# **GENERAL STRUCTURAL NOTES:**

THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AMONG THE DRAWINGS BEFORE STARTING ANY WORK OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, REFERENCE STANDARDS, SITE CONDITIONS OR GOVERNING CODE, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL NOTIFY THE ENGINEER OF DISCREPANCIES AND OBTAIN DIRECTION PRIOR TO PROCEEDING. NOTES ON INDIVIDUAL STRUCTURAL DRAWINGS SHALL TAKE PRIORITY OVER GENERAL STRUCTURAL NOTES. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS, BUT SHALL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS.

ALL CONSTRUCTION SHALL COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE (IBC)

SAFETY - THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL FEDERAL, STATE AND LOCAL SAFETY STANDARDS. THE CONTRACTOR IS IN CHARGE OF ALL SAFETY MATTERS ON AND AROUND

#### STRUCTURAL DESIGN DATA:

STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE IBC AS AMENDED AND ADOPTED BY THE MUNICIPALITY OF ANCHORAGE. OCCUPANCY CATEGORY IS II IN ACCORDANCE WITH IBC SECTION

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

THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SHORING AND BRACING DURING CONSTRUCTION.

LIVE LOADS:

PRIVATE ROOMS AND CORRIDORS SERVING THEM = 40 PSF DECKS AND BALCONIES = 60 PSF

**ROOF SNOW:** 

40 PSF MINIMUM ROOF SNOW, Is = 1.0, Pg = 50 PSF, Pf = 40 psf, Ct = 1.1, Ce = 1.0, Cd = 1.15 LOW ROOFS OVER ENTRIES AND WALKWAY DESIGNED FOR 100 PSF SNOW LOAD.

WIND LOADS:

BASIC WIND SPEED (3-SECOND GUST, Vult)=155 MPH, EXPOSURE B, INTERNAL PRESSURE GCpi=0.18 (ENCLOSED)

#### SEISMIC LOADS:

SITE CLASS D, DESIGN CATEGORY D, Ss=1.50g, S1=0.676g, Sds=1.00g, Sd1=0.766g, Ie=1.0, R=6.5 (LIGHT FRAMED WOOD WALLS SHEATHED WITH WOOD STRUCTURAL PANELS), OMEGA = 2.5, Cd = 4.0, Cs=0.154.

LATERAL ANALYSIS IS LINEAR STATIC. LATERAL FORCES ARE CARRIED BY FLEXIBLE ROOF & FLOOR DIAPHRAGMS. MOMENTS, SHEARS, AND ROTATIONAL FORCES ARE DELIVERED TO THE FOUNDATION BY THE WOOD SHEAR WALLS IN PROPORTION TO THEIR TRIBUTARY AREA.

FOUNDATION DESIGN BASED ON PROJECT GEOTECHNICAL REPORT PREPARED BY NGE-TFT PROJECT 7252-24. FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE IBC AND THE FOUNDATION CRITERIA LISTED BELOW:

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL GRAVEL. BASE OF EXCAVATION TO BE PROOF-COMPACTED. STRUCTURAL FILL GRAVEL TO BE NON-FROST SUSCEPTIBLE COMPACTED FILL TO 95% OF MAXIMUM PROCTOR DENSITY PER ASTM D1557.

ALLOWABLE BEARING CAPACITY: 3,100 PSF AT CONTINUOUS FOOTINGS

TRANSIENT LOADS (WIND & SEISMIC): BEARING INCREASED BY 25%

# SPECIAL INSPECTION:

THE OWNER SHALL ENGAGE A SPECIAL INSPECTOR PER CHAPTER 17 OF THE IBC. SEE STATEMENT OF SPECIAL INSPECTIONS. COPIES OF INSPECTION REPORTS SHALL BE AVAILABLE TO THE CONSTRUCTION SITE FOR REVIEW BY THE MOA BUILDING SAFETY PERSONNEL.

# **DEFERRED SUBMITTALS:**

THE FOLLOWING ITEMS ARE NOT INCLUDED IN THESE DRAWINGS AND REQUIRE STRUCTURAL DESIGN TO BE FURNISHED BY THE CONTRACTOR:

# 1. PREFABRICATED WOOD TRUSSES

DRAWINGS AND CALCULATIONS FOR BUILDER-DESIGNED COMPONENTS, SEALED BY THE ALASKA STATE REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW FOR GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING TO BUILDING SAFETY FOR REVIEW. SUBMITTALS OF BUILDER-DESIGNED ITEMS SHALL INCLUDE LOCATIONS, MAGNITUDES, AND DIRECTIONS OF ALL FORCES TRANSFERRED TO THE STRUCTURE. DEFERRED SUBMITTALS MUST BE REVIEWED AND APPROVED BY BUILDING SAFETY PRIOR TO INSTALLATION/CONSTRUCTION.

THE CONTRACTOR SHALL REVIEW, STAMP WITH HIS APPROVAL, DATE AND SIGN ALL SHOP DRAWINGS AND SUBMITTALS REQUIRED BY THE CONTRACT DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER. AT THE TIME OF SUBMISSION, THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION IN THE SHOP DRAWINGS FROM THE REQUIREMENTS OF THE CONTRACT DRAWINGS. DIMENSIONS AND QUANTITIES ARE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE REVIEWED.

# **CAST-IN-PLACE CONCRETE:**

ALL CAST-IN-PLACE CONCRETE SHALL HAVE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,500

PORTLAND CEMENT SHALL CONFORM TO ASTM C150. MAXIMUM AGGREGATE SIZE SHALL BE 3/4 INCH. ALL AGGREGATE SHALL BE NORMAL WEIGHT MATERIAL CONFORMING TO ASTM C33. WATER SHALL MEET ASTM C94, SECTION 4.1.3.

CONCRETE SHALL BE PROPORTIONED TO ACHIEVE A WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. COMPLY WITH IBC SECTION 1905.

CONCRETE MAY CONTAIN A WATER REDUCING ADMIXTURE MEETING ASTM C494, TYPE A. BEFORE THE ADDITION OF THE WATER REDUCING ADMIXTURE. THE MAXIMUM SLUMP SHALL BE 3-INCHES. MAXIMUM WATER CEMENT RATIO SHALL BE 0.46 FOR FLOOR SLABS AND 0.50 FOR ALL OTHERS.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301, STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE. CONCRETE PLACED DURING COLD WEATHER SHALL CONFORM TO ACI 306. ALL COLD WEATHER CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL CONTAIN AIR ENTRAINMENT PER ACI 318 TABLE 4.2.1.

#### CAST-IN-PLACE CONCRETE CONTINUED

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT FOR CAST-IN-PLACE CONCRETE:

A. CONCRETE CAST AGAINST EARTH: 3-INCHES B. CONCRETE EXPOSED TO EARTH OR WEATHER: 2-INCHES C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

ALL CONCRETE REINFORCING SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 315, ACI 318, CRSI MSP-1 AND ACI SP-66. DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN

TYPICAL REINFORCING BARS SHALL BE ASTM A615, GRADE 60. LAP SPLICES SHALL BE CLASS B LAPS PER ACI (63 X BAR DIAMETER). LAP SPLICES MAY ALSO ACCOMPLISHED USING MECHANICAL DEVICES THAT DEVELOP 125% OF THE STRENGTH OF THE REBAR.

CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

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

#### **MASONRY**

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT, GRADE N, TYPE 1, F'm = 1,500 PSI, WITH A NET COMPRESSIVE STRENGTH OF 1,900 PSI PER ASTM C140

MORTAR SHALL CONFORM TO ASTM C270, TYPE S, 1,800 PSI. PRE-MIXED MORTAR AND RETARDANT ADDITIVES SHALL NOT BE USED. FINE OR COARSE GROUT PER ASTM C476, 2,000 PSI AT 28 DAYS, TESTED PER ASTM C1019. GROUT SHALL BE FREE OF FLY ASH AND CHLORIDE.

ALL CELLS SHALL BE GROUTED SOLID. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN ABOUT 5 MINUTES LATER. PROVIDE CLEANOUTS IF GROUT LIFT EXCEEDS 4'-0" IN BLOCK WALLS. MAXIMUM GROUT LIFT SHALL BE 8'-0" WITH EACH LIFT STOPPING 1-1/2" BELOW THE TOP COURSE OF THE LIFT

#### POST-INSTALLED ANCHORS

INSTALLATION SHALL CONFORM TO MANUFACTURER'S INSTRUCTIONS AND REQUIREMENTS OF ICC-ES REPORT. ALL POST-INSTALLED ANCHORS SHALL HAVE A CURRENT ICC-ES REPORT AND BE AUTHORIZED FOR USE IN SEISMIC DESIGN CATEGORY D. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORS, U.N.O.

THREADED ROD SHALL BE ASTM A307, U.N.O. (OR ISO898 CLASS 5.8), TENSILE STRENGTH OF 60 KSI MIN, AND GALVANIZED WHERE EXPOSED TO THE WEATHER.

EXISTING BASE SHALL BE SCANNED PRIOR TO DRILLING HOLES. EXISTING REBAR LOCATIONS SHALL BE MARKED, AND NEW ANCHOR LOCATIONS REVISED TO AVOID EXISTING REINFORCING. NO REINFORCING BARS SHALL BE CUT TO INSTALL ANCHORS. ALL DEFECTIVE ANCHOR HOLES SHALL BE GROUTED AND A NEW HOLE DRILLED A MINIMUM OF 3 BOLT DIAMETERS AWAY.

