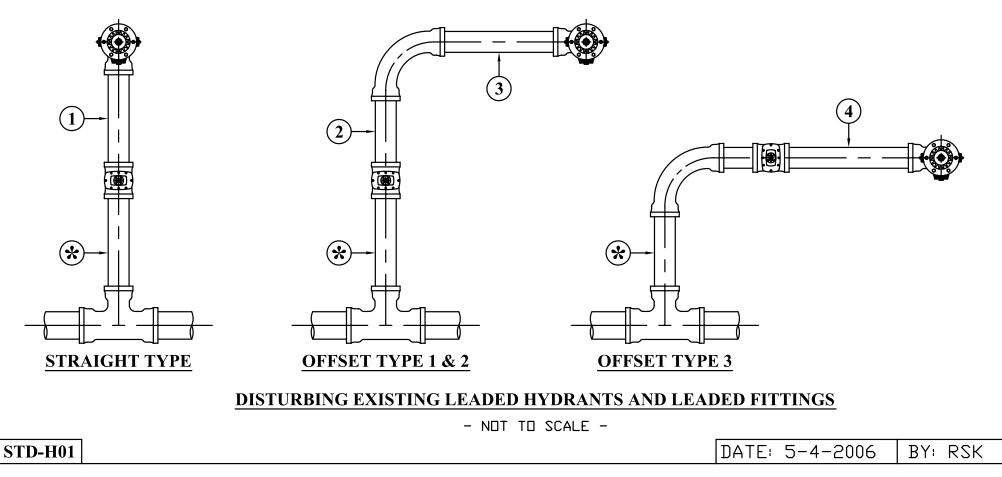
# CLEVELAND DIVISION OF WATER CONSTRUCTION STANDARDS

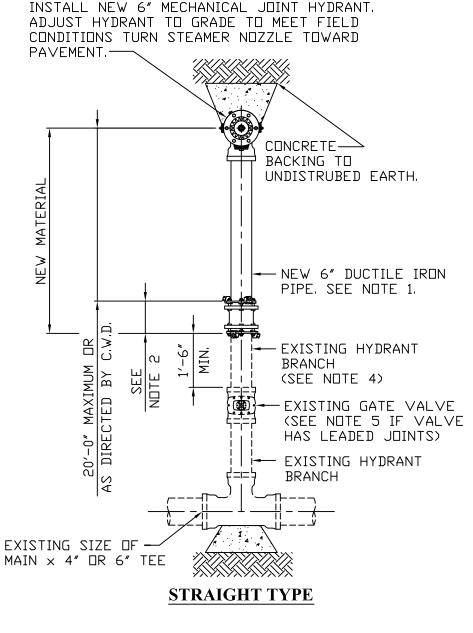
Hydrant Details

★ IF CUTS ARE REQUIRED BETWEEN THE TEE AND VALVE, TOTAL REPLACEMENT WILL BE REQUIRED. SEE DETAILS STD-H06 STD-H07.

★ ★ IF EXISTING HYDRANT BRANCH VALVE IS 4" IN DIAMETER TOTAL REPLACEMENT WILL BE REQUIRED UNLESS SPECIFIC PERMISSION IS GRANTED BY THE DIVISION OF WATER ON A CASE BY CASE BASIS.

CUT AT	SEE DETAIL
	STD-H02 FOR STRAIGHT TYPE
2	STD-H03 FOR OFFSET TYPE 1
3	STD-H04 FOR OFFSET TYPE 2
4	STD-H05 FOR OFFSET TYPE 3
TOTAL REPLACEMENT	STD-H06 FOR STRAIGHT TYPE STD-H07 FOR OFFSET TYPE 1 & TYPE 2 & TYPE 3





