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3/8/2021

IDOT Contract 64N49

Emergency Sanitary Sewer Repair Requirements

Purpose

The purpose of this document is to provide an outline to the Contractor of the procedures and requirements for performing an emergency repair on the 30" sanitary sewer, should this particular sewer be damaged or fail to convey wastewater due to the Contractor's actions or negligence.

It is the Contractor's responsibility to submit a Sanitary Sewer Emergency Action/Repair Plan prior to beginning construction, for review by IDOT & RRWRD, using the information contained in this document. The plan shall contain all necessary planning and preparations needed to provide bypass pumping and repair the sanitary sewer. The plan shall include at a minimum: a timeline for the mobilization and installation of bypass pumping, bypass pipe routing and suction/discharge points, bypass pumping equipment and material submittals, any traffic control modifications required, a timeline for the procurement of repair materials, and repair material submittals. This document contains suggested suction/discharge points and bypass pipe routing, however the Contractor shall verify the feasibility of the suggested routing, and submit accordingly. The Contractor will be responsible for all required permissions, permitting, and access agreements.

Background

The 30" RCP gravity sewer that crosses beneath the existing retaining wall was installed circa 1931. This section of sewer conveys wastewater from the area roughly bounded by IL 2 on the west, Mulford Rd. on the east, Spring Creek Rd. on the south, and Riverside Blvd. on the north. The direction of flow is north to south, with manhole 083-063 being north of the retaining wall and manhole 083-005 being south of the retaining wall.

This particular section of sanitary sewer was last internally televised by RRWRD on October 21, 2020, in which no defects were indicated. The District will provide the video, inspection log, and record drawing upon request. This section of sanitary sewer has been located above-ground using internal televising equipment equipped with below-ground locating capabilities. Prior to construction, the District will locate the sanitary sewer above-ground. It shall be the Contractor's responsibility to locate sanitary sewer below-ground as excavations progress to determine the exact location of the sanitary sewer so as to avoid damage.

Repair Procedures

In the event of a sewer collection system failure, the following shall be performed:

1. Immediately contact RRWRD (contact information below).
2. Immediately begin bypass pumping as outlined below.
3. Perform repair per RRWRD specifications below.
4. De-mobilize bypass pumping after RRWRD has visually inspected and approved the repair by means of internal televising equipment.

5. Remove and properly dispose of all contained wastewater and solid waste materials.
6. RRWRD will then contact the IEPA for reporting purposes.

This does not include any additional actions which may need to be taken by the Contractor, such as repair/restoration of affected turf areas, ground cover, rail ways, pavement, etc., and the potential for coordination of cleaning downstream sanitary sewers.

Contact Information (notify ALL)

RRWRD:	Kyle Gruhn	(815) 621-2932
	Terry Stoll	(815) 543-7983
	Collection Systems Dept. On-Call 24/7	(815) 543-3786
	Ben Christiansen	(815) 209-7952

Existing Conditions

Sewer section 083-063 to 083-005
30" RCP at 0.12% slope
Daily average flow = 2.20 MGD (1835 GPM)
Daily peak flow (10 yr. rain event)= 4.77 MGD (3978 GPM)
These flow rates were determined using hydraulic modeling software.

Bypass Pumping Plan

The attached exhibit shows the suction and discharge manholes that are suggested for this repair. The Contractor shall be responsible for coordinating all requirements of routing the bypass piping, including but not limited to, below the railway trestle and across any pavement. This bypass routing plan assumes that the Contractor will be allowed to route the bypass piping beneath the railway trestle at Spring Creek and that the IL 251 SB exit ramp to Auburn St. would be closed to traffic immediately prior to the installation and operation of the emergency bypass pumping.

Suction Manhole = 083-063
4' diameter, 2' wide cover
10.1' deep
Discharge Manhole = 083-002
5' diameter, 2' wide cover
13.3' deep

