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Revisions:	
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EXPAND BUILDING 1 FOR PRIMARY CARE

ALBERTSON ENGINEERING INC. 3202 W MAIN ST C, RAPID CITY, SOUTH DAKOTA 57702 PHONE (605) 343-9606

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ARCHITECT



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SUMMIT

FIRE PROTECTION

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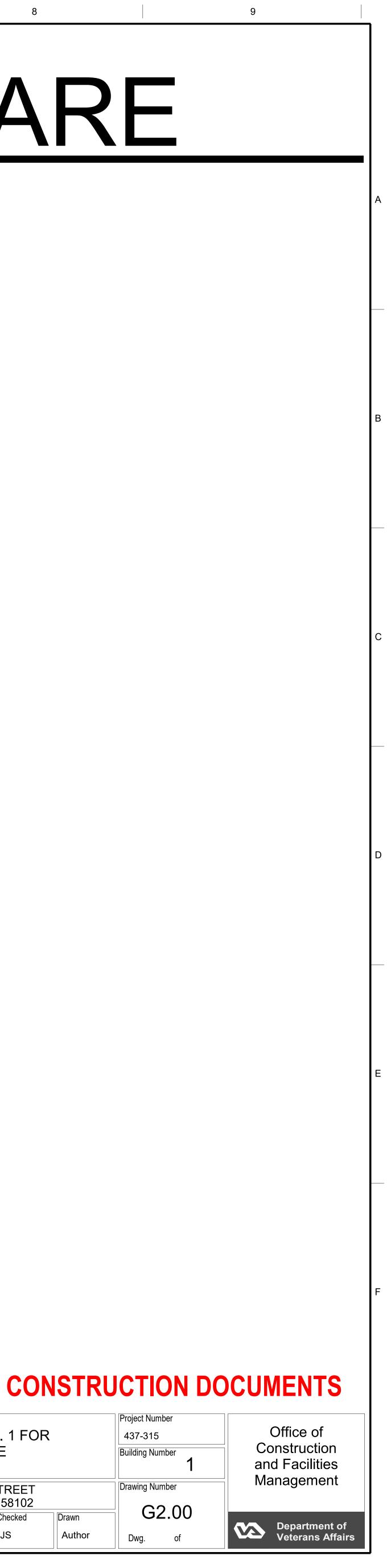
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Drawing Title	Project Title			Project Number
COVER SHEET - VOLUME 2	EXPAND BLD	G. 1 FOR		437-315
	PRIMARY CAP	RE		Building Numbe
Approved: Project Director	Location 2101 ELM			Drawing Numbe
FARGO VAHCS	FARGO, N	D 58102		
	Date	Checked	Drawn	G2.0
	11/16/21	JS	Author	Dwg.

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CONCRETE MIX DESIGN:

HELICAL PIER CAPS

GRADE BEAMS &

LL OTHER CON

INTERIOR SLABS

EXTERIOR SLABS

ENGINEER.

CURRENT VERSIONS.

BEEN MET

SPECIFIED.

ENGINEER IS GIVEN.

CONCRETE TESTING:

CONCRETE."

a. AT 7 DAYS

b. AT 28 DAYS

3. CONCRETE SHALL UTILIZE TYPE I/II CEMENT.

1. CONCRETE MIX SHALL BE DESIGNED BY RECOGNIZE TESTING LABORATORY TO

STRENGTH SCHEDULE WITH A PLASTIC AND WORKABLE MIX:

28 DAY

STRENGTH

3,500 PSI

4,500 PSI

4,000 PSI

5,000 PSI

LOCATION COMPRESSIVE ENTRAINED SLUMP

ACHIEVE A STRENGTH AT 28 DAYS AS SHOWN IN THE BELOW CONCRETE CURING

CONCRETE CURING

STRENGTH SCHEDULE

2. SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR

OTHER POSITIVE IDENTIFICATION. CONCRETE SHALL COMPLY WITH ALL THE

TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN

REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING,

REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR

CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING

WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED

ONE AND ONE HALE (1-1/2) HOURS IE FOR ANY REASON THERE IS A LONGER DELA

RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE

SHALL BE CURED USING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE

1 AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON

AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE

MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE

UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE

UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING

4. COARSE AND FINE AGGREGATES SHALL COMPLY WITH ASTM C33 AND ACI 302.1,

a. COMPLIANCE WITH THE NON-REACTIVE REQUIREMENTS OF ACI 302.1 SHALL NOT

BE PROVIDED FOR BY THE PROVISION OF ACI 302.1 (SUBSECTION 7.3) THAT

EXCLUDES THE AGGREGATES BEING CLASSIFIED AS DELETERIOUSLY REACTIVE

WITH ALKALIES IF THE AGGREGATE HAS A SATISFACTORY SERVICE RECORD

EVALUATION OR WITH THE ADDITION OF A MATERIAL THAT HAS SHOWN TO

PREVENT HARMFUL EXPANSION DUE TO ALKALI-AGGREGATE REACTION.

b. CONCRETE MIX DESIGN SHALL INCLUDE TEST RECORDS OF THE COMPLIANCE

OF THE AGGREGATE MEETING THE REQUIREMENTS OF ASTM C1260, AND THAT

TESTED IN ACCORDANCE WITH ASTM C1260 AT 14 DAYS. USE OF ADMIXTURES

THAT MITIGATE THE EFFECT OF THE REACTIVE AGGREGATE TO BE PROPOSED

ENGINEER TO ALLOW FOR THE USE OF OTHERWISE REACTIVE AGGREGATES. IF

MIX DESIGN SUBMITTAL. THE ENGINEER IS GIVEN DISCRETION AS TO WHETHER

OR NOT TO ACCEPT MITIGATING MEASURES OR TO MAINTAIN REQUIREMENTS

EXPANSION OF THE MORTAR SAMPLE BEING LESS THAN 0.10% WHEN TESTED IN

ACCORDANCE WITH ASTM C1567 AT 14 DAYS. LIABILITY OF THE PERFORMANCE

IF CONCRETE MIXES ARE APPROVED BY THE ENGINEER THAT CONTAIN FITHER

EXCEED THE 0.10% EXPANSION WHEN TESTED ACCORDING TO ASTM C1260,

FINE OR COARSE AGGREGATE. THAT EITHER SEPARATELY OR IN COMBINATION

SPECIAL CONSIDERATIONS MUST BE GIVEN TO SLAB CURING (SLABS ON GRADE

SLABS FOR AT LEAST 10 DAYS. USE OF CURING AND/OR SEALING COMPOUNDS

IS NOT ACCEPTABLE UNTIL THE SLAB HAS CURED A MINIMUM OF 28 DAYS AND

THE CONDITIONS FOR THE APPLICATION OF THE CURING COMPOUND ON THE

CONCRETE SLAB SET BY THE MANUFACTURER'S RECOMMENDATIONS HAVE

CONCRETE SLAB THAT IS EXHIBITING ALKALI-SILICA REACTION. FOR SLABS

SLAB SHOWING AN AVERAGE DENSITY OF POPOUTS GREATER THAN 1 PER 8

SHOWING AN ALKALI SILICA REACTION SOLELY WITHIN THE FINE AGGREGATE: A

SQUARE FEET OVER ANY CONTIGUOUS AREA OF 100 SQUARE FEET OR LARGER.

OR ANY AREA WITH A DENSITY OF 1 POPOUTS PER 2 -SQUARE FEET WITHIN ANY

FOR A ALKALI SILICA REACTION WITHIN THE COARSE AGGREGATE: THE POPOUT

DENSITIES CONSIDERED FOR REJECTION OF THE CONCRETE SLAB SHALL BE 1/2

OF THE DENSITIES GIVEN FOR FINE AGGREGATE. THE EXTENT OF REJECTED

OF ALKALI SILICA REACTIONS AND DETERMINATION OF REJECTION OF THE

CONCRETE SLAB SHALL BE AT LEAST 56 DAYS FROM THE DATE OF POUR.

e. CONCRETE MIXES UTILIZING CRUSHED LIMESTONE AS COARSE AGGREGATE

AND CONTAINING AT LEAST 25% CLASS F FLY ASH AND HAVING A

5. THE CONCRETE STRENGTHS SHOWN IN THE SECTION ABOVE AND IN THE

OUTLINED IN PROVISIONS 4a THROUGH 4d ABOVE.

ENGINEER'S WRITTEN PERMISSION FOR THEIR USE.

FOLLOWING TEST ON CAST-IN-PLACE CONCRETE:

SATISFACTORY SERVICE RECORD PER ACI 302.1 IS CONSIDERED AN

SLAB TO BE DETERMINED BY ENGINEER. THE TIME FRAME FOR OBSERVATION

ACCEPTABLE ALTERNATIVE APPROACH TO THE COMPLIANCE REQUIREMENTS

SPECIFICATIONS ARE MINIMUM COMPRESSIVE STRENGTHS. THE ENGINEER SHALL

AND SUPER-PLASTICIZERS MAY BE USED ONLY WHEN WRITTEN PERMISSION OF THE

DETERMINE IF THE CONCRETE IS ACCEPTABLE, OR TO BE REMOVED, OR TO

RECEIVE SPECIAL CURING IF THE COMPRESSIVE STRENGTHS ARE LESS THAN

6. WATER REDUCING AGENTS MAY BE USED IN THE CONCRETE MIX. PLASTICIZERS

7. NO SALTS OF ANY KIND MAY BE USED IN CONCRETE BEFORE OBTAINING THE

1. CONCRETE TESTING SHALL BE PAID FOR BY THE CONTRACTOR. TESTING

LABORATORY APPROVED BY THE CONTRACTING OFFICER SHALL PERFORM THE

A. ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT

B. ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF

CYLINDRICAL CONCRETE SPECIMENS. A SEPARATE TEST SHALL BE CONDUCTED

DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED,

PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:

C. PROVIDE ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE

D. TESTING SHALL BE BASED UPON CONCRETE TAKEN AT POINT OF PLACEMENT.

E. IN ADDITION TO TYPICAL TESTING REQUIREMENTS, SI UMP AND AIR CONTENT

SAMPLES SHALL BE TAKEN AT BEGINNING OF FIRST TRUCK PRIOR TO ANY

PLACEMENT AND REPEATED AT THE MIDDLE OF FIRST TRUCK. CONCRETE

F. IF ANY SLUMP OR AIR CONTENT FAILS DURING PLACMENT, TESTS SHALL BE

IMMEDIATELY REPORTED AND RETAKEN. IF RETAKEN TESTS FAIL THEN ALL

SUBSEQUENT LOADS MUST BE TESTED AT ARRIVAL AND TEST MUST SHOW

COMPLIANCE PRIOR TO THE CONCRETE IN THAT TRUCK BEING ALLOWED FOR USE

ON PROJECT. ALL COSTS FOR ADDITIONAL TESTING SHALL BE THE RESPONSIBILITY

PLACEMENT SHALL NOT START IF INITIAL TEST(S) FAIL AND SHALL NOT CONTINUE

THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

OF TEST TAKEN AT MIDDLE OF FIRST LOAD FAILS.

FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED

AREA UP TO 100 SQUARE FEET WOULD BE CONSIDERED AS A BASIS FOR THE REJECTION OF THE SLAB FROM WHICH THOSE SAMPLE AREAS ARE INCLUDED.

d. ENGINEER HAS SOLE DISCRETION IN DETERMINING ACCEPTABILITY OF A

AND ELEVATED SLABS). IN SUCH INSTANCES SLABS SHALL BE CURED USING

EITHER A WET BURLAP OR CONTINUOUS WETTING/FOGGING METHOD FOR

THAT NONREACTIVE AGGREGATES MUST BE USED. AT A MINIMUM, SUCH

DOCUMENTATION MUST SHOW THAT REACTIVE AGGREGATES USED IN

COMBINATION WITH A GIVEN AMOUNT OF ADMIXTURE RESULTS IN THE

OF THE CONCRETE MIX REMAINS SOLELY WITH GENERAL CONTRACTOR.

SUCH MITIGATING MEASURES ARE PROPOSED. THEY MUST BE INCLUDED WITHIN

IN CONCRETE MIX SHOP DRAWING MAY BE AN APPROVED APPROACH BY THE

THE EXPANSION OF THE MORTAR SAMPLE SHALL NOT EXCEED 0.10% WHEN

THAN STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE

AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS

AIR

5.0% - 7.0%

< 3.0%

4.0% - 6.0% 5" +/- 1"

5.0% - 7.0% 3" +/ - 1"

4"+/- 1"

3" +/- 1"

MAX W/C

RATIO

0.55

0.45

0.5

0.40

		1.	STRUCTURAL DRAWINGS SHALL BE USED IN CO SPECIFICATIONS AND ARCHITECTURAL, MECHA SITE DRAWINGS. CONSULT THESE DRAWINGS F	NICAL, ELECTRICAL, PLUMBING AND OR SLEEVES, DEPRESSIONS AND
	0 0 t	2.	OTHER DETAILS NOT SHOWN ON STRUCTURAL ALL DIMENSIONS AND CONDITIONS MUST BE VE DISCREPANCIES SHALL BE BROUGHT TO THE A	RIFIED IN THE FIELD. ANY
	he	3.	PROCEEDING WITH THE AFFECTED PART OF TH THE STRUCTURE IS DESIGNED TO BE SELF SUP	IE WORK. PORTING AND STABLE AFTER THE
	hes 6,0		BUILDING IS COMPLETE. IT IS THE CONTRACTO DETERMINE ERECTION PROCEDURES AND SEQ BUILDING AND ITS COMPONENTS DURING EREC OF NECESSARY SHORING, SHEETING, TEMPOR/ FOOTINGS), GUYS OR TIE-DOWNS.	UENCE TO ENSURE SAFETY OF THE TION. THIS INCLUDES THE ADDITION
		4.	ADDITIONAL OBSERVATIONS AS A RESULT OF R AND/OR ADDITIONAL OBSERVATIONS DUE TO TI WILL BE AT THE EXPENSE OF THE CONTRACTOR	HE DEFICIENCIES IN WORK OBSERVED
	e thoæt	5.	ALL STRUCTURAL SHOP DRAWINGS TO BE REVI ADDITION TO ALL PERSONNEL DEEMED NECESS SUBMITTAL TO ENGINEER FOR APPROVAL.	
	inches =	6.	ALL SHOP DRAWINGS TO BE REVIEWED BY ALB HAVE ELECTRONIC COPIES PROVIDED TO ALBE REVIEW. AN ELECTRONIC MARKED SET OF THO THE CONTRACTOR. NO ADDITIONAL HARD COPI BE PROVIDED TO ALBERTSON ENGINEERING IN REQUIRE HARD COPIES OF THE MARKED UP DR IN ADDITION TO THE TYPICAL PROJECT SHOP D STATED IN THE PROJECT SPECIFICATIONS.	RTSON ENGINEERING INC. FOR DSE DRAWINGS WILL BE RETURNED TO ES OF THE SHOP DRAWINGS NEED TO C., ALTHOUGH OTHER PARTIES MAY AWINGS. THESE REQUIREMENTS ARE
		7.	THE DESIGN OF THE STRUCTURE SHOWN IN TH FOR THE ONE-TIME USE AT THE SPECIFIC SITE I REPORT.	
	°, ODE	D	ESIGN CODES:	
		•	STRUCTURAL DESIGN MANUAL FOR HOSPITAL F VETERANS AFFAIRS, FEBRUARY 1, 2014.	PROJECTS: DEPARTMENT OF
		•	2018 INTERNATIONAL BUILDING CODE. ACI 318-14 BUILDING CODE REQUIREMENTS FOR	R STRUCTURAL CONCRETE AND
	\sim	•	COMMENTARY. AISC 360-16 SPECIFICATIONS FOR STRUCTURAL	
		•	AISI S100-16 NORTH AMERICAN SPECIFICATION STEEL STRUCTURAL MEMBERS.	FOR THE DESIGN OF COLD-FORMED
		•	ASCE 7-16 MINIMUM DESIGN LOADS AND ASSOC OTHER STRUCTURES.	CIATED CRITERIA FOR BUILDINGS AND
	0 0	•	SDI C-2017 STANDARD FOR COMPOSITE STEEL	
		•	SDI NC-2017 STANDARD FOR NON-COMPOSITE S TMS 402-16 / ACI 530-16 BUILDING CODE FOR MA	
	e, e, e, e, e, e, e, e, e, e, e, e, e, e		ESIGN LOADS:	
		FC	IE STRUCTURAL SYSTEM FOR THIS BUILDING HAS DLLOWING SUPERIMPOSED LOADINGS BASED ON DOF:	
	foot		SNOW LOAD GROUND SNOW LOAD SNOW EXPOSURE FACTOR	42 PSF + DRIFT 50 PSF 1.0
	0 0 0		SNOW THERMAL FACTOR SNOW IMPORTANCE FACTOR DEAD LOAD	1.0 1.2 20 PSF
			LIVE LOAD RAIN INTENSITY	20 PSF (REDUCIBLE) 3.0 IN/HR
		vv	IND: ULTIMATE WIND SPEED EXPOSURE CATEGORY INTERNAL PRESSURE COEFFICIENT COMPONENT AND CLADDING PRESSURES	124 MPH C 0.18 SEE TABLE ON SHEET S-004
	quarte	SE	EISMIC: SEISMIC DESIGN CATEGORY SITE CLASSIFICATION SEISMIC IMPORTANCE FACTOR	A D 1.5
	foot three		MAPPED SPECTRAL RESPONSE COEFFICIENTS Ss = 0.059 S1 = 0.019 SEISMIC FORCE RESISTING SYSTEM RIGID DIAPHRAGM (COMPOSITE METAL DEC CONCENTRICALLY BRACE FRAMES, AND ST DESIGN BASE SHEAR SEISMIC RESPONSE COEFFICIENT RESPONSE MODIFICATION COEFFICIENTS (R) STEEL ORDINARY CONCENTRICALLY BRACE	EÉL ORDINARY MOMENT FRAMES 0.01W 0.03
	one f	_	ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE PROCEDURE	
			SEE THE FOLLOWING REPORT FOR COMPLETE	
			AND INSTALLATION PROCEDURES. SITE PREPA COMPLY WITH THE FOLLOWING:	
	one half		PREPARED BY: NORTHERN TECHNOLOGIES, LLC TITLE: GEOTECHNICAL EXPLORATION AND ENC VA BUILDING 1 EXPANSION FARGO, NORTH DAKOTA NTI PROJECT 20.FGO 10880	
	one foot	2.	DATE: DECEMBER 3, 2020 GEOTECHNICAL RECOMMENDATIONS WERE PR OF THE SPECIFIC BUILDING TYPE, CONSTRUCTI THE CONSTRUCTION DOCUMENTS. DETERMINI ACCEPTABLE FOR THE BUILDING TYPE IS THE R ENGINEER. ALL STRUCTURAL DESIGNS WERE E LIMITS GIVEN WITHIN THE GEOTECHNICAL REPO	ON TYPE, AND LIKELY LOADS SHOWN ON NG THE AMOUNT OF SETTLEMENT ESPONSIBILITY OF THE GEOTECHNICAL BASED UPON STAYING WITHIN THE
		3.	THE BUILDING CODE REFERENCED IN THE DESI STRUCTURAL NOTES. DESIGNS BASED UPON HELICAL PIER SYSTEM D	GN CODES SECTION OF THESE DESIGNED BY OTHERS. SEE
	eighths .	<u>P</u>	GEOTECHNICAL REPORT FOR ALL REQUIREMEN OF THE HELICAL PIER SYSTEM AND SLAB-ON-GI LUMBING SLEEVES:	
	three ei	LA CC ST	NIMUM SLEEVE SPACING SHALL BE TWO DIAMETI RGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, DNSTRUCTION SLEEVE LOCATIONS AND SIZES SH RUCTURAL ENGINEER OF RECORD.	WHICHEVER IS GREATER. PRIOR TO
	toot	NC	ENETRATIONS: D PENETRATIONS SHALL BE MADE IN ANY STRUCT	FURAL MEMBERS OTHER THAN THOSE
		LC	CATED ON THESE DRAWINGS.	
	quarter inch			
	dnar			
	foot			
11:09:08 AM	ath inch			
11:09.				

Revisions:

VA FORM 08-6231

GENERAL NOTES:

1

OF THE CONTRACTOR.

 CONSUL	_TANTS:	
"Calibre	CALIBRE 9090 S RIDGELINE BLVD, SUITE 105 HIGHLANDS RANCH COLORADO 80129 PHONE (303) 730-0434	Albertson Engineerin
		SUMN FIRE PROTEC

GENERAL STRUCTURAL NOTES

1. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 301 AND ACI 117 EXCEPT AS MODIFIED BELOW:

CONCRETE AND REINFORCING PLACEMENT:

- A. ACI 117 ITEM 4.3.1.1 ELEVATIONS OF SLABS-ON-GRADE TOP OF SLAB ELEVATION SHALL BE WITHIN A 3/8" ENVELOPE EITHER SIDE OF THE THEORETICAL DESIGN SURFACE
- . ACI 117 ITEM 4.5.7 FLOOR FINISH TOLERANCES AS MEASURED BY PLACING A REESTANDING (UNLEVELED) 10 FT. STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 28 DAYS AFTER SLAB CONCRETE PLACEMENT. THE GAP AT ANY POINT BETWEEN THE STRAIGHT EDGE AND THE FLOOR SHALL NOT EXCEED 1/4".
- 2. ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 (#4 AND LARGER), EXCEPT WHERE NOTED OTHERWISE. REINFORCING SHALL NOT BE WELDED
- . WELDED WIRE FABRIC TO CONFORM TO ASTM A185 AND SHALL BE FREE FROM OIL SCALE, AND RUST. PLACE WWF IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND THE SPECIFICATIONS. MINIMUM LAPS SHALL BE ONE SPACE PLUS 2"
- 4. ALL REINFORCING STEEL BARS TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST ACI MANUALS. 5. LAP ALL REINFORCING SPLICES IN CONCRETE A MINIMUM OF 48 BAR DIAMETERS
- OR 24 INCHES, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE ON DRAWINGS (CLASS B SPLICE). 6. PROVIDE CORNER BARS OF SAME BAR DIAMETER AS SPECIFIED FOR THE WALL. BEAM OR FOOTING. PROVIDE MINIMUM OF 40 BAR DIAMETER LAP FOR ALL CORNER
- BARS, UNLESS NOTE OTHERWISE. . PROVIDE FOUNDATION DOWELS AS SHOWN. MINIMUM SIZE DOWELS TO BE #4, UNLESS OTHERWISE NOTED. ALL VERTICAL REINFORCING STEEL IN COLUMNS AND PIERS, OR VERTICAL REINFORCING IN WALLS, SHALL BE DOWELED INTO THE FOOTINGS WITH SAME SIZE AND QUANTITY DOWEL AS THE VERTICAL
- REINFORCING. 3. WHERE SHOWN ON THE DRAWINGS, PROVIDE WELD PLATES, WELDMENTS, OR CONCRETE INSERTS FOR FASTENING AND SECURING OTHER COMPONENTS. CONCRETE INSERTS SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING THEM AND INSTALLED BY THE CONTRACTOR CASTING THE CONCRETE AROUND THEM. CLIP ANGLES SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING

•	REINFORCING STEEL SHALL RECEIVE CONCRE	TE COVER AS FOLLOWS:
	DESCRIPTION	MINIMUM COVER
	CAST AGAINST & PERMANENTLY EXPOSED TO EARTH	3"
	EXPOSED TO EARTH OR WEATHER #6 THROUGH #18 BARS #5 BARS OR SMALLER	2" 1 1/2"
	NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH THE GROUND, SLABS AND WALLS #11 BARS OR SMALLER #14 AND #18	3/4" 1 1/2"
	BEAMS AND COLUMNS	1 1/2"
	SHELLS, FOLDED PLATE MEMBERS:	

NO. 6 BAR AND LARGER NO. 5 BAR, W31 OR D31 WIRE AND SMALLER

10. PROVIDE TWO (2) #5'S, ONE AT EACH FACE, UNLESS NOTED OTHERWISE, AROUND THAN 12"x12" IN CAST-IN-PLACE CONCRETE EXTEND REINFORCING 2'-0" BEYOND OPENING IN BOTH DIRECTIONS. CONTACT ENGINEER FOR ALL OPENINGS GREATER THAN 12"x12" FOR DESIGN.

1/2"

- 11. COLD WEATHER AND HOT WEATHER PROVISIONS OF ACI 306 AND 305 (CURRENT EDITIONS), RESPECTIVELY, SHALL BE MAINTAINED.
- 12. UNLESS NOTED OTHERWISE ALL UNDER SLAB VAPOR RETARDERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM E1745 CLASS A AND SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
- 13. PRIOR TO SCREEDING AN ELEVATED SLAB, CONCRETE SHALL BE UNIFORMLY PLACED ON ALL (3) SPANS OF THE DECK TO A THICKNESS APPROXIMATELY EQUAL TO THE SPECIFIED SLAB THICKNESS AT EACH BEAM OR JOIST LINE.
- 14. CONTRACTOR IS RESPONSIBLE FOR ESTIMATING CONCRETE QUANTITIES ON ELEVATED SLABS AND SHALL ACCOUNT FOR DEFLECTIONS IN THE FLOOR STRUCTURE.
- 15. CONTRACTOR SHALL MAINTAIN A CONSTANT THICKNESS OVER THE ENTIRE ELEVATED SLAB. ELEVATED SLAB THICKNESS SHALL NOT BE 1/4" LESS THAN THE SPECIFIED THICKNESS. 16. LASER SCREED OR OTHER SIMILARLY FUNCTIONING EQUIPMENT SHALL NOT BE
- PERMITTED FOR ELEVATED SLABS UNLESS AUTHORIZED BY ALBERTSON ENGINEERING INC.

CHEMICAL ANCHORS:

SHALL BE A POLYMER INJECTION SYSTEM SUCH AS HILTI-HY 200 EPOXY. OR APPROVED EQUAL. INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE. ANCHOR BOLTS:

- 1. SHALL BE A36 THREADED ROD. PROVIDE HOT DIP GALVANIZE FINISH ON ALL ANCHOR BOLTS PERMANENTLY EXPOSED TO EXTERIOR OR IN CONTACT WITH PRESSURE TREATED LUMBER.
- THREADED ROD EMBEDMENT DEPTH SPECIFIED IN THE DRAWINGS SHALL BE FROM TOP OF CONCRETE TO TOP OF DOUBLE NUT.
- <u>HELICAL PIERS:</u>
- 1. SEE GEOTECHNICAL REPORT FOR ANTICIPATED DEPTHS AND INSTALLATION REQUIREMENTS. . HELICAL PIERS AND HELICAL PIER CAPS SHALL BE DESIGNED BY SPECIALTY
- CONTRACTOR TO THE LOAD CARRYING CAPACITY SHOWN ON THE DRAWINGS AND THE SPECIFICATIONS. DETERMINING SHAFT SIZE, PLATE SIZE, CONFIGURATION, QUANTITY, AND SPACING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE BASE BID.
- HELICAL PIERS SHALL BE DESIGNED FOR A MAXIMUM VERTICAL DEFLECTION OF 0.33in AND LATERAL DEFLECTION OF 0.5IN.
- 4. A HELICAL PIER SHALL BE LOAD TESTED ACCORDING TO ASTM D1143. TESTED PIER CAN BE A PRODUCTION PILE AT SPECIALTY ENGINEER'S CHOICE. SEE GEOTECHNICAL REPORT FOR ADDITIONAL TESTING REQUIREMENTS. IF TEST PIER FAILS, CONTRACTOR SHALL MODIFY THEIR DESIGN AND INSTALL AND TEST ANOTHER PIER AT THEIR EXPENSE.
- 5. SHOP DRAWINGS AND A LETTER OF CERTIFICATION SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION, AND SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND SEAL OF A NORTH DAKOTA REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL INDICATE THE DESIGN LOADS AND JOB NAME AND NUMBER. THEY SHALL INCLUDE DRAWINGS OF THE HELICAL PIERS AND THE CONNECTION TO THE PILE CAPS OR GRADE BEAMS.
- 6. STRUCTURAL DESIGN OF ALL HELICAL PIER COMPONENTS ARE TO BE DONE BY HELICAL PIER CONTRACTOR. STRUCTURAL DESIGN TO BE COMPLETED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH DAKOTA. PROFESSIONAL ENGINEER(S), OR SOMEONE WORKING UNDER THEIR DIRECT SUPERVISION SHALL MAKE PERIODIC OBSERVATIONS DURING THE INSTALLATION OF THE HELICAL PIERS TO VERIFY THAT INSTALLATION IS IN CONFORMANCE WITH THEIR SEALED DOCUMENTS. A MINIMUM OF TWO SEPARATE OBSERVATIONS SHALL BE MADE BY SUCH PARTY. COST FOR SUCH PROFESSIONAL ENGINEER(S) OR SOMEONE WORKING UNDER THEIR DIRECT SUPERVISION SHALL BE INCLUDED IN THE BASE BID. ANY AND ALL DEFICIENT ITEMS SHALL BE RECORDED BY THE PROFESSIONAL ENGINEER AND ITEMS SHALL BE CORRECTED AND CORRECTIONS VERIFIED BY THE PROFESSIONAL ENGINEER(S) FOR THE HELICAL PIER CONTRACTOR. PROFESSIONAL ENGINEER(S) FOR HELICAL PIER CONTRACTOR SHALL CERTIFY THAT INSTALLATION IS IN CONFORMANCE WITH THEIR DESIGN DOCUMENTS AT THE COMPLETION OF THEIR WORK. PROFESSIONAL ENGINEER(S) FOR HELICAL PIER CONTRACTOR SHALL PROVIDE CERTIFICATION AND WRITTEN OBSERVATION REPORTS FOR EVERY VISIT MADE TO
- THE ARCHITECT. OBSERVATION REPORTS SHALL BE GIVEN TO ARCHITECT WITHIN 3 WORKING DAYS OF THE VISIT TO THE SITE.

- 7. FOR THE PURPOSES OF THIS STRUCTURAL NOTES SECTION. ALL OF THE FIELD DBSERVATION WORK DESCRIBED TO BE PERFORMED BY PROFESSIONAL ENGINEER RESPONSIBLE FOR DESIGN OF HELICAL PIERS OR SOMEONE WORKING UNDER HIS/HER DIRECT SUPERVISION. ALL OBSERVATION REPORTS TO BE SIGNED BY PERSON WHO MADE OBSERVATION AND PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN.
- MASONRY AND REINFORCING MASONRY PLACEMENT:
- 1. ALL MASONRY SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. MATERIALS TO BE LAID AND MATERIALS TO BE BUILT UPON SHALL BE FREE FROM SNOW & ICE.
- PROVIDE DUR-O-WALL (OR EQUAL PER SPECIFICATIONS) LADDER OR TRUSS HORIZONTAL JOINT REINFORCEMENT AT EACH SECOND COURSE IN RUNNING BOND, AND EACH COURSE IN STACKED BOND, UNLESS NOTED OTHERWISE, DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINTS.
- 3. PROVIDE BOND BEAMS REINFORCED WITH (2) #5 BARS EVERY 6'-0" OF VERTICAL WALL, AT TOPS OF ALL MASONRY WALLS, AND WHERE SHOWN ON DRAWINGS. AT BOND BEAM CORNERS AND TEE JOINTS, PROVIDE BENT BARS TO MATCH QUANTITY AND BAR SIZE IN THE BOND BEAM. LAPS IN BOND BEAMS SHALL BE 48 BAR DIAMETERS OR A MINIMUM OF 2'-0", WHICHEVER IS GREATER.
- 4. WHERE SHOWN ON THE DRAWINGS. CORES IN CONCRETE BLOCKS UNITS SHALL BE FILLED WITH 3,000 PSI CONCRETE GROUT FROM TOP OF FOOTING TO BOTTOM OF BEARING, OR TO THE TOP OF WALL, DEPENDING ON THE CONDITION. INSPECTION OF OPENING AT BOTTOM IS REQUIRED.
- 5. WHERE REINFORCING STEEL IS CALLED FOR IN FILLED CORES, IT SHALL EXTEND FROM TOP OF FOOTING TO BOTTOM OF BEARING, OR TOP OF WALL. DEPENDING ON CONDITION.
- 6. WHERE REINFORCING STEEL IS INTERRUPTED BY AN OPENING IN THE WALL, THE QUANTITY OF BARS INTERRUPTED ARE TO BE MOVED TO EACH SIDE OF THE OPENING, HALF OF REINFORCING TO ONE SIDE AND REMAINING HALF TO THE OTHER SIDE. REINFORCING SHALL BE FROM TOP OF FOOTING TO TOP OF WALL. PROVIDE A MINIMUM OF (2) #5 VERTICAL REINFORCING BARS AT EACH JAMB. SEE PLAN NOTES AND / OR DETAILS FOR VERTICAL REINFORCING SPACING.
- 7. WHERE VERTICAL REINFORCING STEEL IS SPLICED IN MASONRY, PROVIDE A MINIMUM OF 48 BAR DIAMETERS, LAP SPLICE, UNLESS NOTED OTHERWISE.
- 8. THE MINIMUM DISTANCE BETWEEN PARALLEL BARS, EXCEPT IN COLUMNS, SHALL BE NOT LESS THAN THE DIAMETER OF THE BAR EXCEPT THAT LAPPED SPLICES MAY BE WIRED TOGETHER. THE CENTER TO CENTER SPACING OF BARS WITHIN A COLUMN SHALL BE NOT LESS THAN 2 AND ONE-HALF TIMES THE BAR DIAMETER.
- 9. ALL BARS SHALL BE COMPLETELY EMBEDDED IN MORTAR OR CONCRETE. REINFORCEMENT EMBEDDED IN HORIZONTAL MORTAR JOINTS SHALL HAVE NOT LESS THAN 5/8" MORTAR COVERAGE FROM THE EXPOSED FACE. ALL OTHER REINFORCING SHALL HAVE A MINIMUM COVERAGE OF ONE BAR DIAMETER OVER ALL BARS, BUT NOT LESS THAN 3/4", EXCEPT WHERE EXPOSED TO WEATHER OR SOIL IN WHICH CASE THE MINIMUM COVERAGE SHALL BE 2".
- 10. WHERE REINFORCING IS SHOWN TO BE LOCATED ALONG TWO FACES OF A MASONRY BLOCK WALL, THE CONTRACTOR SHALL BREAK OUT THE SHELL OF THE LOWEST MASONRY BLOCK TO GAIN ACCESS TO THE REINFORCING STEEL. THE REINFORCING STEEL SHALL THEN BE WIRED INTO ITS CORRECT POSITION, AND THE ACCESS HOLE COVERED. THE CONCRETE GROUT FILL SHALL BE PUDDLED OR VIBRATED TO ASSURE COMPLETE FILLING OF THE CORE.
- 11. REINFORCED MASONRY PIERS AND COLUMNS SHALL HAVE THE REINFORCING STEEL ACCURATELY LOCATED BY WIRING THE TOP AND BOTTOM OF ALL VERTICAL STEEL INTO ITS CORRECT POSITION. PROVIDE AN ACCESS HOLE AT THE BOTTOM OF ALL COLUMNS OR PIERS
- 12. ALL REINFORCED HOLLOW UNIT MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. WALLS AND CROSS WEBS FORMING SUCH CELLS TO BE FILLED SHALL BE FULLBEDDED IN MORTAR TO PREVENT LEAKAGE OF CONCRETE GROUT. ALL HEAD (OR END) JOINTS SHALL BE SOLIDLY FILLED WITH MORTAR FOR A DISTANCE IN FROM THE FACE OF THE WALL OR UNIT NOT LESS THAN THE THICKNESS OF THE LONGITUDINAL FACE SHELLS. BOND SHALL BE PROVIDED BY LAPPING UNITS IN SUCCESSIVE VERTICAL COURSES OR BY EQUIVALENT MECHANICAL ANCHORAGE.
- A. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 2"x3".
- B. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF ALL CELLS TO BE FILLED AT EACH POUR OF CONCRETE WHERE SUCH CONCRETE POUR IS IN EXCESS OF 6' IN HEIGHT. ANY OVERHANGING MORTAR. OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED AND / OR CLEANED AT TIME OF INSPECTION AND PRIOR TO CORE FILLING. INSPECT AND SEAL ALL OPENINGS BEFORE CONCRETING.
- C. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF THE REINFORCEMENT.
- D. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH CONCRETE. CONCRETE SHALL BE POURED IN LIFTS OF 8' MAXIMUM HEIGHT. ALL CONCRETE SHALL BE CONSOLIDATED AT THE TIME OF POURING BY PUDDLING FOR LIFTS OF 4' OR LESS, OR BY VIBRATING FOR LIFTS GREATER THAN 4'. CONCRETE SHOULD LATER BE CONSOLIDATED AGAIN BY PUDDLING, BEFORE PLASTICITY IS LOST.
- E. WHEN TOTAL CONCRETE POUR EXCEEDS 8' IN HEIGHT, THE CONCRETE SHALL BE PLACED IN 4' MAXIMUM LIFTS MINIMUM CELL DIMENSION SHALL BE 3".
- F. WHEN CONCRETING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF
- CONCRETE 1 1/2" BELOW THE TOP OF THE UPPERMOST UNIT. 13. PROVIDE A MINIMUM OF 8" BEARING FOR ALL MASONRY LINTELS.
- 14. WHERE LINTEL BLOCKS ARE USED IN LIEU OF HOLLOW MASONRY BLOCKS, THE REINFORCING STEEL SHALL BE ANCHORED TO THE LOWER STEEL OR DOWELS AND THE LINTEL BLOCKS LAID AROUND THE STEEL. THE CONCRETE FILL SHALL BE INSTALLED IN LIFTS NO TO EXCEED 2' IN HEIGHT. THE REINFORCING STEEL SHALL BE MAINTAINED IN THE SAME POSITION AS THE DOWELS. STOP THE POUR OF THE CONCRETE 1 1/2" BELOW THE TOP OF THE UPPERMOST UNIT.
- 15. SPECIFICATION REQUIREMENTS FOR COLD WEATHER AND HOT WEATHER MASONRY CONSTRUCTION SHALL BE MAINTAINED.

