LOADS AND CODES

1. THE DRAWINGS, TO THE BEST OF THE ENGINEER'S KNOWLEDGE, COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING BUILDING CODE: IBC (2003)/ASCE 7-02.

2. DESIGN LOADS:

a. ROOF:

LIVE LOAD:	18 PSF

b. FLOORS:

UNIFORM LIVE LOAD (ASSEMBLY):	100 PSF
UNIFORM LIVE LOAD (MECHANICAL):	200 PSF
UNIFORM LIVE LOAD (LIGHT STORAGE):	125 PSF
UNIFORM LIVE LOAD (ELEVATOR MACHINE RM):	150 PSF
UNIFORM LIVE LOAD (GENERATOR ROOM):	250 PSF
UNIFORM LIVE LOAD (KITCHENS):	150 PSF
BHS STANDARD CONVEYOR LOAD:	100 PLF
BHS OVERSIZED CONVEYOR LOAD:	150 PLF
BHS CATWALK/PLATFORM LOAD:	65 PLF

c. SNOW LOAD:

GROUND SNOW LOAD (Pg):	60 PSF
FLAT ROOF SNOW LOAD (Pf):	47 PSF
SNOW EXPOSURE FACTOR (Ce):	1.0
SNOW IMPORTANCE FACTOR (I):	1.1
THERMAL FACTOR (Ct):	1.0

d. WIND:

BASIC WIND SPEED (3 SECOND GUST):	100 MPH
WIND IMPORTANCE FACTOR:	1.15
BUILDING TYPE:	RIGID & ENCLOSED
WIND EXPOSURE:	C (MWFRS)
WIND EXPOSURE:	C (COMPONENTS & CLADDING)
INTERNAL PRESSURE COEFFICIENT:	±0.18
C&C DESIGN WIND PRESSURE:	
C&C WALL LOADS	±47 PSF @ EDGE ±31 PSF @ FIELD
C&C ROOF LOADS	±96 PSF @ CORNERS ±70 PSF @ EDGES ±44 PSF @ FIELD

e. SEISMIC:

BUILDING CATEGORY	III
SEISMIC IMPORTANCE FACTOR:	1.25
SEISMIC USE GROUP:	II
SPECTRAL RESPONSE COEFFICIENTS:	SDS: 0.297
SDI: 0.112	
SITE CLASS:	C
SEISMIC DESIGN CATEGORY:	B
BASIC SEISMIC-FORCE-RESISTING SYSTEM:	NON-DETAILED STEEL SYSTEM
RESPONSE MODIFICATION FACTOR (R):	3.0
DEFLECTION AMPLIFICATION FACTOR (Cd):	3.0
DESIGN BASE SHEAR (V):	0.06 x W
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE

