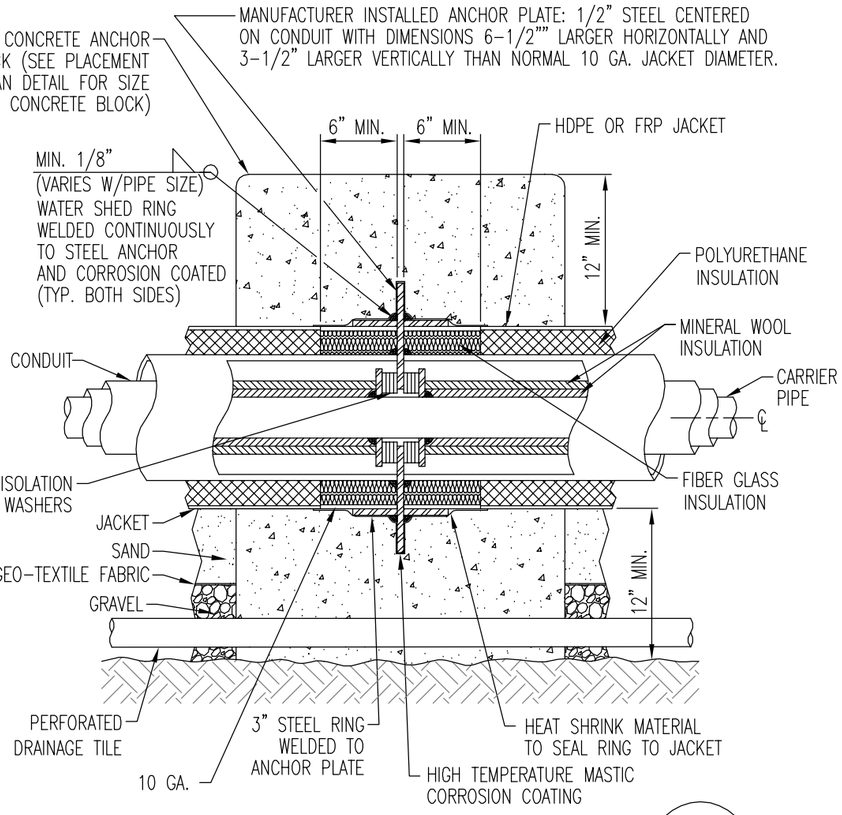
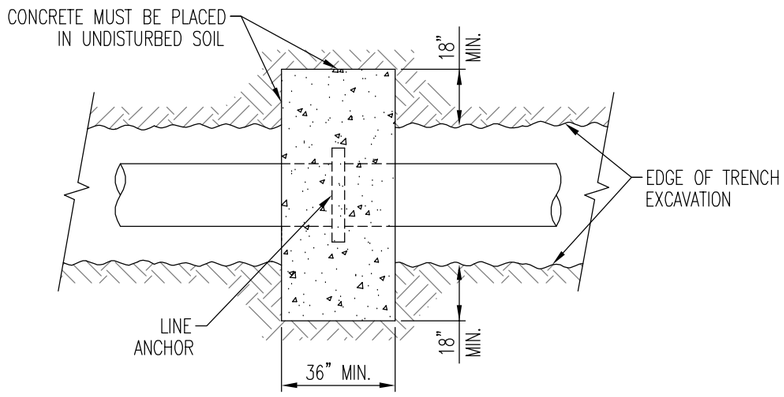


