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***THIS PLUMBING LAYOUT IS PROVIDED FOR REFERENCE AND COORDINATION PURPOSES ONLY.
FINAL DESIGN, SIZING, AND ROUTING OF PLUMBING SYSTEMS SHALL BE COMPLETED BY
MODULAR HOUSING MANUFACTURER.

PLUMBING NOTES

- 1 SEE ALL GENERAL NOTES & DISCIPLINE NOTES LOCATED ON A001
- 2 MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS TO BE ENGINEERED BY RESIDENTIAL MODULAR BUILDING MANUFACTURER. ALL ENGINEERING SHOWN IS SCHEMATIC AND FOR REFERENCE ONLY. ALL SYSTEMS MUST MEET MANUFACTURER RECOMMENDATIONS, ALL APPLICABLE CODES AND AHJ REQUIREMENTS.

KITCHEN

BATH 01

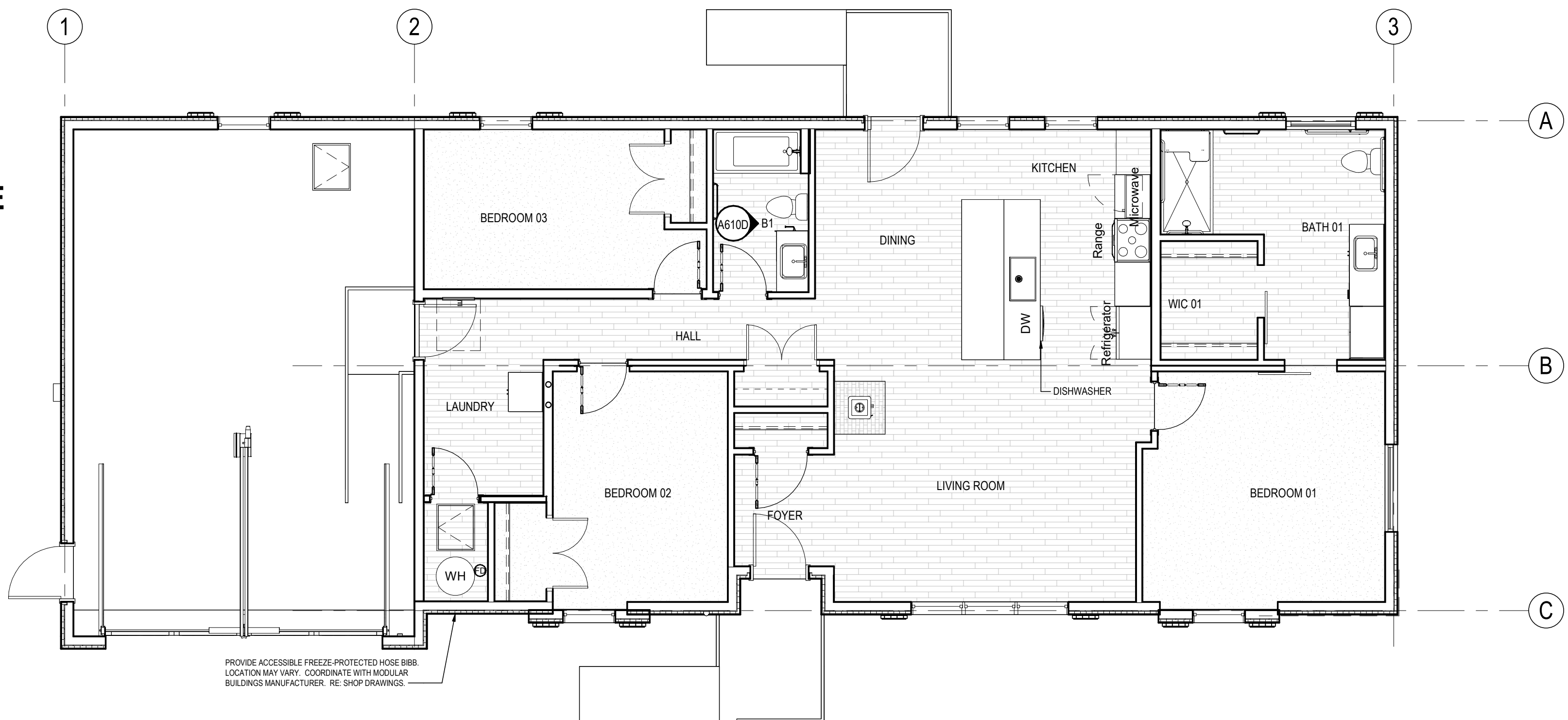
OWNER/PURCHASER
RESPONSIBILITY
DRAIN
VENT

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LAUNDRY

MECH/
STORAGE

BATH 02



A1 LEVEL 1 - PLUMBING PLAN
3/16" = 1'-0"

**PRELIMINARY
NOT FOR
CONSTRUCTION**

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A/E: FIRM
PRIME:
STANTEC
CHEYENNE, WY

DESIGNED:
JC
CADD:
BB/PS/AS
TECH. REVIEW:
LF
DATE:
06/18/2026

SUB SHEET NO.
P101D

TITLE OF SHEET
3BR ABA PLUMBING PLAN

YELLOWSTONE NATIONAL PARK

DRAWING NO.
**101
198433**
PMS/PKG NO.
326141
SHEET
82 OF 94

A1 **ELECTRICAL PLAN**
E101A 1/4" = 1'-0"

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A/E: FIRM	DESIGNED: JC	SUB SHEET NO. E101A	TITLE OF SHEET 2BR ELECTRICAL PLAN	DRAWING NO. 101
PRIME:	CADD: BB/PS/AS			198433
STANTEC CHEYENNE, WY	TECH. REVIEW: LF			PMIS/PGK NO. 326141
	DATE: 06/18/2026			SHEET
				83 OF 94
			YELLOWSTONE NATIONAL PARK	

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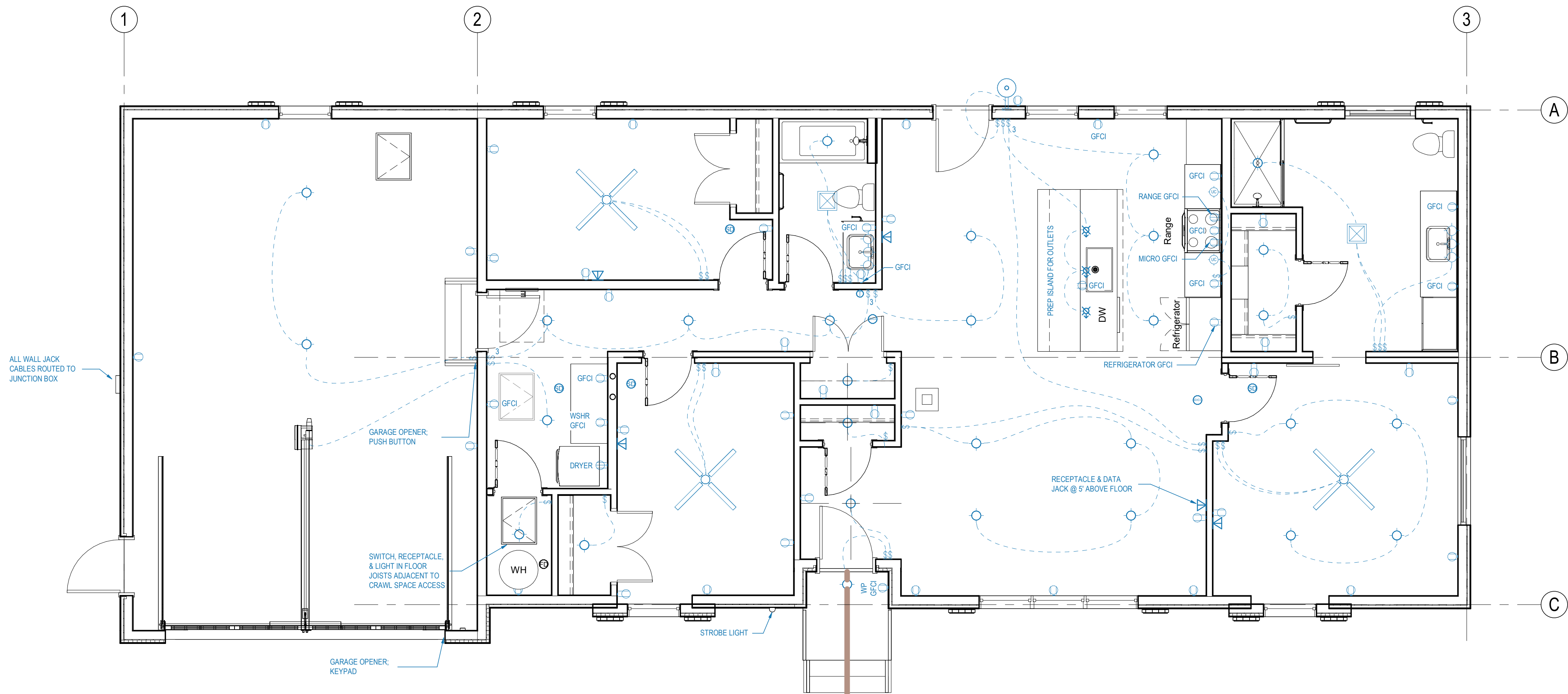
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A/E: FIRM	DESIGNED: JC	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
PRIME:	CADD:			101
STANTEC	BB/PS/AS			198433
CHEYENNE, WY	TECH. REVIEW:			PMIS/PKG NO.
	LF			326141A/326104
	DATE:	E101B	2BR ABA ELECTRICAL PLAN	SHEET
	06/18/2026			84 OF 94
			YELLOWSTONE NATIONAL PARK	

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B

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A1
E101C
ELECTRICAL PLAN
1/4" = 1'-0"

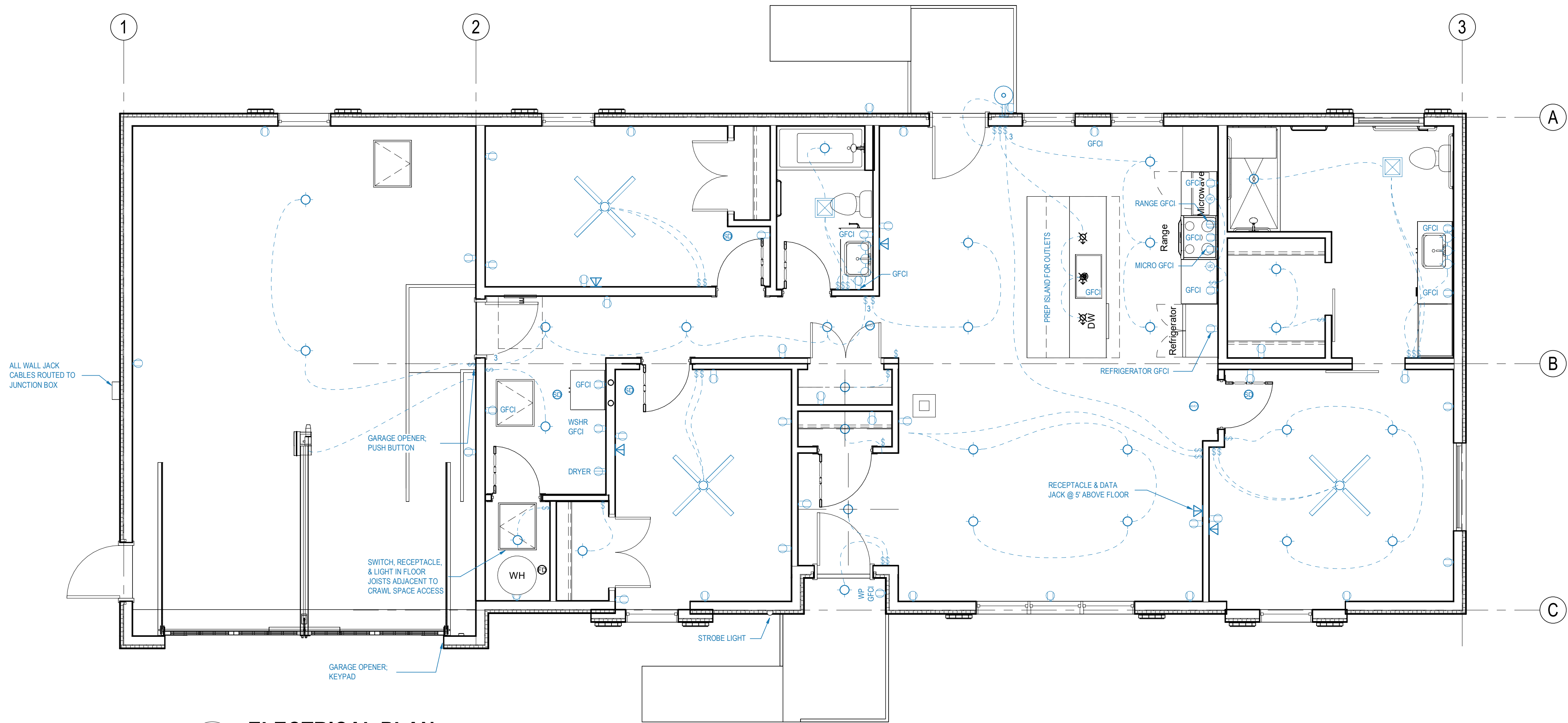
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A/E: FIRM PRIME: STANTEC CHEYENNE, WY	DESIGNED: JC	SUB SHEET NO. E101C	TITLE OF SHEET 3BR ELECTRICAL PLAN YELLOWSTONE NATIONAL PARK	DRAWING NO. 101 198433 PMIS/PKG NO. 326141 SHEET 85 OF 94
	CADD: BB/PS/AS			
	TECH. REVIEW: LF			
	DATE: 06/18/2026			

C

B

A



A1
E101D

ELECTRICAL PLAN

1/4" = 1'-0"

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A/E: FIRM
PRIME:
STANTEC
CHEYENNE, WY

DESIGNED:
JC
CADD:
BB/PS/AS
TECH. REVIEW:
LF
DATE:
06/18/2026

SUB SHEET NO.
E101D

TITLE OF SHEET
**3BR ABA ELECTRICAL
PLAN**

YELLOWSTONE NATIONAL PARK

DRAWING NO.
101
198433
PMIS/PKG NO.
326141
SHEET
86 OF **94**

GENERAL NOTES

ABBREVIATIONS

VI. REINFORCING STEEL

- REINFORCING STEEL SHALL BE DEFORMED CONFORMING TO ASTM A615, GRADE 60.
2. REINFORCING STEEL FOR CAST-IN-PLACE NONPRESTRESSED CONCRETE MEMBERS SHALL HAVE THE FOLLOWING CONCRETE COVER, SEE ACI 117 FOR TOLERANCES.
- A. CONCRETE EXPOSED TO EARTH OR IN CONTACT WITH GROUND:
- | | |
|---|--------|
| a. CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH | 3" |
| b. EXPOSED TO WEATHER OR IN CONTACT WITH EARTH (#6 AND SMALLER) | 1-1/2" |
| c. EXPOSED TO WEATHER OR IN CONTACT WITH EARTH (#6 AND LARGER) | 2" |
- B. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
- | | |
|--|--------|
| a. SLABS, JOISTS AND WALLS (#11 AND SMALLER) | 3/4" |
| b. SLABS, JOISTS AND WALLS (#14 AND LARGER) | 1-1/2" |
| c. BEAMS, COLUMNS AND PEDESTALS | 1-1/2" |
3. BAR SPLICES MAY BE DELETED AND CONTINUOUS REINFORCING USED AT CONTRACTORS OPTION. BAR SPLICES SHALL BE MADE AT POINTS OF MINIMUM STRESS. IN FRAMED BEAMS AND SLABS SPlice TOP BARS AT MID-SPAN, BOTTOM BARS OVER SUPPORTS.
4. STEEL REINFORCEMENT SHOP DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR IN ACCORDANCE WITH ACI 315: "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", AND SHALL INDICATE:
- A. MATERIAL AND GRADE
- B. BAR SCHEDULES WITH BAR LENGTHS AND BENT BAR DIAGRAM
- C. ARRANGEMENT, SPACING, COVER, LAP LOCATIONS AND LENGTHS
- D. SPLICE DETAILS FOR MECHANICAL SPLICES
- E. SUPPORTS FOR CONCRETE REINFORCEMENT
- F. SPECIAL REINFORCEMENT AT OPENINGS
5. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318 AND THE 'MANUAL OF STANDARD PRACTICE' BY CRSI AS MODIFIED BY THE CONTRACT DOCUMENTS.
6. FIELD BENDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT SEOR APPROVAL. ALL REINFORCING BENDS SHALL BE MADE COLD.
7. WHEN MULTIPLE GRADES OF REINFORCEMENT ARE USED, MARK ALL BARS SO IDENTIFICATION CAN BE MADE DURING IN-PLACE INSPECTION.
8. WELDED REINFORCING STEEL SHALL COMPLY WITH ASTM A706, GRADE 60. REINFORCEMENT SHALL ONLY BE WELDED WHERE SPECIFICALLY NOTED ON THE DRAWINGS. WELDING SHALL CONFORM TO AWS D1.4 USING E90XX ELECTRODES.
9. WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064 (PLAIN & DEFORMED WIRE). $F_y = 70$ 000PSI. LAP WELDED WIRE REINFORCEMENT BY 6" OR ONE AND A HALF FULL MESHES, WHICHEVER IS GREATER.
10. EPOXY COATED REINFORCEMENT (ASTM A775 (STRAIGHT BARS), ASTM A934 (BENT BARS)) SHALL BE USED WHERE PERMANENTLY EXPOSED TO WATER, DEICING SALTS AND WHERE NOTED IN THE CONTRACT DOCUMENTS.
11. SPECIAL CONCRETE MOMENT FRAMES AND BOUNDARY ZONES IN SPECIAL CONCRETE SHEAR WALLS: ACTUAL YIELD STRENGTH BASED ON MILL TESTS SHALL NOT EXCEED SPECIFIED STRENGTH BY MORE THAN 18 ksi (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN 3 ksi). THE RATIO OF ACTUAL ULTIMATE TENSILE STRESS TO ACTUAL YIELD STRENGTH SHALL NOT BE LESS THAN 1.25.

VII. ANCHOR ROD

1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 WITH CLASS 1A THREADS, UNLESS NOTED OTHERWISE. FURNISH ANCHOR RODS PREFABRICATED WITH MATCHING DOUBLE HEAVY HEX NUTS JAMMED AT THE END EMBEDDED IN CONCRETE. FURNISH HARDENED PLATE WASHERS, LOCK WASHERS, AND MATCHING HEAVY HEX NUTS FOR SECURING THE BASE PLATE TO THE ANCHOR RODS. A RIGID STEEL TEMPLATE SHALL BE USED TO LOCATE ANCHOR RODS WHILE PLACING CONCRETE.
2. HOOKED ANCHOR RODS SHALL NOT BE USED EXCEPT WHERE NOTED.
3. ANCHOR RODS SHALL HAVE SUFFICIENT LENGTH TO PROVIDE THE MINIMUM EMBEDMENT SHOWN ON THE DRAWINGS, MEASURED FROM THE FACE OF THE CONCRETE TO THE NEAR FACE OF THE DOUBLE NUT, WITH ADEQUATE EXTENSION AS REQUIRED TO RECEIVE THE BASE PLATE WITH FULL THREAD PROJECTION FOR NUT INSTALLATION.
4. ANCHOR ROD INSTALLATION SHALL BE COORDINATED WITH REINFORCING AND FRAMEWORK.
5. LEVELING NUTS SHALL NOT BE USED EXCEPT AFTER EVALUATION BY THE CONTRACTOR'S ERECTION ENGINEER.
6. AFTER BASE INSTALLATION, ANCHOR ROD NUTS SHALL BE INSTALLED TO A SNUG-TIGHT CONDITION.
7. NO HEATING OR BENDING OF THE ANCHOR RODS IS PERMITTED. HOLES IN THE BASE MATERIAL SHALL NOT BE ENLARGED BY BURNING.

