

UNDERGROUND CROSSINGS – PIPELINES

DRAWING NUMBER	SHT.	DRAWING TITLE	DWG REV.	BOM REV.
C-26-23.01	1 – 3	SASKENERGY DISTRIBUTION NATURAL GAS CROSSING	C / D	F
C-26-23.02	1 – 3	TRANSGAS TRANSMISSION NATURAL GAS CROSSING	D / D	G
C-26-23.03	1 – 3	CROSSING OF PIPELINES REGULATED BY THE NEB	D / F	H
C-26-23.03	4	CROSSING OF PIPELINES REGULATED BY TC ENERGY CORPORATION	0	
C-26-23.04	1 – 2	ANODE INSTALLATION	A	0
C-26-23.05	1 – 3	CROSSING OF PIPELINES NOT REGULATED BY THE NEB	0 / B	C

SaskPower - DISTRIBUTION STANDARDS

APPROVAL	DESIGN CHK	DRN. LM	INDEX
L MOEN	P PATEL	CHKD. PP	
		2021/04/16	
DATE OF ISSUE: 2021-08-16		DRAWING NO: C-26-23-INDEX	
		SHEET 1 of 1	REV. P

CROSSING SPECIFICATIONS

1. THE APPROPRIATE DIVISION ENGINEER SHALL BE NOTIFIED OF PROPOSED UNDERGROUND CABLE CROSSINGS OF PLASTIC DISTRIBUTION LINES AS SOON AS PRACTICAL AFTER THE CROSSINGS HAVE BEEN IDENTIFIED. NOTIFICATION SHALL BE BY MEANS OF A ROUTE PLAN OF THE PROPOSED CABLE INSTALLATION ON WHICH ARE NOTED THE PIPELINE CROSSINGS.
2. APPROVED CONSTRUCTION ROUTE MAPS OF CABLE INSTALLATIONS SHALL BE FORWARDED TO APPROPRIATE CUSTOMER OPERATIONS, SUPERINTENDENT, AND TWO (2) WEEKS PRIOR TO CONSTRUCTION.
3. THE CUSTOMER OPERATIONS, SUPERINTENDENT SHALL BE GIVEN TWO (2) WORKING DAYS NOTICE PRIOR TO INSTALLATION OF THE CROSSING TO ALLOW FOR PIPELINE LOCATING AND STAKING.
4. WHERE THE CABLE CROSSES BELOW AND ABOVE THE PIPELINE, THERE SHALL BE A MIMIMUM VERTICAL SEPARATION OF 0.3m (1 ft) BETWEEN THE CABLE AND THE PIPELINE. WHERE THE CABLE CROSSES ABOVE THE PIPELINE, A MINIMUM DEPTH OF COVER OF 1m SHALL BE MAINTAINED OVER THE CABLE.
5. THE SAME CROSSING DEPTH OF THE UNDERGROUND CABLE SHALL BE MAINTAINED FOR THE FULL WIDTH OF THE EXISTING EASEMENT BEING CROSSED.
6. BEFORE EXCAVATING EQUIPMENT IS BROUGHT ONTO THE EXISTING PIPELINE EASEMENT, THE PIPELINE(S) TO BE CROSSED SHALL BE:
 - a) STAKED BY A QUALIFIED SASKENERGY PERSONNEL OR DESIGNATED SASKENERGY REPRESENTATIVE WITH A PIPELINE LOCATOR, AND;
 - b) DAYLIGHTED AS REQUIRED BY SASKENERGY.
7. MACHINE EXCAVATION SHALL NOT TAKE PLACE DIRECTLY OVER THE PIPELINE AND SHALL NOT TAKE PLACE WITHIN 0.6m (2 ft) FROM THE SURFACE OF THE PIPELINE. THE PIPELINE SHALL BE VISIBLE AT ALL TIMES DURING MACHINE EXCAVATION.
8. EXCAVATION AND SUBSEQUENT WORK SHALL BE CONDUCTED IN A MANNER THAT WILL NOT CAUSE DAMAGE TO THE PIPELINE. WORK SHALL BE EXPEDITED TO MINIMIZE THE LENGTH OF TIME THE PIPELINE IS EXPOSED.
9. WHERE THE UNDERGROUND CABLE CROSSED BELOW THE SASKENERGY DISTRIBUTION PIPELINE, CABLE SPLICES SHALL BE MADE AT THE EDGE OF THE PIPELINE EASEMENT.
10. THE CABLE SHALL CROSS THE EXISTING PIPELINE AT AN ANGLE OF 90° WHEREVER POSSIBLE, BUT IN NO CASE AT AN ANGLE LESS THAN 45°.

SaskPower - DISTRIBUTION STANDARDS				
APPROVAL	DESIGN CHK	DRN.	SASKENERGY DISTRIBUTION NATURAL GAS CROSSING	
		CHKD.		
DATE OF ISSUE: 2011-04-01		DRAWING NO: C-26-23.01		SHEET 1 of 3 REV. C

BILL OF MATERIAL

ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		A	B	C	
1	2 65 4X	--	4	--	SLEEVE – COMPRESSION AL
2	2 68 XX	1	--	3	SPLICE – PRIMARY CABLE
3	2 68 XX	1	--	3	SPLICE – COVER PRIMARY JACKET
4	2 68 XX	--	4	--	SPLICE – COVER SECONDARY INSULATION
5	5 12 XX	1	--	3	CRIMPIT CU
6	71 35 00	1	--	3	KIT – CABLE PREPARATION

NOTE:

1. COLUMN A IS FOR A SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLE.
2. COLUMN B IS FOR A 4-WIRE SECONDARY CABLE.
3. COLUMN C IS FOR THREE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.

ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		D	E	F	
1	2 65 4X	8	--	--	SLEEVE – COMPRESSION AL
2	2 68 XX	--	2	6	SPLICE – PRIMARY CABLE
3	2 68 XX	--	2	6	SPLICE – COVER PRIMARY JACKET
4	2 68 XX	8	--	--	SPLICE – COVER SECONDARY INSULATION
5	5 12 XX	--	2	6	CRIMPIT CU
6	71 35 00	--	2	6	KIT – CABLE PREPARATION

NOTE:

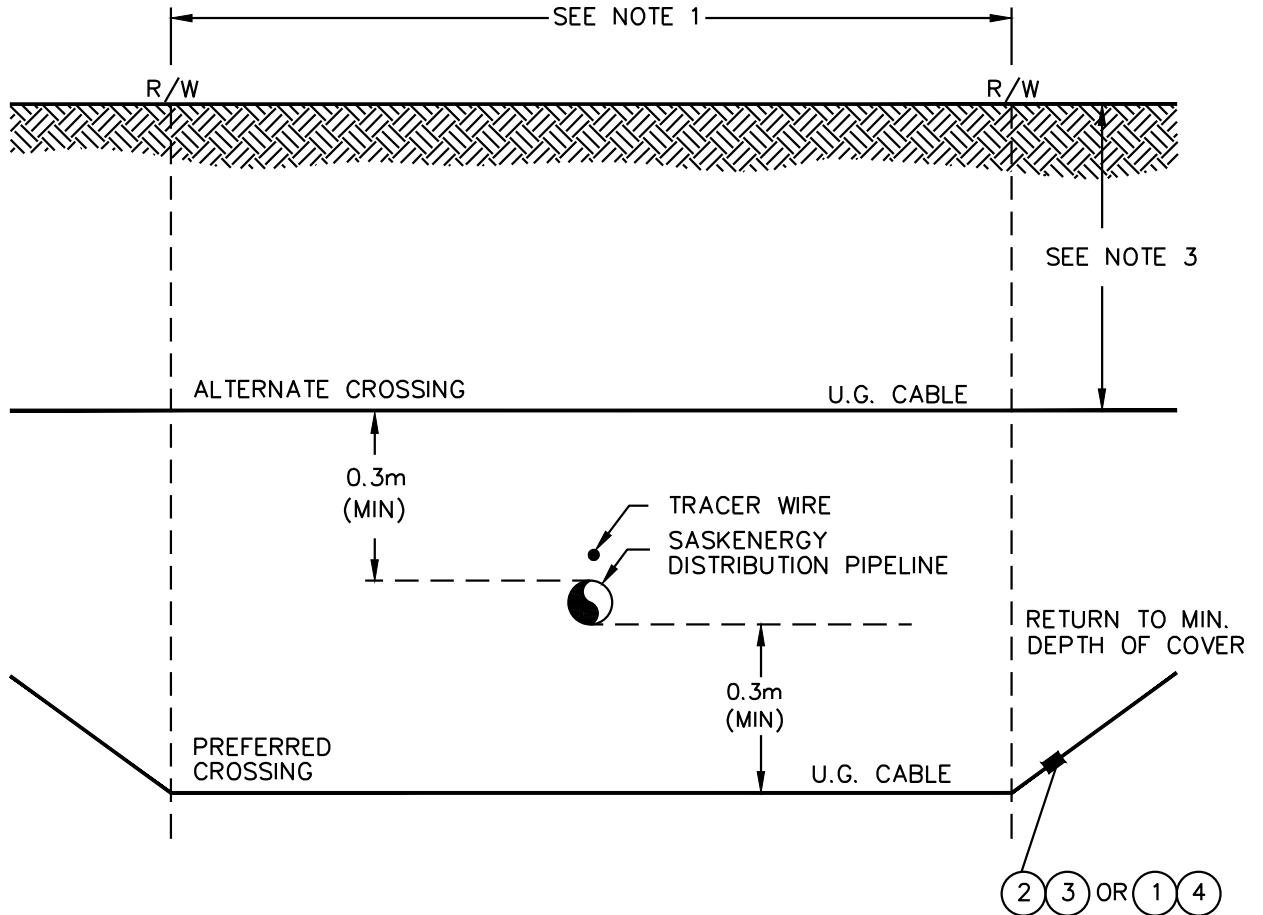
4. COLUMN D IS FOR TWO RUNS OF 4-WIRE SECONDARY CABLES.
5. COLUMN E IS FOR TWO RUNS OF SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.
6. COLUMN F IS FOR TWO RUNS OF THREE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES. (2 - 3Ø PRIMARY CIRCUITS)

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SaskPower - DISTRIBUTION STANDARDS

APPROVAL	DESIGN CHK	DRN.	SASKENERGY DISTRIBUTION NATURAL GAS CROSSING
		CHKD.	

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1. R/W WIDTH MAY VARY.
2. DOUBLE RUNS OF THREE-PHASE PRIMARY CABLE TO BE HORIZONTALLY SEPARATED A MINIMUM OF 1.0m.
3. SEE B-14-65 FOR MINIMUM DEPTH OF COVER.

SaskPower – DISTRIBUTION STANDARDS				
APPROVAL L.MOEN	DESIGN CHK. A.UHREN	DRN. D.REDEKOPP CHKD.	SASKENERGY DISTRIBUTION NATURAL GAS CROSSING	
		2016-10-05		
DATE OF ISSUE	2016/11/08	DRAWING NO. C-26-23.01	SHEET 3 of 3	REV. D

