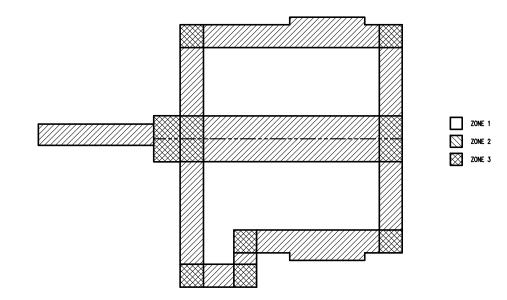
INTERIOR

WORKING POINT

STRUCTURAL GENERAL NOTES

MATERIALS AND CONSTRUCTION:

STRUCTURAL NOTES GENERAL: UNLESS OTHERWISE SPECIFIED, ALL WORK AND MATERIALS SHALL CONFORM TO "FLORIDA BUILDING CODE" (FBC) REQUIREMENTS, 2017 EDITION. ALL ELEVATIONS ON STRUCTURAL SHEETS ARE RELATIVE TO (STRUCTURAL DATUM) FINISHED FLOOR ELEVATION OF 0.00'. DO NOT SCALE DRAWINGS. USE DIMENSIONS AND DETAILS. THE GENERAL CONTRACTOR SHALL VERIFY THE DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THESE STRUCTURAL CONTRACT THE STRUCTURE SHOWN ON THESE DRAWINGS IS SELF-SUPPORTING ONLY IN ITS COMPLETED FORM. THE DESIGN, ADEQUACY, SAFETY AND STABILITY OF ERECTION BRACING, FORMWORK, SHORING, AND TEMPORARY SUPPORTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. FOUNDATIONS HAVE NOT BEEN DESIGNED FOR ANY CONDITION OF LOADING OTHER THAN THAT OF THE COMPLETED STRUCTURE. VERIFICATION OF ADEQUACY OF FOUNDATIONS TO RESIST ERECTION INDUCED FORCES IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND FOR CONFORMANCE WITH THE HEALTH AND SAFETY PROVISIONS REQUIRED BY ANY REGULATORY AGENCIES. THE STRUCTURAL ENGINEER OF RECORD HAS NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR, OR THEIR EMPLOYEES WITH THEIR WORK OR ANY HEALTH STRUCTURAL SUBMITTALS: REPRODUCTION OF CONTRACT DOCUMENTS FOR ERECTION AND/OR SHOP DRAWINGS WILL NOT BE PERMITTED. REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO QUANTITIES, MEMBER SIZES, DETAILS, AND THE DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR ALSO SHALL BE RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION. SEE SPECIFIC PROVISION. (3) THE FOLLOWING SUBMITTALS SHALL MADE TO THE DESIGN TEAM FOR REVIEW: CONCRETE REINFORCEMENT BARS CONCRETE MIX DESIGN GROUT MIX DESIGN MASONRY REINFORCEMENT BARS MASONRY BLOCK METAL DECK PRE-CAST CONCRETE CELL ENCLOSURES PRE—ENGINEERED METAL BUILDING METAL DECK SHORING & RE-SHORING STRUCTURAL STEEL STEEL STAIRS 2. DESIGN LOADS: A. <u>LIVE LOADS</u> $ROOF\ LOAD = 20\ PSF$ SECURITY CEILINGS = 20 PSF HOUSING CELLS = 40 PSF DORMITORIES = 80 PSF CORRIDORS & BALCONIES = 100 PSF CONTROL ROOM FLOOR = 100 PSF STAIRS AND LANDINGS = 100 PSFMECHANICAL MEZZANINE = 250 PSF HANDRAIL/GUARDRAIL = 50 PLF/200 LB NON CONCURRENT* ULTIMATE DESIGN WIND SPEED = 120 MPH RISK CATEGORY: IV WIND EXPOSURE CATEGORY = C







