



## **User Guide**

# I-Trac

I-Trac is heavy duty, professional grade temporary, modular portable roadway and event flooring designed to support extreme loads and equipment traffic on inhospitable, unsafe grounds. I-Trac offers an extreme strength to weight ratio when compare to the alternatives. I-Trac is a composite, interlocking panel system that creates a contiguous surface capable of dealing with all road going vehicles and static loadings, while it is easy to install and extract. I-Trac can be used in all weather conditions as it is molded with high-impact polypropylene with UV inhibitors preventing damage from long UV exposure. The purpose of this guide is to review all aspects in the safe usage of I-Trac panels.

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## **Transportation / Shipping**

I-Trac is transported to job sites using 53' and 48" enclosed trailers or 48' flatbed trailers in

the following volumes per trailer:

53' enclosed trailer	9,804 sq ft
48' enclosed trailer	9,150 sq ft
48' flatbed	9,804 sq ft

I-Trac panels are shipped on pallets, 1 panel to a level. Each pallet has 19 panels per pallet. To prepare for shipping, the full pallet should be securely strapped to prevent any movement of panels on the pallet.

A trailer is loaded 2 strapped pallets high with each row strapped and winched in compliance with DOT Federal Motor Carrier Safety Regulation 49 CFR 393.100 – 393.114.

Pallets transported in closed trailers must be secured to ensure the load will not shift in transport.

### **Preliminary Subsurface Preparation**

Before installing I-Trac, the load bearing properties of the subsurface to be covered must be evaluated to determine suitability for the loads placed on the I-Trac panels. The California Bearing Ratio (CBR) rating guidelines are used for this purpose. These guidelines and test method were developed in the 1930's to determine the quality of soil where roads are to be constructed and are used to determine what is required of the roadbed.

CBR testing is a measurement of the pressure required to penetrate a soil sample with a standard plunger of a given area. CBR tests yield a % value that compares the surface being tested, to the load bearing capacity of well graded crushed California limestone. Well graded California limestone has a CBR value of 100. Samples can be evaluated on equipment in a lab or portable testing devices are available to perform field testing at the job site.

The formula for CBR is:

$$\text{CBR} = P/P_s (100)$$

P = measured pressure required to reach penetration depth of sight soil (lb/in sq)

P<sub>s</sub> = pressure to reach

equal penetration in standard soil (lb/in sq)

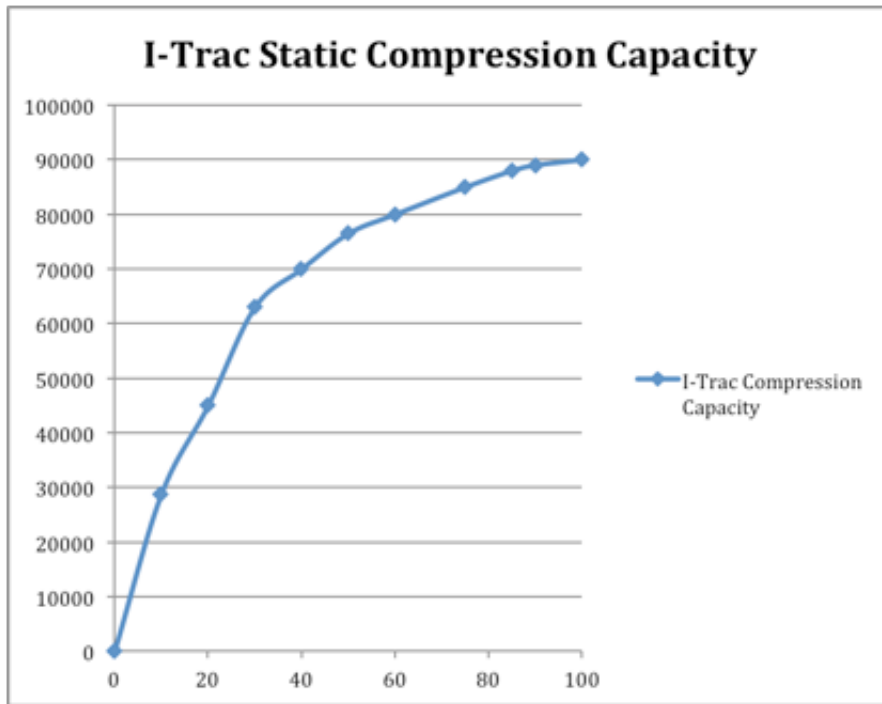
The higher the CBR rating, the harder the surface and the greater the support under the I-Trac panels. Higher CBR ratings enable higher loads to be placed on the temporary roadbed system. The load capacity rating of I-Trac panels will vary with the CBR value for the subsurface.