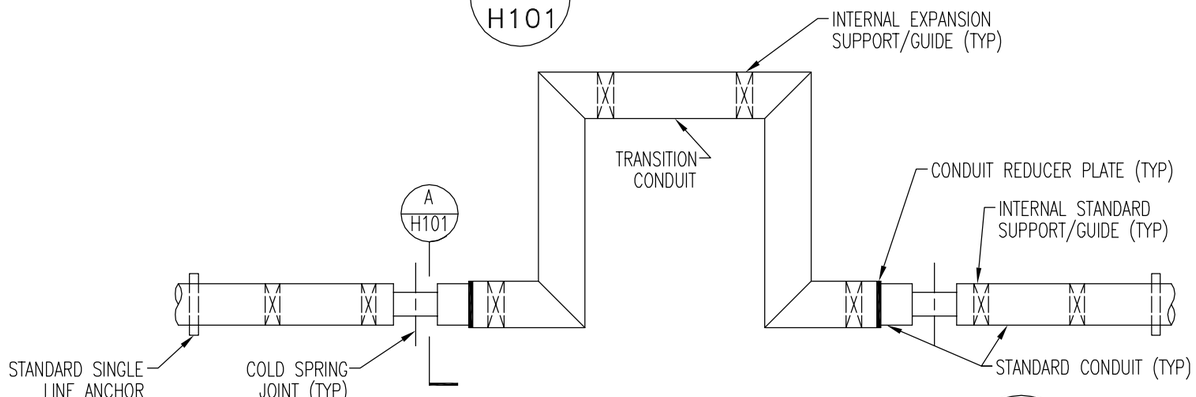
LINE ANCHOR ELEVATION 1 / H101



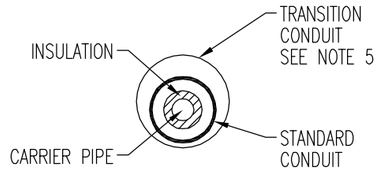
ANCHOR PLACEMENT PLAN 2 / H101

NOTES:

1. SIZE OF EXPANSION LOOPS SHALL BE BASED ON JOB REQUIREMENTS.
2. SPECIFIC JOBSITE REQUIREMENTS AND DIFFERING FIELD CONDITIONS WILL DICTATE WHICH TYPE OF OVERSIZED TRANSITION CONDUIT WILL BE UTILIZED (CIRCULAR OR ELLIPTICAL).
3. EXPANSION TYPE SUPPORTS SHALL BE UTILIZED TO COMPENSATE FOR THE NECESSARY THERMAL EXPANSION WHEREVER A CHANGE OF DIRECTION (90° ELLS, 45° ELLS, ZEES, TEES, LOOPS, ETC.) OCCURS IN THE CONDUIT SYSTEM. THIS INCLUDES EXPANSION SUPPORTS IN EACH LEG AS NECESSARY TO COMPENSATE FOR THERMAL EXPANSION IN BOTH DIRECTIONS.
4. OVERSIZED TRANSITION CONDUIT SHALL ALLOW FOR MOVEMENT OF CARRIER PIPE.
5. TRANSITION CONDUIT SHALL BE 10 GA. THICK CARBON STEEL WELDED AT BOTH CONDUITS IF REQUIRED FOR EXPANSION.
6. DO NOT REMOVE FACTORY INSTALLED SHIPPING BRACES AT EXPANSION LOOP JOINTS UNTIL ALL CARRIER PIPE WELDS HAVE BEEN COMPLETED.
7. COLD SPRING OF CARRIER PIPE SHALL BE PERFORMED IN THE FIELD AFTER ALL PIECES ARE WELDED/INSTALLED AND ATTACHED TO ANCHOR POINTS. POINT OF COLD SPRING SHALL TYPICALLY BE AT SECOND FIELD JOINT FROM 90° ELBOW DUE TO ALIGNMENT AND STIFFNESS OF THE PIPE. CARRIER PIPE OFFSETS, INSTALLATION OF CARRIER PIPE OFF-CENTER, CAN BE USED IN LIEU OF COLD SPRINGING IN THE FIELD. ALL PIPE OFFSETS MUST BE PERFORMED AT THE FACTORY BEFORE SHIPPING TO JOBSITE.
8. ANCHOR PLATE SHALL HAVE OPENINGS TO ALLOW SYSTEM TO BE VENTED AND DRAINED.



SINGLE PIPE EXPANSION LOOP 3 / H101



OUTER CONDUIT TRANSITION SECTION A / H101

DOYON UTILITIES LLC
Jimmy Huntington Building
714 Fourth Avenue, Suite 201
Fairbanks, Alaska 99701
Telephone (907) 455-1500
Fax (907) 455-6788

Date:	14 FEB 2010
Scale:	NONE
Designed By:	RAH
Drawn By:	EMS
Checked By:	NEM

DIRECT BURIED HEAT DISTRIBUTION SYSTEM
EXPANSION LOOPS & ANCHORS

DESIGN & CONSTRUCTION STANDARDS

Drawing No.
UES-DD-H101