GENERAL NOTES

SPECIFICATIONS — REFER TO PROJECT SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR MATERIAL AND WORKMANSHIP.

SHOP DRAWINGS — THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND COORDINATION DRAWINGS FOR THE ENGINEER'S APPROVAL AS STATED IN THE SPECIFICATIONS.

SIMILAR CONDITIONS — IN THE EVENT THAT CERTAIN DETAILS OF THE CONSTRUCTION ARE NOT FULLY SHOWN OR NOTED ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME TYPE AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED, SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL.

DRAWINGS BY OTHERS — SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
A. SIZE AND LOCATION OF ALL NON-LOAD BEARING PARTITIONS, AND ROOF TOP PARAPETS.
B. SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, INSERTS, ETC., EXCEPT AS SHOWN.
C. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS, EXCEPT AS SHOWN.
D. FLOOR AND ROOF FINISHES.
E. DETAILS OF ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).

SEE MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, & TELECOMMUNICATION DRAWINGS FOR THE FOLLOWING:
A. PIPE AND DUCT RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS, EXCEPT AS SHOWN OR NOTED.

ELEVATIONS & DIMENSIONS — ALL ELEVATIONS AND DIMENSIONS SHOWN FOR NEW CONSTRUCTION ARE BASED ON THE DESIGN DRAWINGS FOR THE EXISTING BUILDINGS. FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION.

FIRE RESISTANCE RATING — THE STRUCTURAL STEEL FRAMING INCLUDED IN THESE CONTRACT DRAWINGS SHALL BE CONSIDERED "RESTRAINED" FOR PURPOSE OF FIRE PROTECTION IN ACCORDANCE TO ASTM E 119.

BUILDING CODE — 2003 INTERNATIONAL BUILDING CODE (2003 IBC)
BUILDING CLASSIFICATION: BUILDING CATEGORY IV

A – DESIGN LOADS

A1) LIVE

PUBLIC AREAS (LOBBIES, ATRIUMS, ETC.)	100 PSF
STAIRWAYS (EGRESS)	100 PSF
CORRIDORS (AT OR BELOW GROUND FLOOR)	100 PSF
CORRIDORS (ABOVE GROUND FLOOR)	80 PSF
TYPICAL FLOOR (OPERATING ROOMS)	60 PSF
PARTITION LOADS (UNIFORM, UNREDUCIBLE)	20 PSF
MECHANICAL ROOMS (UNREDUCIBLE)	150 PSF
DRIVEWAY / PARKING (UNREDUCIBLE)	250 PSF

ROOF LIVE (SNOW GOVERNS, UNREDUCIBLE)

LIVE LOAD REDUCTION IS PERMISSIBLE, U.O.N.

A2) DEAD — ALL PERMANENT STATIONARY CONSTRUCTION AND EQUIPMENT.

A3) SEISMIC
SEISMIC IMPORTANCE FACTOR, I_E = 1.50
SEISMIC USE GROUP: III
SPECTRAL RESPONSE ACCELERATION:
SHORT PERIOD, S_S = 0.40
1.0 SEC PERIOD, S_1 = 0.10
SITE CLASS D
SPECTRAL RESPONSE DESIGN COEFFICIENTS:
SHORT PERIOD, S_{DS} = 0.39
1.0 SEC PERIOD, S_{D1} = 0.16
SEISMIC DESIGN CATEGORY: D

BASIC SEISMIC FORCE RESISTING SYSTEM:
ORDINARY STEEL MOMENT FRAME
RESPONSE MODIFICATION FACTOR, R = 3.5
DEFLECTION AMPLIFICATION FACTOR, C_D = 3.0

SEISMIC RESPONSE COEFFICIENT, C_S = 0.167
SEISMIC BASE SHEAR, V = 4 KIPS

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (PER CODE)

A4) WIND
BASIC WIND SPEED (3-SEC GUST) = 100 MPH
WIND IMPORTANCE FACTOR, I_W = 1.15
WIND EXPOSURE CATEGORY: B WITH ESCARPMENT LOAD (PER ASCE 7-02)
INTERNAL PRESSURE COEFFICIENT: GC_{PI} = ±0.18

COMPONENTS AND CLADDING WIND PRESSURE: SEE SPECIFICATIONS

A5) SNOW
GROUND SNOW LOAD, P_G = 50 PSF
FLAT ROOF SNOW LOAD, P_F= 45 PSF
TERRAIN CATEGORY: C
ROOF EXPOSURE: PARTIALLY EXPOSED
SNOW EXPOSURE FACTOR, C_E = 1.0
IMPORTANCE FACTOR, I_S = 1.2
THERMAL FACTOR, C_T = 1.0 (HEATED SPACES)
THERMAL FACTOR, C_T = 1.2 (UNHEATED CANOPIES)
DRIFT LOADING = (PER ASCE 7-02)

B – FOUNDATIONS

B1) GEOTECHNICAL REPORTS — THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING, UNDERSTANDING & IMPLEMENTING THE RECOMMENDATIONS OUTLINED IN THE FOLLOWING GEOTECHNICAL REPORT BY S.W. COLE ENGINEERS, INC.:
I.) DRAFT "GEOTECHNICAL ENGINEERING INVESTIGATION, PROPOSED MEDICAL OFFICE BUILDING AND PARKING GARAGE, WOMEN AND INFANTS FACILITY, CHARLES STREET, PORTLAND, MAINE", DRAFT DATED 29 MARCH 2002.

