

Re-Hab... Don't Replace...

Over a short period of time, pre-cast concrete wetwells can deteriorate due to exposure to waste water gases such as Hydrogen-Sulfide. Decaying concrete wetwells are in constant need of costly repairs. LFM has solved the problem of costly repair and maintenance with its fiberglass wetwell liners. Our fiberglass wetwell liners are corrosion-free and are not affected by common waste water gases. Once a wetwell has been "rehabilitated" with a fiberglass wetwell liner from LFM, repair and replacement costs are minimized.

Experience...

You can benefit from LFM's experience. LFM has been building quality fiberglass reinforced manholes and wetwells since 1982. We utilize the latest in chop and filament winding equipment, therefore providing our customers with the highest quality fiberglass products on the market today. Our production facility covers 83,000 square feet and is located on 35 acres near Giddings, Texas.



Professional Delivery...

LFM maintains its own fleet of delivery trucks; helping to decrease shipping costs considerably. Our fiberglass wetwell liners are light-weight and can be easily loaded and unloaded on construction jobs sites.



Helps Protect the Environment...

The environment is always a concern when dealing with waste water systems. LFM provides a safe solution to the problem of environmental contamination due to the exfiltration of waste water from old leaking concrete wetwells with our fiberglass wetwell liners. Fiberglass liners by LFM are corrosion resistant to waste water gases such as Hydrogen-Sulfide. Over a short period of time, concrete wetwells can start to leak or decay causing an ecological and environmental nightmare. Our fiberglass wetwell liners provide not only a solution to this problem, but a long term preventative measure as well.

Quality Built Right-In...

LFM incorporates a comprehensive in-plant testing and quality control program. This insures complete and consistent workmanship in all of our fiberglass products. Each fiberglass wetwell liner that we build is inspected and tested before it is released for shipping. Our testing procedures include wall thickness reports, raw material analysis and continuous chemical analysis reports. Individual testing reports are recorded and maintained at our office and are available upon request.

Available Diameters...

LFM can custom build fiberglass wetwell liners for existing wetwells from 36 inches in diameter through 168 inches (14 feet). Depths are available from 2 feet through 40 feet. Greater depths can be custom fabricated upon request. Contact your LFM sales representative to find out which dimensions best suit your needs.

One Piece Design...

The one piece design of LFM fiberglass wetwell liners makes installation economical and easy. Because our fiberglass wetwell liners have no seams, installation costs are greatly reduced. Our fiberglass liners are lightweight which eliminates the need for heavy equipment on the job site.

ASTM Certified...

Our fiberglass wetwell liners meet or exceed all ASTM requirements for fiberglass wetwells. LFM's fiberglass wetwell liners are designed to withstand the rigid requirements of ASTM Specification D3753 for glass fiber-reinforced plastic (FRP) products. The ASTM certification tests were performed independently by Southwestern Laboratories of Houston, Texas. Below you will find a summary of the test results.

Summary of Test Results

Tests Performed	Average Results
Stiffness	5% Deflection @ 2.45 lbs. / in ² 10% Deflection @ 2.28 lbs. / in ²
Material Composition	54.25 wt. % Resin
Compressive Strength	Transverse: 22,7000 psi Longitudinal: 10,500 psi
Flexural Strength	Transverse: 56,000 psi Longitudinal: 11,700 psi
Modulus	Transverse: 2,084,000 psi Longitudinal: 1,114,000 psi
Load Rating	24,000 lbs. – 0.157" Deflection 40,000 lbs. – No Damage
Barcol Hardness	Cylinder: 43.1 Reducer: 41.0
Wall Thickness	Cylinder: 0.308
Soundness	No Leaks Detected at 5 psi Air Pressure

Quality Assurance...

LFM stands behind our products. Our fiberglass wetwell liners carry a one year warranty. See the warranty section of our brochure for further information.

Installation Instructions...

1. Prepare excavation

Prepare excavation around existing wetwell making sure to observe all safety rules and regulations. Be sure excavation is properly shored. Remove any existing hatch or concrete top.

2. Set the wetwell liner & make cut-outs

Lift the fiberglass wetwell liner using the galvanized steel lifting lugs which are attached to the inside wall of the wetwell liner. Attach a chain or a heavy-duty strap to the lifting lugs and lift with a backhoe or other similar lifting device. Set the wetwell liner into existing wetwell. At this time, mark the contour of the existing wetwell bottom onto the fiberglass liner. Remove the fiberglass liner and cut along the contour mark. Set the liner back into the existing wetwell in a concentric manner. Use a non-shrinking grout to seal the bottom of the liner to the existing bottom. Fill area between the outside wall of the fiberglass liner and the inside wall of the existing wetwell with a concrete grout poured evenly in one foot lifts.

