

DIVISION 1. GENERAL
A. NO FIELD SUPERVISION PROVIDED UNDER THIS SEAL. CONTACT CYPRESS ENGINEERING FOR CONSTRUCTION CONTRACT ADMINISTRATION.
B. ALL WORK/MATERIALS SHALL CONFORM TO LOCAL, STATE AND FEDERAL CODES. THE STRICTER PROVISIONS OF CODES, SPECIFICATIONS AND THESE NOTES AND NOTES ON INCLUDED DRAWINGS SHALL GOVERN. CYPRESS ENGINEERING DOCUMENTS HAVE BEEN PREPARED FOR USE BY KNOWLEDGEABLE & EXPERIENCED LICENSED GENERAL CONTRACTORS.
C. CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER TRADES.
D. DO NOT SCALE DRAWINGS. USE PRINTED DIMENSIONS OR REQUEST INFORMATION FROM ENGINEER.
E. COMMUNICATION FROM CONTRACTOR TO ENGINEER SHALL THROUGH THE ARCHITECT IN WRITING.
F. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER THROUGH THE ARCHITECT IN WRITING OF MISSING INFORMATION, CONFLICTS WITH EXISTING CONDITIONS, CONFLICTS WITH OTHER DRAWINGS FOR OTHER TRADES, CONFLICTS WITH ANY OTHER WORK OR QUESTIONS REGARDING DRAWINGS BY CYPRESS ENGINEERING. CONTRACTOR SHALL SUBMIT QUESTIONS AND/OR PROPOSED DEVIATIONS FROM PROJECT DOCUMENTS TO ENGINEER IN WRITING.
G. CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK FOR WHICH CYPRESS ENGINEERING CONSTRUCTION DOCUMENTS REQUIRE SUBMITTAL UNTIL A RESPONSE ON SAID SUBMITTALS IS RECEIVED FROM CYPRESS ENGINEERING.
H. CODE COMPLIANCE
1. INTERNATIONAL BUILDING CODE (IBC) 2015
I. LOADS (PER ASCE 7)
1. DEAD LOAD: SELF WEIGHT OF ALL MATERIALS OF CONSTRUCTION INCORPORATED INTO THE BUILDING (BUILDINGS ENGINEERED BY OTHERS SHALL INCLUDE A MINIMUM COLLATERAL LOAD OF 5 PSF PER CEILING, UNLESS NOTED OTHERWISE).
2. LIVE LOAD: PER TABLE 4-1 OF ASCE 7
• ASSEMBLY AREAS: 100 PSF
• BALCONIES AND DECKS: 1.5 TIMES NORMAL LIVE LOAD
• GYMNASIUMS: 100 PSF
• ROOFS (FLAT, PITCHED OR CURVED): 20 PSF
• SCHOOL CLASSROOMS: 40 PSF, 1,000 LB CONCENTRATED
• SCHOOL CORRIDORS ABOVE 1ST FLOOR: 80 PSF, 1,000 LB CONCENTRATED
• SCHOOL 1ST FLOOR CORRIDORS: 100 PSF, 1,000 LB CONCENTRATED
• STAIRS AND EXITWAYS: 100 PSF, 300 LB CONCENTRATED
3. FLOOD LOADS: PER ASCE 7
4. WIND LOADS: BASIC WIND SPEED, V - SEE STRUCTURAL PLAN AND TABLE THIS DRAWING
5. SNOW LOADS: GROUND SNOW LOAD PER FIGURE 7-1 OF ASCE 7
6. RAIN LOADS: PER CHAPTER 8 OF ASCE 7
7. ICE LOADS: PER FIGURE 10-2 OF ASCE 7
8. SEISMIC LOADS: PER CHAPTERS 11 THROUGH 22 OF ASCE 7
J. FLOOD ZONE: SEE PROJECT SURVEY
K. SUBMITTALS:
• PRIOR TO ANY OTHER SUBMITTAL SUBMIT A SCHEDULE OF ALL SUBMITTALS INCLUDING 5 BUSINESS DAYS MINIMUM FOR ENGINEERING REVIEW OF EACH SUBMITTAL
• STRUCTURAL FILL MATERIAL PROPERTIES (LIQUID LIMIT (40 MAX.) AND PLASTIC LIMIT (20 MAX.))
• FILL HEIGHT AT ALL CORNERS OF PAD
• COMPACTION TESTS 1 REQUIRED PER FILL LIFT PER 2,000 S.F. OF FILL AREA
• PILE DRIVING INFORMATION: NAME OF CONTRACTOR, PROPOSED EQUIPMENT, PROPOSED HAMMER, PILE LOAD TEST, BLOW COUNTS ON ALL PILING & VIBRATION REPORT
• REBAR SHOP DRAWINGS
• STRUCTURAL DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR ALL STRUCTURAL STEEL (FRAMES, BEAMS, COLUMNS, BRACING, GIRTS, PURLINS AND ANCHOR BOLTS AND ANY OTHER EMBEDDED ITEMS) SEALED BY A LOUISIANA REGISTERED PROFESSIONAL ENGINEER
• STRUCTURAL STEEL SHOP DRAWINGS
• WELD CERTIFICATIONS
• METAL STUD SHOP DRAWINGS (STUDS & JOISTS) SEALED BY A LOUISIANA REGISTERED PROFESSIONAL ENGINEER
• METAL DECK SHOP DRAWINGS
• CMU MATERIALS AND MORTAR

