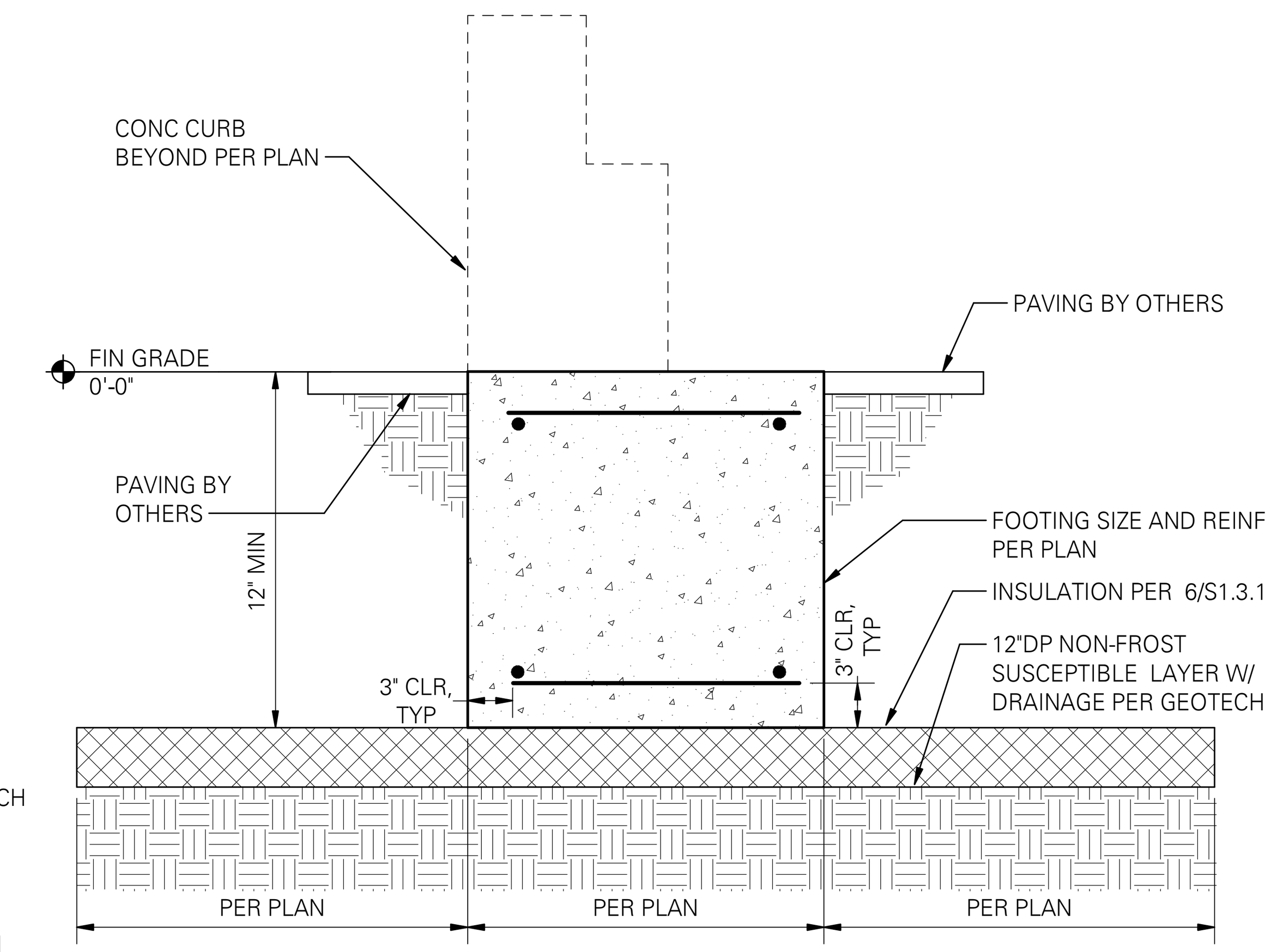
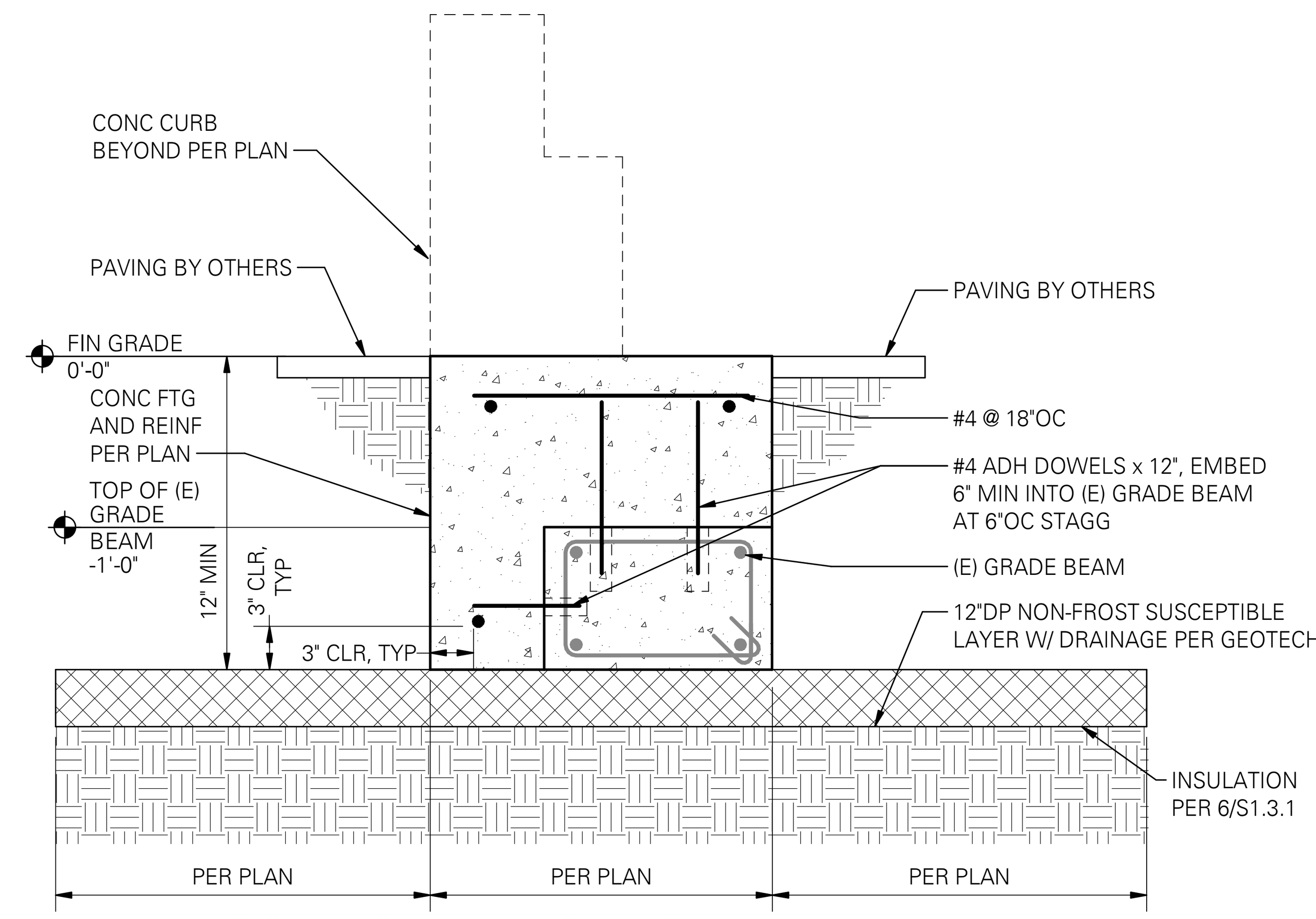


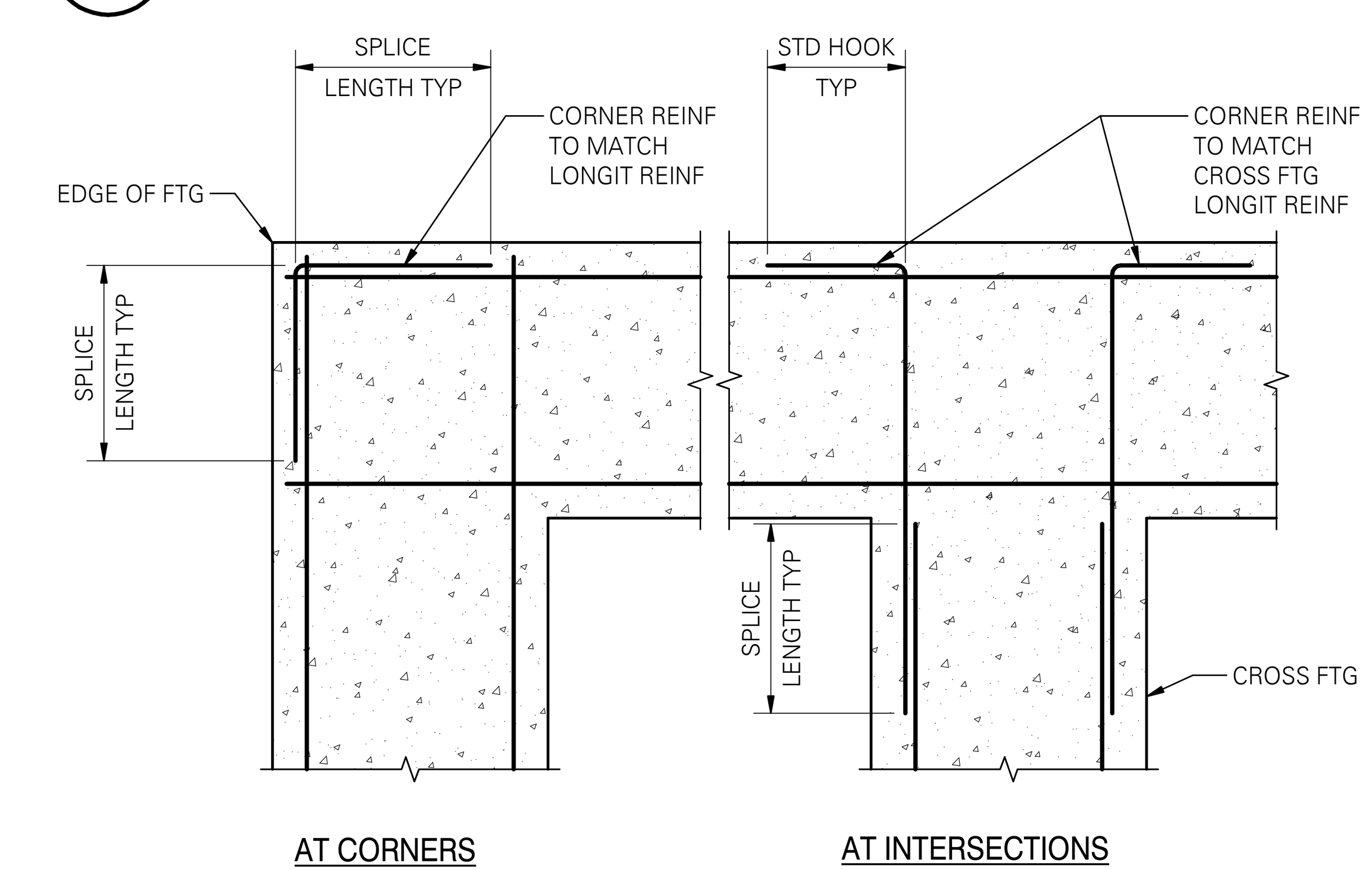
2 **FOOTING AT EXISTING GRADE BEAM**
SCALE: 1" = 1'-0"



3 **SHALLOW FROST PROTECTED FOOTING AT OPENING**
SCALE: 1" = 1'-0"



4 **FOOTING AT EXISTING GRADE BEAM AT OPENING**
SCALE: 1" = 1'-0"



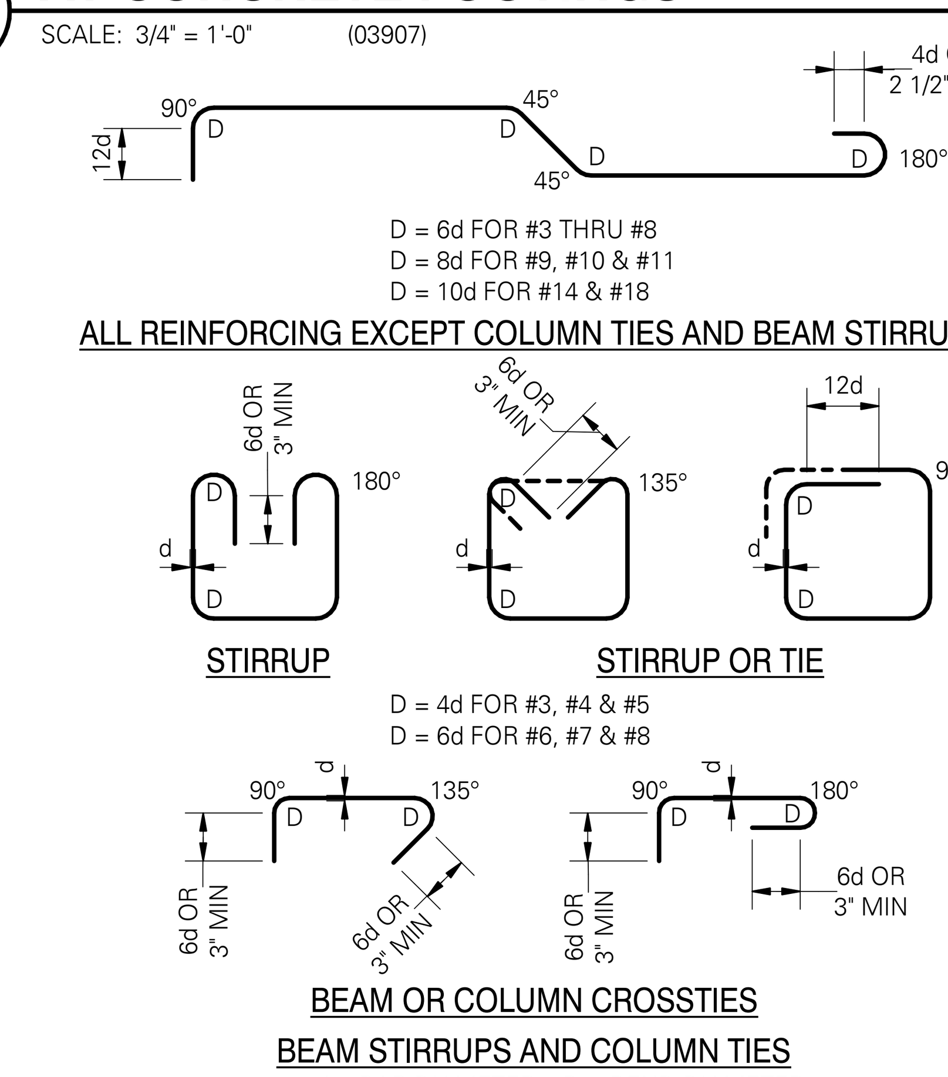
NOTE:
1. SPLICE LENGTHS PER LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE.
2. FOOTING REINFORCING PER PLAN OR ELEVATIONS, SECTIONS AND DETAILS.

8 **PLAN - TYPICAL CORNER REINFORCING AT CONCRETE FOOTINGS**
SCALE: 3/4" = 1'-0" (03907)

01400	GRADE 60 REINFORCING				
BAR SIZE	MISCELLANEOUS BARS		TOP BARS (see note #5)		HOOKED BARS
	Ld	Splice	Ld	Splice	Ldh
f'c = 3000psi					
#3	17	22	22	28	9
#4	22	29	29	38	11
#5	28	36	36	47	14
#6	33	43	43	56	17

NOTES:
1. ALL TABULATED VALUES ARE IN INCHES.
2. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
3. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
4. Ldh = DEVELOPMENT LENGTH OF BAR WITH STANDARD HOOK.
5. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
6. LAP SPLICE OF DIFFERENT SIZED BARS TO BE THE LARGER OF Ld OF THE LARGER BAR OR SPLICE LENGTH OF THE SMALLER BAR.

11 **TYPICAL LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE**
SCALE: 3/4" = 1'-0" (01400)



NOTE:
TIES AND CROSSTIES FOR SHEAR WALL BOUNDARY ELEMENTS SHALL BE DETAILED AS COLUMN TIES/CROSSTIES.

12 **STANDARD HOOKS AND BENDS**
SCALE: 3/4" = 1'-0" (03400)

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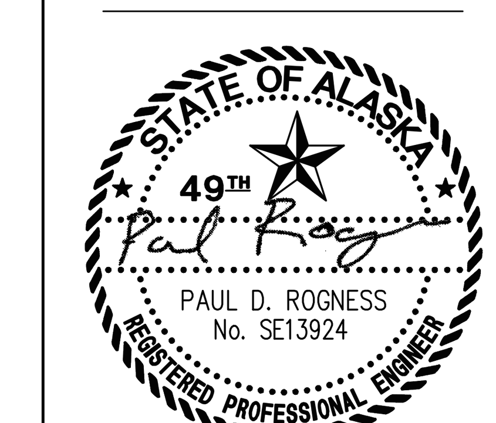

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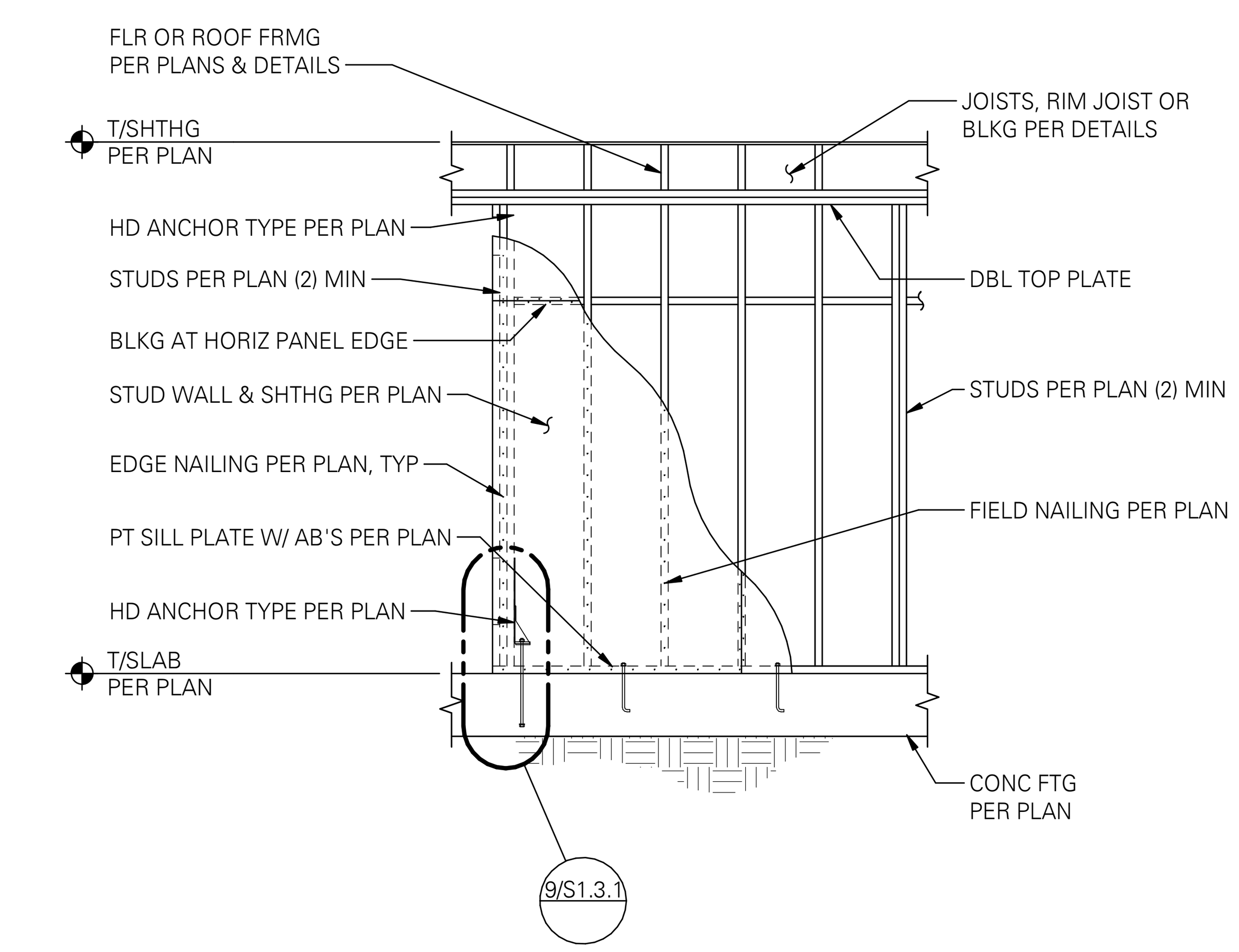
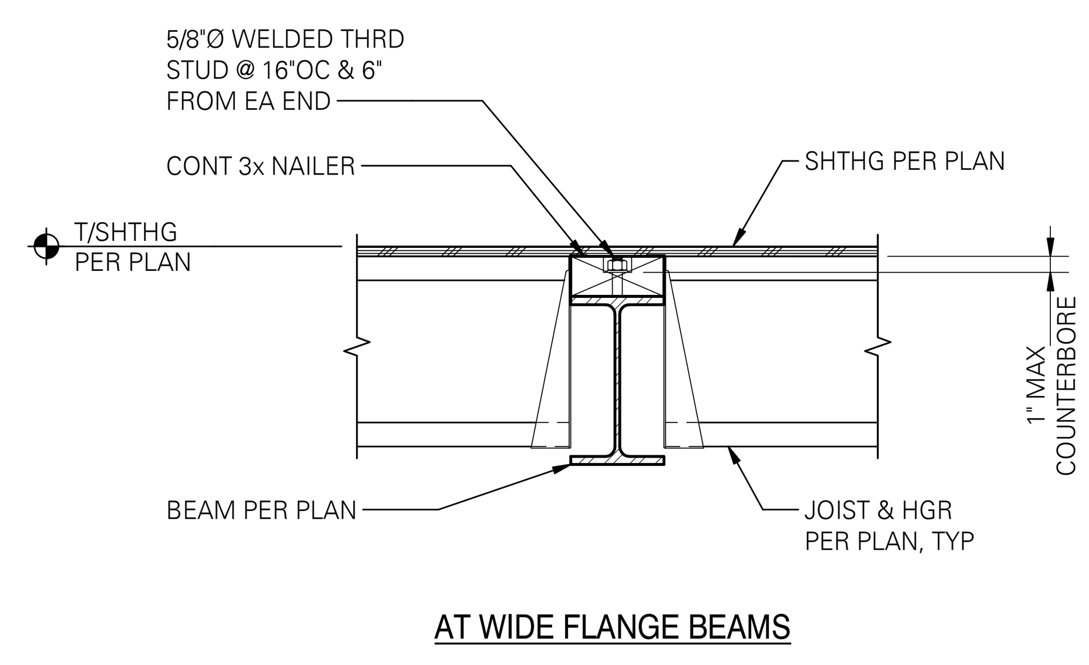


1 TYPICAL SHEAR WALL ELEVATION

SCALE: 1" = 1'-0" (06090)

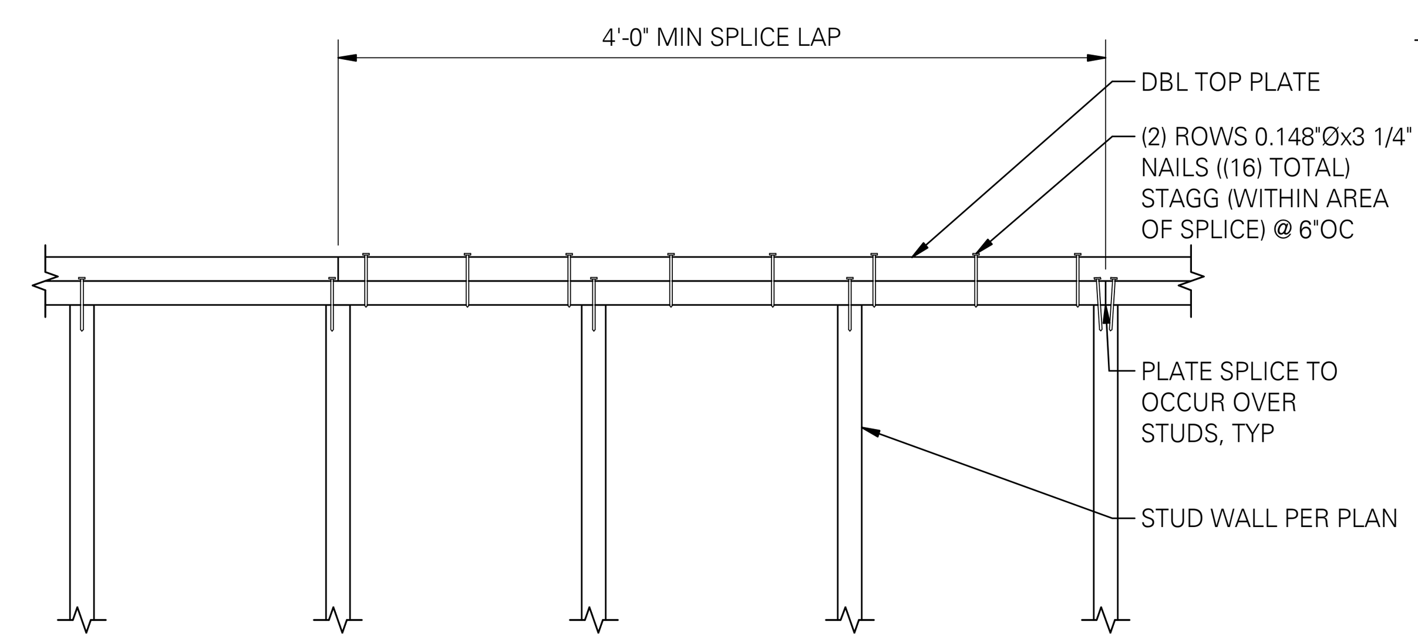


AT WIDE FLANGE BEAMS

NOTE:
ALL WELDED THREADED STUDS SHALL HAVE NUTS AND WASHERS.