ADHESIVE ANCHORS FOR THREADED ROD AND REBAR SHALL BE ONE OF THE FOLLOWING (OR AN APPROVED EQUIVALENT):

SIMPSON SET-3G (ESR-4057 AT CONCRETE & ESR-4844 AT MASONRY)

# STRUCTURAL TIMBER:

2X DIMENSIONAL LUMBER: HF NO. 2 OR BETTER, TYPICAL DF NO.2 AT FIRST LEVEL 2X4 BEARING WALLS 4X AND GREATER LUMBER: GLUE-LAMINATED TIMBER: DF/DF, 24F-V4, INDUSTRIAL GRADE

DF/DF, 24F-V8 AT MULTI SPAN AND CANTILEVER BEAMS DF/DF L2 LAYUP AT GLULAM COLUMNS. CLEARGUARD TREATED **ENGINEERED LUMBER:** 3100 2.0E LVL (2800 2.0E AT 1 3/4-INCH WIDTH AND LESS) 1 5 VERSA-LAM 1.4, 1800, TYPICAL RIM JOIST:

FLOOR SHEATHING: APA RATED SHEATHING, EXPOSURE 1, SPAN RATED 48/24, 3/4-INCH THICK **ROOF SHEATHING** APA RATED SHEATHING, EXTERIOR SPAN RATED 40/20, 5/8-INCH THICK WALL SHEATHING: APA RATED SHEATHING, EXPOSURE 1 SPAN RATED 32/16, 7/16-INCH THICK

INSTALL FLOOR SHEATHING WITH THE LONG DIMENSION ACROSS SUPPORTS. ALLOW 1/8-INCH SPACING AT PANEL ENDS AND PANEL EDGES, UNLESS OTHERWISE RECOMMENDED BY THE PANEL MANUFACTURER. SHEATHING SHALL BE USED IN ACCORDANCE WITH THE RECOMMENDATIONS OF APA, THE ENGINEERED WOOD ASSOCIATION. PLACE NAILS 3/8-INCH FROM EDGE OF PANELS

ALL FLOOR DIAPHRAGMS SHALL BE NAILED: PANEL EDGES: 10d NAILS AT 6-INCHES ON-CENTER INTERMEDIATE SUPPORTS: 10d @ 12-INCHES ON-CENTER

ALL ROOF DIAPHRAGMS SHALL BE NAILED: PANEL EDGES: 10d NAILS AT 6-INCHES ON-CENTER INTERMEDIATE SUPPORTS: 10d @ 12-INCHES ON-CENTER BLOCKING IS NOT REQUIRED UNLESS NOTED ON PLAN

BLOCKING IS NOT REQUIRED UNLESS NOTED ON PLAN

ALL WALL SHEATHING SHALL BE NAILED (UNLESS NOTED OTHERWISE): PANEL EDGES: 8d NAILS AT 6-INCHES ON-CENTER INTERMEDIATE SUPPORTS: 8d @ 12-INCHES ON-CENTER BLOCKING REQUIRED AT UNSUPPORTED PANEL EDGES AT SHEARWALLS

THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL TIMBER MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR REVIEW OF THE ENGINEER.

ALL NAILS SHALL BE COMMON WIRE NAILS, UNLESS NOTED OTHERWISE. NAILING SHALL CONFORM TO TABLE 2304.9.1 OF THE IBC. SIDING FASTENERS SHALL BE GALVANIZED CASING NAILS UNLESS NOTED OTHERWISE. MINIMUM NAIL DIMENSIONS ARE AS FOLLOWS:

NAIL SIZE, PENNY WT	LENGTH, INCHES	DIAMETER. INCHES
8d	2-1/2	0.131
10d	3	0.148
16d	3-1/2	0.162

NAILS SHALL BE DRIVEN FLUSH; HEADS SHALL NOT BE DRIVEN BEYOND TIMBER SURFACE. STANDARD ASTM A307 BOLTS SHALL BE USED IN STD HOLES. WASHERS SHALL BE USED UNDER ALL BOLT HEADS AND NUTS CONTACTING WOOD.

# WOOD STUD WALLS:

EXTERIOR WALL STUDS SHALL BE 2X6 SPACED AT 16-INCHES OC, U.N.O. INTERIOR BEARING WALL STUDS TO BE 16-INCHES OC, U.N.O. CRAWLSPACE BEARING WALLS TO BE 2X SPACED AT 16" O.C.

# STRUCTURAL TIMBER CONTINUED

WOOD PLATES OR SILLS SHALL AT FOUNDATION TO BE AWW 3X DIMENSIONAL LUMBER BOLTED TO FOUNDATIONS WITH 5/8-INCH DIAMETER. MINIMUM EMBEDMENT SHALL BE 7-INCHES AND MAXIMUM SPACING SHALL BE 4-FEET ON-CENTER, U.N.O.

ALL AWW SHEATHING AND LUMBER MUST BE PRESSURE TREATED IN ACCORDANCE WITH THE AWPB-FDN OR AWPA U1 STANDARD. MEMBERS MORE THAN 6-INCHES ABOVE GROUND NEED NOT HAVE THIS SPECIAL PRESERVATIVE TREATMENT, U.N.O.. TIMBER FASTENERS USED TO FASTEN SILL PLATES SHALL BE HOT-DIP GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER.

PRE-MANUFACTURED HARDWARE SHALL BE SIMPSON OR APPROVED EQUAL.

#### **WOOD I-JOISTS:**

WOOD I-JOIST SIZES AND SPACING BASED ON BOISE-CASCADE (SERIES PER PLAN). IF ALTERNATE PRODUCT USED, PROVIDE MANUFACTURER LOAD TABLES AND ICBO REPORTS TO ENGINEER FOR APPROVAL. SIZE FOR TOTAL DEAD LOAD OF 15 PSF. DEFLECTION UNDER TOTAL LOAD NOT TO EXCEED L/360.

### WOOD TRUSSES

THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN, FABRICATION AND ERECTION PROCEDURES OF ALL TRUSSES, BRIDGING AND/OR BLOCKING PANELS, HANGERS, BRACING, ETC. FOR A COMPLETE INSTALLATION OF THE TRUSS SYSTEM. TRUSS CONFIGURATIONS ARE INDICATED ON THE DRAWINGS. ALL BRACING AND BRIDGING SIZES AND SPACING BY TRUSS MANUFACTURER IN ACCORDANCE WITH THE LATEST RECOMMENDATIONS OF THE TRUSS PLATE INSTITUTE.

TRUSSES SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH IBC CHAPTER 23 TO SUPPORT SELF WEIGHT PLUS LIVE LOAD, SUPERIMPOSED DEAD LOADS, AND LATERAL LOADS STATED IN THE GENERAL STRUCTURAL NOTES OR LOCATED ON PLANS. THE UNIFORM LOADS DO NOT INCLUDE SPECIAL OR ADDITIONAL LOADS NOTED ON THE PLANS OR DETAILS. THE ROOF LOAD **DURATION FACTOR IS 1.15.** 

LIMIT TOTAL LOAD DEFLECTIONS TO SPAN/240 AT SIMPLE SPANS U.N.O. LIMIT LIVE LOAD DEFLECTIONS TO SPAN/360 AT SIMPLE SPANS U.N.O. ALL TRUSSES SHALL BE CAMBERED FOR 1.5 TIMES THE DESIGN DEAD LOAD.

ADDITIONAL TRUSSES SHALL BE SUPPLIED AS REQUIRED TO SUPPORT ADDITIONAL LOADS AND EQUIPMENT.

ALL CONNECTORS SHALL HAVE CURRENT I.C.C. APPROVAL. ALL TRUSS TO TRUSS CONNECTORS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, ERECTION DRAWINGS AND DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER FOR REVIEW PRIOR TO MANUFACTURE CALCULATIONS AND SHOP DRAWINGS SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING

ALL FABRICATION SHALL BE PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

### STATEMENT OF SPECIAL INSPECTIONS

THE FOLLOWING STRUCTURAL SYSTEMS ARE PART OF THE DESIGNATED LATERAL FORCE RESISTING SYSTEMS IN THE BUILDING AND HENCE ARE SUBJECT TO THE REQUIREMENTS OF THIS STATEMENT OF SPECIAL INSPECTIONS AND THE STRUCTURAL SPECIAL INSPECTION AND TESTING SCHEDULE IN ACCORDANCE WITH IBC 2018 SECTION 1704.3.

FOUNDATIONS WOOD DIAPHRAGMS WOOD SHEARWALLS SHEARWALL HOLDOWNS POST INSTALLED ANCHORS

# SPECIAL INSPECTIONS AND TESTING:

THE OWNER SHALL ENGAGE A SPECIAL INSPECTOR PER CHAPTER 17 OF THE IBC. SPECIAL INSPECTION AND TESTING OF THE DESIGNATED SEISMIC SYSTEMS AND OTHER BUILDING STRUCTURE COMPONENTS SHALL BE AS OUTLINED IN THE SPECIAL INSPECTIONS AND TESTING SCHEDULE. WHERE REQUIREMENTS OVERLAP, THE MORE STRINGENT IS TO BE USED.

SPECIAL INSPECTION IS NOT REQUIRED FOR COMPONENTS FABRICATED IN A SHOP APPROVED BY THE MUNICIPALITY OF ANCHORAGE TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

# **DISTRIBUTION OF REPORTS:**

COPIES OF THE SPECIAL INSPECTION AND TEST REPORTS SHALL BE DISTRIBUTED TO THE GENERAL CONTRACTOR, THE ENGINEER OF RECORD AND THE ARCHITECT OF RECORD. REPORTS SHALL BE COMPLETED DAILY AND DISTRIBUTED ON A WEEKLY BASIS AND SHALL BE DISTRIBUTED BY THE MONDAY FOLLOWING THE WEEK IN WHICH THE INSPECTION OR TEST WAS COMPLETED. A COPY OF ALL SPECIAL INSPECTION REPORTS, DEFICIENCIES AND CORRECTIVE ACTIONS SHALL BE MAINTAINED AT THE JOB SITE.

