



DERWICK ASSOCIATES CORP.

Stacks Report LM6000

- GENERAL NOTES
- 1. DESIGN CRITERIA
- ACOUSTIC:
 - - Exhaust System: 85 DBA - 3FT FROM EQUIPMENT, 5FT ABOVE GRADE
 - 65 DBA - 400 FEET FOR ONE UNIT IN OPERATION
- MECHANICAL:
 - - Exhaust System: EXHAUST INTERNAL DESIGN PRESSURE
 - DESIGN PRESSURE DUCT +18"/-2" W.C.
 - DESIGN PRESSURE STACK +12"/-2" W.C.
 - OPERATING PRESSURE ALL +8"/-2" W.C
- STRUCTURAL:
 - - SEE DRAWING A-9656-001 SHEET 3
- FLOW CONDITIONS:
 - - MAX FLOW RATE 269 LBM/S AT 848°F
 - - MAX EXHAUST TEMP - 1,000°F
- 2. COMPONENTS / CONSTRUCTION
- EXPANSION JOINT :
 - - 304 STAINLESS STEEL HOT-SIDE FRAME, BACKING BARS AND FLOW LINER
 - - CHEMFAB 1000BF BELT WITH FIBER GLASS INSULATION AND WIRE-FLEXTRA
- BACKING CLOTH
 - - CARBON STEEL COLD SIDE FRAME PAINTED.
- STACK BASE, ELBOW & STACK BREECHING:
 - - 3/8" THICK ASTM A36 CARBON STEEL CASING
 - - 4" DIA. 304L SS DRAIN PIPE C/W CAP
 - - 6" THICK 8 LB/CU. FT. DENSITY CERAMIC FIBRE LINING INSULATION
 - - 12 GA ASTM 240 TYPE 409 STAINLESS STEEL LINING SHEETS
 - - OVERLAP OF LINING SHEETS IN DIRECTION OF GAS FLOW @ HORIZONTAL
- DUCTS AND IN DIRECTION OF RAIN FLOW @ VERTICAL STACK
 - - 24" x 24" CLEAR OPENING ACCESS DOOR.

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- **SILENCER:**
- - 1/4" THICK ASTM A36 CARBON STEEL CASING
- - 2" THICK 8 LB/CU. FT. DENSITY CERAMIC FIBRE LINING INSULATION
- - 26 GA 409SS SEPTUM LINER
- - 4" THICK 8 LB/CU. FT. DENSITY BASALT WOOL LINING INSULATION
- - GLASS SILK CLOTH AND 304 SS MESH RETAINER
- - 12 GA ASTM A240 TYPE 409 STAINLESS STEEL LINING SHEETS
- (PERFORATED AT BAFFLE LOCATION ONLY)
- **SILENCER SPLITTER CONSTRUCTION :**
- - 12 GA ASTM A240 TYPE 409 STAINLESS STEEL SILENCING SPLITTER
- PERFORATED FACING SHEETS
- - 12 GA ASTM A240 TYPE 409 STAINLESS STEEL SILENCING SPLITTER FRAMES
- - BASALT WOOL WRAPPED WITH GLASS SILK CLOTH AND COVERED WITH
- 304 STAINLESS STEEL MESH ON GAS FACES
- **PERSONNEL PROTECTION SCREEN :**
- - 1 1/2-13F EXPANDED METAL, GALVANIZED.
- - 3/8"-16 UNC ZN PL STAND-OFFS (8 1/2" LG APPROX.) FIELD WELDED TO CASING
- (24" SQ. CENTERS)
- **HARDWARE :**
- - FLANGE CONNECTIONS: 3/4" DIA. ASTM A325 HOT DIP GALVANIZED BOLT SETS
- C/W TWO WASHERS
- **3. FINISH**
- **EXTERNAL ONLY SURFACES OF SYSTEM:**
- - CLEAN TO SSPC SP10
- - ONE COAT DIMETCOTE 9 INORGANIC ZINC PRIMER
- ONE UNIT REQUIRED FOR P.O.# PS4701
- ONE UNIT REQUIRED FOR P.O.# PS4703
- ONE UNIT REQUIRED FOR P.O.#