2 TYPICAL NAILER DETAILS AT STEEL BEAM

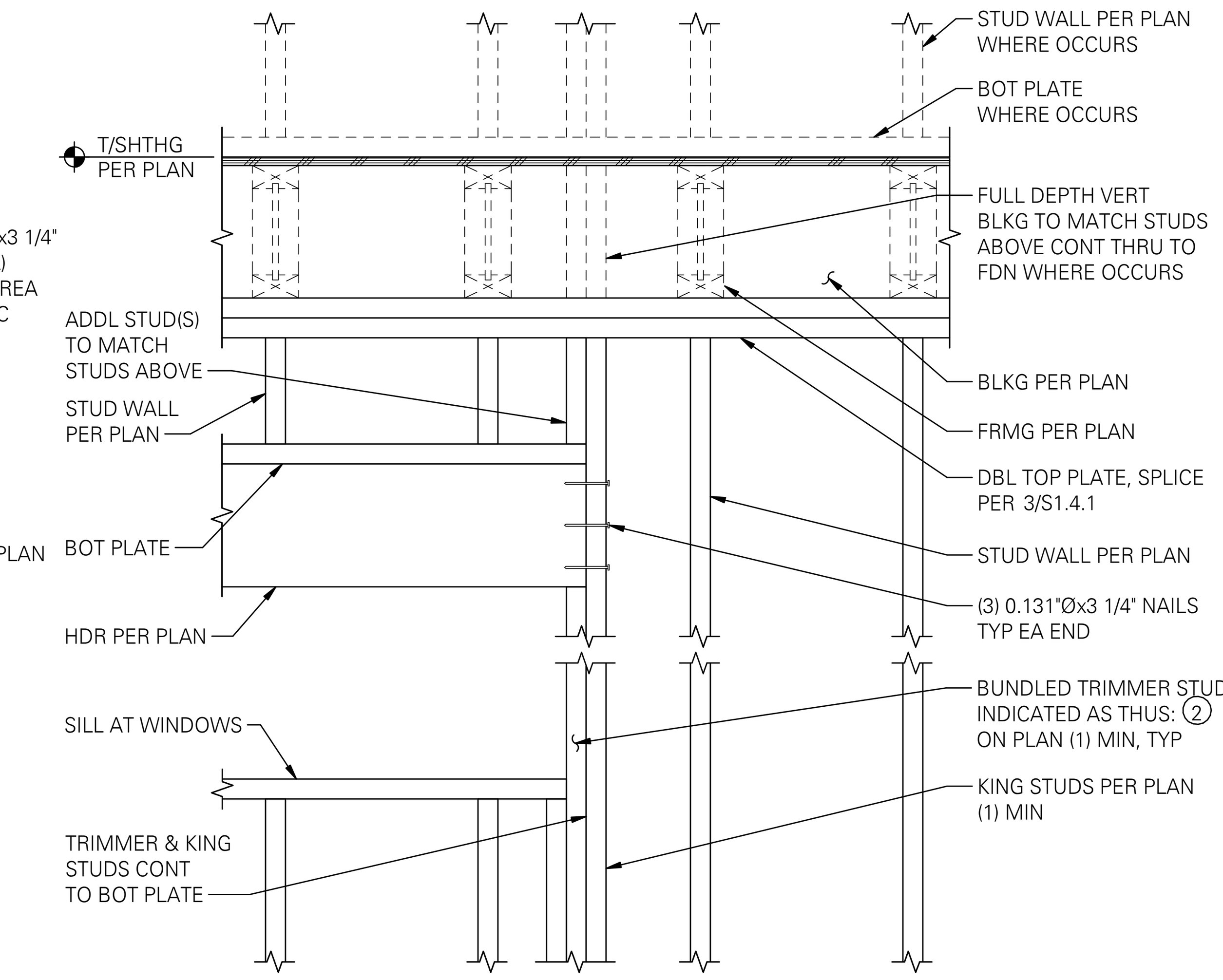
SCALE: 1" = 1'-0" (06909M)



NOTE:
FLOOR/ROOF JOISTS NOT SHOWN FOR CLARITY.

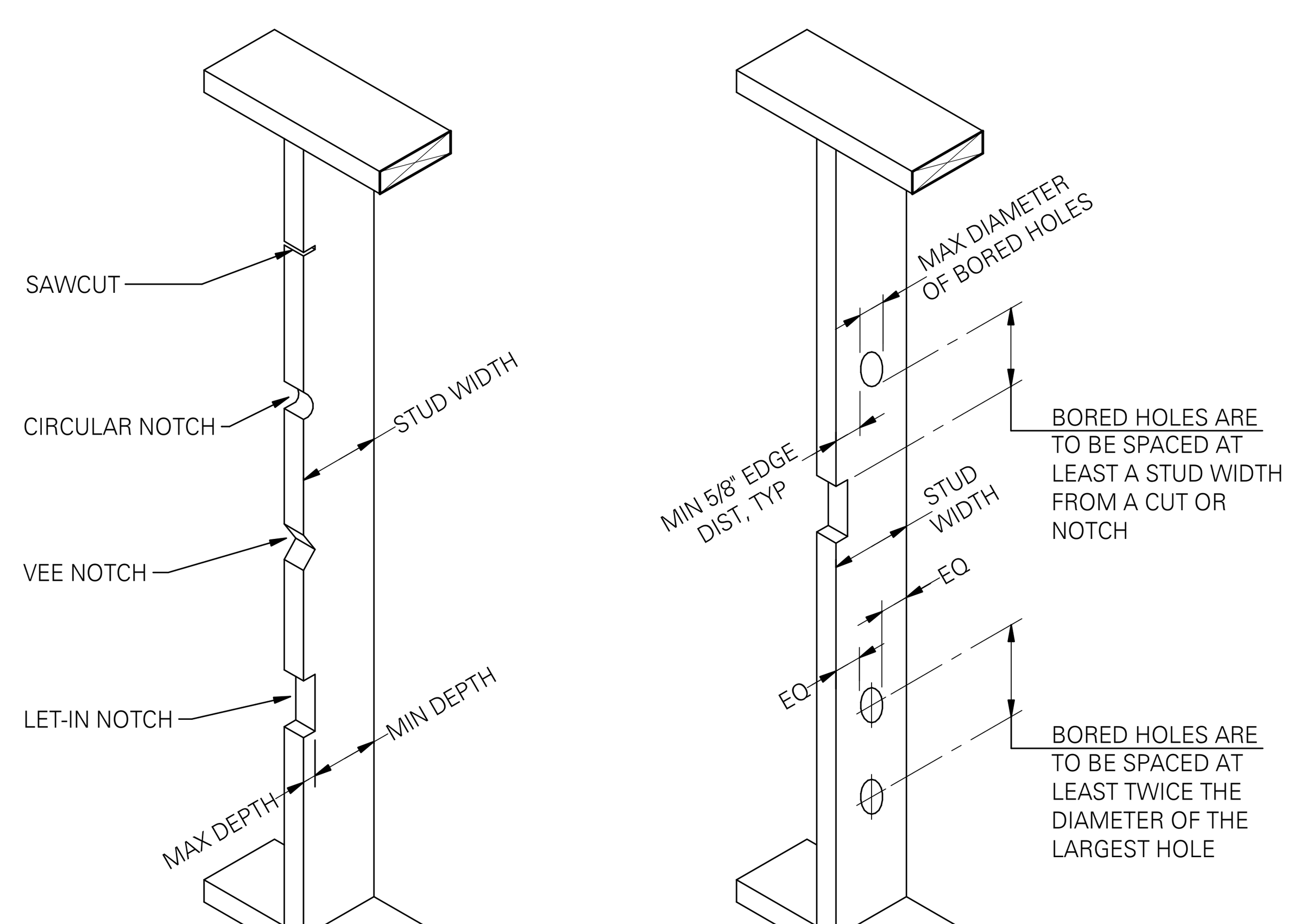
3 TYPICAL PLATE SPLICE DETAIL

SCALE: 1" = 1'-0" (06904)



4 TYPICAL HEADER

SCALE: 1" = 1'-0" (06211)



BEARING WALL STUDS		
STUD SIZE	MAX DEPTH OF EDGE CUT OR NOTCH	MIN DEPTH REMAINING AFTER CUT OR NOTCH
2x4	7/8"	2 5/8"
2x6	1 3/8"	4 1/8"

BEARING WALL STUDS		
STUD SIZE	MAX DIAMETER OF BORED HOLE	MIN DEPTH REMAINING AFTER BORED HOLE
2x4	1 3/8"	5/8" EA SIDE OF HOLE
2x6	2 3/16"	5/8" EA SIDE OF HOLE

NOTE:
STUDS MAY NOT BE BORED IN EXCESS OF 40% OF THE STUD, IF STUDS ARE DOUBLED, BORINGS MAY BE INCREASED TO 60% OF STUD WIDTH PROVIDED NOT MORE THAN (2) SUCCESSIVE STUDS ARE BORED. BORINGS SHALL NOT BE MADE AT THE SAME SECTION WHERE CUT OR NOTCH HAS BEEN MADE.

NON-BEARING WALL STUDS		
STUD SIZE	MAX DEPTH OF EDGE CUT OR NOTCH	MIN DEPTH REMAINING AFTER CUT OR NOTCH
2x4	1 3/8"	2 1/8"
2x6	2 3/16"	3 3/8"

NON-BEARING WALL STUDS		
STUD SIZE	MAX DIAMETER OF BORED HOLE	MIN DEPTH REMAINING AFTER BORED HOLE
2x4	2 1/16"	5/8" EA SIDE OF HOLE
2x6	3 1/4"	5/8" EA SIDE OF HOLE

NOTE:
STUDS MAY NOT BE BORED IN EXCESS OF 60% OF THE STUD. BORINGS SHALL NOT BE MADE AT THE SAME SECTION WHERE CUT OR NOTCH HAS BEEN MADE.

CUTTING AND NOTCHING WOOD STUDS

NOTE:
DO NOT NOTCH MORE THAN THREE ADJACENT STUDS WITHOUT REVIEW BY ENGINEER.

BORED HOLES IN WOOD STUDS

NOTE:
BORED HOLE NOT PERMITTED IN MORE THAN THREE ADJACENT STUDS WITHOUT REVIEW BY ENGINEER.

9 TYPICAL HOLES & NOTCHES IN WOOD STUDS

SCALE: 1" = 1'-0" (06908)

BOLTED SINGLE SHEAR PLATE CONNECTION - SCHEDULE "A"									
3/4" Ø - A325-N		SINGLE ROW		BEAM Fy=50KSI - CONNECTION PLATE Fy=36KSI					
BEAM SIZE	"N" BOLTS REQUIRED (1)	MIN SHEAR PLATE OR WT STEM THICKNESS	MIN HSS COLUMN WALL THICKNESS (10)	WELD SIZE t (7)	MAX SINGLE COPE DEPTH (9)	MAX DOUBLE COPE DEPTH (9)	CONNECTION CAPACITY - ASD (3) (KIPS) UNCOPED	COPED SINGLE	COPED DOUBLE
C8,C9,C10	2	1/4"	1/4"	3/16"	1 1/4"	NR (11)	13.2	7.6	NR (11)
W8	2	1/4"	1/4"	3/16"	1 1/4"	NR (11)	13.2	7.6	NR (11)
W10	2	1/4"	1/4"	3/16"	2 1/2"	1 1/4"	13.2	11.0	11.0
C12,C15	3	1/4"	1/4"	3/16"	2"	1 1/4"	25.6	17.5	17.5
W12	3	1/4"	1/4"	3/16"	2"	1 1/4"	25.6	18.3	18.3
W14	3	5/16"	1/4"	1/4"	2 1/2"	1 1/2"	27.8	EQUAL TO UNCOPED CAPACITY	23.9
W16	4	5/16"	1/4"	1/4"	2 1/2"	1 1/2"	42.4		36.6
W18	5	5/16"	5/16"	1/4"	2 1/2"	1 1/2"	53.0		EQUAL TO UNCOPED CAPACITY
W21	6	3/8"	5/16"	5/16"	2 1/2"	1 1/2"	63.6		
W24	7	3/8"	5/16"	5/16"	2 1/2"	1 1/2"	74.2		
W27	8	3/8"	3/8"	5/16"	2 1/2"	NR (11)	84.8		NR (11)
W30	8	7/16"	3/8"	5/16"	2 1/2"	NR (11)	84.8		NR (11)
W33	9	7/16"	3/8"	5/16"	2 1/2"	NR (11)	95.4		NR (11)
W36	10	7/16"	3/8"	5/16"	2 1/2"	NR (11)	103.2		NR (11)

BOLTED SINGLE ROW SHEAR PLATE CONNECTION NOTES:

1. PROVIDE EITHER STANDARD OR HORIZONTAL SHORT SLOTTED HOLES AS PERMITTED BY AISC J3.2 IN THE BEAM WEB AND/OR THE SHEAR PLATE.

2. WHERE SHORT-SLOTTED HOLES ARE USED, PROVIDE HARDENED WASHERS PER AISC J3.2.

3. CAPACITIES BASED ON AISC 13TH EDITION WITH ASTM A325-N BOLTS.

4. HORIZONTAL DISTANCE FROM SUPPORT FACE TO CENTERLINE OF BOLT GROUP SHALL BE AS SHOWN IN THE DETAILS, BUT SHALL NOT EXCEED 3 1/2" IN THE AS-BUILT CONDITION. SUPPORT FACE FOR TEE IS THE INSIDE FACE OF FLANGE.

5. VERTICAL EDGE DISTANCE FROM BOLT CENTERLINE TO EDGE OF STEEL SHALL BE 1 1/2" TYPICALLY, EXCEPT THAT 1 1/4" IS PERMITTED PER AISC TABLE J3.4 FOR 3/4" DIAMETER BOLTS WITHOUT ANY REDUCTION IN THE TABULATED CAPACITIES.

6. GAP BETWEEN BEAM END AND SUPPORT FACE SHALL BE 1/2" EXCEPT FOR "WT" CONNECTORS USED WITH HSS COLUMNS. WHERE "WT" ARE USED AS SHEAR TAB ELEMENTS, THE GAP BETWEEN FACE OF COLUMN AND END OF BEAM SHALL NOT EXCEED THE LESSER OF 1 1/2" OR THE "k" DISTANCE OF THE "WT" PLUS 1/4".

7. WELD SIZES SHALL BE THE LARGER OF THE SIZE (t), TABULATED IN SCHEDULE "A" OR MINIMUM SHOWN IN TABLE 1.

8. FIELD FILLET WELDS SHALL BE SIZED TO BE AT LEAST 1/8" LARGER THAN THE WELD SIZE SHOWN IN SCHEDULE "A", UNLESS PROPER FIT-UP IS VERIFIED BY A SPECIAL INSPECTOR PRIOR TO WELDING.

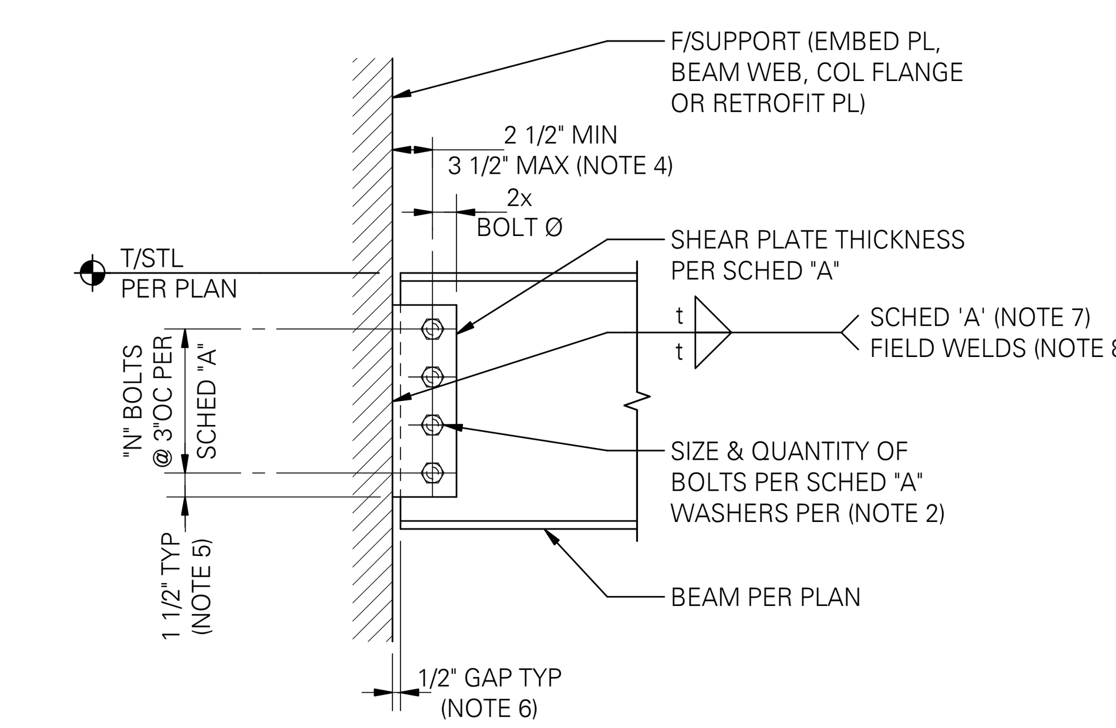
9. COPE DEPTHS (SINGLE AND DOUBLE) SHALL NOT EXCEED THE LESSER OF THOSE SHOWN IN SCHEDULE "A", NOR AS ALLOWED BY BOLT HOLE SPACING AND MINIMUM EDGE DISTANCE REQUIREMENTS. SINGLE COPE LENGTH SHALL NOT EXCEED 6 1/2". DOUBLE COPE LENGTHS SHALL NOT EXCEED THAT REQUIRED TO ACCOMMODATE GIRDER FLANGE + 1/2" MAX GAP BETWEEN FLANGES.

10. UNCOPED CAPACITIES OF WT CONNECTIONS ARE VALID WITH MINIMUM NOMINAL HSS COLUMN WALL TABULATED THICKNESS. THE EFFECTIVE THROAT OF FLARE BEVEL GROOVE WELDS IS BASED ON OUTSIDE RADIUS OF HSS, AND IS TAKEN AS 5/8 TIMES THE HSS WALL THICKNESS BASED ON AWS D1.1, TABLE 2.1. WHEN 3/4" A325-N BOLTS ARE USED, A 3/16" HSS COLUMN WALL THICKNESS IS PERMITTED WITH A 20% REDUCTION OF THE WT CONNECTION CAPACITY.

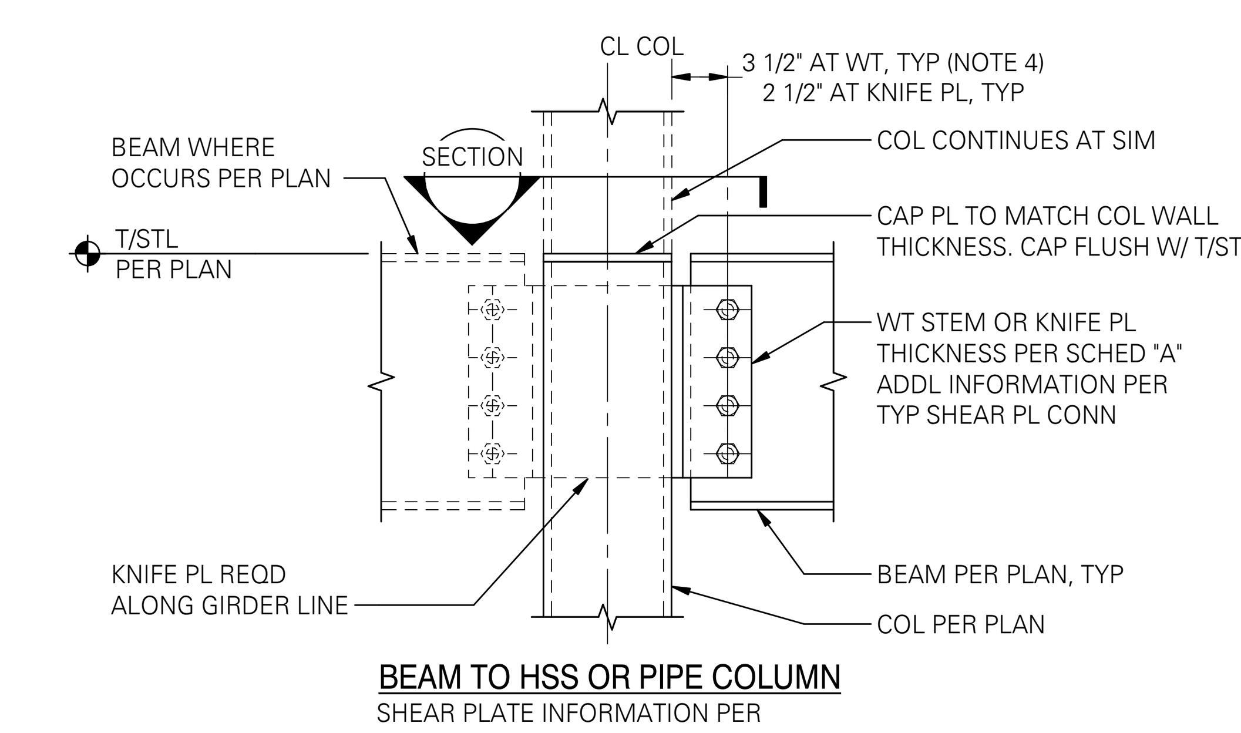
11. NR = NOT RECOMMENDED. DOUBLE COPES FOR THESE BEAMS ARE RESTRICTED BY CONNECTION GEOMETRY AND/OR LARGE REDUCTIONS IN SHEAR CAPACITY. DOUBLE COPES ARE POSSIBLE, BUT CAPACITIES MUST BE CALCULATED FOR SPECIFIC BEAM AND GIRDER GEOMETRIES AND MUST BE DETAILED SEPARATELY.