GENERAL

1. THESE NOTES CONTAIN IMPORTANT PROJECT SPECIFIC INFORMATION. THE CONTRACTOR AND ITS SUBCONTRACTORS (THE CONTRACTORS) MUST THOROUGHLY READ, UNDERSTAND, AND AGREE TO THESE NOTES. ANY QUESTIONS SHALL BE DIRECTED TO THE ENGINEER/ARCHITECT.
2. REFERENCED STANDARDS REFER TO THE LATEST EDITION IN FORCE AT THE TIME THE DOCUMENTS ARE ISSUED FOR BID.
3. THE CONTRACTORS ARE SOLELY RESPONSIBLE FOR JOB SAFETY, CONSTRUCTION PROCEDURES, COORDINATION OF THEIR WORK WITH OTHER TRADES AND ON-SITE SECURITY.
4. THE BIDDERS ARE REQUIRED TO VISIT THE SITE AND DETERMINE ALL EXISTING CONDITIONS AND LIMITATIONS PRIOR TO SUBMITTING THEIR PROPOSALS. FAILURE TO DO SO WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIAL OR PERFORMING ANY WORK THAT MAY BE REQUIRED IN ACCORDANCE WITH THE DOCUMENTS AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTORS SHALL VERIFY ALL RELEVANT EXISTING CONDITIONS PRIOR TO COMMENCING ANY OTHER WORK. ANY DISCREPANCIES BETWEEN THE NOTES, PLANS, DETAILS, SPECIFICATIONS AND EXISTING CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ARCHITECT'S ATTENTION BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
6. CONTRACTORS SHALL COORDINATE WORK WITH THE OWNER TO MINIMIZE DISRUPTION TO THE OWNER'S OPERATIONS.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SHEETING, SHORING, AND BRACING DURING CONSTRUCTION.
8. THE CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS. IN ANY CASE OF CONFLICT BETWEEN THE NOTES, DRAWINGS, DETAILS AND SPECIFICATIONS, THE MOST RIGID (MOST COSTLY) REQUIREMENTS SHALL BE ASSUMED FOR BIDDING PURPOSES BUT ANY CONFLICTS MUST BE RESOLVED IN WRITING BY THE ENGINEER BEFORE THE WORK IS IMPLEMENTED.
9. THE CONTRACTOR SHALL CONTACT ALL INVOLVED UTILITY COMPANIES AND LOCATE ALL UNDERGROUND UTILITIES IN THE VICINITY OF THE WORK BEFORE PROCEEDING WITH ANY EXCAVATION WORK.
10. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.
11. SHOP DRAWINGS FOR ALL MATERIALS ARE TO BE SUBMITTED AND REVIEWED PRIOR TO THE START OF FABRICATION. ONE PRINT OF SHOP DRAWINGS WILL BE RETURNED THROUGH THE ARCHITECT.
12. MINOR DETAILS OR INCIDENTAL ITEMS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR A PROPER AND COMPLETE INSTALLATION SHALL BE INCLUDED AS REQUIRED.
13. THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. INCONSISTENCIES BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
14. PROVIDE AND INSTALL NECESSARY MATERIAL TO CONNECT ELEVATOR SUPPORT BEAMS AND GUIDE RAILS. LOCATION AND SIZE OF MEMBERS AND ANY INSERTS REQUIRED SHALL BE DETERMINED BY THE ELEVATOR MANUFACTURER.
15. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
16. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE ONLY AFTER THE STRUCTURAL WORK CONTAINED IN THE DRAWINGS IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
17. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.
18. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF SHORING, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE. NO PERFORMANCE OF THE WORK, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER.
19. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
20. CONTRACTORS SHALL MAKE NO DEVIATION FROM THE DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE ENGINEER/ARCHITECT.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP ON A DAILY BASIS AND SHALL REMOVE AND DISPOSE OF ALL CONSTRUCTION DEBRIS IN THE VICINITY OF THE WORK.
22. WORK NOT INDICATED ON THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES OR IS AN ACCEPTED GENERAL CONSTRUCTION STANDARD SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.
23. WHERE SPECIAL INSPECTIONS ARE REQUIRED BY THE BUILDING OFFICIAL, THE OWNER SHALL CONTRACT DIRECTLY WITH AN APPROVED IMPARTIAL AGENCY. THE CONTRACTOR SHALL COORDINATE THE SPECIAL INSPECTION PHASES OF THE WORK AND SHALL NOT CONCEAL WORK UNTIL THE INSPECTION IS COMPLETE AND APPROVED

