



MURPHY BROTHERS, INC.

Commercial, Residential, and Industrial Contractor

110 N Hayford Rd. Spokane, WA 99224

Phone (509) 535-1591

Fax (509) 244-2949

To:	Haskell Corporation	Contact:	Justin Sherfy
Address:	PO BOX 917	Phone:	360-734-1200
	Bellingham, WA 98229	Fax:	360-734-5538
Project Name:	Sila Plant 2 Grading And Site Prep	Bid Number:	2023 - 008.2KM
Project Location:	Sila Nanotechnologies, Moses Lake, WA	Bid Date:	7/17/2023
Addendum #:	1,2,3,4,5,6,7		

We are pleased to quote the following project: Metering Manhole Revision

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Metering Manhole Revision	1	LS		

Notes:

Cost Breakdown: Price difference from original metering manhole and new manhole, due to new specs required by department of ecology, also included cost to install concrete pad required under manhole

The requirements of the specification were not known at bid time, original price was based only on information Sila had previously communicated to Clipper controls.

Total price to be based on actual quantity or measurement unless otherwise specified.

Shamrock Paving, Inc. accepts all major Credit Cards. There will be a 3% fee added to your bill if a Credit Card is used for payment.

ACCEPTED: The above prices, specifications and conditions are satisfactory and are hereby accepted. Buyer: _____ Signature: _____ Date of Acceptance: _____	CONFIRMED: Murphy Brothers Authorized Signature: _____ Estimator: Kent Merrick kent@murphybros.us
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Revised Metering Manhole

Cost Breakdown: Price difference from original metering manhole and new manhole, due to new specs required by department of ecology, also included cost to install concrete pad required under manhole

Excluded: compaction testing, fall protection/handrail ect. With the exception of candles and caution tape, exhaust mitigation, **tundish fittings**, saw cutting, asphalt patch batch

Labor	Rate				HRS	Total \$
LABORER- GENERAL LABORER	\$ 72.19				15	\$ 1,082.88

Materials

(OLD) Packaged Metering Manhole	\$ 32,860.00				5%	\$
New Packaged Metering Manhole	\$ 68,234.62				5%	\$
Concrete	\$ 352.00				5%	\$
						\$

NEW METERING MANHOLE



**H.D. FOWLER
COMPANY**

Customer: MURPHY BROS DBA SHAMROCK PAVING INC
Estimator: Brian Frye
Job Name: SILA METERING MANHOLE
Location: MOSES LAKE, WA

Quote #: Q564316
Bid Date: 8/30/2024

Line	Qty	UoM	Description	Unit Price	Extended Price
METERING PARTS					
1	1	EA	68-5800-302 MODEL 5800 REFRIGERATED SAMPLER PACKAGE (1 POLYETHYLENE 2.5 GALLON BOTTLE)		
2	1	EA	60-5804-179 TIENET 306 TO 4700 / 5800 SAMPLER INTERFACE CABLE (32 FT.)		
3	1	EA	69-2903-138 SS STRAINER, LOW FLOW 3/8 INCH STAINLESS STEEL STRAINER		
4	1	EA	60-6700-062 PUMP TUBING FOR 5800 AND 6700 SERIES SAMPLERS - QTY 5EA		
5	1	EA	68-4310-000 SIGNATURE FLOW METER WITH Ultrasonic level sensor		
6	1	EA	60-4307-015 BATTER BACK UP KIT FOR SIGNATURE METER		
7	1	EA	60-4304-044 POWER CORD, 8 FT LONG FOR NORTH AMERICA INCLUDES CORD GRIP FITTING		
8	1	EA	60-4304-054 TIENET 307 ANALOG 4-20MA INPUT OPTION CARD, TWO INDEPENDENT CHANNELS		
9	1	EA	60-4307-108 LTE GLOBAL CELLULAR MODEM LTE Global cellular modem with magnetic mount antenna for Signature_ meter. Requires customer provided cell phone service SIM card (Verizon, AT&T, Bell, Telus, Rogers, Orange, Telstra, Vodafone and others using frequency bands B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B14, B18, B19, B20, B25, B26, B28) with static IP address		2,109.23
10	1	EA	68-2541-001 FLOWLINK CIPHER SOFTWARE		
11	1	EA	CELLSERVICE CELL SERVICE SUBSCRIPTION		
12	1	EA	472 110Y SYSTEM 282, IQ SENSORNET Controller, operate up to 2 sensors, 3 current output, 3 relays, 100-240 VA		
13	1	EA	109 295Y IQ SUN SHIELD, PLASTIC, FOR 2020 & 282 module mounting, also used for mounting air cleaning box.		
14	1	EA	109 286Y RAIL MOUNTING KIT FOR SD/M 170, SD/K 170 and SSH/IQ sun shields(dia. 25-60 mm)		
15	1	EA	480 053USY ADAPTER, CONDUIT, STAINLESS Steel Metric M16 male to 1/2" NPT female		
16	1	EA	480 052Y YSI WMS/IQ WALL MOUNT KIT FOR IQ MODULES		
17	1	EA	302 500Y TETRACON 700 IQ Submersible Conductivity probe for IQ System, requires cable assembly		
18	1	EA	480 044Y SENSOR CONNECTION CABLE, IQ, 15 M, 49.2FT		
19	1	EA	109 320Y SINGLE SENSOR HOLDER (Chain style mounting)		
20	1	EA	505 124YM-5 CHAIN - 15 METERS		
21	1	EA	505 123Y S/CH SHACKLE FOR CHAIN FITTING		
22	1		INBOUND FRT / BILLABLE	500.00	
Section Subtotal:					

