



# Technical Bulletin

## TB 0310 – Additional symbology to GIS and AutoCAD for HV switches

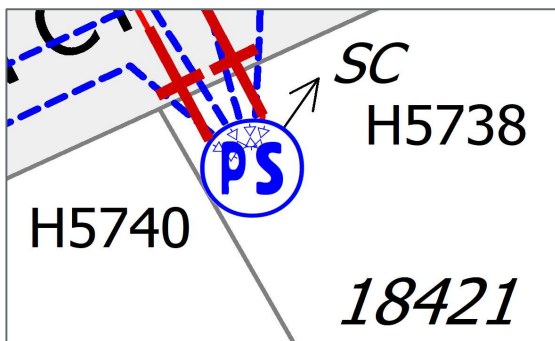
### Purpose

This Technical Bulletin serves as a precursor to the forthcoming implementation of remote operable RMUs.

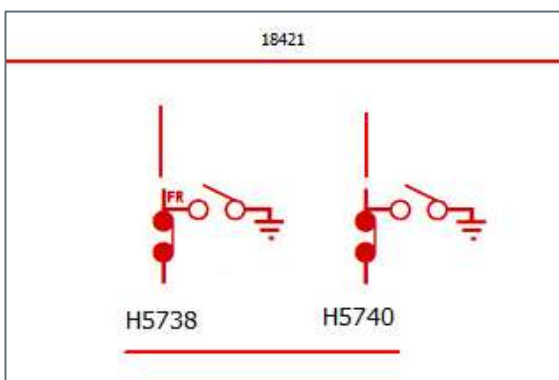
### Background

GIS currently lacks the ability to indicate the presence of SCADA and motorized RMUs on the majority of HV switch types.

The current process for capturing this data on UG substations is with a hand drawn SC arrow, with no attribute data.



Further, no such attribute or symbology exists on the substation detail window.



### Actions

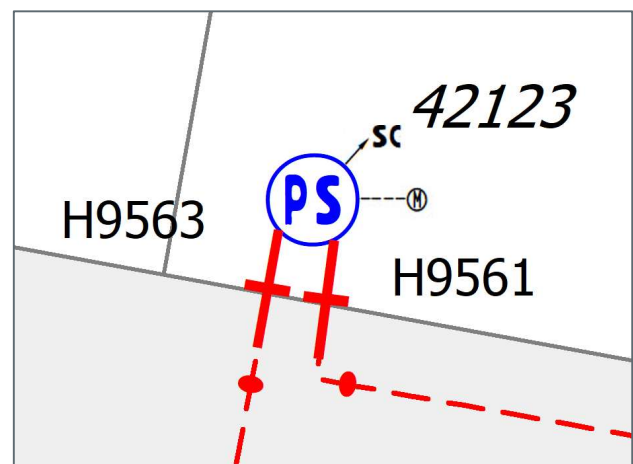
This change will see the addition of two new attributes to all HV switches:

- SCADA
- Motorized RMU

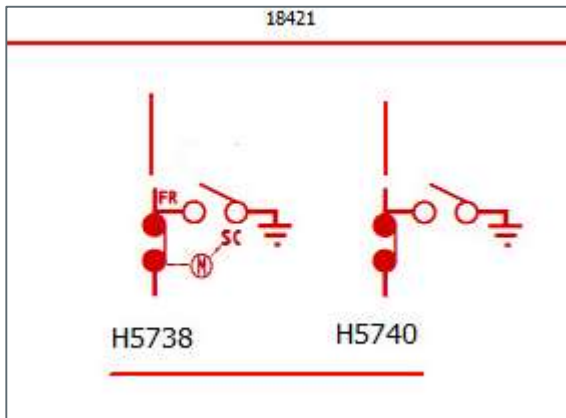
| Attribute Name                      | Attribute Value |
|-------------------------------------|-----------------|
| Type                                | Point           |
| SCADA                               | Yes/No dropdown |
| Motorized RMU                       | Yes/No dropdown |
| Fault Indicator                     | No              |
| Earth Switch Status                 | Open            |
| Earth Switch Side                   | Circuit Side    |
| Earth Switch Number                 | NA              |
| Impedance                           |                 |
| Destination                         |                 |
| Rating                              |                 |
| Network Access Authorisation Number |                 |
| Joint/Termination Kit Number        |                 |
| Joint/Termination Batch Number      |                 |
| Date Of Manufacture                 |                 |

These attributes will be populated as Yes/No dropdown boxes. Each attribute represents the presence of these features per switch.