# **VERIFICATION AND INSPECTION OF SOILS:**

VERIFY SOILS AND FILLS PLACED AND COMPACTED PER PROJECT GEOTECHNICAL REPORT. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. IF TOTAL CONTROLLED FILL DEPTH IS MORE THAN 12-INCHES, PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS, PRIOR TO PLACEMENT, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY, AND CONTINUOUSLY VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL MATERIALS.

# **FOUNDATION SCHEDULES:**

FOOTING (F) SCHEDULE					
MARK	HEIGHT	WIDTH	LENGTH	FOOTING REINFORCING	
F1	10"	1'-4"	CONTINUOUS	(2) #5 BARS CONTINUOUS #5 HOOKED FOOTING DOWEL SPACING TO MATCH WALL REINFORCING SCHEDULE	
F2	10"	2'-0"	CONTINUOUS	(3) #5 BARS CONTINUOUS #5 HOOKED FOOTING DOWEL SPACING TO MATCH WALL REINFORCING SCHEDULE	
F3	12"	6'-0"	CONTINUOUS	(6) #5 CONTINUOUS LONGITUDINAL BARS #5 TRANSVERSE BOTTOM BARS AT 8" O.C. #5 HOOKED FOOTING DOWELS AT 8" O.C.	
F4	10"	4'-0"	4'-0"	(5)#5 BARS EACH WAY	

### FOUNDATION NOTES:

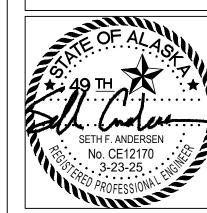
- PROVIDE 3" REBAR COVER WHEN CAST AGAINST EARTH. PROVIDE 2" REBAR COVER WHEN FORMED BUT PERMANENTLY **EXPOSED TO EARTH.**
- PROVIDE HOOKED FOOTING DOWELS FROM FOOTINGS TO MATCH AND LAP VERTICAL FOUNDATION WALL REINFORCING

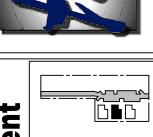
FOUNDATION WALL (W) SCHEDULE							
MARK MATERIAL	WIDTH	REINFORCEMENT		TOP OF WALL ANCHORAGE	NOTES		
		HORIZONTAL	VERTICAL	TOP OF WALL ANGHORAGE	NOTES		
W1 CONCRETE	8"	#5 AT 48" O.C.	#5 AT 32" O.C. CENTERED	5/8" Ø J-BOLT AT 48" O.C. MAX OR PER SHEARWALL	TYP STEMWALL		
	CONCRETE	0	#5 AT 18" O.C.	#5 AT 18" O.C. CENTERED	SCHEDULE	TIF STEWWALL	
W1	MASONRY	8"	#5 AT 48" O.C.	#5 AT 16" O.C. AT INSIDE FACE	5/8" Ø J-BOLT AT 12" O.C.	TYP BASEMENT	
	CONCRETE	0	#5 AT 18" O.C.	#5 AT 18" O.C. AT INSIDE FACE	5/6 Ø J-BOLT AT 12 O.C.	WALL	
W1 CONCRETE	10"	#5 AT 48" O.C.	#8 AT 8" O.C. AT OUTSIDE FACE	N/A	CANTILEVER		
	CONCRETE	8"	#5 AT 18" O.C.	#5 AT 8" O.C. AT OUTSIDE FACE	IVA	RETAINING WALL	

ARETE Project # 2024.121

Project Start Date: 01-01-2025

Release Date: 03-23-2025 Released for: PERMIT





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GENERAL STRUCTURAL NOTES

sheet number

# LATERAL SCHEDULES:

	SHEARWALL (SW) SCHEDULE									
SHEAR NO. OF	NO. OF	OF THICK-	NAIL	NAIL SPACING		A35 OR LTP4 RIM TO PLATE		BOTTOM PLATE ATTACHMENT		FORCE TRANSFER AROUND OPENING
WALL MARK	SIDES	NESS	SIZE	EDGE	FIELD	(SEE DETAILS)	FLOOR	FOUNDATION	MUDSILL	STRAPPING
SW1	1	7/16"	0.131	6"	12"	N/A	16d AT 6"	5/8"Ø A.B. AT 48" O.C.	3x	CS22
SW2	1	7/16"	0.131	4"	12"	N/A	16d AT 5"	5/8"Ø A.B. AT 40" O.C.	3x	CS18
SW3	1	7/16"	0.131	3"	12"	N/A	16d AT 4"	5/8"Ø A.B. AT 32" O.C.	3x	CS16
SW4	1	7/16"	0.131	2"	12"	N/A	16d AT 3"	5/8"Ø A.B. AT 24" O.C.	3x	CS14
SW5	2	7/16"	0.131	4"	12"	16" O.C.	SDWS22500 AT 6" O.C.	5/8"Ø A.B. AT 16" O.C.	3x	N/A
SW6	2	7/16"	0.131	3"	12"	12" O.C.	SDWS22500 AT 4 ½" O.C.	5/8"Ø A.B. AT 16" O.C.	3x	N/A
SW7	2	7/16"	0.131	2"	12"	8" O.C.	SDWS22500 AT 3 ½" O.C.	5/8"Ø A.B. AT 12" O.C.	3x	N/A

#### **SHEARWALL NOTES:**

- SEE FRAMING PLANS FOR LOCATION OF SHEAR WALLS.
- SHEAR WALL SYMBOLS ARE FOR WALLS AT THAT LEVEL.
- ALL PANEL EDGES SHALL BE LOCATED ON STUDS, BLOCKING, PLATES OR RIM JOISTS.
- MAXIMUM SHEARWALL STUD SPACING IS 16" O.C. U.N.O.
- ORIENT PANELS HORIZONTALLY OR VERTICALLY. ALL PANEL EDGES SHALL BE BACKED WITH 2x FRAMING (3x AS REQUIRED). BLOCK BETWEEN STUDS AT HORIZONTAL PANEL EDGES, U.N.O.
- EDGE ATTACHMENT SPACING APPLIES TO ALL STUDS AT PANEL EDGES, TOP AND BOTTOM PLATES, AND BLOCKING AT PANEL EDGES.
- WHERE SHEATHING IS REQUIRED ON BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6"o.c., EACH FACE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR COMMON FRAMING MEMBERS SHALL BE 3x OR THICKER AND NAILS ON EACH FACE SHALL BE STAGGERED.
- WHERE 8d NAILS ARE SPACED AT 3"o.c. OR 10d NAILS ARE SPACED AT 4"o.c. OR LESS, FRAMING MEMBERS SHALL BE 3x
- STITCH NAILED DOUBLE 2x MAY BE SUBSTITUTED FOR 3x MEMBERS. STITCH NAIL ALL DOUBLE 2x MEMBERS WITH 2 ROWS OF 16d NAILS AT 6"o.c. STAGGERED WITH  $\frac{1}{2}$ " CLEAR EDGE DISTANCE.
- 10. 8d=2 1/2"x.131" COMMON OR 2 1/2"x.113" GALVANIZED BOX. 10d=3"x.148" COMMON OR 3"x.128" GALVANIZED BOX.
- 11. LOCATE SILL PLATE ANCHOR BOLTS NO CLOSER THAN 6" FROM WALL CORNERS. PROVIDE 3"x3"x0.25" PLATE WASHERS AT SHEARWALL FOUNDATION ANCHORS, EDGE OF WASHER SHALL BE WITHIN 1 OF PLYWOOD SHEATHING. AT 2-SIDED SHEAR WALLS ALTERNATE ANCHORS EACH SIDE OF PLATE.

