STRUCTURAL - GENERAL NOTES

1. TO THE BEST OF OUR KNOWLEDGE, THE STRUCTURAL PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING GOVERNING DESIGN CODES:
   - A. INTERNATIONAL BUILDING CODE 2018 EDITION
   - B. AISC STEEL CONSTRUCTION MANUAL (14TH EDITION)
   - C. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, (ACI 318-14)
   - D. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-16)
   - E. STRUCTURAL WELDING CODE AWS D1.1
   - F. UFC 1-200-01: UNIFIED FACILITIES CRITERIA (UFC), GENERAL BUILDING REQUIREMENTS W/ CHANGE 1, 1 OCTOBER 2020
   - G. UFC 3-301-01: UNIFIED FACILITIES CRITERIA (UFC), STRUCTURAL ENGINEERING, 1 OCTOBER 2019
   - H. UFC 4-010-01 UNIFIED FACILITIES CRITERIA (UFC), DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS, WITH CHANGE 1, 19 AUGUST 2020
   - I. TYNDALL MEMORANDUM DESIGN WIND SPEED
2. THE STRUCTURAL DOCUMENTS ARE TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL. USE THESE NOTES IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS. IF A CONFLICT EXISTS, THE MORE STRINGENT GOVERNS.
3. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS; INCLUDING DIMENSIONS, AND SITE CONDITIONS AND COORDINATE WITH FIELD DIMENSIONS AND PROJECT SHOP DRAWINGS PRIOR TO CONSTRUCTION. ANY AND ALL DISCREPANCIES SHALL BE SUBMITTED IN WRITING TO ***CONTRACTING OFFICER***. DO NOT MODIFY OR CHANGE THE SIZE OR DIMENSIONS OF STRUCTURAL MEMBERS WITHOUT WRITTEN INSTRUCTIONS FROM THE ***CONTRACTING OFFICER***.
4. IT SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR TO LOCATE ANY AND ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM ALL DAMAGE. EACH CONTRACTOR SHALL PROTECT HIS WORK, ADJACENT PROPERTY AND THE PUBLIC. EACH CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS ACT OR NEGLECT.
5. WHERE A CONSTRUCTION DETAIL IS NOT SHOWN OR NOTED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR WORK. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. ANY QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE RESOLVED BY THE ARCHITECT / ENGINEER.
6. DESIGN LOAD CRITERIA:
   - A. BUILDING RISK CATEGORY. III
   - B. GRAVITY LOADS:
     - a. SLAB ON GRADE (U.N.O.). . . . . 150 PSF
     - b. GENERATOR PAD. . . . . .350 PSF
     - c. ROOF LIVE LOAD . . . . . .20 PSF
     - d. ROOF DEAD LOAD . . . . . .20 PSF
     - e. TRUSS BOTTOM CHORD COLLATERAL LOAD . . . . . .10 PSF
   - C. WIND LOADS:
     - a. ULTIMATE DESIGN WIND SPEED . . . . . .165 MPH
     - b. NOMINAL DESIGN WIND SPEED . . . . . 128 MPH
     - c. WIND EXPOSURE CATEGORY. C
     - d. INTERNAL PRESSURE COEFFICIENT . . . . . ±0.18 (ENCLOSED)
7. THE SPECIALTY ENGINEER, DEFINED AS - A PROFESSIONAL ENGINEER, LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED, WHO PERFORMS SPECIALTY STRUCTURAL ENGINEERING SERVICES FOR SELECTED SPECIALTY-ENGINEERED ELEMENTS IDENTIFIED IN THE CONTRACT DOCUMENTS, AND WHO HAS EXPERIENCE AND TRAINING IN THE SPECIALTY. DOCUMENTS SIGNED AND SEALED BY THE SPECIALTY ENGINEER SHALL BE COMPLETED BY OR UNDER THE DIRECT SUPERVISION OF THE SPECIALTY ENGINEER. AT ROOF SYSTEM, TRUSSES, GLAZING SYSTEMS, ETC AND THEIR ATTACHMENTS TO THE STRUCTURE SHALL BE DESIGNED BY A SPECIALTY ENGINEER TO CONFORM TO ALL LOADING REQUIREMENTS INCLUDING WIND, IMPACT RESISTANCE, AND BLAST LOADING.
8. DO NOT SCALE THE DRAWINGS, USE DIMENSIONS SHOWN ON PLAN IN CONJUNCTION WITH CONTRACTOR FIELD VERIFIED INFORMATION. IF A CONFLICT EXISTS, NOTIFY THE CONTRACTING OFFICER IN WRITING FOR RESOLUTION OF ANY AND ALL CONFLICTS.

SHALLOW FOUNDATION REQ'S

1. GEOTECHNICAL REPORT - FOUNDATION DESIGN CRITERIA IS BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF WITH MAXIMUM DIFFERENTIAL SETTLEMENT OF 1/2". NOVA ENGINEERING HAS TAKEN SOIL SAMPLES AT THIS SITE AND IS PREPARING A REPORT OF FINDINGS. RECOMMENDATIONS IN THIS REPORT SHALL BE FOLLOWED. CONSULT SOILS REPORT BY NOVA FOR FOUNDATION PREPARATION AND EXCAVATION INFORMATION.
2. IF BEARING SOIL IS DISTURBED DURING FOUNDATION PREPARATION, THE CONTRACTOR SHALL RECOMPACT TO REQUIRED DENSITY, AS DEFINED BY THE GEOTECHNICAL ENGINEER.
3. ALL WALLS AND COLUMNS SHALL BE CENTERED ON THE FOOTINGS U.N.O.
4. DO NOT EXCAVATE FOR ANY PURPOSE WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOOTING OR FOUNDATION UNLESS FOOTING OR FOUNDATION IS FIRST PROPERLY PROTECTED AGAINST SETTLEMENT.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER FROM EXCAVATIONS AND DEWATERING OPERATIONS IN SUCH A WAY AS NOT TO CAUSE INCONVENIENCE TO THE WORK AND DAMAGE TO THE STRUCTURAL ELEMENTS.

