

Interim Remedial Measure Work Plan for the Stormwater Drainage System



Saint-Gobain Performance Plastics Site
1 Liberty Street
Village of Hoosick Falls
Rensselaer County, New York
NYSDEC Site # 442048

SAINT-GOBAIN PERFORMANCE PLASTICS, CORP.
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I, Brian Angerman, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

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**INTERIM REMEDIAL MEASURE WORK PLAN
FOR THE STORMWATER DRAINAGE SYSTEM**

**1 LIBERTY STREET
VILLAGE OF HOOSICK FALLS, NEW YORK**

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LIST OF ACRONYMS AND ABBREVIATIONS

CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
COC	Certificate of Completion
ESC	erosion and sediment control
FER	Final Engineering Report
FS	Feasibility Study
GAC	granular activated carbon
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
ISMP	Interim Site Management Plan
NAVD88	North American Vertical Datum of 1988
NYCRR	New York Codes, Rules, and Regulations
NYLD	New York Leak Detection, Inc.
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PFAS	Per- and polyfluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
PLS	Professional land surveyor
PSAT	pressure-sensitive adhesive tape
PTFE	Polytetrafluoroethylene
RI	Remedial Investigation
SCG	standards, criteria, and guidance
SWPPP	Stormwater Pollution Prevention Plan
VOC	volatile organic compound

INTRODUCTION AND PURPOSE

Introduction

This Interim Remedial Measure Work Plan (IRM WP) has been prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) Order on Consent and Settlement Agreement (Index No. CO 4-20160212-18), dated June 3, 2016, and DER-10 – Technical Guidance for Site Investigation and Remediation in connection with the property at 1 Liberty Street in the Village of Hoosick Falls (Village), Rensselaer County, New York (the Site). A Site location map is presented as Figure 1 and the stormwater drainage system is shown on Figure 2.

Purpose and Goal

The IRM has been developed to address the Site's stormwater drainage system. Remedial investigations conducted to date have identified the solids within the stormwater drainage system piping and basins as containing per- and polyfluoroalkyl substances (PFAS) and as a potential ongoing source to the environment.

The purpose of the IRM is:

- To remove accumulated solids containing PFAS within the stormwater drainage system through a combination of manual removal, jetting, or other industry-standard techniques.
- To inspect those sections of the piping that previously could not be inspected due to solids buildup and finish the piping inspections.
- To assess the condition of the piping and conduct repairs and replacement as warranted; and
- To reduce further sedimentation to the drainage system via additional guttering.

The goals of the IRM are to remove PFAS containing solids (potential source materials) within the system, which serve as a potentially ongoing source of PFAS to the environment, to restore the drainage system performance to its intended operation, and to reduce further sedimentation to the drainage system via additional guttering. The activities and results of the IRM will be documented in a Construction Completion Report (CCR) that will be incorporated into the final RI Report.

1.0 SITE BACKGROUND

1.1 Site Background and Physical Setting

This section summarizes the Site background and physical setting, including geology and hydrogeology, as it relates to the proposed IRM. The Site is located in the northwestern portion of the Village of Hoosick Falls, as shown on Figure 1. It is approximately 11.4 acres with an approximate 86,000 square foot manufacturing building with associated entranceways, accessways, parking lots, and loading areas. The manufacturing facility at the Site was originally constructed as a U-shaped building, but several significant expansions both within and around the “U” have been completed at the facility, most recently in 2015.

The Site building was reportedly first developed in 1948 for the Nancy Shoe Company (B and M Shoe Company of New York City). The Site was leased to Tansitor Electronics, Inc, from 1968-1972, and later acquired by Oak Material Group in 1972, AlliedSignal Laminate Systems, Inc. (through multiple name changes and mergers) in 1986, the Furon Company in 1996, and finally Saint-Gobain in 1999. Manufacturing activities at the Site have included the manufacture of shoes, capacitors, extruded tape and films produced from a polytetrafluoroethylene (PTFE) or Teflon paste, various circuit board materials, and pressure-sensitive adhesive tape (PSAT).

Land use surrounding the Site consists of undeveloped land interspersed with residential dwellings to the north; a multi-family dwelling and residential dwellings to the south; residential dwellings and a private pavilion to the east; and Hovey Avenue and residential dwellings to the west (Figure 1).

Topography across the Site is variable. The topographic high point of the Site is a small ridge along the southern Site boundary. The developed portion of the Site with buildings, parking, and access roads is relatively flat, resulting from filling and rework during Site development. The Site slopes gently-to-moderately downwards in each direction from the developed portion. An intermittent stream that originates off-site flows from south to north, across the western side of the Site and through a wetland area. Several intermittent streams from the west join the stream on-site in the wetland area (Figure 2). After exiting the Site, this stream continues to flow north and east before ultimately discharging to the Hoosic River (Figure 1).

The uppermost geologic layer underlying the developed portion of the Site is mechanically reworked native soil and other fill materials which sit above a lacustrine deposit of more than 40 feet of clay and silt. The depth of the mechanically reworked native soil and other fill materials varies across the developed portion of the Site and has been encountered at depths of 10 feet in some areas. Perched water is present within a few feet of the ground surface within the building foundation wall materials and is isolated above the water table that is located approximately 10-15 feet below ground surface beneath the developed portion of the Site in the natural shallow unconsolidated materials.

The stormwater drainage system routes stormwater from the building, including from building foundation drains, to several catch basins from which water is piped away from the facility and discharged to the ground surface via several outfalls on the hillside west of the facility, and an outfall in the southeast corner of the facility (Figure 2). Stormwater not captured within this system, along with discharges from the outfalls, flows overland through various swales and discharges to the wetland area and intermittent stream on the west side of the property.

1.2 Nature and Extent of Constituents of Concern

A remedial investigation of the Site commenced in July 2016. Remedial investigation work has been conducted under the following approved work plans:

- *Final Draft Site Characterization Work Plan* (SCWP Work Plan), dated April 6, 2016 and revised July 15, 2016;
- *Supplemental Investigation*, dated November 22, 2016 and revised November 29, 2016;
- *Liberty Street Site Characterization-Supplemental Investigation*, dated April 26, 2017;
- *Supplemental Scope of Work*, dated May 19, 2017;
- *Drum Removal and Exploratory Test Pitting Plan-Final*, dated November 7, 2017; and,
- *Supplemental Scope of Work*, dated September 27, 2018.

Analysis of the data collected during the Site remedial investigation is ongoing. The data presented in this IRM WP is intended to provide context for developing the proposed

IRM. Remedial investigation data collected from July 2016 through December 2019 were provided to NYSDEC in the following data summary reports:

- *Data Summary Submittal (Through February 2018)* which included samples collected from July 2016 to February 2018, dated May 25, 2018;
- *Vapor Intrusion Data Summary Submittal (February 2019)* which included a summary of vapor intrusion investigations and data collected from October 2018 to February 2019, dated May 15, 2019;
- *Data Summary Submittal (March Through December 2018)* which included samples collected from March 2018 to December 2018, dated August 16, 2019; and,
- *2019 Data Summary Submittal* which included samples collected from January 2019 to December 2019, dated May 1, 2020.

Investigations conducted to-date indicate that the PFAS compound perfluorooctanoic acid (PFOA) and the volatile organic compound (VOC) trichloroethylene (TCE) are the primary compounds of interest at the Site, and have been detected in soil, groundwater, surface water, and other media samples on and near the Site. Solid and liquid samples have been collected from various stormwater system features on Site. Table 1 presents the detected analytical results for solid samples collected from stormwater features (i.e., catch basins), Table 2 presents detected analytical results for soil samples collected from outfalls), and Table 3 presents detected analytical results for stormwater samples collected from stormwater features (i.e., catch basins, roof drains, and outfalls). PFOA and TCE concentrations in stormwater solids and soil samples are presented on Figure 3, and PFOA and TCE concentrations measured in stormwater samples are presented on Figure 4.

PFOA concentrations in solid samples collected from the stormwater system features have ranged from non-detect to a maximum of 160 ng/g detected in catch basin CB07 (Tables 1 and 2; Figure 3), and PFOA concentrations in stormwater samples ranged from non-detect to a maximum of 3,400 ng/L detected in stormwater from an outfall northwest of the facility building (Table 3; Figure 4). In general, elevated concentrations of PFOA in solid samples have been measured in stormwater features within the facility building (i.e., catch basins), and elevated concentrations of PFOA in liquid samples have been measured in stormwater features within the facility building (i.e., catch basins) and from stormwater in the outfalls northwest of the facility building. In contrast, PFOA concentrations in stormwater collected from roof drain downspouts ranged from 2 ng/L

to 88 ng/L with five (5) of the eight (8) locations at concentrations of less than or equal to 10 ng/L.

Generally, concentrations of TCE measured in stormwater and stormwater solids have been low (i.e., < 2 ug/L or < 2 mg/kg) or non-detect, but TCE has been detected at a maximum concentration of 190 ug/L in stormwater collected from a catch basin within the interior courtyard of the facility building (Tables 1 through 3; Figures 3 and 4).

Historical document review revealed a spill of #2 fuel oil and perchloroethane (PCA) in the NYSDEC database for the Site opened in 1999 and closed in 2012. Soil samples collected and analyzed in the 1996 Phase II ESA were documented to contain detections of chlorinated solvents, notably trichloroethylene (TCE). The samples were described as being collected from within the courtyard and near the boiler room. The solid and water samples collected from within the catch basins in the same courtyard during the Site Characterization (CB06 and CB07) had detections of VOCs, notably TCE and cis-1,2-dichloroethylene.

1.3 Stormwater Utility Evaluation

In September 2016, January 2017, September 2017, and February 2020 the storm and sanitary sewer system utilities were located and surveyed as part of the Site Characterization Work Plan (C.T. Male, 2016) and the Supplemental Investigations (C.T. Male, 2017). The work was performed by New York Leak Detection, Inc. (NYLD) of Jamesville, New York under observation by C.T. Male personnel. Details regarding the methods and scope of work are included in the NYLD field reports, which are provided in Appendix A.

A layout of the utilities surveyed is presented on Figure 5a. Figure 5a also identifies the catch basins, flow direction, and the outfalls associated with each storm system line. A detail of each catch basin identifying pipes entering and exiting the stormwater structure is presented on Figure 5b (three pages).

Of the 43 video inspections completed in 2017 and 2020, 27 of the pipes had at least some debris or are of unknown condition. Of those 27 pipes, 12 were either blocked or covered by debris within the pipe and/or the pipe was crushed, limiting the evaluation of the pipe condition without cleaning. Segments of the stormwater drainage system that have not been inspected are identified on Figure 6. The amount of debris was characterized in

one of five ways: none, minimal, some, significant, and blocked. A summary of the pipe conditions observed during the survey is presented in Table 4.

Pipe cleaning was not performed during the surveys. To finish the piping inspections, pipes that contained more than minimal debris are recommended to be cleaned.

In 2016, seven (7) catch basins were identified. During further investigations, five (5) additional catch basins were identified. Of the 12 catch basins, 10 contained solids ranging in accumulation from trace to 17 inches, and eight (8) were documented as containing standing water. A table summarizing the observations of the catch basins is provided as Table 5.

Gutters were observed and documented on certain portions of the roof line. Eight (8) roof drain downspouts were documented across the system. Most of the downspouts drain directly into the catch basins. In limited instances, the downspout discharges onto the ground surface. In areas where gutters are not present, rain sheet flows off the roof, contacting the Site soils, and either flows across the ground surface into a catch basin or into a drain trench along portions of the building's exterior walls which then drain into the catch basins or piping. The existing gutters are shown on Figure 2.

2.0 IRM APPROACH

The goal of the IRM is to remove solids within the stormwater drainage system, restore system performance, and reduce further sedimentation to the drainage system.

2.1 General

The stormwater system evaluations completed to date have involved approximately 74% of the stormwater drainage system. Some of the sections are in good condition and others are not. Accumulated solids and possible pipe damage have prevented the complete inspection of the entire stormwater system. Removal of the solids and repairing/replacing damaged sections will allow for inspection of the entire length of the piping systems. Sections of piping not yet evaluated, including those presented in Table 4 where piping is collapsed, disconnected, and possibly cut off from remaining sections are identified, will be repaired, lined, or replaced as necessary to restore the integrity and functionality of the system. These sections will be approached and cleaned with caution until their competency can be further evaluated.

Each of the catch basins are precast units with solid bottoms except for two where the basin is a pipe with no structure underneath. Each of the basin structures will be cleaned of solids and those basins without concrete bottoms or in poor condition when exposed will be repaired or replaced with new basin structures.

Pipe and catch basin conditions as they were recorded during the remedial investigation are shown on Figure 6. Sections of pipe and features where it is already known that the pipe is crushed, collapsed, or otherwise needs repair are identified.

2.2 Removal of Sediment from Catch Basins

The 12 catch basins will be assessed at the start of work for the IRM. Catch basins containing solid media will be cleaned to the solid bottom, if present, or native soils. The method of basin cleaning will be at the contractor's discretion, but to the performance standard described in Section 3.0.

2.3 Video Inspection and Cleaning of Stormwater Piping

The building drainage system will be cleaned to the extent feasible. The details of each pipe condition and proposed cleaning are provided in Table 4 and Figure 6. In areas where only a section of a pipe needs to be cleaned, the entire length of the pipe may be cleaned and recorded. A pre-cleaning video inspection will be completed to assess the current condition of the pipe. The pipe will then be cleaned using an industry standard jetting tool to remove accumulation of solids and debris in and on the pipe. Sections of piping not yet evaluated, including those presented in Table 4 where piping is collapsed, disconnected, and possibly cut off from the remaining system, will be discussed and reviewed with the contractor in advance. These sections will be cleaned and treated with caution given the uncertainties regarding their condition. A post-cleaning video inspection will be completed to assess the cleaning efforts. The process by which the piping systems are cleaned will be at the contractor's discretion but will be held to the performance standard as described in Section 3.0.

Water used during the cleaning activities will be sourced from the Village of Hoosick Falls Department of Public Works. The source water is treated, and the effluent is analyzed by a laboratory on a monthly basis to confirm that it is PFAS free.

2.4 Cleaning Waste Capture and Control

At each of the outfalls and catch basins, best management practices will be used to capture and control the waste generated during the IRM. Engineering controls will be installed prior to commencement of the work. During the cleaning, vacuum truck(s) will be located at outfall(s) associated with the drainage line that is being cleaned at that time. The vacuum truck will capture waste generated during the cleaning. When the vacuum truck is full or the cleaning of a line is complete, the truck will transport the waste to frac tanks located at the Saint-Gobain McCaffrey Street facility and be managed in accordance with Section 2.4.1. Cleaning of a line will not take place without a vacuum truck and erosion control measures present at the outfall (Appendix B; Drawing C-101).

Additional liquids will not be required for cleaning of the catch basins. Industry standards of poly sheeting will be used to contain excess materials and stage equipment. Materials captured during cleaning of catch basins will be managed in accordance with Section 2.4.1.

Details of the best management practices and engineering controls are explained in further detail in Section 5.0.

2.4.1 IRM Derived Waste

Solids

Solids consisting of soil and sediment removed from the catch basins and piping will be placed in an appropriately sized container(s) designed for that waste. The waste will be temporarily stored on-site and later transferred to a roll-off storage container at the McCaffrey Street facility. The roll-off will have a poly liner and weathertight cover. The material will be profiled at a later date and disposed of in accordance with state and federal regulations at that time.

Liquids

Liquids consisting of water and sediment removed from the catch basins and piping will be placed in an appropriately sized container(s). The waste will be temporarily stored on-site and later transferred to a frac-tank storage container at the McCaffrey Street facility.

After the sediment has settled out of the water, the water will be profiled. If the McCaffrey Street IRM granular activated carbon (GAC) treatment system is capable of handling the constituents of the investigation derived water and with agency approval, the water will be pumped through the McCaffrey Street IRM GAC treatment system. If the on-site treatment system is not capable of handling the water, it will be disposed in accordance with state and federal regulations at that time. The sediment/solids will be profiled at a later date and disposed of in accordance with state and federal regulations at that time.

2.5 Infrastructure Repair

After the catch basins and system piping are cleaned, they will be further assessed by visual or video inspections for sections in need of repair, replacement, or lining. Potentially damaged infrastructure identified will be accessed through standard construction techniques for further assessment and repair. Infrastructure in need of repair already identified consists of, for example, catch basins lacking a solid or intact bottom that will be evaluated for installation of a solid bottom and system piping with blockage

that will be evaluated and repaired. A section of pipe at the northwest corner of the building has already been identified for repair (Appendix B; Drawing C-102).

2.6 Roof Gutter Installation and Repair

Sections of the roof line that do not currently have gutters will be evaluated to have gutters installed. Existing gutters will be cleaned and inspected. As with the other infrastructure, if deficiencies are observed, the gutters will be further assessed and repaired. Repairs will be made using standard construction techniques. Attempts will be made to have each downspout for the proposed and existing gutters to discharge directly to a catch basin, limiting the contact of stormwater with Site soils.

2.7 Applicable NYS Standards, Criteria, and Guidance (SCGs)

As stated above, the goals of the IRM are to remove accumulated solids acting as a potential PFAS source within the stormwater drainage system, restore system performance, and reduce further sedimentation to the drainage system. Applicable NYS SCGs currently do not exist for PFAS in stormwater or stormwater solids.

3.0 IRM PERFORMANCE STANDARDS

The goals of the IRM are to remove accumulated solids acting as a potential PFAS source within the stormwater drainage system, restore system performance, and reduce further sedimentation to the drainage system via additional guttering. The performance standards for the IRM will evaluate the effectiveness of the IRM in removing solids from the system and repairing and restoring infrastructure consistent with the goals established in this IRM WP.

3.1 Solids Removal

A combination of manual removal, jetting, or other industry-standard techniques will be used to remove solids. The assessment of solids removal will be completed by visual inspection and documented (using video and photographs) following cleaning. The performance standard is defined as removal of accumulated solids that impact the performance (i.e., flow constriction or stagnant water) of the building drainage system. Locations with accumulated solids identified during post-IRM video or camera inspections will be noted for further cleaning if needed. Alternative cleaning approaches will be considered in consultation with the sewer rehabilitation contractor as needed. Video or camera inspections will be completed following each cleaning event if multiple cleanings are necessary.

3.2 Infrastructure Repair and Restoration

The assessment for damage to the stormwater drainage system will be completed concurrent with cleaning activities. Pipe blockages are present within the building drainage system as shown on Figure 6. It is unknown whether the blockages are a result of solids accumulation or damaged infrastructure.

The performance standard for infrastructure repair is to restore the building drainage system to its intended operation (i.e., repair features that constrict flow or cause stagnant water) and to reduce further sedimentation to the drainage system via additional guttering.

3.3 Inspection and Sampling

Following the completion of all IRM activities including infrastructure repair and replacement and removal of any additional solids that are discovered via post-IRM video inspections, one stormwater sampling event will be completed. Samples will be collected from existing stormwater outfall pipes observed to be active and flowing and targeted to occur within 2 months of completion of all IRM activities. The sample collection will be scheduled for completion concurrent with a sampling event completed as part of NYSDEC-approved supplemental surface water characterization scope of work (C.T. Male and BEC, 2021). Stormwater samples will be analyzed for PFAS and VOCs, and the results will be evaluated along with the supplemental surface water characterization.

In addition to the single stormwater sampling event, the stormwater drainage system will undergo quarterly (for one year) visual inspection at accessible catch basins and outlets following the completion of all IRM activities described above. If sufficient volume of newly deposited sediments is discovered in areas of the stormwater drainage system (e.g., catch basins) during the post-IRM field inspection, confirmatory sediment sampling will take place. Confirmatory sediment samples will be analyzed for PFAS and VOCs. The analytical results for any confirmatory sediment samples collected from the drainage system will be used to determine in conjunction with NYSDEC whether additional system repair or further remedial action is necessary. If newly deposited sediments are not discovered in areas of the stormwater drainage system during the 1-year post-IRM field inspections, the IRM will be considered complete. Upon IRM completion, erosion and sediment controls will be removed.

4.0 TEMPORARY CONSTRUCTION FACILITIES

4.1 Site Security, Staging, and Parking

4.1.1 Site Security

IRM construction activities will take place on Site. Site security will be implemented during the completion of the IRM activities in accordance with corporate and facility requirements.

4.1.2 Staging

Equipment and materials will be staged at the rear (western) sections of the facility at a designated location identified by the facility. The staging area locations will be established prior to beginning the IRM and may be adjusted throughout the implementation of the IRM.

4.1.3 Parking

It is expected that the existing parking area in the western portion of the Site will be used by personnel involved in the implementation of the IRM.

4.2 Decontamination of Equipment

Equipment that comes into contact with the Site's solids and liquids will be cleaned prior to demobilization. The equipment will be cleaned at a decontamination pad that is anticipated to be located within the western portion of the Site (Appendix B; Drawing C-102). The decontamination pad will be constructed of reinforced polyethylene and bermed at its perimeter to deter the overflow of water beyond the pad. The floor of the pad will be sloped so that water collects in a low area of the pad and can be readily removed, as necessary. Material generated during decontamination will be treated as described in Section 2.4.1. The equipment will be cleaned using shovels, brushes, brooms,alconox and water wash, and/or a high-pressure power washer.

4.3 Utilities

Necessary precautions will be taken to protect existing utilities located within the boundaries of the IRM.

Utilities expected to be required during construction and operation of the IRM include:

- Temporary bathroom and hand-washing facilities.

4.4 Surveying

Survey work performed in conjunction with the IRM will be certified by a New York State Professional Land Surveyor (PLS). The survey work will include surveying pre- and post-IRM Site conditions.

5.0 SITE CONTROLS DURING REMEDIAL ACTION

5.1 Stormwater Management

In accordance with the New York Guidelines for Urban Erosion and Sediment Control and the New York State Stormwater Management Design Manual, a Stormwater Pollution Prevention Plan (SWPPP) is not necessary for the IRM. However, erosion and sediment control measures and pollution prevention measures are designed and presented in the following sections and Appendix B depicting the erosion and sediment control (ESC) best management practices that will be in place.

5.2 Community Air Monitoring Plan (CAMP)

The New York State Department of Health (NYSDOH) Community Air Monitoring Plan (CAMP) will be implemented during this IRM activity.

5.3 Dust Control

Dust is not expected to be generated during work performed. If dust is observed, dust suppression techniques will be implemented, as necessary, to control fugitive dust to the extent practical.

5.4 Construction Observation and Certification

C.T. Male will provide full-time observation during the IRM (environmental observer). Periodic observation will be made by a C.T. Male registered Professional Geologist/Engineer to provide the required certification for the Construction Completion Report (CCR). The geologist/engineer will work with the environmental observer to document that the project is implemented in accordance with the NYSDEC approved IRM WP. The project geologist/engineer will provide engineering review of IRM-related contractor submittals and field changes for the IRM construction work. Deviations from this work plan will be noted in the CCR.

6.0 HEALTH AND SAFETY PLAN (HASP)

C.T. Male and any other construction observers will follow health and safety procedures in accordance with the existing Site-specific health and safety plan (HASP) that was developed for SC-RI activities. Prior to implementing the field work, the existing Site-specific HASP will be amended, as needed, for any IRM tasks that are not addressed in the existing plan.

The contractor(s) for the Site IRM will be required to provide a Site-specific HASP certified by a Certified Industrial Hygienist or equivalent. The contractor's employees will be required to have read and understood their company's Site-specific HASP prior to beginning work.

Site workers will also be required to successfully complete any training required by Saint-Gobain. Daily work permits will need to be prepared for review and signature by all contractors and Saint-Gobain personnel.

A copy of the health and safety plans will be available at the Site during the performance of IRMs to which they are applicable.

7.0 SITE RESTORATION

7.1 Site Restoration

Upon completion of the field activities, the Site will be restored as necessary to pre-IRM conditions with respect to topography, hydrology, and vegetation, to the extent necessary and practicable.

8.0 REMEDIAL ACTION SCHEDULE AND PROGRESS REPORTS

8.1 Remedial Action Schedule

Coordination of project work will begin with formal approval from NYSDEC. Within 60 days of DEC approval, work on Site will commence dependent on contractor's availability. NYSDEC will be provided with written notice a minimum of five business days prior to the initiation of IRM site work.

The IRM site work will be completed during the typical construction season during normal work hours, subject to the facility's normal operating schedule. Given the volume of water and precise equipment required, freezing conditions would reduce the effectiveness and quality of the IRM. Cleaning and video tasks will be completed without interruption. Overall duration of the IRM will depend on the contractor's means and methods, conditions observed, and quantity of repairs.

8.2 IRM Progress Reports

Progress reports will be submitted to the NYSDEC Project Manager via email as part of the Site Monthly Progress Report.

8.3 Citizen Participation

Per 6 NYCRR Part 375-2.10(f), this IRM WP will be placed in the document repositories. A fact sheet summarizing the work to be performed and availability of the IRM WP will be prepared by NYSDEC and sent to the public via the NYSDEC listserv.

9.0 INSTITUTIONAL CONTROLS AND SITE MANAGEMENT PLAN

Following completion of the Site's Remedial Investigation/Feasibility Study a Site Management Plan will be prepared that will document engineering and institutional controls, as appropriate.

