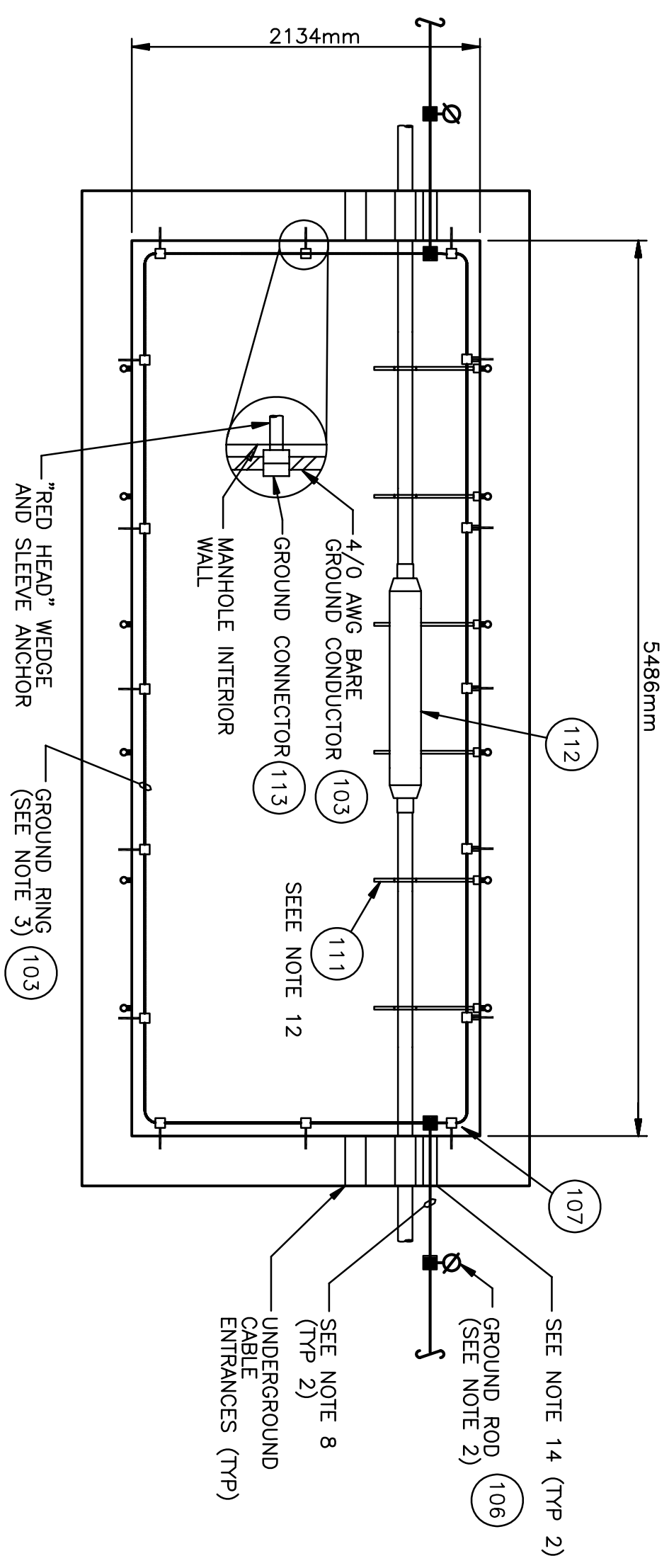
