

GENERAL NOTES

DESIGN CRITERIA INFORMATION

- ALL CONSTRUCTION SHALL CONFORM TO THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE.
- REPRODUCTION OF CONTRACT DOCUMENTS FOR USE AS SHOP DRAWINGS IS NOT PERMITTED.
- CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS AND NOTIFY ARCHITECT OF ANY CONDITIONS WHICH DO NOT COMPLY WITH PLANS AND SPECIFICATIONS.
- SERVICE DESIGN LIVE LOADS ARE AS FOLLOWS:

FLOORS:	100 PSF
ROOF:	20 PSF
COLLATERAL LOAD:	4 PSF
- HANDRAILS: (APPLIED AT ANY POINT IN ANY DESIGN)

1. 200# CONCENTRATED AT TOP RAIL
2. 50 PLF LOADS 1 & 2 ARE NOT APPLIED SIMULTANEOUSLY
- GUARDRAILS: (APPLIED TO TOP RAIL)

1. 200# CONCENTRATED
2. 50 PLF HORIZONTAL LOAD W/ 100 PLF VERTICAL LOAD
LOADS 1 & 2 ARE NOT APPLIED SIMULTANEOUSLY
- THE DESIGN SNOW LOAD CRITERIA IS AS FOLLOWS:

FLAT ROOF SNOW LOAD P_f	10 PSF
SNOW EXPOSURE FACTOR C_e	1.0
SNOW IMPORTANCE FACTOR I_s	1.0
THERMAL FACTOR C_t	1.0
- THE WIND DESIGN CRITERIA IS AS FOLLOWS:

DESIGN WIND SPEED	90 MPH
WIND IMPORTANCE FACTOR	1.15
EXPOSURE	C
BASIC WIND PRESSURE	12.43 PSF
C_{p1+2}	0.18
- THE SEISMIC DESIGN CRITERIA IS AS FOLLOWS:

DESIGN CATEGORY	C
OCCUPANCY CATEGORY	III
SPECTRAL RESPONSE ACCELERATIONS	$S_a = 1.2141$
	$S_1 = 0.333$
	$S_0.5 = 0.220$
SPECTRAL RESPONSE COEFFICIENTS	$C_{s1} = 1.48$
	$C_{s2} = 1.25$

FOUNDATION NOTES

- FOOTINGS WERE DESIGNED FOR AN ASSUMED ALLOWABLE BEARING CAPACITY OF 2500 PSF. ALL FOOTINGS SHALL BEAR ON FOOTING EXCAVATIONS THAT HAVE BEEN INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER.
- THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 1'-6" MINIMUM BELOW FINISHED GRADE UNLESS NOTED OTHERWISE.
- WHERE FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS.

MISCELLANEOUS

- FOR LOCATION OF THE MISCELLANEOUS ITEMS (SUCH AS OPENINGS, INSERTS, ETC.) AFFECTING STRUCTURAL WORK, SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. ALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
- ALL CAVITY WALLS SHALL HAVE 3/8" DIA. TIE BARS TO PROVIDE AT LEAST ONE TIE FOR EACH 3 SQUARE FEET OF WALL.
- USE LIGHTWEIGHT BLOCK PARTITIONS ON ALL FRAMED FLOORS.
- WHERE LINTELS BEAR ON MASONRY WALLS, THEY SHALL BEAR ON EITHER A BOND BEAM COURSE OR ON CORBS FILLED WITH CONCRETE. ALL LINTELS SHALL HAVE AT LEAST 2" OF BEARING AT EACH END UNLESS NOTED OTHERWISE.
- ALL CONCRETE WEDGE-TYPE ANCHORS SHOWN SHALL BE HILTI WEDGE ANCHORS OR EQUAL.