<u>WIND PRESSURE NOTES:</u>

ENCLOSURE CLASSIFICATION = ENCLOSED

INTERNAL PRESSURE, $GCpi = \pm 0.18$

- 1. THIS PLAN INDICATES WIND PRESSURES REQUIRED FOR THE DESIGN AND/OR VERIFICATION OF MISCELLANEOUS
- CONSTRUCTION MATERIALS, AS REQUIRED BY THE FLORIDA BUILDING CODE. REFER TO THE ARCHIECTURAL PLANS, DETAILS, AND SPECIFICATIONS FOR ROOD AND/OR WALL CONSTRUCTION.
- 3. THE CONTRACTOR SHALL VERIFY ALL MATERIALS SUBMITTED FOR REVIEW ARE ADEQUATE TO WITHSTAND THE POSITIVE (TOWARDS THE SURFACE) AND NEGATIVE (AWAY FROM SURFACE) PRESSURES INDICATED ON THIS

MONOSLOPE ROOF PRESSURES									
EFF. WIND AREA	ZONE 1	ZONE 2	ZONE 2 OH	ZONE 3	ZONE 3 OH				
10 ft ²	+15.6/-41.7	+15.6/-58.0	-61.3	+15.6/-90.6	-97.1				
20 ft ²	+15.3/-41.7	+15.3/-57.7	-60.9	+15.3/-87.0	-89.9				
50 ft ²	+14.2/-41.7	+14.2/-56.6	-59.8	+14.2/-76.1	-68.2				
100 ft ²	+12.4/-41.7	+12.4/-54.8	-58.0	+12.4/-58.0	-32.0				
GABLE ROOF PRESSURES									
EFF. WIND AREA	ZONE 1	ZONE 2	ZONE 2 OH	ZONE 3	ZONE 3 OH				
10 ft ²	+15.6/-38.5	+15.6/-64.5	-61.3	+15.6/-97.1	-97.1				
20 ft ²	+15.3/-38.1	+15.3/-62.0	-60.9	+15.3/-91.0	-89.9				
50 ft ²	+14.2/-37.0	+14.2/-54.4	-59.8	+14.2/-72.5	-68.2				
100 ft ²	+12.4/-35.2	+12.4/-41.7	-58.0	+12.4/-41.7	-32.0				
WALL PRESSURES			THE PRESSURES ARE ULTIMATE PRESSURES AND MAY BE MULTIPLIED BY 0.6 PER ASCE 7 TO						
EFF. WIND AREA	ZONE 4	<u>ZONE 5</u>	DETERMINE ALLOWABLE STRESS PRESSURES. 2. FOR EFFECTIVE AREAS BETWEEN THOSE GIVEN, THE LOAD MAY BE INTERPOLATED. OTHERWISE, USE THE LOAD ASSOCIATED WITH THE LOWER FEFECTIVE ARE						
10 ft ²	+35.2/-38.1	+35.2/-46.9							

20 10	,	,		00.0		00.0		
50 ft ²	+14.2/-37.0	+14.2/-54.4		-59.8	+14.2/-72.5	-68.2		
100 ft ²	+12.4/-35.2	+12.4/-41.7		-58.0	+12.4/-41.7	-32.0		
WALL PRESSURES				THE PRESSURES ARE ULTIMATE PRESSUI MAY BE MULTIPLIED BY 0.6 PER ASCE				
EFF. WIND AREA	<u>ZONE 4</u>	<u>ZONE 5</u>	2.	DETERMIN FOR EFFE	E ALLOWABLE STRESS P ECTIVE AREAS BETWEEN 1	RESSURES. THOSE GIVE		
10 ft ²	+35.2/-38.1	+35.2/-46.9		LOAD MAY BE INTERPOLATED. OTHERWISE LOAD ASSOCIATED WITH THE LOWER EFF				
20 ft ²	+33.6/-36.6	+33.6/-43.8	3.	THE FINAL DESIGN PRESSURE, INCLUDI		CLUDING AL		
50 ft ²	+31.6/-34.5	+31.6/-39.7		PERMITTED REDUCTIONS, USED IN THE SHALL NOT BE LESS THAN THAT REQUISECTION 30.2.2 OF ASCE 7-10.				
100 ft ²	+30.0/-32.9	+30.0/-36.6						
200 ft ²	+28.5/-31.4	+28.5/-33.5						