SLAB ON GRADE NOTES

1. ENSURE THAT REINFORCEMENT IS LOCATED IN SLAB CORRECTLY BY CHAIRING REINFORCING ADEQUATELY DURING CONCRETE PLACEMENT.
2. USE 15 MIL. POLYETHYLENE (VAPOR BARRIER) SHEETING BETWEEN COMPACTED SOIL AND CONCRETE SLAB MIN., U.N.O. PLEASE NOTE THAT ARCHITECT WILL PROVIDE FINAL VAPOR BARRIER SPECIFICATIONS AND THIS MAY INCLUDE THICKER VAPOR BARRIERS AS REQUIRED.
3. PROVIDE POROUS DRAINAGE LAYER UNDER INTERIOR PORTIONS OF SLAB ON GRADE. DRAINAGE LAYER SHALL CONSIST OF CLEAN, FREE-DRAINAGE PEA GRAVEL, CRUSHED STONE, OR COARSE SAND. THIS DRAINAGE LAYER SHALL CONSIST OF NATURAL SAND WITH A MAXIMUM 50% PASSING THE NO. 50 SIEVE AND 5% PASSING A NO. 200 SIEVE AS MINIMUM. SEE PROJECT GEOTECHNICAL REPORT FOR GUIDELINES. THE CONTRACTOR SHALL COORDINATE THESE REQUIREMENTS WITH THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO FOUNDATION PREPARATION.
4. PLACE CRACK CONTROL JOINTS USING A MAXIMUM 2:1 LENGTH TO WIDTH RATIO WITH 20'-0" MAXIMUM SPACING, UNLESS LOCATED ON PLANS. PLACE MANDATORY CONSTRUCTION JOINTS AS SHOWN.

LIGHT GAUGE PRE-ENGINEERED TRUSS SYSTEM

1. ALL TRUSSES SHALL BE G60 COATED AND BE DESIGNED BY THE TRUSS SYSTEM ENGINEER. THE SYSTEM SHALL BE DESIGNED AND FABRICATED BY MANUFACTURER TO FUNCTION AS A SYSTEM INCLUDING ALL TEMPORARY AND PERMANENT BRACING REQUIRED AND SPECIFIED.
2. TRUSSES SHALL BE FABRICATED WITH STANDARD CAMBER, AND ERECTED AND BRACED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. TRUSS SYSTEM ENGINEER SHALL SUBMIT ERECTION AND SHOP DRAWINGS SHOWING LOCATIONS, BRIDGING, CONNECTIONS AND DETAILS, SPECIAL AND EXTENDED ENDS. ACCESSORIES REQUIRED FOR THE INSTALLATION OF TRUSS SYSTEM. THE SPECIALTY ENGINEER SHALL INCLUDE COMPONENT DETAILS AND LAYOUT DRAWINGS SHOWING DESIGN LOADING, MEMBER SIZES, BRACING, ANCHORAGE, CONNECTIONS, AND OTHER NECESSARY FABRICATION AND ERECTION INFORMATION.
4. TOP CHORDS SHALL BE MINIMUM 6-INCH, 18GA MEMBERS OF THE SHAPE REQUIRED. THE TOP CHORD SHALL BE OF THE CONFIGURATIONS INDICATED ON THE DRAWINGS. ARRANGEMENT OF WEB MEMBERS TO BE AT THE DISCRETION OF THE DESIGN ENGINEER. AT TRUSS JOINTS, CENTERLINES OF MEMBERS SHALL INTERSECT AT A COMMON POINT OR ECCENTRICITIES SHALL BE CONSIDERED IN THE DESIGN.
5. DIAGONAL BRIDGING SHALL BE DESIGNED FOR L/R LESS THAN OR EQUAL TO 200.
6. TRUSS BRIDGING SHALL NOT BE USED TO SUPPORT EQUIPMENT, PIPING, CONDUITS, DUCTWORK, ETC.
7. TRUSS ANCHORAGES, AS A RESULT OF ACTUAL TRUSS CALCULATIONS, TO TOP PLATE OR SUPPORTS SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS SYSTEM ENGINEER. ANCHORAGES AND BRACING SPECIFIED BY TRUSS SYSTEM ENGINEER MUST MEET THE REQUIREMENT FOR LATERAL CAPACITY PREVIOUSLY INDICATED IN THESE NOTES.
8. THE TRUSS SYSTEM ENGINEER SHALL DESIGN AND SPECIFY ALL TRUSS TO TRUSS CONNECTIONS.
9. PROVIDE 12" WIDE x 14GA CONTINUOUS PLATES AT ALL RIDGES, VALLEYS, & HIPS.
10. JOINTS AND CONNECTIONS SHALL BE MADE WITH SCREWS OR BOLTS.
11. TRUSS SYSTEM ENGINEER SHALL PROVIDE CHORD MEMBERS OF SUFFICIENT MATERIAL. THICKNESS TO ENSURE METAL DECK ATTACHMENTS CAN DEVELOP THE REQUIRED UPLIFT LOADS. TOP CHORD SHALL BE 16GA MINIMUM.
12. TRUSSES AT OVERHANGS SHALL BE DESIGNED USING OVERHANG WIND PRESSURES.
13. TRUSS SYSTEM ENGINEER SHALL DESIGN TOP CHORD EXTENSIONS AS INDICATED. TRUSS SYSTEM ENGINEER SHALL DESIGN RAFTERS AS INDICATED. PROVIDE CLOSURE, BRIDGING, ANCHORAGE, ETC AND ALL OTHER REQUIREMENTS SPECIFIED FOR TRUSSES.