COPIES OF THE GEOTECHNICAL REPORT ARE AVAILABLE FROM THE PROJECT ARCHITECT. WHERE RECOMMENDATIONS IN THESE REPORTS VARY FROM INFORMATION CONTAINED IN THESE DRAWINGS & THE PROJECT SPECIFICATIONS, THE MORE STRINGENT RECOMMENDATIONS SHALL GOVERN.

B2) SOIL BEARING — CONCRETE SPREAD & STRIP FOOTINGS ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 5,000 PSF. BEAR ALL FOOTINGS ON COMPACTED STRUCTURAL FILL OR MUD MAT, U.O.N.

B3) EXCAVATION — ALL FOUNDATION EXCAVATION TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER. EXCAVATE TO LINES AND GRADES TO PROPERLY INSTALL FOUNDATIONS ON COMPACTED STRUCTURAL FILL APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE REQUIRED BEARING CAPACITY. THE ELEVATIONS SHOWN ON THE DRAWINGS ARE ANTICIPATED AND ACTUAL ELEVATIONS ARE TO BE ESTABLISHED IN THE FIELD BY THE GEOTECHNICAL ENGINEER, BUT IN NO CASE SHALL THE BOTTOM OF FOOTING BE LOCATED LESS THAN THE MINIMUM FROST PROTECTION DEPTH BELOW THE LOWEST ADJACENT SURFACE EXPOSED TO FREEZING. THE DIFFERENCE IN ELEVATION BETWEEN THE BOTTOMS OF ADJACENT FOOTINGS SHALL BE EQUAL TO OR LESS THAN THE HORIZONTAL DISTANCE BETWEEN THEM. ANY ADJUSTMENT OF FOOTING ELEVATIONS DUE TO FIELD CONDITIONS MUST HAVE THE PRIOR APPROVAL OF THE ENGINEER.

B4) UTILITIES AND OTHER UNDERGROUND STRUCT. — FOOTINGS TO BEAR BELOW AN IMAGINARY REFERENCE LINE DRAWN UPWARD AND OUTWARD ON A 1V:2H SLOPE FROM THE BOTTOM OF ANY ADJACENT UTILITIES OR OTHER UNDERGROUND STRUCTURES.

B5) DEWATERING SYSTEM — A TEMPORARY DEWATERING SYSTEM SHALL BE USED TO REMOVE EXCESS WATER FROM THE EXCAVATION. THE DEWATERING SYSTEM CAN BE DEACTIVATED AFTER THE FOUNDATIONS ARE COMPLETELY CAST AND THE FOUNDATION WALLS HAVE BEEN WATERPROOFED.

B6) FROST PROTECTION — ALL FOOTINGS SHALL EXTEND AT LEAST 4'-6" BELOW GRADE FOR FROST PROTECTION.

B7) FOOTING SUBGRADE PREPARATION AND FILL — FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT INCLUDED IN PROJECT MANUAL. PLACE ALL SPREAD AND STRIP FOOTINGS ON 8" MINIMUM LAYER OF COMPACTED STRUCTURAL FILL OR MUT MAT (AS DESCRIBED BELOW).

B8) SLAB SUBGRADE PREPARATION AND FILL — FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT INCLUDED IN PROJECT MANUAL. PLACE SUB-BASEMENT AND BASEMENT SLAB-ON-GRADE ON A 12" MINIMUM BED OF COMPACTED STRUCTURAL FILL WITH CONTINUOUS VAPOR BARRIER (LAP 8" AND TAPE ALL JOINTS) BETWEEN THE SLAB AND COMPACTED STRUCTURAL FILL. (U.O.N.)

B9) BACKFILL UNDER SLAB-ON-GRADE — PROOF-ROLL EXISTING SOILS PER SPECIFICATION #02200 "EARTHWORK". BACKFILL BELOW SLABS-ON-GRADE WITH APPROVED STRUCTURAL FILL PLACED IN 8 IN. LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT AS DEFINED BY ASTM D-1557, MODIFIED PROCTOR METHOD. USE A POLYETHYLENE VAPOR BARRIER BETWEEN THE COMPACTED STRUCTURAL FILL AND THE SLAB-ON-GRADE.

B10) BACKFILL AGAINST CANTILEVERED RETAINING WALLS — DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL WALL CONCRETE IS AT FULL DESIGN STRENGTH. BACKFILL WITH APPROVED MATERIAL PLACED IN 8 IN. LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT AS DEFINED BY ASTM D-1557, MODIFIED PROCTOR METHOD.