TABLE 1 MINIMUM WELD SIZE TABLE	
PLATE OR FLANGE THICKNESS (T) *	MINIMUM FILLET SIZE
T < 1/2"	3/16"
1/2" < T ≤ 3/4"	1/4"
3/4" < T	5/16"

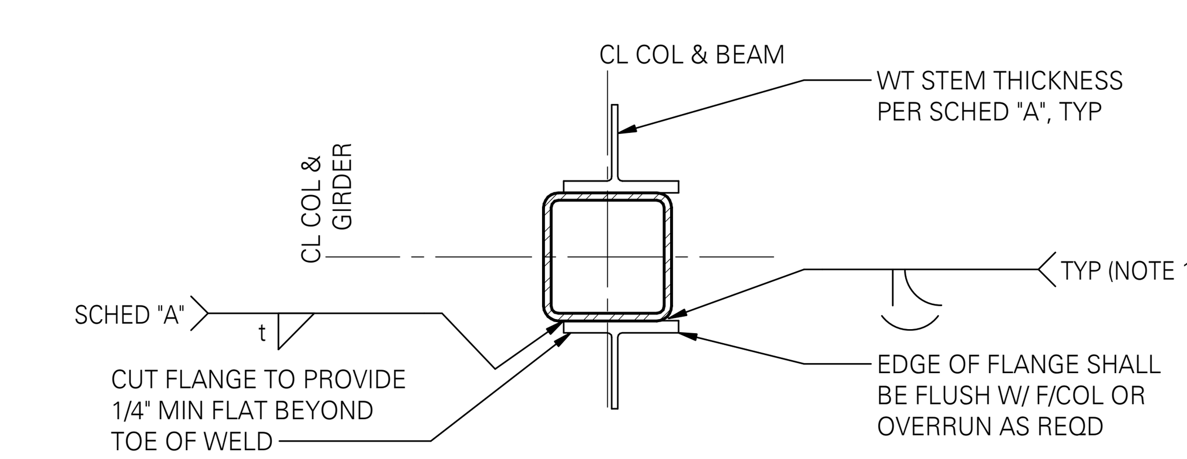
* MINIMUM WELD SIZE TO BE BASED ON THICKNESS OF THE THICKER PART.



TYPICAL SHEAR PLATE CONNECTION



BEAM TO HSS OR PIPE COLUMN
SHEAR PLATE INFORMATION PER TYPICAL SHEAR PLATE CONNECTION.



TYPICAL SECTION AT INTERIOR COLUMN

10 SINGLE SHEAR PLATE (SINGLE ROW) CONNECTIONS

SCALE: 1" = 1'-0" (05201M)

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CIVIL / STRUCTURAL

PROJECT NO.17-0009

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
49TH
PAUL D. ROGNESS
No. SE13924
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/19

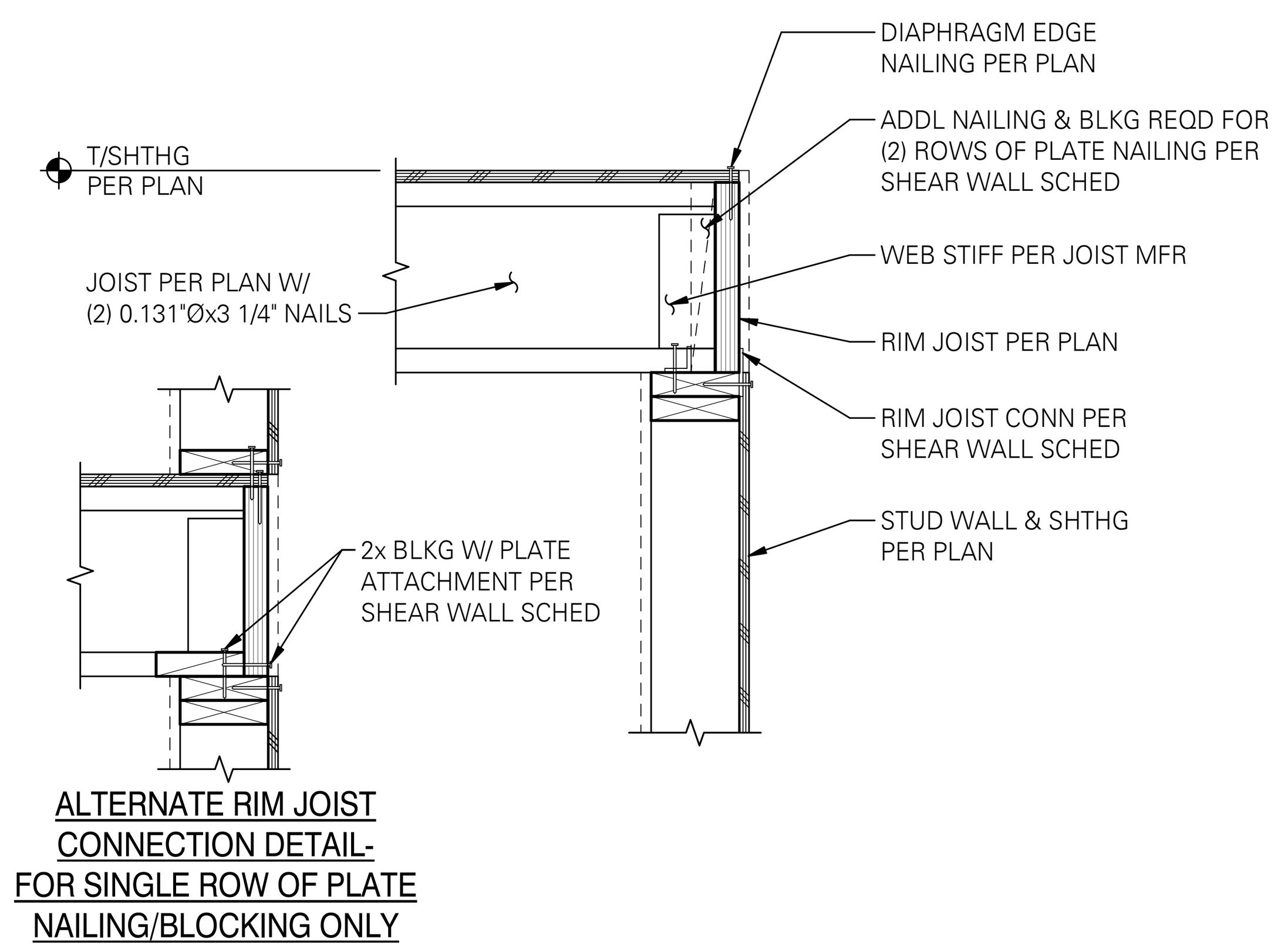
STRUCTURAL WOOD FRAMING DETAILS

AUTHOR: JS CHECKED: JR
REVISION:
ISSUE DATE: JUNE 7, 2019
OWNER PROJECT NO: -

FOR PERMIT
These drawings are sufficiently complete for submission to the jurisdiction having authority for permit. The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the jurisdiction having authority and DCI Engineers.

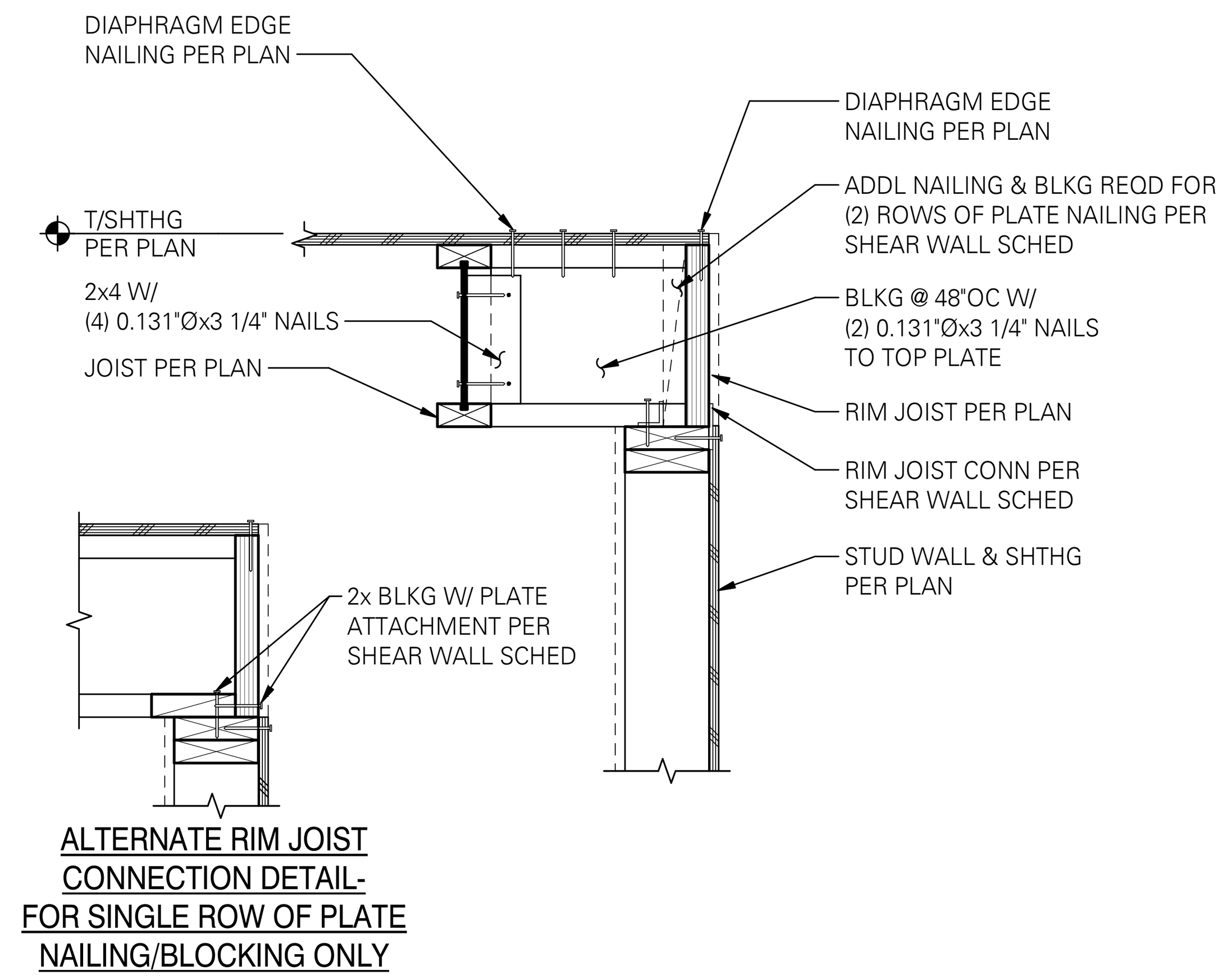
S1.4.1

FULL SIZE PRINTED ON 22 x 34



1 EXTERIOR WALL PERPENDICULAR TO FLOOR JOISTS

SCALE: 1" = 1'-0" (06002M)



2 EXTERIOR WALL PARALLEL TO FLOOR JOISTS

SCALE: 1" = 1'-0" (06001M)

01420A

HOLD-DOWN/STRAP SCHEDULE - HEM-FIR STUDS

[1, 2, 7, 11] ← INDICATES FOOTNOTES

	TYPE	NUMBER OF STUDS/POST [3, 12]	NAILS, SCREWS OR BOLTS	ANCHOR [4]					NOTES
				DIAMETER [10]	CONCRETE EMBEDMENT/CAPACITY				
					STEMWALL [5]		FOOTING		
					EMBED CIP [6, 14]	CAPACITY	EMBED CIP [6]	CAPACITY	
CONCRETE TO WOOD	LSTHD8(RJ)	(2) 2x	(20) 0.148"Øx3" NAILS	----	----	1.95k / 1.61k	----	1.95k / 1.61k	[13]
	STHD10(RJ)	(2) 2x	(28) 0.148"Øx3" NAILS	----	----	2.94k / 2.18k	----	2.94k / 2.18k	[13]
	STHD14(RJ)	(2) 2x	(30) 0.148"Øx3" NAILS	----	----	3.81k / 3.5k	----	3.81k / 3.5k	[13]
	HDU2	(2) 2x	(6) SDS1/4x2 1/2	5/8"Ø	10"	2.22k	8"	2.22k	----
	HDU4	(2) 2x	(10) SDS1/4x2 1/2	5/8"Ø	10"	3.3k	8"	3.3k	----
	HDU5	(2) 2x	(14) SDS1/4x2 1/2	5/8"Ø	10"	4.1k	8"	4.1k	----
	HDU8	(3) 2x	(20) SDS1/4x2 1/2	7/8"Ø	10"	5.7k	10"	5.7k	----
	HDU11	(1) 4x6 OR (1) 6x	(30) SDS1/4x2 1/2	1"Ø	10"	6.9k	12"	6.9k	----
	HDU14	(1) 6x	(36) SDS1/4x2 1/2	1"Ø	10"	7.8k	12"	10.4k	----
	HD12	(1) 6x6	(4) 1"Ø	1 1/8"Ø	10"	8.6k	15"	12.7k	----
	HD19	(1) 6x6	(5) 1"Ø	1 1/4"Ø	10"	9.5k	15"	16.2k	----

NOTES:

[1] SOME HOLD-DOWN TYPES MAY NOT BE USED ON THIS PROJECT.

[2] TYPICAL HOLD-DOWN DETAILS PER 9/S1.3.1. ANCHOR REINFORCEMENT REQUIRED AT STEMWALLS.

[3] PROVIDE PANEL EDGE NAILING PER SHEAR WALL SCHEDULE AT HOLD-DOWN STUDS/POSTS.

[4] BASED ON MINIMUM f'c = 3000 PSI CONCRETE.

[5] STEMWALLS SHALL BE 8" WIDE x 18" TALL MINIMUM.

[6] CAST-IN-PLACE (CIP) TYPE THREADED RODS AT HOLD-DOWNS SHALL HAVE TWO HEX HEAD NUTS WITH OVERSIZED WASHERS.

[7] INCLUDES 1.6 LOAD DURATION INCREASE FOR WOOD.

[8] BASED ON 11 7/8" DEEP FLOOR JOIST.

[9] TOTAL NAILS SPECIFIED, USE HALF THE NAILS AT THE STUDS ABOVE AND BELOW LEVEL BEING CONNECTED.

[10] AT PRESSURE TREATED SILLS, USE HOT DIPPED GALVANIZED BOLTS.

[11] POST INSTALLED HOLD-DOWN OPTIONS MAY BE AVAILABLE AT SOME CONDITIONS. CONTACT ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

[12] NAIL LAMINATE MULTIPLE 2x STUDS WITH PLATE NAILING PER SHEAR WALL SCHEDULE.

[13] MIDWALL/CORNER
WALL END

[14] STUD WALLS SHALL BE 2x6, CENTER HOLD-DOWN IN STUD WALL.

3 HOLD-DOWN/STRAP SCHEDULE - HEM-FIR STUDS

SCALE: 1" = 1'-0" (01420A)

01430D

SHEAR WALL SCHEDULE W6 FOR 0.148"Øx 2 1/2" NAILS IN DOUG-FIR LARCH (2012 IBC) [16]

SOME SHEAR WALL TYPES NOTED MAY NOT BE USED ON THIS PROJECT.

WALL TYPE	WALL SHEATHING APA-RATED [1, 2, 12]	NAIL SIZE & SPACING AT ALL PANEL EDGES [4, 5]	BLOCKING & STUD SIZE AT ADJOINING PANEL EDGES [3, 6, 13]	RIM JOIST OR BLOCKING CONN TO TOP PLATE BELOW [7, 8]	2x PLATE ATTACHMENT	SILL PLATE ATTACHMENT		SHEAR CAPACITY LBS/FT
					NAILING TO WOOD RIM JOIST OR BLOCKING BELOW	ANCHOR BOLT TO CONCRETE BELOW [10]	SILL PLATE AT FOUNDATION [11]	
W6	15/32"	0.148"Øx2 1/2" @ 6"OC	2x	CLIP @ 16"OC	0.148"Øx3 1/4" @ 6"OC	5/8"Ø @ 48"OC	2x	310
W4	15/32"	0.148"Øx2 1/2" @ 4"OC STAGGERED	3x	CLIP @ 12"OC	0.148"Øx3 1/4" @ 4"OC	5/8"Ø @ 32"OC	2x	460
						5/8"Ø @ 48"OC	3x [15]	
W3	15/32"	0.148"Øx2 1/2" @ 3"OC STAGGERED	3x	CLIP @ 8"OC	0.148"Øx3 1/4" @ 6"OC (2) ROWS [9]	5/8"Ø @ 24"OC	2x	600
						5/8"Ø @ 32"OC	3x [15]	
W2	15/32"	0.148"Øx2 1/2" @ 2"OC STAGGERED	3x	CLIP @ 16"OC EACH SIDE	0.148"Øx3 1/4" @ 6"OC (2) ROWS [9]	5/8"Ø @ 16"OC	2x	770
						5/8"Ø @ 24"OC	3x [15]	
2W4	15/32" BOTH SIDES	0.148"Øx2 1/2" @ 4"OC STAGGERED	3x	CLIP @ 12"OC EACH SIDE	0.148"Øx3 1/4" @ 4"OC (2) ROWS [9]	5/8"Ø @ 24"OC	3x [15]	920
2W3	15/32" BOTH SIDES	0.148"Øx2 1/2" @ 3"OC STAGGERED	3x	CLIP @ 8"OC EACH SIDE	CLIP @ 8"OC EACH SIDE [7, 8] OR (2) ROWS OF SDS1/4x5 SCREWS @ 8"OC [9]	5/8"Ø @ 16"OC	3x [15]	1200
2W2	15/32" BOTH SIDES	0.148"Øx2 1/2" @ 2"OC STAGGERED	3x	CLIP @ 6"OC EACH SIDE	CLIP @ 6"OC EACH SIDE [7, 8] OR (2) ROWS OF SDS1/4x5 SCREWS @ 6"OC [9]	5/8"Ø @ 12"OC	3x [15]	1540

NOTES:

[1] INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY.

[2] WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUD.

[3] BLOCKING IS REQUIRED AT ALL PANEL EDGES.

[4] PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLD-DOWN REQUIREMENTS PER PLANS. (ALTERNATE NOTE: WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC ABOVE AND BELOW ALL OPENINGS).

[5] SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLD-DOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLD-DOWN POSTS. ADDITIONAL INFORMATION PER HOLD-DOWN DETAILS.

[6] INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.148"Øx2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.148"Øx2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.

[7] BASED ON 0.131"Øx1 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131"Øx2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.

[8] FRAMING CLIPS: A35 OR LTP5 OR APPROVED EQUIVALENT.

[9] WHERE BOTTOM PLATE ATTACHMENT SPECIFIES (2) ROWS OF NAILS OR SCREWS, PROVIDE DOUBLE JOIST,RIM JOIST OR EQUAL BELOW. STAGGER NAILS/SCREWS IN ROWS 1 1/2" APART MINIMUM.

[10] ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 0.229"x3"x3" MINIMUM. THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13/16"x1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. INCREASE PLATE WASHER SIZE AS REQUIRED. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.

[11] PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL GENERAL NOTES.

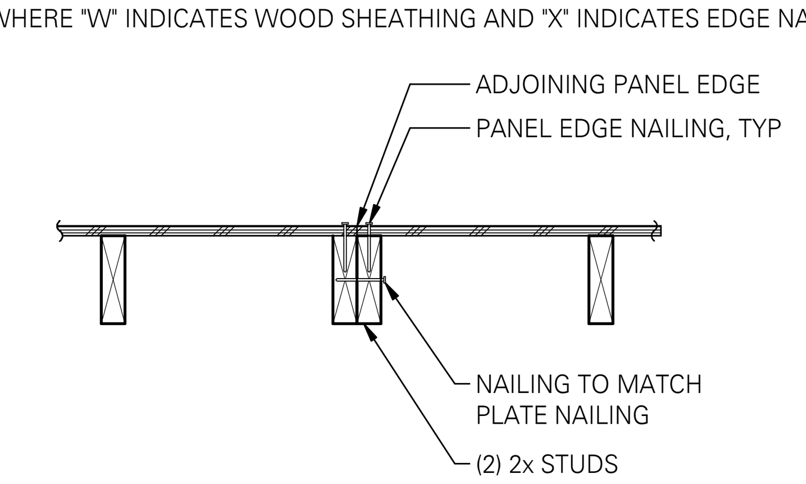
[12] WHERE WOOD SHEATHING (W) IS APPLIED OVER GYPSUM SHEATHING (G), CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.

[13] AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2x STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING, PER SECTION.

[14] CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. SPECIAL INSPECTION MAY BE REQUIRED.

[15] NAIL STUDS TO 3x SILL PLATES WITH EITHER (2) 0.148"Øx4" END NAILS OR (4) 0.131"Øx2 1/2" TOENAILS.

[16] WX WHERE "W" INDICATES WOOD SHEATHING AND "X" INDICATES EDGE NAIL SPACING.



PLAN

9 SHEAR WALL SCHEDULE - DOUG-FIR LARCH

SCALE: 1" = 1'-0" (01430D)

01431B

SHEAR WALL SCHEDULE W6 FOR 0.131"Øx 2 1/2" NAILS IN HEM-FIR LARCH (2012 IBC) [17]

SOME SHEAR WALL TYPES NOTED MAY NOT BE USED ON THIS PROJECT.

WALL TYPE	WALL SHEATHING APA-RATED [1, 2, 12, 13]	NAIL SIZE & SPACING AT ALL PANEL EDGES [4, 5]	BLOCKING & STUD SIZE AT ADJOINING PANEL EDGES [3, 6, 14]	RIM JOIST OR BLOCKING CONN TO TOP PLATE BELOW [7, 8]	2x PLATE ATTACHMENT	SILL PLATE ATTACHMENT		SHEAR CAPACITY LBS/FT
					NAILING TO WOOD RIM JOIST OR BLOCKING BELOW	ANCHOR BOLT TO CONCRETE BELOW [10]	SILL PLATE AT FOUNDATION [11]	
W6	15/32"	0.131"Øx2 1/2" @ 6"OC	2x	CLIP @ 16"OC	0.148"Øx3 1/4" @ 8"OC	5/8"Ø @ 48"OC	2x	240
W4	15/32"	0.131"Øx2 1/2" @ 4"OC	2x	CLIP @ 16"OC	0.148"Øx3 1/4" @ 4"OC	5/8"Ø @ 48"OC	2x	350
W3	15/32"	0.131"Øx2 1/2" @ 3"OC STAGGERED	3x	CLIP @ 12"OC	0.148"Øx3 1/4" @ 4"OC	5/8"Ø @ 32"OC	2x	455
W2	15/32"	0.131"Øx2 1/2" @ 2"OC STAGGERED	3x	CLIP @ 8"OC	0.148"Øx3 1/4" @ 6"OC (2) ROWS [9]	5/8"Ø @ 24"OC	2x	595
						5/8"Ø @ 32"OC	3x [16]	
2W4	15/32" BOTH SIDES	0.131"Øx2 1/2" @ 4"OC STAGGERED	3x	CLIP @ 8"OC	0.148"Øx3 1/4" @ 4"OC (2) ROWS [9]	5/8"Ø @ 24"OC	3x [16]	705
2W3	15/32" BOTH SIDES	0.131"Øx2 1/2" @ 3"OC STAGGERED	3x	CLIP @ 12"OC EACH SIDE	0.148"Øx3 1/4" @ 4"OC (2) ROWS [9]	5/8"Ø @ 16"OC	3x [16]	910
2W2	15/32" BOTH SIDES	0.131"Øx2 1/2" @ 2"OC STAGGERED	3x	CLIP @ 8"OC EACH SIDE	CLIP @ 8"OC EACH SIDE [7, 8] OR (2) ROWS OF SDS1/4x5 SCREWS @ 6"OC [9]	5/8"Ø @ 16"OC	3x [16]	1190

NOTES:

[1] INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY.

[2] WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUD.

[3] BLOCKING IS REQUIRED AT ALL PANEL EDGES.

[4] PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLD-DOWN REQUIREMENTS PER PLANS. (ALTERNATE NOTE: WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC ABOVE AND BELOW ALL OPENINGS).

[5] SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLD-DOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLD-DOWN POSTS. ADDITIONAL INFORMATION PER HOLD-DOWN DETAILS.

[6] INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.131"Øx2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.131"Øx2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.

[7] BASED ON 0.131"Øx1 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131"Øx2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.

[8] FRAMING CLIPS: A35 OR LTP5 OR APPROVED EQUIVALENT.

[9] WHERE BOTTOM PLATE ATTACHMENT SPECIFIES (2) ROWS OF NAILS OR SCREWS, PROVIDE DOUBLE JOIST, RIM JOIST OR EQUAL BELOW. STAGGER NAILS/SCREWS IN ROWS 1 1/2" APART MINIMUM.

