

XERXES SM DEADMAN BURIAL WATER AT GRADE		Murphy USA	
TANK DATA		INSTALLATION	
NOML CAP (GAL.)	25000	TOTAL COVER INCLUDING SOIL & TOP SLAB (FT)	4.00
TYPE (SINGLE WALL = 1, DW = 2)	1	TOP SLAB THICKNESS (IN)	8.00
DRY-1 WET-2	2	NOML TANK DIA (FT)	13.33
NOML TANK DIA (FT)	13.33	TOP SLAB WIDTH (FT)	13.33
PROD STORED (GAL)	0	DEADMAN LING (FT)	46.00
SPEC GRAV. USED	1.00	DEADMAN WID (IN)	18.00
		DEADMAN THK (IN)	8.75
		# OF 42" DIAMETER SUMPS	1
SAFETY FACTOR		TOTAL WEIGHTS	
1.24 : 1		CONCRETE WEIGHT	
		BACKFILL WEIGHT	
		TANK WEIGHT	
		PRODUCT WEIGHT	
		TOTAL DOWN FORCE	
		275442.19 LBS.	
		TOTAL UP FORCE	
		221489.27 LBS.	
WORKSHEET		WORKSHEET	
TANK DATA		TANK DATA	
SHELL DIAMETER	10.00 FT.	ACTUAL CAP (GAL.)	25432.00
SHELL LENGTH	37.50 FT.	TANK WT. (LBS.)	14300.00
DOME PROJECTION	5.00 FT.	DOME PROJECTION	48.54
MID POINT HEIGHT	8.33 FT.	NUMBER OF RIBS	30.00
COLUMN HEIGHT	12.33 FT.	DOME A. (SQ FT)	78.54
RIB VOLUME	263.00 CU. IN.	DOME VOL. (CU FT)	523.60
REINFORCED CONCRETE VOLUMES (CU. FT.)		REINFORCED CONCRETE VOLUMES (CU. FT.)	
TOP SLAB	471.11	DEADMAN	100.63
FORCE = VOL. X 88 LBS/CF	41457.78	FORCE (LBS) = VOL. X 88 LBS/CF	8855.00
TOP SLAB & DEADMAN FORCE		TOP SLAB & DEADMAN FORCE	
50322.78 LBS.		60322.78 LBS.	
BACKFILL VOLUMES (CU. FT.)		BACKFILL VOLUMES (CU. FT.)	
OVER TANK SHELL	1623.06	OVER DEADMAN	1238.73
OVER TANK DOME	392.70	OVER TANK DOME	296.00
TOTAL WET VOLUME	3552.99	TOTAL WET VOLUME	3122.70
FORCE = VOL. X 60 LBS/CF	213178.41 LBS.	FORCE = VOL. X 60 LBS/CF	213278.70 LBS.
BEOYANCY		BEOYANCY	
SHELL VOLUME	2982.23 CU. BK. FT.	SHELL VOLUME	3154.36 CU. BK. FT.
DOME VOLUME	523.60 CU. BK. FT.	DOME VOLUME	523.60 CU. BK. FT.
RIB VOLUME	44.15 CU. BK. FT.	RIB VOLUME	44.15 CU. BK. FT.
TOTAL VOLUME	3549.98 CU. BK. FT.	TOTAL VOLUME	3722.11 CU. BK. FT.
VOL. X 7.48 GAL/CU. FT.	26533.87 GAL/DONS	VOL. X 7.48 GAL/CU. FT.	27825.82 GAL/DONS
FORCE = GAL X 8.34 (LBS./GAL.)	221489.27 LBS.	FORCE = GAL X 8.34 (LBS./GAL.)	312292.48 LBS.