B11) BACKFILL AGAINST FOUNDATION WALLS — DO NOT BACKFILL AGAINST FOUNDATION WALLS UNTIL WALL CONCRETE IS AT FULL DESIGN STRENGTH AND UNTIL SLABS AT BASE AND TOP OF WALL ARE IN PLACE, AND HAVE REACHED THEIR DESIGN STRENGTH. U.O.N. IN GEOTECHNICAL REPORT, BACKFILL WITH APPROVED MATERIAL PLACED IN 8 IN. LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT AS DEFINED BY ASTM D-1557, MODIFIED PROCTOR METHOD.

B12) FOUNDATION PLACEMENT & PROTECTION — PROTECT ALL SOIL BEARING SURFACES FROM FREEZING BEFORE AND AFTER FOUNDATION CONSTRUCTION. IF CONSTRUCTION IS PERFORMED DURING FREEZING WEATHER, BACKFILL FOOTINGS TO A SUFFICIENT DEPTH (FROST PROTECTION DEPTH) AS SOON AS POSSIBLE AFTER CONSTRUCTION. ALTERNATIVELY, USE APPROVED INSULATING BLANKETS OR OTHER APPROVED MEANS FOR PROTECTION AGAINST FREEZING. DO NOT PLACE FOUNDATION CONCRETE IN WATER OR ON FROZEN GROUND. PROTECT IN-PLACE FOUNDATIONS AND SLABS FROM FROST PENETRATION UNTIL THE PROJECT IS COMPLETE.

B13) MUD MAT — PROVIDE 3 TO 4 IN. MUD MAT BELOW FOUNDATION IF CONCRETE FOUNDATION IS NOT CAST SOON AFTER EXPOSING SOIL BEARING SURFACES.

B14) DE-ICING — DO NOT USE SALT OR CHLORIDE-COMPOUNDS TO DE-ICE SITE.

B15) MINI-PILES — SEE SPECIFICATIONS FOR DESIGN AND INSTALLATION OF MINI-PILE FOUNDATIONS.

CLASS B TENSION SPLICE FOR NORMAL-WEIGHT CONCRETE — Fy=60000 PSI

MINIMUM SPLICE and DEVELOPMENT LENGTH SCHEDULE

(UNLESS OTHERWISE SHOWN ON DRAWINGS)

			#3	#4	#5	#6	#7	#8	#9	#10	#11
f'c=4000 PSI	SPLICE LENGTH	TOP BARS	24"	32"	40"	48"	70"	80"	90"	102"	113"
		OTHER BARS	18"	25"	31"	37"	54"	62"	70"	78"	87"
	DEVELOPMENT LENGTH	TOP BARS	18"	25"	31"	37"	54"	62"	70"	78"	87"
		OTHER BARS	14"	19"	24"	28"	42"	47"	54"	60"	67"
			#3	#4	#5	#6	#7	#8	#9	#10	#11
f'c=5000 PSI	SPLICE LENGTH	TOP BARS	22"	29"	36"	43"	63"	72"	81"	91"	101"
		OTHER BARS	17"	22"	28"	33"	48"	55"	62"	70"	78"
	DEVELOPMENT LENGTH	TOP BARS	17"	22"	28"	33"	48"	55"	62"	70"	78"
		OTHER BARS	13"	17"	21"	25"	37"	42"	48"	54"	60"

1. AVOID SPLICES IN REGIONS OF MAXIMUM MOMENT. IF THIS IS NOT POSSIBLE STAGGER SPLICES SO THAT NOT MORE THAN 50% OF THE BARS ARE SPLICED WITHIN A REQUIRED SPLICE LENGTH OTHERWISE INCREASE SPLICE LENGTH BY 30%.
2. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST IN THE MEMBER BELOW THE REINFORCEMENT. WALL REINFORCING IS CLASSIFIED AS OTHER BARS.

D – CAST-IN-PLACE CONCRETE

D1) CONCRETE STRENGTH — PROVIDE THE FOLLOWING 28 DAY COMPRESSIVE STRENGTH FOR FIELD CONCRETE:
I.) 5,000 PSI (MIN.) NORMAL WEIGHT FOR ALL CAST-IN-PLACE CONCRETE FOUNDATIONS, COLUMNS, BASEMENT WALLS
II.) 4,000 PSI (MIN.) NORMAL WEIGHT FOR ALL SLABS-ON-GRADE, MECHANICAL PADS, AND CURBS.
III.) 4,000 PSI (MIN.) LIGHT-WEIGHT CONCRETE FOR ALL CAST-IN-PLACE SLABS-ON METAL DECK. (115PCF ±3PCF)
IV.) 2,000 PSI (MIN.) NORMAL WEIGHT FOR MUD MATS.

D2) PORTLAND CEMENT — ASTM C150, TYPE II. WATER CEMENT RATIO AS REQUIRED FOR DESIGN STRENGTH.

