

S.O.P.

***FOR BASIC CONNECTIONS IN
THE COLLECTION SYSTEM AS
OF 7-1-2018***

BASIC LATERAL REPLACEMENT CONNECTION AT THE CURBLINE

TWO BASIC TYPES

TYPE 1: SHIELDED FERNCO, ALSO KNOWN AS A STRONG BACK.

THE BELL OF THE 6 INCH LATERAL FROM THE MAIN WILL BE CUT OFF AND THE NEW 4 INCH PIPE WILL BE JOINED BY A 6X4 SHIELDED FERNCO WITH STAINLESS STEEL BAND CLAMPS, CEMENTING AROUND FERNCO IS REQUIRED. (EXAMPLE #1 SHOWS FERNCO PRIOR TO CEMENT)

TYPE 2: A DOUGHNUT PACKED WITH OAKUM AND CEMENTED, WHICH IS USED IN THE EVENT THE BELL CAN **NOT** BE CUT OFF.

THE BELL OF THE 6 INCH MAIN WILL **NOT** BE CUT OFF. A RUBBER GASKET (DOUGHNUT) WILL FIT OVER THE NEW 4 INCH LATERAL PIPE AND PRESSED INTO THE BELL END OF THE 6 INCH LATERAL FROM THE MAIN. OAKUM WILL THEN BE PLACED IN GAP AND CEMENTED AROUND CONNECTION. (EXAMPLE #2)

NOTE: PIPE MATERIAL FROM HOUSE WILL ALMOST ALWAYS BE P.V.C. OR CAST IRON, MOST OF THE TIME THERE WILL ALSO BE A CLEAN OUT. THE APPROPRIATE TOWNSHIP WILL BE RESPONSIBLE FOR INSPECTING FROM THE CURBLINE BACK TO THE HOUSE. U.M.H.J.S.A. WILL BE RESPONSIBLE FOR THE CONNECTION AT THE CURBLINE OR ALL THE WAY TO THE MAIN IF REPLACING.



EXAMPLE 1 SHIELDED FERNCO





EXAMPLE 2 DOUGHNUT



LATERAL REPLACEMENT CONNECTIONS FROM MAIN TO CURBLINE

TWO BASIC TYPES

TYPE 1: SINGLE MECHANICAL JOINT COUPLINGS

THE BELL OF THE 6 INCH LATERAL STUB FROM THE MAIN WILL BE CUT OFF AND THE NEW 6 INCH LATERAL PIPE WILL BE JOINED BY A MECHANICAL JOINT COUPLING THEN TRANSITION TO A 4 INCH CONNECTION AT THE CURBLINE USING A SHIELDED FERNCO OR MJ REDUCER FROM 6 INCHES TO 4 INCHES. (EXAMPLE #3 SHOWS THE MJ COUPLING CONNECTED TO C900 DR18 PIPE)

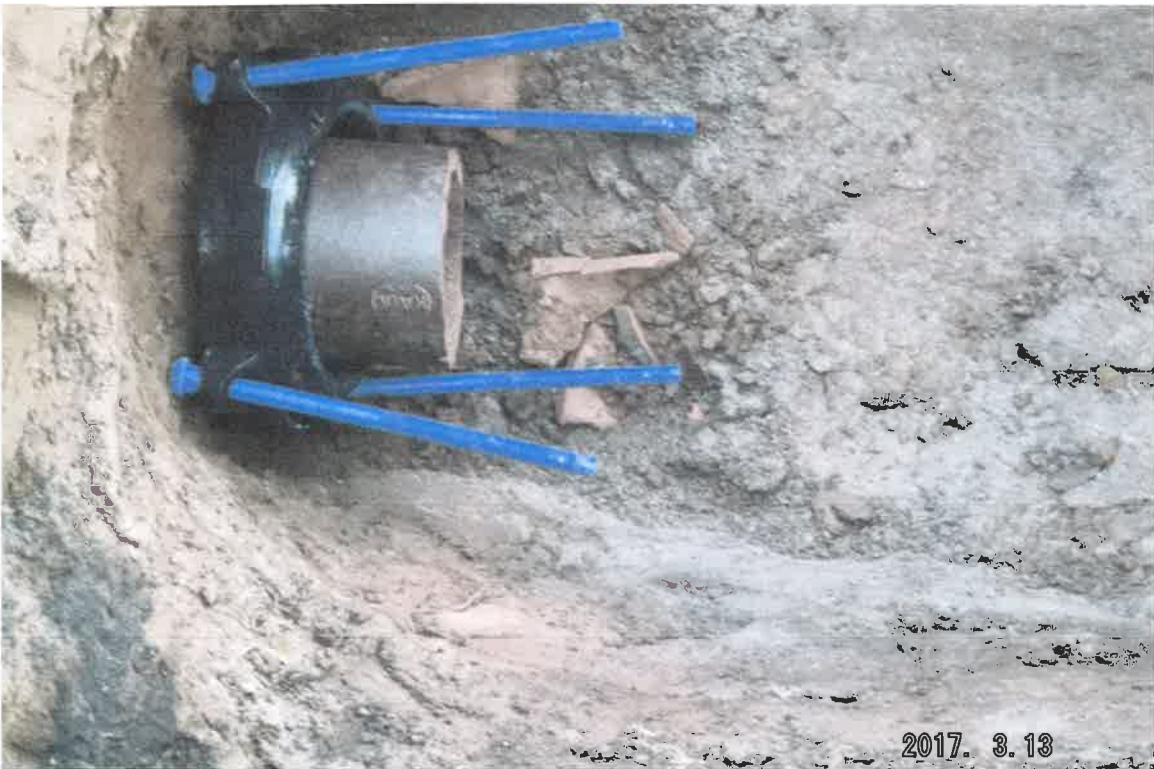
TYPE 2: MULTIPLE MECHANICAL JOINT COUPLINGS

