

**Request for Proposal**

**for**

**Professional Qualifications**

**for**

**ANALYSIS & DESIGN SERVICES FOR  
GORGE SANITARY SEWER**

**As described herein**

**Statement of Qualifications**

**Accepted until October 2, 2023**

**Office of the Service Director**

**2310 Second Street**

**Cuyahoga Falls, Ohio 44221**

## REQUEST FOR PROPOSAL

for

### PROFESSIONAL QUALIFICATIONS

#### **ANANLYSIS & DESIGN SERVICES FOR GORGE SANITARY SEWER**

##### **PURPOSE**

The City of Cuyahoga Falls intends to contract for surveying, design and other professional services in connection with the Gorge Sanitary Sewer Trunk Line Analysis and Replacement Project as described below. This request invites qualified firms to submit statements of qualifications to perform the work described. Statements of Qualifications (SOQs) shall be prepared and submitted in accordance with the requirements described in this Request for Qualifications (RFQ). Statements received after the deadline stated herein will not be considered. Any SOQ not including all requested information will be reason to deem a firm unqualified.

##### **Project Background:**

The City owns and maintains a sanitary sewer collection system located adjacent to and within the Summit Metropark's Gorge Metropark that carries approximately 5 million gallons per day (mgd) from Cuyahoga Falls to the Akron Wastewater Treatment Plant. The existing system, which was installed in the 1930's, consists of various sizes and types of pipes, brick manholes, and junction chamber(s).

The goal of the project is to eliminate all sewers located within the Summit Metropark, using a soon to be installed tunnel system in the City of Akron as an alternate upstream route. The project will include the following improvements:

- Demolition and removal of the existing sanitary sewer system located within the Metropark.
- Replacement of existing sanitary sewer system on Highbridge Rd, Campbell St, Francis Ave., Hillcrest Dr. and Front St.
- Possible installation of new sewer pump station and force main.
- Potential boring/ tunneling of new sanitary sewer main at various depths.
- Potential sewer installation on bridge owned by others.
- Other related upgrades and improvements.

Services required include: Review and analysis of existing plans and recently completed studies and flow monitoring data to determine feasibility of various options, including the development of detailed cost estimates for each option. Preparation of a General Plan and Preliminary Engineering Report for submittal to Ohio EPA; surveying; geotechnical engineering; hydraulic process design; architecture; structural engineering; mechanical, electrical & plumbing (MEP) design; contract document preparation; funding assistance; bidding services; and construction management and RPR services. Design of the improvements is expected to be complete by

July 31, 2025, including application for the plan approval from OEPA. The improvements are expected to be fully functional and ready for connection to Akron's North Side Interceptor Tunnel by July 31, 2027.

Questions should be directed to Russ Kring, Water Utilities Superintendent, at 330-971-8130 or [kringrw@cityofcf.com](mailto:kringrw@cityofcf.com).

**Statement of Qualification Submission:**

Responses to this RFQ must be received by the City of Cuyahoga Falls Service Director's Office as follows:

- Due Date: Monday, October 2, 2023
- Time: Prior to 5:00 pm
- Deliver To: Office of the City Service Director  
City of Cuyahoga Falls  
2310 Second Street, Cuyahoga Falls, OH 44221
- Submittal: Five (5) copies of statement of qualifications in sealed envelope clearly marked on the outside "ANALYSIS & DESIGN SERVICES FOR GORGE SANITARY SEWER"

During the qualification evaluation, the City reserves the right to request additional written information to assist in the evaluation. Written responses to the City's request for additional information shall be signed by the proposer, by an officer of the proposing firm, or by a designated agent empowered to bind the firm in a contract. Upon receipt, the statement of qualifications shall become the property of the City of Cuyahoga Falls for disposition or usage by the City at its discretion.

**Content of Qualifications:**

To standardize responses and simplify the comparison and evaluation of the responses, all statements must be organized in the manner set forth below, separated into sections, and appropriately labeled. All information and materials requested shall be provided in the proposal under a single cover. The proposal length shall be limited to a maximum of 18 single-sided pages plus a cover letter. The minimum font size shall be ten (10) point.

- a. Business Location & Organization. The full name and address of the firm's organization and the branch office that will perform the services described herein shall be stated. The Principal-in-Charge of the branch office shall be identified. Include a statement regarding the history and resources of the firm such as year established, ownership, financial viability and major areas of expertise. A statement shall be included from the firm that to the best of its knowledge, there are no circumstances that shall cause a conflict of interest in performing services for the City of Cuyahoga Falls.
- b. Project Manager. Present the firm's proposed Project Manager for the project along with relevant experience and other projects performed for the City (if any).

- c. Technical Approach and Scope of Work. The responding firm shall state its understanding of the project as outlined. The scope of the approach in rendering the services required, including the use of sub-consultants, shall be detailed.
- d. Related Technical Experience and References. Descriptions of a minimum of two (2) and a maximum of five (5) projects of similar size and nature shall be submitted along with the corresponding reference contacts. Related technical experience examples shall identify project staffing that will also be proposed for the City's project.
- e. Project Team Staffing, Proximity to Project and Organization. Provide a brief description of the staffing and availability to complete this project, emphasizing specialized skills available for this project and past experience on similar projects. Identify office location where majority of work will be performed along with subconsultants. Provide an Organization Chart to identify all personnel who will provide the required services directly to the City under this request including QA/QC staff. The use of subconsultants shall be included.
- f. Timely Completion of the Project. Discuss the consultant's current workload and their ability to complete the project in a timely manner to meet the City's current deadline.
- g. Additional information. Provide any additional information regarding your firm's experience and capabilities that you feel would be important to the success of the project.

#### **Evaluation of Qualifications:**

The City of Cuyahoga Falls will evaluate responding firms and rank in order of their qualifications.