IV. REINFORCED CONCRETE:

3. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 AND ACI 301 WITH MODIFICATIONS AS NOTED ON THE CONTRACT DOCUMENTS.
2. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND BEAR THE WET SEAL OF A CIVIL ENGINEER LICENSED IN THE STATE OF THE PROJECT AND BE PROVIDED TO THE SEOR FOR REVIEW. EACH MIX DESIGN SHALL BEAR THE NAME OF THE PROJECT AND THE SPECIFIC USE.
3. CONCRETE MODULUS OF ELASTICITY SHALL MEET THE MINIMUM PROVIDED IN ACI 318 SECTION 19.2.2 FOR THE 28-DAY STRENGTH SPECIFIED BELOW. TEST SHALL BE IN ACCORDANCE WITH ASTM C469.
4. CONCRETE SHALL HAVE THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS.

<u>A. LOCATION</u>	<u>STRENGTH, f_c</u>	<u>CONCRETE TYPE</u>
B. SLAB ON GRADE	4,500 PSI	NORMAL WEIGHT
C. FOUNDATIONS	4,000 PSI	NORMAL WEIGHT
D. ALL LOCATIONS UNON	3,000 PSI	NORMAL WEIGHT
5. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II. CONCRETE EXPOSED TO SOILS CONTAINING CORROSIVE ELEMENTS (SULFATES) SHALL COMPLY WITH IBC 1904.1.
6. FLY ASH MAY BE USED AS A SUBSTITUTE FOR PORTLAND CEMENT. WEIGHT OF FLY ASH SHALL NOT EXCEED 15% OF CEMENT WEIGHT. FLY ASH SHALL CONFORM TO ASTM C618 CLASS F AND LOSS OF IGNITION SHALL BE LIMITED TO 2%.
7. MIXING OPERATIONS SHALL CONFORM TO ASTM C94.
8. ALL CONCRETE NOT IN CONTACT WITH EARTH TO HAVE FINISH AS SPECIFIED BY ARCHITECT OR AS COVERED IN PROJECT SPECIFICATIONS, NONE OTHERWISE NOTED, NON-ARCHITECTURAL CONCRETE COLUMNS AND WALLS SHALL HAVE 3/4" CHAMFERED CORNERS.
9. AGGREGATE FOR NORMAL/WEIGHT CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C33 AND PROJECT SPECIFICATIONS
10. LIGHTWEIGHT CONCRETE SHALL HAVE AN AIR-DRY UNIT WEIGHT OF NOT MORE THAN 115 PCF AND NOT LESS THAN 110 PCF (UNLESS HIGH VOLUME FLY ASH CONCRETE USED). LIGHTWEIGHT AGGREGATE SHALL CONFORM TO ASTM C330. TEST SHRINKAGE IN ACCORDANCE WITH ASTM C157. SHRINKAGE SHALL NOT EXCEED 0.0005 INCH/INCH.
11. ALL CONCRETE SHALL BE REINFORCED. PROVIDE MINIMUM TEMPERATURE REINFORCEMENT AS REQUIRED BY ACI-318 IN ELEMENTS WHERE NO REINFORCEMENT IS INDICATED ON THE DRAWINGS.
12. DRY PACK OR GROUT UNDER BASE PLATES AND SILL PLATES SHALL BE 7000 PSI MIN AT 28 DAYS.
13. CONCRETE PLACEMENT SHALL CONFORM TO ACI 304 AND PROJECT SPECIFICATIONS. SANDBLAST ALL CONCRETE SURFACES WHICH NEW CONCRETE WILL BE PLACED AGAINST.
14. TWO HOURS MUST ELAPSE BETWEEN END OF COLUMN OR WALL POURS AND THE BEGINNING OF FLOOR POURS.
15. MACROSYNTHETIC FIBERS SHALL CONFORM TO ASTM D7508.

17. MECHANICAL, ELECTRICAL, AND PLUMBING
OPENINGS AND CLOSURES

- OTHER TRADES FOR SIZE AND LOCATION OF ALL SLAB AND WALL OPENINGS AND SLEEVES. CONTRACTOR TO DEVELOP AND SUBMIT A SINGLE COORDINATION DRAWING COMBINING ALL TRADES INDICATING ALL SLAB OPENINGS AND SLEEVES PRIOR TO POURING CONCRETE FOR REVIEW BY STRUCTURAL ENGINEER.
18. ALL PIPE AND CONDUIT OPENINGS SHALL BE SLEEVED AND CAST IN PLACE UNLESS OTHERWISE NOTED. DO NOT SAWCUT, CORE OR CORE DRILL STRUCTURAL CONCRETE WITHOUT EXPLICIT DIRECTION FROM THE STRUCTURAL ENGINEER. DRILL BITS THAT CAN CUT OR DAMAGE REINFORCING ARE NOT PERMITTED TO BE USED ON STRUCTURAL CONCRETE.
19. CONDUITS AND PIPES SHALL NOT BE PERMITTED IN STRUCTURAL CONCRETE ELEMENTS UNLESS SPECIFICALLY REVIEWED BY THE STRUCTURAL ENGINEER. ALL CONDUITS TO BE EMBEDDED IN THE STRUCTURAL CONCRETE SHALL BE SUBMITTED FOR STRUCTURAL REVIEW ON A SINGLE COORDINATED CONDUIT DRAWING COMBINING ALL TRADES DEVELOPED AND COORDINATED BY THE CONTRACTOR. COORDINATED CONDUITS/PIPES MUST BE PLACED IN ONE LAYER AVOIDING CROSSOVER AND SPACED AT THE GREATER OF 3" OR 3 DIAMETERS. DRAWINGS SHALL SHOW STUB-UP LOCATIONS, BEND RADIUS AND DETAIL OF CONDUIT/PIPE INSTALLATION. ALL CONDUITS AND PIPES SHALL BE INSTALLED PER THE REQUIREMENTS OF ACI 318 SECTIONS 20.7 AND 20.8.2.
- A. ELECTRICAL CONDUIT SHALL BE RIGID STEEL CONDUIT OR FLEXIBLE PLASTIC CONDUIT. ALUMINUM CONDUIT IS PROHIBITED. CONDUIT OUTSIDE DIAMETER SHALL NOT EXCEED 2" OR 1/6 SLAB THICKNESS, WHICHEVER IS LESSER. CONDUIT SHALL BE FIRMLY CHAISED AND TIED TO PREVENT DISPLACEMENT DURING POURING.
- B. FOR CONDUIT PLACED IN SLABS ON STEEL DECKING, CONDUIT SHALL RUN IN THE STEEL DECK FLUTES PER THE TYPICAL CONDUIT IN SLAB ON STEEL DECK DETAIL.
20. FOR CONCRETE SLABS-ON-GRADE, A BASE OF STRUCTURAL FILL OR NON-FROST-SUSCEPTIBLE SOILS SHALL EXTEND DEEPER THAN THE FROST DEPTH. A VAPOR BARRIER IS TO BE PLACED BENEATH THE SLAB.

V. CONCRETE JOINTS:

1. CONSTRUCTION JOINTS SHALL BE INSTALLED SUCH THAT STRENGTH AND APPEARANCE OF CONCRETE ARE NOT IMPAIRED, AT LOCATIONS INDICATED OR AS APPROVED BY THE ARCHITECT. SEE PROJECT SPECIFICATIONS FOR LIMITS ON LOCATION AND SPACING.
 - A. LOCATE JOINTS FOR BEAMS, SUSPENDED SLABS, JOISTS AND GIRDERS IN THE MIDDLE THIRD OF SPANS. OFFSET JOINTS IN GIRDERS A MINIMUM DISTANCE OF TWICE THE BEAM WIDTH FROM A BEAM-GIRDER INTERSECTION.
 - B. LOCATE VERTICAL JOINTS IN WALLS AND COLUMNS AT THE UNDERSIDE OF FLOORS, SLABS, BEAMS, AND GIRDERS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS, OR AT 40-FEET MAXIMUM HEIGHT, UNLESS PERMITTED BY ENGINEER.
 - C. LOCATE VERTICAL JOINTS IN WALLS AT DISCONTINUITIES, BESIDES PILES INTEGRAL WITH WALLS, NEAR REENTRANT CORNERS, AND IN CONCEALED LOCATIONS WHERE POSSIBLE. PREFERRED JOINT INTERVALS SHALL BE 15-25 FEET AS APPROPRIATE, WITH A MAXIMUM SPACING OF 30- FEET. AVOID LOCATING VERTICAL JOINTS WITHIN 15- FEET OF A BUILDING CORNER.
 - D. LEAVE-OUT OF CONSTRUCTION JOINTS IN SLABS ON GRADE MAY CORRESPOND WITH CONSTRUCTION JOINTS.
 - E. LAYOUT 7 DAYS, MINIMUM, BETWEEN ADJACENT POURS IN WALLS, UNLESS APPROVED BY ENGINEER.
2. SLAB ON GRADE CONTRACTION JOINTS SHALL BE PROVIDED TO CONTROL THE CRACKING PATTERNS AT LOCATIONS INDICATED, OR AS APPROVED BY THE ARCHITECT.
3. LOCATE JOINTS AT COLUMN LINES WHERE APPLICABLE, WITH SPACING NOT TO EXCEED 15- FEET AND RATIO OF LONG TO SHORT SIDE OR POUR NOT TO EXCEED 1.5. MAXIMUM RECTANGULAR SLAB AREA CONTROLLED BY JOINTING NOT TO EXCEED 225 SQUARE- FEET. CONTRACTOR OPTION TO FORM EITHER SAWCUT OR TOOLED JOINTS.
4. WALL CONTRACTION JOINTS SHALL BE PROVIDED TO CONTROL THE CRACKING PATTERNS AT LOCATIONS INDICATED, OR AS APPROVED BY THE ARCHITECT:
 - A. LOCATE JOINTS AT COLUMN LINES WHERE APPLICABLE, WITH SPACING NOT TO EXCEED TWICE THE WALL HEIGHT OR 20- FEET, AND PREFERABLY 1/4- INCHES LAYOUT OF SLAB JOINTING.
 - B. FORM CONTRACTION JOINTS FOR A DEPTH EQUAL, TO AT LEAST ONE-FOURTH OF CONCRETE WALL THICKNESS BY ATTACHING 1/2- INCH WIDE BEVELED WOOD STRIPS TO INSIDE OF BOTH SIDES OF CONCRETE FORM.

II. DESIGN LOADS:

- | | |
|---|---|
| DEAD LOAD: THE SELF WEIGHT OF THE STRUCTURE | |
| 2. SUPERIMPOSED DEAD LOAD: | |
| A. <u>ROOF LEVEL:</u> | |
| a. ROOFING | 7 PSF |
| b. CEILING | 5 PSF |
| B. FLOOR: | 10 PSF |
| C. WALL: | 8 PSF |
| 3. LIVE LOAD: | |
| A. ROOF: | 20 PSF |
| B. FLOOR: | 100 PSF |
| C. PARTITIONS: | 10 PSF |
| 4. SNOW LOAD: | |
| A. GROUND SNOW LOAD (Pg) = | 72 PSF (MAMMOTH), 262 PSF (CANYON) 238 PSF (NE ENTRANCE) |
| B. SNOW IMPORTANCE FACTOR (I): | 1.0 |
| C. ROOF EXPOSURE CONDITION: | FULLY EXPOSED |
| D. THERMAL FACTOR (Ct) = | 1.2 |
| E. FLAT-ROOF SNOW LOAD (Pt) = | 54 PSF (MAMMOTH), 198 PSF (CANYON), 180 PSF (NE ENTRANCE) |
| F. WINTER WIND PARAMETER: | 0.35 (MAMMOTH & CANYON), 0.45 (NE ENTRANCE) |
| 5. WIND LOAD | |
| A. ULTIMATE DESIGN BASIC WIND SPEED V_{ult} = | 107 MPH |
| B. NOMINAL DESIGN WIND SPEED V_{asd} = | 65 MPH |
| C. RISK CATEGORY = | II |
| D. WIND IMPORTANCE FACTOR = | 1.0 |
| E. WIND EXPOSURE CATEGORY = | B |
| F. ENCLOSURE CATEGORY: | ENCLOSED |
| G. INTERNAL PRESSURE COEFFICIENT (GCPi): | +/- 0.18 |
| H. GUST EFFECT FACTOR (G): | 0.85 |
| I. SITE TOPOGRAPHIC FACTOR | $K_{zt} = 1.0$ |
| J. GROUND ELEVATION FACTOR | $K_g = 1.0$ |
| 6. SEISMIC LOAD | |
| A. SITE CLASS = | C |
| B. RISK CATEGORY = | II |
| C. SEISMIC IMPORTANCE FACTOR = | 1.0 |
| D. MAPPED SPECTRAL RESPONSE | |
| a. SHORT PERIOD S_S = | 1.0 g (MAMMOTH), 1.1 g (CANYON), .065 g (NE ENTRANCE) |
| b. 1-SECOND PERIOD S_1 = | 0.28 g (MAMMOTH), 0.3 g (CANYON), 0.18 g (NE ENTRANCE) |
| E. DESIGN SPECTRAL RESPONSE (5% DAMPED) | |
| a. SHORT PERIOD S_{DS} = | 0.83 g (MAMMOTH), 0.89 g (CANYON), 0.56 g (NE ENTRANCE) |
| b. 1-SECOND PERIOD S_1 = | 0.48 g (MAMMOTH), 0.51 g (CANYON), 0.31 g (NE ENTRANCE) |
| F. SEISMIC DESIGN CATEGORY: | D |
| G. RESPONSE MODIFICATION FACTOR | $R = 6.5$ |
| H. OVERSTRENGTH FACTOR | $\Omega_o = 3.0$ |
| I. DEFLECTION AMPLIFICATION FACTOR | $C_d = 4.0$ |
| J. REDUNDANCY FACTOR | $\rho = 1.0$ |

III. FOUNDATIONS:

1. FOUNDATION DESIGN CRITERIA ARE BASED ON THE GEOTECHNICAL REPORT BY McGETTIGAN CONSULTING LLC, DATED AUGUST 4, 2017 PROJECT NO. 15000701. COPIES ARE AVAILABLE FOR REVIEW AT THE ARCHITECT'S OFFICE.
2. FOOTINGS ARE DESIGNED BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF. THE ALLOWABLE BEARING MAY BE INCREASED BY ONE THIRD FOR WIND OR SEISMIC.
3. PER GEOTECHNICAL REPORT FOR NE ENTRANCE AREA, ULTIMATE COEFFICIENT OF SLIDING FRICTION IS 0.40. ULTIMATE NATIVE SOIL PASSIVE RESISTANCE IS 400 PCF. ULTIMATE STRUCTURAL FILL PASSIVE RESISTANCE IS 500 PCF.
4. PER GEOTECHNICAL REPORT FOR CANYON AREA, ULTIMATE COEFFICIENT OF SLIDING FRICTION IS 0.50. ULTIMATE NATIVE SOIL PASSIVE RESISTANCE IS 400 PCF. ULTIMATE STRUCTURAL FILL PASSIVE RESISTANCE IS 500 PCF.
5. SOIL PREPARATION OF THE SITE SHALL FOLLOW THE RECOMMENDATIONS DESCRIBED IN THE GEOTECHNICAL REPORT. THIS INCLUDES REMOVAL OF EXISTING STRUCTURES/UTILITIES, REMOVAL OF EXISTING FILL WHERE DEEMED NECESSARY, PREPARATION OF THE SUBGRADE & COMPACTION, EXCAVATIONS FOR NEW FOUNDATIONS & SLABS, AND BACKFILLING TO RETAINING WALLS.
6. WHERE SOIL CONDITIONS ARE FOUND DURING CONSTRUCTION THAT DO NOT MEET CRITERIA DESCRIBED IN THE REPORT, SPECIAL INSPECTOR/CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY.
7. LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION OF FOUNDATION TO AVOID ANY INTERFERENCE. CONTRACTOR SHALL EXPOSE EXISTING UTILITY LINES IN THE IMMEDIATE AREA TO DETERMINE THEIR EXACT INVERT ELEVATION, SIZE AND LOCATION RELATIVE TO THE FOUNDATION. NOTIFY THE ENGINEER IMMEDIATELY OF ANY INTERFERENCE WITH PILES, FOOTINGS OR FOUNDATION WALLS.
8. CONTRACTOR SHALL PROVIDE FOR PROPER DEWATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, AND SEEPAGE. WATER SHALL NOT BE ALLOWED TO STAND IN TRENCHES OR FORMS BEFORE OR AFTER CONCRETE IS PLACED, AND SHALL BE PUMPED OUT. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE FOUNDATIONS ARE CAST, THE CONTRACTOR SHALL, AT THEIR OWN EXPENSE, EXCAVATE THE SOFTENED MATERIAL AND REPLACE WITH CONCRETE.
9. CONTRACTOR SHALL PROVIDE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY AND ADEQUATELY RETAIN THE EARTH BANKS AND ANY EXISTING STRUCTURE.
11. EXCAVATIONS FOR FOOTINGS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING OF CONCRETE AND REINFORCING. CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER WHEN THE EXCAVATIONS ARE READY FOR INSPECTION. THE GEOTECHNICAL ENGINEER SHALL SUBMIT A LETTER OF COMPLIANCE TO THE OWNER.
12. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR MASONRY HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGNS, PERMITS AND INSTALLATION OF BRACING AND PROTECTION.
13. ENGINEERED FILL MATERIAL SPECIFICATIONS MAY BE BASED ON WYOMING AND MONTANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AS APPLICABLE TO THE PROJECT SITE, BUT SHALL BE MODIFIED TO EXCLUDE MATERIALS THAT MAY INCREASE THE RISK OF FROST HEAVE.

