

Shunt Safety Conduit System

Keeping your city connected



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Context

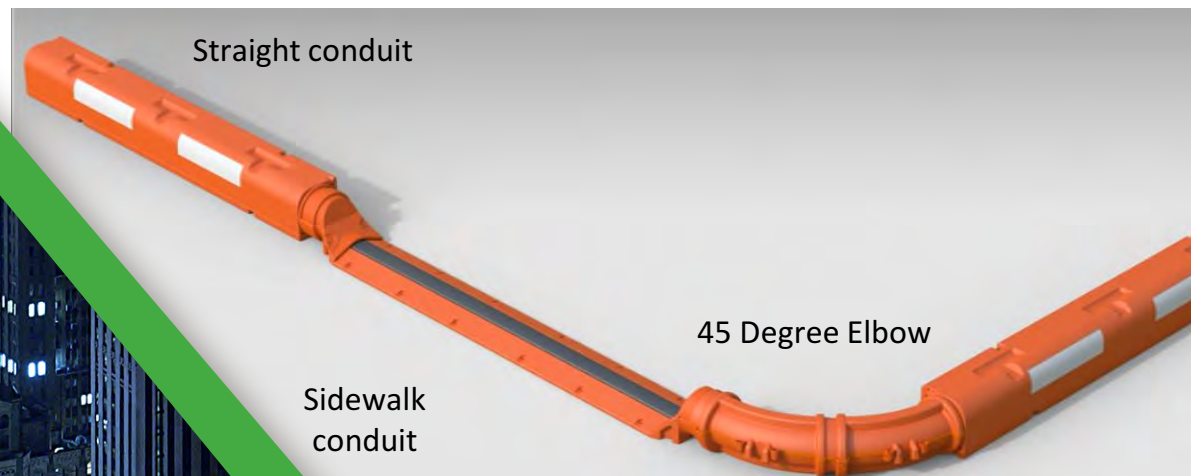
- Most of the major cities have an underground electrical network.
- When a power failure occurs (cable burnout etc.) it is sometime necessary to build a shunt (bypass) that is sitting on the street, sidewalk and other areas that are accessible by the public.
- Until now these high voltage cables are either exposed to the public or protected by a wood conduit specifically built for the shunt.
- Spectrum Catalyst has partnered with Plastik MP to invent & develop a patented system that will revolutionize the way to set-up secured shunt and manhole barriers in a fraction of the time that it currently takes.



Shunt Safety Conduit System

The Spectrum Safety Conduit System is a complete solution that provides the end user with a shunt that is fully secured, highly visible, lightweight and simple to erect. The system can be used in all potential situations where shunt application is needed.

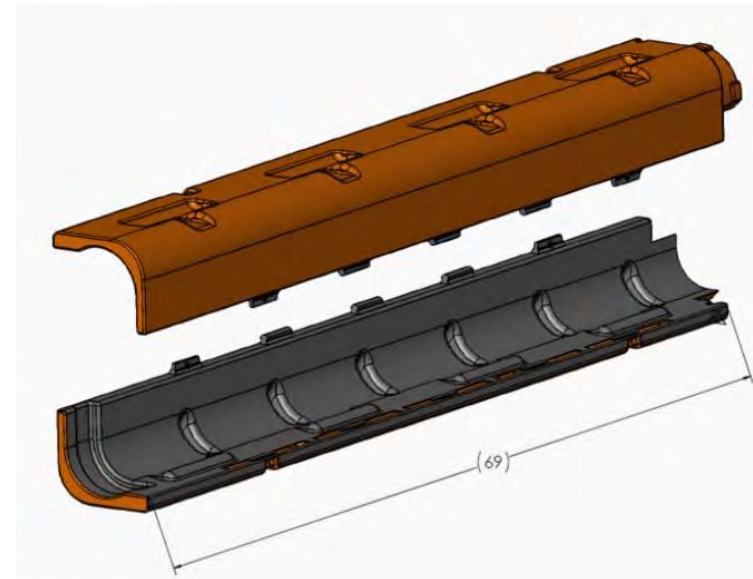
The Spectrum Safety Conduit System is constructed of high molecular polyethylene (HMWPE) making it nearly indestructible. In addition, the System is OSHA safety orange and has reflective safety warning labels to make it easily visible.