STRUCTURAL CONCRETE

1. ALL CAST-IN-PLACE CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318-14 AND ACI 301, EXCEPT AS MODIFIED BY THE PROJECT CONSTRUCTION DOCUMENTS. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00.
2. ALL CONCRETE SHALL MEET THE PROJECT SPECIFICATIONS AND SHALL DEVELOP COMPRESSIVE STRENGTHS AS FOLLOWS (28 DAY STRENGTH):
   - A. NORMAL WEIGHT CONCRETE (145 PCF)
   - B. FOUNDATION & SLABS ON GRADE . . . . . 3500 PSI
   - C. ALL OTHER CONCRETE . . . . . .4000 PSI

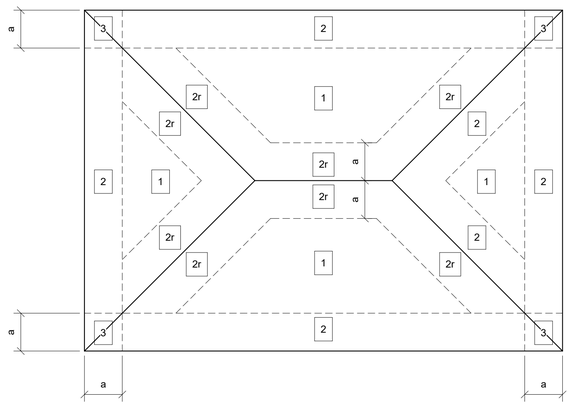
   PROVIDE CURRENT (MAX. 1 YEAR OLD) STATISTICAL DATA FOR EACH CONCRETE MIX SUBMITTED IN ACCORDANCE WITH ACI 318-14.
3. SPACING BARS FOR CONCRETE SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI AND MEET THE REQUIREMENTS OF ASTM A-615. FOR PLACEMENT OF REINFORCING CONFORM TO ACI-301, ACI-315, ACI-318, AND CRSI "MANUAL OF STANDARD PRACTICE". ALL REINFORCING SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED, AND FIRMLY TIED IN PLACE WITH BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS. PROVIDE CLASS "B" LAP SPLICE FOR CONTINUOUS BARS. USE THE FOLLOWING COVER:
   - A. CONCRETE COVER REQUIREMENTS FOR REINFORCEMENT, U.N.O.:
     - a. CONCRETE CAST AGAINST EARTH. . . . . 3"
     - b. CONCRETE POURED IN FORMS BUT EXPOSED TO WEATHER OR EARTH:
       - #5 REINFORCEMENT AND SMALLER . . . . . 1 1/2"
       - REINFORCEMENT LARGER THAN #5 . . . . . 2"
       - WELDED WIRE FABRIC . . 1" FROM TOP OF SLAB
     - c. CONCRETE POURED IN FORMS BUT NOT EXPOSED TO WEATHER OR EARTH.
       - #11 REINFORCEMENT AND SMALLER. . . . . 3/4"
4. USE PLAIN, COLD-DRAWN ELECTRICALLY-WELDED STEEL WIRE FABRIC CONFORMING TO ASTM A-185. SUPPLY IN FLAT SHEETS ONLY (NOT ROLLED). LAP SPLICES SHALL BE TWICE THE SPACING OF THE CROSS WIRES PLUS TWO (2) INCHES.
5. NO CONDUIT PLACED IN CONCRETE SLAB SHALL HAVE AN OUTSIDE DIAMETER GREATER THAN 1/3 THE THICKNESS OF THE SLAB. NO CONDUIT SHALL BE EMBED IN A SLAB THAT IS LESS THAN 4" THICK. MINIMUM CLEAR DISTANCE SHALL BE IN ACCORDANCE WITH ACI 318.
6. ALL REINFORCING BARS, ANCHOR BOLTS, DOWELS AND OTHER CONCRETE INSERTS SHALL BE SECURED ADEQUATELY IN POSITION PRIOR TO PLACEMENT OF CONCRETE. CONTRACTOR SHALL USE TEMPLATES TO INSURE ACCURATE PLACEMENT OF ANCHOR BOLTS, DOWELS, ETC.
7. ALL CONCRETE SHALL BE CONSOLIDATED BY USE OF A MECHANICAL VIBRATOR OR OTHER MEANS APPROVED BY THE ENGINEER.
8. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. CONCRETE SHALL BE PLACED IN ITS FINAL POSITION WITHIN 90 MINUTES AFTER ADDITION OF BATCH WATER. CONCRETE SHALL BE DISCARDED IF THE FOREGOING ELAPSED TIME IS EXCEEDED.