I. GENERAL NOTES:

1. ALL STRUCTURAL WORK SHALL CONFORM TO THE DRAWINGS, THE PROJECT SPECIFICATIONS, ALL DRAWING NOTES, AND THE 2021 INTERNATIONAL BUILDING CODE (IBC).
2. ALL APPLICABLE REFERENCE STANDARDS, AS MODIFIED BY THE BUILDING CODE, INCLUDE:
 - A. ASCE/SEI 7-22: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 - B. ACI 318-19: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - C. AWS D14: STRUCTURAL WELDING CODE - STEEL
 - D. ACI 117-10: STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIAL
3. THE SCOPE OF WORK IS NOT SOLELY DEFINED BY THESE DOCUMENTS.
4. TYPICAL DETAILS APPLY THROUGHOUT THE PROJECT, EVEN IF NOT SPECIFICALLY REFERENCED IN PLANS OR DETAILS. DETAILS OF CONSTRUCTION NOT FULLY SHOWN OR NOTED ON THE DRAWINGS NOT CALLED OUT IN THE SPECIFICATIONS SHALL BE OF THE SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED.
5. ALL FORCES INDICATED IN THE STRUCTURAL DRAWINGS ARE SERVICE LOADS AS DEFINED BY ASCE-7, UNLESS NOTED OTHERWISE.
6. DO NOT USE SCALED DIMENSIONS: USE ONLY WRITTEN DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATIONS BEFORE PROCEEDING WITH WORK.
7. SEE ARCHITECTURAL DRAWINGS FOR SITE POSITIONING AND PROJECT DATUM. REFERENCE IS (0'-0") AS SHOWN ON ARCHITECTURAL DRAWINGS.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY AND THE MEANS AND METHODS OF CONSTRUCTION.
9. STRUCTURAL ELEMENTS SHALL BE CENTERED ABOUT GRIDLINES OR DIMENSION LINES, UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL PROVIDE ENGINEERED DESIGNS OF TEMPORARY SHORING AND BRACING AND MAKE SAFE ALL FLOORS, ROOFS, WALLS, EXCAVATIONS AND ADJACENT PROPERTY AS PROJECT CONDITIONS AND LOCAL BUILDING CODE REQUIRE.
11. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN ON PLAN. DISCREPANCIES AND/OR INTERFERENCES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY.
12. OPENINGS SHALL NOT BE MADE IN ANY STRUCTURAL MEMBER UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
13. DEFICIENT WORK AND WORK NOT IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AS IDENTIFIED BY THE ARCHITECT OR INSPECTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COMPENSATE OWNER FOR SERVICES ARISING FROM DEFICIENT WORK.
14. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY REQUIRED DEWATERING OF THE SITE DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL PREPARE ENGINEERED DESIGN AND SHALL BE RESPONSIBLE FOR CONFIRMING ADEQUACY OF AS BUILT STRUCTURE FOR ALL SURCHARGE LOADS RESULTING FROM COMPACTION AS WELL AS CRANES TRUCKS, BULLDOZERS OR ANY OTHER CONSTRUCTION EQUIPMENT. ENGINEERED DESIGNS SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE JURISDICTION AND SUBMITTED TO ENGINEER OF RECORD FOR REVIEW.
16. THE STRUCTURAL COMPONENTS BY THEMSELVES ARE A NON-SELF-SUPPORTING STRUCTURE. LATERAL STIFFNESS TO WITHSTAND WIND, SEISMIC, OR SOIL ARE CARRIED BY THE ROOF AND FLOOR DIAPHRAGMS TO THE LATERAL SYSTEM. CERTAIN ELEMENTS SHOWN ON THE STRUCTURAL DRAWINGS (SUCH AS BRACING, ROOF AND FLOOR SLABS, AND CONCRETE IN COMPOSITE COLUMNS) ARE REQUIRED FOR OVERALL OR LOCAL STABILITY OF OTHER ELEMENTS (SUCH AS BEAMS, COLUMNS, AND WALLS). IF DUE TO SEQUENCING OF CONSTRUCTION, THESE STABILITY ELEMENTS ARE NOT IN PLACE, THE CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, WHO SHALL INVESTIGATE WHERE TEMPORARY SHORING/BRACING IS REQUIRED AND SHALL DESIGN THIS TEMPORARY SHORING/BRACING. THE CONTRACTOR SHALL PROVIDE THIS SHORING/BRACING UNTIL THE REQUIRED STRUCTURAL ELEMENTS AND THEIR CONNECTIONS HAVE BEEN INSTALLED AND REACH THEIR FINAL DESIGN STRENGTHS.
17. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT WHEN PLACED ON FRAMED FLOORS OR ROOFS. THE CONSTRUCTION MATERIAL LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING WHERE STRUCTURE IS NOT COMPLETE OR HAS NOT ATTAINED DESIGN STRENGTH.
18. BUILDING TOLERANCES: STANDARD TOLERANCES SHALL BE BASED ON THE REQUIREMENTS OF THE AISI CODE OF STANDARD PRACTICE AND ACI 117. STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS.

SYMBOLS

	GRID BUBBLE		SLAB STEP/ DEPRESSION
	ELEVATION MARK		SLOPE UP
	SECTION MARK		SLOPE DOWN
	ELEVATION		RIDGE
	DETAIL MARK		VALLEY
	REVISION NUMBER		SLAB THICKNESS CHANGE

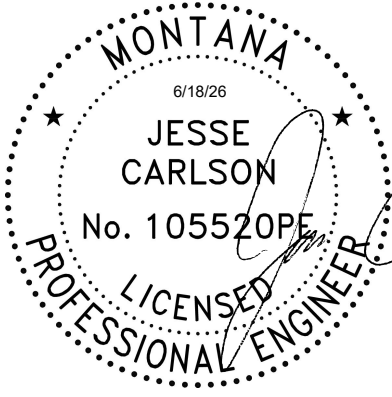
SHEET INDEX

STRUCTURAL SHEET LIST	
SHEET NUMBER	SHEET NAME
S001	GENERAL STRUCTURAL NOTES
S002	STRUCTURAL SPECIAL INSPECTIONS AND TESTS AND GENERAL NOTES
S101	FOUNDATION PLAN - 2BR
S111	FOUNDATION PLAN - 2BR - ADA
S201	FOUNDATION PLAN - 3BR
S211	FOUNDATION PLAN - 3BR - ADA
S500	FOUNDATION DETAILS
S501	FOUNDATION DETAILS
GRAND TOTAL 8	

A/E: FIRM	DESIGNED: T. VHAY	SUB SHEET NO.
PRIME:	CADD:	S001
STANTEC	M. LITZINGER	
CHEYENNE, WY	TECH. REVIEW:	
	M. PUCKETT	
	DATE: 06/18/2026	

#	POUND	LB	POUND
&	AND	LF	LINEAR FOOT
@	AT	LG	LENGTH
AB	ANCHOR BOLT	LLBB	LONG LEG BACK TO BACK
ACS	ALL COMMON SIDES	LLH	LONG LEG HORIZONTAL
ADDL	ADDITIONAL	LLV	LONG LEG VERTICAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LO	LOW
ALT	ALTERNATE	LT WT	LIGHTWEIGHT
ARCH, ARCH'L	ARCHITECT, ARCHITECTURAL	LV	LEVEL
BL	BRICKLEDGE	MAX	MAXIMUM
BLDG	BUILDING	MC	MOMENT CONNECTION
BLKG	BLOCKING	MCJ	MASONRY CONTROL JOINT
BM	BEAM	MECH	MECHANICAL
BN	BOUNDARY NAILING	MEZZ	MEZZANINE
BO	BOTTOM OF	MFR, MANUF	MANUFACTURER
BOB	BOTTOM OF BEAM	MID	MIDDLE
BOD	BOTTOM OF DECK	MIL	MILLIMETER
BOS	BOTTOM OF STEEL	MIN	MINIMUM
BOT, BOTT	BOTTOM	MISC	MISCELLANEOUS
BP	BASE PLATE	MO	MASONRY OPENING
BRBF	BUCKLING RESTRAINED BRACED FRAME	MTL	METAL
BRG	BEARING	N	NORTH
BTWN	BETWEEN	NA	NOT APPLICABLE
C	CHANNEL	NDT	NON-DESTRUCTIVE TESTING
CB	CONCRETE BEAM	NEW, (N)	NEW
CC	CARRIED COLUMN	NIC	NOT IN CONTRACT
CEN	CENTER	NTS	NOT TO SCALE
CFMF	COLD-FORMED METAL FRAMING	NWC	NORMAL WEIGHT CONCRETE
CIP	CAST IN PLACE	OC	ON CENTER
CJ	CONTROL JOINT	OH	OPPOSITE HAND
CJP	COMPLETE JOINT PENETRATION	OPNG	OPENING
CL	CENTERLINE	OPP	OPPOSITE
CLR	CLEAR	PEMB	PRE-ENGINEERED METAL BUILDING
CMU	CONCRETE MASONRY UNIT	PERP	PERPENDICULAR
COL	COLUMN	PJP	PARTIAL JOINT PENETRATION
CONC	CONCRETE	PL	PLATE
CONN	CONNECT, CONNECTION	PLF	POUNDS PER LINEAR FOOT
CONT	CONTINUOUS	PLYWD	PLYWOOD
CTR	CENTERED	PSF	POUNDS PER SQUARE FOOT
CWI	CERTIFIED WELDING INSPECTOR	PSI	POUNDS PER SQUARE INCH
D, DIA	DIAMETER	R	RADIUS
DBA	DEFORMED BAR ANCHOR	REF	REFER, REFERENCE
DBL	DOUBLE	REINF	REINFORCED, REINFORCEMENT
DEF	DEFORMED, DEFINITION	REM	REMAINDER
DEFL	DEFLECTION	REQ'D	REQUIRED
DET, DTL	DETAIL	REQ'MT	REQUIREMENTS
DIAG	DIAGONAL	S,	REQUIREMENTS
DN	DOWN	REV	REVISION
DWG	DRAWING	SAD	SEE ARCHITECTURAL DRAWINGS
EA	EACH	SC	SLIP CRITICAL
EF	EACH FACE	SCHED	SCHEDULE
EJ	EXPANSION JOINT	SCJ	SAWN CONTROL JOINT
EL	ELEVATION	SECT	SECTION
ELEV	ELEVATOR	SF	SQUARE FEET
EN	EDGE NAILING	SHT	SHEET
EOR	ENGINEER OF RECORD	SHTG	SHEATHING
EOS	EDGE OF SLAB	SIM	SIMILAR
EQ	EQUAL	SOG	SLAB ON GRADE
EQ SPA	EQUAL SPACE	SPA	SPACES, SPACING
ES	EACH SIDE	SQ	SQUARE
EW	EACH WAY	SSH	SHORT SLOTTED HOLE
EXIST,	EXISTING	STD	STANDARD
(E)		STL	STEEL
EXT	EXTERIOR	STRUCT	STRUCTURE, STRUCTURAL
FD	FLOOR DRAIN	SUPP	SUPPORT
FDN, FNDN	FOUNDATION	T&B	TOP AND BOTTOM
FF EL	FINISH FLOOR ELEVATION	TEMP	TEMPORARY
FN	FIELD NAILING	THK	THICK
FOA	FACE OF ANGLE	TO	TO OF
FOC	FACE OF CONCRETE	TOC	TOP OF CONCRETE
FOM	FACE OF MASONRY	TOF	TOP OF FOUNDATION
FT	FEET	TOM	TOP OF MASONRY
FTG	FOOTING	TOS	TOP OF STEEL
Fy	YIELD STRESS	TOSC	TOP OF STRUCTURAL CONCRETE
GA	GAGE, GUAGE	TOSL	TOP OF SLAB
GALV	GALVANIZED	TOT	TOTAL
GB	GRADE BEAM	TOW	TOP OF WALL
GLB	GLUED-LAMINATED BEAM	TYP	TYPICAL
GT	GIRDER TRUSS	UON	UNLESS OTHERWISE NOTED
H, HORIZ	HORIZONTAL	V, VERT	VERTICAL
HC	HOLLOW CORE	VIF	VERIFY IN FIELD
HI	HIGH	W	WIDE FLANGE
HK	HOOK	W/	WITH
HSS	HOLLOW STRUCTURAL STEEL	W/O	WITHOUT
IN	INCHES	WB	WIND BRACE
INFO	INFORMATION	WBBP	WIND BRACE BASEPLATE
INT	INTERIOR	WHSS	WELDED HEADED STEEL STUD
JST	JOIST	WP	WORKING POINT, WORK POINT
JT	JOINT	WRT	WITH RESPECT TO
K	KIPS	WT	WEIGHT
KB	KNEE BRACE	WWR	WELDED-WIRE REINFORCEMENT
L	ANGLE	YD	YARD

GENERAL STRUCTURAL NOTES	TITLE OF SHEET	DRAWING NO. 101 198433
		PMIS/PKG NO. 326141
		SHEET
	YELLOWSTONE NATIONAL PARK	87 OF 94



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GENERAL NOTES

VIII. DEFERRED STRUCTURAL SUBMITTALS

1. SOME STRUCTURAL SYSTEMS ARE DEFINED AS VENDOR-DESIGNED COMPONENTS PER THE STRUCTURAL DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT THE STAMPED COMPONENT SYSTEM DOCUMENTS TO THE BUILDING OFFICIAL FOR APPROVAL.
2. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATION THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
3. SUBMITTALS TO BE PREPARED BY A LICENSED ENGINEER LAWFULLY ELIGIBLE TO DESIGN THE ELEMENT OR COMPONENT (SPECIALTY ENGINEER) AND SHALL BE SEALED IN ACCORDANCE WITH STATE LAW. SUBMITTALS SHALL INCLUDE:

A. CALCULATIONS

B. DIAGRAMS SHOWING LOADS APPLIED TO THE PRIMARY STRUCTURE INCLUDING MAGNITUDES, LOCATIONS, AND DIRECTIONS, SEPARATED INTO DEAD, LIVE, WIND AND/OR SEISMIC COMPONENTS.

C. ERECTION OR DESIGN DRAWINGS AS NECESSARY TO DESCRIBE THE SYSTEM OR COMPONENT AND ITS CONNECTION TO THE PRIMARY STRUCTURE.
4. SUBMIT (1) REPRODUCIBLE COPY, (1) SET SEALED COPY FOR THE SEOR'S FILE, AND ADDITIONAL COPIES AS NECESSARY FOR THE BUILDING DEPARTMENT. SUBMITTALS CONTAINING EXCEPTIONS, CORRECTIONS, OR OTHER REVIEW COMMENTS ARE NOT ACCEPTABLE FOR SUBMITTAL TO THE BUILDING DEPARTMENT.
5. THE SEOR'S REVIEW IS STRICTLY LIMITED TO THE FOLLOWING:

A. DRAWINGS AND CALCULATIONS ARE PROPERLY SEALED.

B. LOAD CRITERIA IS CONSISTENT WITH CONTRACT DOCUMENTS.

C. CONNECTIONS TO THE PRIMARY STRUCTURE ARE CONSISTENT WITH THE PRIMARY STRUCTURE DESIGN

D. THE BASE STRUCTURE IS CAPABLE OF SUPPORTING IMPOSED LOADS.
6. THE SPECIALTY ENGINEER'S SEAL WILL CERTIFY THAT THE ITEMS DESIGNED BY THE SPECIALTY ENGINEER CONFORM TO THE CRITERIA WITHIN THE CONTRACT DOCUMENTS AND ALL APPLICABLE CODES AND STANDARDS.
7. IF THE LOADS IMPOSED ON THE STRUCTURE EXCEED THE CRITERIA WITHIN THE CONTRACT DOCUMENTS THE SUBMITTALS WILL BE REJECTED. CHANGES TO THE PRIMARY STRUCTURE TO ACCOMMODATE SPECIALTY ITEMS WILL ONLY BE MADE AT COST AFTER.
8. THE FOLLOWING LIST INCLUDES THE ITEMS THAT ARE DEFINED AS DEFERRED STRUCTURAL SUBMITTAL COMPONENTS. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS FOR ADDITIONAL DEFERRED SUBMITTAL COMPONENTS.

A. ENGINEERED METAL BUILDING

IX. STRUCTURAL LUMBER:

1. ALL STRUCTURAL SAWN LUMBER SHALL BE DOUGLAS FIR LARCH AS GRADED BY THE WWPA OR WCLUB WITH THE FOLLOWING MINIMUM GRADES, UNLESS NOTED OTHERWISE:

A. 2X OR 3X STUDS: NO. 2

B. 4X AND LARGER POSTS OR STUDS: NO. 1

C. 2X OR 3X JOISTS: NO. 2

D. 4X AND LARGER BEAMS OR JOISTS, CONCEALED: NO. 1

E. 4X AND LARGER BEAMS OR JOISTS, EXPOSED: SELECT STRUCTURAL
2. ALL STRUCTURAL COMPOSITE LUMBER (SCL) OR ENGINEERED LUMBER SHALL BE AS FOLLOWS:

A. I-JOISTS: TJI JOISTS MANUFACTURED BY WEYERHAUSER (ESR-1153)

B. LSL: TIMBERSTRAND LSL MANUFACTURED BY WEYERHAUSER (ESR-1387)

C. LVL: MICROLAM LVL (2.0E) MANUFACTURED BY WEYERHAUSER (ESR-1387)

D. PSL: PARALLAM PSL (2.0E) MANUFACTURED BY WEYERHAUSER (ESR-1387)

E. SUBSTITUTION OF PRODUCTS LISTED ABOVE SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL.
3. STRUCTURAL GLUE LAMINATED TIMBER (GLT):

A. GLT FABRICATION SHALL BE PERFORMED IN AN APPROVED FABRICATORS SHOP IN ACCORDANCE WITH CBC 2303.1.3, ANSI/ATC A190.1 AND ASTM D3737.

B. GLT BEAMS SHALL BE 24F-V8 WITH A CAMBER OF R=1600' UNLESS NOTED OTHERWISE.

C. GLT EXPOSED TO WEATHER SHALL BE RATED FOR EXTERIOR USE BY THE MANUFACTURER. FLASHING AND WATERPROOFING OF THE EXPOSED ENDS SHALL BE PROVIDED BY THE CONTRACTOR TO PREVENT DECAY.

D. ALL GLT MEMBERS SHALL HAVE APPEARANCE CLASSIFICATION AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS.
4. ALL STRUCTURAL TIMBER FRAMING SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT THE TIME OF ENCLOSURE, REGARDLESS OF THE MOISTURE CONTENT AT THE TIME OF MANUFACTURE. TIMBER FLOOR FRAMING, INCLUDING JOISTS AND BEAMS, WITH MORE THAN 2 FRAMED LEVELS ABOVE THEM SHALL BE DESIGNATED AS 'S-DRY' OR 'MC15' AND HAVE A MAXIMUM MOISTURE CONTENT OF 15% AT THE TIME OF ENCLOSURE.
5. CONTRACTOR SHALL PROVIDE AT LEAST THREE RANDOM MOISTURE READINGS PERFORMED AT WALL AND FLOOR FRAMING IN THE PRESENCE OF THE BUILDING INSPECTOR PRIOR TO APPROVAL TO ENCLOSURE TO VERIFY IN SERVICE MOISTURE CONTENT TO SATISFY THE REQUIREMENTS ABOVE.
6. ALL LUMBER LOCATED IN DIRECT CONTACT WITH CONCRETE OR MASONRY INCLUDING BUT NOT LIMITED TO SILL PLATES, NAILERS, AND LEDGERS SHALL BE PRESSURE TREATED DOUGLAS FIR.
7. ALL HARDWARE SHALL BE SIMPSON STRONG-TIE CO INSTALLED PER MANUFACTURERS RECOMMENDATIONS. SUBSTITUTION OF EQUIVALENT HARDWARE FROM AN ALTERNATE MANUFACTURER SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
8. MINIMUM FASTENING AND NAILING OF TIMBER COMPONENTS SHALL BE IN ACCORDANCE WITH IBC TABLE 2304.10.1.
9. FASTENERS SHALL BE PROVIDED NEW AND WITHOUT EXCESSIVE RUST. ALL FASTENERS EXPOSED TO WEATHER SHALL BE GALVANIZED.
10. ALL METAL FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED LUMBER SHALL BE STAINLESS STEEL OR OTHERWISE CERTIFIED BY THE MANUFACTURER TO RESIST CORROSION CAUSED BY THE SPECIFIC TREATMENT APPLIED TO THE WOOD.
11. NAILS:

A. ALL NAILS SHALL BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE

B. MINIMUM NAIL PENETRATION SHALL BE 10 TIMES THE SHANK DIAMETER UNLESS NOTED OTHERWISE.

C. EDGE DISTANCES, END DISTANCES, AND FASTENER SPACINGS SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD.

D. BORED PILOT HOLES SHALL BE PERMITTED FOR ALL NAILS TO HELP PREVENT WOOD FROM SPLITTING. BORED HOLES SHALL BE MANDATORY FOR 20d AND LARGER NAILS. WHEN UTILIZED BORED HOLES SHALL HAVE A DIAMETER NOT EXCEEDING 75% OF THE NAIL DIAMETER.

