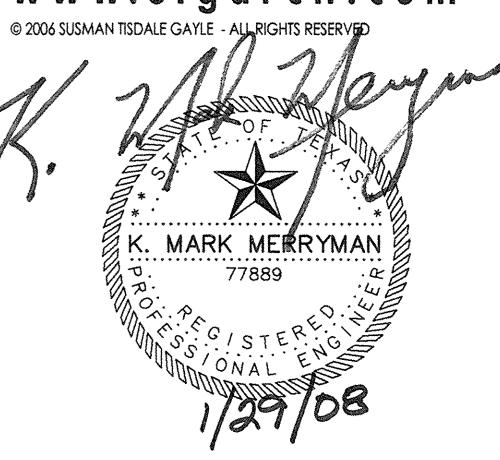




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STRUCTURAL NOTES

A. GENERAL

1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2003 EDITION, WITH LOCAL AMENDMENTS.
2. THE DESIGN GRAVITY LOADS ARE AS FOLLOWS:
SUPERIMPOSED DEAD LOAD (INCLUDED BUT NOT LIMITED TO THE FOLLOWING):

MECHANICAL AND CEILING	5 PSF
BALLOONED ROOF SYSTEM	11 PSF
FINISHES	AS REQUIRED
SPRINKLER SYSTEMS	AS REQUIRED
FLOORING	4 PSF

(PIPE SPRINKLER PIPING SUPPORTED BY THE STRUCTURAL SYSTEM IS TO BE DISTRIBUTED SO THAT THE WEIGHT OF THE WATER-FILLED PIPE DIVIDED BY TRIBUTARY AREA OF THE SUPPORTING MEMBER DOES NOT EXCEED 5 POUNDS PER SQUARE FOOT, AND THE LOADING IMPARTED TO ANY ONE STRUCTURAL MEMBER DOES NOT EXCEED 50 POUNDS PER LINEAR FOOT. EACH STRUCTURAL SUPPORT OF THE PIPING SHALL BE DESIGNED TO SUPPORT A LOAD EQUAL TO THE WEIGHT OF THE WATER-FILLED PIPE PLUS 250 POUNDS.)

LIVE LOADS

ROOF	20 PSF
ROOF NET UPLIFT LOADING	25 PSF
RETAIN/DRIVE	100 PSF
PERSONAL TERRACES	100 PSF
PERMANENT CORRIDORS	100 PSF
MECHANICAL EQUIPMENT AND PADS	ACTUAL WEIGHTS

3. HANDRAILS AND GUARDS SHALL BE DESIGNED IN ACCORDANCE WITH TABLE 1607.1 OF THE INTERNATIONAL BUILDING CODE AS FOLLOWS:

4. A. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A LATERAL LOAD OF 50 POUNDS PER LINEAR FOOT (PLF) APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE GUARD TO THE SUPPORTING MEMBER.
5. B. INTERMEDIATE PALS, BALUSTERS, AND PANEL FILLERS SHALL BE DESIGNED TO SUPPORT A HORIZONTALLY APPLIED NORMAL LOAD OF 50 PSF ON AN AREA NOT TO EXCEED ONE SQUARE FOOT INCLUDING OPENINGS AND SPACE BETWEEN RAILS. REACTIONS DUE TO THIS LOADING ARE NOT REQUIRED TO BE SUPERIMPOSED WITH THOSE IN NOTE (A) ABOVE OR NOTE (C) BELOW.
6. C. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT ON THE RAIL. THESE LOADS NEED NOT BE ASSUMED TO ACT CUMULATIVELY WITH THOSE IN NOTE (B) ABOVE.
7. D. STAIR TREADS AND STRINGS SHALL BE DESIGNED FOR A UNIFORM LOAD OF 100 PSF. INDIVIDUAL STAIR TREADS SHALL ALSO BE DESIGNED TO SUPPORT A 300 LB. LOAD ON A 4 SQUARE INCH AREA IN A POSITION THAT WILL CAUSE MAXIMUM STRESS.

8. E. EXCEPT FOR AREAS OF PUBLIC ASSEMBLY, AND EXCEPT FOR LIVE LOADS WHICH EXCEED 100 PSF, FLOOR LIVE LOADS ARE REDUCED FOR SLAB SYSTEMS, BEAMS, GIRDERS, COLUMNS, PIERS, WALLS, AND FOUNDATIONS WHICH SUPPORT A FLOOR AREA OF 150 SQUARE FEET OR GREATER. THE FLOOR LIVE LOAD IS REDUCED AT THE RATE OF 0.08 PERCENT PER SQUARE FOOT OF FLOOR AREA SUPPORTED IN EXCESS OF 150 SQUARE FEET. THE REDUCTION DOES NOT EXCEED 40 PERCENT FOR MEMBERS RE-CALCULATED ON LEVERAGED LOADS. THE REDUCTION IS NOT FOR OVERHEADS, NOR "R" AS DETERMINED BY R-23.1(HEAD LOAD/LIVE LOAD), IN ACCORDANCE WITH SECTION 1607 OF THE BUILDING CODE.