CROSSING SPECIFICATIONS

1. AN APPROVAL REQUEST ACCOMPANIED BY TWO (2) COPIES OF THIS DRAWING SHALL BE SUBMITTED TO THE PIPELINE ENGINEERING MANAGER, GAS ENGINEERING DIVISION, AT LEAST THREE WEEKS PRIOR TO CONSTRUCTION. A COPY OF THE APPROVED CROSSINGS APPLICATION WILL BE RETURNED WITHIN TWO WEEKS. THE DESIGNATED GAS PRODUCTION AND TRANSMISSION SUPERINTENDENT, SHOULD BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
2. PIPELINES TO BE CROSSED SHALL BE DAYLIGHTED AS PER THE PIPELINE COMPANY REQUIREMENTS.
3. WHERE THE CABLE CROSSES BELOW THE PIPELINE, THERE SHALL BE A MINIMUM VERTICAL SEPARATION OF 0.6m (2 ft) BETWEEN THE CABLE AND THE PIPELINE. WHERE THE CABLE CROSSES ABOVE THE PIPELINE, A MINIMUM VERTICAL SEPERATION OF 0.3m (1 ft) SHALL BE ACCEPTABLE, PROVIDED THAT MINIMUM DEPTH OF COVER IS MAINTAINED OVER THE CABLE.
4. THE SAME CROSSING DEPTH OF THE UNDERGROUND CABLE SHALL BE MAINTAINED FOR THE FULL WIDTH OF THE EXISTING EASEMENT BEING CROSSED.
5. IF REQUIRED, PRIMARY CABLE SHALL BE SPLICED JUST OUTSIDE THE EDGE OF THE RIGHT-OF-WAY (5m FROM POINT OF CROSSING).
6. FOR BARE CONCENTRIC NEUTRAL CABLE, AS PER DRAWING C-26-23.04, ANODES SHALL BE INSTALLED ON BOTH SIDES OF THE CROSSING AT THE EDGE OF THE RIGHT-OF-WAY.
7. FOR BARE CONCENTRIC NEUTRAL CABLE, 1 1/2, INCH DIAMETER POLYETHYLENE PIPE SHALL BE INSTALLED ACROSS THE FULL WIDTH OF THE RIGHT-OF-WAY BEING CROSSED. PIPE SHALL BE SEALED AT BOTH ENDS WITH AN APPROVED SEALING AGENT AND SELF-AMALGAMATING POLYETHYLENE TAPE.
8. THE CABLE SHALL CROSS THE EXISTING PIPELINE AT AN ANGLE OF 90° WHEREVER POSSIBLE, BUT IN NO CASE AT AN ANGLE LESS THAN 45°.
9. INDICATE PERTINENT DIMENSIONS RELATING TO CABLE DEPTH AND PIPELINE DEPTH (IF KNOWN) ON CROSSING PROFILE.
10. WHEN A PIPELINE CROSSES EXISTING SASKPOWER CABLE, THE SAME STANDARDS APPLY AS WHEN A CABLE CROSSES A PIPELINE.
11. A CROSSING PERMIT IS REQUIRED FOR ALL NEW CONSTRUCTION AND SALVAGE WORK, EVEN IF JUST DRIVING OVER THE PIPELINE RIGHT-OF-WAY. A CROSSING PERMIT IS NOT REQUIRED IF USING AN EXISTING PUBLIC ROADWAY TO DRIVE OVER THE RIGHT-OF-WAY.

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SaskPower - DISTRIBUTION STANDARDS				
APPROVAL	DESIGN CHK	DRN. ARU	TRANSGAS TRANSMISSION NATURAL GAS CROSSING	
L. MOEN	A. UHREN	CHKD.		
		2017-01-16		
DATE OF ISSUE:	2017/05/03	DRAWING NO: C-26-23.02	SHEET 1 of 3	REV. D

BILL OF MATERIAL

ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		A	B	C	
1	2 65 4X	--	4	--	SLEEVE – COMPRESSION AL
2	2 68 XX	1	--	3	SPLICE – PRIMARY CABLE
3	2 68 XX	1	--	3	SPLICE – COVER PRIMARY JACKET
4	2 68 XX	--	4	--	SPLICE- COVER SECONDARY INSULATION
5	5 12 XX	3	--	3	CRIMPIT CU
6	71 35 00	1	--	3	KIT – CABLE PREPARATION

NOTE:

1. COLUMN A IS FOR A SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLE.
2. COLUMN B IS FOR A 4-WIRE SECONDARY CABLE.
3. COLUMN C IS FOR THREE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.

ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		D	E	F	
1	2 65 4X	8	--	--	SLEEVE – COMPRESSION AL
2	2 68 XX	--	2	6	SPLICE – PRIMARY CABLE
3	2 68 XX	--	2	6	SPLICE – COVER PRIMARY JACKET
4	2 68 XX	8	--	--	SPLICE- COVER SECONDARY INSULATION
5	5 12 XX	--	6	6	CRIMPIT CU
6	71 35 00	--	2	6	KIT – CABLE PREPARATION

NOTE:

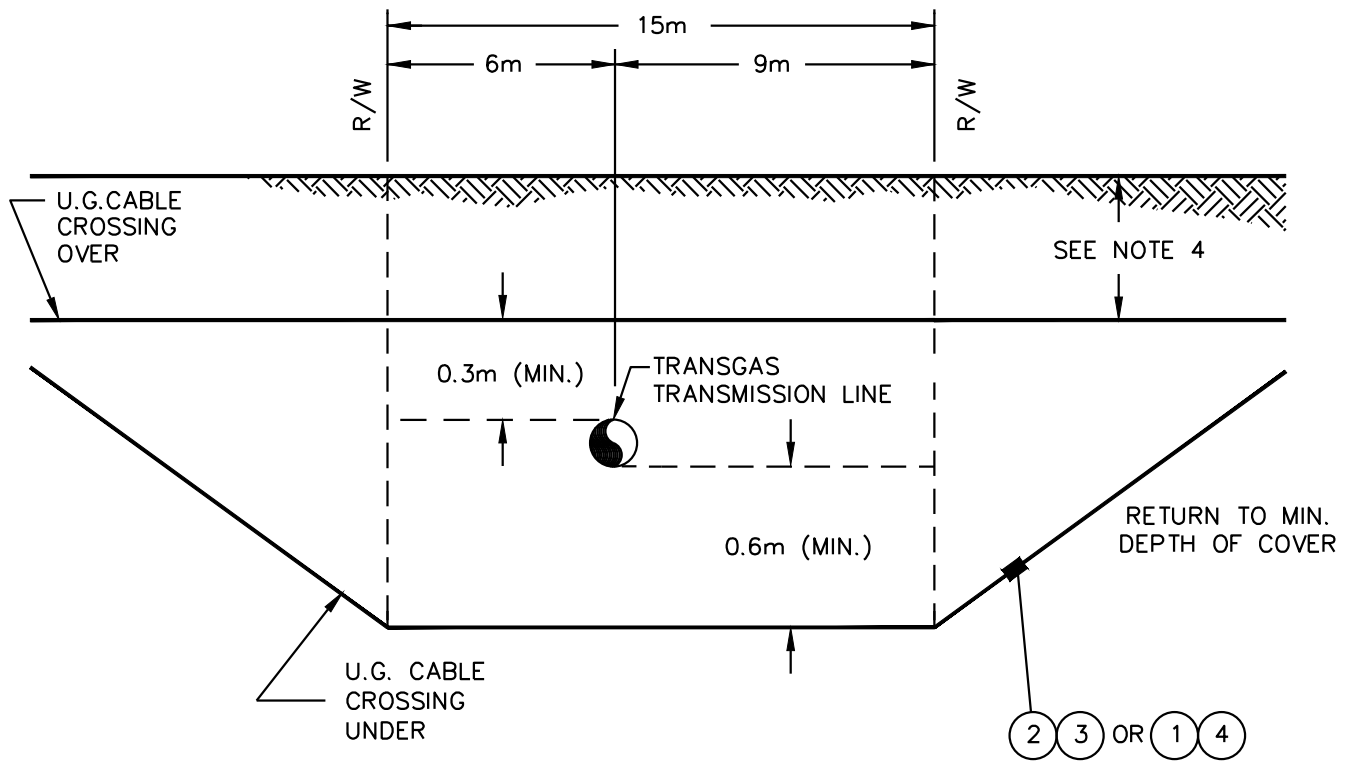
4. COLUMN D IS FOR TWO RUNS OF 4-WIRE SECONDARY CABLES.
5. COLUMN E IS FOR TWO RUNS OF SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.
6. COLUMN F IS FOR TWO RUNS OF THREE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES. (2 - 3Ø PRIMARY CIRCUITS)