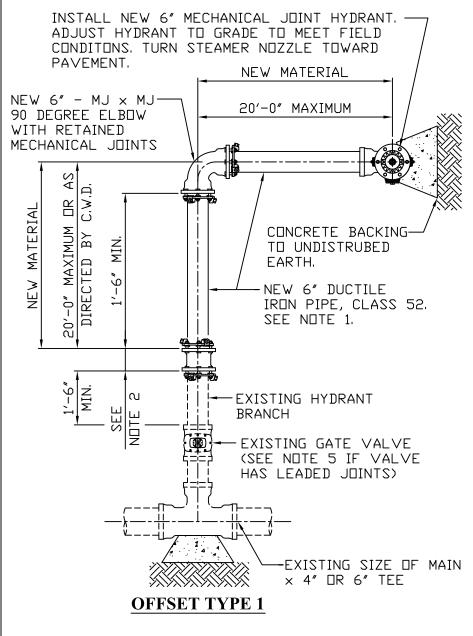
- 1) PLAIN END × PLAIN END DUCTILE IRON PIPE AS SPECIFIED (CUT TO SUIT).
- 2) CONNECTION SHALL BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250, RETAINED MECHANICAL JOINT REDUCERS WHERE EXISTING PIPE IS 4" IN DIAMETER, OR COMPRESSION COUPLINGS WITH ROD AND CLAMPS AS DIRECTED BY C.W.D. INSPECTOR.

COMPRESSION COUPLINGS SHALL BE OF A GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END IRON PIPE. EACH COUPLING SHALL CONSIST OF ONE (1) MIDDLE RING, WITHOUT STOPS; TWO (2) FOLLOWER GLANDS; TWD (2) RUBBER-COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS; AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS (ASTM A276/A193/194, TYPE 304, EXTRA HEAVY HEX) TO PROPERLY COMPRESS THE GASKETS. MIDDLE RING AND FOLLOWER GLANDS SHALL BE OF EITHER STEEL OR DUCTILE IRON (ASTM-A536). THE COMPRESSION COUPLING SHALL BE WITHOUT STOPS AND BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI AND SHALL BE EQUAL TO THE DRESSER STYLE No's 38, 138 (STRAIGHT TYPE), 162 (TRANSITION TYPE), 253 (REDUCING TYPE); OR SMITH-BLAIR 441 (STRAIGHT AND TRANSITION TYPE), R441 (REDUCING TYPE); OR ROMAC STYLE 501 (STRAIGHT AND TRANSITION TYPE), STYLE RC501 (REDUCING TYPE).

IF THE BRANCH IS TO BE SHORTENED, NO NEW IS PIPE REQUIRED.

- 3) ALL BOLTS AND NUTS ON ALL MECHANICAL JOINTS, INCLUDING THOSE ON THE "RETAINED" TYPE, SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS "C", METHOD "B".
- 4) IF EXISTING PIPING IS 4" USE 4" TO 6" REDUCING MJ REDUCER DR REDUCING TRANSITION COUPLING WITH ROD & CLAMP IF APPROVED BY CWD.
- 5) IN HIGH PRESSURE AREAS THE EXISTING VALVE MAY NEED TO BE RESTRAINED TO EXISTING TEE OR FITTING USING ROD & CLAMP AS DIRECTED BY CWD. SEE STD-H01 FOR EXISTING LEAD JOINT REQUIREMENTS.

#### EXTEND, SHORTEN AND ADJUST HYDRANT TO GRADE, STRAIGHT TYPE



- 1) PLAIN END × PLAIN END DUCTILE IRON PIPE AS SPECIFIED (CUT TO SUIT).
- 2) CONNECTION SHALL BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250, RETAINED MECHANICAL JOINT REDUCERS WHERE EXISTING PIPE IS 4" IN DIAMETER, OR COMPRESSION COUPLINGS WITH ROD AND CLAMPS AS DIRECTED BY C.W.D. INSPECTOR.

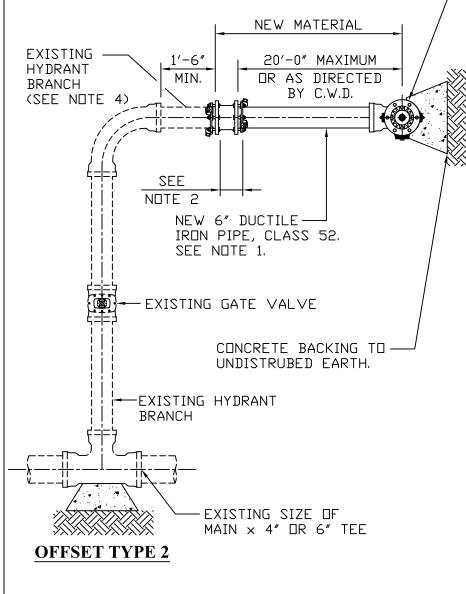
COMPRESSION COUPLINGS SHALL BE OF A GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END IRON PIPE. EACH COUPLING SHALL CONSIST OF ONE (1) MIDDLE RING, WITHOUT STOPS; TWO (2) FOLLOWER GLANDS; TWD (2) RUBBER-COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS; AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS (ASTM A276/A193/194, TYPE 304, EXTRA HEAVY HEX) TO PROPERLY COMPRESS THE GASKETS. MIDDLE RING AND FOLLOWER GLANDS SHALL BE OF EITHER STEEL OR DUCTILE IRON (ASTM-A536). THE COMPRESSION COUPLING SHALL BE WITHOUT STOPS AND BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI AND SHALL BE EQUAL TO THE DRESSER STYLE No's 38, 138 (STRAIGHT TYPE), 162 (TRANSITION TYPE), 253 (REDUCING TYPE); OR SMITH-BLAIR 441 (STRAIGHT AND TRANSITION TYPE), R441 (REDUCING TYPE); OR ROMAC STYLE 501 (STRAIGHT AND TRANSITION TYPE), STYLE RC501 (REDUCING TYPE).