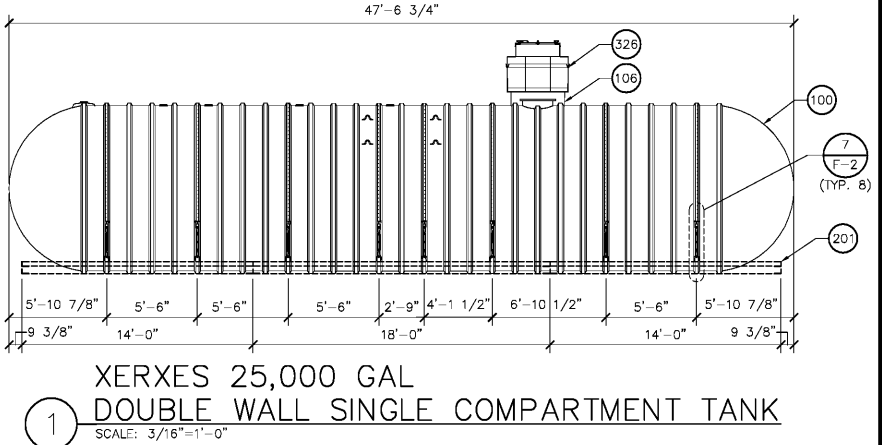
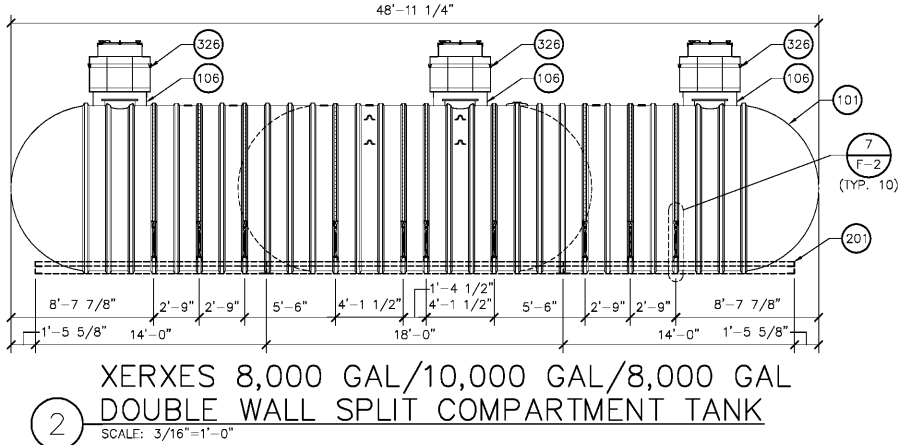
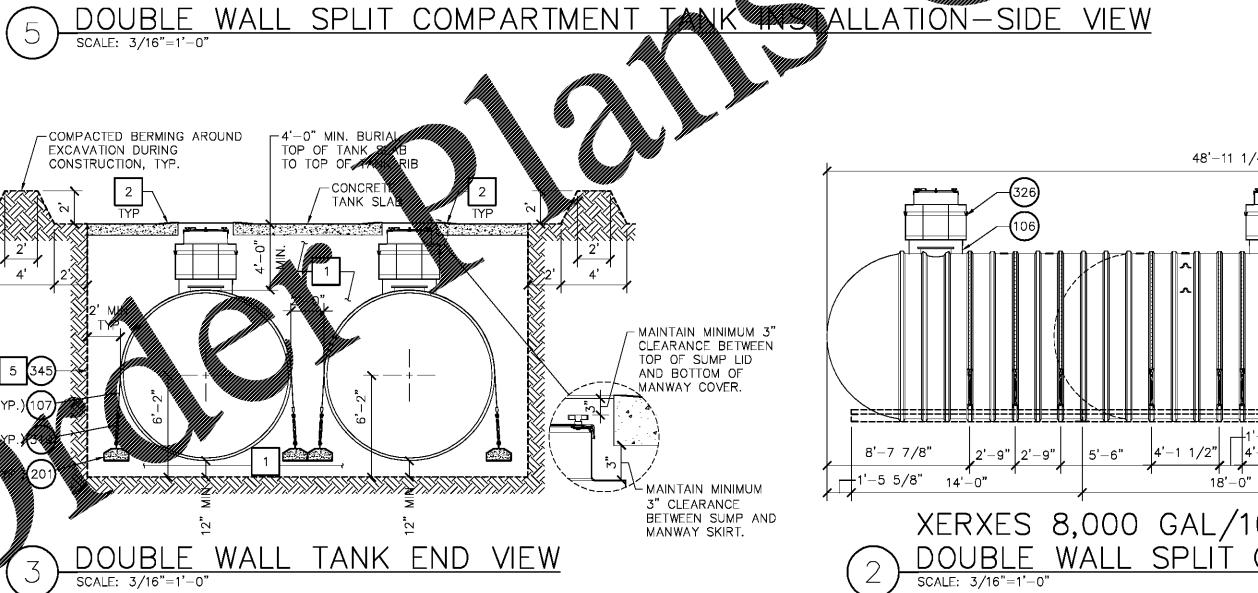
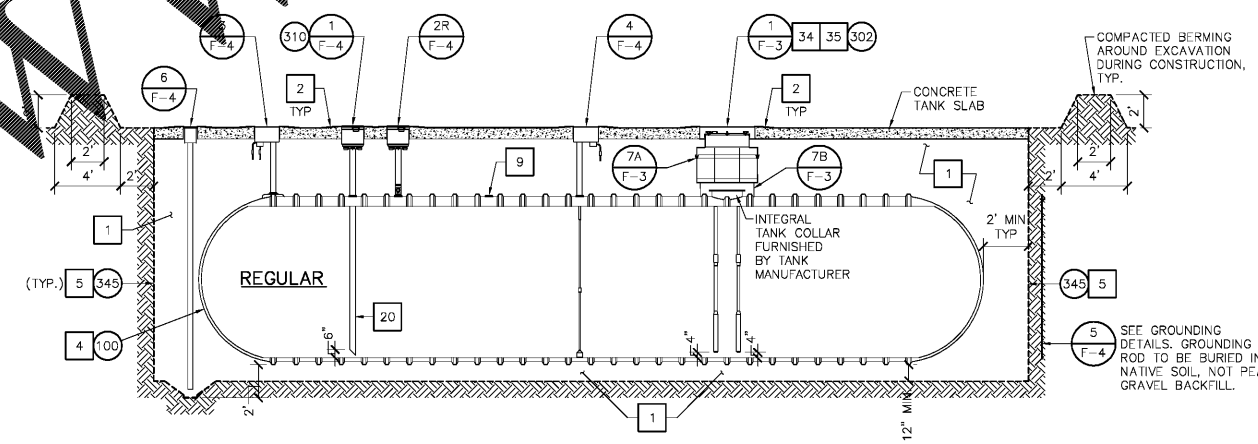
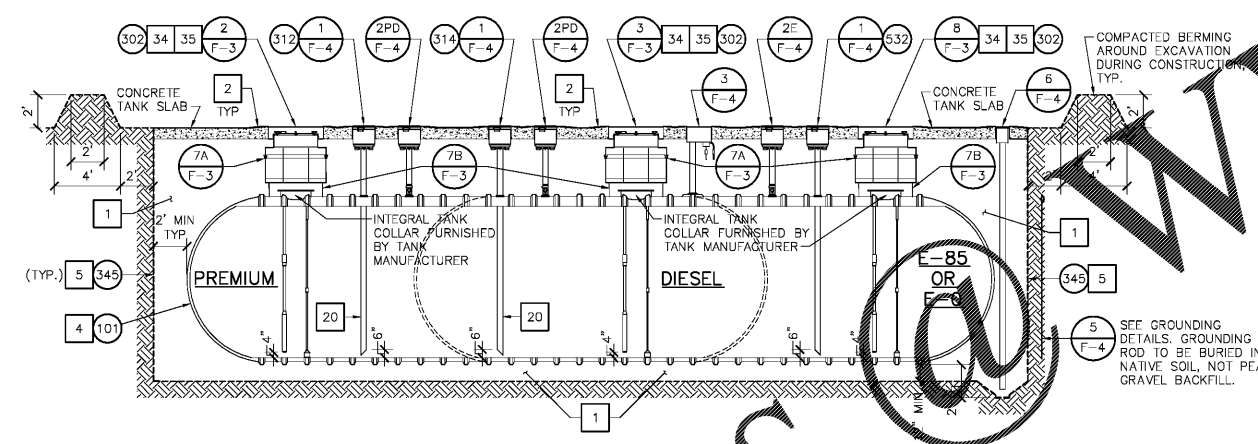
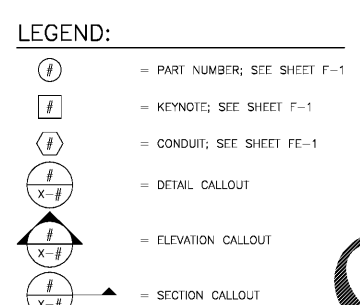
XERXES SM DEADMAN BURIAL WATER AT GRADE		Murphy USA	
TANK DATA		INSTALLATION	
NOML CAP (GAL.)	26000	TOTAL COVER INCLUDING SOIL & TOP SLAB (FT)	4.00
TYPE (SINGLE WALL = 1, DW = 2)	1	TOP SLAB THICKNESS (IN)	8.00
DRY-1 WET-2	2	NOML TANK DIA (FT)	13.33
NOML TANK DIA (FT)	13.33	TOP SLAB WIDTH (FT)	13.33
PROD STORED (GAL)	0	DEADMAN LING (FT)	46.00
SPEC GRAV. USED	1.00	DEADMAN WID (IN)	18.00
		DEADMAN THK (IN)	8.75
		# OF 42" DIAMETER SUMPS	3
SAFETY FACTOR		TOTAL WEIGHTS	
1.20 : 1		CONCRETE WEIGHT	
		BACKFILL WEIGHT	
		TANK WEIGHT	
		PRODUCT WEIGHT	
		TOTAL DOWN FORCE	
		277791.47 LBS.	
		TOTAL UP FORCE	
		232292.48 LBS.	
WORKSHEET		WORKSHEET	
TANK DATA		TANK DATA	
SHELL DIAMETER	10.00 FT.	ACTUAL CAP (GAL.)	26223.00