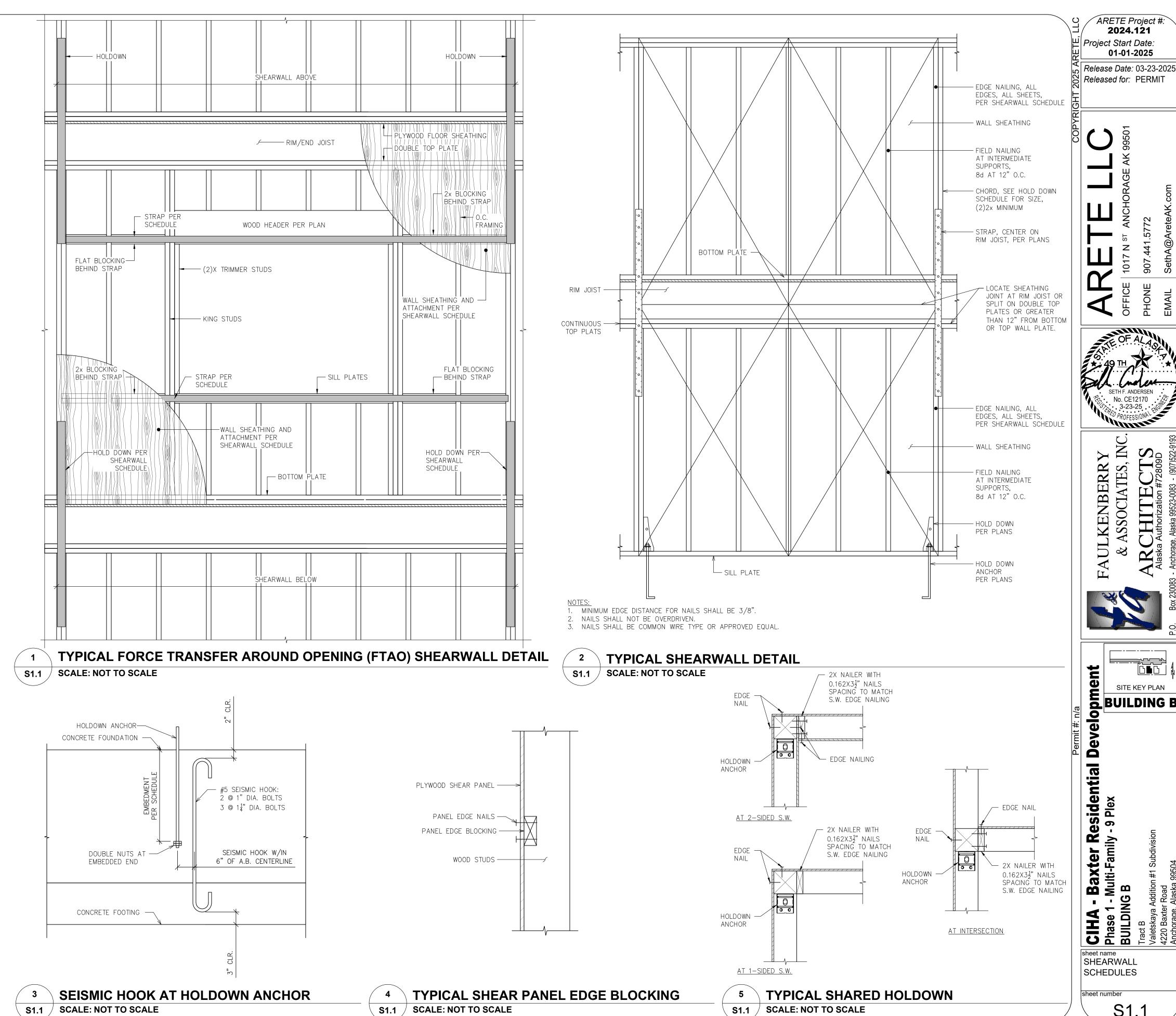
HOLD DOWN ( H ) SCHEDULE						
MARK	TYPE	TYPE CONNECTION TO STUDS CONNECTION AT BASE		END POST/SHEAR WALL CHORD		
H1	SIMPSON HDU8	(20) <sup>1</sup> / <sub>4</sub> "x2 <sup>1</sup> / <sub>2</sub> " SDS SCREWS	7" Ø THREADED ROD EMBED 20"	(3)2X6		
H2	SIMPSON HDU11	(30) <sup>1</sup> / <sub>4</sub> "x2 <sup>1</sup> / <sub>2</sub> " SDS SCREWS	1"Ø THREADED ROD EMBED 34" (2) #5 SEISMIC HOOKS AT CONC.	(3)2X6		
Н3	SIMPSON HDU14	(36) <sup>1</sup> / <sub>4</sub> "x2 <sup>1</sup> / <sub>2</sub> " SDS SCREWS	1"Ø THREADED ROD EMBED 34" (2) #5 SEISMIC HOOKS AT CONC.	6x6		
H4	SIMPSON HD19	(5)1"Ø BOLTS	1¼" Ø THREADED ROD EMBED 52" (2) #5 SEISMIC HOOKS AT CONC.	6x6		
H5	SIMPSON MSTC40	(14) 0.148" X 3 <sup>1</sup> 4" NAILS	(14) 0.148" X 3 <sup>1</sup> 4" NAILS	(2)2x6 (2)2x4		
Н6	SIMPSON MSTC52	(22) 0.148" X 3 <sup>1</sup> <sub>4</sub> " NAILS	(22) 0.148" X 3 <sup>1</sup> <sub>4</sub> " NAILS	(2)2x6 4x4		
H7	SIMPSON MSTC66	(32) 0.148" X 3 <sup>1</sup> 4" NAILS	(32) 0.148" X 3 <sup>1</sup> <sub>4</sub> " NAILS	(2)2x6		
Н8	SIMPSON MSTC78	(38) 0.148" X 3 <sup>1</sup> 4" NAILS	(38) 0.148" X 3 <sup>1</sup> 4" NAILS	4x6		
Н8	SIMPSON CMST12 X 108"	(49) 0.148" X 3 <sup>1</sup> 4" NAILS	(49) 0.148" X 3 <sup>1</sup> 4" NAILS	4x6		

# **HOLD DOWN NOTES:**

- 1. HOLDOWNS BY SIMPSON STRONG-TIE OR APPROVED EQUIVALENT.
- 2. ALL SILL PLATE ANCHOR RODS SHALL BE ASTM F1554 GALVANIZED HEADED BOLTS OR ASTM A36 GALVANIZED THREADED ROD WITH END NUT. HOLDOWN ANCHOR RODS SHALL BE ASTM A36 GALVANIZED THREADED ROD WITH END NUT OR SIMPSON SSTB.
- 3. PROVIDE SOLID "SQUASH" BLOCKING BETWEEN FLOORS AND AT FOUNDATION.
- 4. STITCH NAIL ALL DOUBLE 2x MEMBERS WITH (2) ROWS OF 16d NAILS AT 6" O.C. STAGGERED WITH 1/2" MINIMUM EDGE DISTANCE.
- 5. STRAP HOLDOWNS CAN BE APPLIED DIRECTLY TO FRAMING OR OVER SHEATHING.

6. EMBEDMENT DEPTH IS MEASURED FROM THE TOP OF WALL TO NEAREST FACE OF THE NUT.

- 7. PROVIDE DOUBLE HEAVY HEX NUT AND HEAVY CUT WASHER AT EMBEDDED END OF ANCHOR RODS.
- 8. IN LIEU OF SEISMIC HOOKS, EMBED ANCHOR ROD 7" INTO STRIP FOOTING.



ARETE Project #:

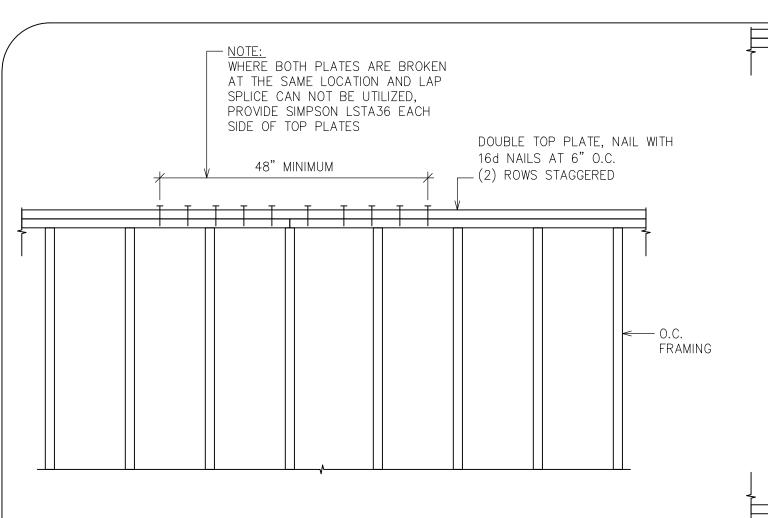
2024.121

01-01-2025

PROFESSIONAL ENGINEERS

SITE KEY PLAN

S1.



- DOUBLE TOP PLATE

TYPICAL TOP PLATE SPLICE

- SIMPSON LSTA12 STRAP IF TOP

-(2)X TRIMMER STUDS,

**TYPICAL WINDOW OPENING** 

S1.2 / SCALE: NOT TO SCALE

EQUAL TO 4'-0"

PLATE IS INTERUPTED BY HEADER

HEADER, SEE SCHEDULE

SINGLE TRIMMER AT SPANS LESS THAN 4'-0"

- KING STUDS EQUAL TO 1/2 THE NUMBER OF

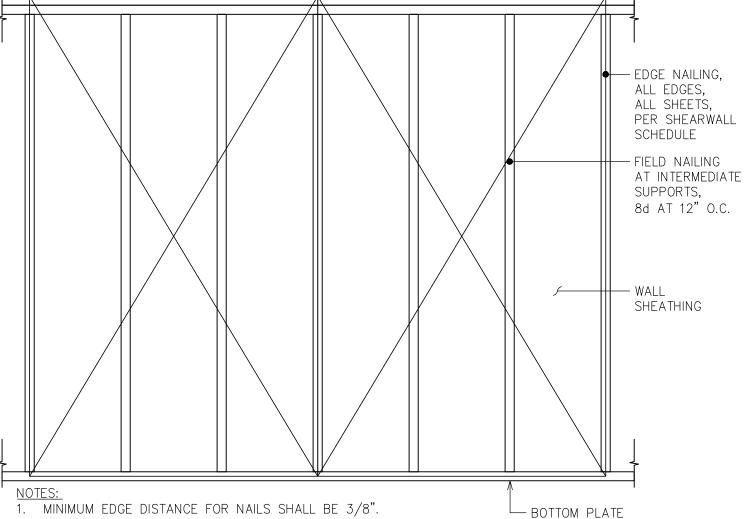
STUDS INTERUPTED BY THE OPENING

DOUBLE TRIMMER AT SPANS GREATER THAN OR

SILL PLATE

- BOTTOM PLATE(S)

S1.2 / SCALE: NOT TO SCALE



HEADED STUD FILLET ANCHOR VERTICAL BOLT HORIZONTAL BOLT WELD SIZE, "S" DIAMETER EMBEDMENT LENGTH EMBEDMENT LENGTH 1/2" 1/4" 5/8" 5/16" 3/4" 5/16" 7/8" 5/16" 3/8" 1 1/8" 1 1/4"

S1.2 / SCALE: NOT TO SCALE

EMBEDMENT IN

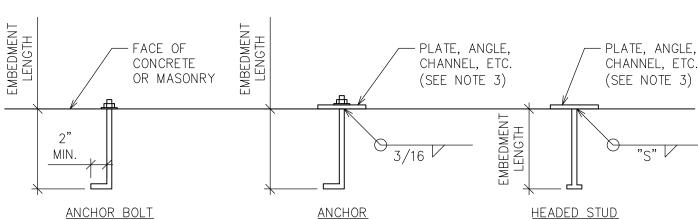
NOTES:

1. PROVIDE ANCHORS, ANCHOR BOLTS AND HEADED STUDS PER THIS SCHEDULE

1. OF DETAILS.

2. SCHEDULE APPLIES TO ANCHORS IN CONCRETE AND MASONRY ONLY.

3. THICKNESS OF DRYPACK SHALL NOT APPLY TOWARDS EMBEDMENT LENGTH.



TYPICAL CAST-IN-PLACE ANCHOR,

EMBEDMENT IN

\_

ANCHOR BOLT AND HEADED STUD SCHEDULE

NOTES:

1. PROVIDE POST-INSTALLED ANCHORS AND

DETAILS.