FOUNDATIONS

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REPORT PREPARED BY HALEY AND ALDRICH DATED NOVEMBER 11, 2008 (FILE NO. 35024-001). THE RECOMMENDATIONS OF THE REPORT WERE THE BASIS OF DESIGN.
2. FOUNDATIONS ARE DESIGNED TO BEAR ON UNDISTURBED SOIL OR PROPERLY COMPACTED SUITABLE FILL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 3,000 PSF. ACTUAL BEARING CAPACITY SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCEMENT. ADJUST THE FOOTING ELEVATION AND/OR SIZE AS DIRECTED BY THE ENGINEER. IF SUITABLE BEARING CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, NO CONCRETE FOUNDATIONS SHALL BE PLACED UNTIL THE SUBGRADE HAS BEEN APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF ALL EXCAVATION SLOPES. WHERE NECESSARY, SHEETING AND SHORING OF EXCAVATIONS (DESIGNED BY PROFESSIONAL ENGINEER HIRED BY CONTRACTOR) SHALL BE PROVIDED WITH ALL TIE-BACKS AND BRACING.
4. ALL FILL AND BACKFILL PLACED IN LOOSE LIFTS SHALL BE COMPACTED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND SPECIFICATION SECTION 312000 (EARTH MOVING).
5. USE ONLY HAND OPERATED WALK BEHIND VIBRATORY COMPACTION EQUIPMENT WITHIN 2' OF FOUNDATIONS AND WALLS TO PROTECT FROM DAMAGE. PLACE FILL IN THIS AREA IN 8" LIFTS (UNO).
6. ALL SUBGRADE PREPARATION AND FILL PLACEMENT SHALL BE CONDUCTED UNDER THE OBSERVATION AND INSPECTION OF THE OWNER'S GEOTECHNICAL ENGINEER. FIELD DENSITY TESTING SHALL BE PERFORMED BY THE GEOTECHNICAL ENGINEER AS REQUIRED TO ASSURE THE QUALITY OF THE FILL.
7. STEP BOTTOM OF FOOTING ELEVATION A MAXIMUM OF TWO HORIZONTAL TO ONE VERTICAL.
8. PREPARE SUBGRADE TO SLOPE AWAY FROM ALL BUILDINGS (2% MINIMUM) AND PROTECT FROM FREEZING.
9. DEWATER EXCAVATIONS AND PROTECT AS REQUIRED TO MAINTAIN REQUIRED SOIL BEARING CAPACITY. ALL SOILS THAT HAVE INSUFFICIENT BEARING CAPACITY DUE TO EXCESSIVE MOISTURE SHALL BE REMOVED AND REPLACED WITH PROPERLY COMPACTED ENGINEERED FILL.
10. PROTECT ADJACENT STRUCTURES AND FOUNDATIONS FROM DAMAGE DURING CONSTRUCTION OF NEW FOUNDATIONS.
11. PER GEOTECH REPORT, PROVIDE A MINIMUM OF 12" CRUSHED STONE UNDER ALL SLABS ON GRADE IN NEW BUILDING AREA, AND 12" OF COMPACTED GRANULAR FILL UNDER NEW SLAB ON GRADE IN EXISTING BUILDING AREA (UNO).
12. THE SLAB ON GRADE HAS BEEN DESIGNED ASSUMING A SUBGRADE MODULUS OF K = 60 pci (BASED ON FIRM UNDISTURBED SUBGRADE CONDITIONS) AND UNIFORM LIVE LOADING OF 100 PSF. THE DESIGNER IS NOT RESPONSIBLE FOR DIFFERENTIAL SETTLEMENT, SLAB CRACKING OR OTHER FUTURE DEFECTS RESULTING FROM UNSUITABLE SUBGRADE CONDITIONS.
13. EXTEND BOTTOM OF EXTERIOR FOOTINGS AT LEAST 4.5 FEET BELOW THE FINAL EXTERIOR GRADE OR PIN TO LEDGE FOR PROTECTION AGAINST FROST, UNO.
14. NO FILL FOR BUILDING SUPPORT SHALL BE PLACED UNTIL SUBGRADES HAVE BEEN OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
15. PROVIDE FOUNDATION DRAINAGE AROUND THE PERIMETER AND BENEATH THE STRUCTURE. PROVIDE POSITIVE GRAVITY FLOW TO PROPERLY DESIGNED OUTLET. REFER TO DRAWINGS, AND SPECIFICATIONS AND GEOTECH REPORT FOR ADDITIONAL INFORMATION.
16. SOILS EXPOSED AT THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITION, SUCH AS DISTURBANCE FROM RAIN OR FROST. SURFACE RUNOFF SHOULD BE DRAINED AWAY FROM THE EXCAVATIONS AND NOT BE ALLOWED TO POND. FOUNDATION EXCAVATIONS SHOULD BE ADEQUATELY PROTECTED FROM RAINFALL OR FREEZING CONDITIONS. GROUNDWATER SHOULD BE ANTICIPATED FOR EXCAVATIONS AND APPROPRIATE DEWATERING MEASURES SHALL BE EMPLOYED.
17. OVEREXCAVATION WILL BE REQUIRED TO REMOVE PREVIOUSLY PLACED FILL MATERIAL (ANTICIPATED BENEATH PORTIONS OF SKY BRIDGE) OR MEDIUM STIFF CLAY SOILS (ANTICIPATED BENEATH WESTERNMOST CORNER OF ADDITION) ENCOUNTERED AT FOUNDATION SUBGRADE LEVEL. THIS WORK SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL REFER TO SPECIFICATION SECTION 023000, SUBSURFACE INVESTIGATION, TO ESTIMATE REMOVAL DEPTHS/VOLUMES AND SPECIFICATION SECTION 312000, EARTH MOVING, FOR EXCAVATION/BACKFILL REQUIRED.