10.0 IRM CONSTRUCTION COMPLETION REPORT

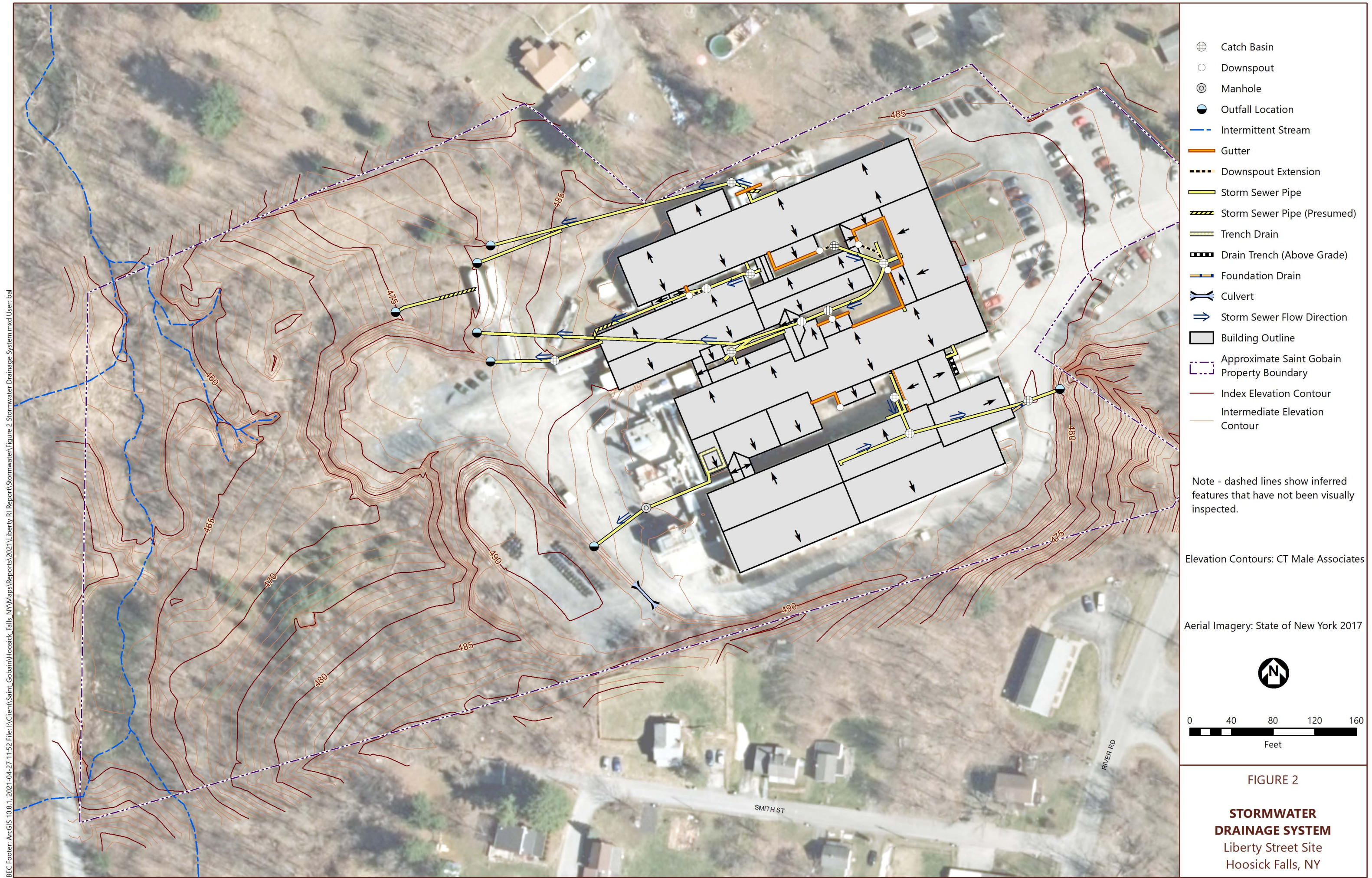
The CCR will then be incorporated and/or referenced in the Final Engineering Report (FER). The FER is required for the Department's issuance of the Certificate of Completion (COC).

11.0 REFERENCES

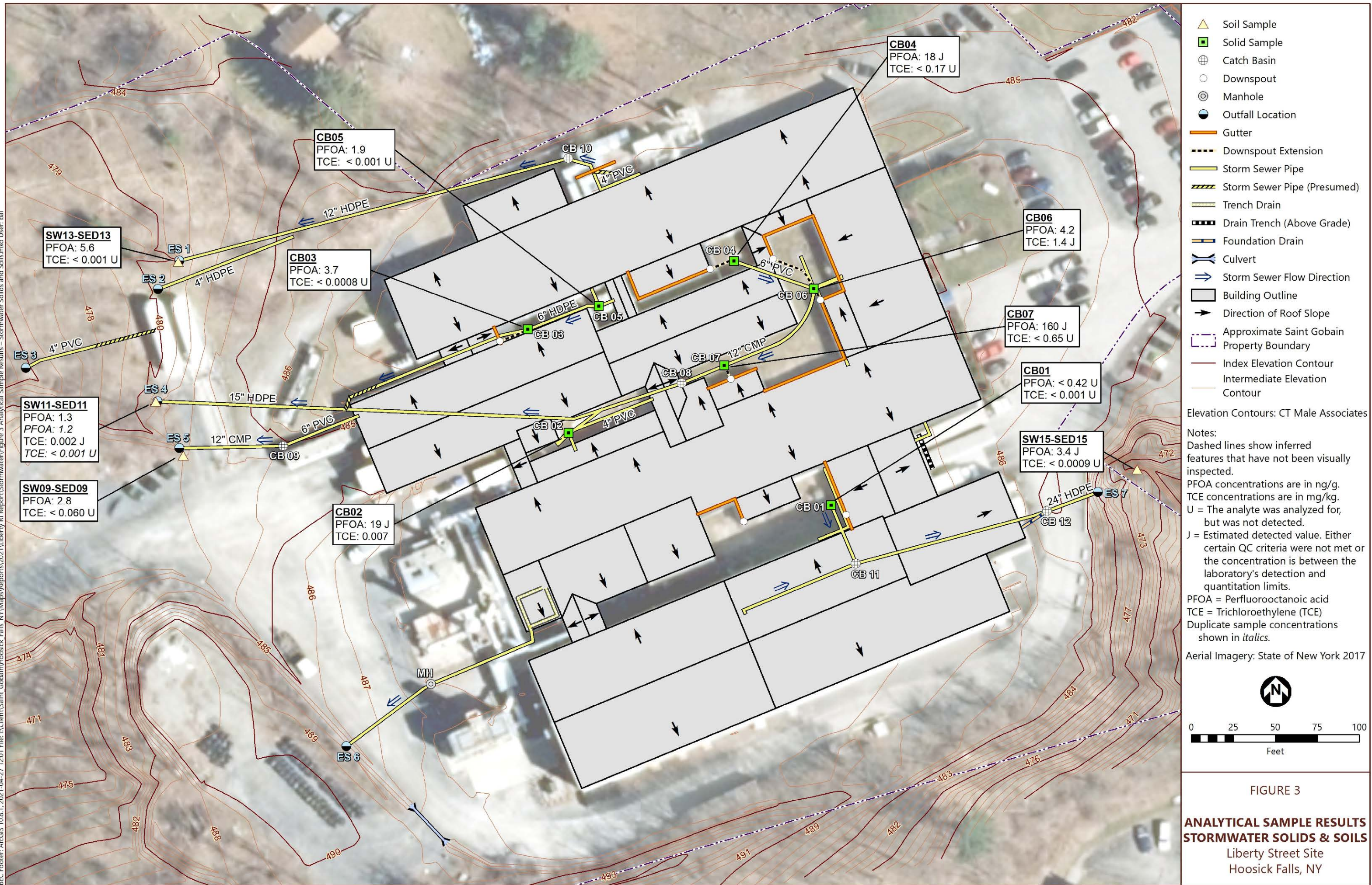
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- C.T. Male, 2017. Supplemental Scope of Work, Saint-Gobain Performance Plastics Site, 1 Liberty Street, Village of Hoosick Falls, Rensselaer County, New York, DEC Site No.: 442048. C.T. Male Associates, May 19, 2017.
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FIGURES





BEC Footer: ArcGIS 10.8.1, 2021-04-27 12:01 File: I:\Client\Saint_Gobain\Hoosick_Falls_NY\Maps\Reports\2021\Liberty_RI_Report\Stormwater\Figure 3 Analytical Sample Results - Stormwater Solids and Soils.mxd User: bal



BEC Footer: ArcGIS 10.8.1, 2021-04-27 12:01 File: I:\Client\Saint_Gobain\Hoosick_Falls_NY\Maps\Reports\2021\Liberty_RI_Report\Stormwater\Figure 4 Analytical Sample Results - Stormwater.mxd User: bal

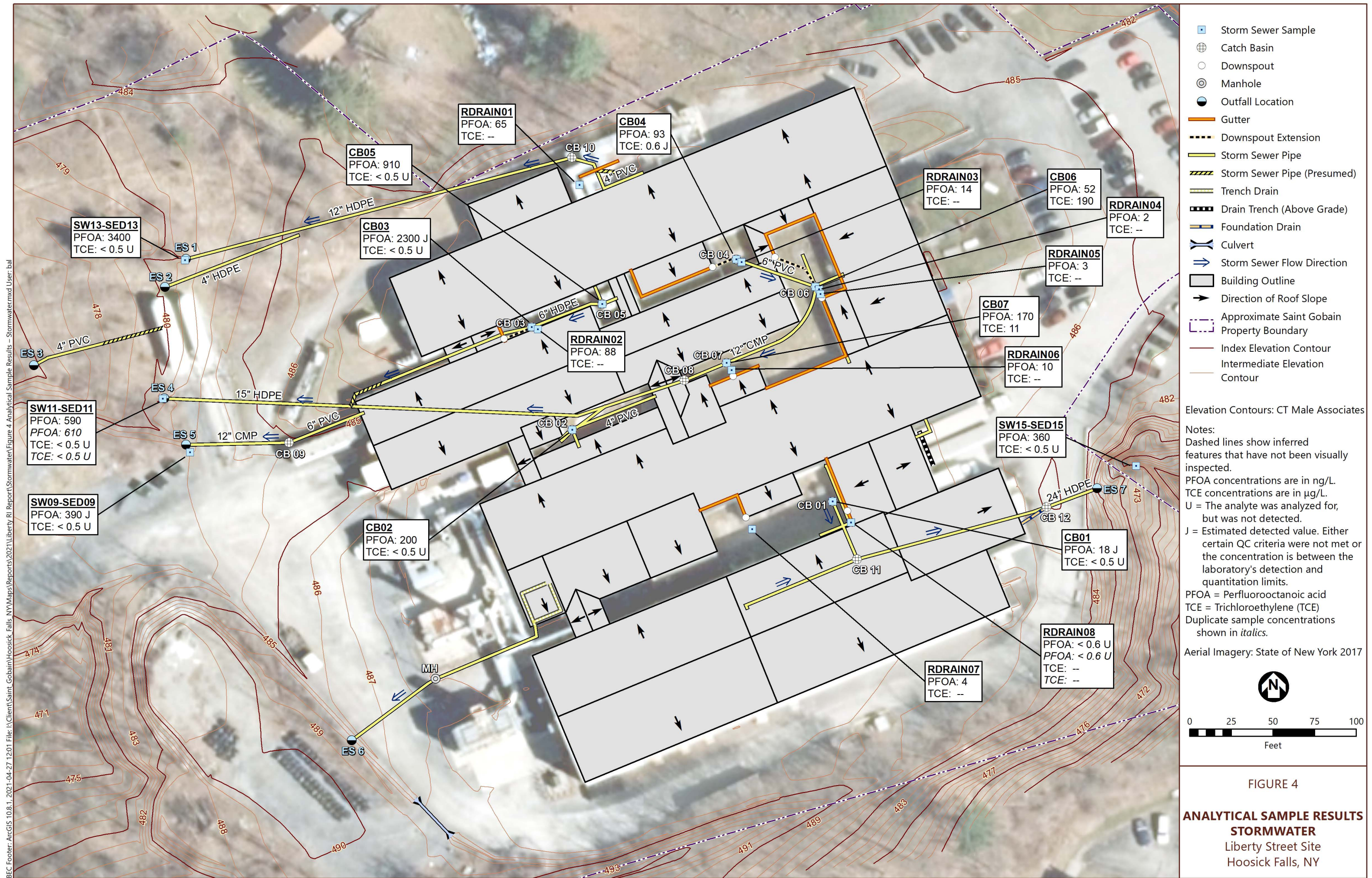
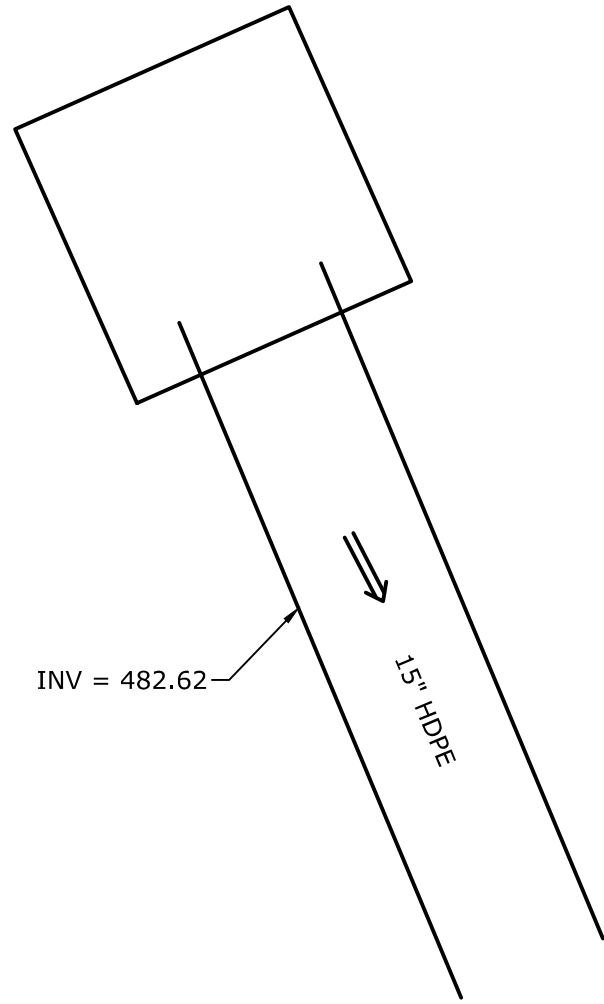


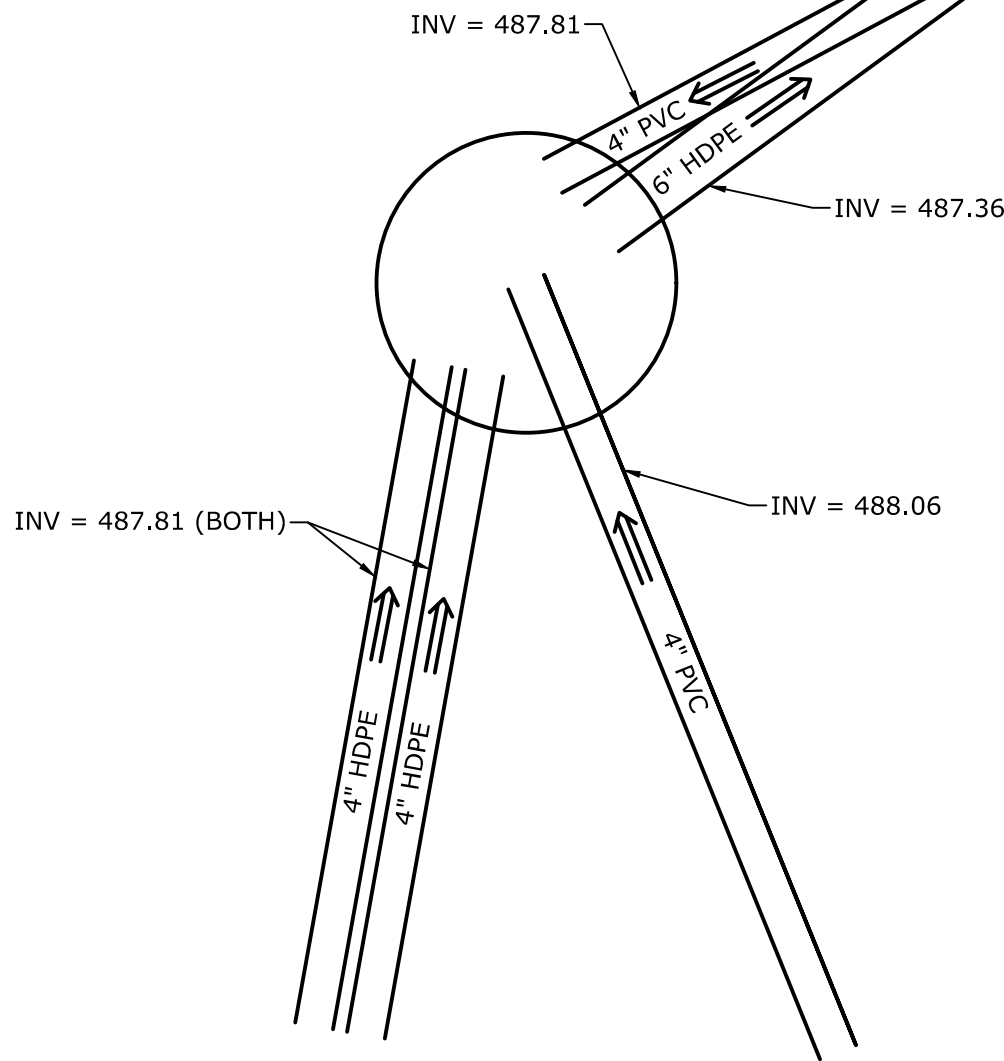
FIG 5A	
SHEET	1 OF 4
DWG. NO: 21-0100	

TF = 486.67
SUMP = 482.62



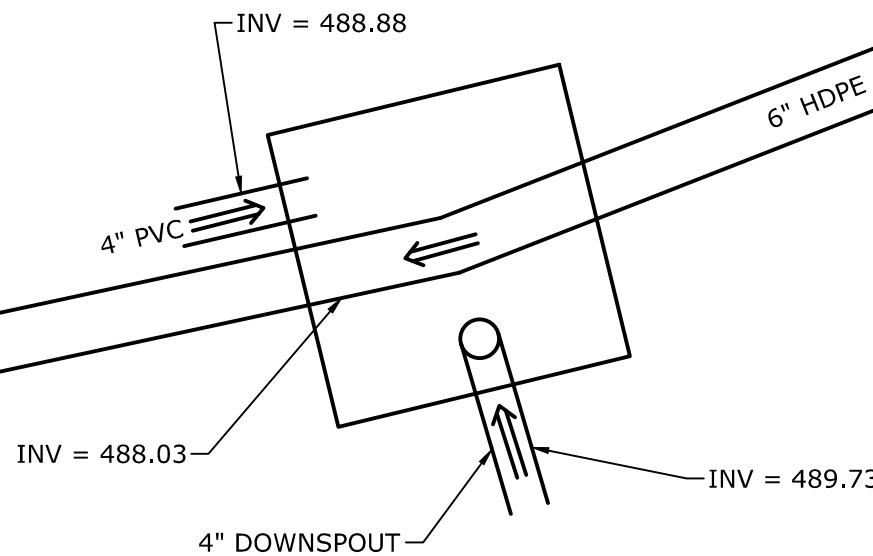
1
FIG-1B
CB01
SCALE: NTS
CROSS REFERENCE: NONE

TF = 488.91
SUMP = 487.26



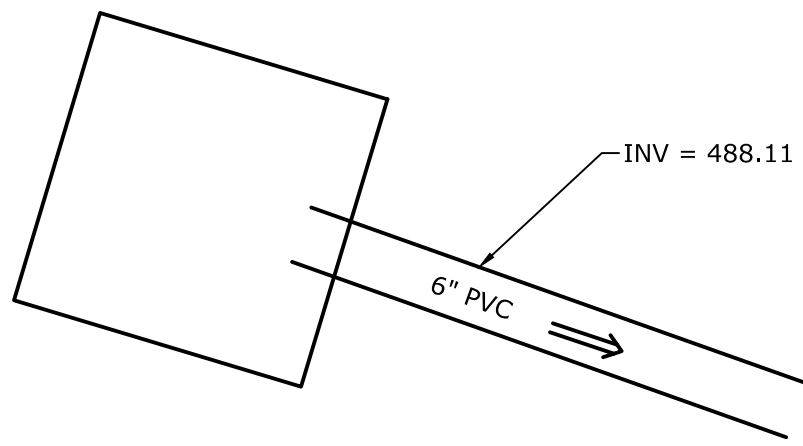
2
FIG-1B
CB02
SCALE: NTS
CROSS REFERENCE: NONE

TF = 490.13
SUMP = 487.73



3
FIG-1B
CB03
SCALE: NTS
CROSS REFERENCE: NONE

TF = 489.71
SUMP = 486.47



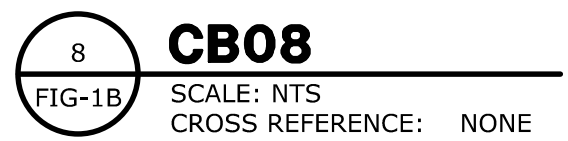
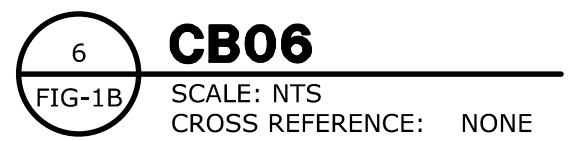
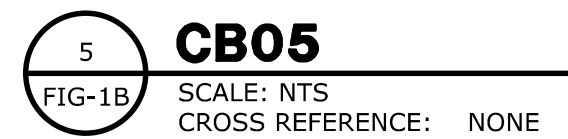
4
FIG-1B
CB04
SCALE: NTS
CROSS REFERENCE: NONE



NOTE:

1. ALL ELEVATIONS ARE IN FEET.

DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.	FIGURE 5B CATCH BASIN DETAILS	
					© 2021 C.T. MALE ASSOCIATES DESIGNED: JTD DRAFTED : AJB CHECKED : JTD PROJ. NO : 16.6132 SCALE : NTS DATE : FEB, 2021	SAINT-GOBAIN PERFORMANCE PLASTICS LIBERTY STREET	
						VILLAGE OF HOOSICK FALLS	RESSELAER COUNTY, NEW YORK
						C.T. MALE ASSOCIATES Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY	
						FIG-5B SHEET 2 OF 4 DWG. NO: 21-0100	



1. ALL ELEVATIONS ARE IN FEET.

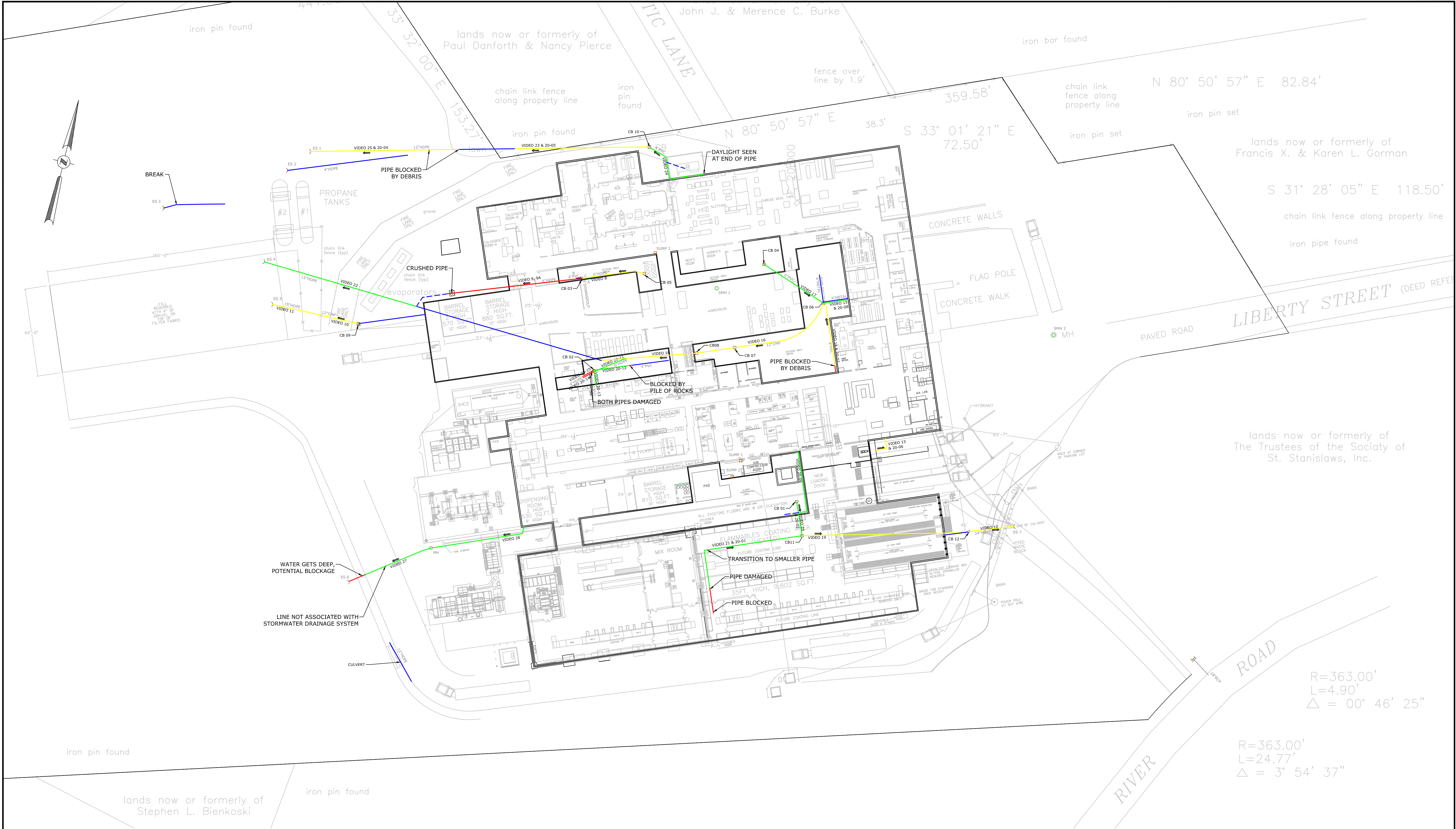
	DATE	REVISIONS RECORD/DESCRIPTION		DRAFTER	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW. © 2021 C.T. MALE ASSOCIATES DESIGNED: JTD DRAFTED : AJB CHECKED : JTD PROJ. NO : 16.6132 SCALE : NTS DATE : FEB, 2021	<div>FIGURE 5B CATCH BASIN DETAILS</div> <div>SAINT-GOABIN PERFORMANCE PLASTICS LIBERTY STREET</div>			
		<div>△</div>									
		<div>△</div>						<div>C.T. MALE ASSOCIATES</div> <div>Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.</div> <div>50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400</div> <div>COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY</div> <div>JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY</div>	<div><div><div></div><div></div><div></div><div></div></div><div>www.ctmale.com</div></div>	<div>FIG-5B</div> <div>SHEET 3 OF 4</div> <div>DWG. NO: 21-0100</div>	
		<div>△</div>									
		<div>△</div>									
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		<div>△</div>									
		<div>△</div>									
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		<div>△</div>									



12
FIG-1B



1. ALL ELEVATIONS ARE IN FEET



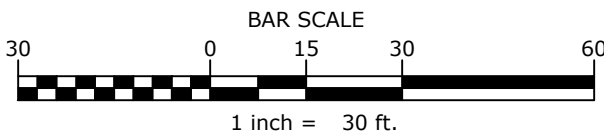
CAD DWG. FILE NAME: K:\Projects\166132\Civil\02 Drawings and Maps\Figure 6, Rev1.dwg













CAD DWG. FILE NAME: Figure 6, Rev1.dwg

- Map References
- "MAP OF LANDS OF AlliedSignal Fluorglas Products LIBERTY STREET PLANT" Village of Hoosick Falls, Rensselaer County, New York. Prepared by David F. Barrass Land Surveyor for SAINT-GOBAIN PERFORMANCE PLASTICS. Dated 8/15/2014, DWG.NO. H14-1014.
 - "FIGURE 1 SUPPLEMENTAL SAMPLING LOCATION PLAN" Village of Hoosick Falls, Rensselaer County, New York. Prepared by C.T. Male Associates. Dated 2/17/2017, DWG. NO 17-156.

