

# DESIGNED ENGINEERED MANUFACTURED

Thank you for the opportunity to introduce you to Global Fabrication, Inc.'s large water containment systems. We have prepared this brochure to demonstrate the many ways Global has developed their large water containment system to help all types of industry solve their water storage needs. This brochure is designed to provide a broad understanding of Global's large water containment systems and accessories.



**Global  
Fabrication** INC.





*Traditional Round Containment  
in Alberta, Canada*

## **BENEFITS FOR GLOBAL'S CUSTOMERS**

### **PRICING**

Global is committed to providing our customers with a competitive price and the service to match their needs.

### **EXPERIENCE**

Global's dedicated staff has the necessary practical knowledge and many years of experience that will instill you with the confidence to proceed.

### **FLEXIBLE**

After listening to your specific needs the Global staff is prepared to develop and adapt our products to meet your requirements.

### **ENGINEERING**

Through Global's qualified professional engineering staff and independent consulting engineers, we are able to provide the necessary high quality services.

### **INSTALLATION**

Thorough quality control methods are employed to ensure correct installation of each customer chosen water containment system. Our outlined procedures provide for ease of installation, less time on site, less site infrastructure and a minimum of required construction personnel.

### **QUALITY AND SERVICE**

Global is committed to providing the highest quality product and services from first contact to the completed water containment system and after-sales service.

### **AESTHETICS**

Global's structured tank sections provide a wall design and a range of colors that will integrate well with any surrounding environment.

### **ADVANCED PRODUCTION TECHNIQUES**

Global is continuously conducting research and development to improve production methods and create uniform quality for all of its customers.

**USES:** Our water containment systems are used for a wide range of water storage applications – including municipal and utility purposes.

**MISCELLANEOUS:** Depending on the size of the water containment system and the wishes of the customer the following can be designed & engineered into the system:

Fixed ladders, stairs & platforms of various types, candy cane inflow/outflow pipes, pipe brackets, level indicators with or without solar power supply, screened sumps, bucket style liners, floating evaporation covers and insulated covers, anode protection and many other customized accessories.

**TANK SITE REQUIREMENTS:** Global may require a ring beam for certain very large commercial water containment systems. This will depend on the terrain involved, the weather experienced in that region, the length of time that the water containment system will be in place and any government regulations that may govern the installation of the system. There may be some exceptions, please consult Global Fabrication for more details.

Site preparation must be completed prior to the arrival of our installers and/or supervisory personnel.

Global requires that all sloping sites have adequate measures for retaining and maintaining the flat area where the water containment vessel will sit and that drainage is provided prior to and upon the completion of the tank construction so that the slope is not eroded, thus endangering the water containment vessels integrity. Professional civil engineering advice should be sought on the retaining and drainage requirements.

In the event our crew is required to stand idle because of any delays or incomplete sites, additional costs may be incurred by the customer.

**DESIGN FLEXIBILITY:** Global has incorporated a great deal of design flexibility into our water containment systems. We have designed traditional round tanks as well as our new square/round tank design with various heights and dimensions which gives the customer a great deal of flexibility in choosing which system will suit their needs best. In the traditional round tank design we have centered the systems on a patent pending design that allows as many as three different sized tanks to be made from the same sized tank panel which allows users to make up the size tank that fits the containment that is currently needed. Likewise the new patent pending square/round tank design makes the most efficient use of the space available and is infinitely variable in size depending on the number of straight panels necessary to produce the volume required.



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# OUR HSEC POLICY

At Global Fabrication, Inc., our health, safety, environmental and community responsibilities are integral to the way we do business.

## THINK SAFETY FIRST

Global Fabrication, Inc. has a commitment to provide a safe work environment for its employees at all times while building the highest quality system components that can be safely erected. GFI intends that the manual provided with each containment system be interpreted and administered with sound judgment consistent with good safety practices. However, the safety commitment and job site practices of the erector are beyond the control of GFI. It is strongly recommended that safe working conditions and accident prevention practices are the top priority on any job site just as they are at our Global fabrication facility. Local, state and federal safety and health standards should always be followed to help insure worker safety. Make certain all employees know the safest and most predictive way of erecting a GFI water containment system. Emergency telephone numbers, location of first aid stations and emergency procedures should be known to all employees. Daily meetings highlighting safety procedures, the use of hard hats, steel toed shoes and other proper equipment for handling heavy materials are recommended erection practices

## OUR COMMITMENTS

We are committed to continual improvement in our performance in this regard.