SHELL LENGTH	37.50 FT.	TANK WT. (LBS.)	14300.00
DOME PROJECTION	5.00 FT.	DOME PROJECTION	48.54
MID POINT HEIGHT	8.33 FT.	NUMBER OF RIBS	30.00
COLUMN HEIGHT	12.33 FT.	DOME A. (SQ FT)	78.54
RIB VOLUME	263.00 CU. IN.	DOME VOL. (CU FT)	523.60
REINFORCED CONCRETE VOLUMES (CU. FT.)		REINFORCED CONCRETE VOLUMES (CU. FT.)	
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50322.78 LBS.		60322.78 LBS.	
BACKFILL VOLUMES (CU. FT.)		BACKFILL VOLUMES (CU. FT.)	
OVER TANK SHELL	1619.51	OVER DEADMAN	1238.73
OVER TANK DOME	392.70	OVER TANK DOME	296.00
TOTAL WET VOLUME	3552.99	TOTAL WET VOLUME	3122.70
FORCE = VOL. X 60 LBS/CF	213178.41 LBS.	FORCE = VOL. X 60 LBS/CF	213278.70 LBS.
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TOTAL VOLUME	3549.98 CU. BK. FT.	TOTAL VOLUME	3722.11 CU. BK. FT.
VOL. X 7.48 GAL/CU. FT.	26533.87 GAL/DONS	VOL. X 7.48 GAL/CU. FT.	27825.82 GAL/DONS
FORCE = GAL X 8.34 (LBS./GAL.)	221489.27 LBS.	FORCE = GAL X 8.34 (LBS./GAL.)	312292.48 LBS.