- LEGEND:
- PIPE IN GOOD CONDITION
 - PIPE SHOULD BE CLEANED
 - SIGNIFICANT CONCERN WITH PIPE
 - PIPE HAS NOT BEEN EVALUATED
 - PRESUMED PIPE LOCATION

- NOTE:
- ALL ELEVATIONS ARE IN FEET.



	DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.	FIGURE 6 STORMWATER DRAINAGE SYSTEM CONDITIONS			
		△				© 2021 C.T. MALE ASSOCIATES	SAINT-GOBAIN PERFORMANCE PLASTICS LIBERTY STREET			
		△				DESIGNED: JTD	VILLAGE OF HOOSICK FALLS RENSSELAER COUNTY, NEW YORK			
		△				DRAFTED : AJB				
		△				CHECKED : JTD	C.T. MALE ASSOCIATES Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY			
		△				PROJ. NO : 16.6132				
		△				SCALE : AS SHOWN				
		△				DATE : APRIL 2021				
		△					<div></div> <div>www.ctmale.com</div>	FIG 6		
							SHEET 1 OF 1			
						DWG. NO: 21-0100				

Tables

Table 1
Analytical Results - Miscellaneous Solid Materials
Interim Remedial Measure Work Plan
Liberty Street Site, Hoosick Falls, NY

Parameter	Location	CB01	CB02	CB03	CB04	CB05	CB06	CB07	SUMP2	SUMP2	SUMP2	SUMP2
	Date	8/04/2016	7/27/2016	8/04/2016	8/15/2016	8/04/2016	8/04/2016	8/04/2016	12/14/2016	12/14/2016	12/14/2016	12/14/2016
	Depth	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 ft	0 ft	0 ft	0 ft
	Sample Name	SG4-SED19-160804	SG4-SED20-160727	SG4-SED17-160804	SG4-SED23-160815	SG4-SED18-160804	SG4-SED22-160804	SG4-SED21-160804	SG4-Sump2-SED01-161214	SG4-Sump2-SED02-161214	SG4-Sump2-SED03-161214	SG4-Sump2-SED04-161214
Parameter	Units											
Volatile Organic Compounds												
1,1,1-Trichloroethane	mg/kg	< 0.001 U	0.016	< 0.0008 U	< 0.17 U	< 0.001 U	0.48 J	< 0.65 U	< 0.003 UJ	< 0.001 UJ	--	--
1,1-Dichloroethane	mg/kg	< 0.001 U	0.017	< 0.0008 U	< 0.17 U	< 0.001 U	0.15 J	< 0.65 U	< 0.003 UJ	< 0.001 UJ	--	--
1,2,3-Trichlorobenzene	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.027 J	< 0.001 R	--	--
1,2,4-Trichlorobenzene	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.018 J	< 0.001 R	--	--
1,2,4-Trimethylbenzene	mg/kg	< 0.001 U	0.004 J	< 0.0008 U	< 0.17 U	< 0.001 UJ	0.096 J	1.2 J	0.048 J	0.002 J	--	--
1,2-Dichlorobenzene	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.006 J	< 0.001 R	--	--
1,2-Dichloroethylene, cis	mg/kg	< 0.001 U	0.007	< 0.0008 U	< 0.17 U	< 0.001 U	8.2	29	< 0.003 UJ	< 0.001 UJ	--	--
1,2-Dichloroethylene, trans	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 U	0.061 J	< 0.65 U	< 0.003 UJ	< 0.001 UJ	--	--
1,3,5-Trimethylbenzene	mg/kg	< 0.001 U	0.003 J	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.031 J	< 0.001 R	--	--
1,3-Dichlorobenzene	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.008 J	< 0.001 R	--	--
1,4-Dichlorobenzene	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.018 J	< 0.001 R	--	--
2-Hexanone	mg/kg	< 0.004 U	< 0.004 U	< 0.003 U	< 0.52 U	< 0.004 U	< 0.15 UJ	< 1.9 UJ	0.042 J	0.22 J	--	--
Acetone	mg/kg	0.11	0.037	< 0.006 U	< 1.2 U	< 0.009 U	< 0.35 U	< 4.5 U	0.46 J	< 0.008 UJ	--	--
Benzene	mg/kg	< 0.0006 U	< 0.0006 U	< 0.0004 U	< 0.086 U	< 0.0007 U	< 0.025 U	< 0.32 U	0.002 J	< 0.0006 UJ	--	--
Butylbenzene	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.009 J	< 0.001 R	--	--
Butylbenzene, sec	mg/kg	< 0.001 U	0.001 J	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.006 J	< 0.001 R	--	--
Butylbenzene, tert	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.018 J	< 0.001 R	--	--
Carbon disulfide	mg/kg	0.001 J	0.001 J	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.065 J	< 0.001 UJ	--	--
Chloroethane	mg/kg	< 0.002 U	0.01	< 0.002 U	< 0.35 U	< 0.003 U	< 0.10 UJ	< 1.3 U	< 0.006 UJ	< 0.002 UJ	--	--
Cumene (isopropyl benzene)	mg/kg	< 0.001 U	0.010	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.006 J	< 0.001 R	--	--
Cymene p- (toluene isopropyl p-)	mg/kg	< 0.001 U	0.006 J	< 0.0008 U	< 0.17 U	< 0.001 UJ	0.12 J	1.4 J	0.011 J	< 0.001 R	--	--
Ethyl benzene	mg/kg	< 0.001 U	0.019	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.023 J	< 0.001 R	--	--
Methyl acetate	mg/kg	< 0.002 U	< 0.003 U	< 0.002 U	8.9	< 0.003 U	0.39	< 1.3 U	0.24 J	0.003 J	--	--
Methyl ethyl ketone (2-butanone)	mg/kg	< 0.005 U	< 0.005 U	< 0.003 U	< 0.69 U	< 0.005 U	< 0.20 U	< 2.6 U	0.087 J	0.037 J	--	--
Methyl isobutyl ketone (MIBK)	mg/kg	< 0.004 U	< 0.004 U	< 0.003 U	< 0.52 U	< 0.004 U	< 0.15 UJ	< 1.9 UJ	0.041 J	< 0.003 UJ	--	--
Methylcyclohexane	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.007 J	< 0.001 UJ	--	--
Propylbenzene	mg/kg	< 0.001 U	0.007	< 0.0008 U	< 0.17 U	< 0.001 UJ	< 0.050 U	< 0.65 U	0.019 J	< 0.001 R	--	--
Styrene	mg/kg	< 0.001 U	0.004 J	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.005 J	< 0.001 R	--	--
Toluene	mg/kg	0.011	0.022	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.081 J	0.012 J	--	--
Trichloroethylene (TCE)	mg/kg	< 0.001 U	0.007	< 0.0008 U	< 0.17 U	< 0.001 U	1.4 J	< 0.65 U	0.015 J	0.008 J	--	--
Vinyl chloride	mg/kg	< 0.001 U	< 0.001 U	< 0.0008 U	< 0.17 U	< 0.001 U	0.83	< 0.65 U	< 0.003 UJ	< 0.001 UJ	--	--
Xylene, m & p	mg/kg	< 0.001 U	0.017	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.098 J	0.003 J	--	--
Xylene, o	mg/kg	< 0.001 U	0.008	< 0.0008 U	< 0.17 U	< 0.001 U	< 0.050 U	< 0.65 U	0.028 J	< 0.001 R	--	--
Per- and Polyfluoroalkyl Substances												
Perfluorodecanoic acid (PFDA)	ng/g	< 0.28 U	< 0.32 UJ	< 0.21 U	< 0.79 UJ	< 0.27 U	< 0.25 UJ	< 0.30 U	1.1	0.36 J	0.70	0.32 J
Perfluoroheptanoic acid (PFHpA)	ng/g	< 0.42 U	0.71 J	< 0.32 U	< 1.2 UJ	< 0.41 U	< 0.38 U	0.58 J	< 0.57 U	5.2	< 0.50 U	< 0.38 U
Perfluorohexanesulfonic acid (PFHxS)	ng/g	< 0.70 U	< 0.81 UJ	< 0.54 U	< 2.0 UJ	< 0.68 U	< 0.64 U	0.80 J	< 0.95 U	< 0.51 U	< 0.83 U	< 0.63 U
Perfluorohexanoic acid (PFHxA)	ng/g	< 0.28 U	< 0.32 UJ	< 0.21 U	< 0.79 UJ	< 0.27 U	< 0.25 U	< 0.30 U	< 0.38 U	2.9 J	< 0.33 U	< 0.25 U
Perfluorononanoic acid (PFNA)	ng/g	< 0.28 U	< 0.32 UJ	< 0.21 U	< 0.79 UJ	< 0.27 U	0.26 J	0.81	1.4	1.9 J	0.92	0.78
Perfluorooctanesulfonic acid (PFOS)	ng/g	< 0.98 U	< 1.1 UJ	< 0.75 U	< 2.8 UJ	< 0.95 U	71	18 J	10	5.2 J	27	23
Perfluorooctanoic acid (PFOA)	ng/g	< 0.42 U	19 J	3.7	18 J	1.9	4.2	160 J	45	520 J	19	55
Perfluoroundecanoic acid (PFUnA / PFUnDA)	ng/g	< 0.42 U	0.58 J	< 0.32 U	< 1.2 UJ	< 0.41 U	< 0.38 U	< 0.45 U	< 0.57 U	< 0.30 UJ	0.55 J	< 0.38 U

Notes

Detections are presented in **bold**.

-- Not analyzed/Not available.

mg/kg - milligrams per kilogram.

ng/g - nanograms per gram.

J - The result is an estimated value.

R - The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Analyte not detected above method detection limit (MDL).

UJ - Analyte not detected. The reported MDL and limit of quantitation (LOQ) are approximate and may be inaccurate or imprecise.

Table 2
Analytical Results - Soil
Interim Remedial Measure Work Plan
Liberty Street Site, Hoosick Falls, NY

Location										SW09-SED09	SW11-SED11		SW13-SED13	SW15-SED15
Date										7/19/2016	7/19/2016		7/19/2016	7/21/2016
Depth										0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Sample Type										N	N	FD	N	N
Parameter	Units	New York DEC Restricted Use Soil Cleanup Objectives Protection of Groundwater	New York DEC Restricted Use Soil Cleanup Objectives Protection of Public Health Residential	New York DEC Restricted Use Soil Cleanup Objectives Protection of Public Health Restricted - Residential	New York DEC Unrestricted Use Soil Cleanup Objectives	New York DEC Restricted Use Soil Cleanup Objectives Protection of Public Health Commercial	New York DEC Restricted Use Soil Cleanup Objectives Protection of Ecological Resources	New York DEC Restricted Use Soil Cleanup Objectives Protection of Public Health Industrial	Rural Soil Background Concentrations (RSBCs)					
Last Updated		10/01/2020	10/01/2020	10/01/2020	10/01/2020	10/01/2020	12/14/2006	10/01/2020						
Exceedance Key		Underline	No Exceedances	No Exceedances	Shade	No Exceedances	No Exceedances	No Exceedances	Italic					
Volatile Organic Compounds														
1,2-Dichloroethylene, cis	mg/kg	0.25	59	100 a	0.25 e	500 b	NS	1000 c		< 0.060 U	0.002 J	0.002 J	< 0.001 U	< 0.0009 U
Acetone	mg/kg	0.05	100 a	100 b	0.05	500 b	2.2	1000 c	0.04	< 0.42 U	0.046 J	0.031	0.044	0.061 J
Carbon disulfide	mg/kg									< 0.060 U	< 0.001 U	< 0.001 U	0.002 J	0.002 J
Methyl acetate	mg/kg									2.7	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U
Methyl ethyl ketone (2-butanone)	mg/kg	0.12	100 a	100 a	0.12	500 b	100 d	1000 c		< 0.24 U	< 0.004 U	< 0.004 U	< 0.005 U	0.005 J
Trichloroethylene (TCE)	mg/kg	0.47	10	21	0.47	200	2	400		< 0.060 U	0.002 J	< 0.001 U	< 0.001 U	< 0.0009 U
Per- and Polyfluoroalkyl Substances														
Perfluorodecanoic acid (PFDA)	ng/g									0.41 J	< 0.28 U	< 0.28 U	< 0.27 U	< 0.28 UJ
Perfluorohexanoic acid (PFHxA)	ng/g									< 0.28 U	< 0.28 U	< 0.28 U	< 0.27 U	< 0.28 UJ
Perfluorooctanesulfonic acid (PFOS)	ng/g	3.7	8.8	44	0.88	440		440		1.4 J	3.8	5.1	< 0.96 U	< 0.99 UJ
Perfluorooctanoic acid (PFOA)	ng/g	1.1	6.6	33	0.66	500		600		2.8	1.3	1.2	5.6	3.4 J
Perfluoroundecanoic acid (PFUnA / PFUnDA)	ng/g									0.42 J	< 0.42 U	< 0.42 U	< 0.41 U	< 0.42 UJ

Notes
Detections are presented in **bold**.
mg/kg - milligrams per kilogram.
ng/g - nanograms per gram.
Sample Type N - Normal.
Sample Type FD - Field Duplicate.
a - The SCO for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.
b - The SCO for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.
c - The SCO for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.
d - The SCO for residential, restricted-residential and ecological resources use were capped at a maximum value of 10,000 ppm. See TSD section 9.3.
e - Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.
J - The result is an estimated value.
NS - Not specified.
U - Analyte not detected above method detection limit (MDL).
UJ - Analyte not detected. The reported MDL and limit of quantitation (LOQ) are approximate and may be inaccurate or imprecise.

Table 3
Analytical Results - Stormwater
Interim Remedial Measure Work Plan
Liberty Street Site, Hoosick Falls, NY

Location		CB01	CB02	CB03	CB04	CB05	CB06	CB07	RDRAIN01	RDRAIN02	RDRAIN03	RDRAIN04	RDRAIN05	RDRAIN06	RDRAIN07	RDRAIN08		SW09- SED09	SW11-SED11		SW13- SED13	SW15- SED15
Date	8/08/2016	8/08/2016	8/09/2016	8/09/2016	8/10/2016	8/10/2016	8/10/2016	8/10/2016	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017		8/17/2016	7/20/2016		8/02/2016	7/21/2016
Depth	0 - 1.5 ft	0 - 0.25 ft	0 - 0.17 ft	0 - 2 ft	0 - 0.42 ft	0 - 0.25 ft	0 - 1 ft											0.04 ft	0.25 ft	0.25 ft	0.25 ft	0.17 ft
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	FD	N	N
Sample Name	SG4- CBSW01- 160808	SG4- CBSW02- 160808	SG4- CBSW03- 160809	SG4- CBSW04- 160809	SG4- CBSW05- 160810	SG4- CBSW06- 160810	SG4- CBSW07- 160810	SG4- RDrain01- 170616	SG4- RDrain02- 170616	SG4- RDrain03- 170616	SG4- RDrain04- 170616	SG4- RDrain05- 170616	SG4- RDrain06- 170616	SG4- RDrain07- 170616	SG4- RDrain08- 170616	SG4-FD01- 170616	SG4-SW09- 160817	SG4-SW11- 160720	SG4-FD01- 160720	SG4-SW13- 160802	SG4-SW15- 160721	
Parameter		Units																				
Volatile Organic Compounds																						
1,1,1-Trichloroethane	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	16	0.9 J	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	2	< 0.5 U	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethylene	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.6 J	< 0.5 U	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloroethylene, cis	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	250	0.5 J	--	--	--	--	--	--	--	--	--	0.6 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloroethylene, trans	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	1	< 0.5 U	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Acetone	ug/l	< 12 UB	< 6 U	63	< 6 U	< 6 U	< 6 UB	< 6 UB	--	--	--	--	--	--	--	--	--	< 25 UB	< 6 U	< 6 U	< 6 U	< 6 U
Trichloroethylene (TCE)	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	0.6 J	< 0.5 U	190	11	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl chloride	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	11	0.7 J	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Per- and Polyfluoroalkyl Substances																						
Perfluorobutanesulfonic acid (PFBS)	ng/l	< 4 UJ	< 4 U	7 JN	5 JN	10 JN	< 4 U	6 JN	< 0.8 U	< 0.8 U	< 0.8 U	< 0.8 U	< 0.8 U	< 0.8 U	< 0.8 U	< 0.8 U	< 0.8 U	< 4 R	< 4 U	< 4 U	< 4 UJ	< 4 U
Perfluorodecanoic acid (PFDA)	ng/l	< 1 U	< 1 UJ	< 1 U	1 JN	< 1 UJ	< 1 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	2 J	< 1 U	< 1 U	2	2 J
Perfluoroheptanoic acid (PFHpA)	ng/l	2 JN	4 J	140	7	45	8 JN	8	4	2	0.8 J	< 0.5 U	0.9 J	2 J	0.6 J	< 0.5 U	< 0.5 U	12 J	29 J	15 J	49 J	20 J
Perfluorohexanesulfonic acid (PFHxS)	ng/l	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 4 R	< 4 U	< 4 U	< 4 U	< 4 U
Perfluorohexanoic acid (PFHxA)	ng/l	< 1 UJ	5	33	5 JN	46 JN	14 JN	7	2 J	2 J	2 J	< 0.6 U	1 J	2 J	0.9 J	< 0.6 U	< 0.6 U	14 J	49 JN	13 J	30	21
Perfluorononanoic acid (PFNA)	ng/l	< 1 UJ	1 J	3	1 JN	11 JN	< 1 UJ	2 JN	< 0.6 UJ	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 UJ	0.7 J	< 0.6 U	< 0.6 U	< 0.6 U	3 J	2 JN	2 JN	4	5
Perfluorooctanesulfonic acid (PFOS)	ng/l	< 5 U	< 5 UJ	9 J	< 5 U	32 J	11	< 5 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	8 J	37 J	31 J	9 J	11 J
Perfluorooctanoic acid (PFOA)	ng/l	18 J	200	2300 J	93	910	52	170	65	88	14	2	3	10	4	< 0.6 U	< 0.6 U	390 J	590	610	3400	360
Perfluoroundecanoic acid (PFUnA / PFUnDA)	ng/l	< 2 U	< 2 U	< 2 U	< 2 U	3 J	< 2 U	< 2 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 2 R	< 2 U	< 2 U	< 2 U	< 2 U

Notes
Detections are presented in **bold**.
-- Not analyzed/Not available.
Sample Type N - Normal.
Sample Type FD - Field Duplicate.
ng/l - nanograms per liter or parts per trillion (ppt).
ug/l - micrograms per liter or parts per billion (ppb).
J - The result is an estimated value.
N - The analyte has been "tentatively identified" or considered "presumptively" present.

R - The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U - Analyte not detected above method detection limit (MDL).
UB - Analyte not detected substantially above level reported in the associated lab, equipment, field, or trip blank.
UJ - Analyte not detected. The reported MDL and limit of quantitation (LOQ) are approximate and may be inaccurate or imprecise.

Table 4
Pipe Condition Assessment Summary
 Liberty Street Site
 Hoosick Falls, NY

2017			
Video Number	Pipe Conditions		Additional Notes
	Joints	Debris	
8	Good	Significant	First 25' is under water and not visible.
9	Good	Blocked	Camera under water. Drop down at 29'. Enter new pipe at 30'. Pipe not at consistenst slope. Dips have lots of stones and debris. Smaller pipe within larger pipe at 101'. Tree trunk stuck at reduction point.
9A	Collapsed	Blocked	Pipe crushed in
10	Good	Some	
11	Unknown	Unknown	Pipe reduces size at 17'. Could not jump into smaller pipe
12	Good	Significant	Difficult to see condition of pipe because the camera is stuck to one side due to debris.
13	Good	Some	
14	Good	Blocked	Pile of rocks at 43'. Frequent spider webs in pipe indicating it doesn't see flow.
15	Good	None	
16	Unknown	Significant	Camera under water. Difficult to see condition of pipe.
17	Good	Minimal	
18	Good	Significant	Large rock at 43'
19	Good	Significant	
20	Good	None	
21	Good	Blocked	Camera enters smaller pipe at 68'. Smaller pipe blocked at 113'.
22	Good	Minimal	
23	Unknown	Significant	Can't see condition of pipe due to water and debris.
24	Good	None	Daylight at the end of pipe.
25	Good	Blocked	Minimal debris until 83'.
27	Good	Significant	Water gets deep at 56'. Potential blockage.
28	Good	Minimal	Frequent spider webs indicating pipe doesn't see flow.

2020			
Video Number	Pipe Conditions		Additional Notes
	Joints	Debris	
20-01	Good	Blocked	Blocked by debris at 113'.
20-02	Good	None	
20-04	Good	Blocked	Blocked by branch? at 104'.
20-05	Good?	Significant	Camera mostly under water. Several "dams" that the camera breaks through.
20-06	Good	Minimal	
20-07	Good	Blocked	Transitions to HDPE at 8'. Lots of sediment in HDPE pipe. Blocked at 44'.
20-08	Good	None	Goes to cleanout?
20-09	Good	Minimal	
20-11	Good	Minimal/Significant	Drops into larger pipe at 23'. Larger pipe has significant debris. Pipe crossing through larger pipe at 95'.
20-12	Good	Blocked	Blocked by pile of rocks at 25'
20-13	Good	Minimal	Daylight at end of pipe.
20-14	Poor	Significant	Pipe crushed in at 2' and 5' and 7'
20-15	Poor	Significant	Pipe crushed in at 6'.

Notes:

Videos 1-7, 26, 20-03, and 20-10 are not included in these tables because they are of sanitary sewer pipes.

Table 5
Catch Basin Assessment Summary
 Liberty Street Site
 Hoosick Falls, NY

Catch Basin	Approx. Amount of Sediment (inches thick)	Approx. Amount of Water (inches deep)	Soild Bottom (Yes / No)	Roof Downspout Associatied (if any)
CB01	6-12	24	Yes	Yes
CB02	17	17	Yes	No
CB03	3	0	Yes	Yes
CB04	1-2	20	Yes	Yes
CB05	10	6	Yes	No
CB06	12-14	14	Yes	Yes
CB07	2-3 / 15	10 / saturated	Yes / No	Yes
CB08	trace	1	Yes (pipe)	N/A
CB09	6	19	Yes	N/A
CB10	4 (stone)	0	Yes	N/A
CB11	undefined	undefined	undefined	N/A
CB12	undefined	undefined	undefined	N/A

APPENDIX A
New York Leak Detection Field Inspection Reports

Date: 9/12/16 - 9/13/16Technician: Rob PennacchioCustomer: C.T Male AssociatesSite Address: 1 Liberty St. Hoosick Falls, NYContact Person: Johnathan DippertPhone: 518-469-1183Phone: 518-786-7400 x7563

Scope of Work: U.L- Video inspection and UL for catch basins and outlets per map provided. Locate and inspect lines from 6 outfall locations, locate and inspect lines from 5 catch basins and 1 manhole.

