

GENERAL NOTES

CODE: STRUCTURAL DESIGN MANUAL FOR HOSPITAL PROJECTS, DEPARTMENT OF VETERANS AFFAIRS

YEAR: OCTOBER 2001

DESIGN LIVE LOADS

FLOOR=	100 PSF
STAIRS=	100 PSF
MECHANICAL ROOM FLOOR=	150 PSF
ROOF=	30 PSF (+DRIFTING)
GROUND SNOW LOAD (P _g)=	25 PSF
FLAT ROOF SNOW LOAD (P _f)=	30 PSF
SNOW EXPOSURE FACTOR (C _e)=	1.0
SNOW IMPORTANCE FACTOR (I _s)=	1.2

DESIGN WIND LOADS (BC)

BASIC WIND SPEED=	80 MPH
EXPOSURE CATEGORY=	B
IMPORTANCE FACTOR (I _w)=	1.15

PRIMARY FRAME

HEIGHT (FT)	LOAD (PSF)
0-15	15.2
15-20	16.4
20-25	17.7
25-30	18.6

COMPONENTS AND CLADDING: USE THE MOST STRINGENT WIND LOAD OBTAINED FROM CODE AND THE PROJECT SPECIFICATIONS. CLADDING MANUFACTURER SHALL CONSIDER INCREASED PRESSURE COEFFICIENTS AT BUILDING CORNERS, EAVES, AND RAKES. LOADS NOTED IN GENERAL NOTES ARE OBTAINED FROM CODE.

SEISMIC (BC & VA)

SDS = 0.229

SD1 = 0.093

SEISMICITY = LOW

SEISMIC USE GROUP III

SEISMIC DESIGN CATEGORY D

SPECIAL REINFORCED CONCRETE MOMENT - RESISTING FRAMES

ANALYSIS PROCEDURES EQUIVALENT LATERAL FORCE METHOD

DESIGN BASE SHEAR (K) 91K

GENERAL

THE STRUCTURAL ADDITION IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE ADDITION IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND INSURE THE SAFETY OF THE CONSTRUCTION PERSONNEL, BUILDING, AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, TEMPORARY BRACING, ETC. THAT MAY BE NECESSARY. FALL PROTECTION SUPPORT FROM PERIMETER COLUMNS SHALL BE PROVIDED IN ACCORDANCE WITH OSHA REQUIREMENTS AS REQUIRED. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER COMPLETION OF THE PROJECT.

THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION FOR THE PROJECT IN A MANNER AND SEQUENCE THAT ARE BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPOSE THE STRUCTURE, WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.

FIELD VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING CONSTRUCTION.

WORK THESE DRAWINGS WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

FOUNDATION

EXISTING FOUNDATION BEARING CAPACITY AND BEARING ELEVATIONS ARE FROM THE DRAWINGS PREPARED BY COLLINS, RIMMER GORDON ARCHITECTS, INC. DATED 1-20-94 FOR ADDITION OVER LINEAR ACCELERATOR. EXISTING BEARING CAPACITY AND BEARING ELEVATIONS FOR THE LINK TO THE AMBULATORY CARE CLINIC ARE FROM DRAWINGS PREPARED BY SPICE COSTANTINO ARCHITECTS DATED 8-11-98.

A SOILS TESTING LABORATORY SHALL BE RETAINED BY THE OWNER TO PROVIDE CONSTRUCTION REVIEW TO INSURE CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS DURING THE EXCAVATION, BACKFILL, AND FOUNDATION PHASES OF THE PROJECT.

THE SOILS TESTING LABORATORY SHALL DISCUSS WITH THE ENGINEER THE DESIGN INTENT OF THE CONSTRUCTION DOCUMENTS AND THE TESTING PROCEDURES USED TO INSURE CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS BEFORE CONSTRUCTION BEGINS. INFORM THE ENGINEER OF ANY VARIANCE IN THESE PROCEDURES.

IT SHALL BE THE RESPONSIBILITY OF THE SOILS TESTING LABORATORY TO: DETERMINE TOPSOIL AND EXCAVATION STRIPPING DEPTH; INSPECT ALL SUBSOIL EXPOSED DURING STRIPPING; SITE GRADING AND EXCAVATION OPERATIONS; PROVIDE FILL MATERIALS; PERFORM DENSITY TESTS OF FILLS TO INSURE PLACEMENT PER SPECIFICATION REQUIREMENTS; INSPECT FOUNDATION BEARING SURFACES.

EXISTING FOUNDATION DESIGN IS BASED ON 11,000 PSF BEARING PRESSURE ON HARD CLAY, UNO.

EXISTING FOUNDATION DESIGN FOR LINK TO AMBULATORY CLINIC IS BASED ON 50,000 PSF ON SOUND HARD SHALE.

STEP FOOTINGS, WHERE REQUIRED, AT A RATIO OF ONE (1) VERTICAL TO TWO (2) HORIZONTAL WITH A MAXIMUM VERTICAL STEP OF 2'-0" UNLESS NOTED OTHERWISE.

UNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES, WHICH WILL RESULT IN DETEIORATION OF BEARING FORMATIONS, SHALL BE PREVENTED. GRADE BEAMS SHALL BE PLACED IMMEDIATELY FOLLOWING EXCAVATIONS AND BEARING SURFACE INSPECTION.

ALL FILL MATERIALS SHALL BE FREE OF ORGANIC CONTAMINATIONS AND OTHER DELETERIOUS MATTER.

FOR BACKFILL AGAINST GRADE BEAMS, ETC., PLACE IN 8" THICK LAYERS, WITH EACH LIFT COMPACTED AT NEAR OPTIMUM MOISTURE CONTENT, UNTIL A MINIMUM IN PLACE DENSITY OF 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D998 IS ACHIEVED.

CONCRETE

ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS AS FOLLOWS:

ALL CONCRETE - 4,000 PSI.

CONCRETE SHALL CONTAIN A MINIMUM CEMENT CONTENT PER CUBIC YARD:

4,000 PSI - 550 #

4,000 PSI - 570# (AIR-ENTRAINED)

ALL CONCRETE SHALL HAVE THE FOLLOWING MAXIMUM WATER CEMENT RATIOS:

COMPRESSIVE STRENGTH NON-AIR ENTRAINMENT AIR ENTRAINMENT

4,000 PSI 0.55 0.45

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

NO TACK WELDING OF REINFORCING IN THE FIELD WILL BE PERMITTED.

WELDED WIRE FABRIC REINFORCING SHALL CONFORM TO ASTM A 185 AND BE FURNISHED IN FLAT SHEETS AND INSTALLED ON CHAIRS.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301-99, "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 302, 305 AND 308 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL CONFORM TO ACI 318-99, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE LATEST ACI "MANUAL OF STANDARD PRACTICE FOR DETAIL REINFORCED CONCRETE STRUCTURES."

PROVIDE 6% (+ 1%) AIR ENTRAINMENT IN ALL CONCRETE EXPOSED TO THE WEATHER OR VULNERABLE TO DEICERS.

PROVIDE DOWEL ANCHORS AT 2'-0" O.C. FOR ALL MASONRY FACED WALLS AND PROVIDE AT COLUMNS WHERE WALLS ABUT COLUMNS.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE CAST-IN-PLACE STRUCTURAL SLABS CONSTRUCTED TO PLAN ELEVATIONS INDICATED WITHIN TOLERANCE REQUIREMENTS. SUPPORT SYSTEM DEFLECTION METHODS, CONSTRUCTION METHODS AND ANY AND ALL FACTORS INFLUENCING THIS REQUIREMENT SHALL BE GIVEN DUE CONSIDERATION.

MINIMUM LAP, SPICE AND ANCHORAGE DIMENSION TABLE

4000 PSI NORMAL WEIGHT CONCRETE, F_y = GRADE 60, NON-COATED BARS

TOP BARS			OTHER BARS		
BAR SIZE	LAP	ANCHORAGE	BAR SIZE	LAP	ANCHORAGE
#3	24"	19"	#3	19"	15"
#4	33"	25"	#4	25"	18"
#5	41"	31"	#5	31"	24"
#6	48"	37"	#6	37"	29"
#7	54"	42"	#7	42"	34"
#8	61"	48"	#8	48"	40"
#9	68"	54"	#9	54"	46"
#10	75"	60"	#10	60"	52"
#11	82"	66"	#11	66"	58"

WHEN LAPPING TWO DIFFERENT SIZE BARS, USE THE LAP DIMENSION OF THE SMALLER BAR OR THE ANCHORAGE DIMENSION OF THE LARGER BAR. USE WHICHEVER DIMENSION IS LARGER.

MINIMUM CONCRETE COVER FOR REINFORCING

CONCRETE REINFORCING SHALL BE PLACED PER THE TOLERANCES OF ACI 117 AND ACI 318

LOCATION MINIMUM COVER

GRADE BEAMS CAST AGAINST & PERMANENTLY EXPOSED TO EARTH

3"

SLABS ON GRADE (W.W.F.)