[10] ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 0.229"x3"x3" MINIMUM. THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13/16"x1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. INCREASE PLATE WASHER SIZE AS REQUIRED. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.

[11] PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL GENERAL NOTES.

[12] 7/16" APA-RATED SHEATHING (OSB) MAY BE USED IN PLACE OF 15/32" SHEATHING PROVIDED THAT ALL STUDS ARE SPACED AT 16"OC MAXIMUM.

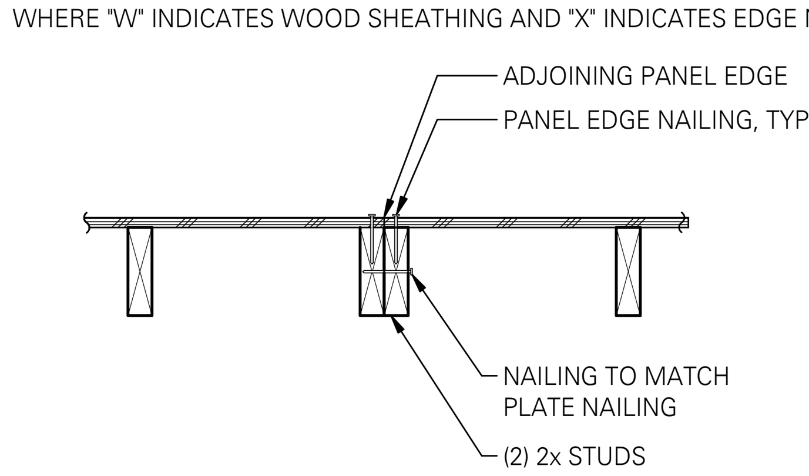
[13] WHERE WOOD SHEATHING (W) IS APPLIED OVER GYPSUM SHEATHING (G), CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.

[14] AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2x STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING, PER SECTION.

[15] CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. SPECIAL INSPECTION MAY BE REQUIRED.

[16] NAIL STUDS TO 3x SILL PLATES WITH EITHER (2) 0.148"Øx4" END NAILS OR (4) 0.131"Øx2 1/2" TOENAILS.

[17] WX WHERE "W" INDICATES WOOD SHEATHING AND "X" INDICATES EDGE NAIL SPACING.



PLAN

11 SHEAR WALL SCHEDULE - HEM-FIR

SCALE: 1" = 1'-0" (01431B)

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CIVIL / STRUCTURAL

PROJECT NO.17-0009

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
49TH
PAUL D. ROGNESS
No. SE13924
REGISTERED PROFESSIONAL ENGINEER

EXPIRES: 12/31/19

STRUCTURAL WOOD FRAMING DETAILS

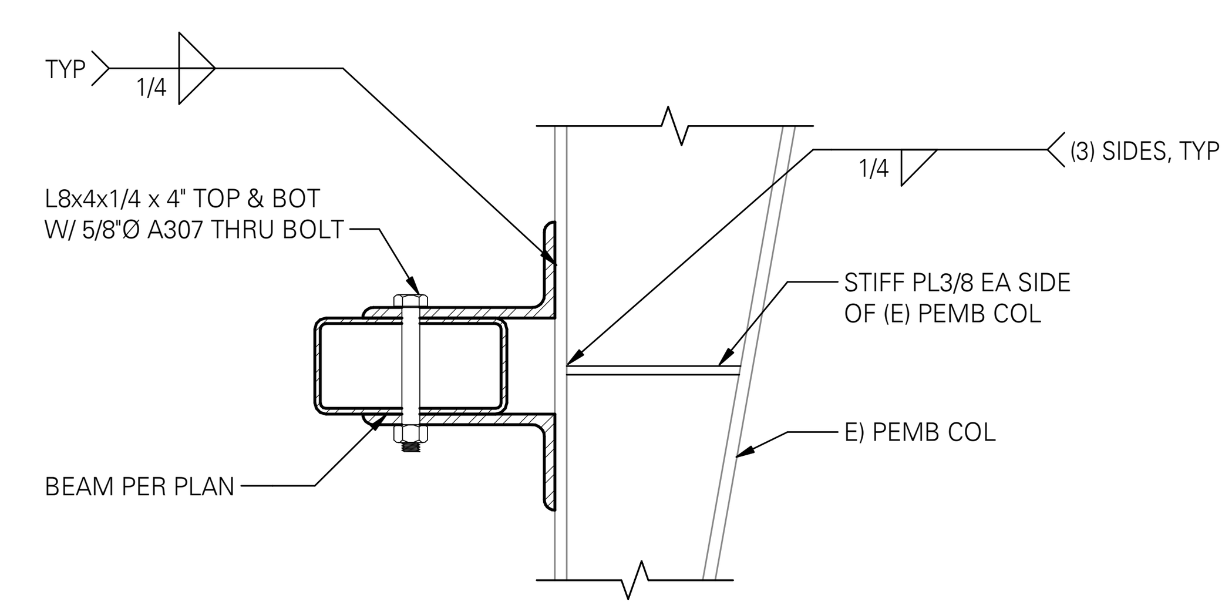
AUTHOR: JS CHECKED: JR
REVISION:
ISSUE DATE: JUNE 7, 2019
OWNER PROJECT NO: -

FOR PERMIT

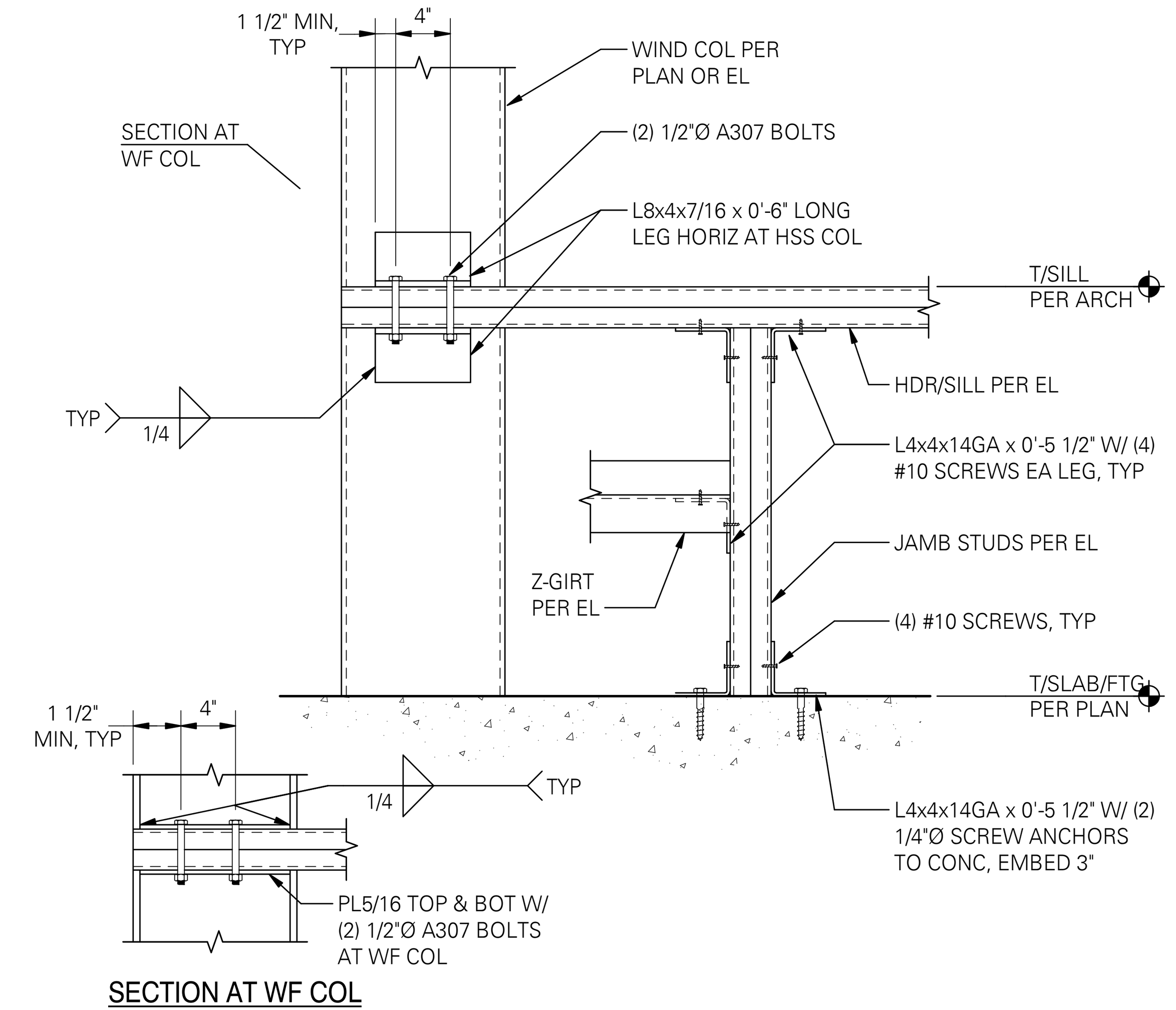
These drawings are sufficiently complete for submission to the jurisdiction having authority for permit. The Contractor shall not use these drawings for construction until Contractor receives written approval for use in construction by the jurisdiction having authority and DCI Engineers.

S1.4.2

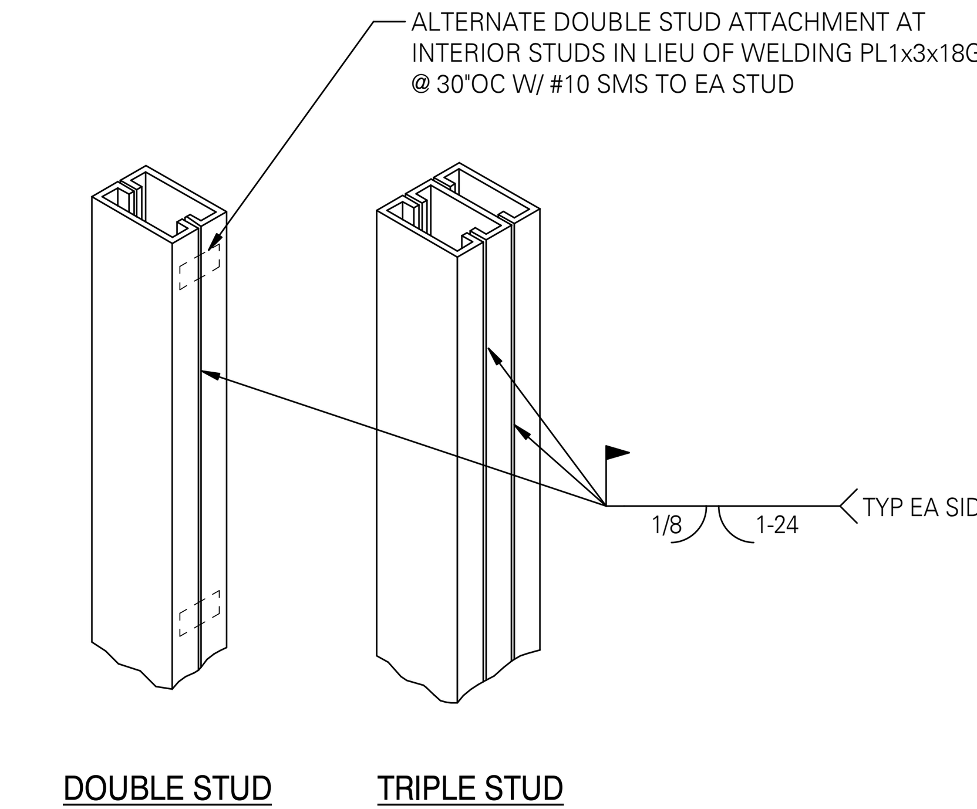
FULL SIZE PRINTED ON 22 x 34



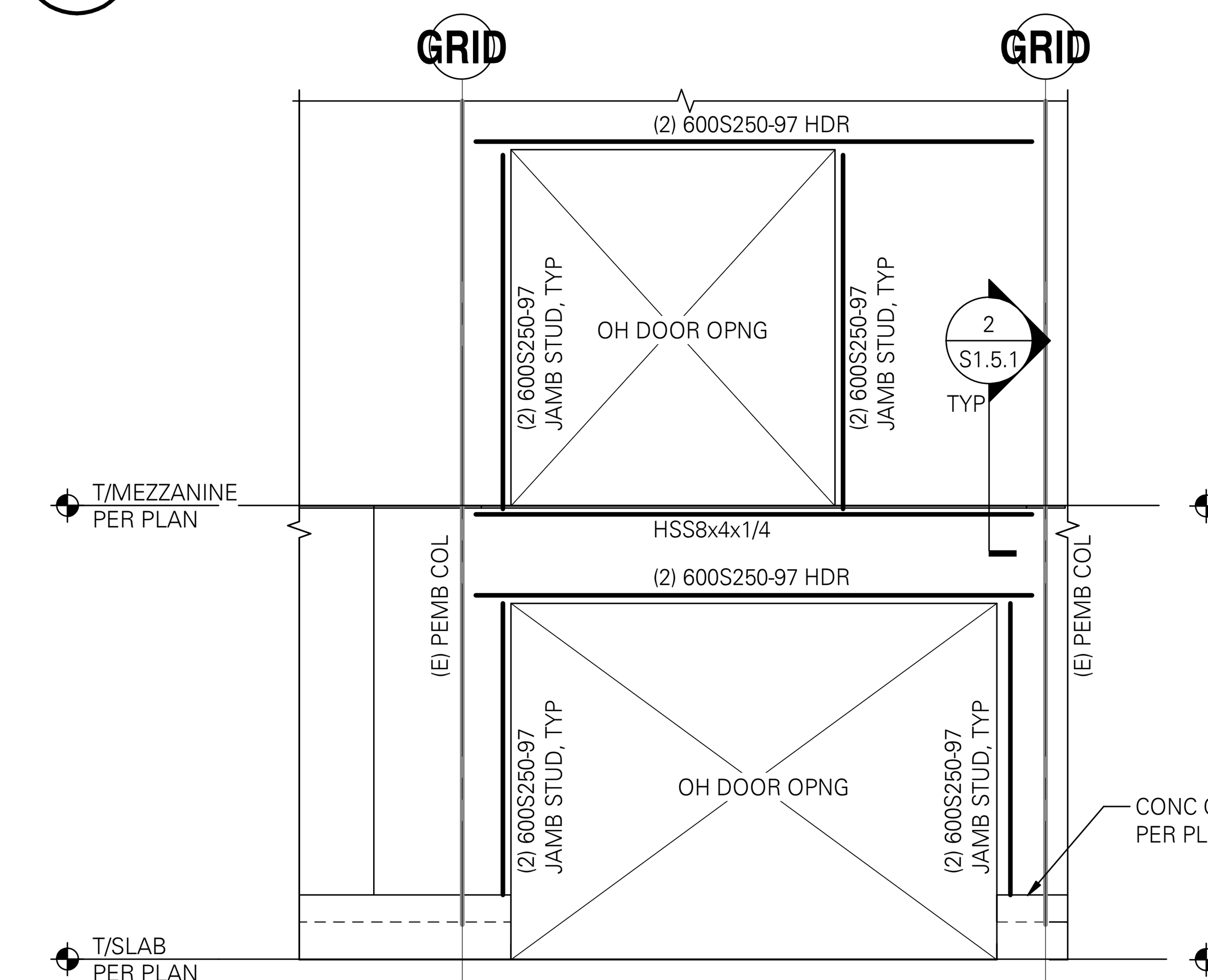
2 SECTION AT BEAM TO PEMB COLUMN
SCALE: 1 1/2" = 1'-0"



3 JAMB AND HEADER/SILL ATTACHMENT
SCALE: 1" = 1'-0"

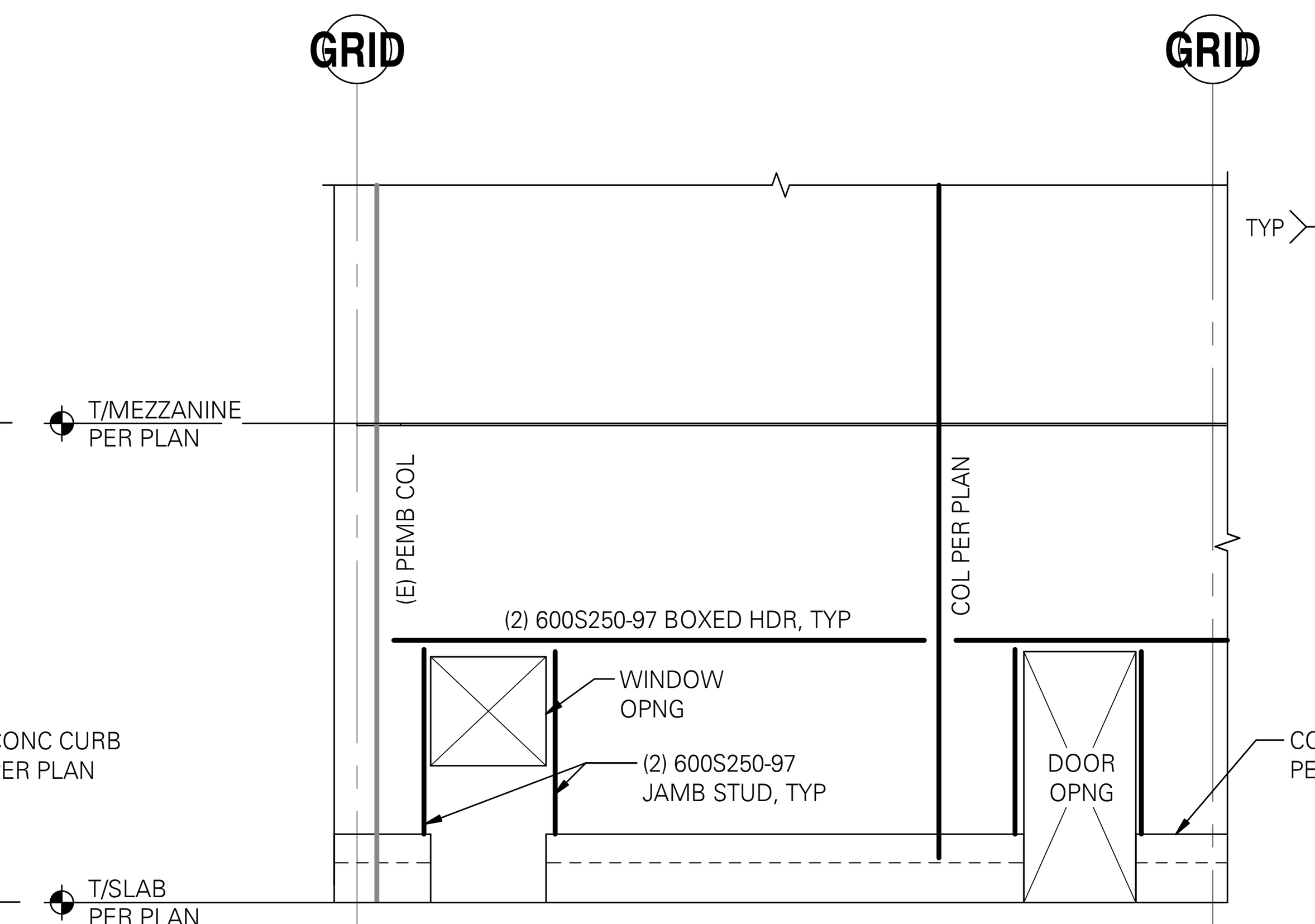


4 TYPICAL JAMB DETAILS
SCALE: 1 1/2" = 1'-0"



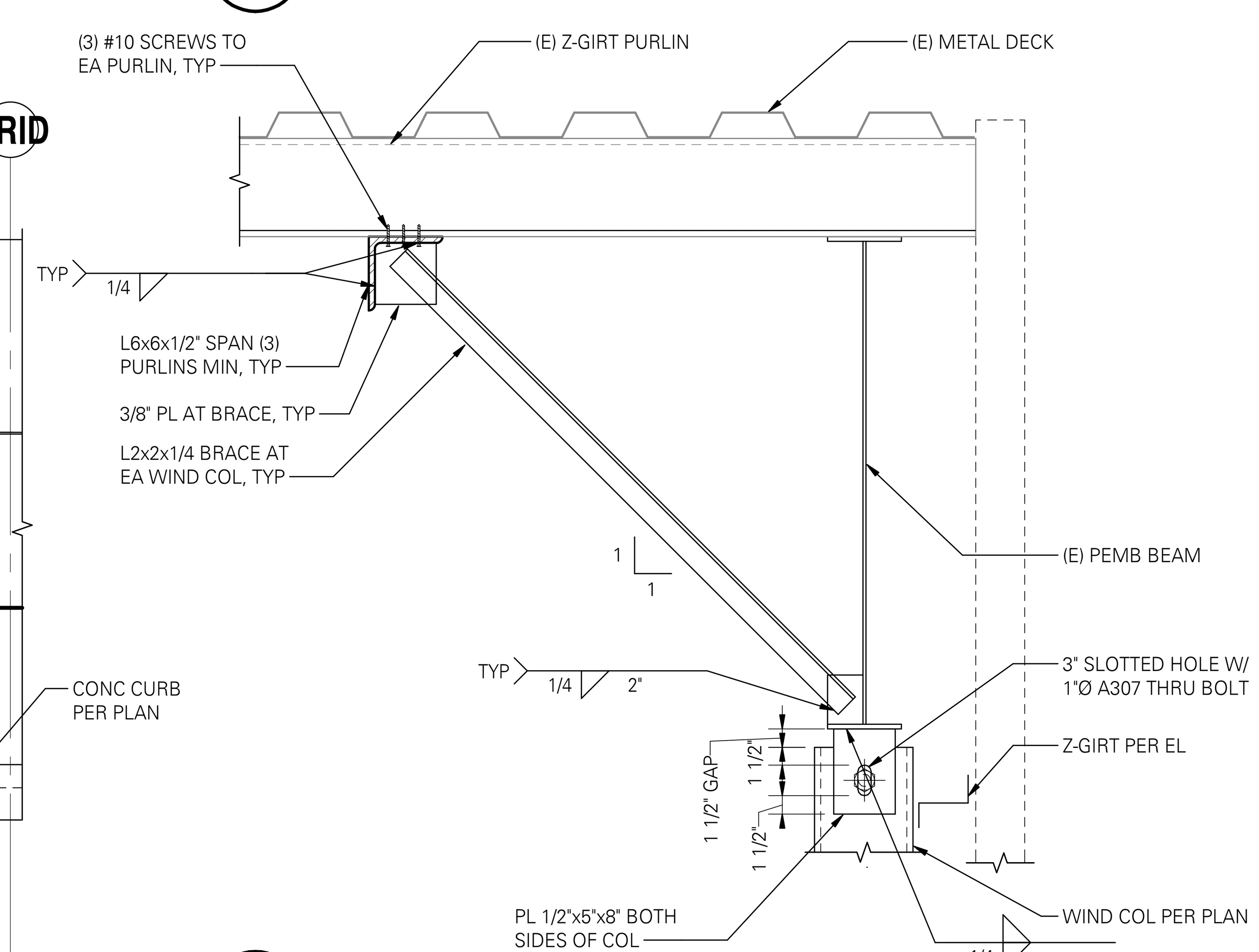
NOTE:
REFERENCE 3 & 4/S.1.5.1 FOR JAMB AND HEADER ATTACHMENT.