9. F. THE STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE WIND PRESSURES SPECIFIED IN CHAPTER 16, SECTION 1609, OF THE INTERNATIONAL BUILDING CODE, USING EXPOSURE CATEGORY C AND USING A BASIC WIND SPEED OF 90 MPH AT A STANDARD HEIGHT OF 33 FEET ABOVE THE GROUND.

10. G. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING SNOW LOADING PARAMETERS, IN ACCORDANCE WITH SECTION 1608 OF THE INTERNATIONAL BUILDING CODE:

GROUND SNOW LOAD	5 PSF
FLAT ROOF SNOW LOAD	5 PSF
SNOW EXPOSURE FACTOR	0.9
SNOW IMPORTANCE FACTOR	1.0

11. H. THE STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE SEISMIC FORCES SPECIFIED IN CHAPTER 16, SECTION 1613, OF THE INTERNATIONAL BUILDING CODE. SEISMIC DOES NOT CONTROL FOR THIS REGION.

12. I. METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MANTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

13. J. THE STRUCTURE HAS BEEN DESIGNED FOR THE IN-SERVICE LOADS ONLY. THE METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUPPORTING FORMWORK FOR THE CONCRETE CONSTRUCTION SHALL NOT BE REMOVED BEFORE THE CONCRETE HAS GAINED SUFFICIENT STRENGTH TO SAFELY SUPPORT THE DEAD AND SUPERIMPOSED LOADS WHICH WOULD BE SUBSEQUENTLY APPLIED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MANTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

14. K. STRUCTURAL MEMBERS HAVE BEEN LOCATED AND DESIGNED TO ACCOMMODATE THE MECHANICAL EQUIPMENT AND OPENINGS SPECIFIED BY THE MECHANICAL CONSULTANT. ANY SUBSTITUTIONS RESULTING IN REVISIONS TO THE STRUCTURE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH HAYNES WHALEY ASSOCIATES, INC.

15. L. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL DETERMINE THE SCOPE OF THE STRUCTURAL WORK ON THE CONTRACT DOCUMENTS. TAKING A WHOLE, THE STRUCTURAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF THE STRUCTURAL WORK. DUE CONSIDERATION SHALL BE GIVEN TO OTHER STRUCTURAL WORK OR WORK RELATED TO THE STRUCTURE, INCLUDING NECESSARY COORDINATION DESCRIBED OR IMPLIED BY THE ARCHITECTURAL AND MECHANICAL DRAWINGS.

16. M. THE REPRODUCTIVE USE OF THE STRUCTURAL CONTRACT DOCUMENTS OR ELECTRONIC FILES AS STRUCTURAL SHOP DRAWING DOCUMENTS BY THE CONTRACTOR OR SUB-CONTRACTORS IS AT THEIR OWN RISK. HAYNES WHALEY ASSOCIATES, INC. ASSUMES NO LIABILITY AS THE RESULT OF THE REPRODUCTIVE USE OF THE STRUCTURAL CONTRACT DOCUMENTS FOR SHOP DRAWINGS.

17. N. SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL REFERENCE ONLY. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED BY DIRECT SCALING OF THE DRAWINGS.

18. O. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL RESULTING REVISIONS TO THE STRUCTURAL SYSTEM FOR OTHER TRADES AS A RESULT OF ACCEPTANCE OF CONTRACTOR PROPOSED ALTERNATIVES OR SUBSTITUTIONS.

19. P. PRINCIPAL OPENINGS IN THE STRUCTURE ARE INDICATED ON THE CONTRACT DOCUMENTS. REFER TO THE CONTRACT DOCUMENTS FOR ELECTRICAL AND PLUMBING DRAWINGS FOR SLEEVES, CURSES, INSERTS, ETC. NOT HEREBE INDICATED. OPENINGS IN SLABS WITH A MAXIMUM SIDE DIMENSION OR DIAMETER OF 12 INCHES OR LESS SHALL NOT REQUIRE ADDITIONAL FRAMING OR REINFORCEMENT, UNLESS NOTED OTHERWISE. THE LOCATION OF SLEEVES OR OPENINGS IN STRUCTURAL MEMBER SHALL BE SUBMITTED TO HAYNES WHALEY ASSOCIATES, INC. FOR REVIEW.