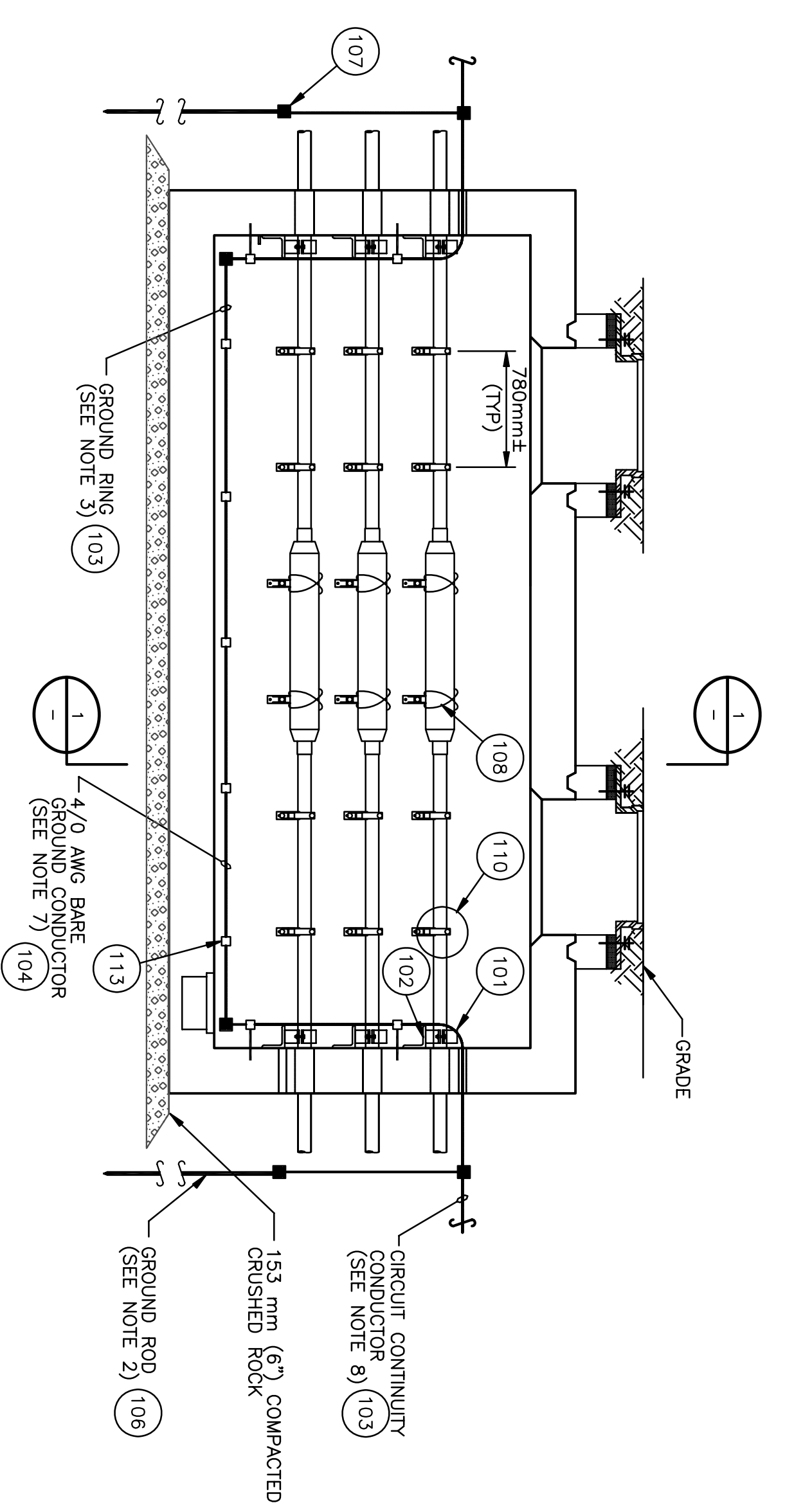