CONCRETE MASONRY UNITS (CMU) NOTES

1. ALL MASONRY WORK SHALL CONFORM TO ACI 530 AND 530.1. SPECIFICATION FOR MASONRY STRUCTURES.
2. CONSTRUCT REINFORCED MASONRY AS NOTED ON THE PLANS AND DETAILS IN ACCORDANCE WITH THE REQUIREMENTS OF MASONRY SPECIFICATION SECTIONS.
3. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM SPECIFICATIONS ASTM C90. THE MINIMUM NET COMPRESSIVE STRENGTH OF MASONRY UNITS SHALL BE 2000 PSI (f'm=1500 PSI FOR MASONRY SYSTEM). PERFORM f'm AND C90 COMPLIANCE BY UNIT TEST METHOD. USE ONLY MASONRY UNITS THAT ARE A MIN. OF 50% SOLID.
4. MORTAR SHALL CONFORM TO ASTM C270. USE TYPE "S" MORTAR WITH 3/8" FULL-BEDDED JOINTS FOR ALL MASONRY UNITS. REMOVE EXCESS MORTAR PROTRUDING INTO CELL CAVITIES THAT ARE TO BE REINFORCED AND GROUTED. ALLOW A MIN. OF 24 HOURS FOR MORTAR TO CURE BEFORE PLACING GROUT.
5. ALL GROUT USED TO FILL REINFORCED MASONRY CAVITIES SHALL CONFORM TO ASTM C-476 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS, TESTED IN ACCORDANCE WITH ASTM C1019. AGGREGATE TO CONFORM TO ASTM C404 FOR COARSE GROUT AND SLUMP OF 8" TO 11". TEST SAMPLES FOR COMPRESSIVE STRENGTH. TEST EVERY 30 YARDS OR EACH DAY'S GROUTING AND AS INDICATED IN THE PROJECT SPECIFICATIONS.
6. PROVIDE HORIZONTAL JOINT REINFORCEMENT IN ALL CMU WALLS, U.N.O. HORIZONTAL JOINT REINFORCING SHALL BE (9 GAUGE SIDE RODS WITH 9 GAUGE CROSS RODS) LADDER TYPE, HOT DIP GALVANIZED AFTER FABRICATION. VERTICAL SPACING OF REINFORCING SHALL BE 16" O.C. MAX. IF REQUIRED, TIES SHALL BE LOCATED WITHIN 8" OF WALL DISCONTINUITIES (MCJ, DOORS, WINDOWS, ETC.) USE PREFABRICATED CORNERS AND TEES AT WALL INTERSECTIONS. OVERLAP DISCONTINUOUS ENDS A MIN. OF 12". HORIZONTAL REINFORCING SHALL CONFORM TO ASTM A-82.
7. ALL REINFORCING STEEL UTILIZED FOR REINFORCING MASONRY SHALL BE ASTM A-615 GRADE 60 REINFORCING STEEL.
8. IN HIGH-LIFT GROUTING USE A MAX. LIFT OF 5'-0" WITH MIN. HALF HOUR MAX. ONE HOUR BETWEEN LIFTS. VIBRATE EACH LIFT AND RECONSOLIDATE PREVIOUS LIFT AFTER PLACING NEXT LIFT.
9. WHERE ANCHOR BOLTS ARE SET IN MASONRY WALL, FILL BLOCK CELLS WITH GROUT FOR BOLTED COURSE, ONE COURSE ABOVE AND TWO COURSES BELOW ANCHOR ELEVATION.
10. USE PRESSURE-TREATED WOOD FOR ALL WOOD IN CONTACT WITH MASONRY.
11. CELLS TO BE GROUTED SHALL HAVE A MINIMUM CLEAR DIMENSION OF 2 INCHES AND CLEAR AREA OF 8 SQUARE INCHES FOR 8" CMU. GROUTING SHALL BE DONE IN A CONTINUOUS OPERATION IN LIFTS ASS DEFINED PREVIOUSLY. THE GROUT SHALL BE CONSOLIDATED BETWEEN LIFTS BY MECHANICAL VIBRATION. GROUT TO STOP MIN. 1" BELOW JOINT IN BLOCK TO FORM A KEY IF SUBSEQUENT POURS ARE TO CONTINUE UPWARDS.
12. PROVIDE HORIZONTAL BOND BEAMS AT 4'-8" O.C., VERTICALLY (MAX), U.N.O. IN 8" CMU WALLS, REINF. W/ (2) #5 CONT.
13. CMU CONTROL JOINTS ARE NOT TO EXCEED 24'-0" U.N.O. & THE FOLLOWING CRITERIA:
    - A. AT CHANGES IN WALL HEIGHT OR THICKNESS
    - B. NEAR WALL INTERSECTIONS
    - C. AT POINTS OF STRESS CONCENTRATION
    - D. AT CONTROL JOINTS IN FOUNDATION WALLS
    - E. WHERE A SLAB JOINT PASSES BENEATH A WALL.
14. THE CONTROL JOINTS SHALL BE LOCATED A MINIMUM OF 2'-0" FROM DOOR OR WINDOW OPENINGS SO THAT CONTROL JOINT DOES NOT INTERFERE WITH LINTEL REINFORCEMENT. THE HORIZONTAL JOINT REINFORCING SHALL BE TERMINATED 2" FROM EACH SIDE OF JOINT. ALL BOND BEAM REINFORCING SHALL CONTINUE THRU THE CMU JOINT.

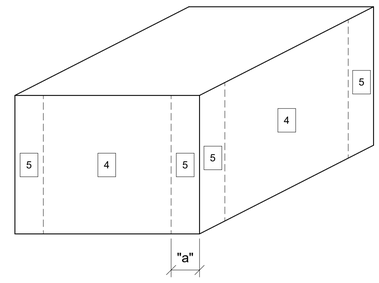
ROOF WIND PRESSURE DIAGRAM

NOTE: a=3'-0"



WALL WIND PRESSURE DIAGRAM

NOTE: a=3'-0"



COMPONENTS AND CLADDING WIND

NOTE: a=3'-0" INTERNAL PRESSURE COEFFICIENT = +/-0.18

WIND PRESSURE (+) / SUCTION (-) IN POUNDS PER SF						
ZONE (SEE FIGURE)	EFFECTIVE WIND AREA (FEET SQUARE)					
	10		50		100	
	+	-	+	-	+	-
ROOF ZONE 1	44.3	-79.8	44.3	-68.2	44.3	-59.4
ROOF ZONE 2		-108.1		-86.3		-80.8
ROOF ZONE 2r		-129.9		-100.2		-87.3
ROOF ZONE 3		-129.9		-100.2		-87.3
WALL ZONE 4	63.0	-68.3	60.1	-65.5	56.4	-61.7
WALL ZONE 5		-84.3		-78.6		-71.1

NOTES:
1. POSITIVE SIGN INDICATES THAT THE PRESSURE IS ACTING TOWARDS THE SURFACE. NEGATIVE SIGN INDICATES THAT THE PRESSURE IS ACTING AWAY FROM THE STRUCTURE.
2. THE WIND LOADS SHOWN HAVE BEN CALCULATED INTERNATIONAL BUILDING CODE 2018 EDITION AND ASCE 7-16. LINEAR INTERPOLATION MAY BE APPLIED FOR LOADING AREAS BETWEEN THE PROVIDED. LOADS SHOWN ARE ULTIMATE LOADS AND MAY BE FACTORED BY 0.6 WHEN APPLICABLE TO REDUCE TO ASD LOADING PRESSURES.