METERING MANHOLE

The manufacturer recommends that a 6" stilling well be added to the metering manhole to accommodate the YSI conductivity probe. The probe instructions indicate that the probe needs about 5 cm distance from the flume side and bottom to operate properly. The probe will need devices to keep it centered and off the bottom of the well.

- | | | |
|----|------|--|
| 23 | 1 EA | PACKAGED METERING MANHOLE Fiberglass construction by Openchannelflow Part Number: PMM-48-H-HS0.8-6P-N-S-U-S 48-inch diameter x 2-feet deep (inlet invert to shoulder) add 10-12-inches to grade H-20 traffic reducer top cover, frame and grade rings by others 2-inch coupling Integral base with external mounting flange 0.8-foot HS flume with approach section, 0.13-205 GPM 6-inch pipe stubs No stilling well Dual scale staff gauge in cm and 1/100-foot increments Stainless steel ultrasonic mounting bracket 3/8-inch stainless steel sampler tube mounted in recessed cavity |
| 24 | 1 EA | 6" STILLING WELL FOR CONDUCTIVITY PROBE |
| 25 | 1 EA | EXPIDITE FEE FOR MONITORING WELL |
| 26 | 1 EA | GEMINI SAMPLER ENCLOSURE Manufacturer: Openchannelflow Construction: Fiberglass laminate, insulated walls & and integral fiberglass floor Features: Gullwing acces door, 2 plated T-handles, cushioned lift handle, stainless steel piano hinge Dimensions: 46"W x 50" D x 60" H Exterior Color: Arctic White --with: Load center, NEMA 3R thermoplastic 125 A main lug Outlet, 20 A duplex GFCI with weather cover Heater, 500 watt with integral thermostat, stainless steel Vents, (2), Round fixed with fiberglass insect screen Coupling, 2-inch PVC, for tubing & cable Panel, encapsulated mounting panel on right wall |
| 27 | 1 EA | EXPIDITE FABRICATION FEE - APPROX 4 WEEK LEAD TIME |
| 28 | | |

NOTES: 1. The quoted Gemini enclosure can contain a Teledyne Isco model 5800 automatic sampler and Signature flowmeter controller. 2. It is expected that the enclosure would be placed on a concrete pad put close to a metering manhole. A PVC sampling tube and ultrasonic flow sensor cable would run from the manhole and enter the enclosure through a 2-inch coupling fitting on the back of the enclosure.