6 ELEVATION AT CFS OVERHEAD DOOR
SCALE: 3/16" = 1'-0"

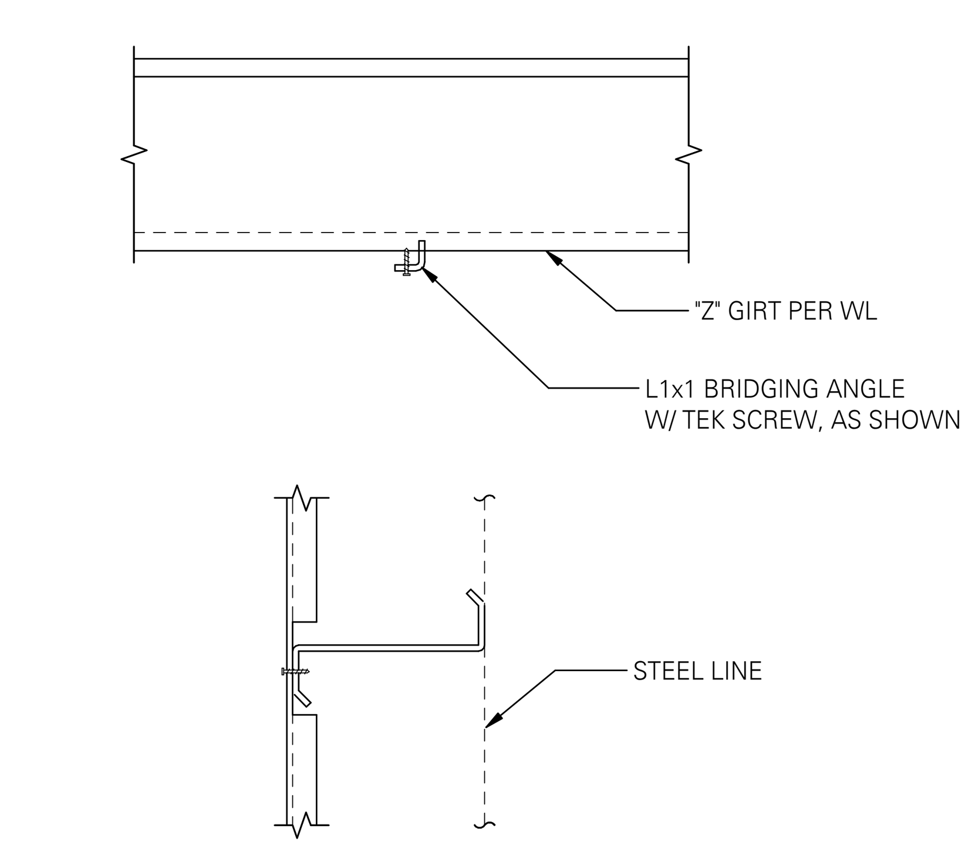


NOTE:
REFERENCE 3 & 4/S.1.5.1 FOR JAMB AND HEADER ATTACHMENT.

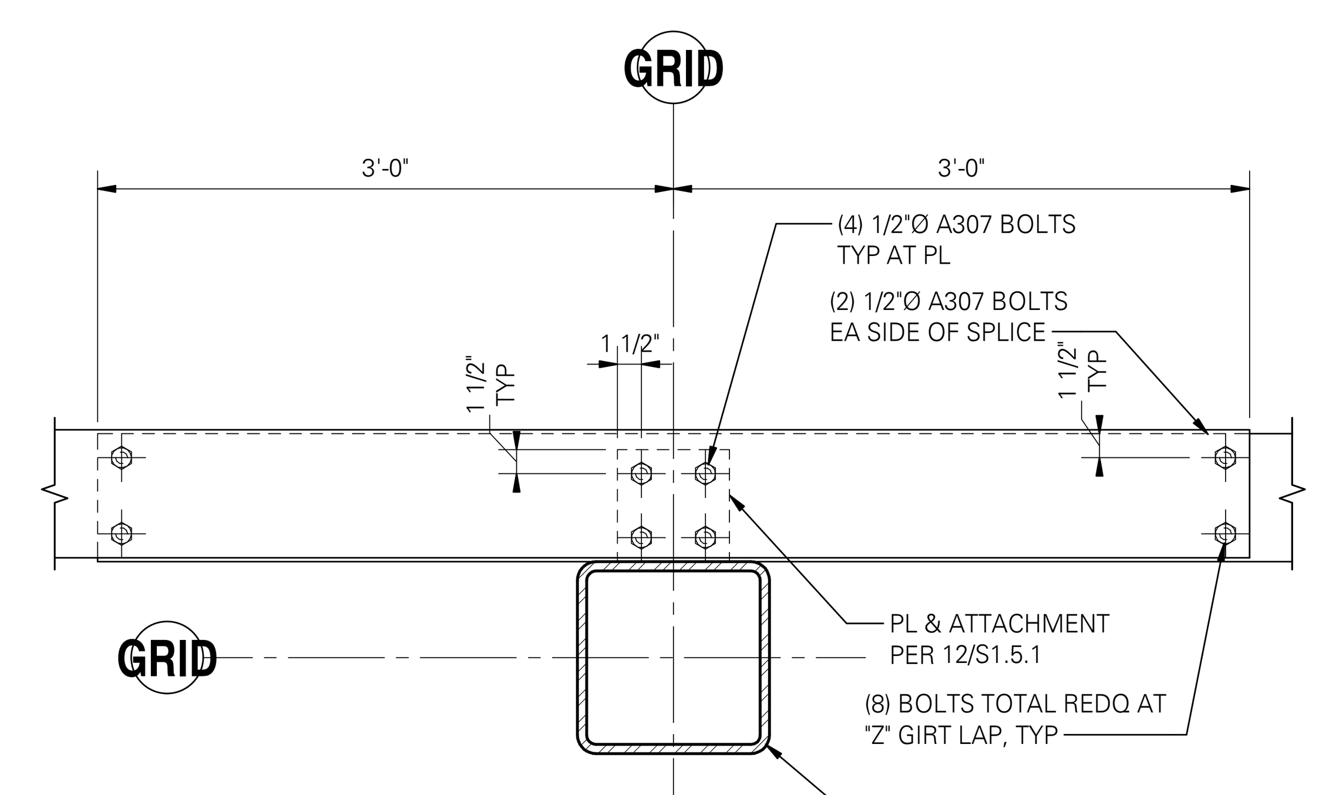
7 ELEVATION AT CFS DOOR
SCALE: 3/16" = 1'-0"



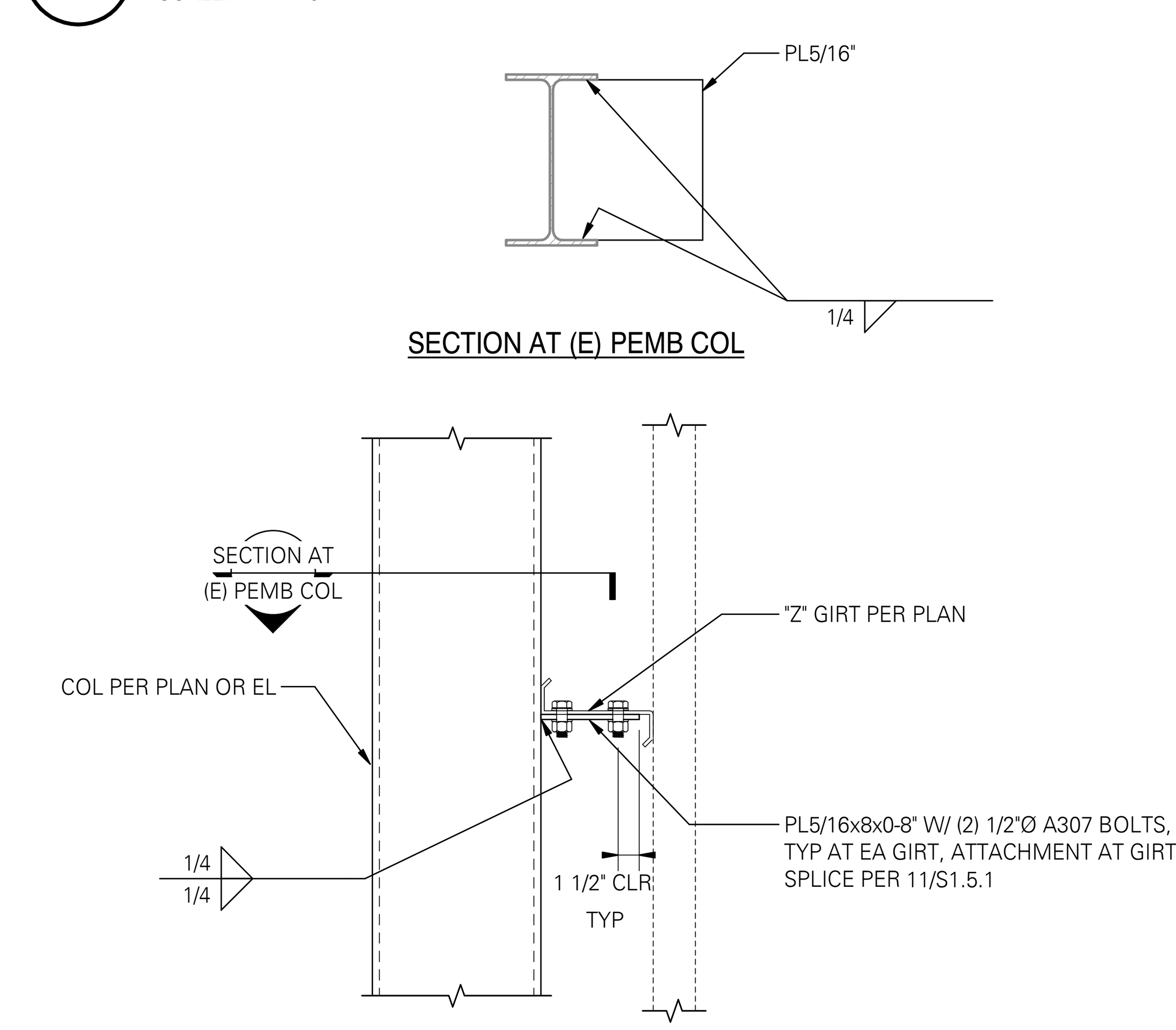
8 WIND COLUMN AT PEMB BEAM
SCALE: 1" = 1'-0"



10 PLAN - WALL "Z" GIRT BRIDGING
SCALE: 1 1/2" = 1'-0"



11 PLAN - "Z" GIRT SPLICE
SCALE: 1" = 1'-0"



12 GIRT ATTACHMENT AT COLUMN
SCALE: 1" = 1'-0"

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CIVIL / STRUCTURAL

PROJECT NO.17-0009

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
49TH
PAUL D. ROGNESS
No. SE13924
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/19

FOR PERMIT
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STRUCTURAL STEEL FRAMING DETAILS

AUTHOR: JS CHECKED: JR
REVISION:
ISSUE DATE: JUNE 7, 2019
OWNER PROJECT NO.: -

S1.5.1

FULL SIZE PRINTED ON 22 x 34

PIPING LEGEND

- DENOTES DEMOLITION
- WASTE
- VENT PIPING
- COLD WATER
- HOT WATER
- HOT WATER RECIRCULATED
- XXX — SEE ABBREVIATIONS FOR MEDIA
- PIPE UP
- PIPE DOWN
- TEE UP
- TEE DOWN
- CAP
- UNION
- DIRECTION OF FLOW
- BALL VALVE
- HOSE BIBB
- DETAILED PIPE UP & DOWN

LOGIC

- POINT OF CONNECTION
- X / XX — DETAIL NUMBER / SHEET LOCATED ON
- DIRECTION OF VIEW
- X / XX — SECTION NUMBER / SHEET LOCATED ON
- X — SHEET NOTES

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	EFF	EFFICIENCY	MCA	MINIMUM CIRCUIT AMPACITY	V	VENT
ABV	ABOVE	EF-X	EXHAUST FAN DESIGNATOR	MFGR	MANUFACTURER	VAC	VOLT-AC
ADA	AMERICANS WITH DISABILITIES ACT GUIDELINES	EGT	ENTERING GLYCOL TEMPERATURE	M/A	MAKEUP AIR	VEL	VELOCITY
		ENT	ENTERING	MIN/MIN.	MINIMUM	VDC	VOLT-DC
AD	ACCESS DOOR	EXIST	EXISTING	MOD	MOTOR OPERATED DAMPER	VTR	VENT THRU ROOF
AF	AIR FOIL	EXH	EXHAUST	MTD	MOUNTED	W	WASTE
AFF	ABOVE FINISHED FLOOR	F	FAHRENHEIT	NAT.	NATURAL	W/	WITH
AFG	ABOVE FINISHED GRADE	FC	FORWARD CURVE	NC	NOISE CRITERIA	W/O	WITHOUT
AFMS	AIR FLOW MONITORING STATION	FCO	FLOOR CLEAN OUT	N.C.	NORMALLY CLOSED	W.C.	WATER COLUMN
AHAP	AS HIGH AS POSSIBLE	FIN	FINISHED	NO.	NUMBER	WCO	WALL CLEAN OUT
AL	ALUMINUM	FLA	FULL LOAD AMPS	N.O.	NORMALLY OPEN	WG	WATER GAUGE
AMPS	AMPERES	FLR	FLOOR	NTS	NOT TO SCALE	WHA	WATER HAMMER ARRESTOR
APD	AIR PRESSURE DROP	FPM	FEET PER MINUTE	O/A	OUTSIDE AIR	WPD	WATER PRESSURE DROP
ARCH	ARCHITECTURAL	FT	FEET	O.D.	OUTSIDE DIAMETER	YCO	YARD CLEAN OUT
B-X	BOILER DESIGNATOR	GA	GAUGE	OC	ON CENTER		
BDD	BACKDRAFT DAMPER	GAL	GALLONS	PEMB	PRE-ENGINEERED METAL BUILDING		
BLDG	BUILDING	GALV	GALVANIZED	PD	PRESSURE DROP		
BOD	BOTTOM OF DUCT	GPH	GALLONS PER HOUR	PG/P.G.	PROPYLENE GLYCOL		
BTUH	BRITISH THERMAL UNIT/HOUR	GPM	GALLONS PER MINUTE	PH	PHASE		
CAP	CAPACITY	HB-X	HOSE BIBB DESIGNATOR	PSI	POUNDS PER SQUARE INCH		
CFM	CUBIC FEET PER MINUTE	HD	HEAD	PSIG	POUNDS PER SQUARE INCH GAUGE		
CIRC	CIRCULATING	HGR	HEATING GLYCOL RETURN	R/A	RETURN AIR		
CLG	CEILING	HGS	HEATING GLYCOL SUPPLY	RD-X	ROOF DRAIN DESIGNATOR		
CONT	CONTINUED	HOA	HAND-OFF-AUTO	RL	RAINLEADER		
C.O./CO	CLEANOUT	HP	HORSEPOWER	RPM	REVOLUTIONS PER MINUTE		
CONN	CONNECTION	HW	HOT WATER	SA-X	SOUND ATTENUATOR DESIGNATOR		
CP-X	CIRCULATION PUMP DESIGNATOR	HWC	HOT WATER CIRCULATED	S/A	SUPPLY AIR		
CU	COPPER	IBC	INTERNATIONAL BUILDING CODE	SCFM	STANDARD CUBIC FEET PER MINUTE		
CW	COLD WATER	IN	INCHES	SP	STATIC PRESSURE		
dB	DECIBELS	INS.	INSULATION	SQ	SQUARE		
DEG	DEGREE	LAT	LEAVING AIR TEMPERATURE	T/A	TRANSFER AIR		
DIA	DIAMETER	LAV	LAVATORY	TEMP	TEMPERATURE		
DIM	DIMENSION	LF	LINEAL FEET	TOD	TOP OF DUCT		
DN	DOWN	LGT	LEAVING GLYCOL TEMPERATURE	TSP	TOTAL STATIC PRESSURE		
DWG	DRAWING	LWT	LEAVING WATER TEMPERATURE	T'STAT	THERMOSTAT		
E/A	EXHAUST AIR	MAX	MAXIMUM	TYP/TYP.	TYPICAL		
EAT	ENTERING AIR TEMPERATURE	MBH	THOUSAND BTUH	UPC	UNIFORM PLUMBING CODE		

DUCTWORK LEGEND

- SUPPLY AIR UP & DOWN
- RETURN AIR UP & DOWN
- EXHAUST AIR UP & DOWN
- MOTORIZED CONTROL DAMPER (M)
- SOUND LINED DUCTWORK
- 12/24 — DUCT SIZE - EXTERIOR INSULATED (1ST FIGURE-SIDE SHOWN) (2ND FIGURE-SIDE NOT SHOWN)
- EXTERNALLY INSULATED DUCTWORK

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	MOUNTING	CW	TW	WASTE	VENT	TRAP	BASIS OF DESIGN	MODEL	FINISH	REMARKS
HB-1	HOSE BIBB	WALL	3/4"	--	--	--	--	ZURN	Z1305	GALVANIZED	FREEZE PROOF HOSE BIB WITH FLUSH MOUNTED, RECESSED WALL BOX AND KEYED LOCKING COVER. COORDINATE WALL THICKNESS PRIOR TO ORDERING.

RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
670 West Fireweed Lane, Suite 200 - Anchorage, AK 99503 - (907) 276-0521
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ECI ARCHITECTURE DESIGN STRATEGY
3909 ARCTIC BOULEVARD, SUITE 103
ANCHORAGE, ALASKA 99503 907.561.5543

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT
PROJECT NO.L9087

CONSTRUCTION DOCUMENTS

STATE OF ALASKA — 14TH — ANDREW J SCHIRACK ME-11879 6/15/19 — REGISTERED PROFESSIONAL ENGINEER

MECHANICAL LEGEND AND SCHEDULES

AUTHOR: AJS CHECKED: AJS
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

M1.0.1

FULL SIZE PRINTED ON 22 x 34

MECHANICAL SPECIFICATIONS

THE INFORMATION SHOWN ON THESE PLANS IS TAKEN FROM AS-BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

DRAWINGS - THE DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION. BRING QUESTIONABLE OR OBSCURE ITEMS, APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITY REGULATIONS TO THE ATTENTION OF THE OWNER. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

PERMITS - THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND FEES.

STANDARDS, CODES AND REGULATIONS - ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), UNIFORM PLUMBING CODE (UPC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE STATE OF ALASKA. SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.

INSURANCE - CONTRACTOR MUST PROVIDE BUILDER'S ALL RISK INSURANCE, WORKER'S COMPENSATION INSURANCE, AND GENERAL LIABILITY INSURANCE AT ALL TIMES WHILE WORKING ON THIS PROJECT.

EQUIPMENT SUBSTITUTIONS - ALL EQUIPMENT LISTED ARE REPRESENTATIVE OF THE STANDARD OF QUALITY AND PERFORMANCE REQUIRED. "OR EQUAL" SUBSTITUTIONS WILL BE CONSIDERED IF THE SUBSTITUTE CATALOG CUTS ARE SUBMITTED AND ARE SHOWN TO BE OF EQUAL OR BETTER QUALITY, INCLUDING EFFICIENCY OF PERFORMANCE, SIZE AND WEIGHT.

WARRANTY - ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

ELECTRICAL WORK - ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN, IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).

MATERIALS - ALL MATERIALS OTHER THAN OWNER SUPPLIED SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN OWNER'S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.

SUBMITTALS - SUBMITTALS SHALL BE IN ELECTRONIC FORM. THE DATA SHALL BE ARRANGED AND INDEXED UNDER BASIC CATEGORIES. SUBMIT ON LOUVERS, DAMPERS, PIPING, UPPORTS AND ANCHORS, AND INSULATION.

OPERATION AND MAINTENANCE MANUALS - PRIOR TO SUBSTANTIAL COMPLETION PROVIDE OPERATION AND MAINTENANCE MANUALS FOR TRAINING OF THE OWNER'S PERSONNEL. DESCRIBE THE PROCEDURES NECESSARY TO OPERATE THE SYSTEM INCLUDING START-UP, OPERATION, EMERGENCY OPERATION AND SHUTDOWN. PROVIDE INSTRUCTIONS AND A SCHEDULE OF PREVENTIVE MAINTENANCE IN TABULAR FORM FOR ALL ROUTINE CLEANING, INSPECTION AND LUBRICATION WITH RECOMMENDED LUBRICANTS. PROVIDE INSTRUCTIONS FOR MINOR REPAIR OR ADJUSTMENTS REQUIRED FOR PREVENTIVE MAINTENANCE ROUTINES. PROVIDE MANUFACTURER'S DESCRIPTIVE LITERATURE INCLUDING APPROVED SHOP DRAWINGS COVERING DEVICES USED IN ANY CONTRACTOR-PROVIDED EQUIPMENT OR SYSTEMS WITH ILLUSTRATION, EXPLODED VIEWS, ETC.

WORKMANSHIP - INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS SHALL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, INSTRUCTIONS AND/OR INSTALLATION DRAWINGS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM WITH APPLICABLE INDUSTRY STANDARDS, AND THIRD PARTY LISTINGS WHERE APPLICABLE.

TEST AND START-UP - TEST ALL PLUMBING AND PIPING SYSTEMS WITH 60 PSIG FOR ONE HOUR BEFORE FILLING AND IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE (UPC).

DISINFECTION OF POTABLE WATER SYSTEM - THE NEW PORTIONS OF THE DOMESTIC WATER PIPING SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 609.9 OF THE UPC.

EQUIPMENT INSTALLATION AND ACCESS - INSTALL ALL EQUIPMENT WHERE NOTED ON THE DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE MISCELLANEOUS COMPONENTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS INCLUDING ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES AND PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.

DEMOLITION - DEMOLITION DRAWINGS ARE BASED ON AS-BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. REPORT DISCREPANCIES TO OWNER BEFORE DISTURBING THE EXISTING INSTALLATION. DISABLE SYSTEMS ONLY TO MAKE SWITCH OVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER AT LEAST 72 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION AND MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS. REMOVE, RELOCATE AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY. REMOVE EXPOSED ABANDONED PIPING, DUCTWORK, INSULATION, HANGERS AND SUPPORTS, CONTROLS AN CONTROL WIRING, AND OTHER ABANDONED MECHANICAL EQUIPMENT. THIS INCLUDES ABANDONED EQUIPMENT ABOVE ACCESSIBLE CEILING FINISHES. WHERE ABANDONED PIPE ENTERS EXISTING SURFACES TO REMAIN, CUT PIPE FLUSH WITH WALLS, AND FLOORS, CAP/PLUG PIPE AND PATCH SURFACES. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS WHICH REMAIN ACTIVE.

RECORD DRAWINGS - PROVIDE ACCURATE PROJECT RECORD DRAWINGS, SHOWN IN RED INK ON A CLEAN SET OF PRINTS, SHOWING ALL CHANGES FROM THE ORIGINAL PLANS MADE DURING INSTALLATION OF THE WORK. SHOW THE DIMENSIONED LOCATION AND ROUTING OF ALL MECHANICAL WORK THAT IS PERMANENTLY CONCEALED. SHOW ROUTING OF WORK IN PERMANENTLY CONCEALED BLIND SPACES WITHIN THE BUILDING. SHOW COMPLETE ROUTING AND SIZING OF ANY SIGNIFICANT REVISIONS TO THE SYSTEMS SHOWN. SUBMIT ORIGINAL COPY TO OWNER AT THE COMPLETION OF WORK AND PRIOR TO SUBSTANTIAL COMPLETION INSPECTION.

PIPING INSULATION - GLASS FIBER, RIGID, MOLDED, NON-COMBUSTIBLE INSULATION; ANSI/ASTM C547; 'K' VALUE OF 0.24 AT 75 DEG F, RATED TO 850 DEG F, VAPOR RETARDER JACKET OF KRAFT PAPER BONDED TO ALUMINUM FOIL; JOHNS MANVILLE "MICRO-LOK" OR EQUAL.

DUCTWORK INSULATION - FSK DUCT WRAP: FLEXIBLE GLASS FIBER; ANSI/ASTM C553; COMMERCIAL GRADE; 'K' VALUE OF 0.27 AT 75 DEG F. JOHNS MANVILLE "MICROLITE XG" OR EQUAL. PROVIDE CANVAS JACKETING ON OUTSIDE AIR CONVEYING DUCTWORK.

VAPOR BARRIER JACKETS - KRAFT REINFORCED FOIL VAPOR BARRIER WITH SELF-SEALING ADHESIVE JOINTS.

INTERIOR JACKETING - ONE PIECE, PVC JACKETS, PRE-MOLDED TYPE, SCHULLER ZESTON 2000, FITTING COVERS AND JACKETING MATERIAL. ALL EXPOSED PIPING WITHIN 10'-0" OF FINISHED FLOOR LEVELS SHALL BE PVC JACKETED.