Straight Conduit

The straight conduit has a robust double wall design that creates the rigidity needed to protect the high voltage cables and also has the ability to be assembled in a fraction of the time as is needed for the construction of a wood conduit.

The concept consists of a single part that is placed on the ground, Then another identical section is flipped over and placed on top of the bottom section, to create a securely enclosed 6' run of conduit box. The lock system will help prevent unauthorized personnel to access and tamper with the wires.



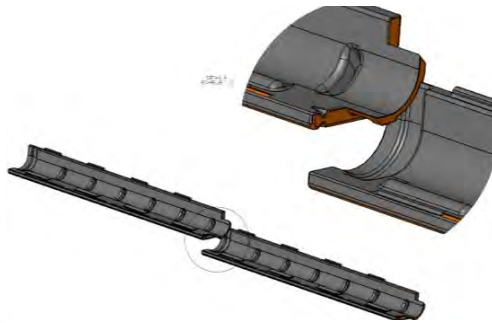
What is presently Used?



Assembly of the Straight Conduit

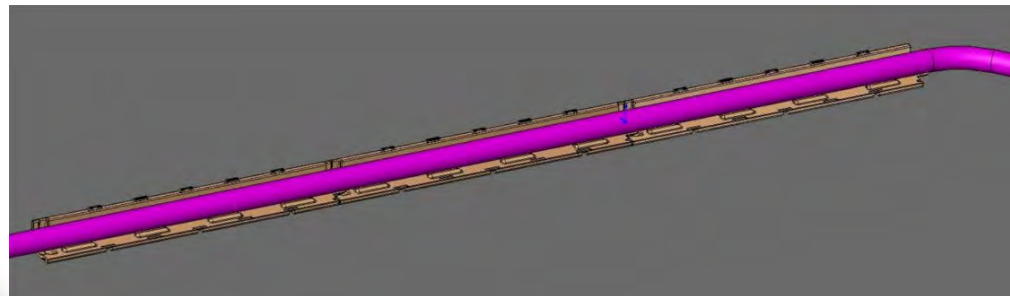
Step 1

Place the bottom sections on the ground by fitting the male end into the female end of the first section and so on for the entire length of the “shunt”.



Step 2

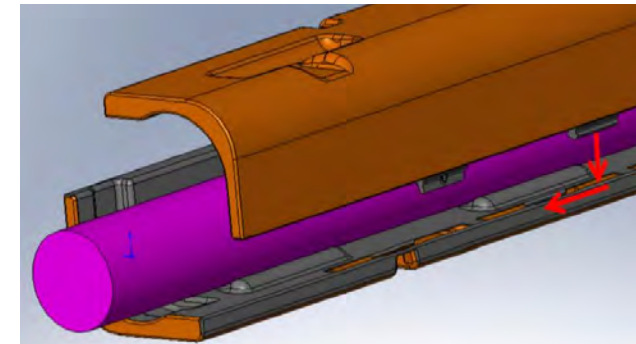
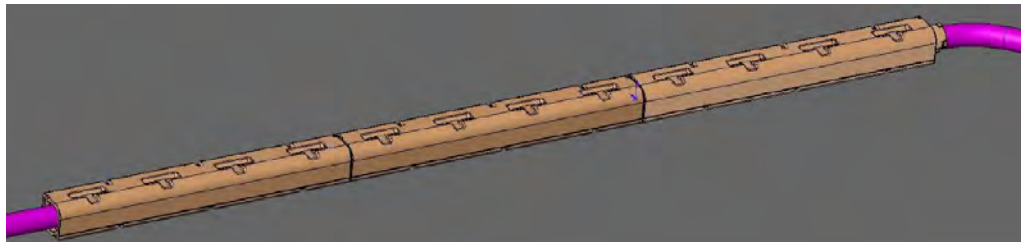
Place the cable on the bottom sections.



