SYMBOL LEGEND

LINE

- BEYOND
- CENTER, GRID
- DEMOLITION
- EXISTING (HALFTONE)
- HIDDEN
- MATCHLINE
- NEW (CUT)
- NEW (PROJECTION)
- OVERHEAD

MATERIAL

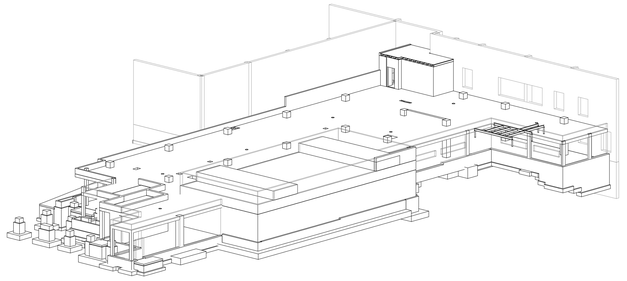
- ALUMINUM
- BRICK
- CONCRETE
- CONCRETE MASONRY BLOCK
- EARTH
- GRAVEL
- GROUT
- WOOD STRUCTURAL PANEL
- STEEL

REFERENCE

- NORTH INDICATOR
- DETAIL VIEW INDICATOR (A6 / S-501)
- ELEVATION VIEW INDICATOR (A1, D1, B1, C1 / S-201)
- SECTION VIEW INDICATOR (A6 / S-501)
- VIEW INDICATOR (A6/S-501)
- GRID INDICATOR (1)
- EXISTING GRID INDICATOR (1)

- BREAK LINE
- SPAN DIRECTION INDICATOR
- SLOPE INDICATOR
- STEP INDICATOR
- OPENING (FLOOR, ROOF OR WALL)
- ELEVATION INDICATOR (TOC 100'-0")
- KEYNOTE INDICATOR (01)
- REVISION CLOUD
- REVISION INDICATOR (01)

ISOMETRIC VIEW

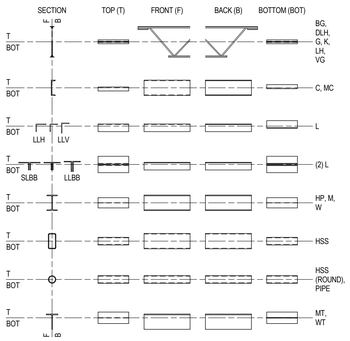


SHEET INDEX

ABBREVIATIONS

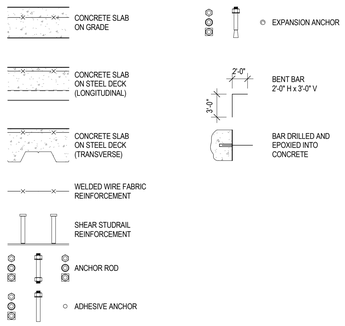
1WAY	ONE-WAY
AB	ANCHOR BOLT
ADDL	ADDITIONAL
ADDM	ADDENDUM
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
APPROX	APPROXIMATE
AR	AS REQUIRED
ARCH	ARCHITECT
B PL	BASE PLATE
B/B	BACK TO BACK
BC	BOTTOM CHORD
BF	BOTH FACES
BF	BOTTOM FACE
BM	BEAM
BO	BOTTOM OF __ (REFER TO TOP OF __)
BOEF	BOTTOM OF EXISTING FOOTING
BOEGB	BOTTOM OF EXISTING GRADE BEAM
BOGB	BOTTOM OF GRADE BEAM
BOT	BOTTOM
BRDG	BRIDGING
BRG PL	BEARING PLATE
BS	BOTH SIDES
BSMT	BASEMENT
BW	BOTH WAYS
C	CHANNEL
C TO C	CENTER TO CENTER
CANTL	CANTILEVER
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CJ	CONTROL JOINT
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONSTR	CONSTRUCTION
CONT	CONTINUE/CONTINUOUS
CONTR	CONTRACTOR
CPRS	COMPRESSIBLE
CTRL	CONTROL
CU	CUBIC
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CU YD	CUBIC YARD
D	DEEP
D	DEPTH
DBE	DECK BEARING ELEVATION
DBL	DOUBLE
DEG	DEGREE
DET	DETAIL
DEMO	DEMOLITION
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIR	DIRECTION
DL	DEAD LOAD
DWG	DRAWING
E	EAST
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
ENGR	ENGINEER
EOD	EDGE OF DECK
EOG	EDGE OF GRATING
EOS	EDGE OF SLAB
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EXC	EXCAVATE
EXIST. (E)	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXT	EXTERIOR
FD	FLOOR DRAIN
FDTN	FOUNDATION
FF	FAR FACE
FLR	FLOOR
FR	FRAME
FS	FAR SIDE
FSTNR	FASTENER
FT	FEET
FTG	FOOTING
FUT	FUTURE
GA	GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLU LAM	GLUE LAMINATED WOOD
GR BM	GRADE BEAM
GRTG	GRATING
H	HIGH
HDR	HEADER
HGR	HANGER
HORIZ, H	HORIZONTAL
HS	HIGH STRENGTH
HSKPG	HOUSEKEEPING
HT	HEIGHT
I	MOMENT OF INERTIA
ID	INSIDE DIAMETER
IF	INSIDE FACE
INFO	INFORMATION
INT	INTERIOR
JST	JOIST
JST BRG	JOIST BEARING
K	KIP
KB	KNEE BRACE
KIP	THOUSAND POUNDS
KLF	KIPS PER LINEAR FOOT
KOP	KNOCK OUT PANEL
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
KWY	KEYWAY
L	ANGLE
LATL	LATERAL
LB	POUND
LD BRG	LOAD-BEARING
LDH	LONG DIMENSION HORIZONTAL
LDV	LONG DIMENSION VERTICAL
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
M	MOMENT
MAX	MAXIMUM
MBR	MEMBER
MC	MOMENT CONNECTION
MD	METAL DECK
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MONOLITHIC
MO	MASONRY OPENING
MTL	METAL
MULT	MULTIPLE
N	NORTH
NF	NEAR FACE
NIC	NOT IN CONTRACT
NLB	NON-LOAD-BEARING
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPH	OPPOSITE HAND
OPP	OPPOSITE
OPT	OPTIONAL
O/O	OUT TO OUT
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PRCST	PRECAST
PRELIM	PRELIMINARY
PS CONC	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PT	PRESSURE TREATED
PT CONC	POST-TENSIONED CONCRETE
QTY	QUANTITY
R	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE
REQD	REQUIRED
REV	REVISION
RS	ROUGH SAWN
RTU	ROOF TOP UNIT
S	SOUTH
SCHED	SCHEDULE
SCHEM	SCHEMATIC
SE	STRUCTURAL ENGINEER
SECT	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SL	SLAB
SLBB	SHORT LEG BACK TO BACK
SP	SUMP PIT
SPCL	SPECIAL
SPEC	SPECIFICATION
SQ	SQUARE
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
STD	STANDARD
STIF	STIFFENER
STL JST	STEEL JOIST
STRUC	STRUCTURAL
SYMM	SYMMETRICAL
T&B	TOP AND BOTTOM
TB	THROUGH BOLT
TC	TOP CHORD
TEMJ	TOP ELEVATION MATCHES JOIST
TEMP	TEMPORARY
THK	THICKNESS
THRU	THROUGH
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOF	TOP OF FOUNDATION
TOG	TOP OF GRATING
TOP	TOP OF PIER
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAR	VARIES
VERT, V	VERTICAL
VIF	VERIFY IN FIELD
W	WEST
W	WIDE
WI	WITH
WO	WITHOUT
WBL	WOOD BLOCKING
WD	WOOD
WF	WIDE FLANGE
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
YD	YARD

STEEL SHAPES LEGEND

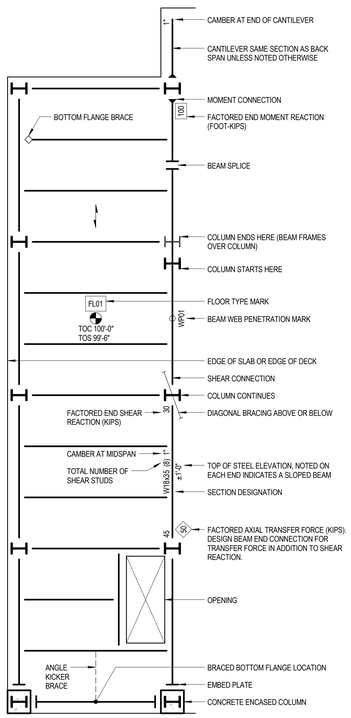


STEEL LEGEND

CONCRETE LEGEND



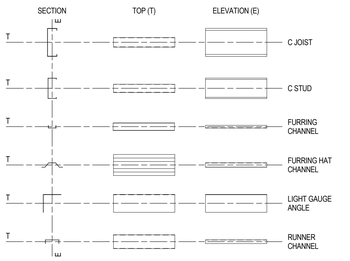
STEEL FRAMING PLAN LEGEND



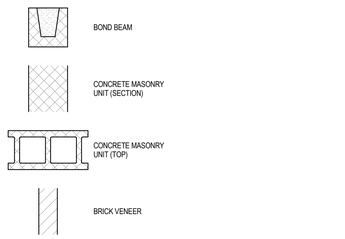
VIEW LOCATION LEGEND

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6

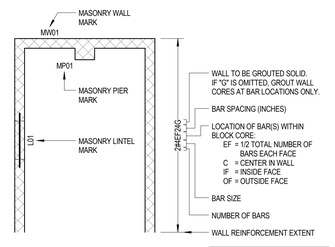
COLD-FORMED SHAPES LEGEND



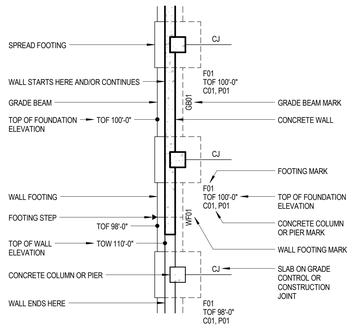
CONCRETE MASONRY LEGEND



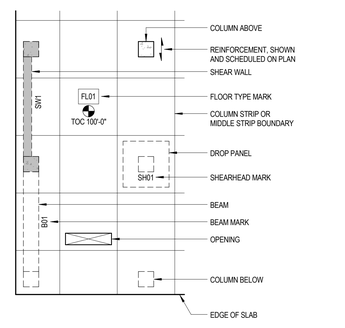
CONCRETE MASONRY PLAN LEGEND



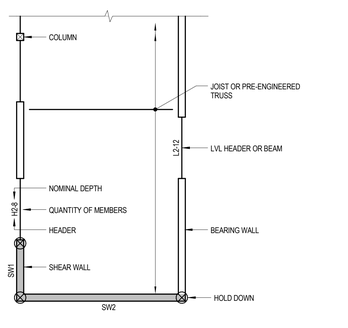
FOUNDATION PLAN LEGEND



CONCRETE TWO-WAY FLAT SLAB FRAMING PLAN LEGEND



COLD-FORMED FRAMING PLAN LEGEND



100% CONSTRUCTION DOCUMENTS

Revisions:	Date:

CONSULTANT

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elm grove, wi 53122

Nagel Architects + Engineers project number:

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	GENERAL INFORMATION
Phase	100% CONSTRUCTION DOCUMENTS
Approved:	
	FULLY SPRINKLERED
Project Title	Construct Cancer Treatment Center
Project Number	607-395
Building Number	BLDG 1 - F WING
Location	WILLIAM S. MIDDLETON VA HOSPITAL, MADISON
Drawing Number	S001
Issue Date	05/17/2017
Checked	BES
Drawn	KRN
	Dwg. 11 of 127

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VA FORM 08 - 6231

STRUCTURAL NOTES

1. DESIGN IS IN ACCORDANCE WITH THE 2012 IBC.
2. THE INTENT OF THESE STRUCTURAL NOTES IS TO INDICATE INFORMATION THAT IS ROUTINELY UTILIZED. ADDITIONAL PROJECT REQUIREMENTS ARE LOCATED WITHIN THE PROJECT SPECIFICATIONS ALSO KNOWN AS THE PROJECT MANUAL. CONFLICTING INFORMATION BETWEEN THESE DRAWINGS AND THE PROJECT SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND CLARIFIED IN WRITING PRIOR TO SUBMITTING BIDS AND CHANGE ORDERS.
3. SEE ARCHITECTURAL DRAWINGS FOR THE CONSTRUCTION CLASSIFICATION TYPE AND THE FIRE RESISTANCE RATING REQUIREMENTS OF STRUCTURAL FRAMING.
4. RESISTANCE TO LATERAL LOADS ON STRUCTURE IS PROVIDED BY CONCRETE SHEAR WALLS, FLOOR DIAPHRAGMS AND ROOF DIAPHRAGMS. CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY BRACING UNTIL ALL LATERAL SUPPORT SYSTEMS ARE IN PLACE AND FUNCTIONAL.
5. ALL STRUCTURAL FRAMING AND CONNECTIONS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE STRUCTURAL FRAMING AND CONNECTIONS FOR ADEQUACY DURING ERECTION AND CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
6. STRUCTURAL ITEMS SHALL NOT BE CUT, BENT, DRILLED, BORED OR OTHERWISE ALTERED UNLESS APPROVED BY ENGINEER OF RECORD.
7. DIMENSIONS OF EXISTING CONSTRUCTION OR CONSTRUCTION IN PROGRESS SHALL BE VERIFIED AND COORDINATED PRIOR TO FABRICATION OF STRUCTURAL COMPONENTS.
8. VERIFY AND COORDINATE, WITH ALL CONTRACTORS, THE LOCATION OF ALL ARCHITECTURAL AND MECHANICAL APPURTENANCES AND OPENINGS.
9. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND ALL JOB SITE SAFETY.
10. PROVISIONS ARE INCLUDED FOR THE FOLLOWING FUTURE ADDITIONS: VERTICAL EXPANSION CONSISTS OF CONVERTING THE ROOF TO BECOME THE FIRST FLOOR AND ADDING A SECOND, THIRD, FOURTH FLOORS AND ROOF. HORIZONTAL EXPANSION CONSISTS OF INFILLING THE FIRST FLOOR BETWEEN GRIDS C.4 & D.

MATERIAL DESIGN CRITERIA

CONCRETE
MINIMUM 28 DAY STRENGTH SHALL BE:

FOOTINGS	4000 PSI, UNO, SEE SCHEDULE
FOUNDATION WALLS	4000 PSI
SLABS ON GRADE	4000 PSI
WALLS	4000 PSI
STRUCTURAL SLAB SYSTEMS	5000 PSI
COLUMNS	5000 PSI

REINFORCING STEEL
1. PLAIN RINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
2. WELDABLE GRADE REINFORCING STEEL SHALL CONFORM TO ASTM A706 OR A496.
3. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A775 GRADE 60.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
5. STAINLESS STEEL REINFORCING SHALL CONFORM TO ASTM A706 or A955.
6. SYNTHETIC FIBER REINFORCING SHALL CONFORM TO ASTM C1116.

CONCRETE MASONRY
1. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 TYPE II, NORMAL WEIGHT UNITS.
2. MORTAR SHALL CONFORM TO ASTM C270 TYPE S ABOVE GROUND AND TYPE M BELOW GROUND.
3. MASONRY GROUT SHALL CONFORM TO ASTM C476 MINIMUM COMPRESSIVE STRENGTH f'c = 3000 PSI.
4. CONCRETE MASONRY UNITS NET AREA COMPRESSIVE STRENGTH OF 3750 PSI.

COLD-FORMED STEEL DECKING
1. STEEL MATERIAL SHALL CONFORM TO ASTM A653, 50 KSI

COLD-FORMED STEEL FRAMING, BLOCKING AND BRIDGING
1. 18 GAGE AND HIGHER (0.0451 INCH MINIMUM THICKNESS OR THINNER) MATERIAL SHALL CONFORM TO ASTM A653, GRADE 33.
2. 16 GAGE AND LOWER (0.0566 INCH MINIMUM THICKNESS OR THICKER) MATERIAL SHALL CONFORM TO ASTM A653, GRADE 50.

STRUCTURAL STEEL
1. STRUCTURAL STEEL W-SHAPES AND STEEL PLATES SHALL CONFORM TO ASTM , GRADE 50.
2. STRUCTURAL STEEL ANGLES, CHANNELS, AND OTHER ROLLED MEMBERS SHALL CONFORM TO ASTM A36.
3. RECTANGULAR AND SQUARE MEMBERS SHALL CONFORM TO ASTM A500 GRADE B, Fy = 46 KSI.
4. ROUND HSS MEMBERS SHALL CONFORM TO ASTM A500 GRADE B, Fy = 42 KSI.
5. STEEL PIPE SHALL CONFORM TO A53 GRADE B.
6. STEEL HEADED STUDS SHALL CONFORM TO ASTM A108 GRADE 1015, 1017 OR 1020, Fy = 50 KSI.
7. STEEL STUDS FOR SHEAR RAIL REINFORCMENT SHALL CONFORM TO ASTM A1044.
8. STEEL ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 55.
9. STEEL BOLTS SHALL CONFORM TO ASTM A325.
10. STEEL EYEBOLTS SHALL CONFORM TO ASTM A489.
11. STEEL NUTS SHALL CONFORM TO ASTM A563.
12. STEEL WASHERS SHALL CONFORM TO ASTM F436.
13. TWIST-OFF-TYPE TENSION CONTROL STRUCTURAL BOLT, NUT AND WASHER ASSEMBLIES SHALL CONFORM TO ASTM F1852.
14. COMPRESSIBLE-WASHER-TYPE DIRECT TENSION INDICATORS FOR USE WITH STRUCTURAL FASTENERS SHALL CONFORM TO ASTM F959.

FOUNDATIONS
1. SHALLOW FOUNDATIONS
   A. ASSUMED NET ALLOWABLE BEARING CAPACITY FOR SPREAD FOOTINGS IS 5000 PSF.