MAIN WIND FORCE RESISTING WIND LOAD

INTERNAL PRESSURE COEFFICIENT = +/-0.18

MAIN WIND FORCE RESISTING SYSTEM PRESSURES		
WIND VELOCITY	ROOF ENCLOSED	WALL ENCLOSED
(MPH)	(PSF)	(PSF)
165	-49.1	48.8

BID DOCUMENTS - NOT FOR CONSTRUCTION

McCarthy ENGINEERING
FL. CA LICENSE NUMBER #29241
216 E. Government St.
Pensacola, FL 32502
P: (850) 475-1268 F: (850) 502-4210

REVISION DESCRIPTION | REV. #

CONSTRUCT B15 & 29 REPLACEMENT/CONSOLIDATION

TYNDALL AFB, FLORIDA

DESIGNED BY: Designer

DRAWN BY: WEH

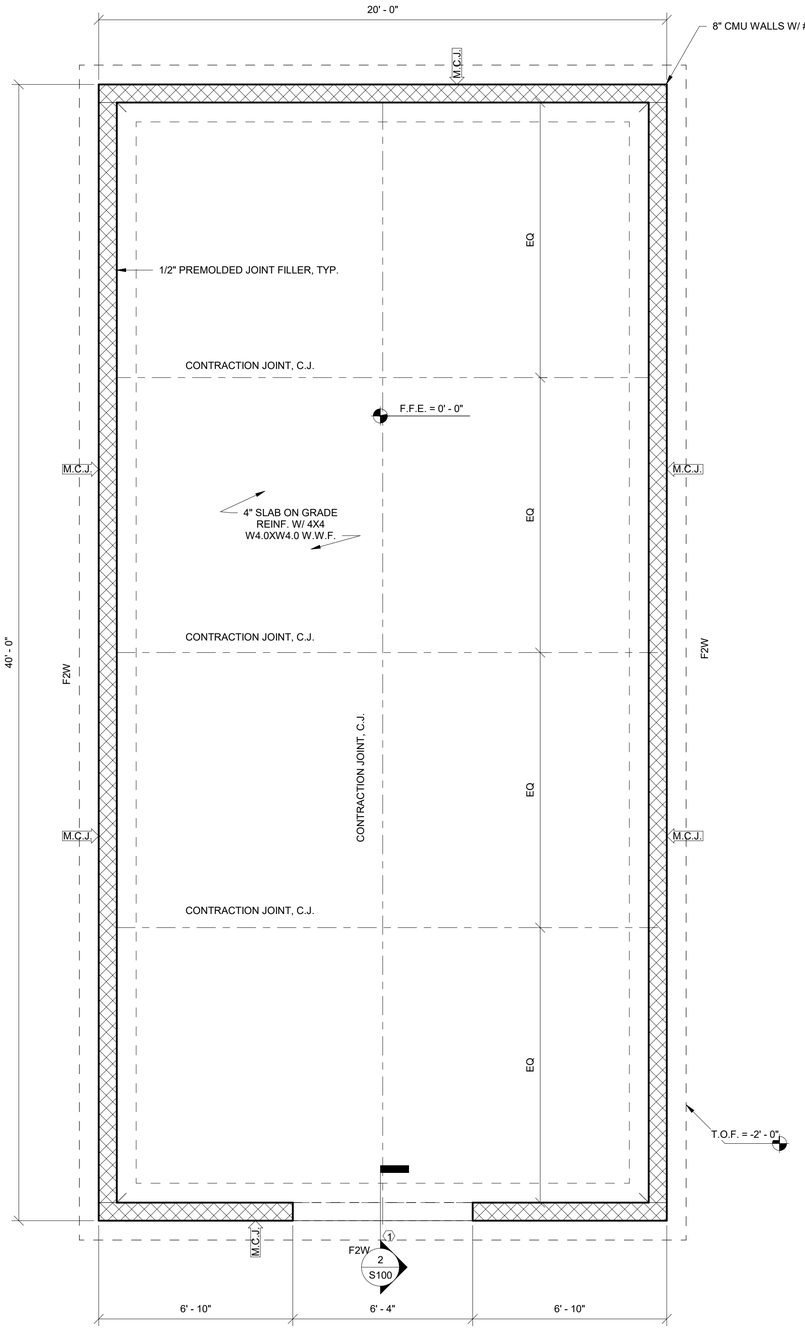
CHECKED BY: DJM

DATE: SEPTEMBER 2021

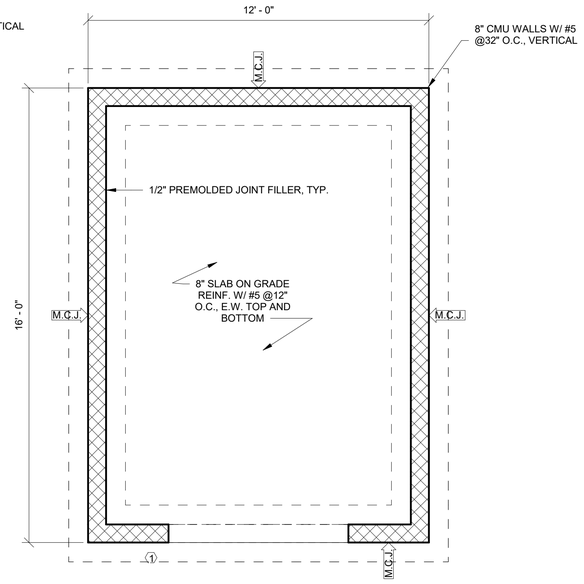
SHEET TITLE: GENERAL NOTES

SHEET: S001

SHEET: 1 *OF* 4



1 FOUNDATION PLAN
3/8" = 1'-0"



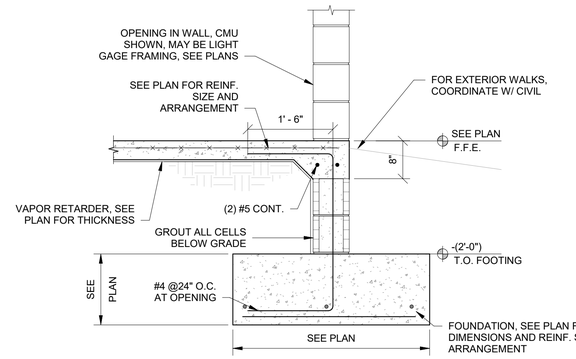
4 FOUNDATION PLAN
3/8" = 1'-0"

