

GENERAL NOTES

CONCRETE MATERIALS

- UNLESS OTHERWISE NOTED ON DRAWINGS, CAST-IN-PLACE CONCRETE MIXES SHALL BE AS SHOWN IN SPEC 03 30 53.
- REINFORCING BARS SHALL BE DEFORMED AND SHALL CONFORM TO ASTM A615, GRADE 60 AND SPECIFICATION 03 30 53.
- ANCHOR BOLT MATERIAL SHALL BE AS SHOWN ON THE DRAWINGS.
- EMBEDDED STEEL MATERIAL SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE ON DRAWINGS.
- EMBEDDED PIPE SLEEVES SHALL BE ASTM A53 GRADE B UNLESS OTHERWISE NOTED ON DRAWINGS.
- GROUT UNDER ALL STRUCTURAL COLUMNS, EQUIPMENT BASES AND AROUND ANCHOR BOLTS, SHALL BE PREPACKAGED, CEMENTITIOUS NON-SHRINK, NON-METALLIC. GROUT SHALL HAVE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI AND CONFORM TO ASTM C 1107.

CONCRETE CONSTRUCTION METHODS

- SITE PREPARATION, EXCAVATION, AND BACKFILLING SHALL BE ACCOMPLISHED PER THE PLANS, SPECIFICATION 31 23 00.00 20, AND THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. GEOTECHNICAL SERVICES DURING CONSTRUCTION INCLUDING OBSERVATION AND TESTING OF THE EXCAVATIONS, BACKFILL AND COMPACTION, SHALL BE PERFORMED BY THE GEOTECHNICAL ENGINEER OF RECORD. SEE CIVIL DRAWING C-102.
- COORDINATE CONCRETE WORK WITH PIPING, ELECTRICAL AND MECHANICAL WORK PRIOR TO PLACING CONCRETE.
- EXPOSED EDGES OF CONCRETE SHALL HAVE 3/4 INCH CHAMFER.
- ALL CONCRETE REINFORCEMENT DETAILING SHALL BE IN ACCORDANCE WITH ACI 318-08.
- CONCRETE COVER FOR REINFORCING BARS FOR CAST-IN-PLACE CONCRETE SHALL CONFORM TO THE MINIMUM CONCRETE COVER SPECIFIED IN ACI 318-08, UNLESS SHOWN OTHERWISE ON DRAWINGS.
- TENSION SPLICES IN REINFORCING BARS SHALL BE CLASS "B" (ACI 318-08) UNLESS SHOWN OTHERWISE ON THE DRAWINGS AND COMPRESSION SPLICES SHALL BE IN ACCORDANCE WITH ACI 318-08, SECTION 12.16, UNLESS OTHERWISE SHOWN ON DRAWINGS.
- SURFACE FINISHES ARE DESCRIBED IN THE CONCRETE CONSTRUCTION SPECIFICATIONS. FINISH FOR SLABS AND PADS SHALL BE BROOM FINISHED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- CONCRETE INDICATED ON THE DRAWINGS TO BE "ROUGHENED" SHALL BE CLEAN, FREE OF LAITANCE AND ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH.

STRUCTURAL STEEL

- STRUCTURAL STEEL "W" SHAPES SHALL CONFORM TO ASTM A 992, GRADE 50. ALL CHANNELS, ANGLES, AND PLATES SHALL CONFORM TO ASTM A 36 UNLESS NOTED OTHERWISE.
- HIGH STRENGTH BOLTS, NUTS, AND HARDENED WASHERS SHALL CONFORM TO ASTM A 325, ASTM A 563 DH, AND ASTM F 436 RESPECTIVELY. BOLTS, NUTS, AND WASHERS SHALL BE MECHANICALLY GALVANIZED.
- WELDING ELECTRODES SHALL CONFORM TO AWS A5.1, WITH A MINIMUM ELECTRODE TENSILE STRENGTH OF 70 KSI.
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ASTM A 123, A 143, A 384, AND A 385. ALL DAMAGED HOT-DIP GALVANIZED AREAS SHALL BE COATED WITH ZRC COLD GALVANIZING COMPOUND, OR APPROVED EQUAL.
- STRUCTURAL STEEL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH SPECIFICATION 05 12 00.