(6) FOUNDATIONS AND ANCHOR BOLTS

b. PORTAL FRAMES

a. THE INDICATED FOUNDATION DESIGN SHALL BE CONSIDERED THE MINIMUM DESIGN FOR CONSTRUCTION.

b. THE OWNER'S BUILDING ENGINEER WILL VERIFY THE DESIGN OF THE FOUNDATION SYSTEM AND REDESIGN AS NECESSARY, TO SUPPORT REACTIONS FOR THE BUILDING FURNISHED. A POST-BID ADDENDUM WILL BE ISSUED, IF MODIFICATIONS TO THE FOUNDATIONS ARE REQUIRED.

c. WITHIN 30 DAYS OF NOTICE TO PROCEED WITH THE PROJECT, PREPARE AND SUBMIT A CERTIFIED REACTION TABLE FOR ALL LOAD CASES AND COMBINATIONS REQUIRED BY THE FLORIDA BUILDING CODE. INCLUDE ALL INPUT LOADINGS AND A CONSOLIDATED LIST OF FRAMES WITH COLUMN AND BRACING REACTIONS FOR ALL APPLICABLE LOAD

COMBINATIONS TO BE USED TO VERIFY FOUNDATION DESIGN. d. THE DIAMETER AND EMBEDMENT OF THE ANCHOR BOLTS SHALL BE SPECIFIED BY THE OWNERS STRUCTURAL ENGINEER UPON APPROVAL OF THE PRE-ENG. METAL BLDG.

SHOP DRAWINGS. (BASED ON REACTIONS FURNISHED.) (7) MATERIALS AND COMPONENTS - ALL MATERIALS AND COMPONENTS SHALL BE THE MANUFACTURER'S STANDARD EXCEPT THE FOLLOWING:

 a. VERTICAL X—BRACING 1. PROVIDE ALL VERTICAL X-BRACING INDICATED ON THE PLANS AS [X].

2. ALL BRACING SHALL BE STEEL RODS OR STRUCTURAL SHAPES. CABLE BRACING SHALL NOT BE USED. 3. WHERE APPLICABLE ALL BRACING SHALL BE LOCATED AT THE CENTER OF CMU WALLS. NOTCH WEBBING OF CMU & BUILD MASONRY AROUND BRACES. OFFSET VERTICAL

WALL REINF. TO CLEAR BRACES. 4. COORDINATE THE LOCATIONS OF BRACES TO CLEAR WALL OPENINGS.

1. PROVIDE ALL PORTAL FRAMES INDICATED ON THE PLANS AS [PF]. 2. PORTAL FRAMES SHALL BE LATERAL RIGID FRAMES INCLUDING A BEAM AND TWO COLUMNS (NESTLED INTO THE PRIMARY FRAME COLUMNS).

(8) FOUNDATIONS ARE NOT DESIGNED TO RESIST ROTATION FROM THE METAL BUILDING COLUMNS. ALL METAL BUILDING FRAMES AND COLUMNS SHALL BE DESIGNED WITH A "PINNED BASE" CONNECTION.

(9) CENTER COLUMNS SHALL BE STRUCTURAL TUBES OR PIPE, SEE PLAN.

(10) SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR METAL ROOFING, SIDING, AND LINER PANELS.

(11) THESE DRAWINGS, NOTES, AND SPECIFICATIONS GOVERN OVER THE BUILDING SUPPLIER'S IN-HOUSE CRITERIA OR STANDARDS, INDUSTRY STANDARDS OR THE TERMS OF THE SUPPLIERS PURCHASE ORDER OR CONTRACT WITH THE CONTRACTOR OR OWNER.

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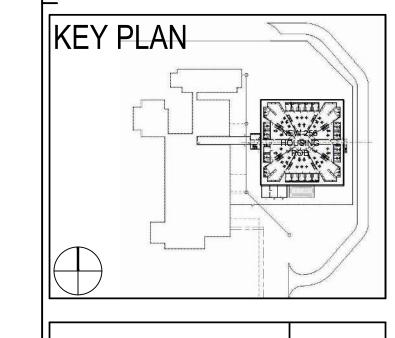
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Professional Seals

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AC 20.