FOUNDATION PLAN NOTES:

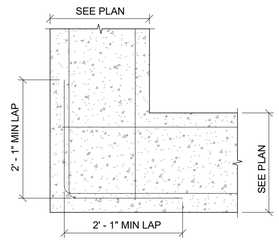
1. IF NOT SHOWN CONTINUOUS FOUNDATIONS SHALL BE **F2W**, SEE SECTIONS FOR SIZE AND REINFORCING REQUIREMENTS.
2. FOR DIMENSIONS NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS. VERIFY OPENING DIMENSIONS W/ ARCH.
3. U.N.O. TOP OF FOOTING IS @ -2'-0".
4. FLOOR SLAB SHALL BE 4" CONC. SLAB-ON-GRADE REINF. W/ 4X4 W4.0XW4.0 W.W.F. U.N.O.

FOUNDATION SCHEDULE

DESIGNATION	SIZE	REINFORCING STEEL
F2W	2'-0"x1'-2" THICK	(3) #5 CONT. BOTTOM #6 @18" O.C. TRANSVERSE



2 TYPICAL SECTION @ EXTERIOR OPENING
3/4" = 1'-0"



3 FOUNDATION REINF. @ CORNER
3/4" = 1'-0"

McCarthy ENGINEERING
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REVISION DESCRIPTION
REV. #

CONSTRUCT B15 & 29
REPLACEMENT/CONSOLIDATION
TYNDALL AFB, FLORIDA

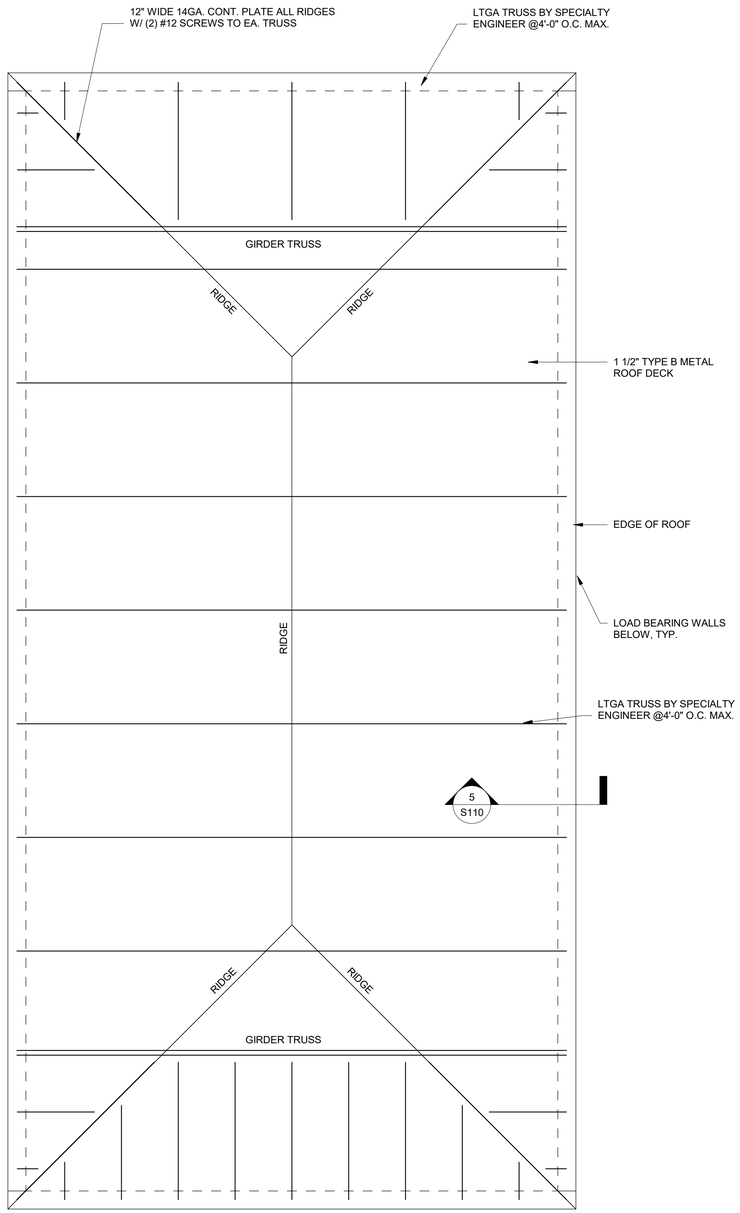
DESIGNED BY: DJM
DRAWN BY: WEH
CHECKED BY: DJM
DATE: SEPTEMBER 2021

SHEET TITLE: FOUNDATION PLAN

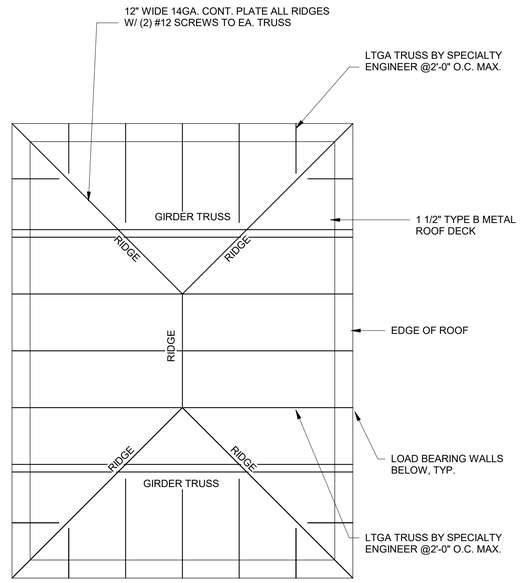
SHEET: S100

SHEET: 2 *OF* 4

BID DOCUMENTS - NOT FOR CONSTRUCTION



1 ROOF FRAMING PLAN
3/8" = 1'-0"



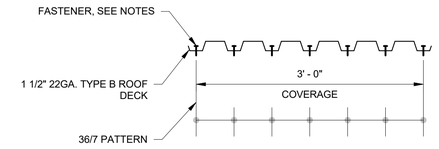
2 ROOF FRAMING PLAN 12X16
3/8" = 1'-0"