Assembly of the Straight Conduit

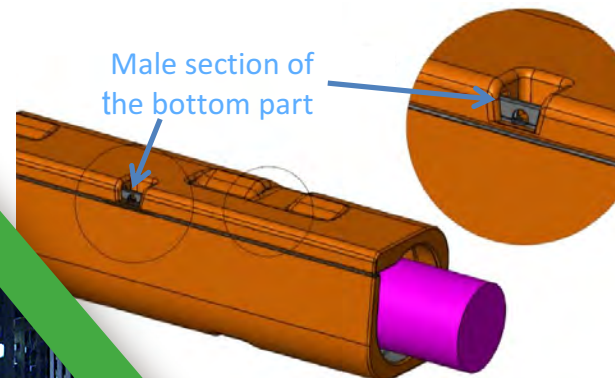
Step 3

Insert the male hooks of the top section into the female keyhole of the bottom section and slide it to perfectly align the 2 sections together and so on for the entire length of the shunt.



Step 4

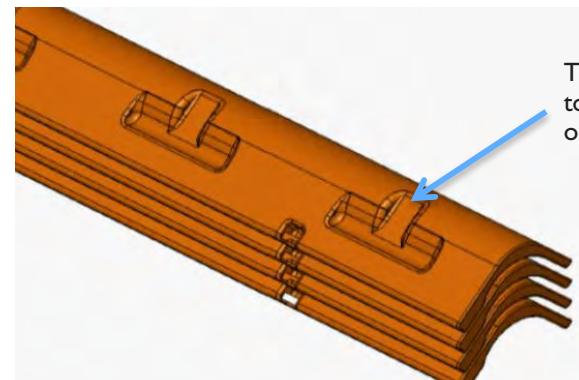
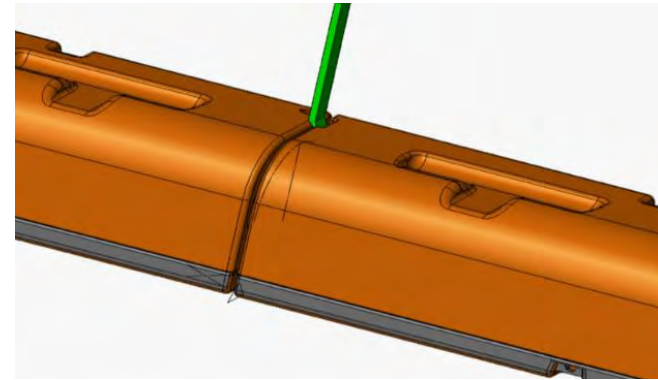
Once all the sections are assembled, the system allows for the entire shunt to be locked and secured by a tie-rop or a lock on the locking tab (male section of the bottom part).



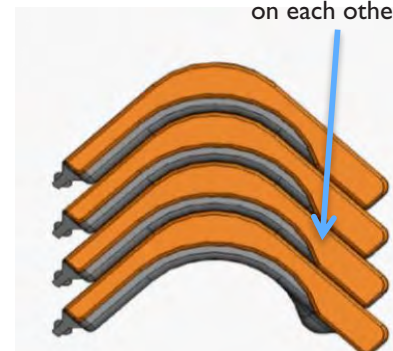
Disassembly of Conduit Box Concept

Do all the steps in the opposing direction and use a crowbar (if needed) to facilitate the unclipping of each section.

Stack each section on each other securely for easy transport and storage.