IF THE BRANCH IS TO BE SHORTENED, NO NEW IS PIPE REQUIRED.

- 3) ALL BOLTS AND NUTS ON ALL MECHANICAL JOINTS, INCLUDING THOSE ON THE "RETAINED" TYPE, SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS "C", METHOD "B".
- 4) IF EXISTING PIPING IS 4" USE 4" TO 6" REDUCING MJ REDUCER DR REDUCING TRANSITION COUPLING WITH ROD & CLAMP IF APPROVED BY CWD.
- 5) IN HIGH PRESSURE AREAS THE EXISTING VALVE MAY NEED TO BE RESTRAINED TO EXISTING TEE OR FITTING USING ROD & CLAMP AS DIRECTED BY CWD. SEE STD-H01 FOR EXISTING LEAD JOINT REQUIREMENTS.

## EXTEND, SHORTEN AND ADJUST HYDRANT TO GRADE, OFFSET TYPE 1

INSTALL NEW 6" MECHANICAL JOINT HYDRANT. ADJUST-HYDRANT TO GRADE TO MEET FIELD CONDITIONS. TURN STEAMER NOZZLE TOWARD PAVEMENT. /



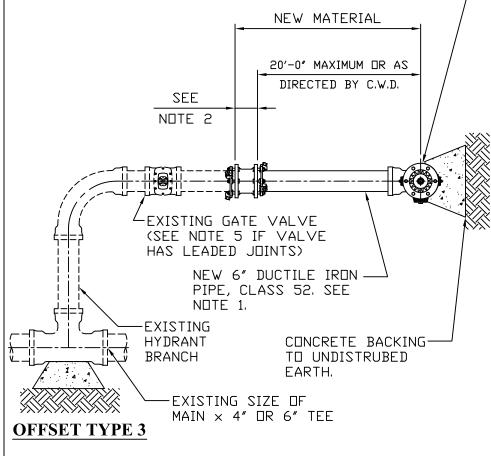
- 1) PLAIN END × PLAIN END DUCTILE IRON PIPE AS SPECIFIED (CUT TO SUIT).
- 2) CONNECTION SHALL BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250, RETAINED MECHANICAL JOINT REDUCERS WHERE EXISTING PIPE IS 4" IN DIAMETER, OR COMPRESSION COUPLINGS WITH ROD AND CLAMPS AS DIRECTED BY C.W.D. INSPECTOR.

COMPRESSION COUPLINGS SHALL BE OF A GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END IRON PIPE. EACH COUPLING SHALL CONSIST OF ONE (1) MIDDLE RING, WITHOUT STOPS; TWO (2) FOLLOWER GLANDS; TWO (2) RUBBER-COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS; AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS (ASTM A276/A193/194, TYPE 304, EXTRA HEAVY HEX) TO PROPERLY COMPRESS THE GASKETS, MIDDLE RING AND FOLLOWER GLANDS SHALL BE OF EITHER STEEL OR DUCTILE IRON (ASTM-A536). THE COMPRESSION COUPLING SHALL BE WITHOUT STOPS AND BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI AND SHALL BE EQUAL TO THE DRESSER STYLE No'S 38, 138 (STRAIGHT TYPE), 162 (TRANSITION TYPE), 253 (REDUCING TYPE); OR SMITH-BLAIR 441 (STRAIGHT AND TRANSITION TYPE), R441 (REDUCING TYPE); OR ROMAC STYLE 501 (STRAIGHT AND TRANSITION TYPE), STYLE RC501 (REDUCING TYPE).