Evaluation of the statements and ultimate selection of the firm is based on the following criteria:

- Business Organization (5 points)
- Project Manager & Experience (15 Points)
- Technical Approach and Scope of Work (20 points)
- Related Technical Experience (25 points)
- Project Team Staffing, Proximity to Project and Organization (20 points)
- Timely Completion of the Project (10 points)
- Additional Information (5 points)

As required by Ohio Revised Code Section 153.65-71, responding firms will be evaluated and ranked in order of their qualifications. Following this evaluation, the City of Cuyahoga Falls may decide to conduct interviews and will subsequently enter into contract negotiations with the most highly qualified firm. The City will be represented at these interviews by the City Service Director, the City Engineer, Water Utilities Superintendent and other relevant City staff. Once the City and the consultant agree upon the scope of services, the consultant will develop a fee proposal for the City's consideration. If the fee proposal is agreeable, the two parties will enter into a contract. If the fee proposal is not acceptable, the two parties will attempt to agree on revisions to the scope of work and budget, and if agreeable enter into a contract for the project.

**Limitations and Reservations:**

The City reserves the right to accept or reject any or all submittals received as a result of this request, or to cancel in part or in its entirety this Request for Qualifications if in the best interest of the City to do so.

Contact Person:

Any questions concerning the proposals should be directed to Russ Kring, Water Utilities Superintendent at 330-971-8130 or [kringrw@cityofcf.com](mailto:kringrw@cityofcf.com).



INNOVATIVE IDEAS  
EXCEPTIONAL DESIGN  
UNMATCHED CLIENT SERVICE

## OFFICE MEMORANDUM

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**DATE:** February 7, 2023  
**TO:** Russell Kring, Anthony Zumbo, P.E., P.S., Teresa D. Hazlett, Tony V. Demasi, P.E.  
**FROM:** Geary A. Visca, P.E.  
**SUBJECT:** 2022 Main Trunk Sewer Flow Monitoring Program and RDII Design Flow Analysis

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**Introduction.** The City of Cuyahoga Falls sanitary sewer system is divided into 23 subsystems, and they are named and numbered based on the Master Meter that they are tributary to in the system. The Main Master Meter tributary area was the focus of studies in 2007 and 2011 since the majority of the separate sanitary sewer overflows (SSO) are in this area. The other Master Meter areas are Howe Road, Babb, Graham, Gilbert, and Water Works. Figures showing the tributary areas for each flow meter; their approximate location; a schematic of the Main Trunk Sewer; and the Main Master Meter flow chart from the July 19, 2011, storm event are attached to this Technical Memorandum.

The Main Trunk Sewer was constructed in the 1930s, and investigation work was done in 2022 consisting of closed circuit televising of the trunk sewer line and field inspection of all its manholes. It was found to have significant problems including blockages, partially collapsed pipes, sections with debris build-up due to the collapsed pipes, and pipes that had been deformed due to landslides in the Gorge Metro Park that is part of the County of Summit Metro Parks. From September through November of 2022, additional flow monitoring was performed for the City of Cuyahoga Falls on all the sewers that are tributary to the Main Trunk Sewer to determine what changes had occurred in the flows tributary to the Main Trunk Sewer since the studies of 2007 and the update that was done in 2011. The other objective of this additional flow monitoring was to develop design flows for replacing the Main Trunk Sewer.

**Background.** In the update that was performed in 2011, additional flow monitoring was done to supplement the 2007 work. This flow monitoring was conducted to determine the effectiveness of improvements that the City of Cuyahoga Falls had implemented after the storm event of 2003. This flow monitoring was only done for CFMM and CFM08 where remedial work had been performed by the City. No work had been done in the CFM10 Area, and therefore, it was not included in that flow monitoring effort. In addition, the hope was that there would be larger rainfall events that would confirm the findings of the 2007 report. The rainfall events that were monitored for the 2007 report were all less than a 6-month storm event.

For the 2007 study, a storm event was selected and then projected to a 10-year storm event, which at the time was considered to be OEPA's criteria for controlling SSOs. The method that was used was the straight line projection method. This is a conservative method for developing peak rainfall derived infiltration and inflow (RDII) design flows for the proposed improvements because it assumes that the quantity of RDII is directly equal to the inches of rainfall that occurred in the observed storm event. RDII is defined as wet weather flow

produced during a storm event that finds its way into the sanitary sewers either as infiltration or inflow either through direct connections such as a storm drain being connected to a sanitary sewer or from storm water exfiltrating from a storm sewer that migrates through the ground to either a sanitary sewer or sanitary lateral. An example of this calculation is given in the following, if the observed storm event was 0.25 inches of rain in an hour, then the projection factor to a 10-year, 1-hour storm event would be 7.08, which is 1.77 inches of rain for the 10-year, 1-hour storm event (**NOAA Atlas 14, Volume 2, Version 3**) divided by the 0.25 inches of observed rainfall. The 7.08 factor would then be applied to the observed peak RDII to develop the design peak RDII for the existing sewer line.

The 2011 update determined that for the CFMM and CFM08 areas that the 2007 projected RDII design flows were greater than what could actually occur. That was because in the 2011 update there were larger storm events. The July 19, 2011, storm event was determined to be approximately a 17-Year, 3-Hour storm event (2.54 inches of rain in 3 hours), and produced recorded flows that were lower than the 2011 projected 10-year storm flows. In addition, there were two other storm events that had frequencies of 1-year and greater than 1-year during the update study, which were also analyzed. For the 2011 update, the flows from the July 19<sup>th</sup> 17-Year, 3-Hour storm event were used as a comparison to the 2007 projections since that storm event exceeded the 10-year storm event criteria.