- | | | |
|----|---|------------------------|
| 29 | 1 | INBOUND FRT / BILLABLE |
|----|---|------------------------|

Section Subtotal:

Approximate Total

Murphy Brothers, Inc.
A Division of Shamrock Paving, Inc.
P.O. Box 19263
Spokane, WA 99219
509-535-1591 Fax 509-535-8660



Submittal Cover Sheet

DATE: 8/22/24

TO: Haskel Corporation
Bellingham, WA

Submittal No. 033 rev 2

Haskell Cont. No. 14800101109000

Shamrock No. 36446

Re:

Spec Reference: _____

We are sending the following: ☒ Attached ☐ Under a Separate Cover via: _____

☐ Drawings

☐ Plans

☐ Prog. Pmt.

☐ Certificates of Compliance

☐ Prints

☐ Payroll

☐ Specs.

☐ Copy of Letter

☐ Other _____

☒ Cut Sheets

☐ EEO Reports

☐ Change Order

Copies	Pages	Date	Description
1	1		Cover Sheet
1	2-8		Metering Manhole

☒ For Approval

☐ For Your Use

☐ For Information

☐ For Rev/Cmt*

☐ As Requested

☐ Returned for Corrections

☐ Approved As Submitted

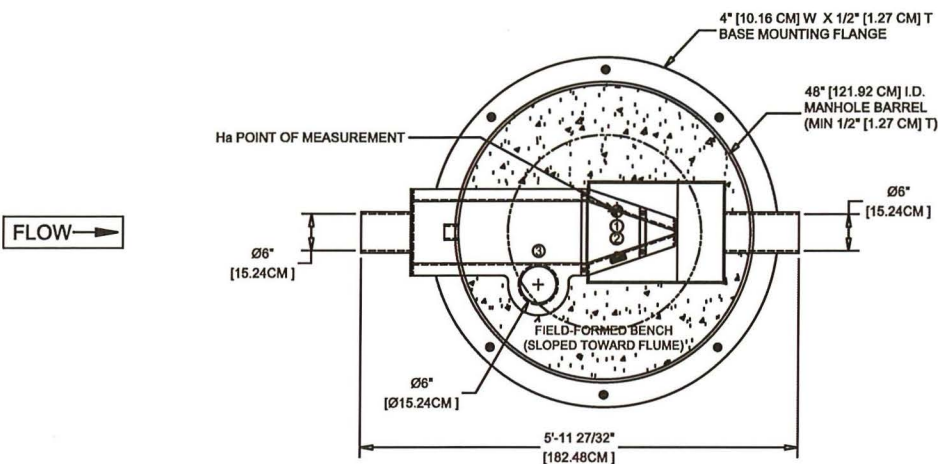
☐ Approved As Noted

Remarks:

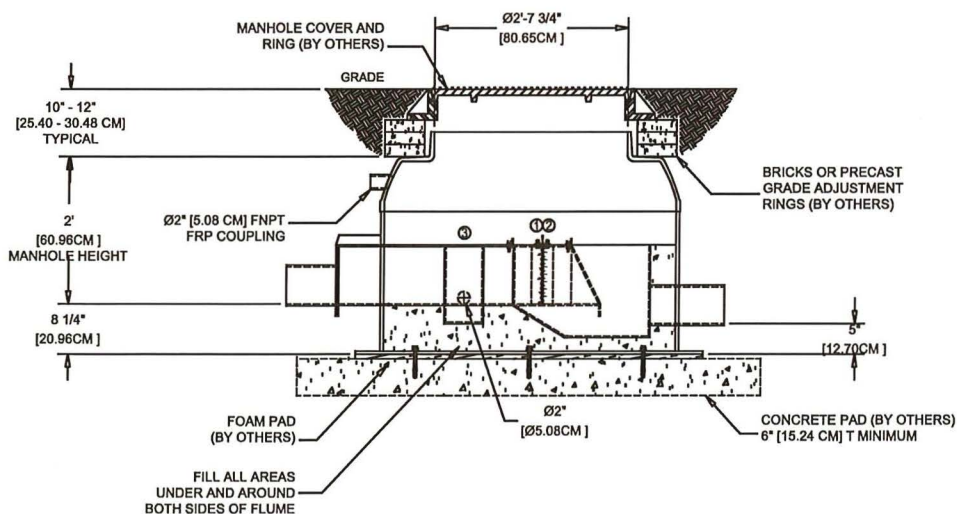
Submitted By Kent Merrick, Project Manager