1/3 SLAB THICKNESS FROM TOP OF SLAB

STRUCTURAL SLABS ON GRADE (BOT. REINF.)

3"

INTERIOR SLABS AND STAIRS

3/4"

EXTERIOR SLABS AND STAIRS

1-1/2"

WALLS INTERIOR FACE

2"

WALLS EXTERIOR FACE

3/4"

COLUMNS AND PIERS (VERT. REINF.)

2"

COLUMN AND PIER TIES

1-1/2"

BEAM LONGITUDINAL REINF.

2"

BEAM STIRRUPS

1-1/2"

MASONRY

ALL MASONRY SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-99/ASCE 5-99/TMS 402-99) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1-99/ASCE 6-99/TMS 602-99) AND NOTED BUILDING CODES.

NONE OF THE MASONRY HAS BEEN DESIGNED BY THE EMPIRICAL DESIGN METHOD.

ALL BRICK MASONRY AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA) NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) AND MINIMUM REQUIREMENTS ESTABLISHED BY NOTED BUILDING CODES.

GROUT TO FILL CORES SHALL BE ASTM C476, COARSE GROUT (3/8" MAXIMUM AGGREGATE) WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI IN 28 DAYS.

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE I OR II.

ASTM C270 TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI SHALL BE USED FOR ALL WALLS AND THESE WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'm) = 1,500 PSI UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.

LAP SPICES SHALL CONFORM TO ATTACHED TABLE:

MASONRY LAP SPICES

BAR SIZE	SPICE LENGTH
#3	10"
#4	25"
#5	31"
#6	37"
#7	42"

ALL MASONRY UNITS SHALL HAVE GALVANIZED HORIZONTAL REINFORCEMENT AS FOLLOWS:

9 GAGE SIDE AND CROSS RODS SPACED 16" O.C. VERTICALLY FOR ALL MASONRY WALLS.

USE TRUSS TYPE AT NON-VERTICALLY REINFORCED WALLS AND LADDER TYPE AT VERTICALLY REINFORCED WALLS.

ALL CORES WITH REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. ALL GROUT SHALL BE CONSOLIDATED IN PLACE BY VIBRATION TO INSURE COMPLETE FILLING OF CELLS.

MORTAR PROTRUSIONS, EXTENDING INTO CELLS OR CAVITIES TO BE REINFORCED AND FILLED, SHALL BE REMOVED.

LAY MASONRY UNITS WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. BED WEBS IN MORTAR IN STARTING COURSE OF FOOTING AND IN ALL COURSES OF COLUMN AND PLASTERS, AND WHERE ADJACENT TO CELLS OR CAVITIES TO BE REINFORCED OR FILLED WITH CONCRETE OR GROUT.

GROUT ONE (1) COURSE OF MASONRY SOLID UNDER ALL WALL BEARING SLABS.

ALL CORNERS TO BE TIED BY MASONRY BOND.

GROUT CORES SOLID A MINIMUM OF ONE COURSE BELOW ANY CHANGE IN WALL THICKNESS.

ALL MASONRY WALLS SHALL HAVE VERTICAL CONTROL JOINTS AT A MAXIMUM SPACING OF 25'. COORDINATE WITH LOCATIONS INDICATED ON ARCHITECTURAL DRAWINGS.

THE COLLAR JOINT IN MULTI-WYTHE WALLS BELOW GRADE SHALL BE FULLY GROUTED AS THE WALL IS CONSTRUCTED.

AN INDEPENDENT TESTING LABORATORY SHALL BE RETAINED TO PERIODICALLY INSPECT AND PERFORM MATERIAL TESTING OF MASONRY MATERIALS AND CONSTRUCTION TO CONFORM WITH THE BUILDING CODE.

MISCELLANEOUS STEEL LINTEL SCHEDULE

FOR MASONRY WALLS 8" OR THICKER OR MASONRY VENEER AND STEEL STUDS:

FOR OPENINGS UP TO 4' 0" USE 3-1/2" X 5-1/2" X 5/16" ANGLE.
FOR OPENINGS FROM 4' 0" TO 5' 0" USE 4" X 3-1/2" X 5/16" LVL.
FOR OPENINGS FROM 5' 0" TO 6' 0" USE 5" X 3-1/2" X 5/16" LVL.
FOR OPENINGS FROM 6' 0" TO 7' 0" USE 6" X 3-1/2" X 5/16" LVL.
FOR OPENINGS FROM 7' 0" TO 10' 0" USE W8X21 + 5/16" BOTTOM PLATE.

USE ONE ANGLE FOR EACH 4" WYTHE OF MASONRY.

ALL LINTELS SHALL HAVE A BEARING AT EACH END OF 1 INCH PER FOOT OF OPENING WITH A MINIMUM OF 6".

ALL LINTELS SHALL BEAR ON 16" SOLID MASONRY EXTENDING 16" BEYOND END OF LINTEL.

ALL LINTELS ON THE BUILDING EXTERIOR SHALL BE GALVANIZED.

STEEL STAIRS

ALL STAIR LANDINGS, STAIRS AND STAIR SUPPORTS TO BE DESIGNED BY STAIR MANUFACTURER. SUPPLY DESIGN CALCULATIONS AND DRAWINGS STAMPED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED TO THE STRUCTURAL ENGINEER FOR REVIEW. LIVE LOAD = 100 PSF. STAIR MANUFACTURER SHALL PROVIDE ALL POSTS, BRACKETS, HANGERS, ETC. TO SUPPORT STAIRS. HANGERS AND POSTS SHALL BE LOCATED IN PARTITION WALLS. POSTS OR HANGERS SHALL LOAD THE STRUCTURE CONCENTRICALLY.

METAL FORM DECK

METAL FORM DECK SHALL BE BLACK HIGH STRENGTH STEEL. DECK SHALL BE PUDDLE WELDED AT ALL STEEL SUPPORTS AS FOLLOWS:

AT ALL LAPS OR EDGES OF PANELS AND AT MID POINT (MAX. SPACING OF WELDS = 15')

COLD-FORMED METAL FRAMING

DESIGN OF METAL STUD FRAMING IS BASED ON CSJ TYPE (1 5/8" FLANGE) STUDS WITH DETRICH INDUSTRIES SECTION PROPERTIES AND ALLOWABLE RESISTING MOMENT CAPACITY. ALTERNATE MANUFACTURER'S FRAMING SIZE SHALL MEET THE MINIMUM SECTION PROPERTIES AND ALLOWABLE RESISTING MOMENT CAPACITY OF THE MEMBERS INDICATED ON THE DESIGN DRAWINGS.

ALL COLD-FORMED FRAMING SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," 1996.

ALL FRAMING MEMBERS 16 GA. AND HEAVIER SHALL BE FORMED FROM STEEL WITH A MINIMUM YIELD STRENGTH OF 50 KSI. ALL OTHER FRAMING SHALL BE FORMED FROM STEEL WITH A MINIMUM YIELD STRENGTH OF 33 KSI.

ALL FRAMING SHALL BE GALVANIZED.

ALL CONNECTIONS SHALL BE SPOREWED OR WELDED. POWDER DRIVEN FASTENERS ARE NOT ACCEPTABLE FOR ANY STRUCTURAL APPLICATIONS.

ALL WELDS SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT.

CONTRACTOR SHALL SUBMIT FABRICATION AND ERECTION SHOP DRAWINGS TO THE ENGINEER FOR REVIEW FOR ALL COLD FORMED METAL FRAMING COMPONENTS AND CONNECTIONS. FOR ALL FRAMING COMPONENTS AND CONNECTIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS INCLUDING TRUSSES, HEADERS, JAMBS, ETC. SUBMIT SHOP DRAWINGS AND CALCULATIONS STAMPED BY AN ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED.

SPECIAL INSPECTION

SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSIDERED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY THE BUILDING CODE. SPECIAL INSPECTION SHALL BE PAID BY THE OWNER.

REQUIRED SPECIAL INSPECTIONS

IN ADDITION TO THE REGULAR INSPECTIONS, THE FOLLOWING ITEMS WILL ALSO REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH THE BUILDING CODE:

- SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION (COMPACTING FILL, SPECIAL GRADING)
- STRUCTURAL CONCRETE OVER 2,500 PSI
- STRUCTURAL MASONRY

SPECIAL INSPECTOR SHALL MEET THE QUALIFICATIONS AS STATED IN THE BUILDING CODE AND SHALL PERFORM THE DUTIES AND RESPONSIBILITIES AS OUTLINED IN THE BUILDING CODE.