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STRUCTURAL:
- SEE DRAWING A-9656-001 SHEET 3

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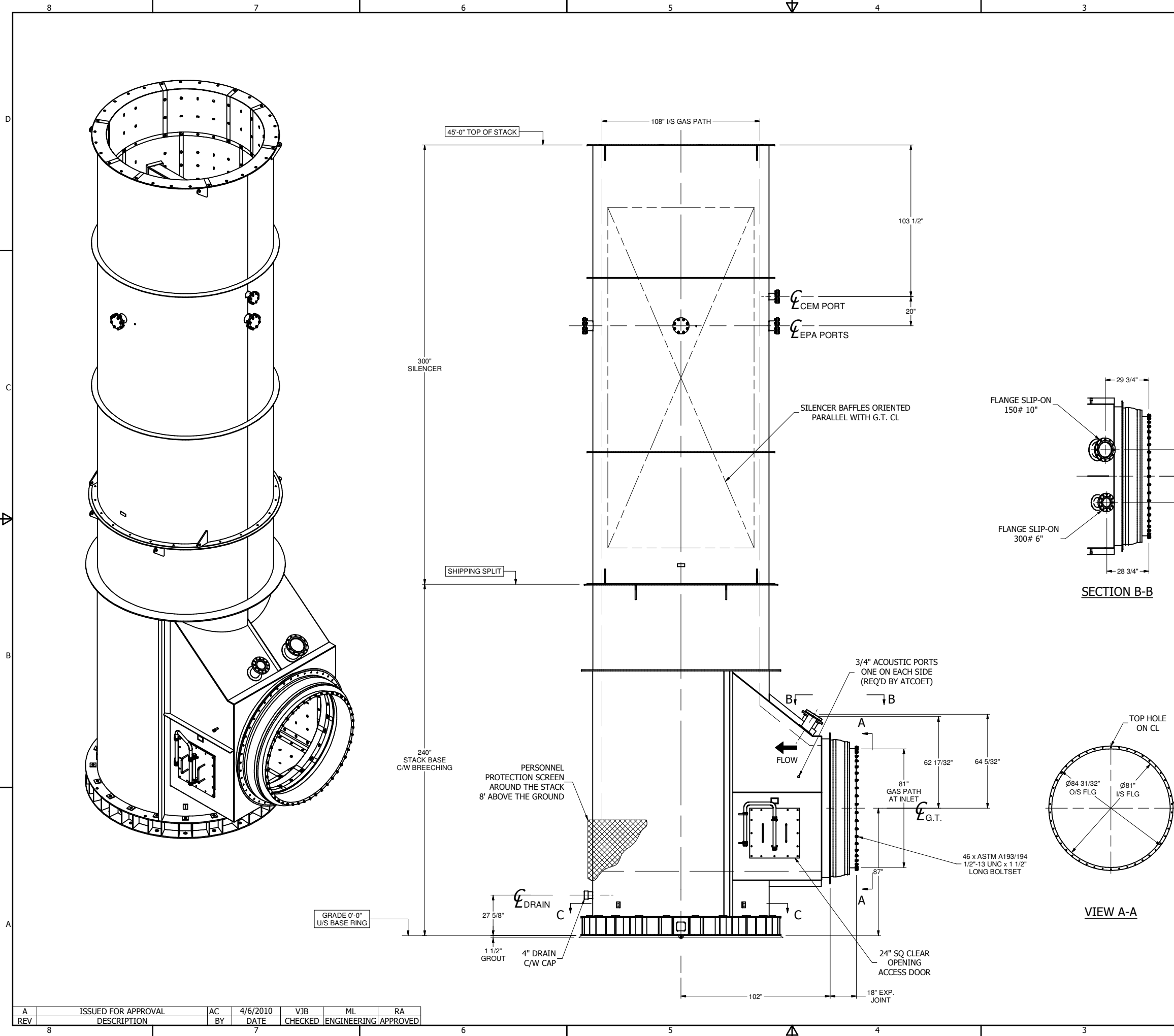