Type of Service:☐ *Leak Detection*☒ *Utility Location/GPR*☒ *Video Inspection*☒ *Infrastructure Assessment*☐ *Utility Mapping/AutoCAD*

Type of Equipment Used☐ *Profiler EMP 400*☒ *RD8000*☐ *MetroTech Vivax vLocPro2*☐ *LC2500 Leak Correlator*☒ *Noggin 250 mHz*☐ *PosiTector UTG G3*☒ *S-30 Surveyor*☐ *Noggin 500 mHz*☒ *Video Inspection Camera*☒ *Rodder*☐ *Conquest 1000 mHz*☐ *Helium # Bottles*☐ *Leica Robotic Total Station*☐ *Leica GPS***Marking Used**☒ *Paint*☒ *Flags*☐ *Chalk*☐ *Updated existing maps
onsite*☐ *Other:*

Instructions from Onsite Contact: Focus on lines suspected of going through the courtyards headed outside under the building.

Size of Pipe: Varied**Ground Cover/Weather Conditions:** Soil, Concrete, Asphalt/ Hot, Sunny**Site Access/Safety Training:** Contractor
Safety Orientation**Expiration Date:** 9/12/17**Information Transfer**☒ *Information relayed on site to: Chris*☐ *Hand drawn map (forward
to office for digital remake)*☐ *All markings picked
up by surveyors*

Notes/Testing Results:

- Utilized RD8000 along with the Rodder to locate storm lines.
- After the location was marked as far as possible the Video Inspection Camera was then used to document the condition of the pipes as well as any anomalies inside the lines.
- Utilized the S-30 surveyor to confirm the interconnection of one of the metallic storm lines.
- Some of the lines were packed with rubble and sediment which made it impossible to get the camera all the way through the full length of the pipe.
- Lines were marked with paint and flags where applicable. All info was relayed onsite to Chris.

Key

Blue	Water
Red	Power
Orange	Communications
Yellow	Gas/Flammable Fuel
White	Unknown
Green	Storm/Sanitary

CB = curb box

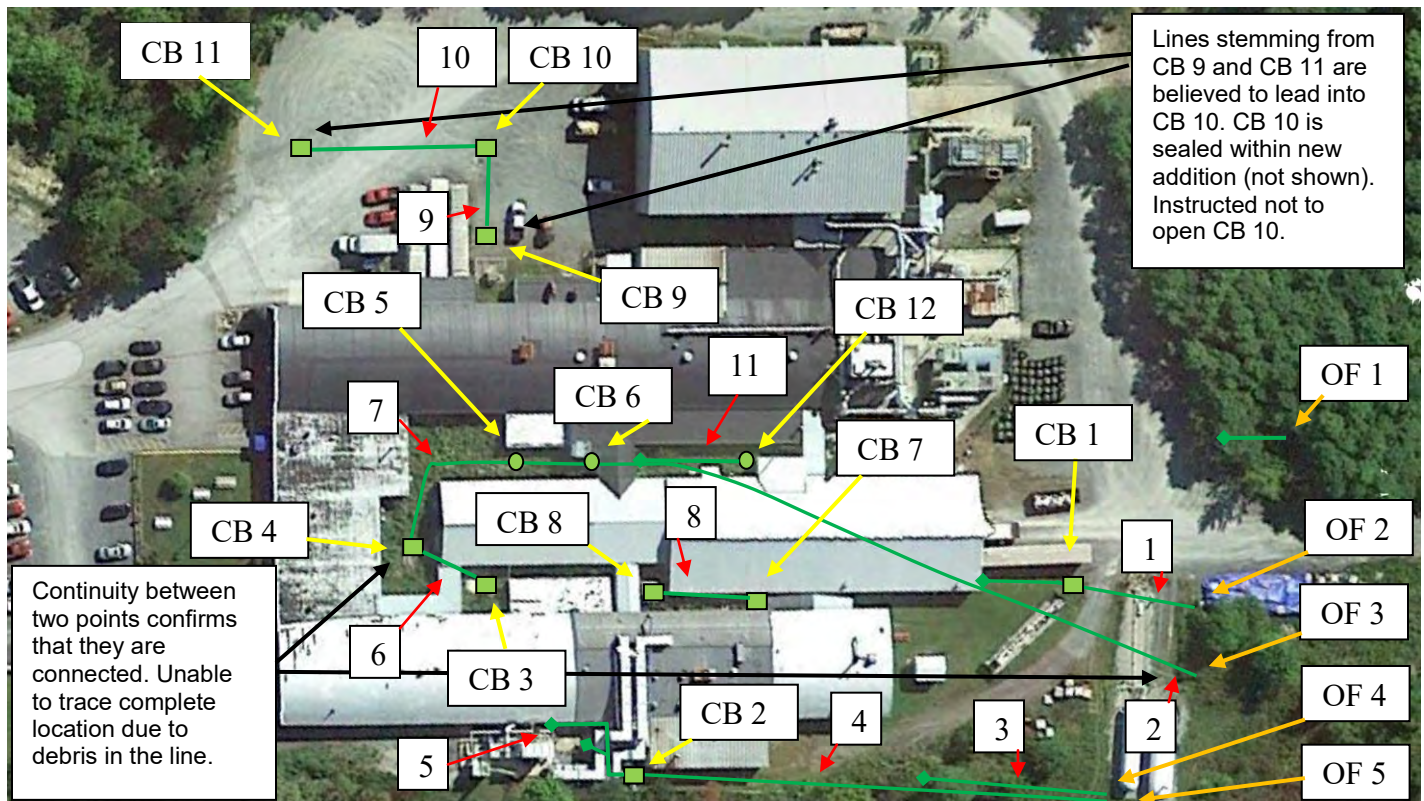
OF = out fall

PVC = Polyvinyl chloride (plastic)

CMP = corrugated metal pipe

HDPE = high-density polyethylene (plastic)

Aerial Overview:



Pipe Descriptions:

Note numbers in above diagram correspond to numbered bullets below.

1. 10" CMP heading from CB 1 to OF 2. Line is clear no apparent defects in pipe.
2. 12" HDPE heading from OF 3 toward building. Camera was able to reach ~15.8 ft. (4.84M) before reaching a lip in the pipe, which it could not pass, due to change in pipe size and material. 10" CMP inside 12" HDPE.
3. 6" HDPE from OF 4 toward building. Camera was able to reach ~86.9 ft. (26.49M) before reaching a collapsed section of pipe due to monitoring well installation.
4. 12" HDPE from OF 5 toward CB 2. Line reached 86.1 ft. (26.25M) before stopping from sediment buildup. Pipe also appears to be slightly pinched.
5. 4" Perforated PVC heading from CB 2 toward building. Line was clear, able to reach the end. Cracks in portion of perforated line at ~10.8 ft. (3.31M). Perforations begin just after the crack in the pipe at the angle point. There is also a section where the line splits. (See Pictures).
6. 6" green PVC heading from CB 3 to CB 4. Line was clear between drainage structures. 46.3 ft. (14.43M) total distance.
7. 10" CMP line full of sediment and heavy debris in areas (See pictures).
8. 6" HDPE from CB 7 to CB 8. Some debris present in line, but camera was able to make it through without trouble.
9. 18" HDPE from CB 9 to CB 10. Line is free and clear of debris. See picture for location of inlets.
10. 18" HDPE from CB 11 toward CB 10. Free and clear of debris. See picture for location of inlets.
11. 4" HDPE from CB 12 toward building. Line unable to be accessed with camera due to collapse in beginning of line.

Photos of Pipes:

Note line numbers in photos correspond to numbers in aerial overview.







Line 3 - Pipe appeared to be crushed in by a monitoring well which was installed in the area. Total distance reached ~86.9 ft.



Line 4 - Pipe is slightly pinched and clogged with sediment. Camera was unable to move past the buildup. Total distance reached ~86.1 ft.













Videos of Pipes:

There are 9 videos available on CD as backup to this report.

Date: Tuesday 1/3/2017 9:30-10:00 amTechnician: Steve BirminghamCustomer: C.T. Male Associates Engineering,Site Address: 1 Liberty St. Hoosick Falls, NYContact Person: Jonathan Dippert 518-469-1183 Phone: Ryan Hubbard 802-578-3150 Phone: _____**Scope of Work:** Utility Location Services -- Video inspect and trace out pipe that was found on property and clear ~ 5-6 borings**Type of Service:**

- | | | |
|---|---|--|
| <input type="checkbox"/> <i>Leak Detection</i> | <input checked="" type="checkbox"/> <i>Utility Location/GPR</i> | <input type="checkbox"/> <i>Video Inspection</i> |
| <input type="checkbox"/> <i>Infrastructure Assessment</i> | <input type="checkbox"/> <i>Utility Mapping/AutoCAD</i> | |
-

Type of Equipment Used

- | | | |
|---|---|--|
| <input type="checkbox"/> <i>Profiler EMP 400</i> | <input checked="" type="checkbox"/> <i>RD8000</i> | <input type="checkbox"/> <i>MetroTech Vivax vLocPro2</i> |
| <input type="checkbox"/> <i>LC2500 Leak Correlator</i> | <input checked="" type="checkbox"/> <i>Noggin 250 mHz</i> | <input type="checkbox"/> <i>PosiTector UTG G3</i> |
| <input type="checkbox"/> <i>S-30 Surveyor</i> | <input type="checkbox"/> <i>Noggin 500 mHz</i> | <input checked="" type="checkbox"/> <i>Video Inspection Camera</i> |
| <input type="checkbox"/> <i>Sonde</i> | <input type="checkbox"/> <i>Conquest 1000 mHz</i> | <input type="checkbox"/> <i>Helium # Bottles</i> |
| <input type="checkbox"/> <i>Leica Robotic Total Station</i> | <input type="checkbox"/> <i>Leica GPS</i> | |

Marking Used

- | | | |
|--|--|---------------------------------------|
| <input checked="" type="checkbox"/> <i>Paint</i> | <input type="checkbox"/> <i>Flags</i> | <input type="checkbox"/> <i>Chalk</i> |
| <input type="checkbox"/> <i>Updated existing maps onsite</i> | <input type="checkbox"/> <i>Other:</i> _____ | |

Instructions from Onsite Contact: _____**Size of Pipe:** _____**Ground Cover/Weather Conditions:** Gravel, grass and concrete / Chilly and damp**Site Access/Safety Training:** _____**Expiration Date:** _____**Information Transfer**

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> <i>Information relayed on site to:</i>
<u>Jonathan Dippert / Ryan Hubbard</u> | <input type="checkbox"/> <i>Hand drawn map (forward to office for digital remake)</i> | <input type="checkbox"/> <i>All markings picked up by surveyors</i> |
|--|---|---|

Notes/Testing Results:

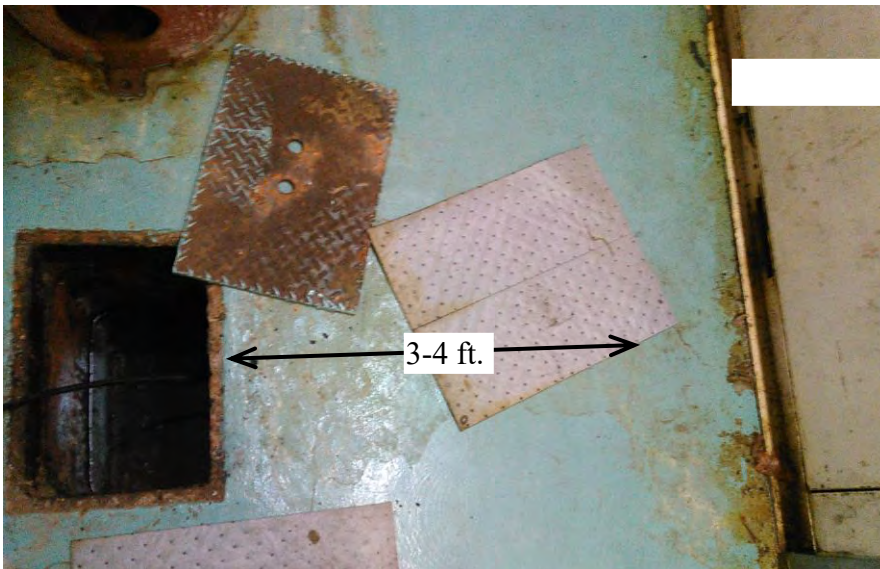


Picture of the drain pipe in the compressor room.

Material in the pipe appears to be absorbent spill granules saturated with oil.

Pipe needs to be cleaned out to verify that it is only in the compressor room and doesn't continue into the manufacturing area.

GPR images show this pipe only in the compressor room.



The camera only traveled 3-4 feet into the pipe due to the blockage.



GPR image of the drain pipe in the compressor room.

Image didn't continue into the manufacturing area.

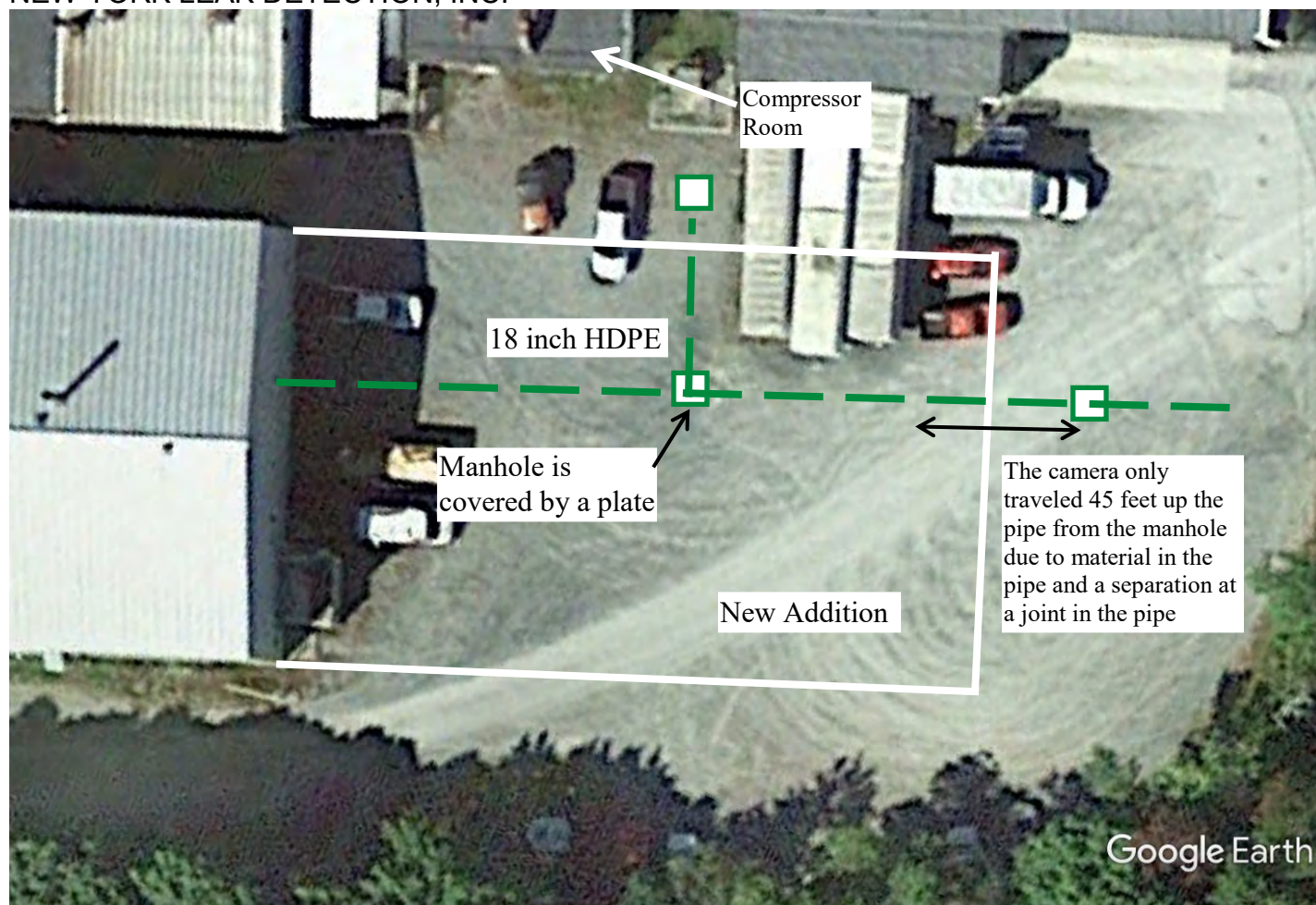
The pipe is just below the concrete slab for the compressor room.



Picture of the 18 inch HDPE drain pipe from the courtyard into the building.

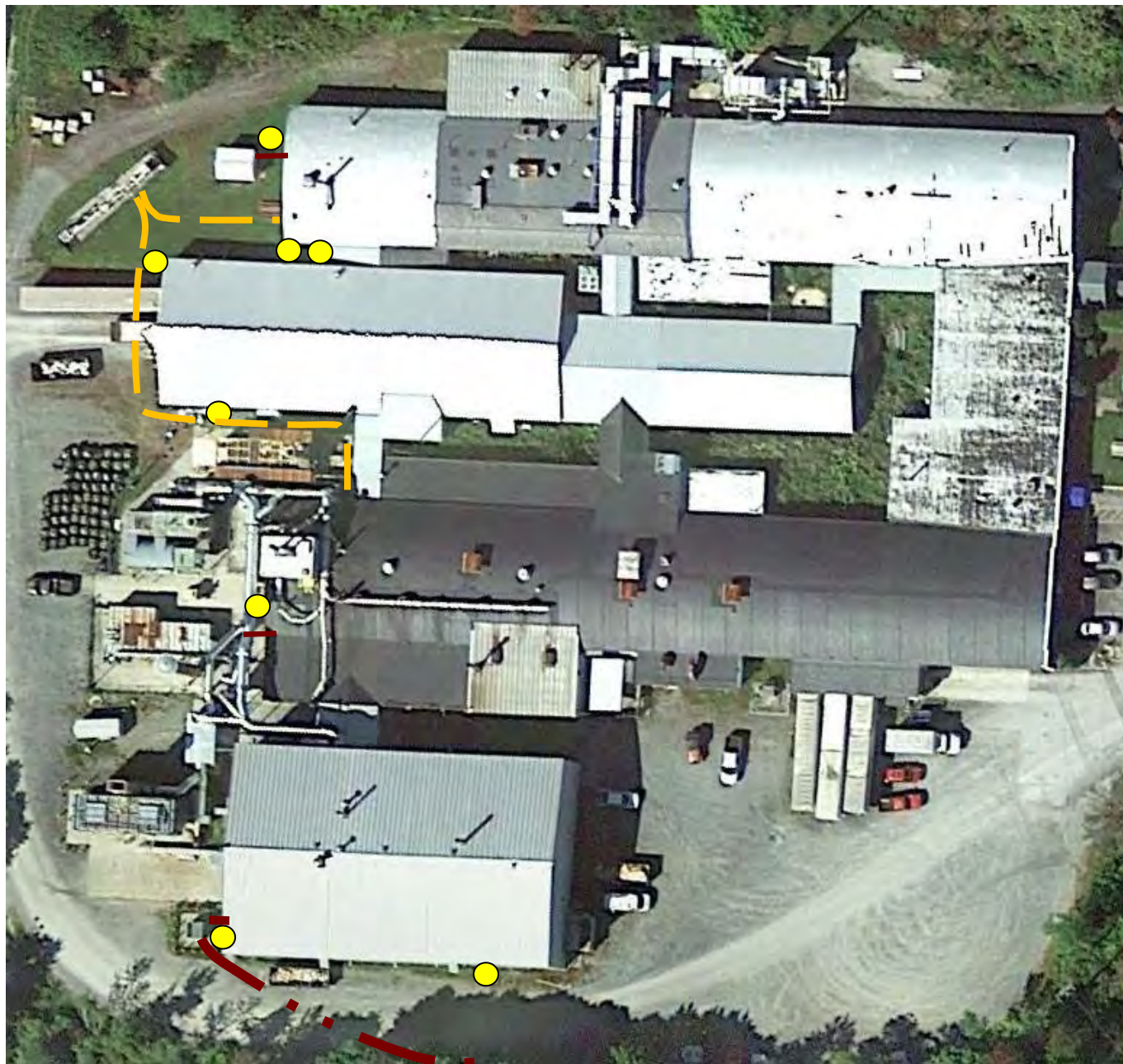


Picture of the 18 inch HDPE drain pipe from the courtyard into the building. Foundation drain pipes are shown entering the pipe.



NEW YORK LEAK DETECTION, INC.

1. The drain pipe in the compressor room appears to be full of the material used to absorb oil.
2. This material in the pipe is saturated with oil.
3. A shop vac using a 1 ½ inch hose might be able to clean the pipe of the material.
4. The GPR imagery for the pipe in the compressor room indicated that it is only in the compressor room and doesn't continue into the manufacturing area.



● Boring locations cleared

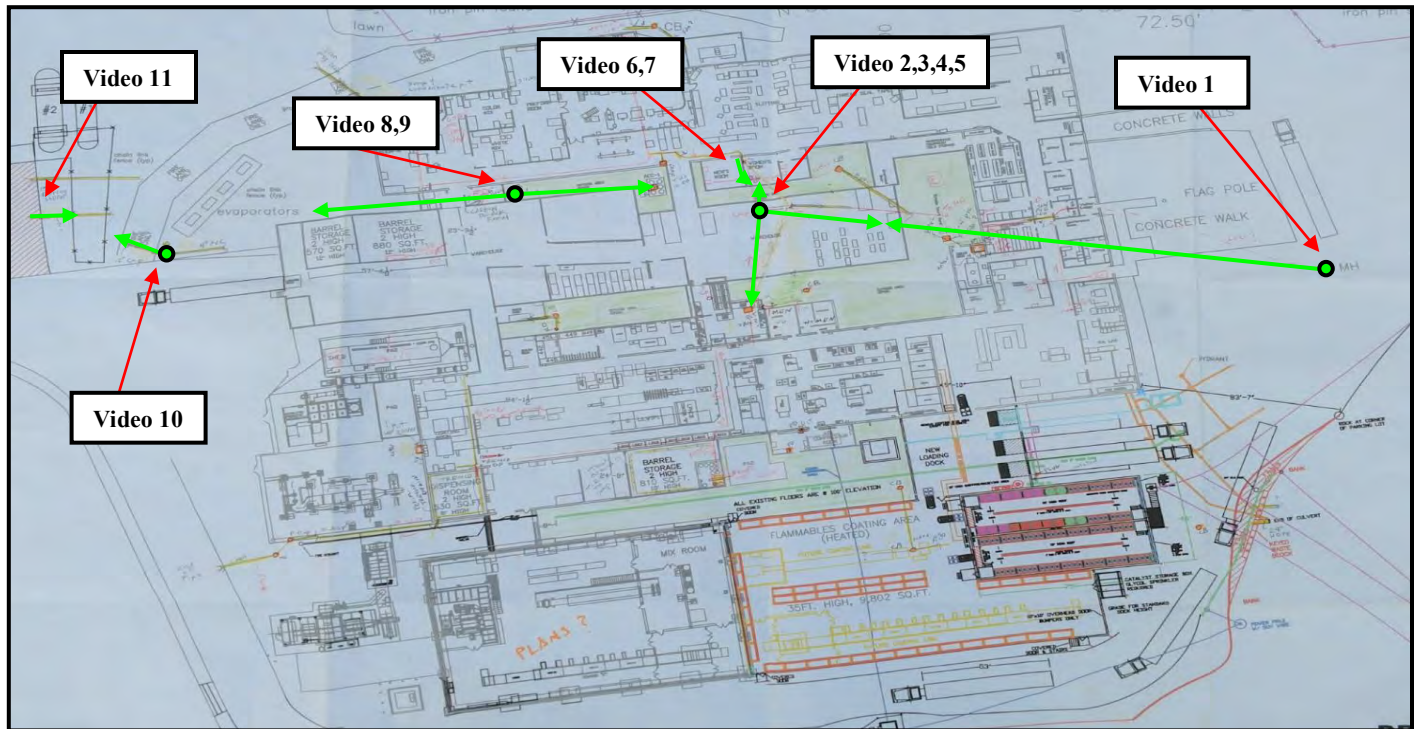
Key

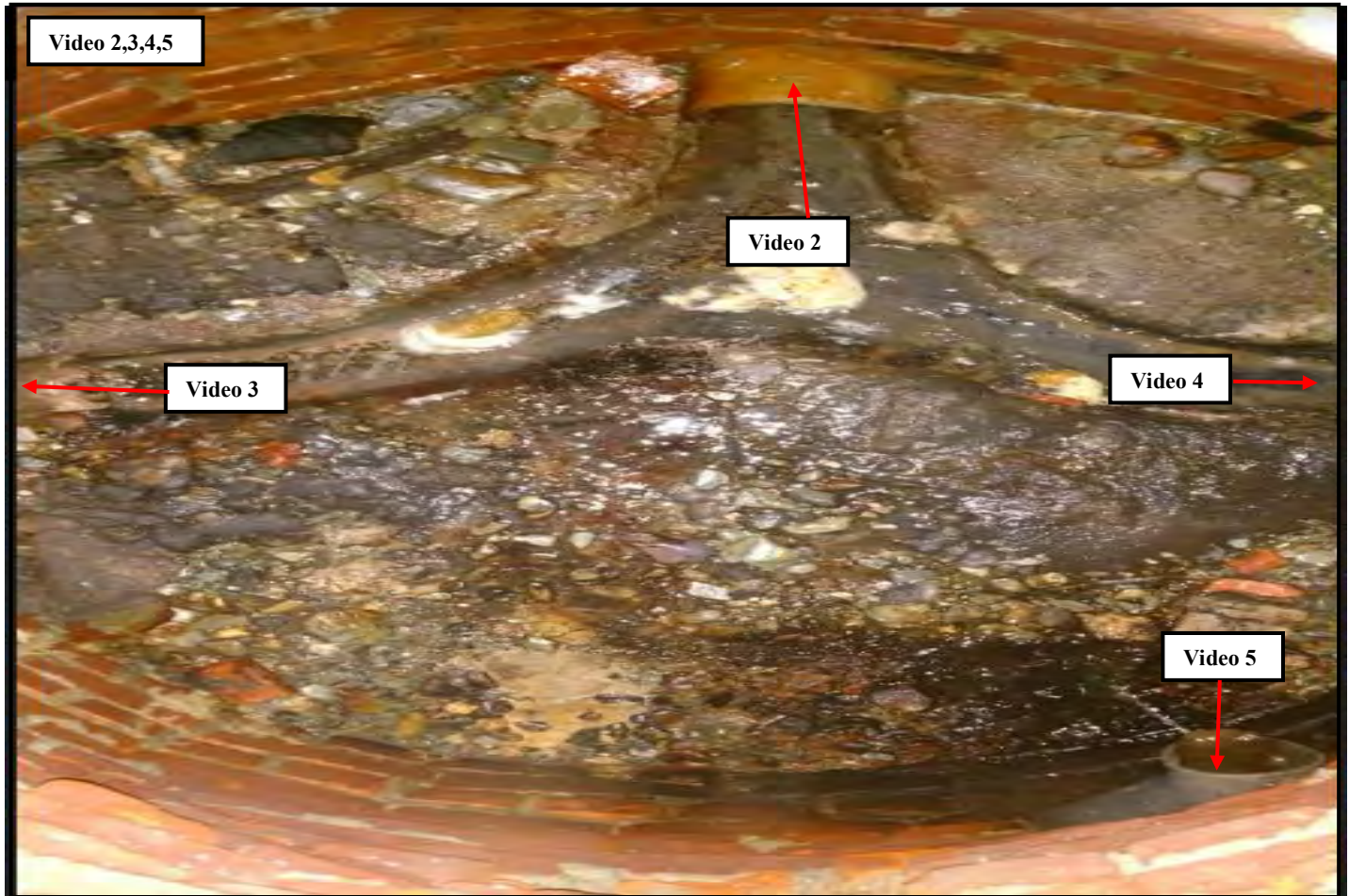
Blue	Water
Red	Power
Orange	Communications
Yellow	Gas/Flammable Fuel
White	Unknown
Green	Storm/Sanitary