2. SUPERIMPOSED DEAD LOADS:

ROOF, FUTURE SECOND FLOOR	45 PSF
TYPICAL UNLESS NOTED	20 PSF

A LOAD ALLOWANCE FOR ITEMS INCLUDING FLOORING, CEILING, SPRINKLERS, DUCTWORK, PLUMBING AND OTHER MISCELLANEOUS COMPONENTS OF 15 PSF ARE INCLUDED IN THE ABOVE DEAD LOADS. THESE ITEMS SHALL BE SUPPORTED TO DISTRIBUTE THEIR LOAD EVENLY AND TO NOT EXCEED THIS UNIFORM LOADING.

2. SUPERIMPOSED LIVE LOADS:

FUTURE FLOORS	100 PSF
TYPICAL UNLESS NOTED	100 PSF

3. ROOF SNOW LOAD (ASCE 7-10):

RISK CATEGORY IV	I = 1.20
GROUND SNOW LOAD	Pg = 30.0 PSF
FLAT ROOF SNOW LOAD	Pf = 25.2 PSF
EXPOSURE FACTOR	Ce = 1.00
THERMAL FACTOR	Ct = 1.00

4. WIND LOAD (ASCE 7-10):

RISK CATEGORY	IV
BASIC WIND SPEED (3-SECOND GUST)	Vult = 120 MPH Vasd = 90 MPH
EXPOSURE CATEGORY	C
EXPOSURE CLASSIFICATION	ENCLOSED
INTERNAL PRESSURE COEFFICIENT	GCpi = +/- 0.18
WIND DIRECTIONALITY FACTOR	Kd = .85
WIND-BORNE DEBRIS REGION	NO
COMPONENTS AND CLADDING	SEE SHEET S010

5. SEISMIC LOAD (ASCE 7-10):

RISK CATEGORY	IV
DESIGN SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.090 g SD1 = 0.074 g
SOIL SITE CLASS	D
SEISMIC DESIGN CATEGORY	C
BASIC SEISMIC FORCE RESISTING SYSTEM	REINFORCED CONCRETE SHEAR WALLS
DESIGN BASE SHEAR	650 KIPS
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE ANALYSIS

6. MISCELLANEOUS LOADS:

HAND RAILINGS	50 PLF IN ANY DIRECTION AND 200 LBS IN ANY DIRECTION

EXISTING STRUCTURE NOTES:

- EXISTING STRUCTURAL ELEMENTS INDICATED ON THE CONTRACT STRUCTURAL DRAWINGS ARE BASED ON CONSTRUCTION DRAWINGS PREPARED BY HOLABIRD & ROOT, VA PROJECT NUMBER 2891 DATED NOVEMBER 23, 1951, FLAD & ASSOCIATES, VA PROJECT NUMBER 607-018 DATED MARCH 4, 1977, AND FLAD & ASSOCIATES, VA PROJECT NUMBER 607-022 DATED OCTOBER 27, 1982.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, MEMBER SIZES, MEMBER MATERIALS, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL MEMBER SIZES AND DIMENSIONS SHOWN ON THE CONTRACT STRUCTURAL DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY EXISTING CONDITIONS THAT DIFFER FROM THOSE INDICATED ON THE CONTRACT STRUCTURAL DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, ETC NECESSARY FOR THE PROPER FABRICATION, ERECTION, CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE.
- BEFORE PROCEEDING WITH ANY WORK WITHIN OR ADJACENT TO THE EXISTING STRUCTURE, THE CONTRACTORS SHALL BECOME FAMILIAR WITH THE EXISTING CONDITIONS. DURING THE PROCESS OF CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF THE EXISTING STRUCTURE WHERE THE EXISTING STRUCTURE IS MODIFIED TO ACCOMMODATE NEW CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING STRUCTURE WHICH ARE TO REMAIN.
- CONTRACTOR SHALL NOT CUT, CORE, DRILL OR OTHERWISE ALTER THE EXISTING STRUCTURAL ELEMENTS OTHER THAN THE MODIFICATIONS SHOWN IN THE CONTRACT STRUCTURAL DRAWINGS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

EARTHWORK AND FOUNDATIONS

1. THE GEOTECHNICAL REPORT, REPORT NO. C16379 AND ALL SUPPLEMENTS AS PREPARED BY CGC, INC. AND DATED SEPTEMBER 2, 2016 WAS USED AS THE BASIS OF FOUNDATION DESIGN.
2. FOOTINGS SHALL BE CAST ON UNDISTURBED SUBSOIL OR COMPACTED FILL MEETING THE MINIMUM DESIGN CAPACITY NOTED ABOVE.
3. SOIL SHALL MEET THE COMPACTION REQUIREMENTS AS DEFINED IN THE GEOTECHNICAL REPORT. IF IT IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN, CONSULT GEOTECHNICAL ENGINEER AND ARCHITECT BEFORE PROCEEDING.
4. NO HOLES, TRENCHES OR DISTURBANCES OF THE SOIL SHALL BE ALLOWED WITHIN THE VOLUME DESCRIBED BY 45 DEGREE LINES SLOPING FROM THE BOTTOM EDGE OF THE FOOTING. IF SUCH ARE REQUIRED, FOOTINGS MUST BE LOWERED.
5. BACKFILL EVENLY ON EACH SIDE OF FOUNDATION WALLS AND RETAINING WALLS.
6. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL FLOOR SYSTEM IS IN PLACE AND FASTENED OR UNTIL WALLS ARE ADEQUATELY BRACED. BRACING SHALL BE DESIGNED BY THE CONTRACTOR.
7. TOPSOIL OR FILL BELOW SLABS ON GRADE SHALL BE REMOVED. SUBGRADE UNDER SLABS SHALL BE BANKRUN GRAVEL, 6" MIN, COMPACTED IN 6 INCH LAYERS.
8. BACKFILL AGAINST INTERIOR FOUNDATION WALLS SHALL BE BANKRUN GRAVEL COMPACTED TO MAXIMUM 6 INCH LAYERS.
9. BACKFILL AGAINST EXTERIOR FOUNDATION WALLS SHALL BE BANKRUN GRAVEL COMPACTED TO MAXIMUM 6 INCHLAYERS.
10. PROVIDE MINIMUM 24 INCHES OF WASHED STONE OVER ALL DRAIN TILES AND 4 INCHES BELOW.
11. SEE GEOTECHNICAL REPORT NOTED ABOVE FOR RECOMMENDATIONS TO CONTROL GROUNDWATER LEVELS DURING CONSTRUCTION.

CONCRETE
1. FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE.
2. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PLACE CONCRETE ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.
4. CONTRACTOR SHALL BE AWARE OF COLD WEATHER CONCRETING PRACTICES AND HAVE COPIES OF NRMCA CIP 27 AND ACI 306R "COLD WEATHER CONCRETING".
5. CONTRACTOR SHALL BE AWARE OF HOT WEATHER CONCRETING PRACTICES AND HAVE COPIES OF NRMCA CONCRETE IN PRACTICE (CIP) 12 AND ACI 305R "HOT WEATHER CONCRETING".
6. LAP ALL WALL BARS WITH CLASS B SPLICES UNLESS OTHERWISE DETAILED. LAP WELDED WIRE MESH 6 INCHES.
7. PROVIDE COLUMN AND WALL DOWELS OF THE SAME SIZE AND NUMBER AS THE RESPECTIVE COLUMN AND WALL REINFORCING UNLESS OTHERWISE DETAILED.
8. PROVIDE TWO (2) #4 BARS AS STIRRUP CARRY BARS WHERE NO TOP STEEL IS AVAILABLE TO HOLD STIRRUPS.
9. PROVIDE DRAWINGS OF PROPOSED CONDUIT AND PIPES TO BE EMBEDDED IN CONCRETE. WHEREVER AN APPROVED PIPE OR CONDUIT EXTENDS THROUGH A BEAM, PROVIDE ONE ADDITIONAL STIRRUP ON EACH SIDE OF THE OPENING.
10. NON-PRESTRESSED CONCRETE PROTECTION FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-08.
11. SLABS ON GRADE SHALL BE CAST ALLOWING A SUFFICIENT NUMBER OF JOINTS TO ADEQUATELY CONTROL SHRINKAGE CRACKING. SAWCUTTING SHALL BE DONE AS SOON AS SAWCUT WILL NOT RAVEL CONCRETE OR WITHIN 16 HOURS MAXIMUM OF INITIAL POURING OPERATION. MAXIMUM SIZE OF PANELS 15'-0" X 15'-0. GENERALLY, JOINTS SHALL OCCUR ON COLUMN CENTERLINES.
12. WELDED WIRE MESH SHALL BE FLAT MANUFACTURED SHEETS. ROLLS ARE NOT PERMITTED.
13. ALLOW AT LEAST 24 HOURS BEFORE POURING ADJACENT WALL SECTIONS BETWEEN CONSTRUCTION JOINTS. MAXIMUM LENGTH OF POUR TO BE 40 FEET, UNLESS CRACK INDUCERS ARE USED AS DETAILED ON THE DRAWINGS.
14. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.
15. DO NOT PLACE OR CUT HOLES IN CONCRETE SLABS, BEAMS, COLUMNS OR WALLS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
16. CONCRETE EXPOSED TO FREEZE THAW CYCLES SHALL BE AIR-ENTRAINED. MINIMUM AIR CONTENT SHALL BE 6 PERCENT. AIR CONTENT OF CONCRETE FOR SLABS WITH HARD TROWEL FINISH SHALL NOT EXCEED 3%. [NO AIR-ENTRAINMENT IS REQUIRED. CONTRACTOR, INSTALLER, AND MANUFACTURER MAY CHOOSE TO INCLUDE AIR-ENTRAINMENT TO IMPROVE PLACEMENT AND FINISHING CHARACTERISTICS.
17. CAMBER CONCRETE MEMBERS FOR DEAD LOAD DEFLECTION BY ADJUSTING FORMS.
18. PIPES AND CONDUITS EMBEDDED IN OR PASSING THROUGH STRUCTURAL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER. PIPE AND CONDUITS EMBEDDED IN CONCRETE SHALL NOT BE LARGER THAN 2 INCHES IN OUTSIDE DIAMETER AT THEIR WIDEST POINT OR FITTING OR 1/3 OF THE THICKNESS OF THE SLAB, BEAM OR WALL.
19. ELECTRICAL CONDUIT OR PIPES EMBEDDED IN OR PASSING THROUGH FLOORS, WALLS OR BEAMS SHALL BE LOCATED AND PLACED SO THAT:
    THEY ARE NOT CLOSER THAN THREE DIAMETERS ON CENTER.
    THE CONCRETE COVER IS NOT LESS THAN 2".
    THEY RUN BETWEEN REINFORCING AND DO NOT DISPLACE IT IN ANY MANNER.
20. NO ALUMINUM CONDUIT SHALL BE PLACED IN CONCRETE.
21. CHAMFER ALL EXPOSED CONCRETE CORNERS. SEE ARCHITECTURAL/STRUCTURAL DRAWINGS FOR REQUIREMENTS.
22. PROPER CURING PROCEDURES SHALL BE USED FOR SLAB-ON-GRADE TO PREVENT CURLING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
23. CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE MIXES.
24. PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS BELOW THE WATER TABLE AND AS SHOWN ON DRAWINGS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
25. CONTRACTOR SHALL INCLUDE ADDITIONAL CONCRETE FOR METAL DECK SLABS TO ACCOUNT FOR DEFLECTIONS IN DECK AND BEAMS.
26. CONTRACTOR SHALL INCLUDE ADDITIONAL CONCRETE FOR SLABS AND BEAMS TO ACCOUNT FOR DEFLECTIONS IN FORMWORK.
27. ALL CONCRETE COLUMNS AND BEAMS INTEGRATED WITH CONCRETE MASONRY UNITS NOMINALLY NOTED AS 8, 10 AND 12 INCH SHALL MATCH ACTUAL WIDTH OF CMU, 7-5/8, 9-5/8 AND 11 5/8 INCHES RESPECTIVELY.
28. PROVIDE DOVETAIL ANCHORS BETWEEN MASONRY AND CONCRETE AT EVERY OTHER BED JOINT UNLESS NOTED OTHERWISE.
29. CONTRACTOR SHALL BE RESPONSIBLE FOR QUANTITIES OF CONCRETE FOR FLAT SLABS, BEAMS AND COMPOSITE SLABS WHILE ACCOUNTING FOR DEFLECTIONS OF FORMWORK, STEEL BEAMS AND SHORING.

CONCRETE MASONRY
1. NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY WALLS (f'm) IS EQUAL TO 2500 PSI BASED ON THE CMU STRENGTH AND MORTAR SHOWN ABOVE.
2. PRODUCTION AND CONSTRUCTION OF CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURE, ACI 530.1, LATEST EDITION, AND THE NCMA TECHNICAL GUIDE.
3. COLD WEATHER CONSTRUCTION SHALL BE IN COMPLIANCE WITH NCMA "RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR COLD WEATHER MASONRY AND CONSTRUCTION."
4. HOT WEATHER CONSTRUCTION SHALL BE IN COMPLIANCE WITH NCMA "RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR HOT WEATHER MASONRY AND CONSTRUCTION."
5. THIS BUILDING IS CLASSIFIED AS A (NON-ESSENTIAL)(ESSENTIAL) FACILITY AND THERFORE REQUIRES A LEVEL (A)(B)(C) QUALITY ASSURANCE PROGRAM. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. MASONRY UNITS SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE.
7. STRENGTH OF CONCRETE MASONRY SHOWN IS BASED ON NET AREA OF UNIT.
8. ALL MASONRY SHALL BE NORMAL WEIGHT UNITS IN ACCORDANCE WITH ACI.
9. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.
10. PROVIDE DOVETAIL ANCHORS BETWEEN MASONRY AND STEEL AND/OR CONCRETE AT EVERY OTHER BED JOINT UNLESS NOTED OTHERWISE.
11. MASONRY WALLS SHALL BE ADEQUATELY BRACED TO RESIST WIND FORCES UNTIL PERMANENT DESIGN SUPPORTS ARE IN PLACE AND FUNCTIONAL. BRACING SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION".
12. PROVIDE DOWELS INTO FOUNDATION THE SAME SIZE AND NUMBER AS WALL REINFORCING.
13. LAP REINFORCING BARS 48 DIAMETERS UNO.
14. CONCRETE MASONRY WALL SHALL BE REINFORCED AT EVERY OTHER BED JOINT WITH (9)(3/16) GAGE (TRUSS)(LADDER) TYPE JOINT REINFORCEMENT UNLESS NOTED OTHERWISE.
15. EXTEND BED JOINT REINFORCING INTO CONCRETE COLUMNS 6 INCHES UNLESS DOVETAILS ANCHORS ARE UTILIZED.
16. GROUT STOP DEVICES SHALL BE METAL LATH OR PLASTIC SCREENING. SOLID SHEET MATERIAL SHALL NOT BE USED.
17. VERTICAL BARS SHOWN ON THE DESIGN DRAWINGS SHALL BE PLACED IN A CONTINUOUS UNOBSTRUCTED CELL OF NOT LESS THAN 3 INCHES BY 4 INCHES.
18. ALL VERTICAL BARS SHALL BE HELD IN POSITION TO PREVENT DISPLACEMENT BEYOND THE TOLERANCES ALLOWED BY CONSTRUCTION LOADS OR BY PLACEMENT OF GROUT OR MORTAR.
19. ALL CELLS CONTAINING REINFORCING SHALL BE GROUTED SOLID.
20. ALL BOND BEAM AND PILASTER SHALL BE REINFORCED AS SHOWN ON THE DESIGN DRAWINGS AND FILLED WITH GROUT.
21. PROVIDE CONTINUOUS BOND BEAMS REINFORCED WITH 2-#5 AT ANCHORAGE OF BRICK SUPPORT ANGLES.
22. PROVIDE A CONTINUOUS BOND BEAM WITH 2-#5 AT TOP AND BOTTOM OF WINDOWS, UNO.
23. PROVIDE A CONTINUOUS BOND BEAM AT TOP OF WALLS WITH 2-#5, UNO.
24. ALL DOOR AND WINDOW JAMBS SHALL CONTAIN 1-#5 (MINIMUM) FULL HEIGHT OF WALL AND BE GROUTED SOLID 8 INCHES WIDE UNLESS SHOWN OTHERWISE.
25. PROVIDE A CONTINOUS BOND BEAM WITH 2-#5 AT ALL BEARING ELEVATIONS, UNO.
26. WHERE NOT SHOWN OTHERWISE, MINIMUM SOLID GROUTED MASONRY BELOW BEAM REACTIONS SHALL BE 16 INCHES DEEP BY 32 INCHES LONG.
27. WHERE NOT SHOWN OTHERWISE, MINIMUM SOLID GROUTED MASONRY BELOW LINTEL REACTIONS SHALL BE 16 INCHES DEEP BY 16 INCHES LONG.
28. MASONRY IN CONTACT WITH SOIL SHALL HAVE ALL ADJACENT CELLS FULLY GROUTED.
29. AT GROUTED CELLS PROVIDE FULL BED JOINTS AROUND CELL PERIMETER.
30. CONTROL JOINTS IN MASONRY WALLS SHALL BE PROVIDED AND SPACED NO GREATER THAN 25 FEET ON CENTER OR MORE THAN 12 FEET FROM A BUILDING CORNER. CONTROL JOINT SHALL ALSO BE PROVIDED NEAR WALL OPENING JAMBS AT WALL INTERSECTIONS, AND AT CHANGES IN WALL HEIGHT. CONTROL JOINTS SHALL NOT BE LOCATED WITHIN GROUTED AREA BENEATH BEAM REACTIONS.
31. FOR CAVITY WALL CONSTRUCTION, OFFSET CONTROL JOINTS IN CMU FROM CONTROL JOINTS IN BRICK VENEER BY 12 (XX) FT +/-, UNO.
32. SEE ARCHITECTURAL DRAWINGS FOR BRICK CONTROL JOINT LOCATIONS.
33. PROVIDE 3 INCH MINIMUM CLEANOUTS IN THE BOTTOM COURSE OF MASONRY FOR EACH GROUT POUR WHEN THE WALL AND GROUT POUR HEIGHT EXCEEDS 5 FEET. IN SOLID GROUTED MASONRY, SPACE CLEANOUTS HORIZONTALLY A MAXIMUM OF 32 INCHES ON CENTER.
34. MAXIMUM GROUT POUR HEIGHT IS BASED ON THE GROUT SPACE REQUIREMENTS OF THE SPECIFICATION FOR MASONRY STRUCTURES.
35. THE TOP OF A GROUT POUR OR COLD JOINT SHALL NOT BE LOCATED WITHIN 1-1/2 INCHES OF A BED JOINT WHEN MULTIPLE GROUT LIFTS ARE USED.
36. CONSOLIDATE GROUT AT THE TIME OF PLACEMENT.
37. WHEN THE GROUT LIFT HEIGHT EXCEEDS 12.67 FEET, THE CONTRACTOR SHALL PROVIDE A "GROUT DEMONSTRATION PANEL" THAT SHALL BE APPROVED BY THE PERMITTING AGENCY, OWNER, ENGINEER AND ARCHITECT PRIOR TO ENGAGING IN GROUT PLACEMENT.
38. COORDINATE WITH THE ELECTRICAL CONTRACTOR THE GROUTING OF CONDUIT IN CORES.
39. CONDUITS, PIPES AND SLEEVES OF ANY MATERIAL TO BE EMBEDDED IN MASONRY SHALL BE COMPATIBLE WITH THE MASONRY. ALUMINIUM PRODUCTS SHALL NOT BE USED.
40. CONDUITS, PIPES AND SLEEVES IN MASONRY SHALL BE NO CLOSER THAN 3 DIAMETERS ON CENTER. ALL HORIZONTAL CONDUITS TO BE ROUTED IN BOND BEAMS.
41. VERTICAL CONDUIT, PIPING, ETC. SHALL BE LOCATED IN CELLS NOT CONTAINING REINFORCEMENT. CONDUIT, PIPING, ETC. SHOULD NEVER BE TIED TO REINFORCEMENT; PROVIDE VERTICAL BAR POSITIONERS.
42. NO PENETRATIONS FOR MEP, IT, ETC. ARE ALLOWED WITHIN 40-INCHES OF ENDS OF SHEARWALLS UNO WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. SEE PLANS FOR LOCATIONS OF SHEARWALL END REINFORCEMENT ZONES.
43. NO PENETRATIONS FOR MEP, IT, ETC. ARE ALLOWED AT LINTEL BEARING LOCATIONS, THROUGH LINTELS/BOND BEAMS, IN CMU PIERS, AT DOOR JAMBS, OR WITHIN 8-INCHES OF A CMU CONTROL JOINT UNO WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.
44. ANY OPENING OR A GROUP OF OPENINGS THROUGH LOAD BEARING OR SHEARWALLS REQUIRING PENETRATION GREATER THAN 8-INCHES BY 8-INCHES THAT ARE NOT SHOWN EXPLICITLY WITH LINTEL CALLOUTS ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER TWO WEEKS PRIOR TO CONSTRUCTION OF THE WALL.