DIVISION 2. SITE WORK
A. SOIL
1. FILL, FOUNDATION BEAM DEPTHS AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH PROJECT GEOTECHNICAL (SOIL) REPORT AND PER THESE NOTES.
2. UNLESS OTHERWISE STATED IN THE PROJECT GEOTECHNICAL REPORT, ALL VEGETATION, LOOSE MATERIAL AND ORGANIC MATERIAL SHALL BE STRIPPED FROM THE SITE AT FOUNDATION LOCATIONS. IF MORE THAN 18 INCHES OF LOOSE MATERIAL IS REMOVED CONTACT ENGINEER FOR FURTHER RECOMMENDATIONS. PROOF ROLL ALL AREAS PRIOR TO FILL PLACEMENT. REMOVE ANY SOFT MATERIALS THAT "RUT" OR "PUMP" UNDER PROOF ROLLING OPERATIONS AND REPLACE WITH STRUCTURAL FILL.
3. UNLESS OTHERWISE STATED IN THE PROJECT GEOTECHNICAL REPORT, STRUCTURAL FILL SHALL HAVE A MAXIMUM LIQUID LIMIT OF 40 AND A MAXIMUM PLASTICITY INDEX (PI) < 20 (THE PI IS THE DIFFERENCE OF THE LIQUID LIMIT AND THE PLASTIC LIMIT OF THE SOIL).
4. UNLESS OTHERWISE STATED IN THE PROJECT GEOTECHNICAL REPORT, CONTRACTOR SHALL PLACE FILL IN 6 TO 8 INCH LIFTS AT MOISTURE CONTENTS WITHIN 3% OF OPTIMUM AND COMPACT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D698) AND SHALL EXTEND A MINIMUM OF 5 FEET BEYOND THE LIMITS OF THE BUILDING (TEST EACH LIFT, MINIMUM OF 1 TEST PER 2,000 S.F. OF AREA PER LIFT). SCARIFY BETWEEN FILL LIFTS FOR BONDING.
5. SOIL COMPACTION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. FAILURE TO PROPERLY TEST OR COMPACT SOIL MAY CAUSE STRUCTURAL CRACKING IF SETTLEMENT OCCURS.
6. THE MAXIMUM FILL HEIGHT ALLOWED IS AS SHOWN ON THE FOUNDATION PLAN. PLACEMENT OF FILL IN EXCESS OF THIS AMOUNT WILL VOID THE ENGINEER'S DESIGN AND HOLD THE ENGINEER HARMLESS.
7. GENERAL CONTRACTOR SHALL GRADE SITE FOR PROPER DRAINAGE.
8. GENERAL CONTRACTOR SHALL PROVIDE AND OWNER SHALL MAINTAIN AFTER COMPLETION OF CONSTRUCTION CONTRACT POSITIVE DRAINAGE AWAY FROM THE FOUNDATION. PONDING WATER AT FOUNDATION EDGES WILL CAUSE SOILS TO GAIN MOISTURE WHICH CAN RESULT IN A LOSS OF BEARING CAPACITY, EXCESSIVE SETTLEMENT AND/OR SWELLING OF THE SOIL, ALL OF WHICH CAUSE DIFFERENTIAL SETTLEMENT.