REINFORCED CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO ACI 318, 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE'.
- THE 28-DAY STRENGTH OF CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:

SLAB-ON-GRADE	3000 PSI
FLOOR SLABS	4000 PSI
FOOTINGS	3000 PSI
- THE USE OF FLY ASH IS PERMITTED. CONCRETE MIX DESIGNS SHALL BE SUBMITTED AND APPROVED PRIOR TO CASTING OF ANY CONCRETE.
- ALL CONCRETE PLACED SHALL BE VIBRATED BY MECHANICAL VIBRATORS.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, 'SPECIFICATION FOR DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT'. THE MINIMUM YIELD STRESS OF REINFORCING BARS SHALL BE 60,000 PSI.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, 'SPECIFICATION FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT'.
- COMPLETE DRAWINGS FOR FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE SUBMITTED FOR APPROVAL. NO FABRICATION MAY BEGIN UNTIL DRAWINGS ARE COMPLETED AND APPROVED.
- LAP SPLICES FOR REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318. ALL UNSPECIFIED LAP SPLICES SHALL BE MAXIMUM LENGTH.
- REINFORCING OF ALL CONCRETE MEMBERS SHALL HAVE THE FOLLOWING CLEAR CONCRETE COVER:

	COVER INCHES
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH WEATHER:	3
CONCRETE EXPOSED TO EARTH OR WEATHER:	2
5/8 THROUGH #8 BARS	2
5/8 BAR, W3 OR D31 WIRE, AND SMALLER	1-1/2
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS:	1-1/2
#4 AND #8 BARS	1-1/2
#1 BAR AND SMALLER	3/4
BEAMS, COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS:	1-1/2
SHELLS, FOLDED PLATE MEMBERS:	3/4
5/8 BAR, W3 OR D31 WIRE, AND SMALLER	1/2
- THE CONTRACTOR SHALL PROVIDE CHAIRS AT 36 INCH CENTER TO CENTER TO SUPPORT WIRE MESH WHILE CASTING SLAB. FULL FABRIC UP BETWEEN SUPPORTS TO PROVIDE 2" CLEARANCE TO TOP OF SLAB. MINIMUM SIDE AND END LAP ON FABRIC SHALL BE ONE WIRE SPACE.

- ANCHOR BOLTS SHALL BE F193 GR 36 WITH HIGH STRENGTH NUTS.
- WELDING OF REINFORCING STEEL SHALL BE DONE IN STRICT ACCORDANCE WITH THE AMERICAN WELDING SOCIETY 'REINFORCING STEEL WELDING CODE' AWS D14.08. PREHEATING OF REINFORCING SHALL BE BASED ON THE CARBON EQUIVALENT DETERMINED FROM REINFORCING MILL REPORTS. GRADE 40 REINFORCING SHALL BE WELDED WITH 100% LOW HYDROGEN ELECTRODES, AND GRADE 60 REINFORCING SHALL BE WELDED WITH 85% LOW HYDROGEN ELECTRODES.
- CONCRETE WALLS SHALL BE REINFORCED AROUND ALL OPENINGS WITH 2 #4 BARS ALL SIDES AND EXTENDED 2'-0" BEYOND OPENING UNLESS NOTED OTHERWISE.
- THE LONGITUDINAL REINFORCING STEEL IN BOND BEAMS, WALLS AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS.
- WHERE BOND BEAMS ARE INTERRUPTED BY STRUCTURAL STEEL COLUMNS, BOND BEAM REINFORCING SHALL BE WELDED TO THE COLUMN TO PROVIDE CONTINUITY OF THE BOND BEAM.
- CHAMFER EXPOSED EDGES OF COLUMNS AND BEAMS 3/4".
- EXTERIOR SLABS-ON-GRADE SHALL BE 4 INCHES THICK ON A 4 INCH GRAVEL FILL AND REINFORCED WITH WUF 6x6-10x4x10 UNLESS NOTED OTHERWISE. CONTRACTION JOINTS 12'-0" O.C. MAXIMUM.
- SAUN JOINTS IN SLABS-ON-GRADE SHALL BE ACCOMPLISHED WITHIN 12 HOURS OF SLAB PLACEMENT.
- USE EXPANSION JOINT MATERIAL BETWEEN ALL EXTERIOR SLABS-ON-GRADE AND THE ADJUTING STRUCTURE EXCEPT AT RETAINING WALLS AND FOUNDATION WALLS.
- CONSTRUCTION JOINTS IN BEAMS, GIRDERS AND SLABS (WHERE USED) SHALL OCCUR AT MIDSPAN AND SHALL BE KEPT, IN ALL CASES, THE LOCATION OF CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. KEYWAYS SHALL BE ONE-THIRD THE DEPTH OF THE MEMBER AND PLACED AT MID-DEPTH.