ABBREVIATIONS

A.B.	ANCHOR BOLTS
A.F.F.	ABOVE FINISH FLOOR
A.R.	ARCHITECTURAL
B.P.	BASE PLATE
B.L.D.G.	BUILDING
B.L.K.	BLOCK
B.M.	BEAM
B.O.I.	BOTTOM
B.R.G.	BRACING
B.R.G.	BEARING
B.U.	BOLTED TO JOIST
C.A.N.T.	CANTILEVER
C.I.P.	CAST-IN-PLACE
C.J.	CONTROL JOINT
C.	CENTERLINE
C.L.R.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
C.O.L.	COLUMN
C.O.N.C.	CONCRETE
C.O.N.S.T.R.	CONSTRUCTION
C.O.N.T.	CONTINUOUS
C.Y.	CUBIC YARD
D.E.T.	DETAIL
D.W.G.	DIAGONAL
# or DIA.	DIAMETER
D.J.	DOUBLE JOIST
D.K.	DECK
D.L.	DEAD LOAD
D.W.G.	DRAWING
D.W.S.	DOWELS
E.A.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
E.L.	ELEVATION
E.L.V.	ELEVATOR
E.S.	EACH SIDE
E.Q.U.I.P.	EQUAL
E.Q.U.I.P.	EQUIPMENT
E.W.	EACH WAY
E.X.P.A.N.S.I.O.N.	EXPANSION
(E) OF EXIST.	EXISTING
E.X.T.	EXTerior
F./B.L.D.G.	FACE OF BUILDING
F./C.O.N.C.	FACE OF CONCRETE
F.D.	FLOOR DRAIN
F.I.N.	FINISH
F.L.G.	FLANGE
F.L.R.	FLOOR
F.S.	FAR SIDE OR FOOTING STEP
FT.	FEET
FT.G.	FOOTING
G.A.	GAUGE
G.B.	GRADE BEAM
G.C.	GENERAL CONTRACTOR
G.A.L.V.	GALVANIZED
H.O.D.	HEADED
H.O.R.I.Z.	HORIZONTAL
I.F.	INSIDE FACE
I.N.T.	INTERIOR
J.B.	JOIST BEARING
J.S.T.	JOIST
J.T.	JOINT
K.I.P.	KIP
L.L.	LIVE LOAD
(L.H.)	LONG LEG HORIZONTAL
(L.V.)	LONG LEG VERTICAL
L.W.	LONG WAY
M.A.S.	MASONRY
M.C.	MOMENT CONNECTION
M.E.C.H.	MECHANICAL
M.F.R.	MANUFACTURER
M.T.L.	METAL
(N.)	NEW
(N.C.)	NOT IN CONTRACT
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
O/O	OUT TO OUT
O.P.P.	OPPOSITE
P.C.	PRECAST CONCRETE
P.	PLATE
P.L.C.S.	PLACES
P.S.F.	POUNDS/SQUARE FOOT
P.S.I.	POUNDS/SQUARE INCH
R.A.D.	RADIUS
R.D.	ROOF DRAIN
R.E.I.N.F.	REINFORCING
R.E.Q.D.	REQUIRED
R.E.T.	RETAINING
S.E.C.T.	SECTION
S.M.	SMILAR TO
S.O.G.	SLAB ON GRADE
S.P.A.	SPACES
S.Q.	SQUARE
S.T.I.F.T.	STIFFENER
S.T.L.	STEEL
S.T.R.U.C.T.	STRUCTURAL
S.W.	SHORT WAY
S.Y.M.	SYMMETRICAL
T.P.	TOP OF
T.Y.P.	TYPICAL
U.N.L.E.S.S. NOTED OTHERWISE	UNLESS NOTED OTHERWISE
V.E.R.T.	VERTICAL
W.P.	WORK POINT
W.W.F.	WELDED WIRE FABRIC
W/	WITH

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ISSUE/REVISION DATES

B	8/11/03	D.D. SUBMITTAL
C	9/15/03	CD 95% COMPLETION OWNER REVIEW
D	4/23/04	TO 10% COMPLETION ISSUED TO OWNER
E	8/2/04	ISSUED FOR BID



ISSUE/REVISION DATES	
B	8/11/03 D.D. SUBMITAL
C	9/15/03 CD 95% COMPLETION OWNER REVIEW
D	4/23/04 CD 100% COMPLETION ISSUED TO OWNER
E	8/2/04 ISSUED FOR BID

STATE OF OHIO
MICHAEL C. THORSON
REGISTERED PROFESSIONAL ENGINEER

Office of Facilities
Department of Veterans Affairs

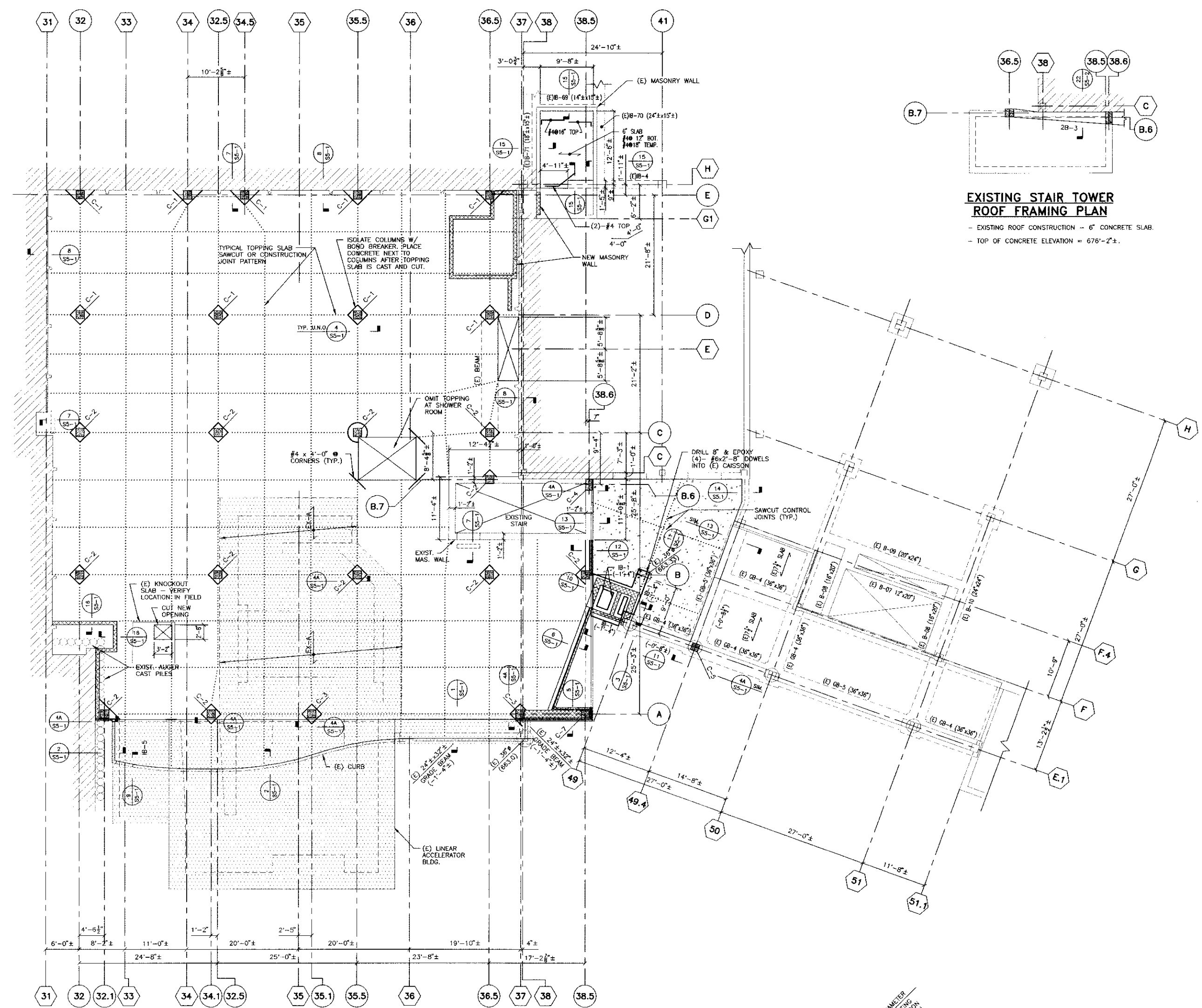
VETERANS AFFAIRS

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DRAWN BY	PROJ. ENG.
TBA	MGT
PROJECT NO.	
20326	
4/23/04	
FIRST FLOOR FRAMING PLAN	
1/8"=1'-0"	
S1-1	

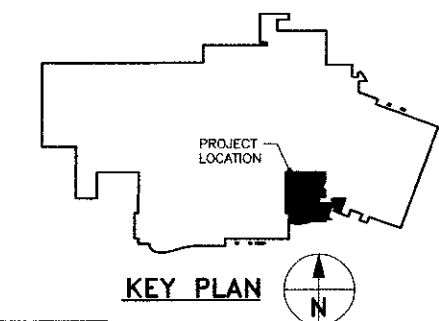
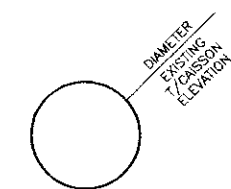