D3) AGGREGATE — NORMAL WEIGHT: ASTM C33, WITH MAXIMUM SIZE OF 1 IN. LIGHT WEIGHT: ASTM C330

D4) WATER — POTABLE

D5) SLUMP — 4 INCH MAXIMUM. PRIOR TO ADDITION OF ADMIXTURES.

D6) ADMIXTURES — SEE SPECIFICATIONS. ASTM C260 AIR-ENTRAINING AGENT AS REQUIRED FOR A TOTAL ENTRAINED AIR CONTENT OF 6% (±1%) FOR ALL CONCRETE EXPOSED TO FREEZING. ASTM C494 WATER REDUCING AGENT IN ALL CONCRETE. DO NOT USE CALCIUM CHLORIDE.

D7) STEEL REINFORCEMENT — ASTM A615 GRADE 60.
ASTM A185 FOR WELDED WIRE REINFORCEMENT (WWR). USE FLAT SHEETS ONLY (NO ROLLS)
PROVIDE #6 CHAIR BARS, HIGH CHAIRS, TIES, CLIPS, SLAB BOLSTERS AND OTHER ACCESSORIES WHERE NOT SPECIFIED ON THE DRAWINGS IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315 OR CRSI-WRSI MANUAL OF STANDARD PRACTICE. USE PLASTIC TIPS ON ALL CHAIRS PLACED ON THE SIDES OF CONCRETE FORMWORK.
FIELD WELDING OF CROSSING BARS ("TACK" OR "SPOT" WELDING) IS NOT PERMITTED.
DO NOT CUT BARS OR OMIT BARS BECAUSE OF SLEEVES OR OPENINGS IN FLOORS, EXCEPT AS SPECIFICALLY DETAILED IN DRAWINGS.

D8) OPENINGS — OPENINGS, POCKETS, ETC. LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, OR WALLS, UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.

D9) REINFORCEMENT AT OPENINGS — PROVIDE 2 - #6 AT EACH SIDE OF ALL OPENINGS IN WALLS AND SLABS AND EXTEND 2 FT-6 IN. BEYOND THE OPENING OR AS DETAILED, EXCEPT VERTICAL BARS AT SIDES OF OPENINGS IN WALLS ARE TO EXTEND FROM FLOOR TO FLOOR. BARS MAY BE MOVED ASIDE AT OPENINGS OR SLEEVES, BUT DO NOT CUT OR OMIT.

D10) MINIMUM CONCRETE COVER

CONCRETE PLACED AGAINST EARTH:	3 IN.
SLABS-ON-GRADE BOTTOM:	1-1/2 IN.
SLABS-ON-GRADE TOP:	1 IN.
SLABS-ON-GRADE TOP EXPOSED TO WATER OR WEATHER:	2 IN.
FORMED CONCRETE EXPOSED TO EARTH, WATER OR WEATHER:	2 IN.
FORMED SLABS, TOP AND BOTTOM:	1 IN.
INTERIOR FACES OF WALLS:	1 IN.
COLUMNS OR PIERS (MAIN REINFORCEMENT):	1-1/2 IN.

D11) WALLS AND GRADE BEAMS — PLACE WALLS AND GRADE BEAMS IN LEVEL, FULL HEIGHT LIFTS WITH CONSTRUCTION JOINTS WHERE INDICATED ON ARCHITECTURAL AND STRUCTURAL DRAWINGS. PROVIDE OPENINGS FOR WATER, MECHANICAL, ELECTRICAL, AND OTHER SERVICES AS REQUIRED. PROVIDE KEYS AND DOWELS AT ALL CONSTRUCTION JOINTS.

D12) SPLICING OF REINFORCEMENT — AS SHOWN IN TABLE ON THIS SHEET, BUT NOT LESS THAN 40 BAR DIAMETERS FOR SLABS AND BEAM BOTTOM BARS, AND NOT LESS THAN 48 BAR DIAMETERS FOR WALLS AND BEAM TOP STEEL. PROVIDE A LAP OF 8 IN OR 1-1/2 SPACES, WHICHEVER IS LARGER, FOR WWF. TIE WIRES TOGETHER AT LAP.

D13) MINIMUM REINFORCEMENT — REINFORCE ALL WALLS LESS THAN 8" THICK WITH AT LEAST #4 @ 12 IN. EACH WAY EACH FACE AND 2 - #6 EACH EDGE, UON.
REINFORCE ALL WALLS 8" TO 12" THICK WITH AT LEAST #5@12" O.C., E.W., E.F. W/ 2-#7 EACH EDGE, UON.
REINFORCE ALL WALLS THICKER THAN 12" WITH AT LEAST #6@12" O.C., E.W., E.F. W/ 2-#8 EACH EDGE, UON.
IN SLABS, PROVIDE AT LEAST 0.0018 TIMES THE AREA OF CONCRETE IN EACH DIRECTION.
REINFORCE ALL SLAB-ON-GRADE WITH MINIMUM W5xW5-6x6, UON ON PLANS.

