

A. DESIGN DATA

1. CODES AND STANDARDS:

- ALL WORK TO BE PERFORMED, SHALL BE IN ACCORDANCE WITH APPLICABLE STATE, LOCAL, AND FEDERAL CODES AND REGULATIONS.
- THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
 - INTERNATIONAL BUILDING CODE, 2021 EDITION
 - AMERICAN CONCRETE INSTITUTE 2009
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 16TH EDITION
 - AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE 7-16) MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

2. DESIGN LOADS

A. DESIGN LIVE LOADS:

- ROOF LIVE LOAD 20 PSF
- SECOND FLOOR LIVE LOAD 80 PSF
- DEAD LOAD = STRUCTURE WEIGHT
- WIND DESIGN DATA
 - BASIC WIND SPEED (3 SECOND GUST): 127 MPH
 - RISK CATEGORY: II (ASCE 7-16 TABLE 1.5-1)
 - WIND EXPOSURE CATEGORY: EXPOSURE "B"
 - INTERNAL PRESSURE COEFF.: 0.18 (ASCE 7-16 FIG 26.13-1)
 - HORIZONTAL DESIGN WIND PRESSURE: 24.6 psf
 - DESIGN WIND PRESSURE FOR EXTERIOR COMPONENTS AND CLADDING MATERIALS: (ASCE 7-16 METHOD 1)

MEAN ROOF HEIGHT NOT TO EXCEED 60'-0"
AND ROOF ANGLE LESS THAN 27 DEGREES

ROOF					
GCp +/- GCpi			Surface Pressure (psf)		
Area	10 sf	50 sf	100 sf	10 sf	50 sf
Negative Zone 1	-1.18	-1.11	-1.08	-29.0 psf	-27.3 psf
Negative Zone 2	-1.98	-1.49	-1.28	-48.7 psf	-36.7 psf
Negative Zone 3	-1.98	-1.49	-1.28	-48.7 psf	-36.7 psf
Positive Zone 1	0.48	0.41	0.38	16.0 psf	16.0 psf
Positive Zone 2&3	1.08	0.97	0.92	26.6 psf	23.8 psf
Overhang Zone 1&2	-1.70	-1.63	-1.60	-41.8 psf	-40.1 psf
Overhang Zone 3	-1.70	-1.63	-1.60	-41.8 psf	-40.1 psf

PARAPET					
Area			Surface Pressure (psf)		
CASE A:			10 sf	100 sf	500 sf
Interior Zone			66.4 psf	45.3 psf	42.5 psf
Corner Zone			66.4 psf	45.3 psf	42.5 psf
CASE B:			10 sf	100 sf	500 sf
Interior Zone			-46.5 psf	-38.7 psf	-33.2 psf
Corner Zone			-53.1 psf	-41.4 psf	-33.2 psf

WALLS					
GCp +/- GCpi			Surface Pressure at "h"		
Area	10 sf	100 sf	500 sf	10 sf	100 sf
Negative Zone 4	-1.17	-1.01	-0.90	-28.8 psf	-24.9 psf
Negative Zone 5	-1.44	-1.12	-0.90	-35.4 psf	-27.8 psf
Positive Zone 4 & 5	1.08	0.92	0.81	26.6 psf	22.6 psf

