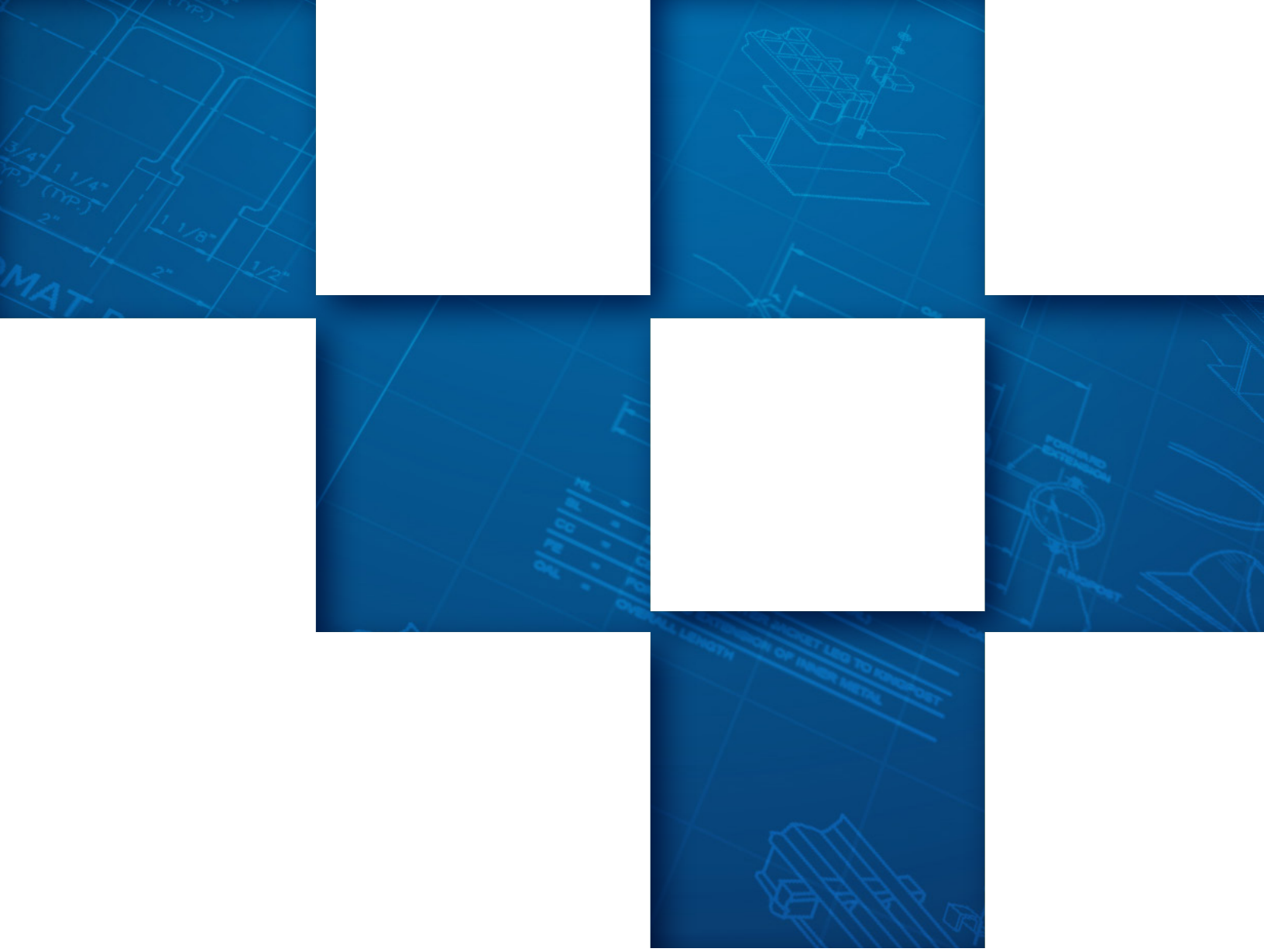

ENC SECURITY FENCE

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AIMS INTERNATIONAL

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ENC SECURITY FENCE

Security Fence System
Utility Transmission Sites / Telecommunications Sites / Airport Perimeter Improvements

PROTECT YOUR CRITICAL ASSETS WITH FRP FENCE

AIMS International's composite material is ideal for protecting critical assets, is electrically nonconductive (will not conduct electricity), is RF invisible with low radar reflectivity; which is great for Utility Transmission sites, Airports Security Perimeter Fencing and Telecommunication locations.