E. TOE NAILS SHALL BE DRIVEN AT AN ANGLE OF APPROXIMATELY 30 DEGREES WITH THE MEMBER AND STARTED APPROXIMATELY 1/3 THE LENGTH OF THE FASTENER FROM THE MEMBER END.

IX. STRUCTURAL LUMBER - CONT.:

12. WOOD SCREWS:

A. WOOD SCREWS SHALL MEET THE DIMENSIONAL STANDARDS OF ANSI/ASME B18.6.1.

B. MINIMUM SCREW PENETRATION SHALL BE 10 TIMES THE SCREW DIAMETER UNLESS NOTED OTHERWISE.

C. EDGE DISTANCES, END DISTANCES, AND FASTENER SPACINGS SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD.

D. BORED LEAD HOLES SHALL BE PROVIDED WITH A DIAMETER EQUAL TO APPROXIMATELY 7/8 OF THE SCREW ROOT DIAMETER.

E. WOOD SCREWS SHALL BE TURNED, NOT DRIVEN INTO PLACE. SOAP OR OTHER LUBRICANTS MAY BE PROVIDED TO FACILITATE INSERTION AND TO PREVENT DAMAGE TO THE SCREWS.
13. BOLTS AND LAG SCREWS:

A. BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 AND MEET THE DIMENSIONAL STANDARDS OF ANSI/ASME B18.2.1.

B. HOLES FOR BOLTS SHALL BE A MINIMUM 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER.

C. BOLTS SHALL BE ACCURATELY ALIGNED IN MAIN MEMBERS AND SIDE PLATES. BOLTS SHALL NOT BE FORCIBLY DRIVEN INTO PLACE.

D. BORED LEAD HOLES FOR LAG SCREWS SHALL BE 40-70% OF THE SHANK DIAMETER AT THE THREADED PORTION OF THE SCREW, AND THE SAME DIAMETER AS THE SHANK AT THE SHANK.

E. LAG SCREWS SHALL BE TURNED, NOT DRIVEN INTO PLACE.

F. ALL BOLTS, NUTS, AND LAG SCREWS SHALL BE PROVIDED WITH FLAT OR MALLEABLE WASHERS WHERE BEARING AGAINST DIRECTLY AGAINST WOOD.

G. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED UPON INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
14. ALL BUILT UP, DOUBLE 2X BEAMS AND JOISTS SHALL BE FASTENED TOGETHER WITH 2-ROWS 10d NAILS AT 12" OC.
15. PROVIDE DOUBLE FLOOR JOISTS UNDER PARTITION WALLS RUNNING PARALLEL TO JOIST SPAN.
16. PROVIDE SOLID BLOCKING IN JOIST FRAMING ABOVE ALL SUPPORTS, BELOW PARTITION WALLS, AND AT MIDSPAN OF JOISTS SPANNING GREATER THAN 10 FEET.
17. SUPPORT ALL UPPER LEVEL POSTS AND TRIMMERS IN LOWER LEVELS WITH EQUIVALENT FRAMING AND/OR BLOCKING OR OTHERWISE FRAME POSTS THROUGH FLOOR SYSTEMS.
18. FIRE BLOCK STUD WALLS AT MID-HEIGHT WHERE STUD LENGTH EXCEEDS 10 FEET.
19. NOTCHING OR CUTTING STUDS TO CLEAR ANCHOR BOLTS IS NOT PERMITTED. STUDS SHALL HAVE FULL BEARING ON THE SILL PLATE.
20. LET-IN BRACES SHALL NOT BE USED FOR TEMPORARY BRACING ON ANY WALL FRAME. STEEL STRAPS WHICH DO NOT REQUIRE THE CUTTING OF STUDS ARE AN ACCEPTABLE ALTERNATIVE.
21. WHERE POSTS ARE SPECIFIED WITH CAPS AND/OR BASES, THE LOAD SHALL BE TRANSFERRED TO THE FOUNDATION BY VERTICAL GRAIN ONLY.
22. DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE EXPLICITLY SHOWN IN THE DETAILS.
23. HOLD-DOWNS SHALL BE INSTALLED 1/2" MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING OF THE ANCHOR BOLT. THE HOLD-DOWN SHALL BE INSTALLED TIGHT TO THE POST WITHOUT FILLERS. DO NOT BEND HOLD-DOWN ANCHORS. TIGHTEN ANCHORS PER MANUFACTURERS RECOMMENDATIONS PRIOR TO COVERING THE WALL FRAMING.

SPECIAL INSPECTION AND TEST REQUIREMENTS				
TYPE		FREQUENCY	REQUIRED INSPECTIONS AND/OR TESTS	REFERENCES CODES/STANDARDS
SOILS				IBC 1705.6
1. BEARING MATERIAL	☒	PERIODIC	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	GEOTECHNICAL REPORT
2. EXCAVATIONS	☒	PERIODIC	VERIFY EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	CONSTRUCTION DOCUMENTS
3. FILL MATERIALS	☒	PERIODIC	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	
4. PRIOR TO PLACEMENT OF FILL	☒	PERIODIC	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.	
5. DURING PLACEMENT OF FILL	☒	CONTINUOUS	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	

CONCRETE				IBC 1705.3
1. REINFORCEMENT	☒	PERIODIC	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	ACI 318: 20, 25.2, 25.3, 26.6.1-26.6.3 IBC 1908.4
2. ANCHORS	☒	PERIODIC	INSPECT ANCHORS CAST IN CONCRETE	ACI 318: 17.8.2
3. ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	☒	CONTINUOUS	INSPECT ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	ACI 318: 17.8.2.4
	☒	PERIODIC	INSPECT ALL OTHER MECHANICAL OR ADHESIVE ANCHORS - SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI318: 17.8.2 OR OTHER QUALIFICATION PROCEDURES.	ACI 318: 17.8.2
4. DESIGN MIX	☒	PERIODIC	VERIFY USE OF REQUIRED DESIGN MIX	ACI 318:19, 26.4.3, 26.4.4 IBC 1904.1, 1904.2, 1908.2, 1908.3
5. PRIOR TO CONCRETE PLACEMENT	☒	CONTINUOUS	FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	ASTM C172, C31 IBC 1908.10
6. DURING PLACEMENT	☒	CONTINUOUS	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	ACI318: 26.5 IBC: 1908.6,1908.7,1908.8
	☒	PERIODIC	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	ACI318: 26.5.3-26.5.5 IBC: 1908.9
7. PRESTRESSED CONCRETE	☒	CONTINUOUS	APPLICATION OF PRESTRESSING FORCES	ACI318: 26.10
	☒	CONTINUOUS	GROUTING OF BONDED PRESTRESSING TENDONS	
8. PRECAST CONCRETE	☒	PERIODIC	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	ACI 318: 26.9
9. IN-SITU CONCRETE STRENGTH	☒	PERIODIC	VERIFY IN-SITU CONCRETE STRENGTH: • PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE • PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	ACI 318: 26.11.2
10. FORMWORK	☒	PERIODIC	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	ACI 318: 26.11.2(b)

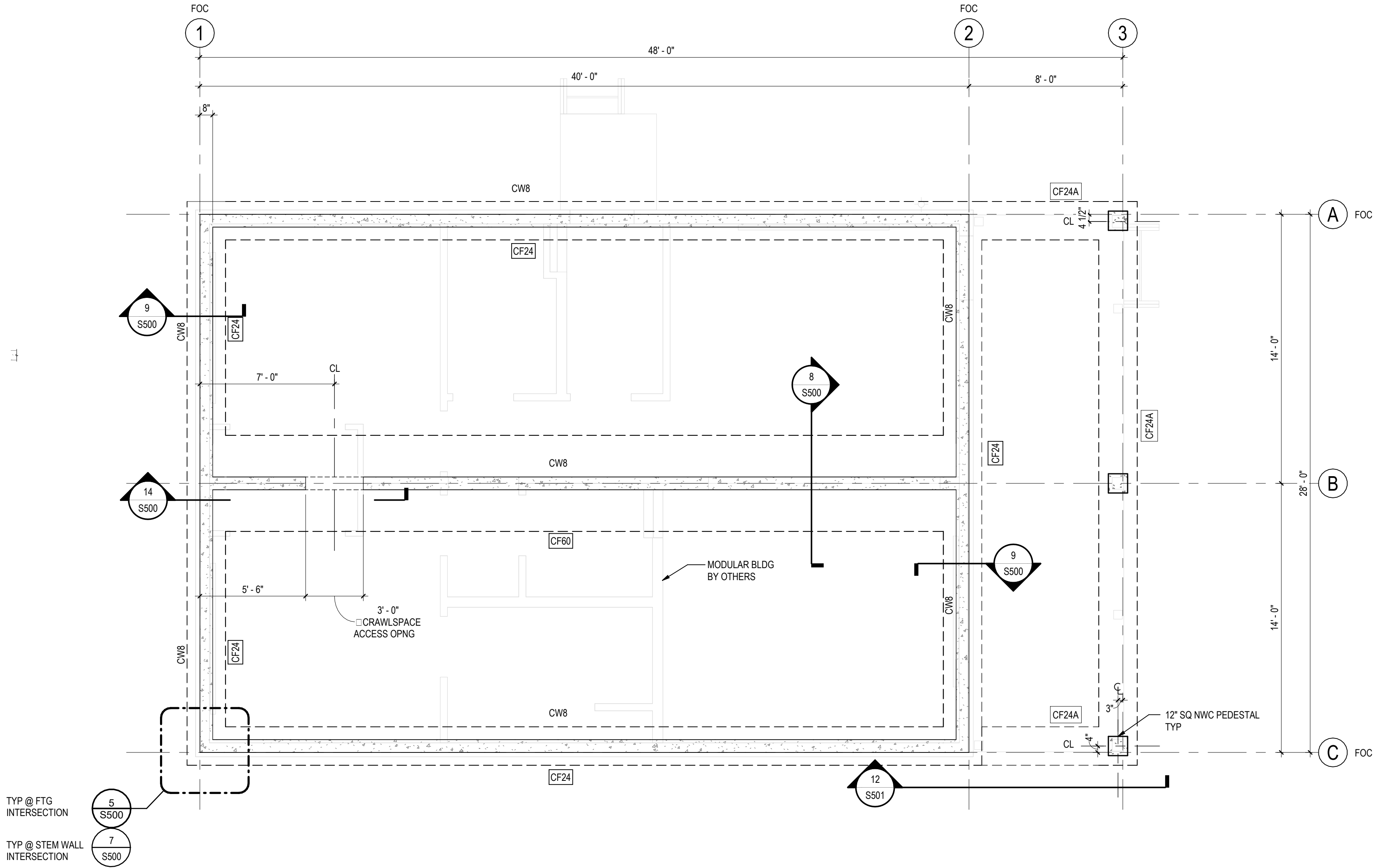
VII. ANCHOR RODS

- BY ENGINEERED BUILDING DESIGNER

DEFINITIONS		STATEMENT OF SPECIAL INSPECTIONS
SPECIAL INSPECTION	INSPECTION OF CONSTRUCTION REQUIRING THE EXPERTISE OF AN APPROVED SPECIAL INSPECTOR IN ORDER TO ENSURE COMPLIANCE WITH THE BUILDING CODE AND THE APPROVED CONSTRUCTION DOCUMENTS.	INSPECTION AND TESTING REQUIREMENTS ON THIS SHEET ARE IN ACCORDANCE WITH SECTION 1705 OF THE INTERNATIONAL BUILDING CODE (IBC) AND HAVE BEEN IDENTIFIED AS A STATEMENT OF SPECIAL INSPECTIONS AS REQUIRED BY IBC SECTION 1704.3. THE OWNER OR THE OWNER'S AUTHORIZED AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION AS REQUIRED BY IBC SECTION 1705 AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL. THESE SPECIAL INSPECTIONS AND TESTS ARE IN ADDITION TO THE INSPECTIONS BY THE BUILDING OFFICIAL THAT ARE IDENTIFIED IN IBC SECTION 110. SPECIAL INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH IBC SECTION 1704.2.1, AND ALL OTHER APPLICABLE SECTIONS AND STANDARDS. SPECIAL INSPECTIONS AND TESTS INDICATED ON THIS SHEET ARE FOR THE STRUCTURAL WORK. SEE OTHER DISCIPLINES DRAWINGS AND SPECIFICATIONS FOR REQUIRED NONSTRUCTURAL SPECIAL INSPECTIONS AND TESTS. <u>DESIGNATED SEISMIC FORCE RESISTING SYSTEM:</u> • BY ENGINEERED METAL BUILDING ENGINEER
SPECIAL INSPECTOR	A QUALIFIED PERSON EMPLOYED OR RETAINED BY AN APPROVED AGENCY AND APPROVED BY THE BUILDING OFFICIAL AS HAVING THE COMPETENCE NECESSARY TO INSPECT A PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.	
PERIODIC	SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF WORK.	
CONTINUOUS	SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT CONTINUOUSLY WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED	
OBSERVE	THE INSPECTOR SHALL OBSERVE THESE FUNCTIONS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS.	
PERFORM	THESE INSPECTIONS SHALL BE PERFORMED FOR EACH CONNECTION OR MEMBER, AND COMPLETED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.	
☒	INDICATES SPECIAL INSPECTION OF ITEM IS REQUIRED FOR THE WORK DEFINED IN THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT.	



A/E: FIRM	DESIGNED: T. VHAY	SUB SHEET NO. S002	TITLE OF SHEET STRUCTURAL SPECIAL INSPECTIONS, TESTS AND GENERAL NOTES	DRAWING NO. 101
PRIME:	CADD:			198433
STANTEC CHEYENNE, WY	M. LITZINGER			PMIS/PKG NO. 326141
	TECH. REVIEW: M. PUCKETT			SHEET
	DATE: 06/18/2026			88 OF 94
			YELLOWSTONE NATIONAL PARK	



1
S101

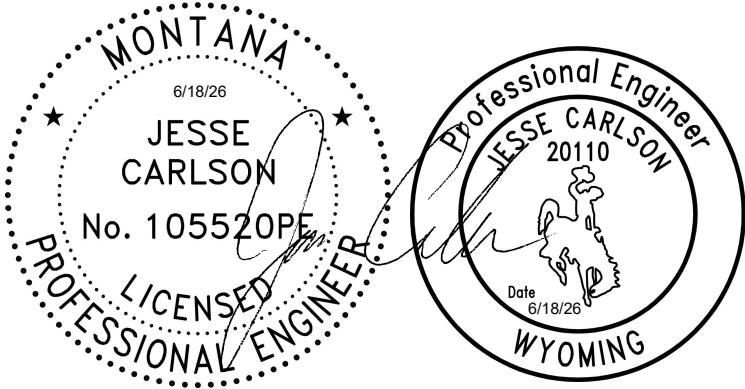
2 BDR FOUNDATION PLAN
1/4" = 1'-0"

CONCRETE STEM WALL SCHEDULE			
MARK	WIDTH (IN)	REINFORCING	
		VERTICAL	HORIZONTAL
CW8	8"	#5 @ 18" OC	#5 @ 18" OC

NOTE:
1. CENTER STEM WALL ON FTG UON.

FOOTING SCHEDULE					
MARK	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	LONG. REINFORCEMENT	TRANS REINFORCEMENT
CF24	CONT	24"	12"	(2) #5 CONT TOP & BOT	#5 NONE OC
CF24A	CONT	24"	24"	(2) #5 CONT TOP & BOT	#4 TIES @ 12"OC
CF60	CONT	60"	12"	(5) #5 CONT TOP & BOT	#5 NONE OC

NOTE:
1. SEE DETAILS 5/ S500, 8/ S500, 9/ S500FOR DEFINITIONS OF LENGTH, WIDTH AND DEPTH.



A/E FIRM
PRIME:
STANTEC
CHEYENNE, WY

DESIGNED:
T. VHAY
CADD:
M. LITZINGER
TECH. REVIEW:
M. PUCKETT
DATE:
06/18/2026

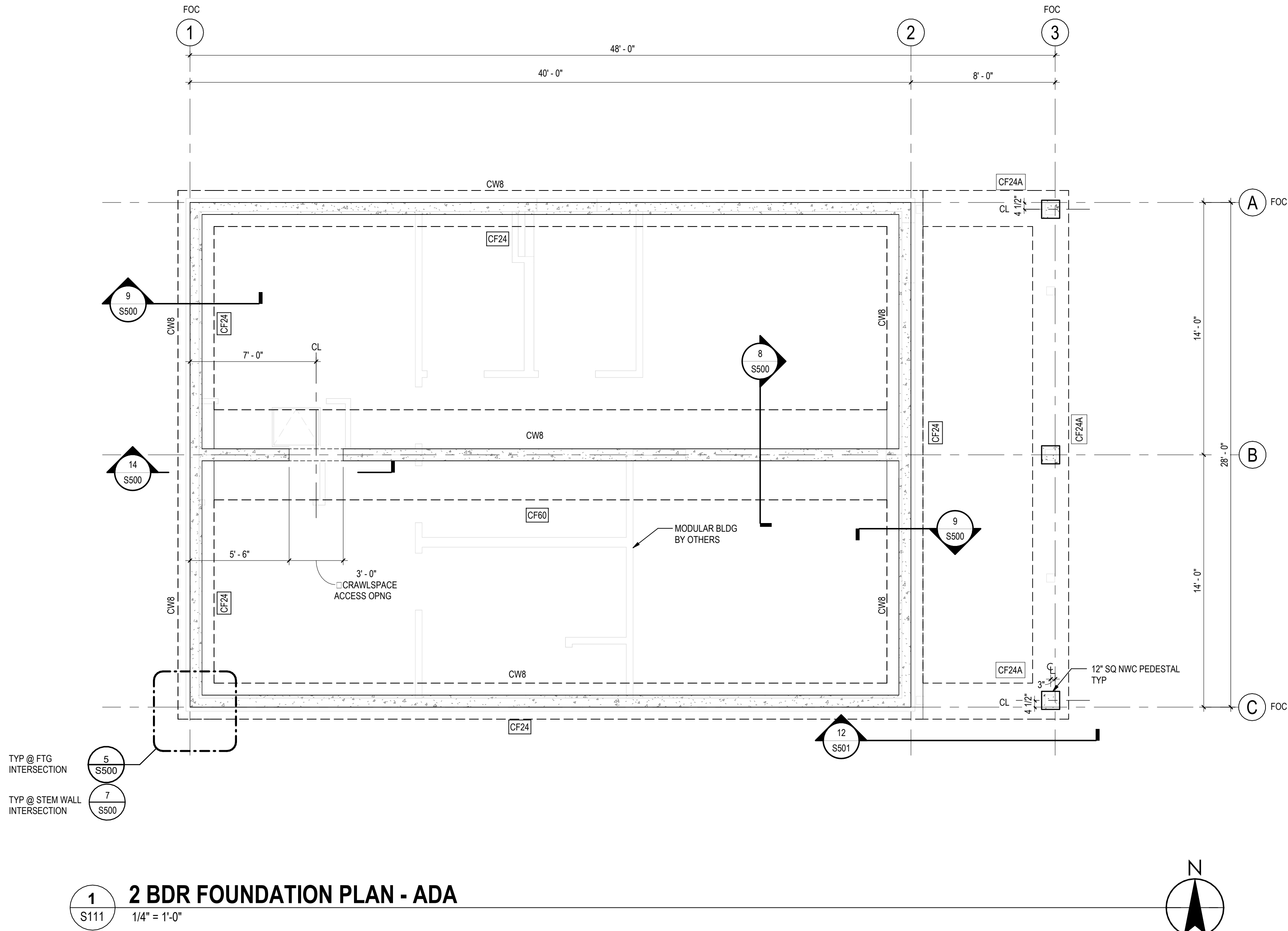
SUB SHEET NO.
S101

TITLE OF SHEET
FOUNDATION PLAN - 2BR

YELLOWSTONE NATIONAL PARK

DRAWING NO.
101
198433
PMIS/PKG NO.
326141
SHEET
89 OF **94**

PLOT DATE: 6/15/2026 4:18:56 PM REVIT VERSION: 2025
Autodesk Docs://185706708_YELL_NPS/03_struct_185706708_2bdr_ada.rvt

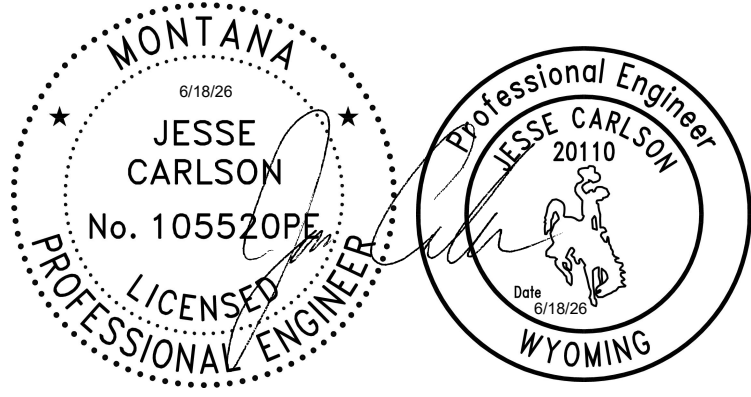


CONCRETE STEM WALL SCHEDULE			
MARK	WIDTH (IN)	REINFORCING	
		VERTICAL	HORIZONTAL
CW8	8"	#5 @ 18" OC	#5 @ 18" OC

NOTE:
1. CENTER STEM WALL ON FTG UON.