CONCRETE

1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)," AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301)." GENERAL CONTRACTOR, CONSTRUCTION MANAGER AND/OR OWNER'S CLERK OF THE WORKS SHALL HAVE AVAILABLE ON SITE AT ALL TIMES A COPY OF ACI "FIELD REFERENCE MANUAL SP-15".
2. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE "ACI DETAILING MANUAL" (ACI 315).
3. SUBMIT CONCRETE MIX DESIGNS TO THE ENGINEER FOR REVIEW. NO CONCRETE SHALL BE PLACED WITHOUT THE DESIGN MIX BEING REVIEWED BY THE ENGINEER/ARCHITECT.
4. HORIZONTAL FOUNDATION WALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL PIERS.
5. PLACE (2) #5 BARS IN EACH FACE AROUND ALL WALL AND SLAB OPENINGS AND DIAGONALLY AT EACH CORNER OF THE OPENING. EXTEND BARS 2'-0" MINIMUM BEYOND OPENINGS.
6. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" (UNO).
7. LAP REINFORCEMENT A MINIMUM OF 36 BAR DIAMETERS UNLESS OTHERWISE NOTED.
8. ALL ADJOINING SURFACES NOT CAST MONOLITHICALLY SHALL BE ROUGHENED TO 1/4" AMPLITUDE FOR THE ENTIRE JOINED SURFACE PER ACI RECOMMENDATIONS. COAT SURFACES TO BE JOINED WITH APPROVED BONDING AGENT.
9. PROVIDE KEYWAYS AT ALL SLAB AND WALL CONSTRUCTION JOINTS (UNO).
10. HORIZONTAL JOINTING WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. VERTICAL JOINTS SHALL OCCUR AT CENTER OF SPANS AT LOCATIONS APPROVED BY THE ENGINEER.
11. SLAB-ON-GRADE SHALL HAVE CONSTRUCTION AND/OR CONTRACTION JOINTS AT EACH COLUMN LINE IN EACH DIRECTION. ADDITIONAL JOINTS SHALL BE PROVIDED SUCH THAT THE MAXIMUM SPACING BETWEEN JOINTS SHALL NOT EXCEED 16' AND SHALL NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5 TO 1.
12. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PROTECT FINISHED SURFACES. PROVIDE ADEQUATE PROTECTION AGAINST OVEREXPOSURE TO SUN, WIND, OR RAIN.
13. WATER SHALL NOT BE ADDED TO THE CONCRETE AT THE JOBSITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE CONCRETE SUPPLIER TO ENSURE PUMPABLE AND WORKABLE MIXES WITHOUT THE ADDITION OF WATER AT THE JOBSITE. THE USE OF CONCRETE ADDITIVES SHALL BE AT THE OPTION OF THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER/ARCHITECT. ALL MANUFACTURER'S RECOMMENDATIONS FOR THE USE OF ADDITIVES SHALL BE FOLLOWED. THE USE OF CALCIUM E CHLORIDE OR OTHER CHLORIDE BEARING SALTS ARE NOT PERMITTED.
14. PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY FLOATING AND TROWELING UNTIL THE CONCRETE HAS LOST SURFACE WATER SHEEN. FINISHING OF SLAB SURFACES SHALL COMPLY WITH ACI RECOMMENDATIONS ACI 302 AND 304.
15. PROVIDE 7 DAY CURING IMMEDIATELY AFTER FINISHING USING APPROVED CURING METHOD.
16. CONCRETE EXPOSED TO WEATHER SHALL HAVE 6% ±1-1/2% AIR ENTRAINMENT.
17. CONCRETE SHALL BE PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.
18. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR II. AGGREGATES SHALL CONFORM TO ASTM C33 CLASS 3M.
19. READY-MIX CONCRETE MUST COMPLY WITH THE REQUIREMENTS OF ASTM C94, AND AS SPECIFIED HEREIN. PROVIDE BATCH TICKET FOR EACH BATCH DISCHARGED AND USED IN WORK, INDICATING PROJECT NAME, MIX TYPE, MIX TIME, BATCH QUANTITY, AND PROPORTIONS OF INGREDIENTS. JOB-SITE MIXING WILL NOT BE PERMITTED.
20. GROUT SHALL BE NONSHRINKABLE CONFORMING TO ASTM C827 AND SHALL HAVE A COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI. PREGROUTING OF BASE PLATES IS NOT PERMITTED.
21. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED (U.N.O.).
22. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND A497.
23. CONCRETE MIX DESIGN:
    a. STRENGTH: 4000 PSI NW @28 DAYS FOR FOUNDATIONS
    b. STRENGTH: 4500 PSI NW @28 DAYS FOR EXTERIOR SLAB ON GRADE
    c. STRENGTH: 3000 PSI NW @28 DAYS FOR INTERIOR SLAB ON GRADE (NON POLISHED)
    d. STRENGTH: 3500 PSI NW @28 DAYS FOR INTERIOR SLAB ON GRADE (POLISHED)
    e. STRENGTH: 3500 PSI LW @28 DAYS FOR SUSPENDED SLABS
24. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED. VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE WORK SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR.
25. PROVIDE PVC SLEEVES WHERE PIPES PASS THROUGH EXTERIOR CONCRETE, OR SLABS, UNLESS SHOWN OTHERWISE.
26. COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. PROVIDE NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION.
27. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
    a. SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH: 3"
    b. FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO WEATHER: 2"
    c. SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER: 1½"
28. REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS AND AT INTERSECTIONS. PROVIDE LAPPED BARS AT SPLICES OR HOOKED BARS AT DISCONTINUOUS ENDS. PROVIDE TENSION LAP SPLICES PER THE SCHEDULE FOR ALL REINFORCING UNLESS OTHERWISE SHOWN ON PLAN.
29. FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS, PROVIDE SUPPLEMENTAL REINFORCING AROUND OPENING AS SHOWN ON THE CONTRACT DOCUMENTS.
30. REPAIR CONCRETE EXHIBITING VOIDS, SPALLS OR OTHERWISE DAMAGED SURFACE WITH DRY PACK OR CEMENT GROUT AND FINISH FLUSH. AT THE DISCRETION OF THE STRUCTURAL ENGINEER OR AS QUALIFIED BY TESTING, EXCESSIVE "HONEYCOMBS" THAT JEOPARDIZE THE DESIGN, SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
31. SAWCUT FLOOR SLAB CONTROL JOINTS AS SOON AS POSSIBLE BUT NO LATER THAN 6 HOURS AFTER PLACING CONCRETE. USE EARLY ENTRY DRY CUT SAWING SYSTEM WITH SKID PLATE (SOFF-CUT). SAWCUTTING THE SLABS THE NEXT DAY IS NOT ACCEPTABLE.
32. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF COMPLETION AT LEAST 24 HOURS PRIOR TO THE SCHEDULED COMPLETION OF THE INSTALLATION OF REINFORCEMENT.
33. FLOOR FLATNESS & LEVELING REQUIREMENTS FOR SLABS ARE INDICATED IN THE PROJECT SPECIFICATIONS.
34. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 305.
    COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306.
35. THE TOP OF ALL FOUNDATIONS SHALL BE TROWEL FINISHED AND SMOOTH.

