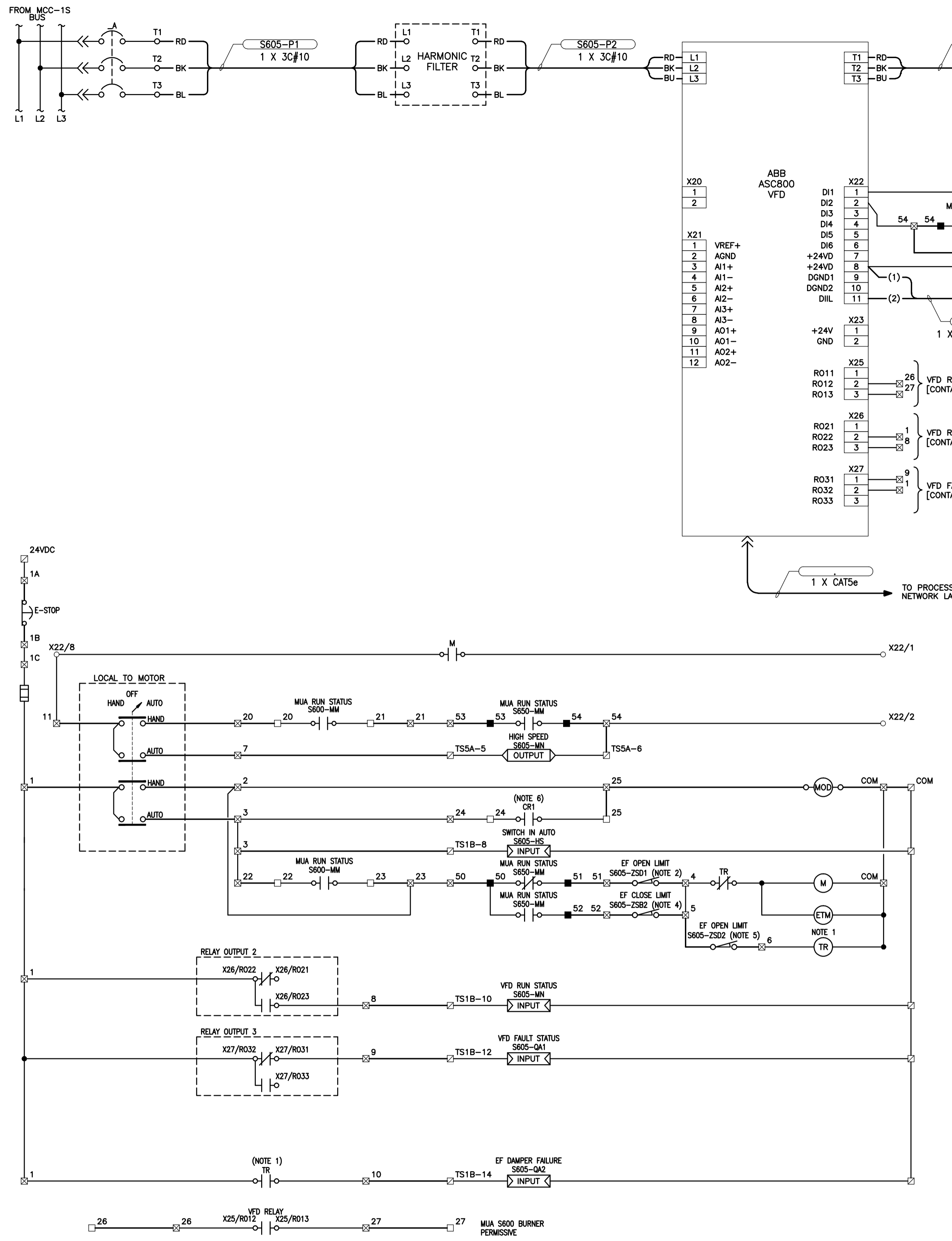


File Name: P:\Projects\2009\09-0754-08\DocControl\ToBeIssued\DWG\ELECTRICAL\1-0103S-E0020-001-Rev 00.dwg - Tab: 1-0103S-E0020-001 Plotted By: GNeilson 12/16/2010 [Thu 4:45pm]



