



Hurricane Netting System

Installation Guidelines

For
Large Missile Impact
&
Wind Abatement

Find more online including
Instrucciones en Español at
www.hurricane-net.com

ver 3.1



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Materials Included

Contents:



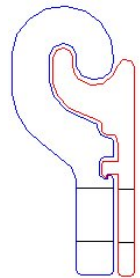
CAT-5 Box Kit

Net Material (size depends on box purchased)

1/4" Nylon Rope (50' for 12.5' & 25', 100' for 50')

CAT-5 Clamps - (2) for 12.5' box (3) for 25' box (6) for 50' box

Storage Bag (*Free storage bag is included in kit*)



CAT-5 Clamp

Optional Tools/Hardware Needed:

- Scissors (to cut fabric to desired size)
- Drill/Bits (to install anchors to structure/foundation)
- Pliers (to close CAT-5 clamps)
- Fasteners (see information contained herein)
- Screwdriver (as needed to secure fasteners)
- Ground anchors (capacity to match application)
- Tape Measure
- Pencil

CAT-5 Additional Optional Products:

- Clamps (10 pack)
- Extra Storage Bags








CAT-5 storage bag







Recommended Fasteners

Note: The fasteners contained herein represent fasteners used in the testing and certification of the product. They may not be best suited for all applications. Select anchors best suited to secure the product based on information contained herein and sound engineering judgment.

CONCRETE:

<p>1/4-20 Machine Screw Anchor ~Removable Mount in Concrete</p>	
<p>1/4-20 X 1" Sidewalk Bolt ~Removable Mount & Net Connect</p>	
<p>1/4-20 Washered Wingnut ~Secure Net Connection</p>	
<p>1/4-20 X 2" Eye Bolt ~Removable Mount in Concrete</p>	
<p>Tapcon ~Permanent Mount in Concrete</p>	

WOOD:

<p>Male PanelMate® ~Permanent Mount in Concrete or Wood</p>	
<p>1/4 X 4" X 2 1/2" Lag Screw ~Permanent Mount in Wood</p>	
<p>Ground Anchor ~Permanent Mount into Ground</p>	
<p>Brass Wood Bushing ~Removable Mount in Wood</p>	

***NOTE:** Anchor type and spacing should always be reviewed by a professional competent to determine safe working capacities. **The above are possible suggestions ONLY. Each installation application will be unique.** Installation and use of any anchor shall be per the manufacturer specifications. CAT-5 Protection, Inc. shall be held harmless for the use of any anchoring system beyond the product approval or without the written review and approval of a CAT-5 engineer. Wind abatement and impact resistant calculation examples can be found herein.