## HEALTH AND SAFETY

Our fundamental belief is that all injuries can be prevented. This responsibility starts with each one of us.

## ENVIRONMENT

We care for our environment. We are committed to the efficient use of resources, reducing and preventing pollution, and product stewardship.

## COMMUNITY

We strive to be valued corporate citizens in our communities. We respect the values and cultural heritage of all people.

## OUR ACTIONS

To meet our commitments, we will set targets, develop, implement and maintain management standards and systems, and comply with relevant industry standards and legal requirements. We will engage with our stakeholders to build relationships based on honesty, openness and mutual trust and share responsibility for meeting the goals of our Policy. We will identify, assess and manage our risks. We will truly succeed when we achieve our health, safety and environmental goals and are valued by the communities in which we work.

Dennis V. Raybuck  
President



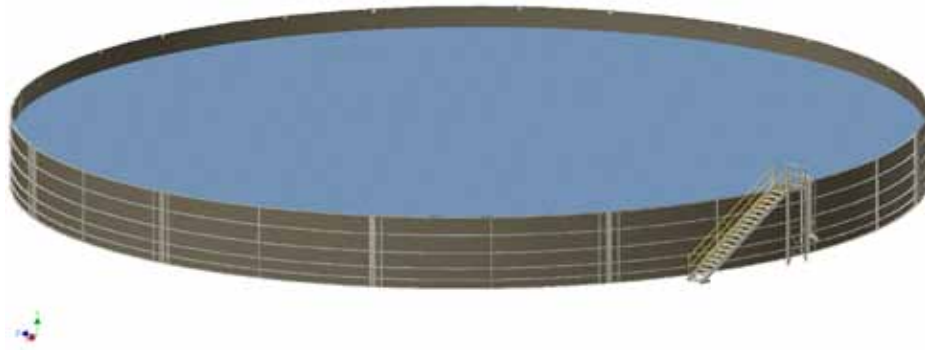
*1 1/2 million gallon containments with floating roofs.*

Global's large above ground water containment systems can be configured to meet the requirements of any project ranging from 250,000 Gallons (945,000 Liters) to over 200,000,000 Gallons (757,000,000 Liters). The short time that it takes to prepare the site and then erect the system makes it the choice of any customer needing a high quality large water containment system, no matter where the project is located.

Global insures that each water containment system will receive the necessary attention to detail to make sure it is capable of meeting our customer's needs. Global's water containment systems have the necessary structural engineering and integrity to provide any commercial customers with the appropriate product for their specific need. In addition, customized engineering may be carried out for the specialized requirements of any customer.

Global's water containment systems can be engineered to suit earthquake zones, high winds and heavy storms, heavy industrial or highly specialized environments. These requirements are not uncommon and can be easily accommodated to allow the best possible solution for most situations. Global's water containment system combines the strength of our exclusive bolted design, with an aesthetic appeal, incorporating rigid insulation to reduce evaporation from severe heat and freezing from the cold.

All of the design and attention to detail is backed with quality materials, professional engineering certification and a reputation we are not willing to compromise. This gives you, the customer, peace of mind in knowing you have purchased a high quality product that is correct for the application intended.



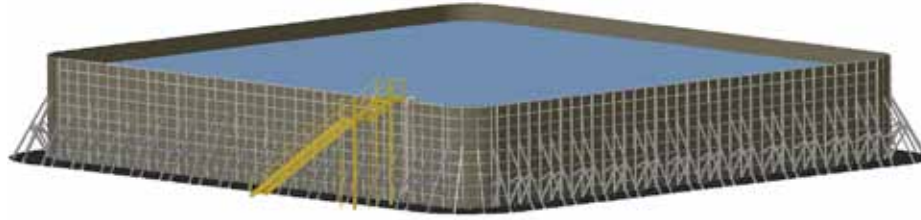
## TRADITIONAL ROUND CONTAINMENT DESIGN

For those customers wanting to use the traditional round tank design Global has a patent pending design that allows as many as three different sized tanks to be made from the same sized tank panel. This design allows large users to purchase a certain number of tank sections and then by using the designed accessories make up whatever size tank fits the containment that is necessary. For instance; if Company # 1 is setting up a 1.5 million gallon containment to serve Region A during a three month period of development and then needs to move to Region B where they only need a 1.25 million gallon containment, they need only use the necessary patent pending design accessory and 11 tank sections instead of the 12 they needed for the larger tank in Region A. It is that simple and a great savings for the company to now have flexibility instead of needing to have completely different tanks for each area.