IDENTIFICATION - LABEL ALL EQUIPMENT WITH HEAT RESISTANT LAMINATED PLASTIC LABELS HAVING ENGRAVED LETTERING 1/2" HIGH. IF ITEMS ARE NOT SPECIFICALLY LISTED ON THE SCHEDULES, CONSULT THE ENGINEER CONCERNING DESIGNATION TO USE. SETON ENGRAVED SETON-PLY NAMEPLATES OR EQUAL. IDENTIFY PIPING TO INDICATE CONTENTS AND FLOW DIRECTION OF EACH PIPE EXPOSED TO VIEW BY A LABELED SLEEVE (OR ADHESIVE PIPE MARKERS) IN LETTERS READABLE FROM FLOOR AT LEAST ONCE IN EACH ROOM AND AT INTERVALS OF NOT MORE THAT 20' APART AND ON EACH SIDE OF PARTITION PENETRATIONS. COLORING SCHEME IN ACCORDANCE WITH ANSI A13.1-1981, SETON OPTI-CODE OR EQUAL.

DUCTWORK - PROVIDE GALVANIZED SHEET METAL RECTANGULAR OR ROUND DUCT WHERE CALLED OUT ON THE PLANS. SEAL ALL DUCT SEAMS AND JOINTS AIRTIGHT. USE TURNING VANES IN ALL SQUARE ELBOWS AND FLAT OVAL ELBOWS. INSTALL VOLUME DAMPERS AND EXTRACTORS WHERE SHOWN ON THE DRAWINGS. ALL SHEET METAL WORK TO BE CONSTRUCTED, INSTALLED, TESTED AND BALANCED IN ACCORDANCE WITH SMACNA STANDARDS. SUPPORT LOW AND MEDIUM PRESSURE DUCTWORK PER SMACNA GUIDELINES.

LOUVERS - LOUVERS SHALL BE STATIONARY DRAINABLE TYPE WITH DRAIN GUTTERS IN EACH BLADE AND DOWNSPOUTS IN JAMBS AND MULLIONS. LOUVERS SHALL HAVE A MINIMUM OF 54% FREE AREA. STATIONARY DRAINABLE BLADES SHALL BE CONTAINED WITHIN A 6" FRAME. LOUVER COMPONENTS (HEADS, JAMBS, SILLS, BLADES, & MULLIONS) SHALL BE FACTORY ASSEMBLED BY THE LOUVER MANUFACTURER. LOUVER DESIGN SHALL WITHSTAND A WIND LOAD OF 20 LBS. PER SQ. FT. EQUIVALENT OF A 90 MPH WIND.

DOMESTIC WATER PIPING:

- COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ASME B16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER. JOINTS: ASTM B32, LEAD FREE SOLDER, WATER SOLUBLE FLUX OR LISTED PRESS-FIT SYSTEM.
- CPVC PIPE: ASTM D2846/D2846M, CHLORINATED POLYVINYL CHLORIDE (CPVC) MATERIAL. FITTINGS: ASTM D2846/D2846M, CPVC. JOINTS: ASTM D2846/D2846M, SOLVENT WELD WITH ASTM F493 SOLVENT CEMENT.

PIPING SUPPORTS AND HANGERS - SIZED AND SPACED IN ACCORDANCE WITH THE UPC. INSTALLED AS PER THE MANUFACTURERS INSTRUCTIONS.

CONTRACTOR SHALL COORDINATE WITH EXISTING EQUIPMENT TO DETERMINE EXTENT OF EQUIPMENT TO BE PROVIDED. CONTRACTOR SHALL SUPPLY ALL EQUIPMENT NECESSARY TO MODIFY THE EXISTING SYSTEM IN ACCORDANCE WITH THE CONTRACT DOCUMENTS WHILE MAINTAINING THE EXISTING SEQUENCE OF OPERATIONS. EXTEND AND INSTALL ALL WIRING IN ACCORDANCE WITH THE NEC. TEST ALL SYSTEMS, VERIFY ALL SYSTEMS OPERATE PRIOR TO START OF PROJECT AND RE-VERIFY AT COMPLETION. PROVIDE CONTROL SYSTEMS DEMONSTRATIONS TO OWNERS REPRESENTATIVE(S) PRIOR TO SUBSTANTIAL COMPLETION. THE CONTROL SYSTEM SHALL MAINTAIN THE EXISTING SEQUENCE OF OPERATIONS AT THE COMPLETION OF THE PROJECT.

DAMPERS - PROVIDE FOAM INJECTED THERMALLY ISOLATED DAMPERS. ALUMINUM AIRFOIL BLADES TO BE INJECTED WITH POLYURETHANE FOAM. JAMB SEALS TO BE POLYCARBONATE. BLADE SEALS TO BE RUSKIPRENE. FRAME TO BETHERMALLY ISOLATED HEAVY GAUGE EXTRUDED ALUMINUM HAT CHANNEL. DAMPER TO BE RATED FROM -70 TO + 200 DEG F. RUSKIN CDTI-50BF OR EQUAL.

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ECI ARCHITECTURE DESIGN STRATEGY
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PROJECT NO.L9087

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

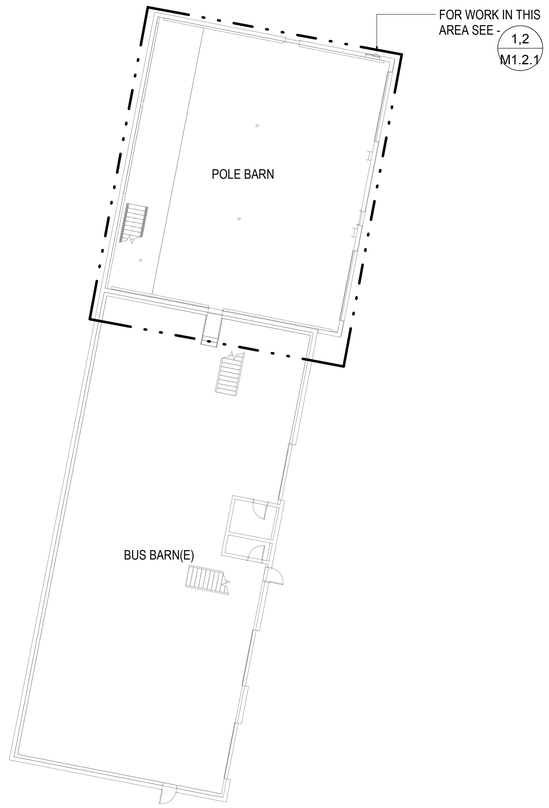
STATE OF ALASKA
ANDREW J SCHIRACK
ME-118794
6/5/19
REGISTERED PROFESSIONAL ENGINEER

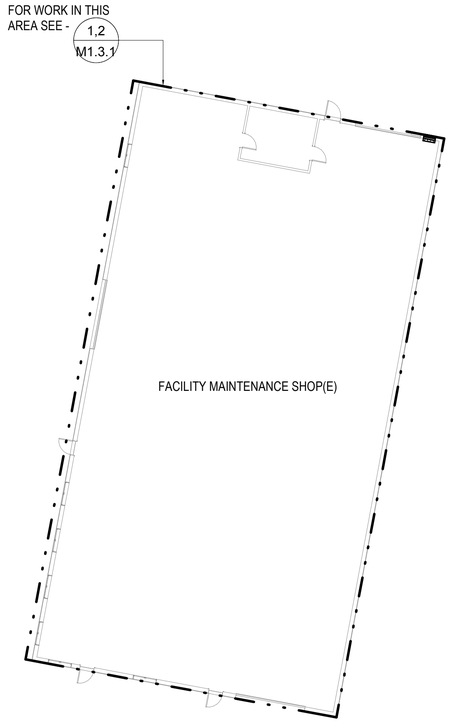
MECHANICAL SPECIFICATIONS

AUTHOR: AJS CHECKED: AJS
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

M1.0.2

FULL SIZE PRINTED ON 22 x 34





1 MECHANICAL SITE PLAN
1/16" = 1'-0"

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CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS
PROJECT NO.L9087

STATE OF ALASKA
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6/15/19
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MECHANICAL SITE PLAN

AUTHOR: AJS CHECKED: AJS
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

M1.1.1

FULL SIZE PRINTED ON 22 x 34

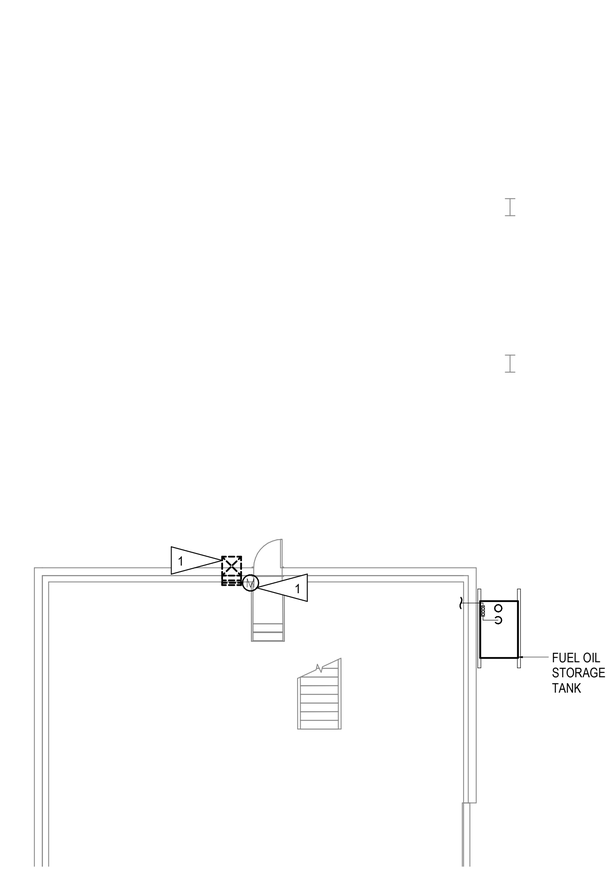
GENERAL NOTES

A. THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM AS BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THERE IS NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN HERE-IN. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

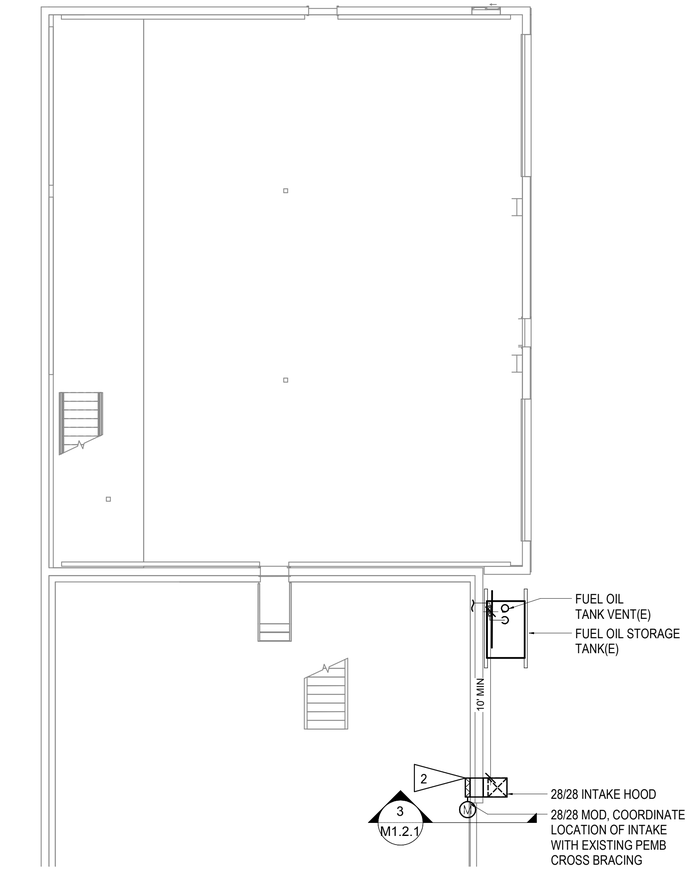
SHEET NOTES

1. DEMOLISH 28/28 MAKE UP AIR INTAKE HOOD AND ASSOCIATED MOTORIZED DAMPER. REMOVE AND SALVAGE DAMPER ACTUATOR FOR REUSE. SALVAGE CONTROL WIRING FOR FUTURE RECONNECTION.

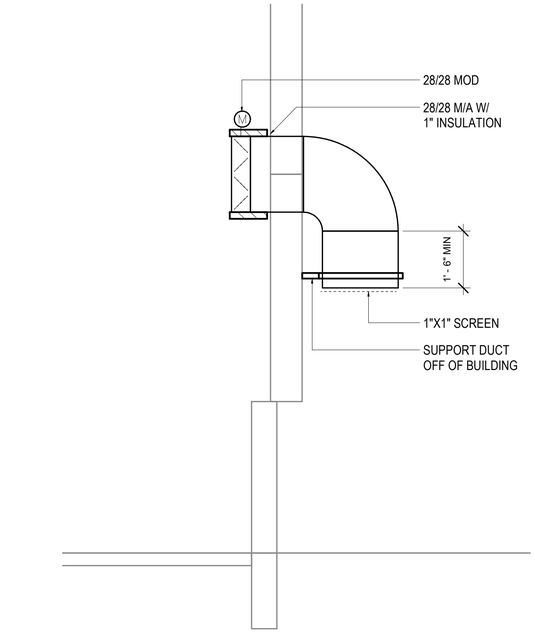
2. INSTALL DAMPER ACTUATOR ON TO SERVE INSULATED CONTROL DAMPER. EXTEND CONTROL WIRING AS NECESSARY TO OPERATE MOTORIZED DAMPER. MOD SHALL OPERATE ACCORDING TO EXISTING SEQUENCE OF OPERATIONS.



1 POLE BARN VENTILATION - DEMOLITION
1/8" = 1'-0"



2 POLE BARN VENTILATION - REMODEL
1/8" = 1'-0"



3 M/A HOOD SECTION
1/2" = 1'-0"

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PROJECT NO.L9087

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
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ME-118794
6/5/19
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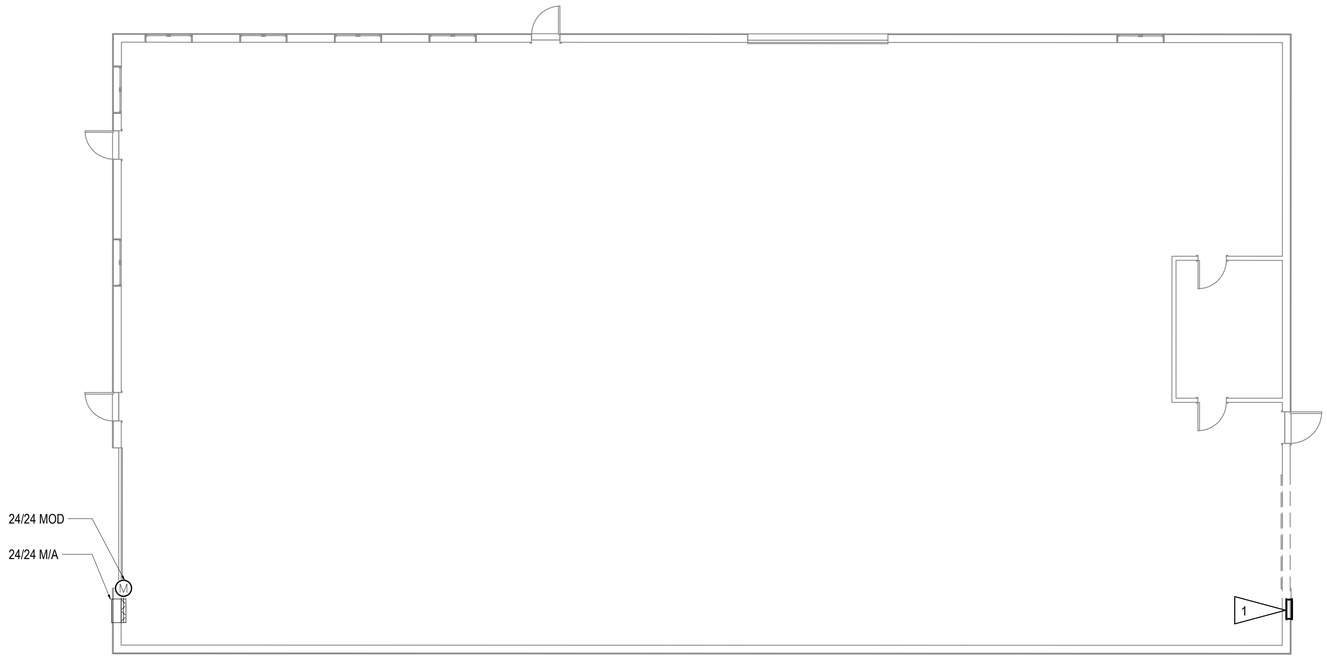
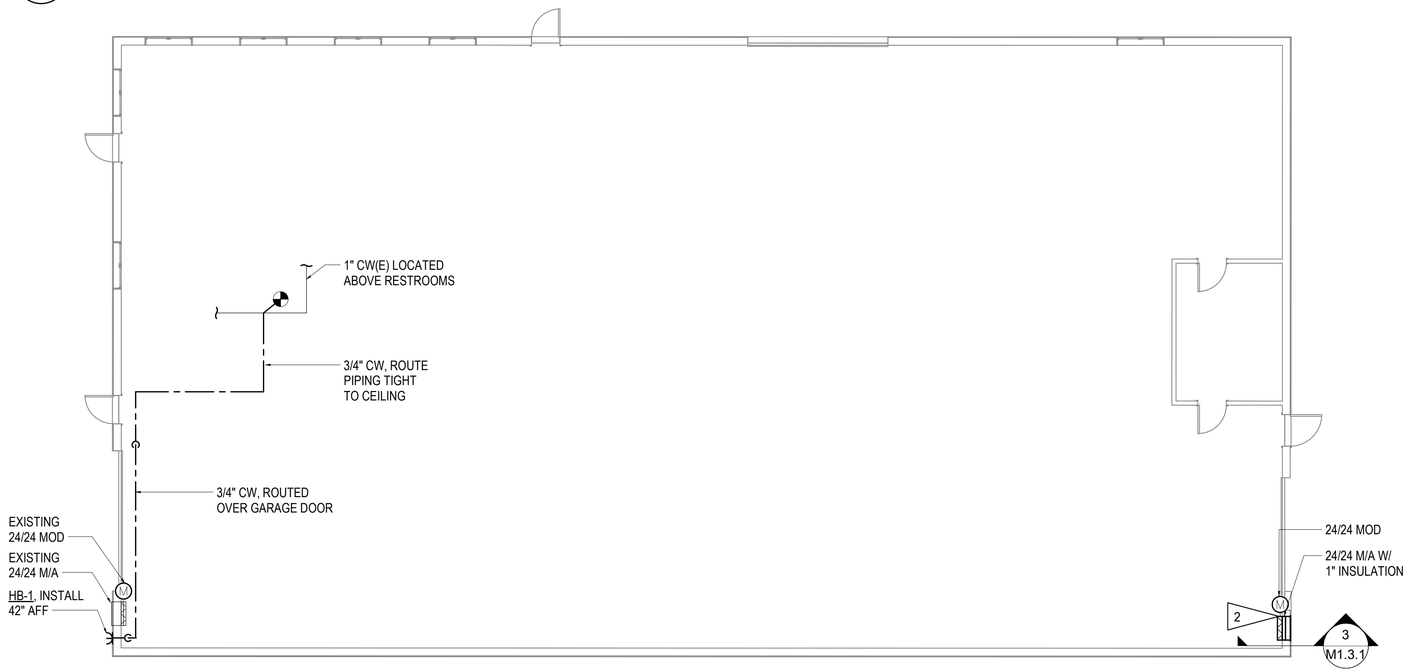
MECHANICAL POLE BARN DEMOLITION AND REMODEL PLANS
AUTHOR: AJS
CHECKED: AJS
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

M1.2.1

FULL SIZE PRINTED ON 22 x 34



1 MAINTENANCE SHOP HVAC PLAN - DEMOLITION
1/8" = 1'-0"



2 MAINTENANCE SHOP HVAC AND PLUMBING PLAN - REMODEL
1/8" = 1'-0"

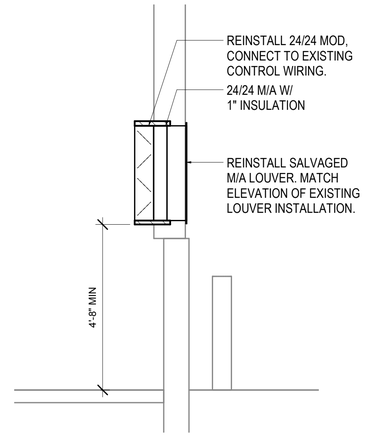
GENERAL NOTES

A. THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM AS BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THERE IS NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN HERE-IN. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

SHEET NOTES

1. REMOVE AND SALVAGE 24/24 MAKE UP AIR LOUVER AND ASSOCIATED MOTORIZED DAMPER FOR REUSE. SALVAGE CONTROL WIRING FOR FUTURE RECONNECTION.

2. RE-INSTALL 24/24 M/A LOUVER, MOTOIZED DAMPER, AND DAMPER ACTUATOR. EXTEND CONTROL WIRING AS NECESSARY TO OPERATE MOTORIZED DAMPER. MOD SHALL OPERATE ACCORDING TO EXISTING SEQUENCE OF OPERATIONS.



3 LOUVER SECTION
1/2" = 1'-0"

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PROJECT NO.L9087

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

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6/5/19

MAINTENANCE SHOP DEMOLITION AND REMODEL PLANS
AUTHOR: AJS CHECKED: AJS
REVISION:
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M1.3.1

FULL SIZE PRINTED ON 22 x 34

ELECTRICAL LEGEND

○	LIGHT FIXTURE - SURFACE MOUNTED CEILING
⊗	EMERGENCY EXIT LIGHT - SURFACE MOUNTED CEILING, ARROW SHOWS EXIT DIRECTION - EXISTING AND NEW
	REMOTE EMERGENCY LIGHT - SURFACE MOUNTED WALL
	LIGHT FIXTURE STRIP - SURFACE MOUNTED CEILING
A	FIXTURE TAG (LETTER INDICATES TYPE)
$	SINGLE POLE SWITCH
	CONDUIT, CONCEALED OR EXPOSED
#10	NUMBER AND SIZE OF WIRES (NO MARKS = 3 #12)
A-2	HOMERUN TO PANEL (PANEL AND CIRCUIT No.)
	PANEL - EXISTING AND NEW
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
	QUADRUPLEX RECEPTACLE
J	JUNCTION BOX
	MOTOR (SIZED AS NOTED)
$F	FRACTIONAL HORSEPOWER MOTOR STARTER
$3	THREE WAY SWITCH
	OVERHEAD DOOR OPERATOR
	DUPLEX RECEPTACLE TO BE REMOVED (DASHED OR DOTTED LINES INDICATE ITEMS TO BE REMOVED TYPICAL)
#	NOTE TAG (No. INDICATES NOTE)
(#)	EXISTING FIXTURE TAG (No. INDICATES TYPE)
AFG	ABOVE FINISHED GRADE
C	CONDUIT
E	DENOTES EXISTING ITEM
LED	LIGHT EMITTING DIODE
TYP	TYPICAL
WP	WEATHERPROOF

SHEET NOTES:

1. NEW BREAKER IN EXISTING PANEL. SEE E1.2.1.
2. PROVIDE SUBMETERING FOR PANELBOARD. MOUNT ADJACENT TO PANEL.
3. PROVIDE 3/4"C, CAT6 CABLE TO TELEPHONE BACKBOARD IN BUS BARN. SEE KEYPLAN ON SHEET E1.1.1 FOR LOCATION. COORDINATE WITH OWNER FOR EXACT CONNECTION REQUIREMENTS. FOR BIDDING PURPOSES, ASSUME A CABLE LENGTH OF 175'.