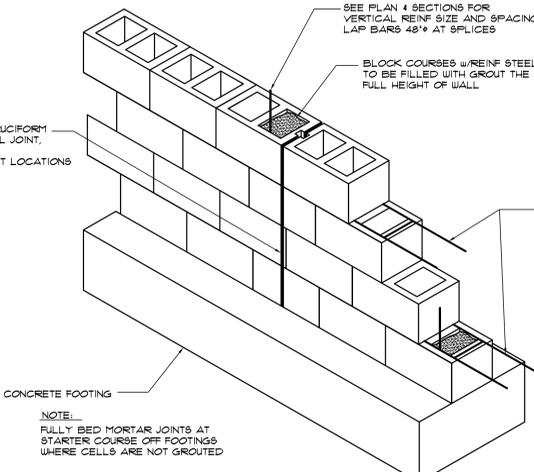
REINFORCED MASONRY

- ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530, 'BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES'.
- ALL CONCRETE MASONRY UNITS FOR LOAD-BEARING WALLS SHALL CONFORM TO ASTM C-90, 'SPECIFICATION FOR HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS'. TYPE M OR S MORTAR SHALL BE USED.
- ALL LOAD-BEARING BLOCK MASONRY SHALL HAVE A MINIMUM FRESH STRENGTH OF 1500 PSI. CONCRETE OR GROUT USED FOR FILLING CELLS SHALL BE 3000 PSI.
- 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 FULLY BEDDED IN MORTAR TO PREVENT LEAKAGE OF 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.
- VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR UNOBSTRUCTED, CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 3" AND HAVING A CLEAR AREA OF 10 SQUARE INCHES.
- CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF ALL CELLS TO BE FILLED IN EACH FOUR OF GROUT WHERE SUCH GROUT FOUR IS IN EXCESS OF 4 FEET IN HEIGHT. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM THE INSIDES OF SUCH CELL WALLS. THE CLEANOUTS SHALL BE SEALED BEFORE GROUTING, AFTER INSPECTION.
- VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 102 DIAMETERS OF THE REINFORCEMENT OR 10 FEET.
- ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. GROUT SHALL BE CONSOLIDATED AT THE TIME OF POURING BY FIDDLING OR VIBRATION, AND THEN RECONSOLIDATED AGAIN BY FIDDLING LATER BEFORE PLASTICITY IS LOST.
- WHEN TOTAL GROUT POUR EXCEEDS 8 FEET IN HEIGHT, THE GROUT SHALL BE PLACED IN FOUR FOOT LIFTS AND SPECIAL INSPECTION DURING GROUTING SHALL BE REQUIRED. MINIMUM CELL DIMENSION SHALL BE 3 INCHES.
- WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF GROUT NOT LESS THAN 1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.