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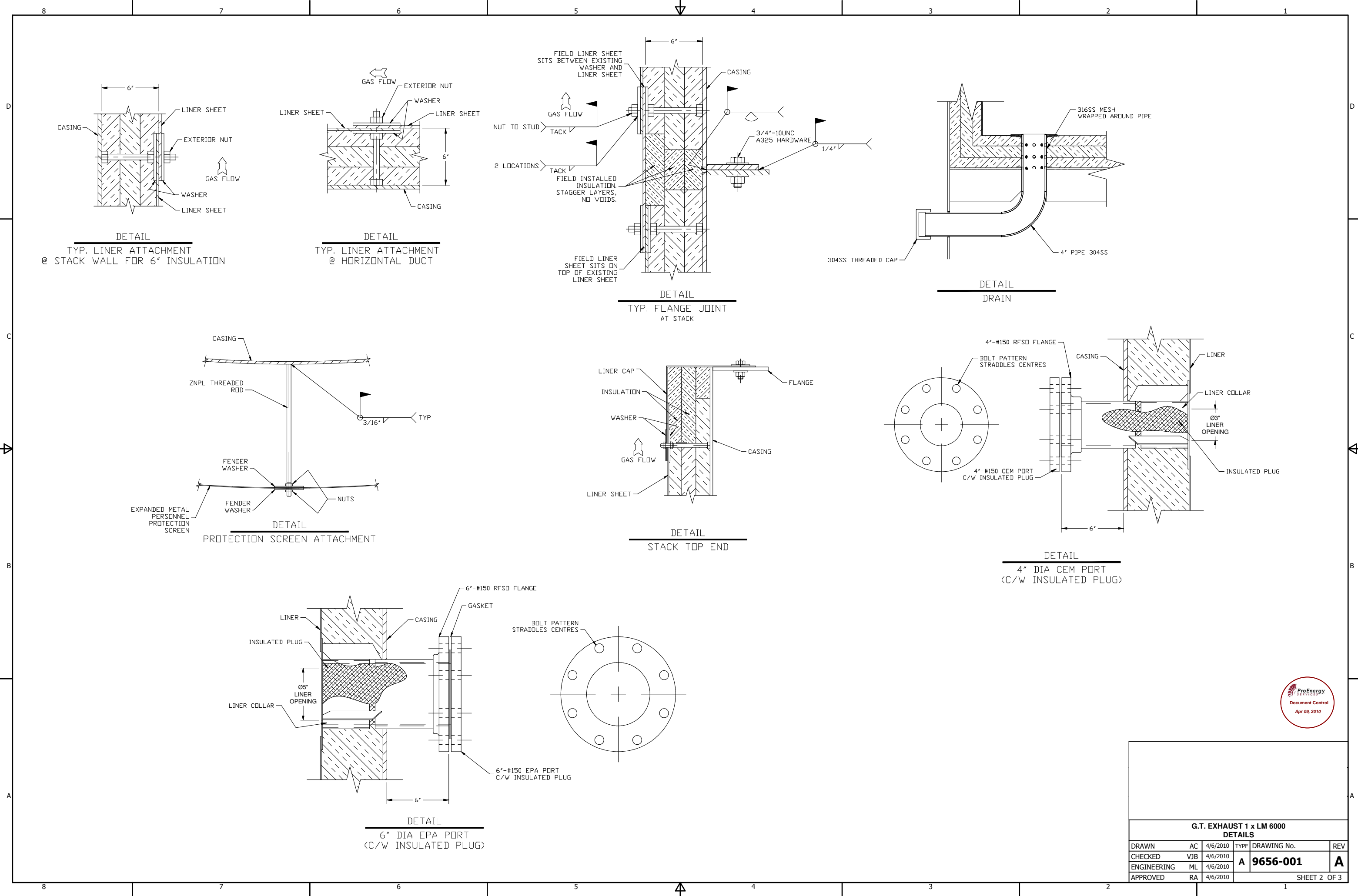
G.T. EXHAUST 1 x LM 6000
GENERAL ARRANGEMENT