STRUCTURAL STEEL

1. STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH ALL AISC REQUIREMENTS INCLUDING THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AND THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. PROVIDE WELDED STIFFENER PLATES (3/8" MIN.) ON BOTH SIDES OF THE WEB AT ALL POINTS OF CONCENTRATED LOADS.
3. REPAIR ALL DAMAGED GALVANIZING IN ACCORDANCE WITH ASTM A780-93A.
4. PROVIDE TEMPORARY BRACING - DESIGNED BY THE CONTRACTOR'S ENGINEER - AS REQUIRED TO RESIST ALL LATERAL LOADS UNTIL ALL PERMANENT BRACING HAS BEEN INSTALLED.
5. PROVIDE LOOSE OR HANGING LINTELS NOT SHOWN ON DRAWINGS AS REQUIRED TO COMPLETE JOB. COORDINATE WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL NOT STRUCTURAL DRAWINGS. CONTACT THE STRUCTURAL ENGINEER FOR ANY DESIGN INFORMATION REQUIRED.
6. UNLESS OTHERWISE NOTED, STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING ALL BRICK SHELF ANGLES, SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
7. DEFORMED BAR ANCHORS (D.B.A.) SHALL BE NELSON OR KSM DEFORMED BAR ANCHORS OR APPROVED EQUAL AND SHALL CONFORM TO ASTM A108. WELDING SHALL COMPLY WITH MANUFACTURERS RECOMMENDATIONS.
8. STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONFORM TO AISC'S "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL" 13th EDITION.
9. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

a. WIDE FLANGE SHAPES	ASTM A992
b. CHANNELS & ANGLES	ASTM A36
c. PLATES AND OTHER SHAPES	ASTM A36
d. SQUARE & RECTANGULAR TUBING	ASTM A500, GRADE B
e. ROUND PIPES AND TUBING	ASTM A53, GRADE B
f. ANCHOR RODS	ASTM F1554, GRADE 36
g. HEADED STUDS	ASTM A108

10. BOLTED CONNECTIONS SHALL BE BOLTED USING ASTM A325 OR A490 HIGH STRENGTH BOLTS, UNLESS NOTED OTHERWISE.
11. WELDING SHALL CONFORM TO AWS D1.1. WELDING ELECTRODES SHALL COMPLY WITH AWS REQUIREMENTS
12. THE DESIGN OF CONNECTIONS NOT SHOWN ON THE DRAWINGS SHALL BE PROVIDED BY THE FABRICATOR. CONNECTIONS SHALL BE DESIGNED FOR THE FORCES SHOWN. DESIGN CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE. SUBMIT SEALED CALCULATIONS WITH SHOP DRAWINGS
13. ALL STEEL SHALL BE FABRICATED AND SHIPPED AS SHOP PRIMED STEEL UNLESS NOTED OTHERWISE. ALTERNATE S1 = ALL STEEL SHALL BE FABRICATED AS SHOP PAINTED STEEL, UNLESS NOTED OTHERWISE.
14. STEEL MEMBERS SHALL BE CUT FROM FULL LENGTH STOCK. UNAUTHORIZED SPLICES WILL BE CAUSE FOR REJECTION
15. PROVIDE L4x4x1/4 DECK SUPPORT ANGLE AS REQUIRED AT COLUMNS WHERE STRUCTURAL MEMBERS DO NOT FRAME IN ALL FOUR DIRECTIONS.
16. SUBMIT COMPLETE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