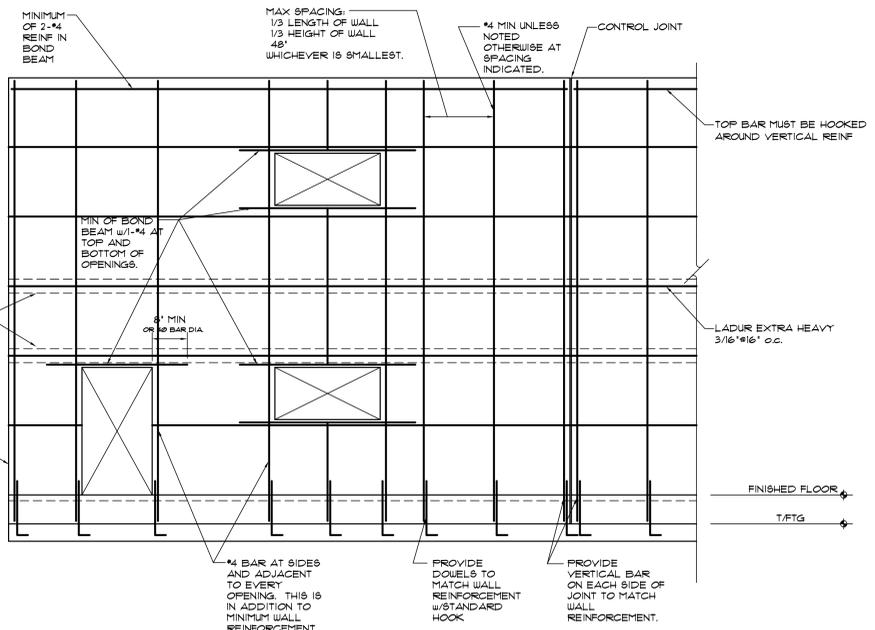
STRUCTURAL STEEL

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS' DATED 3/3/05 OF THE A.I.S.C.
- SHOP DRAWINGS FOR ALL STRUCTURAL STEEL SHALL BE SUBMITTED AND APPROVED PRIOR TO ANY FABRICATION.
- STRUCTURAL STEEL SHALL MEET THE FOLLOWING ASTM SPECIFICATIONS:
 - STRUCTURAL PIPE: A53 TYPE E OR S, GRADE B, WITH SULPHUR CONTENT NOT TO EXCEED 0.05%.
 - STRUCTURAL TUBE: A500 GRADE B.
 - W-SHAPES: A992, UNLESS NOTED OTHERWISE ON CONTRACT DOCUMENTS.
 - ALL OTHER FRAMING: A36 UNLESS NOTED OTHERWISE ON CONTRACT DOCUMENTS.
- STEEL FRAMING CONNECTIONS SHALL BE BOLTED OR WELDED. BOLTS SHALL BE A MINIMUM OF 3/4" DIAMETER AND SHALL BE ASTM A509. EACH FASTENER SHALL BE TIGHTENED TO THE MINIMUM TENSION FOR THE SIZE AND GRADE OF FASTENER USED AS DETERMINED BY ONE OF THE FOLLOWING METHODS:
 - TURN OF THE NUT (A19.2)
 - CALIBRATED WRENCH
 - LOAD INDICATOR WASHERS
 - LOAD INDICATOR BOLTS.
- STEEL BEAMS WHICH BEAR ON MASONRY WALLS SHALL HAVE MASONRY ANCHORS AND SHALL BEAR EITHER ON BOND BEAMS OR FILLED BLOCK CORSES AND SHALL BEAR A MINIMUM OF 8" UNLESS SHOWN OTHERWISE.
- BEAMS SHALL BE FABRICATED AND ERRECTED WITH NATURAL CAMBER UP.
- ALL WELDS SHALL CONFORM TO AWS/AWS, 'STRUCTURAL WELDING CODE'. ALL GROOVE WELDS SHOWN ON CONTRACT DOCUMENTS SHALL BE FULL PENETRATION UNLESS NOTED OTHERWISE. WELDING SHALL BE DONE WITH E-7018 ELECTRODES UNLESS NOTED OTHERWISE.
- () DENOTES DEVIATION FROM TOP OF STEEL ELEVATION IN INCHES.
- STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL NOT BE PAINTED.
- GROUT USED IN GROUT BEDS UNDER COLUMN BASE PLATES SHALL BE CEMENT BASED, NON-SHRINK GROUT. THE GROUT SHALL EXHIBIT NO SHRINKAGE IN ACCORDANCE WITH ASTM C911, 'TEST METHOD FOR EARLY VOLUME CHANGE OF CEMENTITIOUS MIXTURES' AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C-109, 'TEST METHOD FOR COMPRESSIVE STRENGTH OF HYDRAULIC CEMENT MORTARS'.