FIRST FLOOR FRAMING PLAN

- 1/8"=1'-0"
- NOTES:
- EXISTING FLOOR CONSTRUCTION: 11" CONCRETE SLAB UNLESS NOTED OTHERWISE ON PLAN.
 - (E) DENOTES EXISTING FLOOR CONSTRUCTION OVER LINEAR ACCELERATOR: CONCRETE TWO-WAY SLAB + LEAD SHEILDING + REINFORCED CONCRETE FILL.
 - TOP OF EXISTING CONCRETE ELEVATION = 666'-9-1/2"±.
 - NEW TOPPING CONSTRUCTION: 2-1/2"± CONCRETE SLAB ON BOND BREAKER SHEET REINFORCED WITH 6 X 6 - W1.4 X W1.4 W.W.F.
 - BOND BREAKER SHEET MAY BE EXISTING WATERPROOFING SHEET IF SHEET IS IN ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT. EXAMINE SHEET AFTER DEMOLITION OF PLAZA PAVERS. IF USED, AREAS DAMAGED BY CONSTRUCTION SHALL BE REPLACED WITH 6 MIL POLYETHYLENE SHEET. SURFACE MUST BE CLEAN BEFORE CONSTRUCTION OF TOPPING SLAB.
 - C-X DENOTES CONCRETE COLUMN - SEE DRAWING S4-1 FOR CONCRETE COLUMN SCHEDULE.
 - (E) DENOTES NEW 5" SLAB ON GRADE REINFORCED WITH 6X6-W2.0XW2.0 W.W.F. ON VAPOR BARRIER AND 4" GRANULAR FILL.

- FINISH FLOOR ELEVATION = 667'-0"± (MATCH EXISTING).
- ELEVATIONS NOTED THUS (+0'-0") ARE TOP OF CONCRETE ELEVATIONS REFERENCED FROM FINISH FLOOR ELEVATION 667'-0" = 0'-0".
- COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXACT SIZE AND LOCATION OF ALL NEW OPENINGS AND EDGE OF SLAB LOCATIONS. SEE TYPICAL DETAIL ON S4-1 FOR OPENING REINFORCEMENT.
- SEE SHEET S0-1 FOR GENERAL NOTES.
- SEE SHEET S4-1 FOR TYPICAL SLAB REINFORCING DETAILS.
- SEE SHEET S4-1 FOR BEAM SCHEDULE.
- SEE SHEET S4-1 FOR COLUMN SCHEDULE.
- SEE DRAWING S4-2 FOR TYPICAL DETAILS.
- (E) DENOTES EXISTING CONSTRUCTION

EXISTING CAISSON LEGEND



THE EXISTING CONDITIONS SHOWN ON THESE DOCUMENTS WERE BASED UPON EXISTING DRAWINGS PREPARED BY COLLIER RIMER GORDON ARCHITECTS DATED 1-20-94, DALTON DALTON ASSOCIATES/SMITH HINCHMAN & ORYLL ASSOCIATES DATED 2-1-91, AND SPICE COSTANTINO ARCHITECTS DATED 8-11-99. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. ANY DISCREPANCIES ARE TO BE IMMEDIATELY REPORTED TO THE ENGINEER AND ARCHITECT, PRIOR TO PROCEEDING WITH ANY OF THE WORK IN QUESTION.

THORSON BAKER & Associates, Inc.
Consulting Engineers

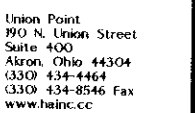
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VETERANS
AFFAIRS

WADE PARK
OUTPATIENT
MENTAL HEALTH
ADDITION




4/23/04

8"=1'-0"

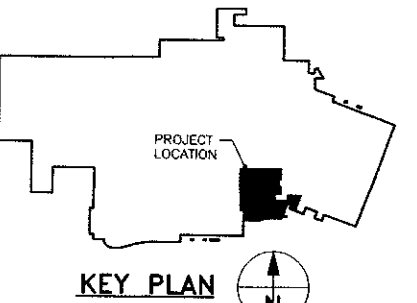
S2-1



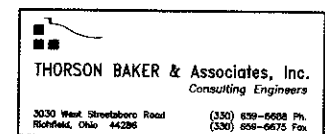
NOTES:

- FLOOR CONSTRUCTION: 10" CONCRETE SLAB UNLESS NOTED OTHERWISE ON PLAN.
- TOP OF CONCRETE ELEVATION = $679'-5-3/8" \pm$ (MATCH EXISTING).
- TOPMOST AND BOTTOMMOST REINFORCEMENT RUNS IN EAST-WEST DIRECTION.
-  DENOTES 2" SLAB DEPRESSION - SEE ARCH. DRAWING FOR DIMENSIONS.

- COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXACT SIZE AND LOCATION OF ALL OPENINGS AND EDGE OF SLAB LOCATIONS. SEE TYPICAL DETAIL ON S4-2 FOR OPENING REINFORCEMENT.
- SEE SHEET S0-1 FOR GENERAL NOTES.
- SEE SHEET S4-1 FOR TYPICAL SLAB REINFORCING DETAILS.
C.S.: DENOTES COLUMN STRIP.
M.S.: DENOTES MIDDLE STRIP.
- SEE SHEET S4-1 FOR BEAM SCHEDULE.
- SEE SHEET S4-1 FOR COLUMN SCHEDULE. SEE SHEET S1-1 FOR COLUMN DESIGNATION.
- (E) DENOTES EXISTING CONSTRUCTION.



KEY PLAN



THE EXISTING CONDITIONS SHOWN ON THESE DOCUMENTS WERE BASED UPON EXISTING DRAWINGS PREPARED BY COLLINS RIMER GORDON ARCHITECTS DATED 1-20-84, DALTON DALTON ASSOCIATES SMITH HINCHMAN & GRYLLS ASSOCIATES DATED 2-1-81, AND SPACE COSTANTINO ARCHITECTS DATED 8-11-99. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. ANY DISCREPANCIES ARE TO BE IMMEDIATELY REPORTED TO THE ENGINEER AND ARCHITECT. PRIOR TO PROCEEDING WITH ANY OF THE WORK IN QUESTION.

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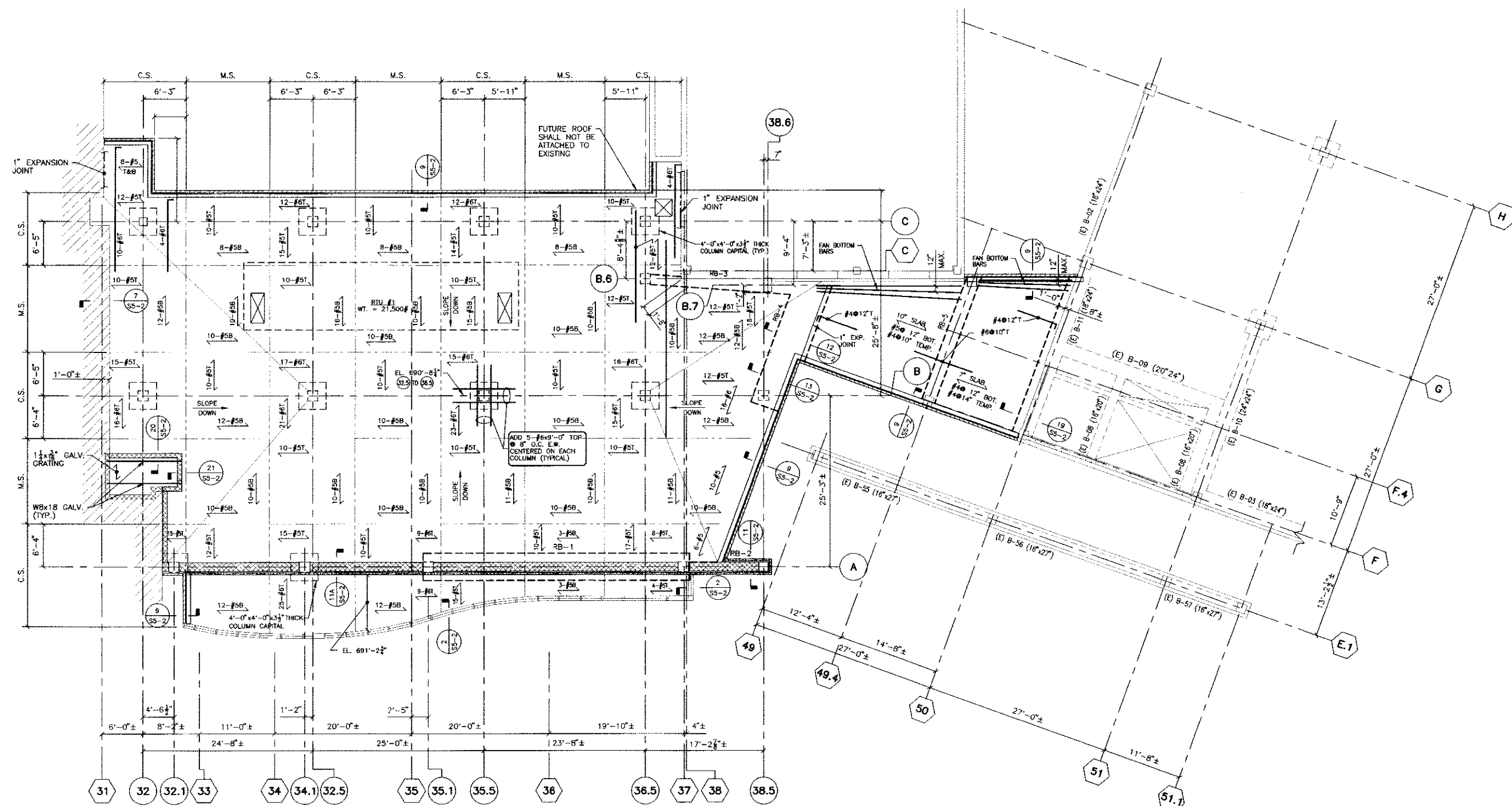
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ROOF FRAMING
PLAN