AS NOTED Issued for Permit Description REVISIONS

> July 24, 2020 STRUCTURAL

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NOTES

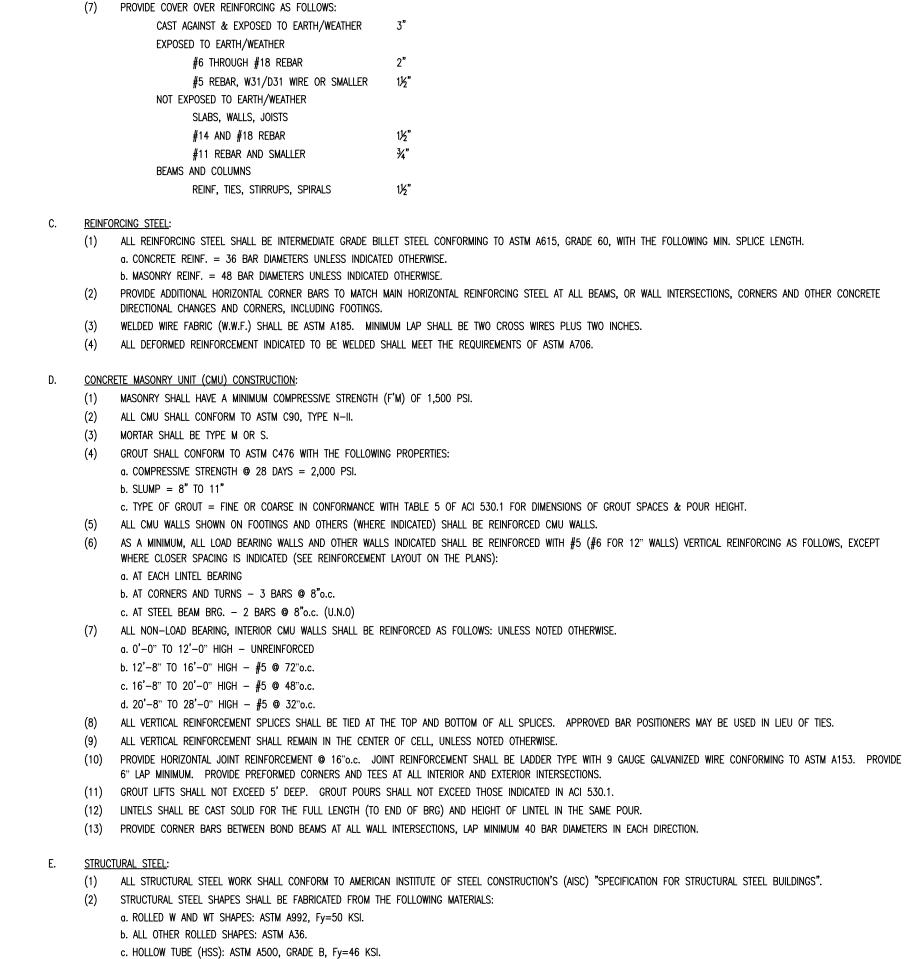
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PROJECT NO.

DESTROY AFTER USE



(3) ALL STEEL CONNECTIONS SHALL CONFORM TO AISC MANUAL "STANDARD FRAMED BEAM CONNECTIONS" UNLESS SHOWN OTHERWISE. HIGH STRENGTH BOLTS SHALL BE ASTM

(5) UNLESS NOTED OTHERWISE FASTEN ALL METAL DECK TO SUPPORTING MEMBERS, PERIMETER MEMBERS AND OPENING EDGES WITH 5/8" PUDDLE WELDS AT 12"o.c. PROVIDE #10

(6) THE CONTRACTOR SHALL PROTECT THE DECK FLUTES FROM MOUNDING CONCRETE AND HEAVY EQUIPMENT INCLUDING WHEEL BARROWS AND SCREEDING EQUIPMENT, PRIOR TO AND