FOOTING SCHEDULE					
MARK	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	LONG. REINFORCEMENT	TRANS REINFORCEMENT
CF24	CONT	24"	12"	(2) #5 CONT TOP & BOT	#5 @ 12" OC
CF24A	CONT	24"	24"	(2) #5 CONT TOP & BOT	#4 TIES @ 12" OC
CF60	CONT	60"	12"	(5) #5 CONT TOP & BOT	#5 @ 12" OC

NOTE:
1. SEE DETAILS 5/ S500 8/ S500 9/ S500 FOR DEFINITIONS OF LENGTH, WIDTH AND DEPTH.



A/E: FIRM
PRIME:
STANTEC
CHEYENNE, WY

DESIGNED:
T. VHAY
CADD:
M. LITZINGER
TECH. REVIEW:
M. PUCKETT
DATE:
06/18/2026

SUB SHEET NO.

S111

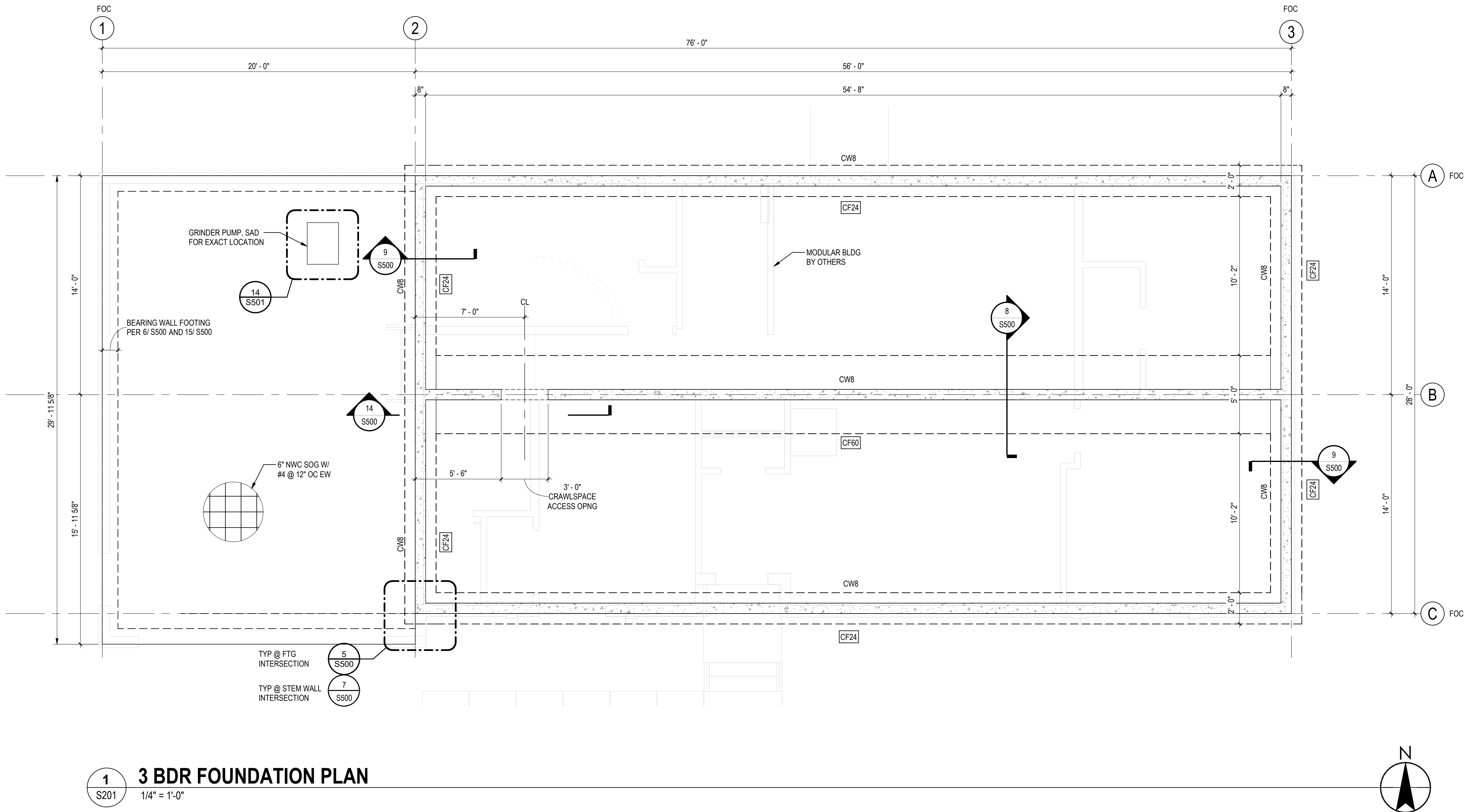
TITLE OF SHEET

FOUNDATION PLAN
2BR - ADA

YELLOWSTONE NATIONAL PARK

DRAWING NO.
101
198433
PMIS/PKG NO.
326141
SHEET
90 OF 94

PLOT DATE: 6/15/2026 4:07:11 PM REVIT VERSION: 2025
Autodesk Docs://185706708_YELL_NPS/03_struct_185706708_3bdr.rvt



CONCRETE STEM WALL SCHEDULE			
MARK	WIDTH (IN)	REINFORCING	
		VERTICAL	HORIZONTAL
CW8	8"	#5 @ 18" OC	#5 @ 18" OC

NOTE:
1. CENTER STEM WALL ON FTG UON.

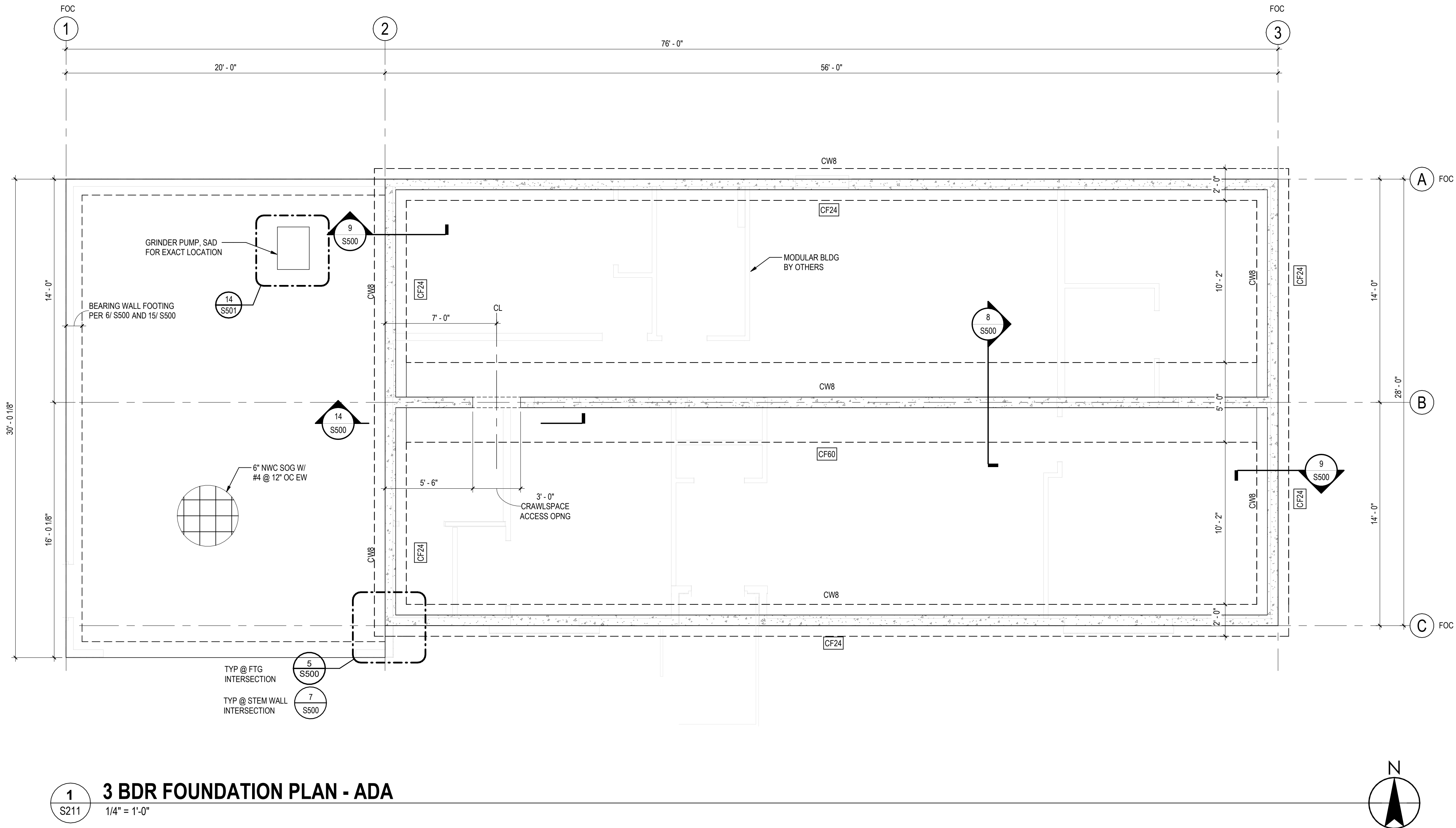
FOOTING SCHEDULE					
MARK	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	LONG. REINFORCEMENT	TRANS REINFORCEMENT
CF24	CONT	24"	12"	(2) #5 CONT TOP & BOT	#5 NONE OC
CF24A	CONT	24"	24"	(2) #5 CONT TOP & BOT	# 4 TIES @ 12"OC
CF60	CONT	60"	12"	(5) #5 CONT TOP & BOT	#5 NONE OC

NOTE:
1. SEE DETAILS 5/ S500, 8/ S500, 9/ S500 FOR DEFINITIONS OF LENGTH, WIDTH AND DEPTH.



A/E: FIRM	DESIGNED: T. VHAY	SUB SHEET NO. S201	FOUNDATION PLAN - 3BR	TITLE OF SHEET YELLOWSTONE NATIONAL PARK	DRAWING NO. 101
PRIME: STANTEC CHEYENNE, WY	CADD: M. LITZINGER				198433
	TECH. REVIEW: M. PUCKETT				PMIS/PKG NO. 326141
	DATE: 06/18/2026				SHEET 91 OF 94

PLOT DATE: 6/15/2026 4:18:35 PM REVIT VERSION: 2025
Autodesk Docs://185706708_YELL_NPS/03_struct_185706708_3bdr_ada.rvt

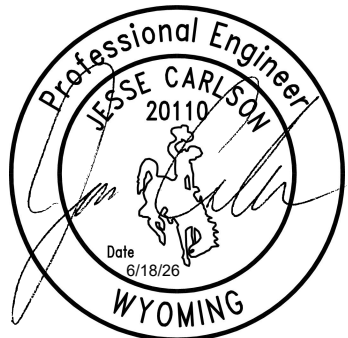


CONCRETE STEM WALL SCHEDULE			
MARK	WIDTH (IN)	REINFORCING	
		VERTICAL	HORIZONTAL
			L
CW8	8"	#5 @ 18" OC	#5 @ 18" OC

NOTE:
1. CENTER STEM WALL ON FTG UON.

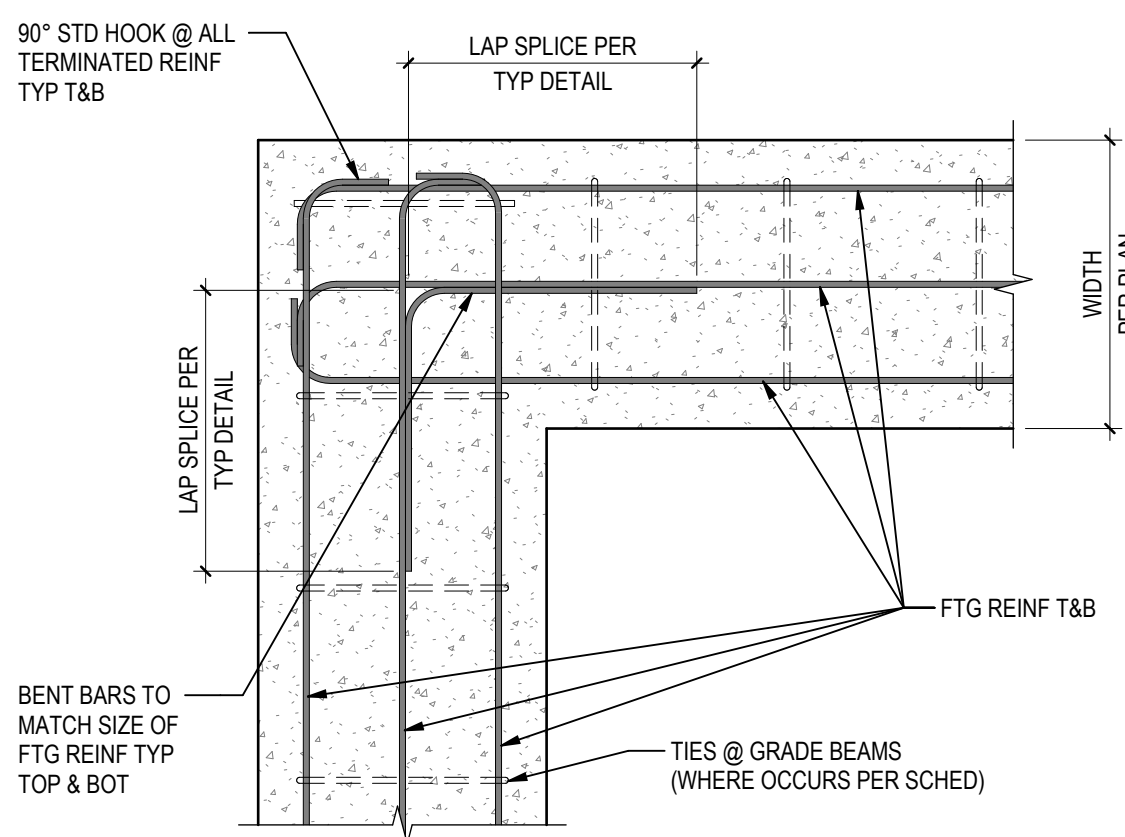
FOOTING SCHEDULE					
MARK	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	LONG. REINFORCEMENT	TRANS REINFORCEMENT
CF24	CONT	24"	12"	(2) #5 CONT TOP & BOT	#5 NONE OC
CF24A	CONT	24"	24"	(2) #5 CONT TOP & BOT	#4 TIES @ 12" OC
CF60	CONT	60"	12"	(5) #5 CONT TOP & BOT	#5 @ 12" OC

NOTE:
1. SEE DETAILS 5/ S500, 8/ S500 AND 9/ S500 FOR DEFINITIONS OF LENGTH, WIDTH AND DEPTH.