PURPOSE

FRP fencing can be used in place of metal fencing anywhere and is advantageous in areas with corrosion or conductivity concerns. The FRP fencing materials are fire retardant, non-corrosive, non-conductive, invisible to radar, and act as a visibility and security barrier.

MATERIAL

The fencing is made from molded FRP panels. It is light-weight, fire-retardant, corrosion-resistant and has a very high dielectric strength (non-conductive). The hardware used to fasten it can be either FRP, plastic, 316 stainless steel, or typical galvanized steel bolts. Posts are made from structural FRP shapes while the hinges and latches for gates are made from 316 stainless steel or galvanized steel. The FRP panels can also be used as isolation panels for metallic fences. The standard fence design is 6' x 8' and can withstand wind speeds of up to 140 mph or higher designs available based on ASCE 7-10. The versatile design has the ability to fit any fencing application.

AIMS ENC FENCE SYSTEM MATERIALS

AIMS International composite security fence system uses materials that are ALL Non-Magnetic, Fire Retardant and extremely Corrosion Resistant. Materials require NO hot work or overhead crane as the materials are light and can be easily transported by hand. A minimal amount of maintenance is required which directly lowers labor and tooling costs.

Project planning, design, value engineering, project management, and cost analysis are part of AIMS International Security fence support. AIMS International's Quality Assurance teams inspect materials at pre-determined benchmarks during manufacturing and communicate progress to keep your project schedule on-time.

AIMS International's dedicated team of professionals have real world solutions for your fencing project's success from start to finish. Our ENC Security Fencing system helps Utility and Telecommunication companies harden or fortify their sites and meet FERC and NERC regulatory requirements. AIMS designs the ENC Security Fence to withstand hurricane wind speeds up to 140 mph or higher designs available per ASCE 7-10 requirements.

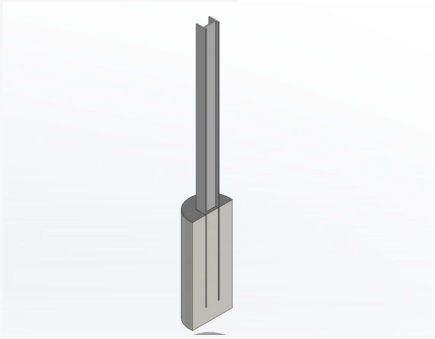
Certified Laboratories conduct flashover voltage test on every batch to ensure NO electrical conductivity with the minimum of 138,000 volts and up to 650,000 volts. AIMS composites materials for various size panels and utilizes both H and T post designs in order to minimize the system's impedance to comply with 1EEE grounding requirements with no additional grounding beyond structural lugs.

AIMS International Panels and Posts are available in multiple sizes, thickness, various colors, and strength configurations in order to suit most project requirements.

POST & FOOTING DETAILS

The AIMS FRP Fence System easily increases utility or airport security requirements by using our FRP non-conductive Post and Panel design with threaded fasteners tightened and sealed with AIMS Panel Plugs. All fasteners are located behind the fence which increases criminal deterrence. AIMS Security Fence Systems do not require additional grounding costs and can be used in conjunction with Metal Fence Systems. Final lug grounding requirements are recommended.