SaskPower - DISTRIBUTION STANDARDS

APPROVAL	DESIGN CHK	DRN.	TRANSGAS TRANSMISSION NATURAL GAS CROSSING
		CHKD.	

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CROSSING PROFILE



NOTE:

1. R/W WIDTH SHOWN IS TYPICAL. ACTUAL WIDTH MAY VARY.
2. THE SASKENERGY TRANSMISSION LINE IS NORMALLY LOCATED 6m FROM THE WEST OR SOUTH EDGE OF RIGHT-OF-WAY.
3. DOUBLE RUNS OF THREE-PHASE PRIMARY CABLE TO BE HORIZONTALLY SEPARATED A MINIMUM OF 1.0m.
4. SEE B-14-65 FOR MINIMUM DEPTH OF COVER

SaskPower – DISTRIBUTION STANDARDS				
APPROVAL	DESIGN CHK.	DRN. D.REDEKOPP	TRANSGAS TRANSMISSION NATURAL GAS CROSSING	
L.MOEN	A.UHREN	CHKD.		
		2016-10-05		
DATE OF ISSUE	2016/11/08	DRAWING NO. C-26-23.02	SHEET 3 of 3	REV. D

UNDERGROUND PIPELINE CROSSING SPECIFICATIONS
REGULATED BY NEB

(FORMERLY KNOWN AS FOREIGN OR CROSSING SASKATCHEWAN BORDERS)

1. THIS DRAWING IS TO BE USED FOR INFORMATION PURPOSES ONLY, AND APPLIES TO PIPELINES REGULATED BY THE NATIONAL ENERGY BOARD (NEB).

A DETAILED PIPELINE CROSSING DRAWING MUST BE SUBMITTED TO AND APPROVAL OBTAINED FROM THE AUTHORITY OF THE PIPELINE WHICH ARE REGULATED BY THE NEB PRIOR TO ANY DIGGING OR CONSTRUCTION OCCURRING. REQUESTS FOR APPROVAL ARE TO BE ROUTED THROUGH THE SUPERVISOR, ENGINEERING RECORDS, AT LEAST EIGHT WEEKS PRIOR TO CONSTRUCTION.

PIPELINES REGULATED BY NEB ARE SHOWN ON GDS DWG. EFC84 (OBTAINABLE FROM DRAFT. SERVICES).

THE PIPELINE AUTHORITY SHALL BE NOTIFIED AT LEAST 72 HRS. PRIOR TO CONSTRUCTION.

THE PIPELINE COMPANY WILL DO THE LOCATING AND WILL SUPERVISE HAND EXCAVATION AND THE ACTUAL CROSSING CONSTRUCTION.

2. PIPELINES TO BE CROSSED SHALL BE DAYLIGHTED BY HAND BEFORE ANY DIGGING MACHINES ARE BROUGHT ON TO THE EXISTING PIPELINE RIGHT-OF-WAY.
3. VERTICAL SEPARATIONS BETWEEN THE CABLE AND THE PIPELINE WILL BE GOVERNED BY THE PIPELINE COMPANY'S REQUIREMENTS, BUT THE MINIMUM VERTICAL SEPARATION SHALL BE 0.6m (2 FT.)
4. THE SAME CROSSING DEPTH SHALL BE MAINTAINED FOR THE FULL WIDTH OF THE RIGHT-OF-WAY BEING CROSSED.
5. IF REQUIRED, CABLE SHALL BE SPLICED JUST OUTSIDE THE EDGE OF THE RIGHT-OF-WAY.
6. FOR BARE CONCENTRIC NEUTRAL PRIMARY CABLES, ANODES SHALL BE INSTALLED ON BOTH SIDES OF THE CROSSING OUTSIDE THE EDGE OF RIGHT-OF-WAY, AS PER DRAWING C-26-23-04.
7. FOR UNJACKETED CONCENTRIC NEUTRAL PRIMARY CABLES, 1 1/2 INCH DIAMETER POLYETHYLENE SHALL BE INSTALLED ACROSS THE FULL WIDTH OF THE RIGHT-OF-WAY BEING CROSSED. PIPE SHALL BE SEALED AT BOTH ENDS WITH PUTTY TAPE AND ELECTRICAL VINYL TAPE.
8. FOR CROSSING GREATER THAN 30m, USE JACKETED PRIMARY CABLE.
9. THE CABLE SHALL CROSS THE EXISTING PIPELINE AT AN ANGLE OF 90° WHEREVER POSSIBLE, BUT IN NO CASE AT AN ANGLE LESS THAN 45°.
10. INDICATE NAME OF PIPELINE COMPANY AND PERTINENT DIMENSIONS RELATING TO CABLE AND PIPELINE DEPTHS (IF KNOWN) ON SKETCH.
11. FOR CROSSINGS OF TC ENERGY CORPORATION PIPELINES ONLY, PLASTIC CABLE MARKER TAPE WILL BE SUPPLIED AND INSTALLED AT 0.5m DEPTH BELOW SURFACE BY TC ENERGY CORPORATION.
12. FOR CROSSINGS OF SOUTH SASKATCHEWAN PIPELINE CO. PIPELINES, MARKING TAPE (SUPPLIED BY SASKPOWER) WILL BE INSTALLED 0.3m ABOVE THE PIPELINE OR CABLE, WHICH EVER IS HIGHER ACROSS THE FULL WIDTH OF THE PIPELINE RIGHT OF WAY.
13. WHEN A PIPELINE CROSSES EXISTING SASKPOWER CABLE, THE SAME STANDARDS APPLY AS WHEN A CABLE CROSSES A PIPELINE.