DRAWN	AC	4/6/2010	TYPE	DRAWING No.	REV
CHECKED	VJB	4/6/2010	A	9656-001	A
ENGINEERING	ML	4/6/2010			
APPROVED	RA	4/6/2010			

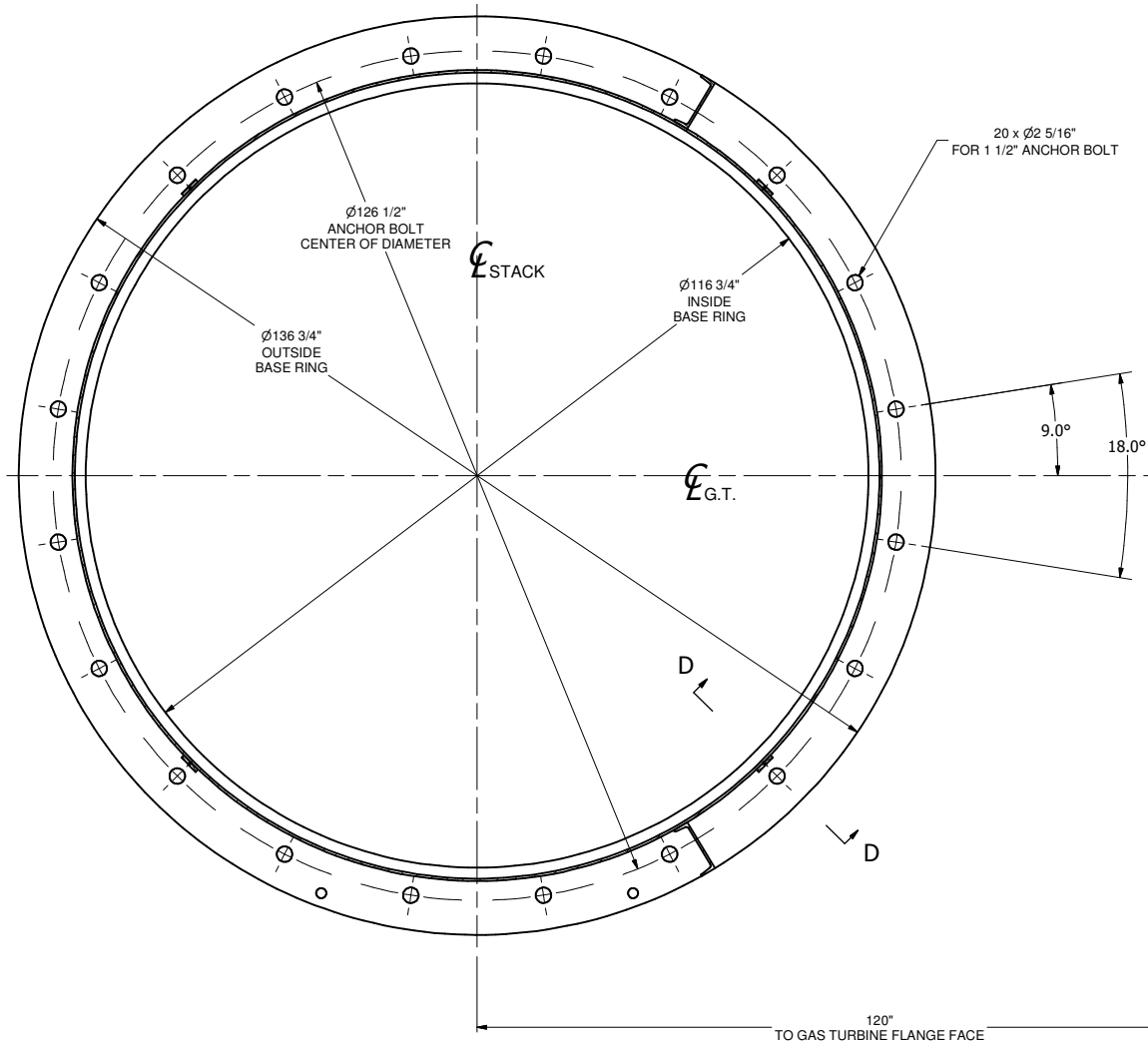
SHEET 1 OF 3



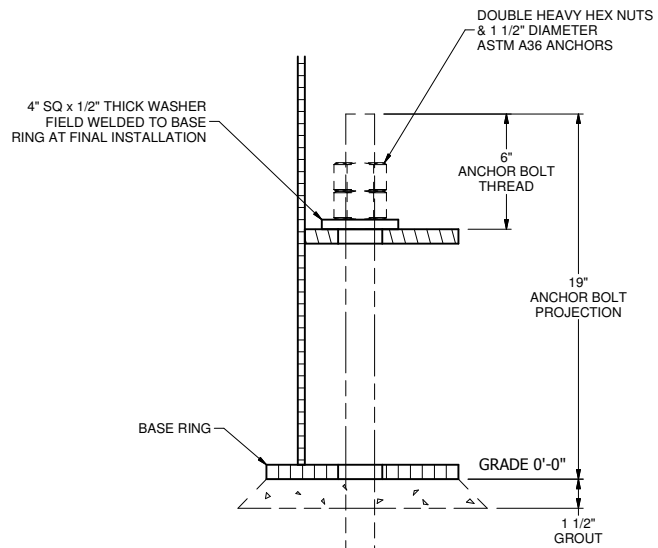
A	ISSUED FOR APPROVAL	AC	4/6/2010	VJB	ML	RA
REV	DESCRIPTION	BY	DATE	CHECKED	ENGINEERING	APPROVED



G.T. EXHAUST 1 x LM 6000 DETAILS					
DRAWN	AC	4/6/2010	TYPE	DRAWING No.	REV
CHECKED	VJB	4/6/2010	A	9656-001	A
ENGINEERING	ML	4/6/2010			
APPROVED	RA	4/6/2010	SHEET 2 OF 3		



SECTION C-C



SECTION D-D

FOUNDATION LOAD TABLE

FOUNDATION LOADS IN KIP (1,000 lb) AND KIP-FT, NOT FACTORED OR COMBINED																		
EXHAUST STACK	DEAD LOAD			FLOOR LIVE LOAD			INTERNAL PRESSURE			SNOW LOAD			WIND LOAD			SEISMIC LOAD		
	Shear	Tension	Moment	Shear	Tension	Moment	Shear	Tension	Moment	Shear	Tension	Moment	Shear	Tension	Moment	Shear	Tension	Moment
TOTAL AT STACK BASE	0	-56.0	0	0	8	0	3.4	-4.0	25	0	-2.6	0	16	0	500	12	0	450
MAXIMUM PER ANCHOR	0	-2.8	0	0	0.4	0	0	0.3	0	0	-0.1	0	0	9.5	0	0	8.5	0

TABLE NOTES:

1. Tension is positive upward, compression is negative.