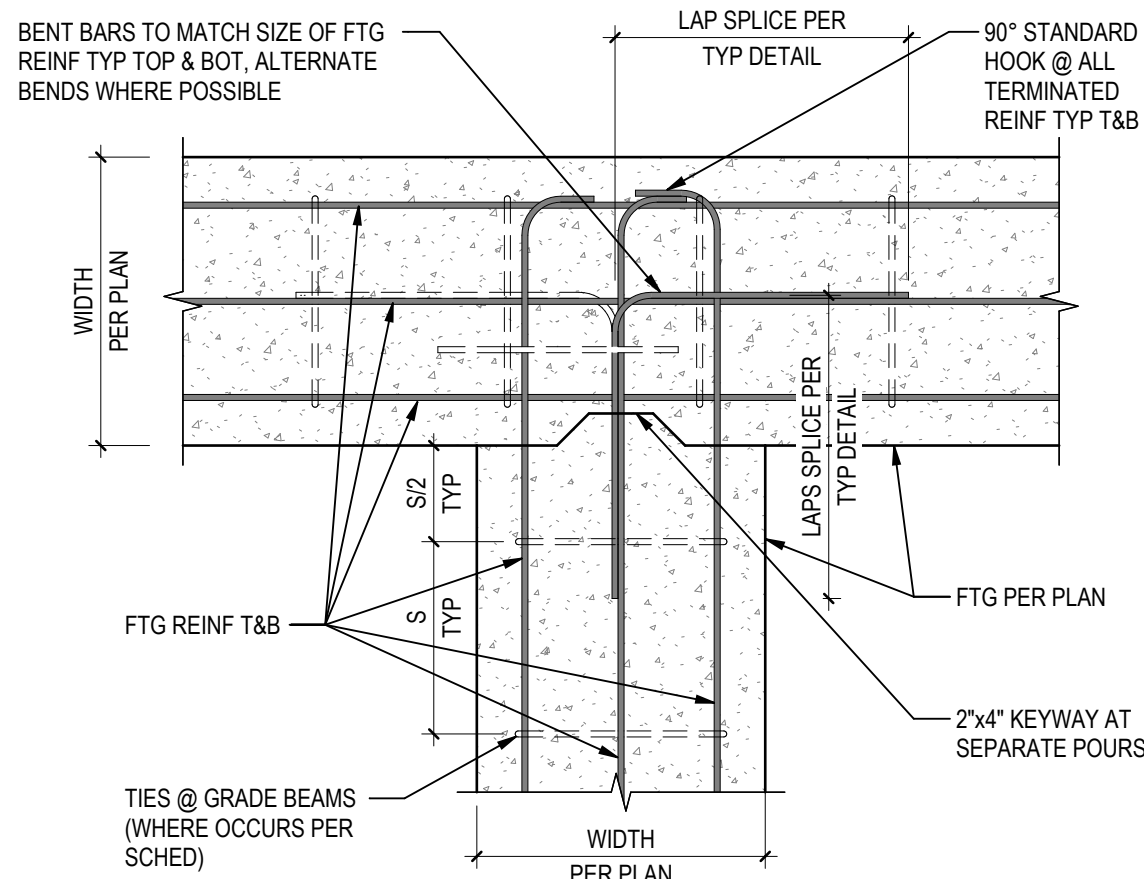
A/E: FIRM	DESIGNED: T. VHAY	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
PRIME: STANTEC CHEYENNE, WY	CADD: M. LITZINGER	S211	FOUNDATION PLAN 3BR - ADA	101
	TECH. REVIEW: M. PUCKETT			198433
	DATE: 06/18/2026			PMIS/PKG NO. 326141
				SHEET
			YELLOWSTONE NATIONAL PARK	92 OF 94

PLOT DATE: 6/15/2026 4:07:12 PM REVIT VERSION: 2025
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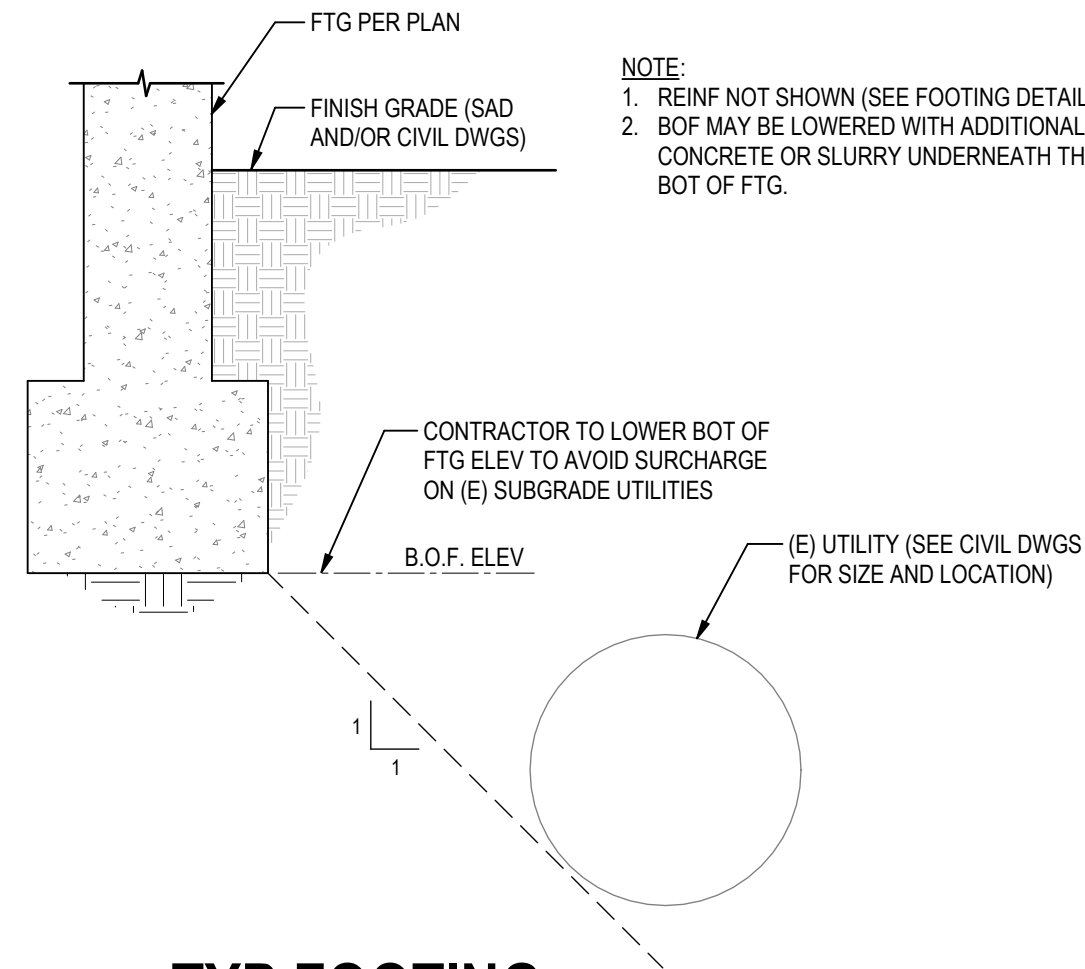


NOTES:
1. SEE PLAN FOR ACTUAL NUMBER OF REINF BARS.