STANDARD LINTEL SCHEDULE	
WALL SIZE	LINTEL TYPE
4' BRICK	L - 4"x3 1/2"x4"
4' BLOCK	4"x8" CONC w/1-4 TIE
6' BLOCK	6"x8" CONC w/1-4 TIE
8' BLOCK	8"x8" CONC w/2-4 TIE
8' BLOCK	8"x8" BOND BEAM w/2-5 TIE
10' BLOCK	10"x8" CONC w/2-4 TIE
10' BLOCK	10"x8" BOND BEAM w/2-5 TIE
12' BLOCK	12"x8" CONC w/2-4 TIE
12' BLOCK	12"x8" BOND BEAM w/2-5 TIE
OPENINGS 6'-0" TO 8'-0"	
WALL SIZE	LINTEL TYPE
4' BRICK	L - 6"x3 1/2"x4"
6' BLOCK	6"x12" CONC w/2-5 TIE
6' BLOCK	6"x12" BOND BEAM w/2-5 TIE
8' BLOCK	8"x12" CONC w/2-5 TIE
8' BLOCK	8"x12" BOND BEAM w/2-5 TIE
10' BLOCK	10"x12" CONC w/2-5 TIE
10' BLOCK	10"x12" BOND BEAM w/2-5 TIE
OPENINGS 8'-0" TO 12'-0"	
WALL SIZE	LINTEL TYPE
4' BRICK	L - 8"x3 1/2"x4"
6' BLOCK	6"x18" CONC w/2-5 TIE
6' BLOCK	6"x18" BOND BEAM w/2-5 TIE
8' BLOCK	8"x18" CONC w/2-5 TIE
8' BLOCK	8"x18" BOND BEAM w/2-5 TIE
10' BLOCK	10"x18" CONC w/2-5 TIE
10' BLOCK	10"x18" BOND BEAM w/2-5 TIE
OPENINGS 12'-0" TO 16'-0"	
WALL SIZE	LINTEL TYPE
4' BRICK	L - 12"x3 1/2"x4"
6' BLOCK	6"x24" CONC w/2-5 TIE
6' BLOCK	6"x24" BOND BEAM w/2-5 TIE
8' BLOCK	8"x24" CONC w/2-5 TIE
8' BLOCK	8"x24" BOND BEAM w/2-5 TIE
10' BLOCK	10"x24" CONC w/2-5 TIE
10' BLOCK	10"x24" BOND BEAM w/2-5 TIE

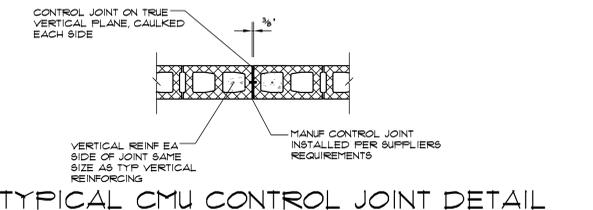


REINFORCED MASONRY DETAIL

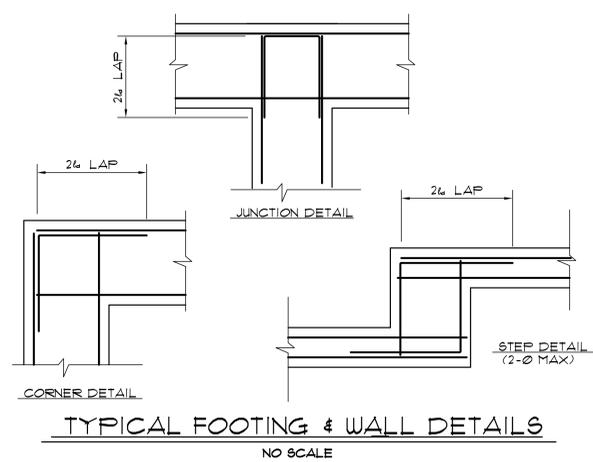


TYPICAL MASONRY SHEAR WALL REINFORCING

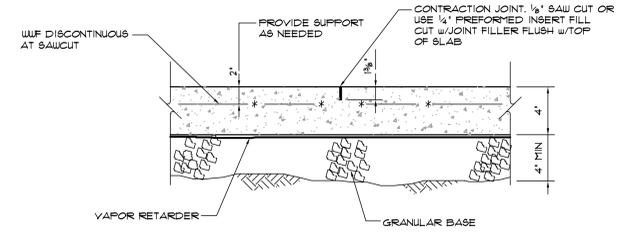
- NOTES:
- REQUIREMENTS ON THIS DIAGRAM APPLY TO ALL LOAD BEARING CMU WALLS. THE INFORMATION SHOWN ON THIS DIAGRAM INDICATES THE MINIMUM REQUIREMENT FOR WALL REINFORCEMENT. AT LOCATIONS WHERE REINFORCING IS CALLED OUT ELSEWHERE ON THE DRAWINGS, THE MOST STRINGENT SHALL BE PROVIDED.
 - PROVIDE CONTROL JOINTS @ 15'-0" MAX.