9. GENERAL CONTRACTOR SHALL PROVIDE AND OWNER SHALL MAINTAIN AFTER COMPLETION OF CONSTRUCTION CONTRACT PROTECTION FOR FOUNDATION FROM THE EFFECTS OF MOISTURE LOSS DUE TO TREES ADJACENT TO THE FOUNDATION. MOISTURE LOSS IN SOIL CAN RESULT IN SOIL SHRINKAGE WHICH CAN CAUSE DIFFERENTIAL SETTLEMENT.
10. CONTRACTOR SHALL PLAN HIS WORK IN ORDER TO PLACE CONCRETE AS SOON AS POSSIBLE AFTER SOIL HAS BEEN PREPARED FOR CONSTRUCTION IN ORDER TO MINIMIZE DAMAGE TO THE SOIL BY EXPOSURE TO THE ENVIRONMENT. DO NOT PLACE CONCRETE ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL, PONDING WATER OR DESICCATED SOILS (SOILS THAT HAVE EXCESSIVELY DRIED).
11. SEE FOUNDATION DRAWINGS FOR ADDITIONAL NOTES.
12. SEE FOUNDATION PLAN FOR MAXIMUM FILL ALLOWED (LOCAL AUTHORITY HAVING JURISDICTION MAY HAVE STRICTER FILL REQUIREMENTS).
B. PILES
1. PILE SIZES SHALL BE AS STATED ON THE FOUNDATION PLAN, DRIVEN WITH AN IMPACT HAMMER, NOT VIBRATED.
2. PILES SHALL HAVE TIP EMBEDMENT INTO NATURAL SOIL OR DRIVEN TO REFUSAL. REFUSAL SHALL BE AS SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT OR BUILDING CODE.
3. TIMBER PILES SHALL BE PER ANSI 0.5.1
4. TIMBER PILES SHALL MEET AWWA STANDARDS UC4C (FORMERLY C3) FOR PRESERVATIVE RETENTION.
5. ALL FILL SHALL BE PLACED AND COMPACTED PRIOR TO PILE INSTALLATION.
6. THE GENERAL CONTRACTOR SHALL INCLUDE PREDRILLING OF 8 FEET IN HIS BID. PER PROJECT GEOTECHNICAL REPORT, SHALLOW PREDRILLING MAY BE REQUIRED TO DEPTHS OF 6 TO 8 FEET TO MINIMIZE VIBRATIONS OR TO PENETRATE SURFICIAL SOILS. SHALLOW PREDRILLING SHALL BE PERFORMED BY DRY AUGER METHODS AND THE AUGER BIT DIAMETER SHALL BE NO LARGER THAN THE DIAMETER OF THE PILE. ACTUAL REQUIREMENTS FOR PREDRILLING TO BE DETERMINED DURING THE TEST PILE PROGRAM. IN ALL CASES PILES SHALL BE DRIVEN 10 FEET BELOW THE PREDRILL DEPTH.
7. THE GENERAL CONTRACTOR SHALL OBTAIN A PILE LOAD TEST TO VERIFY PILE CAPACITY AND PROVIDE TEST RESULTS TO ENGINEER FOR REVIEW.
8. PILE INSTALLATION CONTRACTOR SHALL MONITOR VIBRATIONS DURING PILE INSTALLATION. MAXIMUM PEAK PARTICLE VELOCITY SHALL BE LIMITED TO 0.10 INCHES/SECOND WHEN ADJACENT TO HISTORICAL STRUCTURES OR UP TO 0.25 INCHES/SECOND IN THE ABSENCE OF HISTORICAL STRUCTURES.