Before installation the sight must be inspected and any large rocks or debris removed. Any large holes or indentations should be graded or filled in. If possible, CBR testing should be completed or estimates should be made using a sufficient safety factor. Soil conditions may vary over the installation area, so care must be taken to evaluate the total area to be covered. It is the responsibility of the installer to ensure the surface is capable of supporting the loads required and does not have any large holes or irregularities that will affect the structural integrity of the I-Trac panel installation.

The I-Trac compression load capacity will vary depending on the CBR value of the subsurface of the I-Trac roadway. The graph below charts the compression load capacity of I-Trac panels at CBR values from 0 to 100. The use of geotextile will increase the subsurface CBR rating and additional layers of I-Trac panels increase the load capacity of the I-Trac roadway. Use of geotextile creates a barrier between dirt and the roadway keeping panels cleaner as well as limiting water build up at low areas under the installation.

### **I-Trac Compression Capacity Range**

The following graph illustrates the range of I-Trac static compression capacity per square foot of installation at subsurface CBR ratings from 0 to 100.



### Test Data – Field Conditions

The following chart provides guidelines for I-Trac static load capacity on different types of surfaces with estimated CBR ground conditions. These guideline are estimates. The most effective way to determine accurate CBR ratings is to have subsurfaces tested in a lab or to purchase a portable CBR testing device to take multiple measurements over the total area of the surface where the I-Trac panels will be deployed.

I-Trac Load Capacity Lbs / sq ft*	I-Trac Load Capacity Lbs / sq in*	CBR Values Different Subsurface Types
90,000	625	100 – California Graded Crushed Limestone
76,500	531	50 – Firm Sub-Surface
63,000	437	30 – Sandy Soil
45,000	312	20 – Clay Soil
28,750	200	10 – Wet / Muddy Sub-Surface
0	0	0 – Unsupported

\* Values calculated using physical compression figures obtained between:

CBR 0 (unsupported) and CBR 100 (fully supported steel sub-frame)

# US 315

## Woven Geotextile



### Recommended Geotextile Material

A woven geotextile made of 100% polypropylene slit film yarns. This product provides separation of the aggregate from the subgrade and has high tensile strength and modulus, adding reinforcement to the foundation soil. US 315 will satisfy the requirements as outlined in AASHTO M-288-06 for Class 1 Stabilization & Separation applications and meets the following M.A.R.V. values except where noted:



PROPERTY	TEST METHOD	ENGLISH	METRIC
Tensile Strength	ASTM D-4632	315 lbs	1,402 N
Elongation @ Break	ASTM D-4632	15%	15%
Mullen Burst	ASTM D-3786	600 psi	4,136 kPa
Puncture Strength	ASTM D-4833	120 lbs	533 N
CBR Puncture	ASTM D-6241	100 lbs	445 kN
Trapezoidal Tear	ASTM D-4533	120 lbs	533 N
Apparent Opening Size	ASTM D-4751	40 US Sieve	0.425 mm
Permittivity	ASTM D-4491	0.05 Sec-1	0.05 Sec-1
Water Flow Rate	ASTM D-4491	4 g/min/sf	163 l/min/sm
UV Resistance @ 500 Hours	ASTM D-4355	70%	70%

ROLL SIZE	AREA	WEIGHT
12.5' x 360'	500 sqs	210 lbs
15' x 300'	500 sqs	210 lbs
17.5' x 258'	500 sqs	210 lbs