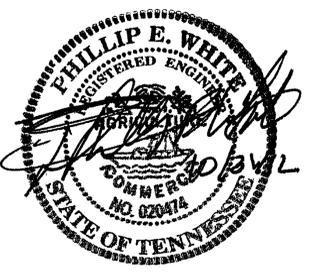
TYPICAL CMU CONTROL JOINT DETAIL



TYPICAL FOOTING & WALL DETAILS

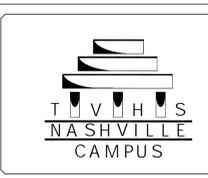


SLAB CONTRACTION JOINT DETAIL



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Revisions	Date



Tennessee Valley Healthcare System



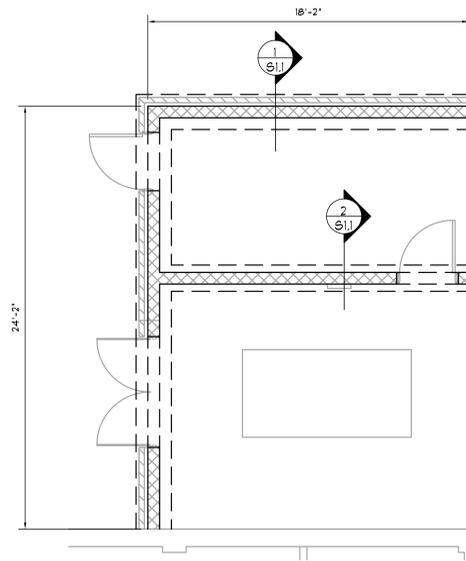
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PROJECT NUMBER: 118-036

Project Title: UPGRADE ELECTRICAL DISTRIBUTION PHASE 3
Drawing Title: GENERAL NOTES
Approved By: [Signature]
Approved By: [Signature]
Building Number: 107
Checked By: PEW
Drawn By: BNT

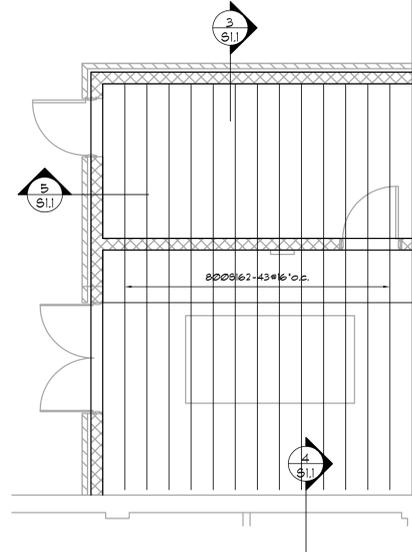
Date: OCTOBER 31, 2012
Project No.: 626A4-11-202
Drawing No.: 107-SS-01
Dwg. 1 of 2

Department of Veterans Affairs



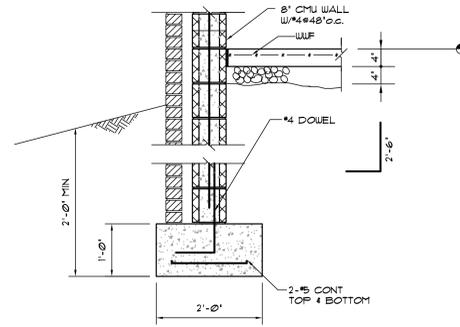
FOUNDATION PLAN
SCALE 1/4" = 1'-0"