All traditional Global round water containment systems are engineered with a segmented ring structure to maintain the integrity of the systems structure, as well as the proper bolt specification, protective coatings and other safeguards in order to supply a product that will provide a long and usable life in the field.

In the table below you will see the size charts for the traditional round containments. Please note that the traditional round containments are shown in groups of three sizes. The largest size in each group is the standard for that group. By using the designed accessories you can use the same panels to make-up two smaller sizes of the traditional round tank.

Outside Circum. In Feet	Inside Diameter in Feet	Gallons per Foot of Depth	Height of Each Segment	# of Seg.	Width of Straight Segment	Gallons of Total Storage	Barrel Equivalent of Storage	Round Tank Number
387.50	123.35	89,388	12.00	10	38.75	1,072,650	25,539	GFI 1 MM
426.25	135.68	108,159	12.00	11	38.75	1,297,907	30,903	GFI 1.25 MM
465.00	148.02	128,718	12.00	12	38.75	1,544,617	36,777	GFI 1.5 MM
503.75	160.35	151,065	12.00	13	38.75	1,812,779	43,161	GFI 1.8 MM
542.50	172.69	175,200	12.00	14	38.75	2,102,395	50,057	GFI 2.1 MM
581.25	185.02	201,122	12.00	15	38.75	2,413,464	57,463	GFI 2.4 MM
620.00	197.36	228,832	12.00	16	38.75	2,745,985	65,381	GRI 2.75 MM
658.75	209.69	258,330	12.00	17	38.75	3,099,960	73,809	GFI 3.0 MM
697.50	222.03	289,616	12.00	18	38.75	3,475,388	82,747	GFI 3.5 MM



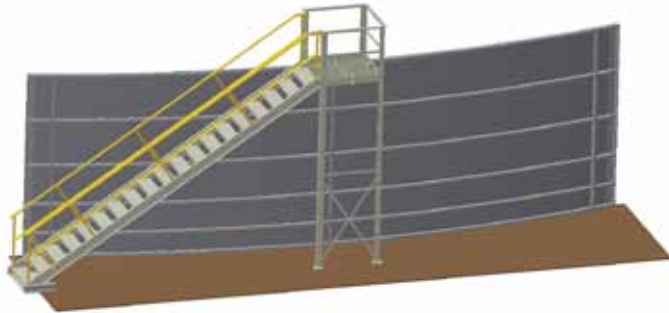
## REVOLUTIONARY NEW SQUARE/ROUND DESIGN

For those customers that wish to avail themselves of the newest technology Global has developed the new patent pending square/round tank system which makes the most efficient use of the space available. This revolutionary new design deals with pressure distribution, while dispersing stresses away from the tank walls, to maintain integrity of the square/round system even at heights of 18 feet, immense water volumes and wind loads of up to 100 mph (162 kph). This system is infinitely variable in size (either square or rectangular) only dependent on the number of straight wall sections necessary to produce the volume required. All Global square/round water containment systems are engineered with proper pressure distribution and stress dispersal in mind to maintain the integrity of the systems structure, as well as the proper bolt specification, protective coatings and other safeguards in order to supply a product that will provide a long and usable life in the field. In additional, due to the 7.5' width of the wall sections the containments are able to be shipped on a regular flatbed truck without special permits or shipped overseas in standard OGC.

In the table below you will see approximate size charts for the revolutionary new square/round containments. Please note that the new square/round design is infinitely variable in size, either square or rectangular, depending only on the number of straight wall sections necessary to produce the volume required.