1/8"=1'-0"

S2-2



ROOF FRAMING PLAN

1/8"=1'-0"

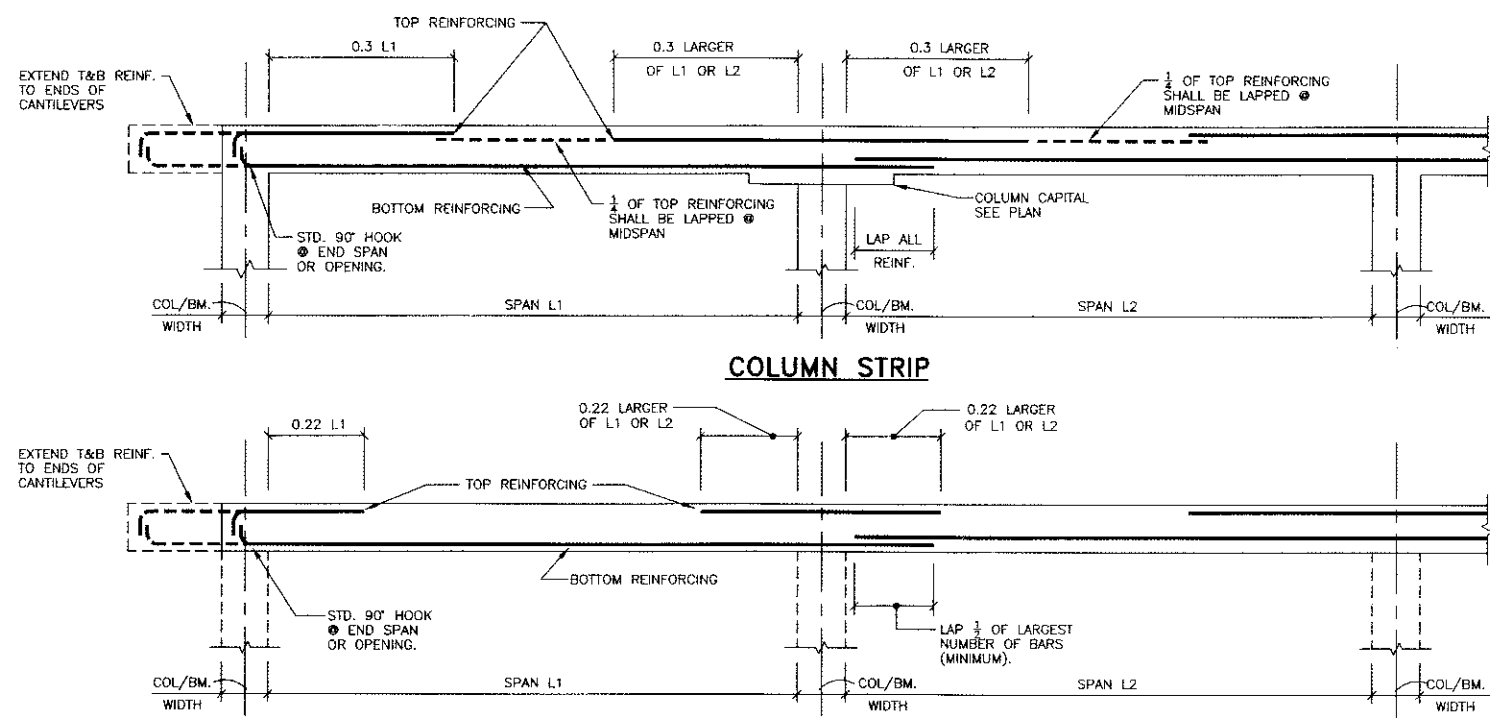
NOTES:

- ROOF CONSTRUCTION: 10" CONCRETE SLAB UNLESS NOTED OTHERWISE ON PLAN.
- TOP OF CONCRETE ELEVATION = 691'-2.3/4"± (MATCH EXISTING). U.N.O.
- TOPMOST AND BOTTOMMOST REINFORCEMENT RUNS IN EAST-WEST DIRECTION.
- COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXACT SIZE AND LOCATION OF ALL OPENINGS AND EDGE OF SLAB LOCATIONS. SEE TYPICAL DETAIL ON S4-2 FOR OPENING REINFORCEMENT.
- SEE SHEET S0-1 FOR GENERAL NOTES.
- SEE SHEET S4-1 FOR TYPICAL SLAB REINFORCING DETAILS.
- C.S.: DENOTES COLUMN STRIP.
- M.S.: DENOTES MIDDLE STRIP.
- SEE SHEET S4-1 FOR BEAM SCHEDULE.
- SEE SHEET S4-1 FOR COLUMN SCHEDULE. SEE SHEET S1-1 FOR COLUMN DESIGNATION.
- (E) DENOTES EXISTING CONSTRUCTION.

THE EXISTING CONDITIONS SHOWN ON THESE DOCUMENTS WERE BASED UPON EXISTING DRAWINGS PREPARED BY COLLINS RIVER GORDON ARCHITECTS DATED 1-20-94, DALTON DALTON ASSOCIATES/SMITH HINCHMAN & GRYLLS ASSOCIATES DATED 2-1-61, AND SHICE COSTANTINO ARCHITECTS DATED 8-11-98. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. ANY DISCREPANCIES ARE TO BE IMMEDIATELY REPORTED TO THE ENGINEER AND ARCHITECT PRIOR TO PROCEEDING WITH ANY OF THE WORK IN QUESTION.

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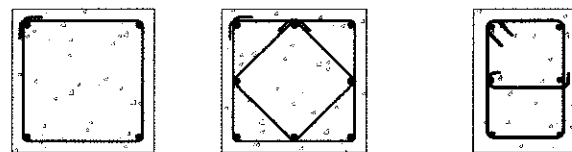
KEY PLAN



COLUMN STRIP
MIDDLE STRIP
FLAT SLAB REINFORCING DETAILS

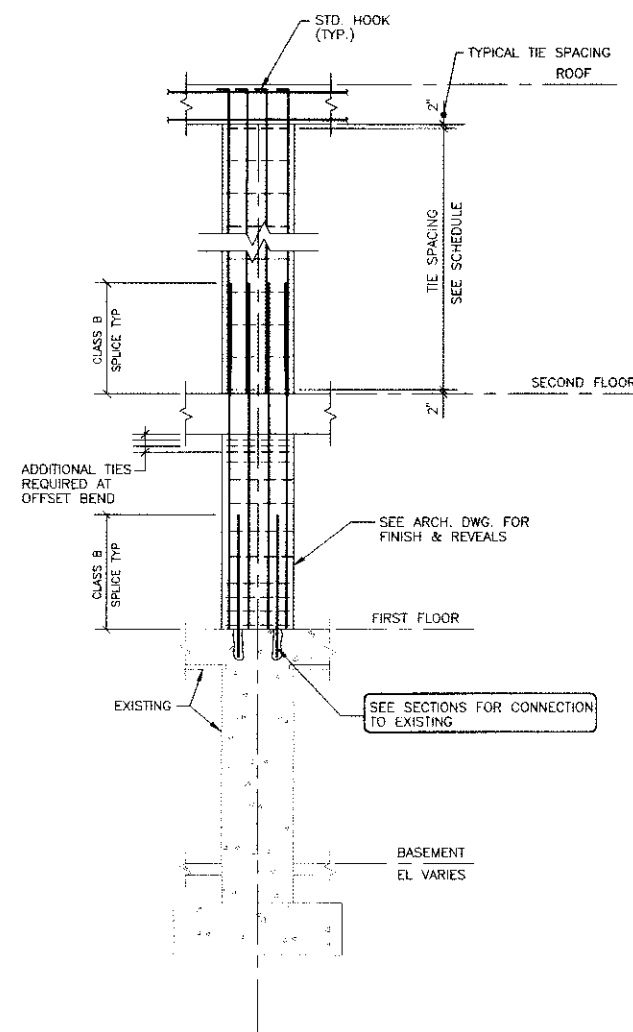
- NOTES:
- FOR LAPS SEE SHEET S0-1.
 - FOR ONE WAY SLABS, USE COLUMN STRIP REINFORCING DIMENSIONS.