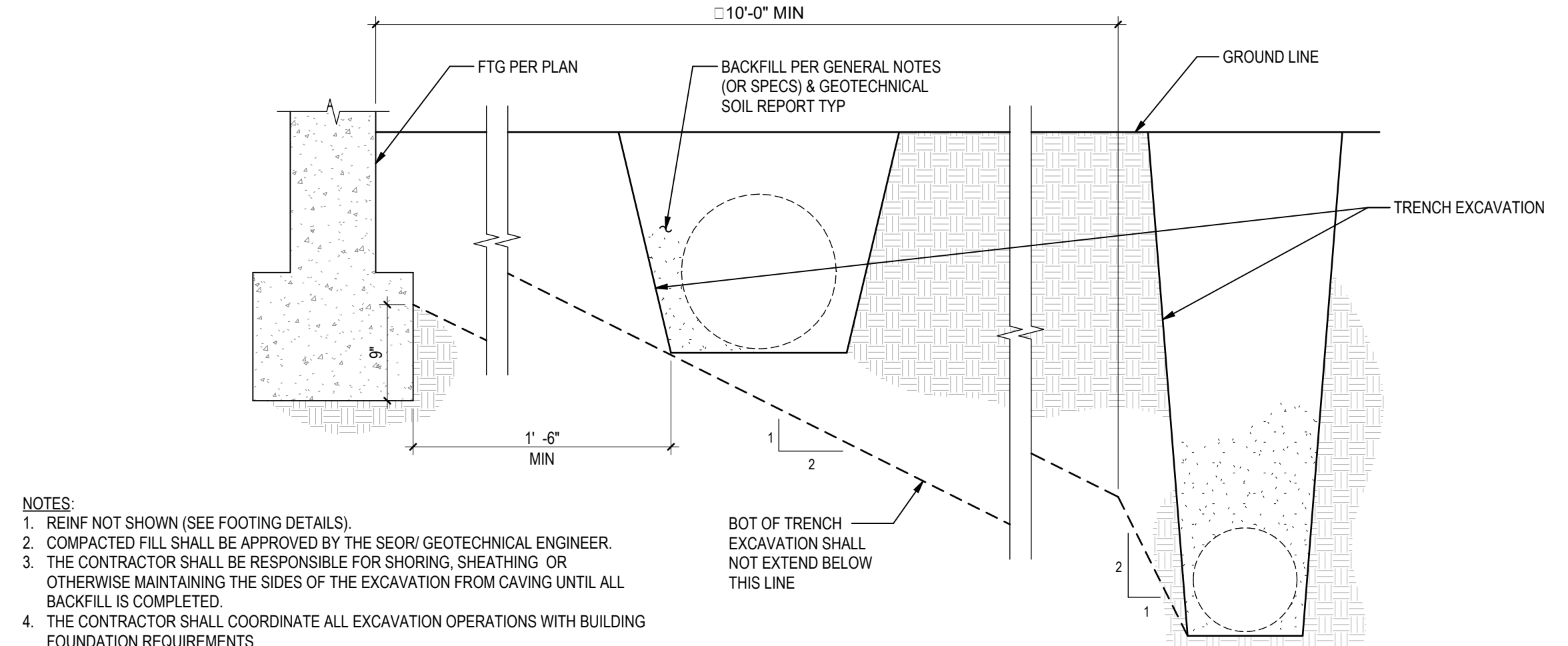
CASE A - CORNER



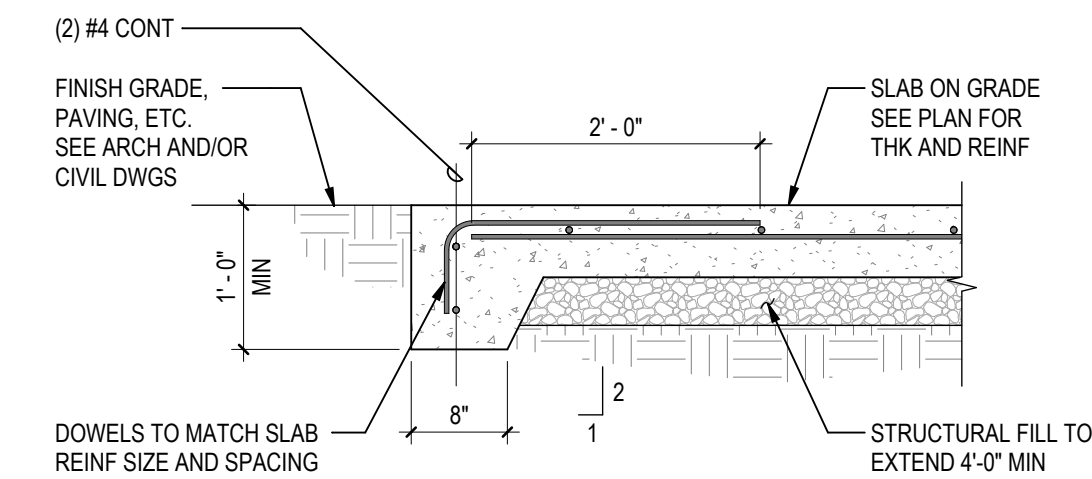
CASE B - T-INTERSECTION



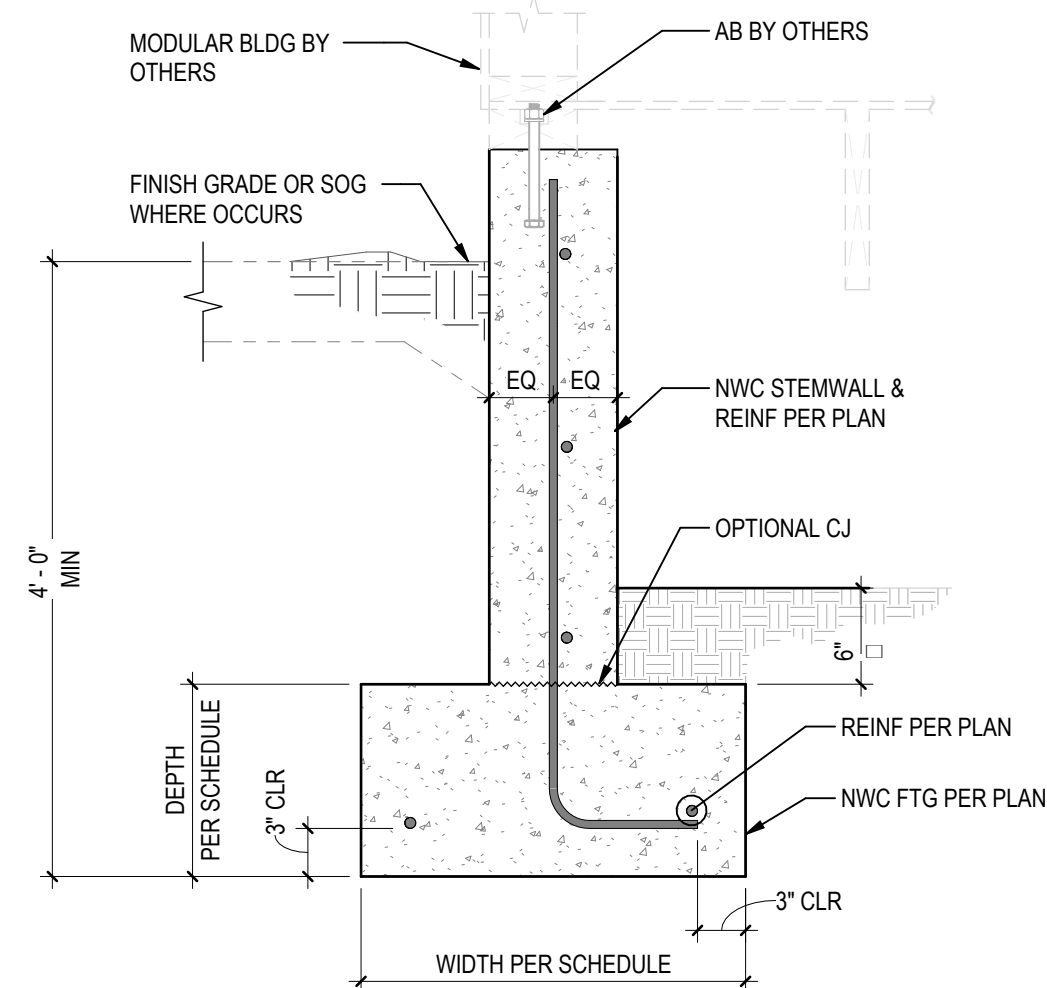
TYP FOOTING
PARALLEL TO (E) UTILITY



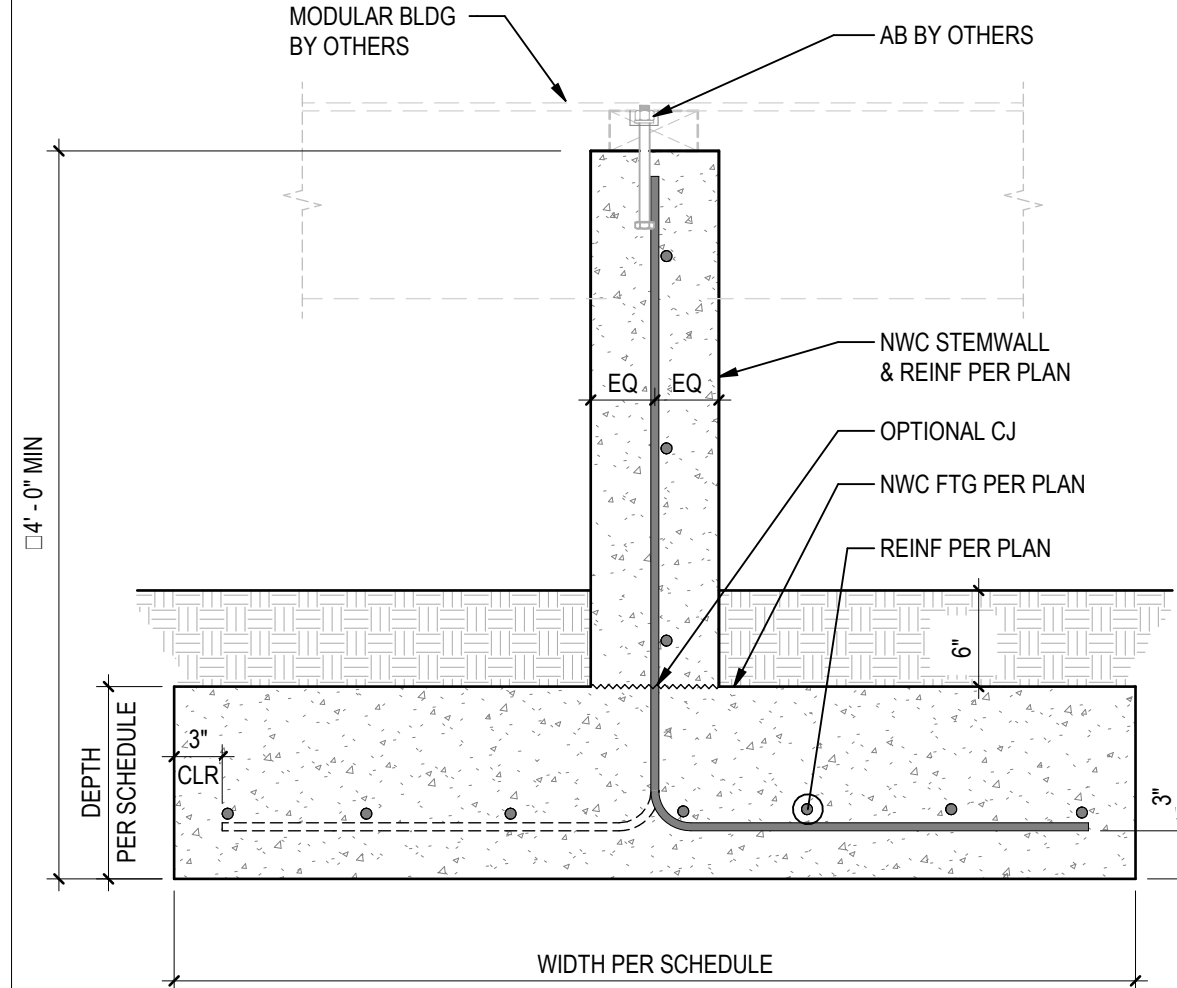
TYP EXCAVATION PARALLEL TO FOOTING



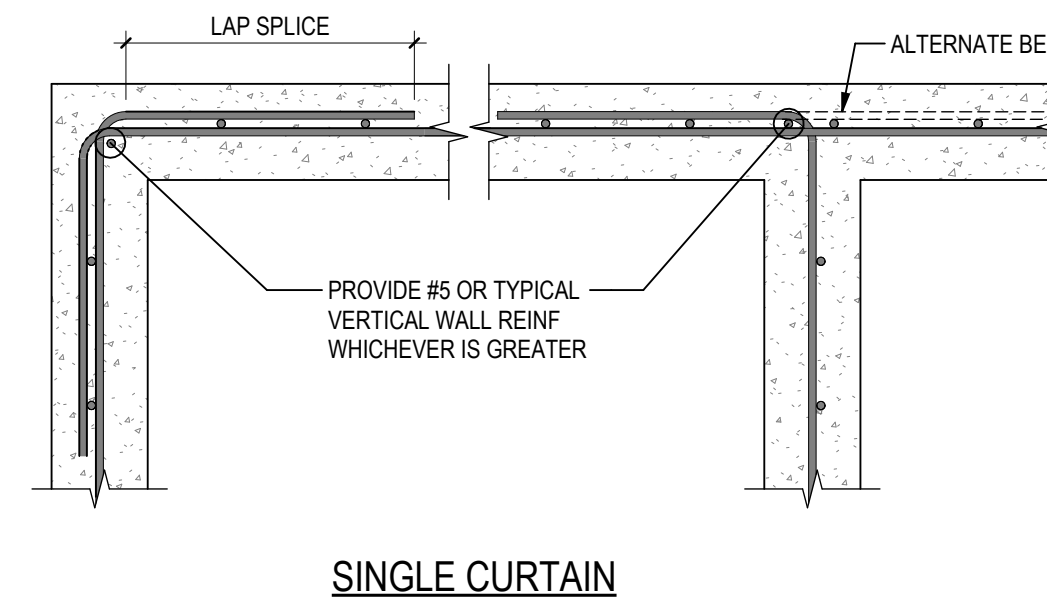
EDGE OF SLAB ON GRADE



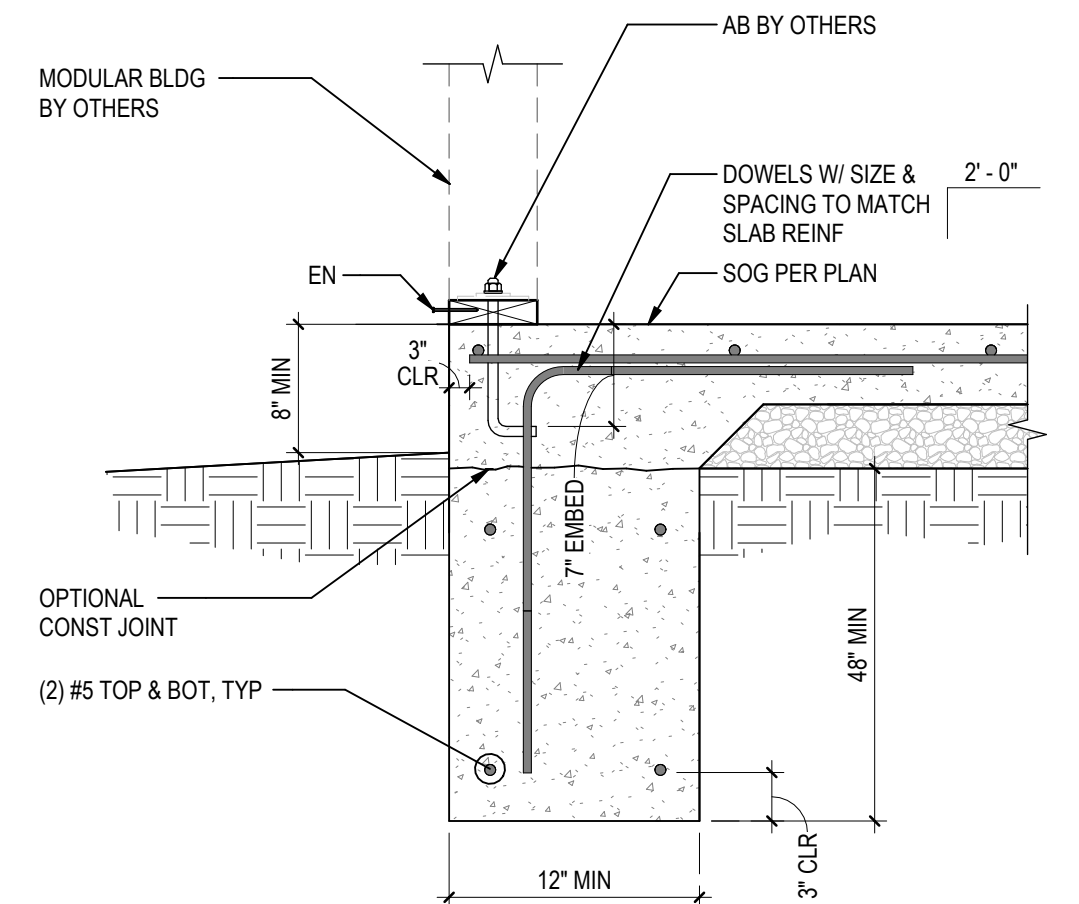
TYPICAL RAISED FLOOR FRAMING
AT EXTERIOR STEM WALL



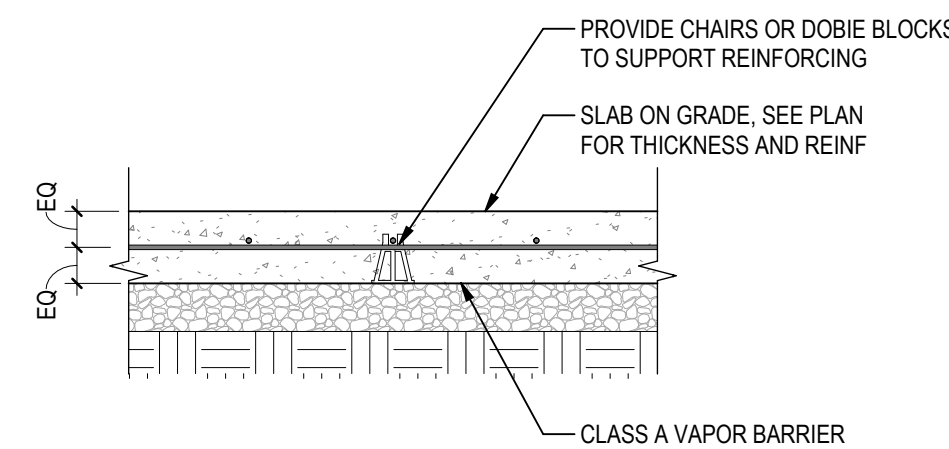
TYPICAL RAISED FLOOR FRAMING
AT INTERIOR STEM WALL



TYPICAL CONCRETE WALL
REINFORCING AT INTERSECTION

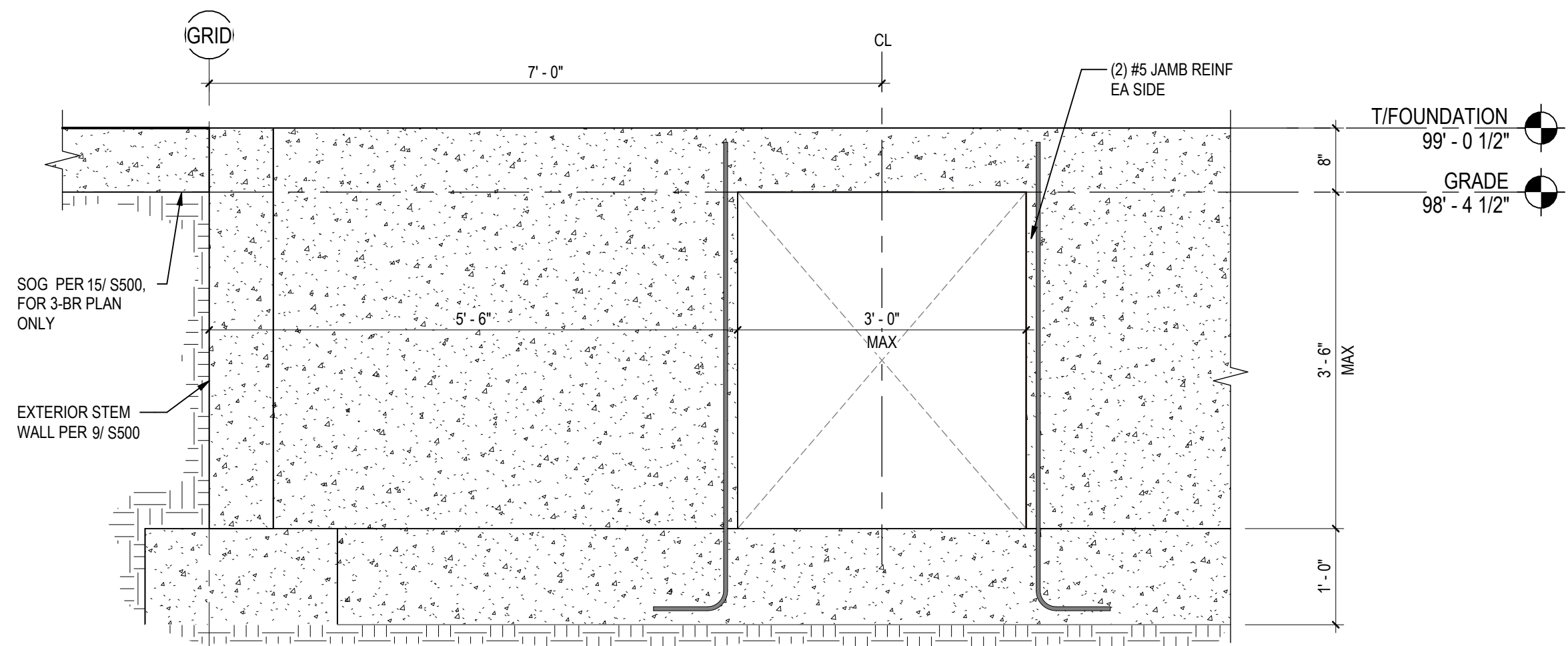


EXTERIOR BEARING WALL FOOTING

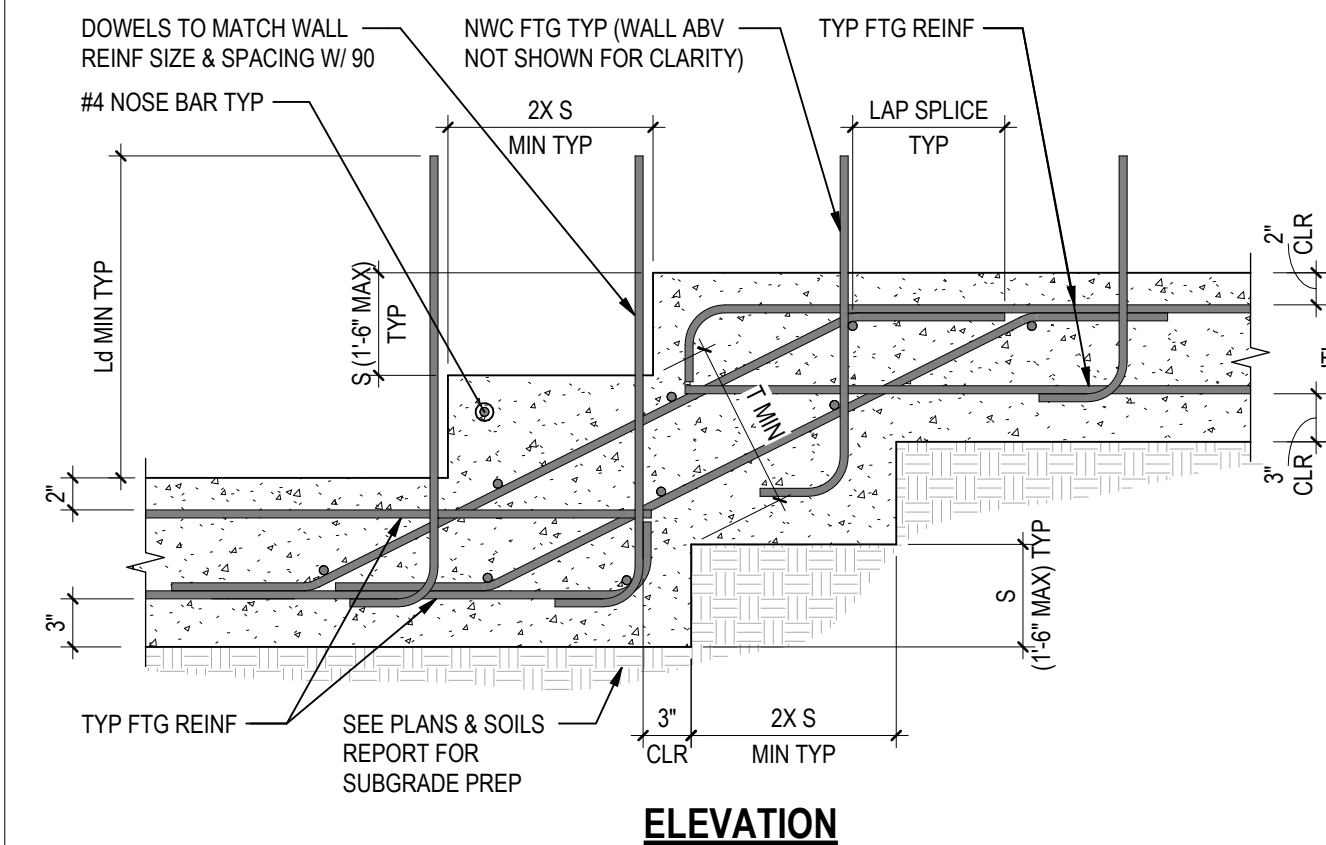


NOTES:
1. SEE GENERAL NOTES FOR SUB-SLAB PREPARATION REQUIREMENTS.

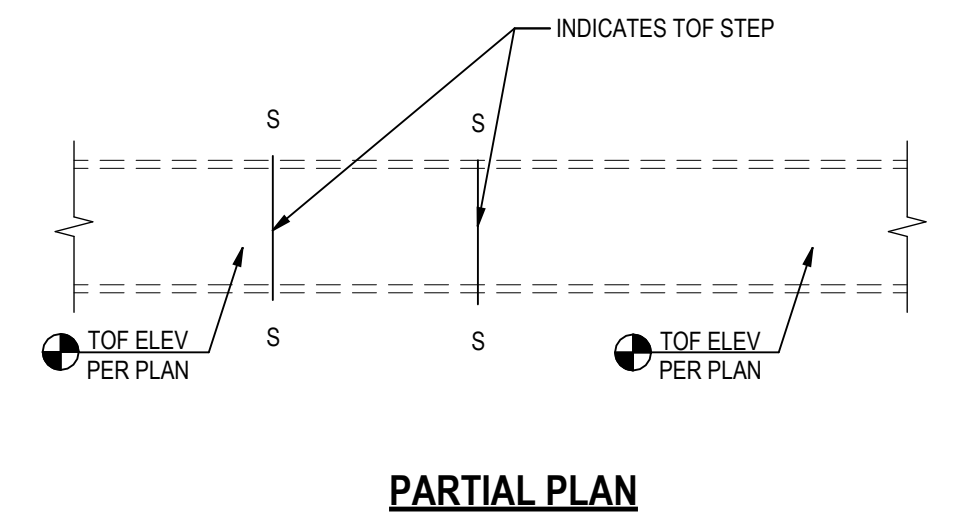
TYPICAL SLAB ON GRADE SECTION



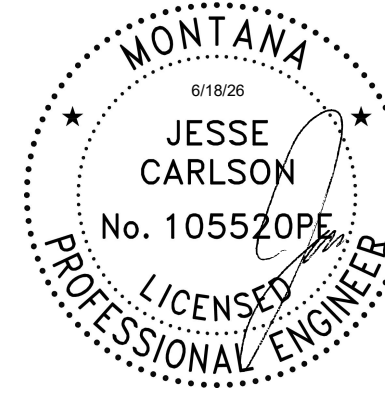
CRAWLSPACE ACCESS OPENING



TYPICAL STEPPED FOOTING



PARTIAL PLAN



A/E: FIRM
PRIME: STANTEC
CHEYENNE, WY

DESIGNED:
T. VHAY
CADD:
M. LITZINGER
TECH. REVIEW:
M. PUCKETT
DATE:
06/18/2026

SUB SHEET NO.

S500

TITLE OF SHEET

FOUNDATION DETAILS

YELLOWSTONE NATIONAL PARK

DRAWING NO.
101
198433
PMIS/PKG NO.
326141
SHEET
93 OF 94

Diagram illustrating the dimensions for a 90° hook. The hook is formed by bending a bar of diameter DIA. The dimensions shown are:

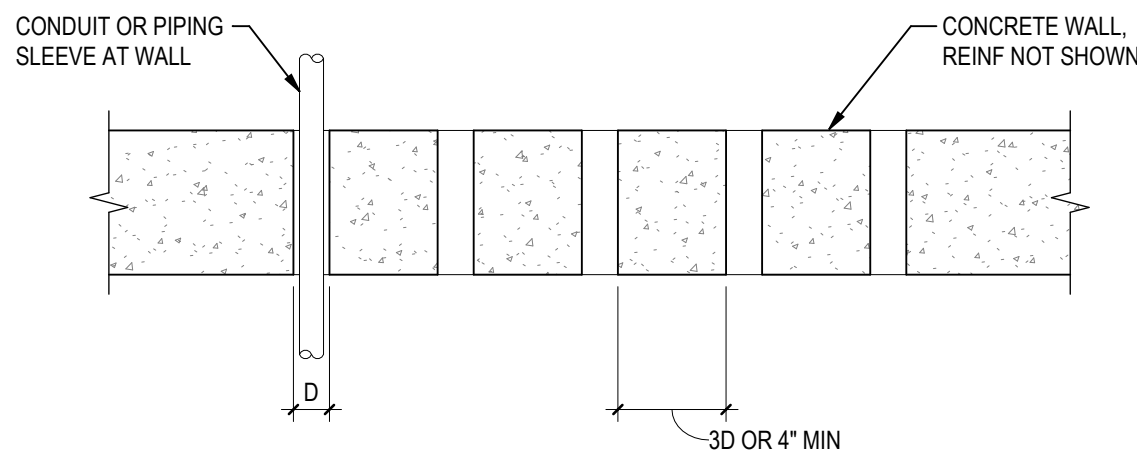
- l_{de} : Development length (straight portion).
- DIA : Bar diameter.
- l_{ext} : Extension length (straight portion after the hook).
- 90.00000000000000° : Bend angle.
- POINT AT WHICH BAR IS DEVELOPED: Indicated by an arrow pointing to the start of the hook.

90° HOOK

Diagram illustrating the dimensions for a 180° hook. The hook is formed by bending a bar of diameter DIA. The dimensions shown are:

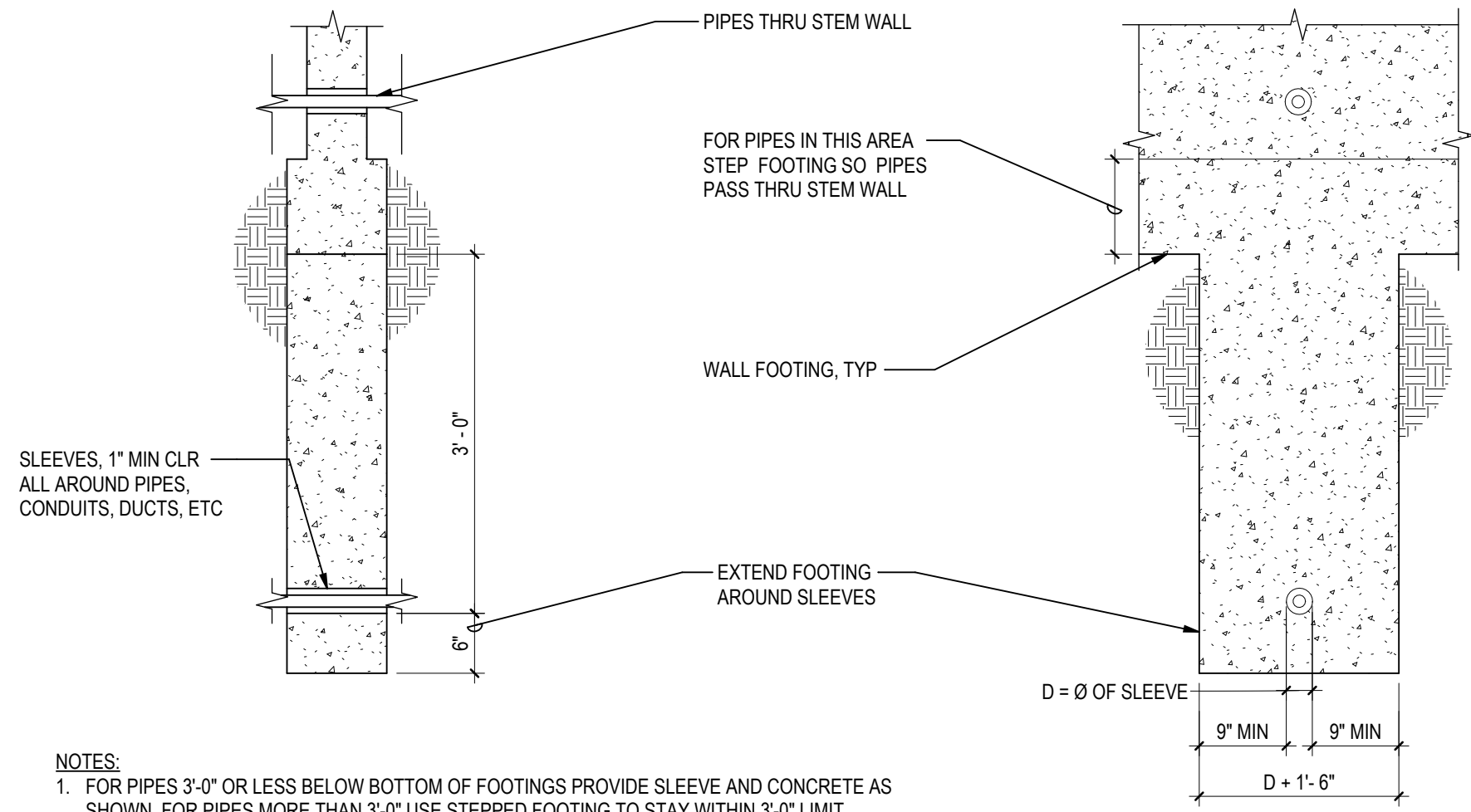
- l_{de} : Development length (straight portion).
- DIA : Bar diameter.
- l_{ext} : Extension length (straight portion after the hook).
- 180.00000000000000° : Bend angle.
- POINT AT WHICH BAR IS DEVELOPED: Indicated by an arrow pointing to the start of the hook.