FOUNDATION DESIGN LOAD DATA:

DESIGN WIND, SNOW AND SEISMIC LOADING VALUES ARE GREATER THAN THE VALUES REQUIRED BY IBC SITE SPECIFIC DATA

GEOTECHNICAL:

ALLOWABLE SOIL BEARING LOAD = 3000 PSF

6,000 GALLON DOUBLE WALL FUEL TANK (UL-2085):

8'-0" DIAMETER, 16'-0" LENGTH

DEAD LOAD:

TANK, SADDLES, PLATFORM, ETC. = 22,900 LBS

FLUID LOAD:

DIESEL FUEL = 51,200 LBS

WIND LOAD:

V = 156 MPH
Iw = 1.15
EXPOSURE = C

TRANSMITTER MODULE:

10'-0" WIDE, 18'-0" LONG

DEAD LOAD:

PRE-CAST BLDG AND CONTENTS = 45,000 LBS

LIVE LOAD:

9,000 LBS

WIND LOAD:

V = 156 MPH
Iw = 1.15
ENCLOSED BLDG.
EXPOSURE = C

SNOW LOAD:

Pg = 80 LB/SF
Pf = 72.6 LB/SF
Ce = 0.9
I = 1.2
Ct = 1.2

SEISMIC LOAD:

Ie = 1.5
Ss = 1.25
S1 = 0.40
SITE CLASS = D
S05 = 0.83
S01 = 0.43
SEISMIC DESIGN CATEGORY = D
BASE SHEAR = 31,100 LBS
Cs = 0.42
R = 3
ANALYSIS METHOD = EQUIVALENT
LATERAL FORCE - NON BUILDING STRUCTURE

SEISMIC LOAD:

Ie = 1.5
Ss = 1.25
S1 = 0.40
SITE CLASS = D
S05 = 0.83
S01 = 0.43
SEISMIC DESIGN CATEGORY = D
BASE SHEAR = 14,630 LBS
Cs = 0.25
R = 5
ANALYSIS METHOD = EQUIVALENT
LATERAL FORCE - BUILDING STRUCTURE

GENERATOR MODULE:

10'-0" WIDE, 14'-0" LONG

DEAD LOAD:

PRE-CAST BLDG AND CONTENTS = 37,000 LBS

LIVE LOAD:

7,000 LBS

WIND LOAD:

V = 156 MPH
Iw = 1.15
ENCLOSED BLDG.
EXPOSURE = C

SNOW LOAD:

Pg = 80 LB/SF
Pf = 72.6 LB/SF
Ce = 0.9
I = 1.2
Ct = 1.2

SEISMIC LOAD:

Ie = 1.5
Ss = 1.25
S1 = 0.40
SITE CLASS = D
S05 = 0.83
S01 = 0.43
SEISMIC DESIGN CATEGORY = D
BASE SHEAR = 12,000 LBS
Cs = 0.25
R = 5
ANALYSIS METHOD = EQUIVALENT
LATERAL FORCE - BUILDING STRUCTURE

SITE GENERATOR, WEATHER ENCLOSURE & SUBBASE FUEL TANK:

DEAD LOAD:

GENSET, ENCLOSURE, AND TANK = 4,300 LBS

FLUID LOAD:

NOMINAL CAPACITY = 215 GALLONS
DIESEL FUEL = 1,800 LBS

WIND LOAD:

V = 156 MPH
Iw = 1.15
EXPOSURE = C

SEISMIC LOAD:

Ie = 1.5
Ss = 1.40
S1 = 0.42
SITE CLASS = D
S05 = 0.94
S01 = 0.45
SEISMIC DESIGN CATEGORY = D
BASE SHEAR = 3,200 LBS
Cs = 0.56
R = 2.5
ANALYSIS METHOD = EQUIVALENT
LATERAL FORCE - NON BUILDING STRUCTURE

HOLD FOR GENSET VENDOR DATA



Project Manager	
QC Reviewer	
Architectural	
Structural	
Mechanical	
Plumbing	
Electrical	
Civil	

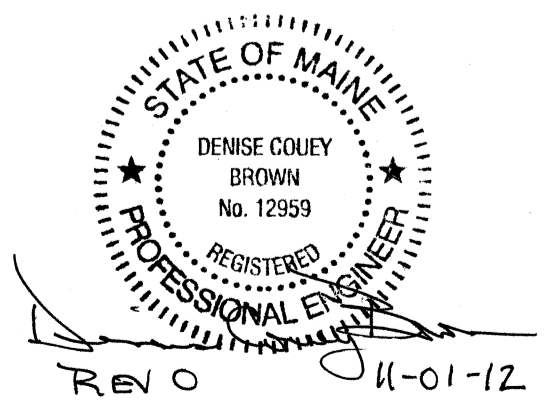
ISSUED FOR CONSTRUCTION	1/17/12	Date
Description		
Work		

Designed by	DCB
Drawn by	RAM
Checked by	MLM
Reviewed by	DCB
Date:	2012

KBR
63 SOUTH ROYAL STREET SUITE 200
MOBILE, AL 36602
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FEMA
FEDERAL EMERGENCY MANAGEMENT AGENCY

KBR Engineering Services by KBR Engineering Co. LLC



FEMA EMERGENCY RADIO NETWORK
ON WIGAN PORTLAND, MAINE

STRUCTURAL GENERAL NOTES

Drawing Number:
S-001