I.C.C. APPROVAL

REINFORCING STEEL PER THIS SCHEDULE

. POST-INSTALLED ANCHORS SHALL HAVE

THICKNESS OF DRYPACK SHALL NOT

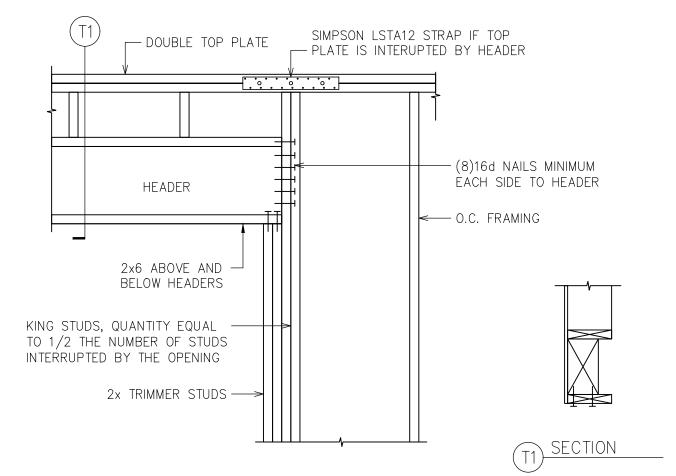
APPLY TOWARDS EMBEDMENT LENGTH.

UNLESS NOTED OTHERWISE ON PLANS OR

3. NAILS SHALL BE COMMON WIRE TYPE OR APPROVED EQUAL

2. NAILS SHALL NOT BE OVERDRIVEN.





- FLUSH HEADER

- CONT. RIM JOIST

REINFORCING SIMPSON SET-3G SIMPSON SET-3G ADHESIVE ADHESIVE 4" 5" TYPICAL EXTERIOR HEADER 6" SCALE: NOT TO SCALE 8"

IUS -

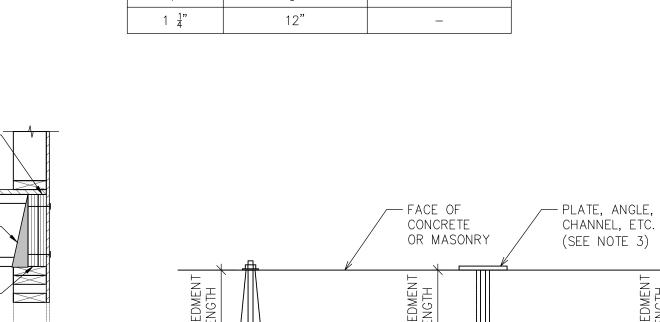
(T1) SECTION

CONT. RIM JOIST 2 - ROWS 10d NAILS AT

FLUSH HEADER -

- WALL FRAMING ---

6" O.C. TO HEADER

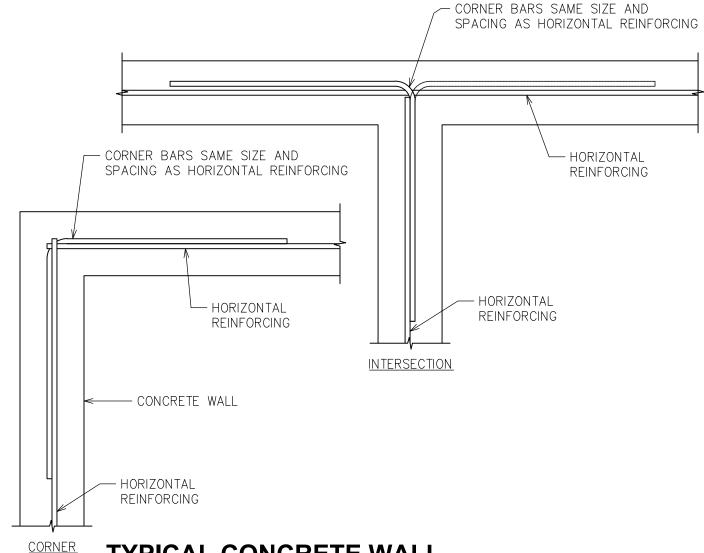


TYPICAL POST-INSTALLED ANCHOR AND REINFORCING STEEL SCHEDULE S1.2 / SCALE: NOT TO SCALE

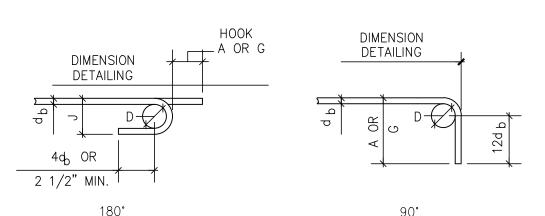
- (3)#5 CONTINUOUS THROUGH STEP └─ THIRD MEMBER SPLICES SHALL NOT BE PERMITTED 3'-0" MIN. IN THIRD MEMBER(MIDDLE MEMBER) TOP AND BOTTOM (3)#5 CONTINUOUS THROUGH STEP SPLICES SHALL NOT BE PERMITTED IN THIRD MEMBER(MIDDLE MEMBER) 95% COMPACTION TOP AND BOTTOM NOTES:

1. MAXIMUM SPACING BETWEEN STEPS SHALL BE 2X HEIGHT OF FOOTING : C 2. FOOTING STEPS LESS THAN 24" DO NOT REQUIRE THIRD MEMBER. 3'-0" MIN. " CLR. TYPICAL STEP FOOTING DETAIL

S1.2 / SCALE: NOT TO SCALE

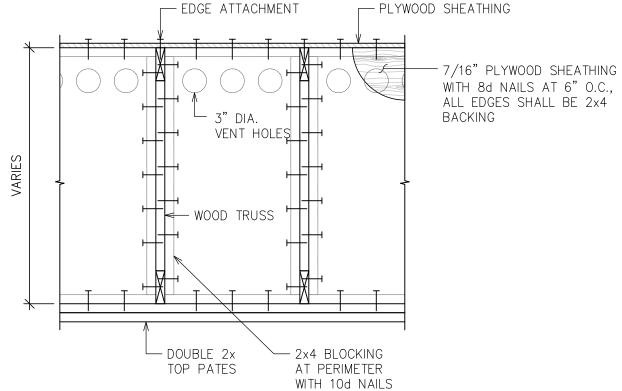


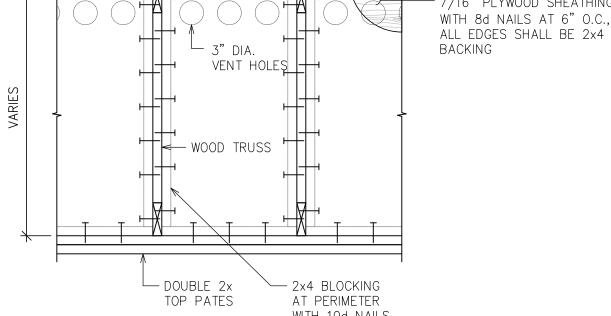
TYPICAL CONCRETE WALL REINFORCING AT INTERSECTING WALLS S1.2 / SCALE: NOT TO SCALE



	END HOOKS,ALL GRADES						
BAR	FINISHED	180-DEG HO	OKS	90-DEG HOOKS			
SIZE	BEND DIA D,IN.	A OR G, IN.	J, IN.	A OR G,IN.			
#3	2.25	5	3	6			
#4	3	6	4	8			
#5	3.75	7	5	10			
#6	4.5	8	6	12			
#7	5.25	10	7	14			
#8	6	11	8	16			
#9	9.5	15	11.75	19			
#10	10.75	17	13.25	22			
#11	12	19	14.75	24			
#14	18.25	27	21.75	31			
#18	24	36	28.5	41			

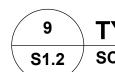
TYPICAL REINFORCING HOOK SCHEDULE S1.2 / SCALE: NOT TO SCALE





TYPICAL PLYWOOD TRUSS BLOCKING PANEL S1.2 / SCALE: NOT TO SCALE

AT 3" O.C.