FREE-FLOW CAPACITY: 0.1346 GPM [0.0085 L/S] MINIMUM - 205.1 GPM [12.94 L/S] MAXIMUM

- ① STAFF GAUGE
- ② SAMPLER TUBE
- ③ STILLING WELL



PLAN VIEW
(REDUCER TOP AND OPENING NOT SHOWN FOR CLAIRTY)

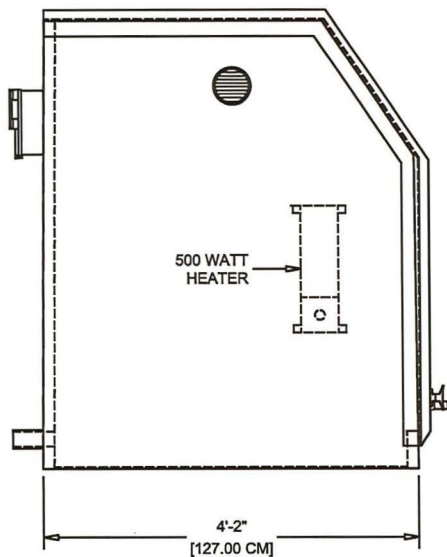


ELEVATION CROSS-SECTION VIEW

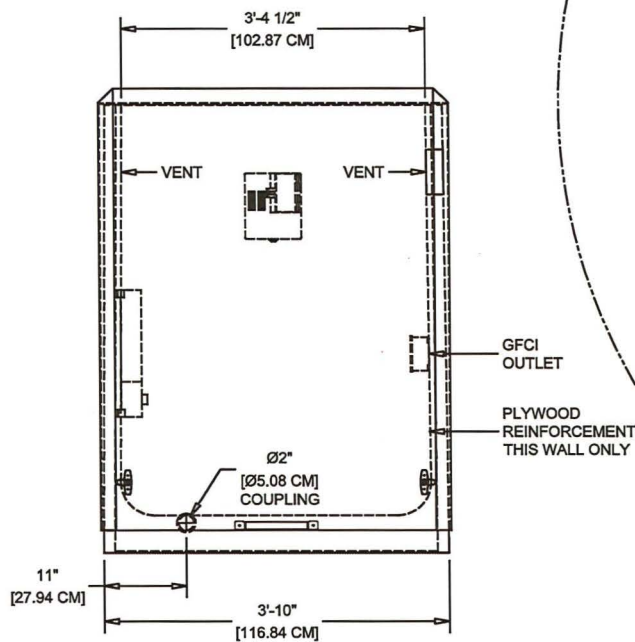
ASTM
D 3753

NOTES:				OPENCHANNELFLOW BOISE ATLANTA	
1) SIZING AND PROVISION FOR CONCRETE PAD BY OTHERS				DWG NO.	PMM 4-H-HS8-6P-A6-S-N-S (1)
2) MANHOLE COVER/RING, GRADE ADJUSTMENT RINGS, AND ANCHOR BOLTS BY OTHERS				DATE	24.08.21
3) FIELD-FORMED, SLOPPED BENCH TO TOP OF FLUME (CONCRETE OR SAND CAPPED BY CONCRETE), FILLING ALL AREAS UNDER AND AROUND BOTH SIDES OF FLUME, SHORING UP THE FLUME				H-20 MANHOLE, Ø48", W/ 0.8" HS FLUME W/ Ø6" STUBS, Ø6" STILLING WELL, GAUGE, & SAMPLER TUBE	
This drawing and the data contained within is the sole, confidential property of OPENCHANNELFLOW (OCF) and may not be copied, reproduced, disclosed to others, in whole or in part, without the prior written consent of OCF. OCF reserves the right to change any dimension, finish, material, or method of construction indicated on this drawing at will and without notice. This drawing is provided in confidence with the understanding it shall be returned to OCF upon demand.				Unless otherwise indicated, dimensions are in feet and inches, with centimeters indicated in []. Angles are in degrees.	
REV	REVISION DESCRIPTION	BY	DATE		