3. SEISMIC LOADS

SEISMIC DESIGN CATEGORY B

IMPORTANCE COEFFICIENT 1.0

RISK CATEGORY II

Ss 0.10 Sds 0.11

S1 0.05 S01 0.08

Cs0 0.054

SITE CLASS D

4. SNOW LOADS

GROUND SNOW LOAD = 0 PSF

SNOW EXPOSURE FACTOR = C

SNOW IMPORTANCE FACTOR = 1.0

THERMAL FACTOR = 1.0

B. GENERAL NOTES:

- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- THE STRUCTURAL DESIGN IS BASED ONLY ON THE STRUCTURE IN ITS COMPLETED STATE. CONTRACTORS AND THEIR SUBS SHALL TAKE WHAT-EVER PRECAUTIONS ARE NECESSARY IN THEIR OPINIONS TO WITHSTAND ALL HORIZONTAL AND VERTICAL LOADINGS THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION PRIOR TO COMPLETION.
- SHOP DRAWINGS SUBMITTED FOR STRUCTURAL REVIEW SHALL CONSIST OF NOT MORE THAN TWO SETS OF PRINTS. DRAWINGS SHALL BEAR THE CONTRACTORS APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITY, QUALITY AND COORDINATION WITH ALL DISCIPLINES. ONLY ONE MARKED UP COPY WITH THE ENGINEERS COMMENTS WILL BE RETURNED TO THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS AT THE JOB SITE AND BRING TO THE ARCHITECTS ATTENTION ANY DISCREPANCIES.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH LOCAL BUILDING CODES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS TO COMPLETE THE PROJECT.
- CONSTRUCTION DEAD AND LIVE LOADS SHALL NOT EXCEED ACTUAL DESIGN LOAD FOR ANY STRUCTURAL COMPONENT.
- TEMPORARY BRACING SHALL BE PROVIDED AS REQUIRED TO HOLD ALL COMPONENTS OF THE STRUCTURE IN PLACE UNTIL FINAL SUPPORT IS SECURELY ANCHORED.
- AN INDEPENDENT TESTING COMPANY SHALL DO ALL INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENT, OR THESE PLANS.
- THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL/SITE WORK PLANS FOR DIMENSIONS AND DETAILS OF THE ITEMS WHICH PENETRATE OR ATTACH TO THE BUILDING STRUCTURE.
- CONTRACTOR SHALL KEEP ON THE SITE AT ALL TIMES A MARKED-UP AS-BUILT SET OF DRAWINGS, WHICH SHALL BE DELIVERED TO THE OWNER UPON COMPLETION OF THE PROJECT.
- ALL WORK AND MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR MINIMUM FROM THE DATE OF OCCUPANCY.
- UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL PROPERLY CLEAN THE SITE.
- THE INTENT OF THE CONSTRUCTION DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE COMPLETION OF THE WORK. THEREFORE, ALL ITEMS NECESSARY FOR THE COMPLETION OF THE WORK SHALL BE REQUIRED WHETHER OR NOT THEY ARE SHOWN ON THE DRAWINGS, BUT ARE INFERRABLE AS BEING NECESSARY TO PROVIDE THE INTENDED RESULTS.
- ALL DIMENSIONS SHOULD BE READ OR CALCULATED AND NEVER SCALED.
- CONTRACTOR SHALL PASS ALL INSPECTIONS AND APPROVALS AS REQUIRED BY LOCAL AUTHORITIES DURING THE COURSE OF CONSTRUCTION.
- CONTRACTOR SHALL ASK FOR DETAILS WHENEVER UNCERTAIN ABOUT METHODS OF INSTALLATION. LACK OF DETAILS NOT REQUESTED SHALL NOT EXCUSE IMPROPER INSTALLATION AND CORRECTION SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
- THE SHEETS IN THESE CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY TO EACH OTHER: WHAT IS CALLED FOR BY ONE SHALL BE BINDING AS IF CALLED BY ALL.

- IN ALL CASES WHERE A CONFLICT MAY OCCUR SUCH AS BETWEEN ITEMS COVERED BY SPECIFICATIONS AND NOTES ON THE DRAWINGS, OR BETWEEN GENERAL NOTES AND SPECIFIC DETAILS, THE ARCHITECT SHALL BE NOTIFIED AND HE WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENT.
- THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION, EQUIPMENT, ETC. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, AND SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
- WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.
- ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.
- OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF HE CHOOSES AND OPTION, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES AND APPLICABLE COORDINATE ALL DETAILS.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT.
- TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.
- WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
- ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF LOUISIANA.
- THE USE OF REPRODUCTION OF THESE CONTRACT DRAWINGS BY THE CONTRACTOR, SUB-CONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARED SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING FROM ANY ERRORS THAT MAY BE PRESENT HEREON.

C. EARTHWORK

A GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED BY SITE ENGINEERING, JULY 26, 2025.