Date: 9-11-17**Technician:** Steve Carney**Customer:** CT Male**Site Address:** 1 Liberty St. Hoosick Falls, NY**Contact Person:** Ron Smaka**Phone:** 518-378-2948**Phone:****Scope of Work:** Video inspection of Storm and sanitary line**Type of Service:**☐ *Leak Detection*☒ *Utility Location/GPR*☒ *Video Inspection*☐ *Infrastructure Assessment*☐ *Utility Mapping/AutoCAD*

Type of Equipment Used☐ *Profiler EMP 400*☒ *RD8000*☐ *Leica GPS*☐ *LC2500 Leak Correlator*☐ *Noggin 250 mHz*☒ *Traceable Rodder*☐ *S-30 Surveyor*☐ *Noggin 500 mHz*☒ *Video Inspection Camera*☐ *Sonde*☐ *Conquest 1000 mHz*☐ *Helium # Bottles*☐ *Leica Robotic Total Station***Marking Used**☒ *Paint*☐ *Flags*☐ *Chalk*☐ *Updated existing maps
onsite*☒ *Other:*
_____ *Tape* _____**Instructions from Onsite Contact:** Video inspect and locate various pipes (Sanitary and storm) throughout facility.**Notes/Testing Results:** Video inspected pipes highlighted below. Pipe locations were marked using tape (interior) and flags (exterior).**Information Transfer**☒ *Information relayed on site to: Ron Smaka*☐ *Hand drawn map (forward to office for digital remake)*☐ *All markings picked up by surveyors*

Video Inspections 9-11-17





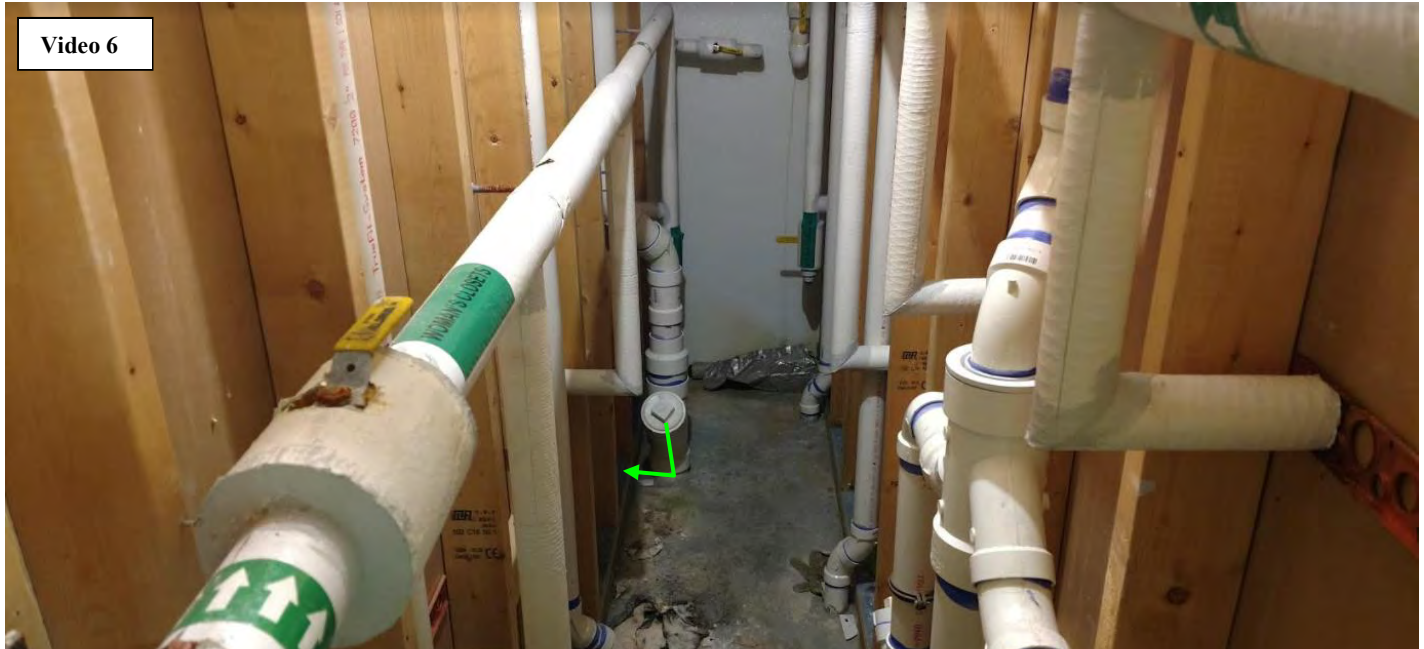
Video 2 – Sanitary : Was able to record partial run from MH (Pipe 6” – Video Inspection 190 feet long). Observed a “Tie in” at approx. 68 feet and 135 feet

Video 3 – Sanitary : Was able to record partial run from MH (Pipe 4” – Video Inspection 21 feet long). Observed between 0 and 15 feet pipe runs horizontal then between 15 and 18 feet pipe run is vertical back to horizontal til 21 feet.

Video 4 – Sanitary : Was able to record partial run from MH (Pipe 4” – Video Inspection 51 feet long). Observed a “Tie in” at approx. 45 feet until a vertical at 51 feet which was not able to be inspected due to push restrictions.

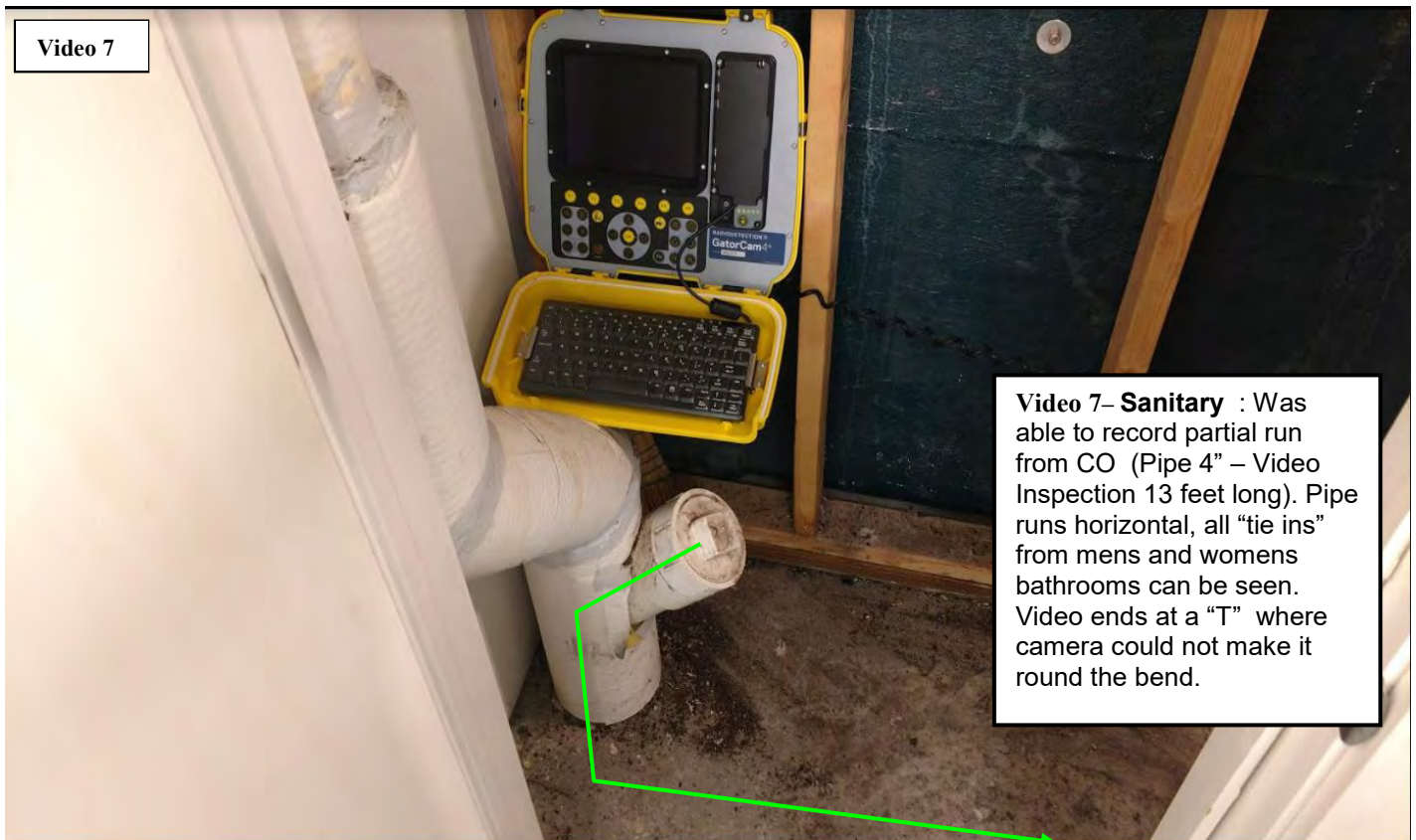
Video 5 – Sanitary : Was able to record partial run from MH (Pipe 3” – Video Inspection 1.5 feet long). This pipe was blocked with a black sludge which did have a petroleum odour and sheen.

Video 6

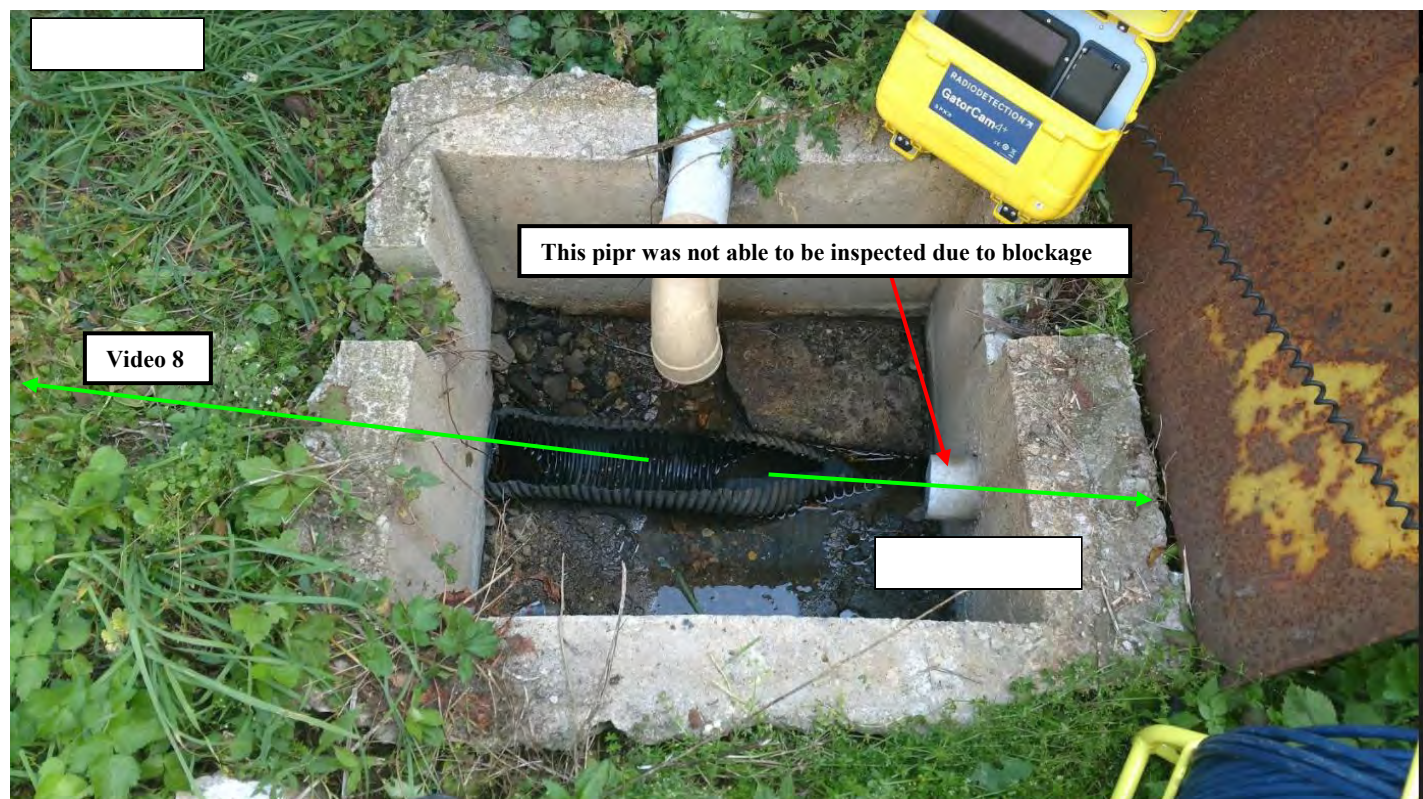


Video 6- Sanitary : Was able to record partial run from CO (Pipe 4" – Video Inspection 13 feet long). Pipe runs horizontal and then drops into a vertical before 90's into horizontal. All the bends restricted distance camera could be pushed

Video 7



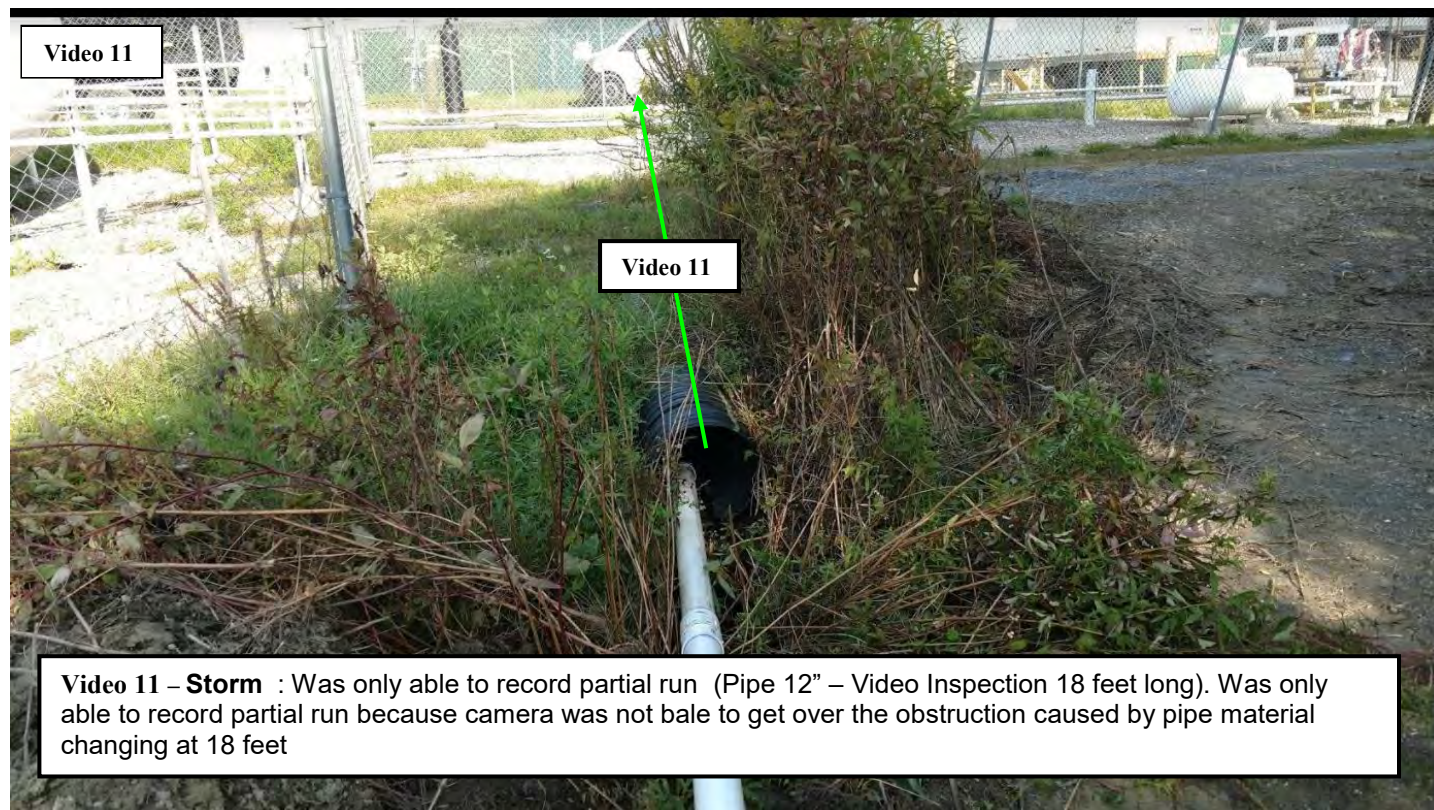
Video 7- Sanitary : Was able to record partial run from CO (Pipe 4" – Video Inspection 13 feet long). Pipe runs horizontal, all "tie ins" from mens and womens bathrooms can be seen. Video ends at a "T" where camera could not make it round the bend.

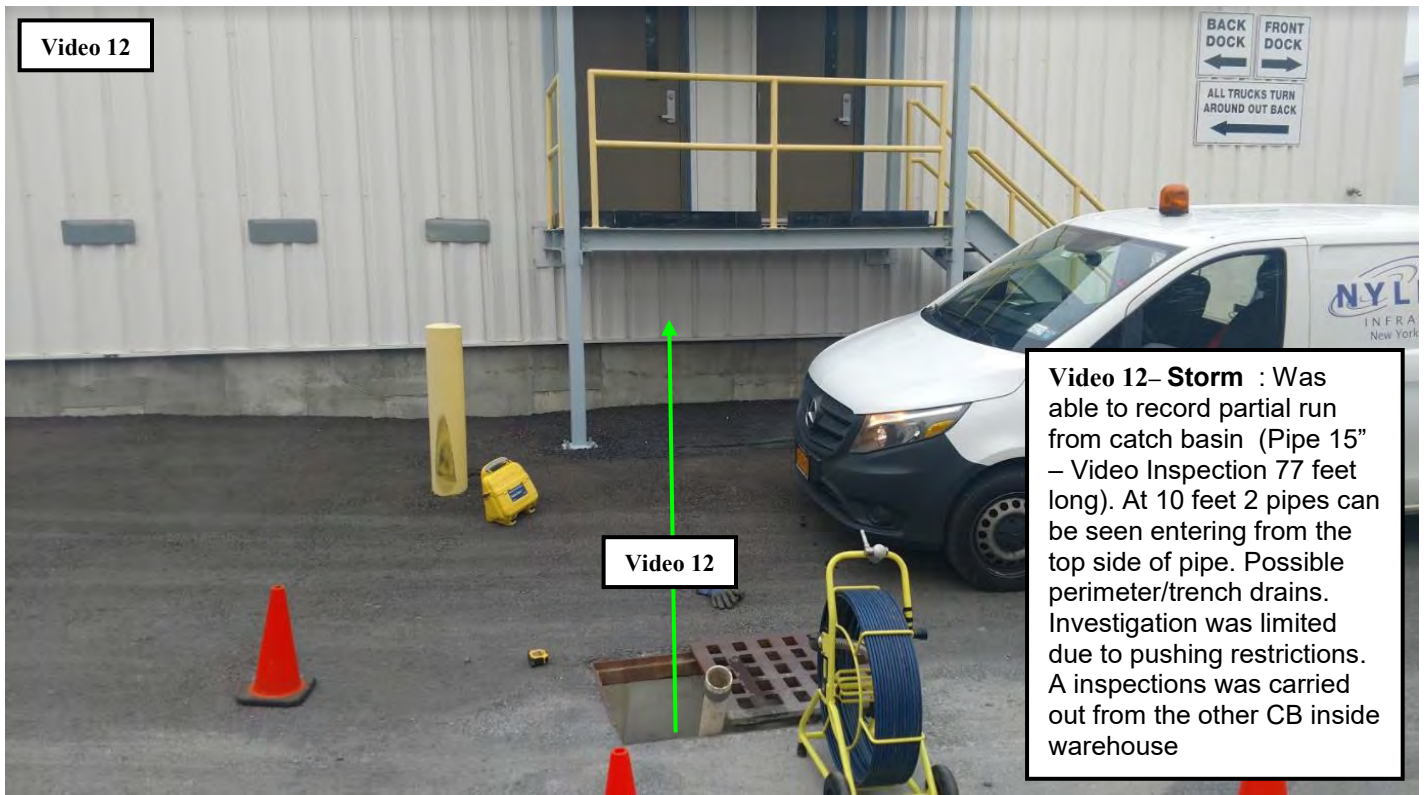
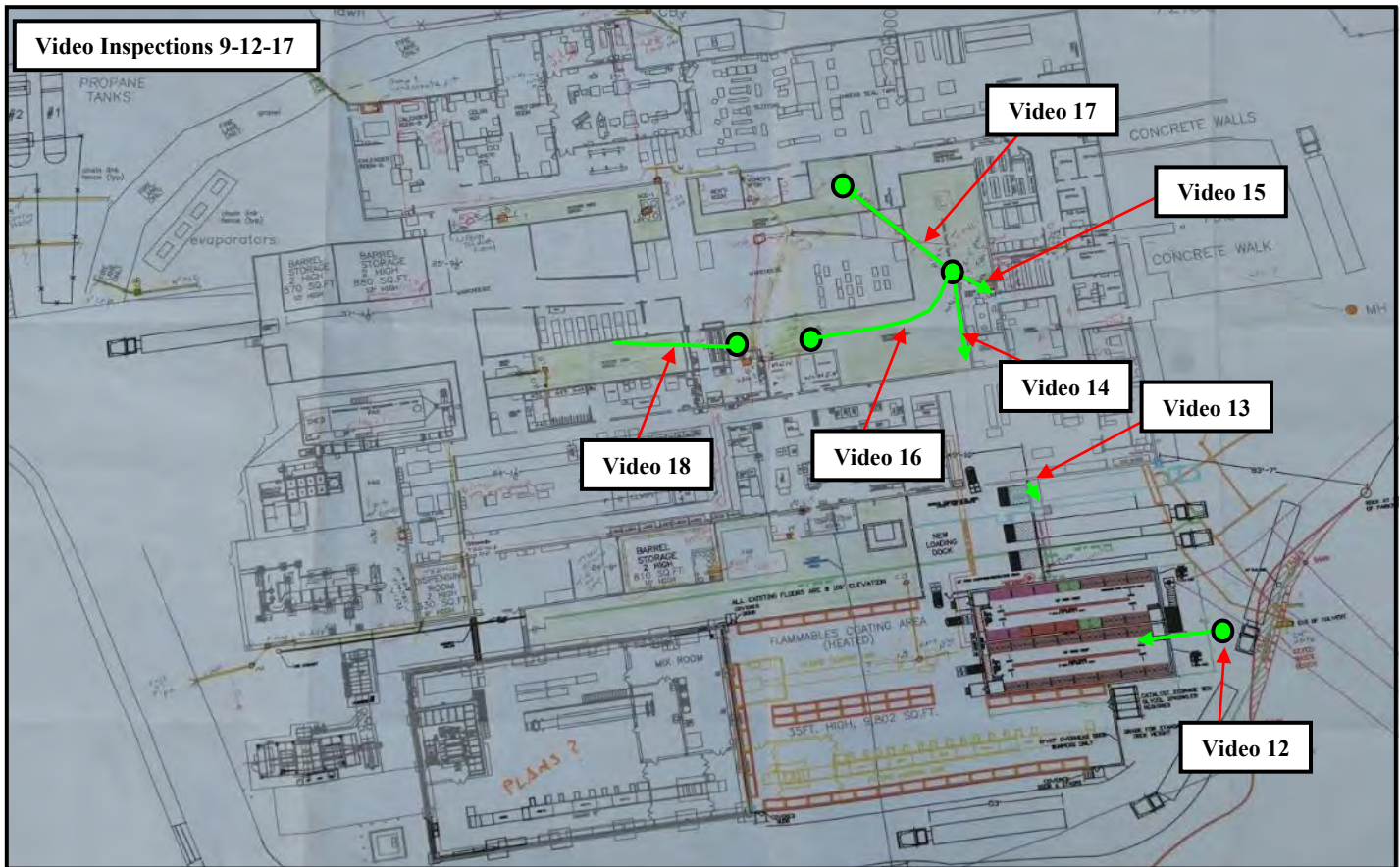


Video 8 – Storm : Was able to record full run from MH to MH (Pipe 4" – Video Inspection 45 feet long). For the majority of this inspection the camera was submerged under water but was able to record the full run.