CONCRETE MASONRY

1. ALL MASONRY WORK SHALL CONFORM TO THE ACI 530, LATEST EDITION.
2. PROVIDE STANDARD TRUSS-TYPE "DUR-O-WALL" MASONRY REINFORCING IN FIRST TWO COURSES ABOVE ALL LINTELS
3. MASONRY SHALL BE REINFORCED ON EACH SIDE OF ALL OPENINGS WITH #4 VERT. BAR. ALSO PROVIDE (2) #3 HORIZ. BARS ABOVE AND BELOW ALL MASONRY OPENINGS. REINFORCEMENT SHALL EXTEND 2'-0" BEYOND OPENING IN EACH DIRECTION. ALL CORNERS, INTERSECTIONS AND ENDS OF MASONRY WALLS SHALL BE REINFORCED WITH #4 VERT. BAR FULL HEIGHT. FILL REINFORCED CELLS WITH GROUT.
4. HOT WEATHER MASONRY SHALL CONFORM TO ACI 305.
5. COLD WEATHER MASONRY SHALL CONFORM TO ACI 306 AND ACI 530.
6. ALL CMU CONSTRUCTION SHALL CONFORM TO ACI 530 SEISMIC REQUIREMENTS FOR A PERFORMANCE CATEGORY B. - ELEMENTS NOT PART OF LATERAL FORCE RESISTING SYSTEM.
7. ALL ONE STORY WALLS SHALL HAVE A BOND BEAM AT THE ROOF WHICH TIES INTO THE VERTICAL REINFORCEMENT. BOND BEAMS SHALL BE PROVIDED AT THE TOPS OF ALL CMU WALLS AND AT HORIZONTAL INTERVALS NOT TO EXCEED EIGHTEEN (18) TIMES THE WALL THICKNESS. ALL BOND BEAMS SHALL BE REINFORCED WITH A MINIMUM OF ONE (1) CONTINUOUS #5 REBAR AND FILLED SOLID WITH 3000 PSI SMALL AGGREGATE CONCRETE (MORTAR MIX IS UNACCEPTABLE).
8. CONCRETE MASONRY CONSTRUCTION MATERIALS SHALL CONFORM TO THE FOLLOWING (UNO):

a. CONCRETE MASONRY UNITS	ASTM C90, GRADE N, TYPE 1
b. DEFORMED REINFORCING BARS	ASTM A615, GRADE 60
c. JOINT REINFORCEMENT	ASTM A82
d. MASONRY MORTAR	ASTM C270, TYPE S
e. MASONRY GROUT	ASTM C476, TYPE 1 FINE GROUT
f. REQUIRED DESIGN f'm	2,000 PSI

9. ALL MASONRY BLOCK WALLS SHALL BE OF SINGLE WYTHE CONSTRUCTION, AND LAID IN RUNNING BOND (UNO). TOOL ALL JOINTS CONCAVE
10. CORNER AND END BLOCKS SHALL BE USED TO FINISH ALL 90 DEGREE CORNERS AND WALL OPENINGS.
11. PROVIDE GALVANIZED LADDER TYPE JOINT REINFORCEMENT AT EVERY SECOND COURSE, UNLESS NOTED OTHERWISE. PROVIDE PREFABRICATED CORNERS AND TEES AS REQUIRED.
12. MORTAR SHALL NOT BE USED WHERE GROUT IS SPECIFIED.
13. ALL WALLS SHALL HAVE VERTICAL CONTROL JOINTS AT A MAXIMUM SPACING OF 25'-0" OR 1.5x WALL HEIGHT (WHICHEVER IS LESS). WHERE CONTROL JOINTS PASS THROUGH BOND BEAM, REINFORCEMENT SHALL BE CONTINUOUS. RAKE JOINT IN BOND BEAM AND SEAL BOTH SIDES. ALIGN CONTROL JOINTS IN MASONRY WALLS WITH CONTROL JOINTS IN SUPPORTING CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.
14. SUBMIT COMPLETE SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.