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SCALE: N.T.S.

SaskPower – DISTRIBUTION STANDARDS				
APPROVAL	DESIGN CHK.	DRN.D.REDEKOPP	CROSSING OF PIPELINES REGULATED BY THE NEB	
L.MOEN	L.MOEN	CHKD.		
		2021-07-06		
DATE OF ISSUE	2021-08-16	DRAWING NO. C-26-23.03	SHEET 1 of 4	REV. D

BILL OF MATERIAL

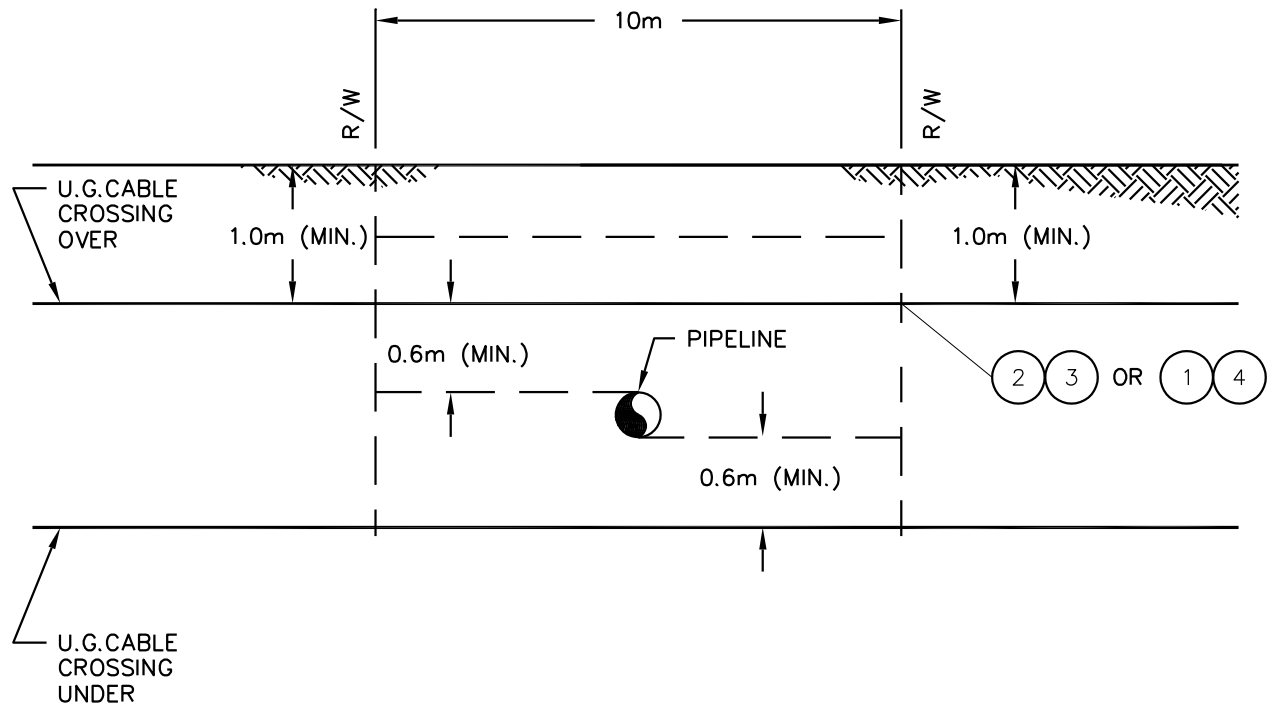
ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		A	B	C	
1	2 65 4X	--	4	--	SLEEVE – COMPRESSION – AL
2	2 68 XX	1	--	3	SPLICE – PRIMARY CABLE
3	2 68 XX	1	--	3	SPLICE – COVER – PRIMARY JACKET
4	2 68 XX	--	4	--	SPLICE – COVER – SECONDARY INSULATION
5	5 12 XX	1	--	3	CRIMPIT – CU
6	71 35 00	1	--	3	CABLE PREPARATION KIT
<p>NOTE:</p> <ol style="list-style-type: none"> 1. COLUMN 'A' IS FOR A SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLE. 2. COLUMN 'B' IS FOR A 4-WIRE SECONDARY CABLE. 3. COLUMN 'C' IS FOR THREE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES. 					

ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		D	E	F	
1	2 65 4X	8	--	--	SLEEVE – COMPRESSION – AL
2	2 68 XX	--	2	6	SPLICE – PRIMARY CABLE
3	2 68 XX	--	2	6	SPLICE – COVER – PRIMARY JACKET
4	2 68 XX	8	--	--	SPLICE – COVER – SECONDARY INSULATION
5	5 12 XX	--	2	6	CRIMPIT – CU
6	71 35 00	--	2	6	CABLE PREPARATION KIT
<p>NOTE:</p> <ol style="list-style-type: none"> 4. COLUMN 'D' IS FOR TWO RUNS OF 4-WIRE SECONDARY CABLES. 5. COLUMN 'E' IS FOR TWO RUNS OF SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES. 6. COLUMN 'F' IS FOR TWO RUNS OF THREE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES. 					