IF THE BRANCH IS TO BE SHORTENED, NO NEW IS PIPE REQUIRED.

- 3) ALL BOLTS AND NUTS ON ALL MECHANICAL JOINTS, INCLUDING THOSE ON THE "RETAINED" TYPE, SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS "C", METHOD "B".
- 4) IF EXISTING PIPING IS 4" USE 4" TO 6" REDUCING MJ REDUCER OR REDUCING TRANSITION COUPLING WITH ROD & CLAMP IF APPROVED BY CWD.
- 5) IN HIGH PRESSURE AREAS THE EXISTING VALVE MAY NEED TO BE RESTRAINED TO EXISTING TEE OR FITTING USING ROD & CLAMP AS DIRECTED BY CWD. SEE STD-H01 FOR EXISTING LEAD JOINT REQUIREMENTS.

## EXTEND, SHORTEN AND ADJUST HYDRANT TO GRADE, OFFSET TYPE 2



1) PLAIN END  $\times$  PLAIN END DUCTILE IRON PIPE AS SPECIFIED (CUT TO SUIT).

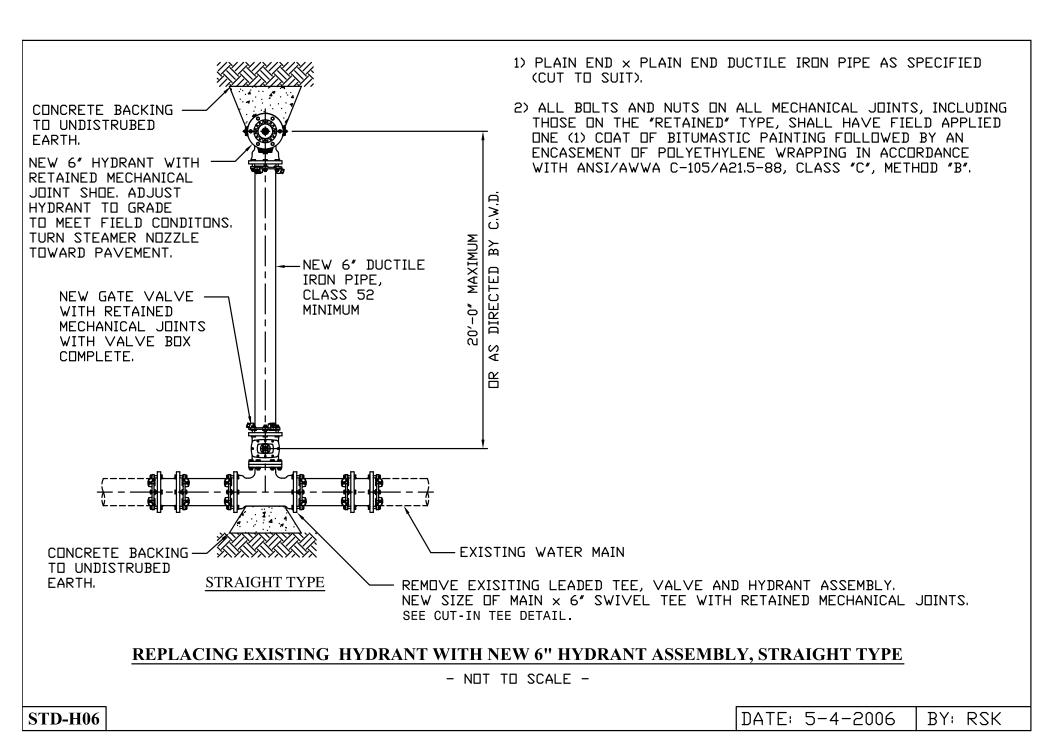
2) CONNECTION SHALL BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250, RETAINED MECHANICAL JOINT REDUCERS WHERE EXISTING PIPE IS 4" IN DIAMETER, OR COMPRESSION COUPLINGS WITH ROD AND CLAMPS AS DIRECTED BY C.W.D. INSPECTOR.