TANK ANCHORING NOTES

- WHEN ANCHORING BELOW GRADE, EXTREME CARE MUST BE TAKEN TO ASSURE WORKMEN SAFETY. SLOPING AND SHORING SHALL COMPLY WITH OSHA CONSTRUCTION INDUSTRY STANDARDS 29 CFR PART 1926 SUBPART P. OSHA STANDARDS-EXCAVATIONS: FINAL RULE OCT. 1 89. HARD HATS SHALL BE WORN BY ALL WORKMEN OPERATING IN EXCAVATING OR WHERE OVERHEAD WORK IS IN PROGRESS.
- TANK ANCHORING IS REQUIRED FOR ALL PROJECTS.
- EACH TANK REQUIRES (3) MANUFACTURER SUPPLIED DEADMEN ON EACH SIDE. DEADMEN ARE NOT DIVIDED INTO SMALLER SECTIONS THAN SHOWN. ALL DEADMEN MUST BE INSTALLED PLUMB, LEVEL AND PARALLEL TO THEIR RESPECTIVE TANK.
- STRAPS ARE TO BE LOCATED AS INDICATED ON THE DRAWINGS. EIGHT (8) HOLD DOWN STRAPS ARE REQUIRED FOR THE 25,000 GALLON TANK. TEN (10) HOLD DOWN STRAPS ARE REQUIRED FOR THE 26,000 GALLON TANK. IF STRAP LOCATIONS ON ACTUAL TANKS VARY FROM THESE DETAILS, CONSULT WITH XERXES.
- REFER TO TANK MANUFACTURER'S INSTALLATION MANUAL AND OPERATING GUIDELINES FOR THE CONNECTION OF MANUFACTURER SUPPLIED TURNBUCKLES TO DEADMEN ANCHOR POINTS AND MANUFACTURER SUPPLIED HOLD DOWN STRAPS.
- BALLAST TANKS WITH CLEAN, POTABLE WATER TO CAPACITY. DO NOT LEAVE UNFILLED TANKS UNATTENDED DURING CONSTRUCTION.
- USE ONLY MANUFACTURER SUPPLIED ANCHOR STRAPS.
- ANCHORING DESIGN AS PER PEI RP-100 APPENDIX A.

GENERAL NOTES:

- GAUGE (STRIKER) PLATES ARE LOCATED UNDER ALL OPENINGS PER TANK MANUFACTURER.
- SUPPLY AND INSTALL SUMPITITE SEALANT ON ALL TANK AND DISPENSER SUMPS. ALL SEAMS, SUPPLY LINES, AND CONDUIT PENETRATIONS ARE TO BE COATED. ALL APPLICATORS MUST BE TRAINED AND CERTIFIED BY THE SUPPLIER.
- ALL SUMP PENETRATIONS NEED TO BE AT RIGHT ANGLES TO THE SUMP.



STANDARD

F-2
WAYNE
OCTOBER 2017
STANDARDS

TANK INSTALLATION AND ANCHORING DETAILS
SCALE: AS NOTED
DATE: MARCH, 2018
FILE NAME: 07-Moc60016-F-2
REVISION

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