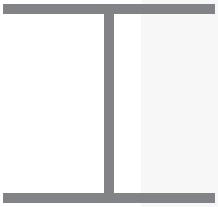
FENCE POST IN CONCRETE



MOUNTING PLATE ASSEMBLY

H-POST

H4x1/4
H6x1/4
H6x3/8
H8x3/8
H8x1/2
H10x3/8
H10x1/2
H12x1/2

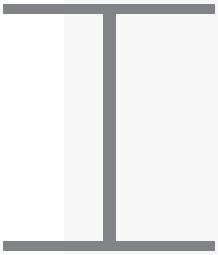


HT- Post

HT4x1/4
HT6x1/4
HT6x3/8
HT8x3/8
HT8x1/2
HT10x3/8
HT10x1/2
HT12x1/2

I- Post

I-4x1/4
I-6x1/4
I-6x3/8
I-8x3/8
I-8x1/2
I-10x3/8
I-10x1/2
I-12x1/2

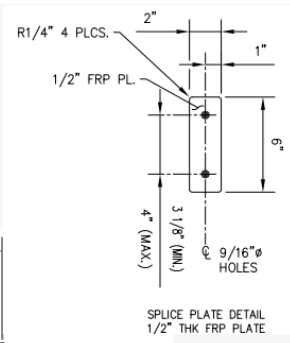


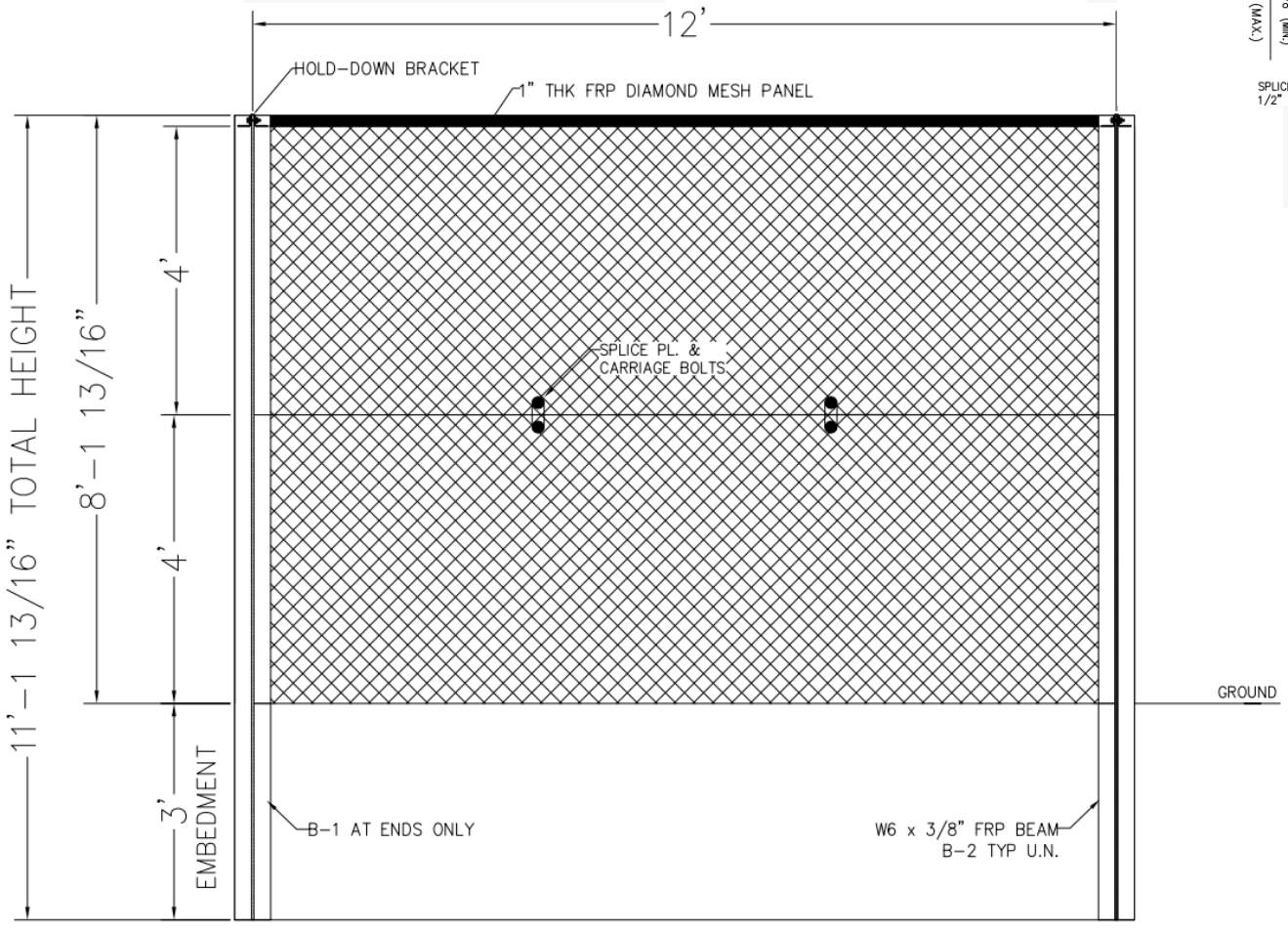
FENCE POST SIZE SUGGESTIONS (H-POST & I-POST)