MASONRY PRISM TESTING

- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL CONSTRUCT THREE (3) TEST PRISMS FOR TESTING. THEY SHALL BE CONSTRUCTED OF TWO (2) 8"x8"x16" PRISMS FOR TESTING, ONE (1) ON TOP OF THE OTHER, JOINED WITH TYPE "S" MORTAR, AND FILLED WITH 3,000 PSI CONCRETE GROUT. PRISMS SHALL BE CURED FOR 28 DAYS. NO REINFORCING SHALL BE USED IN THE CONSTRUCTION OF THE PRISMS.
- 2. PRISMS SHALL BE MADE OF THE SAME MATERIALS, UNDER THE SAME CONDITIONS AND INSOFAR AS POSSIBLE, WITH THE SAME BONDING ARRANGEMENTS AS FOR THE STRUCTURE. THE MOISTURE CONTENT OF THE UNITS AT THE TIME OF LAYING, CONSISTENCY OF MORTAR, AND WORKMANSHIP SHALL BE THE SAME AS WILL BE USED IN THE STRUCTURE. THE VALUE OF fm SHALL BE THE AVERAGE OF ALL SPECIMENS TESTED BUT SHALL BE NOT MORE THAN 125 PERCENT OF THE MINIMUM VALUE DETERMINED BY THE TEST, WHICHEVER IS LESS.
- 3. TESTING SHALL INCLUDE TESTS IN ADVANCE OF BEGINNING OPERATIONS AS DESCRIBED ABOVE, AND AT LEAST ONE (1) FIELD TEST DURING CONSTRUCTION FOR EACH 5.000 SQUARE FEET OF WALL, BUT NOT LESS THAN ONE (1) FIELD TEST MINIMUM IF TOTAL SQUARE FEET OF WALL FOR ENTIRE PROJECT IS LESS THAN 5,000 S.F. ONLY WALLS INDICATED ON STRUCTURAL PLANS NEED BE TESTED.
- 4. THE COMPRESSIVE STRENGTH, f'm, SHALL BE COMPUTED BY DIVIDING THE ULTIMATE LOAD BY THE NET AREA OF THE MASONRY USED IN THE CONSTRUCTION OF THE PRISMS.
- 5. TEST PRISMS SHALL BE STORED FOR SEVEN DAYS IN AIR, AT A TEMPERATURE OF 70 DEGREES, PLUS OR MINUS 5 DEGREES, IN A RELATIVE HUMIDITY EXCEEDING 90%, AND THEN IN AIR AT A TEMPERATURE OF 70 DEGREES, PLUS OR MINUS 5 DEGREES, UNTIL TESTED. THOSE CONSTRUCTED IN THE FIELD SHALL BE STORED UNDISTURBED FOR FROM 48 TO 96 HOURS UNDER WET MATERIAL TO SIMULATE 90% HUMIDITY, THEN TRANSPORTED TO LABORATORY FOR CONTINUED CURING AS DESCRIBED ABOVE.
- 6. NOT LESS THAN THREE (3) PRISM SPECIMENS SHALL BE MADE FOR EACH FIELD TEST IO CONFIRM THAT THE MATERIALS ARE AS ASSUMED IN THE DESIGN. THE STANDAR AGE OF TEST SPECIMENS SHALL BE 28 DAYS, BUT 7 DAY TESTS MAY BE USED, PROVIDED THE RELATION BETWEEN THE 7 DAY AND 28 DAY STRENGTHS OF THE MASONRY IS ESTABLISHED BY ADEQUATE TEST DATA FOR THE MATERIALS USED

ARCHITECT



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- MASONRY MATERIALS: 1. MASONRY UNITS SHALL MEET AS
- 2. MORTAR SHALL BE TYPE "M" (BEI ASTM C270. GROUT SHALL BE 3, C476. MORTAR MIX SHALL BE A APPROVED EQUAL, GROUT SHALL DESIGN SUBMITTED FOR APPROV

STRUCTURAL STEEL

- 1. STEEL SHALL CONFORM TO AST A36 (Fy=36 KSI) FOR ALL OTHER STRUCTURAL TUBING SHALL CON KSI). STRUCTURAL PIPE SHALL ((Fy=35 KSI). 2. STEEL SHALL CONFORM TO THE
- STRUCTURAL STEEL BUILDINGS. 3. ALL SHOP CONNECTIONS TO BE CONNECTIONS TO BE BOLTED. L
- SHOP COAT AND ONE FIELD TOU GALVANIZED IS INDICATED ON T 4. WELDS FOR ALL EXPOSED STRU NOTED OTHERWISE.
- 5. ALL BOLTED CONNECTIONS SHAI F1852 BOLTS, UNLESS NOTED O
- A. FAILURE OF A BOLT OR NUT CRACK IN THE BOLT OR NUT FAILED BOLTS OR NUTS COM OF THE LOT OF ORIGIN FOR IS NOT PROVIDED, THEN ALL COME FROM THE LOT CONTA 6. CONTRACTOR SHALL MAINTAIN E
- ARCHITECTURALLY EXPOSED ST STANDARD PRACTICE FOR STEEL 7. ANCHOR BOLT HOLES IN STRUCT 1/8" MAX, UNLESS NOTED OTHER

SHEAR STUD CONNECTORS

- 1. SHEAR STUD CONNECTORS SHA WITH AWS D1.1, "STRUCTURAL W SHALL BE TYPE "B", HEADED STU PSI, AND SHALL BE OF LENGTH A
- COMPOSITE STEEL FORM I 1. COMPOSITE FORM DECK SHALL COMPOSITE DECK (2VLI-18) AND
- DECK INSTITUTE (SDI) SPECIFICAT 2. POUR STOPS AND GIRDER FILLE FILLERS TO SUPPORTING STRUC UNLESS OTHERWISE INDICATED.
- 3. FLOOR DECK CLOSURES: WELD S AND Z-CLOSURES TO DECK. ACC TIGHT FITTING CLOSURES AT OP COVER PLATES AT CHANGES IN OTHERWISE INDICATED.

4. DECKING SHALL HAVE MINIMUM (COLD FORMED LIGHT GAUC

- 1. STEEL STUD, TRACK, AND LINTE DRAWINGS AND IN THE SPECIFIC STRUCTURAL QUALITY GRADE 33 STRUCTURAL QUALITY GRADE 5 SHALL HAVE HOT DIPPED GALVA
- 2. METAL STUD MEMBERS SHALL C SECTIONS 6"x16 GA. : 600 S 162-54
- 3. ALL FRAMING MEMBERS SHALL B FIT SQUARELY AGAINST ABUTTIN PLACE UNTIL PROPERLY JOINED.
- JOINING OF STRUCTURAL MEMBE OR WELDED. WIRE TYING OF FRA SHALL NOT BE PERMITTED.
- 5. ATTACHMENT OF COLLATERAL M SELF-DRILLING SCREWS OR HAF BE CONNECTED TO STEEL BY STA LOCAL BUILDING CODES.
- 6. STUDS SHALL SIT SQUARELY IN ABUTMENT AGAINST TRACK WEE SECURELY FASTENED TO THE FL

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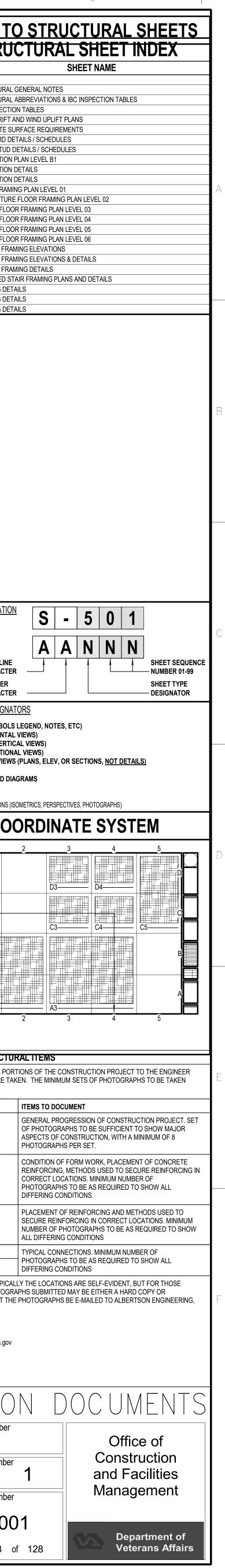
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			SYM	BOLS LE	GEND		INDEX TO
1. UNLESS NOTED OTHERWISE ALL BEAMS SUPPORTED BY MASONRY W ON A BEAM BEARING PLATE POCKETED INTO THE WALL. BEAM SHALL	BEAR A	SWX		(X" Ø X (X'-X" / XX'-X"		B	STRUC SHT NO
PERPENDICULAR TO THE SUPPORTING WALL, THE BEAM SHALL EXTEN OF THE OPPOSITE SIDE OF WALL. BEAM BEARING PLATES SHALL BE 5	ID TO WITHIN 2" /8" THICK AND	SHEAR WALL			STEP TOP OF	B CUT SECTION	S-001 STRUCTURAL GEN S-002 STRUCTURAL ABB S-003 IBC INSPECTION T/
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	-					•	S-602 METAL STUD DETA SB101 FOUNDATION PLAN SB501 FOUNDATION DETA
 MORTAR SHALL BE TYPE "M" (BELOW GRADE) OR "S" (ABOVE GRADE) ASTM C270. GROUT SHALL BE 3,000 PSI PEA-GRAVEL CONCRETE AND 	AND SHALL MEET SHALL MEET ASTM	TO THE SHEET	ORIENTED 90° FW/ MAGNETIC OPTIONAL)	MATCH LIN	E INDICATOR	ELEVATION INDICATOR	SB502 FOUNDATION DET/ SF101 FLOOR FRAMING P SF102 ROOF/FUTURE FLC
		1455 + + +	X	F1	Wx (XXX'-XX")	pcsphil	SF103 FUTURE FLOOR FF SF104 FUTURE FLOOR FF SF105 FUTURE FLOOR FF SF106 FUTURE FLOOR FF
TRUCTURAL STEEL:	S. AND ASTM				B		SF401 LATERAL FRAMING SF402 LATERAL FRAMING SF403 LATERAL FRAMING
A36 (Fy=36 KSI) FOR ALL OTHER MISCELLANEOUS SHAPES AND PLATES STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B OR G	S. IRADE C (Fy=46	COLUMN INDICATOR(S) 20GA TYPE 'V	REVISION SYMBOL V3' MTL DECK	FOOTING/PIER IDENTIFIER	BEAM INDICATOR(S)	PC SPAN IDENTIFIER	SF404 ENLARGED STAIR SF501 FRAMING DETAILS SF502 FRAMING DETAILS
	IONS FOR			XN XXNNN	XN	XXNNN	SF503 FRAMING DETAILS
CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED. STEEL TO SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, E>	D RECEIVE ONE		DICATOR		EXT ELEVATION INDICATOR	DETAIL BUBBLE INDICATOR	
	100TH UNLESS		SJ			- XX"	
F1852 BOLTS, UNLESS NOTED OTHERWISE		COLUMN/FND GRID INDICATOR	SLAB JOINT INDICATOR	SECTION INDICATOR	ELEVATION	N INDICATOR	-
CRACK IN THE BOLT OR NUT SHALL BE GROUNDS FOR REJECTION FAILED BOLTS OR NUTS COMING FROM THE SAME LOT. IF THE DOO OF THE LOT OF ORIGIN FOR THE FAILED NUT(S) OR BOLT(S) DOES	OF ALL THE CUMENTATION NOT EXIST, OR		CALE: FULL		0" 1/2" 1	<u> </u>	
COME FROM THE LOT CONTAINING THE FAILED NUT(S) OR BOLT(S) 6. CONTRACTOR SHALL MAINTAIN ERECTION TOLERANCES OF STRUCTU	RAL STEEL AND			DETAIL/SECTION/PLA BLOCK TITLE INDICAT	N		
STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES. 7. ANCHOR BOLT HOLES IN STRUCTURAL STEEL SHALL BE OVERSIZED N		HX	<u>C1</u>	(MC-x)	(R1)	X	
1/8" MAX, UNLESS NOTED OTHERWISE. SHEAR STUD CONNECTORS:		HOLDOWN INDICATOR	CORNER REINF INDICATOR	MASONRY PIER INDICATOR	WALL REINFORCING INDICATOR	KEYNOTE IDENTIFIER	-
WITH AWS D1.1, "STRUCTURAL WELDING CODE", SECTION 7 - STUD WE SHALL BE TYPE "B", HEADED STUDS, HAVING A MINIMUM TENSILE STRE	ELDING. STUDS ENGTH OF 60,000	5:12 SLOPE		MOMENT	R1 RAFTER	12 4 ROOF SLOPE	-
PSI, AND SHALL BE OF LENGTH AND DIAMETER SHOWN ON THE DRAW COMPOSITE STEEL FORM DECK:	INGS.						SHEET IDENTIFICATION
	S OF THE STEEL	WORK POINT INDICATOR	ASTERISK	STEP	CONTINUOUS BEAM INDICATOR	STEP TOP OF WALL INDICATOR	DISCIPLINE
		STR	UCTUR	AL HATC		RNS	CHARACTER MODIFIER CHARACTER
AND Z-CLOSURES TO DECK, ACCORDING TO SDI RECOMMENDATIONS, TIGHT FITTING CLOSURES AT OPEN ENDS OF RIBS AND SIDES OF DEC	TO PROVIDE KING. WELD		NATIVE UNDISTURBED SOIL		СМЛ		SHEET TYPE DESIGNATOR 0 GENERAL (SYMBOLS LEC 1 PLANS (HORIZONTAL VIE
OTHERWISE INDICATED. 4. DECKING SHALL HAVE MINIMUM OF (3) SPANS.			BACKFILL/FILL		MORTAR		2 ELEVATIONS (VERTICAL V 3 SECTIONS (SECTIONAL V 4 LARGE SCALE VIEWS (PL 5 DETAILS
			ENGINEERED FIL		GROUT		 6 SCHEDULES AND DIAGRA 7 USER DEFINED 8 USER DEFINED 9 3D REPRESENTATIONS (ISOME
STRUCTURAL QUALITY GRADE 33 FOR 18 GAUGE THICKNESS OR LESS STRUCTURAL QUALITY GRADE 50, CLASS 1 FOR 16 GAUGE OR GREATE	, AND ASTM A653 R. MEMBERS	4 47 4	DRAINAGE COURSE		INSUL/ICF/SIP /EIFS SYSTEMS		COO
SECTIONS:	M AISI				GRATING		<u>1</u> 2
3. ALL FRAMING MEMBERS SHALL BE CUT SQUARELY OR AT AN ANGLE A			WD- GLUED		CONC WALL HOLDOWN (BLOCKOUT)		
			PLYWOOD/OSB		ROUGH LOG		C
			GYPSUM BOARD		WOOD STUD BRG WALL		
LOCAL BUILDING CODES.			WD- BLKG OR SHIM WOOD-		STONE/		
SECURELY FASTENED TO THE FLANGES OF BOTH TOP AND BOTTOM F	UNNER TRACKS.						A1
RESPONSIBLE FOR PROVIDING DOCUMENTATION THAT CONNECTOR F CAPACITY FOR INSTALLATIONS IN WHICH THEY ARE TO BE INSTALLED,	IAS ADEQUATE AS WELL AS						OF THE STRUCTURAL
SUPPORTING STRUCTURE.	<text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text>	FOR APPROVAL INCLUDE THE FO	. PHOTOGRAPHS S		O THE ENGINEER WIT	HIN 2 WORKING DAYS	S OF WHEN THEY WERE TAKEN.
		EVENT OVERALL CONSTR	RUCTION PROGRES	S			CONSTRUCTION. CAN G UIRED AREAS. O
		CONCRETE POUR	S		PRIOR TO EACH	I CONCRETE POUR	Pł C(RI
							C PI D
		CONCRETE MASO	NRY CONSTRUCTIO	DN	PRIOR TO GROU	JTING	PI SI NI AI
		STEEL CONSTRUC			PRIOR TO ENCL	OSURE	יד PI D
		CASES WHERE CASES WHERE	THEY ARE NOT, CO DRMAT. HARD COPI	NTRACTOR TO INCLUDE	E SOME METHOD OF PHS ARE NOT REQUIF	DOCUMENTING THE L	ARE BEING TAKEN. TYPICALLY T OCATIONS. THE PHOTOGRAPH GLY PREFERRED THAT THE PH
		ALBERTSON EN ENGINEER OF R MICHAEL D. ALB	gineering inc. Ecord:	E-MAIL ADDRESS: mike@albertsonenging		VA COR: DENNIS LANGEVIN	E-MAIL ADDRESS: Dennis.Langevin@va.gov
		AARON HARTWE	ELL E-MAIL A	aaron@albertsonengir	neering.com		Dennis.Langevin@va.gov
		FOURFRONT DE	Joel Simo	onyak@fourfrontdesign.co			RUCTION
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		-	ECIAL INSPECTION	N	
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD ^a	IBC REFERENCE	REQUIRED O PROJECT
1. INSPECTION REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	-	x	ACI 318 CH 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	YES
 REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706. 	WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 X AWS D1.4, ACI 318: 26.6.4			NO	
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16".		X	AGI 310. 20.0.4	-	NO
C. INSPECT ALL OTHER WELDS	X	-			
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-	YES
 INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.^b A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. 	x	-	ACI 318: 17.8.2.4, ACI 318: 17.8.2	-	NO
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4A.	-	X			YES
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	x	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	YES
 PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. 	X	-	ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1908.10	YES
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8	YES
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9	YES
9. INSPECT OF PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES.	X	-	ACI 318: 26.10	-	NO
B. GROUTING OF BONDED PRESTRESSING TENDONS.	X	-			
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: CH. 26.9	-	NO
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES ANDFORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	-	NO
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2(b)	-	YES

a. WHERE APPLICABLE, SEE SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSEUD BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

WELDING OR REINFORCING BARS. SPECIAL INSPECTIONS OF WELDING AND QUALIFICATIONS OF SPECIAL INSPECTORS FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.4 FOR SPECIAL INSPECTION AND AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION. MATERIAL TESTS.

IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIALS IN CHAPTERS 19 AND 20 OF ACI 318, THE BUILDING OFFICIAL SHALL REQUIRE TESTING OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN CHAPTERS 19 AND 20 OF ACI 318.

DELEGATED DESIGN - RESPONSIBILITIES AND SUBMITTAL **REQUIREMENTS FOR CONTRACTOR:**

- 1. IF PROFESSIONAL DESIGN SERVICES OR CERTIFICATIONS BY A DESIGN PROFESSIONAL RELATED TO SYSTEMS, MATERIALS, OR EQUIPMENT ARE SPECIFICALLY REQUIRED OF THE CONTRACTOR BY THE CONTRACT DOCUMENTS; THE ARCHITECT AND/OR ALBERTSON ENGINEERING, INC. WILL SPECIFY THE PERFORMANCE AND DESIGN CRITERIA THAT SUCH SERVICES MUST SATISFY WITHIN THE CONTRACT DOCUMENTS.
- 2. THE CONTRACTOR SHALL BE ENTITLED TO RELY UPON THE ADEQUACY AND ACCURACY OF THE PERFORMANCE AND DESIGN CRITERIA PROVIDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL CAUSE SUCH SERVICES OR CERTIFICATIONS TO BE PROVIDED BY AN APPROPRIATELY LICENSED DESIGN PROFESSIONAL"SPECIALTY ENGINEER", WHOSE SIGNATURE AND SEAL SHALL APPEAR ON ALL DRAWINGS, CALCULATIONS, SPECIFICATIONS, CERTIFICATIONS, SHOP DRAWINGS, AND OTHER SUBMITTALS PREPARED BY THE "SPECIALTY ENGINEER".
- 3. SHOP DRAWINGS AND OTHER SUBMITTALS RELATED TO THE WORK, DESIGNED OR CERTIFIED BY THE "SPECIALTY ENGINEER" SHALL BEAR THE "SPECIALTY ENGINEER'S" WRITTEN APPROVAL AND CONFIRMATION THAT SUCH WORK COMPLIES WITH ALL APPLICABLE CODES AND THE DESIGN CRITERIA WHEN SUBMITTED TO THE ARCHITECT AND/OR ALBERTSON ENGINEERING, INC.
- 4. THE OWNER, ARCHITECT, AND ALBERTSON ENGINEERING, INC. SHALL BE ENTITLED TO RELY UPON THE ADEQUACY AND ACCURACY OF THE SERVICES, CERTIFICATIONS, AND APPROVALS PERFORMED OR PROVIDED BY SUCH DESIGN PROFESSIONALS, PROVIDED THE CONTRACT DOCUMENTS HAVE SPECIFIED TO THE CONTRACTOR THE PERFORMANCE AND DESIGN CRITERIA THAT SUCH SERVICES MUST SATISFY.
- 5. ARCHITECT AND/OR ALBERTSON ENGINEERING, INC. WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON SUBMITTALS ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS.
- 6. ALL SHOP DRAWINGS SUBMITTED FOR APPROVAL FOR WHICH PROFESSIONAL DESIGN SERVICES OR CERTIFICATIONS BY A DESIGN PROFESSIONAL RELATED TO SYSTEMS, MATERIALS, OR EQUIPMENT ARE TO BE COMPLETED TO A LEVEL SUCH THAT THE OWNER, ARCHITECT, AND ALBERTSON ENGINEERING, INC. SHALL BE ENTITLED TO RELY UPON THE ADEQUACY AND ACCURACY OF THE SERVICES, CERTIFICATIONS, AND APPROVALS SUBMITTED. THE "SPECIALTY ENGINEER" SHALL COMPLETE WORK WITH ACCEPTANCE THAT ALBERTSON ENGINEERING, INC. WILL NOT UNDERTAKE A REVIEW OF THE "SPECIALTY ENGINEER'S" CALCULATIONS AND SUBMITTALS AND THE "SPECIALTY ENGINEER" ACKNOWLEDGES THAT THEY ARE SOLELY RESPONSIBLE FOR THE DELEGATED DESIGN WORK CERTIFIED BELOW AND ARE NOT RELYING UPON ALBERTSON ENGINEERING, INC. FOR ANY REVIEW.

THESE PROVISIONS ARE CONTRACTED REQUIREMENTS FOR SAID PROJECT AND THE "SPECIALTY ENGINEER" IS BOUND BY THESE PROVISIONS.

		CONSULTANTS:	
		CALIBRE 9090 S RIDGELINE BLVD, SUITE 105 HIGHLANDS RANCH COLORADO 80129 PHONE (303) 730-0434	Albertson Enginee
			SUM
Revisions:	Date		FIRE PRO

21 11:

IBC INSPECTION TABLES

DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE

PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT

				N AND
			1	
MINIMUM VERIFICATION	MINIMUM VERIFICATION QUALITY ASSURANCE(a) LEVEL 1 LEVEL 2 LEVEL 3 O CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS. R R R O CONSTRUCTION, VERIFICATION OF F ¹ m AND F ¹ AAC, EXCEPT WHERE SPECIFICALLY NR R R O CONSTRUCTION, VERIFICATION OF F ¹ m AND F ¹ AAC, EXCEPT WHERE SPECIFICALLY NR R R CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN NR R R	REFERENCE FOR CRITERIA		
	LEVEL 1	LEVEL 2	LEVEL 3	TMS 602
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS.	R	R	R	ART 1.5
PRIOR TO CONSTRUCTION, VERIFICATION OF F^1 m and F^1 $_{\text{AAC}}$, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	NR	R	R	ART 1.4 B
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	NR	R	R	ART 1.5 & 1.6.3
DURING CONSTRUCTION, VERIFICATION OF F ¹ m AND F ¹ AAC, FOR EVERY 5,000 SQ. FT. (465 SQ. M).	NR	NR	R	ART 1.4 B

MASONRY CONSTRUCTION

NR

NR

R

(a) R = REQUIRED, NR = NOT REQUIRED

OTHER THAN SELF-CONSOLIDATING GROUT.

	F	REQUENCY	(a)	REFERENCE FOR	R CRITERIA
INSPECTION TASK	LEVEL 1	LEVEL 2	LEVEL 3	TMS 402	TMS 602
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE.					
A. PROPORTIONS OF SITE-PREPARED MORTAR.	NR	Р	Р		ART. 2.1, 2.6 A 8 2.6 C
B. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.	NR	Р	Р		ART. 2.4 B & 2.4 H
C. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.	NR	Р	Р		ART. 3.4 & 3.6 A
D. PRESTRESSING TECHNIQUE	NR	Р	Р		ART. 36 B
E. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY.	NR	C ^(b) P ^(c)	С		ART. 2.1 C.1
F. SAMPLE PANEL CONSTRUCTION	NR	Р	С		ART. 1.6D
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE.					
A. GROUT SPACE	NR	Р	С		ART. 3.2 D & 3.2F
B. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	NR	Р	Р	SEC. 10.8 & 10.9	ART. 2.4 & 3.6
C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	Р	С	SEC. 6.1, 6.3.1, 6.3.6 & 6.3.7	ART. 3.2 E & 3.4
D. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	NR	Р	Р		ART. 2.6 B & 2.4 G.1.B
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION	I		1		
A. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	Р	Р		ART. 1.5
B. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	Р	Р		ART. 3.3 B
C. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	Р	Р		ART. 3.3 F
D. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	NR	Р	С	SEC. 1.2.1 _(c) , 6.2.1 & 6.3.1	
E. WELDING OF REINFORCEMENT	NR	С	С	SEC. 6.1 & 6.1.2	
F. PREPERATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))	NR	Р	Р		ART. 1.8 C & 1.8 D
G. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	NR	С	С		ART. 3.6 B
H. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	NR	С	С		ART. 3.5 & 3.6 C
I. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	NR	C ^(b) P ^(c)	С		ART. 3.3 B.9 & 3.3 F.1.B
4. OBSERVE PREPERATION OF GROUT SPECIMENS, MORTAR SPECIMENT, AND/OR PRISMS	NR	Р	С		ART. 1.4 B.2.a.3 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.2.c.3, 1.4 B.3 & 1.4 B.4

THE TABLE. NR = NOT REQUIRED, P = PERIODIC, C = CONTINUOUS (b) REQUIRED FOR THE FIRST 5,000 SQUARE FEET. (465 SQ METERS) OF AAC MASONRY. (c) REQUIRED AFTER THE FIRST 5,000 SQUARE FEET. (465 SQ METERS) OF AAC MASONRY.

SPECIAL INSPECTION AND TESTING:

1. SPECIAL INSPECTION AND MINIMUM TESTING SHALL BE PERFORMED IN ACCORDANCE WITH 2018 IBC AND ALL REFERENCED MATERIALS AND TABLES.

2. INSPECTION SHALL BE PROVIDED BY AN INDEPENDENT TESTING AGENCY HIRED AT THE CONTRACTOR'S EXPENSE. AGENCY INSPECTION PERSONNEL SHALL MEET THE INSP QUALIFICATIONS FOR EACH MATERIAL ITEM AS INDICATED IN THE SPECIFICATIONS.

3. ANY MATERIAL OR PLACEMENT DEVIATIONS FROM MINIMUMS SHOWN ON THE DRAWINGS OR IN SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

4. IN ADDITION TO THE IBC INSPECTION TABLES, THE INSPECTOR SHALL VERIFY THAT ALL STEEL MAINTAIN ERECTION TOLERANCE OF STRUCTURAL STEEL AND ARCHITECTURALLY EXPOSED STRUCTURAL STEEL WITHIN AISC'S CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

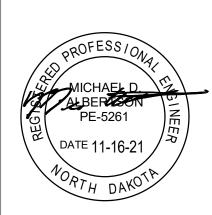
5. IN ADDITION TO THE CONCRETE AND MASONRY IBC INSPECTION TABLES, THE INSPECTOR SHALL VERIFY THAT ALL CONCRETE AND MASONRY MAINTAIN TOLERANCES SPECIFIED IN ACI 117-90 STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS.

6. TESTING - ALL TEST REPORTS SHALL BE PROVIDED TO THE VA COR. ANY FAILED FIELD TEST SHALL BE REPORTED TO ALBERTSON ENGINEERING INC AND THE VA COR IMMEDIATELY.



SUMMIT FIRE CONSULTING 575 MINNEHAHA AVE WEST ST. PAUL, MINNESOTA 55103 (612) 387-7050

1 2 3 4



ARCHITECT



FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PH: (605) 342-9470 FOURFRONT DESIGNINC. FAX: (605) 342-2377 WWW.FOURFRONTDESIGN.COM

5 6

	DECK	
TABLE 1.1 INSPECTION OR EXECUTI PRIOR TO DECK PLACEMEN	-	
TASK	QC	QA
A. VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	PERFORM	PERFORM
B. DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	PERFORM	PERFORM
TABLE 1.2 INSPECTION OR EXECUTI AFTER DECK PLACEMENT	ON TASKS	
TASK	QC	QA
A. VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	PERFORM	PERFOR
B. VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS	N/A	PERFOR
C. DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK	PERFORM	PERFOR
ACCESSORIES		
TABLE 1.3 INSPECTION OR EXECUTI PRIOR TO WELDING	ON TASKS	
TASK	QC	QA
A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	OBSERVE	OBSERV
B. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	OBSERVE	OBSERV
C. MATERIAL IDENTIFICATION (TYPE/GRADE)	OBSERVE	OBSERV
D. CHECK WELDING EQUIPMENT	OBSERVE	OBSERV
TASKS DURING WELDING	QC	QA
A. USE OF QUALIFIED WELDERS	OBSERVE	OBSERV
B. CONTROL AND HANDLING OF WELDING CONSUMABLES	OBSERVE	OBSERV
C. ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	OBSERVE	OBSERV
D. WPS FOLLOWED	OBSERVE	OBSERV
TABLE 1.5 INSPECTION OR EXEC TASKS AFTER WELDING	UTION	
TASK	QC	QA
A. VERIFY SIZE & LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, & PERIMETER WELDS	PERFORM	PERFOR
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA	PERFORM	PERFOR
	PERFORM PERFORM	
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA		PERFOR
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA C. VERIFY REPAIR ACTIVITIES D. DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	PERFORM	PERFOR
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA C. VERIFY REPAIR ACTIVITIES	PERFORM	PERFOR
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA C. VERIFY REPAIR ACTIVITIES D. DOCUMENT ACCEPTANCE OR REJECTION OF WELDS TABLE 1.6 INSPECTION OR EXECUTION TABLE 1.6 INSPECTION	PERFORM PERFORM	PERFORI
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA C. VERIFY REPAIR ACTIVITIES D. DOCUMENT ACCEPTANCE OR REJECTION OF WELDS TABLE 1.6 INSPECTION OR EXECUTION TA MECHANICAL FASTENING TASK	PERFORM PERFORM ASKS PRIOR T	PERFORI
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• QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE INSTALLER

• QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY THE CERTIFIED TESTING AGENCY

ART 1.4 B

Project Number Drawing Title Project Title STRUCTURAL ABBREVIATIONS & IBC EXPAND BLDG. 1 FOR 437-315 **INSPECTION TABLES** PRIMARY CARE Building Number Approved: Project Director Drawing Numb Location 2101 ELM STREET FARGO, ND 58102 FARGO VAHCS S-0 Checked Date Drawn 11/16/2021 AJH MDR Dwg. 59

7

CONSTRUCTIO

8

STF

CONSTR

CONTR

COORD

DOUG FIR DO

**EMB

GR BM

GYP BD

**HAB **HAS

HORI7

**HSB

**HSS

GRTG

MBOLS USE

	9		
RUCTURAL A		** NOT LISTED IN THE NCS MANUAL	
ED AS ABBREVIATIONS: ND NGLE	KSF	THOUSAND POUND KIPS PER LINEAR FOOT KIPS PER SQUARE FOOT	
DUBLE ANGLE T ENTER LINE	KSI (L) L	KIPS PER SQUARE INCH ANGLE	
ARALLEL ENNY (NAIL)		LAMINATE (ED) POUND LINEAR FEET	
ATE DUND OR NUMBER	**LGR LL	LEDGER LIVE LOAD	
DUND OR DIAMETER <u>NS:</u> 	LLH LLV LOC	LONG LEG HORIZONTAL LONG LEG VERTICAL LOCATION	
CHOR BOLT/ROD	LONG **LSL	LONGITUDINAL LAMINATED STRAND LUMBER LIGHTWEIGHT	
30VE DDITIONAL DDENDUM	**LVL LVR	LAMINATED VENEER LUMBER LOUVER	,
DHESIVE DJUSTABLE, ADJACENT, DJOINING	(M) MACH MB	MACHINE MACHINE BOLT	
BOVE FINISH FLOOR GGREGATE	MATL MAX	MATERIAL MAXIMUM	
NCHOR, ANCHORAGE TERNATE PPROXIMATE	MBR **MC MECH	MEMBER MISCELLANEOUS CHANNEL MECHANICAL	
NCHOR ROD RCHITECT (URAL)	MEZZ MFD	MEZZANINE MANUFACTURED MANUFACTURER	
 Eveled Elow Finish Floor	MFR MFR REC	MANUFACTURER MANUFACTURER'S RECOMMENDATION	
RICK LEDGE JILDING	MIN MISC MTL	MINIMUM MISCELLANEOUS METAL	
ELOW .OCK (ING) EAM			
OTTOM OTTOM OF OTTOM OF CONCRETE	^^(N) NA NIC	NEW NOT APPLICABLE NOT IN CONTRACT	
EARING	NO NOM	NOMBER	
RICK ASEMENT ETWEEN	NS NTS (0)	NEAR SIDE NOT TO SCALE	
JILT-UP 		ON CENTER OUTSIDE DIAMETER OVERHEAD DOOR	
HANNEL AMBER ARRIAGE BOLT	OPNG	OPENING	
JBIC FEET OR FOOT HAMFER	**OSB **OVS (P)	OPPOSITE ORIENTED STRAND BOARD OVERSIZED	
AST-IN-PLACE AST-IN-PLACE CONCRETE ONTROL JOINT	(P) **PAF	POWDER ACTUATED FASTENER	
ENTER LINE EILING EAR, CLEARANCE	PCF PED	PARALLEL POUNDS PER CUBIC FOOT PEDESTAL	
ONCRETE MASONRY UNIT	PERF		
DNCRETE DNNECT (ION) DNSTRUCTION	PL PLF PLYWD	PLATE POUNDS PER LINEAR FOOT PLYWOOD PANEL	
DNSTRUCTION DNTINUOUS, CONTINUE DNTRACT (OR) DORDINATE	PNL	PANEL PAIR, PIPE RAIL	
ENTER	PREFAB	PREFABRICATE	
JBIC YARD	PSI **PSL	POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PARALLEL STRAND LUMBER POST TENSION (ED),	
EEP, DEPTH, PENNY (NAIL) DUBLE EMOLITION, DEMOLISH			
ETAIL AMETER	(R) R	 RADIUS/RISE (R)	
AGONAL, DIAGRAM MENSION RECTION	REF	REINFORCED CONCRETE PIPE REFERENCE REINFORCE (D), (ING)	
VIDE, DIVISION	REQD	REINFORCE (D), (ING) REQUIRE REQUIRED REVISED	
EAD LOAD DUGLAS FIR RAIN	REV RO RS	REVISION (S), REVISED ROUGH OPENING ROUGH SAWN REVERSE (SIDE)	
RAWING (S)	(S)		
KISTING (SEE EXIST) ACH	SECT	OLIFET.	
POXY ANCHOR BOLT	SHTHG SIM **SI	SIMILAR	
EVATION	SLNT	SNOW LOAD SEALANT SLEEVE	
MBED (ED) (PANDED POLYSTYRENE QUAL	**SOG SPEC	SLAB-ON-GRADE SPECIFICATION (S)	
QUIPMENT STIMATE ACH WAY	SQ **SSL **SSLT		
KISTING KPANSION, EXPOSED		IRANSVERSE	
	STIF	STIFFENER	
	STRUCT SUB FL	STRUCTURAL SUBFLOOR	
ANGÈ	SYMM	SHEAR WALL SYMMETRY, SYMMETRICAL	
ACE OF ACE OF ACE OF CONCRETE	(T) T	TREAD TOP AND BOTTOM	
ACE OF CONCRETE ACE OF MASONRY ACE OF STUD ACE OF WALL	T&G **TBD		
ACE OF WALL AR SIDE DOT, FEET	thd Thk Thru	THROUGH	
DOTING RAMING	**TL TO	TOTAL LOAD TOP OF	
JTURE AGE, GAUGE	TOB TOC TOF	TOP OF BEAM TOP OF CONCRETE TOP OF FOOTING	
ALVANIZED ENERAL CONTRACTOR	TOM TOP	TOP OF MASONRY TOP OF PIER	
LUE LAMINATED (BEAM) LUE LAMINATED (BEAM) RADE BEAM RATING	10 PAR TOS TO SHTHG	TOP OF PARAPET TOP OF STEEL, SLAB TOP OF SHEATHING	
VDSLIM	TOW	TOP OF WALL	
rpsum BOARD GH	TRTD TS	TRANSVERSE TREATED TUBE STEEL	
YPSUM BOARD YPSUM BOARD GH EADED ANCHOR BOLT EADED ANCHOR STUD DLLOW CORE EADER	TYP (U)		
INCER	**\/	SHEAR	
ORIZONTAL GH STRENGTH	VERT VIF	VERTICAL VERIFY IN FIELD	╞
GH STRENGTH BOLT DLLOW STRUCTURAL SHAPE EIGHT	E VRFY (W)		
 SIDE DIAMETER	Ŵ W/	WIDTH WITH	
SULATE (D), INSULATION	**\^/ ^		
	WF (W) WL	WEDGE ANCHOR WOOD WIDE FLANGE WIND LOAD	
DIST DINT	WP	Weld (ED) Waterproofing, Working Point	
 Housand (KIP)	**WS WT	WALL STEP WEIGHT	
EYED CONSTRUCTION JOINT	(X)		
	(Y)	EXTRUDED POLYSTYRENE YARD	
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IBC 2018 TABLE 170 REQUIRED SPECIAL INSPECTION HELICAL PILE FOUNDA	AND TESTS	6 OF
TYPE	CONTINUOUS SPECIAL INSPECTION	PE S INS
1. VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS.	X	
2. DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED.	X	
3. INSPECT INSTALLATION OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X	
4. RECORD TYPE OF INSTALLATION EQUIPMENT USED, PILE DIMENSIONS, TOP ELEVATIONS, FINAL DEPTH, AND FINAL INSTALLATION TORQUE.	x	
5. FOR STEEL ELEMENTS, PERFORM ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.2.	-	
6. FOR CONCRETE ELEMENTS AND CONCRETE-FILLED ELEMENTS, PERFORM TESTS AND ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3.	-	
7. FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.	-	

IBC 2018 TABL REQUIRED VERIFICATION ANI				
VERIFICATION AND INSPECTION TASKS				
	:			
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.				
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.				
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.				
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.				
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.				