SaskPower - DISTRIBUTION STANDARDS

APPROVAL	DESIGN CHK	DRN. LM	CROSSING OF PIPELINES REGULATED BY THE NEB
L MOEN	P PATEL	CHKD. PP	
		2021-04-06	
DATE OF ISSUE: 2021-08-16		DRAWING NO: C-26-23.03	SHEET 2 OF 4
			REV. H

CROSSING PROFILE



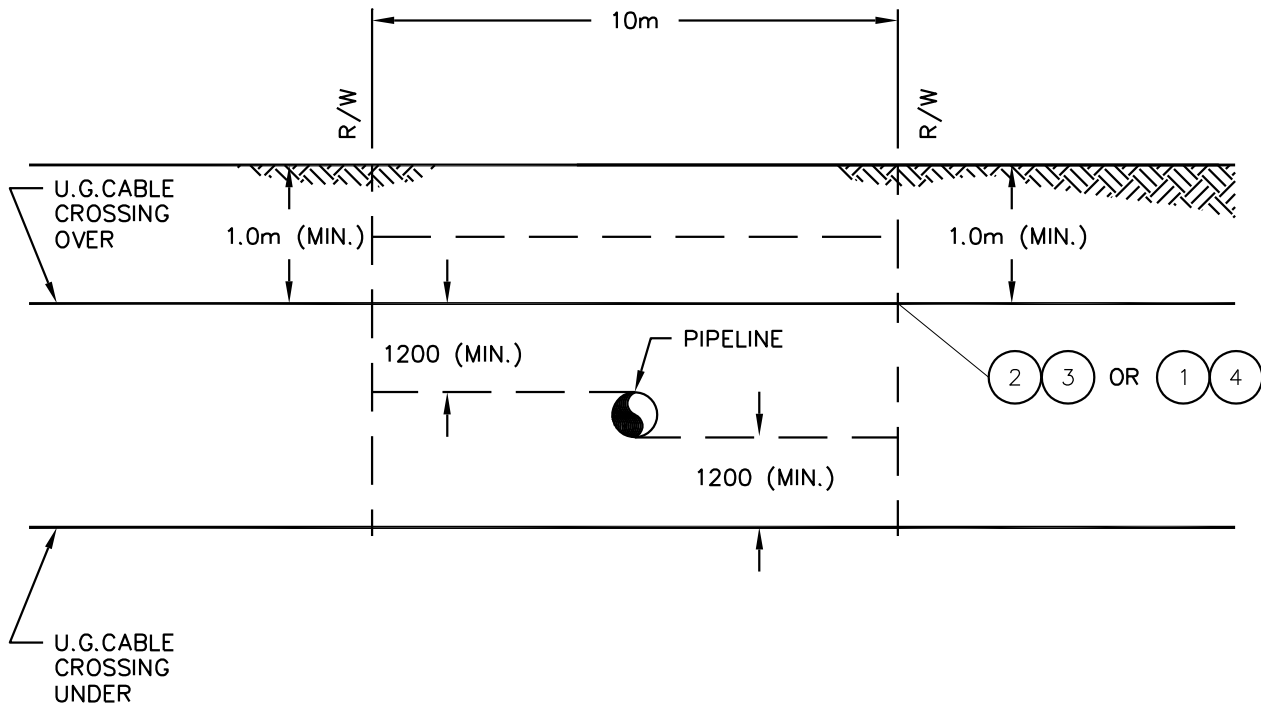
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NOTES:

1. DOUBLE RUNS OF THREE-PHASE PRIMARY CABLE TO BE HORIZONTALLY SEPARATED A MINIMUM OF 1.0m.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.

SaskPower – DISTRIBUTION STANDARDS				
APPROVAL	DESIGN CHK.	DRN.D.REDEKOPP	CROSSING OF PIPELINES REGULATED BY THE NEB	
L.MOEN	L.MOEN	CHKD.		
		2021-07-06		
DATE OF ISSUE	2021-08-16	DRAWING NO.	C-26-23.03	SHEET 3 of 4
				REV. F

CROSSING PROFILE



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NOTES:

1. DOUBLE RUNS OF THREE-PHASE PRIMARY CABLE TO BE HORIZONTALLY SEPARATED A MINIMUM OF 1.0m.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.

SaskPower – DISTRIBUTION STANDARDS

APPROVAL L.MOEN	DESIGN CHK. L.MOEN	DRN.D.REDEKOPP CHKD. 2021-07-06	CROSSING OF PIPELINES REGULATED BY TC ENERGY CORPORATION
DATE OF ISSUE	2021-08-16	DRAWING NO. C-26-23.03	SHEET 4 of 4 REV. -

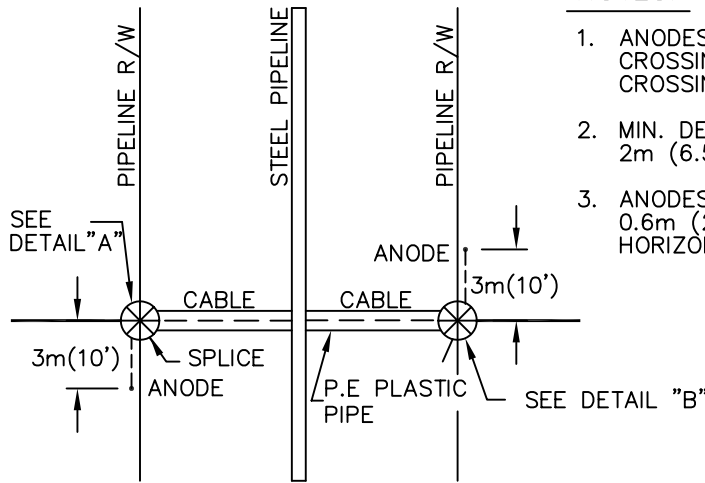
BILL OF MATERIAL

ITEM NO.	CODE NO.	QUANTITY		DESCRIPTION
		A	B	
1	2-83-02	0.5	1	WIRE-CU #2/7 STR
2	3-90-01	0	15	PIPE-1 1/2" BLACK POLYETHYLENE
2	2-94-22			CABLE-#2 SOLID AL CN JACKETED (FOR CROSSINGS GREATER THAN 30 m)
3	2-68-XX	1	2	SPLICE
4	5-12-01	3	4	CRIMPIT-CU
5	7-72-33	0.2	0.2	TAPE ELECTRICAL VINYL-3/4" x 30'
6	71-35-00	1	2	KIT-CABLE PREPARATION
7	71-42-03	0.2	0.2	TAPE PUTTY SEAL-1/2" x 60"
8	12-120-009	2	2	ANODES-CATHODIC PROTECTION 4 kg
<p>NOTE:</p> <p>1. COLUMN A IS INSTALL ANODES ONLY.</p> <p>2. COLUMN B IS INSTALL ANODES AT PIPELINE CROSSING EXISTING CABLE.</p>				