TYPE OF PANEL	STANDARD 8'-0" TALL ENC FRP FENCE (100 MPH WIND)						
	CENTER-TO-CENTER POST SPACING						
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"
DIAMOND MESH PANELS	H4 / I-6	H4 / I-6	H6 / I-6	H6 / I-8	H8 / I-8	H8 / I-8	H8 / I-8
SQUARE MESH PANELS	H6 / I-6	H4 / I-8	H8 / I-8	H8 / I-8	H8 / I-8	H8 / I-8	H8 / I-8
SOLID PLANKING	H6 / I-8	H8 / I-8	H8 / I-8	H8 / I-10	H10 / I-10	H10 / I-10	H10 / I-10
LOUVERS	H6 / I-8	H6 / I-8	H8 / I-8	H8 / I-8	H8 / I-10	H8 / I-10	H8 / I-10

POST & FOOTING DETAILS

FENCE POST SIZE SUGGESTIONS (I- BEAM)							
TYPE OF PANEL	STANDARD 8'-0" TALL ENC FRP FENCE (100 MPH WIND)						
	CENTER-TO-CENTER POST SPACING						
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"
DIAMOND MESH PANELS	I-6	I-6	I-6	I-8	I-8	I-8	I-8
SQUARE MESH PANELS	I-6	I-8	I-8	I-8	I-8	I-8	I-8
SOLID PLANKING	I-8	I-8	I-8	I-10	I-10	I-10	I-10
LOUVERS	I-8	I-8	I-8	I-8	I-10	I-10	I-10





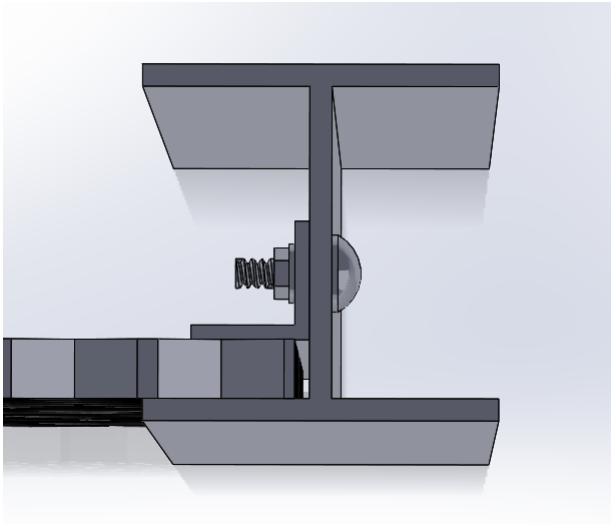
CONNECTION DETAILS

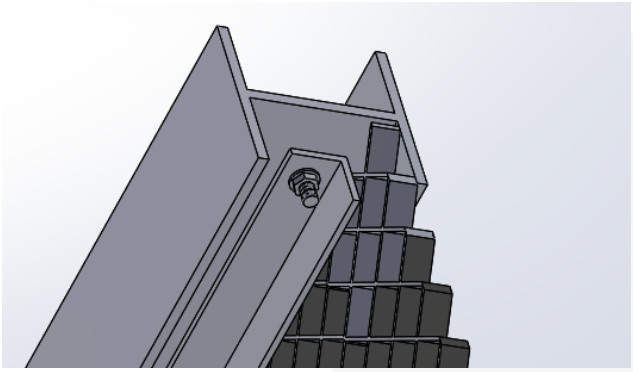
The AIMS FRP Fence combines non-conductivity and security into an easy-to-install solution for the energy, air, marine, transportation, and other industries.