REVIEW OF CONTRACTOR SUBMITTALS, INCLUDING SHOP DRAWINGS AND OR PRODUCT DATA IS FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. REVIEW OF SUCH SUBMITTALS IS NOT FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER INFORMATION SUCH AS DIMENSIONS, QUANTITIES AND INSTALLATION OR PERFORMANCE OF SYSTEMS, WHICH ARE THE CONTRACTOR'S RESPONSIBILITY. THE ENGINEERS REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS OR, UNLESS OTHERWISE SPECIFICALLY STATED BY THE ENGINEER, OF ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES. THE ENGINEER'S APPROVAL OF A SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

DIVISION 3. CONCRETE
A. ALL CONCRETE WORK (INCLUDING MIX DESIGN, FORMWORK & MATERIALS) SHALL COMPLY WITH ACI 301
B. STRUCTURAL CONCRETE: NORMAL WEIGHT, MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45 U.N.O. (MAXIMUM WATER/CEMENT RATIO SHALL BE 0.40 FOR CONCRETE IN MARINE ENVIRONMENTS).
C. ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
D. CALCIUM CHLORIDE SHALL NOT BE USED FOR PRESTRESSED/POST-TENSIONED CONCRETE. ALL OTHER CONCRETE SHALL MEET THE REQUIREMENTS OF ACI301 FOR WATER-SOLUBLE CHLORIDE-ION LIMITS.
E. UNLESS SPECIFICALLY NOTED IN THE STRUCTURAL DRAWINGS, IT IS UNDERSTOOD THAT CONCRETE IS NOT EXPOSED TO SULFATE.
F. TOTAL ADJUST SHALL BE 5% FOR BROOM FINISH SURFACES. MAXIMUM AIR ENTRAINMENT FOR HARD-TROWELED FINISH SURFACES SHALL BE 3%. CONCRETE FOR HARD-TROWELED FINISH SURFACES SHALL NOT INCLUDE AIR ENTRAINING ADMIXTURES. (ACI301 & ACI302)
G. FINISHES SHALL BE PER ACI301, UNLESS NOTED OTHERWISE.
H. SLAB REINFORCEMENT SHALL BE SUPPORTED AT 4 FT ON CENTER MAX. IN BOTH DIRECTIONS (THE USE OF CONCRETE BRICKS OF AN EQUAL OR GREATER COMPRESSIVE STRENGTH AS REQUIRED FOR THE SLAB IS ACCEPTABLE).
I. SEE ATTACHED FOUNDATION NOTES AND DETAILS FOR ADDITIONAL INFORMATION.
J. TOLERANCES FOR CONCRETE CONSTRUCTION SHALL BE PER ACI117 EXCEPT THAT SLAB ON GROUND THICKNESS SHALL BE THE MINIMUM SPECIFIED ON THE DRAWINGS AT ANY AREAS.
K. CONTRACTOR SHALL THOROUGHLY CONSOLIDATE CONCRETE (ESPECIALLY AT ANCHORAGES AND DOWELS).
L. CONTRACTOR SHALL CURE CONCRETE IN ACCORDANCE WITH ACI-308 IMMEDIATELY AFTER FINISHING TO MINIMIZE THE APPEARANCE OF SHRINKAGE CRACKS.
M. ALL FORMWORK SHALL BE IN ACCORDANCE WITH ACI-301
N. WHERE CONSTRUCTION JOINTS ARE NOT INDICATED ON THE DRAWINGS, THEY SHALL BE LOCATED BY THE CONTRACTOR, SUBJECT TO REVIEW BY THE OWNER'S ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE KEYS, WITH REINFORCING CONTINUOUS THROUGH THE JOINT.
O. ANCHOR BOLTS BOLTS SHALL BE ASTM A307 HOT DIP GALVANIZED MATERIAL & SPACED AT 48" O.C. MAX., UNLESS NOTED OTHERWISE.
P. REBAR & WWR REINFORCEMENT
1. ALL REBAR SHALL CONFORM TO ASTM A615, GRADE 60.
2. MINIMUM CLEAR COVER FOR REBAR SHALL BE AS FOLLOWS (PER ACI 318:7.7):
CONCRETE EXPOSED TO WEATHER: 3"
CONCRETE EXPOSED TO EARTH OR WEATHER: 2" (1 1/2" FOR #5, W31 WIRE, D31 WIRE OR SMALLER) SLABS, WALLS OR JOISTS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 3/4" (1 1/2" FOR #14 OR #18 BARS)
BEAMS OR COLUMNS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 1 1/2"
3. PROVIDE CORNER BARS AT ALL BEAM CORNERS AND "T" INTERSECTIONS TO MATCH HORIZONTAL REBAR REINFORCEMENT. MINIMUM LAP LENGTH OF EACH LEG 48 BAR DIAMETERS (SEE PROVIDED DETAIL).
4. ALL WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A185 (FLAT SHEETS ONLY).
WWR 6x6 W4.0xW4.0 INDICATES 0.225" DIAMETER WIRE (4 GAGE)
WWR 6x6 W2.9xW2.9 INDICATES 0.192" DIAMETER WIRE (6 GAGE)
WWR 6x6 W1.4xW1.4 INDICATES 0.135" DIAMETER WIRE (10 GAGE)
5. SLAB REINFORCEMENT SHALL BE SUPPORTED AT 4 FT ON CENTER MAX. IN BOTH DIRECTIONS (THE USE OF CONCRETE BRICKS OF AN EQUAL OR GREATER COMPRESSIVE STRENGTH AS REQUIRED FOR THE SLAB IS ACCEPTABLE).
6. REBAR STIRRUPS ARE REQUIRED FOR PILE SUPPORTED GRADE BEAMS (SEE SECTIONS FOR INFO).
7. STIRRUPS ARE NOT REQUIRED FOR NON-PILE SUPPORTED GRADE BEAMS. HOWEVER, GRADE BEAM REINFORCEMENT SHALL BE PROPERLY SUPPORTED SO THAT IT REMAINS IN ITS PROPER LOCATION (WELDED WIRE REINFORCEMENT SUPPORTS SPACED AT 24" O.C. MAX. IS ACCEPTABLE).
8. PROVIDE CORNER BARS AT ALL BEAM CORNERS AND "T" INTERSECTIONS TO MATCH HORIZONTAL REBAR REINFORCEMENT. MINIMUM LAP LENGTH OF EACH LEG 48 BAR DIAMETERS (SEE PROVIDED DETAIL).
Q. POST-TENSION REINFORCEMENT - N/A