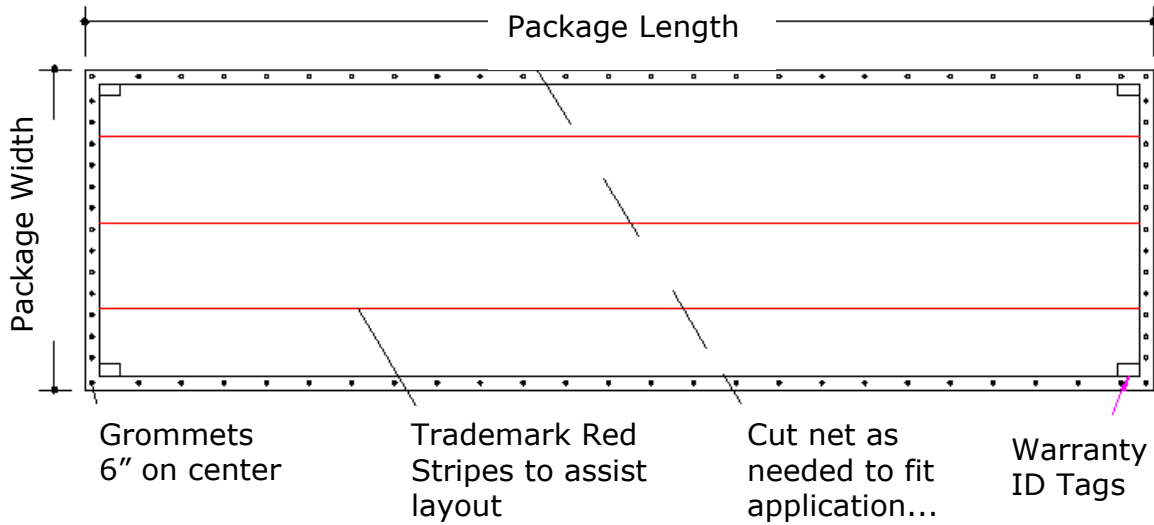


Product General Concepts

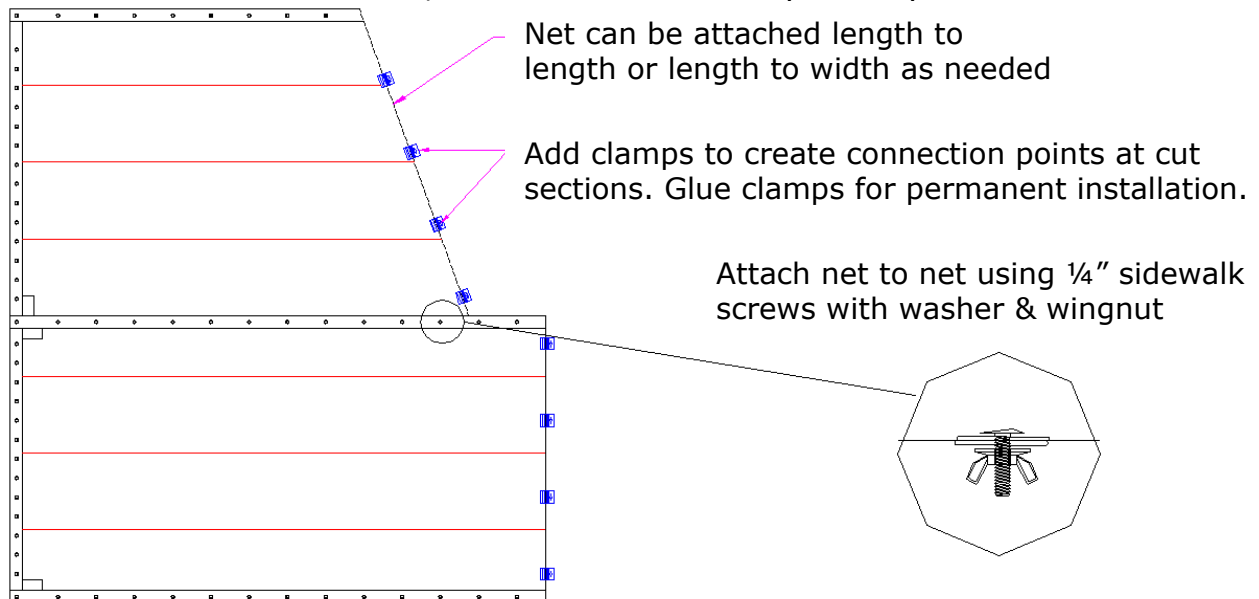
The CAT-5 Hurricane Netting System helps deflect and diffuse the wind, while letting air 'breathe' in a structure before, during, and after a storm, allowing light to still pass through. Effective use of the net will also keep covered contents in place and from becoming flying debris.

Consider the CAT-5 Hurricane Netting components as building blocks. Using sound engineering principles, the use of the product is limited only to the imagination.

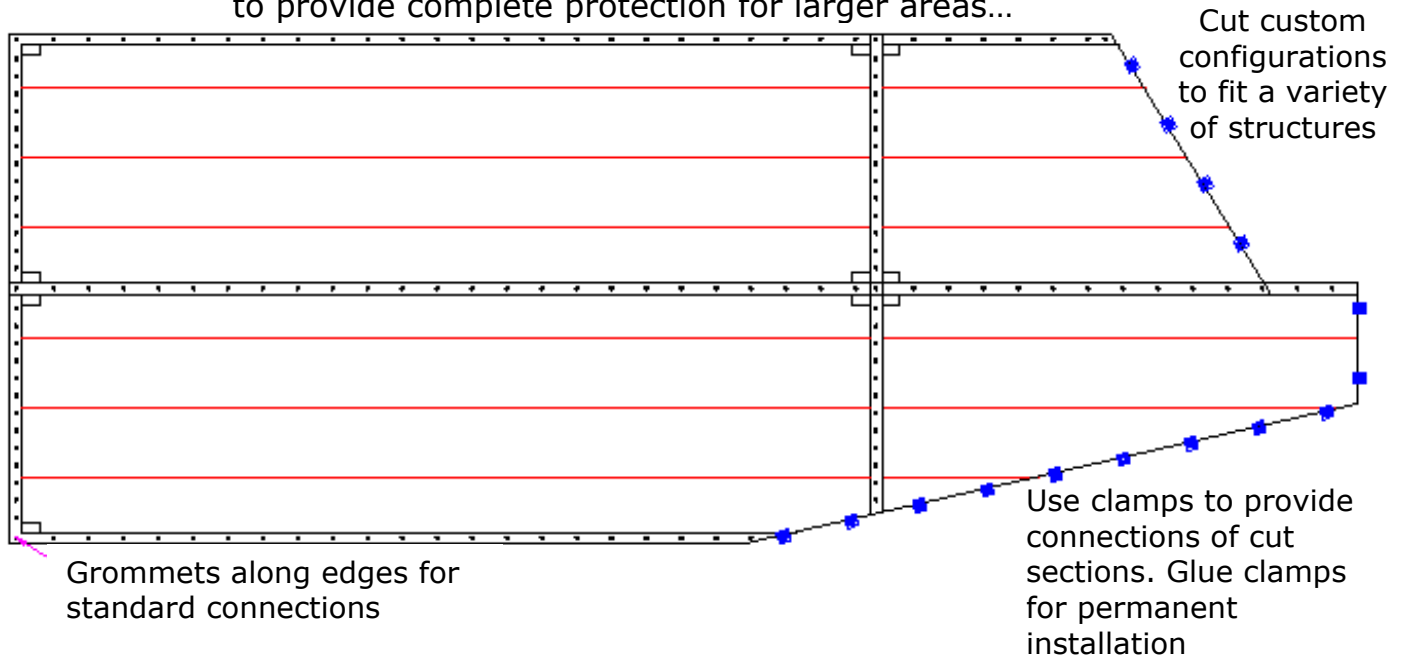
The net is shipped in one large piece (varying sizes are available):