IBC 2018 1705.9 HELICAL PILE FOUNDATIONS

- 1. INSPECTIONS SHALL BE PERFORMED CONTINUOUSLY DURING INSTALLATION OF HELICAL PILE FOUNDATIONS.
- 2. INFORMATION RECORDED SHALL INCLUDE INSTALLATION EQUIPMENT USED, PILE DIMENSIONS, TIP ELEVATIONS, FINAL DEPTH, FINAL INSTALLATION TORQUE AND OTHER PERTINENT INSTALLATION DATA AS REQUIRED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.

								Drawing Title		Project Title	CONSTR	RUCTION [DOCUMENTS
		CONSULTANTS:				ARCHITECT		IBC INSPECTION TABI	ES	EXPAND BLD	G. 1 FOR	437-315	Office of
		CALIBRE 9090 S RIDGELINE BLVD, SUI HIGHLANDS RANCH COLOR	E 105 DO 80129 Albertson Engineering Inc.	ALBERTSON ENGINEERING, INC. 315 NORTH MAIN AVENUE, SUITE 200 SIOUX FALLS, SOUTH DAKOTA 57104	ALBERTISON DI PE-5261	FOURFRON 517 7TH ST	IT DESIGN, INC. REET			PRIMARY CA		Building Number	Construction and Facilities
1:25 AN		PHONE (303) 730-0434	Albertson Engineering inc.	PH: (605) 343-9606	DATE 11-16-21	RAPID CITY	, SOUTH DAKOTA	Approved: Project Director		Location 2101 ELM	STREET	Drawing Number	Management
11:10 4 4 11:10			m	SUMMIT FIRE CONSULTING 575 MINNEHAHA AVE WEST	No	PH: (605) 34	2-9470	FARGO VAHCS		FARGO, N	ID 58102	S-003	
00000000000000000000000000000000000000	Revisions: Da	te	SUMMIT FIRE PROTECTION	ST. PAUL, MINNESOTA 55103 (612) 387-7050	ATH DAKOT	FOURFRONT DESIGNINC. FAX: (605) 3 WWW.FOU	*Z-2377 RFRONTDESIGN.COM			11/16/2021	AJH MDR	Dwg. 60 of 128	Department of Veterans Affairs
	VA FORM 08-6231												
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PERIODIC

SPECIAL INSPECTION

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REQUIRED ON PROJECT

YES

YES

YES

YES

YES

YES

YES

TABLE N5.4-1 INSPECTION TASKS PRIOR 1	O WELDING		AISC 360-16 TABLE N5. INSPECTION TASKS PRIOR TC	•			
INSPECTION TASKS PRIOR TO WELDING	INSPECTION INTER	AL REQUIRED ON PROJECT	INSPECTION TASKS PRIOR TO BOLTING		REQUIRED ON PROJEC		
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	YES	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	0	YES		
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	Р Р	YES YES	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	0	YES		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P 0	YES	CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF	0	YES		
	0	YES	THREADS ARE TO EXCLUDED FROM SHEAR PLANE)				
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)			CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	0	YES		
 JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) 	0	YES	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL	0	YES		
TACKING (TACK WELD QUALITY AND LOCATION) FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING JOINT PREPARATIONS			PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER	P	YES		
 DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) 	Р	YES	FASTENER COMPONENTS	0	YES		
CONFIGURATION AND FINISH OF ACCESS HOLES	0	YES	AISC 360-16 TABLE N5.	<u> </u>			
 FIT-UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) 	0	YES	INSPECTION TASKS DURING				
TACKING (TACK WELD QUALITY AND LOCATION)	0		INSPECTION TASKS DURING BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJECT		
(a) THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.	A WELDER WHO HAS WELDED	A JOINT OR	FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	0	YES		
WILWIDER VAN DE IDENTIFIED. STAWPS, IF USED, SMALL BE THE LUW-STRESS TYPE.			JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING	0	YES		
			OPERATION FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING				
TABLE N5.4-2				0	YES		
INSPECTION TASKS DURING	G WELDING	1	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	0	YES		
INSPECTION TASKS DURING WELDING	INSPECTION INTERVAL	REQUIRED ON PROJECT					
JSE OF QUALIFIED WELDERS	0	YES	AISC 360-16 TABLE N5.	<u> </u>			
CONTROL AND HANDLING OF WELDING CONSUMABLES PACKAGING EXPOSURE CONTROL 	0	YES	INSPECTION TASKS AFTER E				
IO WELDING OVER CRACKED TACK WELDS	0	YES	INSPECTION TASKS AFTER BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJECT		
NVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS 	0	YES	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	Р	YES		
PRECIPITATION AND TEMPERATURE			O-OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PEN	IDING THESE INSPECTIONS.			
 VPS FOLLOWED SETTINGS ON WELDING EQUIPMENT 			P-PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.				
TRAVEL SPEED SELECTED WELDING MATERIALS	0	VEO	OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND C				
SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED	0	YES	TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORM				
 INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) PROPER POSITION (F, V, H, OH) 			 FOR STRUCTURES IN RISK CATEGORY III/IV (ASCE/SEI 7, TABLE 1.5-1), ULTRASONIC TESTIN PENETRATION GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING MM) THICK OR GREATER. 	G SHALL BE PERFORMED ON A IN BUTT, T- AND CORNER JOIN	ALL COMPLETE-JOINT- NTS, IN MATERIALS 5/16" (8		
VELDING TECHNIQUES			ALL NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL BE DOCUMENTED.				
INTERPASS AND FINAL CLEANINGEACH PASS WITHIN PROFILE LIMITATIONS	0	YES					
EACH PASS MEETS QUALITY REQUIREMENTS			SEE AISC360-16 CHAPTER N FOR ADDITIONAL WELD INSPECTION REQUIREMENTS.				
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	Р	YES	SEE AISC360-16 CHAPTER N FOR ADDITIONAL BOLT INSPECTION REQUIREMENTS.				
		1	 EXPOSED CUT SURFACES OF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS AND EXPO VISUALLY INSPECTED FOR CRACKS SUBSEQUENT TO GALVANIZING. 	JOED CORNERS OF RECIANG	UULAR HOO OHALL BE		
AISC 360-16 TABLE N	5.4-3		 INSPECTION SHALL OCCUR DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBI COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, INCLUDING DIAMETER, GRADE, TYF 				
INSPECTION TASKS AFTER	RWELDING		ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE.				
INSPECTION TASKS AFTER WELDING	INSPECTION INTERVAL	REQUIRED ON PROJECT	 FABRICATED STEEL AND ERECTED STEEL FRAMES, AS APPROPRIATE, SHALL BE INSPECTE THE CONSTRUCTION DOCUMENTS, INCLUDING BRACES, STIFFENERS, MEMBER LOCATION 				
VELDS CLEANED	0	YES					
SIZE, LENGTH AND LOCATION OF WELDS	Р	YES					
NELDS MEET VISUAL ACCEPTANCE CRITERIA:							
CRACK PROHIBITION WELD/BASE-METAL FUSION							
CRATER CROSS SECTION WELD PROFILES	Р	YES					
WELD SIZE							
UNDERCUT POROSITY							
RC STRIKES	Р	YES					
-AREA ^(a)	Р	YES					
VELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ^(b)	Р	YES					
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	YES					
REPAIR ACTIVITIES	0	YES					
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	0	YES					
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	0	YES					
WHEN WELDING OF DOUBLE PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN P	ERFORMED IN THE K-AREA, VIS	JALLY INSPECT THE					
VEB k-AREA FOR CRACKS WITHIN 3" (75 mm) OF THE WELD.							

TABLE N5.4-1 INSPECTION TASKS PRIOR TO	O WELDING		AISC 360-16 TABLE N5 INSPECTION TASKS PRIOR TO	-			
INSPECTION TASKS PRIOR TO WELDING	INSPECTION INTERV	AL REQUIRED ON PROJECT	INSPECTION TASKS PRIOR TO BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJEC		
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	YES	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	0	YES		
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	YES	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	0	YES		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE MATERIAL IDENTIFICATION (TYPE/GRADE)	P 0	YES	CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF	0	YES		
WELDER IDENTIFICATION SYSTEM ^(a)	0	YES	THREADS ARE TO EXCLUDED FROM SHEAR PLANE)	-			
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)			CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND	0	YES		
 JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) 	0	YES	HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	0	YES		
TACKING (TACK WELD QUALITY AND LOCATION) FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING JOINT PREPARATIONS			PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER	P	YES		
 DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) 	P	YES	FASTENER COMPONENTS	0	YES		
CONFIGURATION AND FINISH OF ACCESS HOLES	0	YES	AISC 360-16 TABLE N5	6-2			
 FIT-UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) 	0	YES	INSPECTION TASKS DURING				
TACKING (TACK WELD QUALITY AND LOCATION) CHECK WELDING EQUIPMENT	0		INSPECTION TASKS DURING BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJECT		
(a) THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A		A JOINT OR	FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	0	YES		
MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.			JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	0	YES		
TABLE N5.4-2			FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	0	YES		
INSPECTION TASKS DURING	WELDING		FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	0	YES		
INSPECTION TASKS DURING WELDING	INSPECTION INTERVAL	REQUIRED ON PROJECT		· · · · ·			
USE OF QUALIFIED WELDERS	0	YES	AISC 360-16 TABLE N5	6-3			
CONTROL AND HANDLING OF WELDING CONSUMABLES PACKAGING EXPOSURE CONTROL 	0	YES	INSPECTION TASKS AFTER				
NO WELDING OVER CRACKED TACK WELDS	0	YES	INSPECTION TASKS AFTER BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJECT		
ENVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS PRECIPITATION AND TEMPERATURE 	0	YES	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	Р	YES		
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) • PROPER POSITION (F, V, H, OH)	0	YES	 O-OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PE P-PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORM FOR STRUCTURES IN RISK CATEGORY III/IV (ASCE/SEI 7, TABLE 1.5-1), ULTRASONIC TESTII PENETRATION GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING MAN THORY OR OPERATED. 	COMPLETED WELDS SHALL BE IANCE WITH THE CONSTRUCTI	ON DOCUMENTS. ALL COMPLETE-JOINT-		
WELDING TECHNIQUES INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS 	0	YES	 MM) THICK OR GREATER. ALL NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL BE DOCUMENTED. SEE AISC360-16 CHAPTER N FOR ADDITIONAL WELD INSPECTION REQUIREMENTS. 				
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	Р	YES	• SEE AISC360-16 CHAPTER N FOR ADDITIONAL BOLT INSPECTION REQUIREMENTS.				
			 EXPOSED CUT SURFACES OF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS AND EXP VISUALLY INSPECTED FOR CRACKS SUBSEQUENT TO GALVANIZING. 	POSED CORNERS OF RECTANG	ULAR HSS SHALL BE		
AISC 360-16 TABLE N5 INSPECTION TASKS AFTER	-		 INSPECTION SHALL OCCUR DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EME COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, INCLUDING DIAMETER, GRADE, TY ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE. 				
INSPECTION TASKS AFTER WELDING	INSPECTION INTERVAL	REQUIRED ON PROJECT	FABRICATED STEEL AND ERECTED STEEL FRAMES, AS APPROPRIATE, SHALL BE INSPECT THE CONSTRUCTION DOCUMENTS, INCLUDING BRACES, STIFFENERS, MEMBER LOCATION				
WELDS CLEANED	0	YES					
SIZE, LENGTH AND LOCATION OF WELDS	Р	YES					
 WELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION WELD/BASE-METAL FUSION CRATER CROSS SECTION WELD PROFILES WELD SIZE UNDERCUT POROSITY 	Р	YES					
ARC STRIKES	P	YES					
k-AREA ^(a)	Р	YES					
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ^(b)	Р	YES					
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	YES					
REPAIR ACTIVITIES	0	YES					
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	0	YES					
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	0	YES					
	1	ı					
^(a) WHEN WELDING OF DOUBLE PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PEF WEB k-AREA FOR CRACKS WITHIN 3" (75 mm) OF THE WELD.	RFORMED IN THE K-AREA, VISU	ALLY INSPECT THE					

TABLE N5.4-1 INSPECTION TASKS PRIOR TO	O WELDING		AISC 360-16 TABLE N5. INSPECTION TASKS PRIOR TO		
INSPECTION TASKS PRIOR TO WELDING	INSPECTION INTERVA	L REQUIRED ON PROJECT	INSPECTION TASKS PRIOR TO BOLTING		REQUIRED ON PROJEC
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	Р	YES		0	YES
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	Р	YES	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	0	YES
IANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE IATERIAL IDENTIFICATION (TYPE/GRADE)	Р О	YES	CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF	0	YES
	0	YES	THREADS ARE TO EXCLUDED FROM SHEAR PLANE)		YES
TIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)			CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND	0	
 JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD CLIALITY AND LOCATION) 	0	YES	HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL	0	YES
TACKING (TACK WELD QUALITY AND LOCATION) FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING JOINT PREPARATIONS	Р	YES	OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER	0	YES
 DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) 			FASTENER COMPONENTS		
CONFIGURATION AND FINISH OF ACCESS HOLES FIT-UP OF FILLET WELDS	0	YES	AISC 360-16 TABLE N5.	6-2	
 DIMENSIONS (ALIGNMENT, GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) 	0	YES	INSPECTION TASKS DURING	BOLTING	
CHECK WELDING EQUIPMENT	0	-	INSPECTION TASKS DURING BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJECT
a) THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.	WELDER WHO HAS WELDED A	JOINT OR	FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	0	YES
			JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	0	YES
			FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	0	YES
TABLE N5.4-2 INSPECTION TASKS DURING	WELDING		FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	0	YES
INSPECTION TASKS DURING WELDING	INSPECTION INTERVAL	REQUIRED ON PROJECT	EDGES		
ISE OF QUALIFIED WELDERS	0	YES	AISC 360-16 TABLE N5.	6-3	
ONTROL AND HANDLING OF WELDING CONSUMABLES PACKAGING EXPOSURE CONTROL 	0	YES	INSPECTION TASKS AFTER I		
O WELDING OVER CRACKED TACK WELDS	0	YES	INSPECTION TASKS AFTER BOLTING	INSPECTION INTERVAL	REQUIRED ON PROJECT
 NVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS PRECIPITATION AND TEMPERATURE 	0	YES	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	Р	YES
 VPS FOLLOWED SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) PROPER POSITION (F, V, H, OH) 	0	YES	 P-PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND O TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORM FOR STRUCTURES IN RISK CATEGORY III/IV (ASCE/SEI 7, TABLE 1.5-1), ULTRASONIC TESTIN PENETRATION GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING MM) THICK OR GREATER. 	ANCE WITH THE CONSTRUCTI	ON DOCUMENTS. ALL COMPLETE-JOINT-
/ELDING TECHNIQUES INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS 	0	YES	 ALL NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL BE DOCUMENTED. SEE AISC360-16 CHAPTER N FOR ADDITIONAL WELD INSPECTION REQUIREMENTS. 		
LACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	Р	YES	SEE AISC360-16 CHAPTER N FOR ADDITIONAL BOLT INSPECTION REQUIREMENTS.		
			EXPOSED CUT SURFACES OF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS AND EXP VISUALLY INSPECTED FOR CRACKS SUBSEQUENT TO GALVANIZING.	DSED CORNERS OF RECTANG	ULAR HSS SHALL BE
AISC 360-16 TABLE N5 INSPECTION TASKS AFTER	-		 INSPECTION SHALL OCCUR DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMB COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, INCLUDING DIAMETER, GRADE, TYI ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE. 		
INSPECTION TASKS AFTER WELDING	INSPECTION INTERVAL	REQUIRED ON PROJECT	FABRICATED STEEL AND ERECTED STEEL FRAMES, AS APPROPRIATE, SHALL BE INSPECT THE CONSTRUCTION DOCUMENTS, INCLUDING BRACES, STIFFENERS, MEMBER LOCATION		
VELDS CLEANED	0	YES			
IZE, LENGTH AND LOCATION OF WELDS	Р	YES			
VELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION WELD/BASE-METAL FUSION CRATER CROSS SECTION WELD PROFILES WELD SIZE UNDERCUT POROSITY	Ρ	YES			
ARC STRIKES	Р	YES			
-AREA ^(a)	Р	YES			
/ELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ^(b)	Р	YES			
ACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	Р	YES			
REPAIR ACTIVITIES	0	YES			
OCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	0	YES			
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	0	YES			
WHEN WELDING OF DOUBLE PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PEF	I FORMED IN THE k-AREA, VISU/	ALLY INSPECT THE]		
VEB k-AREA FOR CRACKS WITHIN 3" (75 mm) OF THE WELD.					

--

E 1705.6 INSPECTION OF SOILS

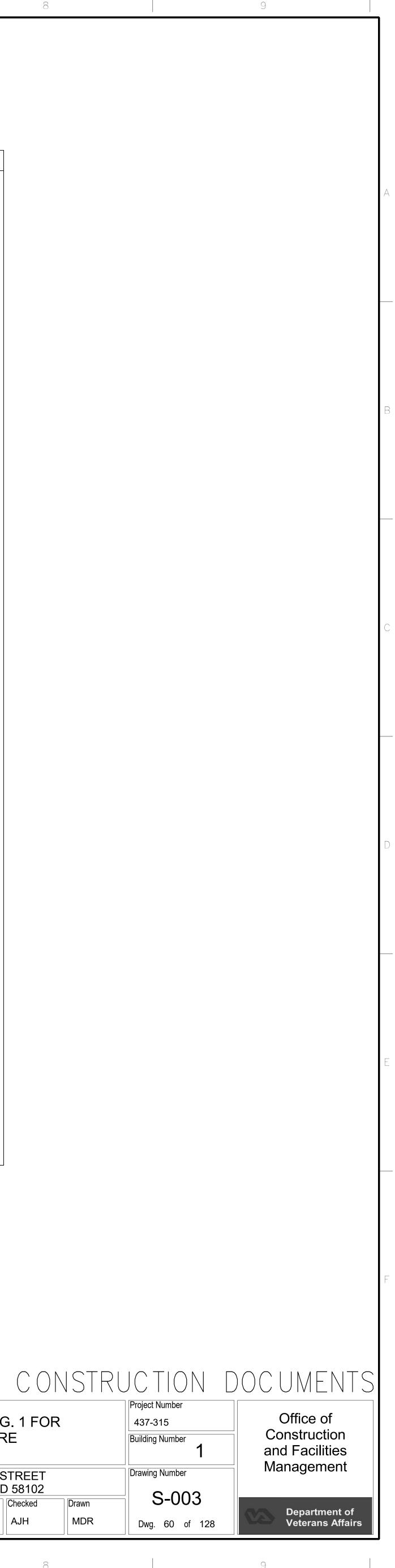
FREQUENCY (
CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REQUIRED ON PROJEC
-	X	NO
-	X	YES
-	X	YES
X	-	YES
-	X	YES

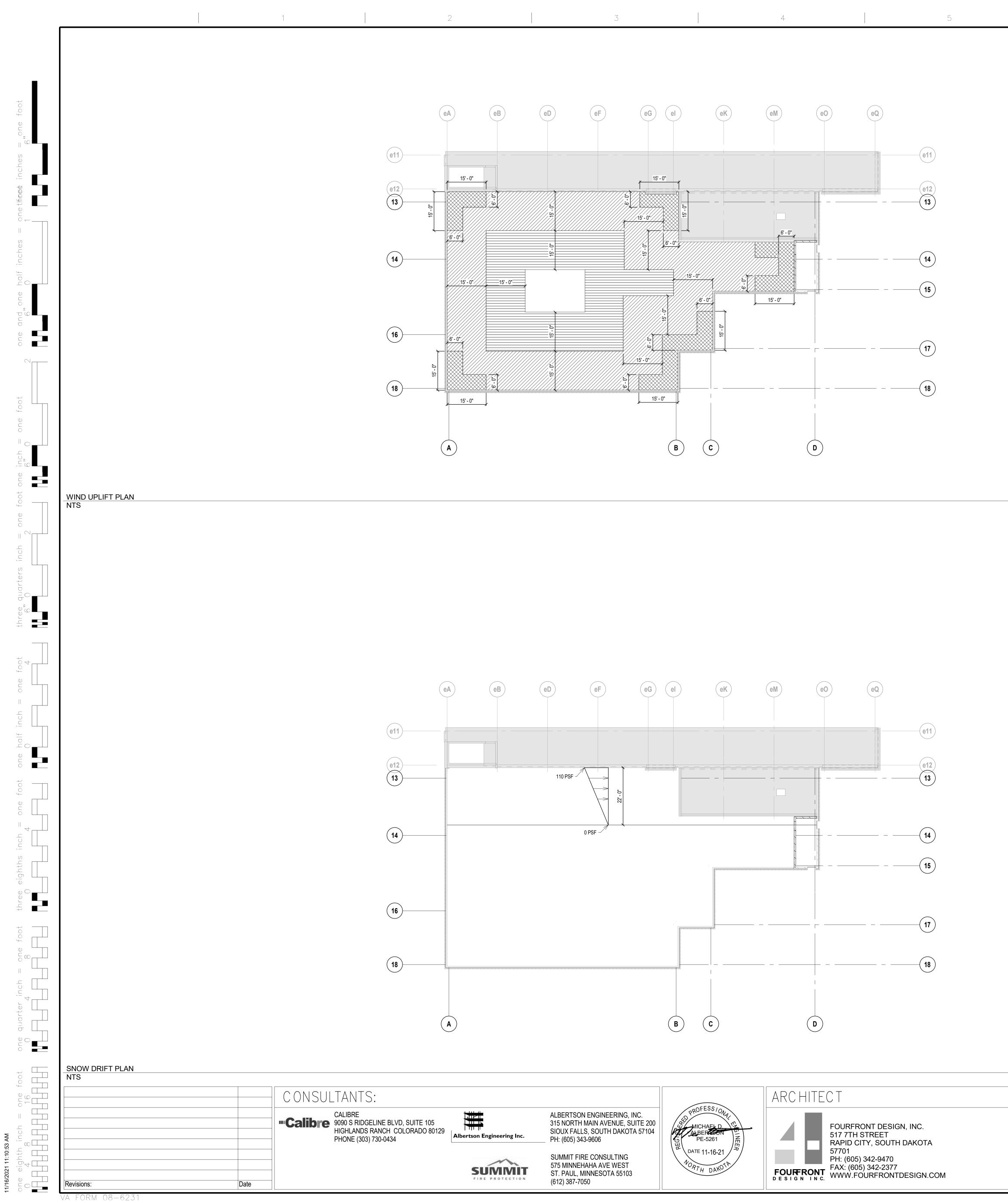
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STEEL CONSTRUCTION

Drawing Title	Project Title			Project Numbe
IBC INSPECTION TABLES	EXPAND BI	_DG. 1 FO	R	437-315
	PRIMARY C	Building Numb		
Approved: Project Director	Location 2101 EL	M STREET		Drawing Numb
FARGO VAHCS	FARGO			
	Date	Checked	Drawn	S-C
	11/16/2021	AJH	MDR	Dwg. 60





4	FORM	08-6231	





	8			
SHEET NO	DTES			
NOW DRIFT PLAN SNOW DRIFT LOADS S SERIES S-001.		I ADDITION TO I	UNIFORM SNC	W LOADS
SCHEDUL	ES			
	N	/IND U	IPLIF	T SC
	FLAT I	ROOF		PRES
	НАТСН	WIDTH	0 - 20	20 - 5
		REMAINDER	33	33
		SEE PLAN	58	55
		SEE PLAN	76	71
		SEE PLAN	104	94
	1. WIND UP	AL REMARY	ES SHOWN AF	
		WIND	COMI	PON

7

6

CONSTRUCTI

Drawing Title SNOW DRIFT AND WIND UPLIFT PLANS	Project Title EXPAND BI PRIMARY C	Project Number 437-315 Building Numbe		
Approved: Project Director FARGO VAHCS	Location 2101 EL FARGO	Drawing Numbe		
	Date 11/16/2021	Checked AJH	Drawn MDR	Dwg. 61

9

ADS INDICATED ON SHEET

WIND UPLIFT SCHEDULE									
FLAT ROOF									
		E	FFECTIVE WIN	D AREA (SQ F1	-)				
HATCH	WIDTH	0 - 20	20 - 50	50 - 100	> 100				
	REMAINDER	33	33	33	33				
	SEE PLAN	58	55	48	45				
	SEE PLAN	76	71	64	59				
	SEE PLAN	104	94	81	71				
	LIFT PRESSUR IENTS AND CLA								
	WIND CLAD	••••	SCHE						
			PRESSU	RE (PSF)					
		E	FFECTIVE WIN	D AREA (SQ F1	-)				
ZO	NE	0 - 20	20 - 50	50 - 100	> 100				
ZONE 4	PRESSURE	36	35	32	30				
	SUCTION	39	38	36	34				
ZONE 5	PRESSURE	36	35	32	30				
ZONE 0	SUCTION	48	45	41	38				
SUCTION 48 45 41 38 ADDITIONAL REMARKS: 1. WIND PRESSURES SHOWN ARE GROSS PRESSURES FOR DESIGN OF COMPONENTS AND CLADDING (FACTORED). SERVICE LOADS ARE MULTIPLIED BY 0.6.									

ON	DOCUMENTS
ber 1 Iber	Office of Construction and Facilities Management
004 of 128	Department of Veterans Affairs

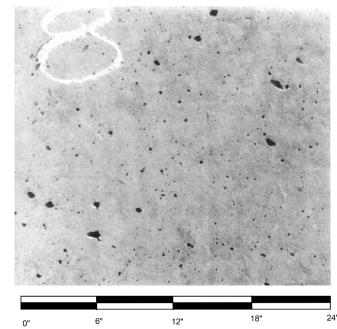
	= one foot 6,	
	from inches	
	iches = one thoet	
	and, one half inches	
	= one foot	
	t one inch	
	ch = one foot one inch	
	three quarters inch 6.0	
	= one foot	
	one half inch	
	■ one foot	
	eighths inch	
	one foot three	
	one quarter inch	
	= one foot	
11/16/2021 11:11:13 AM	one eighth inch 0 4 8 0 4 8	

			-
UNLESS SPECIFICALLY NOTED	JONCREIE FIN D OTHERWISE, THE FOLLOWING REQU	VISH SCHEDULE UIREMENTS APPLY TO ALL CAST-IN-PLA	CE AND PRECAST CONCRETE
ITEM	BASE CONCRETE SURFACE CATEGORY	MODIFICATIONS TO DEFAULT REQUIREMENTS	REMARKS
PIER CAPS	N/A		
FOOTINGS	CSC1		
GRADE BEAMS WITHOUT ANY PORTION VISIBLE	CSC1		
GRADE BEAMS WITH PORTIONS VISIBLE	CSC2		
BASEMENT WALLS	CSC2		
PRECAST ITEMS	CSC3	TEXTURE - T4 COLOR UNIFORMITY - CU4	SPECIALIZED FINISHES SUCH AS EXPOSED AGGREGATE NOT SUBJECT TO SURFACE VOID RATIO LIMITS
CONCRETE EXPOSED IN UTILITARIAN AREAS SUCH AS MECHANICAL ROOMS OR JANITOR CLOSETS	CSC2		
ALL OTHER EXPOSED CONCRETE	CSC3		
ALL OTHER CONCRETE NOT EXPOSED	CSC2		
ADDITIONAL REMARKS:			
SEE TABLE 1 - DESCRIPTION OF FOR REQUIREMENTS.	MED CONCRETE SURFACE CATEGOR	RIES, TABLE 3.1B, TABLE 3.1C, AND 3.1D	FOR ADDITIONAL SPECIFIC
SPECIALIZED FINISHES MUST HAVE	MOCK UP PANEL CONSTRUCTED AND	ISHES, ACID WASHES, COLORED CONCI) SUBMITTED FOR APPROVAL OF ARCHI HITECT SHALL BE THE SOLE JUDGE IN D	TECT. APPROVED MOCK UP PANEL
		TION PRIOR TO ANY REPAIRS. ANY REPAIRS	

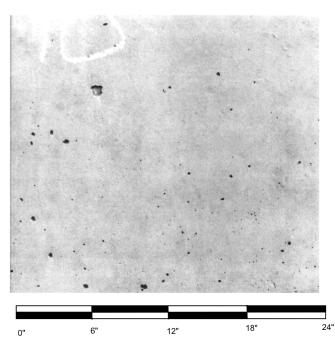
				-													
UNLESS SPECIFICALLY NOTED	D OTHERWISE, THE FOLLOWING REC	NISH SCHEDULE QUIREMENTS APPLY TO ALL CAST-IN-PLAC	CE AND PRECAST CONCRETE			-	ESCRIPTION OF VISIBLE EFFECTS ON		ESCR	IPTION OF FORM	MED CO	NCRET	E SURF	ACE CA	TEGORIE	S (CSC	
ITEM	BASE CONCRETE SURFACE CATEGORY	MODIFICATIONS TO DEFAULT REQUIREMENTS	REMARKS		CRITERION		CAST FORMED SURFACE	FORMED CONCRET		COMMON APPLICATION	TEXTURE	SURFACE		SURFACE IRREGU-	CONSTRUCTION AND FACING	MOCKUP	FORM- FACING
				-			- ACCEPTABLE GAPS IN ADJACENT FORMWORK COMPONENTS ≤ 3/4 IN.	SURFACE	CATEGORY						JOINT d	MOONO	CATEGORY ®
PIER CAPS FOOTINGS	N/A CSC1					T1	 ACCEPTABLE DEPTH OF MORTAR LOSS ≤ 1/2 IN. ACCEPTABLE SURFACE OFFSETS OF PANEL JOINTS UP TO 1 IN. (ACI 117-10, SECTION 4.8.3, CLASS D). ALLOWABLE PROJECTIONS 1 IN. FROM ADJACENT SURFACE. (ACI 301-16, SECTION 5.3.3.3.a). FORM-FACING MATERIAL EXAMPLES: ROUGH SAWN LUMBER, CDX PLYWOOD, AND PARTICLE BOARD. 			CONCRETE SURFACES IN AREAS WITH NO VISIBILITY OR OF LIMITED IMPORTANCE WITH REGARD TO FORMED CONCRETE SURFACE							
GRADE BEAMS WITHOUT ANY PORTION VISIBLE	CSC1						 - IMPRINTS OF MODULAR PANEL FRAMES ARE ACCEPTABLE. - ACCEPTABLE GAPS IN ADJACENT FORMWORK COMPONENTS ≤ 1/2 IN. - ACCEPTABLE DEPTH OF MORTAR LOSS ≤ 3/8 IN. - ACCEPTABLE SURFACE OFFSETS OF PANEL JOINTS UP TO 1/2 IN. (ACI 117-10, SECTION 4.8.3, CLASS C). 		CSC1	REQUIREMENTS, OR COVERED WITH SUBSEQUENT FINISH MATERIALS CAPABLE OF ACCOMMODATING THE	T1	SVR1	CU1	SI1	CJ1	OPTIONAL	FC1
GRADE BEAMS WITH PORTIONS VISIBLE	CSC2				TEXTURE PANEL-JOINT	12	 ALLOWABLE PROJECTIONS 1/2 IN. FROM ADJACENT SURFACE. FORM-FACING MATERIAL EXAMPLES: CLASS BBOES PLYWOOD, MDO PLYWOOD. IMPRINTS OF MODULAR PANEL FRAMES ARE ACCEPTABLE. 	E		TOLERANCES OF THIS CATEGORY CONCRETE SURFACES WHERE							
BASEMENT WALLS	CSC2		SPECIALIZED FINISHES SUCH AS			ТЗ	 ACCEPTABLE GAPS IN ADJACENT FORMWORK COMPONENTS ≤ 1/4 IN. ACCEPTABLE DEPTH OF MORTAR LOSS ≤ 1/4 IN. ACCEPTABLE SURFACE OFFSETS OF PANEL JOINTS UP TO 1/4 IN. (ACI 117-10, SECTION 4.8.3, CLASS B). ALLOWABLE PROJECTIONS 1/4 IN. FROM ADJACENT SURFACE. (ACI 301-16, SECTION 5.3.3.3.b). 	je finish w	CSC2	VISUAL APPEARANCE IS EXPOSED BUT NOT TO PUBLIC VIEW OR OTHERWISE SPECIFIED	T2	SVR2	CU2	SI2	CJ2	OPTIONAL	FC1
PRECAST ITEMS	CSC3	TEXTURE - T4 COLOR UNIFORMITY - CU4	EXPOSED AGGREGATE NOT SUBJECT TO SURFACE VOID RATIO LIMITS				- FORMWORK SHOULD BE GROUT TIGHT. AVOID GROUT / MORTAR LEAKAGE AND CORRECT WHERE OCCURS.	TE SURFAC		CONCRETE SURFACES THAT ARE IN PUBLIC VIEW OR WHERE APPEARANCE IS IMPORTANT.							
CONCRETE EXPOSED IN UTILITARIAN AREAS SUCH AS MECHANICAL ROOMS OR JANITOR CLOSETS	CSC2					Τ4	 PERMISSIBLE SURFACE OFFSETS OF PANEL JOINTS UP TO 1/8 IN. (ACI 117-10, SECTION 4.8.3, CLASS A). ALLOWABLE PROJECTIONS 1/8 IN. FROM ADJACENT SURFACE. (ACI 301-16, SECTION 5.3.3.3.C). FORM-FACING MATERIAL EXAMPLES: HDO PLYWOOD, PSF PLYWOOD, FULL PLASTIC, STEEL AND FIBERGLASS. IMPRINTS OF MODULAR PANEL FRAMES ARE UNACCEPTABLE UNLESS DEMONSTRATED AND APPROVED IN THE MOCKUP. 			SUCH AS EXTERIOR OR INTERIOR EXPOSED BUILDING ELEMENTS.	T3	SVR3	CU3	SI3	CJ3	REQUIRED	FC2
ALL OTHER EXPOSED CONCRETE	CSC3				SURFACE VOID RATIO (SVR)	SVR1-SVR4	- REFER TO TABLE 3.1D.		CSC4	THE EXPOSED CONCRETE IS A PROMINENT FEATURE OF THE	ТА	SVR4	CU4	SI4	CJ4	REQUIRED	FC3
ALL OTHER CONCRETE NOT EXPOSED	CSC2			_		CU1	 LIGHT AND DARK COLOR VARIATIONS ARE ACCEPTABLE. COLOR VARIATIONS BETWEEN ADJACENT PLACEMENTS AND LAYER LINES ARE ACCEPTABLE. RUST AND DIRT STAINS ARE ACCEPTABLE. 			COMPLETED STRUCTURE OR VISUAL APPEARANCE IS IMPORTANT.		UNA		UH.	004		
ADDITIONAL REMARKS: SEE TABLE 1 - DESCRIPTION OF FOR REQUIREMENTS. SPECIALIZED FINISHES INCLUDE EXF SPECIALIZED FINISHES MUST HAVE N TO BE USED AS A BASIS FOR THE AC	POSED AGGREGATE, SANDBLAST FI MOCK UP PANEL CONSTRUCTED AN	DRIES, TABLE 3.1B, TABLE 3.1C, AND 3.1D F NISHES, ACID WASHES, COLORED CONCR ID SUBMITTED FOR APPROVAL OF ARCHIT CHITECT SHALL BE THE SOLE JUDGE IN DI	RETE, AND OTHER SIMILAR ITEMS. TECT. APPROVED MOCK UP PANEL			CU2	 GRADUAL LIGHT AND DARK COLOR VARIATIONS ARE ACCEPTABLE. COLOR CONSISTENCY BETWEEN ADJACENT PLACEMENTS AND LAYER LINES SHOULD BE MOSTLY UNIFORM. MAXIMUM TONAL VARIATION FOR CONCRETE SHALL BE CONTAINED WITHIN 3 TONAL RANGES (FOR EXAMPLE LIGHTEST BEING 2.0 AND DARKEST BEING 4.0). CONCRETE SOURCE MATERIALS AND FORM-FACING MATERIAL SHOULD BE CONSISTENT TYPE, GRADE, AND SOURCE TO AVOID CAUSING DEVIATIONS IN APPEARANCE. RUST AND DIRT STAINS ARE ACCEPTABLE. 	b. VOID AREA OF	REMENTS/ FEATU PORES SURFAC DNS CAN USUALL	JRES ARE DESCRIBED IN DETAIL IN TABL CE. REFER TO TABLE 3.1D LY BE SEEN ONLY AFTER A LONGER PER		OR AT LEAST 8 WE	EKS.				
		ATION PRIOR TO ANY REPAIRS. ANY REP E AT THE DISCRETION OF THE ARCHITECT			COLOR UNIFORMITY	CU3	- RUST AND DIRT STAINS ARE ACCEPTABLE. - DISCOLORATIONS CAUSED BY CONCRETE SOURCE MATERIAL OF DIFFERENT TYPE AND ORIGIN, DIFFERENT TYPES OF FACING MATERIALS, OR INCONSISTENT TREATMENT OF CONCRETE SURFACES ARE UNACCEPTABLE. - MAXIMUM TONAL VARIATION FOR CONCRETE SHALL BE CONTAINED WITHIN 2 TONAL RANGES (FOR EXAMPLE	e. REFER TO TAE UNLESS OTHERW	BLE 3.1C. /ISE SPECIFIED, ⁻	THE REQUIREMENTS GIVEN APPLY TO C RUCTURAL CAST-IN-PLACE SLABS. REQ			, .				OF SLABS ON
TOLERANCES SPECIFIED IN ACI 117, AREAS OF CONFLICT, THESE TABLES		L STILL APPLY TO ALL CONCRETE SURFAC AND GUIDE.	CES IN THIS PROJECT, BUT IN				- MAXIMUM TONAL VARIATION FOR CONCRETE SHALL BE CONTAINED WITHIN 2 TONAL RANGES (FOR EXAMPLE LIGHTEST BEING 2.0 AND DARKEST BEING 3.0). - RUST STAINS, DIRT STAINS AND VISIBLE POURING LAYERS ARE UNACCEPTABLE. - DISCOLORATIONS CAUSED BY CONCRETE SOURCE MATERIAL OF DIFFERENT TYPE AND ORIGIN, DIFFERENT	SPECIALIZED FIN	SHES, AND THE	MEANS AND METHODS USED TO OBTAIN DE, BUT ARE NOT LIMITED TO, CHEMICAL	THOSE SURFACES	5, SHALL NOT AFFE	CT ANY SURFACES E	XCEPT FOR THE SF	ECIFIC SURFACES SPEC	IFIED. EXAMPLES	OF
						CU4	TYPES OF FACING MATERIALS, OR INCONSISTENT TREATMENT OF CONCRETE SURFACES ARE UNACCEPTABLE. - MAXIMUM TONAL VARIATION FOR CONCRETE SHALL BE CONTAINED WITHIN 1 TONAL RANGE (FOR EXAMPLE LIGHTEST BEING 2.0 AND DARKEST BEING 2.5 OR LIGHTEST BEING 1.5 AND DARKEST BEING 2.0).										
	TABLE 3.1C	- FORM-FACING		5		04	- RUST STAINS, DIRT STAINS AND VISIBLE POURING LAYERS ARE UNACCEPTABLE. - ACI 117-10, SECTION 4.8.3, CLASS D - SURFACE. - MAXIMUM GRADUAL DEVIATION OVER A DISTANCE OF 5 FT. OR ABRUPT DEVIATION IS 1 IN.										
CRITERION	FC1	FORM-FACING CATE		FC3		SII	- LIMIT DEFLECTION OF FORMWORK STRUCTURE TO L/240. - ACI 117-10, SECTION 4.8.2 DOES NOT APPLY.										
HOLES, GREATER THAN 3/16 IN.	PLUG OR DISK COVERS ARE ACCEPTABLE	ACCEPTABLE IF PATCHED, SANDED GROUNDED TO MATCH ADJACENT F		BLE FILLING IS UNACCEPTABLE		SI2	 ACI 117-10, SECTION 4.8.3, CLASS C - SURFACE. MAXIMUM GRADUAL DEVIATION OVER A DISTANCE OF 5 FT. OR ABRUPT DEVIATION IS 1/2 IN. LIMIT DEFLECTION OF FORMWORK STRUCTURE TO L/360. ACI 117-10, SECTION 4.8.2 DOES NOT APPLY. 										
HOLES, 3/16 IN. OR LESS	ACCEPTABLE	ACCEPTABLE WITHOUT PATCHING, F SURFACE IS NOT DAMAGED OR TORN		IF PATCHED, SANDED AND SEALED OR TO MATCH ADJACENT FORM SURFACE	SURFACE IRREGULARITIES ^a	SI3	- ACI 117-10, SECTION 4.8.3, CLASS B - SURFACE. - MAXIMUM GRADUAL DEVIATION OVER A DISTANCE OF 5 FT. OR ABRUPT DEVIATION IS 1/4 IN. - LIMIT DEFLECTION OF FORMWORK STRUCTURE TO L/360.										
VIBRATOR BURNS	ACCEPTABLE	UNACCEPTABLE		UNACCEPTABLE			- ACI 117-10, SECTION 4.8.2 DOES NOT APPLY. - ACI 117-10, SECTION 4.8.3, CLASS A - SURFACE.										
SCRATCHES / DENTS	ACCEPTABLE	ACCEPTABLE IF PATCHED, SANDED / GROUNDED TO MATCH ADJACENT F		ABLE UNLESS OTHERWISE APPROVED		SI4	- MAXIMUM GRADUAL DEVIATION OVER A DISTANCE OF 5 FT. OR ABRUPT DEVIATION IS 1/8 IN. - LIMIT DEFLECTION OF FORMWORK STRUCTURE TO L/400. - ACI 117-10, SECTION 4.8.2 DOES APPLY.										
CONCRETE REMNANTS ^a	ACCEPTABLE	UNACCEPTABLE		UNACCEPTABLE		CJ1 CJ2	- ACCEPTABLE OFFSET OF SURFACES BETWEEN TWO ADJACENT PLACEMENTS ≤ 1 IN. - ACCEPTABLE OFFSET OF SURFACES BETWEEN TWO ADJACENT PLACEMENTS ≤ 1/2 IN. THE LISE OF CHAMFED STRIPS OF SUMMAR DEVELOPMENTS.										
CEMENT RESIDUE ^b	ACCEPTABLE	ACCEPTABLE	SHOULD NOT A	AFFECT FINISHED CONCRETE SURFACE			- THE USE OF CHAMFER STRIPS OR SIMILAR REVEALS ARE RECOMMENDED AT CONSTRUCTION JOINTS. - ACCEPTABLE OFFSET OF SURFACES BETWEEN TWO ADJACENT PLACEMENTS ≤ 1/4 IN.										
SWELLING OF FACING AT FASTENER OR TIE HOLES	ACCEPTABLE	UNACCEPTABLE		UNACCEPTABLE	CONSTRUCTION AND FACING JOINTS ^b	CJ3	- ACCEPTABLE OFFSET OF SORFACES BETWEEN TWO ADJACENT FLACEMENTS \$ 1/4 IN. - THE USE OF CHAMFER STRIPS OR SIMILAR REVEALS ARE RECOMMENDED AT CONSTRUCTION JOINTS. - CONSTRUCTION JOINT LOCATIONS SHOULD BE COORDINATED WITH ARCHITECTURAL DESIGN										
	ACCEPTABLE	ACCEPTABLE	SHOULD NOT A	AFFECT FINISHED CONCRETE SURFACE		CJ4	 ACCEPTABLE OFFSET OF SURFACES BETWEEN TWO ADJACENT PLACEMENTS ≤ 1/8 IN. OFFSETS LESS THAN 1/8 IN. SHOULD BE SPECIFIED IN DESIGN DOCUMENTS. THE USE OF CHAMFER STRIPS OR SIMILAR REVEALS ARE RECOMMENDED AT CONSTRUCTION JOINTS. CONSTRUCTION JOINT LOCATIONS SHOULD BE COORDINATED WITH ARCHITECTURAL DESIGN AND 										
ADDITIONAL REMARKS: a. CONCRETE REMNANT IS HARDENE	ED CONCRETE ON THE FORM FACE.						- CONSTRUCTION JOINT LOCATIONS SHOULD BE COORDINATED WITH ARCHITECTURAL DESIGN AND APPROVED BY ARCHITECT OR ENGINEER. - THE MOCKUP SHOULD CONTAIN ALL FEATURES REPRESENTATIVE TO THE FINISHED PRODUCT.										
b. CEMENT RESIDUE IS A THIN FILM R	REMAINING ON THE FORM FACE.				ADDITIONAL REMARKS:												
c. PERFORM AND INSPECT REPAIRS (OF FORM FACING AND MAKE ACCEP	PTABLE FOR THE INTENDED FORMED CON	ICRETE SURFACE.		a. SURFACE IRREGULARITIES I	DO NOT APPLY FOR WO	DRKED OR TEXTURED AREAS.										
					b. CONSTRUCTION JOINTS THA	T REMAIN VISIBLE. LIM	ITS ALSO APPLY TO VERTICAL OFFSET OF FORMWORK, REVEALS, FINISH LIMITS, ETC.										