These shapes will allow to securely stack them on each other



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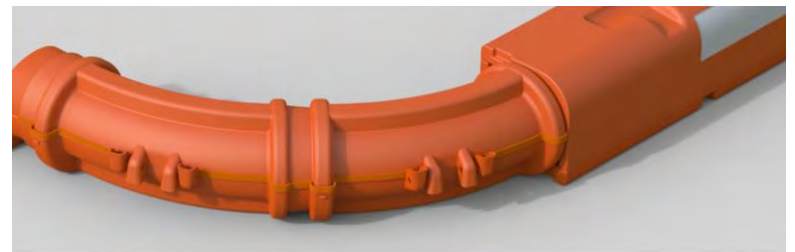
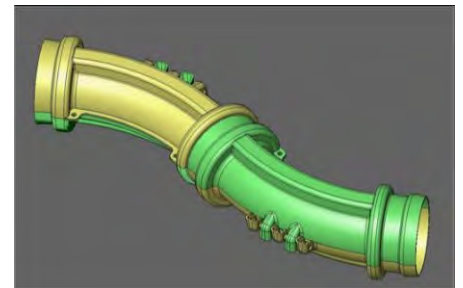
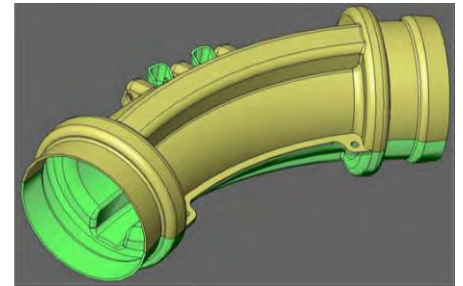
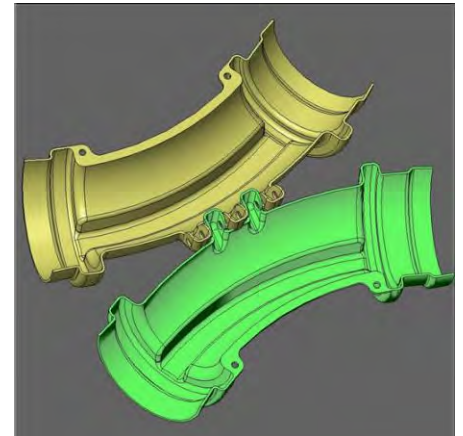
45 Degree Conduit Elbow

The 45 degree conduit elbow is designed to be used when the shunt needs to turn right, left, upward, downward or any direction that is needed.

It can be used to jump over a sidewalk, to get in or out of a manhole, or turn in any direction.

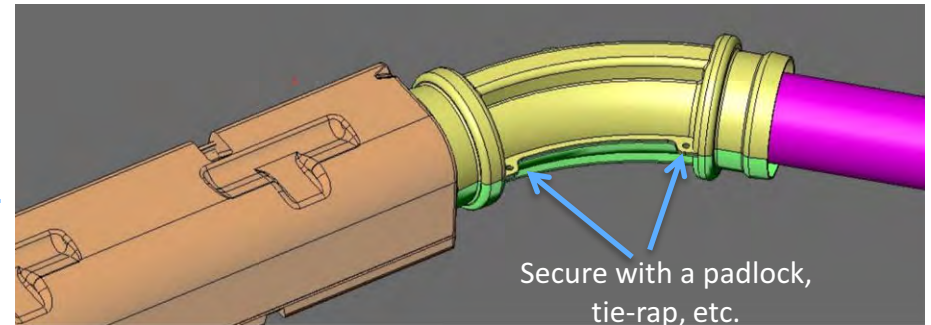
They have an integrated hinge that enables easy opening or closing of the 45 degree conduit elbow.

The 45 degree conduit elbow is made using indestructible high molecular weight polyethylene (HMWPE) with a safety orange color to be easily visible.