...Then cut on-site to fit, and attach with clamps if required...

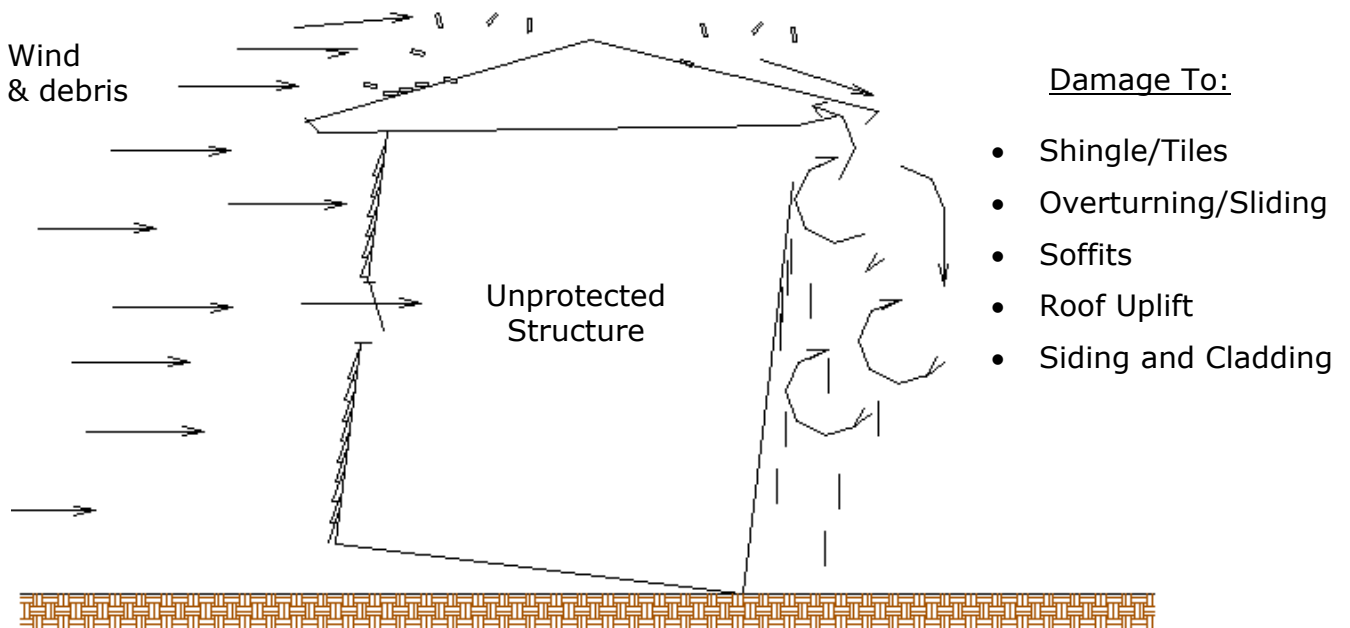


...Many nets can be connected together to provide complete protection for larger areas...