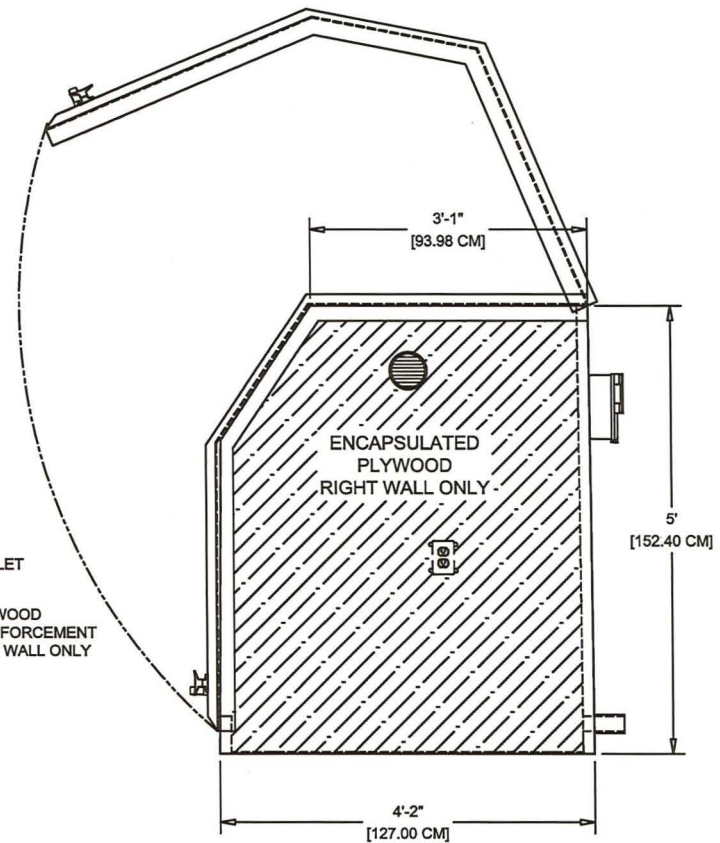
EXTERIOR COLOR:	WHITE
INTERIOR COLOR:	WHITE
CORE:	1" [2.54 CM] 1/2" [1.27 CM] PLYWOOD



LEFT ELEVATION VIEW



ELEVATION VIEW



RIGHT ELEVATION VIEW

REV	REVISION DESCRIPTION	BY	DATE

NOTES:
 1) PIANO HINGE, DUAL GAS STRUT LIFT ARMS, LIFT HANDLE, AND KEY-LOCKED T-HANDLES
 2) INTERNAL FLOOR
 3) RIGID, CLOSED CELL POLYISOCYANURATE FOAM CORE

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OPENCHANNELFLOW BOISE ATLANTA		
DWG NO.	E-G1-1-W-2HLRVV (1)	DATE 24.08.21
GEMINI EQUIPMENT ENCLOSURE W/ Ø2" COUPLING, HEATER, LOAD CENTER, REINFORCEMENT, & (2) VENTS		
Unless otherwise indicated, dimensions are in feet and inches, with centimeters indicated in []. Angles are in degrees.		



PACKAGED METERING MANHOLES



Packaged Metering Manholes are an excellent solution to the problem of how to accurately measure piped flows below grade.

Integrating a fiberglass manhole barrel, top, ladder, flume, and base, Packaged Metering Manholes are:

- Water-tight
- Corrosion resistant
- Engineered to meet your flow monitoring needs

At the core of each unit is our high-strength fiberglass manhole barrel. This barrel, fabricated to the exacting standards of ASTM D3753 and AASHTO H-20, has exceptionally high strength, while at the same time weighing 1/10th that of a comparable concrete manhole.