NOTE:
1. 4" CONC SLAB REINF W/ WUF #6 @ 16" W/ 4" W/ 4" ON 10 MIL POLYETHYLENE VAPOR BARRIER 4' THICK

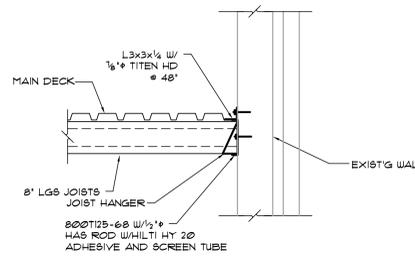


ROOF FRAMING PLAN
SCALE 1/4" = 1'-0"

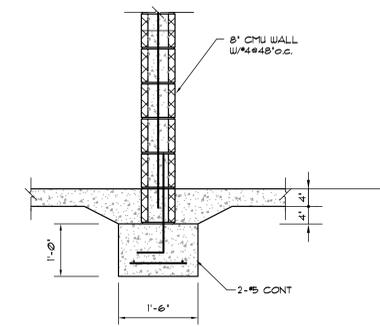
NOTE:
1. USE 1/2" X 24GA TYPE B METAL FORM DECK. ATTACH TO JOIST W/ #10 SCREWS ON 36/4 PATTERN.



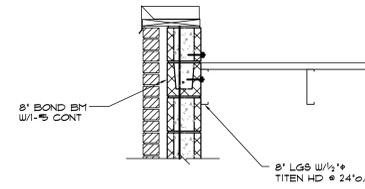
SECTION 1 (ST.1)
SCALE 3/4" = 1'-0"



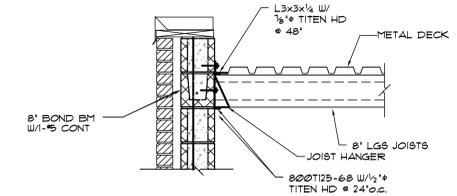
SECTION 4 (ST.1)
SCALE 3/4" = 1'-0"



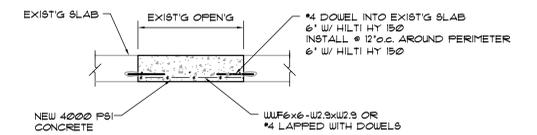
SECTION 2 (ST.1)
SCALE 3/4" = 1'-0"



SECTION 5 (ST.1)
SCALE 3/4" = 1'-0"

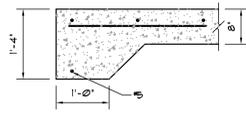


SECTION 3 (ST.1)
SCALE 3/4" = 1'-0"

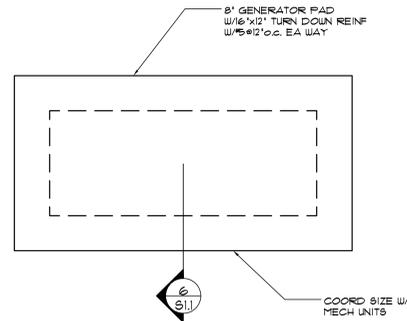


SECTION 6 (ST.1)
SCALE 3/4" = 1'-0"

INFILL LAUNDRY CHUTE OPENING DETAIL

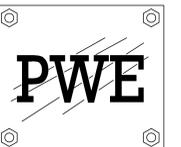


SECTION 6 (ST.1)
SCALE 3/4" = 1'-0"



GENERATOR PAD DETAILS

NTS
GC TO COORDINATE WITH GENERATOR MANUFACTURER TO PROVIDE SLOPE IN TOP OF PAD TO ALLOW DRAINAGE FROM UNDER THE SECONDARY CONTAINMENT TANK



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Revisions	Date



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Project Title:	UPGRADE ELECTRICAL DISTRIBUTION PHASE 3
Drawing Title:	FOUNDATION & FRAMING PLANS, SECTIONS
Approved By:	
Location:	ALVIN C. YORK CAMPUS MURFREESBORO, TN
Building Number:	107
Checked By:	PEW
Drawn By:	BNT

Date:	OCTOBER 31, 2012
Project No.:	626A4-11-202
Drawing No.:	107-SS-02
Drawn:	2 Of 2

Department of Veterans Affairs