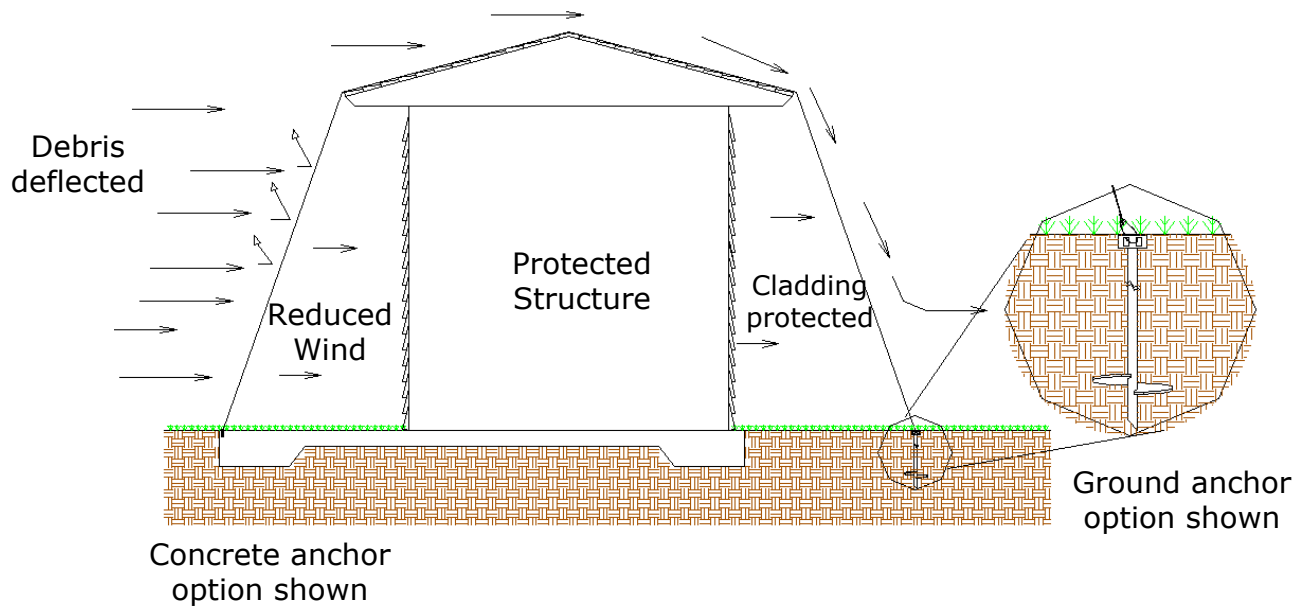


System can be used in conjunction with other types of impact protection systems on openings to provide enhanced protection all for your outdoor possessions.

Consider the many benefits of the net by reviewing the potential damage to structures caused by high winds:



The CAT-5 Hurricane Net can protect structures from all these elements:



IMPORTANT NOTE: Call your local utilities company to locate all underground utilities before you install earth anchors!!!

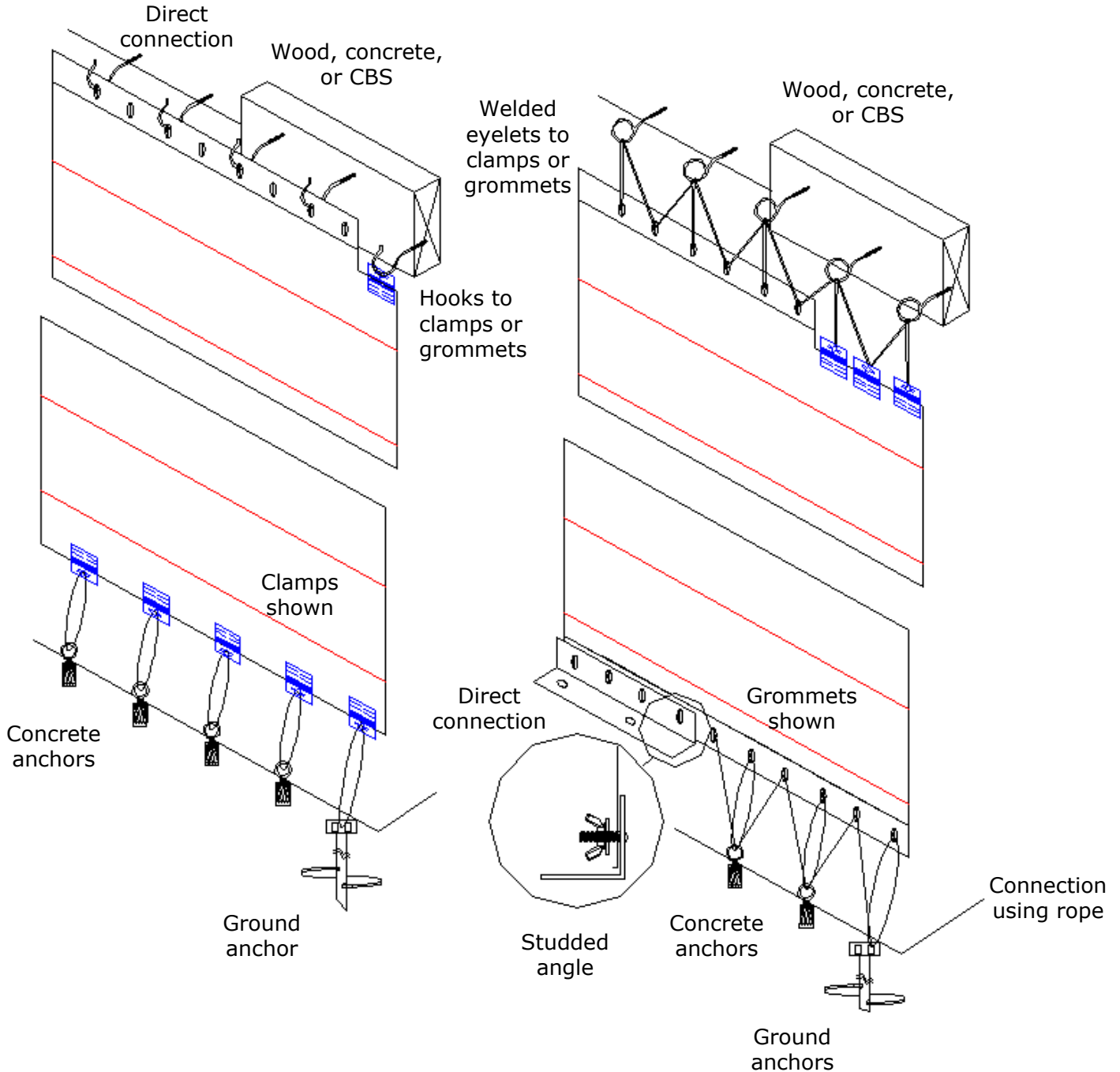
- ✓ Shingles/Tiles/Roof undamaged
- ✓ Overturning protected
- ✓ Soffit protected
- ✓ Cladding damage avoided
- ✓ Large missile impact protected