STRUCTURAL STEEL
1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL," FOURTEENTH EDITION AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," APRIL 14, 2010 EDITION.
2. THE STRUCTURAL STEEL FABRICATOR SHALL BE AISC CERTIFIED.
3. ALL STRUCTURAL AND MISCELLANEOUS STEEL WHICH SHALL REMAIN EXPOSED TO VIEW SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" WITHOUT GAPS OR OPEN JOINTS.
4. STEEL DECK FABRICATION AND ERECTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STEEL DECK INSTITUTE.
5. ALL WELDING SHALL COMPLY WITH AWS D1.1 USING E70XX ELECTRODES. ALL WELDING TO BE DONE BY AWS PREQUALIFIED WELDERS, CERTIFIED FOR WELDS MADE. PROVIDE CONTINUOUS MINIMUM SIZED WELDS PER AISC REQUIREMENTS, UNLESS NOTED OTHERWISE.
6. THE MINIMUM SIZE OF FILLET WELDS SHALL BE AS SPECIFIED IN TABLE J2.4 IN THE AISC MANUAL OF STEEL CONSTRUCTION.
7. MINIMUM STRENGTH OF WELDED CONNECTIONS: UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL SHOP AND FIELD WELDS SHALL DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER OF ELEMENT JOINED. ALL MEMBERS WITH MOMENT CONNECTIONS, NOTED ON THE DRAWINGS, SHALL BE WELDED TO DEVELOP THE FULL FLEXURAL CAPACITY OF THE MEMBER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
8. BOLTED CONNECTIONS SHALL BE MADE WITH A MINIMUM OF TWO HIGH STRENGTH BOLTS (MIN 3/4 INCH DIAMETER). CONNECTIONS SHALL BE DESIGNED TO SUPPORT, AT A MINIMUM, ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE AISC TABLES OF UNIFORM LOAD CONSTANTS FOR THE GIVEN BEAM, SPAN, AND STEEL SPECIFIED, UNLESS OTHERWISE DETAILED OR NOTED. BEAM-TO BEAM AND BEAM-TO-COLUMN FRAMING CONNECTIONS SHALL BE MADE WITH DOUBLE ANGLES UNLESS OTHERWISE DETAILED OR NOTED.
9. WHERE SPECIFIC CONNECTION FORCES AND MOMENTS ARE SHOW IN THE DRAWINGS, THE CONNECTIONS SHALL BE DESIGNED FOR SUCH MINIMUM LOADS IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION.
10. BOLTS SHALL BE TIGHTED SNUG-TIGHT PLUS ONE-HALF TURN UNLESS NOTED OTHERWISE OR BE TWIST-OFF-TYPE TENSION CONTROL STRUCTURAL BOLT, NUT AND WASHER ASSEMBLIES.
11. ALL STRUTS, HANGERS, AND BRACES SHALL HAVE CONNECTIONS DESIGNED TO DEVELOP THE FULL ALLOWABLE TENSILE STRENGTH OF THE MEMBER UNLESS THE DESIGN FORCE IS INDICATED ON THE DRAWINGS, IN WHICH CASE THE CONNECTIONS SHALL BE DESIGNED FOR THE FORCE INDICATED.
12. COLUMN BASE PLATES SHALL HAVE OVERSIZED HOLES WITH PLATE WASHERS (MIN 3/8-INCH THICK) PROVIDED WITH ANCHOR RODS.
13. GROUT UNDER BASE PLATES IN ACCORDANCE WITH THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."
14. METAL DECK SHALL BE GALVANIZED WITH A MINIMUM G-60 COATING PER ASTM A653.
15. METAL DECK SHALL BE LAID OUT AND INSTALLED TO HAVE A MINIMUM OF 3 CONTINUOUS SPANS. IF LESS THAN THE MINIMUM IS REQUIRED, PROVIDE THICKER GAGE DECK AS REQUIRED.
16. ROOF DECK SHALL BE WIDE RIB PROFILE, 1 1/2 INCHES DEEP AND 18 GAGE THICKNESS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
17. STEEL ROOF DECK SHALL BE SECURELY FASTENED TO ALL STRUCTURAL SUPPORTS WITH SCREWS SPACED NO GREATER THAN 12 INCHES ON CENTER.
18. DECK END LAPS SHALL BE 3-INCH MINIMUM AND SHALL OCCUR AT SUPPORTS. LOCATE AT VALLEYS AND RIDGES.
19. WHERE CONTINUOUS DIAPHRAGM CHORD ANGLES ARE INDICATED, PROVIDE A FULL PENETRATION WELD AT THE SPLICE LOCATIONS.
20. CLEAN, PREPARE, AND SHOP PRIME EXTERIOR EXPOSED STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH S.S.P.C. STANDARDS SP-1 AND SP-6.
21. CLEAN, PREPARE, AND SHOP PRIME INTERIOR EXPOSED STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH S.S.P.C. STANDARDS SP-1 AND SP-3.
22. WHILE THE DESIGN DOCUMENTS MAY REFERENCE OSHA, THEY ARE NOT INTENDED TO SPECIFICALLY IDENTIFY ALL APPLICABLE OSHA REQUIREMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY AND COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS.
23. ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING MASONRY SHELF ANGLES, SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123, UNLESS OTHERWISE NOTED.
24. ALL STRUCTURAL STEEL CONNECTIONS PERMANENTLY EXPOSED TO THE WEATHER, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153, UNLESS OTHERWISE NOTED.
25. ALL STEEL SHALL BE POSITIONED WITH THE NATURAL CAMBER OR INDUCED CAMBER TURNED UP.
26. REFER TO ARCHITECTURAL SHEETS FOR STRUCTURAL STEEL AND DECK TO BE FIREPROOFED.
27. THE THICKNESS OF THE FIREPROOFING MATERIAL SHALL BE BASED ON STEEL MEMBER SIZES, FIREPROOFING MATERIAL AND THE HOURLY RESISTANCE RATING SPECIFIED ABOVE. CALCULATIONS TO SPECIFY THE REQUIRED THICKNESS SHALL BE PERFORMED.
28. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISCELLANEOUS STEEL.

PRE-ENGINEERED COLD-FORMED STEEL FRAMING

1. DESIGN, FABRICATION, AND ERECTION OF COLD-FORMED STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE AISI DESIGN MANUAL AS AMENDED TO DATE. ALL FRAMING MEMBERS SHOWN ON PLANS ARE SCHEMATIC AND ARE SHOWN FOR INTENT ONLY.
2. STEEL STUD CURTAIN WALL AND CONNECTIONS TO BE DESIGNED BY SUPPLIER. (STEEL STUD CURTAIN WALL AND CONNECTION DESIGN SHALL BE SEALED BY PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN THIS WORK AND REGISTERED IN THE STATE OF WISCONSIN.
3. MIMINUM DESIGN THICKNESS OF STUDS AND TRACK AT EXTERIOR OF BUILDING VERTICALLY SUPPORTING MASONRY SHALL BE 16 GAGE.
4. MIMINUM DESIGN THICKNESS OF STUDS AND TRACK AT EXTERIOR OF BUILDING VERTICALLY NOT SUPPORTING MASONRY SHALL BE 16 GAGE.
5. LOAD BEARING STUDS VERTICALLY SUPPORTING MASONRY SHALL BE DESIGNED TO CARRY ALL GRAVITY LOADS AND LATERAL FORCES INCLUDING BUT NOT LIMITED TO DEAD LOADS, LIVE LOADS, WIND LOADS, AND AXIAL LOAD ECCENTRICITY.
6. LOAD BEARING STUDS NOT VERTICALLY SUPPORTING MASONRY SHALL BE DESIGNED TO CARRY ALL GRAVITY LOADS AND LATERAL FORCES INCLUDING BUT NOT LIMITED TO DEAD LOADS, LIVE LOADS, WIND LOADS, AND AXIAL LOAD ECCENTRICITY.
7. NON-LOAD BEARING STUDS NOT VERTICALLY SUPPORTING MASONRY SHALL TRANSFER LATERAL LOADS TO STRUCTURE BY MEANS OF SLIDE CLIPS TO ALLOW FOR VERTICAL MOVEMENT OF PRIMARY STRUCTURAL MEMBERS.
8. SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.
9. STUDS, TRACK, AND ACCESSORIES SHALL BE GALVANIZED WITH A MINIMUM G-90 COATING PER ASTM A653.
10. STUDS SHALL BE PLUMBED, ALIGNED, AND SECURELY ATTACHED TO FLANGES OR WEBS OF LOWER TRACK. STUDS SHALL BE SEATED TIGHT TO TRACK WEBS PRIOR TO ATTACHMENT.
11. JOINTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS OR A LOAD DISTRIBUTION MEMBER SHALL BE PROVIDED AT THE TOP OF THE WALL.
12. REFER TO ARCHITECTURAL WALL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION.
13. STEEL STUD ERECTOR SHALL CONSTRUCT ALL LIGHTGAGE FRAMING IN A MANNER WHICH PROTECTS LATERAL STABILITY OF THE STRUCTURE.
14. ALL WELDS PERFORMED ON GALVANIZED LIGHTGAGE COMPONENTS SHALL BE COATED WITH ZINC RICH PAINT FOR CORROSION PROTECTION IN ACCORDANCE WITH ASTM A780. CONTRACTOR SHALL NOTIFY THE ARCHITECT TO ALLOW ADEQUATE TIME FOR WELDS TO BE REVIEWED BEFORE SYSTEMS ARE ENCLOSED.
15. STEEL STUD WALLS SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE REQUIRED CAPACITIES TO CARRY CONSTRUCTION LOADS. CONTRACTOR SHALL PROVIDE NECESSARY BRIDGING OR ATTACHMENT TO WALL SHEATHING BEFORE STRUCTURAL COMPONENTS ARE LOADED.

ANCHORS AND FASTENERS
1. INSTALLATION OF MECHANICAL AND ADHESIVE ANCHORS, FASTENERS AND SCREWS SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURERS REPRESENTATIVE.
2. EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ UNLESS NOTED OTHERWISE.
3. ADHESIVE ANCHORS SHALL BE HILTI HY 200 UNLESS NOTED OTHERWISE.
4. SLEEVE ANCHORS SHALL BE HILTI HLC UNLESS NOTED OTHERWISE.
5. HOLLOW TUBE EXPANSION ANCHORS SHALL BE LINDAPTER HOLLO-BOLT.
6. CONCRETE SCREW ANCHORS SHALL BE HILTI KWIK HUS SCREW ANCHOR.
7. SHEET METAL SCREW TYPE FASTENERS SHALL BE HILTI, INC. OR ENGINEER APPROVED SUBSTITUTION.

COMPONENT STRUCTURAL CALCULATION REVIEW

COMPONENT STRUCTURAL CALCULATIONS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:
1. STEEL AND CONCRETE STAIRS
2. COLD-FORMED METAL FRAMING
3. RAILING SYSTEMS
4. CURTAIN WALLS
5. STRUCTURAL STEEL CONNECTIONS
6. CANOPIES AND AWNINGS

PRIOR TO SUBMITTING FOR REVIEW, COMPONENT STRUCTURAL CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL AND BE SIGNED AND SEALED BY A STATE OF REGISTERED ENGINEER EXPERIENCED IN THIS TYPE OF WORK. AT MINIMUM, CALCULATIONS SHALL INCLUDE MATERIAL, LOADING AND SERVICE DESIGN CRITERIA.

THE REGISTERED ENGINEER SHALL HAVE A MINIMUM OF 5 YEARS OF RELATED EXPERIENCE UNLESS NOTED OTHERWISE.

REVIEW OR APPROVAL OF CALCULATIONS HAS BEEN LIMITED TO DETERMINING WHETHER THE SUPERIMPOSED LOADS AND DESIGN ASSUMPTIONS, REPORTED AS HAVING BEEN USED IN THE CALCULATIONS SUBMITTED FOR REVIEW, ARE IN GENERAL CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO OTHER DETAILS OF THE CALCULATIONS HAVE BEEN REVIEWED. REVIEW OR APPROVAL SHALL NOT RELIEVE SUBMITTER EITHER FROM RESPONSIBILITY FOR FULLY COMPLYING WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS, OR FROM ANY ERROR OR OMISSION IN ANY CALCULATIONS.

THE REGISTERED PROFESSIONAL ENGINEER SEALING THE CALCULATIONS FOR REVIEW WARRANTS TO REVIEWING ENGINEER THAT THE SUPERIMPOSED LOADS AND DESIGN ASSUMPTIONS, AS INDICATED IN THE CONTRACT DOCUMENTS, HAVE BEEN USED PROPERLY THROUGHOUT ALL SUCH CALCULATIONS. REVIEWING ENGINEER HAS RELIED UPON THE REGISTERED PROFESSIONAL ENGINEER SEALING THE CALCULATIONS SUBMITTED FOR REVIEW FOR THE PROPER DESIGN OF ALL COMPONENT(S) TO WHICH THE SEALED CALCULATIONS RELATE, ALL SUCH COMPONENT(S) ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND ALL SUCH COMPONENT(S) ARE FIT FOR USE FOR WHICH THEY ARE INTENDED.

SHOP DRAWINGS AND SUBMITTALS

SHOP DRAWINGS AND SUBMITTALS SHALL BE PROVIDED FOR THE FOLLOWING ITEMS:
1. CONSTRUCTION PROCEDURES INCLUDING PROVISIONS FOR HOT AND COLD WEATHER CONSTRUCTION
2. CONSTRUCTION JOINT LOCATIONS IN CONCRETE ELEMENTS
3. CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE ELEMENTS
4. CONCRETE AND GROUT MIX DESIGNS INCLUDING PROPORTIONING DATA
5. MATERIAL CERTIFICATES
6. REINFORCING STEEL
7. ELEVATORS
8. STRUCTURAL STEEL
9. METAL DECK
10. STEEL AND CONCRETE STAIRS*
11. COLD-FORMED METAL FRAMING*
12. RAILING SYSTEMS*
13. CURTAIN WALLS*
14. STRUCTURAL STEEL CONNECTIONS*
15. CANOPIES AND AWNINGS*

PRIOR TO SUBMITTING FOR REVIEW, STARRED (*) ITEMS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL AND BE SIGNED AND SEALED BY THE ENGINEER PREPARING STRUCTURAL COMPONENT CALCULATIONS OF SUCH ITEMS. SEE "COMPONENT STRUCTURAL CALCULATION REVIEW" ABOVE.

SHOP DRAWINGS SUBMITTED FOR REVIEW SHALL BEAR THE CONTRACTOR "APPROVAL" STAMP. SHOP DRAWINGS RECEIVED WITHOUT CONTRACTOR APPROVAL WILL BE RETURNED WITHOUT REVIEW.