IUS HANGERS -

CONT. TOP PLATES -

AT HEADER

KING STUDS, QUANTITY EQUAL

TO 1/2 THE NUMBER OF STUDS

INTERRUPTED BY THE OPENING

**TYPICAL "FLUSH" EXTERIOR HEADER** S1.2 / SCALE: NOT TO SCALE

<del>- TTT + -</del>

MECHANICAL ANCHOR (SEE NOTE 4) ADHESIVE ANCHOR ADHESIVE ANCHOR (THREADED ROD OR (THREADED ROD OR REINFORCING STEEL) REINFORCING STEEL)

CRED PROFESSIONAL ENGINEER

ARETE Project #: 2024.121

01-01-2025

Release Date: 03-23-2025

Released for: PERMIT

出∣*Project Start Date:* 

SITE KEY PLAN BUILDING B

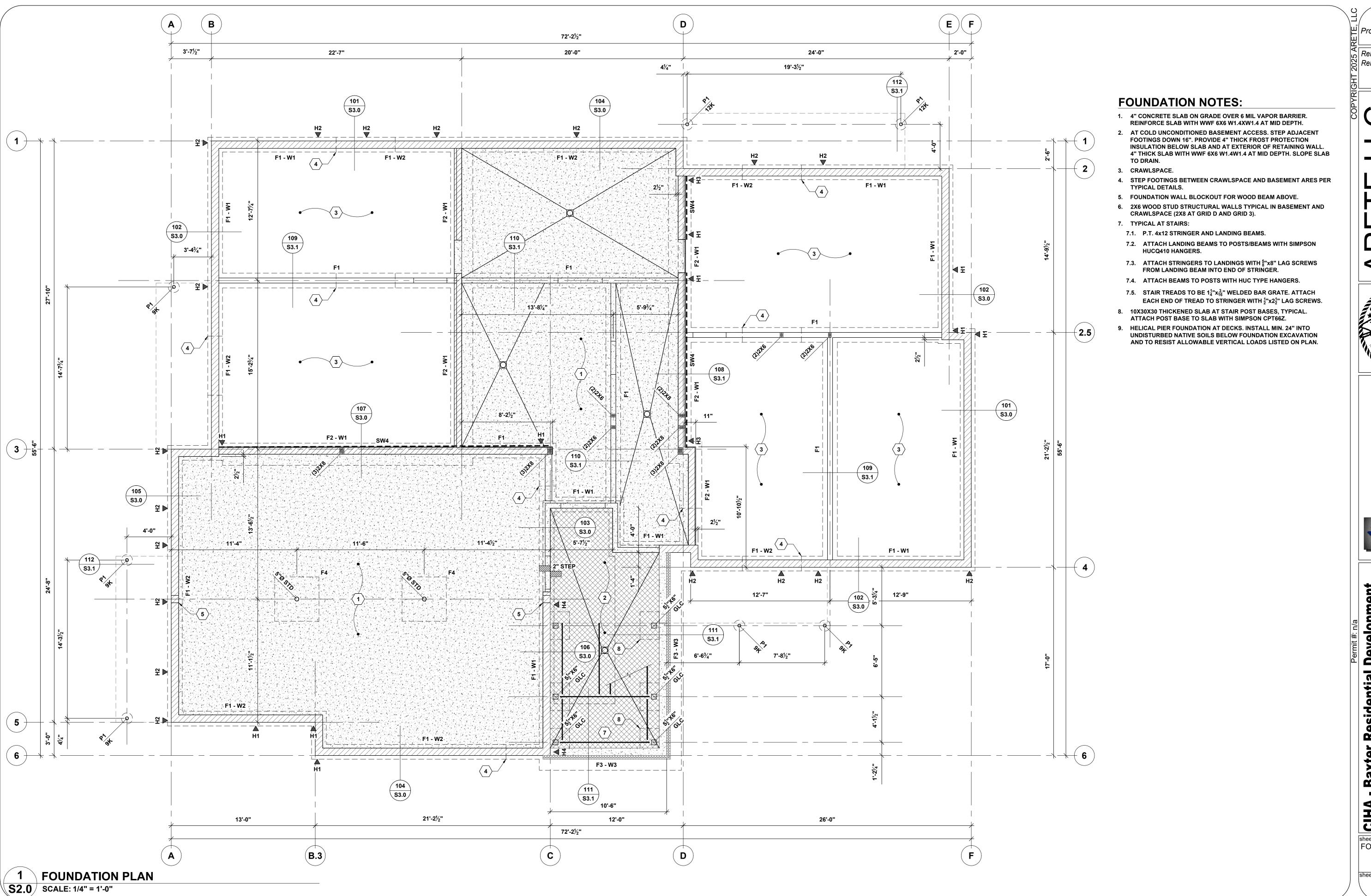
Dev

CIHA - Baxter Residential
Phase 1 - Multi-Family - 9 Plex
BUILDING B

TYPICAL DETAILS

S1.2

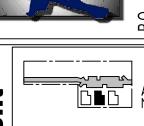
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ARETE Project #: 2024.121 Project Start Date:

01-01-2025

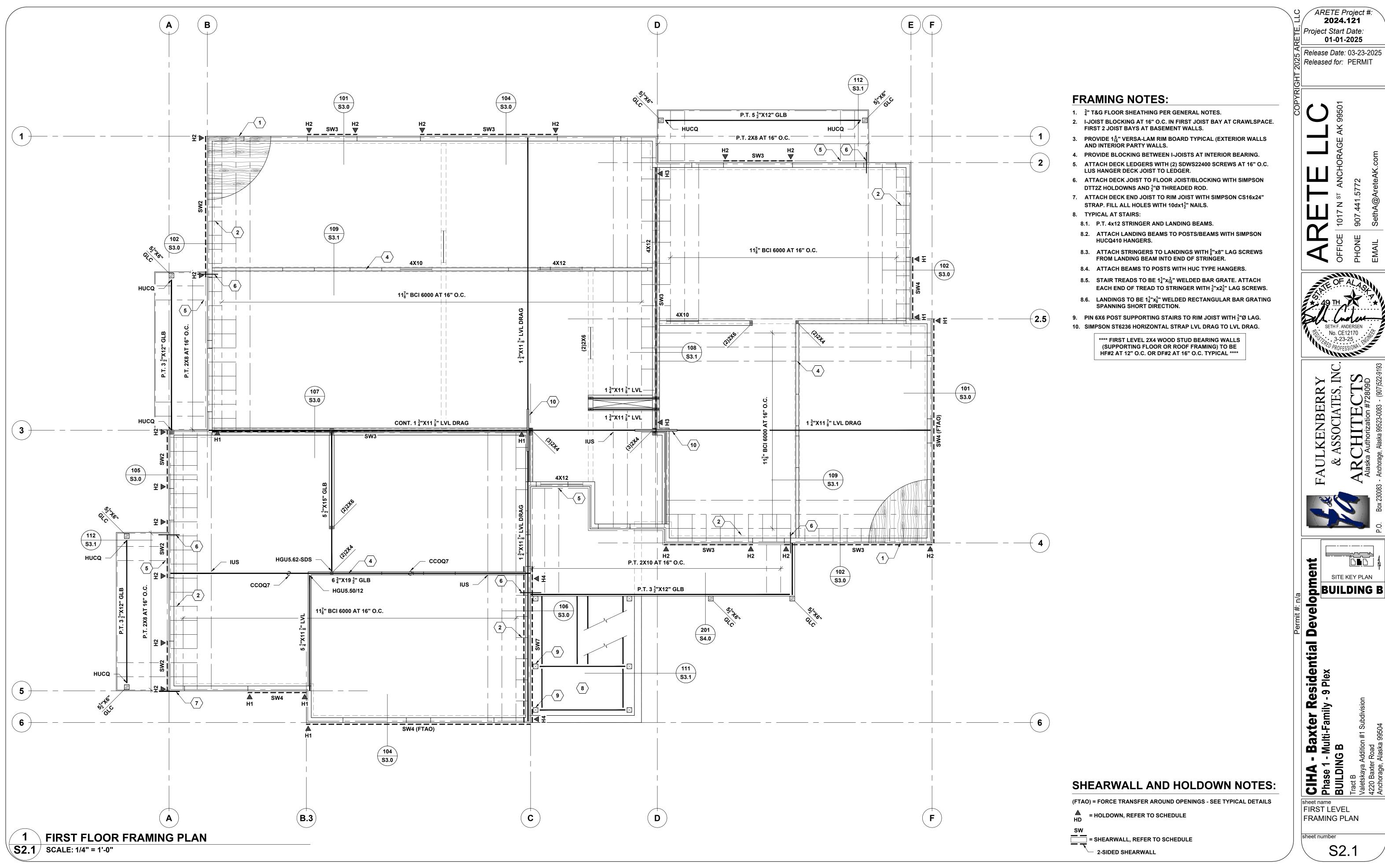
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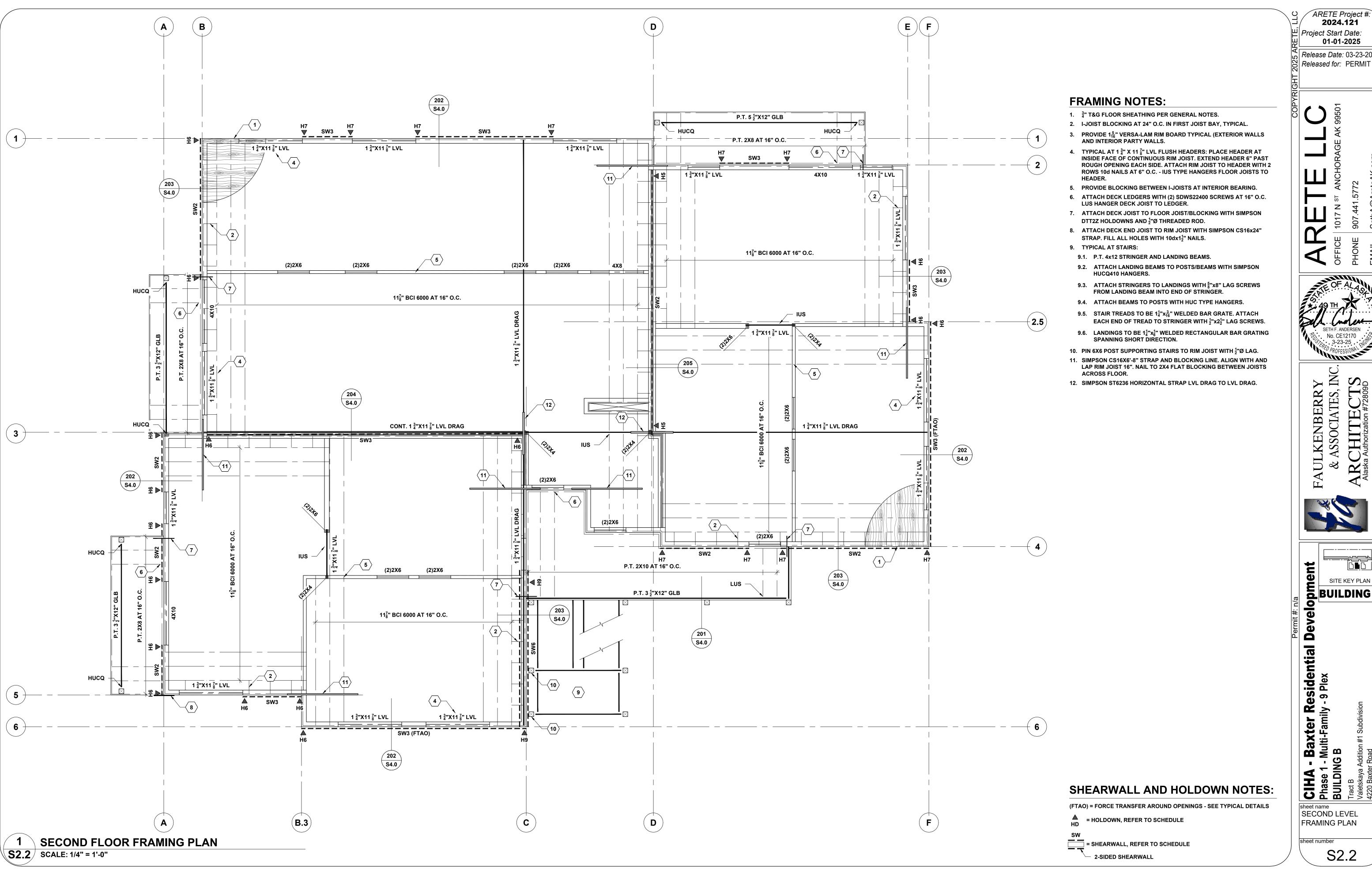