TABLE 3.1D - CONCRETE SURFACE VOID RATIO (SVR) ON AS-CAST FORMED SURFACES									
SURFACE VOID RATIO	SVR1	SVR2	SVR3	SVR4					
VOID AREA OF PORES OF SURFACE [®] OCCURRING WITHIN A 24 IN. x 24 IN. SQUARE	6.9 IN. ² , Dmax = 3/4 IN.	5.8 IN.², Dmax = 5/8 IN.	3.5 IN. ² , Dmax = 3/8 IN.	1.7 IN.², Dmax = 1/4 IN.					
ADDITIONAL REMARKS:									

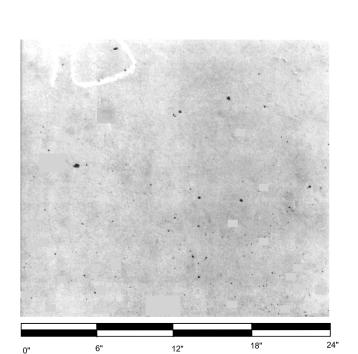
* VOID AREA IS THE SUMMATION OF THE AREAS OF ALL VOIDS WITHIN THE SAMPLE SPACE OF 24 IN. x 24 IN. VOIDS WITH AN AVERAGE DIAMETER OF d < 3/32 IN. ARE EXCLUDED FROM THE CALCULATION OF THE VOID AREA. Dmax IS MAXIMUM DIMENSION OF ANY VOID IN ANY DIRECTION.



24" x 24" CONCRETE SURFACE VOID RATIO -MAX VOID RATIO FOR SVR1



24" x 24" CONCRETE SURFACE VOID RATIO -MAX VOID RATIO FOR SVR2



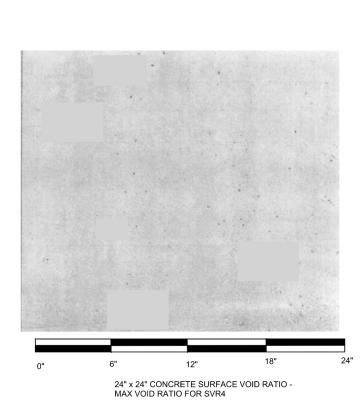
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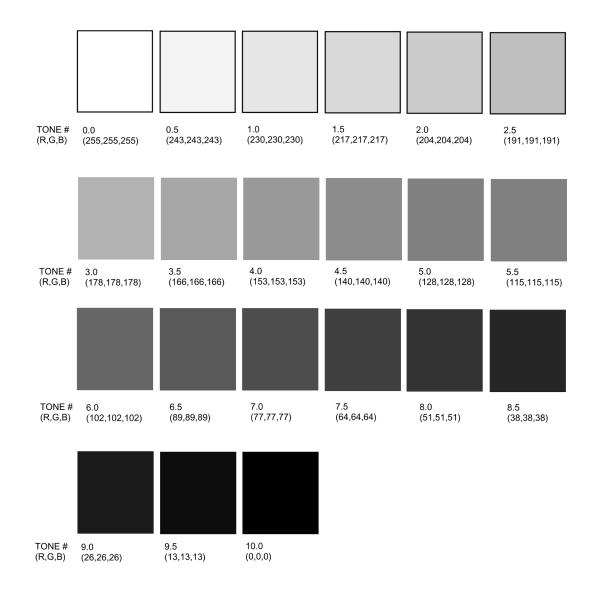
24" x 24" CONCRETE SURFACE VOID RATIO -MAX VOID RATIO FOR SVR3

SUMMIT FIRE CONSULTING

575 MINNEHAHA AVE WEST

ST. PAUL, MINNESOTA 55103 (612) 387-7050





PROFESS/ ALBERTSON ENGINEERING, INC. 315 NORTH MAIN AVENUE, SUITE 200 SIOUX FALLS, SOUTH DAKOTA 57104 PH: (605) 343-9606

MICHAEL D. ALBERTSON G PE-5261 NORTH DAKO

ARCHITECT

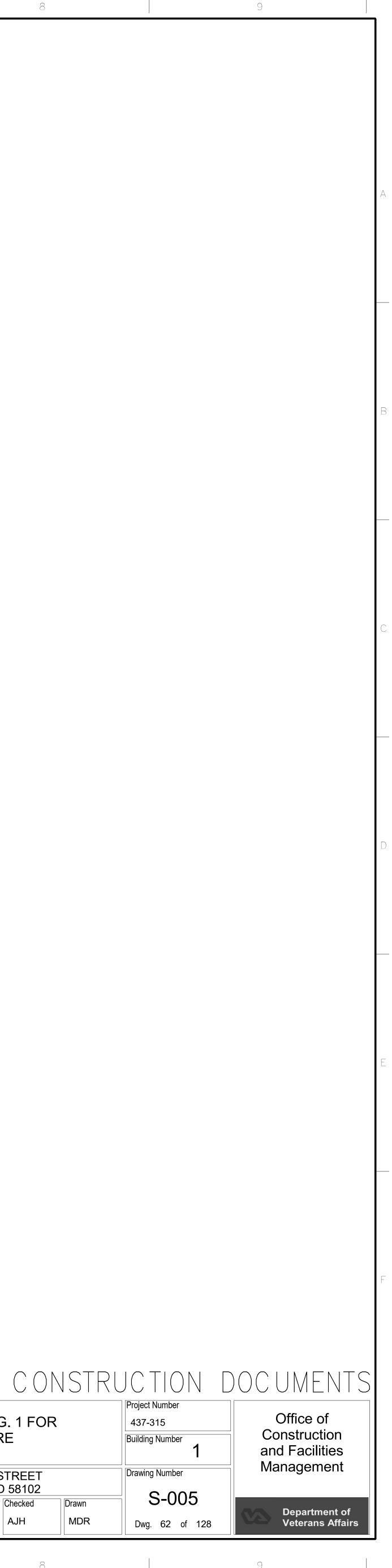


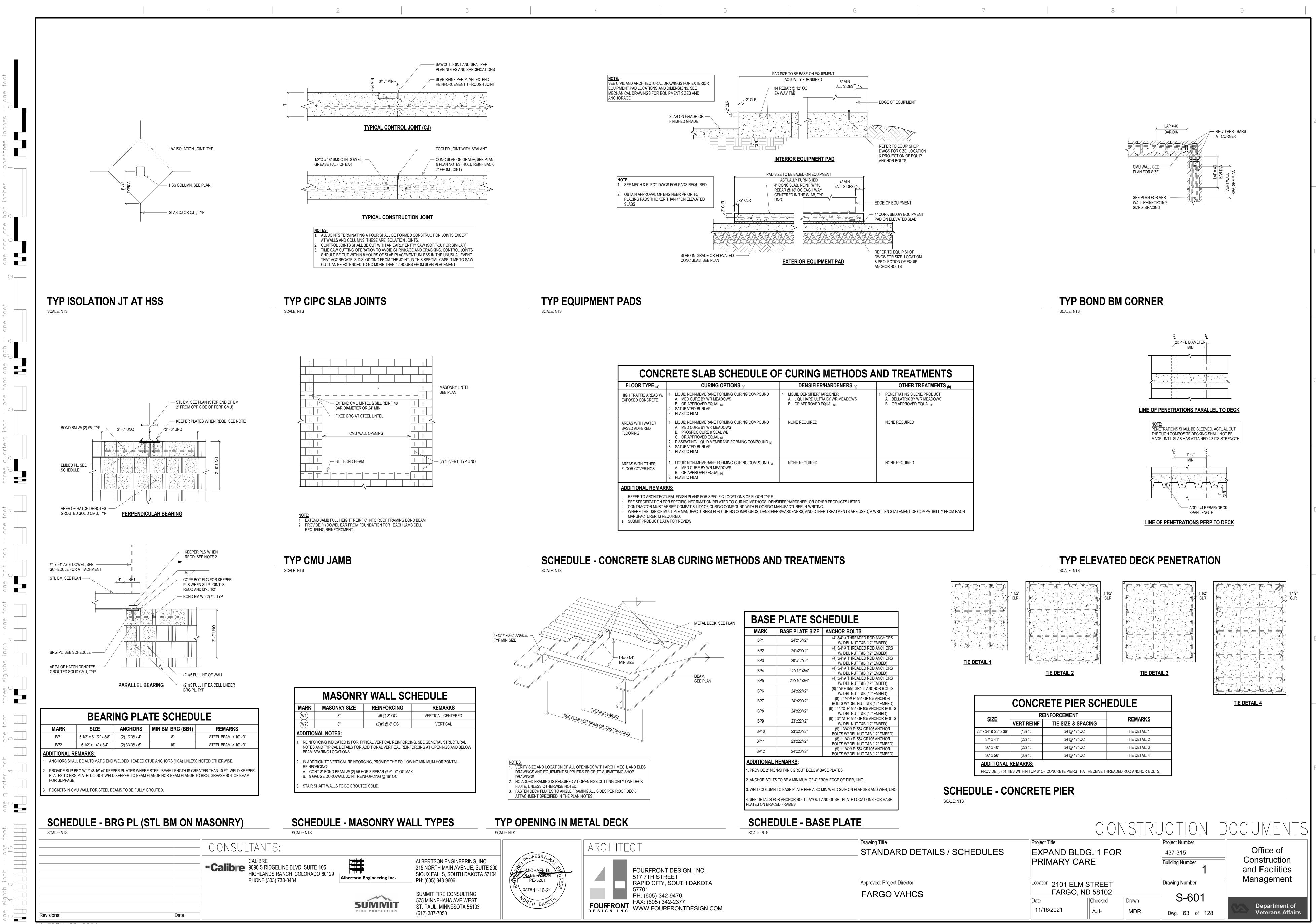
FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA FOURFRONT DESIGNINC. FOURFRONT DESIGNINC.

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Project Number

 Drawing Title CONCRETE SURFACE REQUIREMENTS	Project Title EXPAND BLDC PRIMARY CAR	Project Number 437-315 Building Number		
Approved: Project Director FARGO VAHCS	Location 2101 ELM S FARGO, NE		Drawing Numbe	
	Date 11/16/2021	Checked AJH	Drawn MDR	Dwg. 62





VA FORM 08-6231

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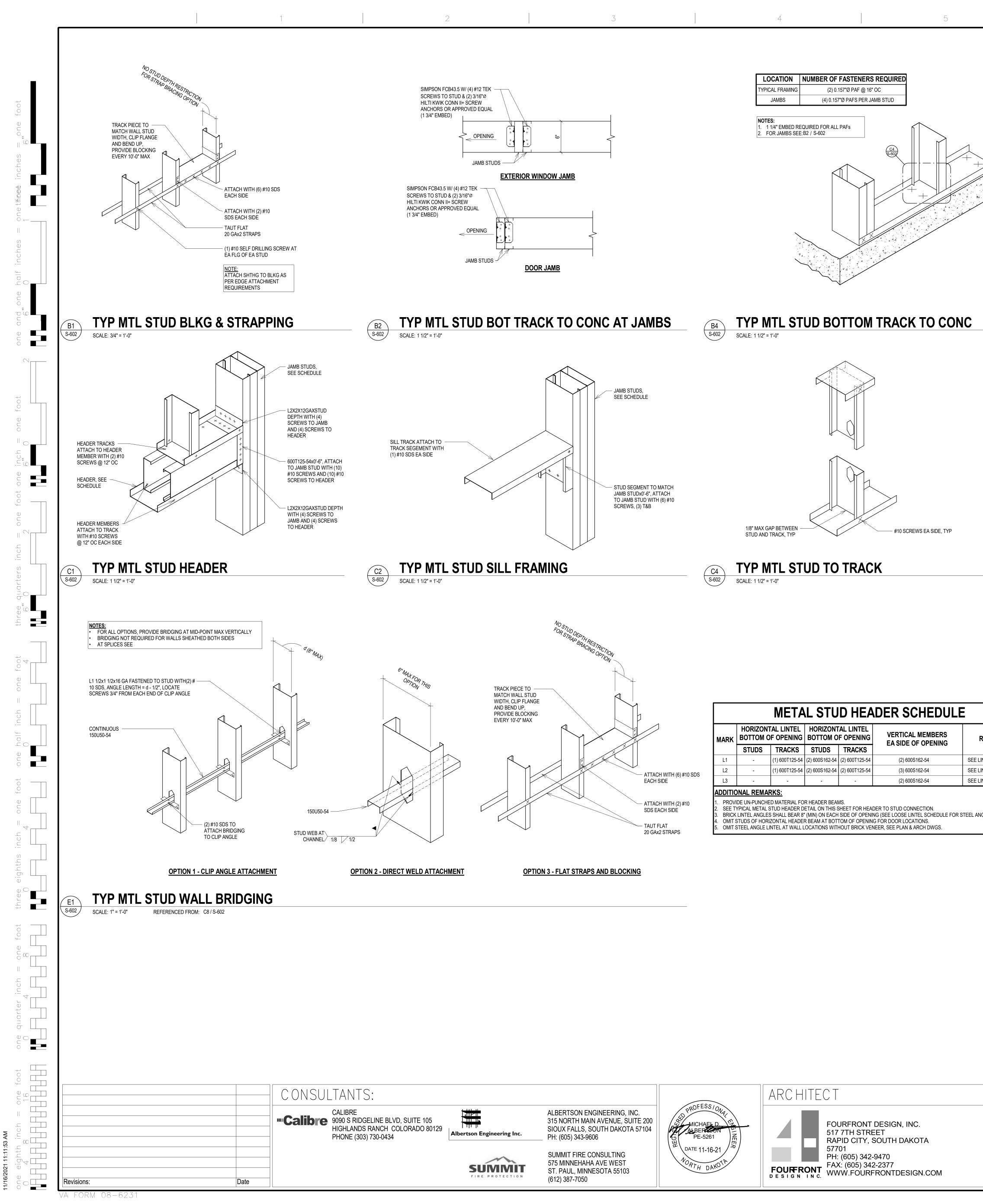
CONC	RETE SLAB SCHEDULE OF	= (
FLOOR TYPE (a)	CURING OPTIONS (b)							
HIGH TRAFFIC AREAS W/ EXPOSED CONCRETE	 LIQUID NON-MEMBRANE FORMING CURING COMPOUND MED CURE BY WR MEADOWS OR APPROVED EQUAL (e) SATURATED BURLAP PLASTIC FILM 	1. /						
AREAS WITH WATER BASED ADHERED FLOORING	 LIQUID NON-MEMBRANE FORMING CURING COMPOUND MED CURE BY WR MEADOWS PROSPEC CURE & SEAL WB OR APPROVED EQUAL (e) DISSIPATING LIQUID MEMBRANE FORMING COMPOUND (c) SATURATED BURLAP PLASTIC FILM 	ſ						
AREAS WITH OTHER FLOOR COVERINGS	 LIQUID NON-MEMBRANE FORMING CURING COMPOUND (c) A. MED CURE BY WR MEADOWS B. OR APPROVED EQUAL (e) PLASTIC FILM 	ſ						
ADDITIONAL REMARK	<u> </u>							
 ADDITIONAL REMARKS: a. REFER TO ARCHITECTURAL FINISH PLANS FOR SPECIFIC LOCATIONS OF FLOOR TYPE. b. SEE SPECIFICATION FOR SPECIFIC INFORMATION RELATED TO CURING METHODS, DENSIFIER/H c. CONTRACTOR MUST VERIFY COMPATIBILITY OF CURING COMPOUND WITH FLOORING MANUFA d. WHERE THE USE OF MULTIPLE MANUFACTURERS FOR CURING COMPOUNDS, DENSIFIERS/HAR MANUFACTURER IS REQUIRED. e. SUBMIT PRODUCT DATA FOR REVIEW 								



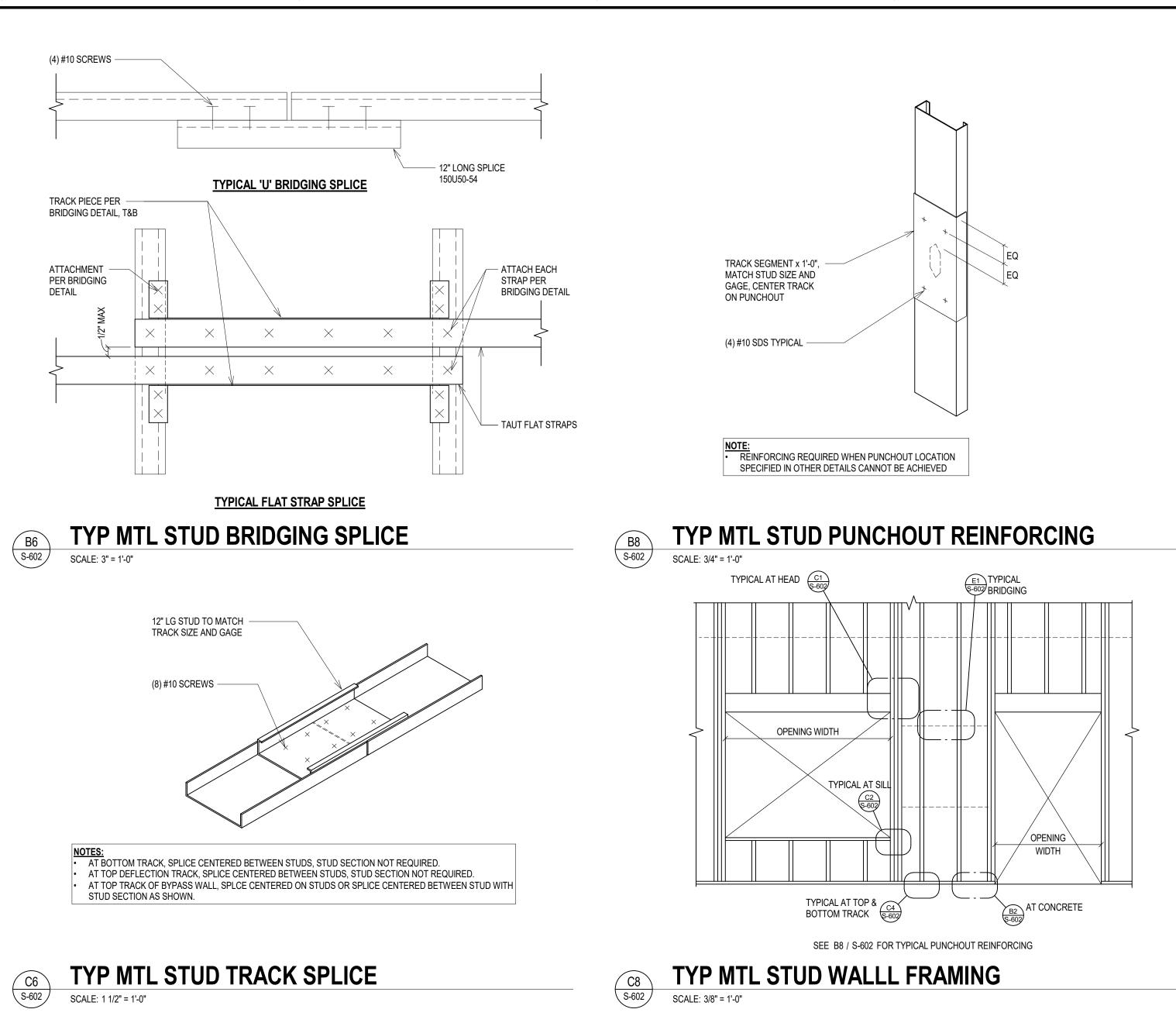
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LATE SC	HEDULE			1 1/2" CLR		1 1/2" CLR		
ASE PLATE SIZE 24"x16"x2" 24"x20"x2"	ANCHOR BOLTS (4) 3/4"Ø THREADED ROD ANCHORS W/ DBL NUT T&B (12" EMBED) (4) 3/4"Ø THREADED ROD ANCHORS W/ DBL NUT T&B (12" EMBED)							
20"x12"x2"	(4) 3/4"Ø THREADED ROD ANCHORS W/ DBL NUT T&B (12" EMBED)	<u>TIE D</u>	DETAIL 1					
12"x12"x3/4"	(4) 3/4"Ø THREADED ROD ANCHORS W/ DBL NUT T&B (12" EMBED)				<u>TIE DETAIL 2</u>		<u>TIE DETA</u>	<u>IL 3</u>
20"x10"x3/4"	(4) 3/4"Ø THREADED ROD ANCHORS W/ DBL NUT T&B (12" EMBED)							
24"x22"x2"	(8) 1"Ø F1554 GR105 ANCHOR BOLTS W/ DBL NUT T&B (12" EMBED)							
24"x20"x2"	(8) 1 1/4"Ø F1554 GR105 ANCHOR BOLTS W/ DBL NUT T&B (12" EMBED)			CON	CRETE PIER	SCHEDU	JLE	
24"x20"x2"	(9) 1 1/2"Ø F1554 GR105 ANCHOR BOLTS W/ DBL NUT T&B (12" EMBED)				REINFORCEMENT			
23"x22"x2"	(9) 1 3/4"Ø F1554 GR105 ANCHOR BOLTS W/ DBL NUT T&B (12" EMBED)		SIZE	VERT REI			REMARKS	
23"x20"x2"	(9) 1 3/4"Ø F1554 GR105 ANCHOR BOLTS W/ DBL NUT T&B (12" EMBED)		28" x 34" & 28" x 36"	(18) #5	#4 @ 12" OC		TIE DETAIL 1	
23"x22"x2"	(8) 1 1/4"Ø F1554 GR105 ANCHOR BOLTS W/ DBL NUT T&B (12" EMBED)		37" x 41"	(22) #5	#4 @ 12" OC		TIE DETAIL 2	
24"x20"x2"	(9) 1 1/4"Ø F1554 GR105 ANCHOR		36" x 40"	(22) #5	#4 @ 12" OC		TIE DETAIL 3	
IARKS:	BOLTS W/ DBL NUT T&B (12" EMBED)		36" x 56"	(30) #5	#4 @ 12" OC		TIE DETAIL 4	
RINK GROUT BELOW BA	ASE PLATES.		ADDITIONAL		P 6" OF CONCRETE PIERS THAT	RECEIVE THREADED		
3E A MINIMUM OF 4" FR	OM EDGE OF PIER, UNO.							
ASE PLATE PER AISC M	IIN WELD SIZE ON FLANGES AND WEB, UNO.	SCHED	ULE - CO	ONCR	ETE PIER			
NCHOR BOLT LAYOUT A RAMES.	ND GUSET PLATE LOCATIONS FOR BASE	SCALE: NTS	<u> </u>					
	E PLATE	-				CON	ISTRU	JC TIC
	Drawing Title			P	Project Title			Project Number
	STANDAF	RD DETAILS / SCHE	DULES	E	EXPAND BLDO	G. 1 FOR		437-315
				F	PRIMARY CAF	RE		Building Number
	Approved: Project	Director			ocation 2101 ELM S	STREET		Drawing Numbe
	FARGO V	/AHCS			FARGO, NE			S-60
					Date	Checked	Drawn	
					11/16/2021	AJH	MDR	Dwg. 63

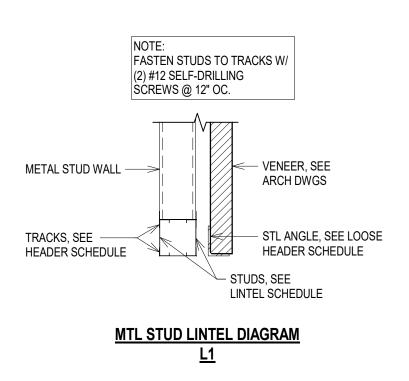
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MARK		TAL LINTEL DF OPENING	HORIZONT	AL LINTEL F OPENING	VERTICAL MEMBERS EA SIDE OF OPENING	REMARKS				
1	STUDS	TRACKS	STUDS	TRACKS	EA SIDE OF OPENING					
L1	-	(1) 600T125-54	(2) 600S162-54	(2) 600T125-54	(2) 600S162-54	SEE LINTEL SECTION L1				
L2	-	(1) 600T125-54	(2) 600S162-54	(2) 600T125-54	(3) 600S162-54	SEE LINTEL SECTION L1				
L3	-	-	-	-	(2) 600S162-54	SEE LINTEL SECTION L1				
1. PROVI 2. SEE T 3. BRICK	DDITIONAL REMARKS: PROVIDE UN-PUNCHED MATERIAL FOR HEADER BEAMS. SEE TYPICAL METAL STUD HEADER DETAIL ON THIS SHEET FOR HEADER TO STUD CONNECTION. BRICK LINTEL ANGLES SHALL BEAR 8" (MIN) ON EACH SIDE OF OPENING (SEE LOOSE LINTEL SCHEDULE FOR STEEL ANGLE SIZES). OMIT STUDS OF HORIZONTAL HEADER BEAM AT BOTTOM OF OPENING FOR DOOR LOCATIONS.									



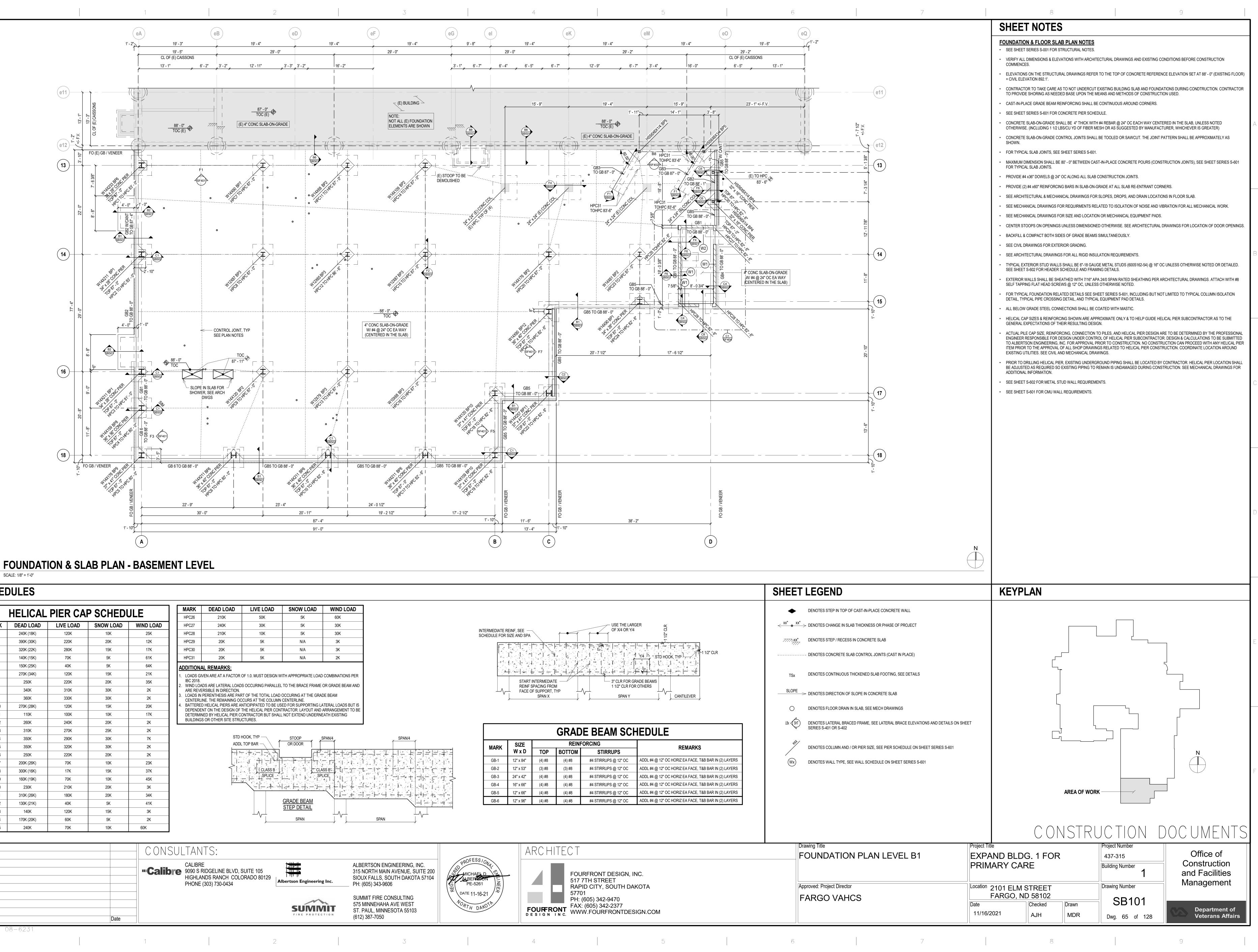
LOOSE LINTEL SCHEDULE				
MAXIMUM OPENING SIZE OF ANGLES PER 4" MASONRY				
≤ 4' - 0"	GALV 5"x3 1/2"x1/4" (LLV)			
≤ 5' - 6"	GALV 6"x4"x5/16" (LLV)			
≤ 7' - 6"	GALV 7"x4"x3/8" (LLV)			
ADDITIONAL REMARKS:				
 PROVIDE 8" MINIMUM BEARING EACH END, UNLESS NOTED OTHERWISE. LINTEL SIZES SHALL BE USED FOR ALL MASONRY OPENINGS IN EXTERIOR BRICK VENEER OTHERWISE SHOWN OR NOTED. PROVIDE CLOSURE PLATES BETWEEN LOOSE LINTEL AND WALL AS PER ARCH DWGS. 				