180° HOOK



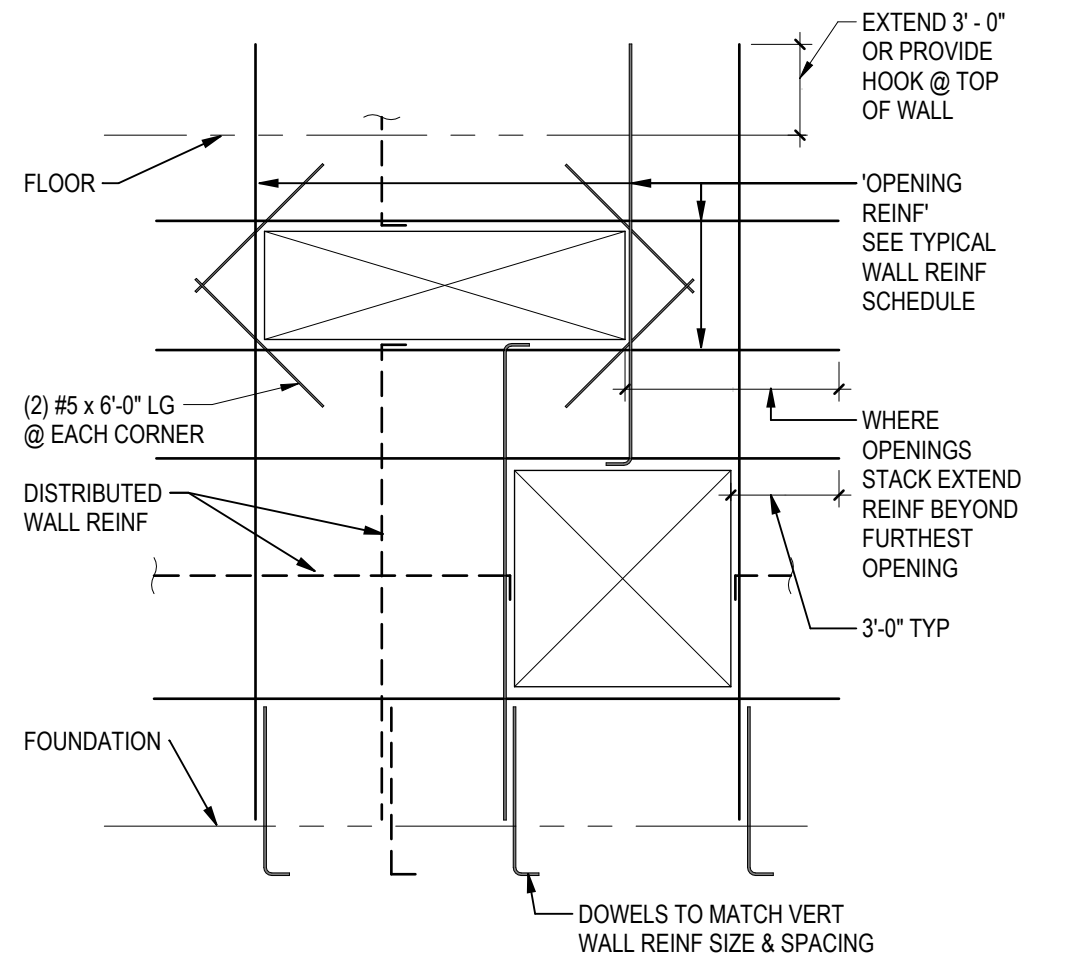
NOTES

1. WHERE CLEAR DISTANCE BETWEEN SLEEVES IS NOT POSSIBLE OR WALL REINFORCEMENT IS INTERRUPTED, TREAT AS A WALL OPENING AND PROVIDE ADDITIONAL REINFORCING PER TYPICAL DETAILS.



NOTES:

1. FOR PIPES 3'-0" OR LESS BELOW BOTTOM OF FOOTINGS PROVIDE SLEEVE AND CONCRETE AS SHOWN. FOR PIPES MORE THAN 3'-0" USE STEPPED FOOTING TO STAY WITHIN 3'-0" LIMIT.



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S501

NTS

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S501

NTS

3
S501

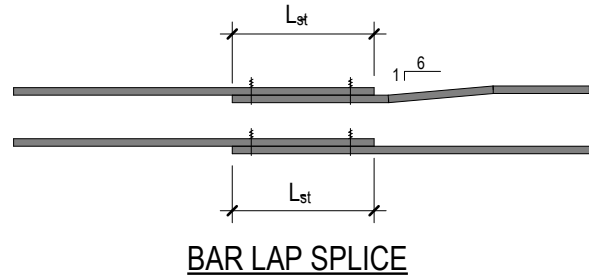
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S501

NTS

NOTES:

1. TABULATED VALUES ARE FOR:
NORMAL WEIGHT CONCRETE AND, UNCOATED REINF STEEL AND, CLASS B SPLICES,
REINF SATISFYING:
SLAB, WALLS: CLR SPA $\geq d_b$, AND CONC CLR COVER $> d_b$
BEAMS, COLUMNS: CLR SPA $> d_b$, AND CONC CLR COVER $> d_b$
2. MULTIPLY TABLE VALUES:
1.33 IF LIGHTWEIGHT CONCRETE IS USED
1.5 IF REINFORCEMENT IS EPOXY COATED
0.77 IF CLASS A SPLICES ARE USED
1.5 IF SPACING REQUIREMENTS ARE NOT MET
3. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH
CONCRETE CAST BELOW THE BAR. USE TYPE BAR FOR ALL OTHER CASES.
4. IF BARS OF DIFFERENT SIZES ARE LAP SPICED IN TENSION, L_s SHALL BE THE GREATER OF L_d
OF THE LARGER BAR AND L_{ss} OF THE SMALLER BAR.
5. MECHANICAL LAP SPLICES MAY BE USED AT CONTRACTOR'S OPTION. USE TYPE 2 SPLICES AS
DEFINED IN ACI 318.
6. CLASS A SPLICES MAY ONLY BE USED WHEN CALLED OUT EXPLICITLY ON DRAWING.



ALL GRADES

The diagrams illustrate the geometry of hooks for different bending angles. Each hook is defined by a straight section of length l_{str} and a curved section of length l_{cur} . The total length is l_{tot} . The diameter of the wire is d_s , and the inner diameter of the hook is DIA . The bending angle is indicated by a curved arrow labeled "BEND".

- 90° HOOK:** The bending angle is 90.00000000000000°.
- 135° HOOK:** The bending angle is 135.00000000000000°.
- 180° HOOK:** The bending angle is 180.00000000000000°.

BAR SIZE		Ldh, DEVELOPMENT LENGTH (1)		
		CONCRETE STRENGTH		
	f _c = 3000 PSI	f _c = 4000 PSI	f _c = 3000 PSI	
#3	0'-8"	0'-7"	0'-6"	
#4	0'-11"	0'-9"	0'-9"	
#5	1'-2"	1'-0"	0'-11"	
#6	1'-4"	1'-2"	1'-1"	
#7	1'-7"	1'-5"	1'-3"	
#8	1'-10"	1'-7"	1'-5"	
#9	2'-1"	1'-9"	1'-7"	
#10	2'-3"	2'-0"	1'-10"	
#11	2'-6"	2'-2"	2'-0"	

NOTES:

1. DEVELOPMENT LENGTHS IN TABLE ARE FOR NORMAL WEIGHT CONCRETE. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE DEVELOPMENT LENGTH BY 33%.

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S501

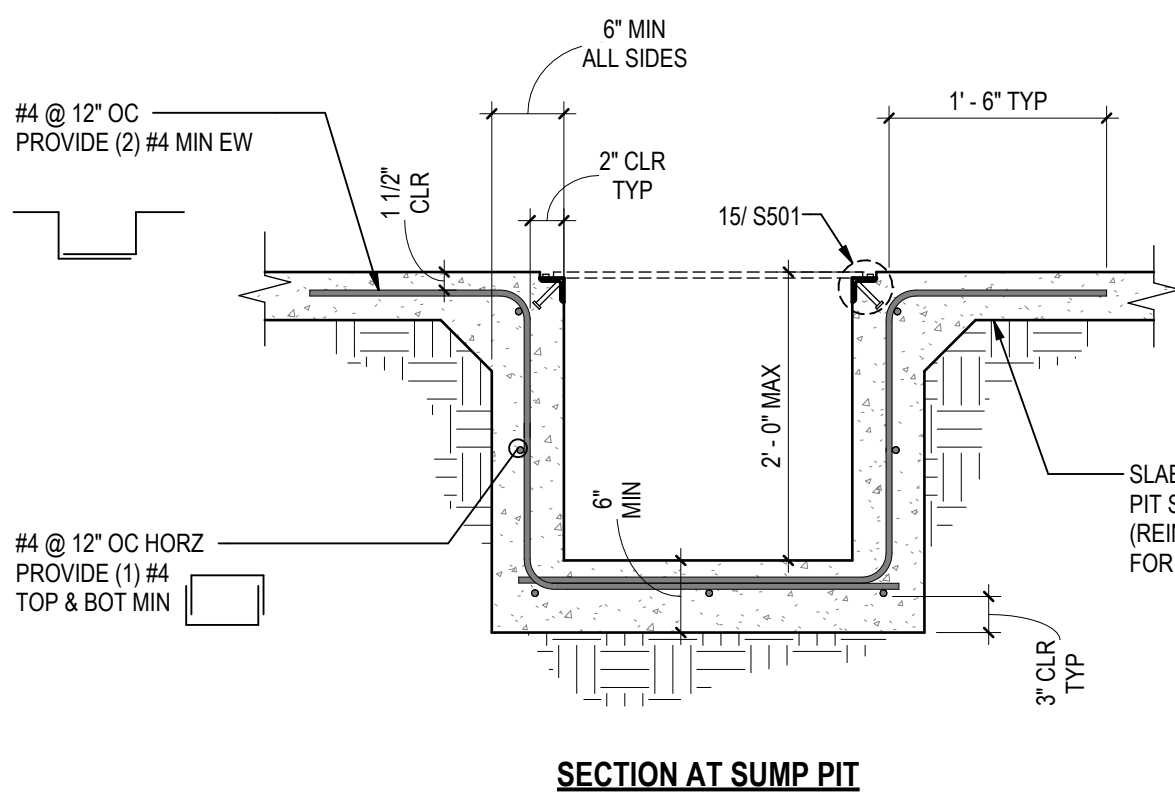
NTS

8
S501

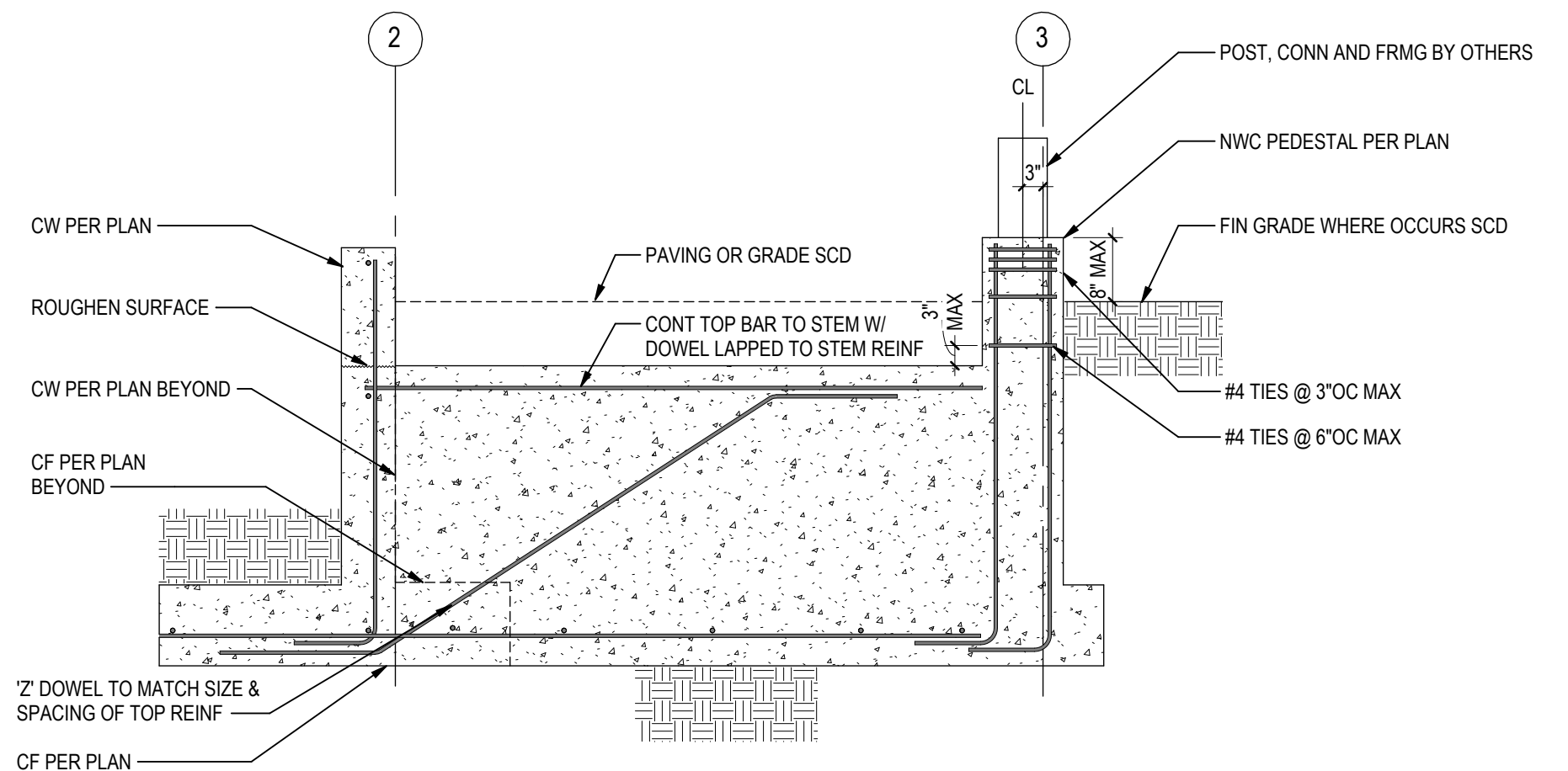
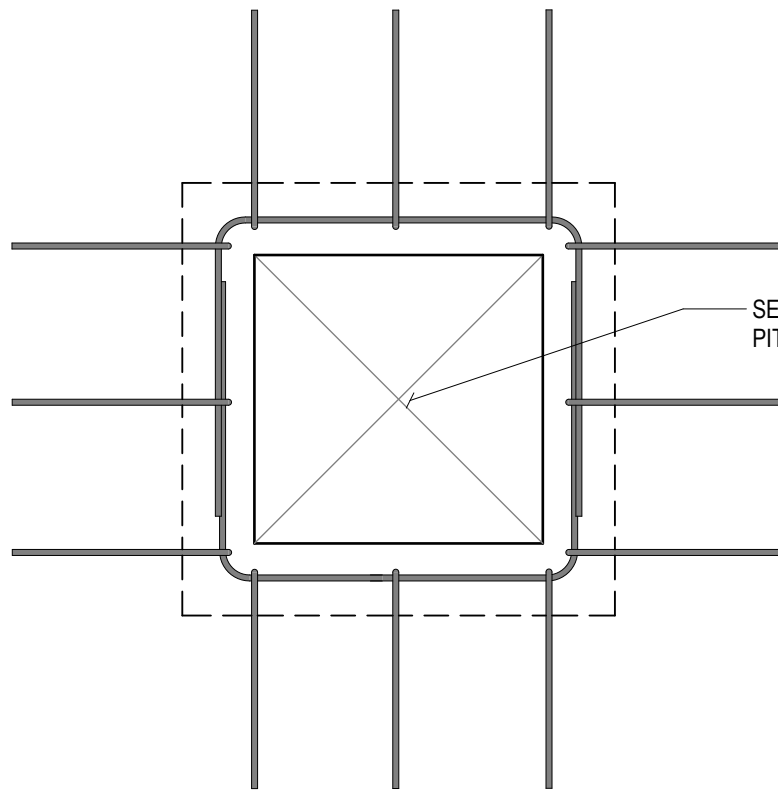
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NTS



PLAN AT SUMP PIT



15
S501

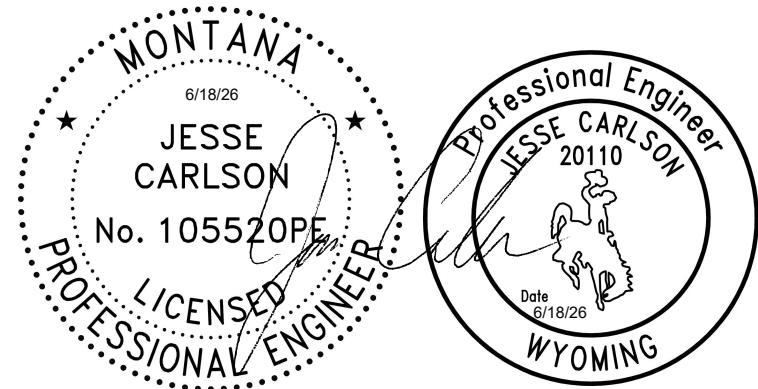
NTS

14
S501

NTS

12
S501

NTS



A/E FIRM
PRIME:
STANTEC
CHEYENNE, WY

DESIGNED:	T. VHAY
CADD:	M. LITZINGER
TECH. REVIEW:	M. PUCKETT
DATE:	06/18/2026

SUB SHEET NO.

S501

TITLE OF SHEET

FOUNDATION DETAILS

YELLOWSTONE NATIONAL PARK

DRAWING NO.
101
98433
MIS/PKG NO.
326141
SHEET
4 OF 94