SITE KEY PLAN
BUILDING B

sheet name FOUNDATION PLAN

S2.0





ARETE Project #: 2024.121 Project Start Date:

01-01-2025

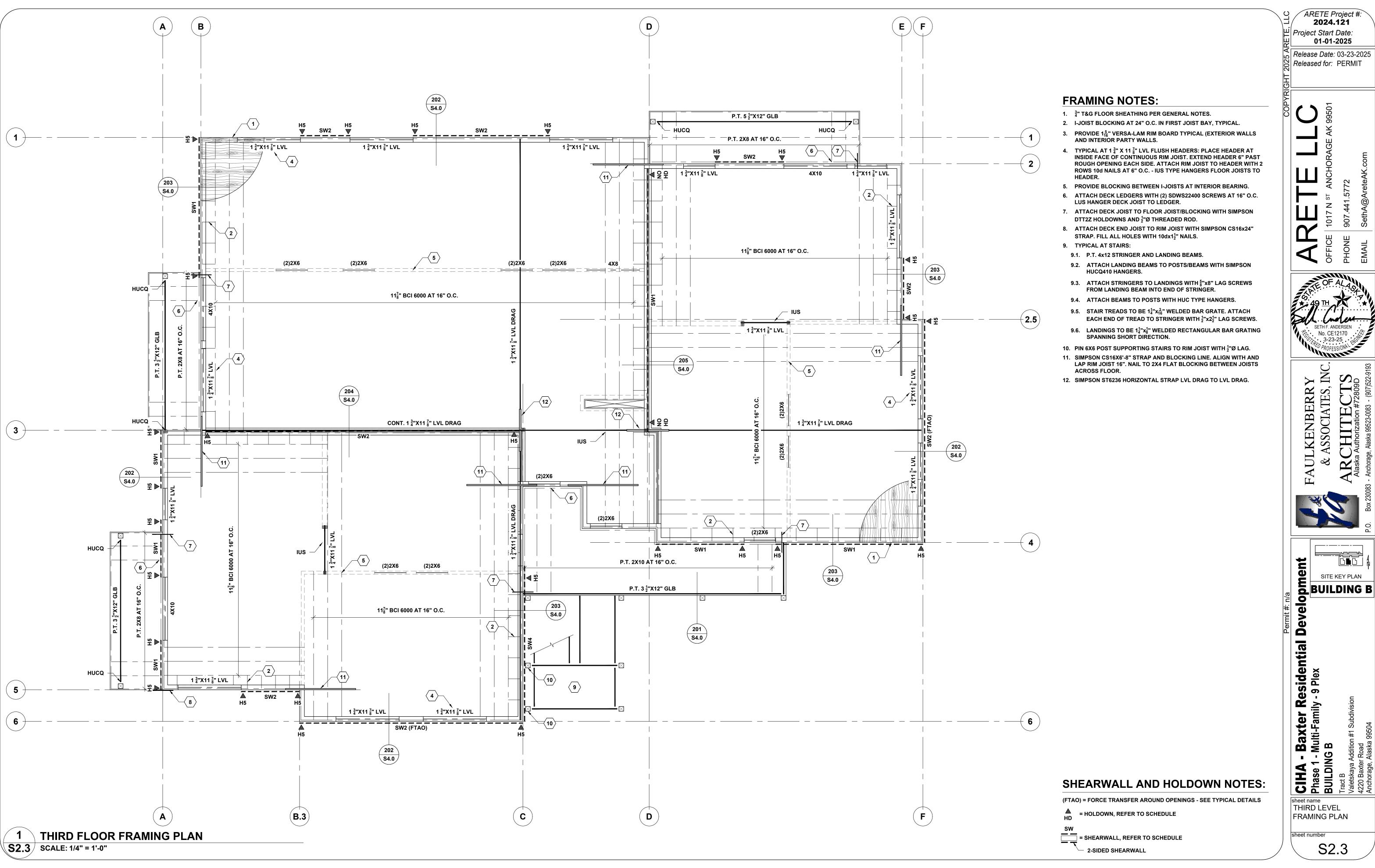
Release Date: 03-23-2025

ERED PROFESSIONAL 3-23-25

SITE KEY PLAN
BUILDING B

sheet name SECOND LEVEL FRAMING PLAN

S2.2

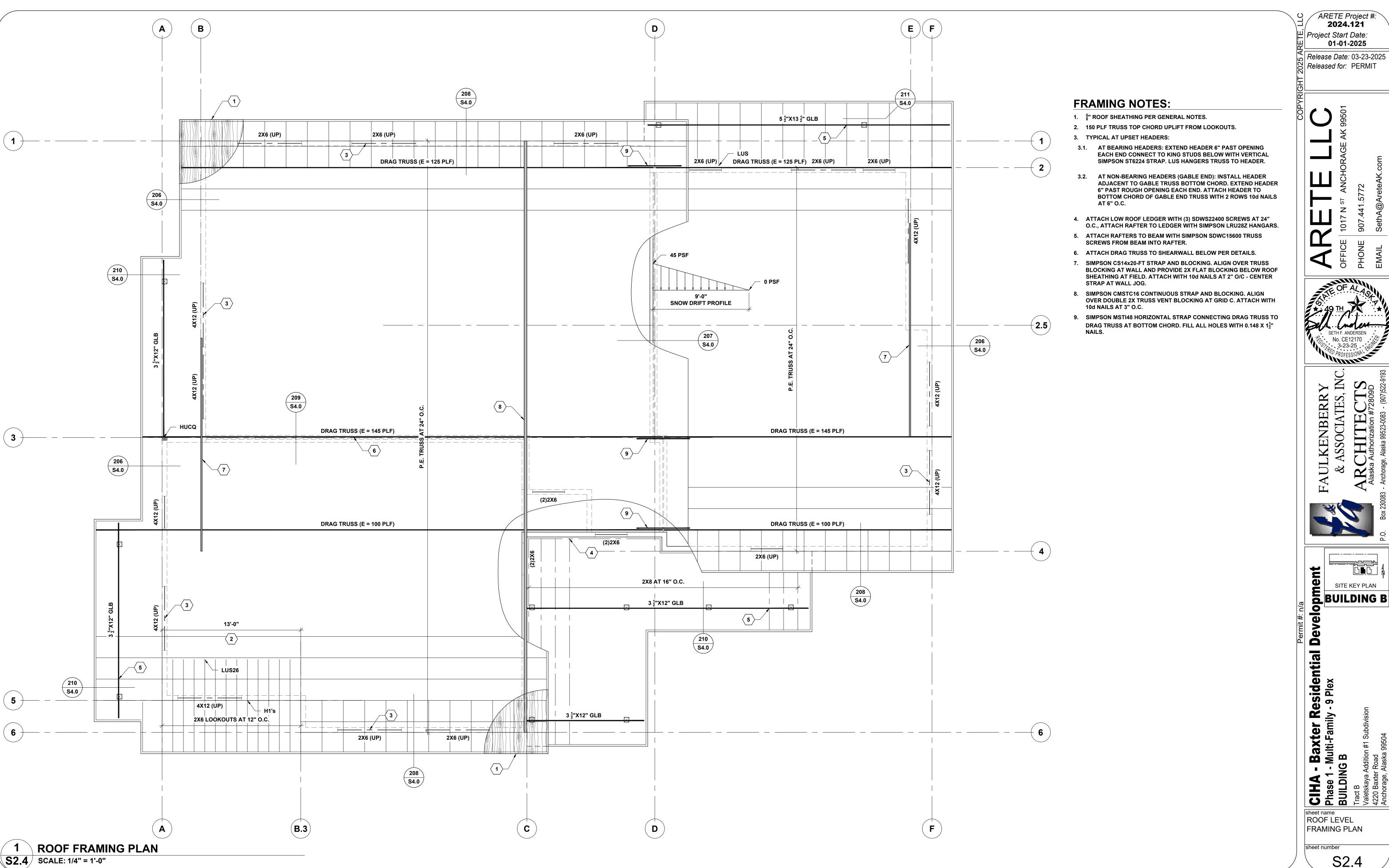


ARETE Project #: 2024.121 Project Start Date:

01-01-2025

Release Date: 03-23-2025

S-23-25 FIGHT



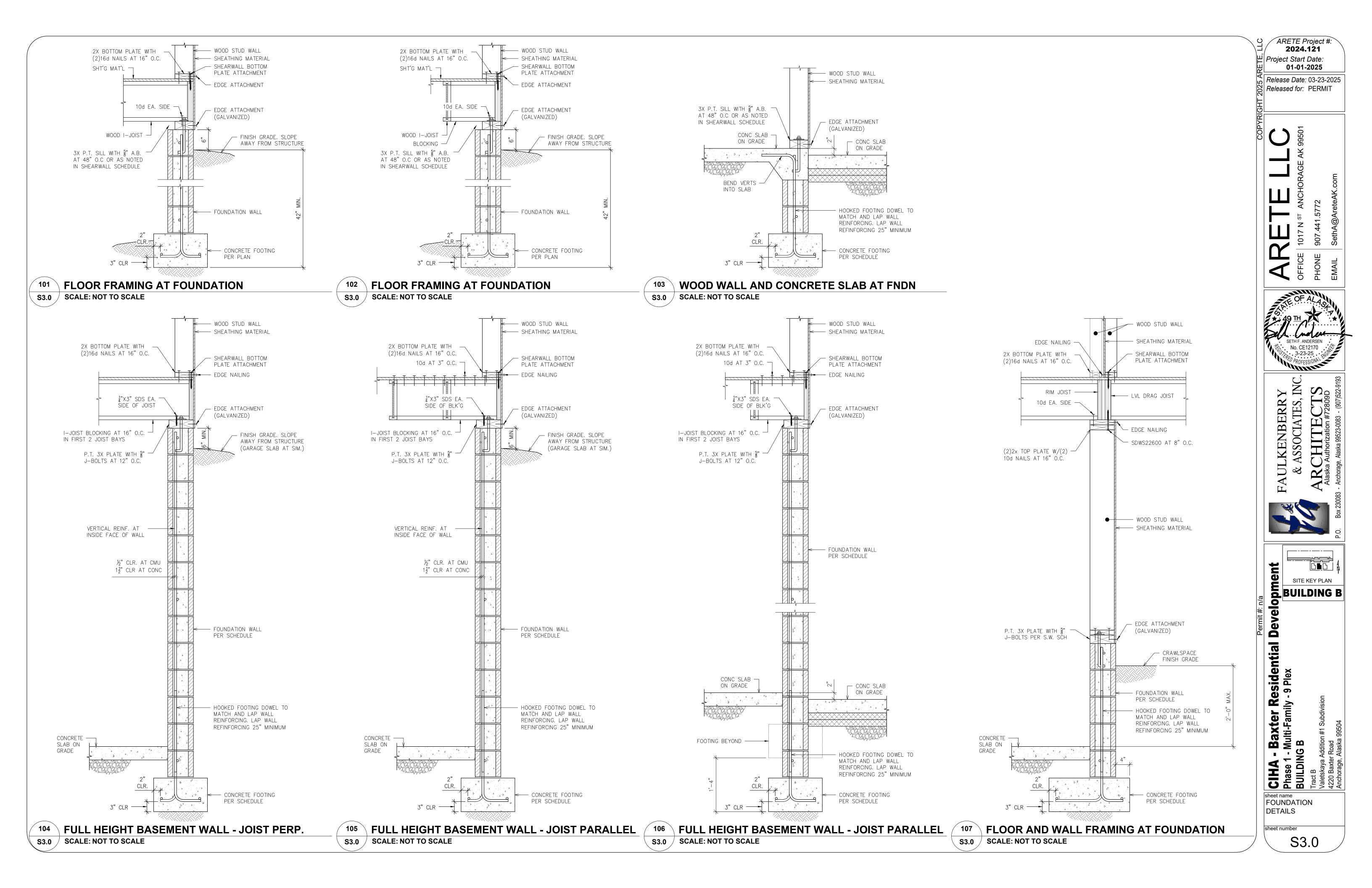
ARETE Project #: 2024.121 巴|*Project Start Date:* 

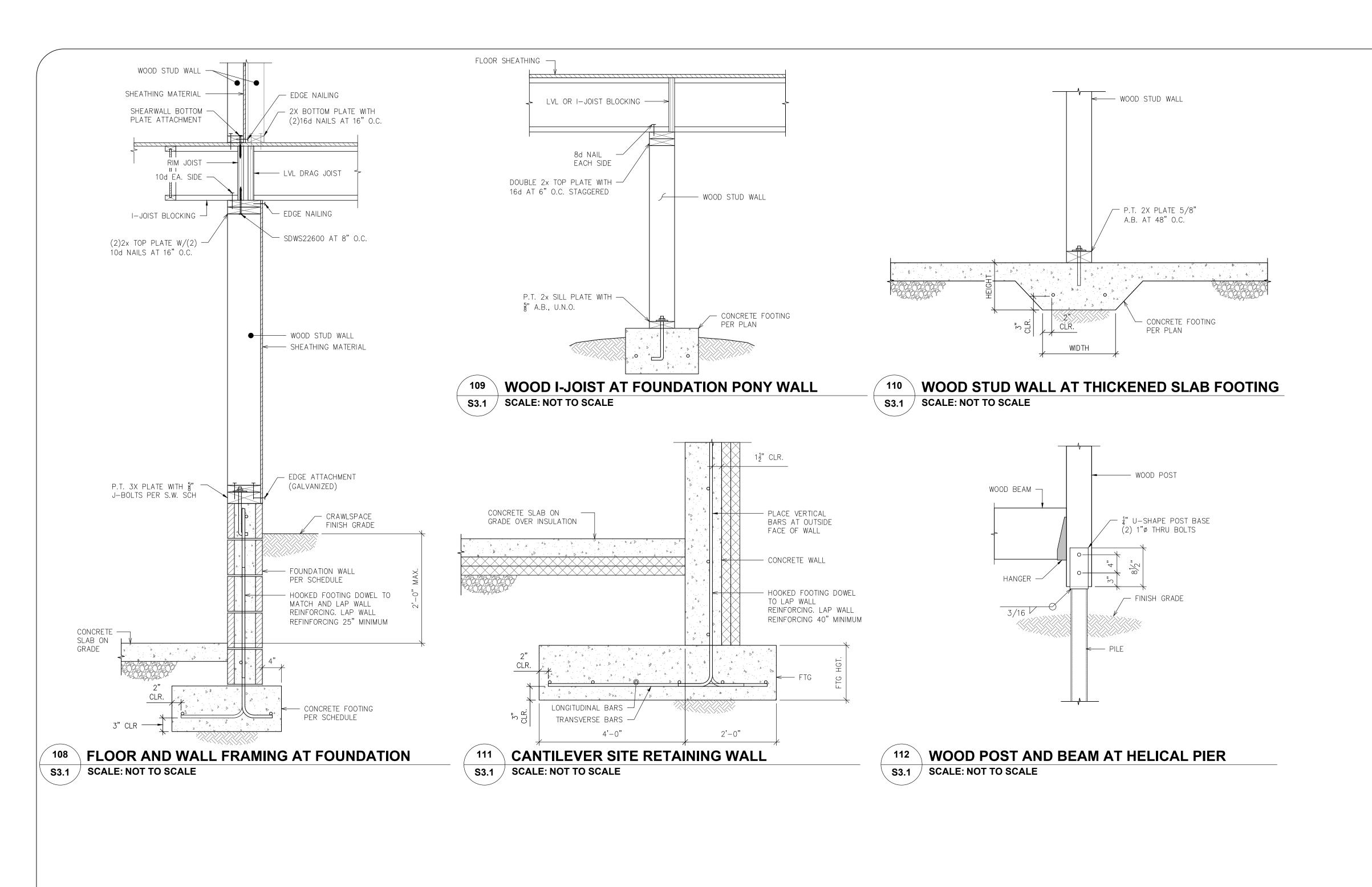
01-01-2025

Release Date: 03-23-2025 Released for: PERMIT

sheet name ROOF LEVEL FRAMING PLAN

S2.4





ARETE Project #: 2024.121 巴|*Project Start Date:* 

Release Date: 03-23-2025

01-01-2025

Released for: PERMIT

SPED PROFESSIONAL ENGINEERS

CIHA - Baxter Residential Development

Phase 1 - Multi-Family - 9 Plex

BUILDING B

Tract B

Valetskaya Addition #1 Subdivision

4220 Baxter Road

Water Road

Tract B

Valetskaya Addition #1 Subdivision

Residential Development

BUILDING B

Valetskaya Addition #1 Subdivision

Residential Development

BUILDING B

Valetskaya Addition #1 Subdivision

Residential Development

Residential Developme

sheet name FOUNDATION DETAILS

sheet number S3.1