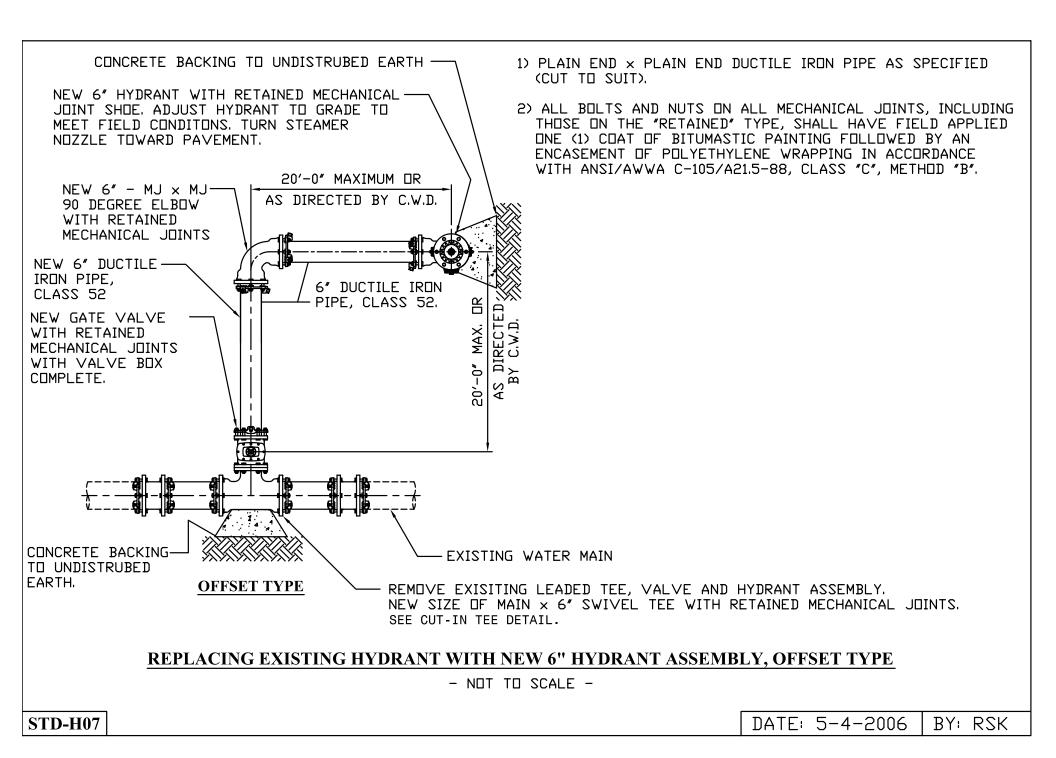
COMPRESSION COUPLINGS SHALL BE OF A GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END IRON PIPE, EACH COUPLING SHALL CONSIST OF ONE (1) MIDDLE RING, WITHOUT STOPS; TWO (2) FOLLOWER GLANDS; TWO (2) RUBBER-COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS; AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS (ASTM A276/A193/194, TYPE 304, EXTRA HEAVY HEX) TO PROPERLY COMPRESS THE GASKETS, MIDDLE RING AND FOLLOWER GLANDS SHALL BE OF EITHER STEEL OR DUCTILE IRON (ASTM-A536). THE COMPRESSION COUPLING SHALL BE WITHOUT STOPS AND BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI AND SHALL BE EQUAL TO THE DRESSER STYLE No's 38, 138 (STRAIGHT TYPE), 162 (TRANSITION TYPE), 253 (REDUCING TYPE); OR SMITH-BLAIR 441 (STRAIGHT AND TRANSITION TYPE), R441 (REDUCING TYPE); OR ROMAC STYLE 501 (STRAIGHT AND TRANSITION TYPE), STYLE RC501 (REDUCING TYPE).