Factory-Integrated Flumes:

- Cutthroat
- HS / H
- Montana
- Palmer-Bowlus
- Parshall
- Trapezoidal

Openchannelflow offers several styles of Packaged Metering Manholes to suit your particular site needs:

- Domed Top (for grassy, non-traffic areas)
- Aluminum Hatch (for pedestrian traffic, low-profile areas)
- H-20 Reducer (for vehicular traffic areas)
- Open Top

In addition, Openchannelflow Packaged Metering Manholes are available in a range of diameters: 48-inch [1.22 m], 60-inch [1.52 m], 72-inch [1.83 m], and 92-inch [2.34 m]



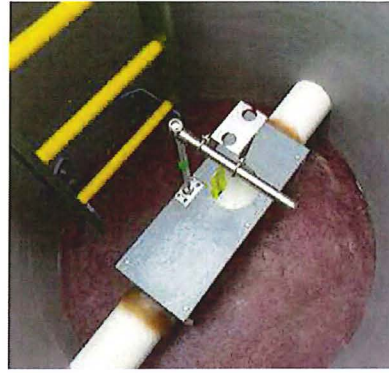
West Coast:
950 W. Bannock Street, Suite 1100
Boise, Idaho 83702

East Coast:
815 Branch Drive
Alpharetta, Georgia 30004

V: 866.435.8637 | F: 855.331.6457 | www.openchannelflow.com

Flume Sizes Available:

- Cutthroat
up to 108" x 24"
- HS / H
0.4' to 2.5'
- Montana / Parshall
1" to 24"
- Trapezoidal
up to 2" 45° SRCRC



Benefits

For owner, consultants, and contractors, Packaged Metering Manholes provide:

- Single source responsibility - no finger pointing among subs
- Confidence that the primary device is installed correctly
 - Accurate and repeatable flow measurement for owners
 - No expensive call-backs for contractors
- Wide variety of flume styles and sizes
 - Choose the device that best fit the flow rates
- Virtually no maintenance or repairs
- Minimal installation / plant downtime
- Industry leading (5) year FiberLock equipment warranty - install it and forget it!



Dig It! Drop It! Done!

From the outset, Packaged Metering Manholes from Openchannelflow have been designed to be extremely easy to install. At a prepared site, installation can take a little as a morning, making Packaged Metering Manholes great for holiday / plant shut-down installations.

Customization

Openchannelflow offers a wide range of options to help you customize not only the flume, but also the manhole. All to help you maximize the value to the end user.

Manhole

- Mounting panels /shelves
- GP and XP lights and fans
- Intermediate platforms
- Non-slip benching /surrounds

Flume

- Dual scale staff gauges
- Stilling wells
- Ultrasonic sensor brackets
- Gratings and covers

End Connections

- Pipe stubs
- Flanges
- Caulking collars
- Dual containment piping



West Coast:
950 W. Bannock Street, Suite 1100
Boise, Idaho 83702

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Alpharetta, Georgia 30004

V: 866.435.8637 | F: 855.331.6457 | www.openchannelflow.com



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(5) Year FiberLock Limited Warranty

1. Per the Terms of Quotation and Sale, Seller warrants the Equipment manufactured by Seller will be free from defects in workmanship and materials under normal use and regular service and maintenance for up to (5) years from the Transfer of Title. The warranty period shall be based upon the warranty registration information provided by the Buyer within the time period allowed by the Seller.
2. The time period for the Warranty shall be as follows:
 - a. (1) year – no installation or operation photos provided
 - b. (3) years – installation, but no operation photos provided
 - c. (5) years – installation and operation photos provided

All time periods above REQUIRE that the Buyer fully complete and return the Seller's Order Information Form. Orders where the Order Information Form is not fully completed and returned to the Seller at the time of order shall be sold "as-is", with no warranty.