D14) SHOP DRAWINGS — SUBMIT FOR ENGINEER'S APPROVAL COMPLETE BENDING AND PLACING DETAILS OF ALL REINFORCING STEEL INCLUDING WELDED WIRE REINFORCEMENT, INDICATING POSITION OF SPLICES. INCLUDE ACCESSORY DRAWINGS. INCLUDE PRECISE LOCATIONS OF ALL SLEEVES CAST INTO CONCRETE TO ACCOMMODATE PLUMBING AND ELECTRICAL WORK.

D15) STANDARD SPECIFICATIONS — COMPLY WITH THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE:

ACI 301	STRUCTURAL CONCRETE FOR BUILDINGS
ACI 302	CONCRETE FLOOR AND SLAB CONSTRUCTION
ACI 304	MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE
ACI 305	HOT WEATHER CONCRETING
ACI 306	COLD WEATHER CONCRETING
ACI 315	DETAILING REINFORCING STEEL
ACI 318	GENERAL DESIGN OF ITEMS NOT OTHERWISE SPECIFIED
ACI 347	FORMWORK
CRSI	MANUAL OF STANDARD PRACTICE

D16) CONSTRUCTION JOINTS — PROVIDE KEYS AND DOWELS AT ALL CONSTRUCTION JOINTS. PROVIDE DOWELS WITH AN AREA EQUAL TO THE WALL OR SLAB REINF, BUT NOT LESS THAN 0.003 TIMES THE CONCRETE CROSS SECTIONAL AREA AT THE CONSTRUCTION JOINT. SUBMIT THE PROPOSED LOCATION OF CONSTRUCTION JOINTS TO THE DESIGNER FOR APPROVAL. MAXIMUM SPACING OF CONSTRUCTION JOINTS TO BE 60 FT. FOR WALLS AND STRUCTURAL FLOORS AND 80 FT. FOR SLABS ON GRADE.

D17) FOUNDATION DOWELS — PROVIDE HOOKED DOWELS TO MATCH SIZE AND SPACING OF LONGITUDINAL BARS IN WALLS UON.

D18) SURFACE TREATMENT — ROUGHEN ALL EXISTING CONCRETE SURFACES COMMON WITH NEW CONCRETE TO AN AMPLITUDE OF 1/4" (MIN.).

D19) STRUCTURAL TESTING & INSPECTION — A MINIMUM OF THREE (3) CYLINDERS SHALL BE TAKEN NOT LESS THAN ONCE A DAY NOR LESS THAN ONCE FOR 100 CUBIC YARDS OF CONCRETE FOR COMPRESSIVE STRENGTH TESTING. TESTING IS TO BE PAID FOR BY THE OWNER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AT LEAST 24 HOURS PRIOR TO CASTING ANY CONCRETE SO THAT STRUCTURAL TESTING & INSPECTION CAN BE COORDINATED. ABSOLUTELY NO CONCRETE IS TO BE CAST PRIOR TO REBAR BEING INSPECTED AND APPROVED.

D20) EMBEDDED ITEMS — ALL CONDUIT, PIPING, DUCTWORK, ETC. TO BE EMBEDDED WITHIN CIP SLABS, WALLS, BEAMS OR COLUMNS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS AND SHALL BE SUBJECT TO APPROVAL BY THE EOR. APPROVED EMBEDDED ITEMS SHALL BE LOCATED AND EVENLY DISTRIBUTED IN SUCH A MANNER TO PREVENT ADVERSELY AFFECTING THE STRENGTH OF CONCRETE MEMBERS.

D21) FOOTING SUBGRADE — NO CONCRETE FOOTING SHALL BE POURED UNTIL SUBGRADE FOR SAME HAS BEEN APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

D22) BASE PLATE GROUTING — 8000 PSI 28-DAY COMPRESSIVE STRENGTH NON-SHRINK GROUT.

D23) CURING COMPOUNDS — DO NOT USE CURING COMPOUNDS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OF RECORD (EOR).

D24) SHEAR KEYS — UNLESS OTHERWISE NOTED ON THE DRAWINGS, SHEAR KEYS BELOW WALL BOTTOMS SHALL BE 4" WIDE BY 3" DEEP. SHEAR KEYS AT WALL TOPS SHALL BE 3" WIDE BY 2" DEEP. DO NOT USE EPS MATERIAL FOR FORMING KEYS UNLESS IT IS FIRMLY ATTACHED TO RIGID BACKUP MATERIALS.

D25) HOUSEKEEPING PADS AND CURBS — PADS AND CURBS MAY BE SHOWN ON PLAN IN CERTAIN INSTANCES FOR REFERENCE ONLY. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS AND COORDINATE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND LOCATION. USE SAME CONCRETE AS BASE SLAB U.O.N. MAXIMUM PAD THICKNESS IS 6 INCHES, U.O.N.