DIVISION 4. MASONRY
A. ALL MASONRY WORK SHALL CONFORM TO BRICK INDUSTRY ASSOCIATION STANDARDS & THE BUILDING CODE.
B. BRICK
1. VERTICAL EXPANSION JOINTS: SEE ARCHITECTURAL DRAWINGS
2. TIES SHALL BE SPACED A MAXIMUM OF 16 IN. O.C. VERTICALLY AND 16 IN. O.C. HORIZONTALLY. ALL TIES MUST BE EMBEDDED AT LEAST 1 1/2 IN. INTO THE BRICK VENEER WITH A MINIMUM MORTAR COVER OF 5/8 IN. TO THE OUTSIDE FACE OF THE WALL. TIES MUST BE SECURELY ATTACHED TO THE STUDS THROUGH THE SHEATHING, NOT TO THE SHEATHING ALONE. AROUND THE PERIMETER OF OPENINGS, ADDITIONAL TIES SHOULD BE INSTALLED SPACED AT A MAXIMUM OF 3 FT O.C. WITHIN 12 IN. OF THE OPENING.
3. BRICK UNITS SHALL CONFORM TO ONE OF THE FOLLOWING:
• ASTM C216 SPECIFICATION FOR FACING BRICK,
• ASTM C652 SPECIFICATION FOR HOLLOW BRICK,
• ASTM C1405 SPECIFICATION FOR GLAZED BRICK (SINGLE-FIRED, SOLID UNITS) OR
• ASTM C1266 SPECIFICATION FOR CERAMIC GLAZED STRUCTURAL CLAY FACING TILE, FACING BRICK AND SOLID MASONRY UNITS.
• ALL BRICK UNITS SHOULD BE OF GRADE SW. THE USE OF SALVAGED BRICK IS NOT RECOMMENDED SINCE SUCH BRICK MAY NOT BOND PROPERLY WITH MORTAR AND MAY BE LESS DURABLE.
4. MORTAR SHALL CONFORM TO ASTM C270 SPECIFICATION FOR MORTAR FOR UNIT MASONRY, TYPE S.
5. WEEPHOLES SHALL BE PROVIDED IN THE OUTSIDE WYTHE OF MASONRY WALLS AT A MAXIMUM SPACING OF 33 INCHES ON CENTER. WEEPHOLES SHALL NOT BE LESS THAN 3/16" IN DIAMETER. WEEPHOLES SHALL BE LOCATED IMMEDIATELY ABOVE FLASHING.
6. LINTELS SHALL HAVE AT LEAST 8" BEARING ON BRICK WALL ON BOTH SIDES OF OPENINGS. LINTEL SIZES (FOR BRICK VENEER) ASTM A36 STEEL:
• 0 TO 6FT OPENINGS: L5x3 1/2x3/8
• >6 TO 8FT OPENINGS: L6x3 1/2x3/8
• >8 TO 10FT OPENINGS: L7x4x3/8
C. CONCRETE MASONRY UNITS (CMU)
1. CONCRETE BLOCK SHALL BE PER ASTM C90 (HOLLOW) f'm = 1,900 PSI (MIN).
2. MORTAR SHALL CONFORM TO ASTM C270 SPECIFICATION FOR MORTAR FOR UNIT MASONRY, TYPE S (1,800 PSI @ 28 DAYS).
3. FILL ALL CELLULAR SPACES WITH 3,000 PSI 28-DAY COMPRESSIVE STRENGTH CONCRETE, U.N.O.
4. VERTICAL CONTROL JOINTS SHALL BE SPACED AT 20 FEET (MAX.) ON CENTER.
5. MAXIMUM UNSUPPORTED HEIGHT OF PIERS/COLUMNS SHALL BE 10 TIMES THEIR LEAST PLAN DIMENSION.
6. VERTICAL REINFORCEMENT SHALL BE #5'S SPACED AT 48" O.C. UNLESS NOTED OTHERWISE (UNO)
7. BOND BEAMS SHALL BE REINFORCED WITH 2 - #4'S AND BE SPACED AT 48" O.C. VERTICALLY UNO