Drawing Title	Project Title			Project Number
METAL STUD DETAILS / SCHEDULES	EXPAND BL	DG. 1 FOF	२	437-315
	PRIMARY C	ARE		Building Numbe
Approved: Project Director				Drawing Numbe
Approved: Project Director	Location 2101 ELN			
FARGO VAHCS	FARGO,	ND 58102		S-6
	Date	Checked	Drawn	3-0
	11/16/2021	AJH	JAB	Dwg. 64



CONSTRUCTION DOCUMENTS Office of Construction and Facilities Management 602 Department of of 128 Veterans Affairs

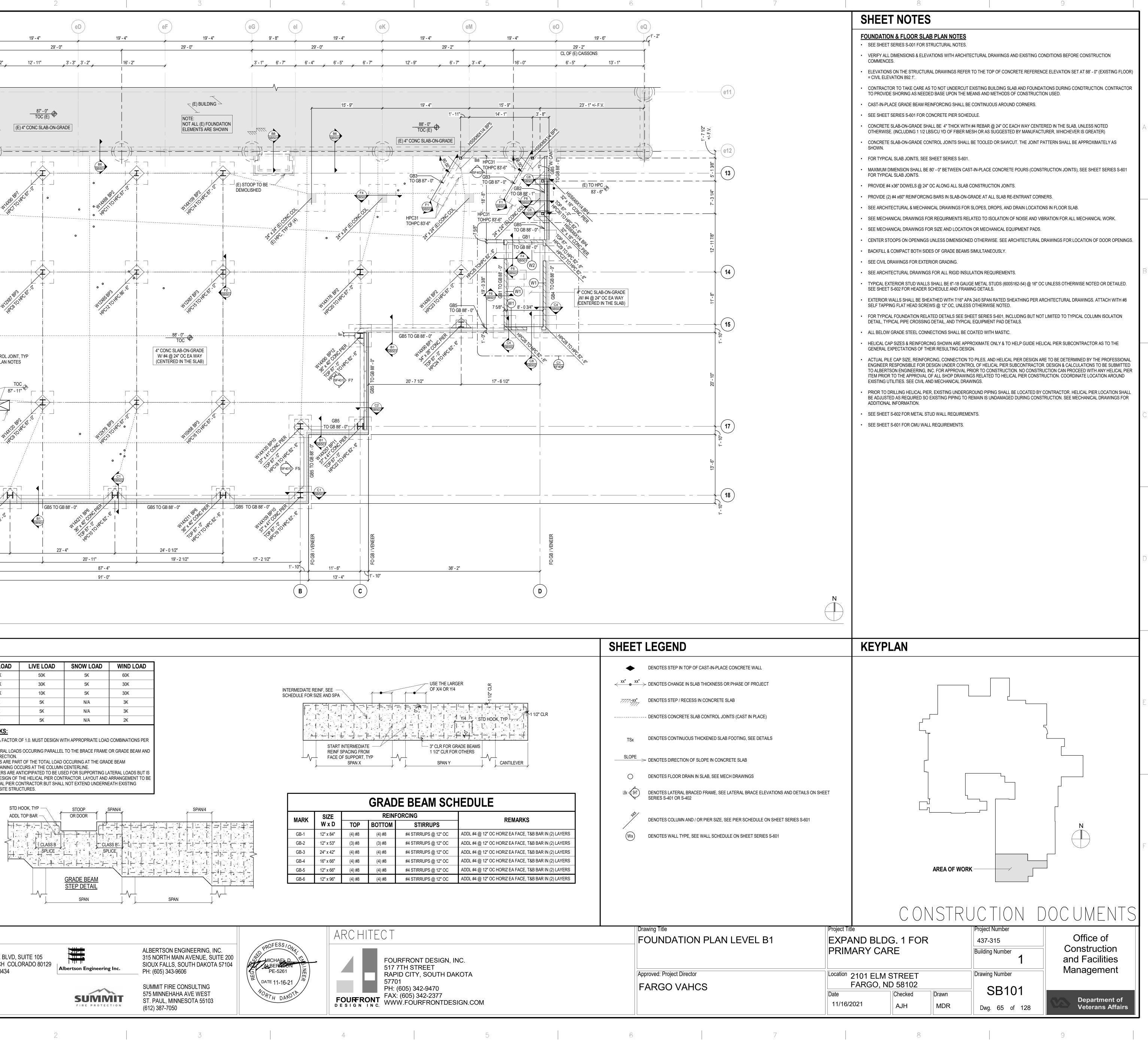


FOUNDATION & SLAB PLAN - BASEMENT LEVEL D1 SB101

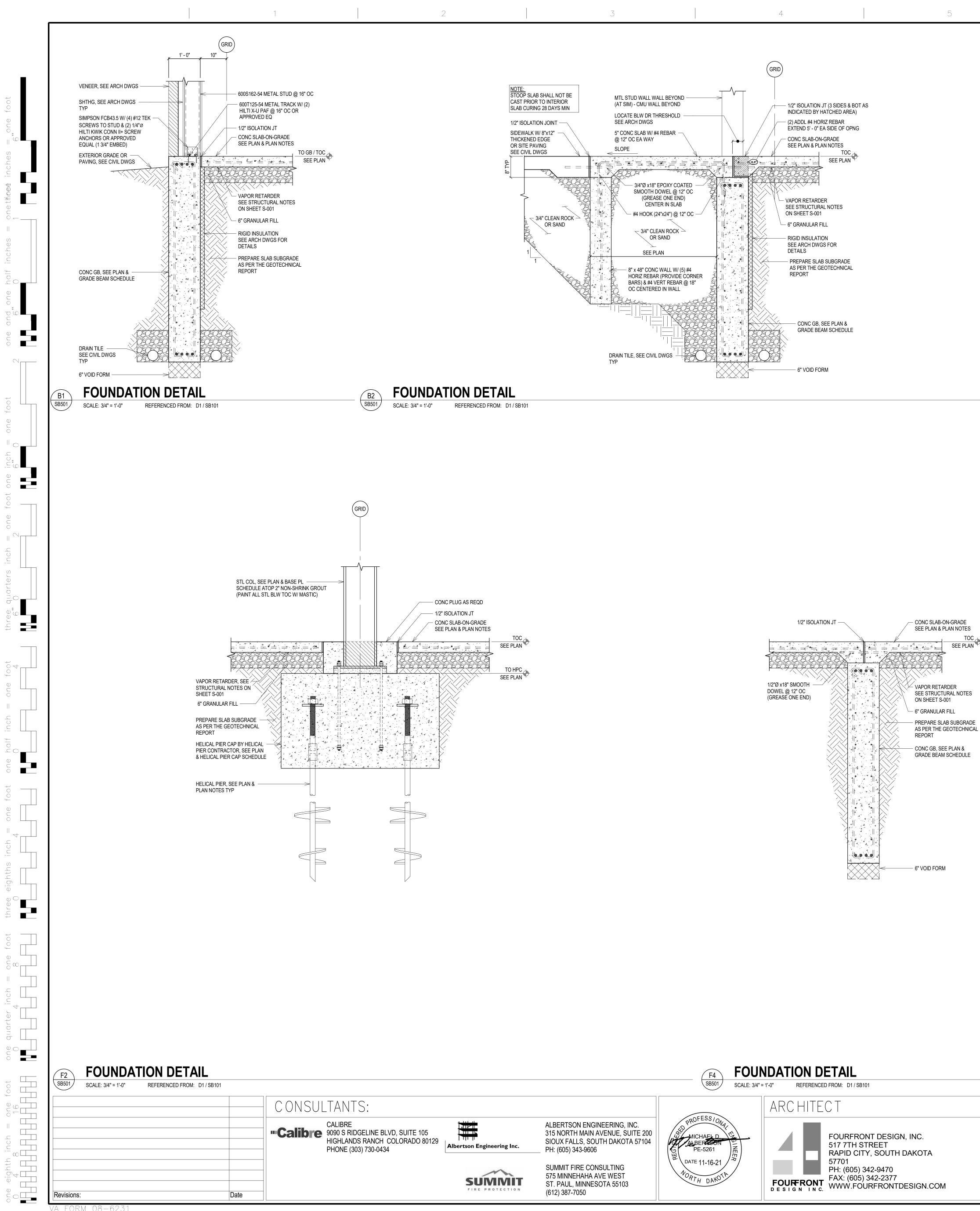
SCHEDULES

	HELICAL	PIER CA	P SCHEDU	JLE
MARK	DEAD LOAD	LIVE LOAD	SNOW LOAD	WIND LOAD
HPC1	240K (18K)	120K	10K	25K
HPC2	390K (30K)	220K	20K	12K
HPC3	320K (22K)	280K	15K	17K
HPC4	140K (15K)	70K	5K	61K
HPC5	150K (25K)	40K	5K	64K
HPC6	270K (34K)	120K	15K	21K
HPC7	250K	220K	20K	35K
HPC8	340K	310K	30K	2K
HPC9	360K	330K	30K	2K
HPC10	270K (28K)	120K	15K	20K
HPC11	110K	100K	10K	17K
HPC12	260K	240K	20K	2K
HPC13	310K	270K	25K	2K
HPC14	350K	290K	30K	7K
HPC15	350K	320K	30K	2K
HPC16	250K	220K	20K	2K
HPC17	200K (26K)	70K	10K	23K
HPC18	300K (16K)	17K	15K	37K
HPC19	160K (19K)	70K	10K	45K
HPC20	230K	210K	20K	ЗK
HPC21	310K (26K)	180K	20K	34K
HPC22	130K (21K)	40K	5K	41K
HPC23	140K	120K	15K	ЗK
HPC24	170K (20K)	60K	5K	2К
HPC25	240K	70K	10K	60K

MARK	DEAD LOAD	LIVE LOAD	SNOW LOAD		
HPC26	210K	50K	5K		
HPC27	240K	30K	5K		
HPC28	210K	10K	5K		
HPC29	20K	5K	N/A		
HPC30	20K	5K	N/A		
HPC31	20K	5K	N/A		

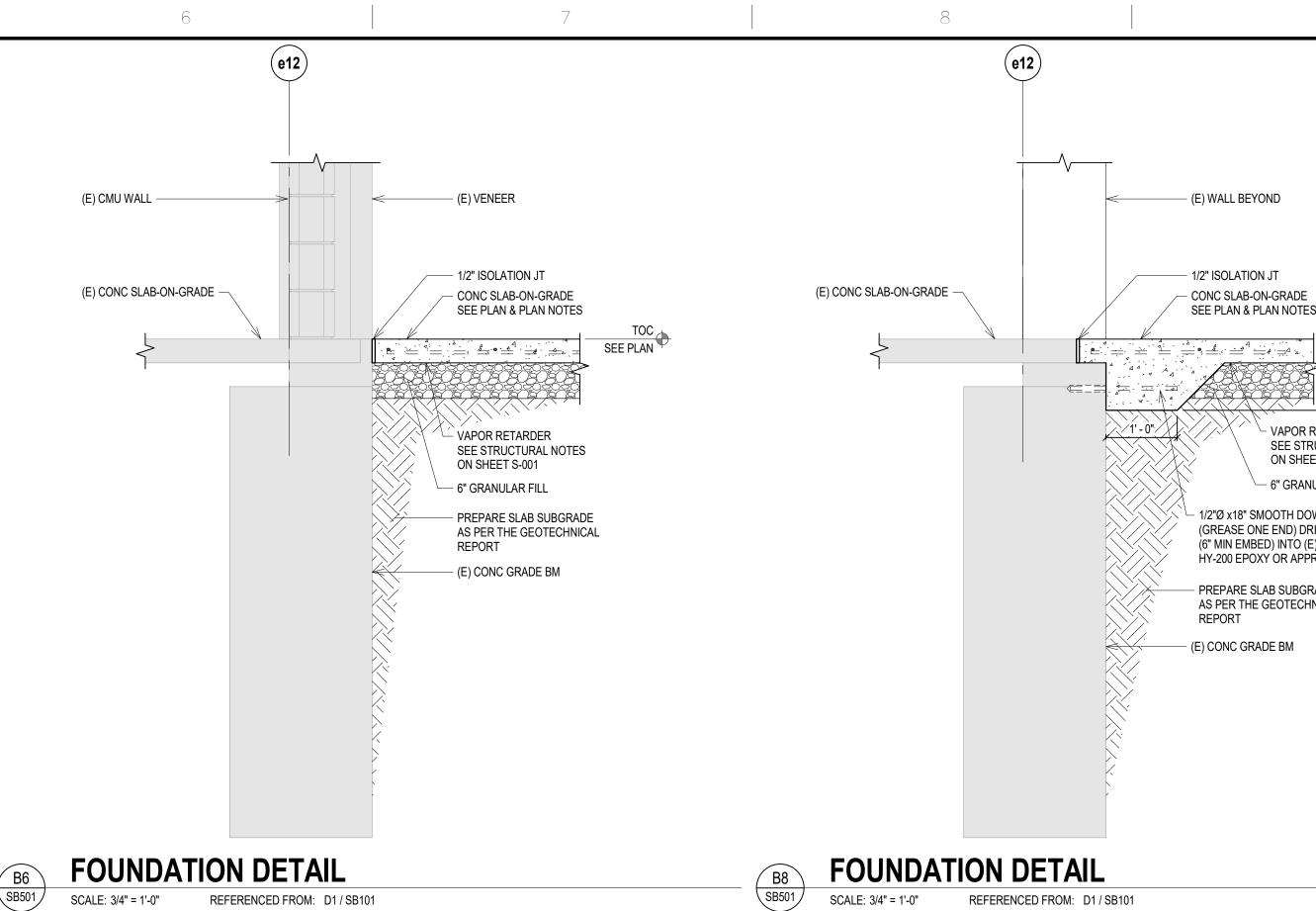


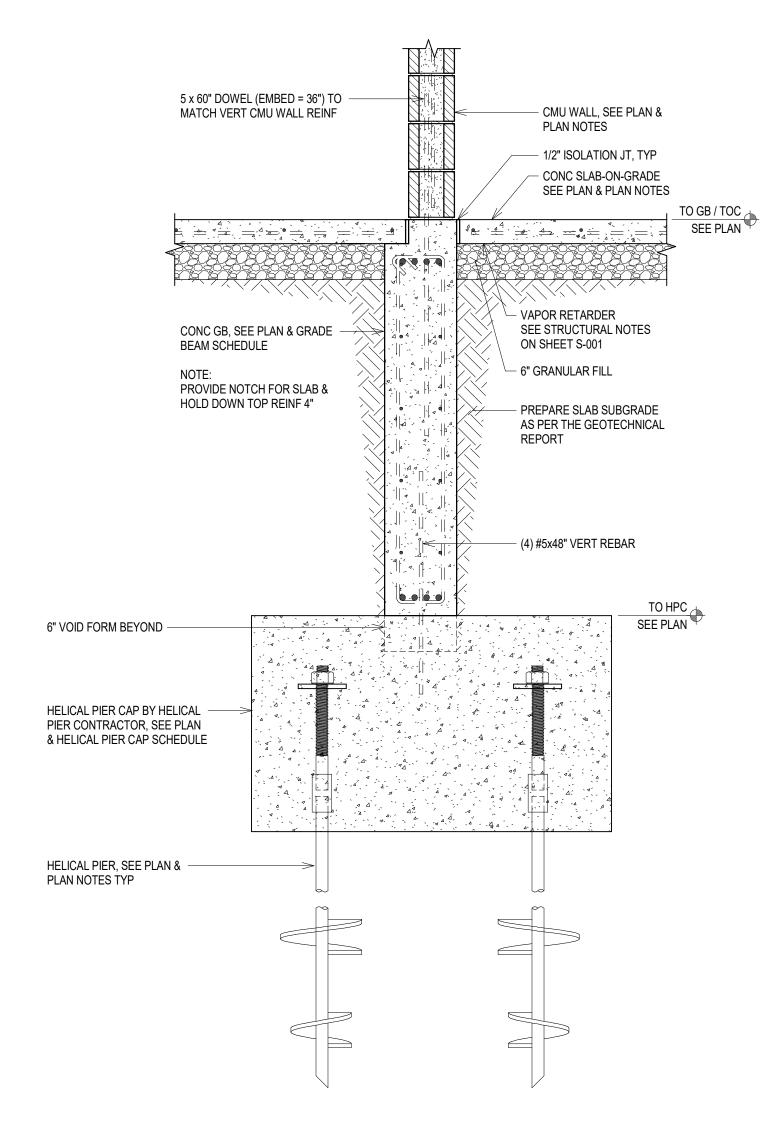
		HPC25	240K	70K	10K	60K	
	foot						
						— CON	SULT
						"Calil	
M						Call	bre 909 HIG PHO
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21 11.	eighth						
11/16/2021		Revisions:			Date		
~		VA FORM 08	8-6231				



VA FORM 08-6231

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F6 SB501 SCALE: 3/4"	NDATION DETAIL = 1'-0" REFERENCED FROM: D1 / SB101		СС	NSTR	XUCTI(
	Drawing Title	Project Title			Project Number
	FOUNDATION DETAILS	EXPAND B	LDG. 1 FO	R	437-315
		PRIMARY (CARE		Building Numb
	Approved: Project Director	Location 2101 El	_M STREET		Drawing Numl
	FARGO VAHCS	FARGC	, ND 58102		
		Date	Checked	Drawn	
		11/16/2021	AJH	MDR	Dwg. 66

SEE PLAN

- (E) WALL BEYOND

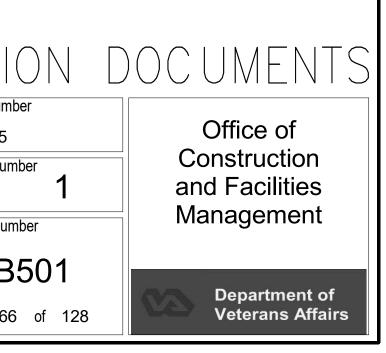
- 1/2" ISOLATION JT

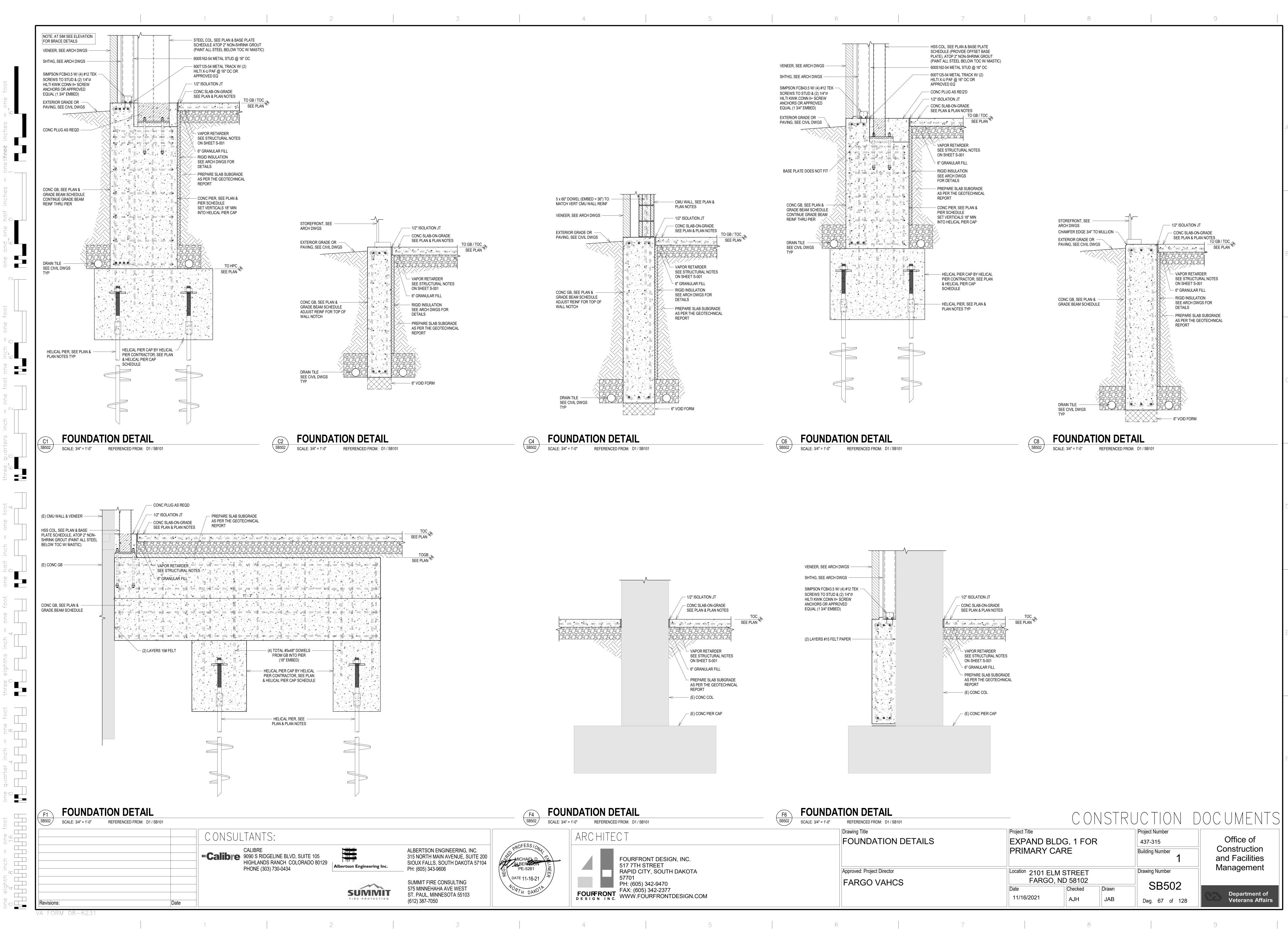
- CONC SLAB-ON-GRADE

SEE PLAN & PLAN NOTES

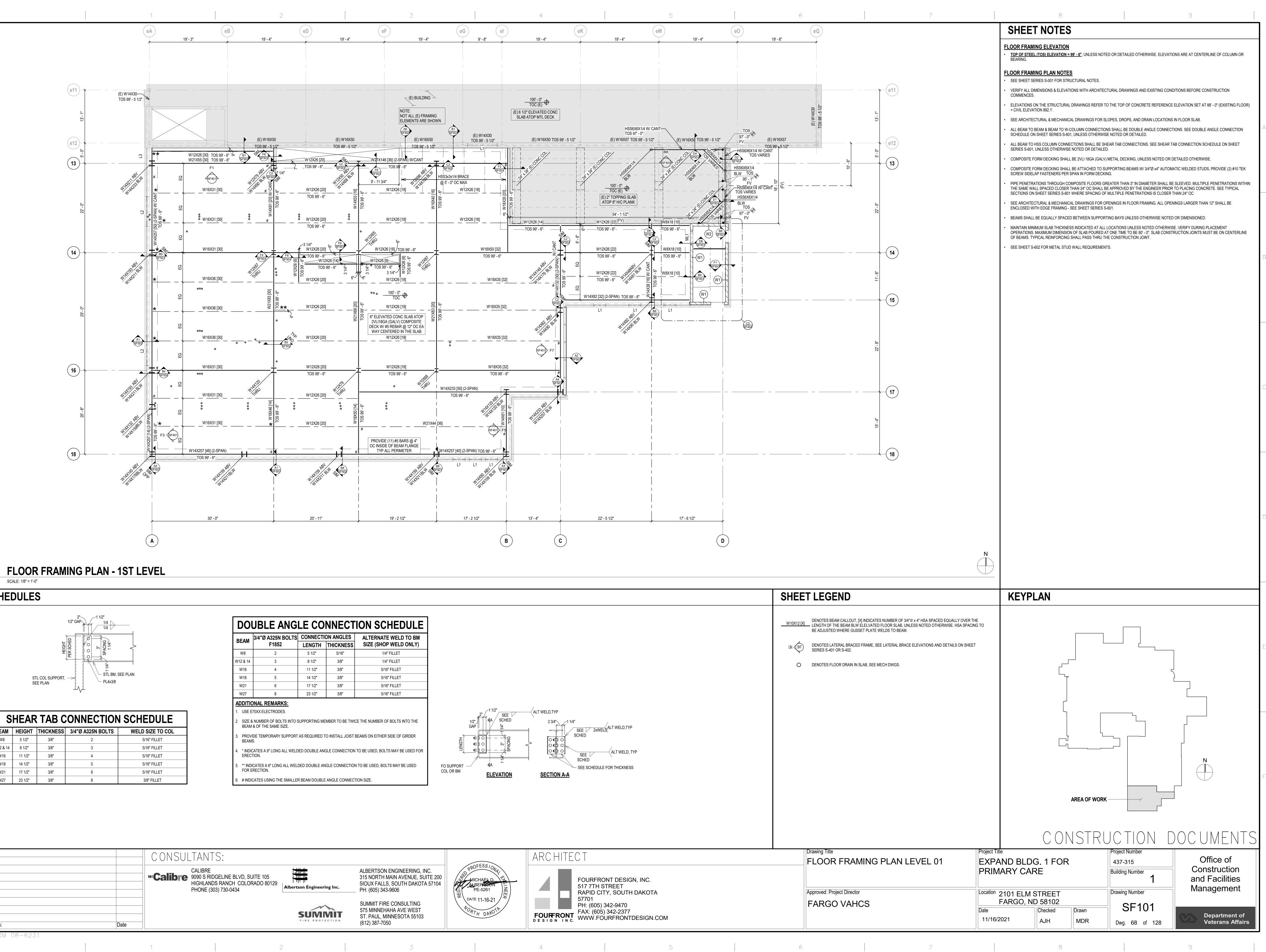








F6 BB502 SCALE: 3/4" = 1'-0'	PATION DETAIL REFERENCED FROM: D1/SB101		СО	NSTR	RUCTI
	Drawing Title	Project Title			Project Numb
	FOUNDATION DETAILS	EXPAND B	LDG. 1 FO	R	437-315
		PRIMARY (CARE		Building Num
	Approved: Project Director	Location 2101 El	_M STREET		Drawing Num
	FARGO VAHCS	FARGC), ND 58102		
		Date	Checked	Drawn	
		11/16/2021	AJH	JAB	Dwg. 67

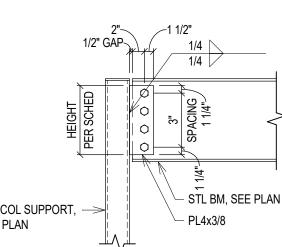




SCHEDULES

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SHEAR TAB CONNECTION SCHEDULE				
BEAM	HEIGHT	THICKNESS	3/4"Ø A325N BOLTS	WELD SIZE TO COL
W8	5 1/2"	3/8"	2	5/16" FILLET
W12 & 14	8 1/2"	3/8"	3	5/16" FILLET
W16	11 1/2"	3/8"	4	5/16" FILLET
W18	14 1/2"	3/8"	5	5/16" FILLET
W21	17 1/2"	3/8"	6	5/16" FILLET
W27	23 1/2"	3/8"	8	3/8" FILLET

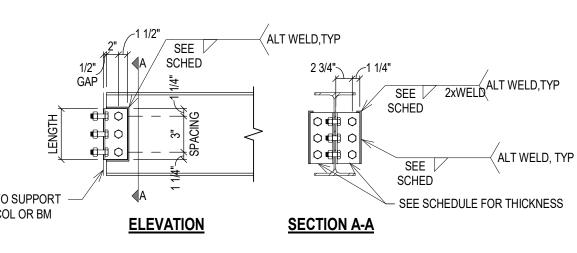
DO	UBLE ANG	LE CONNECT	ION SCHEDULE
		CONNECTION ANCLES	

BEAM	3/4"Ø A325N BOLTS	4"Ø A325N BOLTS CONNECTION ANGLES		ALTERNATE WELD TO BM		
	F1852	LENGTH	THICKNESS	SIZE (SHOP WELD ONLY)		
W8	2	5 1/2"	5/16"	1/4" FILLET		
W12 & 14	3	8 1/2"	3/8"	1/4" FILLET		
W16	4	11 1/2"	3/8"	5/16" FILLET		
W18	5	14 1/2"	3/8"	5/16" FILLET		
W21	6	17 1/2"	3/8"	5/16" FILLET		
W27	8	23 1/2"	3/8"	5/16" FILLET		
ADDITIONAL REMARKS:						

		ONSULTANTS:	
	C	CALIBRE 9090 S RIDGELINE BLVD, SUITE 105 HIGHLANDS RANCH COLORADO 8012 PHONE (303) 730-0434	29 Albertson Engin
Revisions:	Date		FIRE

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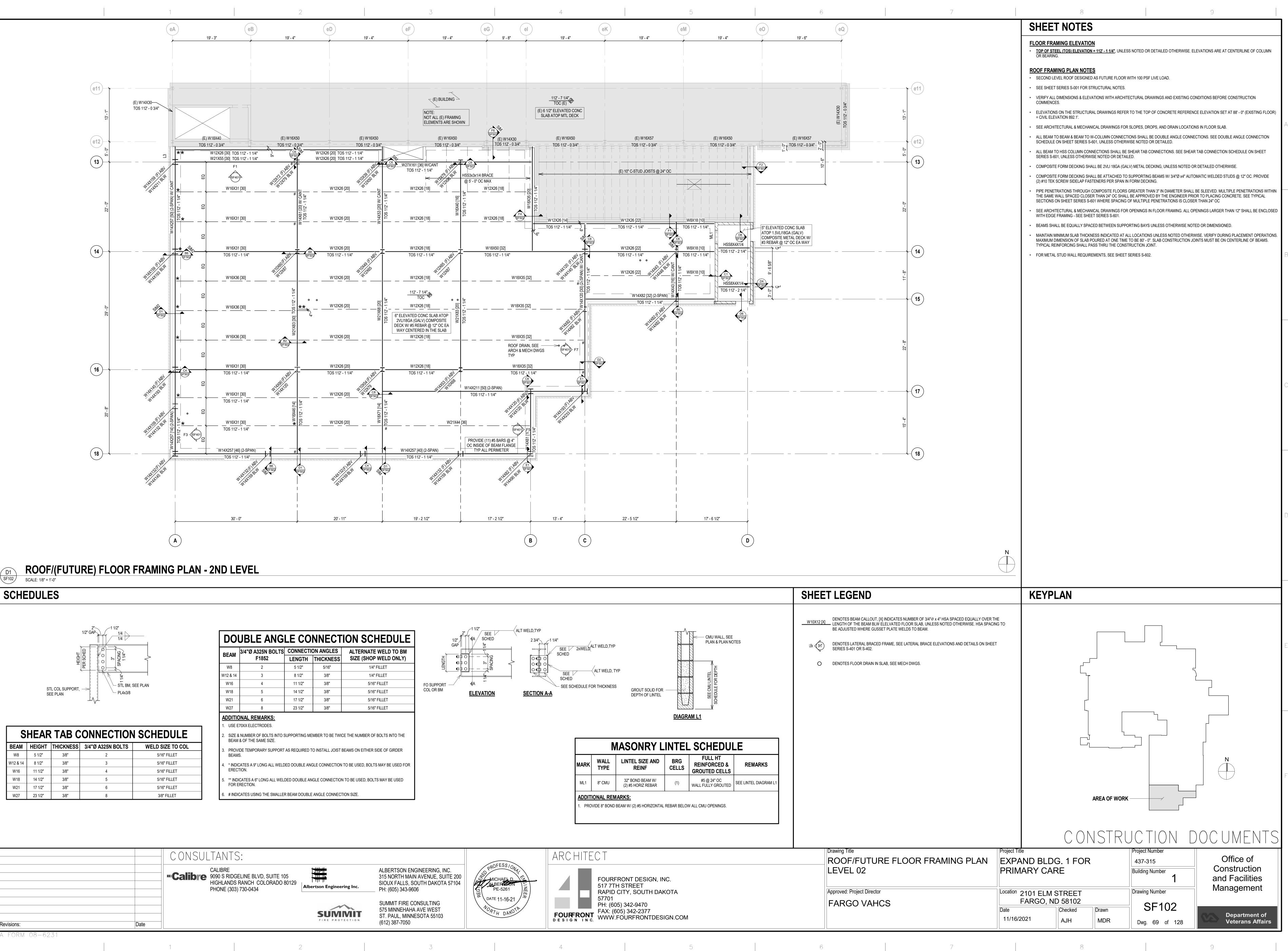
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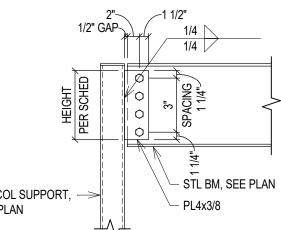
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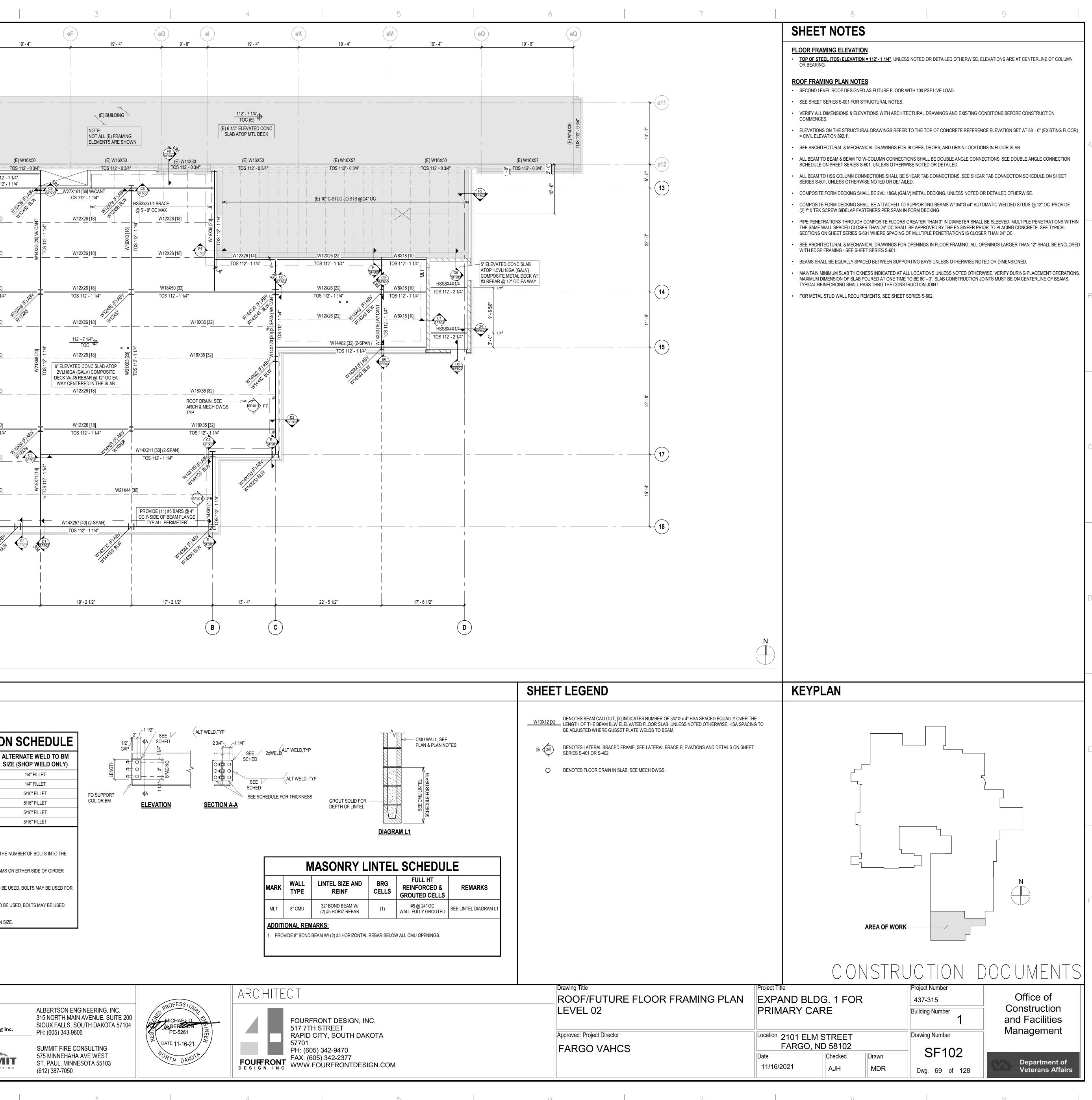
one eighth inch = one foot 0 4 8 16 0 4 8 16



S	SHEAR TAB CONNECTION SCHEDULE					
BEAM	HEIGHT	THICKNESS	3/4"Ø A325N BOLTS	WELD SIZE TO COL		
W8	5 1/2"	3/8"	2	5/16" FILLET		
W12 & 14	8 1/2"	3/8"	3	5/16" FILLET		
W16	11 1/2"	3/8"	4	5/16" FILLET		
W18	14 1/2"	3/8"	5	5/16" FILLET		
W21	17 1/2"	3/8"	6	5/16" FILLET		
W27	23 1/2"	3/8"	8	3/8" FILLET		

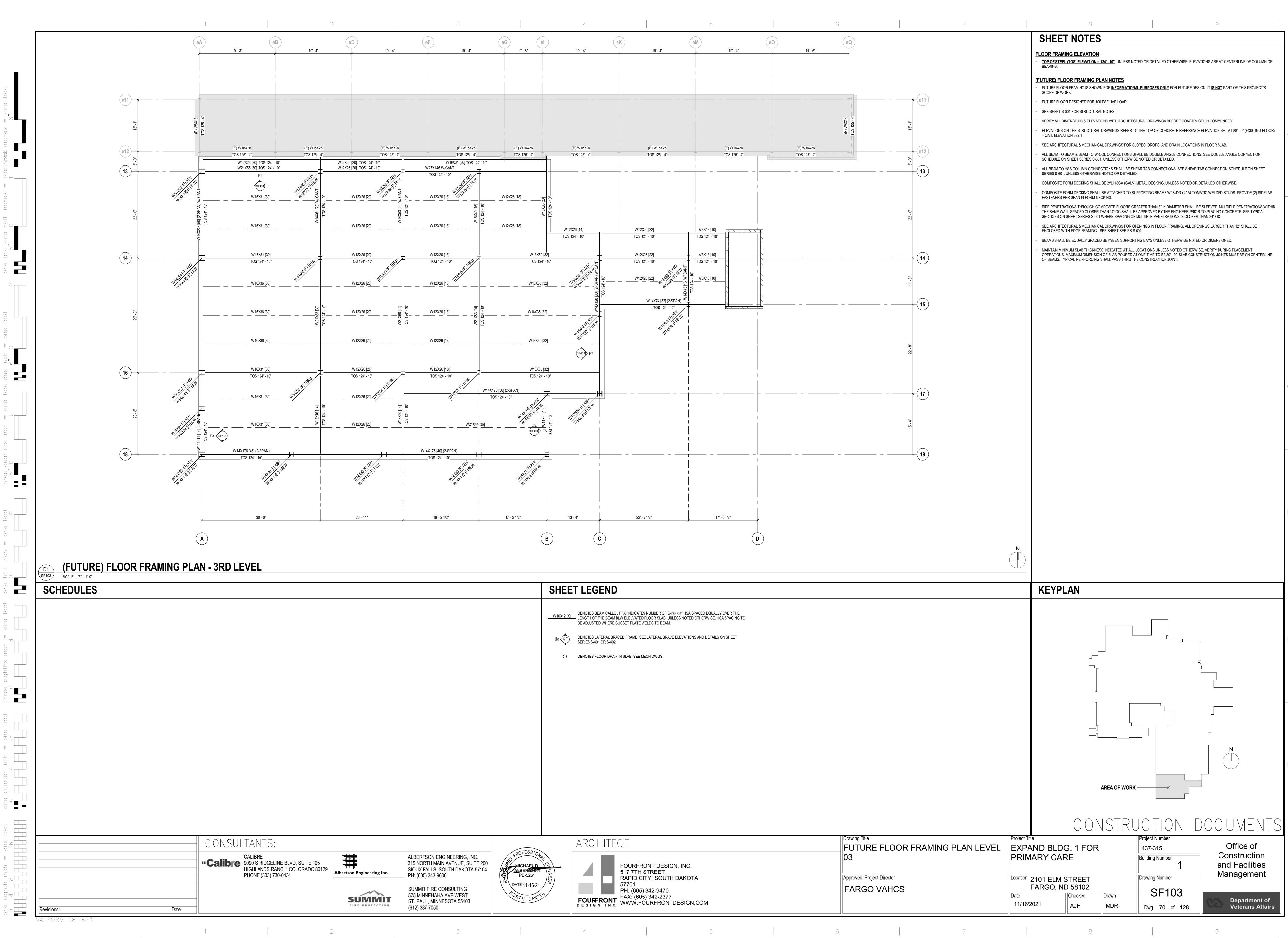
DOUBLE ANGLE CONNECTION						
BEAM 3/4"Ø A325N BOLTS		CONNECTION ANGLES				
BEAM	F1852	LENGTH	THICKNESS			
W8	2	5 1/2"	5/16"			
W12 & 14	3	8 1/2"	3/8"			
W16	4	11 1/2"	3/8"			
W18	5	14 1/2"	3/8"			
W21	6	17 1/2"	3/8"			
W27	8	23 1/2"	3/8"			
 USE E SIZE 8 	DNAL REMARKS: 70XX ELECTRODES.	SUPPORTING ME	MBER TO BE TWI	CE -		
	& OF THE SAME SIZE. IDE TEMPORARY SUPPORT S.	AS REQUIRED T	O INSTALL JOIST	BEA		
4. * INDIO	CATES A 9" LONG ALL WELD	DED DOUBLE ANG	GLE CONNECTION	ТО		

