

- E. Up to 10% of the rehabilitated drainage lines shall be CCTV surveyed at the end of the maintenance period in order to assess the general condition of the rehabilitated pipelines. This survey shall demonstrate to the Engineers satisfaction the successfulness of the rehabilitation works. Any defects shall be repaired by the Contractor at no cost to ADM and a further 10% of the rehabilitated drainage pipelines shall be CCTV surveyed with the process being repeated until no defects are found in the 10% survey sample of rehabilitated drainage pipelines.

29.3.3 Drainage Flow Control

29.3.3.1 General

- A. The Contractor should be aware of social and climatic conditions pertaining to Abu Dhabi particularly in dealing with drainage and consequential pumping and bypassing or diverting of drainage flows. All works shall be carried out in such manner as to cause minimum disruption, noise or any nuisance to the public.
- B. Manholes, inlets and catchbasins and drainage pipelines being worked on shall be completely isolated and bypassed such that they do not contain any drainage flow. This shall be achieved by plugging, pumping and bypassing or diverting the flow.
- C. When flow in a drainage line is plugged, pumped and bypassed or diverted sufficient precautions must be taken to protect the drainage lines from damage that might result from pipeline surcharging. Further, precautions must be taken to ensure that drainage flow control operations do not cause flooding or damage to public or private property being served by the drainage pipeline involved.

29.3.3.2 Pipe Stoppers

- A. The flow shall be stoppered off using an approved type of pipe stopper.
- B. Stoppers shall be suitable for the sizes and classes of pipe in which they are used and must not cause damage to existing pipes. Stoppers must be able to withstand the maximum possible differential head at each location and shall be fully restrained in accordance with the manufacturers recommendations.
- C. The Contractor shall be solely responsible for maintaining such stoppers in good working condition and for the consequences of any failure thereof.
- D. Where a section of the drainage system is isolated for work involving man-entry to the isolated area, a minimum of two stoppers shall be used at each boundary location isolating the area from the main drainage mains and lateral pipelines. At least one of these stoppers at each location should be of an approved pneumatic type.