In addition to the creation of these two attributes, it is proposed that HV switches will have the option to add two graphical components; the Motorized RMU and SC symbols.



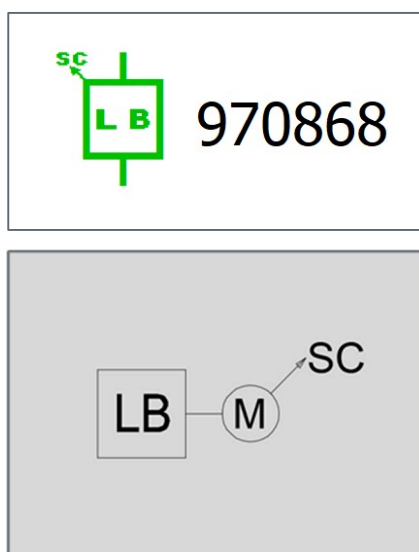
The detail window for substations will also have labels placed on each switch, where applicable.



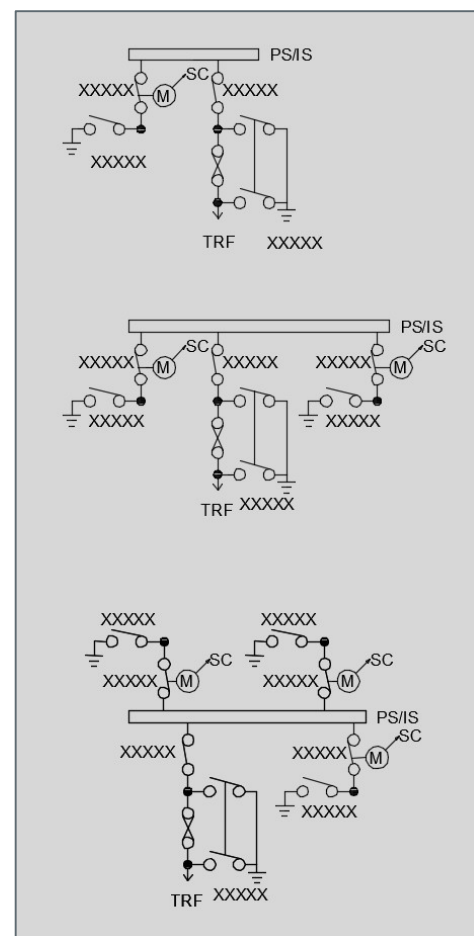
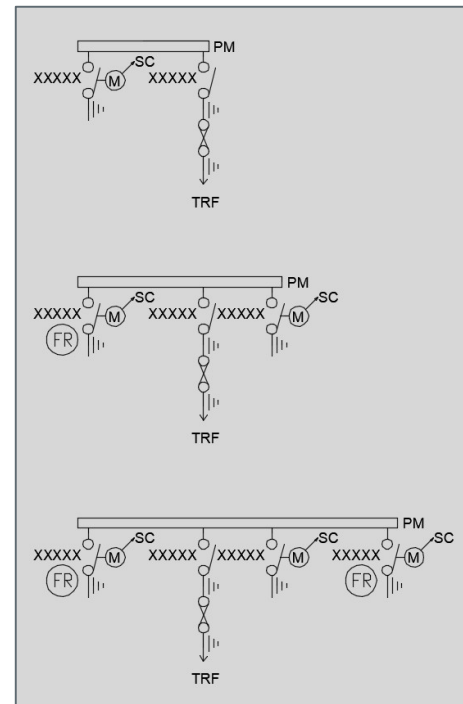
Drawing 294854 – Drawing Specification Standard Drawing Symbols will be updated to include new symbology, allowing for designers to capture this information on project drawings as well as integration with the CAD to GIS process.

|  |                |
|--|----------------|
|  | HV_SWITCH_SC   |
|  | HV_SWITCH_MRMU |

HV LBS example in GIS and CAD. Note that the GIS symbology uses existing SC enabled symbol.



Typical examples of common switchgear configurations for ground Substations in CAD:



## Implementation

This project will commence in anticipation of the arrival and installation of new remote operated RMU switchgear units.

All current HV switches will have both attributes defaulted to 'No' with both symbology options available for placement.

Data cleansing tasks will ensure that all current switches are updated to reflect their real world status in GIS and the substation detail window.

## Impacted Standards

The contents of this technical bulletin will be included in the next update of the following standard(s):

- SAD0001 – Project Drawing Standard
- SAD0005 – Network Asset Information (NAI) System Symbology