	-		SUM
	"Calibre	CALIBRE 9090 S RIDGELINE BLVD, SUITE 105 HIGHLANDS RANCH COLORADO 80129 PHONE (303) 730-0434	Albertson Engine
	CONSUL	_TANTS:	
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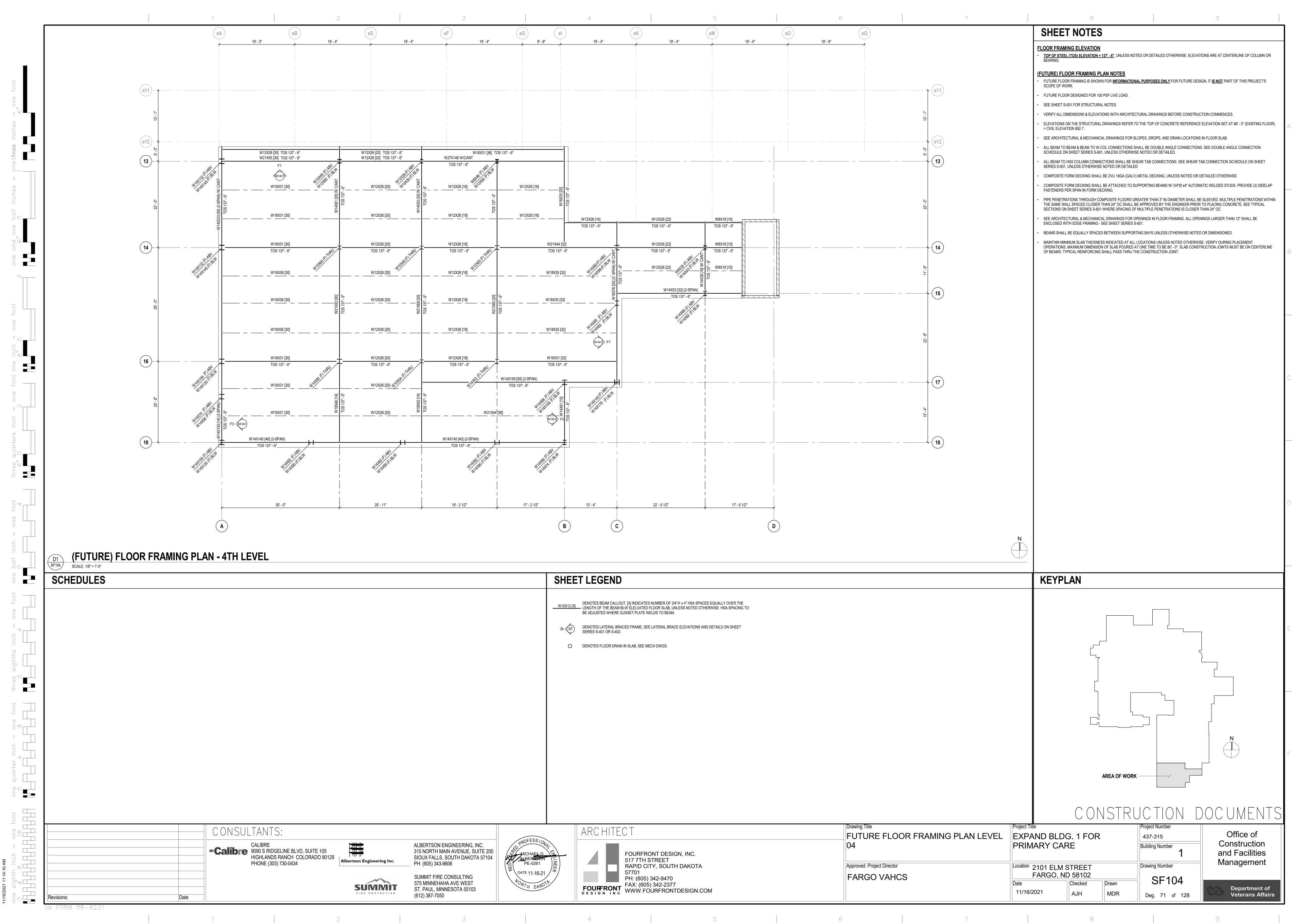


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TAILED OTHERWISE. ELEVATIONS ARE AT CENTERLINE OF COLUMN	
E LOAD.	
NGS AND EXISTING CONDITIONS BEFORE CONSTRUCTION	
CONCRETE REFERENCE ELEVATION SET AT 88' - 0" (EXISTING FLOOR)	
B, AND DRAIN LOCATIONS IN FLOOR SLAB. DOUBLE ANGLE CONNECTIONS. SEE DOUBLE ANGLE CONNECTION DETAILED.	A
NECTIONS. SEE SHEAR TAB CONNECTION SCHEDULE ON SHEET	
NG, UNLESS NOTED OR DETAILED OTHERWISE. AMS W/ 3/4"Ø x4" AUTOMATIC WELDED STUDS @ 12" OC. PROVIDE	
3" IN DIAMETER SHALL BE SLEEVED. MULTIPLE PENETRATIONS WITHIN 3Y THE ENGINEER PRIOR TO PLACING CONCRETE. SEE TYPICAL NETRATIONS IS CLOSER THAN 24" OC	
OOR FRAMING. ALL OPENINGS LARGER THAN 12" SHALL BE ENCLOSED	
LESS OTHERWISE NOTED OR DIMENSIONED. NLESS NOTED OTHERWISE. VERIFY DURING PLACEMENT OPERATIONS. AB CONSTRUCTION JOINTS MUST BE ON CENTERLINE OF BEAMS.	
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	SHEE	TLEGEND
	W10X12 [X]	DENOTES BEAM CALLOUT, [X] INDICATES NUMBER OF 3/4"Ø x 4" HSA SPACED EQUALLY OVER THE — LENGTH OF THE BEAM BLW ELELVATED FLOOR SLAB, UNLESS NOTED OTHERWISE. HSA SPACING TO BE ADJUSTED WHERE GUSSET PLATE WELDS TO BEAM.
	LBX (SHT)	DENOTES LATERAL BRACED FRAME, SEE LATERAL BRACE ELEVATIONS AND DETAILS ON SHEET SERIES S-401 OR S-402.
	0	DENOTES FLOOR DRAIN IN SLAB, SEE MECH DWGS.
ALBERTSON ENGINEERING, INC.	10 _{AV}	ARCHITECT
ng Inc. ALBERTSON ENGINEERING, INC. 315 NORTH MAIN AVENUE, SUITE 200 SIOUX FALLS, SOUTH DAKOTA 57104 PH: (605) 343-9606 PE-5261		FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA
SUMMIT FIRE CONSULTING 575 MINNEHAHA AVE WEST ST. PAUL, MINNESOTA 55103 (612) 387-7050	-21 /	FOURFRONT D E S I G N I N C. 57701 PH: (605) 342-9470 FAX: (605) 342-2377 WWW.FOURFRONTDESIGN.COM
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D OTHERWISE. ELEVATIONS ARE AT CENTERLINE OF COLUMN OR	
NLY FOR FUTURE DESIGN, IT <u>IS NOT</u> PART OF THIS PROJECT'S	
SS BEFORE CONSTRUCTION COMMENCES.	Δ
ND DRAIN LOCATIONS IN FLOOR SLAB. ANGLE CONNECTIONS. SEE DOUBLE ANGLE CONNECTION FAILED.	
CTIONS. SEE SHEAR TAB CONNECTION SCHEDULE ON SHEET	
IS W/ 3/4"Ø x4" AUTOMATIC WELDED STUDS. PROVIDE (2) SIDELAP N DIAMETER SHALL BE SLEEVED. MULTIPLE PENETRATIONS WITHIN THE ENGINEER PRIOR TO PLACING CONCRETE. SEE TYPICAL TRATIONS IS CLOSER THAN 24" OC	
OR FRAMING. ALL OPENINGS LARGER THAN 12" SHALL BE	
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E 80' - 0". SLAB CONSTRUCTION JOINTS MUST BE ON CENTERLINE ON JOINT.	E

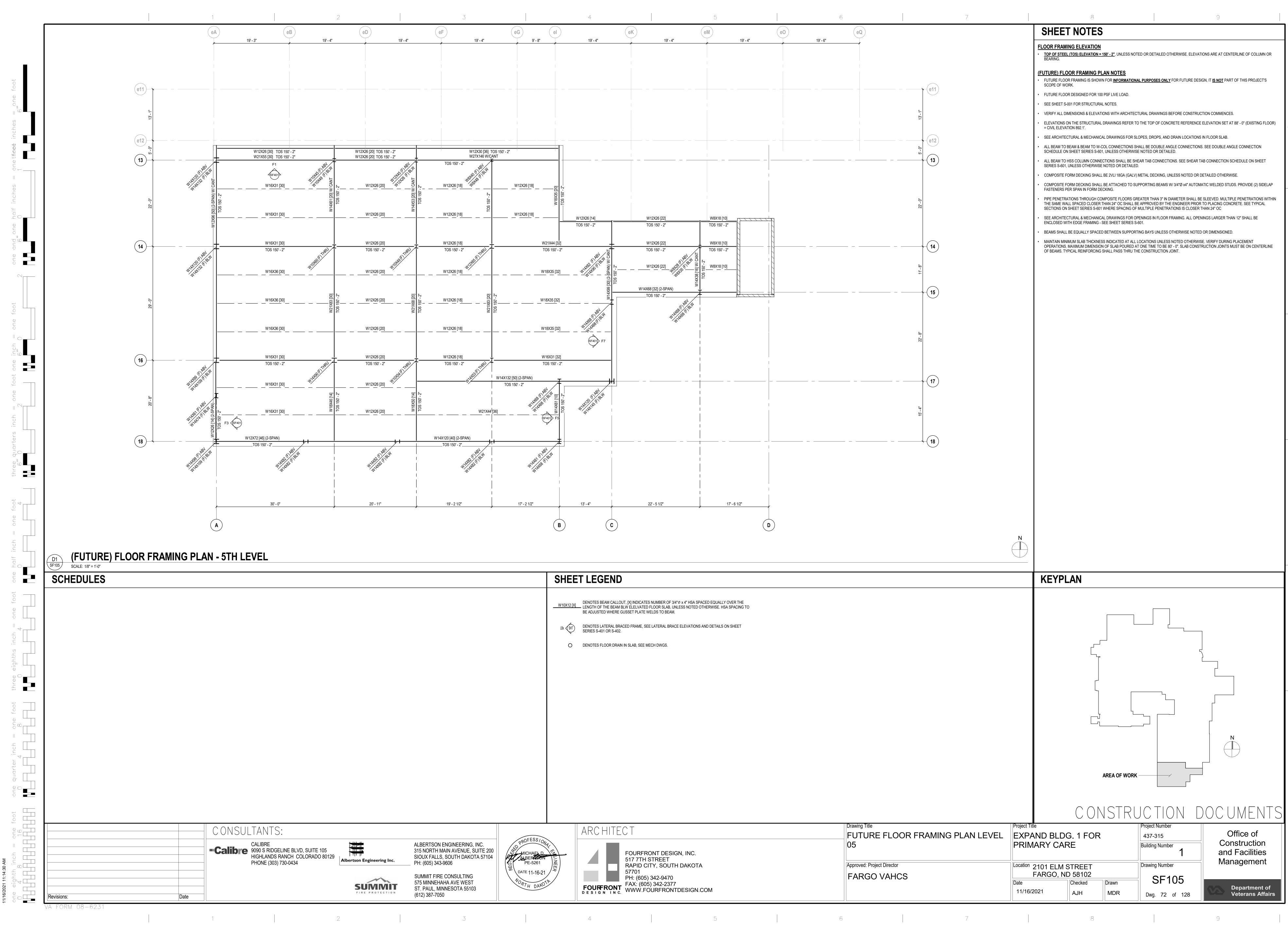


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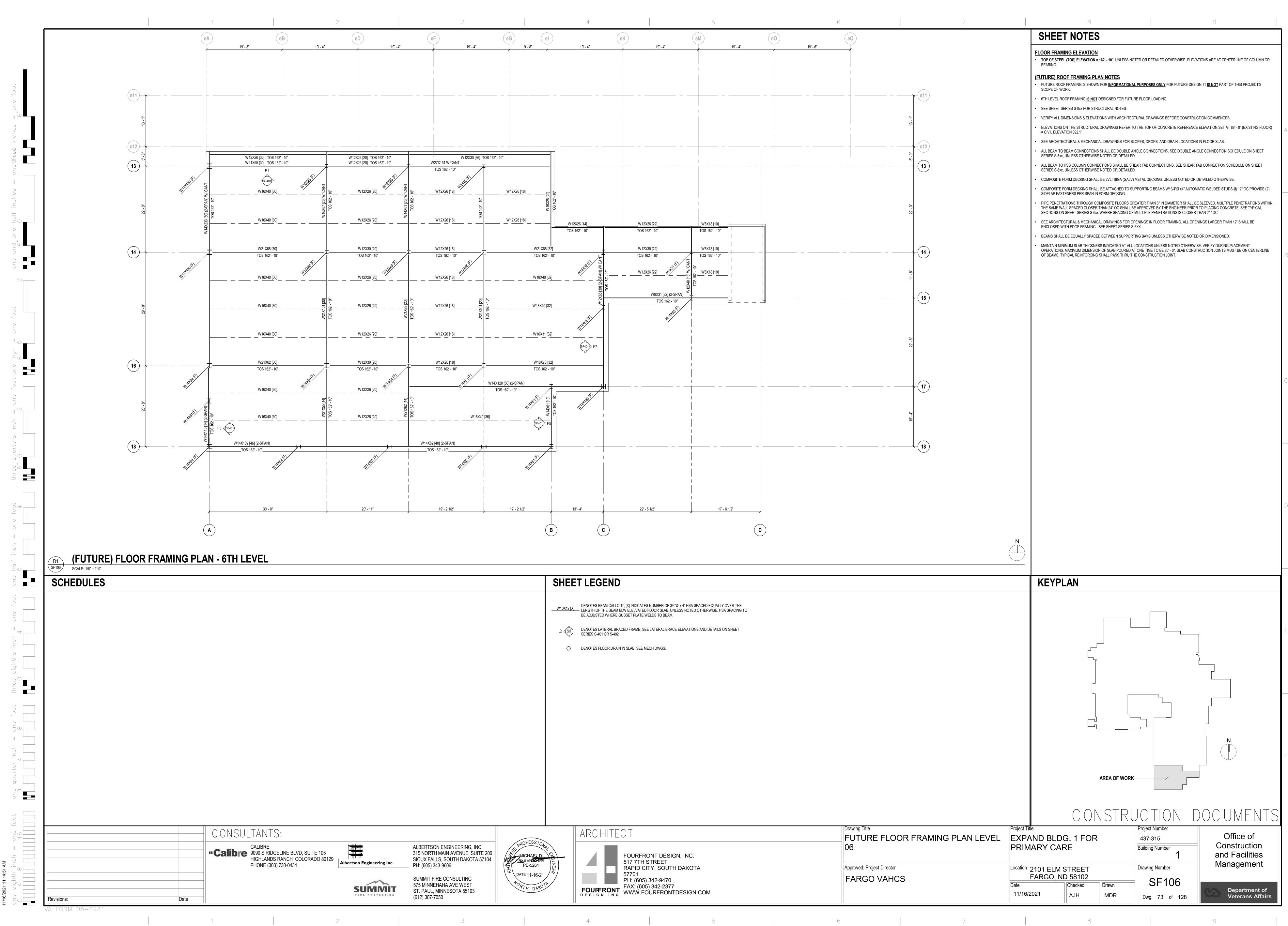


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N DIAMETER SHALL BE SLEEVED. MULTIPLE PENETRATIONS WITHIN THE ENGINEER PRIOR TO PLACING CONCRETE. SEE TYPICAL TRATIONS IS CLOSER THAN 24" OC OR FRAMING. ALL OPENINGS LARGER THAN 12" SHALL BE	
SS OTHERWISE NOTED OR DIMENSIONED. ESS NOTED OTHERWISE. VERIFY DURING PLACEMENT E 80' - 0". SLAB CONSTRUCTION JOINTS MUST BE ON CENTERLINE DN JOINT.	



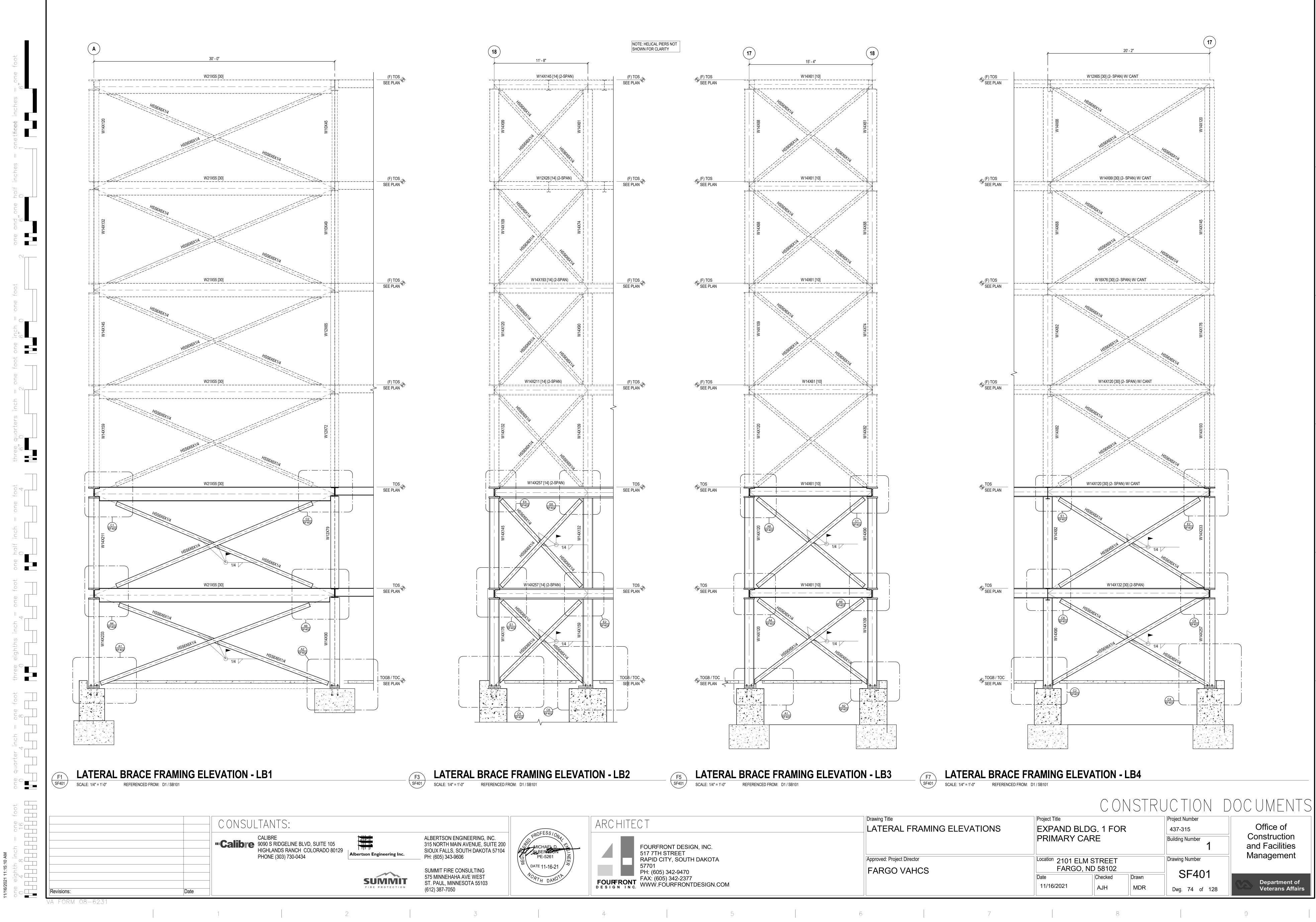
	SHEET	T LEGEND
		DENOTES BEAM CALLOUT, [X] INDICATES NUMBER OF 3/4" Ø x 4" HSA SPACED EQUALLY OVER THE LENGTH OF THE BEAM BLW ELELVATED FLOOR SLAB, UNLESS NOTED OTHERWISE. HSA SPACING TO BE ADJUSTED WHERE GUSSET PLATE WELDS TO BEAM. DENOTES LATERAL BRACED FRAME, SEE LATERAL BRACE ELEVATIONS AND DETAILS ON SHEET SERIES S-401 OR S-402. DENOTES FLOOR DRAIN IN SLAB, SEE MECH DWGS.
ALBERTSON ENGINEERING, INC. 315 NORTH MAIN AVENUE, SUITE 200 SIOUX FALLS, SOUTH DAKOTA 57104 PH: (605) 343-9606 SUMMIT FIRE CONSULTING 575 MINNEHAHA AVE WEST ST. PAUL, MINNESOTA 55103 (612) 387-7050	PROFESSION MICHAELD. ALBERTSON PE-5261	ARCHITECT FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PH: (605) 342-9470 FAX: (605) 342-2377 WWW.FOURFRONTDESIGN.COM
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D OTHERWISE. ELEVATIONS ARE AT CENTERLINE OF COLUMN OR	
INLY FOR FUTURE DESIGN, IT IS NOT PART OF THIS PROJECT'S	
GS BEFORE CONSTRUCTION COMMENCES. ONCRETE REFERENCE ELEVATION SET AT 88' - 0" (EXISTING FLOOR)	
AND DRAIN LOCATIONS IN FLOOR SLAB.	A
E ANGLE CONNECTIONS. SEE DOUBLE ANGLE CONNECTION TAILED.	
ECTIONS. SEE SHEAR TAB CONNECTION SCHEDULE ON SHEET	
G, UNLESS NOTED OR DETAILED OTHERWISE. MS W/ 3/4"Ø x4" AUTOMATIC WELDED STUDS. PROVIDE (2) SIDELAP	
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OR FRAMING. ALL OPENINGS LARGER THAN 12" SHALL BE	
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ESS NOTED OTHERWISE. VERIFY DURING PLACEMENT BE 80' - 0". SLAB CONSTRUCTION JOINTS MUST BE ON CENTERLINE ON JOINT.	В



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AND DRAIN LOCATIONS IN FLOOR SLAB.		
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/IS W/ 3/4"Ø x4" AUTOMATIC WELDED STUDS @ 12" OC PROVIDE (2)		
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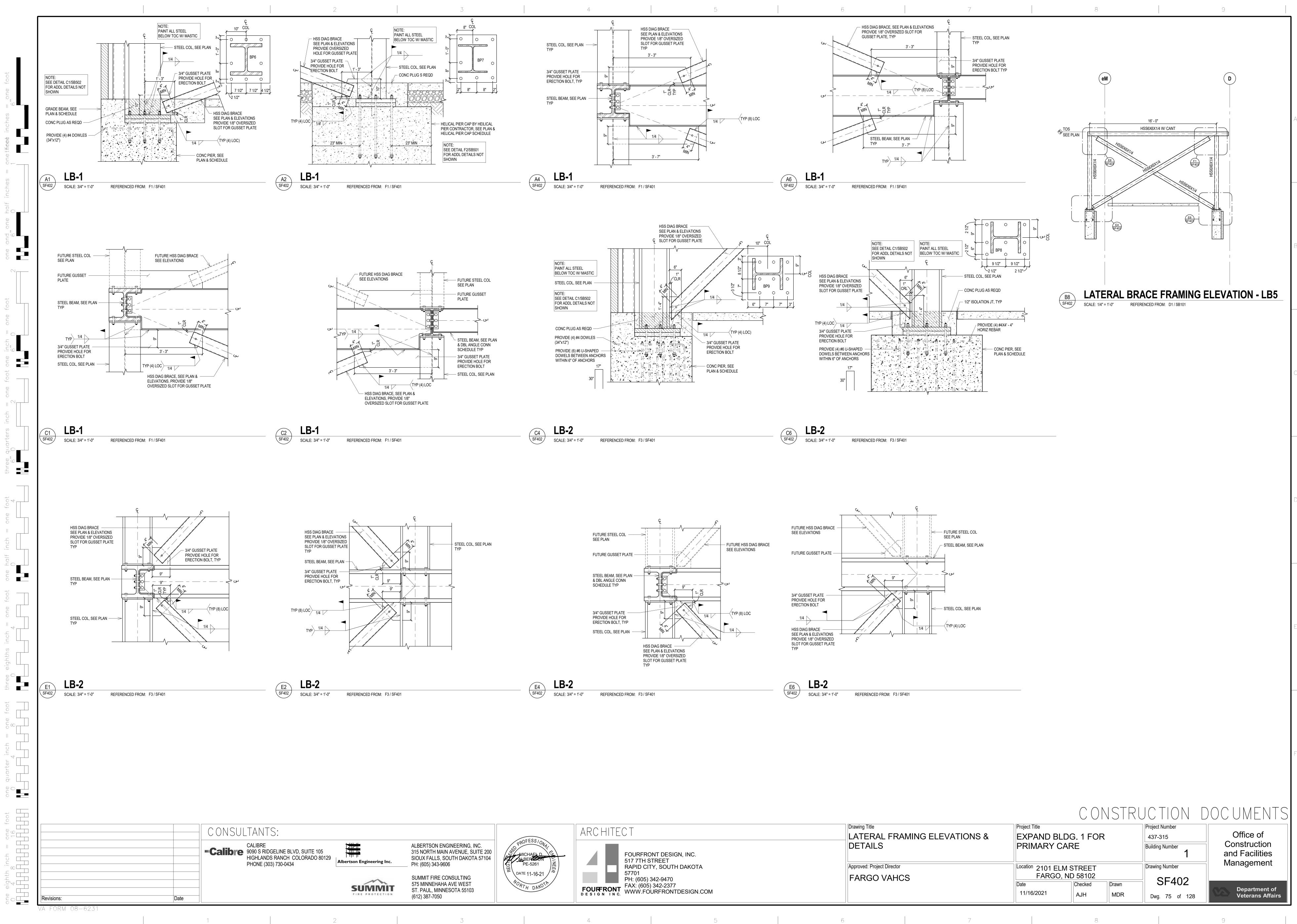






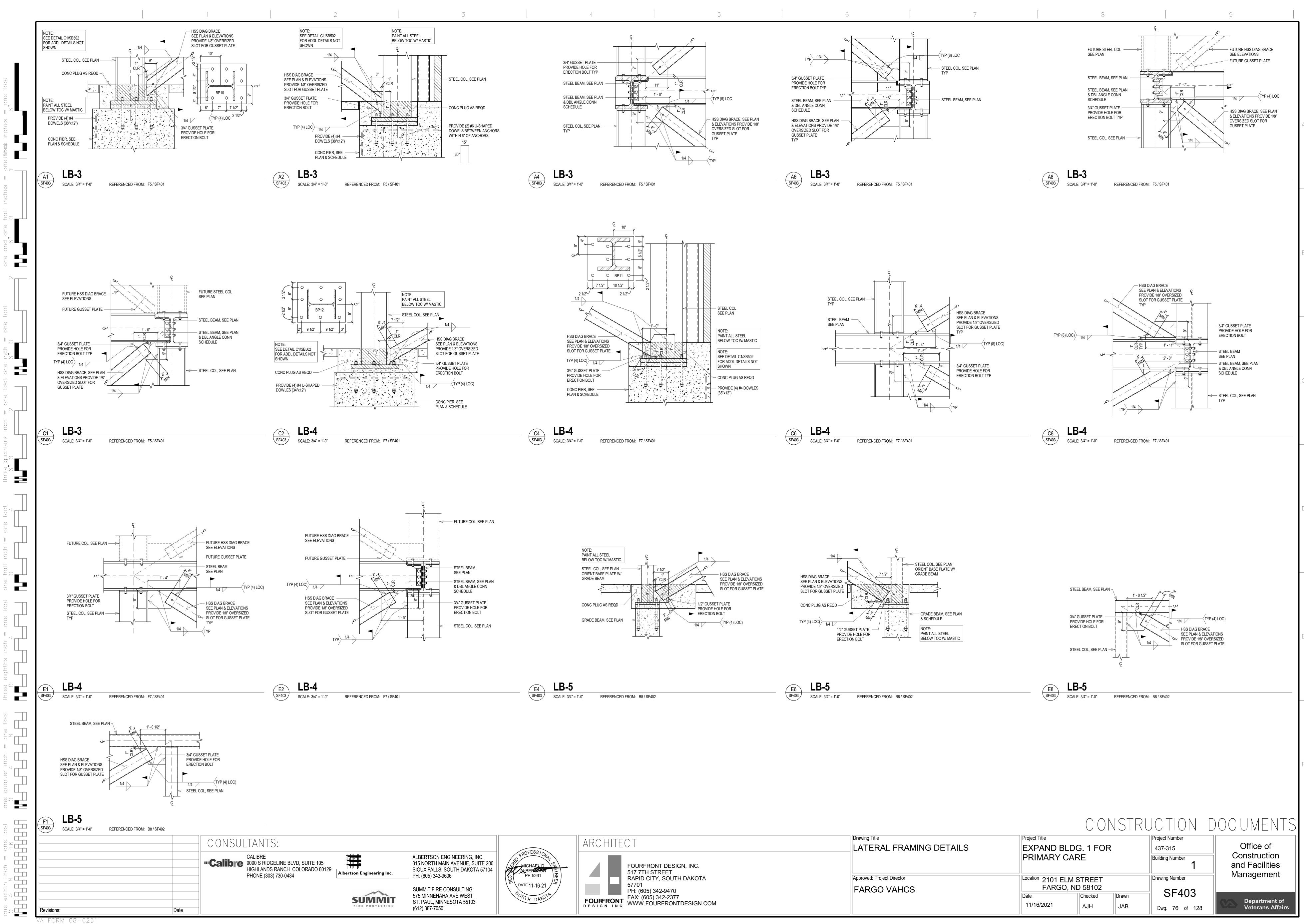
CONS	TRUCTI(
	Project Number

Drawing Title	Project Title			Project Numbe	
LATERAL FRAMING ELEVATIONS	EXPAND BLDG. 1 FOR PRIMARY CARE			437-315	
				Building Numb	
Approved: Project Director				Drawing Numb	
FARGO VAHCS	Date	Checked	Drawn	SF4	
	11/16/2021	AJH	MDR	Dwg. 74	



		\cup \bigcirc	$ \cup \vee$	$C \cup C \cup C$
Drawing Title	Project Title			Project Numb
LATERAL FRAMING ELEVATIONS &	EXPAND BI	LDG. 1 FO	R	437-315
DETAILS	PRIMARY C	CARE		Building Numl
Approved: Project Director	Location 2101 EL	M STREET		Drawing Num
FARGO VAHCS		, ND 58102		
	Date	Checked	Drawn	SF4
	11/16/2021	AJH	MDR	Dwg. 75

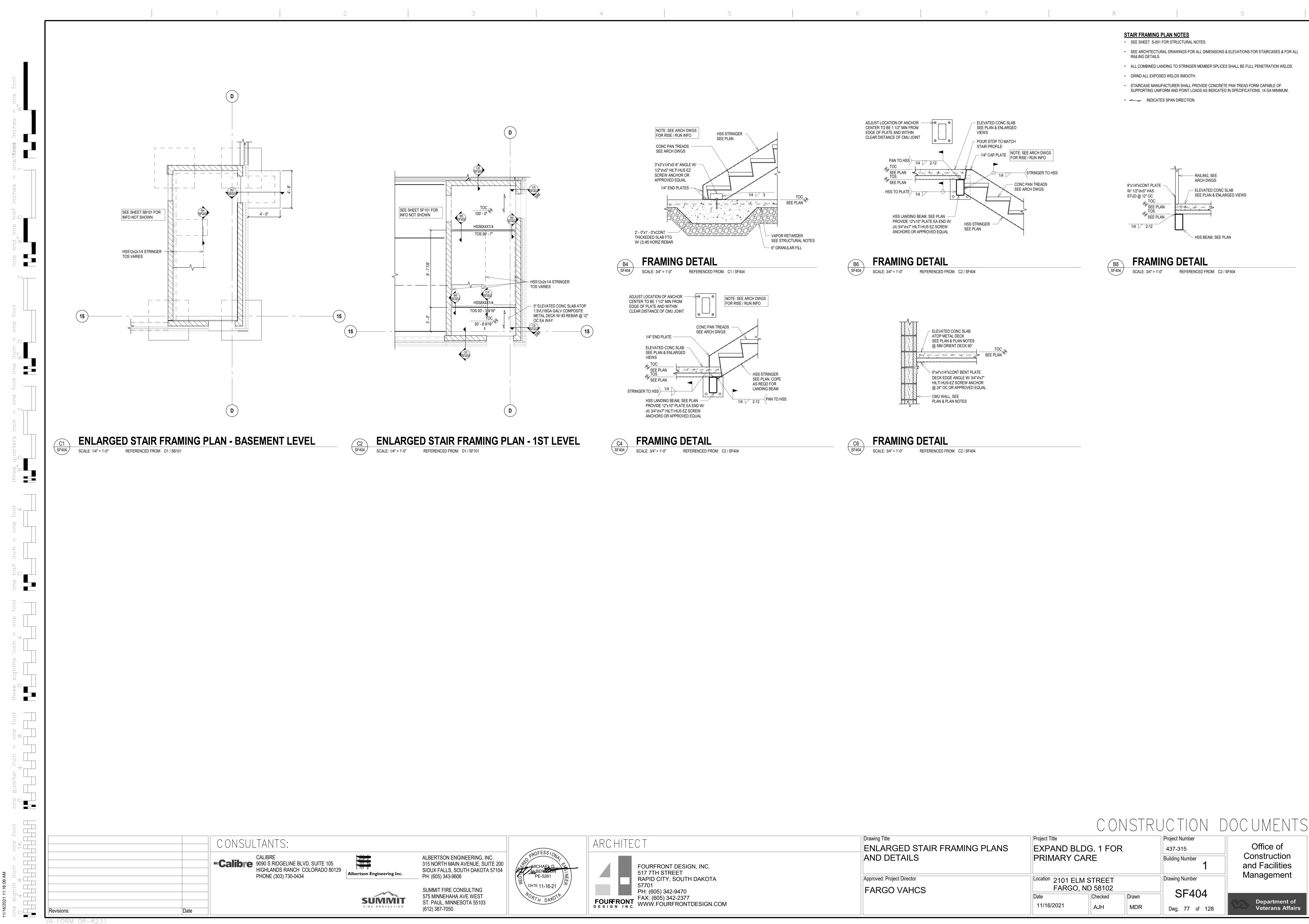




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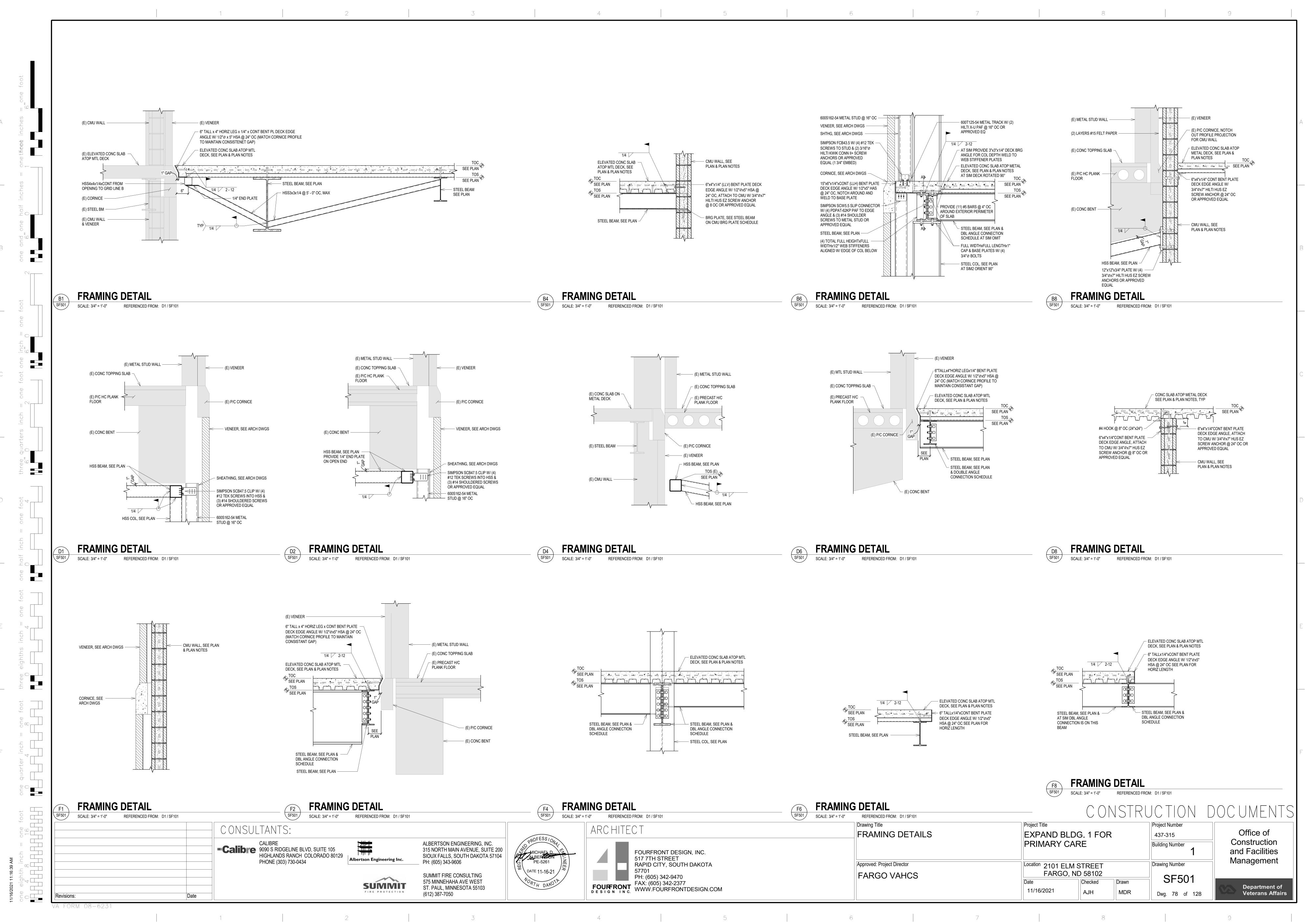
Drawing Title	Project Title			Project Number
LATERAL FRAMING DETAILS	EXPAND BI	LDG. 1 FOI	2	437-315
	PRIMARY C	CARE		Building Number
Approved: Project Director	Location 2101 EL			Drawing Number
FARGO VAHCS	FARGO), ND 58102		
	Date	Checked	Drawn	SF4
	11/16/2021	AJH	JAB	Dwg. 76 0