ROOF FRAMING PLAN NOTES:

1. ROOF DECK SHALL BE 1 1/2" DEEP, 20 GAGE, TYPE B GALVANIZED METAL ROOF DECK CONFORMING TO THE STEEL DECK INSTITUTE (SDI) RECOMMENDED PRACTICE. FASTEN WITH A 36/7 FASTENER LAYOUT USING #12 SCREWS AT ALL SUPPORTS AND PERIMETER ANGLES & #10 SCREWS AT 12" O.C. SIDE LAPS BETWEEN SUPPORTS TYP. AND ALL SCREWS SHALL BE BUILDEX TRAXX SELF DRILLING W/ HEX HEAD WASHER OR APPROVED EQUIVALENT, TYP. U.N.O.
2. TRUSS BEARING WALL ELEV. = SEE ARCH.
3. ALL TRUSSES BY SPECIALTY ENGINEER

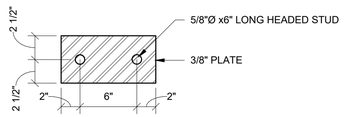
NOTES:

1. ATTACH DECK TO JOIST W/ #12 SCREWS
2. PROVIDE #10 SCREWS FOR SIDELAP FASTENING OF DECKS TOGETHER. LOCATE #10 SCREWS @12" O.C.

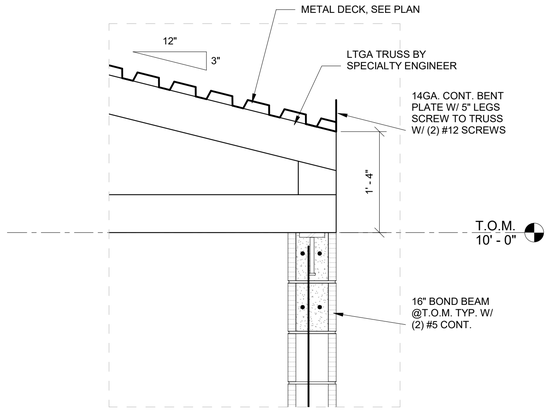


3 ROOF DECK ATTACHMENT
1" = 1'-0"

BEARING PLATE 8" CMU EA. TRUSS LOCATION



4 BEARING PLATE DETAIL
1 1/2" = 1'-0"



5 TRUSS BEARING SECTION
1" = 1'-0"

McCarthy ENGINEERING
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REVISION DESCRIPTION

REV. #

CONSTRUCT B15 & 29
REPLACEMENT/CONSOLIDATION

TYNDALL AFB, FLORIDA

DESIGNED BY:
DJM

DRAWN BY:
WEH

CHECKED BY:
DJM

DATE:
SEPTEMBER 2021

SHEET TITLE:
ROOF FRAMING PLAN

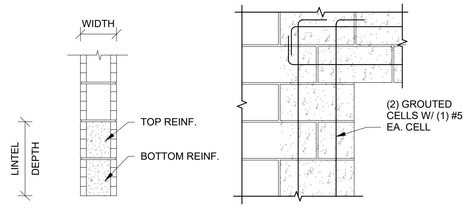
SHEET:
S110

BID DOCUMENTS - NOT FOR CONSTRUCTION

ADDITIONAL CMU NOTES

1. ALL VERTICAL REINFORCING SHALL EXTEND INTO THE UPPERMOST BOND BEAM AND WHERE TERMINATES PROVIDE A 90° HOOK WITH MINIMUM 8" LEG.
2. ADDITIONAL REINFORCEMENT IN CONJUNCTION WITH TYPICAL VERTICAL WALL REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS: PROVIDE (4) FILLED CELLS OF TYPICAL WALL REINFORCEMENT AT ALL WALL INTERSECTIONS. PROVIDE (3) FILLED CELLS OF TYPICAL WALL REINFORCEMENT AT CORNERS, PROVIDE (2) FILLED CELLS OF TYPICAL WALL REINFORCEMENT EACH SIDE OF OPENING (U.N.O.), PROVIDE (1) FILLED CELL OF WALL REINFORCEMENT ON EITHER SIDE OF MASONRY CONTROL JOINTS. PROVIDE (5) FILLED CELLS OF TYPICAL WALL REINFORCEMENT AT END OF WALLS.
3. PROVIDE 8" DEEP BOND BEAMS ALL WALL AT @4'-8" O.C., VERTICALLY (MAX) W/ (2) #5 CONT., TYP.
4. PLACE CONCRETE MASONRY UNITS IN RUNNING BOND PATTERN.
5. SEE FOUNDATION PLAN FOR WALL REINFORCING SIZE AND ARRANGEMENT. HORIZONTAL JOINT REINFORCING FOR CMU WALL SHALL BE HEAVY DUTY 3/16" SIDE RODS WITH 9GA. CROSS MEMBERS. WALL REINFORCEMENT SHALL BE CONSTRUCTED IN LADDER TYPE REINFORCEMENT AND SPACED AT 16" O.C., VERTICALLY.
6. PROVIDE MINIMUM 8" DEEP BOND BEAM UNDER NOTED WINDOW OPENINGS ON PLAN, BOND BEAM SHALL BE REINFORCED W/ (2) #5 AND EXTEND REINFORCING 2'-0" PAST EA. SIDE OF OPENING, TYPICAL.
7. SPLICE ALL REINFORCEMENT WITH MIN. 48 BAR DIAMETER SPLICES.