IN THIS TYPE OF CONNECTION IT IS THE SAME AS A TYPE 1 EXCEPT THERE IS MORE THEN ONE MECHANICAL JOINT CONNECTION. THE FIRST ONE WILL CONNECT AS ABOVE, THEN A SMALL SECTION OF PIPE CONNECTED TO ANOTHER M.J. OR POSSIBLE TWO 45° MJ'S JOINED TOGETHER CONNECTING THE NEW PIPE WHICH WILL THEN TRANSITION TO A 4 INCH CONNECTION AT THE CURBLINE. THIS IS USED WHEN THERE NEEDS TO BE A 45° OR OTHER BEND INSTALLED TO MAKE THE CONNECTION. (EXAMPLE #4)

THESE MECHANICAL JOINT COUPLINGS ARE MADE BY VARIOUS MANUFACTURERS AND WILL VARY IN APEARENCE; HOWEVER, THEY ARE ALL EASILY IDENTIFIED BY HAVING LARGE BOLTS AND NUTS AROUND THE CIRCUMFRENCE OF THE COUPLING (EXAMPLE #5) ALSO PICTURED IS A C900 FITTING WITH C900 DR18 PIPE, THESE ARE GASKETED PUSH IN FITTINGS.



EXAMPLE 3 SINGLE MJ



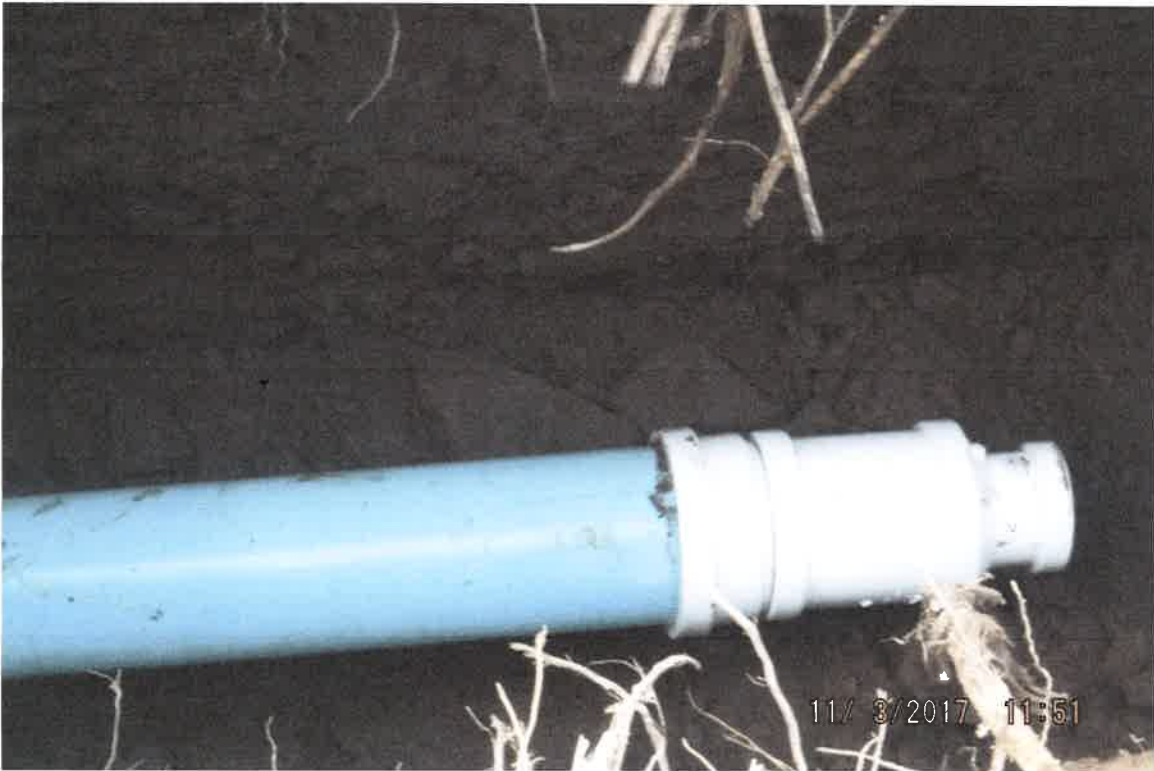


EXAMPLE 4 MULTIPLE MJ



EXAMPLE 5

C900 FITTING WITH C900 DR18



MECHANICAL JOINT COUPLING



NOTE: PIPE MATERIAL MUST BE EITHER DUCTILE IRON OR C900 DR18 PLASTIC, C900 PIPE IS BLUE & FITTINGS ARE WHITE. THESE TWO TYPES OF PIPE ARE THE ONLY TWO ALLOWED WITH NO EXCEPTIONS.

PLUMBERS MAY USE C900 GASKETED PUSH IN FITTINGS WHICH ARE WHITE TO JOIN THE C900 TOGETHER OR THEY CAN USE THE MJ'S, IT IS UP TO THEM.
(EXAMPLE #6)



EXAMPLE 6



NEW CONNECTIONS (TAPS)

TWO TYPES

TYPE 1: NEW CONNECTION TO MAIN