- FOUNDATION DESIGN IS BASED UPON TABLE 1806.2 IBC 2015.
- DESIGN SHALL BE VERIFIED BY GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION.
- REFER TO MAL BUILDING MANUFACTURER ANCHOR BOLT PLAN FOR ANCHOR BOLT SETTINGS.
- THE SUBCONTRACTOR SHALL COOPERATE WITH THE ENGINEER IN THE SCHEDULING AND EXECUTION OF THE WORK SO THAT THE REQUIRED TESTS AND INSPECTIONS MAY BE PERFORMED, AND THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER AS FAR AS POSSIBLE IN ADVANCE OF THE READINESS OF THE WORK. NO WORK SHALL PROCEED UNTIL THE REQUIRED INSPECTIONS AND TESTS (VERIFY WITH G.C.) HAVE BEEN PERFORMED.
- NOTIFY TESTING SERVICE PRIOR TO PROCEEDING WITH PLACEMENT OF FOOTINGS, FILL, OR OTHER CONSTRUCTION OVER SUB GRADES AND EXISTING FILL. TESTING SERVICE MUST INSPECT AND APPROVE SUB GRADES AND EXISTING FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS PERFORMED THEREON.
- IF QUESTIONABLE SOIL CONDITIONS ARE ENCOUNTERED DURING EXCAVATION, NOTIFY ENGINEER IMMEDIATELY. MAINTAIN EXCAVATIONS IN A CLEAN CONDITION.
- WATER SHALL NOT BE PERMITTED TO POND IN FOOTING EXCAVATION. KEEP EXCAVATION DRY. FAILURE TO DO SO WILL BE CAUSE FOR REQUIRING CONTRACTOR TO REMOVE WATER DAMAGED SOILS AND REPLACE WITH CONTROLLED FILL AS DIRECTED.
- REMOVE ANY ABANDONED SEWER OR SERVICE LINE ENCOUNTERED DURING EXCAVATION WITHIN THE BUILDING LINES. SHOULD SUCH LINES BE FOUND BELOW OR ADJACENT TO FOOTING LOCATIONS, NOTIFY THE A/E.
- LOCATE EXISTING UTILITIES BY HAND EXCAVATION AND PROVIDE PROTECTION FROM DAMAGE. COOPERATE WITH GENERAL CONTRACTOR (G.C.) AND UTILITY COMPANIES FOR INTRAINING SERVICES. DO NOT BREAK UTILITY CONNECTIONS WITHOUT NOTIFYING GENERAL CONTRACTOR A MINIMUM OF 48 HOURS IN ADVANCE AND PROVIDING ACCEPTABLE TEMPORARY SERVICES.
- REMOVE EXISTING WALKS, DRIVES, CURBS, BENCHES, DIMENSIONS, BOULDERS, VEGETATION (TREES, STUMPS, AND ROOTS 1" OR LARGER IN DIAMETER WITHIN THE LINES OF THE BUILDING 5' BEYOND), TRASH, AND SIMILAR ITEMS AS NECESSARY TO EXECUTE THE WORK OF THIS PROJECT.
- EXCAVATE FOR STATIONS AND ELEVATIONS AND DIMENSIONS SHOWN. EXTENDING EXCAVATION A SUFFICIENT DISTANCE TO PERMIT LAYING AND REMOVAL OF OTHER WORK AND FOR INSPECTION. TRIM BOTTOM TO REQUIRED LINES AND GRADES TO PROVIDE SOLID BASE TO RECEIVE CONCRETE.
- BACK FILL EXCAVATIONS AS PROMPTLY AS WORK PERMITS.
- EXCAVATE FOR TRENCHES TO DEPTH INDICATED OR REQUIRED AND TO ESTABLISH INDICATED FLOW LINES OR INVERT ELEVATIONS. MAINTAIN UNIFORM WIDTH REQUIRED FOR PARTICULAR ITEM TO BE INSTALLED, INCLUDING WIDTH TO PROVIDE AMPLE WORKING ROOM. PROVIDE 6" TO 9" CLEARANCE ON BOTH SIDES OF PIPE OR CONDUIT. OUTSIDE BUILDING, EXCAVATE TRENCHES FOR WATER BEARING PIPING SO TOP OF PIPING IS BELOW FROST LEVEL WHERE APPLICABLE, AS PER LOCAL BUILDING CODE/OFFICIAL.
- REPAIR DAMAGES TO EXISTING UTILITIES AT CONTRACTOR'S EXPENSE AS DIRECTED BY UTILITY COMPANY.
- PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES IN AREAS OF WORK. BARRICADE OPEN EXCAVATIONS AND PROVIDE WARNING LIGHTS. COMPLY WITH REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- PROVIDE BRACING AND SHORING AS REQUIRED IN EXCAVATIONS, TO MAINTAIN SIDES AND TO PROTECT ADJACENT STRUCTURES FROM SETTLEMENT. COMPLYING WITH LOCAL CODES AND REGULATIONS. MAINTAIN UNTIL EXCAVATIONS ARE BACKFILLED.
- ENGINEERED FILL SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. FILL MATERIAL SHALL BE CLEAN, FREE OF ORGANIC MATERIAL, AND SHALL BE TESTED IN ACCORDANCE WITH ASTM C136 ASTM C117, AND APPROVED BY ENGINEER. SUITABLE MATERIALS OBTAINED FROM EXCAVATION AT THE SITE MAY BE USED, APPROVED BY ENGINEER.
- SITE FILL AND BACK FILL MATERIAL SHALL CONSIST IF POSSIBLE OF EXISTING ON-SITE MATERIALS FREE OF DEBRIS, ORGANIC MATERIAL AND EXCESSIVE SILT.
- THE FOLLOWING GRADATIONS ARE ACCEPTABLE FOR DRAINAGE FILL:
 - DRAINAGE COURSE: NARROWLY GRADED MIXTURE OF WASHED CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL; ASTM D448 COURSE-AGGREGATE GRADING SIZE #7, WITH 100 PERCENT PASSING A 1-1/2" INCH SIEVE AND ZERO TO 5 PERCENT PASSING NO. 8 SIEVE.
 - CLEAN FINE GRADED MATERIAL ASTM D448 NO. 10 WITH 100 PERCENT PASSING #4 SIEVE. 85-100 PERCENT PASSING #4 SIEVE, AND 10 TO 30 PERCENT PASSING #100 SIEVE. ANY MATERIAL PASSING #200 SIEVE WILL REJECT THE SAMPLE.
- STOCKPILE EXCAVATED MATERIALS WHERE DIRECTED BY PROJECT ENGINEER UNTIL REQUIRED FOR BACK FILL AND FILL.
- ENGINEERED FILL (IF REQUIRED) AND DRAINAGE FILL COMPACTION-95% MAXIMUM DENSITY, ASTM D698 (STANDARD PROCTOR DENSITY), OR AS REQUIRED BY THE ENGINEER.
- PROVIDE SOIL TREATMENT FOR TERMITES PROTECTION AS DIRECTED.