3. Replace the concrete top

Replace the concrete top on the wetwell and install hatch. Backfill according to engineer's specifications. In a short time, an old leaking concrete wetwell can be transformed into a newly lined LFM fiberglass wetwell.



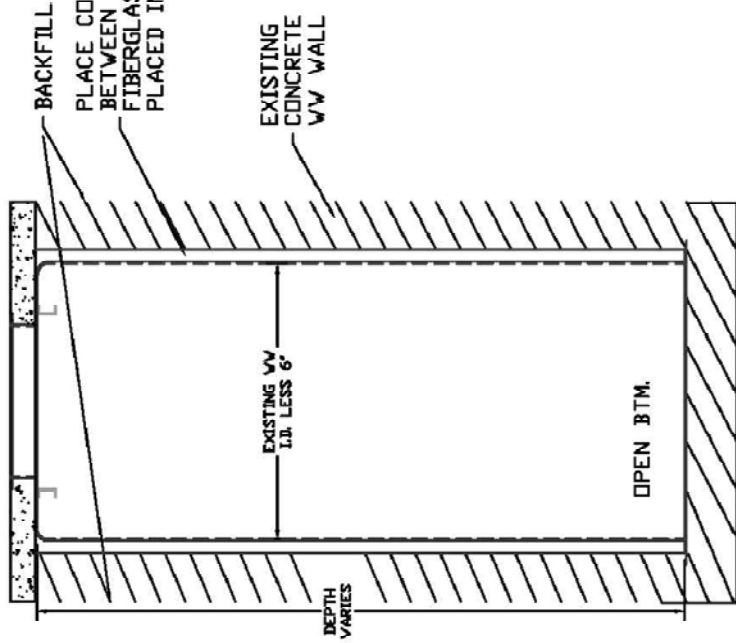
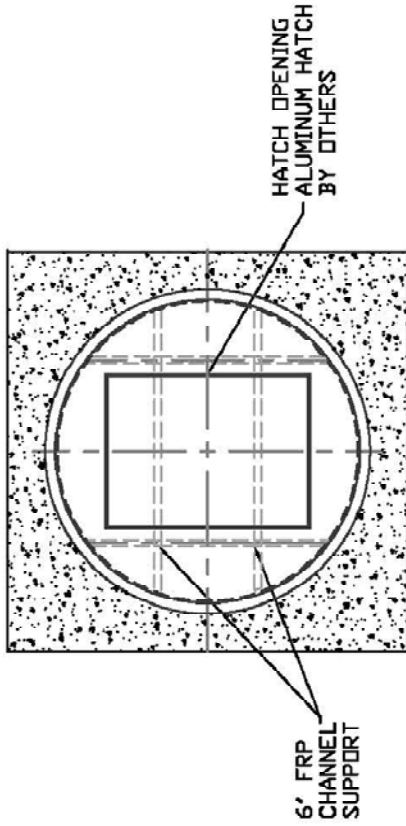
Technical Support & Sales:

800.237.5791

www.lfm-frp.com

NOTES:

1. BASIN DESIGNED, FABRICATED, INSPECTED, TESTED AND MARKED IN ACCORDANCE WITH A.S.T.M. D-3299 SPECIFICATIONS.
 2. BASIN TO BE INSTALLED BY INSERTING INTO WET CONCRETE. REFER TO L.F.MFG., INC. SPECIFICATION #LP1057SP FOR INSTALLATION RECOMMENDATIONS.
 3. SIGNED APPROVED DRAWING REQUIRED BEFORE START OF MANUFACTURING. DATE: _____
- () APPROVED _____
- () APPROVED AS NOTED _____
- () REVISE & RESUBMIT _____



SEAL AT LINER BTM. W/ INDUSTRIAL SILICONE OR NON-SHRINKING GROUT

TOLERANCES		FRACTION = 1/4	
DECIMAL		= ±.250	
= ±.062		= ±.010	
UNLESS OTHERWISE SPECIFIED			
COLOR	GRAY	LINER	ORTHOPHTHALIC
DESIGN TEMP.	OPERATING TEMP.	DESIGN PRESS.	OPER. PRESS.
SERVICE	DESIGN SP. GR. OPERATING SP. GR.		
OWN BY/SCALE	REV.	S.D. NO.	DATE
T.J.J. INC.	08/31/06 T.J.J. REV. A		09/10/03
CHK BY/APP BY/ DWG NO.		QUOTE NO.	SH#
DB JDM		A-WW3431	1 OF 1
FIELD BY/CUSTOMER			
DB			