(7) IT IS THE CONTRACTOR'S RESPONSIBILITY TO SHORE THE DECK AS NECESSARY FOR CONCRETE PLACEMENT AND CURING AS WELL AS AT PENETRATIONS OR AREAS OF MINOR DECK

(2) THE DESIGN SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2016 EDITION AND THE "LOW RISE BUILDING SYSTEMS MANUAL" PUBLISHED BY THE METAL BUILDING

b. THE DESIGN SHALL INCORPORATE ALL COLLATERAL LOADS INDICATED, INCLUDING SPECIAL MECHANICAL AND ELECTRICAL SYSTEMS, CEILINGS AND OTHER ARCHITECTURAL

b. Drift shall be calculated at "h" (the eave height of the building) above finished floor for horizontal load in both lateral and longitudinal directions.

(5) SUBMIT STRUCTURAL SHOP DRAWINGS AND ALL CALCULATIONS FOR REVIEW AND APPROVAL. ALL SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED, SIGNED, AND SEALED

a. THE MAXIMUM HORIZONTAL DEFLECTION (DRIFT) OF THE BUILDING UNDER FULL F.B.C. DESIGN LOADS SHALL BE LIMITED TO H/300. (BOTH DIRECTIONS)

BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. CALCULATIONS SHALL INCLUDE BUT ARE NOT LIMITED TO:

FEATURES. THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURERS AND VERIFY DESIGN LOADS ARE BASED ON ACTUAL EQUIPMENT AND CONFIGURATIONS TO

(1) METAL FLOOR DECK SHALL BE GALVANIZED STEEL DECK WITH THE PROPERTIES INDICATED ON THE DECK SCHEDULES ON THE FLOOR FRAMING PLANS.

(1) THE CONTRACTOR SHALL PROVIDE THE STRUCTURAL DESIGN OF THE METAL BUILDING AND ALL OTHER PRE-ENGINEERED COMPONENTS.

THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT FILE NO. DEI20006, DATED MAY 18, 2020 BY AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.

PREPARATION REQUIREMENTS FOR A CONVENTIONAL SHALLOW FOUNDATION SYSTEM.

(5) PROVIDE THE FOLLOWING MINIMUM SOIL DENSITY TESTS FOR COMPACTED SUBGRADE AND PER COMPACTED FILL LIFT:

AS DIRECTED BY THE GEOTECHNICAL REPORT WHICHEVER IS MORE STRINGENT.

LIGHTWEIGHT CONCRETE (LW) SHALL HAVE A MAXIMUM UNIT WEIGHT OF 120 P.C.F.

CHAMFER ALL CONCRETE EXPOSED EDGES UNLESS INDICATED OTHERWISE.

(4) ALL SLABS-ON-GRADE CONSTRUCTION SHALL BE REINFORCED AS FOLLOWS:

OWNER TO APPROVE LABORATORY PRIOR TO TESTING AND PAYMENT.

d. STRUCTURAL PIPE: ASTM A53, TYPE E OR S, GRADE B, Fy=35 KSI.

(6) UNLESS NOTED OTHERWISE, ALL WELDING SHALL BE MADE WITH E70 ELECTRODE.

SIDELAP SCREW AT MIDSPAN OR 36" INTERVALS (WHICHEVER IS SMALLER).

a. DESIGN LOADS AND DESIGN LOAD COMBINATIONS SHALL CONFORM TO THE F.B.C.

(5) ALL WELDING WORK SHALL BE PERFORMED AS PER THE AMERICAN SOCIETY'S RECOMMENDATIONS BY CERTIFIED WELDERS.

(7) NON-SHRINK GROUT SHALL BE NONMETALLIC SHRINKAGE-RESISTANT GROUT CONFORMING TO ASTM C1107

(2) ALL STEEL DECK SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE.

(4) ALL DECK SHALL BE FABRICATED FROM GALVANIZED SHEETS CONFORMING TO ASTM A 653, CLASS G60 COATINGS.