D. CONCRETE

- PROVIDE A MINIMUM 4 INCHES OF DRAINAGE FILL WITH 10 MIL VAPOR BARRIER BELOW ALL FLOOR SLABS.
- NO FILL OR BACKFILL SHALL BE "SETTLED" BY THE USE OF WATER.
- FOUNDATION REINFORCEMENT SHALL BE CONTINUOUS WITH CORNER BARS AT INTERSECTIONS AND CORNERS. SPLICE ALL BARS WITH CONTACT TENSION LAP. CLASS B ALL REINFORCING BAR LAPS SHALL BE 30 BAR DIAMETERS FOR #8 AND SMALLER. SPLICE BARS ONLY WHERE SHOWN ON DRAWINGS OR SCHEDULES APPROVED BY A/E.
- PLACE OR SUPPORT ALL REINFORCING BARS TO PROVIDE THE FOLLOWING CONCRETE COVER:
 - 3" AT BOTTOM OF FOOTINGS OR WALLS WITHOUT FOOTINGS.
 - 2" AT EARTH SIDE OF WALLS IN CONTACT WITH EARTH.
 - 1" AT WALL FACES NOT IN CONTACT WITH EARTH.
 - 2" AT BOTTOM OF SLABS OVER EARTH OR OTHER FILL.
- PROVIDE KEYED CONSTRUCTION JOINTS (K.C.J.) AT LOCATIONS NOTED ON THE PLAN.
- PROVIDE CONTROL JOINTS (C.J.) AT LOCATIONS NOTED ON THE PLAN. IF C.J. IS SAWCUT THE CUT MUST BE MADE AS SOON AS POSSIBLE BUT NOT LATER THAN 24 HOURS AFTER THE POUR.
- SLAB-ON-GRADE SHALL BE REINFORCED AS INDICATED ON THE DRAWING.
- CODES AND STANDARDS: ACI 301 AND ACI 318. COMPLY WITH APPLICABLE PROVISIONS EXCEPT AS OTHERWISE INDICATED.
- OWNER SHALL EMPLOY TESTING LABORATORY TO TEST AND EVALUATE CONCRETE DELIVERED TO AND PLACED AT SITE. THIS TESTING DOES NOT RELIEVE SUBCONTRACTOR OF RESPONSIBILITY OF PROVIDING CONCRETE IN COMPLIANCE WITH CONTRACT DOCUMENTS.
- CONCRETE MATERIALS:
 - PORTLAND CEMENT - ASTM C150, TYPE 1.
 - FLY ASH IN ACCORDANCE WITH ACI 232.2R.
 - AGGREGATES - ASTM C33.
 - WATER - CLEAN, DRINKABLE.