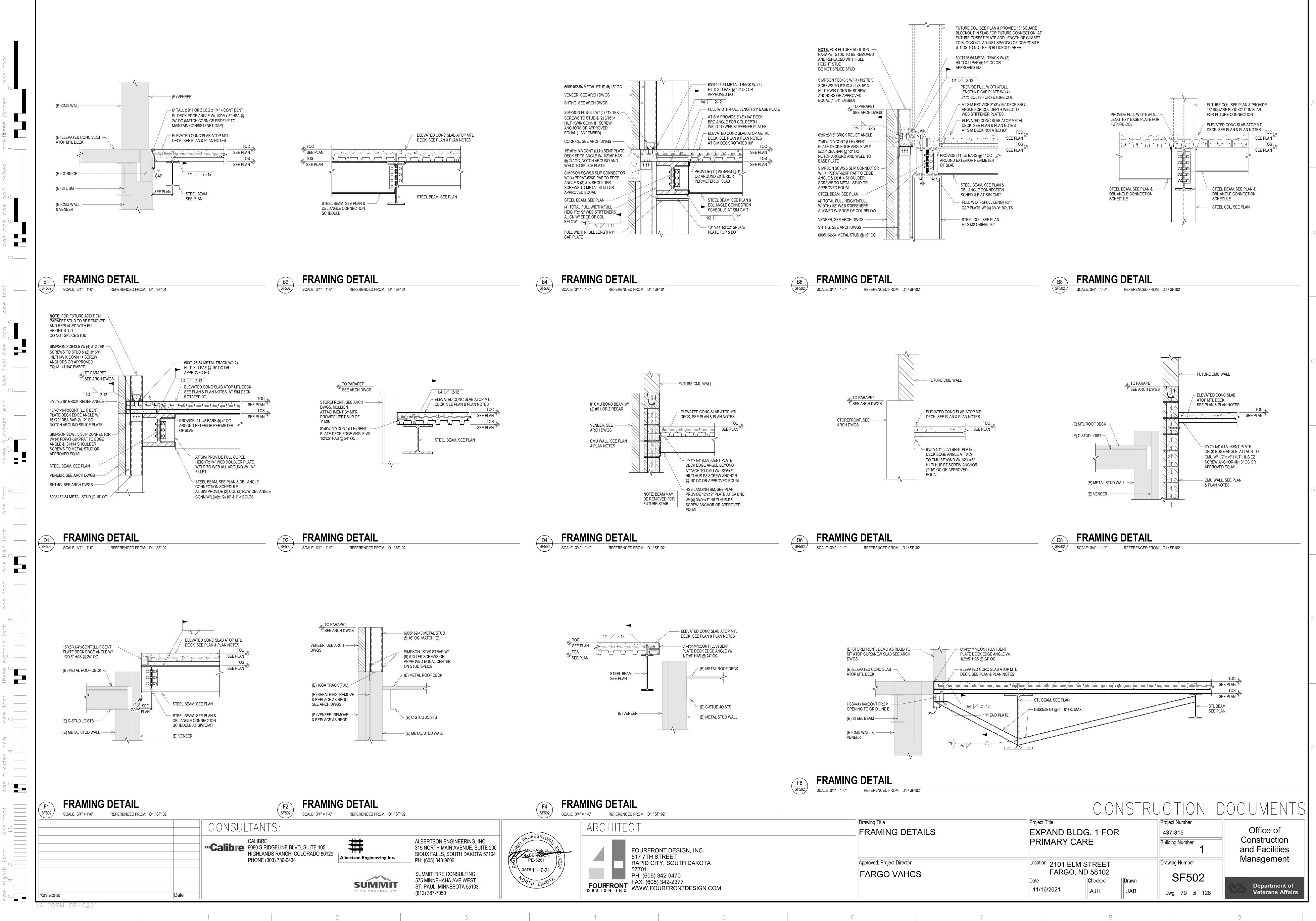


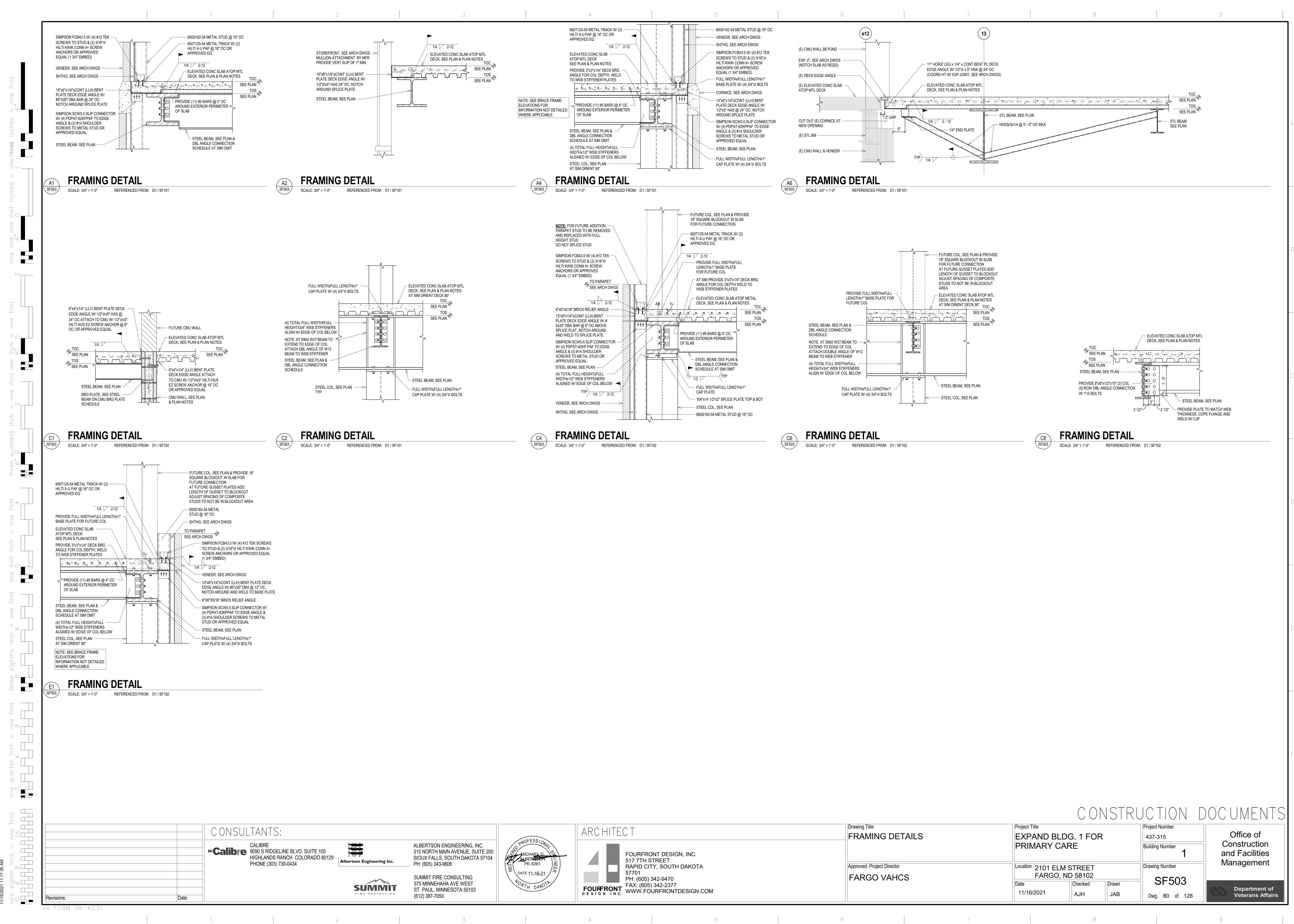
26	FRAMING

CONSTRUCTI
Project Num

ENLARGED STAIR FRAMING PLANS	EXPAND BLD	G. 1 FOF	R	437-315
AND DETAILS	PRIMARY CA	RE		Building Numb
Approved: Project Director	Location 2101 ELM	STREET		Drawing Numb
FARGO VAHCS	FARGO, N	D 58102		SF4
	Date	Checked	Drawn	J 364
	11/16/2021	AJH	MDR	Dwg. 77







FRAMING DETAILS	EXPAND BL	_DG. 1 FOI	R	437-315
	PRIMARY C	CARE		Building Number
Approved: Project Director FARGO VAHCS	Location 2101 EL FARGO	M STREET		Drawing Numbe
	Date	Checked	Drawn	SF5
	11/16/2021	AJH	JAB	Dwg. 80





AHU AP AS A/G ASME	
BMS	BUILDING MANAGEMENT SYSTEM
B/G	BELOW GRADE
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
COND	CONDENSATION
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CIRCULATING PUMP
CR	CONDENSATE RETURN
CV	CONTROL VALVE
DAMP. DAT DB DCW DE DEG DHW-R DHW DIFF. DIST DS DWV	DISCHARGE AIR TEMPERATURE DRY BULB DOMESTIC COLD WATER DEIONIZED WATER DEGREES DOMESTIC HOT WATER RETURN DOMESTIC HOT WATER
EA ECC EEW ELECT. ELEV ERC ESH	EXISTING EXHAUST AIR ENERGY CONTROL CENTER EMERGENCY EYE WASH ELECTRICAL ELEVATION ENERGY RECOVERY COIL - AHU EMERGENCY SHOWER ELECTRIC WATER COOLER
FS FILT. FPM	FAHRENHEIT FLOOR DRAIN FLOOR SINK FILTER FEET PER MINUTE FEET
GAL	GALLONS
G.C.	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GT	GLYCOL TANK
H HB HP HPS HR HRP HSP HVAC HX Hz	HORSEPOWER HIGH PRESSURE STEAM HOUR
IBC	INTERNATIONAL BUILDING CODE
IECC	INTERNAIONAL ENERGY CONSERVATION CODE
IFB	INTEGRAL FACE AND BYPASS
IMC	INTERNATIONAL MECHANICAL CODE
I/O	INPUT/OUTPUT
IPC	INTERNATIONAL PLUMBING CODE
L	LENGTH
LA	LABORATORY EQUIPMENT COMPRESSED AIR
LAV	LAVATORY
LV	LABORATORY EQUIPMENT VACUUM
LBS	POUNDS
LPS	LOW PRESSURE STEAM
MA	MEDICAL AIR
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MC	MECHANICAL CONTRACTOR

Revisions:	Date			
		"Calibre	CALIBRE 9090 S RIDGELINE BLVD, SUITE 105 HIGHLANDS RANCH COLORADO 80129 PHONE (303) 730-0434	Albertson Engineering Inc.
		- CONSUI	_TANTS:	

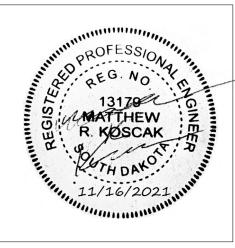
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	3 4		5	6	7	8 9
		PLL	JMBING SYMBOLS			
MD MECH MFG MIN MIN	MOTORIZED DAMPER MECHANICAL MANUFACTURER MINIMUM MINUTE	<u>- Lo</u>	3-WAY CONTROL VALVE	þ	BALL VALVE	PLUMBING SHEET INDEXP-000SYMBOLS, LEGENDS AND ABBREVIATIONSP-101B/G PLUMBING PLAN - BASEMENT LEVELP-102A/G DRAIN, WASTE AND VENT PLAN - BASEMENT LEVELP-103A/G WATER PLAN - BASEMENT LEVEL
mm MPS MT MV	MILLIMETER MEDIUM PRESSURE STEAM MOISTURE (HUMIDITY) TRANSMITTER MANUAL VENT	Ŕ	2-WAY CONTROL VALVE	ν	PLUG VALVE	P-103A/G WATERT EAR PASEMENT LEVELP-104PLUMBING PLAN - FIRST LEVELP-105ROOF PLUMBING PLANP-201DRAIN, WASTE AND VENT ISOMETRIC
N.C. NC NFPA	NORMALLY CLOSED NOISE CRITERIA LEVEL NATIONAL FIRE PROTECTION ASSOCIATION		CHECK VALVE		TEMPERATURE SENSOR	P-201DIVINIT, WASTE AND VENT ISOMETRICP-202DOMESTIC WATER ISOMETRICP-501PLUMBING DETAILSP-601PLUMBING SCHEDULES
NG NPT	NATURAL GAS NATIONAL PIPE THREAD		THERMOSTATIC MIXING VALVE	to or U	TRIPLE DUTY VALVE	
OA OAT OE ORD OSA	OUTSIDE AIR OUTSIDE AIR TEMPERATURE ORAL EVACUATION OVERFLOW ROOF DRAIN OUTSIDE AIR	X	PRESSURE REDUCING VALVE		VACUUM BREAKER	
OSHA OXY	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OXYGEN		BACKFLOW PREVENTER	Ŧ	TEST PORT	GENERAL PLUMBING NOTES:
Pa PC PC PD	PASCAL PUMPED CONDENSATE PREHEAT STEAM COIL - AHU PRESSURE DROP	₽	PRESSURE RELIEF VALVE	Ą	HAMMER ARRESTOR	ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FUEL GAS CODE (IFGC), NFPA 101 LIFE SAFETY CODE, AND ANY AUTHORITY HAVING JURISDICTION. THIS IS A
PDS PH PI	PRESSURE DIFFERENTIAL SENSOR PHASE PROPORTIONAL INTEGRAL	N N N	SOLENOID VALVE	ιþ	PIPE UNION	FEDERAL PROJECT, AS SUCH ALL CODE REQUIREMENTS ARE REQUIRED. ALL EQUIPMENT, MATERIALS, AND ARTICLES INCORPORATED IN THE WORK SHALL
PI PID PRESS. PSH	PROPORTIONAL INTEGRAL PROPORTIONAL INTEGRAL DERIVATIVE PRESSURE HIGH PRESSURE SWITCH	Ø [⊥]	PRESSURE GAUGE	- h	PIPE ELBOW	BE NEW AND OF COMPARABLE QUALITY AS SPECIFIED. ALL WORKMANSHIP SHALL BE FIRST-CLASS AND SHALL BE PERFORMED BY MECHANICS SKILLED AND REGULARLY EMPLOYED IN THEIR RESPECTIVE TRADES.
PSIG PSL QUANT.	POUNDS PER SQUARE INCH - GAUGE LOW PRESSURE SWITCH QUANTITY	日日	THERMOMETER	Ŷ	PIPE DOWN	ALL WORK SHALL BE COORDINATED WITH ALL AFFECTED TRADES PRIOR TO STARTING WORK. REWORK REQUIRED DUE TO COORDINATION ISSUES SHALL BE DONE BY THE INSTALLATION CONTRACTOR WITHOUT INCREASED COST TO THE OWNER.
R R RA RC	RADIUS RETURN RETURN AIR REHEAT STEAM COIL - AHU	\bigcirc	PUMP	4	PIPE UP	THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. ALTHOUGH EVERY ATTEMPT HAS BEEN MADE TO INDICATE THE EXACT ROUTING AND LOCATION OF PROPOSED SYSTEMS, NOT ALL OFFSETS, REQUIRED FITTINGS AND/OR CONDITIONS CAN BE SHOWN. THE CONTRACTOR SHALL COORDINATE WORK AND MAKE REQUIRED
RD REQ'D RPM	ROOF DRAIN REQUIRED REVOLUTIONS PER MINUTE	\otimes	STEAM TRAP	++++++	PIPE TEE DOWN	CHANGES TO THE ROUTING IN ORDER TO AVOID CONFLICTS WITHOUT ANY INCREASED COST TO THE OWNER.
S SA SAN	SINK SUPPLY AIR SANITARY	Ŷ	STRAINER	_+ + +-	TEE	SYSTEMS DESIGNATED TO BE PROVIDED AND INSTALLED WITHIN THESE CONTRACT DOCUMENTS ARE INTENDED TO BE COMPLETE AND OPERATIONAL. PROVIDE EVERYTHING ESSENTIAL FOR THE COMPLETION OF THE WORK TO MAKE THE SYSTEM READY FOR NORMAL AND PROPER OPERATION, INCLUDING ALL WORK OR
SCW SD SF	SOFT COLD WATER SMOKE DAMPER FAN SECTION - AHU	Þ	CONCENTRIC REDUCER	2	PLUMBING PLAN NOTE	MATERIALS NOT DIRECTLY SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS, BUT NECESSARY FOR THE PROPER OPERATION OF THE SYSTEM.
SF SH SP SPEC	SQUARE FEET SHOWER STATIC PRESSURE SPECIFICATION					PLUMBING CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER MAINTENANCE CLEARANCES ARE MAINTAINED. CLOSE COORDINATION WILL BE REQUIRED WITH THE MECHANICAL PIPING, HVAC, FIRE PROTECTION, AND ELECTRICAL CONTRACTOR.
SS SST SV	SANITARY SEWER START/STOP STEAM VENT					ALL DOMESTIC WATER PIPING ABOVE GRADE IS INTENDED TO BE INSULATED, TYPE K OR L HARD DRAWN COPPER PIPE AS SPECIFIED. TYPE M COPPER PIPE IS NOT ALLOWED.
T TEMP. TT	THERMOSTAT TEMPERATURE TEMPERATURE SENSOR/TRANSMITTER					ALL WASTE AND VENT PIPING ABOVE AND BELOW GRADE IS INTENDED TO BE CAST IRON AS SPECIFIED. PVC IS NOT ALLOWED.
TYP. V	TYPICAL VENT					FOR PIPE SIZES NOT SHOWN ON FLOOR PLANS SEE PIPING ISOMETRIC DRAWINGS.
VAV VFD	VARIABLE AIR VOLUME VARIABLE FREQUENCY DRIVE					

- VFD VARIABLE FREQUENCY DRIVE VARIABLE SPEED MOTOR CONTROLLER VSMC VTR VENT THROUGH ROOF
- WITH W/
- WET BULB WB WC WATER CLOSET
- WD WATER DISPENSER WMS WATER MONITORING SYSTEM WH WALL HYDRANT

ALBERTSON ENGINEERING, INC. 315 NORTH MAIN AVENUE, SUITE 200 SIOUX FALLS, SOUTH DAKOTA 57104 PH: (605) 274-0880

SUMMIT FIRE CONSULTING 575 MINNEHAHA AVE WEST ST. PAUL, MINNESOTA 55103 (612) 387-7050



ARCHITECT



FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PH: (605) 342-9470 FAX: (605) 342-2377 WWW.FOURFRONTDESIGN.COM

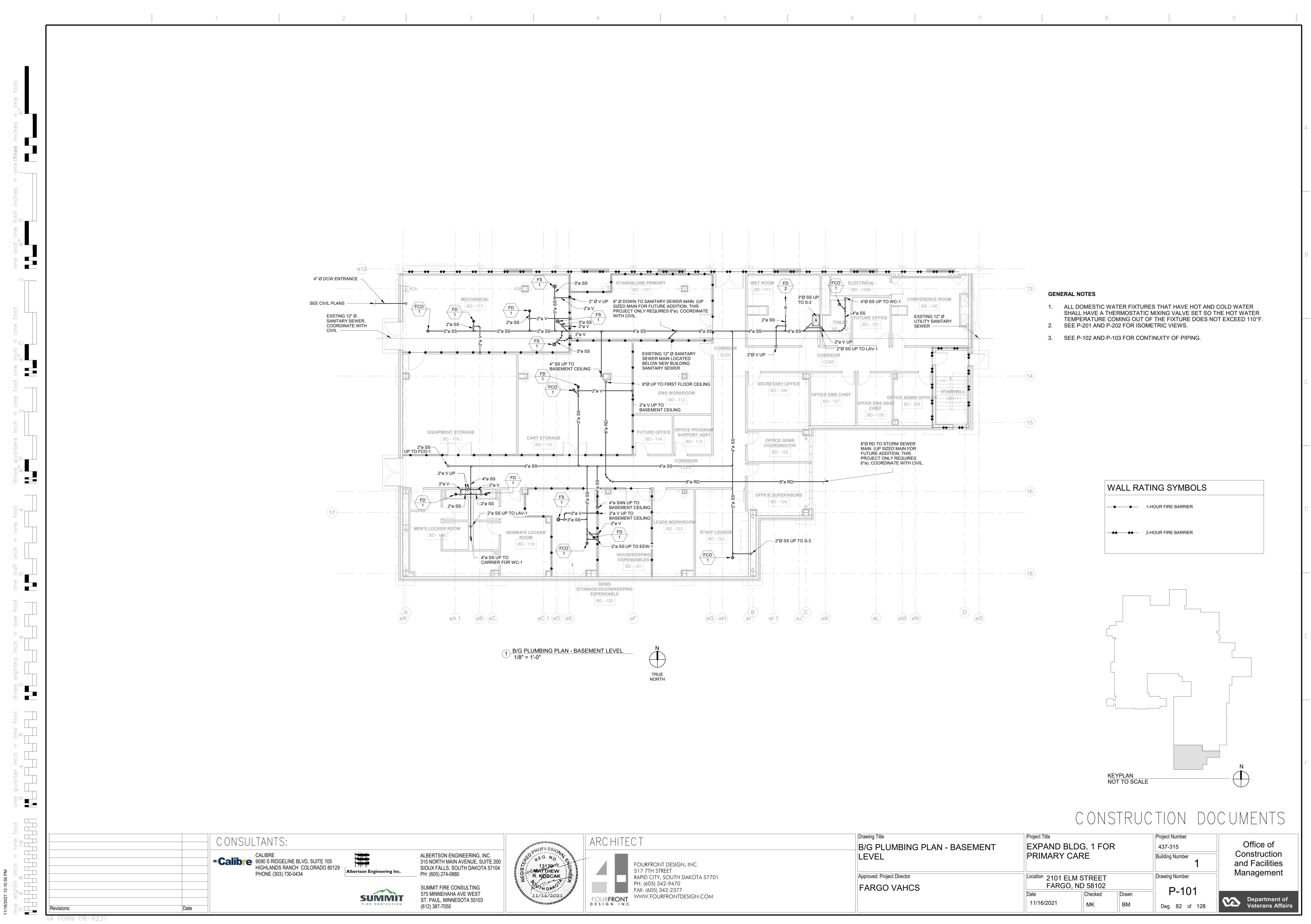
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		CON	stru		CUMENTS
Drawing Title SYMBOLS, LEGENDS AND ABBREVIATIONS	Project Title EXPAND BL PRIMARY C		R	Project Number 437-315 Building Number 1	Office of Construction and Facilities
Approved: Project Director FARGO VAHCS	Location 2101 EL FARGO,	M STREET ND 58102		Drawing Number	Management
	Date 11/16/2021	Checked MK	Drawn BM	P-UUU Dwg. 81 of 128	Department of Veterans Affairs

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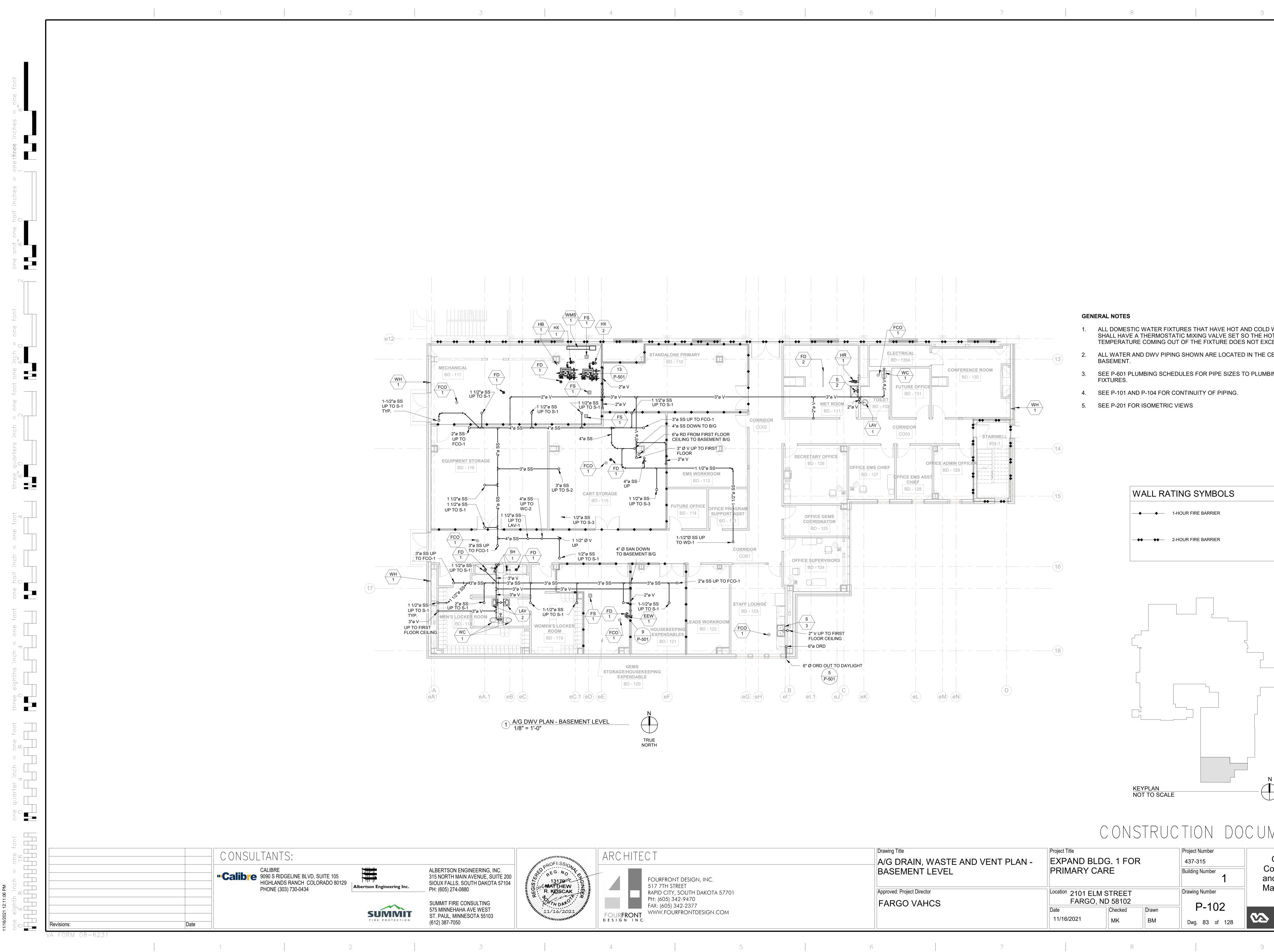
EX	
NT LEVEL	

THOUGH EVERY ATTEMPT D LOCATION OF PROPOSED /OR CONDITIONS CAN BE (AND MAKE REQUIRED ICTS WITHOUT ANY
ED WITHIN THESE CONTRACT ERATIONAL. PROVIDE E WORK TO MAKE THE I, INCLUDING ALL WORK OR OR IN THE SPECIFICATIONS, E SYSTEM.
NG PROPER MAINTENANCE I WILL BE REQUIRED WITH D ELECTRICAL CONTRACTOR.
DED TO BE INSULATED, TYPE E M COPPER PIPE IS NOT
DE IS INTENDED TO BE CAST
ING ISOMETRIC DRAWINGS.



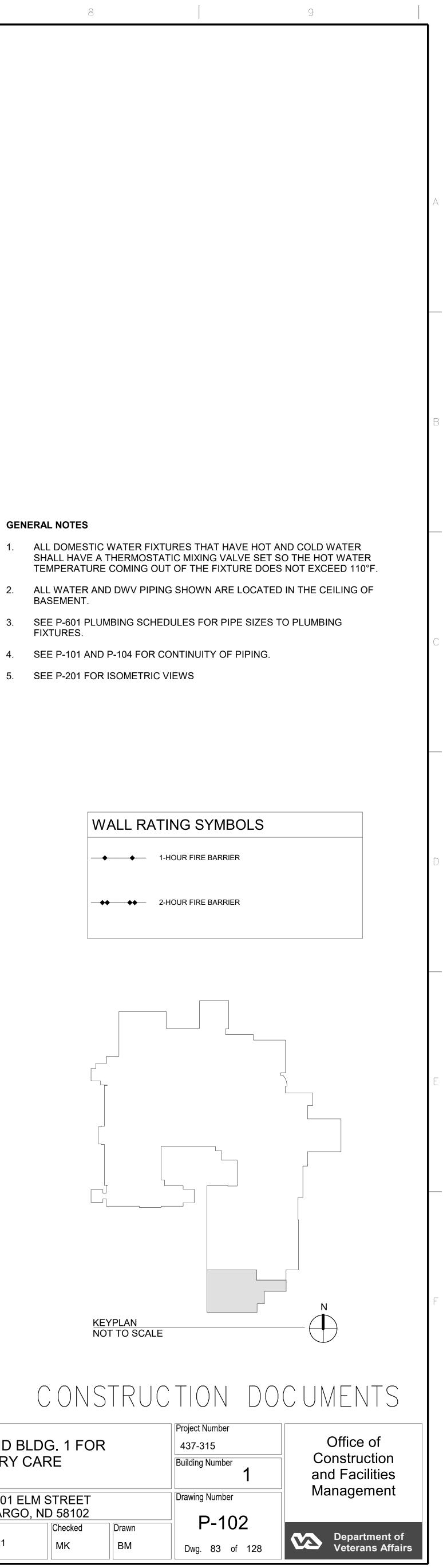
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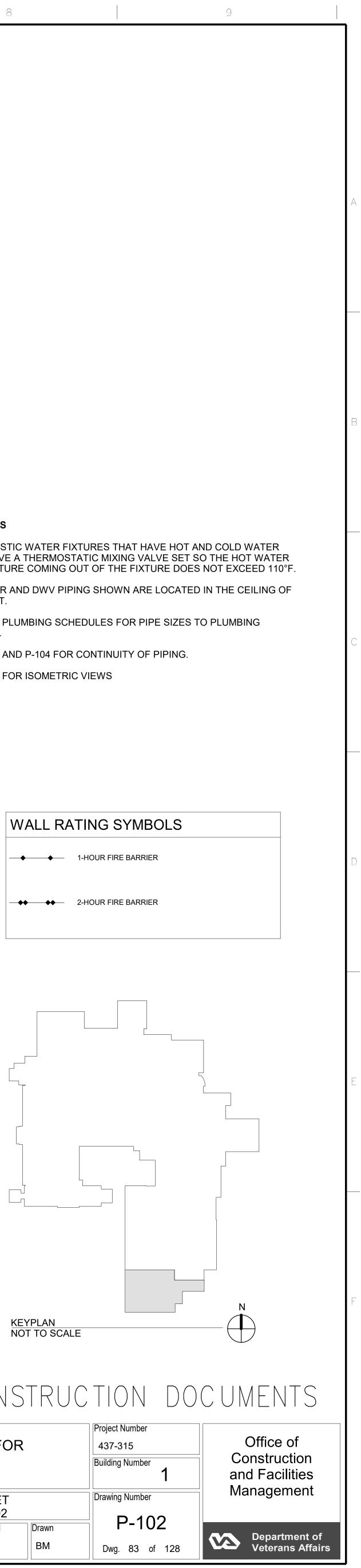
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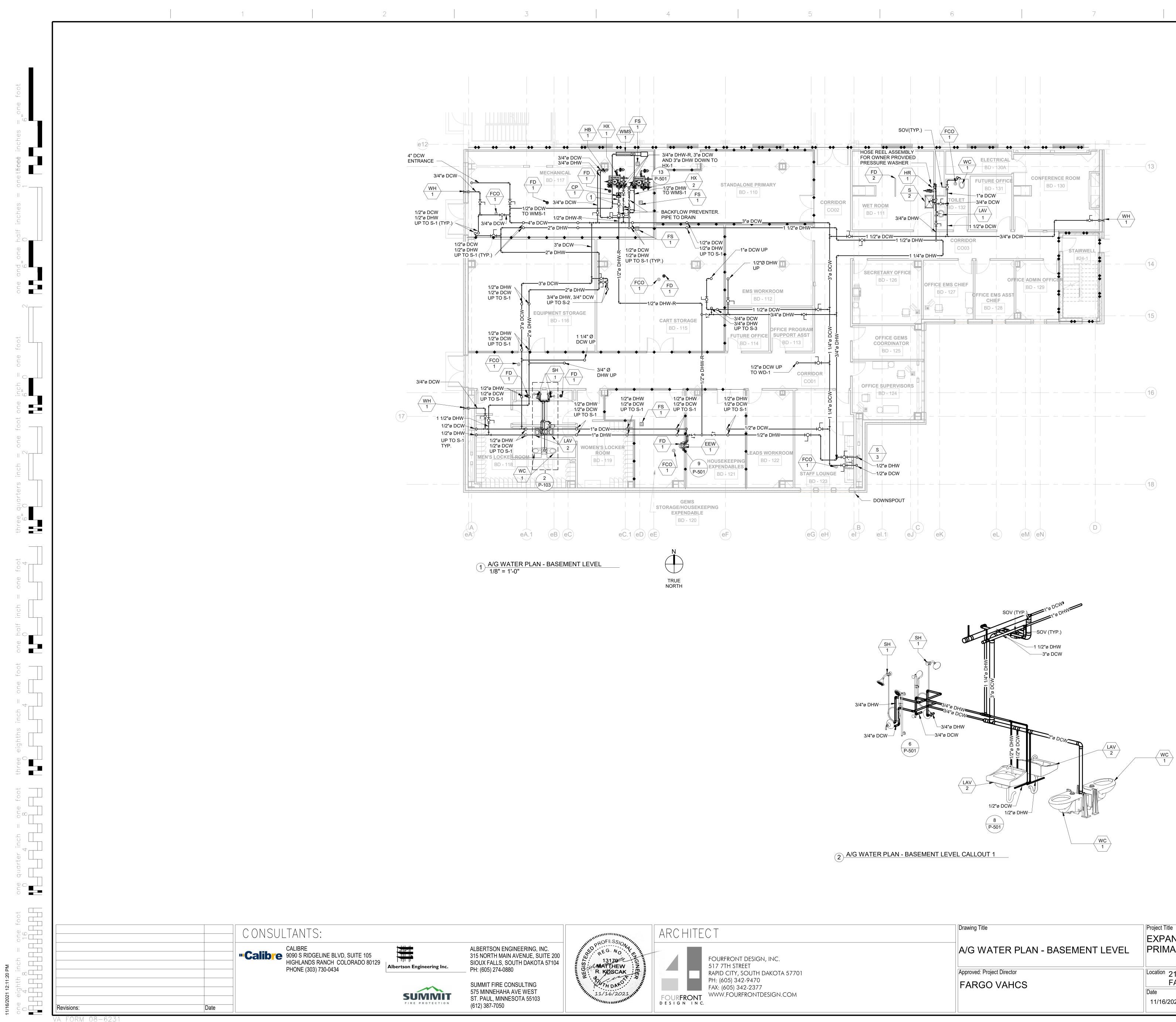
GENERAL NOTES