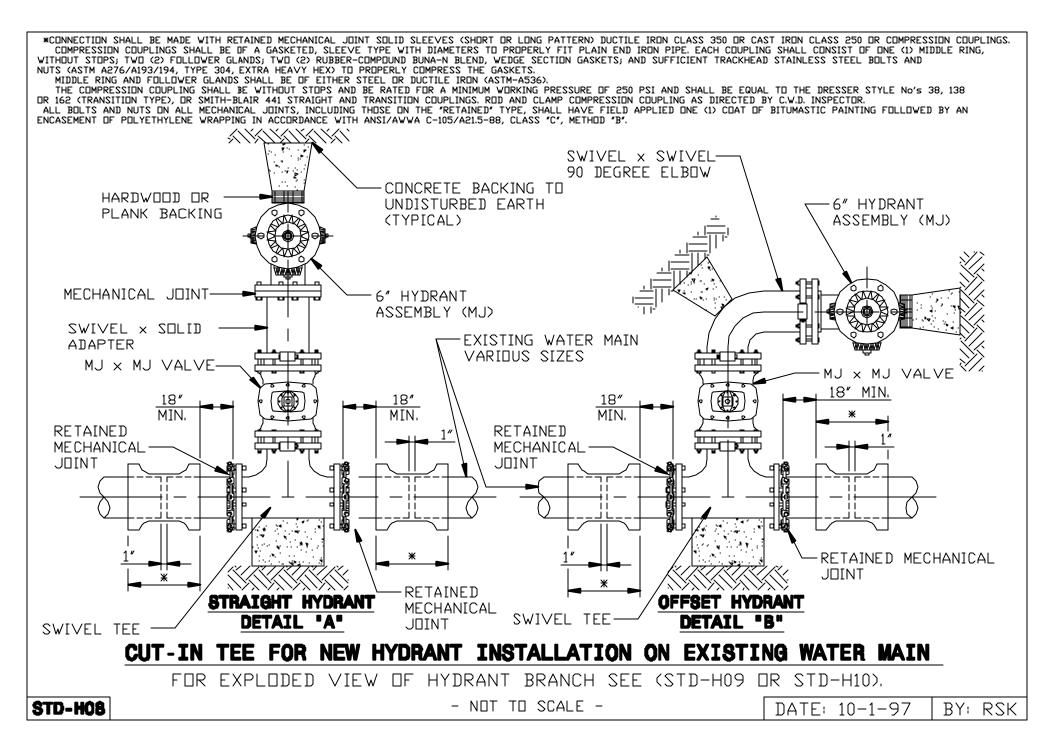
IF THE BRANCH IS TO BE SHORTENED, NO NEW IS PIPE REQUIRED.

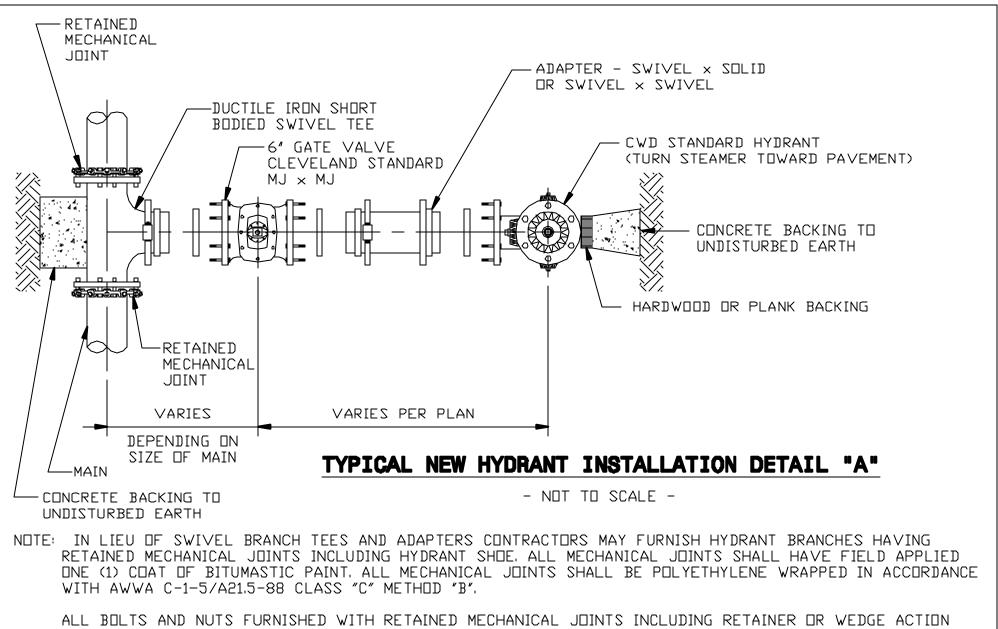
- 3) ALL BOLTS AND NUTS ON ALL MECHANICAL JOINTS, INCLUDING THOSE ON THE "RETAINED" TYPE, SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS "C", METHOD "B".
- 4) IF EXISTING PIPING IS 4" USE 4" TO 6" REDUCING MJ REDUCER DR REDUCING TRANSITION COUPLING WITH ROD & CLAMP IF APPROVED BY CWD.
- 5) IN HIGH PRESSURE AREAS THE EXISTING VALVE MAY NEED TO BE RESTRAINED TO EXISTING TEE OR FITTING USING ROD & CLAMP AS DIRECTED BY CWD. SEE STD-H01 FOR EXISTING LEAD JOINT REQUIREMENTS.