11. REINFORCING MATERIALS:

a. DEFORMED REINFORCING BARS - ASTM A615, GRADE 60.

12. ADMIXTURES: PROVIDE ADMIXTURES THAT CONTAIN NOT MORE THAN 0.1 PERCENT CHLORIDE IONS.

g. WATER-REDUCING, RETARDING, AND ACCELERATING CHEMICAL ADMIXTURES: ASTM C494.

13. RELATED MATERIALS:

- VAPOR BARRIER - ASTM E 1745 CLASS A NOT LESS THAN 10 MILS.
 - ABSORPTIVE COVER - BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ. PER SQ. YD., COMPLYING WITH AASHTO M 182, CLASS 2.
 - MOISTURE-RETAINING COVER - WATERPROOF PAPER, POLYETHYLENE FILM, OR POLYETHYLENE-COATED BURLAP, COMPLYING WITH ASTM C171.
 - MEMBRANE-FORMING CURING COMPOUND - ASTM C309, TYPE 1.
 - EVAPORATION CONTROL MONOLAYER FILM-FORMING COMPOUND APPLIED TO EXPOSED CONCRETE SLAB SURFACES FOR TEMPORARY PROTECTION FROM RAPID MOISTURE LOSS.
 - WATERSTOPS: FLAT DUMBBELL OR CENTERBOLT TYPE, SIZE TO SUIT JOINTS, OF EITHER RUBBER OR PVC.
14. PROPORTION MIXES COMPLYING WITH MIX DESIGN PROCEDURES SPECIFIED IN ACI 301.
15. PROPORTION AND DESIGN MIXES TO RESULT IN CONCRETE SLUMP AT POINT OF PLACEMENT AS FOLLOWS:
- n. RAMPS, SLABS, AND SLOPING SURFACES: NOT MORE THAN 3 INCHES.
- o. REINFORCED FOUNDATION SYSTEMS: NOT LESS THAN 1 INCH AND NOT MORE THAN 3 INCHES.
- p. DRILLED SHAFTS: NOT LESS THAN 6 INCH AND NOT MORE THAN 8 INCHES WITHOUT LOSS OF COMPRESSIVE STRENGTH.
- q. OTHER CONCRETE: NOT MORE THAN 4 INCHES.
16. PROVIDE READY-MIX CONCRETE COMPLYING WITH ASTM C 94.
17. CONCRETE PLACEMENT:
- r. COLD WEATHER-COMPLY WITH ACI 306.
- s. HOT WEATHER-COMPLY WITH ACI 305.

CONCRETE MIX REQUIREMENTS									
USAGE	AGGREGATE	MIN. CEMENT SACKS/YD ³	SLUMP (INCHES)	7 DAY STR. PSI	28 DAY STR. PSI	SUPER P	FIBERS		
DRILLED SHAFTS	T	5.20	4	2200	3000	NO	NO		
GRADE BEAMS	Q	5.20	4	2200	3000	NO	NO		
PEDESTALS	Q	5.20	4	2200	3000	NO	NO		
FOOTINGS	Q	5.80	3 TO 8	2800	4000	YES	NO		
SLABS ON GRADE	Q	5.50	3 TO 8	2400	3500	YES	NO		
TOPPING FOR STEEL DECK	Q	5.80	3 TO 8	2800	4000	YES	NO		
CURBS	Q	5.80	3 TO 8	2800	4000	YES	NO		
DRY BOTTOMS					2000				
ALL OTHERS	Q	5.20	4	2200	3000	NO	NO		

- NOTES:
① THE SLUMP IN THE TABLE ABOVE IS GIVEN AT POINT OF PLACEMENT.
- ② SAND AND PEA GRAVEL (145 PCF)
③ REGULAR WEIGHT SAND AND LIMESTONE (145 PCF)
④ LIGHT WEIGHT AGGREGATE (110 PCF)
- SLUMP 3 TO 8 MEANS THE SLUMP PRIOR TO ADDING SUPER P. SHOULD BE 3" AND 8" AFTER THE ADDITION OF THE SUPER P. - USE OF SUPER P IS A CONTRACTOR'S OPTION
- CONCRETE NOT MEETING THE SPECIFIED SEVEN DAY STRENGTH SHALL BE REPLACED OR CONSTRUCTION STOPPED IN THE AREA IN QUESTION UNTIL THE 28 DAY STRENGTH TEST HAS BEEN APPROVED
- SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.