D26) EPOXY DOWELS AND ANCHORS — USE HILTI HIT RE500 EPOXY ADHESIVE ANCHOR SYSTEM, OR APPROVED EQUAL, FOR ALL EPOXY DOWELS AND ADHESIVE ANCHORS.

E – STRUCTURAL STEEL

E1) STRUCTURAL SHAPES — WIDE FLANGE SHAPES AND CHANNELS: ASTM A992, OR ASTM A572 GRADE 50 (Fy = 50,000 PSI) ANGLES, BARS AND PLATES: ASTM A36 UON

E2) HOLLOW STRUCTURAL SECTIONS (HSS) — ASTM A500 - GRADE B (FY = 46,000 PSI).

E3) PIPE — ASTM A53 TYPE E GRADE B OR ASTM A501

E4) BOLTED CONNECTIONS — FOR BOLTED BEAM CONNECTIONS NOT SHOWN ON THE DRAWINGS, PROVIDE THE FOLLOWING MINIMUM NUMBER OF 3/4" DIAMETER A325X OR A490X BOLTS: 2 FOR W8 AND W10 BEAMS, 3 FOR W12 AND W14 BEAMS, 4 FOR W16 AND W18 BEAMS, AND 5 FOR W21 AND W24 BEAMS. PROVIDE ANGLES OR PLATES WITH A THICKNESS TO DEVELOP THE CAPACITY OF THE BOLTS PROVIDED. TENSION CONTROL BOLTS ARE ACCEPTABLE. SEE TYPICAL STEEL DETAILS

E5) ANCHOR BOLTS — ASTM F1554 GRADE 36 BOLTS UON ON THE DRAWINGS.

E6) WELDING ELECTRODES — CONFORM TO AWS SPECIFICATIONS FOR ELECTRODES BASED ON WELDING PROCESS AND THE TYPE AND GRADE OF STEEL. SEE SPECIFICATIONS FOR ADDITIONAL ELECTRODE REQUIREMENTS FOR BEAM-TO-COLUMN WELDS AND COLUMN SPLICES THAT ARE PART OF THE MOMENT FRAMES.

E7) ERECTION — PROVIDE ANCHOR BOLTS, STEEL WEDGES, THREADED SCREWS OR SHIMS TO SUPPORT AND PLUMB ALL COLUMNS. GROUT SOLID UNDER BASE PLATES IMMEDIATELY AFTER COLUMNS ARE PLUMB. PROVIDE BEARING PLATES AND WALL ANCHORS OR ANCHOR BOLTS FOR ALL BEAMS RESTING ON CONCRETE AND ALL OTHER NECESSARY CONNECTING HARDWARE. SET ANCHOR BOLTS USING TEMPLATE. DO NOT FIELD CUT OR FIELD MODIFY ANY STRUCTURAL STEEL WITHOUT PRIOR WRITTEN APPROVAL BY ARCHITECT FOR EACH SPECIFIC CASE.

E8) PAINT — SHOP PRIME ALL STEEL NOT ENCASED IN CONCRETE OR TO BE FIREPROOFED. FOR ALL EXPOSED STEEL, USE A THREE COAT PAINT SYSTEM WITH A ZINC-RICH PRIMER, AN EPOXY INTERMEDIATE COAT, AND A PROTECTIVE TOP COAT, OR HOT-DIP GALVANIZE THE STEEL AFTER FABRICATION IS COMPLETE.

E9) FABRICATION — SHOP FABRICATE TO GREATEST EXTENT POSSIBLE BY WELDING INCLUDING BEAM STIFFENERS, COLUMN CAPS AND BASE PLATES, HOLES AND CONNECTIONS. SUBMIT COMPLETE SHOP DRAWINGS, FROM FIELD DIMENSIONS, FOR DESIGNER'S APPROVAL. DO NOT START FABRICATION OF STRUCTURAL STEEL MEMBERS UNTIL THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER OF RECORD (EOR).

E10) STANDARD SPECIFICATIONS — COMPLY WITH THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF :
AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN.
AISC LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR STEEL HOLLOW STRUCTURAL SECTIONS.
SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
AWS D1.1 STRUCTURAL WELDING CODE - STEEL.

E11) LINTELS — FOR OPENINGS IN MASONRY WALLS NOT OTHERWISE PROVIDED FOR ON ARCHITECT'S DRAWINGS, PROVIDE LOOSE LINTEL PER SCHEDULE IN TYPICAL STEEL DETAILS. STEEL ANGLES IN PAIRS SHALL BE PLUG WELDED TOGETHER EVERY 12 INCHES. PROVIDE A MINIMUM OF SIX INCHES OF BEARING FOR ALL LINTELS. ALL EXTERIOR LINTELS TO BE HOT-DIPPED GALVANIZED.

E12) FIREPROOFING — FIREPROOF BEAMS AND COLUMNS AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS.