Video 9 – Storm : Was able to record partial run from MH (Pipe 4" – Video Inspection 100 feet long). At 29 feet the pipe is either separated or there is another structure the camera passes through. At the 100 foot mark there is an obstruction.

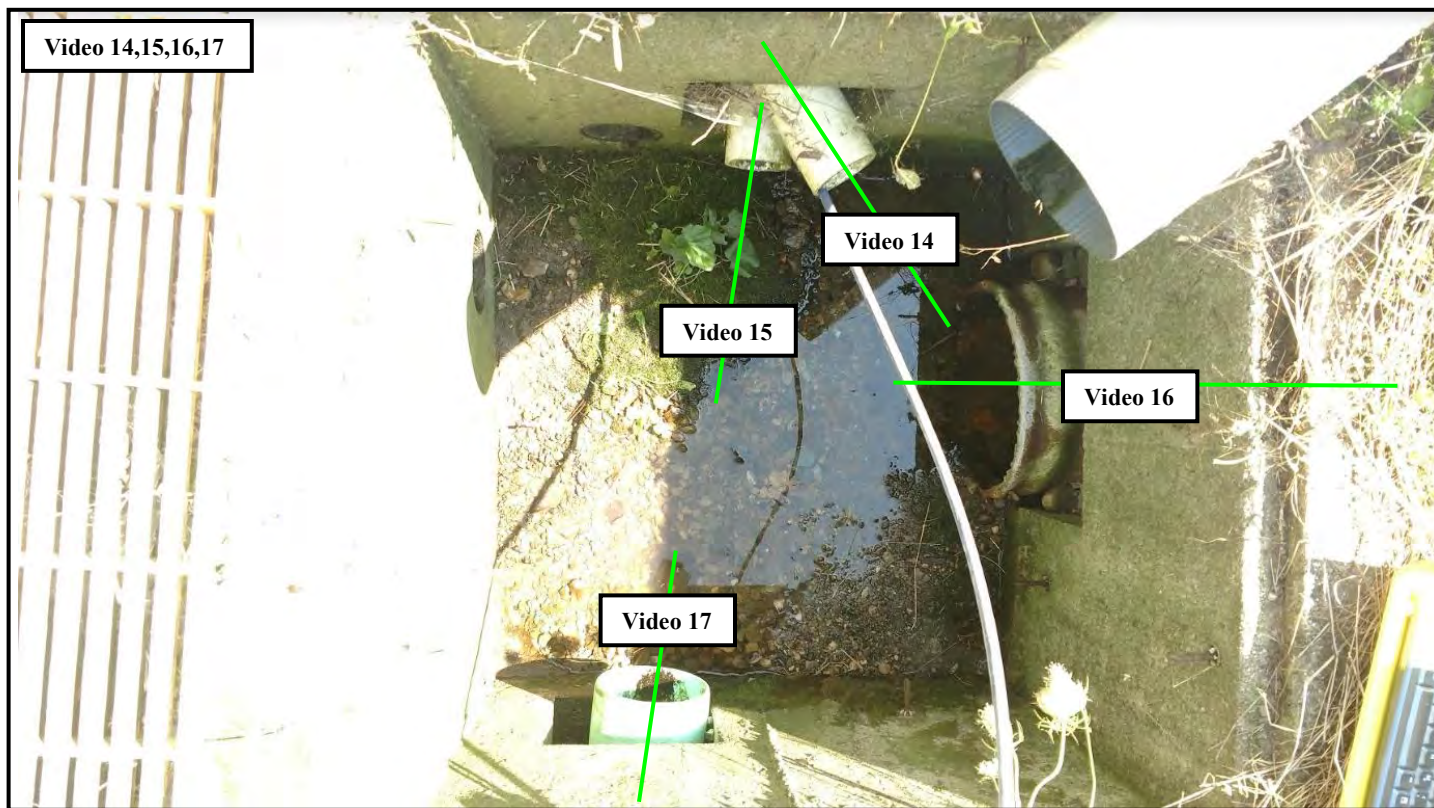
Video 9a – Storm : The obstruction mentioned above was overcome up until 108 feet where it was noted the pipe is crushed and no further footage could be obtained.







Video 13– Storm : Was able to record partial run from trench drain (Pipe 3" – Video Inspection 9 feet long). Inspection was stopped short due to blockage in the pipe at 9 feet. It is suspected this line is tied into the pipe in video 12

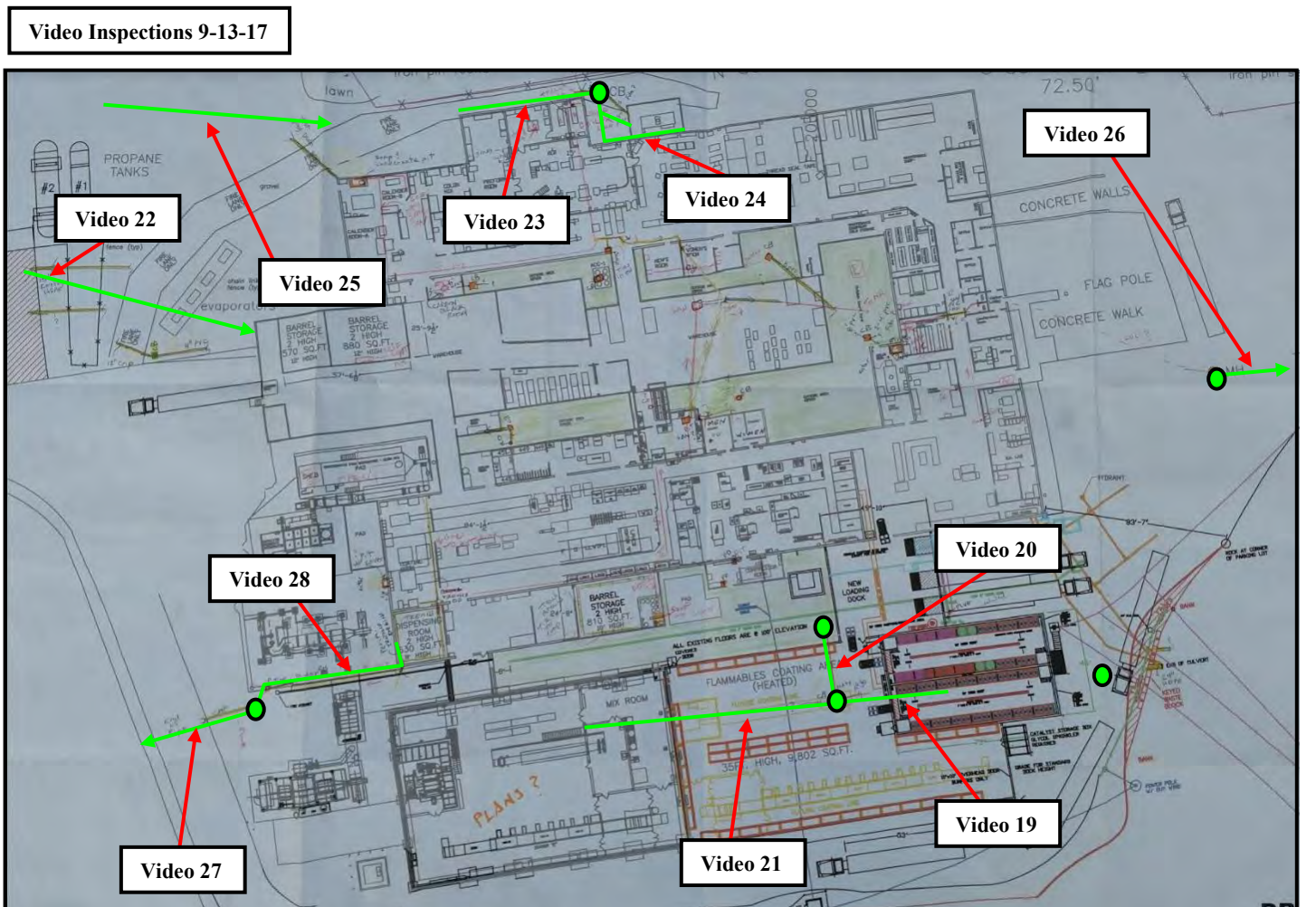


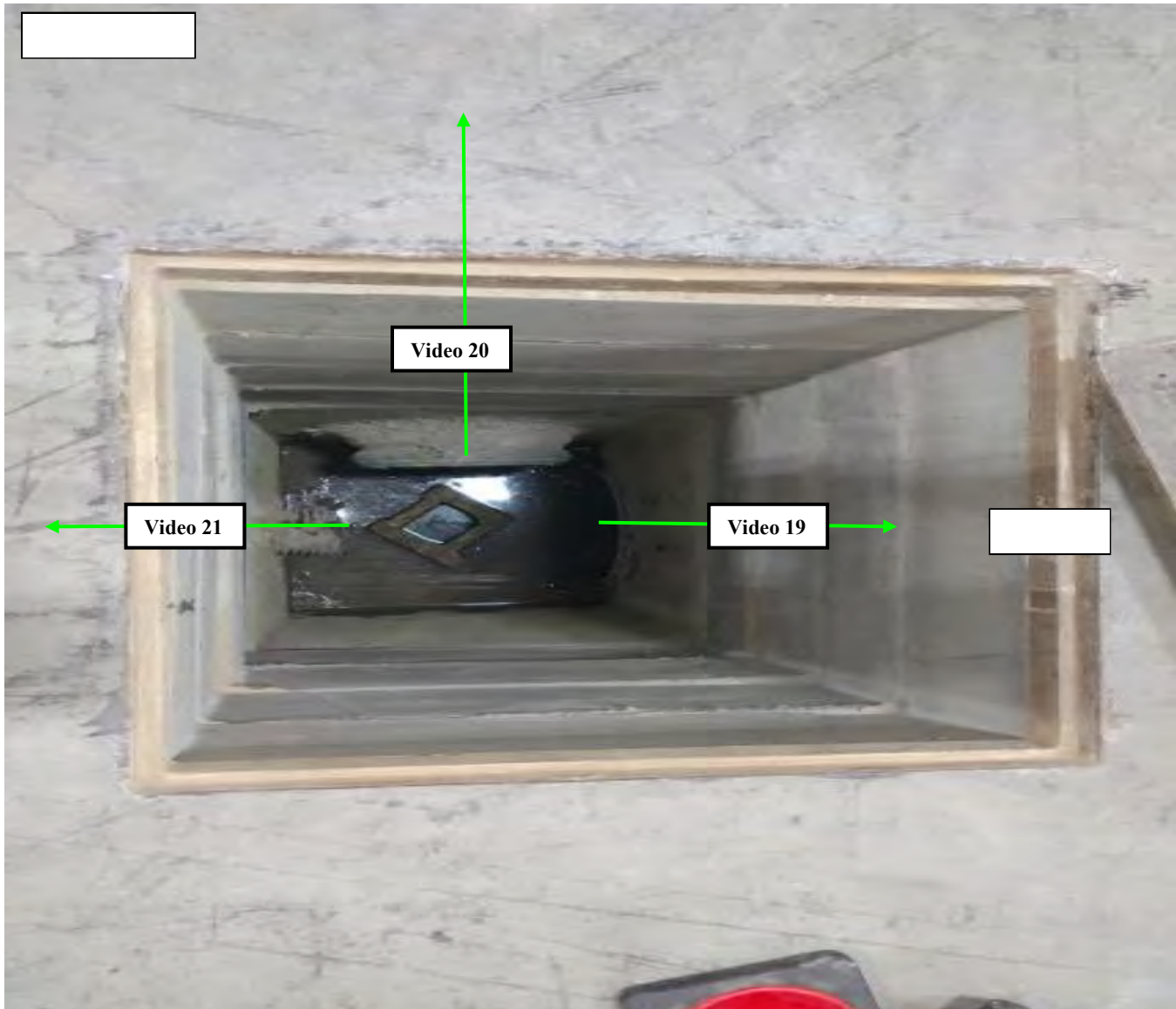
Video 14 – Storm : Was able to record full run from MH to the end of pipe (Pipe 4" – Video Inspection 44 feet long). This pipe was all clear and was determined to be a perimeter drain

Video 15 – Storm : Was able to record full run (Pipe 4" – Video Inspection 11 feet long). Inspection runs along 4"PVC and terminates at a iron connection. Unable to determine what this line is for. Seems to be abandoned.

Video 16 – Storm : Was able to record partial run from MH to vault (Pipe 12" – Video Inspection 91 feet long). This pipe is the outflow for this catch basin and heads in a westerly direction ultimately discharging at the back of the building near propane tanks

Video 17– Storm : Was able to record full run from MH to MH (Pipe 6" – Video Inspection 47 feet long). Clean video inspection





Video 19 – Storm : Was able to record partial run from MH (Pipe 18” – Video Inspection 47 feet long). This video should be used in conjunction with video 12 as this will give a full inspection of this pipe. This pipe is one of the main outflows to the East.

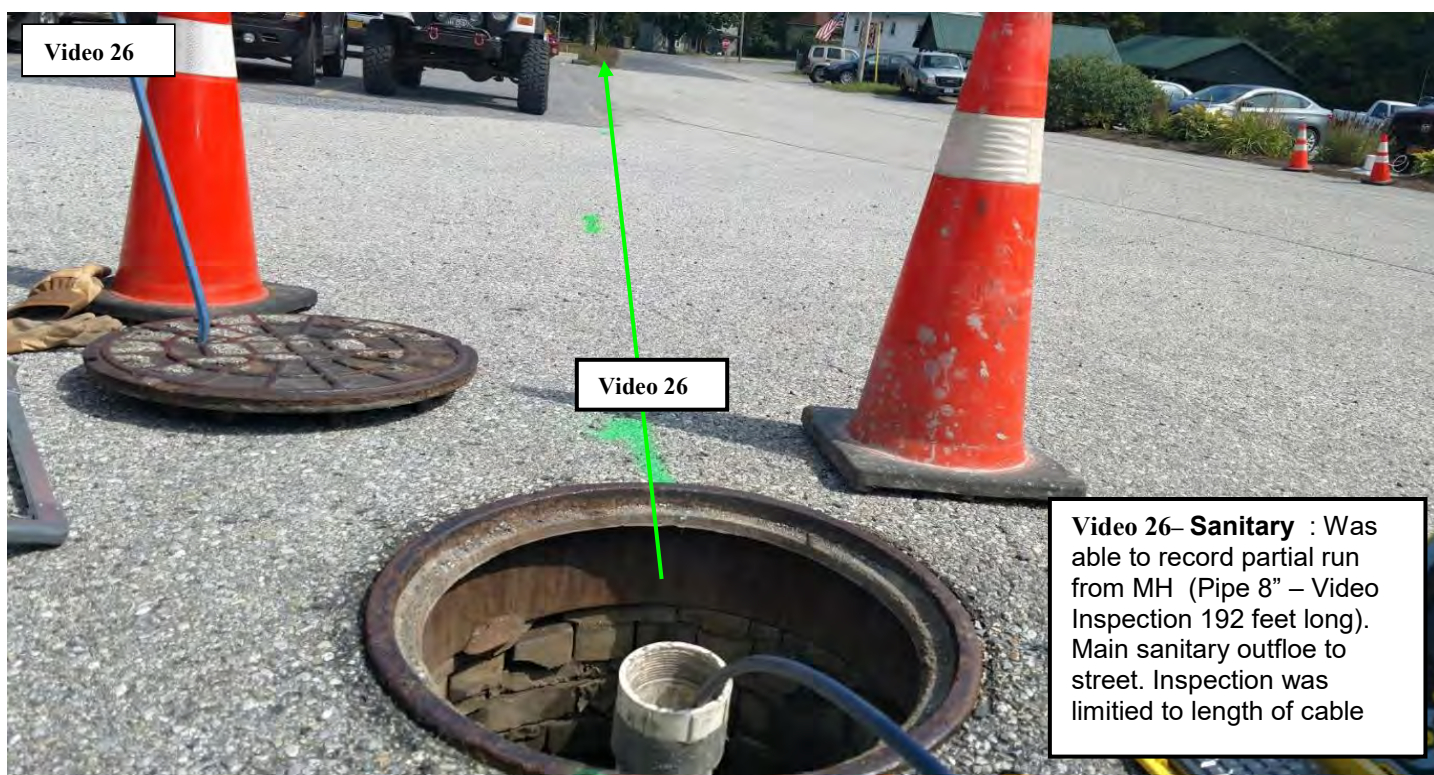
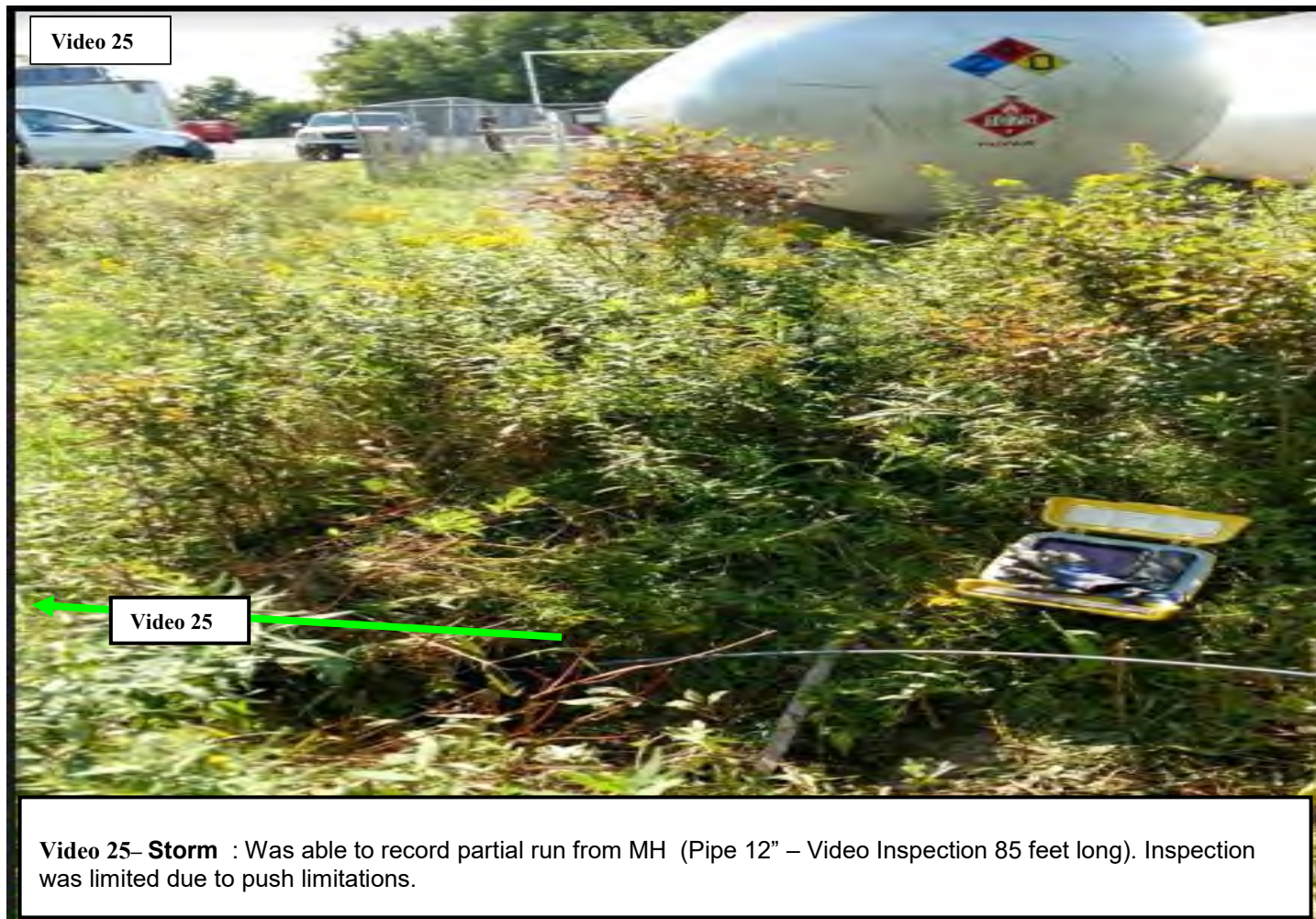
Video 20– Storm : Was able to record full run from MH to MH (Pipe 15” – Video Inspection 32 feet long). Clean video inspection. 2 pipes can be seen tying into main at 24 feet. These pipes are suspected to be perimeter drains.

Video 21– Storm : Was able to record partial run from MH (Pipe 6” – Video Inspection 112 feet long). Inspection was stopped by debris in the pipe. It is suspected that this pipe could possibly have something to do with perimeter drainage.



Video 23– Storm : Was able to record partial run from MH (Pipe 12" – Video Inspection 35 feet long). Inspection was stopped by debris in the pipe. Camera is under water for most of the inspection. Runs parallel to building

Video 24– Storm : Was able to record full run from MH (Pipe 4" – Video Inspection 54 feet long). At 15 feet a wye is seen. Camera could not take the bend at this location.