LIGHT FIXTURE SCHEDULE

TYPE	LOCATION	MANUFACTURER AND CATALOG NUMBER (OR APPROVED EQUAL)	LUMINAIRE DESCRIPTION	MOUNTING		LAMPS	BALLAST/DRIVER	TOTAL INPUT WATTS
				TYPE	HEIGHT			
A	AS SHOWN	LITHONIA #ZL1N-LED-L48-SMR-5000LM-L/LENS-MVOLT-40K-80CRI-WH	4'LED STRIP LIGHT, SYMMETRIC REFLECTORS, NO DIFFUSER, WHITE FINISH	SURFACE	CEILING	4000K LED 4585LM	120/277V DRIVER	34W
B	ABOVE MAN DOOR	HUBBELL OUTDOOR LIGHTING #SG1-20-4K7-FT-UNV-DB-PCU	OUTDOOR WALL MOUNTED LED WITH FORWARD THROW DISTRIBUTION, TEXTURED DARK BRONZE FINISH, AND INTEGRAL PHOTOCONTROL.	WALL MOUNTED	8'-0" AFG	4000K LED 2310LM	120/277V DRIVER 0-10V DIMMING	21W
B1	ABOVE OH DOOR	HUBBELL OUTDOOR LIGHTING #SG2-80-4K7-FT-UNV-DB-PCU	SAME AS FIXTURE TYPE 'B' EXCEPT WITH HIGHER LUMEN OUTPUT.	WALL MOUNTED	27'-0" AFG	4000K LED 8079LM	120/277V DRIVER 0-10V DIMMING	80W
X	AS SHOWN	LITHONIA #LQM-S-W-3-G-120/277-ELN	STENCIL FACE LED EXIT SIGN, WHITE HOUSING, GREEN LETTERING.	WALL MOUNTED	8'-6" AFF	-	120V DRIVER	1W

EXISTING LIGHT FIXTURE SCHEDULE

TYPE	EXISTING LUMINAIRE DESCRIPTION	TOTAL WATTAGE
(A)	SURFACE MOUNTED HIGH BAY ROUND FIXTURE	100W
(B)	EXTERIOR REMOTE HEAD FIXTURE	5W

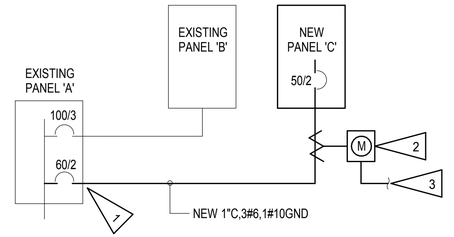
ELECTRICAL LOAD CALCULATION

PROJECT: **COV BUILDING MAINTENANCE SHARED FACILITY PROJECT**
VALDEZ, ALASKA
DATE : **6/5/2019**

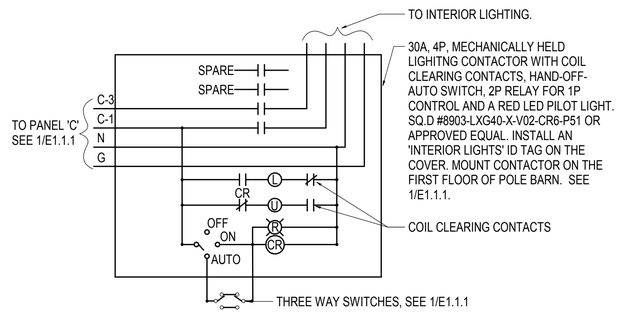
EXSTING 225A, 120/208V, 3-PHASE, 4-WIRE PANEL 'A'

DEMAND LOAD (NEC 220.87)			
EXISTING PEAK KW DEMAND (PAST 12 MONTHS)	13.8 kW		
PER NEC 220.87(2) (125%)	17.2 kW		
ASSUMED POWER FACTOR OF 0.85	20.3 KVA		
EXISTING DEMAND LOAD	**20 KVA**	**56 A**	
LOAD REMOVED: (NONE)			
LOAD ADDED:			
PANEL 'C'	7.9 KVA		
TOTAL LOAD ADDED	**8 KVA**		
TOTAL COMPUTED DEMAND LOAD:	**28 KVA**	**78 A**	

BASED ON ABOVE CALCULATION, THE EXISTING 225A SERVICE IS ADEQUATE FOR EXISTING AND NEW LOADS.



1 ONE-LINE DIAGRAM



2 LIGHTING CONTACTOR DETAIL
12" = 1'-0"

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PROJECT NO.L9087

CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS

STATE OF ALASKA
CHANNING P. LILLO
EE-10285
6/5/19
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL LEGEND, FIXTURE SCHEDULES, ONE-LINE DIAGRAM, AND ELECTRICAL DETAIL
AUTHOR: KB CHECKED: CPL
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

E1.0.1

FULL SIZE PRINTED ON 22 x 34

ELECTRICAL SPECIFICATIONS

26 05 00 - COMMON WORK RESULTS FOR ELECTRICAL

A. SCOPE OF WORK: FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT FOR AN EXTENSION TO THE EXISTING ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

B. STANDARDS, CODES AND REGULATIONS: COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, AND INTERNATIONAL FIRE CODE INCLUDING ALL STATE AND LOCAL AMENDMENTS TO THESE CODES. COMPLY WITH THE LATEST PUBLISHED VERSION OF THE NECA STANDARD OF INSTALLATION.

C. DRAWINGS: THE DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION. BRING QUESTIONABLE OR OBSCURE ITEMS, APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITIES REGULATIONS TO THE ATTENTION OF THE OWNER. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

D. RECORD DRAWINGS: MARK UP A CLEAN SET OF DRAWINGS AS THE WORK PROGRESSES TO SHOW THE DIMENSIONED LOCATION AND ROUTING OF ALL ELECTRICAL WORK WHICH WILL BECOME PERMANENTLY CONCEALED. SHOW ROUTING OF WORK IN PERMANENTLY CONCEALED BLIND SPACES WITHIN THE BUILDING. SHOW COMPLETE ROUTING AND SIZING OF ANY SIGNIFICANT REVISIONS TO THE SYSTEMS SHOWN.

E. WORKMANSHIP: INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS SHALL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, INSTRUCTIONS AND/OR INSTALLATION DRAWINGS AND IN ACCORDANCE WITH NECA STANDARDS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM WITH APPLICABLE INDUSTRY STANDARDS, NEMA STANDARDS AND UNDERWRITERS LABORATORIES STANDARDS WHERE APPLICABLE.

F. SUBMITTALS: PROVIDE MATERIAL AND EQUIPMENT SUBMITTALS CONTAINING A COMPLETE LISTING OF MATERIAL AND EQUIPMENT SHOWN ON THE DRAWINGS. INCLUDE CATALOG NUMBERS, WIRING DIAGRAMS, ROUGH-IN DIMENSIONS AND PERFORMANCE DATA FOR ALL MATERIAL AND EQUIPMENT. SUBMITTALS SHALL BE IN ELECTRONIC .PDF FORMAT, SEPARATE FROM WORK FURNISHED UNDER OTHER DIVISIONS. INDEX AND CLEARLY IDENTIFY ALL MATERIAL AND EQUIPMENT BY ITEM, NAME OR DESIGNATION USED ON THE DRAWINGS. SUBMITTAL REVIEW IS FOR GENERAL DESIGN AND ARRANGEMENT ONLY AND DOES NOT RELIEVE THE CONTRACTOR FROM ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE SUBMITTALS ARE NOT CHECKED FOR QUANTITY, DIMENSION, OR FOR PROPER OPERATION. WHERE DEVIATIONS OF A SUBSTITUTE PRODUCT OR SYSTEM PERFORMANCE HAVE NOT BEEN SPECIFICALLY NOTED IN THE SUBMITTAL BY THE CONTRACTOR, PROVISIONS OF A COMPLETE AND SATISFACTORY WORKING INSTALLATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

G. WARRANTY: THE CONTRACTOR SHALL GUARANTEE ALL WORK EXECUTED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM BENEFICIAL OCCUPANCY. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

H. PERMITS: SECURE AND PAY FOR ALL FEES, PERMITS, ETC. REQUIRED BY LOCAL AND STATE AGENCIES.

I. REFERENCE SYMBOLS: THE ELECTRICAL "LEGEND" ON THE DRAWINGS IS A STANDARDIZED VERSION, AND ALL SYMBOLS SHOWN MAY NOT BE USED. USE THE "LEGEND" AS A REFERENCE FOR THE SYMBOLS USED ON THE DRAWINGS.

J. PENETRATION OF FIRE BARRIERS: ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED BARRIERS SHALL BE SEALED IN ACCORDANCE WITH NEC ARTICLE 300.21 AND THE FOLLOWING:
   1. ALL HOLES OR VOIDS CREATED TO EXTEND ELECTRICAL SYSTEMS THROUGH FIRE RATED FLOORS, WALLS OR CEILING SHALL BE SEALED WITH AN ASBESTOS-FREE INTUMESCENT FIRE STOPPING MATERIAL CAPABLE OF EXPANDING 8 TO 10 TIMES WHEN EXPOSED TO TEMPERATURES 250 DEGREES F OR HIGHER.
   2. ATERIALS SHALL BE SUITABLE FOR THE FIRE STOPPING OF PENETRATIONS MADE BY STEEL, GLASS, PLASTIC AND SHALL BE CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME, SMOKE AND GASES IN COMPLIANCE WITH THE REQUIREMENTS OF ASTM E814, UL 1479 AND THE UL FIRE RESISTANCE DIRECTORY REQUIREMENTS FOR THROUGH-PENETRATION FIRESTOP DEVICES (XHCR)
   3. THE RATING OF THE FIRE STOPS SHALL BE THE SAME AS THE TIME-RATED FLOOR, WALL OR CEILING ASSEMBLY.
   4. INSTALL FIRE STOPPING MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

26 05 05 - SELECTIVE DEMOLITION FOR ELECTRICAL

A. DEMOLITION DRAWINGS ARE BASED ON A NON-DESTRUCTIVE FIELD OBSERVATION. REPORT DISCREPANCIES TO OWNER BEFORE DISTURBING THE EXISTING INSTALLATION. DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN ALL EXISTING ELECTRICAL SYSTEMS (TELEPHONE, FIRE ALARM, LIGHTING, ELECTRICAL SERVICE, ETC.) IN SERVICE DURING CONSTRUCTION. DISABLE SYSTEMS ONLY TO MAKE SWITCHOVERS AND CONNECTIONS.

B. OBTAIN PERMISSION FROM OWNER AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION AND MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.

C. REMOVE, RELOCATE AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY. REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. WHERE ABANDONED CONDUIT ENTERS EXISTING SURFACES TO REMAIN, CUT CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS WHICH ARE NOT REMOVED.

D. DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED. DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS AND OTHER ACCESSORIES. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE.

26 05 19 - WIRE AND CABLE

A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.

B. MATERIALS:
   1. ALL CONDUCTORS SHALL BE COPPER WITH TYPE XHHW, THWN, THW OR THHN INSULATION. MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE SHALL BE #12 AWG.
   2. TYPE MC CABLE: SOLID COPPER CONDUCTOR, 600 VOLT THERMOPLASTIC INSULATION, RATED 90º C, INSULATED GREEN GROUNDING CONDUCTOR, AND GALVANIZED STEEL ARMOR OVER MYLAR.

C. INSTALLATION:
   1. COLOR CODE WIRES BY LINE OR PHASE. COLOR CODE THE 120/240V CONDUCTORS BLACK, RED AND WHITE.
   2. DO NOT SHARE NEUTRAL CONDUCTORS. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT THAT REQUIRES A NEUTRAL.
   3. USE PROPERLY SIZED INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR ALL CONDUCTORS #8 AWG AND SMALLER. TERMINATE #6 AWG AND LARGER CONDUCTORS WITH CRIMP OR COMPRESSION TYPE CONNECTORS INSTALLED WITH TOOL RECOMMENDED BY CONNECTION MANUFACTURER AND INSULATE WITH PROPERLY SIZED 600 VOLT RATED HEAT SHRINK TUBING.
   4. INSTALLATION SCHEDULE: BUILDING WIRE IN RACEWAYS AT ALL LOCATIONS UNLESS OTHERWISE NOTED. PROVIDE XHHW-2 FOR FEEDERS AND IN EXTERIOR LOCATIONS. TYPE MC CABLE MAY BE USED FOR BRANCH CIRCUIT WIRING IN CONCEALED DRY, INTERIOR LOCATIONS.

26 05 26 - GROUNDING AND BONDING

A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.

B. INSTALLATION:
   1. PROVIDE A SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL NEW BRANCH CIRCUITS AND FEEDERS. TERMINATE EACH END ON A GROUNDING LUG, BUS, OR BUSHING.
   2. MECHANICAL CONNECTORS: NON-REVERSIBLE CRIMP TYPE LUGS ONLY. USE FACTORY MADE COMPRESSION LUG FOR ALL TERMINATIONS. CRIMP TYPE ONE HOLE FOR CONDUCTORS SMALLER THAN #6 AWG.
   3. BOND TOGETHER SYSTEM NEUTRALS, EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT, METAL RACEWAY SYSTEMS, GROUNDING CONDUCTOR IN RACEWAYS AND CABLES AND RECEPTACLE GROUND CONNECTORS.

26 05 33 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.

B. MATERIALS:
   1. ELECTRICAL METALLIC TUBING CONDUIT (EMT): ANSI C80.3. GALVANIZED TUBING. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB 1; STEEL OR MALLEABLE IRON, COMPRESSION TYPE OR SET SCREW FITTINGS WITH INSULATED THROAT BUSHINGS. DIE-CAST FITTINGS ARE NOT ACCEPTABLE. PROVIDE FACTORY ELBOWS ON SIZES 1-1/2" AND LARGER.
   2. PROVIDE GALVANIZED OR CADMIUM PLATED, ONE PIECE PRESSED STEEL OUTLET BOXES 4 INCH SQUARE OR OCTAGONAL, 1-1/2 INCHES DEEP MINIMUM SIZE FOR USE IN INTERIOR AREAS.
   3. FOR TELECOMMUNICATIONS SYSTEMS, OUTLET BOXES SHALL BE 4 INCHES SQUARE, 2-1/4 INCHES DEEP MINIMUM.

C. INSTALLATION:
   1. INSTALL CONDUIT FOR ALL SYSTEMS UNLESS OTHERWISE NOTED, 1/2 INCH MINIMUM SIZE.
   2. EXPOSED DRY INTERIOR LOCATIONS SHALL BE ELECTRICAL METALLIC TUBING. EMT MAY ALSO BE USED FOR CONCEALED, DRY, INTERIOR LOCATIONS.
   3. PAINT ALL EXPOSED CONDUIT TO MATCH SURFACE TO WHICH IT IS ATTACHED OR CROSSES. CLEAN GREASY OR DIRTY CONDUIT PRIOR TO PAINTING IN ACCORDANCE WITH PAINT MANUFACTURER'S INSTRUCTIONS.
   4. ALL CONDUIT FOR THE TELECOMMUNICATIONS DISTRIBUTION SYSTEM SHALL BE INSTALLED WITH NO MORE THAN THREE 90-DEGREE BENDS BETWEEN PULLBOXES. PULL BOXES SHALL NOT BE USED IN LIEU OF CONDUIT BENDS. CONDULETS (LB FITTINGS) SHALL NOT BE INSTALLED IN ANY TELECOMMUNICATIONS RACEWAY.
   5. PROVIDE OUTLET BOXES AS SHOWN ON THE DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, DEVICE INSTALLATION AND CODE COMPLIANCE.
   6. INSTALL FITTINGS AND FLEXIBLE M ETAL CONDUIT TO ACCOMMODATE 3-AXIS MOVEMENTS WHERE RACEWAY CROSSES SEISMIC JOINTS.
   7. DO NOT INSTALL BOXES BACK-TO-BACK IN WALLS. PROVIDE A MINIMUM 6 INCH SEPARATION FOR MINIMUM SOUND TRANSMISSION.
   8. USE MULTIPLE-GANG BOXES WHERE MORE THAN ONE DEVICE ARE MOUNTED TOGETHER; DO NOT USE SECTIONAL BOXES.
   9. SUPPORT BOXES INDEPENDENTLY OF CONDUIT.
   10. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS MOUNTED ABOVE COUNTERS, BENCHES AND BACKSPLASHES.

26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.

B. MATERIALS:
   1. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, WHITE LETTERS ON A BLACK BACKGROUND. NAMEPLATES SHALL BE PROVIDED TO IDENTIFY ALL ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT AND LOADS SERVED.
   2. TAPE LABELS: ADHESIVE TAPE LABELS, WITH 3/16 INCH BOLD BLACK LETTERS ON CLEAR BACKGROUND MADE USING DYMO RHINO SERIES OR EQUAL LABEL PRINTER.
   3. WIRE AND CABLE MARKERS: CLOTH MARKERS, SPLIT SLEEVE OR TUBING TYPE.

C. INSTALLATION:
   1. GEAR: PROVIDE ENGRAVED THREE-LAYER LAMINATED PLASTIC NAMEPLATES WITH WHITE LETTERS ON A BLACK BACKGROUND TO IDENTIFY ALL ELECTRICAL DISTRIBUTION, AND LOADS SERVED.
   2. CONDUITS: MARK ALL CONDUITS ENTERING OR LEAVING PANELBOARDS WITH INDELIBLE BLACK MAGIC MARKER WITH THE CIRCUIT NUMBERS OF THE CIRCUITS CONTAINED INSIDE. LABEL FEEDER CONDUITS AND SPARE CONDUITS AT EACH END WITH SOURCE AND TERMINATION POINT.
   3. JUNCTION BOXES: MARK ALL CIRCUIT NUMBERS OF WIRING ON ALL JUNCTION BOXES WITH SHEET STEEL COVERS. MARK WITH INDELIBLE BLACK MARKER.
   4. WIRE IDENTIFICATION: PROVIDE WIRE MARKERS ON EACH CONDUCTOR IN PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND AT LOAD CONNECTION. MARKERS SHALL BE LOCATED WITHIN ONE INCH OF EACH CABLE END, EXCEPT AT PANELBOARDS, WHERE MARKERS FOR BRANCH CIRCUIT CONDUCTORS SHALL BE VISIBLE WITHOUT REMOVING PANEL DEADFRONT.
   5. DEVICE PLATES: LABEL EACH RECEPTACLE DEVICE PLATE OR POINT OF CONNECTION DENOTING THE PANELBOARD NAME AND CIRCUIT NUMBER. INSTALL LABEL ON THE TOP OF EACH PLATE.

26 24 16 - PANELBOARDS

A. SUBMITTALS: SUBMIT PRODUCT DATA FOR APPROVAL.

B. MATERIAL:
   1. MANUFACTURERS: SQUARE D, GE, EATON, OR EQUAL.
   2. PROVIDE DEAD-FRONT CIRCUIT BREAKER PANELBOARDS WITH BUS SIZE, SHORT CIRCUIT RATING, NUMBER AND SIZE OF BRANCH CIRCUITS AS SHOWN ON THE DRAWINGS. BUSSING SHALL BE COPPER. CABINETS SHALL BE 6 INCHES BY 20 INCHES WIDE MINIMUM. PROVIDE WITH FLUSH OR SURFACE FRONTS, AS NOTED ON THE DRAWINGS, WITH CONCEALED TRIM CLAMPS, CONCEALED HINGE, AND FLUSH LOCK. FINISH IN MANUFACTURER'S STANDARD GRAY ENAMEL. MOLDED CASE CIRCUIT BREAKERS SHALL BE BOLT-ON THERMAL MAGNETIC TRIP TYPE WITH COMMON TRIP HANDLE FOR ALL POLES. PROVIDE CIRCUIT BREAKERS UL LISTED AS TYPE SWD FOR LIGHTING CIRCUITS SWITCHED AT THE PANEL.
   3. PROVIDE SUBMETER FOR PANEL. ANSIC12-20 REVENUE GRADE SUBMETER WITH RS485, ETHERNET OR WI-FI COMMUNICATION CAPABILITY AND POWER SUPPLY. ELECTRO INDUSTRIES #SHARK100S OR EQUAL. PROVIDE WITH CURRENT TRANSFORMER KIT ELECTRO INDUSTRIES #CT200K OR EQUAL AND CT SHORTING BLOCK.

C. INSTALLATION:
   1. INSTALL PANELBOARDS PLUMB WITH TOP OF CABINET 6'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON THE DRAWINGS.
   2. PROVIDE TYPED CIRCUIT DIRECTORIES FOR EACH PANEL.
   3. ALL PANELBOARDS SHALL HAVE SIGNAGE FOR ARC HAZARD INSTALLED. THE MARKING SHALL BE LOCATED TO BE CLEARLY VISIBLE TO QUALIFIED PERSONNEL BEFORE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE OF THE EQUIPMENT. AT A MINIMUM THE 3-LINE SIGNAGE SHALL STATE THE FOLLOWING: WARNING - ARC FLASH AND SHOCK HAZARD - APPROPRIATE PPE REQUIRED.

26 27 26 - WIRING DEVICES

A. SUBMITTALS: SUBMIT PRODUCT DATA FOR APPROVAL.

B. MATERIALS:
   1. RECEPTACLES: CONVENIENCE AND STRAIGHT BLADE RECEPTACLES SHALL BE NEMA AND FEDERAL SPECIFICATION FS W-C-596, TYPE 5-20R, WHITE NYLON FACE. SPECIFIC USE RECEPTACLES SHALL BE NEMA WD1 OR WD5; AS REQUIRED TO MATCH LOAD SERVED, BLACK PHENOLIC FACE. GFCI RECEPTACLES SHALL BE 20A, DUPLEX CONVENIENCE RECEPTACLE WITH INTEGRAL CLASS 'A' GROUND FAULT CURRENT INTERRUPTER AND LOCKOUT FEATURE. WEATHER-RESISTANT RECEPTACLES SHALL BE LISTED TO THE WEATHER-RESISTANT SUPPLEMENT OF UL 498 AND COMPLY WITH THE REQUIREMENTS OF NEC 406.9.
   2. WALL PLATES: DECORATIVE COVER PLATES IN FINISHED AREAS SHALL BE 430 OR 302 STAINLESS STEEL. PROVIDE 1/2 INCH RAISED, SQUARE, GALVANIZED OR CADMIUM PLATED, PRESSED STEEL COVER PLATE SUPPORTING DEVICES INDEPENDENT OF THE OUTLET BOX FOR ALL EXPOSED WORK.

C. INSTALLATION:
   1. UNLESS OTHERWISE NOTED ON THE DRAWINGS, INSTALL RECEPTACLES 18 INCHES ABOVE FINISH FLOOR, 4 INCHES ABOVE COUNTERS AND BACKSPLASHES WITH GROUNDING POLE ON BOTTOM. UNLESS OTHERWISE NOTED DIMENSIONS ARE TO CENTERLINE OF OUTLET.
   2. INSTALL GALVANIZED STEEL PLATES ON OUTLET BOXES AND JUNCTION BOXES IN UNFINISHED AREAS, ABOVE ACCESSIBLE CEILINGS, AND ON SURFACE-MOUNTED OUTLETS.

26 29 13 - ENCLOSED CONTROLLERS

A. SUBMITTALS: SUBMIT PRODUCT DATA FOR APPROVAL.

B. MATERIALS:
   1. MANUFACTURERS: SQUARE D, GE, EATON OR EQUAL.
   2. MANUAL AND FRACTIONAL MOTOR STARTERS: NEMA ICS 2, AC GENERAL PURPOSE CLASS A, MANUALLY OPERATED UNIT WITH NUMBER OF POLES AS REQUIRED BY THE LOAD SERVED, FULL-VOLTAGE CONTROLLER FOR FRACTIONAL HORSEPOWER INDUCTION MOTORS, WITH THERMAL OVERLOAD UNIT, RED PILOT LIGHT, AND TOGGLE OPERATOR.

C. INSTALLATION:
   1. SELECT AND INSTALL HEATER ELEMENTS IN MOTOR STARTERS TO MATCH INSTALLED MOTOR CHARACTERISTICS.
   2. MOTOR STARTING EQUIPMENT SHALL BE LISTED FOR USE AND PROPERLY SIZED FOR OPERATION WITH THE INSTALLED MOTORS.

26 29 16 - ENCLOSED CONTACTORS

A. SUBMITTALS: SUBMIT PRODUCT DATA FOR APPROVAL.

B. MATEREALS:
   1. MANUFACTURERS: SQUARE D, GE, EATON, OR EQUAL.
   2. LIGHTING CONTACTORS: NEMA ICS 2; MECHANICALLY HELD, 2-WIRE CONTROL WITH 120VAC COIL, 30A RATED CONTACTS, NUMBER OF POLES AS INDICATED ON THE PLANS, 4-POLE MINIMUM. ENCLOSURE SHALL BE NEMA TYPE 1. PROVIDE HAND/OFF/AUTO SWITCH, 2-POLE RELAY FOR 1-POLE CONTROL AND A RED PILOT LIGHT.