**LEGEND**

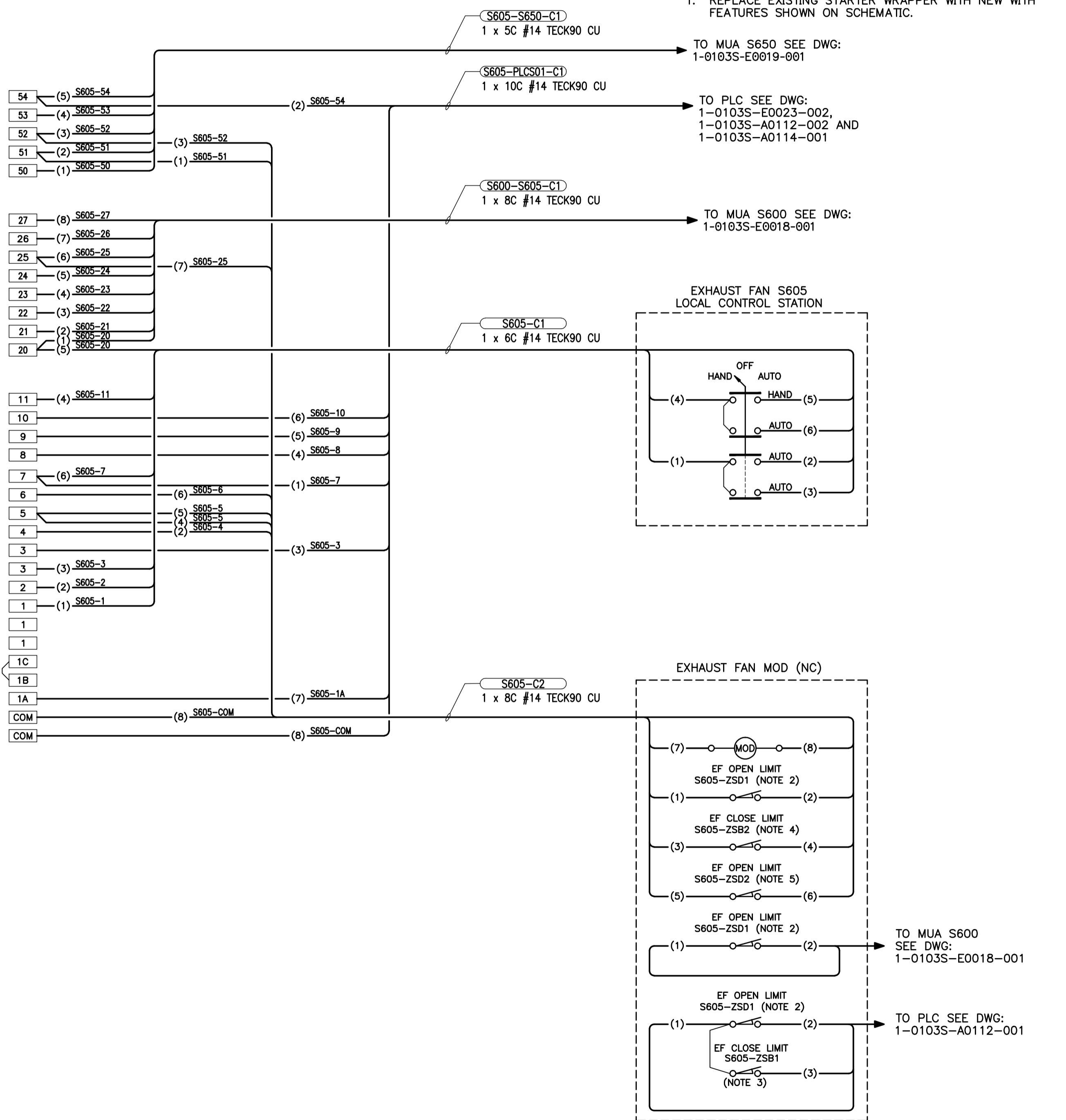
- ☐ PLC TERMINALS
- ☒ VFD STARTER TERMINALS
- ☐ MUA S600 TERMINALS
- MUA S650 TERMINALS
- FIELD WIRING
- PANEL WIRING
- ( ) CONDUCTOR IDENTIFICATION
- WIRE CONNECTION
- PILOT LIGHT
- ETM ELAPSED TIME METER
- OUTPUT PLC OUTPUT
- INPUT PLC INPUT

**NOTES:**

1. TIMING RELAY STARTS TIMING ON ENERGIZATION AND CONTACT OPENS AFTER TIMEOUT. TIMED OUT RELAY REQUIRES A MANUAL RESET.
2. LIMIT SWITCH CONTACT CLOSURES WHEN DAMPER PROVES FULLY OPEN.
3. LIMIT SWITCH CONTACT CLOSURES WHEN DAMPER PROVES FULLY CLOSED.
4. LIMIT SWITCH CONTACT OPENS WHEN DAMPER PROVES FULLY CLOSED.
5. LIMIT SWITCH CONTACT OPENS WHEN DAMPER PROVES FULLY OPEN.
6. REFER TO DRAWING 1-0103S-E0018-001 FOR DETAILS ON CR1 ACTIVATION.
7. REFER TO ALLEN BRADLEY DWG. ED 2839-089-92 FOR DETAILS ON EXISTING TWO SPEED STARTER CONTROLS.
8. DAMPER LIMIT SWITCHES MAY REQUIRE MULTIPLYING RELAY(S) IN ORDER TO PROVIDE THE CORRECT NUMBER OF CONTACTS.
9. AUXILIARY CONTACT ON DISCONNECT SWITCH SHALL BREAK BEFORE DISCONNECT OPENS AND MAKE BEFORE DISCONNECT CLOSURES.

**CONSTRUCTION NOTES:**

1. REPLACE EXISTING STARTER WRAPPER WITH NEW WITH FEATURES SHOWN ON SCHEMATIC.



**APEGN**  
Certificate of Authorization  
KGS Group  
No. 245 Date: 2010/12/21

**KGS GROUP**  
CONSULTING ENGINEERS

B.M. ELEV.	FIELD BOOK #:
POSTED TO LBIS	
DESIGNED BY: REW/AP	CHECKED BY: REW
DRAWN BY: GCN	APPROVED BY: REW
HDR. SCALE: N.T.S.	RELEASED FOR CONSTRUCTION
VERTICAL: N.T.S.	
00 ISSUED FOR TENDER 2010-12-21 REW	
NO. REVISIONS	DATE BY
	2009 09 29

**ALLIANCE**  
Engineering Services Inc.

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
**R.E. WILLMS**  
Member 3833  
REGISTERED PROFESSIONAL ENGINEER

TENDER No. SE2.7  
FILENAME: 1-0103S-E0020-001-Rev  
PLDT DATE: 2010/12/16

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

2010 HVAC REPLACEMENT AND ASSOCIATED WORKS  
**WEWPC**

AREA S - SECONDARY CLARIFIERS 1 & 2  
EF=S605 VFD SCHEMATIC & WIRING DIAGRAM

SHEET 1 OF 1  
CITY DRAWING NUMBER  
1-0103S-E0020-001