The City monitors the Main Trunk Sewer SSOs, which are in the Gorge Metro Park and discharge to the Cuyahoga River, using level sensors. The following information was obtained for CFMM, CFM08, and the SSOs during the July 19 storm event:

1. **CFM08.** The flow meter CFM08 for Area CFM-8 showed no signs of surcharging, and the sanitary sewer was conveying **1.780 MGD**, which was less than the straight-line projected flow from the 2007 report of 2.560 MGD. The reduction in flow was attributed to work that the City had performed in this area to eliminate cross-connections to the storm sewer system, and to the straight line projection method that was used to determine the peak flow rate. There were no reports of basement flooding in this area during the July 19 storm event.
2. **CFMM.** The flow meter CFMM showed that the sanitary sewer was flowing at less than half full, and was conveying **7.130 MGD**. There were no signs of downstream constrictions and no basement floodings were reported in this area. The straight-line projected flow from the 2007 report for this flow meter location was 38.660 MGD.
3. **Main Master Meter.** Downstream improvements made to the Main Trunk Sewer alleviated conditions that restricted the carrying capacity of the Main Trunk Sewer in the Gorge Metro Park. The SSOs along the Main Trunk Sewer did not activate during the July 19 storm event. The Main Master Meter recorded a peak flow of **13.478 MGD**.

**2022 Flow Monitoring.** The 2022 flow monitoring was started on September 28 and was completed on November 28. During this flow monitoring there were four significant rainfall storm events, October 12, October 26, November 11, and November 30. Of these storm events, the October 12 was selected for further analysis since there was several days of dry weather prior to the storm event, no problems in the tributary sewer systems such as surcharging, etc., and no flow meter malfunctions. The ADS rain gauge was located at the City of Cuyahoga Falls Water Department Main Office on Bailey Road. The details the storm event is shown in Table 1.

**Table 1**

Rainfall Event	Rainfall Start Time	Rainfall Duration (Hours)	Recorded Rainfall Volume (Inches)
October 12	10:45 PM	3.25	0.71

The October 12 storm event was 56% of a 1-Year, 3-Hour storm event. This was a respectable storm event, but not as significant as what occurred in 2011, which, as previously noted, exceeded a 10-year storm. Design flows using the straight-line projection method were developed for the monitoring location for the 1-Year, 3-Hour, 10-Year, 3-Hour, 25-Year, 3-Hour, 50-Year, 3-Hour, and 100-Year, 3-Hour Storm Events. The results of this analysis is shown in Table 2.

**Table 2**

October 12 Storm Event	Recorded Peak Wet Weather Flow (MGD)	1-Year Storm Event (MGD)	10-Year Storm Event (MGD)	25-Year Storm Event (MGD)	50-Year Storm Event (MGD)	100-Year Storm Event (MGD)
CFMM	4.167	6.665	11.239	13.412	15.164	17.046
CFM08	0.685	1.169	2.054	2.475	2.814	3.178
CFM10	2.399	4.032	7.023	8.444	9.589	10.819
Hillcrest	0.341	0.581	1.021	1.2230	1.399	1.580
Francis	0.302	0.529	0.945	1.143	1.302	1.473
<b>*TOTALS</b>	<b>7.894</b>	<b>12.976</b>	<b>22.282</b>	<b>26.704</b>	<b>30.268</b>	<b>34.096</b>

\*The "TOTALS" would be the approximate flows at the Main Master Meter. They would be approximate since the "TOTALS" do not include RDII in the Main Trunk Sewer downstream of each meter location to the Main Master Meter. This RDII value is not considered important since the sources would be eliminated if the Main





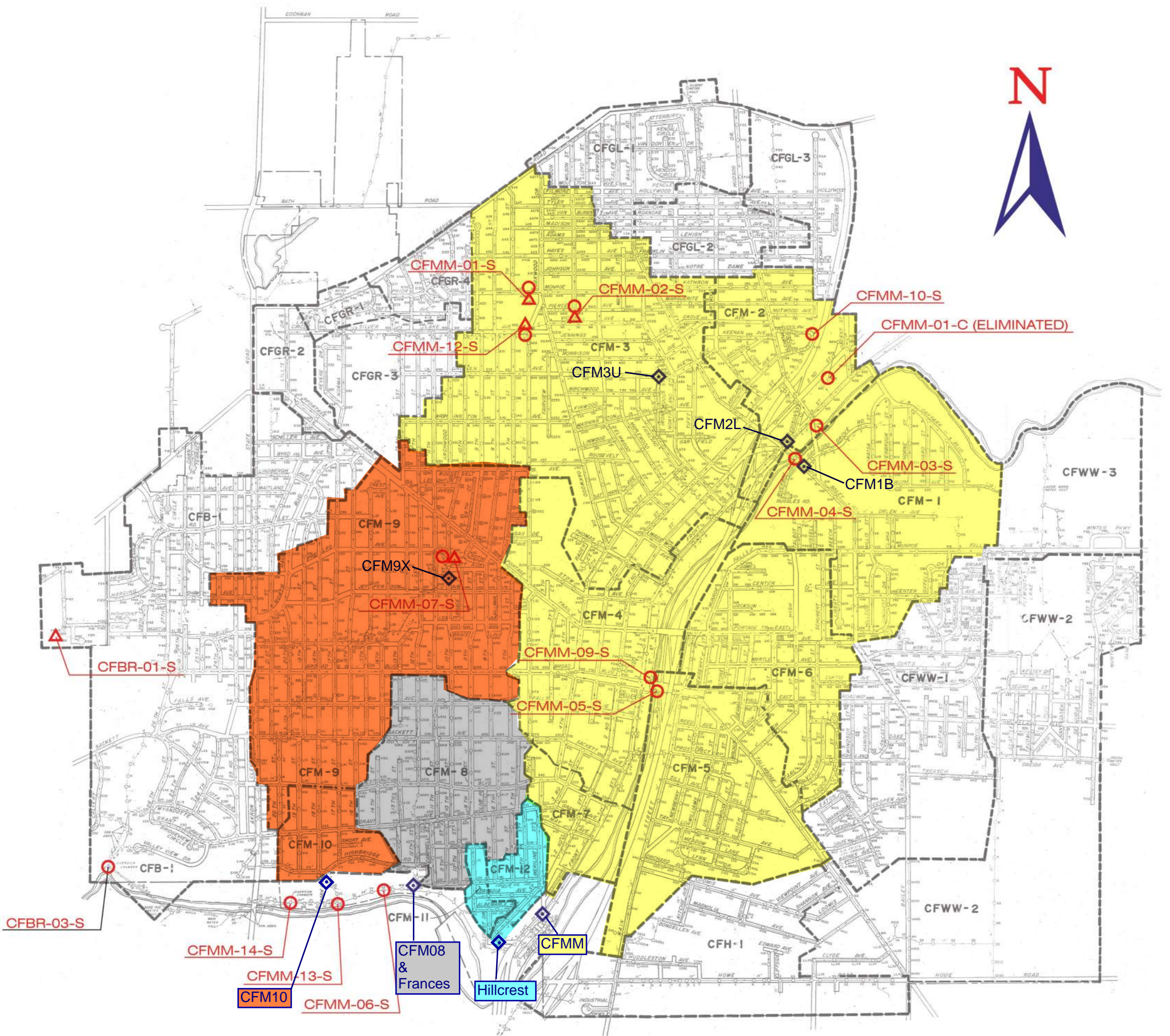
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Trunk Sewer is replaced in its current location in the Gorge Metro Park, and these same sewers would be abandoned if the flow is taken to the Northside Interceptor Tunnel.