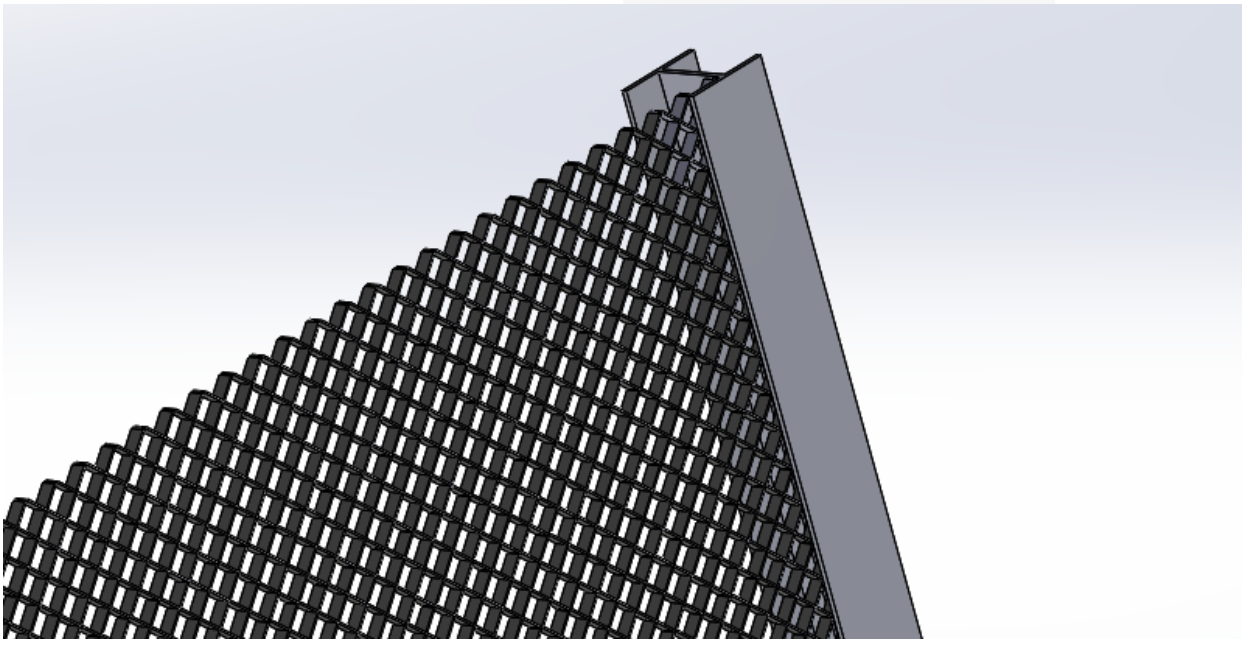
Threaded fasteners bolt through the panels and tighten securely using AIMS Panel Plugs. All nuts are located behind the fence, making criminal access nearly impossible.

When criminals typically attempt to gain access through a chain-link or steel fence, they use cutters and/or cutting torches. These tools are useless against AIMS ENC Fence System. Additionally, if a criminal manages to cut a hole in chain-link fencing, they can remove items larger than the hole simply by expanding the chain-link fence. This is impossible with the AIMS ENC Fence, since a hole created in the AIMS ENC Fence System only allows for the extraction of items smaller than the hole.

The AIMS FRP Fence can be installed as a new or retrofit construction and steel posts can be used depending upon the recommendation from your grounding engineer, who must assess and approve the final specification. Non-metallic, anti-corrosion and non-conductive fence components are available. The materials and information contained herein are designed as a guideline for selecting and planning a non-conductive barrier.







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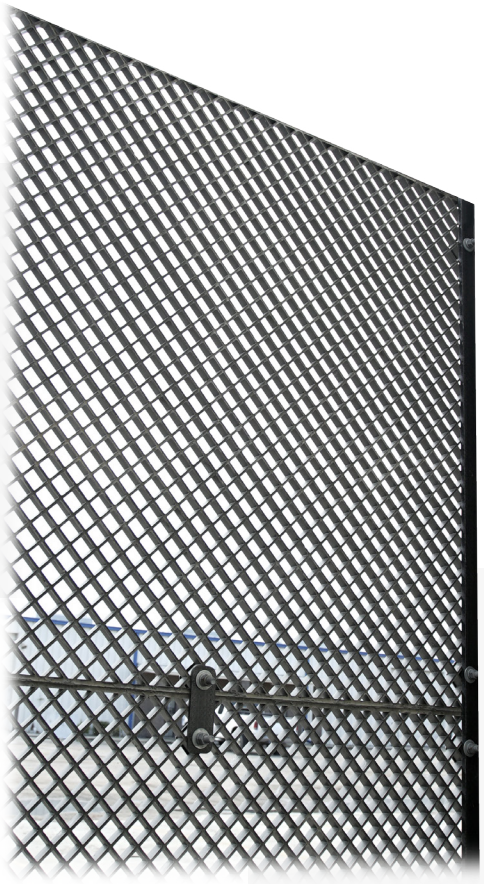
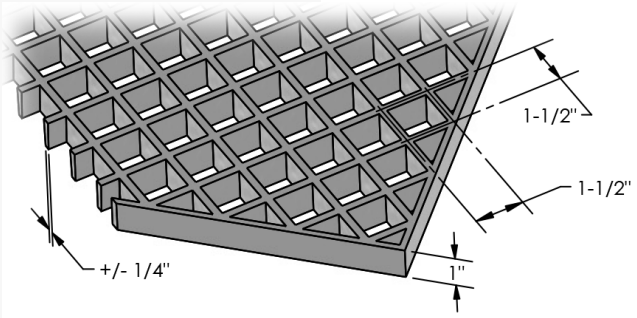
DIAMOND MESH