2. For the purpose of foundation design total vertical loads are acting at the centre of stack base.

LOADS PER IBC 2000

LIVE LOAD

- Uniformly distributed 100 psf on the floor

INTERNAL PRESSURE

- Design +18"/-2" W.G. Duct

- Design +12"/-2" W.G. Stack

- Operating +8"/-2" W.G.

SNOW LOAD

- Ground snow load p_g = 30 psf

- Exposure factor C_e =1.0

- Thermal factor C_t =1.0

- Importance factor I_s =1.1

- Flat-roof snow load p_r = 23.1 psf

WIND LOAD

- Occupancy category II

- Basic wind speed V =110 mph

- Site (soil) class "C"

- Terrain exposure "C"

- Importance factor I_w =1.15

- Topographic factor K_{GT} =1.0

SEISMIC LOAD

- Occupancy category II,

- Site (soil) class "D"

- Importance factor I_e =1.25

- Spectral response acceleration S_s =0.412g, S_1 =0.19g

- Basic seismic-force-resisting system: Steel stack

- Analysis procedure: Equivalent lateral force.



G.T. EXHAUST 1 x LM 6000 FOUNDATION PLAN & LOADING TABLE					
DRAWN	AC	4/6/2010	TYPE	DRAWING No.	REV
CHECKED	VJB	4/6/2010	A	9656-001	A
ENGINEERING	ML	4/6/2010			
APPROVED	RA	4/6/2010	SHEET 3 OF 3		