Here is some more detail on installation:

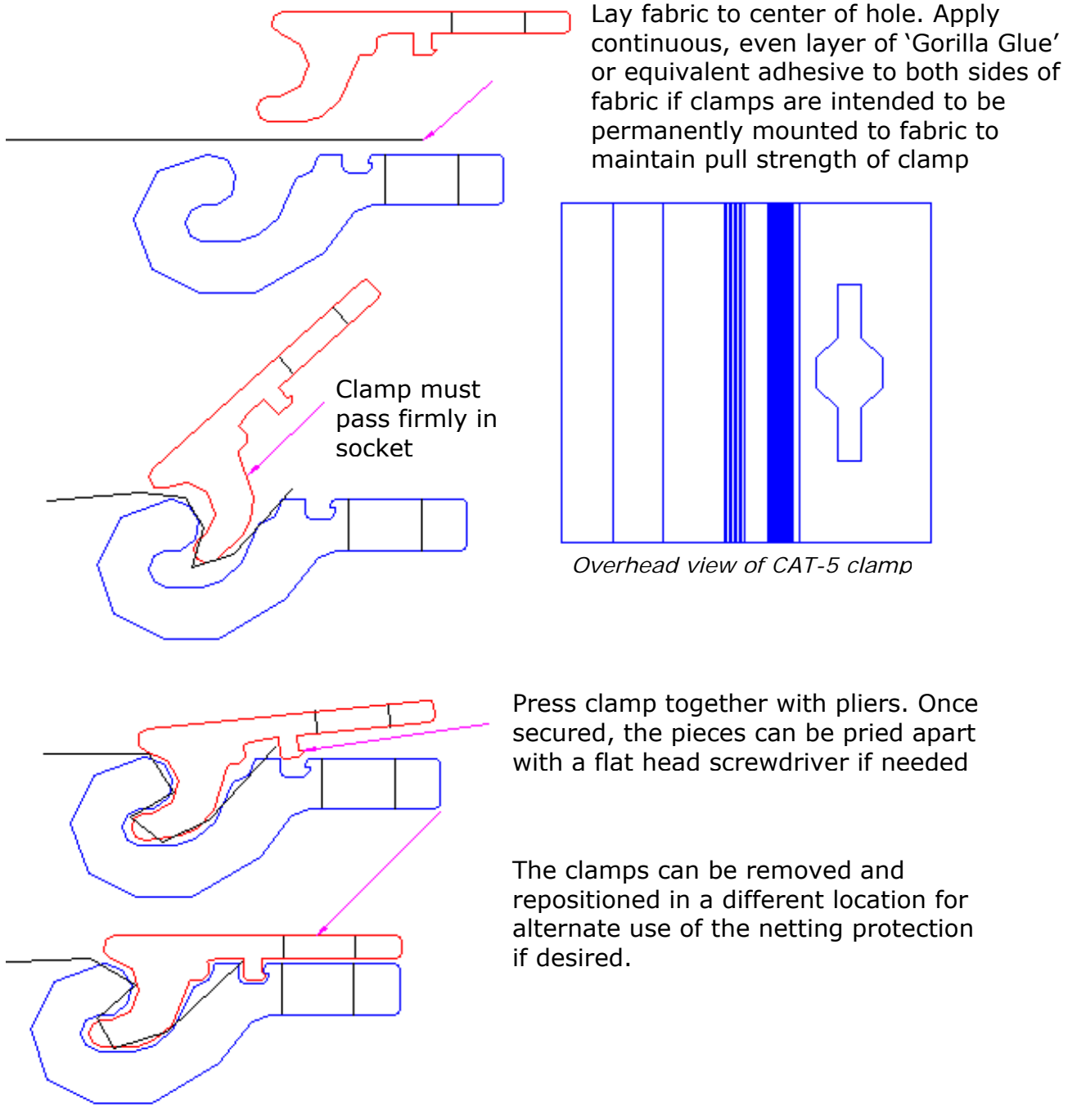
The net can be hooked, tied, or directly fastened to connectors. Methods can be used interchangeably with proper engineering (large missile impact applications are to follow respective product approvals).