THIS CONNECTION IS VERY SIMILAR TO THE LATERAL REPLACEMENT FROM THE MAIN TO CURBLINE WITH THE EXCEPTION OF CORE BORING A HOLE IN THE MAIN AND MAKING THE CONNECTION WITH AN INSERTA TEE. (EXAMPLE 7 SHOWS THE INSERTA TEE AND THE INSERTA TEE WITH A MJ COUPLING ATTACHED). TAPS WILL BE MADE BY U.M.H.J.S.A. ROAD EMPLOYEE'S. AFTER THE INSERTA TEE IS INSTALLED FOLLOW THE SAME EXACT PROCEEDURE FOR LATERAL REPLACEMENT FROM MAIN TO CURBLINE.

TYPE 2: NEW CONNECTION TO MANHOLE (M.H. MAY BE PRECAST OR BRICK)

THIS CONNECTION REQUIRES A HOLE TO BE CORE BORED INTO THE SIDE OF MANHOLE. THIS CONNECTION IS SOMETIMES DONE BY U.M.H.J.S.A. WHICH IS PERFERRED OR THE PLUMBER. ON A PRECAST M.H.THE NEW LATERAL PIPE FROM THE CURB WILL SLIDE THROUGH THE HOLE AND BE SECURED WITH A LINK SEAL. IF THE MANHOLE IS BRICK AND THEY ARE USING C900 DR18 A DUCTILE IRON SLEEVE WILL NEED TO BE CEMENTED IN THE HOLE PRIOR TO THE C900 WITH A LINK SEAL. IF USING DUCTILE IRON, A SLEEVE IS **NOT** REQUIRED. A DROP CONNECTION WITH AN ELBOW DIRECTING FLOW INTO THE CHANNEL. A INSIDE DROP BOWL IS REQUIERD AT THE TOP OF THE DROP CONNECTION, THIS DIRECTS FLOW INTO THE DROP PIPE AS WELL AS OFFERING A POINT FOR CLEANING OUT. THE DROP CONNECTION PIPE SHALL BE SECURED WITH STAINLESS STEEL CLAMPS AND FASTENERS WHICH WILL BE DIRECTED INTO THE CHANNEL. (EXAMPLE #8 & 9)

NOTE: CLAMPS MAY NOT EXCEED 48 INCHES CENTER TO CENTER. A DROP CONNECTION IS **NOT** REQUIRED WHEN CORE BORED HOLE IS LESS THEN 15 INCHES.