E13) FRAMING — BEAMS EQUALLY SPACED U.O.N.
CANTILEVER BEAMS ARE SAME SIZE AS BACKSPAN U.O.N.
U.O.N. ON PLANS, MINIMUM BOLT SIZE SHALL BE 3/4" DIAMETER.
ALL SHOP CONNECTIONS SHALL BE HIGH STRENGTH BOLTED OR WELDED.
ALL ENDS OF COLUMNS AT SPLICES AND OTHER SURFACES IN CONTACT ON BEARING CONNECTIONS SHALL BE SQUARE CUT TO COMPLETE TRUE BEARING.
U.O.N., ALL BEAM TO BEAM MOMENT CONNECTIONS SHALL DEVELOP THE STRENGTH OF THE SMALLER MEMBER BEING CONNECTED.
CONNECTION FORCES SHOWN ON DRAWINGS ARE SERVICE FORCES U.O.N. SHEAR REACTIONS SHOWN ON PLAN AT ONE BEAM END ARE THE SAME AT BOTH BEAM ENDS. DO NOT TAKE 33% ALLOWABLE STRESS INCREASE.
INCLUDE FULL DEPTH SHEAR CONNECTION IN DESIGN OF BEAMS WITH AXIAL FORCE SHOWN ON PLAN IN ADDITION TO THE FLANGE CONNECTIONS REQUIRED TO TRANSFER THE LOADS.
GALVANIZED NUTS AND BOLTS TO BE MATCHED ASSEMBLIES.

E14) SLIP CRITICAL CONNECTIONS
- BOLTED MOMENT CONNECTIONS
- TRUSS MEMBER CONNECTIONS
- AS REQUIRED BY DETAILS AND SECTIONS

F – METAL DECK AND SHEAR STUDS

F1) METAL DECK — PROVIDE METAL DECK MADE FROM GALVANIZED STEEL WITH MINIMUM YIELD STRENGTH OF 33 KSI. SEE DRAWINGS AND SPECIFICATIONS FOR GAUGE AND PROFILE. PROVIDE SHEET METAL POUR STOPS WITH THICKNESS BASED ON SDI CRITERIA (SDI PUBLICATION #29); 14 GAUGE MIN. THICKNESS.

F2) SHEAR STUDS — PROVIDE HEADED TYPE STUDS WHICH CONFORM TO ASTM A108 GRADE 1015 OR 1020 COLD FINISHED CARBON STEEL. THE NUMBER OF SHEAR STUDS REQUIRED PER BEAM IS INDICATED BY (#) ON THE DRAWINGS. PROVIDE 3/4 IN. DIAMETER BY 5 IN. LONG STUDS UON.

F3) STUD PLACEMENT — SPACE STUDS UNIFORMLY ALONG LENGTH OF BEAM/BAY. PROVIDE A MINIMUM OF 1 IN. BETWEEN THE EDGE OF ANY STUD AND THE FACE OF CONCRETE, A METAL DECK RIB OR SIMILAR DISCONTINUITY. WHERE BEAMS ON PLAN ARE MISSING A SHEAR STUD DESIGNATION, PROVIDE THE FOLLOWING MINIMUM NUMBER OF SHEAR STUDS:
A) BEAMS WITH MOMENT CONNECTIONS AT EITHER (OR BOTH) ENDS: 1 STUD PER FT
B) ALL OTHER BEAMS: 1 STUD PER 2 FT

F4) STANDARD SPECIFICATIONS — AISC SPECIFICATIONS PER STRUCTURAL STEEL SECTION ABOVE,
AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS,
SDI CODE OF RECOMMENDED PRACTICE AND SPECIFICATIONS FOR COMPOSITE STEEL FLOOR DECK AND
AWS STRUCTURAL WELDING CODE - STEEL AND STRUCTURAL STEEL WELDING CODE - SHEET STEEL.

F5) REINFORCEMENT — WHERE REQUIRED, DECK BOTTOM REINFORCEMENT SHALL BE CONTINUOUS IN EACH BAY.

F6) EMBEDDED CONDUIT AND PIPE — MAXIMUM OUTER DIAMETER 1 IN., SPACE NO CLOSER THAN 3 DIAMETERS ON CENTER. MINIMUM CONCRETE COVER: 3/4 IN. DO NOT USE ANY ALUMINUM PIPE OR CONDUIT. ADD SUBFRAMING AS DIRECTED BY ENGINEER WHERE THESE PARAMETERS CANNOT BE SATISFIED.

F7) SHORING — COMPOSITE BEAM DESIGN ASSUMES UNSHORED DECK CONSTRUCTION. DECK DESIGN REQUIRES SHORING OF ALL SINGLE SPAN SHEETS, UNLESS SPECIFICALLY APPROVED BY THE EOR.

F8) EXPANSION ANCHORS — SET EXPANSION ANCHORS AT COMPOSITE DECK RIBS ONLY. DO NOT CUT ANY REINFORCEMENT IN COMPOSITE DECK RIBS. USE HILTI KWIK BOLT III EXPANSION ANCHOR (KB III), OR APPROVED EQUAL, FOR ALL EXPANSION ANCHORS.