20. Q. ELEVATOR SHAFT AND SUPPORT BEAMS HAVE BEEN DESIGNED AND BASED ON A THYSEN KRUPP SEVILLE 30 MODEL ELEVATOR. THE ELEVATOR CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION OF THE MACHINE BEAMS AND/OR SECONDARY BEAMS TO THE STRUCTURE. SHOP DRAWINGS FOR THE ELEVATORS SHOWING CONNECTION DETAILS, LOCATION AND MAGNITUDE OF LOADS APPLIED TO THE STRUCTURE, ETC. SHALL BE SUBMITTED TO HAYNES WHALEY ASSOCIATES, INC. FOR REVIEW OF DESIGN ASSUMPTIONS.

21. R. FOUNDATION SLAB ON GRADE

22. S. THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON A REPORT PREPARED BY TERRACON, INC. REPORT NUMBER 96055219, DATED FEBRUARY 2, 2006. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.

23. T. THE FOUNDATION FOR THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURES AT A BEARING DEPTH AS INDICATED ON PLAN BELOW EXISTING GRADE AT THE TIME THE GEOTECHNICAL REPORT WAS PREPARED:

TOTAL END BEARING LOAD	15,000 PSF
TOTAL DOWNWARD SKIN FRICITION LOAD	1,000 PSF
(NEGLIGENCE UP TO 5'-0")	
TOTAL UPWARD SKIN FRICITION LOAD	1,000 PSF
(NEGLIGENCE UP TO 5'-0")	

24. U. PIERS SHALL BEAR A MINIMUM OF AT LEAST 12 FEET BELOW THE EXISTING NATURAL GROUND SURFACE AT THE TIME OF THE BORINGS. IN ADDITION, THE PIERS SHALL BEAR AT LEAST 5 FEET INTO THE NATURAL STRATUM II TAN SILTY CLAY SOILS.

25. V. DRILLED PIERS SHALL BE EXCAVATED, CLEANED, AND REINFORCED, AND THE CONCRETE SHALL BE PLACED ON THE SAME DAY. DRILLED PIERS WITH LESS THAN 2'-0" CLEAR BETWEEN BELLS OR SHAFTS SHALL BE EXCAVATED AND CONCRETE PLACED A MINIMUM OF 24 HOURS APART. IF BELLS CANNOT BE FORMED WITHOUT CAVING OF THE SOIL, THE ARCHITECT, GEOTECHNICAL ENGINEER, AND HAYNES WHALEY ASSOCIATES, INC., SHALL BE NOTIFIED BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

26. W. TEMPORARY STEEL CASING MAY BE REQUIRED DURING THE INSTALLATION OF DRILLED PIERS (SEE GEOTECHNICAL REPORT). THE CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR THE USE OF STEEL CASING AS A SEPARATE ITEM IN THE CONTRACT.

27. X. EXCAVATIONS FOR CONTINUOUS FOOTINGS SHALL BE CLEANED AND HAND TAMPED TO A UNIFORM SURFACE. FOOTING EXCAVATIONS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 6 MIL VSGUEN IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF THE EXCAVATION OF THE FOOTING.

28. Y. FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE NOTED TO THE ARCHITECT, GEOTECHNICAL ENGINEER AND HAYNES WHALEY ASSOCIATES, INC., BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

29. Z. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND HAYNES WHALEY ASSOCIATES, INC. 24 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.

30. AA. REINFORCEMENT PLACEMENT SEQUENCE FOR FOOTINGS IS NOTED ONLY FOR MAJOR REINFORCEMENT BAR LAYERS. IN SPREAD FOOTINGS AND MATS THE CONTRACTOR SHALL SOURCE ALL OTHER BAR PLACEMENTS AS REQUIRED TO CONFORM TO THE CONTRACT DOCUMENTS.

31. BB. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING OF WALLS WHICH ARE ULTIMATELY SUPPORTED AND DOCKED. SHORING WHICH HAS BEEN REMOVED FROM THE WALLS AND SUPPORTING ELEMENTS ARE IN PLACE, THE CONCRETE IN THE WALLS AND SUPPORTING ELEMENTS HAS ATTAINED THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH (FC) AND COMPACTION OF THE BACKFILL AGAINST THE WALL HAS BEEN COMPLETED.

10. SUBGRADE UNDER SLABS ON FILL SHALL BE PREPARED, PLACED AND COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT.

11. THE FLOOR SUBGRADE SHALL BE PROPERLY COMPACTED AND PROFROLLED AND SHALL BE FREE OF STANDING WATER, MUD AND FROZEN SOIL.