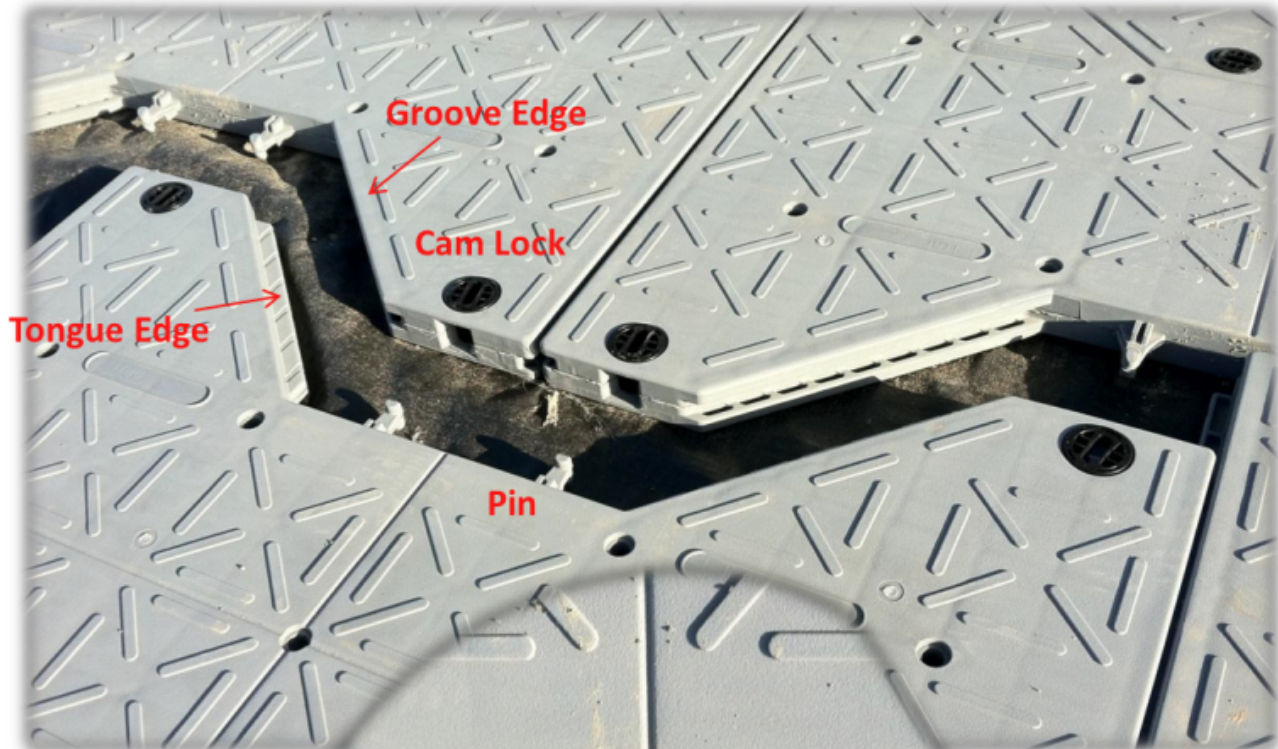
The above information is to the best of our knowledge accurate, but it is not intended to be considered a guarantee. Any implied warranty for a particular use or purpose is excluded. If the product does not meet the above properties, and notice is given to US Fabrics, Inc., the product will be replaced or refunded (5/2015).

## Assembly / Recovery Instructions

Assembly instructions for the original I-Trac panel and the latest version with a replaceable pin.

I-Trac™

### Description of Components



**Cam Lock  
Open  
Position**

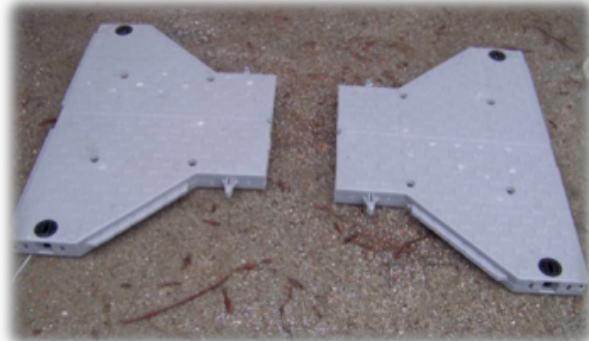


**Cam Lock  
Closed  
Position**

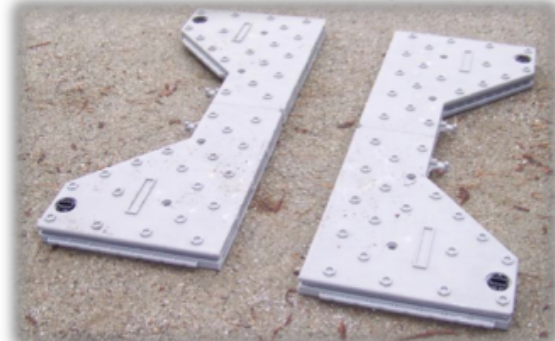


## Description of Components (2)

**Horizontal Split**



**Vertical Split**



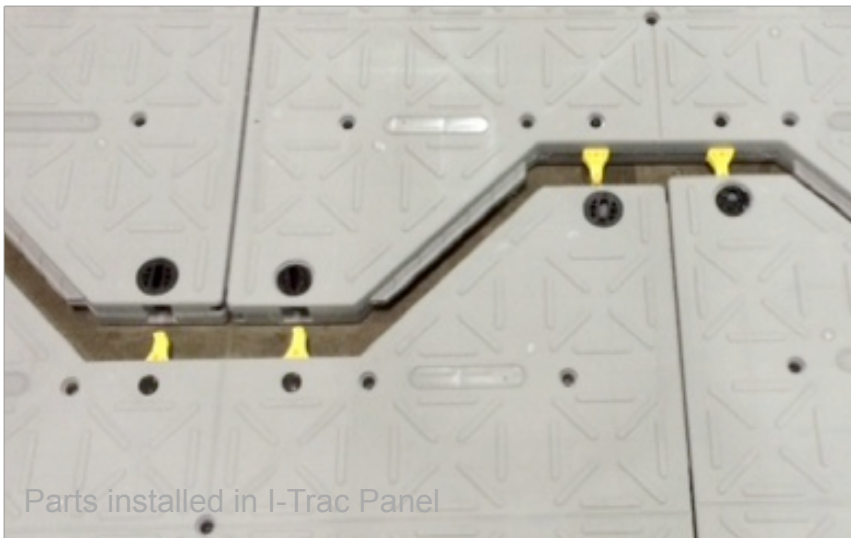
**Panels are designed with solid cut lines to split panels horizontally or vertically.  
Panels can be cut on band saw or table saw.**



**Cut panels can be used to create straight perimeter edges**



Pin, pin holder, peg, and cam lock



Parts installed in I-Trac Panel

All parts are field replaceable with a hard rubber mallet and can be removed with a screw driver.