STEEL DECK

1. STEEL ROOF DECK SHALL BE FABRICATED IN ACCORDANCE WITH "SDI SPECIFICATIONS AND COMMENTARY FOR STEEL ROOF DECK" FROM ASTM A653 SHEET STEEL. DECK DEPTH, PROFILE, AND THICKNESS ARE INDICATED ON THE DRAWINGS
2. STEEL FLOOR DECK SHALL BE FABRICATED IN ACCORDANCE WITH "SDI SPECIFICATIONS AND COMMENTARY FOR COMPOSITE STEEL FLOOR DECK" FROM ASTM A653 SHEET STEEL. DECK DEPTH, PROFILE, AND THICKNESS ARE INDICATED ON THE DRAWINGS
3. ALL STEEL DECK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A924, G90.
4. STEEL DECK SHALL BE INSTALLED IN A THREE SPAN CONDITION, UNLESS NOTED OTHERWISE.
5. FASTEN STEEL DECK TO SUPPORTING MEMBERS AS INDICATED IN THE DRAWINGS. PROVIDE A MINIMUM OF 1½" END BEARING, AND LAP END JOINTS A MINIMUM OF 2 INCHES.
6. STEEL ROOF DECK SHALL BE PART OF A FACTORY MUTUAL APPROVED ROOF ASSEMBLY. CONTRACTOR TO COORDINATE WITH OTHER TRADES.
7. THE ROOF AND FLOOR DECK SHALL BE FASTENED AS NOTED ON THE DESIGN DRAWINGS. WELDING WASHERS ARE RECOMMENDED FOR ATTACHING DECK THAT IS 24 GAGE AND LIGHTER. WELDING WASHERS SHALL BE 16 GAGE. RECOMMENDED FASTENING INCLUDES STRIKING AN ARC, BURNING A HOLE THROUGH THE STEEL AND BUILDING UP A PLUG WELD FROM THE JOIST (OR BEAM) IN INTO THE WASHER. FASTENERS OTHER THAN WELDS ARE ACCEPTABLE PROVIDED THE THE ALTERNATE FASTENERS MEET OR EXCEED ALL DESIGN CONNECTION PARAMETERS.
8. ALL METAL DECK SHALL BE SHORED AS REQUIRED BY THE MANUFACTURER'S SPAN AND LOAD CONDITION TABLES TO SUPPORT WET WEIGHT OF CONCRETE AND CONSTRUCTION LOADS.
9. SUBMIT COMPLETE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

GLUED LAMINATED FRAMING

TIMBER FRAMING

1. ALL GLUE LAMINATED TIMBER FRAMING SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH AITC A190.1 AND AITC A117
2. GLUE LAMINATED TIMBER BEAMS AND COLUMNS SHALL BE CONSTRUCTED OF COMBINATION 24F-V3, ARCHITECTURAL APPEARANCE GRADE. COLUMNS SHALL BE CONSTRUCTED IN A BALANCED LAYUP. ALL STRUCTURAL GLUE LAMINATED TIMBER SHALL BE MANUFACTURED FROM SOUTHERN YELLOW PINE.
3. ALL CONNECTION HARDWARE SHALL CONFORM TO ASTM A36. HARDWARE USE IN CONJUNCTION WITH TREATED TIMBER SHALL BE FINISHED WITH AN EPOXY PAINT SYSTEM, SEE SPECIFICATIONS.
4. ALL FASTENERS SHALL COMPLY WITH ASTM A307. FASTENERS USED IN CONJUNCTION WITH TREATED TIMBER SHALL BE HOT DIP GALVANIZED.
5. SUBMIT COMPLETE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
6. DESIGN CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE. SUBMIT SEALED CALCULATIONS WITH SHOP DRAWINGS.
7. KEEP ALL GLUE LAMINATED TIMBER PROTECTED DURING TRANSIT, STORAGE AND ERECTION PER AITC 111-79.

COLD FORMED LIGHT GAUGE STEEL FRAMING FOR INTERIOR PARTITIONS

1. COLD FORMED STEEL FRAMING MEMBERS SHALL BE OF THE TYPE, SHAPE, SIZE, GAUGE, AND SPACING AS SHOWN ON THE DRAWINGS. MEMBER TYPES AND SIZES SHOWN ON THE DRAWINGS REFER TO MEMBERS MANUFACTURED BY THE DIETRICH INDUSTRIES, INC. MEMBERS EQUIVALENT IN SHAPE, SIZE, STIFFNESS, AND STRENGTH BY OTHER MANUFACTURERS MAY BE SUBSTITUTED FOR FRAMING MEMBERS SHOWN. ALTERNATE MEMBERS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO FABRICATION AND ERECTION.
2. ALL COLD FORMED STEEL FRAMING SHALL CONFORM TO THE ANSI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS.
3. COLD FORMED STRUCTURAL TRACKS AND STUDS 12, 14 AND 16 GAUGE MATERIALS SHALL BE FORMED WITH ASTM A446, GRADE D OR ASTM A570, GRADE 50 STEEL WITH A MINIMUM FY=50 KSI. COLD-FORMED STRUCTURAL TRACKS AND STUDS 18 GAUGE AND LIGHTER SHALL BE FORMED FROM ASTM A446, GRADE A OR ASTM A570, GRADE 33 GALVANIZED. FASTENINGS SHALL BE AS SHOWN ON THE DRAWINGS. FASTENINGS NOT SHOWN SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
4. COLD-FORMED METAL FRAMING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE. SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL.
5. UNLESS OTHERWISE NOTED, ALL CONNECTIONS ARE TO THE SCREWED WITH A MINIMUM OF (4) #12-14 SCREWS OR EQUIVALENT WELDS AS NOTED.
6. WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.3, STRUCTURAL WELDING CODE, SHEET METAL SECTION.
7. NON-LOADBEARING STUDS SHALL BE CONNECTED AT THE TOP OF THE WALLS BY VERTICALLY SLOTTED DEFLECTION TRACKS TO ALLOW FOR 1" OF VERTICAL DEFLECTION.
8. SUBMIT COMPLETE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF SHORING, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE. NO PERFORMANCE OF THE WORK INCLUDING, BUT NOT LIMITED TO, SHORING AND DEMOLITION OF EXISTING STRUCTURE, OR FABRICATION OR ERECTION OF NEW STRUCTURAL ELEMENTS, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER. SUBMIT TWO COPIES. ONE COPY WILL BE REVIEWED AND RETURNED. CONTRACTOR SHALL ALLOW 10 WORKING DAYS FOR THE ENGINEER'S REVIEW OF SHOP DRAWINGS.
2. REQUIRED SUBMITTALS INCLUDE:
    a. CONCRETE MIX DESIGN
    b. CONCRETE REINFORCING FABRICATION DRAWINGS INCLUDING BAR SUPPORTS
    c. STRUCTURAL STEEL FRAMING FABRICATION DRAWINGS
    d. **STRUCTURAL STEEL CONNECTION DESIGN
    e. **GLULAM DESIGN CALCULATIONS
    f. GLULAM FABRICATION & ERECTION DRAWINGS
    g. CONSTRUCTION/CONTRACTION JOINT LAYOUT PLAN DRAWING
    h. STEEL DECK FABRICATION AND ERECTION DRAWINGS
    i. **LIGHT GAGE STEEL DESIGN CALCULATIONS
    j. LIGHT GAGE STEEL FABRICATION AND ERECTION DRAWINGS
    k. CONCRETE MASONRY MATERIAL
    l. **PRECAST CONCRETE DESIGN CALCULATIONS
    m. PRECAST CONCRETE FABRICATION AND ERECTION DRAWINGS