A325-N BEARING TYPE, THREAD INCLUDED IN SHEAR PLANE.

(4) ANCHOR BOLTS AND ALL OTHERS SHALL BE ASTM F1554-50.

DURING CONCRETE PLACEMENT.

G. PRE-ENGINEERED METAL BUILDING NOTES: (UNLESS NOTED OTHERWISE)

MANUFACTURERS ASSOCIATION (MBMA).

BE FURNISHED AND INSTALLED.

COLLATERAL LOADS: 10 PSF

(4) DEFLECTION (HORIZONTAL DRIFT) CRITERIA

SUBMIT CALCULATIONS FOR REVIEW.

c. SEE SPECIFICATIONS.

c. MINIMUM DESIGN LOADS SHALL BE AS FOLLOWS:

BUILDING DEAD LOAD = ACTUAL LOADS

ROOF LIVE LOAD = 20 PSF (REDUCIBLE)

WIND / SEISMIC LOAD = SEE STRUCTURAL NOTES

c. SEE SPECIFICATIONS FOR VERTICAL DEFLECTION LIMITATIONS.

a. FRAME DESIGN INCLUDING DEFLECTION (BOTH DIRECTIONS)

b. BUILDING REACTIONS (INCLUDE BOTH LOAD CASES AND LOAD COMBINATIONS FOR ALL COLUMNS)

(3) DESIGN LOADS

F. <u>METAL FLOOR DECK</u>:

b. ONE FOR EVERY 250 LINEAL FEET BENEATH STRIP FOOTINGS

a. ONE PER 5,000 SF SLAB-ON-GRADE

SLABS-ON-GRADE: 3,000 PSI NW

ELEVATED SLABS: 4,000 PSI LW

FOUNDATIONS:

c. ON FOR EVERY THIRD ISOLATED FOOTING

A MINIMUM COMPRESSIVE STRENGTH AS FOLLOWS:

4" THICK - 6X6-W1.4XW1.4 WELDED WIRE FABRIC

6" THICK - 6x6-W2.1xW2.1 WELDED WIRE FABRIC

3,000 PSI NW

ALLOWABLE SOIL BEARING CAPACITY TO BE 2,500 PSF ON RE-COMPACTED IN-SITU SOILS OR NEWLY PLACED STRUCTURAL FILL. REFER TO THE GEOTECHNICAL REPORT FOR SOIL

(4) ALL SOIL BELOW SLABS-ON-GRADE AND FOOTINGS SHALL BE COMPACTED TO A DEPTH OF 12" AT OPTIMUM MOISTURE CONTENT TO 95% OF MODIFIED PROCTOR, ASTM D1557, OR

(1) ALL CONCRETE WORK SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (A.C.I. 318-08). CONCRETE SHALL HAVE

(5) CONTRACTOR SHALL MAKE SETS OF FOUR ACCEPTANCE CYLINDERS FOR STRENGTH TESTING FOR EACH 50 YARDS OF CONCRETE PLACED. CYLINDERS SHALL BE MADE IN

(6) CURE ALL SURFACES FOR A PERIOD OF 7 DAYS UNTIL AVERAGE COMPRESSIVE STRENGTH HAS REACHED 70% OF SPECIFIED STRENGTH. CURING SHALL BE BY PONDING, MOIST

OR LIQUID MEMBRANE FORMING CURING COMPOUND. SELECTION OF CURING METHOD SHALL BE COMPATIBLE WITH THE FINISH TO BE APPLIED TO THE CONCRETE SURFACE.

ACCORDANCE WITH ASTM C31 AND WITH ASTM C172. TESTING SHALL BE PERFORMED BY AN ACI CERTIFIED TESTING LABORATORY AND SHALL BE PAID FOR BY THE CONTRACTOR.

CURING WITH SAND OR ABSORPTIVE MATS KEPT CONTINUOUSLY WET, CONTINUOUS APPLICATION OF STEAM (NOT EXCEEDING 105'F) OR MIST SPRAY, WATERPROOF CURING PAPER