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SaskPower - DISTRIBUTION STANDARDS

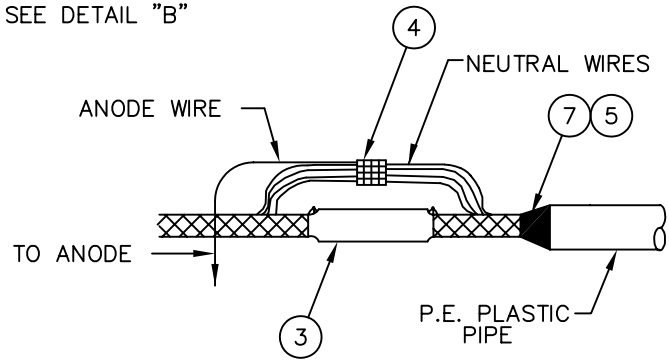
DRN.	DESIGN CHK.	APPROVAL	ANODE INSTALLATION
CHKD.			
DATE	DATE	DATE	
DATE OF ISSUE 96-07-26		DRAWING NO: C-26-23.04	SHEET 1 OF 2 REV. 0



PLAN VIEW

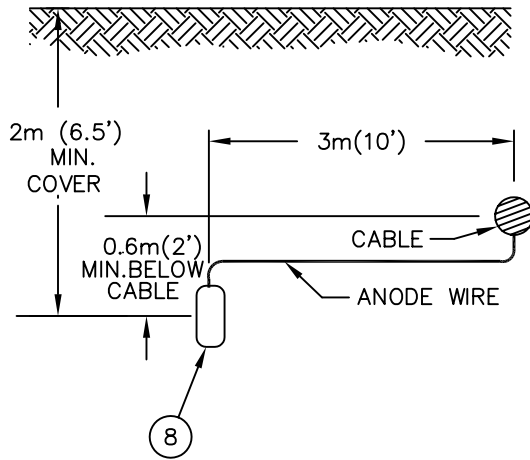
NOTES:

1. ANODES TO BE INSTALLED ON BOTH SIDES OF CROSSING AT EDGE OF RIGHT-OF-WAY WHEN CROSSING STEEL GAS TRANSMISSION PIPELINES.
2. MIN. DEPTH OF COVER OVER ANODES TO BE 2m (6.5').
3. ANODES TO BE INSTALLED AT A MIN. OF 0.6m (2') BELOW AND 3m (10') OUT HORIZONTALLY FROM CABLE.

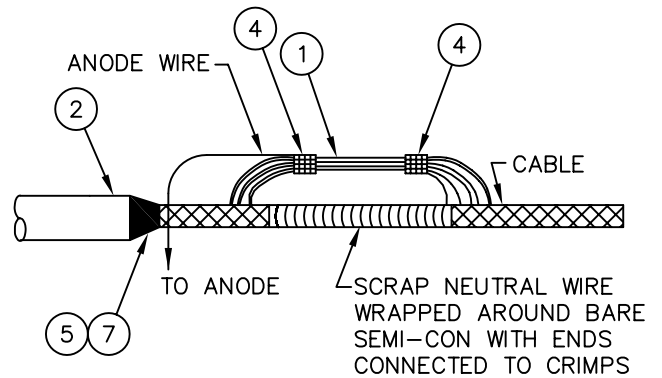


DETAIL "A"

SPLICE LOCATION



PROFILE



DETAIL "B"

NON-SPLICE LOCATION

SaskPower - DISTRIBUTION STANDARDS

DRN. A.B.W	DESIGN CHK.	APPROVAL	ANODE INSTALLATION
CHKD. FTK			
DATE 87-05-25	DATE	DATE	
DATE OF ISSUE	DRAWING NO. C-26-23.04	SHEET 2 of 2	REV. A

UNDERGROUND PIPELINE CROSSING SPECIFICATIONS

NOT REGULATED BY NEB

(EXCEPT SASKENERGY)

1. APPROVAL MUST BE OBTAINED FROM THE PIPELINE AUTHORITY PRIOR TO ANY DIGGING OR CONSTRUCTION OCCURRING. IF THE PIPELINE AUTHORITY REQUIRES SASKPOWER TO SIGN A LEGAL AGREEMENT, THEN SUCH AN AGREEMENT IS TO BE SENT TO SASKPOWER'S LEGAL DEPT. (H.O. REGINA).

THE PIPELINE AUTHORITY SHALL BE NOTIFIED AT LEAST 72 HRS. PRIOR TO CONSTRUCTION.

THE PIPELINE COMPANY WILL DO THE LOCATING AND WILL SUPERVISE HAND EXCAVATION AND THE ACTUAL CROSSING CONSTRUCTION.
2. PIPELINES TO BE CROSSED SHALL BE DAYLIGHTED BY HAND BEFORE ANY DIGGING MACHINES ARE BROUGHT ON TO THE EXISTING PIPELINE RIGHT-OF-WAY.
3. VERTICAL SEPARATIONS BETWEEN THE CABLE AND THE PIPELINE WILL BE GOVERNED BY THE PIPELINE COMPANY'S REQUIREMENTS, BUT THE MINIMUM VERTICAL SEPARATION SHALL BE 0.6m (2 FT.)
4. THE SAME CROSSING DEPTH SHALL BE MAINTAINED FOR THE FULL WIDTH OF THE RIGHT-OF-WAY BEING CROSSED.
5. IF REQUIRED, CABLE SHALL BE SPLICED JUST OUTSIDE THE EDGE OF THE RIGHT-OF-WAY.
6. FOR BARE CONCENTRIC NEUTRAL PRIMARY CABLES, ANODES SHALL BE INSTALLED ON BOTH SIDES OF THE CROSSING OUTSIDE THE EDGE OF RIGHT-OF-WAY, AS PER DRAWING C-26-23-04.
7. FOR UNJACKETED CONCENTRIC NEUTRAL PRIMARY CABLES, 1 1/2 INCH DIAMETER POLYETHYLENE PIPE SHALL BE INSTALLED ACROSS THE FULL WIDTH OF THE RIGHT-OF-WAY BEING CROSSED. PIPE SHALL BE SEALED AT BOTH ENDS WITH PUTTY TAPE AND ELECTRICAL VINYL TAPE.
8. FOR CROSSING GREATER THAN 30m, USE JACKETED PRIMARY CABLE.
9. THE CABLE SHALL CROSS THE EXISTING PIPELINE AT AN ANGLE OF 90° WHEREVER POSSIBLE, BUT IN NO CASE AT AN ANGLE LESS THAN 45°.
10. INDICATE NAME OF PIPELINE COMPANY AND PERTINENT DIMENSIONS RELATING TO CABLE AND PIPELINE DEPTHS (IF KNOWN) ON SKETCH.
11. WHEN A PIPELINE CROSSES EXISTING SASKPOWER CABLE, THE SAME STANDARDS APPLY AS WHEN A CABLE CROSSES A PIPELINE.