AIMS International Diamond Mesh ENC security fence designs are 4' wide x 12' long x 1" thick Molded Panels. The industry has decided in favor of utilizing FRP material to replace chain link and other outdated types of ASSET protection fence. This simple material change dramatically increases the ASSETS perimeter security levels. The Security Fence design change provides anti-climb, anti-cut and anti-torch technology protection. AIMS International has learned how to maximize the systems impedance to comply with 1EEE grounding requirements with no additional grounding beyond structural lugs. The ENC system is corrosion free, since it is made of non-metallic materials, it is essentially inert. There are no costly or complex storage concerns. AIMS International Panel and Post Modular concepts make it easy to configure 8' high, 10' high, even up to 20' high designs that are available today. Conversely, some applications require washout and/or buried wildlife exclusion barriers. All AIMS ENC Security Fence designs accept razor wire options, other security toppers and harness video surveillance cabling. AIMS ENC Security Fence and gate designs use 316 stainless steel, conventional galvanized steel, or other ENC hardware.

- Security Fence Material is ENC (Electrically Non-Conductive)
- FRP is an Anti-Corrosion Material and is Corrosion-resistant
- Full compliance with 1EEE positive grounding requirements
- Very strong yet lightweight materials are quick and easy to install
- Anti-Climb, Anti-Cut, Anti-Torch and also a Fire-Retardant Material
- Design can withstand hurricane winds and forces (ASCE 7-10)
- Transparent to Radars, RF Signals and Microwave Transmissions
- No Hot Work, No Overhead Crane, Lower labor and Tooling Costs
- Can be used for Isolation Panels in conjunction with Metal Fencing
- Available in multiple standard RAL colors (for visibility and aesthetics)
- Multiple Post and Panel sizes, shapes and various mesh types available
- Easily designed to have low, medium to no visible or physical observation
- Personnel, single, or double door gates can be easily installed



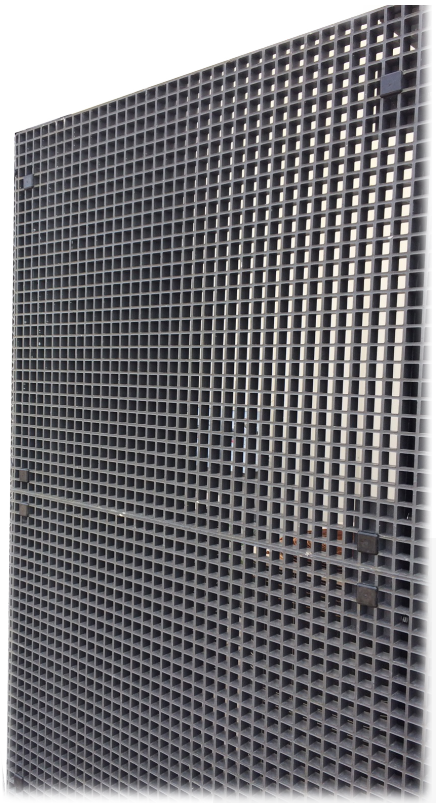
Concentrated Full Panel Load – 4' x 12' *Deflection in Inches* **1" Thick x 1-1/2" Diamond Mesh 4' x 12'**

SPAN INCHES	POUNDS						
	100	250	500	750	1000	1500	2000
18	0.010	0.027	0.061	0.085	0.105	0.164	0.206
24	0.029	0.065	0.125	0.182	0.241	0.359	0.477
36	0.070	0.175	0.347	0.518			
48	0.116	0.297	0.593				