PRE-ENGINEERED BUILDING (CLASSROOM & GYMNASIUM BUILDINGS):

- THE BUILDING SHALL BE A MANUFACTURER'S STANDARD PREFABRICATED METAL STRUCTURE. RIGID FRAMES, PORTAL FRAMES, AND BRACING ARE SHOWN FOR CONCEPTUAL PURPOSES. METAL BUILDING MANUFACTURER SHALL COORDINATE LOCATION OF ALL BUILDING COMPONENTS TO MINIMIZE INTERFERENCE WITH ARCHITECTURAL FEATURES AND MECHANICAL EQUIPMENT.
- METAL BUILDING MANUFACTURER SHALL DESIGN AND SUPPLY A WIND GIRT FOR SUPPORT OF STUD WALLS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATE GIRT AS CLOSE TO TOP OF STUD WALLS AS POSSIBLE. GIRT SHALL BE DESIGNED AS A MWFRS MEMBER WITH AN ALLOWABLE SERVICE DEFLECTION OF L/360.
- THE BUILDING SHALL BE DESIGNED AND FABRICATED ACCORDING TO THE LATEST AISC AND AISI SPECIFICATIONS, THE INTERNATIONAL BUILDING CODE, MBMA "LOW RISE BUILDING SYSTEMS MANUAL", AND THE CONTRACT SPECIFICATIONS.
- THE BUILDING MANUFACTURER SHALL SUBMIT FOR APPROVAL A COMPLETE DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR ALL STRUCTURAL STEEL (RIGID FRAMES, BEAMS, COLUMNS, BRACING GIRTS, AND PURLINS, ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SEALED BY A LOUISIANA REGISTERED PROFESSIONAL ENGINEER PRIOR TO FABRICATION WITH THE SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE DETAILS OF THE MAIN MEMBERS, TYPICAL CONNECTIONS (SHOWING BOLT HOLES AND WELDS), AND ERECTION DRAWINGS. THE CALCULATIONS MAY INCLUDE A COMPUTER PRINTOUT, BUT SUFFICIENT HANDWRITTEN NOTATION WILL BE REQUIRED SO THAT AN ENGINEER NOT FAMILIAR WITH THE COMPUTER PROGRAM CAN EASILY FOLLOW THE DESIGN CALCULATIONS.
- DESIGN REQUIREMENTS:
A. STRUCTURAL MEMBERS SHALL WITHSTAND ALL BUILDING SYSTEM DEAD LOADS PLUS HANGING STRUCTURE, EQUIPMENT, ETC. NOTED ON DRAWINGS, ROOF LIVE LOAD OF 20 PSF WITH TRIBUTARY AREA LOAD REDUCTION WHERE APPLICABLE, AND COLLATERAL LOAD OF 8 PSF (MINIMUM) PER CEILING. WIND LOAD AND SEISMIC LOADS SHALL BE PER THE GENERAL STRUCTURAL DESIGN CRITERIA.
B. FRAME DRIFT AND COMPONENT DEFLECTIONS SHALL BE LIMITED AS FOLLOWS:
PRIMARY FRAMING: L/240 FOR ROOF DEAD + LIVE
H/500 FOR LATERAL LOADS
SECONDARY FRAMING: L/180 FOR ROOF DEAD + LIVE LOAD
L/360 FOR ROOF DEAD + LIVE IF SUPPORTING BRITTLE CEILING)
L/600 FOR GIRTS PROVIDING LATERAL SUPPORT FOR MASONRY