E. STRUCTURAL STEEL

A. MATERIAL

- ALL HOT ROLLED STEEL PLATES, SHAPES, SHEET PILING, AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM SPECIFICATION A6-98A.
- CLEARLY MARK THE GRADE OF STEEL ON EACH PIECE, WITH A DISTINGUISHING MARK VISIBLE FROM FLOOR SURFACES FOR THE PURPOSE OF FIELD INSPECTION OF PROPER GRADE OF STEEL. UNLESS NOTED OTHERWISE ON THE DRAWINGS, STRUCTURAL STEEL SHALL BE AS FOLLOWS:
 - ALL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. (ASTM72-50 IS ACCEPTABLE AS A SUBSTITUTE FOR A992).
 - ALL CHANNEL SHAPES SHALL CONFORM TO ASTM A36.
 - ALL ROLLED ANGLE SHAPES SHALL CONFORM TO ASTM A36.
 - ALL PIPE SHAPES SHALL CONFORM TO ASTM A53 (TYPES E OR S), GRADE B OR ASTM A53.
 - ALL RECTANGULAR HSS SHALL CONFORM TO ASTM A500, GRADE B (FY=46 KSI).
 - ALL ROUND HSS SHALL CONFORM TO ASTM A500, GRADE B (FY=42 KSI).
 - ALL BASE PLATES SHALL CONFORM TO ASTM A572 AS FOLLOWS:
 - ALL CONNECTION MATERIAL EXCEPT AS NOTED OTHERWISE HEREIN OR ON THE DRAWINGS, INCLUDING BEARING PLATES, GUSSET PLATES, STIFFENER PLATES, FILLER PLATES, ANGLES, ETC. SHALL CONFORM TO ASTM A36 UNLESS A HIGHER GRADE OF STEEL IS REQUIRED BY STRENGTH AND ANGLE WHICH SHALL CONFORM TO THE RESULTING SIZE ARE COMPATIBLE WITH THE CONNECTED MEMBERS.
 - OTHER STEEL NOT INDICATED OTHERWISE SHALL CONFORM TO ASTM A992 OR ASTM A572-50, EXCEPT PLATES AND ANGLES WHICH SHALL CONFORM TO ASTM A36.

B. CONNECTIONS

- STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL BE DONE IN ACCORDANCE WITH AISC360-05, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS. CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED EXCEPT AS NOTED ON DRAWINGS.
- CONNECTION DETAILS NOT COMPLETELY DETAILED ON THE DRAWINGS (INCLUDING MATERIAL, GRADE, SIZE, NUMBER, SIZE, AND GRADE OF BOLTS AND SIZE OF WELDS) SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONNECTION DESIGN REACTIONS NOTED ON THESE DRAWINGS ARE BASED ON FACTORED (ULTIMATE) LOADS AND ARE INTENDED FOR USE WITH THE AISC LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD. WHERE DESIGN REACTIONS ARE NOT SHOWN USE 0.6 TIMES THE VALUE TABULATED IN TABLE 3-6 OF THE AISC DESIGN MANUAL OR RELATED TABLES FOR OTHER SHAPES.
- ALL BOLTS IN STRUCTURAL CONNECTIONS SHALL CONFORM TO ASTM F3125, GRADE A325 TYPE 1, UNLESS INDICATED OTHERWISE ON THESE DRAWINGS. FIELD BOLTS SHALL BE 3/4" DIAMETER A.S.T.M. A325 BEARING TYPE BOLTS WITH THREADS INCLUDED IN THE SHEAR PLANE, UNLESS NOTED OTHERWISE.
- SEE DRAWINGS FOR LOCATIONS REQUIRING ASTM A449 TYPE 1 BOLTS. USE ONLY FOR BEARING-TYPE CONNECTIONS WITH A BOLT DIAMETER GREATER THAN 1 1/2 INCHES. THREADED ROUND STOCK SHALL CONFORM TO ASTM A36.