- 2. BASEMENT.
- FIXTURES.
- 5. SEE P-201 FOR ISOMETRIC VIEWS





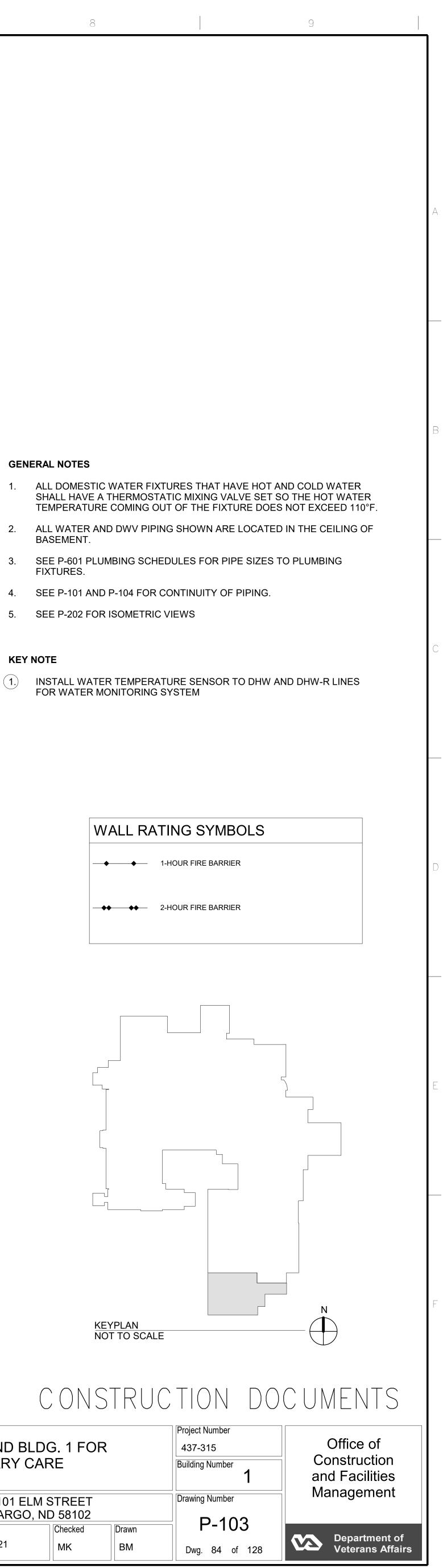
Drawing Title	Project Title		Project Number		
A/G DRAIN, WASTE AND VENT PLAN -	EXPAND BLDG. 1 FOR		437-315		
BASEMENT LEVEL	PRIMARY CARE			Building Number	
Approved: Project Director	Location 2101 ELM STREET			Drawing Numbe	
FARGO VAHCS	FARGO, ND 58102				
	Date	Checked	Drawn	= P-1(
	11/16/2021	MK	BM	Dwg. 83	

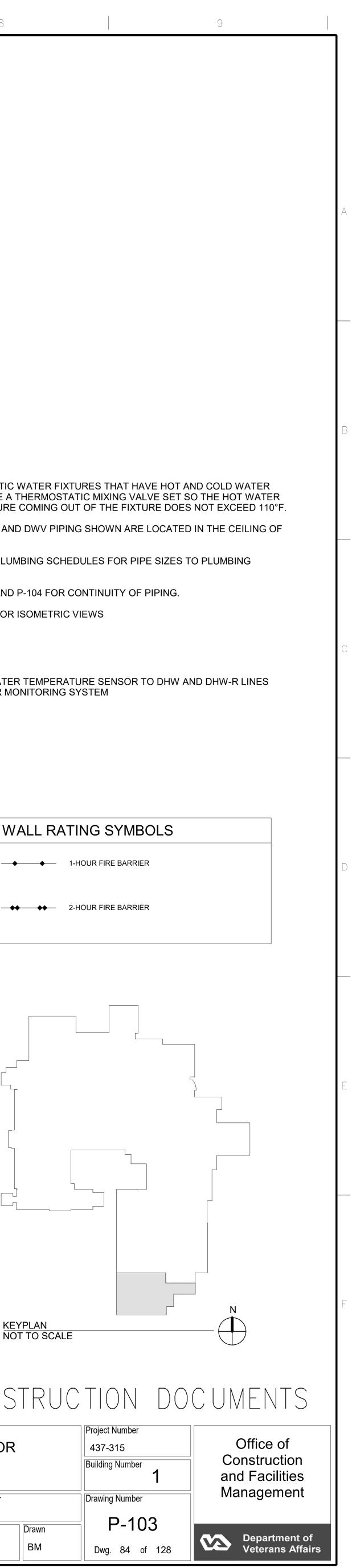


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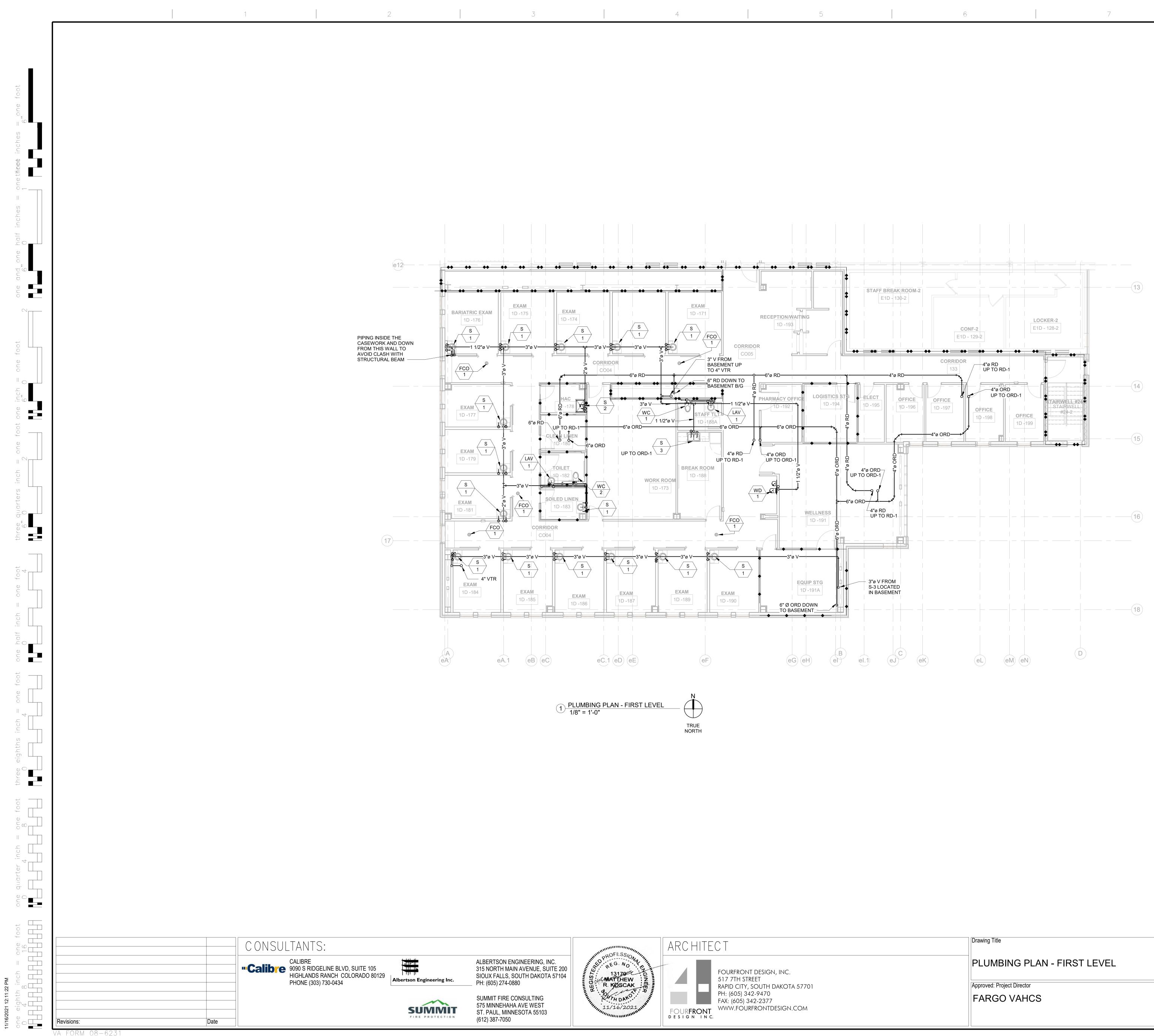
	Drawing Title	Project Title			Project Number
		EXPAND BLDG. 1 FOR		437-315	
A/G WATER PLAN - BASEMENT LEVEL		PRIMARY CARE			Building Number
	Approved: Project Director		Location 2101 ELM STREET		
	FARGO VAHCS	FARGO, ND 58102			
		Date	Checked	Drawn	P-10
		11/16/2021	МК	ВМ	Dwg. 84 of

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KEY NOTE

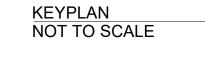


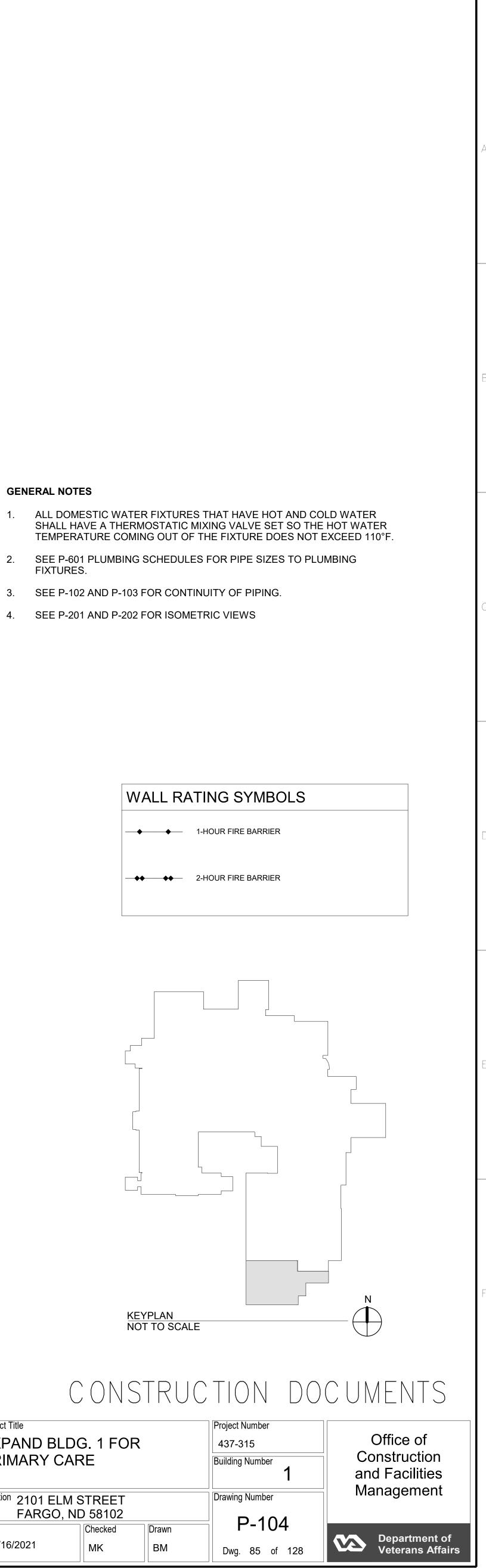
FORM	-80

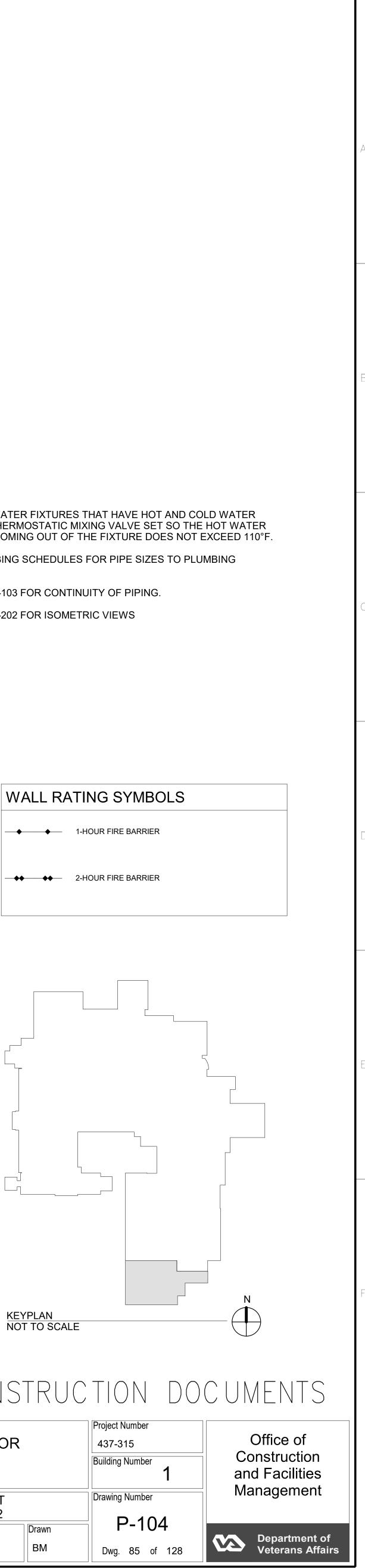


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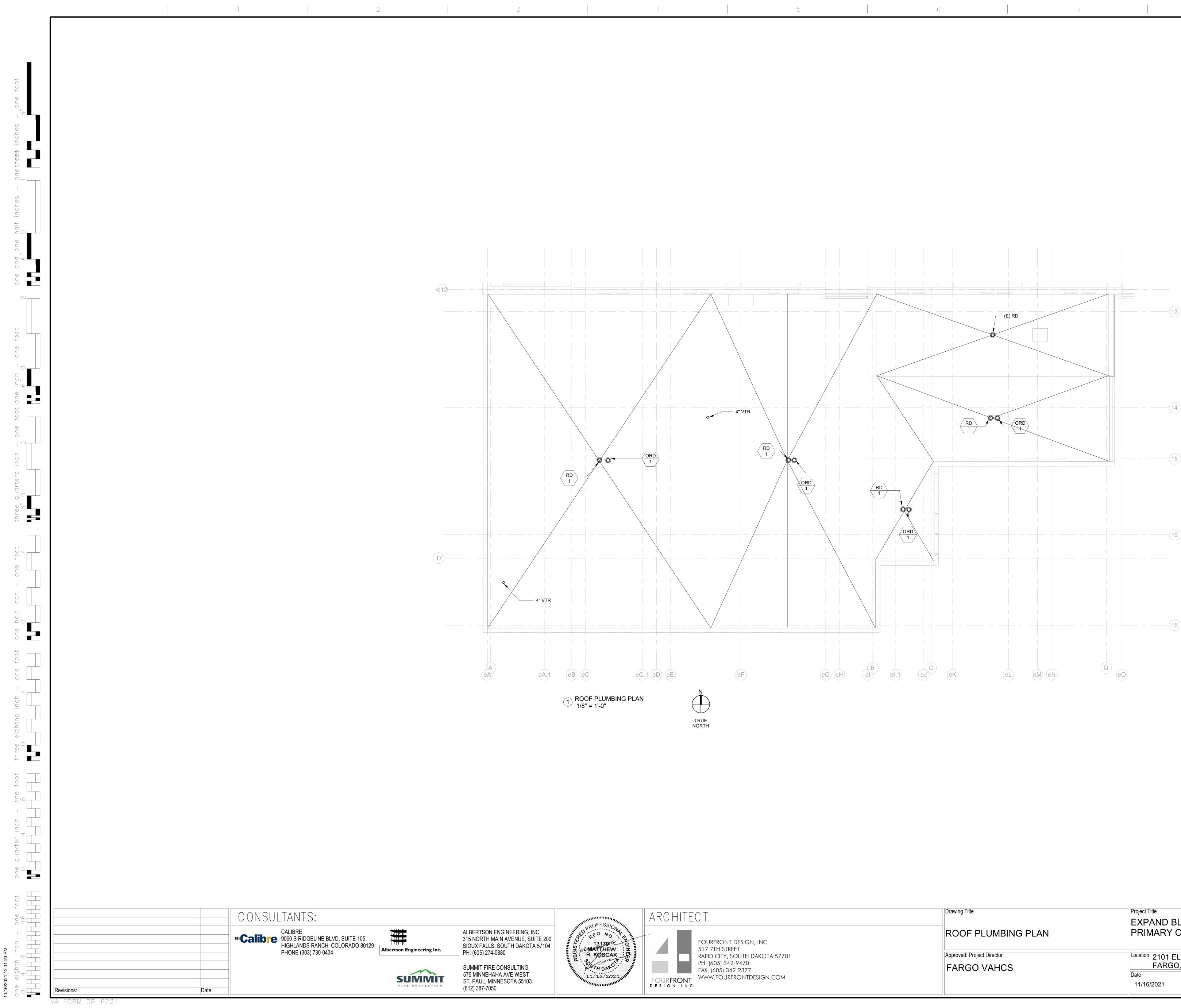
Project Title			Project Number	
EXPAND BLDG. 1 FOR				
L PRIMARY CARE		Building Numbe		
Location 2101 ELM	Drawing Numbe			
FARGO, ND 58102				
Date	Checked	Drawn	= P-1	
11/16/2021	МК	ВМ	Dwg. 85	
	EXPAND BLD PRIMARY CA Location 2101 ELM FARGO, N Date	EXPAND BLDG. 1 FO PRIMARY CARE	EXPAND BLDG. 1 FOR PRIMARY CARE	







GENERAL NOTES



FORM	08-6231



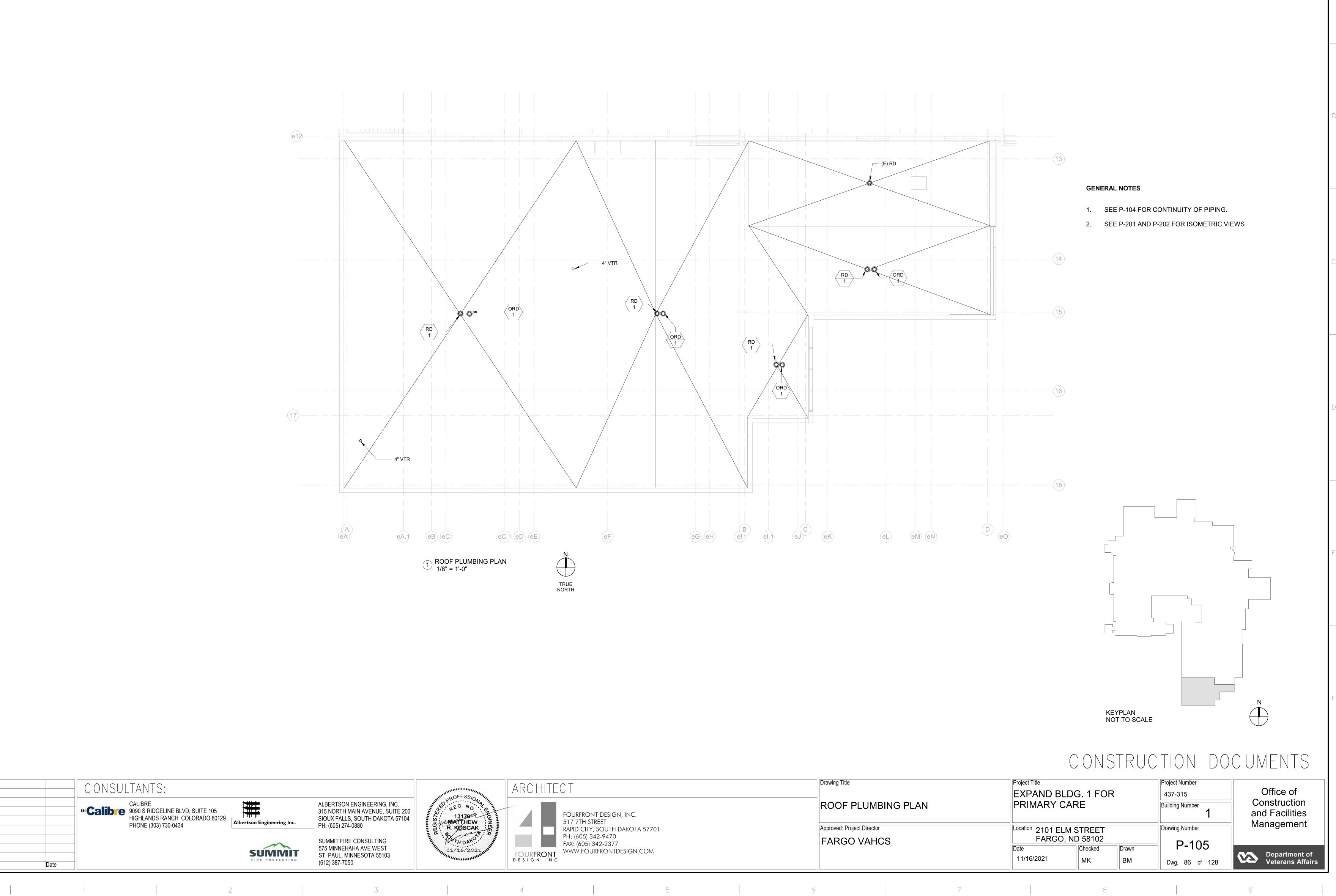


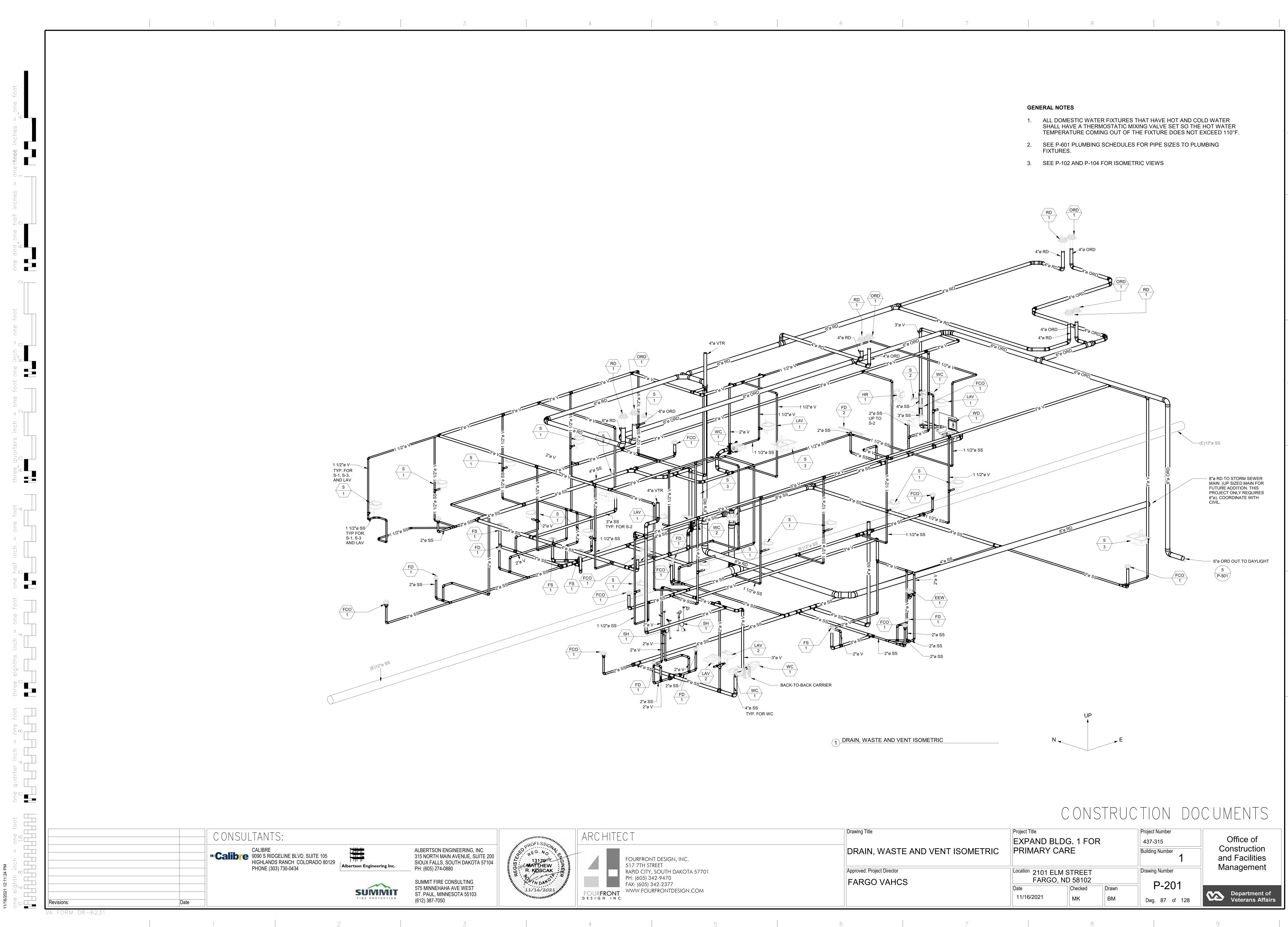
GENERAL NOTES

- 1. SEE P-104 FOR CONTINUITY OF PIPING.
- 2. SEE P-201 AND P-202 FOR ISOMETRIC VIEWS

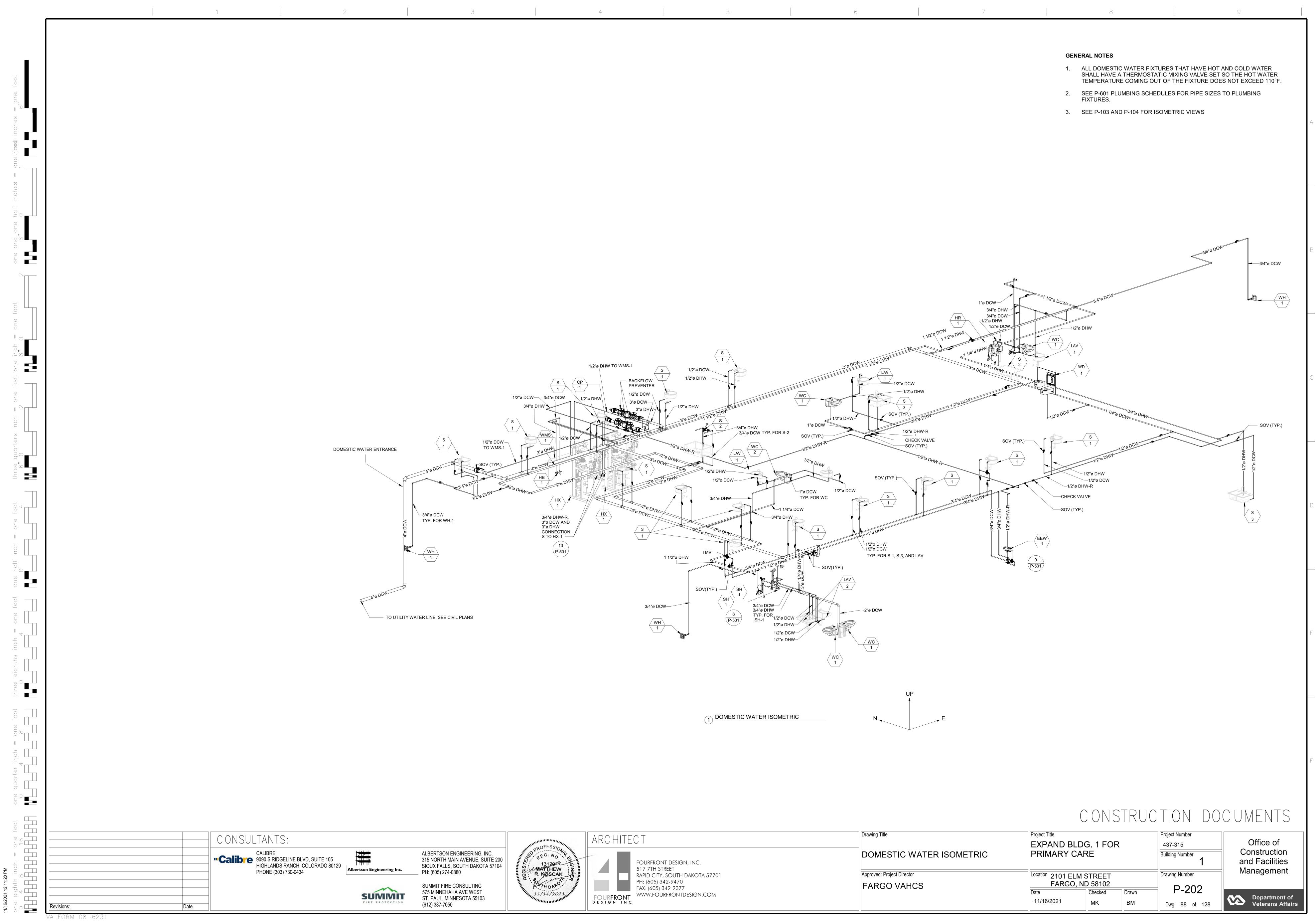
KEYPLAN NOT TO SCALE

Drawing Title	Project Title EXPAND BLDG. 1 FOR			Project Number	
			437-315		
ROOF PLUMBING PLAN	PRIMARY CARE		Building Numbe		
Approved: Project Director	Location 2101 ELM STREET			Drawing Numbe	
FARGO VAHCS	FARGO	, ND 58102			
	Date	Checked	Drawn	= P-10	
	11/16/2021	MK	BM	Dwg. 86	





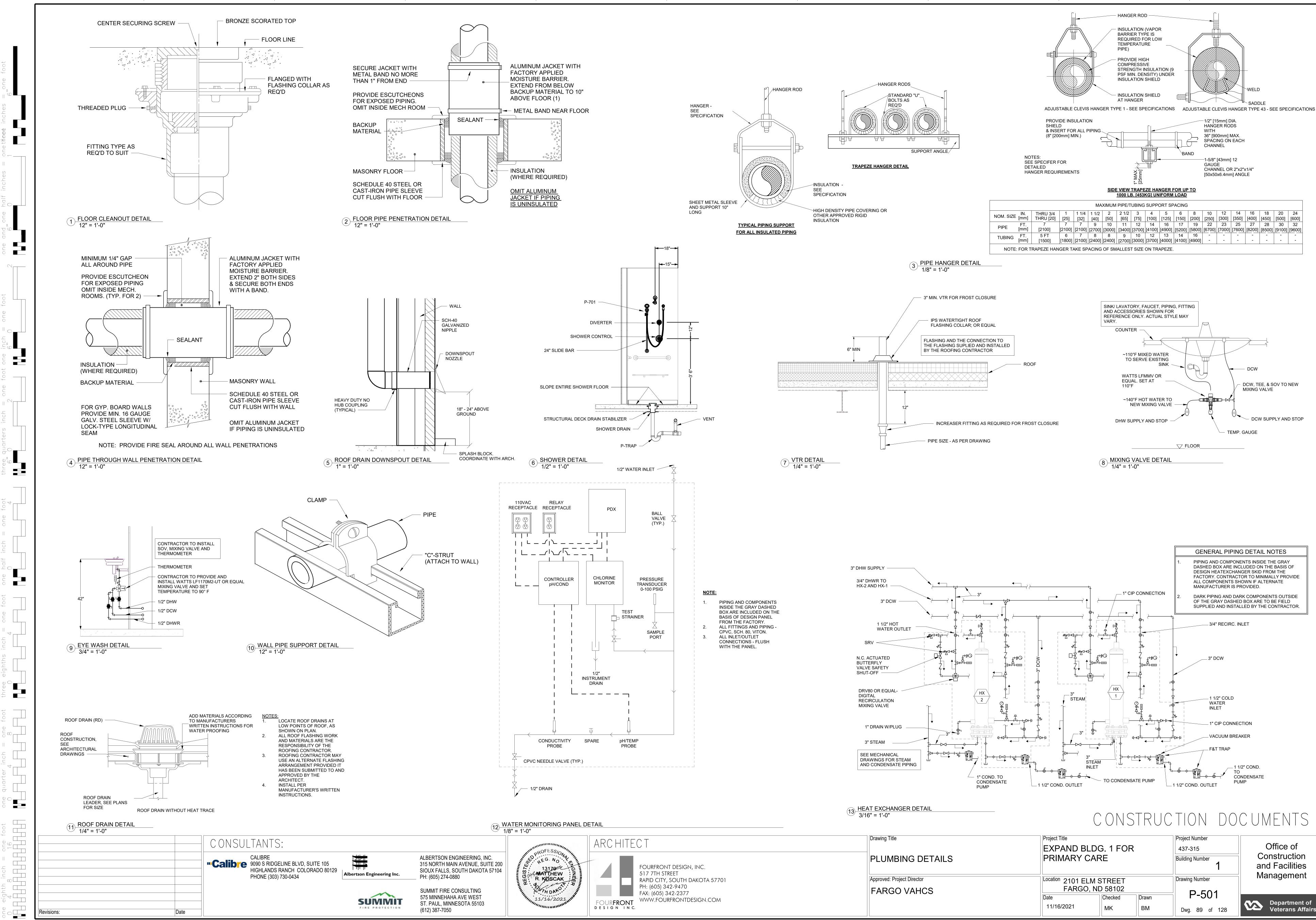
Drawing Title	Project Title		Project Number
		LDG. 1 FOR	437-315
DRAIN, WASTE AND VENT ISOMETRIC	PRIMARY	CARE	Building Numbe
Approved: Project Director	Location 2101 EL	LM STREET	Drawing Numbe
FARGO VAHCS	FARGO), ND 58102	P-2
	Date	Checked Drawn	
	11/16/2021	МК ВМ	Dwg. 87



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Drawing Title	Project Title			Project Number	
	EXPAND BLDG. 1 FOR PRIMARY CARE			437-315 Building Numbe	
DOMESTIC WATER ISOMETRIC					
Approved: Project Director	Location 2101 ELM STREET			Drawing Numbe	
FARGO VAHCS	FARGO, ND 58102			<u> </u>	
	Date	Checked	Drawn	P-2	
	11/16/2021	MK	ВМ	Dwg. 88	



VA FORM 08-6231

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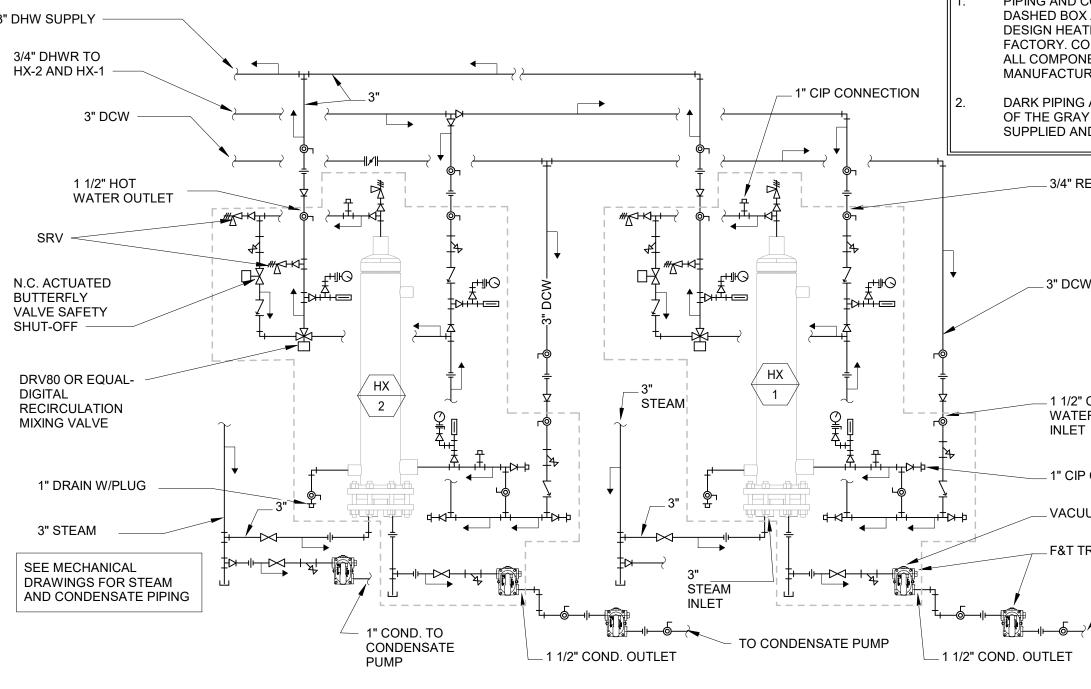
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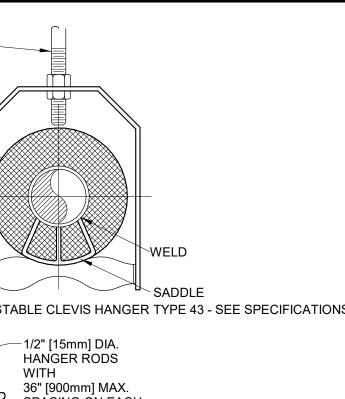
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 Drawing Title	Project Title			Project Numbe
 PLUMBING DETAILS	EXPAND BL PRIMARY C		R	437-315 Building Numb
Approved: Project Director	Location 2101 EL			Drawing Numb
FARGO VAHCS	Date	, ND 58102 Checked	Drawn	P-5
	11/16/2021	MK	BM	Dwg. 89

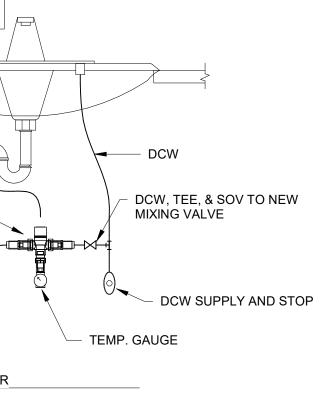
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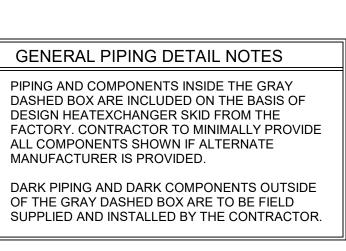




- SPACING ON EACH CHANNEL -1-5/8" [43mm] 12 GAUGE
- CHANNEL OR 2"x2"x1/4" [50x50x6.4mm] ANGLE

10	12	14	16	18	20	24
[250]	[300]	[350]	[400]	[450]	[500]	[600]
22	23	25	27	28	30	32
[6700]	[7000]	[7600]	[8200]	[8500]	[9100]	[9600]
-	-	-	-	-	-	-
-	-	-	-	-	-	-





- 3/4" RECIRC. INLET

- 3" DCW

1 1/2" COLD WATER INLET

_ 1" CIP CONNECTION VACUUM BREAKER

F&T TRAP

of 128

__1 1/2" COND. то CONDENSATE PUMP

Office of Construction and Facilities Management 501 Department of Veterans Affairs