## Tools Recommended



**36" wrecking bar: used to lock/unlock cams and to pry panels apart upon removal**



**8 or 10 lb sledge hammer: used to tap panels together during installation**

## Deployment Instructions

### Step #1: Lay Geotextile Material.

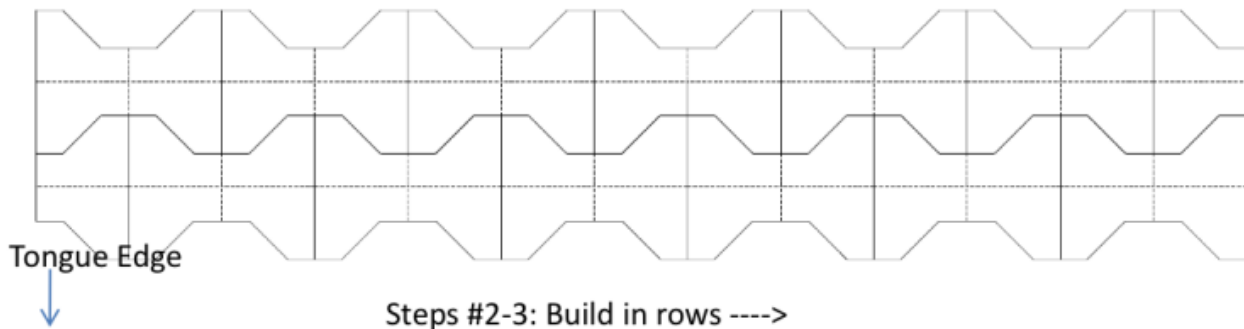


**Geotextile is not necessary, but a woven polypropylene geotextile provides a clean and uniform surface between muddy ground and I-Trac panels.**

**Geotextile is recommended to keep panels clean and expedite the installation and removal process.**

**Geotextile is also recommended for HLZ applications.**

## Deployment Instructions



**Step #2: Chose corner of application to begin build**

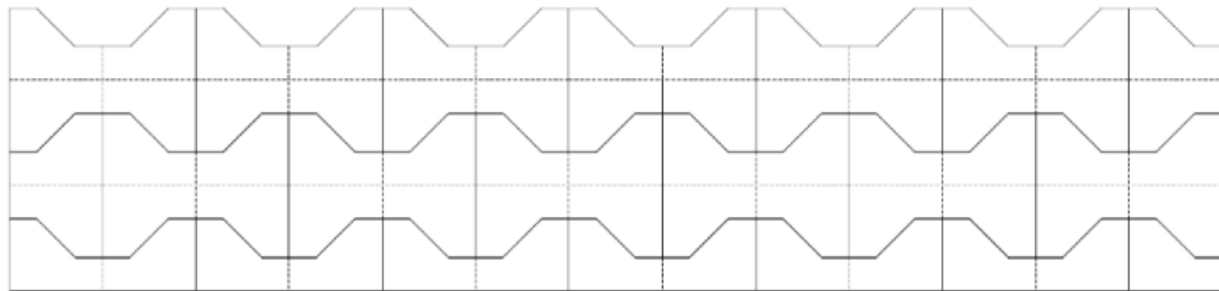
**Tip: *Build with tongue edge (male edge) forward***

**Step #3: Build in rows as illustrated**

*Build from side to side, completing a full row before moving to the next row*



## Deployment Instructions



Step #4: Add trim panels to complete flush edge ---->

**Step #4: Add trim panels to complete flush edge.**

**Tip: Maintain a straight lead edge.**

***Using a string line is suggested.***





## Deployment Instructions

In extreme load applications or ground conditions softer than CBR 5, multiple layers of panels are deployed to create a 2-layer or 4-layer roadway. Panels are assembled in 2-layer configuration using  $\frac{1}{2}$ " x 4.5" carriage bolts.





## Deployment Instructions

If installing on sloped ground and for all helipad applications, rebar stakes should be used to secure panels to ground.



## **Cleaning**

I-Trac can be cleaned using a high-pressure spray washer. High-pressure steam cleaners should never be used.

## **Maintenance**

If an I-Trac panel weld seam between the panel is separated, the panel must be recycled. The pin body, pin, peg and cam can all be replaced if damaged.