Length in Feet	Width in Feet	Gallons per Foot of Depth	Height of Each Segment	# of Seg.	Width of Straight Segment	Gallons of Total Storage	Barrel Equivalent of Storage	Square-Round Tank Number
92.75	92.75	64,351	12.00	46	7.5	768,809	18,305	S-R 250 M
107.75	107.75	86,849	12.00	54	7.5	1,038,780	24,733	S-R 500 M
119.00	119.00	105,931	12.00	60	7.5	1,267,768	30,185	S-R 750 M
130.25	130.25	126,907	12.00	66	7.5	1,519,477	36,178	S-R 1.0 MM
141.50	141.50	149,776	12.00	72	7.5	1,793,909	42,712	S-R 1.25 MM
152.75	152.75	174,539	12.00	78	7.5	2,091,062	49,787	S-R 1.5 MM
160.25	160.25	192,100	12.00	82	7.5	2,301,788	54,804	S-R 2.0 MM
167.75	167.75	210,502	12.00	86	7.5	2,522,612	60,062	S-R 2.5 MM
175.25	175.25	229,745	12.00	90	7.5	2,753,535	65,560	S-R 3.1 MM
175.25	175.25	229,745	18.00	90	7.5	4,130,303	98,341	S-R 4.1 MM
194.00	194.00	281,536	18.00	100	7.5	5,062,537	120,537	S-R 5.0 MM
239.00	239.00	427,294	18.00	124	7.5	7,686,173	183,004	S-R 7.6 MM
280.25	280.25	587,519	18.00	146	7.5	10,570,228	251,672	S-R 10.5 MM
306.50	306.50	702,735	18.00	160	7.5	12,644,117	301,050	S-R 12.5 MM
336.50	336.50	847,034	18.00	176	7.5	15,241,497	362,893	S-R 15 MM
362.75	362.75	984,341	18.00	190	7.5	17,713,021	421,739	S-R 17.5 MM
389.00	389.00	1,131,957	18.00	204	7.5	20,370,109	485,003	S-R 20 MM
434.00	434.00	1,408,997	18.00	228	7.5	25,356,834	603,734	S-R 25 MM

The renderings below display many of the accessories that are available for Global's large above ground water containment systems. In addition Global can custom design any accessory that might be required by our customers.



*Stairway w/ Platform*



*Candy Canes 4", 8" and 12"*



*Caged Ladder*



*Candy Canes 45 Degree  
(Also 4", 8" and 12")*



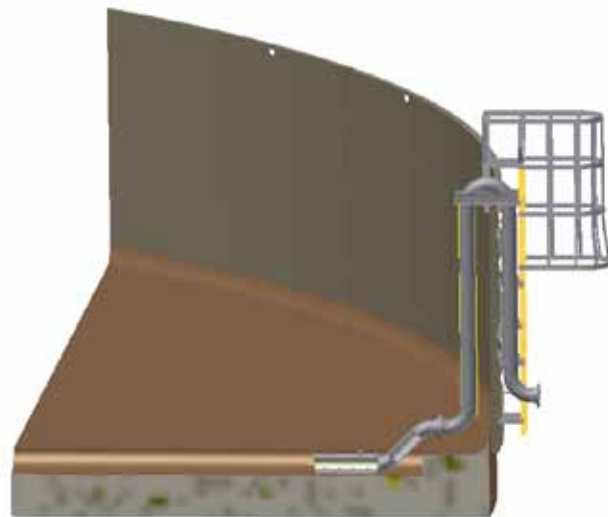
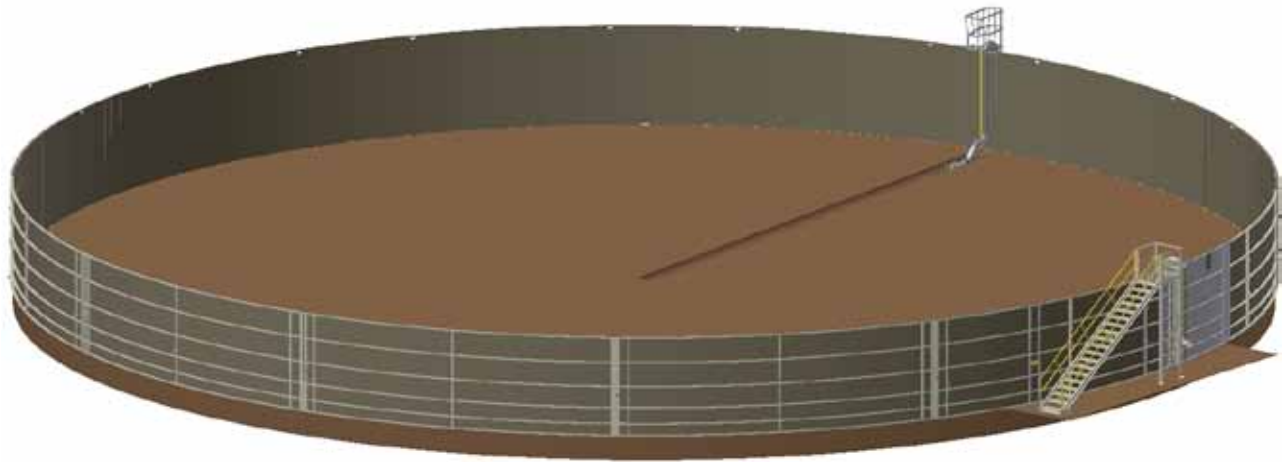
*Ladder w/ Platform*