3. Products purchased by Seller from a third party for resale to Buyer shall carry only the warranty extended by the original manufacturer.
4. THIS IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER WITH RESPECT TO THE EQUIPMENT AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS, OR OTHERWISE, AND WHETHER OR NOT SELLER'S EQUIPMENT IS SPECIFICALLY DESIGNED AND/OR MANUFACTURED BY SELLER FOR BUYER'S USE OR PURPOSE.
5. This warranty is contingent upon the proper use of the Equipment and does not extend to normal maintenance, and shall be void if the Equipment is: subjected to unusual physical / environmental stress, neglect, misuse, inadequate storage, or improper installation.
6. For applications where chemical or temperature compatibility is required, it is incumbent upon the Buyer to notify the Seller at the time of quotation, in writing, of the nature of the exposure. Failure of the Buyer to notify the seller in writing at the time of quotation of such exposure shall void this warranty and shall exhaust the Buyer's recourse against the Seller.
7. Buyer assumes all other responsibility for any loss or to any losses or damages due to misuse, accident, abuse, normal wear and tear, Buyer's negligence, unauthorized modification or alteration, use beyond rated capacity, or improper installation, anchoring, sealing, maintenance or application of the Equipment.
8. This warranty does not cover mobilization, removal, temporary site accommodations, and reinstallation expenses.
9. Should Equipment manufactured by or especially for the Seller become defective during the warranty period, the Seller shall repair or replace it solely at its discretion. Warranty repairs made at the Seller's facility, a facility of the Seller's choosing, or in the field shall be made at no cost to the Buyer. Should the Seller deem that field service of the Equipment is necessary, the Buyer shall locate the Equipment in a safe, secure, ground-level area from which the Seller, its parent, or its independent subcontractors may perform their work, without site access preconditions or insurance burden. Should the Seller determine that the Equipment must be repaired at its facility, or a facility of the Seller's choosing; the Buyer shall bear all costs associated with the removal, packing, unpacking, and reinstallation of the Equipment, as well as any costs associated with temporary site accommodations while the Equipment is being repaired. Damage to the Equipment during shipment back to the Seller due to insufficient packaging by the Buyer shall not be warranted.
10. The Seller shall pay surface transportation charges both ways within the continental United States if the Equipment proves to be defective within (30) days of the date of shipment. Throughout the remainder of the warranty period, the Buyer shall pay surface transportation charge to return the Equipment to the Seller, and the Seller shall pay surface transportation charges to return the repaired Equipment to the Buyer.
11. If during the warranty period, the Buyer desires warranty service at a place other than Seller's plant or at the site where the Equipment is installed, or by personnel other than Seller's employees or subcontractors, the Buyer shall pay all additional travel expenses and costs in excess of those which would have otherwise been incurred by Seller at a straight time rate for the work performed at Seller's plant or Equipment installation site.



Information, research, and solutions for open channel flow

12. To the extent that Seller has been supplied specifications, information, representations of the operating conditions or other data in the selection or design of the Equipment and the preparation of Seller's Quotation, and in the event that actual operating conditions or other conditions differ from those represented to Seller, any warranties or other provisions contained herein which are affected by such conditions shall be null and void.
13. If within (30) days after Buyer's discovery of any warranty defects within the warranty period or within (10) days of receipt for quantity discrepancies, Buyer notifies Seller thereof in writing, Seller shall, solely at its discretion, repair, correct or replace F.O.B. point of manufacture, or refund the purchase price that portion of the Equipment found by Seller to be defective or missing. Failure by Buyer to give such written notice to Seller within the applicable time period shall be deemed an absolute and unconditional waiver of Buyer's claim for such defects or shortage.
14. Products repaired or replaced during the warranty period shall be covered by the foregoing warranty for the remainder of the warranty period or (90) days from the date of Seller's service, whichever is longer.
15. Prior to returning Equipment, for service, the Buyer shall obtain a Return Material Authorization (RMA) number by contacting the Seller's customer service department.
16. Buyer assumes all other responsibility for any loss, damage, or injury to persons or property arising out of, connected with, or resulting from the use of the Equipment, either alone or in combination with other products/components.
17. Should Buyer be past due in payment to Seller for this or any other Agreement between the two parties, Seller's warranty obligations shall be waived until such time as the Buyer's account is current (including any and all collections charges, rates, or fees). Under no circumstances shall the warranty period for the Equipment extend due to the resolution of Buyer's past due payments.
18. Manholes sold by the Seller with open spaces between the device / flume / channel / etc. and the manhole barrel wall SHALL BE REQUIRED to have either a poured, watertight shoulder or integral fiberglass bench for this warranty to take effect. Damage or failure of the structure due to lack of such a structure shall not be warrantable.