- THE GENERAL CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, FOR REVIEW, ENGINEERED AND CHECKED SHOP DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DRAWINGS FOR ALL STRUCTURAL STEEL. SUBMIT SHOP DRAWINGS PREPARED IN ACCORDANCE WITH AISC MANUAL "DETAILING FOR STEEL CONSTRUCTION", DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED AND MARKED "NO OBJECTION NOTED".
- ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED.
- MINIMUM NUMBER OF BOLT ROWS BASED ON MEMBER DEPTH FOR W & C SHAPES ARE AS FOLLOWS:

UP TO 12"	DEEP 2 ROWS
14" TO 16"	DEEP 3 ROWS
18" TO 21"	DEEP 4 ROWS
24" DEEP	5 ROWS
- ALL CONNECTIONS SHALL BE SIMPLE SHEAR CONNECTIONS UTILIZING HIGH-STRENGTH BOLTS IN BEARING-TYPE CONNECTIONS (UNLESS NOTED OTHERWISE) WITH THREADS INCLUDED IN THE SHEAR PLANE.
- NON-COMPOSITE BEAM CONNECTIONS SHALL BE DESIGNED FOR THE REACTION DUE TO MAXIMUM ALLOWED LOAD FOR THE APPROPRIATE SPAN AND SHAPE BASED ON THE BEAM TABLES OF THE AISC MANUAL OF STEEL CONSTRUCTION (13TH EDITION).
- ALL SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION AS PER THE REQUIREMENTS OF THE AISC 360-05, SECTION J1.2.

C. WELDING

- UNLESS NOTED OTHERWISE, ELECTRODES FOR WELDING SHALL CONFORM TO E70XX(SMAW), F7XX-EXXX (SAW), E70S-X (GMAW), OR E7XX-X (FCAW). ALL FIELD WELDING SHALL BE DONE WITH E-70XX ELECTRODES.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO THE "CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION", LATEST EDITION.
- ALL WELDED JOINTS SHALL COMPLY W/ THE PROVISIONS OF AWS D1.1 STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY (SECTION 2207). THE GC SHALL MAKE PROOF OF WELDER CERTIFICATION AVAILABLE AT THE JOB SITE.

D. ANCHOR RODS

- UNLESS INDICATED OTHERWISE IN THE DRAWINGS, ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36. SEE ANCHOR BOLT SCHEDULE FOR ANCHOR BOLT DIAMETERS, QUANTITY AND TYPE OF NUTS, AND REQUIRED EMBEDMENT LENGTH. DAMAGE THREADS AT TWO PLACES BELOW THE NUT TO PREVENT LOOSING.

E. GROUT

- GROUT BELOW STRUCTURAL STEEL BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH A MINIMUM STRENGTH OF:
- | | |
|--------------------|--------------------|
| BEARING MATERIAL | 3,000 PSI CONCRETE |
| 4,000 PSI CONCRETE | |
| GROUT STRENGTH | 6,000 PSI |
| | 8,000 PSI |

F. MISCELLANEOUS

- ALL BEAMS AND GIRDERS SHALL BE FABRICATED WITH NATURAL CAMBER UP.
- AFTER FABRICATION, ALL STEEL SHALL BE CLEANED OF ALL RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS.
- THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBER FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT.
- ALL ADDITIONAL STEEL REQUIRED BY THE CONTRACTOR FOR ERECTION PURPOSES AND SITE ACCESS OF STOCKPILED MATERIALS SHALL BE PROVIDED AT NO COST TO THE OWNER. ALL SUCH ADDITIONAL STEEL SHALL BE REMOVED BY THE CONTRACTOR.
- ALL STEEL EXPOSED TO EARTH SHALL BE PAINTED WITH BITUMINOUS COATING. ALL STRUCTURAL STEEL EXPOSED TO THE WEATHER SHALL BE SHOP PRIMED & FIELD PAINTED W/ TWO COATS OF PAINT. (EXCEPT FOR SURFACES TO RECEIVE WELD OR TO BE ENCASED IN/IN CONCRETE. TOUCH UP ALL STRUCTURAL STEEL AFTER ERECTION WITH SAME PRIMER).
- THIS STRUCTURE IS DESIGNED TO BE LATERAL BRACED BY THE MASONRY WALLS. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING OF STRUCTURAL FRAMING UNTIL ALL PERMANENT BRACING AND MOMENT CONNECTIONS ARE COMPLETELY INSTALLED.
- STEEL COLUMNS ARE TO BE CONTINUOUS WITH NO SPLICES UNLESS NOTED OTHERWISE. ALL STEEL COLUMNS TO HAVE 1 /2" CAP PLATE UNLESS NOTED.