Total Length of bypass = approximately 765 LF

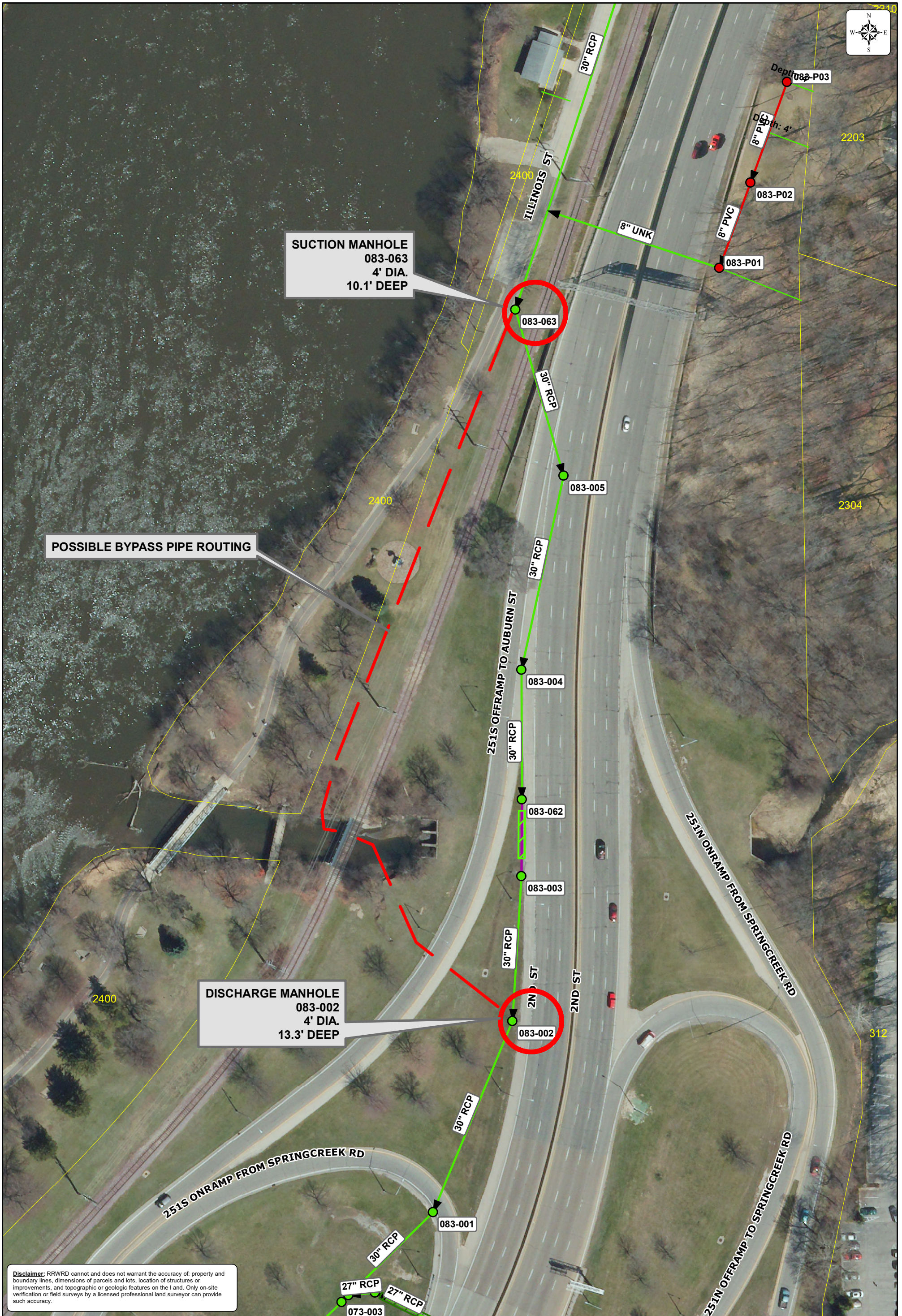
The Contractor may submit alternate points of suction & discharge to be reviewed for approval by IDOT and the RRWRD.

Sanitary Sewer Repair Materials

The District will verify and inspect the main line repair limits. Connections shall only be made to structurally sound pipe. Replacement pipe material shall be PVC DR 18 AWWA C900, ASTM D3139. Connections to existing RCP pipe shall be made with Fernco shear resistant, or approved equivalent, repair couplings made of flexible PVC compound with 316 stainless steel clamps and stainless steel rings. Transition couplings shall conform to applicable parts of ASTM D5926 and C1173. Pipe bedding for PVC pipe shall be Class 1A per ASTM D2321.

Repair Acceptance

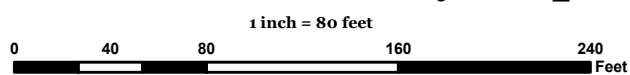
The Contractor shall be responsible for removing foreign debris and cleaning the repaired sewer section and downstream sewers if deemed necessary by the District. Prior to de-mobilizing the bypass pumping, the RRWRD will internally televise and inspect the repaired section of pipe. Access for internal televising will be from Manhole 083-005. The Contractor shall include appropriate provisions for traffic control for the access of this manhole in the Sanitary Sewer Emergency Action/Repair Plan. Repair work performed without a District inspector present will not be accepted.



Disclaimer: RRWRD cannot and does not warrant the accuracy of, property and boundary lines, dimensions of parcels and lots, location of structures or improvements, and topographic or geologic features on the land. Only on-site verification or field surveys by a licensed professional land surveyor can provide such accuracy.



RRWRD Facility Map



By: kyleg
Produced: 3/4/2021
RRWRD Engineering Department