COLUMN SCHEDULE								
		C1	C2	C3	C4	C5	C6	C7
ROOF	SIZE REIN. TIES TYPE		18"x18" (8)-#8 #4@4"	18"x18" (8)-#8 #3@3 1/2"	14"x24" (6)-#9 #4@3 1/2"		16"x16" (4)-#8 #4@4"	16"x16" (4)-#8 #4@4"
SECOND FLOOR	SIZE REIN. TIES TYPE	18"x18" (8)-#8 #4@4"	18"x18" (8)-#8 #3@3 1/2"	18"x18" (8)-#8 #3@3 1/2"	14"x24" (6)-#9 #4@3 1/2"	16"x16" (4)-#8 #4@4"		16"x16" (4)-#8 #4@4"
PLAZA LEVEL	SIZE REIN. TIES TYPE							

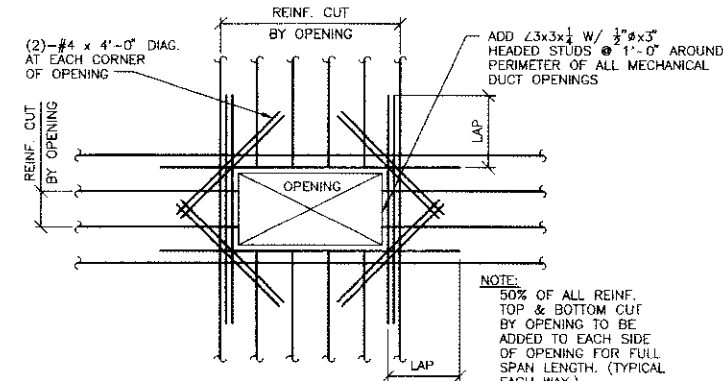


TYPE I **TYPE II** **TYPE III**

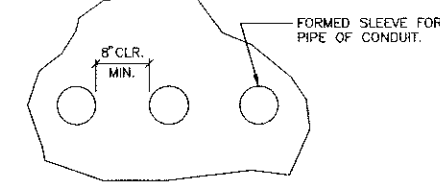
CONCRETE COLUMN TYPES



TYPICAL CONCRETE COLUMN DETAIL

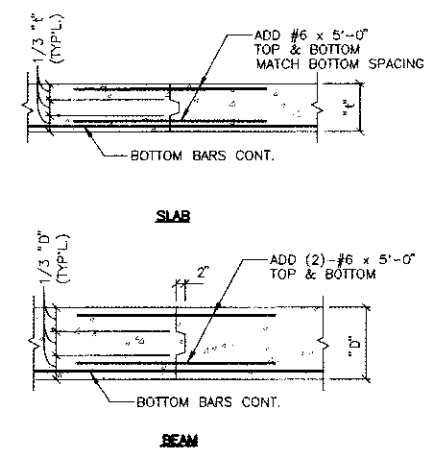


TYP. REINF. @ SLAB OR WALL OPENING DETAIL



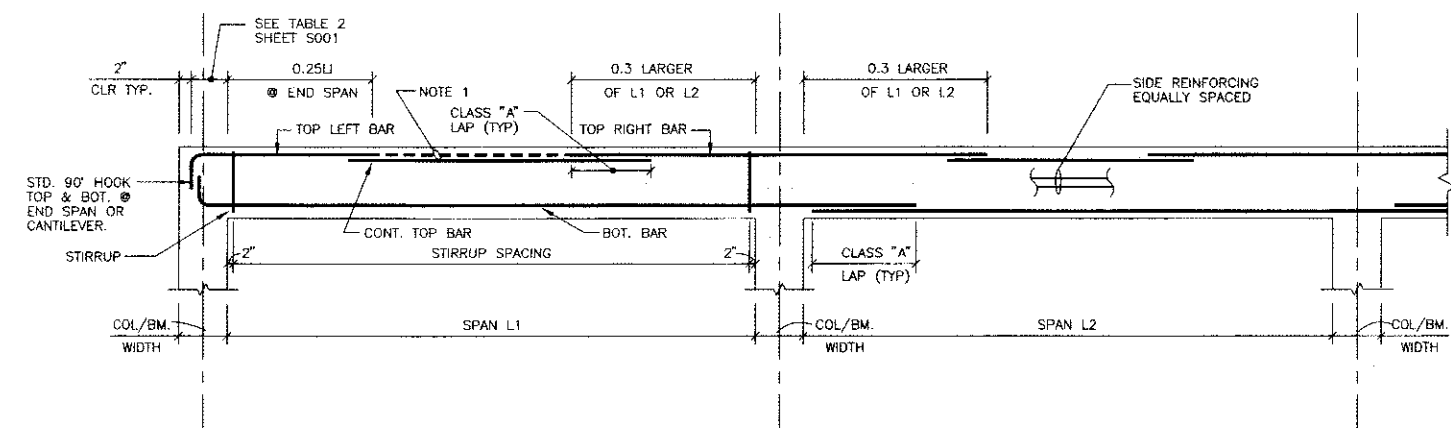
**TYPICAL PIPE & ELECTRICAL
CONDUIT OPENING DETAIL**

- OPENINGS FOR PIPE & CONDUIT SHALL BE SLEEVED THROUGH FLOOR WITH A MINIMUM OF 8" CLEAR BETWEEN SLEEVES. SLEEVES SHALL NOT INTERRUPT REINFORCING. IF SLEEVES ARE CLOSER THAN 8" CLEAR OR THEY INTERRUPT REINFORCING, REINFORCE SLAB TO CONFORM WITH TYPICAL OPENING REINFORCING DETAIL.
- OPENINGS SHALL NOT BE CORE-DRILLED. IF CORE-DRILLING IS REQUIRED, REINFORCING SHALL BE LOCATED PRIOR TO DRILLING AND SHALL NOT BE CUT.
- OPENINGS SHALL NOT BE CORE-DRILLED WITHIN 36" FROM THE EDGE OF A COLUMN WITHOUT THE REVIEW OF THE STRUCTURAL ENGINEER.



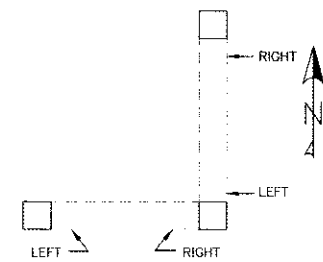
TYPICAL CONSTRUCTION JOINT DETAILS

- CONSTRUCTION JOINTS ARE PERMITTED IN MIDDLE THIRD OF CLEAR SPAN.
- CONTRACTOR SHALL SUBMIT IN DRAWING FORM THE PROPOSED CONSTRUCTION JOINT LAYOUTS FOR THE PROJECT. REINFORCING SHOP DRAWINGS SHALL REFLECT THE APPROVED CONSTRUCTION JOINT LAYOUT WITH THE REINFORCING DETAILED ACCORDINGLY.

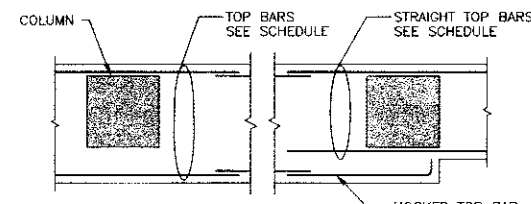


TYPICAL BEAM REINFORCING

- NOTES:
- WHERE CONT. TOP BAR IS THE SAME AS THE LEFT OR RIGHT TOP BAR, EXTEND LEFT OR RIGHT TOP BAR ACROSS SPAN OR LAP @ MIDSPAN WITH CLASS "A" SPLICE.
 - CLASS "A" LAPS SHALL CONFORM TO LAP LENGTHS IN TABLE 1, SHEET S0-1, DIVIDED BY 1.3.
 - WHERE NO TOP BAR IS SPECIFIED IN SCHEDULE, PROVIDE (1)-#5 FOR EACH STIRRUP LEG.