REVIEW OR APPROVAL IS LIMITED TO GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION STATED IN THE CONTRACT DOCUMENTS AND DOES NOT EXTEND TO MEANS, METHODS, TECHNIQUES, SEQUENCES, OR CONSTRUCTION PROCEDURES. REVIEW OR APPROVAL SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FROM OBLIGATIONS TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. APPROVAL OF A SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

CONTRACTOR IS SOLELY RESPONSIBLE FOR: DIMENSIONS TO BE VERIFIED AT THE PROJECT SITE; INFORMATION PERTAINING TO THE FABRICATION PROCESS; COORDINATION OF THE WORK OF ALL TRADES; AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS-BUILT DRAWINGS AND DOCUMENTS
1. THE CONTRACTOR SHALL SUBMIT PILE RECORD DRAWINGS FOR APPROVAL BY THE ENGINEER. PILE LOCATIONS SHALL BE DIMENSIONED HORIZONTALLY AND VERTICALLY FROM LOCATIONS AS SHOWN ON PLANS. ELEVATIONS, SIZES AND LENGTHS AS WELL AS ANY UNUSUAL CONDITIONS ENCOUNTERED DURING INSTALLATION SHALL BE NOTED. PILES AND PILE GROUPS OUT OF TOLERANCE WILL REQUIRE STRUCTURAL EVALUATION AND POTENTIAL REDESIGN.
2. THE CONTRACTOR SHALL SUBMIT TENDON JACKING FORCES AND ELONGATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO REMOVING EXCESSIVE END STRAND MATERIAL.
3. ACTUAL TENDON LOSSES SHALL BE COMPUTED BY TENDON SUPPLIER AND FURNISHED TO THE ENGINEER FOR RECORD PURPOSES ONLY.

MATERIALS AND FIELD TESTING

EARTHWORK AND FOUNDATIONS
1. COMPACTION AND SOIL TESTING, DEEP FOUNDATION AND SITE PREPARATION OVERSIGHT SHALL BE PROVIDED BY A GEOTECHNICAL CONSULTANT RETAINED BY THE CONTRACTOR. THE GEOTECHNICAL ENGINEER SHALL VERIFY THAT ALL RECOMMENDATIONS INLUDING SOIL BEARING CAPACITIES, AND OTHER RECOMMENDED ITEMS AS OUTLINED IN THE GEOTECHNICAL REPORT NOTED ABOVE HAVE BEEN SATISFIED. THE GEOTECHNICAL ENGINEER SHALL PROVIDE FIELD REPORTS TO THE OWNER.
2. EXISTING AND NEW BUILDINGS SHALL BE MONITORED UNDER A FIELD SETTLEMENT OBSERVATION PROGRAM PROVIDED BY A GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR. AT LEAST FOUR LOCATIONS OF EACH STRUCTURE SHOULD BE MARKED AND MONITORED FOR FIELD SETTLEMENT BY THE GEOTECHNICAL ENGINEER. ALL SURVEYING REQUIRED SHALL BE PERFORMED BY A STATE OF WISCONSIN REGISTERED SURVEYOR.

CONCRETE, GROUT AND STEEL
1. CONCRETE SHALL BE TESTED BY THE CONTRACTOR'S TESTING LAB. SEE SPECIFICATIONS FOR REQUIREMENTS. PROVIDE TEST REPORTS TO THE COR, ARCHITECT AND ENGINEER.
2. GROUT SHALL BE TESTED BY THE CONTRACTOR'S TESTING LAB. SEE SPECIFICATIONS FOR REQUIREMENTS. PROVIDE TEST REPORTS TO THE COR, ARCHITECT AND ENGINEER.
3. STRUCTURAL STEEL SHALL BE INSPECTED BY THE CONTRACTOR'S TESTING LAB. SEE SPECIFICATIONS FOR REQUIREMENTS. PROVIDE TEST REPORTS TO THE COR, ARCHITECT AND ENGINEER.
4. STEEL REINFORCING BAR PLACEMENT SHALL BE INSPECTED BY THE CONTRACTOR'S TESTING LAB. SEE SPECIFICATIONS FOR REQUIREMENTS. PROVIDE TEST REPORTS TO THE COR, ARCHITECT AND ENGINEER.

100% CONSTRUCTION DOCUMENTS

Revisions: | Date:

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Nagel Architects + Engineers
project number:

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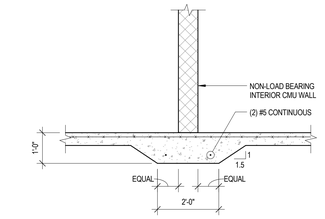
Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: GENERAL NOTES
Approved:

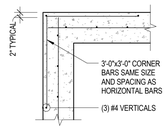
Phase: 100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center
Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON
Issue Date: 05/17/2017 | Checked: BES | Drawn: KRN

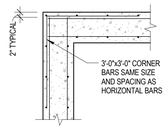
Project Number: 607-395
Building Number: BLDG 1 - F WING
Drawing Number: S002
Dwg. 12 of 127



C4 CMU WALL ON SLAB ON GRADE
1/2" = 1'-0"

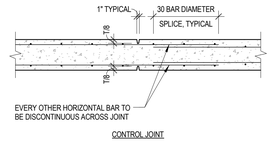


ONE LAYER OF REINFORCEMENT

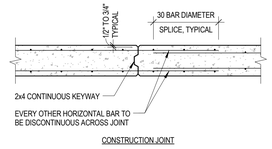


TWO LAYERS OF REINFORCEMENT

C5 WALL CORNER
1/2" = 1'-0"

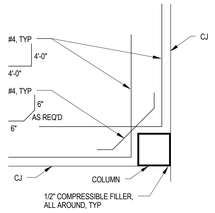


CONTROL JOINT

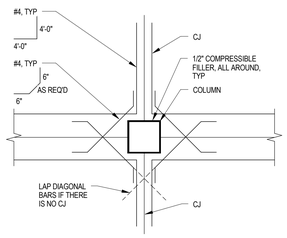


CONSTRUCTION JOINT

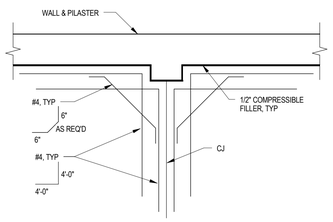
C6 WALL CONTROL AND CONSTRUCTION JOINT
1/2" = 1'-0"



AT CORNER

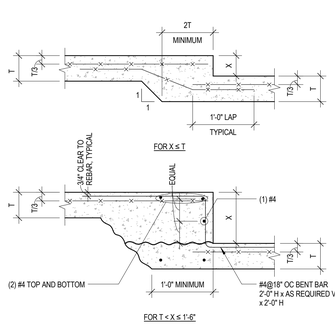


AT INTERIOR



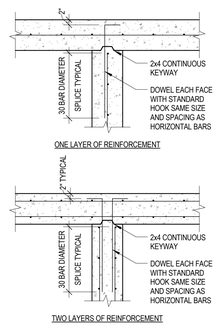
AT EXTERIOR

A3 TYPICAL SOG ISOLATION JOINT
1/2" = 1'-0"



FOR T < X ≤ 1'-6"

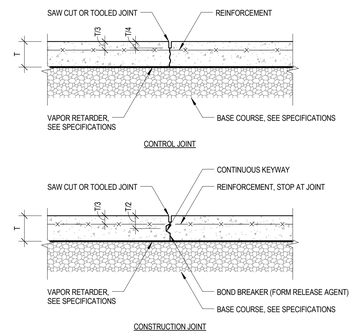
B4 SLAB ON GRADE DEPRESSION
1" = 1'-0"



ONE LAYER OF REINFORCEMENT

TWO LAYERS OF REINFORCEMENT

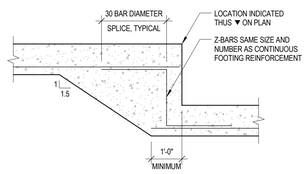
B5 WALL INTERSECTION
1/2" = 1'-0"



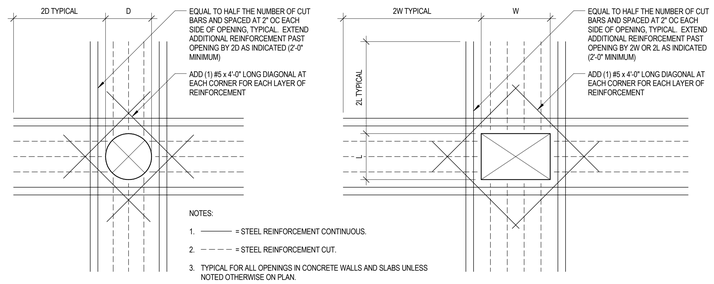
CONTROL JOINT

CONSTRUCTION JOINT

B6 SLAB ON GRADE CONTROL AND CONSTRUCTION JOINT
1" = 1'-0"



A4 FOOTING STEP
1/2" = 1'-0"



NOTES:
1. ——— = STEEL REINFORCEMENT CONTINUOUS.
2. – – – – = STEEL REINFORCEMENT CUT.
3. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS UNLESS NOTED OTHERWISE ON PLAN.
4. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
5. FOR OPENINGS 1'-0" ROUND/SQUARE OR LESS THE WALL STEEL CAN BE REPLACED WITHOUT ADDITIONAL REINFORCEMENT.

A5 OPENING REINFORCEMENT
1/2" = 1'-0"

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Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: GENERAL FOUNDATION DETAILS	Phase: 100% CONSTRUCTION DOCUMENTS
Approved:	FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center	Project Number: 607-395
	Building Number: BLDG 1 - F WING
Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON	Drawing Number: S003
Issue Date: 05/17/2017	Checked: BES
	Drawn: KRN
	Dwg. 13 of 127

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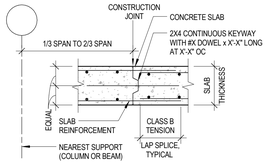
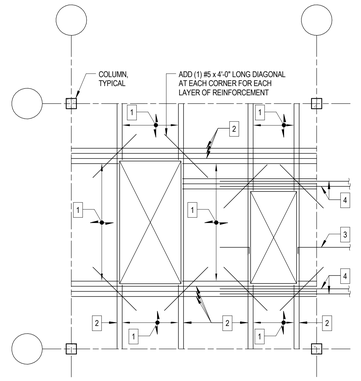


TWO-WAY SLAB CONSTRUCTION JOINT

C3 1/2" = 1'-0"



NOTES:

1. FOR OPENINGS 1'-0" OR LESS THE DISPLACED BARS CAN BE MOVED WITHOUT ADDITIONAL REINFORCEMENT.

1 = BOTTOM BARS INTERRUPTED BY OPENING.

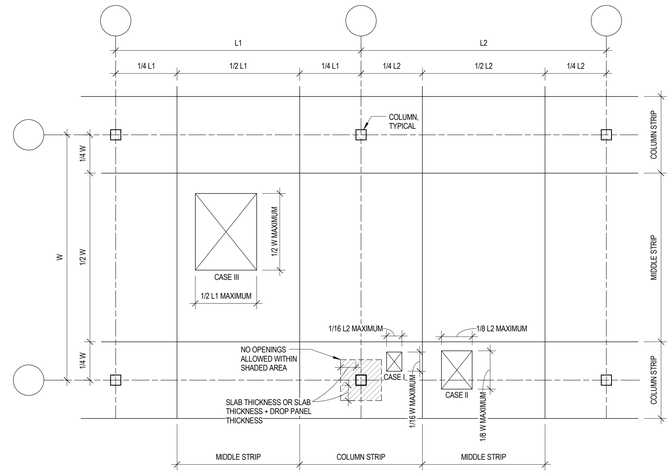
2 = DISPLACED BOTTOM BARS. ADDITIONAL 1/2 OF INTERRUPTED BARS EACH SIDE OF OPENING. PROVIDE 2 BARS MINIMUM EACH SIDE. THE DISPLACED BOTTOM BARS SHALL EXTEND THE FULL LENGTH OF THE BAY IN WHICH THEY OCCUR.

3 = TOP BARS INTERRUPTED BY OPENING. PROVIDE 90 DEGREE HOOKS AT OPENING.

4 = DISPLACED TOP BARS. ADDITIONAL 1/3 OF INTERRUPTED BARS EACH SIDE OF OPENING. PROVIDE 2 BARS MINIMUM EACH SIDE.

TWO-WAY SLAB OPENING REINFORCEMENT

C4 1" = 1'-0"



NOTES:

1. CASE DESCRIPTION
   CASE I: AT INTERSECTION OF TWO COLUMN STRIPS
   CASE II: AT INTERSECTION OF COLUMN STRIP AND MIDDLE STRIP
   CASE III: AT INTERSECTION OF TWO MIDDLE STRIPS
2. IF MORE THAN ONE OPENING OCCURS IN ANY STRIP INTERSECTION, THE SUM OF THE LENGTHS OF OPENINGS (INCLUDING SLEEVES) IN ANY DIRECTION SHALL NOT EXCEED THE ALLOWABLE DIMENSION NOTED ON THE PLAN ABOVE. MAINTAIN 3" CLEAR MINIMUM BETWEEN OPENINGS.
3. SLEEVES SHALL BE SCHEDULE 40 PIPE.
4. OPENING DIMENSIONS SHALL CONFORM TO THIS DETAIL UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE STRUCTURAL PLANS.
5. FOR REINFORCEMENT AT SLAB OPENINGS SEE TWO-WAY SLAB OPENING REINFORCEMENT DETAIL THIS SHEET.
6. SIZE AND LOCATION OF OPENINGS NOT INDICATED ON THE STRUCTURAL PLANS SHALL BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL.

TWO-WAY SLAB OPENINGS NOT SHOWN ON PLAN

C5 1" = 1'-0"

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Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: GENERAL TWO-WAY FLAT SLAB DETAILS

Approved:

Phase: 100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center

Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON

Issue Date: 05/17/2017

Checked: BES

Drawn: KRN

Project Number: 607-395

Building Number: BLDG 1 - F WING

Drawing Number: S004

Dwg. 14 of 127

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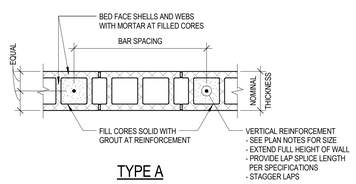
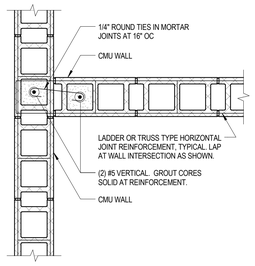
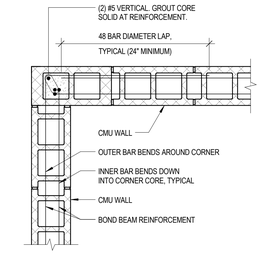


TYPE A

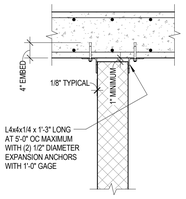
C4 DETAIL
1" = 1'-0"



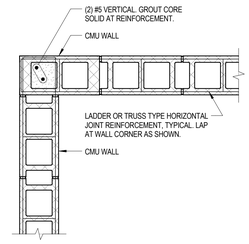
C5 CMU WALL INTERSECTION
1" = 1'-0"



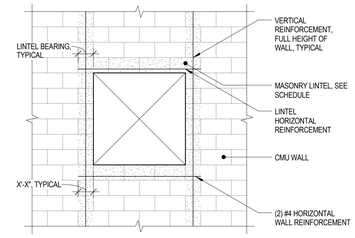
C6 BOND BEAM CORNER
1" = 1'-0"



B4 SUPPORT AT TOP OF INTERIOR CMU WALLS
3/4" = 1'-0"

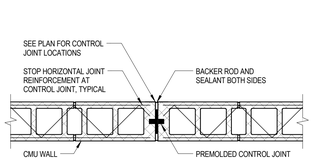


B5 CMU WALL CORNER
1" = 1'-0"



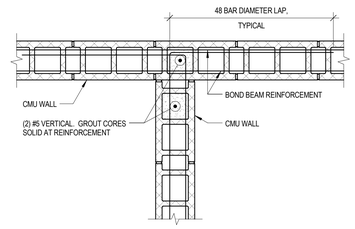
NOTES:
1. GROUT ALL CELLS SOLID CONTAINING REINFORCEMENT.

B6 CMU WALL PUNCHED OPENING
3/8" = 1'-0"

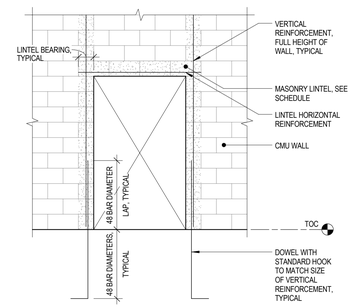


NOTES:
1. STOP BOND BEAM REINFORCEMENT (NOT SHOWN) AT CONTROL JOINT.