WIND ABATEMENT APPLICATION

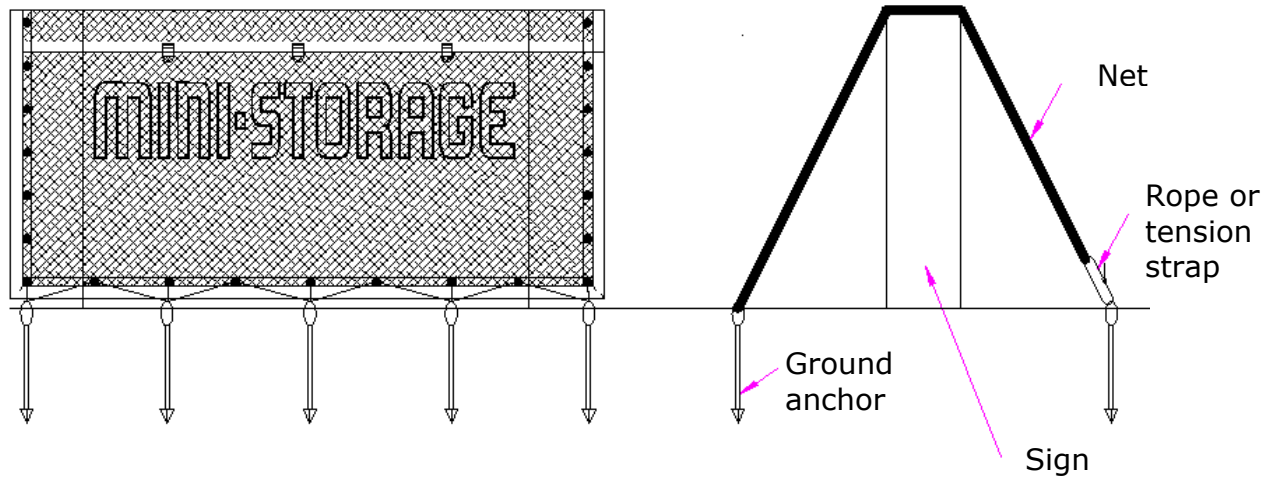
IMPACT APPLICATION



The CAT-5 clamps can easily be installed where needed and left in-place for future use. Here's how they're installed:

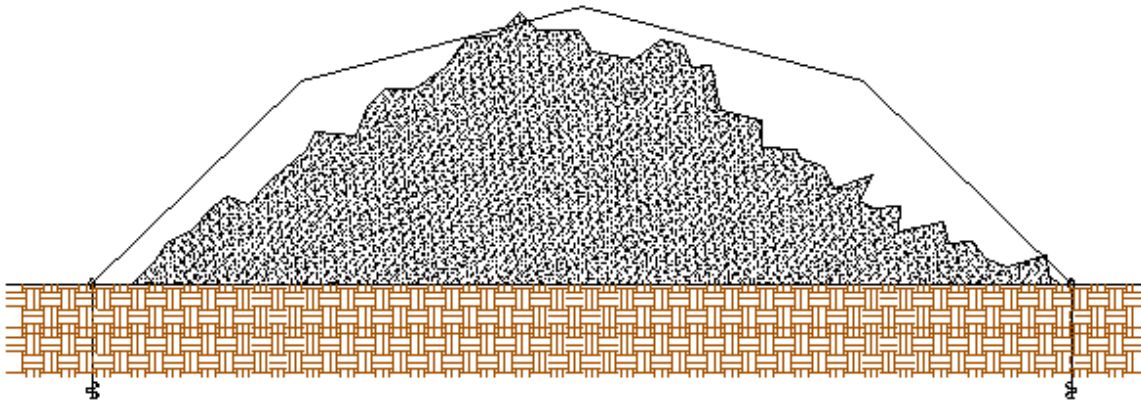


Here's a typical installation over a sign or similar kiosk:

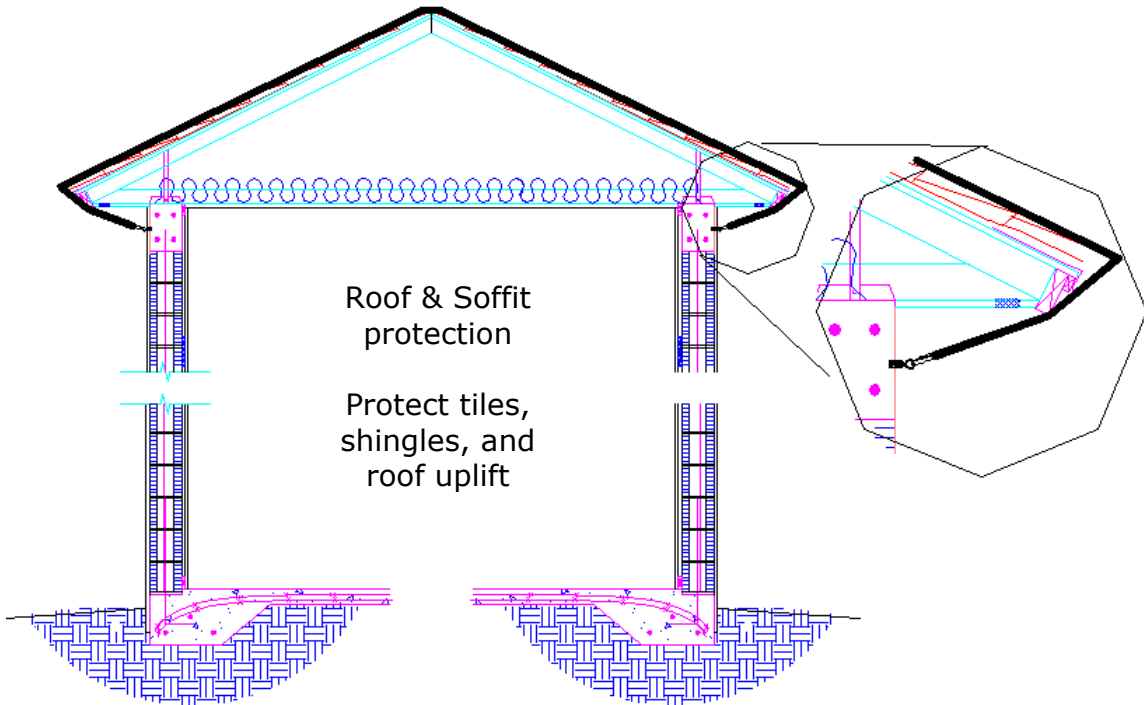


The net can also be used to secure loose debris, construction materials, or landscaping...

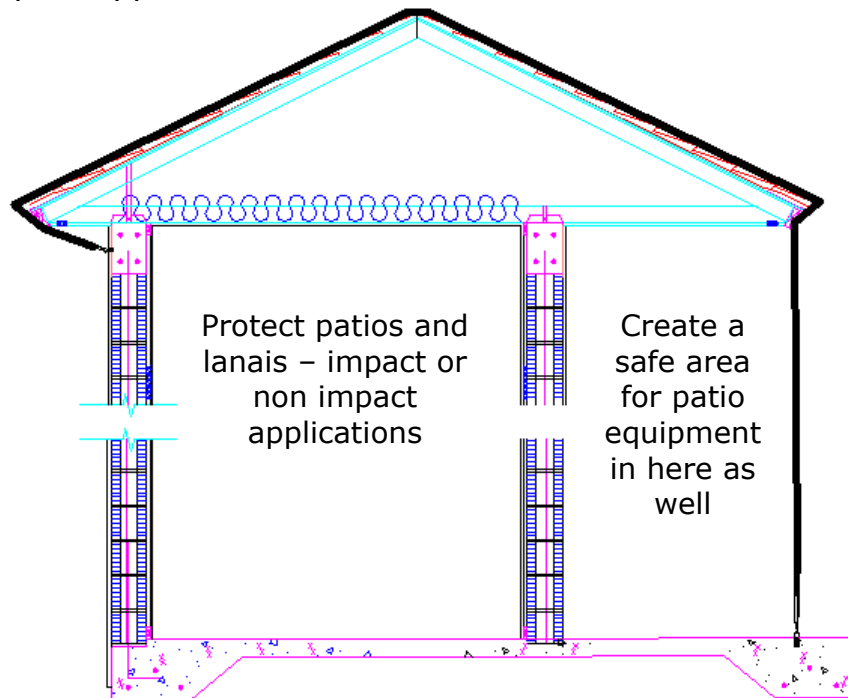
- Debris/landscaping/construction material protection
- Fast Installation
- Reusable-resizable protection



Protect your roof shingles or tiles, soffits, and prevent your entire roof from uplift and other damage:



Or continue the netting down over patios and lanais in an impact or non-impact application:



Other Custom Applications:

Contact your net representative or visit www.hurricane-net.com for up-to-date information on the latest products and accessories available for the CAT-5 Hurricane Netting System. Custom orders and special applications can be made available.

Services are available to paint retail sign names, and special messages such as 'Open For Business'.