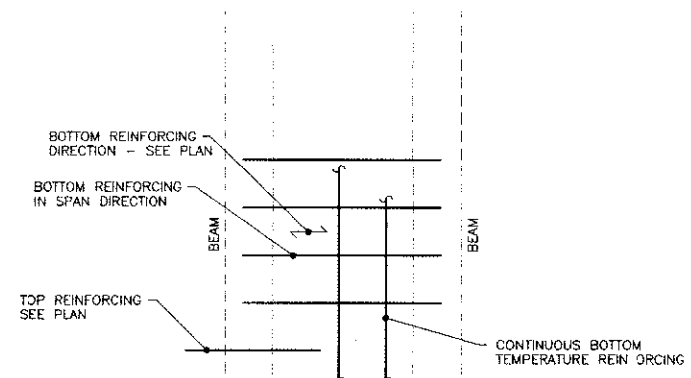


**ORIENTATION OF
BEAMS ON SCHEDULE**



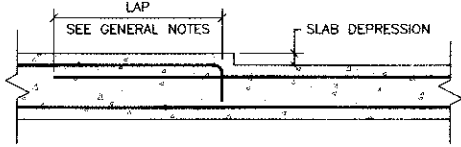
**TYPICAL PLAN OF REINFORCING
BEAM WIDTH VARIES**

CONCRETE BEAM SCHEDULE									
MARK	BEAM SIZE		REINFORCING				STIRRUPS		REMARKS
	WIDTH	DEPTH	BOTTOM	TOP	QUANTITY	NO. OF SPACES	L. SUPP.	R. SUPP.	
1B-1	24	28	(3)-#9	(3)-#9	(3)-#9	(1)-#3	@ 10" CONT.		CLOSED
2B-1	48	24	(7)-#10	(12)-#6	(8)-#6	(7)-#10 ST.	(2)-#3	@ 5" CONT.	CLOSED
2B-2	16	24	(2)-#7	(2)-#7	(2)-#7	(1)-#3	@ 7" CONT.		CLOSED
2B-3	VARIES	38 1/2	(3)-#9	(5)-#9	(5)-#9	(1)-#3	@ 16" CONT.		CLOSED
2B-4	56	24	(8)-#7	(8)-#7	(8)-#7	(2)-#3	@ 9" CONT.		CLOSED
RB-1	48	24	(7)-#10	(8)-#6	(8)-#6	(7)-#10 ST.	(2)-#3	@ 5" CONT.	CLOSED
RB-2	16	24	(2)-#7	(2)-#7	(2)-#7	(1)-#3	@ 8" CONT.		CLOSED
RB-3	VARIES	24	(3)-#7	(3)-#9	(6)-#9	(1)-#3	@ 10" CONT.		CLOSED
RB-4	56	24	(8)-#7	(8)-#7	(8)-#7	(2)-#3	@ 9" CONT.		CLOSED
RB-5	24	20	(4)-#9	(6)-#6	(6)-#6	(1)-#3	@ 9" CONT.		OPEN



ONE WAY SLAB REINFORCING PLAN

- USE COLUMN STRIP FLAT SLAB REINFORCING DETAILS FOR LENGTHS OF REINFORCING.



**TYPICAL REINFORCING
DETAIL @ SLAB DEPRESSIONS**



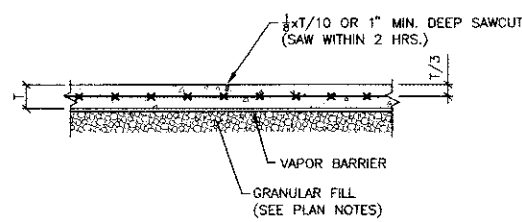
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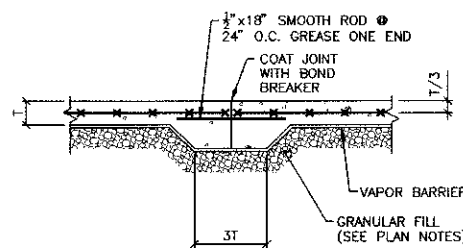
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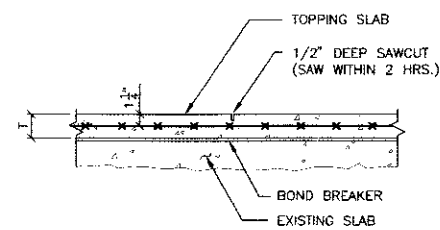
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4/23/04
REINFORCING
SCHEDULES AND
TYPICAL DETAILS
AS NOTED
S4-1



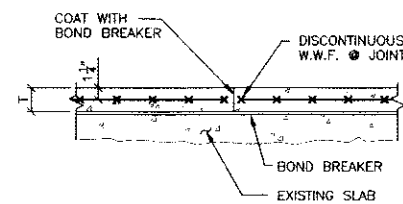
CONTROL JOINT
(SEE PLAN FOR LOCATIONS)



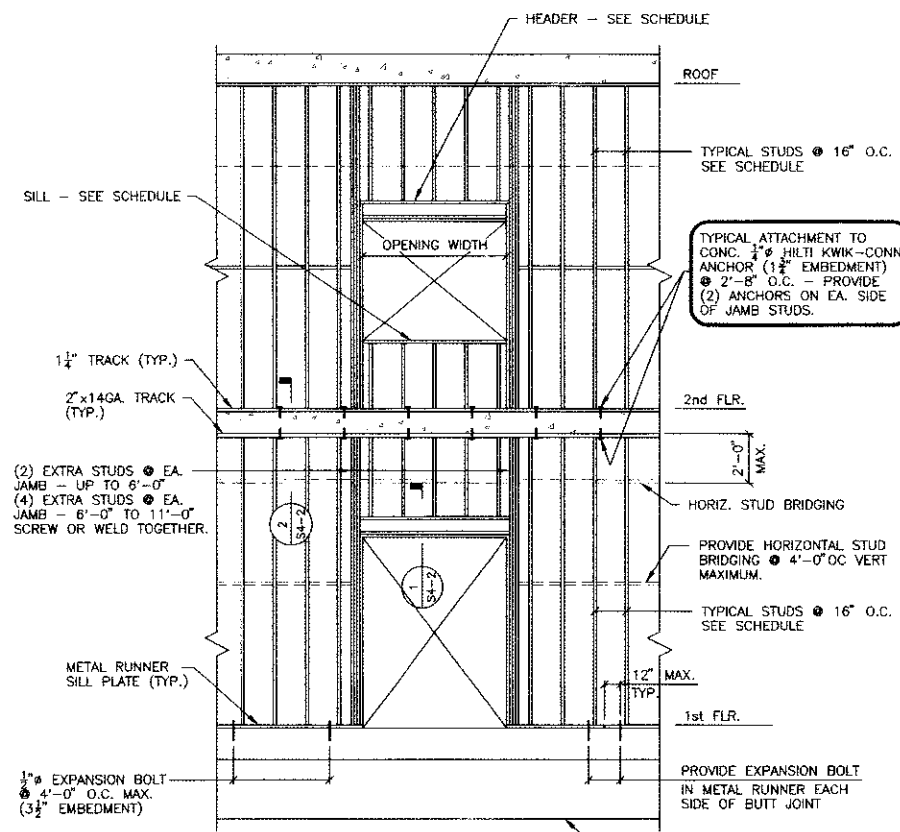
CONSTRUCTION JOINT
TYPICAL SLAB ON GRADE DETAILS



CONTROL JOINT
(SEE PLAN FOR LOCATIONS)

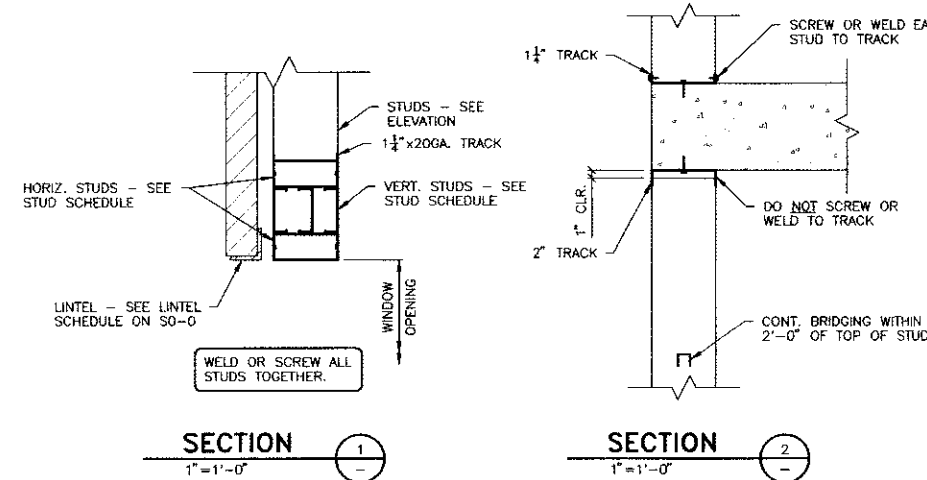


CONSTRUCTION JOINT
TOPPING SLAB TYPICAL DETAILS
- W.W.F. IN TOPPING SLAB SHALL BE CHAINED INTO POSITION



AT DOORS AND SINGLE OPENINGS
TYPICAL EXTERIOR WALL ELEVATION

EXTERIOR WALL STUD SCHEDULE	
TYPICAL STUDS @ 16" O.C. MAX.	
6" x 1 1/2" x 18GA	FIRST FLOOR TO ROOF
---	---
SILL:	
UP TO 6'-0"	(1) - 6" x 1 1/2" x 14GA. TRACK
6'-1" TO 11'-0"	(4) - 6" x 1 1/2" x 12GA. STUDS
HEADER:	
UP TO 6'-0"	(2) - 6" x 1 1/2" x 20GA. STUDS VERT.
6'-1" TO 11'-0"	(2) - 6" x 1 1/2" x 18GA. TRACK - HORIZ. TOP & BOT.
	(3) - 6" x 1 1/2" x 14GA. STUDS VERT.
	(4) - 6" x 1 1/2" x 12GA. STUDS HORIZ. (2)-TOP & (2)-BOT.