A4 CMU WALL VERTICAL CONTROL JOINT
1" = 1'-0"



A5 BOND BEAM INTERSECTION
1" = 1'-0"



NOTES:
1. GROUT ALL CELLS SOLID CONTAINING REINFORCEMENT

A6 CMU WALL DOOR OPENING
3/8" = 1'-0"

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Nagel Architects + Engineers
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: GENERAL MASONRY DETAILS	Phase: 100% CONSTRUCTION DOCUMENTS
Approved:	FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center	Project Number: 607-395
	Building Number: BLDG 1 - F WING
Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON	Drawing Number: S005
Issue Date: 05/17/2017 / Checked: BES / Drawn: KRN	Dwg. 15 of 127

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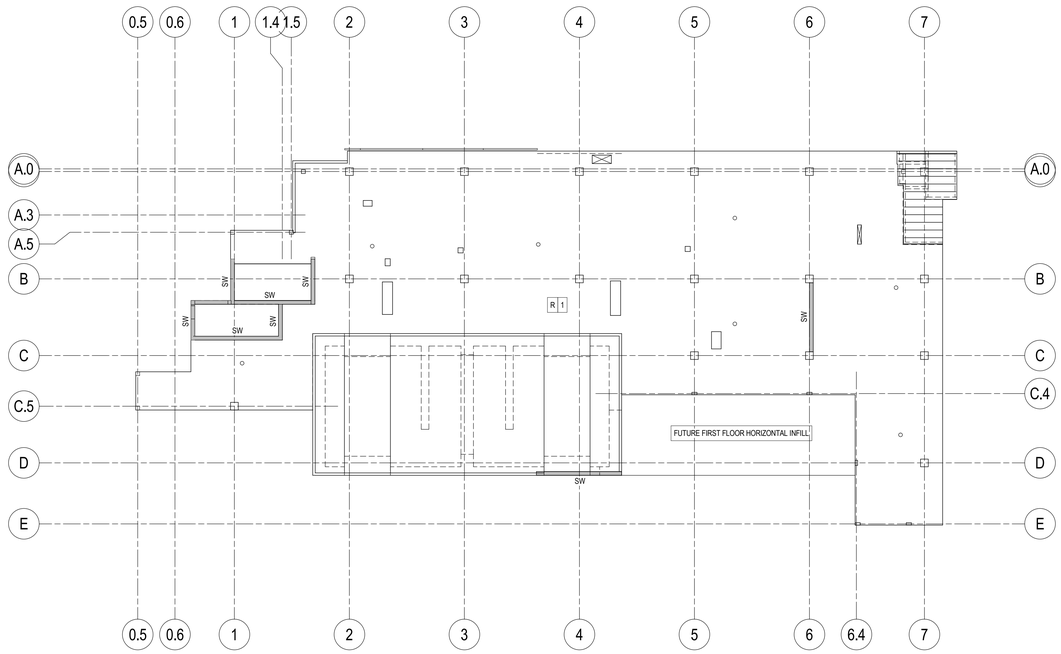
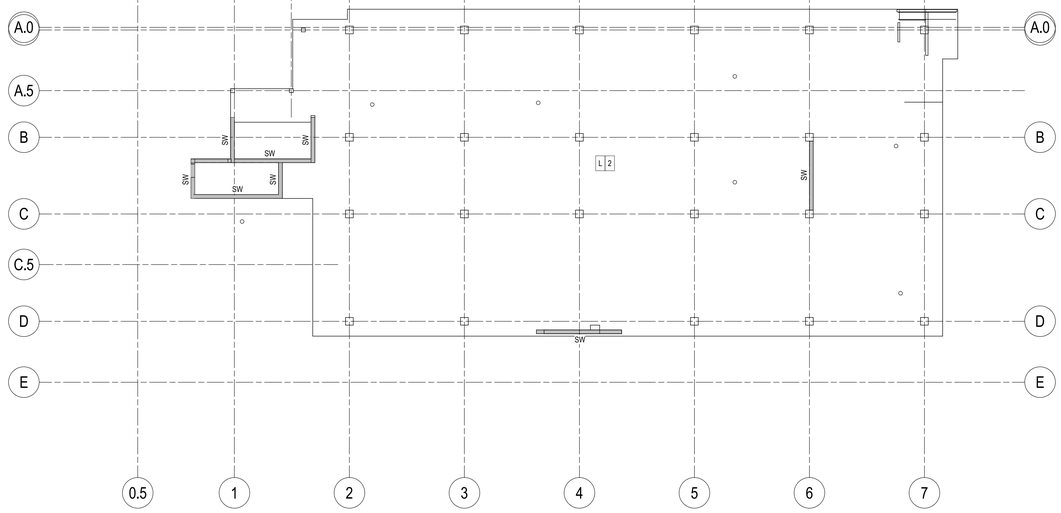


LIVE LOAD PLAN - ROOF/FUTURE FIRST FLOOR

1/16" = 1'-0"



LIVE LOAD PLAN - FUTURE FLOORS 2-4 & FUTURE ROOF

1/16" = 1'-0"

LOAD MAP NOTES AND DESIGNATIONS

LIVE LOAD DESIGNATION		
MARK	USE	LIVE LOAD (PSF)
L	TYPICAL FLOOR	100 (R)
R	ROOF	100 (R)

	SUPERIMPOSED DEAD LOAD (SDL) DESIGNATION						
MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	MECHANICAL EQUIPMENT (PSF)	MISCELLANEOUS (PSF)	2" CONCRETE TOPPING
1	ROOF (FUTURE FLOOR 1)	40	3	2	5	5	25 PSF
2	FUTURE FLOORS 2-4 & FUTURE ROOF	15	3	2	5	5	-

LOAD MAP KEY:

M | 6
- NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK
- LETTER INDICATES LIVE LOAD MARK

LOAD MAP NOTES:

1. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE.
2. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL/ELECTRICAL EQUIPMENT.
4. FUTURE FLOORS AND ROOF ARE ASSUMED TO BE 13" THICK TWO WAY CONCRETE SLABS.

WIND PRESSURE LOADS (FOR FIVE STORY STRUCTURE)

ROOF PRESSURE TABLE (PSF)						
TRIBUTARY AREA (SF)	INTERIOR ZONE 1 (PSF)		EDGE ZONE 2 (PSF)		CORNER ZONE 3 (PSF)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10	16.9	41.6	38.1	69.9	38.1	69.9
50	16.0	39.2	34.2	52.6	34.2	52.6
>100	16.0	38.1	45.2	45.2	32.5	45.2

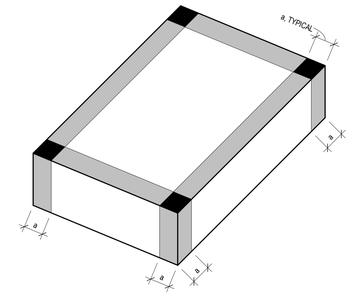
OVERHANGS, CANOPIES, AWNINGS PRESSURE TABLE (PSF)				
TRIBUTARY AREA (SF)	ZONES 1 & 2 (PSF)		ZONE 3 (PSF)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10		60.0		60.0
50		57.5		57.5
>100		56.5		56.5

WALL PRESSURE TABLE (PSF)				
TRIBUTARY AREA (SF)	INTERIOR ZONE 4 (PSF)		EDGE ZONE 5 (PSF)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10	38.1	41.3	38.1	50.8
100	32.5	35.7	32.5	39.6
>500	28.6	31.8	28.6	31.8

= **INTERIOR ZONES**
ROOF - ZONES 1
WALLS - ZONE 4

= **END ZONES**
ROOF - ZONES 2
WALLS - ZONE 5

= **CORNER ZONES**
ROOF - ZONES 3



FLAT ROOF BUILDING
a = 18'-0"

NOTES:

1. POSITIVE AND NEGATIVE VALUES INDICATE WIND PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACES, RESPECTIVELY.
2. TRIBUTARY AREA IS THE PRODUCT OF SPAN LENGTH MULTIPLIED BY THE TRIBUTARY WIDTH OF THE ELEMENT UNDER CONSIDERATION THE TRIBUTARY WIDTH IS THE SMALLER OF ONE THIRD OF THE SPAN OR THE ACTUAL WIDTH OF THE DOOR/WINDOW/WALL.

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VA U.S. Department of Veterans Affairs

Drawing Title: LOAD DIAGRAMS
Approved:
Phase: 100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED
Project Title: Construct Cancer Treatment Center
Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON
Issue Date: 05/17/2017
Checked: BES
Drawn: KRN
Project Number: 607-395
Building Number: BLDG 1 - F WING
Drawing Number: S010
Dwg. 16 of 127

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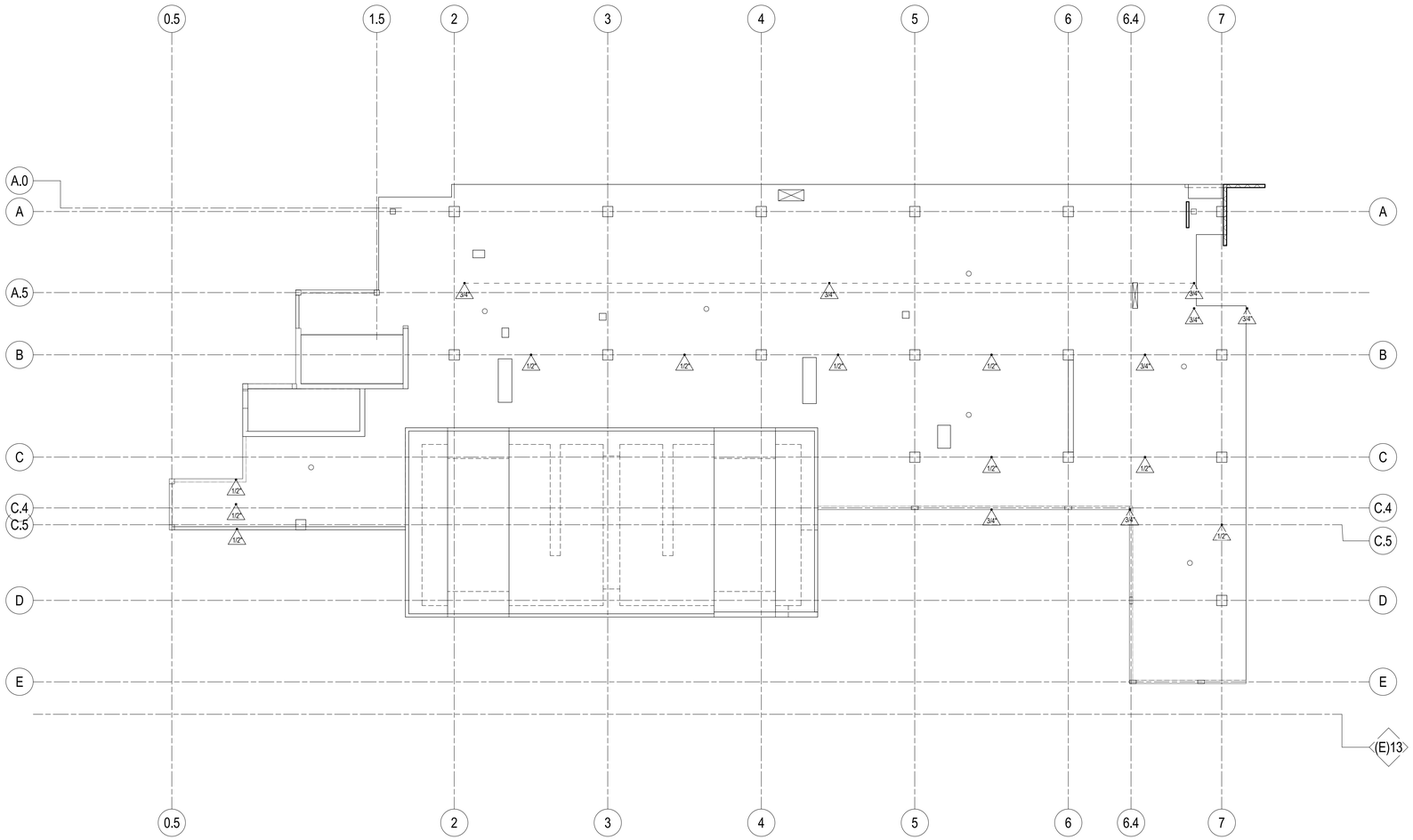
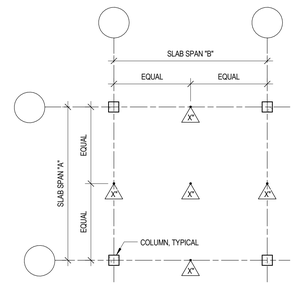


SLAB CAMBER PLAN

3/32" = 1'-0"



TWO-WAY SLAB CAMBER DIAGRAM

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suite 200
elm grove, wi 53122

Nagel Architects + Engineers
project number:

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: SLAB CAMBER PLAN	Phase: 100% CONSTRUCTION DOCUMENTS
Approved:	FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center	Project Number: 607-395
	Building Number: BLDG 1 - F WING
Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON	Drawing Number: S011
Issue Date: 05/17/2017	Checked: BES
	Drawn: KRN
	Dwg. 17 of 127

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VA FORM 08 - 6231

NOTE:
GC TO VERIFY ALL BRICK LEDGE ELEVATIONS WITH ARCHITECT PRIOR TO CONSTRUCTION.

EXISTING BUILDING NOTE: INFORMATION PERTAINING TO THE EXISTING CONDITIONS PROVIDED IN THESE CONSTRUCTION DOCUMENTS REPRESENTS TO THE BEST OF OUR KNOWLEDGE OF THE ACTUAL EXISTING FIELD CONDITION. DIMENSIONS OF EXISTING CONSTRUCTION SHALL BE FIELD VERIFIED AND COORDINATED PRIOR TO FABRICATION OF STRUCTURAL COMPONENTS. REPORT DISCREPANCIES BETWEEN THESE DRAWINGS AND FIELD CONDITIONS TO ARCHITECT/ENGINEER FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE ARCHITECT/ENGINEER IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACT. EXISTING STRUCTURAL COMPONENTS ARE SHOWN AS HALF TONE OR GRAY SCALE. FIELD VERIFY THAT ALL EXISTING STRUCTURAL COMPONENTS MATCH EXISTING PLANS.

REFER TO ARCHITECTURAL DEMOLITION SHEETS AND NEW CONSTRUCTION DRAWINGS AND DETAILS FOR ADDITIONAL INFORMATION REGARDING CUT/DEMOLITION EXTENTS AND MISCELLANEOUS OPENINGS

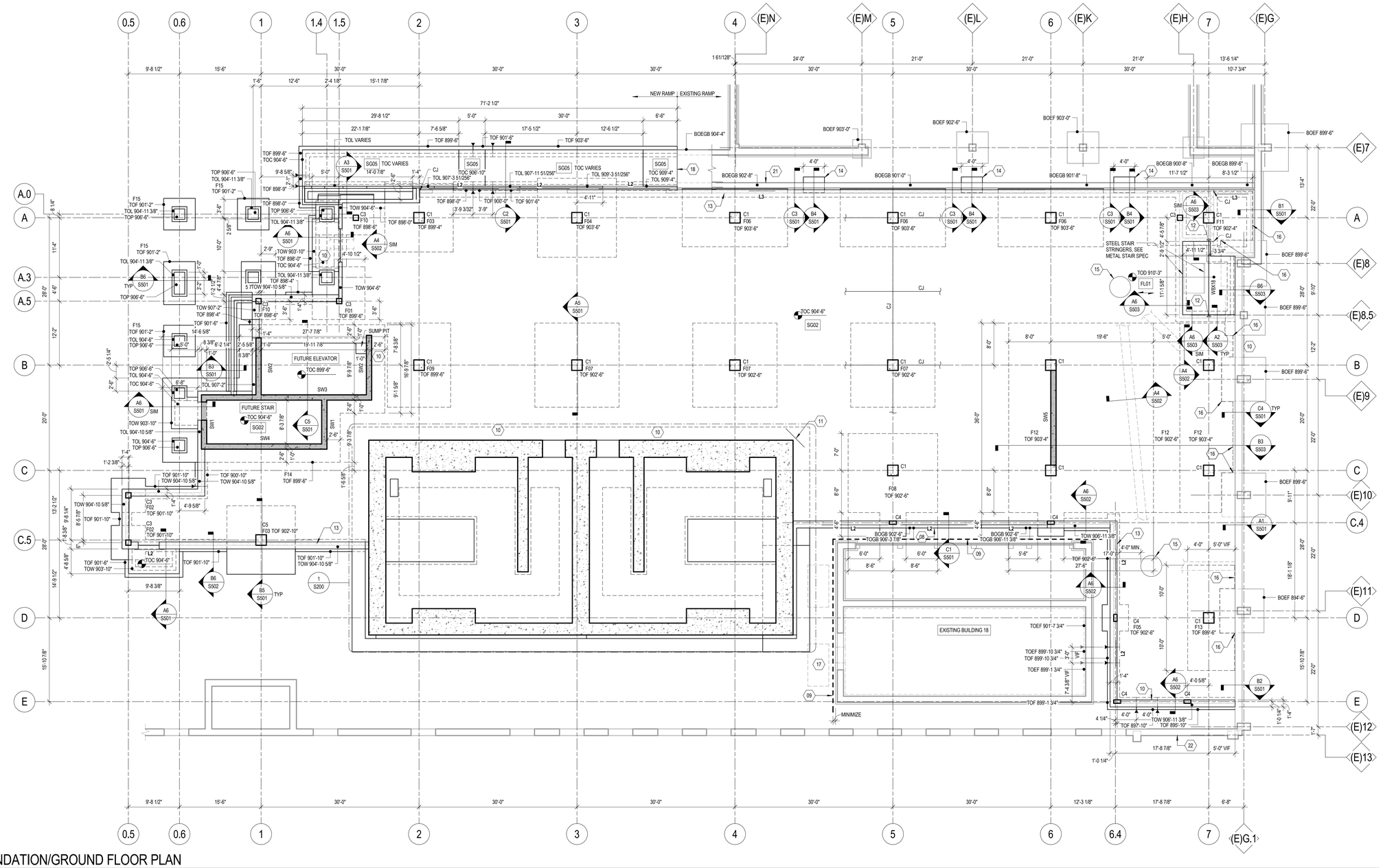
CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, ERECTION AND SEQUENCING OF ALL TEMPORARYSHORING. ALL LOCATIONS OF TEMPORARY BRACING, SHORING AND UNDERPINNING IS TO BEDETERMINED BY THE CONTRACTOR AND THE CONTRACTORS ENGINEER. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS. SHORING NOTED IN THESE DRAWINGS ARE RECOMMENDATIONS AND DO NOT REFLECT ALL LOCATIONS OF TEMPORARY SHORING, BRACING AND UNDERPINNING.

SHEET KEYNOTES

08 GRADE BEAM, SEE "GRADE BEAM SECTION" ON FOUNDATION DETAILS SHEET FOR INFORMATION.
09 TEMPORARY SHORING FOR INSTALLATION OF NEW ELECTRICAL MANHOLES/FOOTINGS.
10 PIPE SLEEVE FOR UTILITY PENETRATION THROUGH WALL. COORDINATE SIZE, LOCATION AND ELEVATION WITH MECHANICAL/ELECTRICAL/PLUMBING DRAWING.
11 (2)#4x5'-0" LONG LOCATED 1" BELOW TOP OF SLAB ON GRADE. PROVIDE AT ALL RE-ENTRANT CORNERS. ALL LOCATIONS NOT SHOWN ON PLAN.
12 (2) #4 UNDER BEAM BEARING.
13 8" NON LOAD BEARING CMU REINFORCED WITH #4@48" OC, TYP, UNO.
14 INSTALL FOOTINGS (CENTERED BETWEEN NEW ADJACENT FOOTINGS) PRIOR TO THE EXCAVATION FOR FOOTINGS F06 & F11.
15 MANHOLE, SEE PLUMBING.
16 1" BEAD BOARD BETWEEN NEW AND EXISTING FOOTINGS.
17 ELECTRICAL SUBSTRUCTURE, SEE ELECTRICAL.
18 DOWEL NEW RAMP SLAB AND WALLS WITH #4 x 2'-0" (EPOXY COATED) AT 12" OC, EPOXY EMBED 6" INTO EXISTING.
21 NEW 5'-0" WIDE x 2'-2" HIGH OPENING IN EXISTING RAMP WALL, TOP OF OPENING = 908'-0", GC TO COORDINATE WITH MECHANICAL.
22 NEW CORES THROUGH EXISTING FOUNDATION WALL FOR CHILLED WATER LINES, ALIGN VERTICALLY WITH EXISTING CORES.