12. A VAPOR BARRIER WITH A PERFORMANCE EQUIVALENT TO A 10 MIL STEGOWRAP SHALL BE PLACED BEHIND THE SLAB ON GRADE.

13. SLABS ON GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AT EACH COLUMN LINE IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED, SUCH THAT NO AREA BOUND BY A CRACK CONTROL JOINT IS GREATER THAN 1000 SQUARE FEET. THE SPACING OF THE JOINTS DOES NOT EXCEED 36 TIMES THE SLAB THICKNESS, AND THE RESULTING ASPECT RATIO OF THE DIMENSIONS OF SLAB AREA DOES NOT EXCEED 1.5 TO 1. CRACK CONTROL JOINTS SHALL BE MADE USING A "SOFT CUT" CONCRETE SAW AS SOON AS THE SLAB HAS SET. THE JOINTS SHALL BE 1/8 INCH DEEP AND 1/8 INCH WIDE. PROVIDE A 1/8 INCH FINISH. THE CRACK CONTROL JOINTS SHALL BE CUT A MAXIMUM WIDTH OF 1/8 INCH AND A MINIMUM DEPTH OF 1/3 THE SLAB THICKNESS. REFER TO THE DRAWINGS FOR INFORMATION ON CONTROL JOINTS, CONSTRUCTION JOINTS, REINFORCEMENT DETAILS AND JOINT SEALANT DETAILS.

14. WHERE THE SLAB IS TO RECEIVE SENSITIVE ARCHITECTURAL FLOOR FINISHES, ALL JOINTS IN THE SLAB CONSTRUCTION SHALL BE PREPARED TO ALIGN WITH JOINTS IN THE FLOOR FINISHES.

15. CONCRETE DECK ON STEEL FORM

16. FLOOR SLAB SYSTEM SHALL BE NORMAL WEIGHT CONCRETE 3 1/2 INCHES THICK, ON CORRUGATED STEEL FORMS. STEEL FORMS SHALL BE 28 GAGE COLD-FORMED STEEL CONFORMING TO ASTM A108, GRADE 33 (MIN.). STEEL FORMS SHALL BE 1/16 INCHES DEEP AND SHALL HAVE A MINIMUM SECTION MODULUS OF 0.035 INCHES CUBED PER FOOT OF WIDTH. REINFORCEMENT SLAB WITH 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.

17. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.

18. CONSTRUCTION JOINTS BETWEEN PIERS AND PIER CAPS SHALL BE PREPARED BY ROUGHENING THE CONTACT SURFACE TO A FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH LEAVING THE CONTACT SURFACE CLEAN AND FREE OF LATANCE.

19. PROVIDE 1- NO. 4 REINFORCEMENT BAR X 4'-0" AT RE-ENTRANT CORNERS AND AROUND RECTANGULAR HOLES IN SLABS UNLESS NOTED OTHERWISE. PLACE BAR DIAGONAL TO CORNER WITH 1" CLEARANCE FROM THE TOP AND THE SIDE OF THE SLAB AT THE CORNER.

20. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, CHAPTER 6.3.

21. STRUCTURAL STEEL

22. CONTRACTOR SHALL FABRICATE AND ERECT STEEL IN ACCORDANCE WITH OSHA'S SAFETY REQUIREMENTS, INCLUDING 29 CFR PART 1926 SAFETY STANDARDS FOR STEEL ERECTION.

23. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, GRADE 50 EXCEPT AS NOTED.

24. OTHER ROLLED STEEL SHAPES (M, S, HP SHAPES, CHANNELS, AND ANGLES) SHALL CONFORM TO ASTM A36, EXCEPT AS NOTED.

25. PLATES SHALL CONFORM TO ASTM A36, EXCEPT AS NOTED.

26. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR TYPE S, GRADE B, OR ASTM A500 GRADE B. MILL TEST REPORTS FOR THE STEEL PIPE SHALL BE SUBMITTED FOR REVIEW.

27. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.

28. ANCHOR BOLTS (ANCHOR RODS) SHALL CONFORM TO ASTM F1554 GRADE 55, UNLESS NOTED OTHERWISE.

29. CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE HIGH STRENGTH BOLTS WHICH MEET OR EXCEED THE REQUIREMENTS OF ASTM A325, TYPE N, X, OR SC CLASS A. BOLTS SHALL BE DESIGNED AS BEARING TYPE BOLTS, EXCEPT AS NOTED. BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SNUG TIGHT" CONVENTION AS OUTLINED IN THE "SPECIFICATION FOR STRUCTURAL CONNECTIONS USING BOLTS" (SC-10). BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL CONNECTIONS USING BOLTS" (SC-10). BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL CONNECTIONS USING BOLTS" (SC-10).

30. MAXIMUM CEMENT WATER RATIO BY WEIGHT

31. MAXIMUM SLUMP PRIOR TO PLASTICIZERS

32. MAXIMUM AGGREGATE SIZE

33. STEEL DECK SHALL BE FREE FROM OIL, DIRT, AND ANY OTHER DELETERIOUS MATERIALS THAT WOULD TEND TO REBOND THE CONCRETE WITH THE CONCRETE AND THE STEEL DECK.

34. PROVIDE SUFFICIENT CHAIRS, BOLSTER BARS, ETC. TO MAINTAIN THE WELDED WIRE FABRIC AND REINFORCEMENT BARS AT THE DEPTH SPECIFIED.