Video 27



Video 27- Storm : Was able to record full run from MH (Pipe 8" – Video Inspection 56 feet long). Pipe was full of debris near end of inspection but full pipe was recorded

Video 28



Video 28- Storm : Was able to record full run from CO (Pipe 4" – Video Inspection 70 feet long). Clean video inspection into floor drain inside building



2 pit locations shown above –

Pit 1 : Contains a pipe that heads into the building. Not able to enter pipe due to debris. Vacuming out this pipe may aid in further investigations

Pit 2 : Unsure of what the purpose of the tank is and not able to gain access to pipes in order to trace them out. This may be possible if pipes can be cut in order to gain access. Possibly a water oil seperator

Please see photos below







Date(s) on site: 2-18-20 thru 2-20-20**Technician:** Steve Carney**Other Technicians on site:****Customer:** C.T. Male Associates Engineering,**Site Address:** 1 Liberty St, Hoosick Falls, NY**Contact Person:** Ron Smaka and Jon Dippert**Phone:** 518-378-2948 / 518-786-7400**Scope of Work:** Utility Location Services – Utility location and Video inspection.**Type of Service:** *mark all that apply*

- | | | |
|--|--|--|
| <input type="checkbox"/> Leak Detection | <input type="checkbox"/> Comprehensive Leak Survey | <input type="checkbox"/> Pressurized Pipe Inspection |
| <input type="checkbox"/> Infrastructure Assessment | <input checked="" type="checkbox"/> Utility Location/GPR | <input type="checkbox"/> Utility Mapping/AutoCAD |
| <input type="checkbox"/> EM Survey | <input checked="" type="checkbox"/> Video Inspection | <input type="checkbox"/> Valve Exercising |

Type of Equipment Used:*mark all that apply*

- | | | |
|--|---|---|
| <input type="checkbox"/> Profiler EMP 400 | <input checked="" type="checkbox"/> RD8000 Pipe & Cable Locator | <input type="checkbox"/> MetroTech vLocPro2 |
| <input type="checkbox"/> LC2500 Leak Correlator | <input checked="" type="checkbox"/> Noggin 250 MHz | <input type="checkbox"/> PosiTector UTG G3 |
| <input type="checkbox"/> S-30 Surveyor | <input type="checkbox"/> Noggin 500 MHz | <input checked="" type="checkbox"/> Video Inspection Camera |
| <input checked="" type="checkbox"/> Sonde / Locatable Rodder | <input type="checkbox"/> Conquest 1000 MHz | <input type="checkbox"/> Helium # Bottles |
| <input type="checkbox"/> Leica Robotic Total Station | <input type="checkbox"/> Leica RTK GPS | <input type="checkbox"/> JD7 Investigator |
| <input type="checkbox"/> Valve Maintenance Trailer | <input type="checkbox"/> Thermal Imaging Camera | <input type="checkbox"/> ZCorr Data Loggers |

Marking Used: *mark all that apply*

- | | | |
|---|---|---------------------------------------|
| <input checked="" type="checkbox"/> Paint | <input checked="" type="checkbox"/> Flags | <input type="checkbox"/> Chalk/Marker |
| <input type="checkbox"/> Tape | <input type="checkbox"/> Updated Onsite Mapping | <input type="checkbox"/> Other _____ |

Field Report – Utility Location**Site Access/Safety Training:** Yes**Expiration Date:** 2-18-21**Ground Cover/Weather Conditions:** Various**Instructions from Onsite Contact:** Utility Location Services – Utility location and Video inspection.**Information Transfer:**In addition to this field report,
mark all that apply:☒ Information relayed on site to:

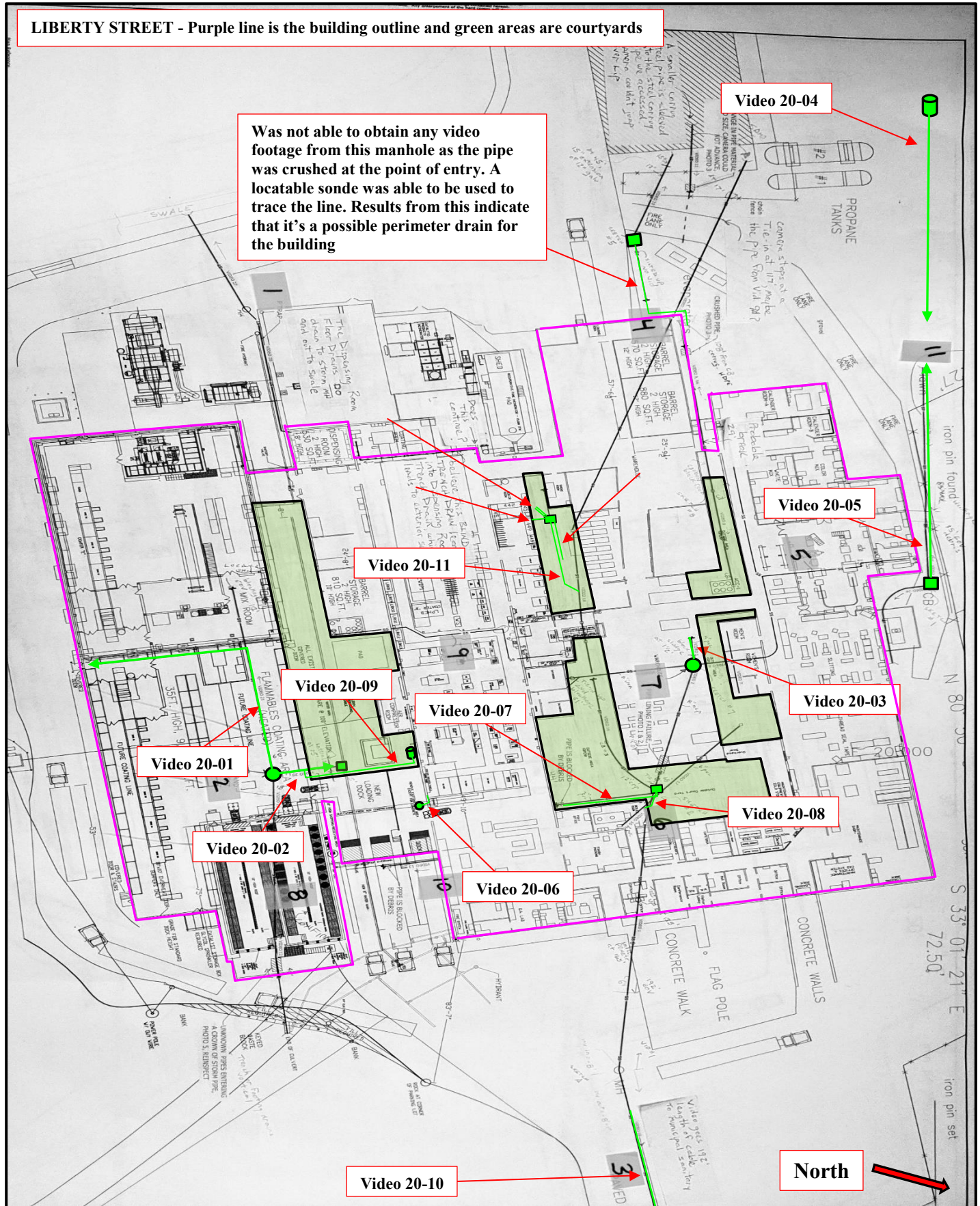
Ron Smaka

☐ *Hand drawn sketch*☐ *Maps updated onsite*☐ *Photographs*☐ *Surveyed by others*☐ *Surveyed and AutoCAD Mapping by NYLD***Notes/Testing Results:**

A visual inspection was performed in the area of concern to assess for utility structures. Utilizing the RD8000 in conductive, inductive, and power/radio modes, located and marked out utilities as shown in the area below. Sonde/Locatable Rodder was used within applicable utilities. Additional confirmation performed with the Noggin using the 250 and/or 500 MHz antenna. GPR signal reception varies depending upon soil conditions. Therefore, it is utilized in combination with various other geophysical tools for the most accurate verification of known/unknown utilities and/or structures.

Utilities were painted in appropriate color, marked with flags and depths provided where possible.

This report is back up to information relayed and marked on site at time of service. It is for informational purposes only.

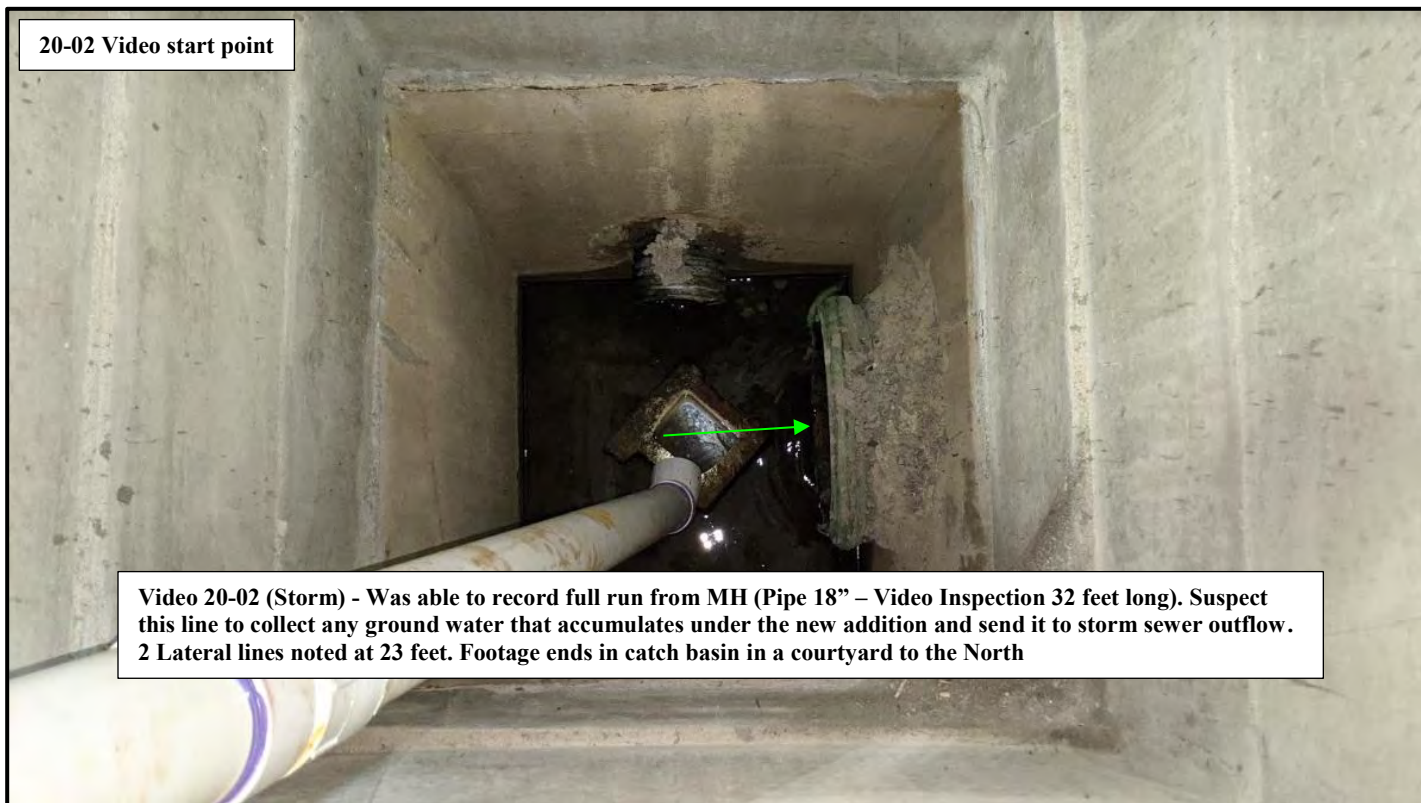


20-01 Video start point



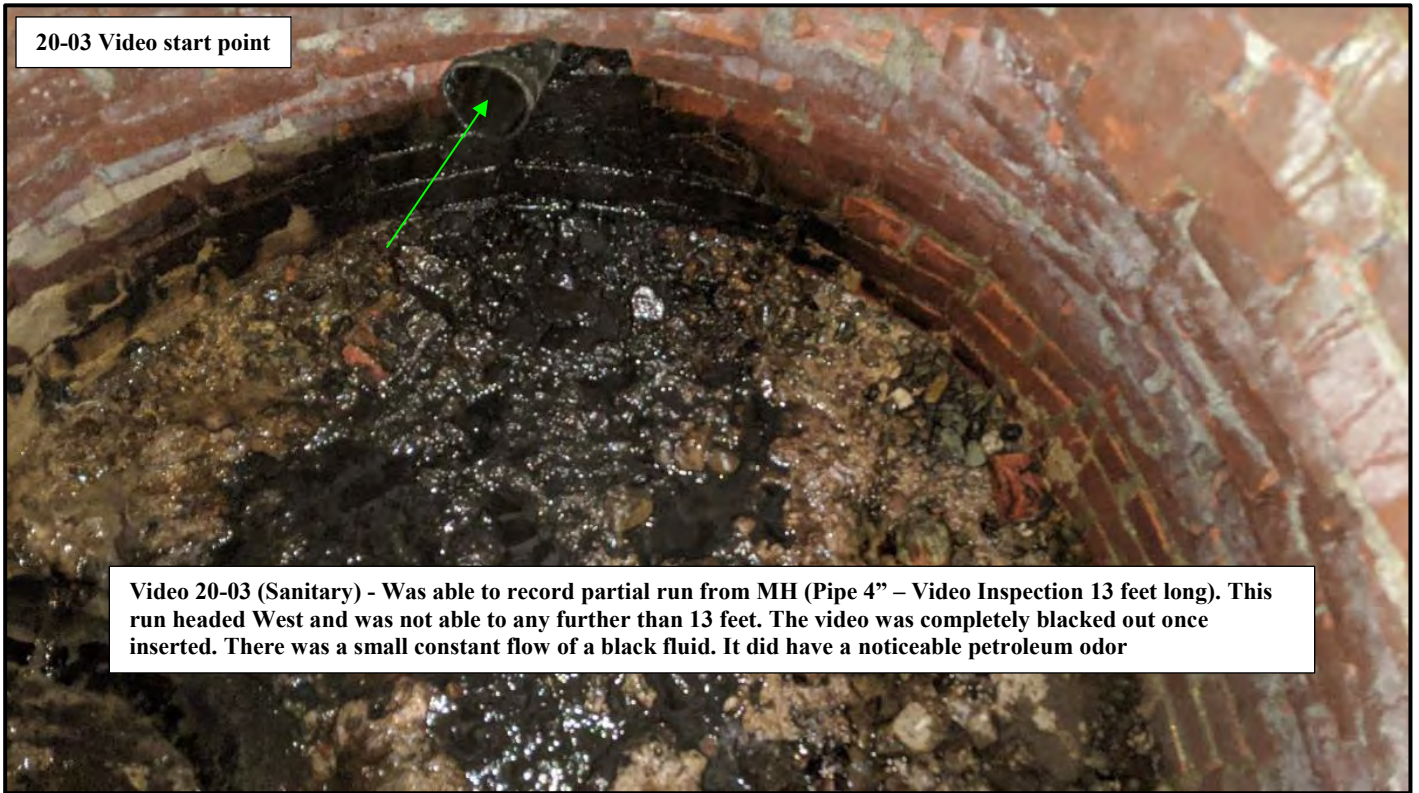
Video 20-01 (Storm) - Was able to record full run from MH (Pipe 8” – Video Inspection 113 feet long). Suspect this line to collect any ground water that accumulates under the new addition and send it to storm sewer outflow

20-02 Video start point



Video 20-02 (Storm) - Was able to record full run from MH (Pipe 18” – Video Inspection 32 feet long). Suspect this line to collect any ground water that accumulates under the new addition and send it to storm sewer outflow. 2 Lateral lines noted at 23 feet. Footage ends in catch basin in a courtyard to the North

20-03 Video start point

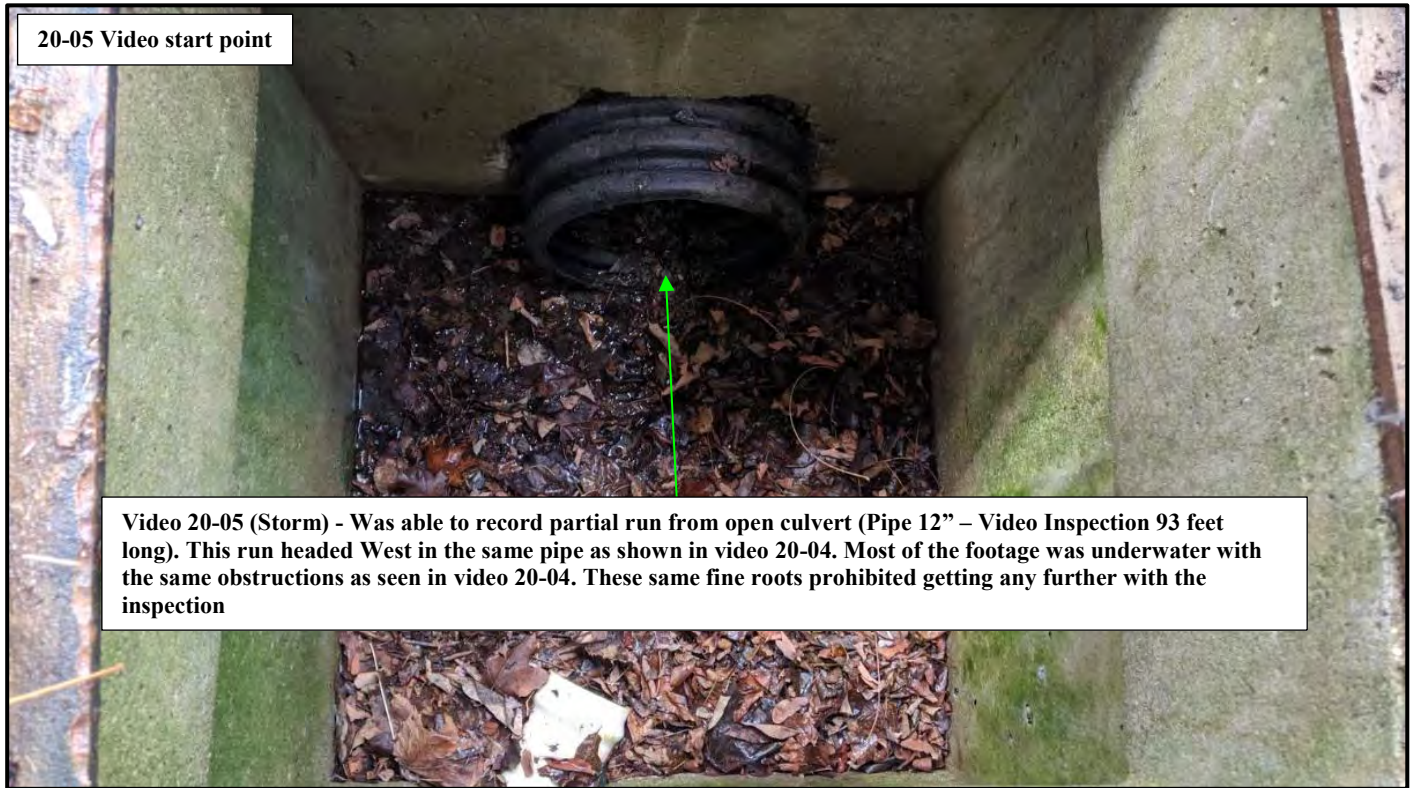


Video 20-03 (Sanitary) - Was able to record partial run from MH (Pipe 4" – Video Inspection 13 feet long). This run headed West and was not able to any further than 13 feet. The video was completely blacked out once inserted. There was a small constant flow of a black fluid. It did have a noticeable petroleum odor

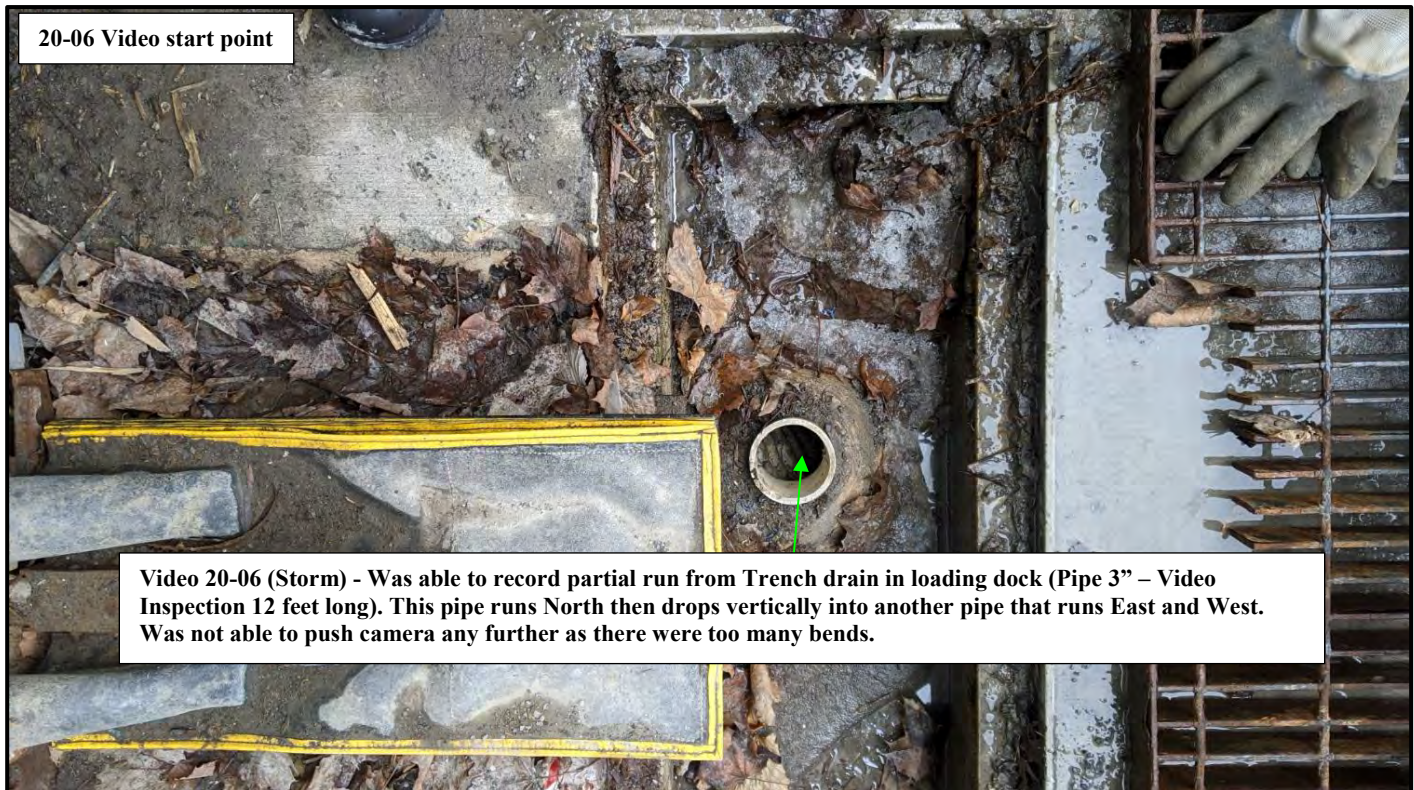
20-04 Video start point



Video 20-04 (Storm) - Was able to record partial run from open culvert (Pipe 12" – Video Inspection 104 feet long). This run headed East. A few bellies were noted along this run as well as a lot of fine plant roots which were obstructing flow. The final blockage seemed to be a mass of these roots.

20-05 Video start point

Video 20-05 (Storm) - Was able to record partial run from open culvert (Pipe 12" – Video Inspection 93 feet long). This run headed West in the same pipe as shown in video 20-04. Most of the footage was underwater with the same obstructions as seen in video 20-04. These same fine roots prohibited getting any further with the inspection

20-06 Video start point

Video 20-06 (Storm) - Was able to record partial run from Trench drain in loading dock (Pipe 3" – Video Inspection 12 feet long). This pipe runs North then drops vertically into another pipe that runs East and West. Was not able to push camera any further as there were too many bends.

Field Report – Utility Location**20-07 Video start point**

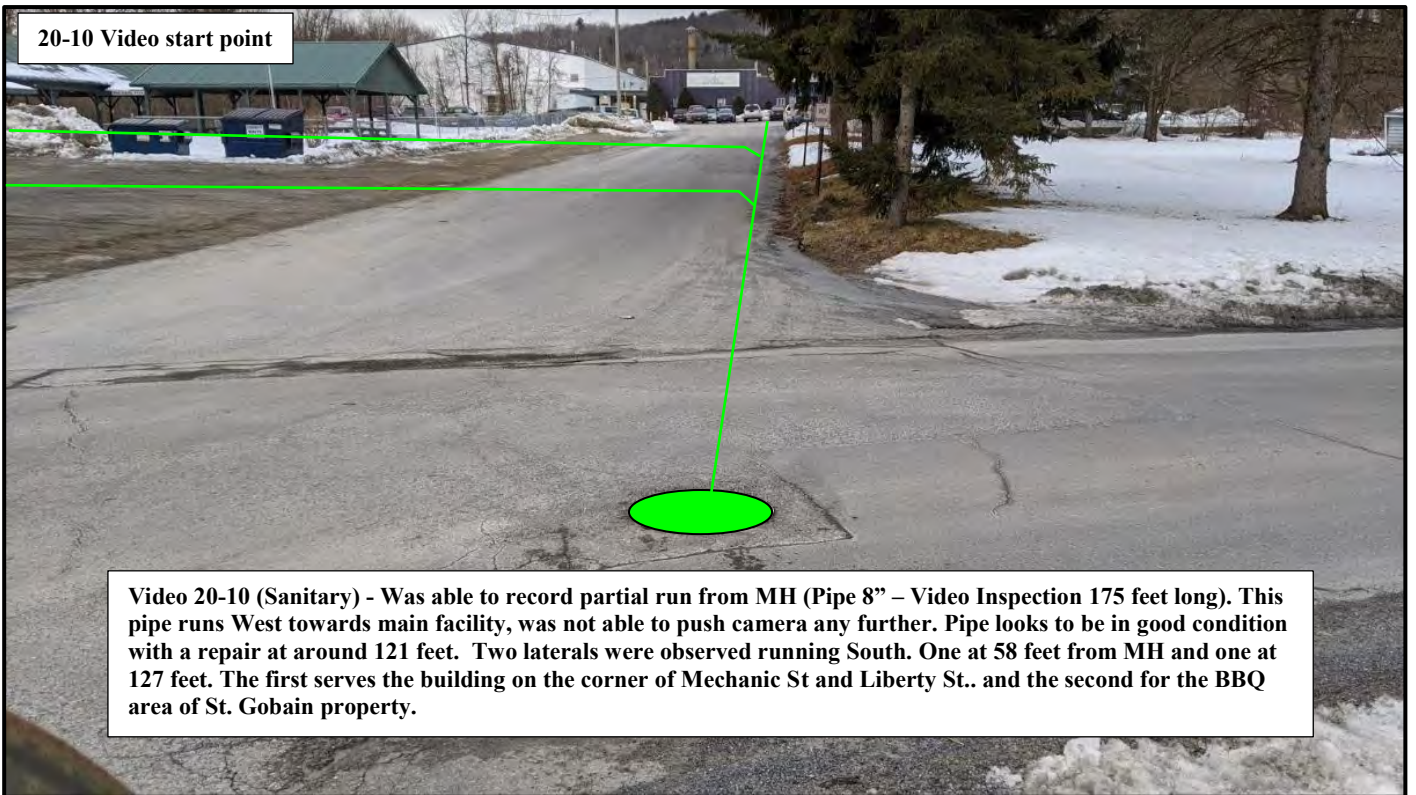
Video 20-07 (Storm) - Was able to record partial run from MH (Pipe 3" – Video Inspection 44 feet long). This pipe runs East then 90's immediately South. Suspect this to be a perimeter drain as it runs along the edge of the building. Sand and small stones obstruct the pipe at 44 feet.