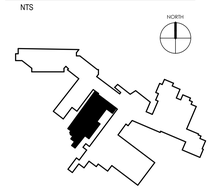
FLOOR / ROOF SCHEDULE

MARK	DESCRIPTION	REMARKS
FL01	4 1/2" NORMAL WEIGHT CONCRETE OVER 2" x 20 GAGE COMPOSITE METAL DECK (6 1/2" TOTAL THICKNESS) REINFORCED WITH #4@16" OC EACH WAY	
FL05	5" CONCRETE TWO-WAY FLAT SLAB. REINFORCED WITH #4@12" OC EACH WAY TOP AND BOTTOM.	
FL07	13" CONCRETE TWO-WAY FLAT SLAB. REINFORCE WITH #6 CONTINUOUS AT 12" OC EACH WAY TOP AND BOTTOM. ADDITIONAL REINFORCEMENT NOTED ON PLAN. BAR PLACEMENT ORDER: 1) NORTH TO SOUTH BOTTOM, 2) EAST TO WEST BOTTOM, 3) EAST TO WEST TOP, 4) NORTH TO SOUTH TOP.	PROVIDE STANDARD HOOKS AT SLAB PERIMETER, TYP.
RF01	3" x 18 GAGE WIDE RIB GALVANIZED METAL ROOF DECK	
RF02	1 1/2" x 20 GAGE WIDE RIB GALVANIZED METAL ROOF DECK	
SG02	5" CONCRETE SLAB ON GRADE REINFORCED WITH #3@12" OC EACH WAY	
SG03	6" CONCRETE SLAB ON GRADE REINFORCED WITH #4@12" OC EACH WAY	
SG04	12" CONCRETE SLAB ON GRADE REINFORCED WITH #4@12" OC EACH WAY TOP AND BOTTOM.	
SG05	6" CONCRETE SLAB ON GRADE REINFORCED WITH #4@12" OC (EPOXY COATED) EACH WAY.	



KEY PLAN

NTS



FOUNDATION/GROUND FLOOR PLAN

1/8" = 1'-0"

100% CONSTRUCTION DOCUMENTS

Revisions:	Date:

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project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	FOUNDATION/GROUND FLOOR PLAN
Phase	100% CONSTRUCTION DOCUMENTS
Approved:	
	FULLY SPRINKLERED
Project Title	Construct Cancer Treatment Center
Project Number	607-395
Building Number	BLDG 1 - F WING
Location	WILLIAM S. MIDDLETON VA HOSPITAL, MADISON
Drawing Number	S100
Issue Date	05/17/2017
Checked	BES
Drawn	KRN
	Dwg. 18 of 127

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SHEET KEYNOTES

04 PROVIDE 3" EXPANSION JOINT BETWEEN BUILDINGS.
07 PROVIDE COUPLERS FOR FUTURE COLUMNS. SEE C2/S601.
11 (2)#4x5'-0" LONG LOCATED 1" BELOW TOP OF SLAB ON GRADE. PROVIDE AT ALL RE-ENTRANT CORNERS. ALL LOCATIONS NOT SHOWN ON PLAN.
19 STEEL STUD WALL TO PROVIDE LATERAL BRACING TO CMU PARAPET WALL. COLD FORM FRAMING SHALL BE DESIGNED FOR A 150# LB LOAD APPLIED TO THE TOP OF THE STUD WALL.
20 VERIFY DIMENSIONS WITH EQUIPMENT MANUFACTURER AND HOLES REQUIRED FOR FASTENING.
24 13"Hx8"Wx9'-0" LONG BEAM WITHIN SLAB WITH (2)#6 x 9'-0" TOP AND BOTTOM, #3 TIES AT 6" OC EACH SIDE OF DEPRESSION, SEE B2/S503.

FLOOR / ROOF SCHEDULE

MARK	DESCRIPTION	REMARKS
FL01	4 1/2" NORMAL WEIGHT CONCRETE OVER 2" x 20 GAGE COMPOSITE METAL DECK (6 1/2" TOTAL THICKNESS) REINFORCED WITH #4@18" OC EACH WAY	
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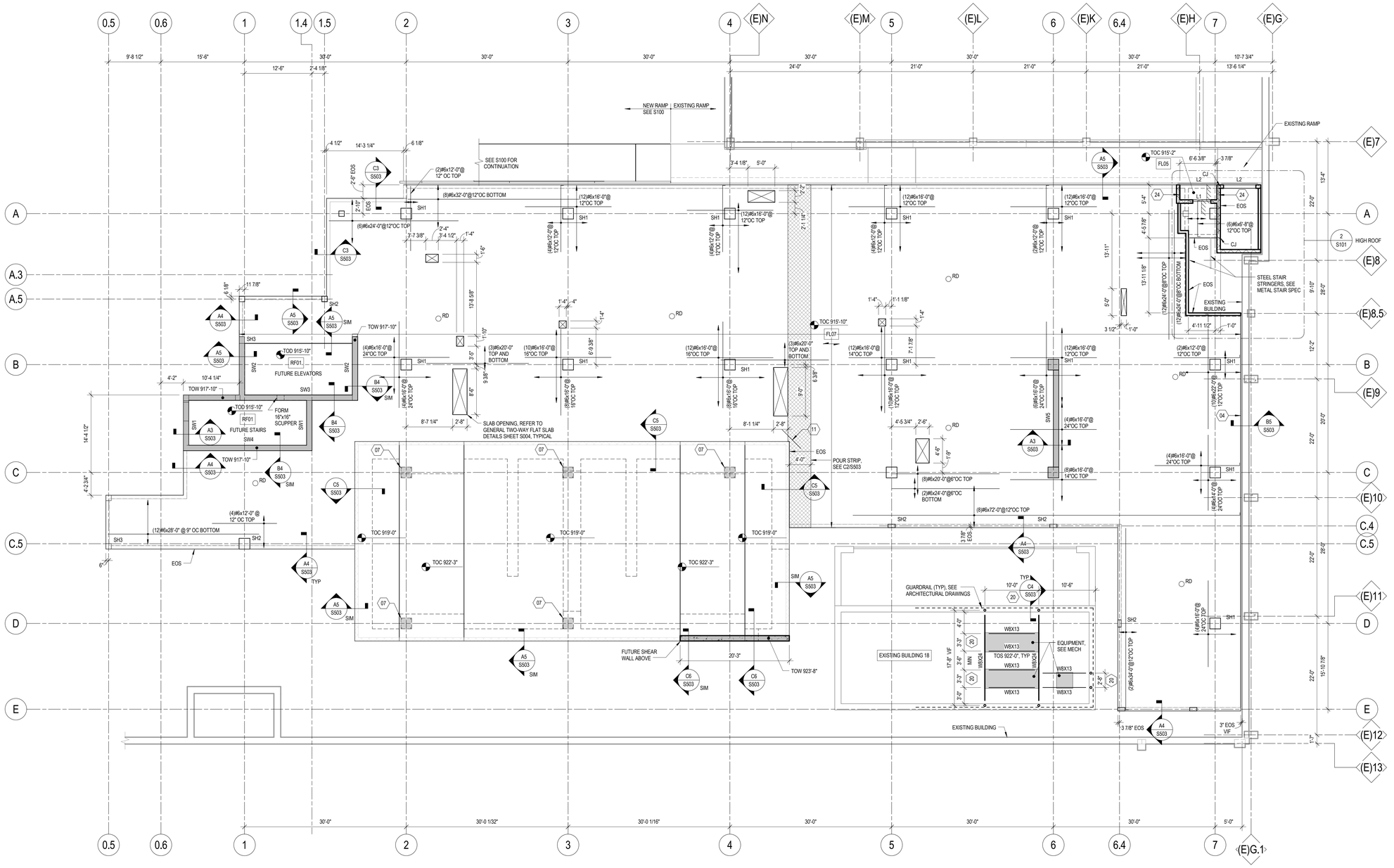
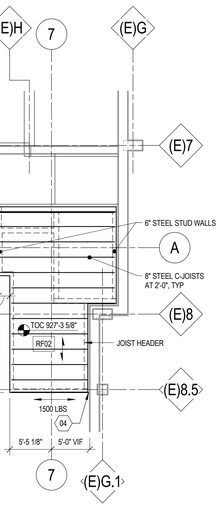


ROOF/FUTURE FIRST FLOOR PLAN

1/8" = 1'-0"

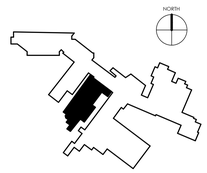


2 HIGH ROOF PLAN

1/8" = 1'-0"

KEY PLAN

NTS



100% CONSTRUCTION DOCUMENTS

Revisions:	Date:

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Nagel Architects + Engineers project number:

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VA U.S. Department of Veterans Affairs

Drawing Title ROOF/FUTURE FIRST FLOOR PLAN	**Phase** 100% CONSTRUCTION DOCUMENTS
Approved:	FULLY SPRINKLERED

Project Title Construct Cancer Treatment Center			**Project Number** 607-395
			Building Number BLDG 1 - F WING
Location WILLIAM S. MIDDLETON VA HOSPITAL, MADISON			**Drawing Number** S101
Issue Date 05/17/2017	**Checked** BES	**Drawn** KRN	Dwg. 19 of 127

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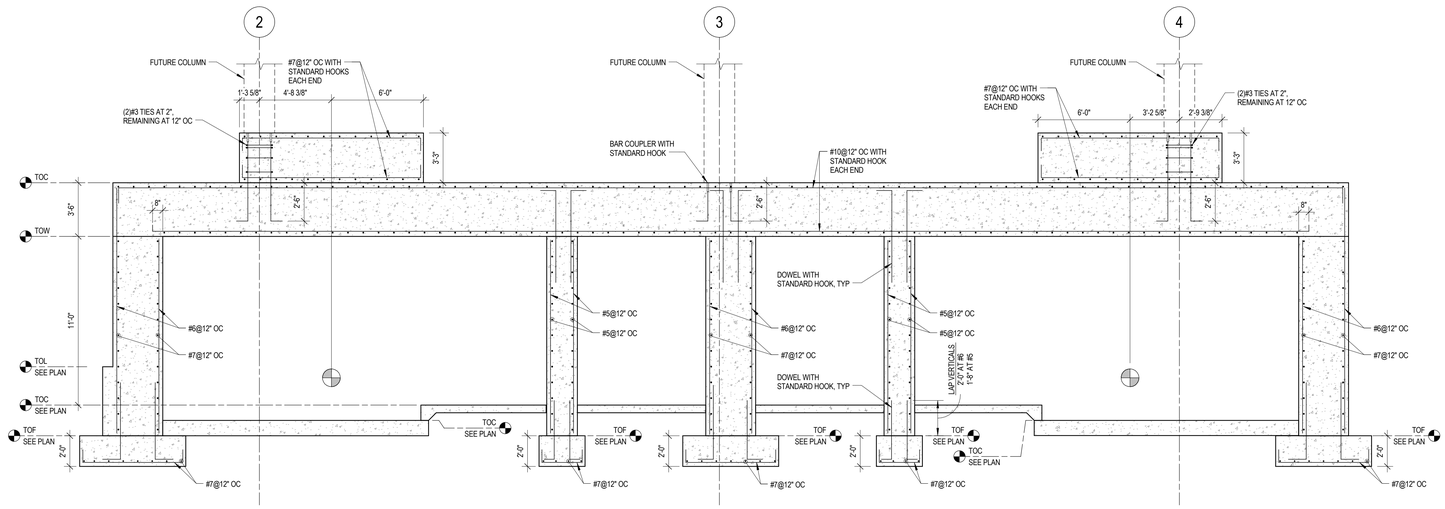
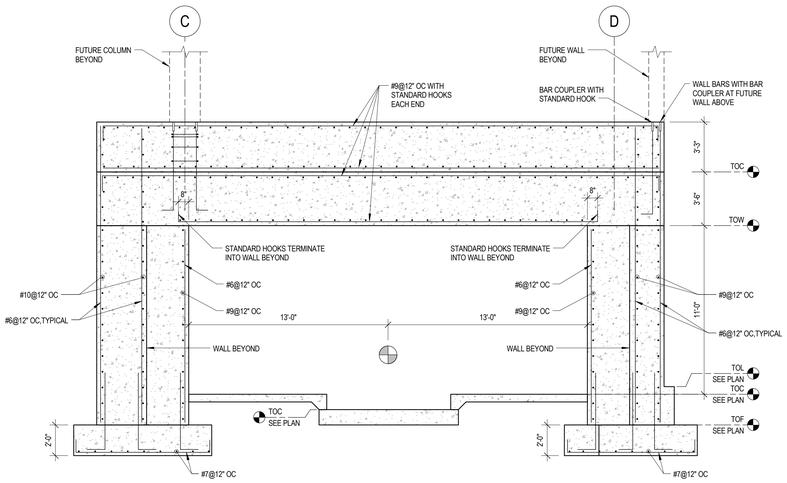


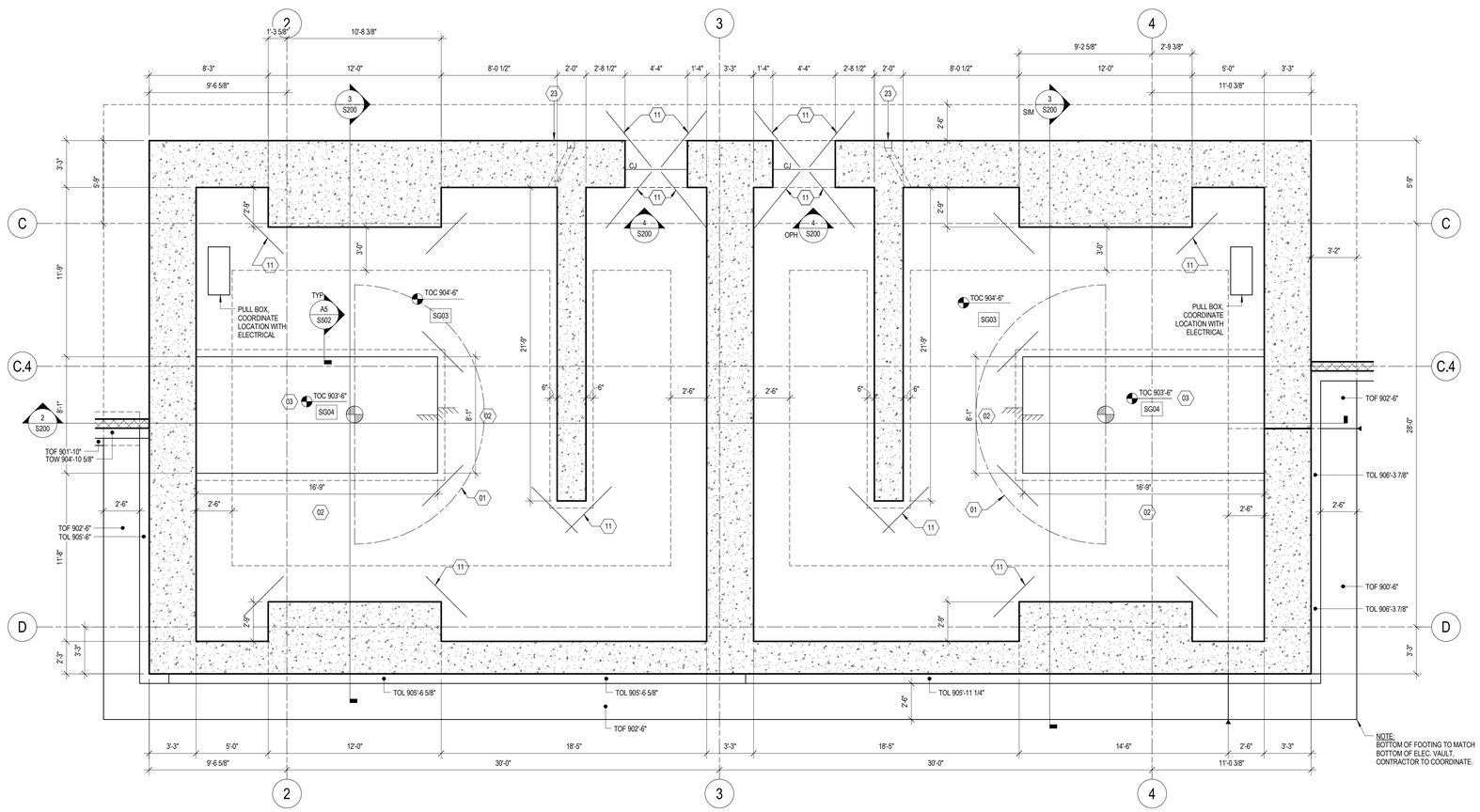
2 LINEAR ACCELERATOR SECTION

1/4" = 1'-0"



3 LINEAR ACCELERATOR SECTION

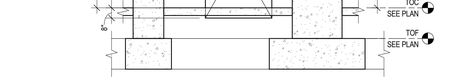
1/4" = 1'-0"



1 LINEAR ACCELERATOR ENLARGED PLAN

1/4" = 1'-0"

NOTE: GC TO COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ROUGH-INS. GC TO COORDINATE ELECTRICAL AND TECHNOLOGY JUNCTION BOXES AND CONDUIT THAT ARE TO BE PROVIDED BELOW SLAB AND THROUGH WALL WITH OWNER PURCHASED LINEAR ACCELERATOR SITE INSTALLATION DRAWINGS AND SPECIFIED VAULT DOOR REQUIREMENTS.