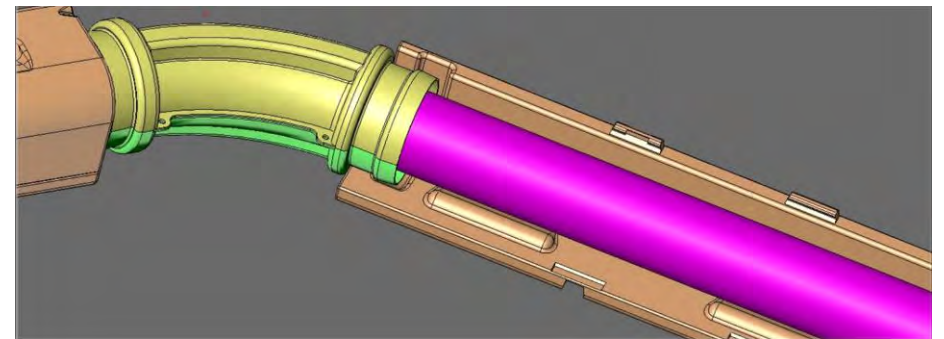
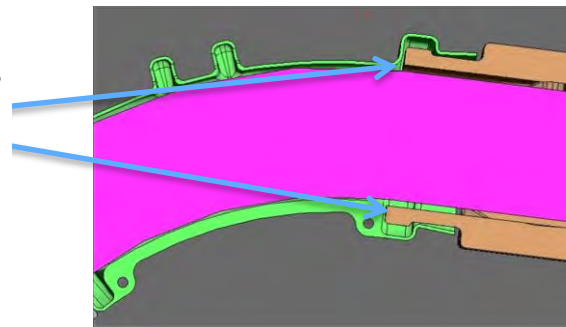


Assembly of the 45 Degree Conduit Elbow

Close the 45 degree conduit elbow onto the exposed male section of the previous straight conduit and secure the 45 degree conduit elbow with a padlock or tie-rap.



When the elbow is closed, it is impossible to open the previous conduit Box or slide the elbow out.



Resume the assembly process by installing bottom sections until you reach another obstacle that will need an 45 degree conduit elbow.

Containment Barrier

The Containment Barrier is a quick set-up modular barrier system to secure a space. It is designed to work in conjunction with the straight conduit.

This concept is based on panel sections assembled together by a plastic rod inserted permanently in-factory. This plastic rod creates a hinge that will allow the end user to position the panel in 3 specific positions (straight, 90 degree or -90 degree).

Our unique “patent pending locking design feature” will enable the end user to securely lock the panel in 3 specific positions, allowing for multi use purposes. For example, the Containment Barrier is ideal to safely secure a manhole vault or any other road surface areas as needed.



What is presently used?



Containment Barrier Concept with a Hinge

Versatility

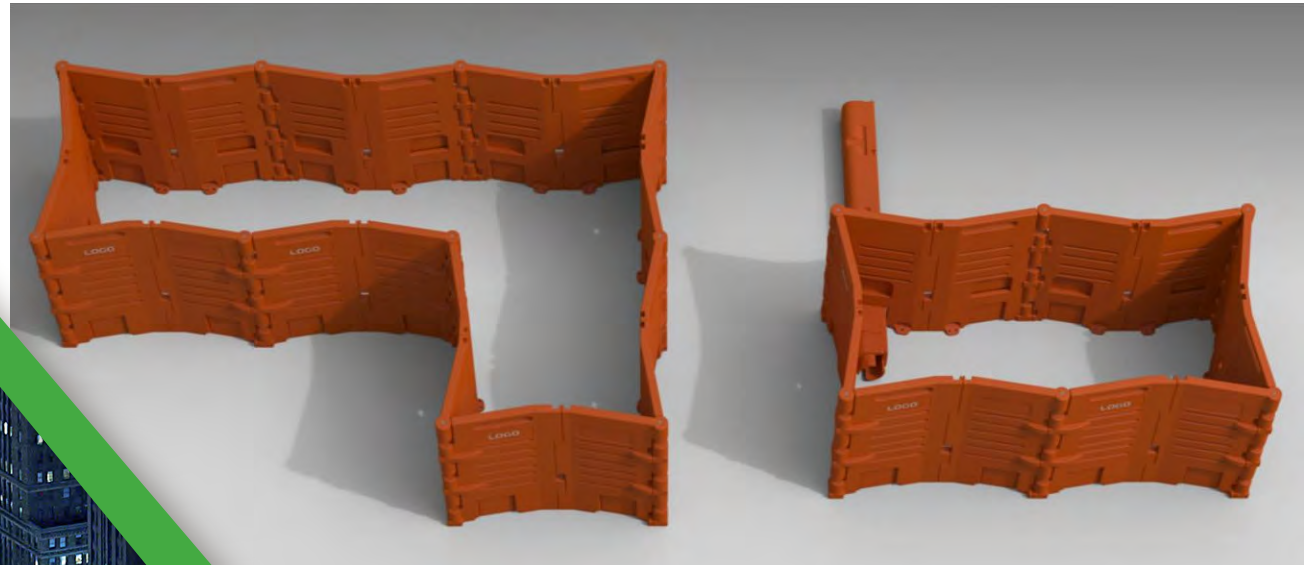
The 3 positions of the panel will enable the end user to create a multitude of containment barrier shapes.