In comparing the straight-line projected flows for the October 12 Storm Event to the July 19, 2011, storm event, the projected flows for the storm event are greater than what was recorded for both CFMM and CFM08. The total flow for both storm events exceeded what was recorded by the Main Master Meter on July 19, 2011; 22.3 MGD 10-year storm and 15.9 MGD 10-year storm versus 13.5 MGD for the July 19, 2011, storm event.



# City of Cuyahoga Falls ELIMINATION OF SANITARY SEWER OVERFLOWS UPDATE

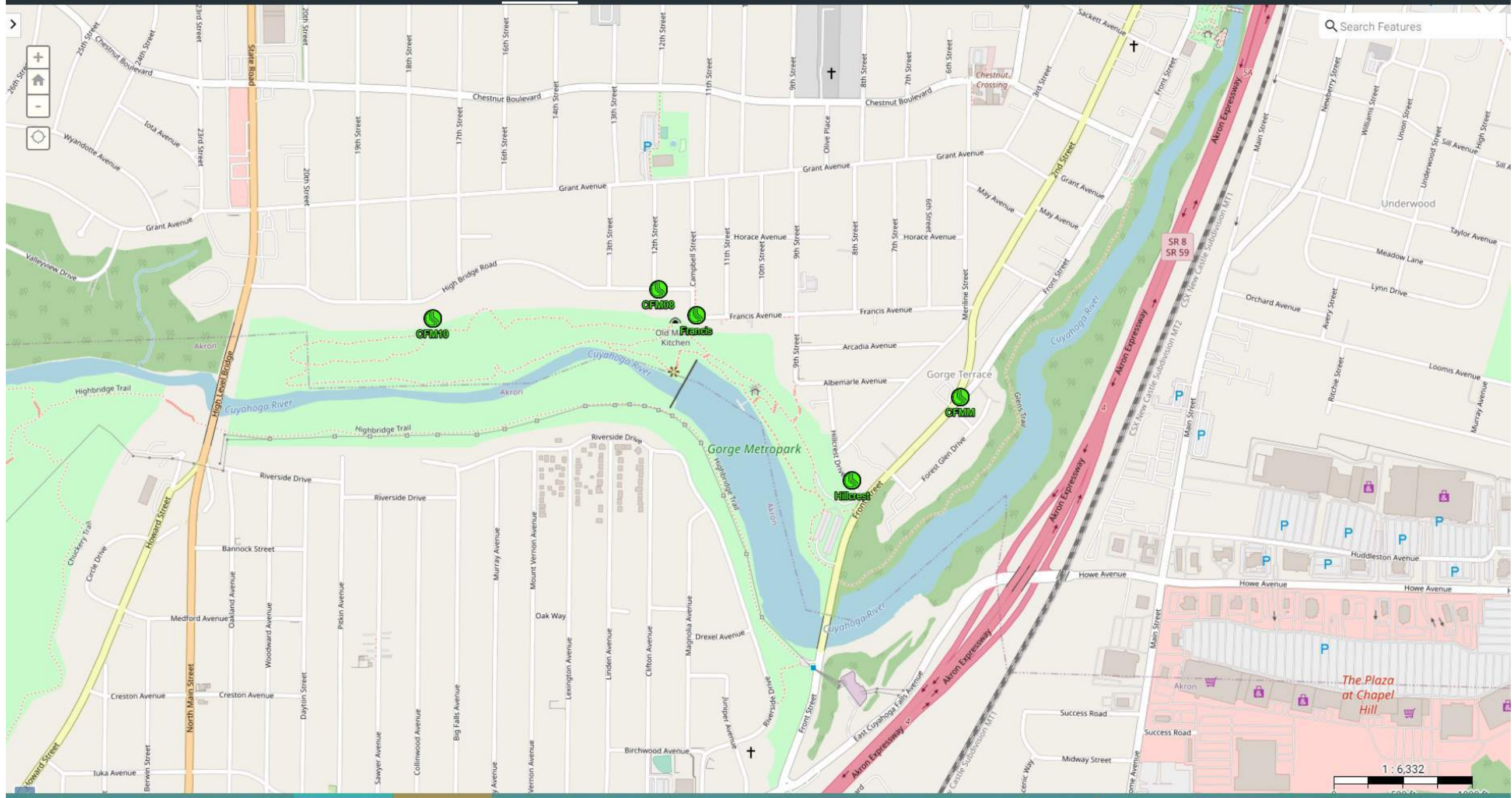


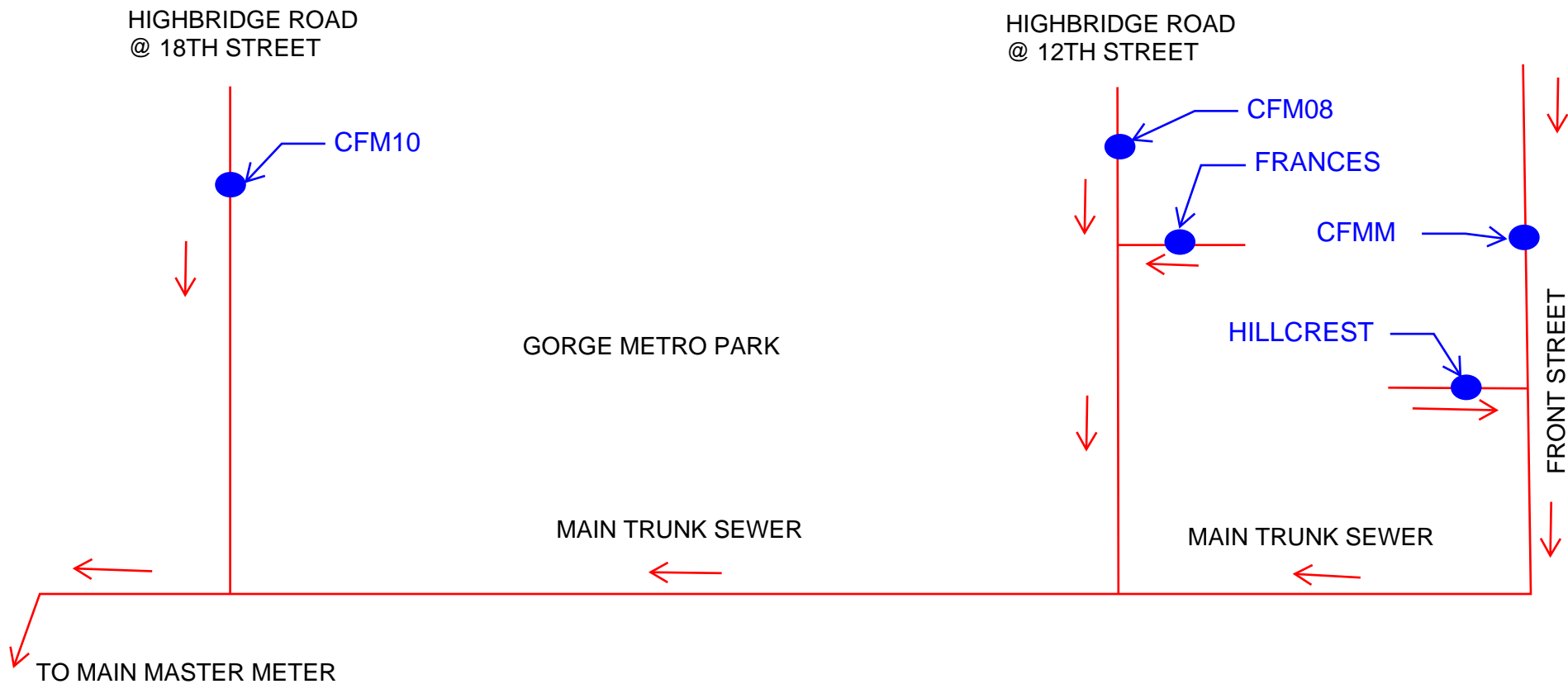
## LEGEND

- Flow Meter
- Overflows
- Overflow Pump Station

Prepared by