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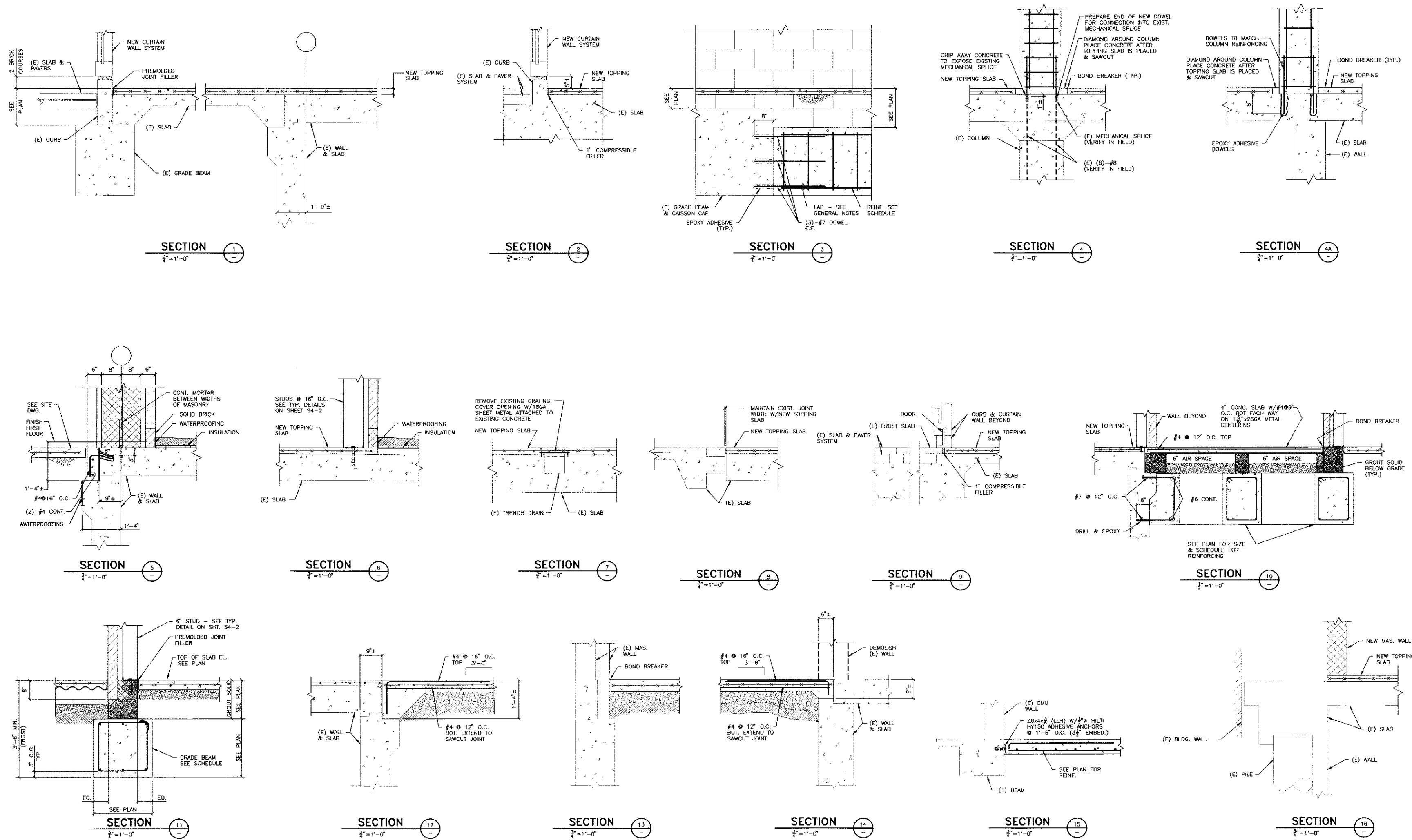
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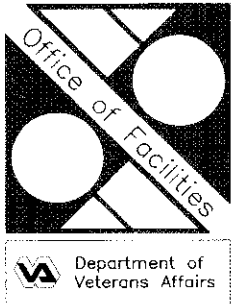
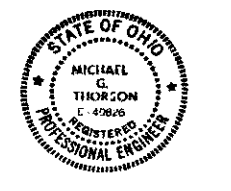
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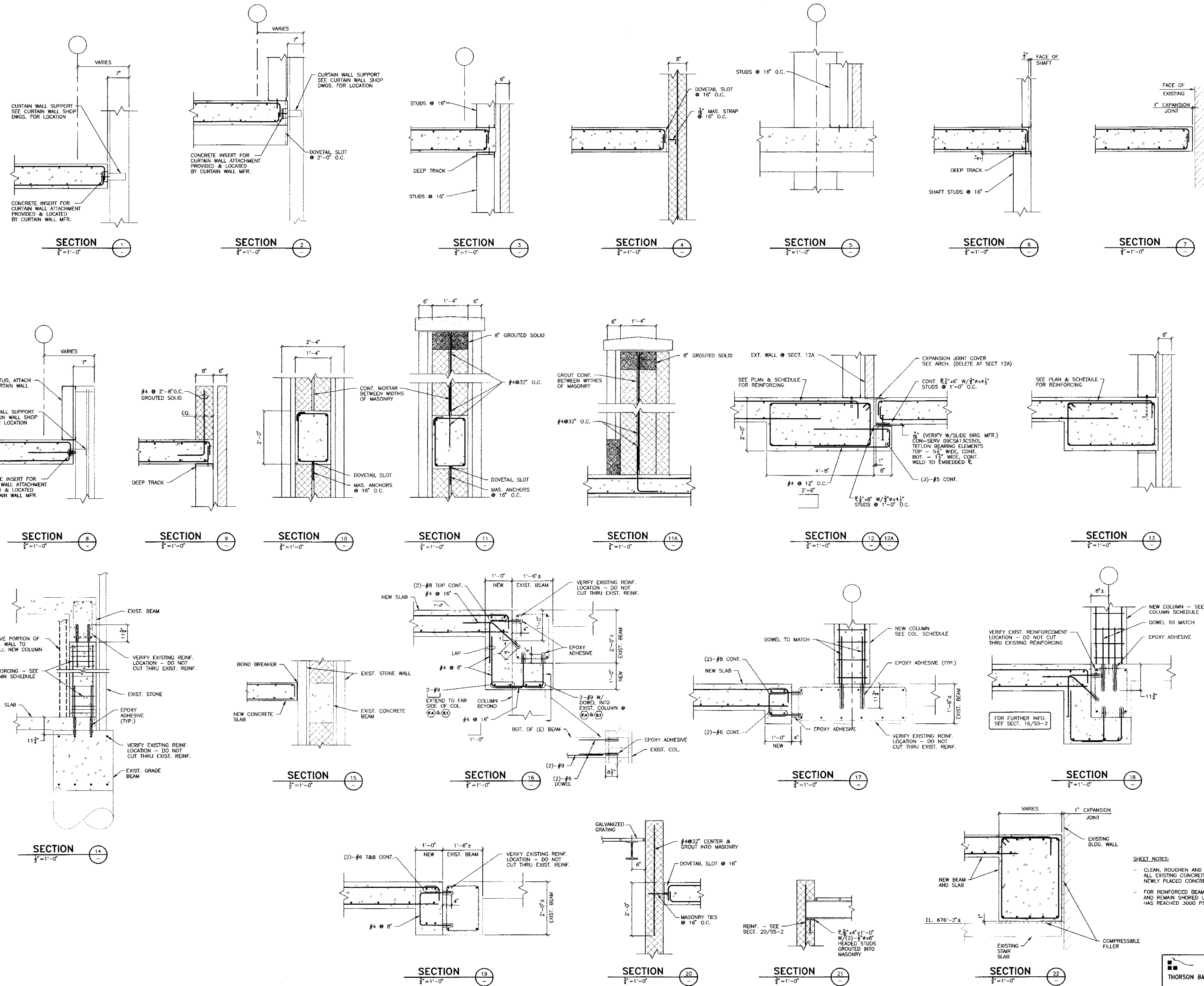
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AS NOTED	
S5-1	

SHEET NOTES:
- CLEAN, ROUGHEN AND APPLY BONDING AGENT TO ALL EXISTING CONCRETE INTERACTING WITH NEWLY PLACED CONCRETE.
- FOR REINFORCED BEAMS DO NOT APPLY ANY LOADS AND REMAIN SHORED UNTIL CONCRETE STRENGTH HAS REACHED 3000 PSI.

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AS NOTED	
S5-2	

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