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SaskPower – DISTRIBUTION STANDARDS

DRN. R. LANG	DESIGN CHK.	APPROVAL	CROSSING OF PIPELINES NOT REGULATED BY THE NEB
CHKD.			
DATE 97-10-07	DATE	DATE	
DATE OF ISSUE		DRAWING NO. C-26-23.05	SHEET 1 OF 3 REV. 0

BILL OF MATERIAL

ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		A	B	C	
1	2 65 4X	--	4	--	SLEEVE – COMPRESSION AL
2	2 68 XX	1	--	3	SPLICE – PRIMARY CABLE
3	2 68 XX	1	--	3	SPLICE – COVER PRIMARY JACKET
4	2 68 XX	--	4	--	SPLICE- COVER SECONDARY INSULATION
5	5 12 XX	1	--	3	CRIMPIT CU
6	71 35 00	1	--	3	KIT – CABLE PREPARATION
<p>NOTE:</p> <p>1. COLUMN A IS FOR A SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLE.</p> <p>2. COLUMN B IS FOR A 4-WIRE SECONDARY CABLE.</p> <p>3. COLUMN C IS FOR THREE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.</p>					

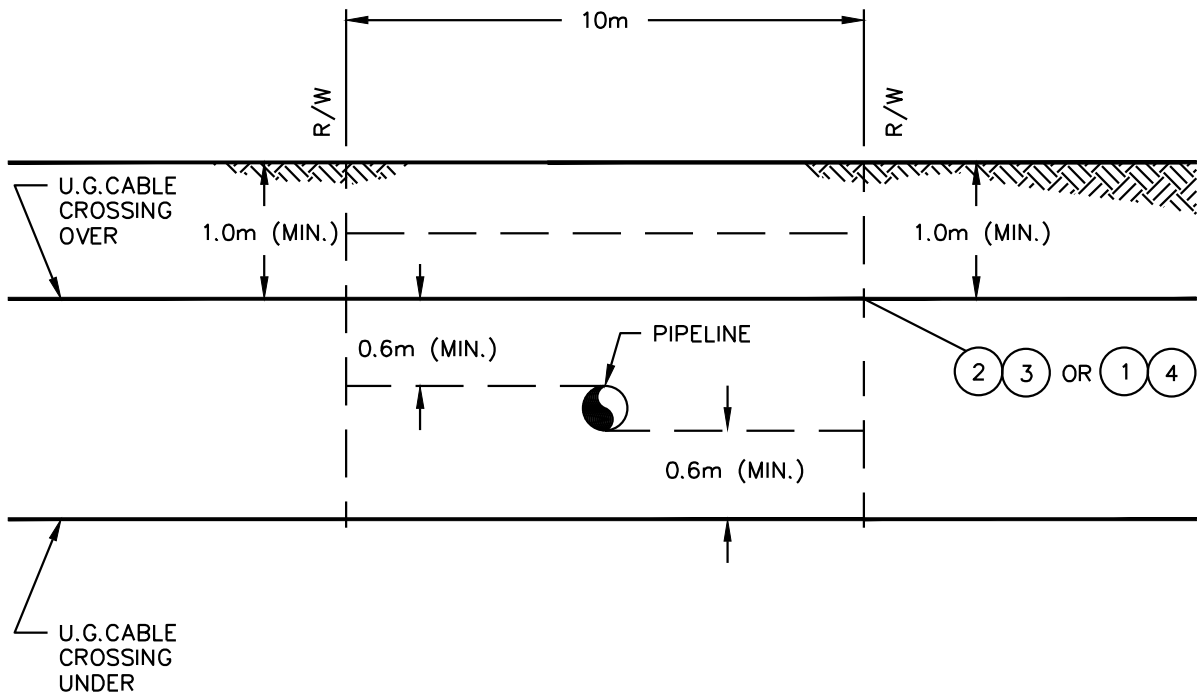
ITEM NO.	CODE NO.	QUANTITY			DESCRIPTION
		D	E	F	
1	2 65 4X	8	--	--	SLEEVE – COMPRESSION AL
2	2 68 XX	--	2	6	SPLICE – PRIMARY CABLE
3	2 68 XX	--	2	6	SPLICE – COVER PRIMARY JACKET
4	2 68 XX	8	--	--	SPLICE- COVER SECONDARY INSULATION
5	5 12 XX	--	2	6	CRIMPIT CU
6	71 35 00	--	2	6	KIT – CABLE PREPARATION
<p>NOTE:</p> <p>4. COLUMN D IS FOR TWO RUNS OF 4-WIRE SECONDARY CABLES.</p> <p>5. COLUMN E IS FOR TWO RUNS OF SINGLE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.</p> <p>6. COLUMN F IS FOR TWO RUNS OF THREE-PHASE PRIMARY JACKETED CONCENTRIC NEUTRAL CABLES.</p>					

SaskPower - DISTRIBUTION STANDARDS

APPROVAL	DESIGN CHK	DRN.	CROSSING OF PIPELINES NOT REGULATED BY THE NEB
		CHKD.	
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			REV. C

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CROSSING PROFILE



NOTE:

1. DOUBLE RUNS OF THREE-PHASE PRIMARY CABLE TO BE HORIZONTALLY SEPARATED A MINIMUM OF 1.0m.

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APPROVAL	DESIGN CHK.	DRN. D.REDEKOPP	CROSSING OF PIPELINES NOT REGULATED BY THE NEB	
L.MOEN	A.UHREN	CHKD.		
		2016-10-05		
DATE OF ISSUE	2016/11/08	DRAWING NO. C-26-23.05	SHEET 3 of 3	REV. B