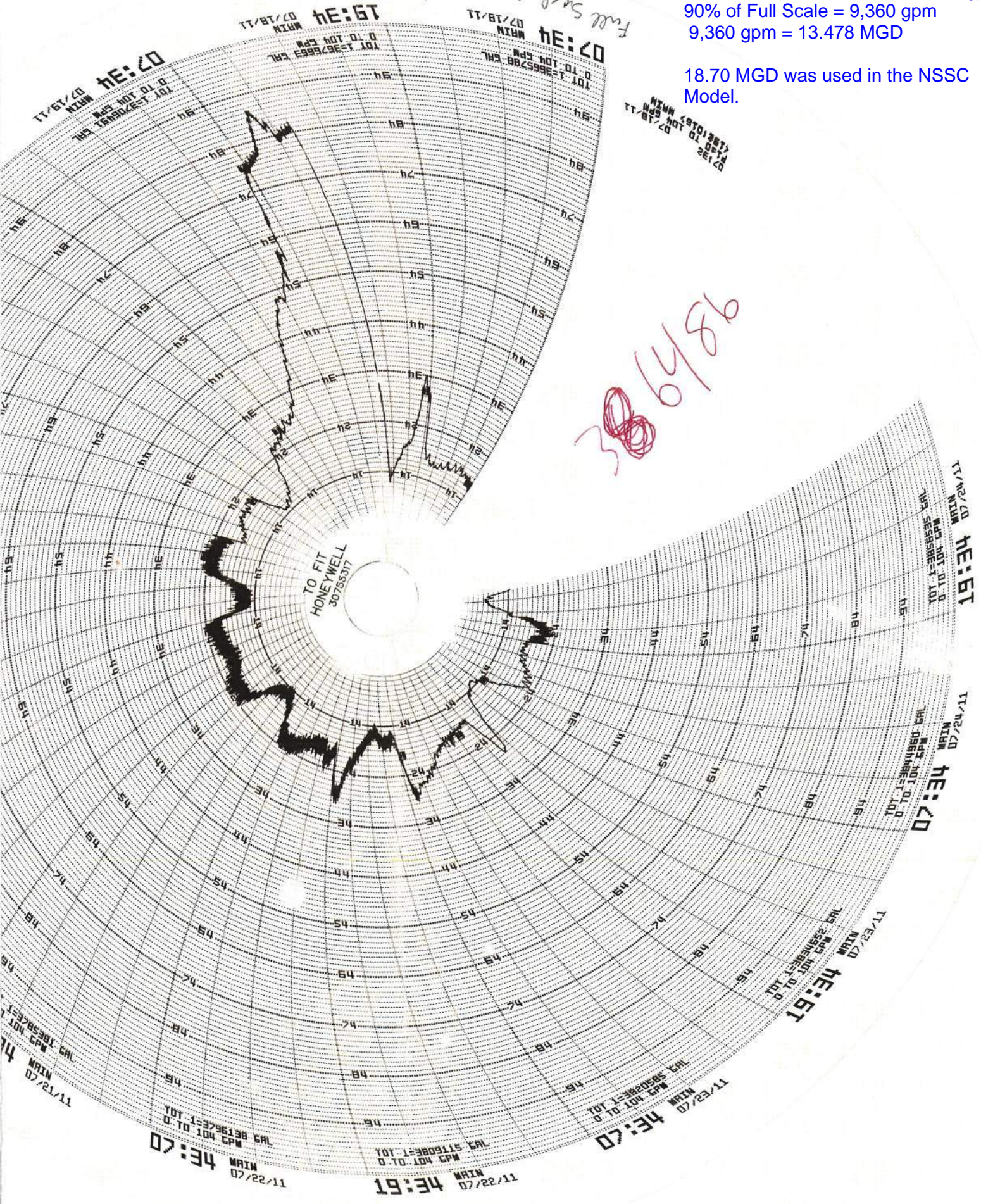


# CUYAHOGA FALLS MAIN TRUNK SEWER FLOW METER SCHEMATIC

Full Station 10,400 gpm

90% of Full Scale = (0.90)(10,400 gpm)  
90% of Full Scale = 9,360 gpm  
9,360 gpm = 13.478 MGD

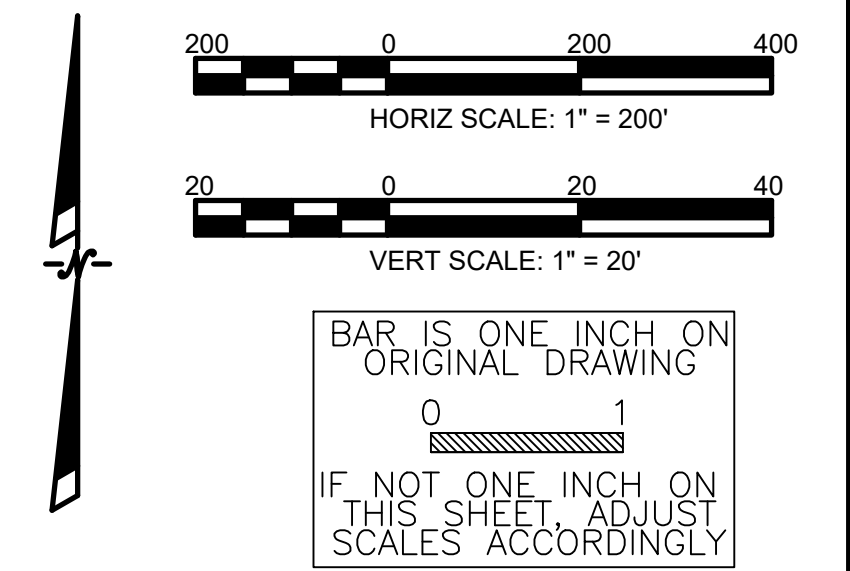
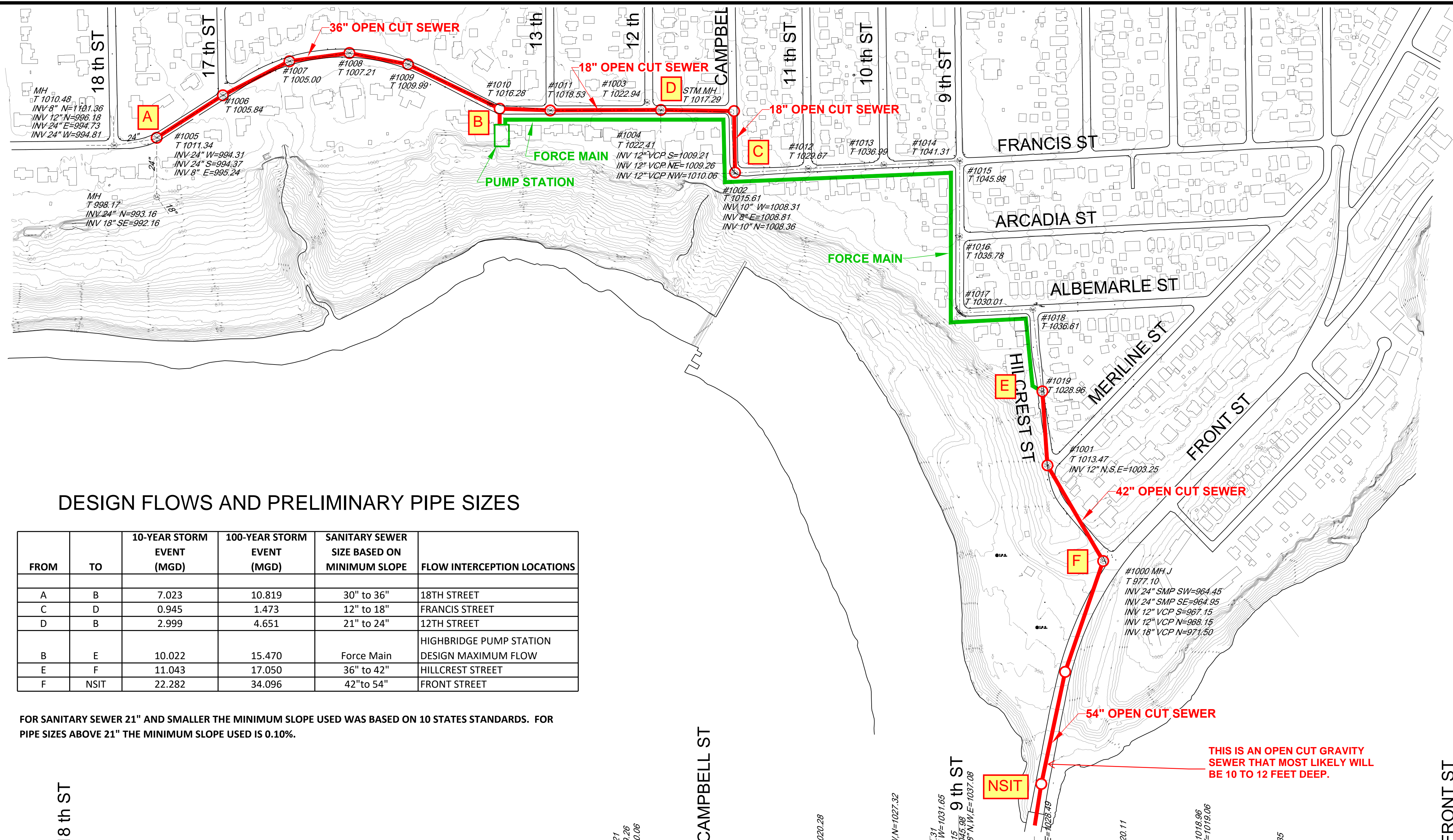
18.70 MGD was used in the NSSC Model.