WHERE L IS THE SPAN OF THE ELEMENT BETWEEN SUPPORT POINTS, AND H IS THE EAVE HEIGHT OF THE BUILDING. USE 25-YEAR MRI FOR SERVICE WIND.

DIVISION 5. METAL -- STRUCTURAL STEEL
A. SPECIFICATIONS: DESIGN, FABRICATION, AND ERECTION ARE TO BE GOVERNED BY THE LATEST REVISIONS OF THE FOLLOWING U.N.O.:
1. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10).
2. AISC CODE OF STANDARD PRACTICE (CONTRACTOR SHALL SUBMIT STEEL SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION).
3. AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (ALLOWABLE STRESS DESIGN).
4. PROJECT SPECIFICATION "STRUCTURAL STEEL FABRICATION AND ERECTION"
5. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1.
B. MATERIALS:
1. WIDE FLANGE AND WT SHAPES SHALL BE ASTM A992, Fy = 50 KSI, U.N.O.
2. ALL OTHER HOT-ROLLED SHAPES SHALL BE ASTM A36, Fy = 36 KSI, U.N.O.
3. STEEL PIPES SHALL BE ASTM A53, TYPE-S (SEAMLESS) GRADE B, U.N.O.
4. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL BE ASTM A500, GRADE B, U.N.O.
5. PLATES AND BARS SHALL BE ASTM A36, U.N.O.
C. BOLTS
1. ALL BOLTS SHALL BE ASTM A325 HIGH STRENGTH WITH HARDENED WASHERS AND HEAVY HEX NUTS UNLESS NOTED OTHERWISE.
2. ALL BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER U.N.O.
3. ALL BOLTS, NUTS, & WASHERS SHALL BE GALVANIZED, U.N.O.
D. CONNECTIONS:
1. ALL CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED UNLESS NOTED OTHERWISE
2. MINIMUM NUMBER OF BOLTS FOR ALL CONNECTIONS SHALL BE (2) UNLESS NOTED OTHERWISE
3. SPACING OF BOLTS SHALL BE 3" UNLESS NOTED OTHERWISE.
4. EDGE DISTANCE OF BOLTS SHALL BE 1 1/2" UNLESS NOTED OTHERWISE.
5. ALL CLIP ANGLES SHALL BE MINIMUM L3X3X1/4 UNLESS NOTED OTHERWISE.
6. GUSSET PL 3/8 (MIN) THICKNESS REQUIRED U.N.O.
E. WELDS
1. ALL WELDS SHALL BE WITH E70XX ELECTRODES IN ACCORDANCE WITH AWS D1.1. USE HIGHER STRENGTH ELECTRODE IF REQUIRED BY AWS D1.1 [ALL WELDING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS].
2. MINIMUM SIZE OF FILET WELD SHALL BE 3/16" UNLESS NOTED OTHERWISE
3. SEAL WELD AROUND ALL WELDED CONNECTIONS WHERE WELDING IS NOT INDICATED TO PROVIDE WATERTIGHT CONNECTION.
4. FULL STRENGTH FIELD WELDS IN MATERIALS OVER 5/8" THICK AND WELDED FIELD SPLICES OF MAIN MEMBERS SHALL BE SUBJECTED TO NON-DESTRUCTIVE TESTING BY AN INDEPENDENT LABORATORY.
F. COATINGS
1. ALL UNEXPOSED STEEL SHALL BE SHOP PAINTED (IN ACCORDANCE WITH AISC STANDARDS) OR GALVANIZED.
2. ALL STEEL SHALL BE GALVANIZED OR PAINTED PER PROJECT SPECIFICATIONS.
3. SEAL ERECTION CONTRACTOR SHALL "TOUCH UP" WITH PAINT, GALVANIZING COMPOUND OR APPROVED COATING ALL ABRADED AREAS.
G. MISCELLANEOUS
1. METAL ROOFING (IF APPLICABLE) SHALL BE PER OWNER & MEET THE WIND REQUIREMENTS OF THIS DWG & GOVERNING BUILDING CODE.
2. SEAL ENDS OF OPEN MEMBERS SUCH AS PIPES AND TUBES WITH 1/8" THICK PLATE & 1/8" SEAL WELDS, UNLESS SPECIFICALLY NOTED OTHERWISE.