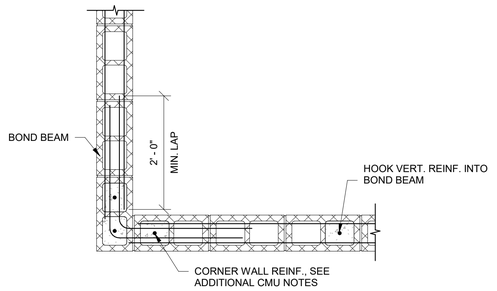
NOTES:
1. PROVIDE MINIMUM 16" BEARING FOR ALL LINTELS
2. HOT DIP GALVANIZE ALL EXPOSED STRUCTURAL STEEL, INCLUDING; ANGLES, THREADED RODS, BOLTS, NUTS WASHERS, ETC., IF REQUIRED.



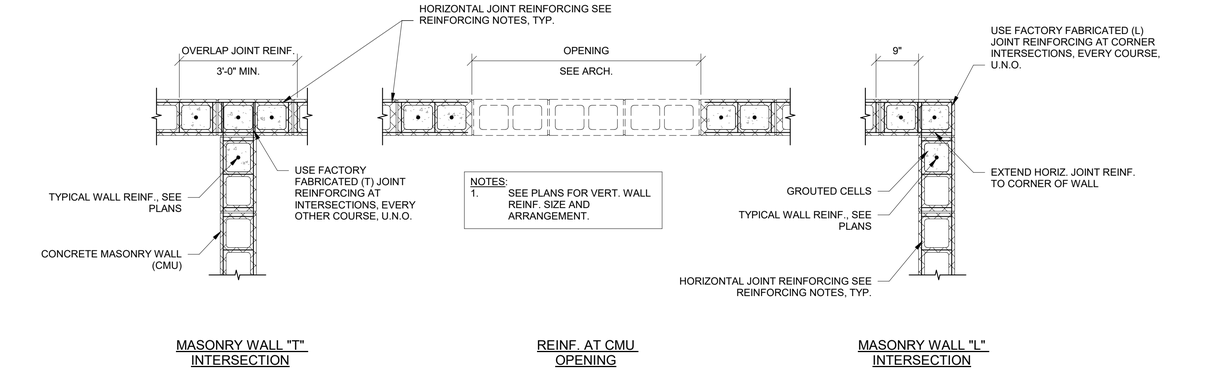
1 LINTEL DETAILS
3/4" = 1'-0"

CMU LINTEL SCHEDULE

TAG	LINTEL SIZE (WIDTH & DEPTH)	REINFORCING SIZE & ARRANGEMENT		
		TOP	BOTTOM	SHEAR
1	8x24 CMU	(2) #5	(2) #6	---



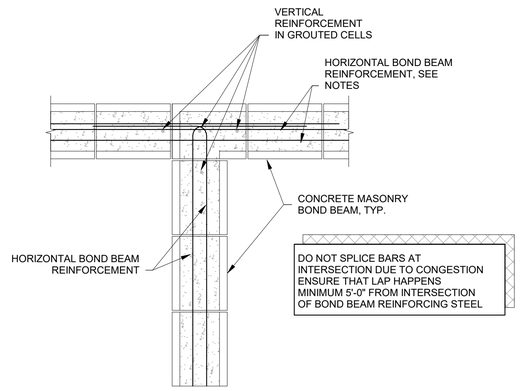
2 BOND BEAM CORNER REINFORCING
3/4" = 1'-0"



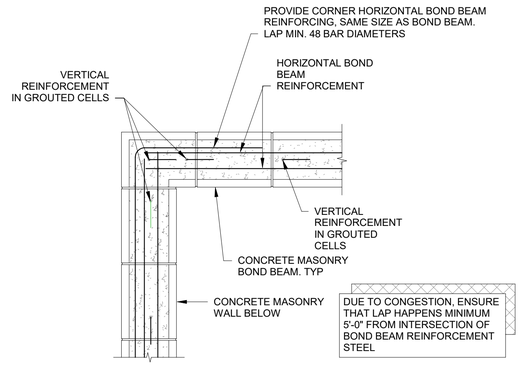
NOTES:
1. SEE PLANS FOR VERT. WALL REINF. SIZE AND ARRANGEMENT.

MASONRY WALL "T" INTERSECTION | REINF. AT CMU OPENING | MASONRY WALL "L" INTERSECTION

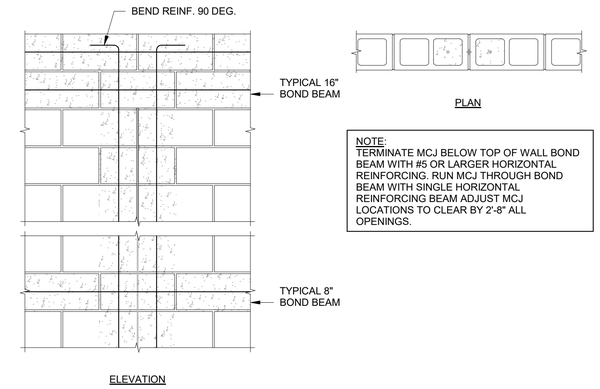
3 CMU WALL INTERSECTION DETAILS
3/4" = 1'-0"



4 INTERSECTION OF STRUCTURAL BOND BEAM
3/4" = 1'-0"



5 TYPICAL REINF. ATE BOND BEAM CORNER
3/4" = 1'-0"



NOTE:
TERMINATE MCJ BELOW TOP OF WALL BOND BEAM WITH #5 OR LARGER HORIZONTAL REINFORCING. RUN MCJ THROUGH BOND BEAM WITH SINGLE HORIZONTAL REINFORCING BEAM ADJUST MCJ LOCATIONS TO CLEAR BY 2'-8" ALL OPENINGS.

6 TYPICAL MCJ DETAIL
3/4" = 1'-0"

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DESIGNED BY: DJM
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CHECKED BY: DJM
DATE: SEPTEMBER 2021

SHEET TITLE: MASONRY DETAILS

SHEET: S400

SHEET: 4 OF 4

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