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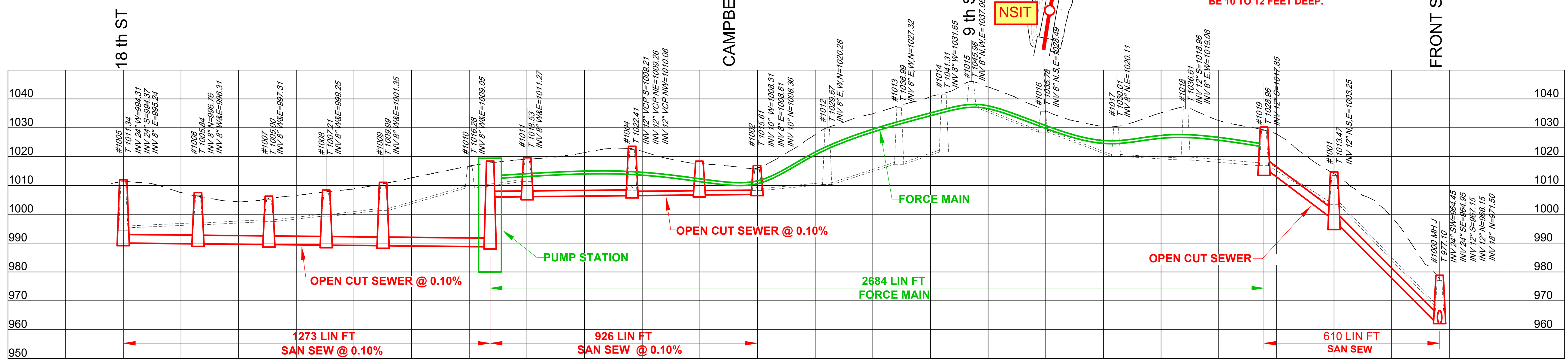
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**DESIGN FLOWS AND PRELIMINARY PIPE SIZES**

FROM	TO	10-YEAR STORM EVENT (MGD)	100-YEAR STORM EVENT (MGD)	SANITARY SEWER SIZE BASED ON MINIMUM SLOPE	FLOW INTERCEPTION LOCATIONS
A	B	7.023	10.819	30" to 36"	18TH STREET
C	D	0.945	1.473	12" to 18"	FRANCIS STREET
D	B	2.999	4.651	21" to 24"	12TH STREET
B	E	10.022	15.470	Force Main	HIGHBRIDGE PUMP STATION DESIGN MAXIMUM FLOW
E	F	11.043	17.050	36" to 42"	HILLCREST STREET
F	NSIT	22.282	34.096	42" to 54"	FRONT STREET

FOR SANITARY SEWER 21" AND SMALLER THE MINIMUM SLOPE USED WAS BASED ON 10 STATES STANDARDS. FOR PIPE SIZES ABOVE 21" THE MINIMUM SLOPE USED IS 0.10%.



CITY OF CUYAHOGA FALLS, SUMMIT COUNTY  
 STATE OF OHIO  
**CUYAHOGA FALLS  
 SANITARY IMPROVEMENTS**  
**MAIN TRUNK SEWER REPLACEMENT  
 PUMP STATION ALTERNATIVE**

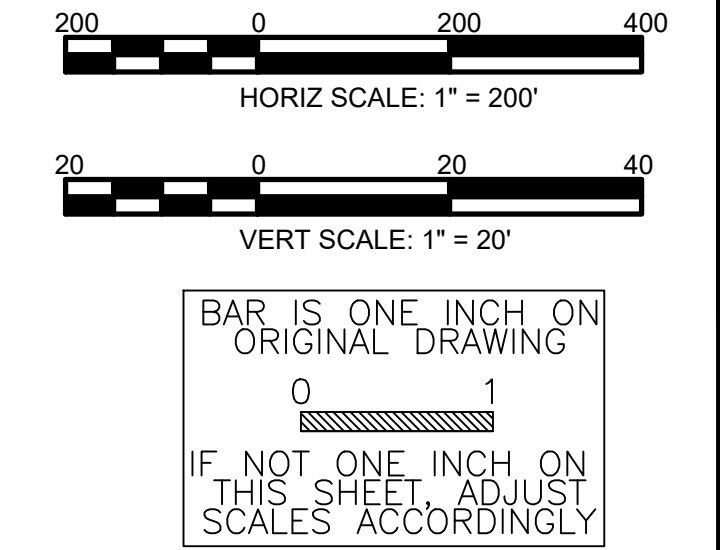
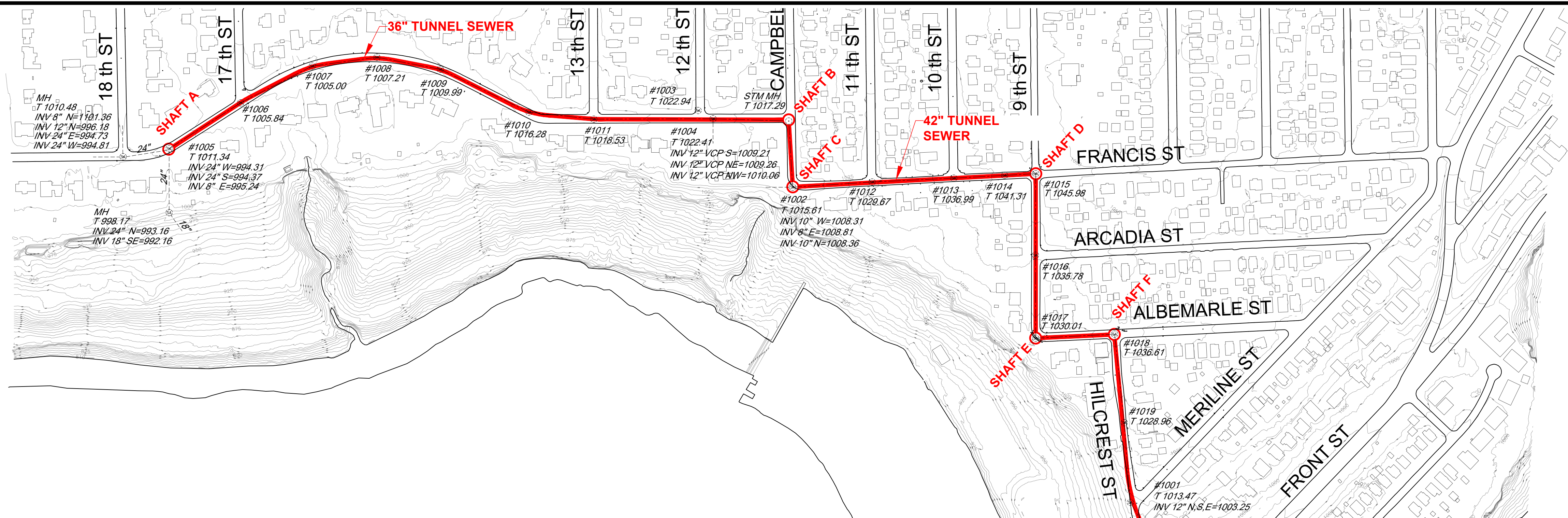
NO.	REVISION	BY	DATE