4 WALK DOOR ELEVATION

1/4" = 1'-0"

NOTE:
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FLOOR / ROOF SCHEDULE

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SG05	6" CONCRETE SLAB ON GRADE REINFORCED WITH #4@12" OC (EPOXY COATED) EACH WAY.	

SHEET KEYNOTES

01	LINEAR ACCELERATOR ISOCENTER, SEE ARCHITECTURAL DRAWINGS. THE FLOOR SLAB SHALL BE LEVEL WITH THE TOP OF THE TREATMENT COUCH BEARING MOUNT WITHIN +/- 1/8" FOR 6'-0" RADIUS ABOUT ISOCENTER. VERIFY WITH MANUFACTURER'S SPECIFICATIONS.
02	VERIFY PIT DIMENSIONS WITH MANUFACTURER SHOP DRAWINGS.
03	AFTER BASE FRAME IS PLACED AND LEVELED BY MANUFACTURER, FILL RECESS WITH GROUT BY CONTRACTOR, SEE DESIGN SPECIFICATIONS FOR STANDARD GROUT PROPERTIES. PROVIDE MINIMUM SEVEN DAY CURE TIME PRIOR TO INSTALLATION.
11	(2)#4x5'-0" LONG LOCATED 1" BELOW TOP OF SLAB ON GRADE. PROVIDE AT ALL RE-ENTRANT CORNERS. ALL LOCATIONS NOT SHOWN ON PLAN.
23	6"x6"x6" BLOCKOUT WITH 6" CONDUIT PHYSICS CABLE PASS, APPROX. 4 FEET AFF OUTSIDE VAULT AND APPROX. 6 INCHES AFF INSIDE THE VAULT.

100% CONSTRUCTION DOCUMENTS

Revisions:	Date:

CONSULTANT

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Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	ENLARGED PLAN
Approved:	
Phase	100% CONSTRUCTION DOCUMENTS
	FULLY SPRINKLERED
Project Title	Construct Cancer Treatment Center
Location	WILLIAM S. MIDDLETON VA HOSPITAL, MADISON
Issue Date	05/17/2017
Checked	BES
Drawn	KRN
Project Number	607-395
Building Number	BLDG 1 - F WING
Drawing Number	S200
	Dwg. 20 of 127

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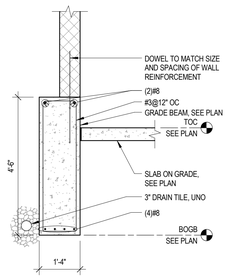
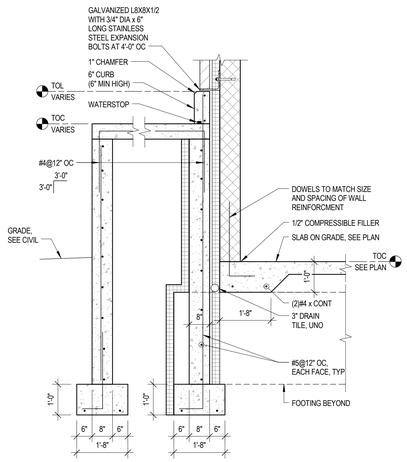
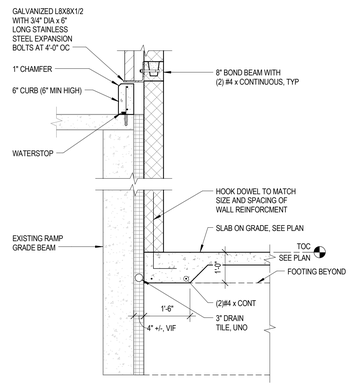


C1 GRADE BEAM SECTION
1/2" = 1'-0"



C2 FOUNDATION SECTION
1/2" = 1'-0"



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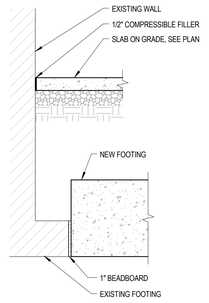
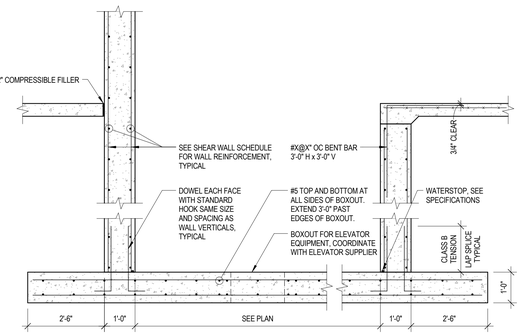
1/2" = 1'-0"

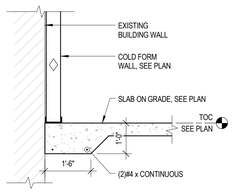


C4 FOUNDATION SECTION
1/2" = 1'-0"

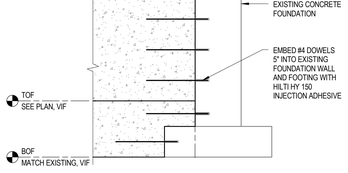


NOTE: SEE OPENING REINFORCEMENT DETAIL ON "GENERAL DETAILS" SHEET(S) FOR ADDITIONAL REINFORCEMENT REQUIRED AT ELEVATOR SUMPS. SEE "SUMP PIT DETAIL" THIS SHEET FOR SUMP PIT CONSTRUCTION. SEE PLUMBING DRAWINGS FOR SIZES AND LOCATIONS.

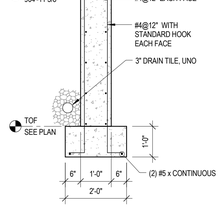
C5 ELEVATOR PIT SECTION
1/2" = 1'-0"



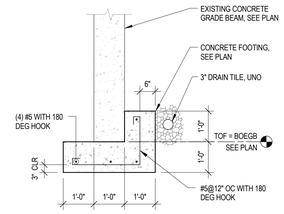
B1 SECTION
1/2" = 1'-0"



B2 NEW FOUNDATION WALL AT EXISTING FOUNDATION
1/2" = 1'-0"



B3 PLANTER WALL SECTION
1/2" = 1'-0"



B4 FOUNDATION SECTION
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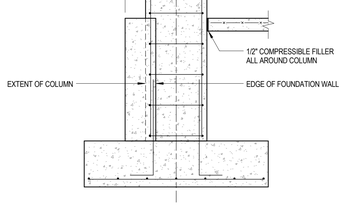
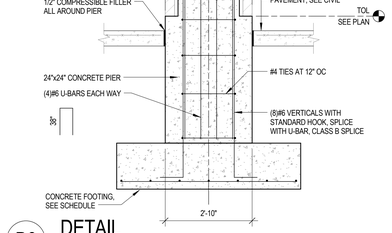
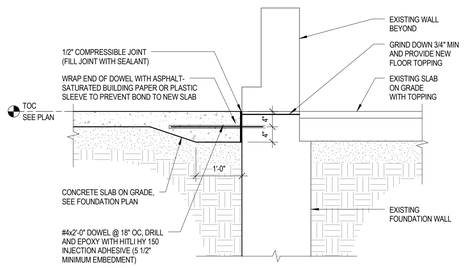


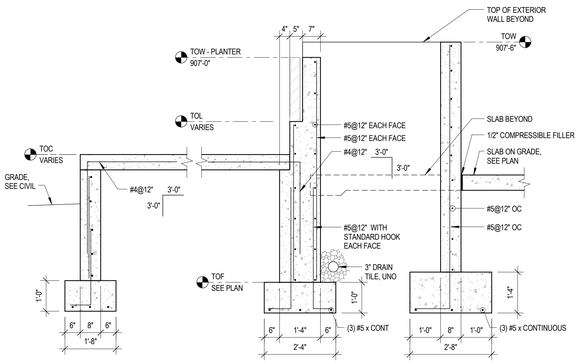
B5 DETAIL
1/2" = 1'-0"



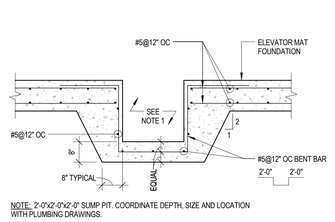
B6 DETAIL
1/2" = 1'-0"



A1 SLAB ON GRADE TO EXISTING SLAB AT OPENING
3/4" = 1'-0"

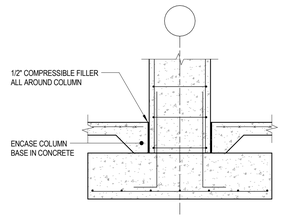


A3 PLANTER AT RAMP SECTION
1/2" = 1'-0"

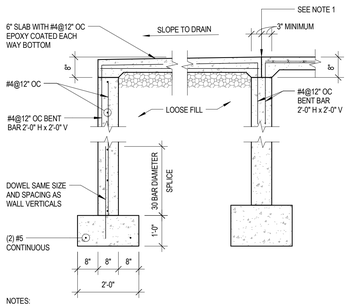


NOTE: 2'-0"x2'-0"x2'-0" SUMP PIT. COORDINATE DEPTH, SIZE AND LOCATION WITH PLUMBING DRAWINGS.

A4 SUMP PIT DETAIL
1/2" = 1'-0"



A5 DETAIL
1/2" = 1'-0"



NOTES:
1. LOCATE SLAB BREAK UNDER DOOR THRESHOLD. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.

A6 DETAIL
1/2" = 1'-0"

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Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FOUNDATION DETAILS	Phase: 100% CONSTRUCTION DOCUMENTS
Approved:	FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center		Project Number: 607-395
		Building Number: BLDG 1 - F WING
Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON		Drawing Number: S501 Dwg. 21 of 127
Issue Date: 05/17/2017	Checked: BES	Drawn: KRN

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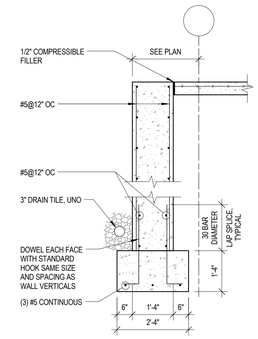
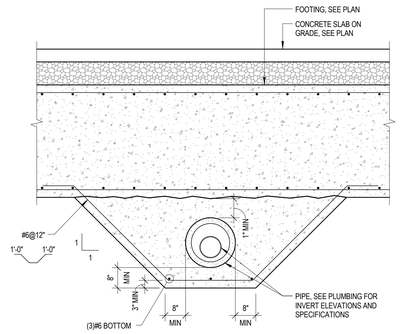
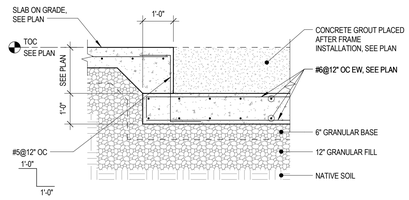


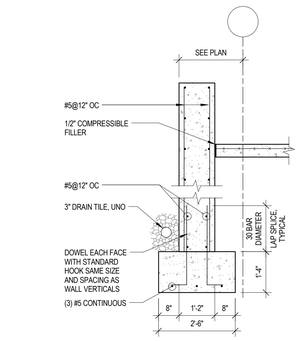
B6 DETAIL
1/2" = 1'-0"



A4 DEPRESSED FOOTING AT PLUMBING PIPES
1/2" = 1'-0"



A5 LINEAR ACCELERATION PIT SECTION
1/2" = 1'-0"



A6 DETAIL
1/2" = 1'-0"

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Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FOUNDATION DETAILS	Phase: 100% CONSTRUCTION DOCUMENTS	Project Title: Construct Cancer Treatment Center	Project Number: 607-395
Approved:	FULLY SPRINKLERED	Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON	Building Number: BLDG 1 - F WING
		Issue Date: 05/17/2017 / Checked: BES / Drawn: KRN	Drawing Number: S502 Dwg. 22 of 127

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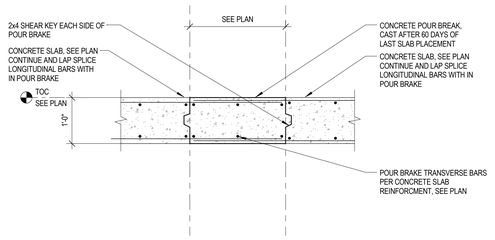
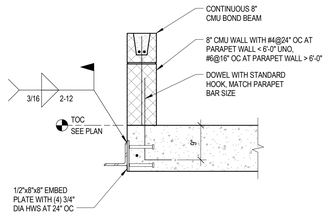
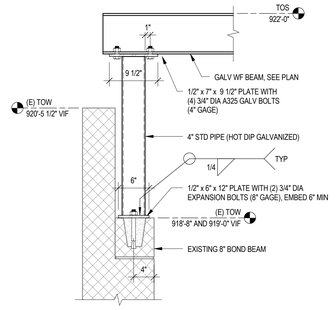


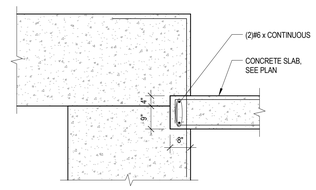
C2 CONCRETE POUR STRIP DETAIL
3/4" = 1'-0"



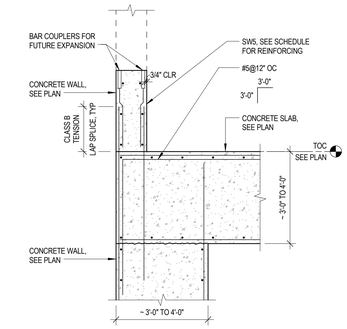
C3 PERIMETER SECTION AT MAIN ENTRANCE
3/4" = 1'-0"



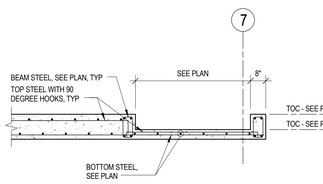
C4 MECH EQUIPMENT FRAMING DETAIL
1" = 1'-0"



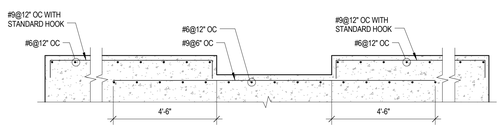
C5 SLAB AT WALL
1/2" = 1'-0"



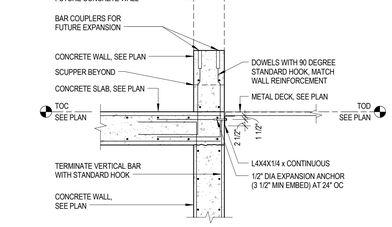
C6 SLAB AT WALL
1/2" = 1'-0"



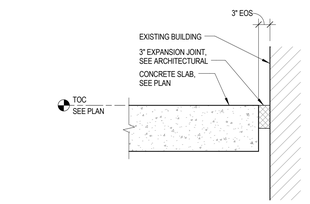
B2 SECTION AT SLAB DEPRESSION
3/8" = 1'-0"



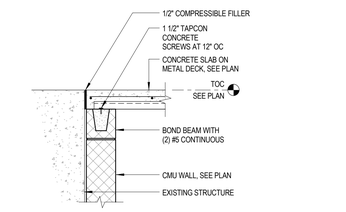
B3 SECTION
3/8" = 1'-0"



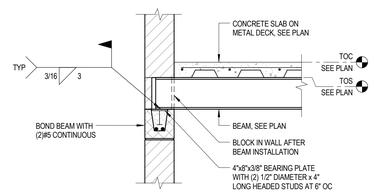
B4 ELEVATOR SECTION
1/2" = 1'-0"



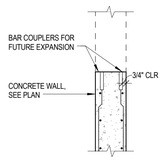
PERIMETER SECTION AT EXISTING BUILDING
3/4" = 1'-0"



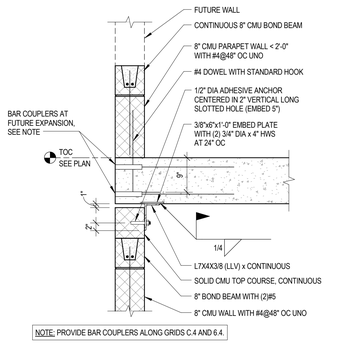
B6 SECTION
3/4" = 1'-0"



A2 SECTION
3/4" = 1'-0"

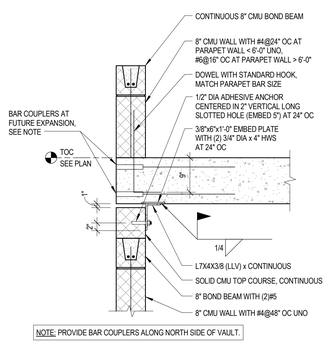


A3 SECTION
1/2" = 1'-0"



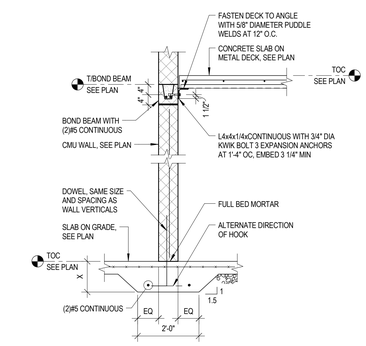
NOTE: PROVIDE BAR COUPLERS ALONG GRIDS C.4 AND 6.4.

A4 PERIMETER SECTION
3/4" = 1'-0"



NOTE: PROVIDE BAR COUPLERS ALONG NORTH SIDE OF VAULT.