DIVISION 6. WOOD - N/A

ASCE-7 CODE SUMMARY

BUILDING RISK CATEGORY: 3
DEAD LOAD:
PER CHAPTER 3, ACTUAL CONSTRUCTION MATERIALS & FIXED SERVICE EQUIPMENT
LIVE LOADS:
PER CHAPTER 4, SEE TABLE THIS DRAWING
FLOOD LOADS:
PER CHAPTER 5
SNOW LOADS: GROUND SNOW LOAD PER FIGURE 7-1 OF ASCE 7
RAIN LOADS: PER CHAPTER 8 OF ASCE 7
ICE LOADS: PER FIGURE 10-2 OF ASCE 7
SEISMIC LOADS: PER CHAPTERS 11 THROUGH 22 OF ASCE 7
WIND LOADS PER ASCE-7, ANALYTICAL METHOD:
PER CHAPTERS 26 & 27
BASIC WIND SPEED, Vult: 140 MPH
(PER FIGURE 26.5-1B)
DIRECTIONALITY FACTOR: 0.85
(PER SECTION 26.6)
WIND EXPOSURE CATEGORY: C
(PER SECTION 26.7)
TOPOGRAPHIC FACTOR: (PER SECTION 26.8)
GUST EFFECT FACTOR: 0.85 (PER SECTION 26.9)
ENCLOSURE CLASSIFICATION:
ENCLOSED STRUCTURE (PER SECTION 26.10)
INTERNAL PRESSURE COEFFICIENT:
GcPi = +/- 0.18 (PER SECTION 26.11)
WIND LOADS ON MWFRS PER CHAPTER 27
DIRECTIONAL PROCEDURE
WIND LOADS ON COMPONENTS & CLADDING PER CHAPTER 30
COMPONENTS AND CLADDING (DOORS, WINDOWS, VENEERS, ETC.) SHALL MEET THE PRESSURE REQUIREMENTS FOR THE WIND SPEED AND EXPOSURE CATEGORY.
GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 26.10.3.2

LEGEND OF SYMBOLS

	SECTION CUT - DRAWING NUMBER INDICATES WHERE THE SECTION IS DRAWN
	SECTION TITLE- DRAWING NUMBER INDICATES WHERE THE SECTION IS CUT
	DETAIL CALL-OUT - DRAWING NUMBER INDICATES WHERE THE DETAIL IS DRAWN
	DETAIL TITLE- DRAWING NUMBER INDICATES WHERE THE DETAIL IS CALLED OUT
	KEY NOTE CALL-OUT (SEE KEY NOTES ON THAT DRAWING FOR INFORMATION)
	KEY NOTE CALLED OUT ON THAT DRAWING

GENERAL STRUCTURAL NOTES

PIAZZA ARCHITECTURE PLANNING
MADISONVILLE ELEMENTARY SCHOOL

MADISONVILLE, LA
ST. TAMMANY PARISH

Cypress Engineering

PROJECT No.
18-0186FE

DRAWN BY CE	CHECKED BY DAP	DRAWING
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REV.	REVISION DESCRIPTION	DATE
0	ISSUED FOR CONSTRUCTION	12/03/18