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 VERT. SCALE: 1" = 20'  
 PROJECT NUMBER  
**2122-6003-00**

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 JUNE 9, 2023  
 DLZ OHIO, INC.

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 OF  
 DRAWING NUMBER

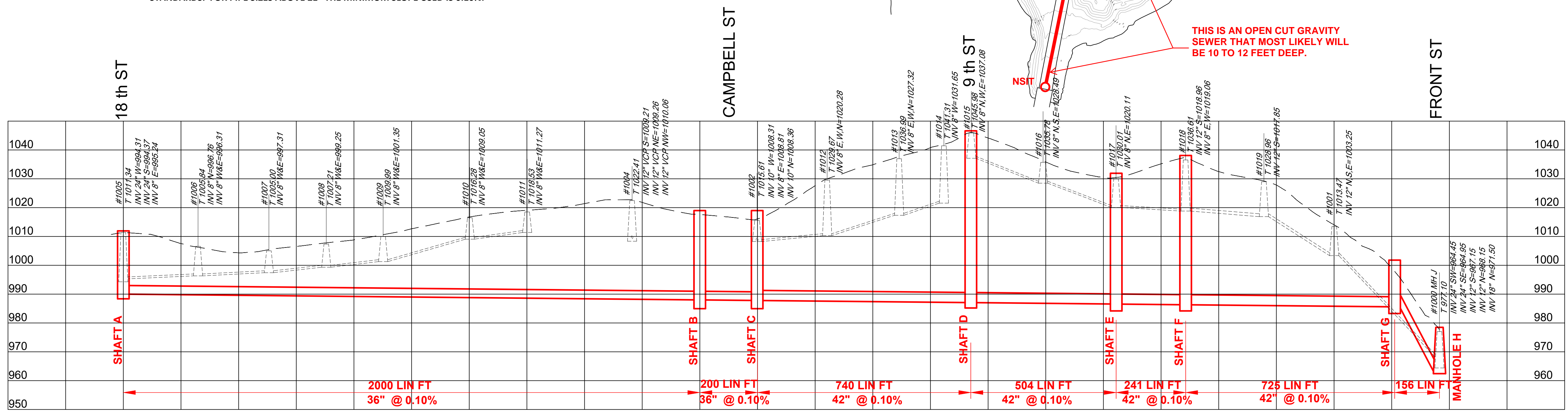
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**DESIGN FLOWS AND PRELIMINARY PIPE SIZES**

FROM	TO	10-YEAR STORM EVENT (MGD)	100-YEAR STORM EVENT (MGD)	SANITARY SEWER SIZE BASED ON MINIMUM SLOPE	FLOW INTERCEPTION LOCATIONS
A	B	7.025	10.819	30" to 36"	18TH STREET
B	C	9.079	13.997	36"	12TH STREET
C	D	10.100	15.470	36" TO 42"	FRANCIS STREET
D	E	10.100	15.470	36" TO 42"	
E	F	10.100	15.470	36" TO 42"	
F	G	10.100	15.470	36" TO 42"	
G	H	11.043	17.050	36" TO 42"	HILLCREST STREET
H	NSIT	22.282	34.096	48" to 54"	FRONT STREET

FOR SANITARY SEWER 21" AND SMALLER THE MINIMUM SLOPE USED WAS BASED ON 10 STATES STANDARDS. FOR PIPE SIZES ABOVE 21" THE MINIMUM SLOPE USED IS 0.10%.



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CITY OF CUYAHOGA FALLS, SUMMIT COUNTY  
 STATE OF OHIO  
**CUYAHOGA FALLS  
 SANITARY IMPROVEMENTS**  
**MAIN TRUNK SEWER REPLACEMENT  
 GRAVITY ALTERNATIVE**

DRAWN:	CHK'D:	NO.	REVISION	BY	DATE
RWM					
DESIGNED:	GAV	APPRV'D:			
DATE:	JUNE 9, 2023				
HORIZ. SCALE:	1" = 200'				
VERT. SCALE:	1" = 20'				
PROJECT NUMBER	2122-6003-00				

**DRAFT COPY**  
 JUNE 9, 2023  
 DLZ OHIO, INC.

SHEET
OF
DRAWING NUMBER