A5 PERIMETER SECTION
3/4" = 1'-0"



A6 SECTION
1/2" = 1'-0"

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Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	FOUNDATION, CONCRETE, MASONRY AND STEEL DETAILS
Approved:	
Phase	100% CONSTRUCTION DOCUMENTS
	FULLY SPRINKLERED
Project Title	Construct Cancer Treatment Center
Location	WILLIAM S. MIDDLETON VA HOSPITAL, MADISON
Issue Date	05/17/2017
Checked	BES
Drawn	KRN
Project Number	607-395
Building Number	BLDG 1 - F WING
Drawing Number	S503
	Dwg. 23 of 127

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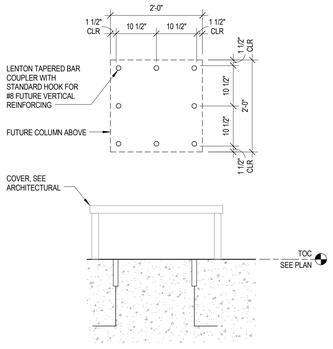
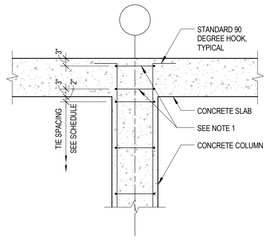


C2 DETAIL
3/4" = 1'-0"



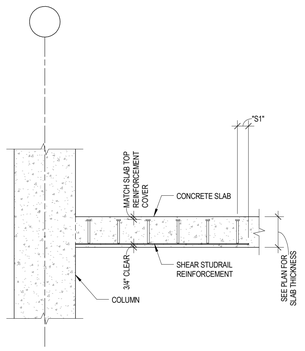
DETAIL 1

CONCRETE FOOTING SCHEDULE						
	SIZE			REINFORCEMENT		
MARK	LENGTH	WIDTH	THICKNESS	BOTTOM	TOP	REMARKS
F01	10'-0"	10'-0"	2'-6"	#6@12" OC EW	#6@12" OC EW	
F02	6'-6"	6'-6"	1'-4"	(8)#6 EW		
F03	13'-0"	13'-0"	2'-4"	(12)#9 EW		
F04	15'-0"	15'-0"	3'-0"	(18)#9 EW		
F05	5'-0"	5'-0"	1'-4"	(5)#6 EW		
F06	20'-0"	11'-0"	3'-2"	(20)#9 EW		
F07	16'-0"	16'-0"	3'-0"	(18)#9 EW		
F08	SEE PLAN	SEE PLAN	3'-0"	#9@10" OC EW	#6@12" OC EW	5000 PSI CONCRETE
F09	12'-0"	16'-0"	2'-6"	(15)#9 EW		
F10	11'-0"	6'-6"	1'-6"	#6@12" OC EW		
F11	SEE PLAN	SEE PLAN	2'-10"	(20)#9 EW	#6@12" OC EW	
F12	SEE PLAN	SEE PLAN	3'-10"/3'-0"	#9@14" OC EW	SEE DETAIL	5000 PSI CONCRETE, BOF -5'-0"
F13	SEE PLAN	SEE PLAN	5'-0"	SEE REMARKS	#9@12" OC EW	#9@8" OC BOTTOM NORTH/SOUTH, #9@12" OC EAST/WEST
F14	SEE PLAN	SEE PLAN	2'-6"	#6@12" OC EW	#6@12" OC EW	
F15	6'-0"	6'-0"	1'-8"	#6@12" OC EW		

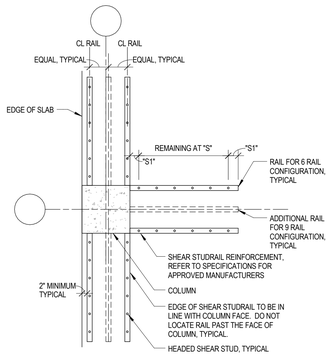
SHEARHEAD SCHEDULE						
SHEARHEAD NUMBER	LOCATION (I, E, C)	NUMBER OF RAILS	NUMBER OF STUDS/RAIL	STUD SPACING (INCH)		STUD DIAMETER (INCH)	COLUMN TYPE (S, C)
				S1	S		
SH1	I	12	12	3.25	3.25	3/8	S
SH2	E	6	25	2	2	3/8	S
SH3	C	4	8	4.25	4.25	3/8	S

SHEARHEAD SCHEDULE NOTES:

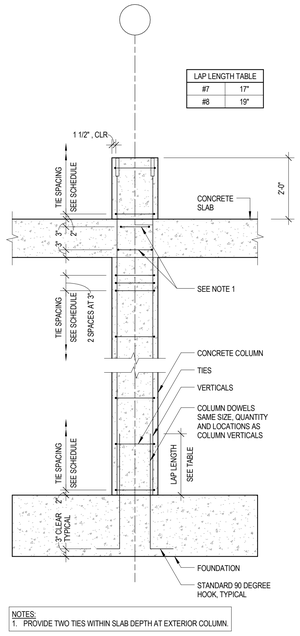
1. FOR LOCATION:
   I = INTERIOR, SEE INTERIOR COLUMN DETAIL THIS SHEET FOR SHEARHEAD LAYOUT.
   E = EXTERIOR, SEE EDGE COLUMN DETAIL THIS SHEET FOR SHEARHEAD LAYOUT.
   C = CORNER, SEE CORNER COLUMN DETAIL THIS SHEET FOR SHEARHEAD LAYOUT.
2. FOR COLUMN TYPE:
   S = SQUARE OR RECTANGULAR
   C = CIRCULAR
3. FOR SECTION AT STUDRAIL SEE STUDRAIL DIAGRAM DETAIL THIS SHEET.



B1 STUDRAIL DIAGRAM
3/4" = 1'-0"



B2 EDGE COLUMN
1/2" = 1'-0"



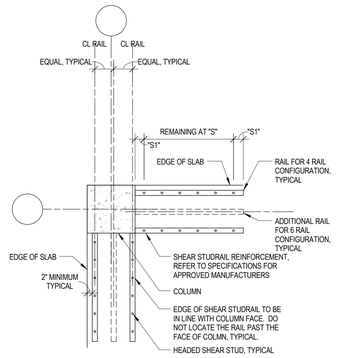
NOTES:
1. PROVIDE TWO TIES WITHIN SLAB DEPTH AT EXTERIOR COLUMN.

DETAIL 2

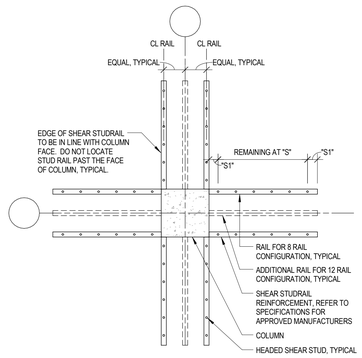
CONCRETE COLUMN SCHEDULE						
MARK / LEVEL		C1	C2	C3	C4	C5
TOC (COLUMN)						
13'-4"	SIZE (WxL)	24"x24"	12"x12"			
	VERTICALS	(8)#8 (SEE NOTE 2)	(8)#7 (SEE NOTE 2)			
	TIES	#3@15" OC	#3@12" OC			
	TYPE	I	I			
TOC ROOF	CONCRETE STRENGTH (PSI)	5000	5000			
11'-4"	SIZE (WxL)	24"x24"	12"x12"	12"x12"	8"x16"	24"x24"
	VERTICALS	(8)#8	(8)#7	(8)#7	(6)#6	(8)#8
	TIES	#3@15" OC	#3@12" OC	#3@12" OC	#3@8" OC	#3@15" OC
	TYPE	I	I	I	II	I
TOC GROUND FLOOR	CONCRETE STRENGTH (PSI)	5000	5000	5000	5000	5000
0'-0"	SIZE (WxL)	24"x24"	12"x12"	12"x12"	8"x16"	24"x24"
	VERTICALS	(8)#8	(8)#7	(8)#7	(6)#6	(8)#8
	TIES	#3@15" OC	#3@12" OC	#3@12" OC	#3@8" OC	#3@15" OC
	TYPE	I	I	I	II	I
TOF	CONCRETE STRENGTH (PSI)	5000	5000	5000	5000	5000
SEE PLAN						

CONCRETE COLUMN SCHEDULE NOTES:

1. SEE TYPICAL COLUMN DIAGRAM DETAIL THIS SHEET FOR INFORMATION PERTAINING TO COLUMN SCHEDULE.
2. PROVIDE LENTON TAPERED BAR COUPLERS, OR APPROVED EQUAL, FOR VERTICAL BARS AT THE TOP OF COLUMNS NOTED FOR FUTURE EXPANSION, SEE DETAIL A3S801 (DETAIL 2). TEST COUPLERS FOR PLUMBNESS BY CHECKING FUTURE BAR FOR ALIGNMENT.
3. FOR COLUMNS THAT OVERLAP A FOUNDATION WALL, CONTINUE WALL HORIZONTAL REINFORCEMENT THROUGH COLUMN.

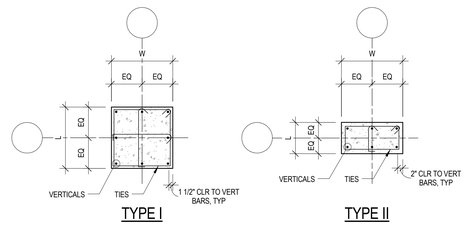


A1 CORNER COLUMN
1/2" = 1'-0"



A2 INTERIOR COLUMN
1/2" = 1'-0"

A3 TYPICAL COLUMN DIAGRAM
1/2" = 1'-0"



A4 CONCRETE COLUMN TYPES
1/2" = 1'-0"

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Revisions:	Date:

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elm grove, wi 53122

Nagel Architects + Engineers project number:

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FOUNDATION AND CONCRETE COLUMN SCHEDULES

Phase: 100% CONSTRUCTION DOCUMENTS

Approved:

FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center

Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON

Issue Date: 05/17/2017 | Checked: BES | Drawn: KRN

Project Number: 607-395

Building Number: BLDG 1 - F WING

Drawing Number: S601

Dwg. 24 of 127

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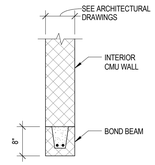
LINTEL SCHEDULE

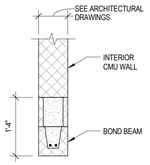
MARK	TYPE	SIZE	BEARING LENGTH	REMARKS
N/A	I	8" BOND BEAM WITH (2) #5 BOTTOM	8"	ALL INTERIOR NON-LOAD BEARING WALL OPENINGS LESS THAN OR EQUAL TO 6'-0". SEE DETAIL A.
N/A	II	16" BOND BEAM WITH (2) #4 BOTTOM	8"	ALL INTERIOR NON-LOAD BEARING WALL OPENINGS GREATER THAN 6'-0" BUT LESS THAN OR EQUAL TO 12'-0". SEE DETAIL A.
L1	III	8" BOND BEAM WITH (2) #5 BOTTOM	8"	EXTERIOR NON-LOAD BEARING WALL OPENINGS LESS THAN OR EQUAL TO 4'-0", SEE DETAIL A.
L2	IV	16" BOND BEAM WITH (2) #4 BOTTOM	8"	EXTERIOR NON-LOAD BEARING WALL OPENINGS GREATER THAN OR EQUAL TO 4'-0" BUT LESS THAN OR EQUAL TO 12'-0", SEE DETAIL A.
L3	II	16" BOND BEAM WITH (2) #5 BOTTOM	8"	

LINTEL SCHEDULE NOTES:

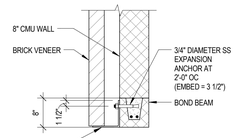
1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.
2. COORDINATE BOTTOM OF LINTEL ELEVATION WITH ARCHITECTURAL DRAWINGS.
3. ALL DIMENSIONS ARE NOMINAL MASONRY DIMENSIONS UNLESS NOTED OTHERWISE.
4. PROVIDE MINIMUM 8" BEARING EACH END UNLESS NOTED OTHERWISE.
5. FOR CMU LINTELS, CONTRACTOR TO PROVIDE TEMPORARY SHORING UNTIL MASONRY HAS PROPERLY SET (3 DAYS MINIMUM).



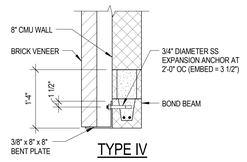
TYPE I



TYPE II



TYPE III



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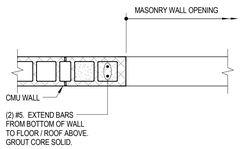

DETAIL A

100% CONSTRUCTION DOCUMENTS

Revisions:	Date:

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elm grove, wi 53122

Nagel Architects + Engineers project number:

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MASONRY SCHEDULES

Approved:

Phase: 100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center

Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON

Issue Date: 05/17/2017

Checked: BES

Drawn: KRN

Project Number: 607-395

Building Number: BLDG 1 - F WING

Drawing Number: S605

Dwg. 25 of 127

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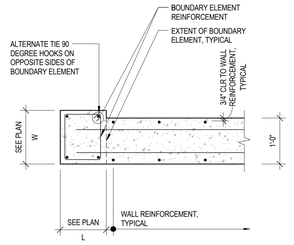
VA FORM 08 - 6231

CONCRETE SHEAR WALL SCHEDULE

SHEAR WALL MARK	SW1						SW2						SW3, SW4						SW5					
LEVEL	REINFORCEMENT EACH FACE		BOUNDARY ELEMENT REINFORCEMENT				REINFORCEMENT EACH FACE		BOUNDARY ELEMENT REINFORCEMENT (NORTH OR EAST END)				REINFORCEMENT EACH FACE		BOUNDARY ELEMENT REINFORCEMENT (NORTH OR EAST END)				REINFORCEMENT EACH FACE		BOUNDARY ELEMENT REINFORCEMENT (NORTH OR EAST END)			
	VERTICAL BARS	HORIZONTAL BARS	TYPE	SIZE (WXL)	VERTICAL BARS	TIES	VERTICAL BARS	HORIZONTAL BARS	TYPE	SIZE (WXL)	VERTICAL BARS	TIES	VERTICAL BARS	HORIZONTAL BARS	TYPE	SIZE (WXL)	VERTICAL BARS	TIES	VERTICAL BARS	HORIZONTAL BARS	TYPE	SIZE (WXL)	VERTICAL BARS	TIES
TOW																								
917'-10" TOC ROOF	#4@8" OC	#4@12" OC	-	12"x12"	(4)#4	#4@12" OC	#4@12" OC	#4@12" OC	I	12"x12"	(4)#6	#4@12" OC	#4@12" OC	#4@12" OC	I	12"x12"	(4)#4	#4@12" OC	#4@10" OC	#4@10" OC	II	24"x24"	SEE COLUMN SCHEDULE	SEE COLUMN SCHEDULE
915'-10" TOC FIRST FLOOR	#4@8" OC	#4@12" OC	-	12"x12"	(4)#4	#4@12" OC	#4@12" OC	#4@12" OC	I	12"x12"	(4)#6	#4@12" OC	#4@12" OC	#4@12" OC	I	12"x12"	(4)#4	#4@12" OC	#4@10" OC	#4@10" OC	II	24"x24"	SEE COLUMN SCHEDULE	SEE COLUMN SCHEDULE
904'-6" TOF	#4@8" OC	#4@12" OC	-	12"x12"	(4)#4	#4@12" OC	#4@12" OC	#4@12" OC	I	12"x12"	(4)#6	#4@12" OC	#4@12" OC	#4@12" OC	I	12"x12"	(4)#4	#4@12" OC	#4@10" OC	#4@10" OC	II	24"x24"	SEE COLUMN SCHEDULE	SEE COLUMN SCHEDULE
902'-6"																								

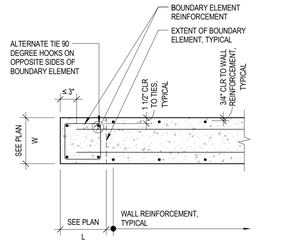
CONCRETE SHEAR WALL SCHEDULE NOTES:

1. ALL VERTICAL BARS SHOULD BE LAPPED WITH A CLASS B TENSION LAP SPLICE.
2. PROVIDE WALL DOWELS OF THE SAME SIZE AND LOCATIONS AS THE WALL REINFORCEMENT. SEE SHEAR WALL DOWELS DETAIL THIS SHEET.
3. SEE PLANS FOR TOP OF WALL ELEVATIONS.
4. SEE PLANS FOR WALL DIMENSIONS.
5. SEE THIS SHEET FOR SHEAR WALL REINFORCEMENT TYPES.
6. PROVIDE LENTON TAPERED BAR COUPLERS, OR APPROVED EQUAL FOR VERTICAL BARS AT THE TOP OF WALLS FOR FUTURE EXPANSION, SEE A3,B4,C6/S503.
7. REINFORCEMENT AROUND SHEAR WALL OPENING: (2)#5 BARS EACH SIDE OF OPENING. EXTEND ADDITIONAL REINFORCEMENT PAST OPENING BY 2'-0". ADD (1)#5 x 3'-0" LONG DIAGONAL AT EACH CORNER FOR EACH LAYER OF REINFORCEMENT.



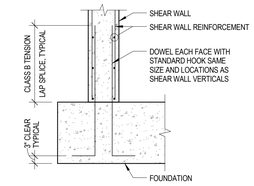
NOTES:
1. LOCATE HOOKS ON BOUNDARY ELEMENT TIES AS SHOWN.

TYPICAL END OF WALL DETAIL TYPE II
3/4" = 1'-0"

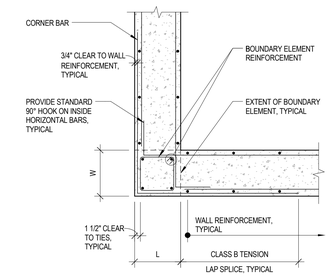


NOTES:
1. LOCATE HOOKS ON BOUNDARY ELEMENT TIES AS SHOWN.

TYPICAL END OF WALL DETAIL TYPE I
3/4" = 1'-0"



A5 SHEAR WALL DOWELS
1/2" = 1'-0"



NOTES:
1. LOCATE HOOKS ON BOUNDARY ELEMENT TIES AT INSIDE CORNER OF WALL INTERSECTION.

TYPICAL CORNER DETAIL TYPE I
3/4" = 1'-0"

100% CONSTRUCTION DOCUMENTS

Revisions:	Date:

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Nagel Architects + Engineers project number:

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: CONCRETE SHEAR WALL SCHEDULE

Phase: 100% CONSTRUCTION DOCUMENTS

Approved:

FULLY SPRINKLERED

Project Title: Construct Cancer Treatment Center

Project Number: 607-395

Building Number: BLDG 1 - F WING

Location: WILLIAM S. MIDDLETON VA HOSPITAL, MADISON

Issue Date: 05/17/2017

Checked: BES

Drawn: KRN

Drawing Number: S606

Dwg. 26 of 127

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