

# Three Phase Protection - Oil Fuse Cutout Replacement

## Challenge

The university added new buildings which required three phase protection. The existing service is an older underground system utilizing oil fuse cutouts here overcurrent protection was required. The university has a long term plan to upgrade their system equipment and decided to invest in the latest technology for the new service installation. A main requirement for any new equipment was the ability to fit into their confined space, submersible manhole vaults (30" opening).

## Solution

G&W Electric's solid dielectric fault interrupters provided an ideal solution. It's compact size and cable entrance flexibility greatly simplified installation requirements for both the new building service and potential future oil fuse cutout replacements in other existing locations. The university liked the added safety feature of solid dielectric insulation compared to oil. They also realized the time and cost savings associated with the fuseless, resettable vacuum interrupters compared to the stocking of spare fuse links and replacement time required with the oil fuse cutouts. Placement of the fault interrupter within the confined manhole also permitted operation with a hookstick from above ground. G&W Electric solution provides accurate coordination with any type of upstream fuse and adds the flexibility of selecting single phase protection if future overcurrent protection needs change.

## Results

This package provides the optimum balance between system features, flexibility and cost. The university plans on upgrading the rest of their existing system equipment with fault interrupters. G&W Electric offers solid dielectric load and fault interrupting switchgear through 38kV for padmount and submersible vault applications.

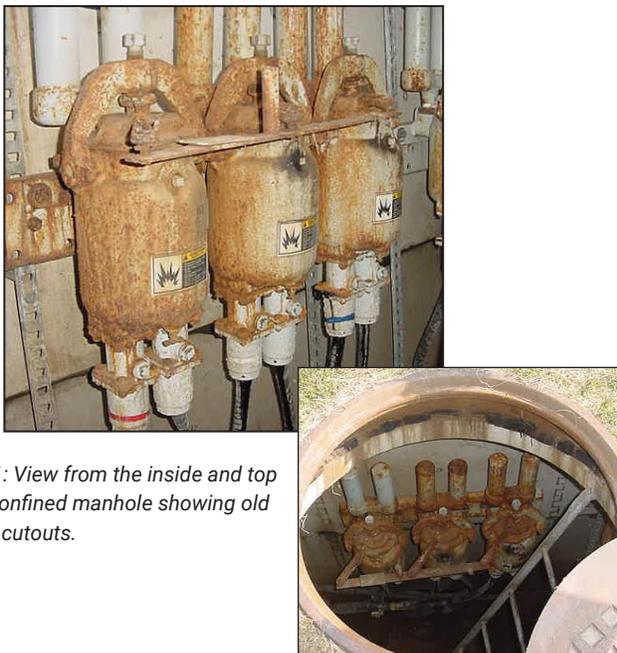


Figure 1: View from the inside and top of the confined manhole showing old oil fuse cutouts.



Figure 2: Three phase interrupter mounted to vault wall. Operating handle permits manual reset of all three phases. and is accessible from above ground using a hookstick.