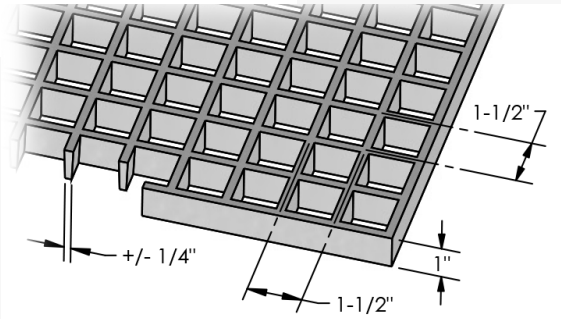
AIMS INTERNATIONAL

SQUARE MESH

AIMS International Square Mesh ENC security fence designs are 4' wide x 12' long x 1" thick Molded Panels. The industry has decided in favor of utilizing FRP material to replace chain link and other outdated types of ASSET protection fence. This simple material change dramatically increases the ASSETS perimeter security levels. The Security Fence design change provides anti-climb, anti-cut and anti-torch technology protection. AIMS International has learned how to maximize the systems impedance to comply with 1EEE grounding requirements with no additional grounding beyond structural lugs. The ENC system is corrosion free, since it is made of non-metallic materials, it is essentially inert. There are no costly or complex storage concerns. AIMS International Panel and Post Modular concepts make it easy to configure 8' high, 10' high, even up to 20' high designs that are available today. Conversely, some applications require washout and/or buried wildlife exclusion barriers. All AIMS ENC Security Fence designs accept razor wire options, other security toppers and harness video surveillance cabling. AIMS ENC Security Fence and gate designs use 316 stainless steel, conventional galvanized steel, or other ENC hardware.



- Security Fence Material is ENC (Electrically Non-Conductive)
- FRP is an Anti-Corrosion Material and is Corrosion-resistant
- Full compliance with 1EEE positive grounding requirements
- Very strong yet lightweight materials are quick and easy to install
- Anti-Climb, Anti-Cut, Anti-Torch and also a Fire-Retardant Material
- Design can withstand hurricane winds and forces (ASCE 7-10)
- Transparent to Radars, RF Signals and Microwave Transmissions
- No Hot Work, No Overhead Crane, Lower labor and Tooling Costs
- Can be used for Isolation Panels in conjunction with Metal Fencing
- Available in multiple standard RAL colors (for visibility and aesthetics)
- Multiple Post and Panel sizes, shapes and various mesh types available
- Easily designed to have low, medium to no visible or physical observation
- Personnel, single, or double door gates can be easily installed



Concentrated Full Panel Load - 4' x 12' *Deflection in Inches* **1-1/2" Thick x 1-1/2" Square Mesh 4' x 12'**

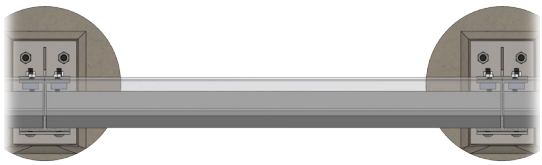
SPAN INCHES	POUNDS						
	100	250	500	750	1000	1500	2000
18	0.008	0.016	0.028	0.035	0.045	0.066	0.087
24	0.014	0.035	0.059	0.075	0.095	0.139	0.168
36	0.024	0.059	0.114	0.163	0.213	0.313	0.416
48	0.036	0.094	0.185	0.274	0.362	0.538	

AIMS INTERNATIONAL

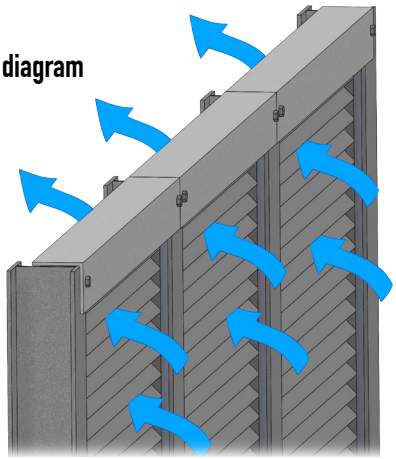
LOUVERED DESIGN

The AIMS International Louvered design is widely used in hazardous industrial applications both offshore and onshore. The Louvered ENC security fence design provides Secure Restricted Visual access without restricting cooling equipment airflow. Custom sizes of this product are available. The industry has decided in favor of utilizing FRP materials to replace chain link and other outdated types of ASSET protection fencing. This simple material change dramatically increases the ASSETS perimeter security levels. The Security Fence design change provides anti-climb, anti-cut and anti-torch technology protection. AIMS International has learned how to maximize the systems impedance to comply with 1EEE grounding requirements with no additional grounding beyond structural lugs. The ENC system is corrosion free, since it is made of non-metallic materials it is essentially inert. There are no costly or complex storage concerns. AIMS International Post and Louvered Sections create a Modular concept that is easy to configure between 10' to 16' high. All AIMS ENC Security Fence designs accept razor wire options, other security toppers and harness video surveillance cabling. AIMS ENC Security Fence and gate designs use 316 stainless steel, conventional galvanized steel, or other ENC hardware.