SUBMITTALS REFERENCED "**" REQUIRED THE SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE.

TESTING & INSPECTIONS

1. OWNER SHALL ENGAGE A QUALIFIED TESTING AGENCY TO CONDUCT PERIODIC OR CONTINUOUS TESTS TO CONFIRM CONSTRUCTION IS IN CONFORMANCE WITH SPECIFIED PROCEDURES, SPECIFICATIONS AND IBC 2003 CHAPTER 17.
2. TESTING AND INSPECTIONS SHALL INCLUDE:
    a. STRUCTURAL FILL GRADATION AND COMPACTION
    b. CONCRETE SLUMP, TEMPERATURE, AIR CONTENT AT POINT OF PLACEMENT
    c. CONCRETE COMPRESSION TESTS
    d. STRUCTURAL STEEL FIELD BOLTED CONNECTIONS
    e. STRUCTURAL STEEL FIELD WELDED CONNECTIONS
    f. HEADED SHEAR STUDS
    g. MASONRY CONSTRUCTION - LEVEL 1 INSPECTIONS
    h. WOOD DIAPHRAGMS

ABBREVIATIONS

BOT.	BOTTOM
CONT.	CONTINUOUS
CNT	CENTER
EW	EACH WAY
FD	FLOOR DRAIN
⟶	DIRECTION OF FLOOR OR ROOF SLOPE
REQ'D	REQUIRED
FTG.	FOOTING
C.I.P.	CAST IN PLACE
C.J.	CONTRACTION (CONTROL) JOINT LOCATION. STEEL TEMPERATURE AND SHRINKAGE REINFORCEMENT SHALL BE TERMINATED ON EACH SIDE OF JOINT
H.P.	HIGH POINT
TYP	TYPICAL
THRD.	THREADED
U.N.O.	UNLESS NOTED OTHERWISE
T&B	TOP AND BOTTOM

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THESE DRAWINGS ARE ISSUED FOR CONSTRUCTION AND REFLECT ALL AMEC ISSUED BULLETINS AND SKETCHES.

△	Issue	Date & Issue Description	By	Check
--	01	07/11/08 SCHEMATIC DESIGN	JDE	--
--	02	09/22/08 DESIGN DEVELOPMENT	JDE	--
--	03	12/03/08 75% CONSTRUCTION DOCUMENTS	JDE	--
--	04	01/23/09 95% CONSTRUCTION DOCUMENTS	JDE	--
--	05	10/26/09 ISSUED FOR PERMIT	JDE	--
8	06	02/03/10 BULLETIN #5	JDE	--
9	07	02/05/10 BULLETIN #6	JDE	--
142	08	09/01/11 ISSUED FOR CONSTRUCTION	JDE	--

Seal/Signature

STATE OF MAINE
JEFFREY D. EVANS
LICENSED
PROFESSIONAL ENGINEER
9.1.11

Project Name
PWM Terminal Enhancement

Project Number
09.6395.000

CAD File Name
T:\5330101\SHEETS\S00.00.DWG

Description
GENERAL STRUCTURAL NOTES

Scale

S00.00

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