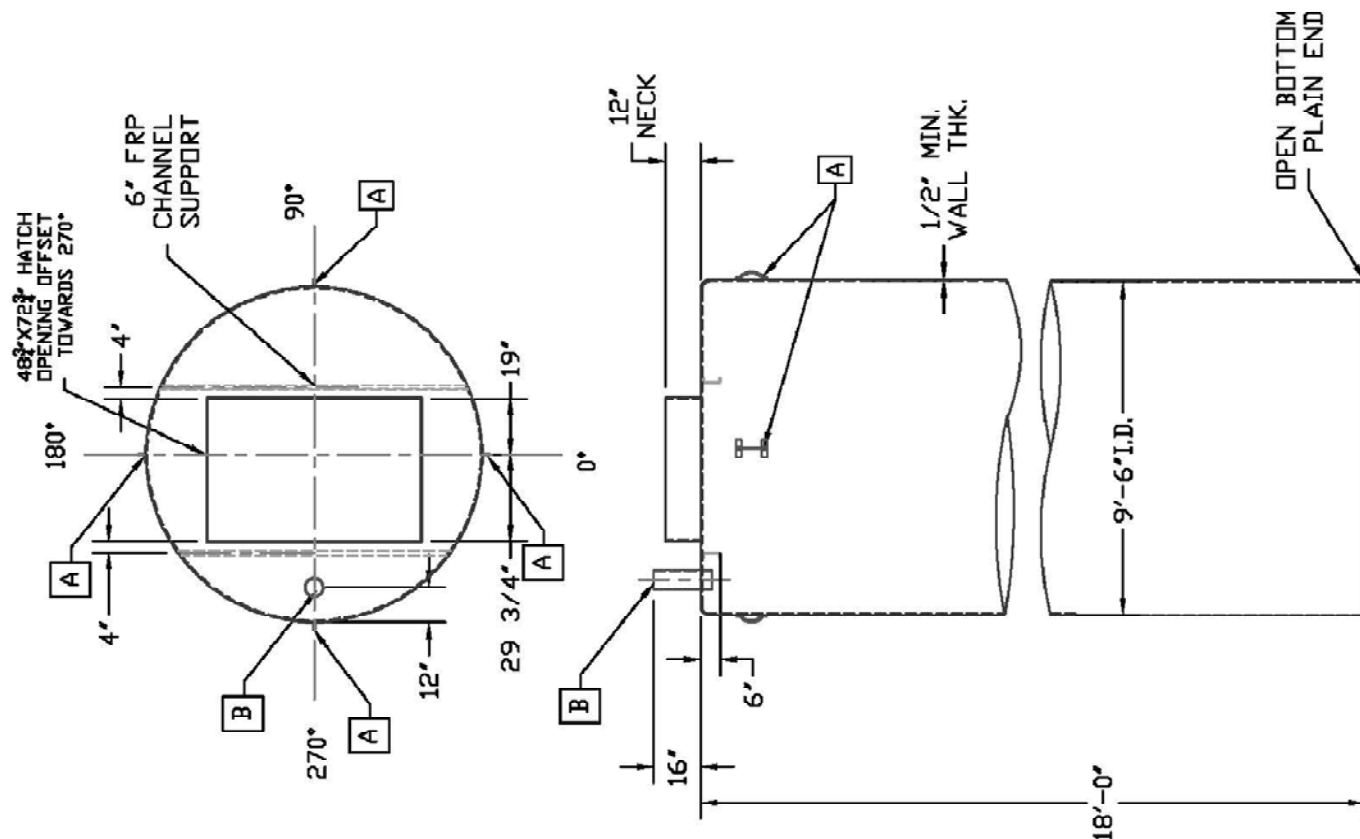
LFM

LF. MANUFACTURING, INC.
(800) 237-5791
(979) 542-8027
FAX # (979) 542-0911

FRP SPECIALISTS

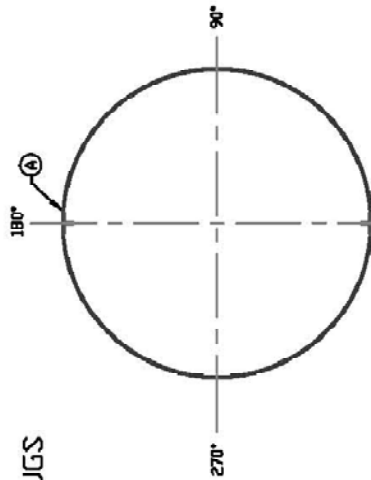
NOTES:

1. WETWELL DESIGNED, FABRICATED, INSPECTED, TESTED AND MARKED IN ACCORDANCE WITH A.S.T.M. D-3753 SPEC'S CURRENT EDITION.
 2. WETWELL TO BE INSTALLED BY INSERTING INTO WET CONCRETE. REFER TO L.F.M. INC. SPECIFICATION #LP1056SP FOR INSTALLATION RECOMMENDATIONS.
 3. SIGNED APPROVED DRAWING REQUIRED BEFORE START OF MANUFACTURING. DATE: _____
- () APPROVED _____
- () APPROVED AS NOTED _____
- () REVISE & RESUBMIT _____

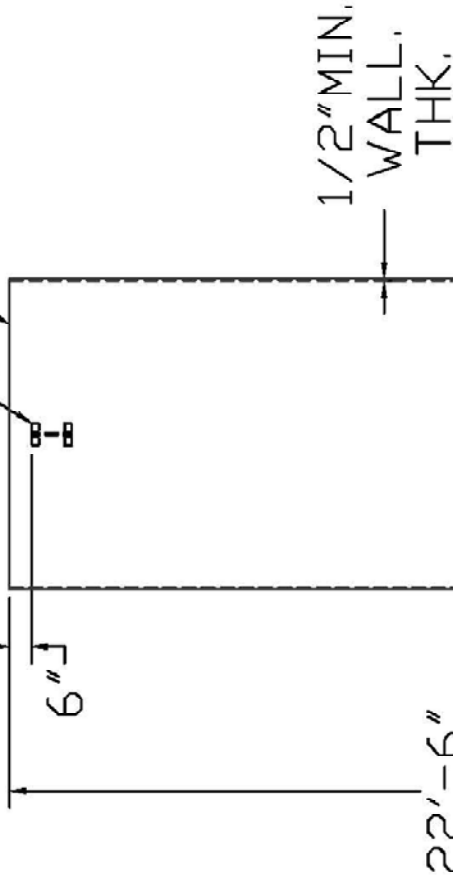
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LFM
ERP SPECIALISTS
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LIFTING LUGS
ON INSIDE
OF LINER



OPEN TOP P.E.



NOTES:

1. WETWELL LINER DESIGNED, FABRICATED INSPECTED TESTED AND MARKED IN ACCORDANCE WITH A.S.T.M. D-3753 SPECIFICATIONS.
 2. WETWELL LINER TO BE INSTALLED BY INSERTING INTO WET CONCRETE, REFER TO L. F. MFG., INC. SPECIFICATION #LP1057SP FOR INSTALLATION RECOMMENDATIONS.
 3. VERTICAL SEAM ALLOWED.
 4. SIGNED APPROVED DRAWING REQUIRED BEFORE START OF MANUFACTURING. DATE: _____
- () APPROVED _____
- () APPROVED AS NOTED _____
- () REVISE & RESUBMIT _____

A 2	GALV. STL. LIFTING LUGS	PROD.
ITEM QTY/DESC	DESCRIPTION	TOLERANCES
7'-0"DIA. FRP WETWELL LINER	LFM8262	FRACTION = $\pm 1/4$ DECIMAL INCH = $\pm .250$ INCH = $\pm .062$ INCH = $\pm .010$ UNLESS OTHERWISE SPECIFIED
COLOR LINER	GRAY ISOPHTHALIC	DESIGN SP. GR. OPERATING SP. GR.
DESIGN TEMP. AMBIENT	OPERATING TEMP. AMBIENT	DESIGN PRESS. ATMOS.
SERVICE WASTEWATER	1.2	1.2 MAX
DATE: 10/27/05	REV. 1	DATE: 10/27/05
CHK BY: APP BY: DWG NO. A-WW4544	QUOTE NO. 1	OF 1
DB: JDM	FIELD BY: CUSTOMER	DATE: 10/27/05
DB: MIKE THOMPSON SALES	LF. MANUFACTURING, INC.	(800) 237-5791
		(979) 542-8027
		FAX # (979) 542-0911