- Security Fence Material is ENC (Electrically Non-Conductive)
- FRP is an Anti-Corrosion Material and is Corrosion-resistant
- Full compliance with 1EEE positive grounding requirements
- Very strong yet lightweight materials are quick and easy to install
- Anti-Climb, Anti-Cut, Anti-Torch and also a Fire-Retardant Material
- Design can withstand hurricane winds and forces (ASCE 7-10)
- Transparent to Radars, RF Signals and Microwave Transmissions
- No Hot Work, No Overhead Crane, Lower labor and Tooling Costs
- Can be used for Isolation Panels in conjunction with Metal Fencing
- Available in multiple standard RAL colors (for visibility and aesthetics)
- Multiple Post and Panel sizes, shapes and various mesh types available
- Easily designed to have low, medium to no visible or physical observation
- Personnel, single, or double door gates can be easily installed



Air flow diagram



LOUVERS (FRP ANGELS)				
Tensile Strength	ASTM D638-14	PSI		30000
Tensile Modulus		KSI		2500
Compressive Strength	ASTM D695-15	LW	PSI	30000
		CW	PSI	15000
Compressive Modulus		LW	KSI	2500
		CW	KSI	1000
Flexural Strength	ASTM D790-17	LW	PSI	30000
		CW	PSI	10000
Flexural Modulus		LW	KSI	1800
		CW	KSI	800
Short Beam Shear	ASTM D2344-16	PSI		4500
Maximum Bearing Strength	ASTM D953-10	LW	PSI	30000
		CW	PSI	20000
24 HR Water Absorption	ASTM D570-98 (R2010)	%0.6 Max by Weight		

AIMS INTERNATIONAL

SOLID PLANKING

AIMS International Solid Planking ENC security fence designs are custom composite fabrication panels. The industry has decided in favor of utilizing FRP materials to replace chain link and other outdated types of ASSET protection fencing. This simple material change dramatically increases the ASSETS perimeter security levels. The Security Fence design change provides anti-climb, anti-cut and anti-torch technology protection. AIMS International has learned how to maximize the systems impedance to comply with 1EEE grounding requirements with no additional grounding needed beyond structural lugs. The ENC system is corrosion free, since it is made of non-metallic materials it is essentially inert. There are no costly or complex storage concerns. AIMS International Panels and Post Modular concepts makes it easy to configure 8' high or higher. All AIMS ENC Security Fence designs accept razor wire options. AIMS ENC Security Fence and gate designs use 316 stainless steel, conventional galvanized steel, or other ENC hardware.

- Security Fence Material is ENC (Electrically Non-Conductive)
- FRP is an Anti-Corrosion Material and is Corrosion-resistant
- Full compliance with 1EEE positive grounding requirements
- Very strong yet lightweight materials are quick and easy to install
- Anti-Climb, Anti-Cut, Anti-Torch and also a Fire-Retardant Material
- Design can withstand hurricane winds and forces (ASCE 7-10)
- Transparent to Radars, RF Signals and Microwave Transmissions
- No Hot Work, No Overhead Crane, Lower labor and Tooling Costs
- Can be used for Isolation Panels in conjunction with Metal Fencing
- Available in multiple standard RAL colors (for visibility and aesthetics)
- Multiple Post and Panel sizes, shapes and various mesh types available
- Easily designed to have low, medium to no visible or physical observation
- Personnel, single, or double door gates can be easily installed

SOLID PLANKING			
Flexural Strength (Compression Side)	ASTM D790-17	PSI	40000
Flexural Strength (Tension Side)	ASTM D790-17	PSI	51000
Modulus of Elasticity	ASTM D790-17	KSI	3600
Weight		PSF	5.69

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"The FRP System is corrosion free, since it is made from a non-metallic substance and thus immune to corrosive reactions . . . since the FRP System is essentially inert, it has no costly or complex storage and preservation concerns. The FRP System maintains its initial integrity and will not weaken over time, so is not susceptible to corrosion from airborne agents such as sulfur dioxide or carbon dioxide. Negligible degradation means very little maintenance. "

–Dr. Binder Singh

OVER 35 YEARS WORKING WITH ...

ABB
Anadarko
bp
Chevron
HESS
AMOCO
bhpbilliton
KBR
We Deliver
MURPHY
OIL CORPORATION
SBM
OFFSHORE
Remington
Oil and Gas LLC
MARATHON
McDERMOTT
PENNZOIL
WOOD GROUP
MUSTANG

AIMS has designed, developed, installed and maintained FRP structural members in a variety of onshore and offshore applications for over 35 years.

ZERO Structural Failures

ZERO Warranty Claims

ZERO UV Degradation