Stability

The shape of the panels creates a wider footprint (zig-zag shape) to improve the stability of the panel when they are standing upright.

Safety

No saws or screw guns needed which will reduce the risk of injury.



Positioning the Panel in 3 Specific Positions

Step 1

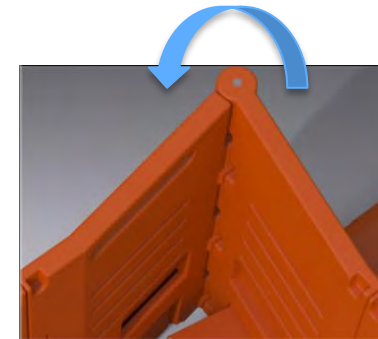
Grab the handle and lift the panel vertically



Lift 2''

Step 2

Flip the section of the panel in one of the 3 possible positions (90 degree, Straight or -90 degree)



Step 3

Slide the section of the panel back down to lock the panel in the desired position



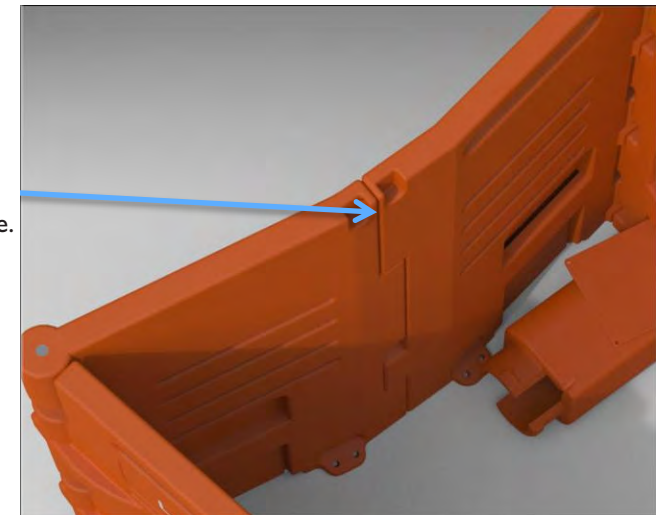
Slide 2''

Attachment of the Panels

Once the panel is positioned (90 degree, straight or -90 degree), it is very easy to connect the panels together. The male section will drop down into the joining panel by creating a ridged connection. This design feature will also enable any side to be used as a swinging access door.

Each panel can be secured by the use of a lock, drift pin, common bolt or heavy plastic zip tie, passed through the adjoining alignment holes.

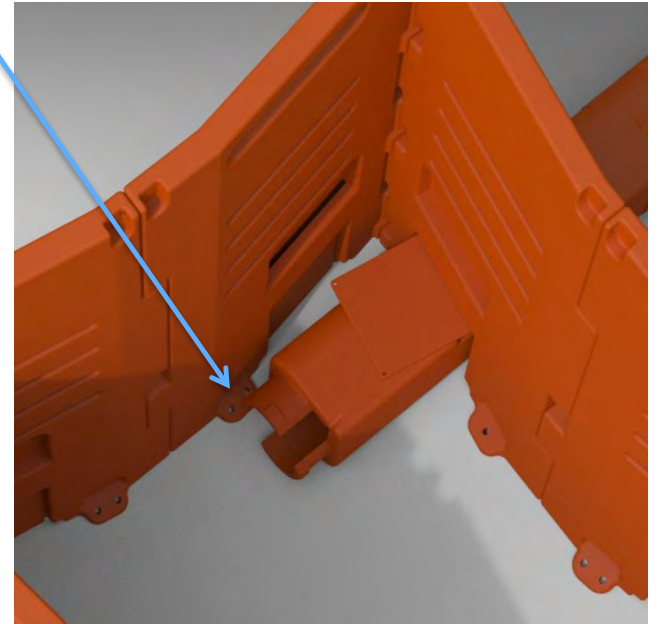
All the panels of a containment barrier can be attached permanently with a tie-rap while leaving one section locked with a master lock for easy access to a manhole vault, etc.