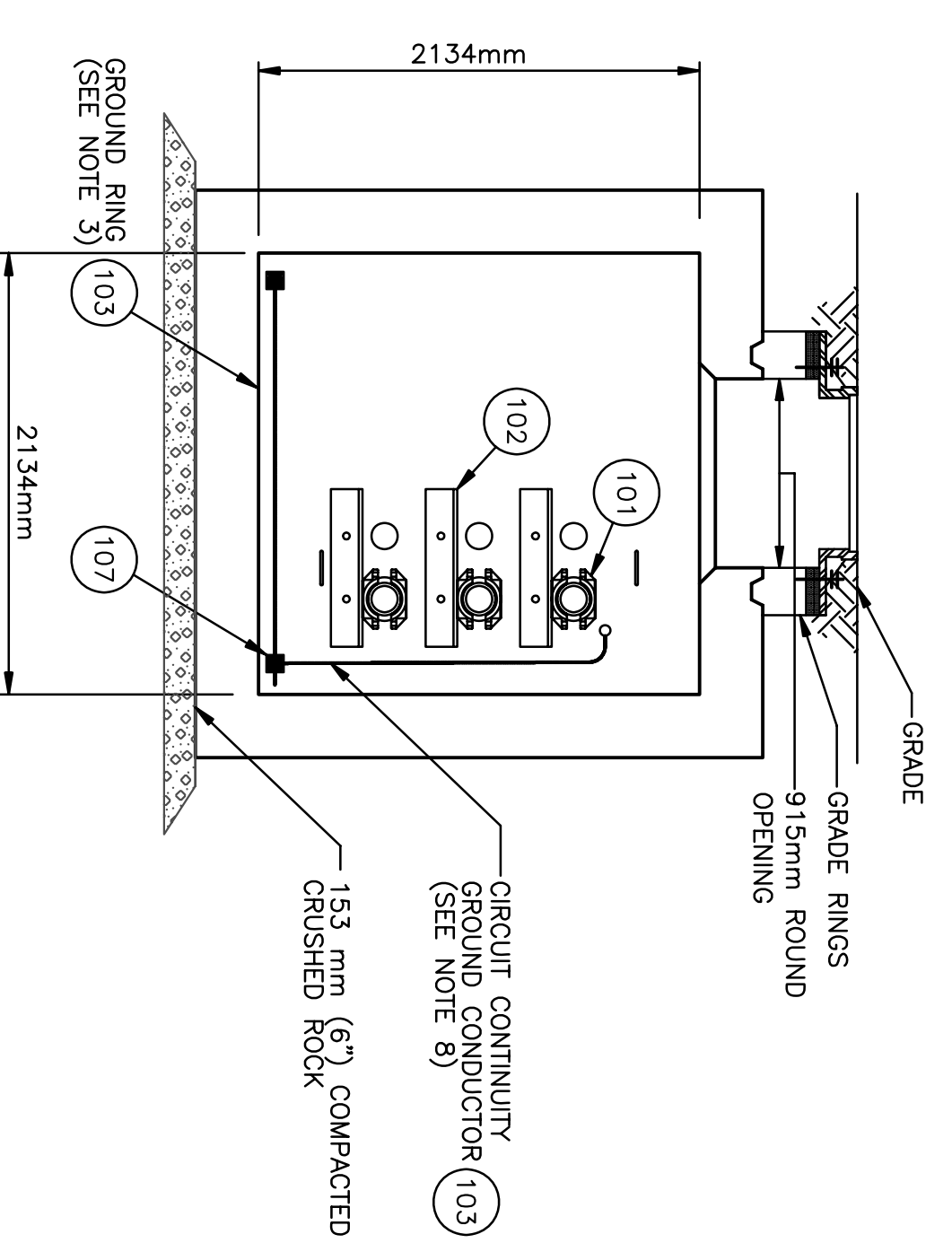
**DETAIL A**  
CABLE SHEATH BONDING AND CABLE PHASING  
NOT TO SCALE



**DETAIL B**  
TYPICAL MANHOLE PLAN VIEW  
NOT TO SCALE



**DETAIL C**  
TYPICAL MANHOLE WALL ELEVATION  
NOT TO SCALE



**SECTION 1**

ITEM NO.	ITEM DESCRIPTION	MANUFACTURER AND CATALOG NO.	QUANTITY REQUIRED	FURNISHED BY
101	CABLE CLAMP		6	CIC
102	ANGLE (153mmx153mmx8mmTKx762mmLG) GALVANIZED STEEL		6	CIC
103	4/0 AWG - BARE COPPER		AS REQ'D	CIC
104	4/0 AWG COPPER - INSULATED		-	-
105	SINGLE PHASE LINK BOX WITH SVL'S		3	CM
106	GROUND ROD, 16mmdia, 3050mmLG		2	CC
107	CONNECTOR, CADWELD, 5/8" TO 4/0 AWG		AS REQ'D	CC
108	NYLON TIE, HEAVY DUTY		6	CIC
109	PULLING EYES		4	MF
110	FIBERGLASS REINFORCED CABLE CLAMP		12	CIC
111	"UNISTRUT" CABLE AND JOINT SUPPORT		18	CIC
112	CABLE JOINT		3	CM
113	GROUND CONNECTOR	BURNDY TYPE GB29	AS REQ'D	CIC