Technical Specifications

Wind Abatement:

- Ultimate pull strength per clamp = 384LB
- Allowable pull strength per clamp on fabric (1.5FS)=256LB
- Approx. %Open of fabric =47%, %Solid = 53%

FABRIC & CLAMP CAPACITY CALCULATION EXAMPLE

Using single row of clamps over roof or similar structure:

Span: 24ft (between clamps, or on uplift portion of net, usually 1/2 the roof or leeward side of installation)

Calculated ASCE 7 uplift or wind resistance pressure =20PSF

(MWFRS or C&C as applicable, to be performed by registered professional engineer, based on design velocity and exposure and portion of the building pressure is acting on)

On center spacing of clamps = $483\text{LB}/(24\text{ft}/2*20\text{psf}) = 24\text{in O.C.}$

Note: alter clamp spacing or use intermediate clamps to achieve various alternate results. See installation illustration suggestions contained herein. Actual installation may vary in accordance with proper engineering principles. Use in HVHZ design areas is subject to proper engineering principles and limitations.

Note: anchorage of clamps must resist the calculated load in the proper combination of shear and tension as designed by a registered professional engineer on a site-specific basis in accordance with anchoring geometry. Information presented herein is provided as a basic guide and starting point for installation of the product. Ground anchors and fasteners shall maintain their respective installation requirements and factors of safety which shall be designed and calculated by others.



Technical Specifications (continued)

Large Missile Impact Version (ASTM, Florida Product Approved)

The CAT-5 team is continually testing and updating the large missile impact certifications. The latest information on the details of installation is beyond the scope of this guideline, but follows the installation procedures contained herein.

Visit www.floridabuilding.org and search for a product or manufacturer, or go online to www.hurricane-net.com for a copy of the latest approval and obtain a detailed installation procedure.

As of the printing of this manual, large missile impact approvals are available up to 12.5' tall of varying pressure and connection methods.

Test Standards (All tests passed):

ASTM D3775:	12" warp, 9" fill
ASTM D3776	13.2 oz/cuyd (fabric only)
ASTM D5034	tensile strength (grab) 572lbf warp, 632lbf fill
ASTM D1117	Tear Strength (trapezoidal), 99lb warp, 121lb fill
ASTM D5035	Elongation, % 23.7 warp, 21.7 fill
ASTM D3884	Abrasion Resistance, (no exposure to core yarn)
ASTM G53	Weatherability, 1200 hours, no discoloration
ASTM G21	Mildew Resistance, no growth
ASTM D412	(Wind Abatement) – 384lb (clamp, test load)
ASTM 1886, 1996	(Large Missile Impact) Passed
ASTM E330	(Cyclical Loading)
Metro Dade	TAS 201, 202, 203 – Passed (9/06, 7/07, CTC labs)
ASTM G155, D2565, D638, G26, G155-00e1, 155-05a	(4500hrs accelerated weatherability)
ASTM 1929	(Self ignition)
ASTM D2843	(Smoke density)
ASTM D635	(Burning class C)
HVHZ Approved	(Dade, Broward FL)

Visit www.hurricane-net.com for more information.



IMPORTANT

The CAT-5 Hurricane Netting System is intended to be a wind abatement and/or large missile impact protection system offering varying degrees of protection to residences and other structures. With proper inspection of the product and installation by a qualified person and in accordance with these guidelines, the CAT-5 system enhances the ability of residences and other structures to reduce the effect of high winds and flying debris. However, no man-made system can totally protect any structure against the forces of nature.

Upon receipt of the product, the customer shall examine the contents to make certain that (1) all parts are included; (2) no part is broken, cracked, bent or not as represented in the enclosed drawings/sketches. It is recommended that a qualified individual inspect and install the system. If the delivery of the system is incomplete or defective in any manner, it should not be used. Care should be taken in removing, inspecting and otherwise handling all parts.

No part should be substituted nor modified in any way. No unauthorized part(s) should be added or omitted. Installation should be made prior to the onset of winds or inclement weather.

Installation should not be attempted by any person not able or not qualified. Installation should not be performed by any person who has an infirmity.

Prolonged exposure to sunlight should be avoided. Care should be taken in removal and storage of all parts. Effectiveness of reuse of the system will be determined by the care in removal of the system and integrity of components. Fully inspect the system prior to each pending storm and after each deployment to ensure the integrity of all parts and connections.

THERE IS NO WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.

THERE ARE NO ORAL WARRANTIES. THERE ARE NO WARRANTIES UNLESS SET FORTH HEREIN. NO ORAL COMMUNICATION WITH THE SELLER, BY TELEPHONE OR OTHERWISE, WILL CREATE A WARRANTY OR ANY REPRESENTATION WHATSOEVER AS TO INSTALLATION OF THE PRODUCT.



IMPORTANT (Continued)

Every attempt has been made to design and deliver a reasonably effective system for offering a degree of protection against damage caused by high winds. Because no system can prevent any or all damage, no warranty can be offered on the contents protected. The purchaser thus assumes all risk of loss if the system, however installed and used, fails to protect a structure against the effects of hurricane force winds. Manufacturers warranty included with the product is a 10 year limited warranty against defective materials only. More information on the manufacturers warranty can be found on the warranty certificate found in the product package and online at www.hurricane-net.com