G – CONCRETE UNIT MASONRY

G1) DESIGN STRENGTH — F'M = 2000 PSI

G2) BLOCK — HOLLOW LOAD BEARING MASONRY UNITS, ASTM C90. 4000 PSI MINIMUM STRENGTH. ALL BLOCK TO BE TWO CORE TYPE.

G3) WATER — POTABLE

G4) MASON'S SAND — ASTM C144, FINENESS MODULUS 2.0 TO 2.5

G5) HYDRATED LIME — ASTM C207, TYPE S

G6) PORTLAND CEMENT — ASTM C150, TYPE I OR II

G7) MORTAR — ASTM C270, TYPE S. PROPORTION MIX BY VOLUME 1 : 1 1/2 : 3 (PORTLAND CEMENT : HYDRATED LIME : MASON'S SAND)

G8) REINFORCEMENT & GROUTING — REINFORCING BARS: ASTM A615 GRADE 60
JOINT REINFORCING: DUR-O-WAL STANDARD TRUSS FOR 8 IN. WALLS AND DUR-O-WAL EXTRA HEAVY TRUSS FOR 12 IN. WALLS
GROUT ALL REINFORCED VERTICAL CORES AND ANY UNREINFORCED CORES INDICATED TO RECEIVE GROUTING ON THE DRAWINGS. MAXIMUM GROUT HEIGHT; 1 STORY.
MINIMUM REINFORCEMENT: UON ON THE DRAWINGS, ALL LOAD-BEARING CMU WALLS ARE TO BE REINFORCED HORIZONTALLY WITH JOINT REINFORCING IN EVERY OTHER COURSE, A BOND BEAM AT 8 FT O.C. WITH ONE CONT. #5 FOR 8 IN. WALLS OR ONE CONT. #6 FOR 12 IN. WALLS. VERTICALLY PROVIDE ONE #6 AT 3 FT - 4 IN. O.C. FOR 8 IN. WALLS AND ONE #6 AT 2 FT - 8 IN. O.C. FOR 12 IN. WALLS.
SPLICES: MINIMUM OF 48 BAR DIAMETERS.

G9) SHOP DRAWINGS — SUBMIT FOR DESIGNER'S APPROVAL COMPLETE BENDING AND PLACING DETAILS OF ALL REINFORCING STEEL INDICATING POSITION OF SPLICES AND LOCATION OF REINFORCEMENT AND GROUT IN THE MASONRY.

G10) STANDARD SPECIFICATIONS — COMPLY WITH THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE ACI 530 / ASCE 5 / TMS 402-02 AND ACI 530.1 / ASCE 6 / TMS 602-02.

General Notes:

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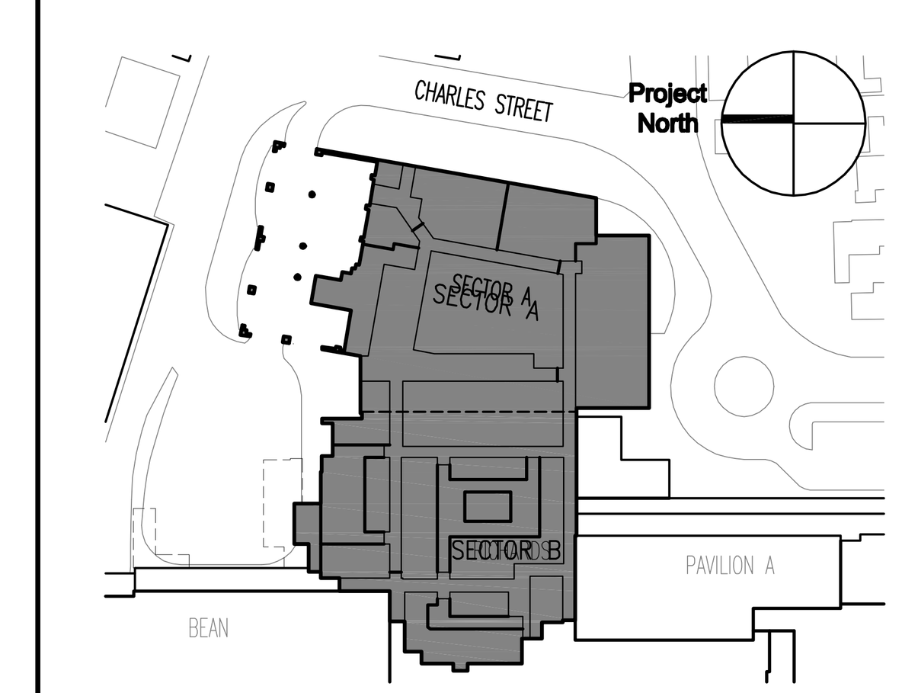
MARK	ISSUE DATE	DESCRIPTION
BID	12/14/07	BID SET

Issue Log



Key Plan

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