C. INSTALLATION:
   1. INSTALL DISCONNECT SWITCHES IN ACCORDANCE WITH THE MANUFACTURER'S INSATLLATION INSTRUCTIONS.
   2. FIELD LOCATE TO ALLOW READY ACCESS AND WHERE THE EVENTUAL VIBRATION AND NOISE THEY WILL PRODUCE WILL NOT BE OBJECTIONABLE TO BUILDING OCCUPANTS.
   3. PROVIDE PERMANENT LABEL TO CLEARLY INDICATE PURPOSE OF THE CONTACTOR.

26 50 00 - LIGHTING FIXTURES

A. SUBMITTALS: SUBMIT PRODUCT DATA FOR APPROVAL.

B. MATERIALS:
   1. LUMINAIRES: PROVIDE AND INSTALL ALL LIGHTING EQUIPMENT OR APPROVED EQUAL AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THE "FIXTURE SCHEDULE". PROVIDE LIGHTING EQUIPMENT COMPLETE, WIRED, ASSEMBLED, WITH PROPER FLANGES, MOUNTING SUPPORTS, HARDWARE, ETC.
   2. LED DRIVERS: PROVIDE UL LISTED POWER SUPPLY AS RECOMMENDED BY THE LED FIXTURE MANUFACTURER FOR OPERATION OF THE SPECIFIED LED LAMPS. POWER SUPPLY SHALL BE INTEGRAL TO THE LUMINAIRE UNLESS OTHERWISE NOTED ON THE PLANS. POWER SUPPLY SHALL OPERATE AT THE SUPPLY VOLTAGE INDICATED ON THE PLANS AND SHALL BE LISTED FOR STARTING AND OPERATING THE LAMPS AT 75F AVERAGE INDOOR TEMPERATURE.

C. INSTALLATION:
   1. SUPPORT LUMINARIES IN SUSPENDED CEILINGS FROM STRUCTURE ABOVE USING A MINIMUM OF (4) ANCHORS.
   2. PROVIDE LUMINAIRE DISCONNECTING MEANS IN DRIVER CHANNEL OF EACH LIGHT FIXTURE. WHERE THE LUMINAIRE IS FED FROM A MULTI-WIRE BRANCH CIRCUIT, PROVIDE MULTI-POLE DISCONNECT TO SIMULTANEOUSLY BREAK ALL SUPPLY CONDUCTORS TO THE DRIVER, INCLUDING THE GROUNDED CONDUCTOR.

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CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

CONSTRUCTION DOCUMENTS
PROJECT NO.L9087

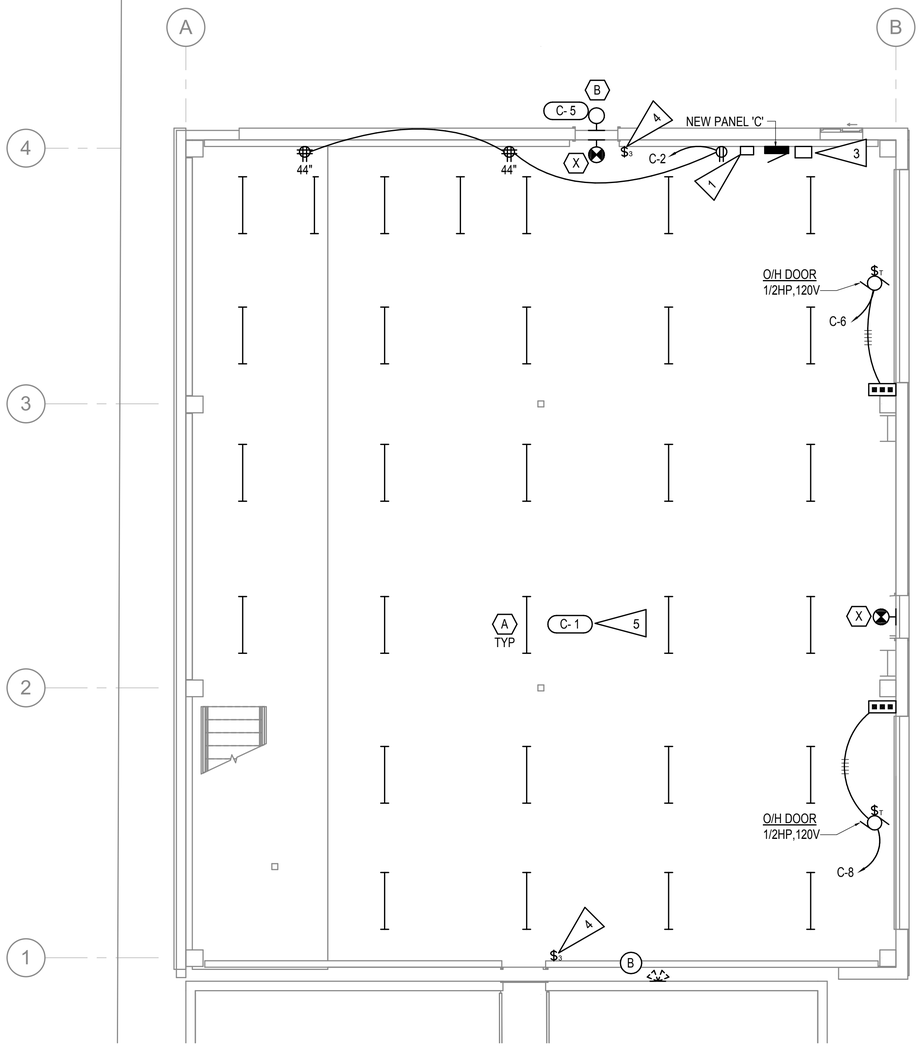
STATE OF ALASKA
CHANNING P. LILLO
EE-10285
6/7/19
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL SPECIFICATIONS

AUTHOR: KB
CHECKED: CPL
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

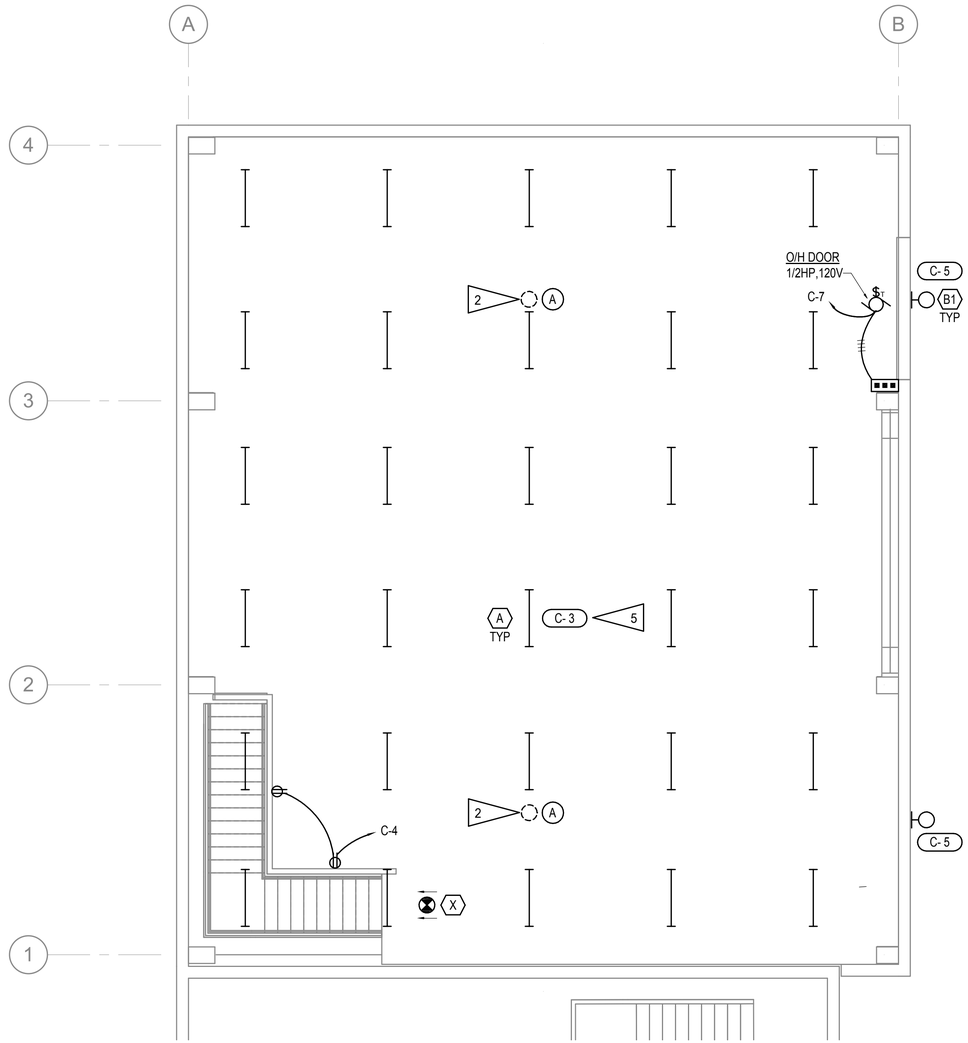
E1.0.2

FULL SIZE PRINTED ON 22 x 34



1 ELECTRICAL REMODEL PLAN - LEVEL 1

3/16" = 1'-0"



2 ELECTRICAL REMODEL PLAN - LEVEL 2

3/16" = 1'-0"

GENERAL NOTES:

A. THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THERE IS NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN HERE-IN. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

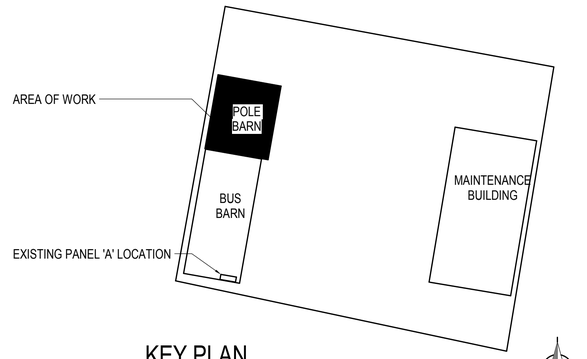
B. THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL SALVAGEABLE MATERIALS. THE CONTRACTOR SHALL DELIVER SALVAGED MATERIALS TO A WAREHOUSE AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL DISPOSE OF, OFF SITE, ALL UNWANTED MATERIALS.

C. DASHED OR DOTTED LINES INDICATE ITEMS TO BE REMOVED. SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.

D. CONNECT EXIT SIGNS TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT. NOTE THAT EXIT SIGNS ARE NOT REQUIRED BY CODE BUT ARE ADDED TO HELP CLARIFY EXIT LOCATIONS.

SHEET NOTES:

1. SUBMETER FOR PANEL. SEE 1/E1.0.1.
2. DEMOLISH EXISTING HIGH BAY LIGHTS. TURN OVER TO OWNER. DEMOLISH CONDUIT/WIRE BACK TO SOURCE OR NEAREST JBOX OR DEVICE ON THE SAME CIRCUIT.
3. LIGHTING CONTACTOR TO CONTROL ALL INTERIOR LIGHTING.
4. CONNECT THREE-WAY SWITCH TO LIGHTING CONTACTOR. SEE 2/E1.0.1.
5. CONNECT ALL INTERIOR LIGHTING ON THIS FLOOR TO CIRCUIT INDICATED WITH 1/2"C 3#12 MINIMUM. ROUTE CIRCUIT VIA LIGHTING CONTACTOR. SEE 2/E1.0.1



KEY PLAN

NOT TO SCALE

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CITY OF VALDEZ

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CONSTRUCTION DOCUMENTS

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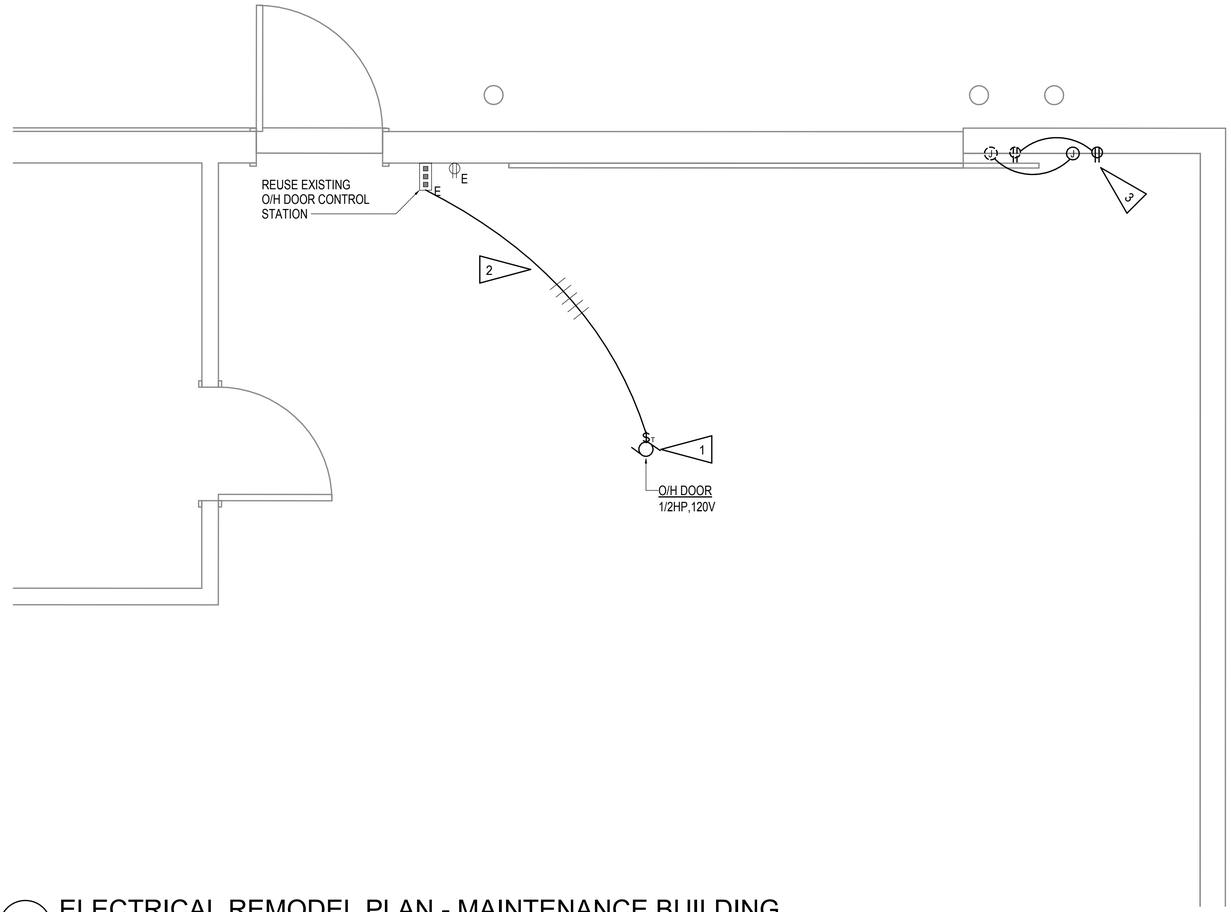
6/6/19
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL POLE BARN PLAN

AUTHOR: KB CHECKED: CPL
REVISION:
ISSUE DATE: 6/7/2019
OWNER PROJECT NO: -

E1.1.1

FULL SIZE PRINTED ON 22 x 34



1 ELECTRICAL REMODEL PLAN - MAINTENANCE BUILDING

1/2" = 1'-0"

GENERAL NOTES:

A. THERE IS NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN HERE-IN. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

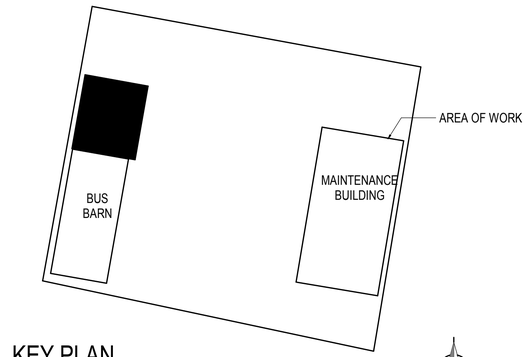
B. DASHED OR DOTTED LINES INDICATE ITEMS TO BE REMOVED. SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.

SHEET NOTES:

1. EXISTING O/H DOOR TO BE REPLACED WITH NEW IN NEARBY LOCATION. EXTEND AND RECONNECT EXISTING CIRCUIT TO NEW O/H DOOR. CONFIRM EXISTING BREAKER MATCHES NEW DOOR MOTOR SIZE (20A/1P).

2. EXTEND AND RECONNECT MOTOR CONTROL WIRING AND SAFETY CONTROLS TO NEW O/H DOOR.

3. RELOCATE EXISTING DUPLEX RECEPTACLE AND O/H DOOR SAFETY EYES TO NEW LOCATION TO ALLOW FOR NEW, WIDER O/H DOOR. EXTEND AND RECONNECT CONDUIT/WIRING AS REQUIRED.



KEY PLAN

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CITY OF VALDEZ
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CONSTRUCTION DOCUMENTS

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EE-10285
6/5/19
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL MAINTENANCE BUILDING PLAN

AUTHOR: KB
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E1.1.2

FULL SIZE PRINTED ON 22 x 34

EXISTING PANEL 'A'

MFR/MODEL: SQUARE 'D' TYPE NQ | VOLTS: 120/208V,3PH,4W | ENCLOSURE: NEMA 1 | 225 A

VOLT-AMPS | MTG: SURFACE

NOTE	CIRC	POLE	AMPS	SERVICE	TYPE	A	B	C	TYPE	SERVICE	AMPS	POLE	CIRC	NOTE
	1	1	20	BOILER 1						FACP	20	1	2	
	3	3	20	UNKNOWN						UNKNOWN	20	3	4	
	5	3	20	^^^						^^^	20	3	6	
	7	3	20	^^^						^^^	20	3	8	
	9	1	20	CANOPY LEDS AND CONTACTOR						PADDLE FANS	20	1	10	
	11	1	20	MAIN POST RECEP						MEZZANINE LIGHTS	20	3	12	
	13	1	20	MAIN POST RECEP						^^^	20	3	14	
	15	1	20	MAIN MEZZANINE						^^^	20	3	16	
	17	2	20	UNKNOWN						UPPER 104W LEDS	20	1	18	
	19	2	20	^^						GARAGE DOOR	20	2	20	
	21	1	20	OUTSIDE RECEP (EGAN)						^^	20	2	22	
	23	1	20	OUTSIDE RECEP (GARAGE)						DATA QUAD. RECEP	20	1	24	
	25	3	20	REFER 20A (LEFT FREEZER)						MAIN LIGHTS	20	1	26	
	27	3	20	^^^						**MAIN LIGHTS (EM)**	20	1	28	a
	29	3	20	^^^						**UNKNOWN**	50	3	30	b
	31	3	20	REFER 20A (RIGHT FREEZER)						^^^	50	3	32	b
	33	3	20	^^^						^^^	50	3	34	b
	35	3	20	^^^						SPACE	-	1	36	
	37	2	20	120V CIRCUIT						PANEL B	100	3	38	
	39	2	20	^^						^^^	100	3	40	
	41	1	-	SPACE						^^^	100	3	42	

PANEL NOTES:
a EXISTING LIGHTING BREAKER TO BE RELOCATED IN PANEL, SEE NOTE 'A' IN REMODEL PANEL 'A' FOR LOCATION
b EXISTING UNKNOWN BREAKER TO BE RELOCATED IN PANEL, SEE NOTE 'B' IN REMODEL PANEL 'A' FOR LOCATION

PANEL OPTIONS:

REMODEL PANEL 'A'

MFR/MODEL: SQUARE 'D' TYPE NQ | VOLTS: 120/208V,3PH,4W | ENCLOSURE: NEMA 1 | 225 A

VOLT-AMPS | MTG: SURFACE

NOTE	CIRC	POLE	AMPS	SERVICE	TYPE	A	B	C	TYPE	SERVICE	AMPS	POLE	CIRC	NOTE
	1	1	20	BOILER 1						FACP	20	1	2	
	3	3	20	UNKNOWN						UNKNOWN	20	3	4	
	5	3	20	^^^						^^^	20	3	6	
	7	3	20	^^^						^^^	20	3	8	
	9	1	20	CANOPY LEDS AND CONTACTOR						PADDLE FANS	20	1	10	
	11	1	20	MAIN POST RECEP						MEZZANINE LIGHTS	20	3	12	
	13	1	20	MAIN POST RECEP						^^^	20	3	14	
	15	1	20	MAIN MEZZANINE						^^^	20	3	16	
	17	2	20	UNKNOWN						UPPER 104W LEDS	20	1	18	
	19	2	20	^^						GARAGE DOOR	20	2	20	
	21	1	20	OUTSIDE RECEP (EGAN)						^^	20	2	22	
	23	1	20	OUTSIDE RECEP (GARAGE)						DATA QUAD. RECEP	20	1	24	
	25	3	20	REFER 20A (LEFT FREEZER)						MAIN LIGHTS	20	1	26	
	27	3	20	^^^						**UNKNOWN**	50	3	28	b
	29	3	20	^^^						^^^	50	3	30	b
	31	3	20	REFER 20A (RIGHT FREEZER)						^^^	50	3	32	b
	33	3	20	^^^						**NEW PANEL C**	**60**	2	34	c
	35	3	20	^^^						^^	**60**	2	36	c
	37	2	20	120V CIRCUIT						PANEL B	100	3	38	
	39	2	20	^^						^^^	100	3	40	
a	41	1	20	**MAIN LIGHTS (EM)**						^^^	100	3	42	

PANEL NOTES:
a NEW LOCATION FOR EXISTING LIGHTING BREAKER.
b NEW LOCATION FOR EXISTING UNKNOWN BREAKER. TRACE CIRCUIT AND UPDATE PANEL SCHEDULE TO INDICATE LOAD.
c PROVIDE NEW BREAKER (SIZED AS SHOWN) LISTED FOR USE IN EXISTING PANEL.

PANEL OPTIONS:

NEW PANEL 'C'

MFR/MODEL: SQUARE 'D' TYPE NQ | VOLTS: 120/208V,1PH,3W | ENCLOSURE: NEMA 1 | 60 A

TYPE: PANELBOARD | VOLT-AMPS | MTG: SURFACE

NOTE	CIRC	POLE	AMPS	SERVICE	TYPE	A	B	TYPE	SERVICE	AMPS	POLE	CIRC	NOTE
	1	1	20	LTG LEVEL 1	LTG	1,022	900	RECP	RECP WORK BENCH	20	1	2	
	3	1	20	LTG LEVEL 2	LTG		1,021	360	RECP	RECP LEVEL 2	20	1	4	
	5	1	20	LTG EXTERIOR	LTG	181	1176	MOTR	OH DOOR LEVEL 1 CKT 1	20	1	6	
	7	1	20	OH DOOR LEVEL 2	MOTR		1,176	1,176	MOTR	OH DOOR LEVEL 1 CKT 2	20	1	8	
	9	1	20	SPARE						SPARE	20	1	10	
	11	1	20	SPARE						SPARE	20	1	12	
				TOTAL V-A		3,279	3,733			7,012	VA			
				TOTAL AMPS		27	31			34	A			
				A.I.C. RATING: 10,000										

	LTG	RECP	MOTR	LG.MT	MISC	SPEC	TOTAL	AMPS
CONNECTED LOAD IN KVA (THIS PANEL):	2.22	1.26	3.53	0.29	0.00	0.00	7.0 KVA	34 A
CONNECTED LOAD IN KVA (BRANCH PANELS):							0.0 KVA	0 A
TOTAL CONNECTED LOAD IN KVA:	2.22	1.26	3.53	0.29	0.00	0.00	7.0 KVA	34 A
DEMAND LOAD IN KVA:	2.78	1.26	3.53	0.29	0.00	0.00	7.9 KVA	38 A

PANEL NOTES:
a
b
c
d
e

PANEL OPTIONS:
MAIN CIRCUIT BREAKER (SEE ONE-LINE FOR SIZE)

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CITY OF VALDEZ
BUILDING MAINTENANCE SHARED FACILITY PROJECT

PROJECT NO.L9087

CONSTRUCTION DOCUMENTS

PANEL SCHEDULES

AUTHOR: KB
CHECKED: CPL
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E1.2.1

FULL SIZE PRINTED ON 22 x 34