EXAMPLE 7 INSERTA TEE



EXAMPLE 8 INSIDE DROP BOWL



EXAMPLE 9 DUCTILE SLEEVE



GRINDER PUMP CONNECTION

TWO TYPES

TYPE 1: GRINDER PUMP CONNECTION TO MAIN

AGAIN, IN REGARD TO INSPECTIONS, THE SAME APPLIES HERE. THE TOWNSHIP WE BE RESPONSIBLE FROM THE CURBLINE TO HOUSE AND U.M.H.J.S.A WILL BE RESPONSIBLE FROM THE CURBLINE TO MAIN.THE PLUMBER WILL MAKE THE TAP INTO THE MAIN, THIS IS USUALLY APX A 2 INCH OR SLIGHTLY SMALLER HOLE. PLUMBER WILL CORE BORE HOLE AND USE A SADDLE FOR THE CONNECTION, A FLEXIBLE PLASTIC PIPE RUNNING FROM THE HOUSE TO THE SADDLE WILL BE INSERTED. (EXAMPLE 10 SHOWS SADDLE AND PIPE)

TYPE 2: GRINDER PUMP CONNECTION TO MANHOLE

THIS CONNECTION REQUIRES THE PLUMBER TO CORE BORE A HOLE IN THE SIDE OF THE MANHOLE, THEN THE PIPE SLIDES THROUGH AND THEN A LINK SEAL IS INSTALLED OVER THE PIPE AND AGAINST THE WALL WHERE IT WAS CORE BORED. A SERIES OF BOLTS ARE TIGHTENED TO MAKE WATER TIGHT CONNECTION, SOMETIMES CONCRETE IS INSTALLED OVER THE LINK SEAL. A DROP PIPE WILL BE INSTALLED SECURED WITH STAINLESS STEEL HADWARE AND DIRECTED TOWARD CHANNEL. (EXAMPLE #11 & 11A) EVERYTHING ELSE IS THE SAME AS GRINDER PUMP CONNECTION TO MAIN.



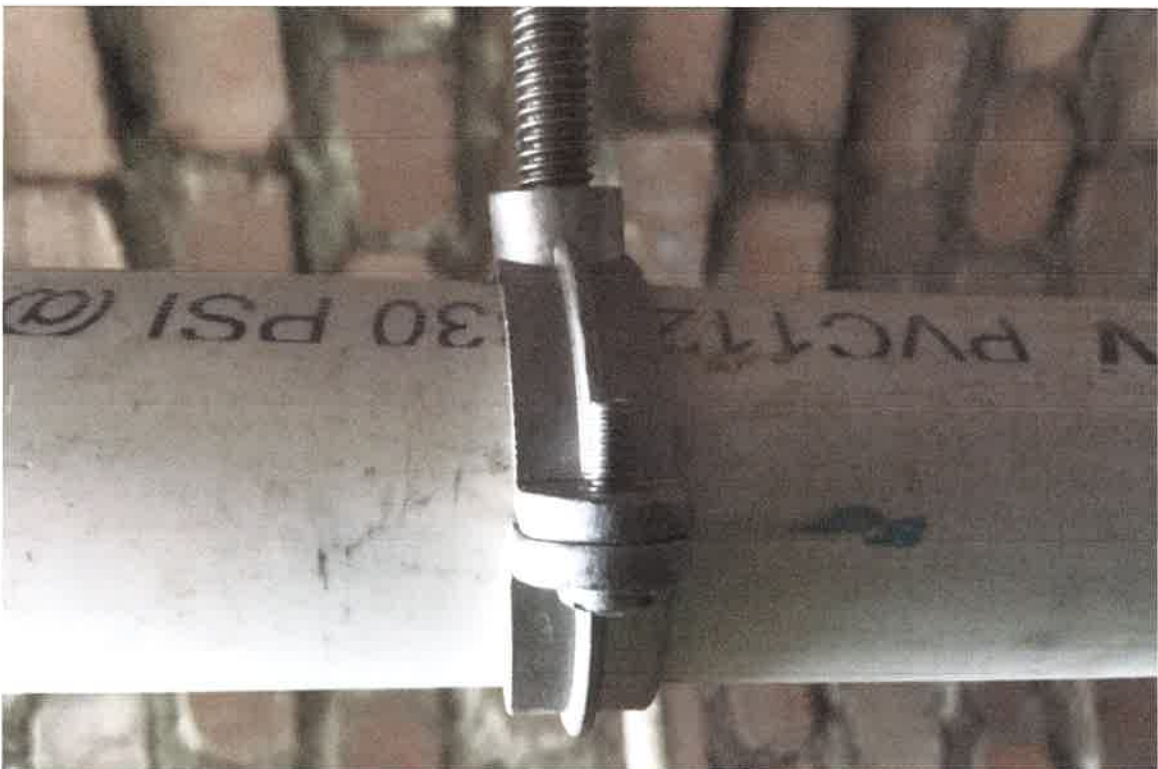
EXAMPLE 10 GRINDER PUMP TO MAIN



EXAMPLE 11 LINK SEAL



STAINLESS STEEL HARDWARE





EXAMPLE 11A DROP CONNECTION