*Screened Suction Device  
(Top Screen Not Shown)*



The below illustration shows the trench method recommended for the complete drainage of water from either the traditional round containment or the new square/round containment. This trench begins in the middle of the containment at a depth of six inches and moves to the exterior of the tank to a depth of 12 inches where the screened suction device is placed and attached to a candy cane. Although the outer circumference of the tank base must be level to within 1" around the containment the inside may be slightly sloped to the drainage trench.



The above detail shows how the screened suction device is to be placed in the containment. Also, this drawing illustrates the berm to be placed around the inside circumference of the containment to bolster the transition of the bucket style liner where the welds change from horizontal to vertical.

# TANK INFORMATION

**WALL STRUCTURE:** Global's water containment system panels are made from structural steel plate with additional structural steel ribbing on the outside to withstand all foreseen stresses placed on the panels by sun, rain, snow, wind & seismic natural forces. All traditional Global water containment systems are engineered with a segmented ring structure. All square/round water containment systems are engineered with a pressure distribution & stress dispersal assembly.

**INSULATION:** All Global panels are insulated with a rigid polyisocyanurate insulation to help protect the stored water from severe hot and cold environments. This helps reduce evaporation from extreme heat in warm climates and helps reduce the cost of heating the water in cold climates.

**PROTECTIVE COATING:** Global's panels are coated on both sides with a polyurea coating that has proven to withstand harsh environments.

**BOLTING SPECIFICATION:** Global specifies high tensile strength bolts depending on the size and depth of the tank being proposed.

**LINERS:** Global has several containment liner options available to our customers including HDPE and LDPE based liners that are suitable for either potable or non-potable water storage. These liners meet or exceed American, Australian and other international standards for the type of water to be stored. Global will provide the proper liner whatever the individual customer needs.

**ROOF:** Global has several roof options depending on the area the tank will be located in and the needs of the individual customer. The tanks may have no roof, a floating roof or a pre-stressed roof structure with a vinyl or aluminum cover. All of the above options are developed to suit the needs of each individual customer.

**WARRANTY:** Global Fabrication, Inc. provides up to a 1-year conditional warranty for permanent potable water storage tanks installed by a certified installer. Other warranty terms are dependent on tank application and location. For information please contact Global Fabrication, Inc.

**MANUFACTURING:** Global manufactures each tank at its location in DuBois, Pennsylvania USA. Each water containment system project will be confirmed in writing, providing a full manufacturing and installation schedule. Please note that Global requires certain information prior to commencing this process. This will be provided to you at the time you receive Global's quotation for the system.

**INSTALLATION:** Large commercial water containment systems will be installed by customer supplied labor with Global providing supervisory personnel and all necessary drawings prior to shipment of water containment system parts. Our water containment systems have a relatively quick installation time frame. Turnkey installations can be quoted if desired by the individual customer but are quite costly outside of North America.

**RELOCATION:** Global water containment systems can be easily disassembled and relocated should the need arise.

# PROJECT SERVICES MAY INCLUDE

- Documentation: Sales documentation, contract administration, product specifications and pricing to enable your water containment project to proceed with confidence.
- Project Management: Providing the comprehensive management and coordination of all aspects of your project for a safe, timely, cost effective delivery and installation.
- Engineering and Drafting: Custom designs, detailed drawings and professionally engineered water containment solutions.
- Construction: An experienced, efficient and professional installation team who are well equipped with supporting vehicles, handling equipment and tools. Our teams are highly trained in safe methods of work and are disciplined to operate within the strictest client site requirements.
- Civil Works: Provision of civil services including tank foundations such as concrete ring beams can be supervised by Global if contracted for by the customer.
- Plumbing Services: Supply and installation of pipe-work and fittings associated with your water containment project. Includes provision of automation such as level control and telemetry on water storage tanks.

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