FURNISHED BY CODE:  
 CIC - CABLE INSTALLATION CONTRACTOR  
 CC - CIVIL CONTRACTOR  
 MF - MANHOLE FABRICATOR  
 CM - CABLE MANUFACTURER

**NOTES:**

- FOR GENERAL NOTES, SEE WSTR-E002.
- ALL GROUND RODS SHALL BE 3050MM X 16MM COUPLED GROUND RODS.
- THE GROUND RING, SHALL BE MOUNTED 6" ABOVE MANHOLE FINISHED FLOOR.
- NO LINK BOXES ARE NEEDED IN PROPOSED MANHOLE.
- CABLE INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLE, CONNECTORS AND ATTACHMENTS NECESSARY FOR COMPLETE INSTALLATION OF THE GROUNDING SYSTEM IN THE MANHOLE AND ON THE TERMINATION STRUCTURES.
- CIVIL CONTRACTOR SHALL FURNISH AND INSTALL 4/0 FOR THE LENGTH OF DUCTBANK WITH SEPARATE 4/0 CONDUCTOR COILED IN MANHOLE AND AT THE BASE OF STRUCTURE.
- CIVIL CONTRACTOR SHALL FURNISH AND INSTALL GROUND RODS WELDED TO 4/0 IN MANHOLE AND STRUCTURE LOCATION.
- CIVIL CONTRACTOR SHALL FURNISH AND INSTALL 4/0 AWG BARE COPPER GROUND WIRE THE FULL LENGTH OF DUCT. GROUND WIRE SHALL BE BONDED AT THE MANHOLE GROUND RING AND RISER STRUCTURE LINK BOX OR GROUNDING CONDUCTOR.
- CABLE INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL ALL HARDWARE USED TO SECURE THE 69kV CABLE.
- ALL UNUSED CONDUITS SHALL BE PLUGGED AND SEALED USING WATERIGHT DUCT PLUGS AS MANUFACTURED BY JACKSON USA, INC. OR ACCEPTABLE EQUAL.
- 69kV CABLE JOINT TO BE SECURED TO SUPPORT BRACKET USING NYLON TIES. NYLON TIES SHALL BE SELF-LOCKING AND RATED 120 POUNDS MINIMUM TENSILE HOLDING STRENGTH. THE CABLE INSTALLATION CONTRACTOR SHALL INSTALL TIES USING INSTALLATION TOOLS AS RECOMMENDED BY THE CABLE MANUFACTURER.
- THE CABLE INSTALLATION CONTRACTOR MAY BE DIRECTED TO INSTALL ADDITIONAL CABLE SUPPORTS IN EACH MANHOLE AS DIRECTED BY CABLE MANUFACTURER/REPRESENTATIVE.
- FOR MANHOLE SECTIONS AND DETAILS, SEE DRAWING WSTR-P001.
- THE CONTRACTOR SHALL PROVIDE WATER TIGHT SEALANT AFTER INSTALLATION OF THE GROUND CONTINUITY CONDUCTOR.

**LEGEND**

☐ - GROUNDING WITH SVL

**KDOT PROJ. NO. 54-87 K-8258-01**  
**Sheet No. 151 of 556**

**APPROVED FOR CONSTRUCTION**

NO.	DATE	REVISIONS AND RECORD OF ISSUE
1	03/01/06	ISSUED FOR CONSTRUCTION
0	01/31/05	95% REVIEW ISSUE

BLACK & VEATCH  
 WESTAR ENERGY COMPANY  
 US HIGHWAY 54/KELLOGG AVENUE PROJECT  
 69kV UNDERGROUND TRANSMISSION LINE  
 MANHOLE & JOINTS INSTALLATION DETAILS

PROJECT: 136462-WSTR-E004  
 DRAWING NUMBER: 1  
 REV: 1