F. STEEL JOIST FRAMING NOTES

- OPEN WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED AND MANUFACTURED TO THE MINIMUM STANDARDS ESTABLISHED BY THE STEEL JOIST INSTITUTE. FOR JOISTS AND JOIST GIRDERS DESIGNED USING AISC-ASD THE 1/8 STRESS INCREASE ALLOWANCE FOR WIND AND SEISMIC LOADING SHALL NOT BE USED. TOP CHORDS OF JOISTS SHALL BE BRACED TO ANGLES OR TEES. BRIDGING SHALL BE DESIGNED (UNLESS NOTED OTHERWISE) IN ACCORDANCE WITH PARAGRAPH 5.4 OF THE STEEL JOISTS INSTITUTE SPECIFICATIONS. SHOP PAINT TO BE PER ARCH. SPECIFICATIONS.
- JOIST GIRDERS SHALL BE DESIGNED, MANUFACTURED, AND ERECTED PER THE STEEL JOIST INSTITUTE SPECIFICATIONS.
- PROVIDE FLAT BEARING FOR ALL JOISTS. THE ENDS OF ALL JOISTS SHALL HAVE A MINIMUM BEARING OF 2 1/2", EXCEPT FOR LH & DLH JOISTS WHICH HAVE A MINIMUM BEARING OF 4". WHERE NECESSARY, JOISTS ARE TO BE STAGGERED WHEN BEARING OVER NARROW STEEL SUPPORTS. MINIMUM BEARING CANNOT BE OBTAINED. SPECIAL ENDS MUST BE SHOWN, NOTED AND DESIGNED BY MANUFACTURER AND SUBMITTED FOR APPROVAL.
- SJ - STRUT JOIST - BOTTOM CHORD TO BE ANGLES EQUAL IN SIZE TO TOP CHORD; DO NOT WELD BOTTOM CHORD TO STABILIZER PLATE.
- JOISTS SHALL BE FIELD BOLTED AT THE COLUMN LINES TO PROVIDE LATERAL STABILITY DURING CONSTRUCTION. USE TWO 1/2" DIAMETER BOLTS. UNLESS PRE-ASSEMBLED INTO PANELS, ALL JOISTS WITH SPANS OF 40'-0" OR MORE, SHALL HAVE EACH END CONNECTED TO THE SUPPORTING STEEL STRUCTURE W/ 1/2" DIAMETER ERECTION BOLTS.
- JOISTS SHALL BE DESIGNED FOR APPLICABLE WIND LOADS, INCLUDING UPLIFT. SEE CHART 50.1 FOR ROOF UPLIFT PRESSURES.
- JOIST LOCATIONS ARE SHOWN FOR DESIGN PURPOSE. ACTUAL LOCATIONS MAY NEED TO BE ALTERED SLIGHTLY TO ACCOMMODATE BATHROOM PLUMBING FIXTURES. CONTRACTOR TO COORDINATE STEEL PLACEMENT PRIOR TO SUBMITTING SHOP DRAWINGS.
- WHERE 4 OR 5 ROWS OF BRIDGING ARE REQUIRED, A ROW NEAREST THE MIDSPAN OF THE JOIST SHALL BE DIAGONAL "X" BRIDGING WITH BOLTED CONNECTIONS AT CHORDS AND INTERSECTIONS.
- UNLESS SPECIFICALLY DETAILED OTHERWISE, ALL JOISTS SHALL BE ATTACHED TO SUPPORTING MEMBER W/ TWO 3/8" FILLET WELDS x 1 1/2" LONG (1 EA. SIDE).
- UNLESS SPECIFICALLY DETAILED OTHERWISE, ALL JOIST GIRDERS SHALL BE ATTACHED TO SUPPORTING MEMBERS W/ TWO 1/2" FILLET WELDS x 3" LONG (1 EA. SIDE).

G. STEEL NON-COMPOSITE FLOOR DECK (1.0C26):

- DECK SHALL BE 1.0" DEEP, 36" WIDE, 26 GAUGE GALVANIZED STEEL, WITH MINIMUM YIELD STRESS OF 80 KSI, G60.
- DECK SHALL BE ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS 3 SPAN MINIMUM AND SHALL BE ATTACHED FOR A MINIMUM DIAPHRAGM SHEAR CAPACITY OF 1208 PLF USING THE FOLLOWING MINIMUM ATTACHMENTS 36/4.
- WELD DECK TO SUPPORTING MEMBERS WITH 4 - 5/8" PUDDLE WELDS PER SHEET AT ENDS, END LAPS AND AT INTERMEDIATE SUPPORTS, AND AT 12" O.C. AT PERIMETER BEAMS AND OPENINGS EDGES RUNNING PARALLEL TO THE DECK.
- SIDE SEAM ATTACHMENT SHALL BE #10 TEK SCREWS AT 12" O.C.
- INSTALL DECK ENDS OVER SUPPORTING FRAMING WITH A MIN