Secure with lock,
drift pin, common
bolt or heavy zip tie.

Anchoring Flange

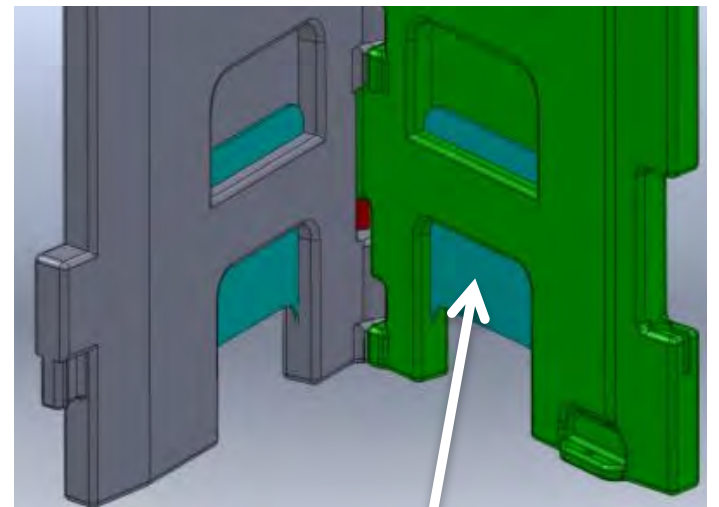
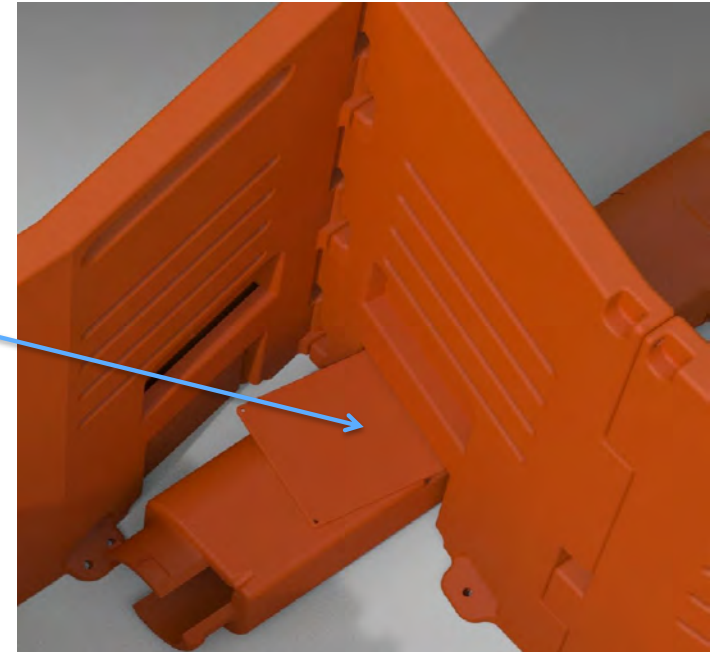
Each panel will have an anchoring flange at the bottom to be able to anchor the panels to the pavement with a simple spike.



Opening for the Conduit

The containment barrier has been designed to be used with the straight conduit.

The straight conduit can go through the containment barrier using the opening that is created by folding the plastic door or using the optional sliding door.



Optional sliding door

Benefits of the Shunt Safety Conduit System

- Increased profitability, due to significant labor cost reduction. This is evidenced by installation time, which is a fraction of all other competitive products
- Complete protection for the cable and the public
- Enhance corporate image
- Reusable-very long lifetime
- Easy to store, transport and set-up
- Very low cost of ownership
- No boom trucks needed to move heavy lumber, typically used in shunt construction