### EXTEND, SHORTEN AND ADJUST 6" HYDRANT TO GRADE, OFFSET TYPE 3





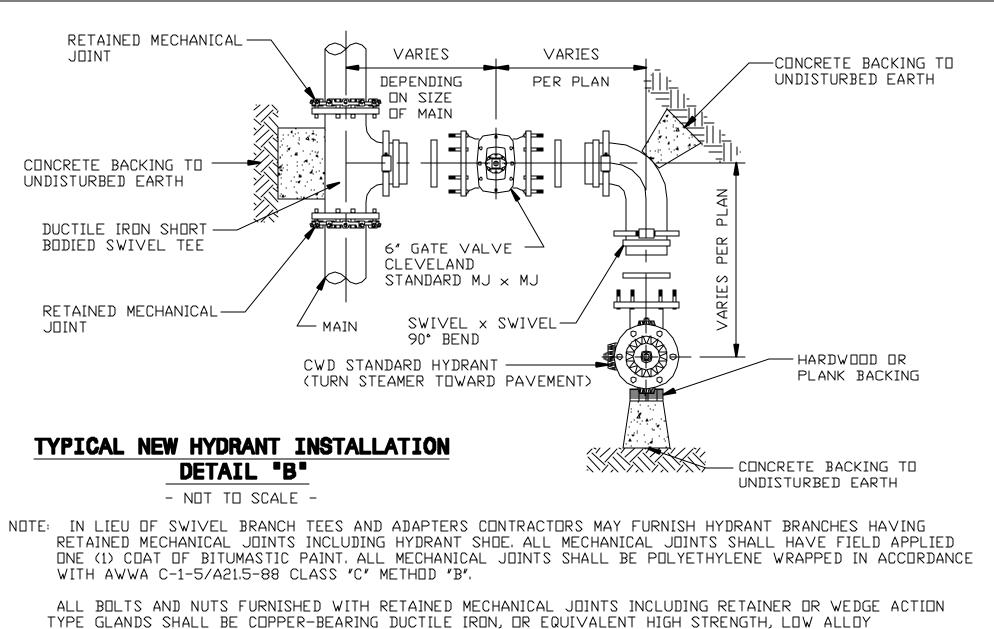




TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

STD-H09

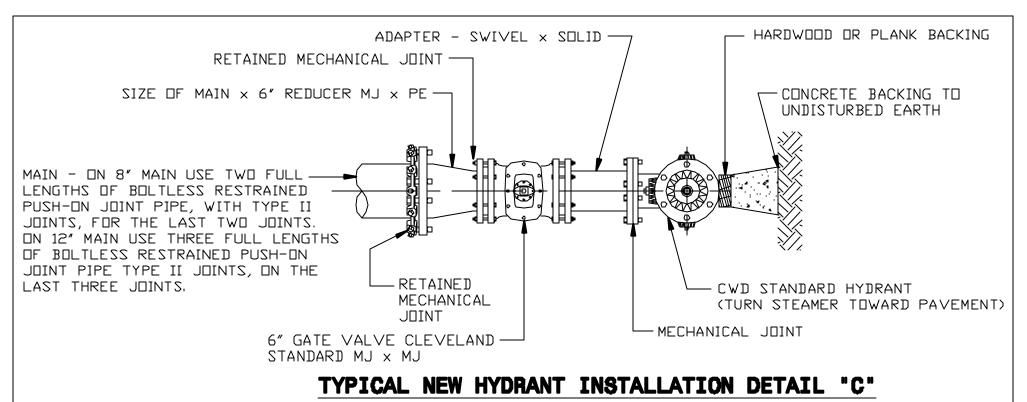
DATE: 3-4-2002 BY: RSK



CORROSION RESISTANT STEEL,

STD-H10

DATE: 10-1-97 | BY: RSK



NOT TO SCALE

DATE: 3-4-2002 BY: RSK

NDTE: IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-1-5/A21.5-88 CLASS "C" METHOD "B".

ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

STD-H11