20-08 Video start point

Video 20-08 (Storm) - Was able to record full run from MH (Pipe 3" – Video Inspection 12 feet long). This pipe runs East then 90's South. This pipe serves as drainage for the concrete entrance way to the boiler room

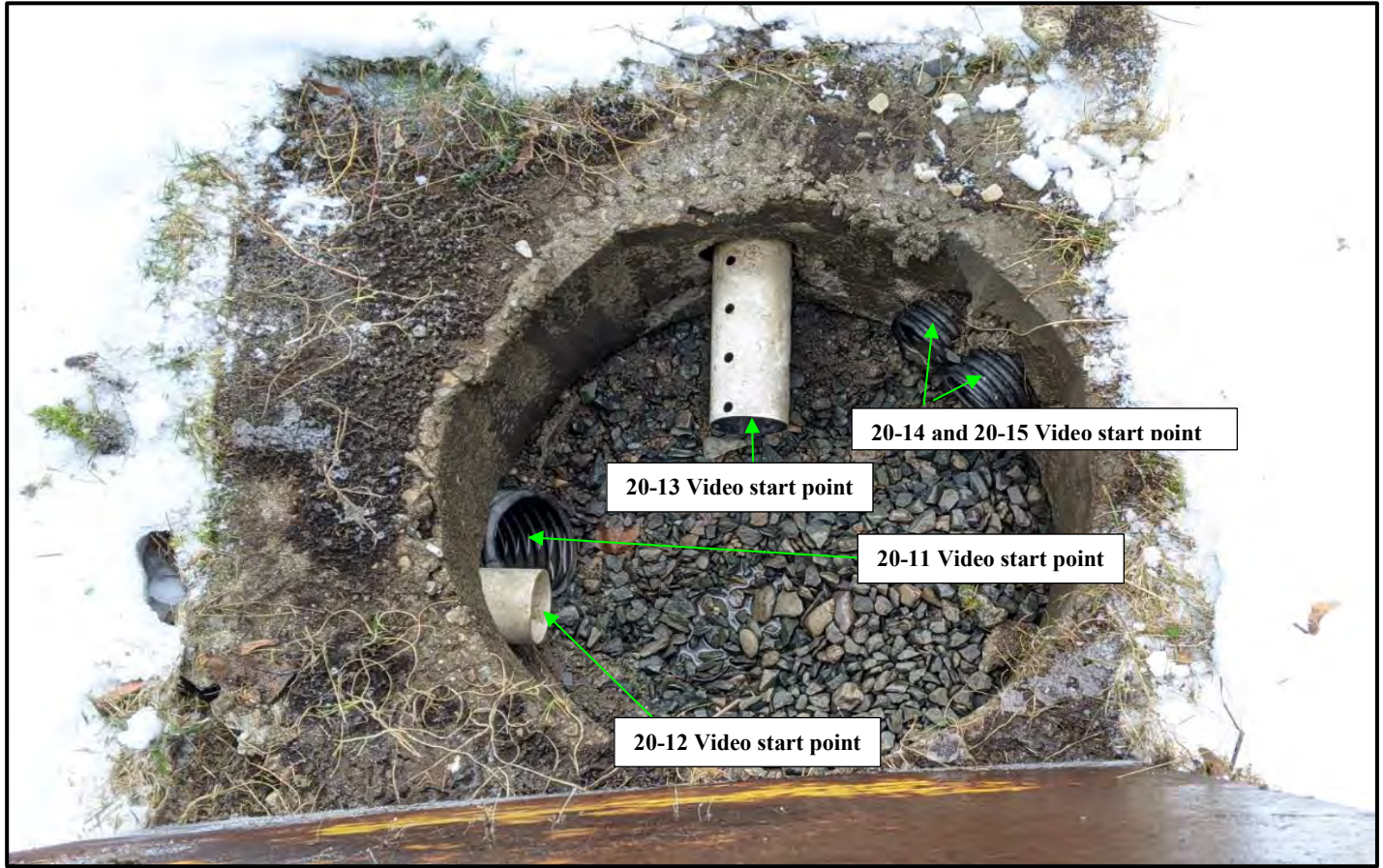
Field Report – Utility Location**20-09 Video start point**

Video 20-09 (Storm) - Was able to record full run from open pipe (Pipe 4" – Video Inspection 52 feet long). This pipe runs East then 90's South and ultimately ends up as the Eastern lateral shown in Video 20-02. Suspect this to serve as a perimeter drain

20-10 Video start point

Video 20-10 (Sanitary) - Was able to record partial run from MH (Pipe 8" – Video Inspection 175 feet long). This pipe runs West towards main facility, was not able to push camera any further. Pipe looks to be in good condition with a repair at around 121 feet. Two laterals were observed running South. One at 58 feet from MH and one at 127 feet. The first serves the building on the corner of Mechanic St and Liberty St., and the second for the BBQ area of St. Gobain property.

Field Report – Utility Location



Video 20-11 This video heads East from the start point. At around 25 feet it wyes into the same line that originates from the manhole described in Video 20-08 and 20-07. This pipe looks to be in poor condition with many bellies.

Video 20-12 This video heads East and doesn't make it out of the courtyard due to being blocked with coarse stone. It seems to serve as a perimeter drain due to drainage holes that are obvious in the pipe construction.

Video 20-13 This video West for approximately 10 feet before surfacing to air on the West side of the courtyard. No laterals could be seen. Suspect this also to be perimeter drain.

Video 20-14 and 20-15 Both these pipes head in a North Easterly direction. Both seemed to be crushed around the 7 foot mark

Subsurface Limitations

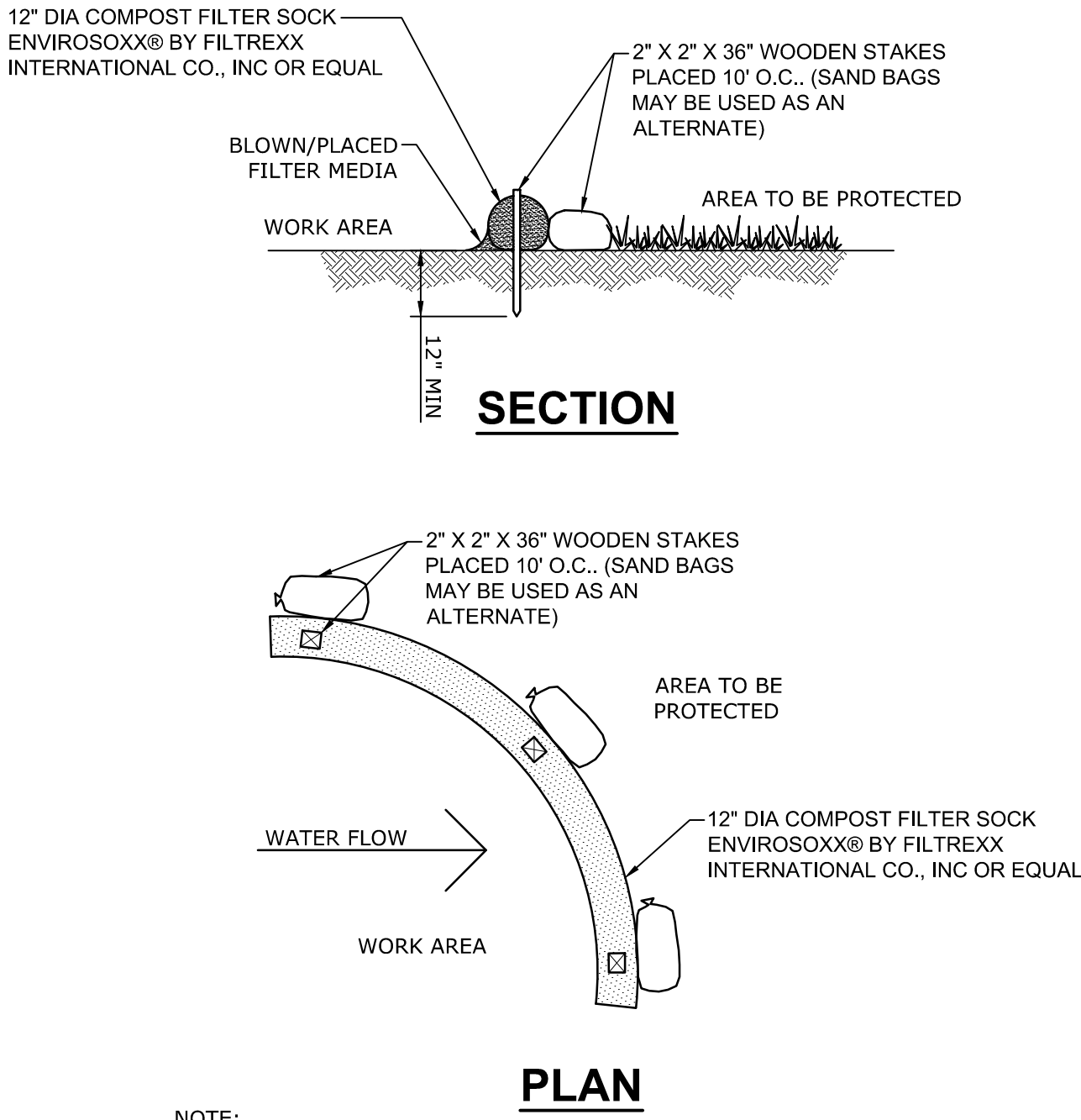
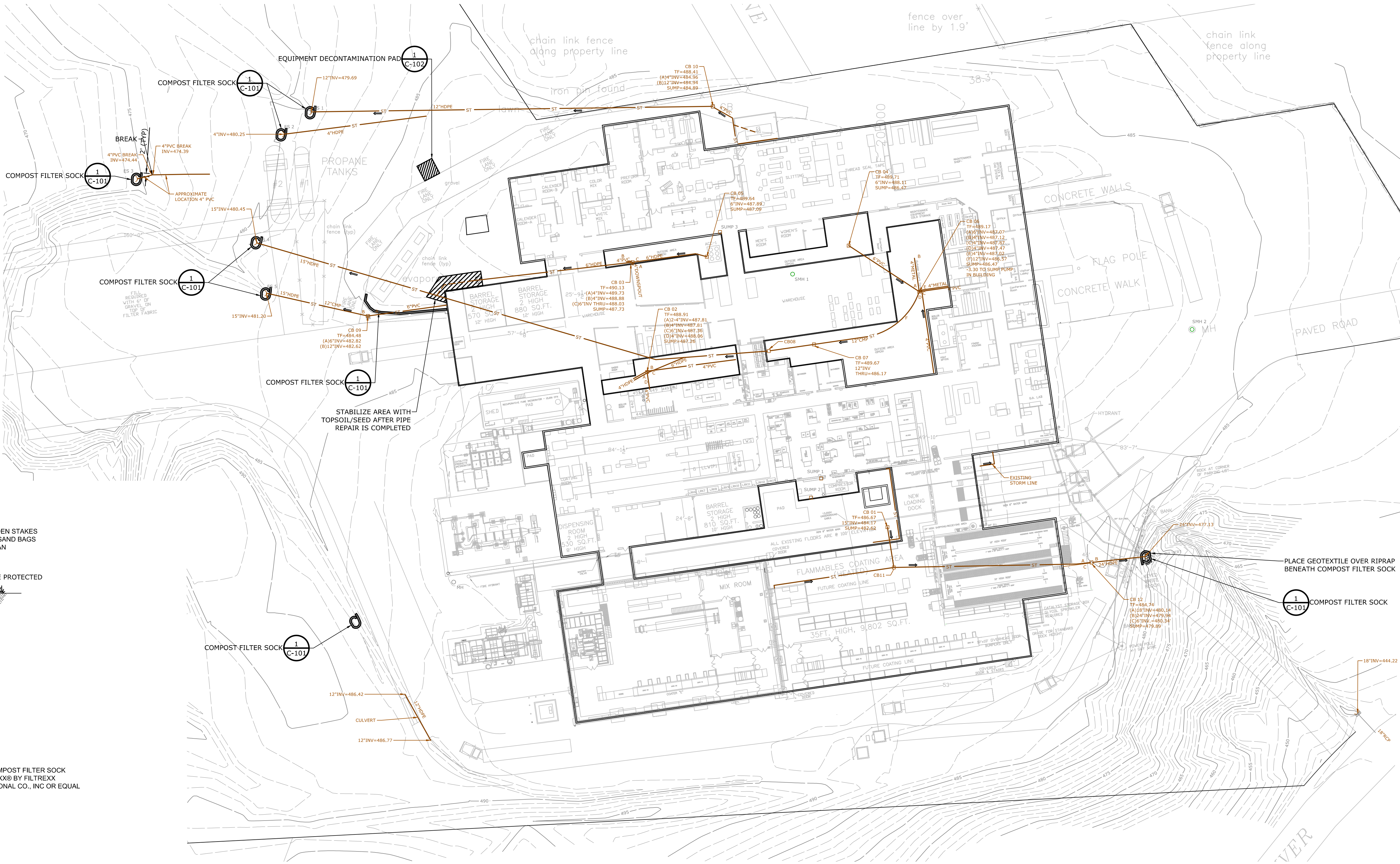
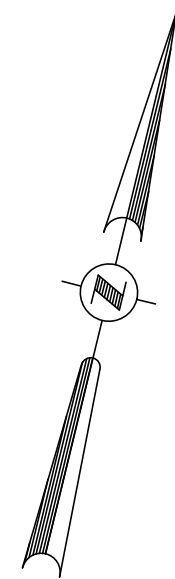
Utility locating is the art and science of using non-intrusive methods to search for, find and mark out buried, unseen conduits or other objects. There are innumerable variables involved in locating underground utilities, such as topography, size and complexity of job site, depth and proximity of buried utilities, above ground obstructions, short turnaround schedules, changes in the scope of work, lack of (or outdated) blueprints and adverse weather conditions.

New York Leak Detection, Inc. (NYLD) has made a substantial financial investment in crossover technologies and training to meet our clients' needs when locating and mapping utilities. However, due to unpredictable factors that may affect the results, NYLD makes no guarantee, expressed or implied, with respect to the completeness or accuracy of the information provided. Any use or reliance on the information or opinion is at the risk of the user and NYLD shall not be liable for any damage or injury arising out of the use or misuse of the information provided.

NYLD strives to provide the highest quality utility location services possible with the technical expertise of our field specialists and state-of-the-art equipment used. Every effort is made to provide our clients with the most accurate information possible without adverse consequences.

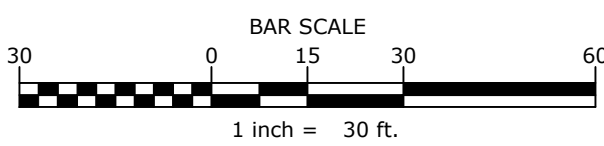
NYLD makes no guarantee that all subsurface utilities and obstructions will be detected. GPR signal penetration might not be sufficient to detect all utilities. NYLD is not responsible for detecting subsurface utilities and obstructions that normally cannot be detected by the methods employed or that cannot be detected because of site conditions. NYLD is not responsible for maintaining mark-outs after leaving the work area. Mark-outs made in inclement weather and in high traffic areas may not last. Surveyor assumes responsibility of picking up data on site.







APPENDIX B
Erosion and Sediment Control Plans

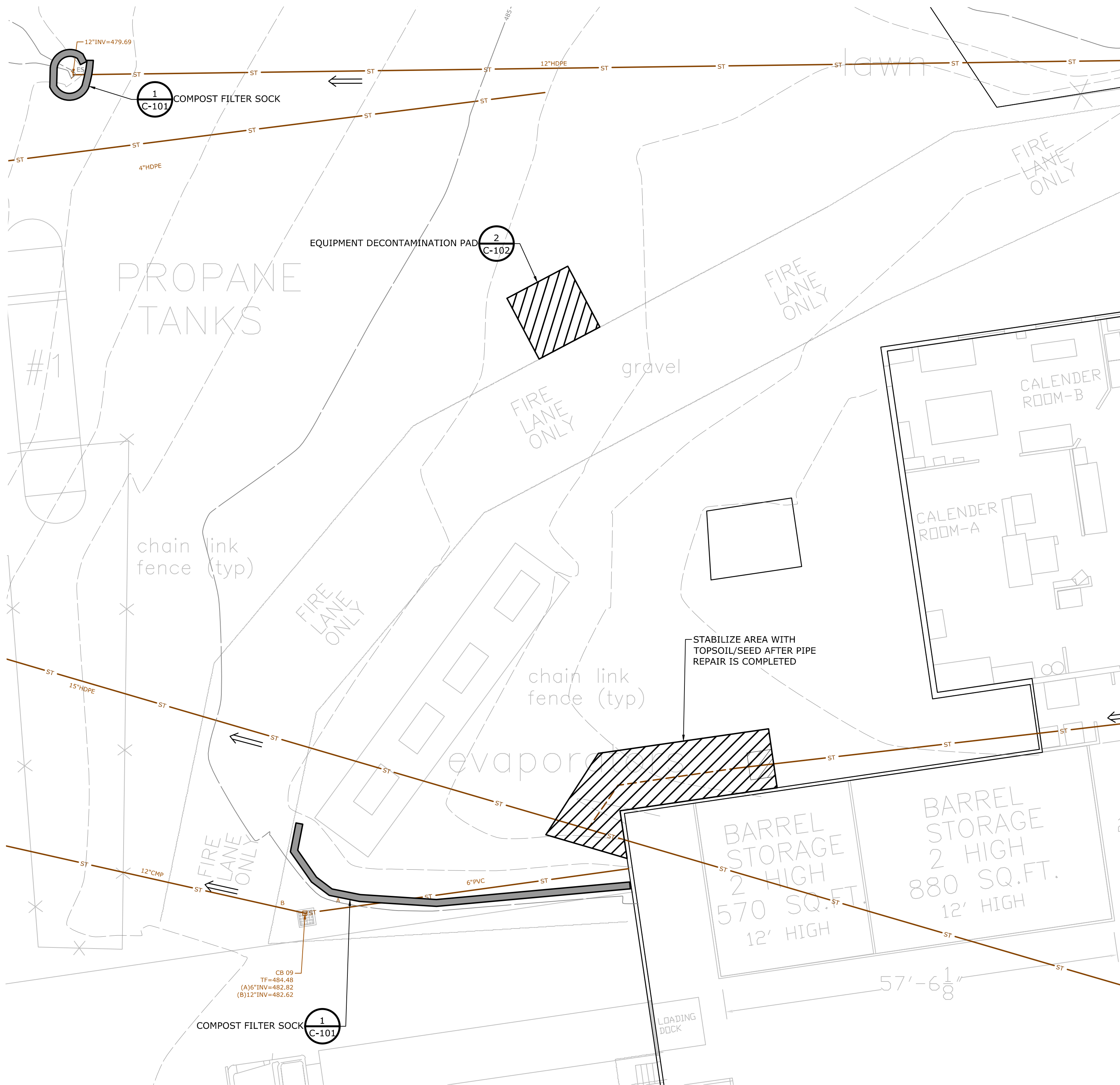


- NOTE:
1. FILL COMPOST FILTER SOCK WITH FILTER MEDIA APPROVED BY NYSDEC FOR THIS APPLICATION.
 2. WHEN USING COMPOST FILTER SOCKS ADJACENT TO SURFACE WATER, THE COMPOST SHOULD HAVE A LOW NUTRIENT VALUE.
 3. PRESSURE VACUUM TRUCK WILL ASSIST IN THE CAPTURE AND CONTROL OF THE CLEANING WASTE.
 4. FILTER SOCK CONFIGURATIONS SHOWN ON PLAN ARE FOR SCHEMATIC PURPOSES - FIELD CONDITIONS WILL DETERMINE ACTUAL CONFIGURATION.
 5. WHEN WRAPPING COMPOST FILTER SOCK AT END SECTIONS, SOCK SHOULD OVERLAP A MINIMUM OF 2' AND OCCUR ON THE UPHILL SIDE OF THE CULVERT (REFER TO PLAN).

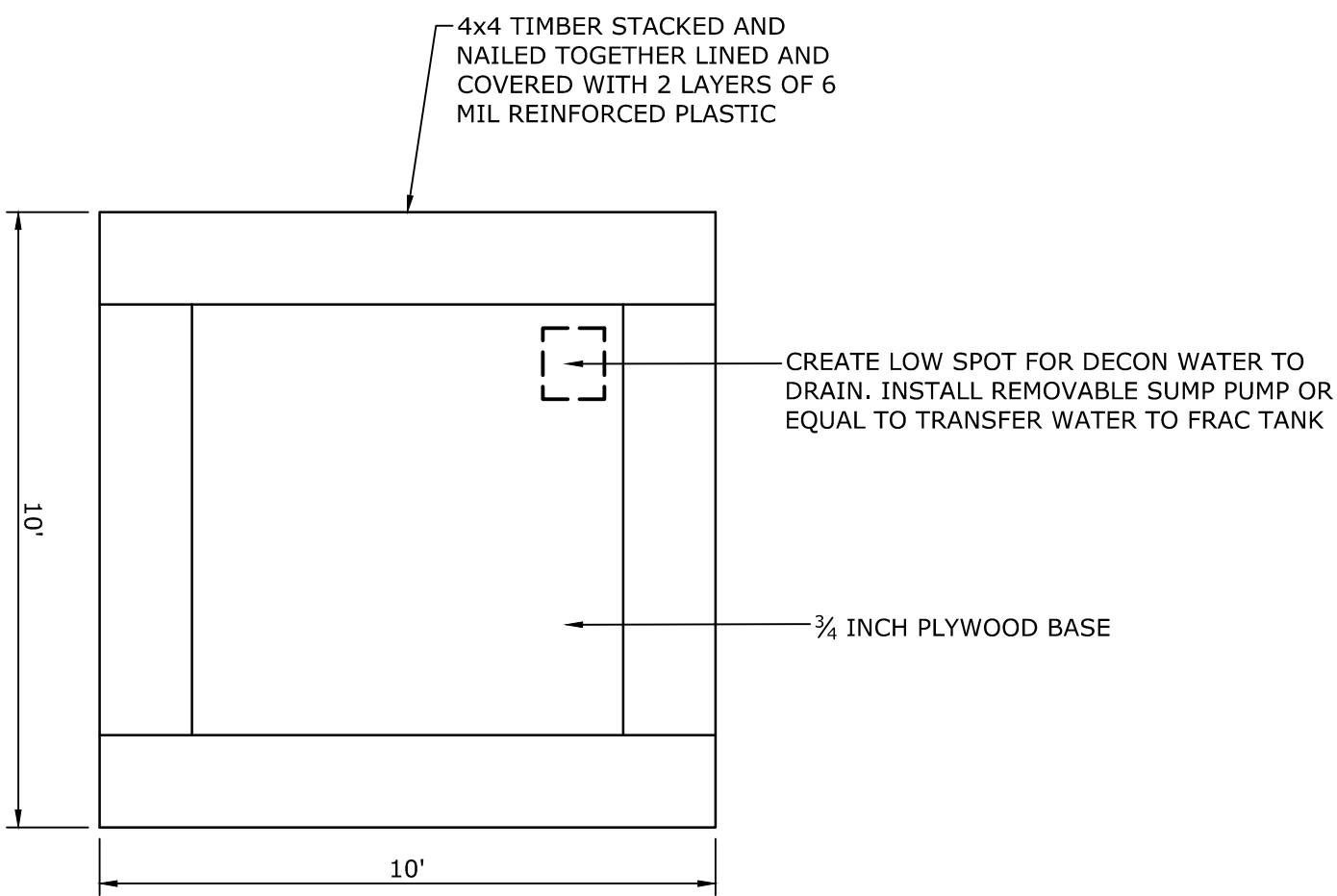
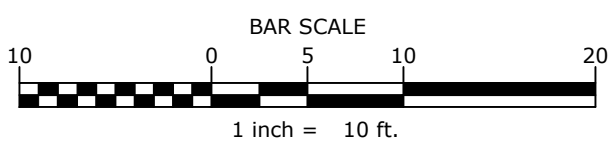
COMPOST FILTER SOCK
SCALE: NTS
CROSS REFERENCE: NONE



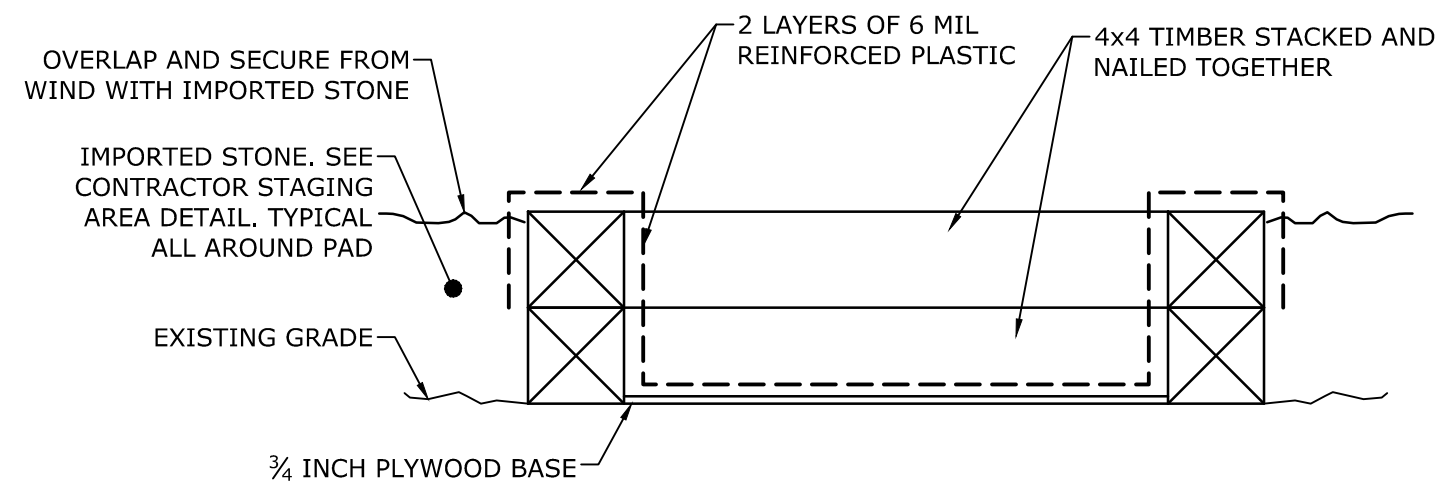
LAUREN J. SHERMAN P.E. NO. 090765	DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW. © 2021 C.T. MALE ASSOCIATES DESIGNED: LJS DRAFTED : SMW CHECKED : LJS PROJ. NO : 16.6132 SCALE : 1"=30' DATE : MARCH 24, 2021
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EROSION & SEDIMENT CONTROL PLAN						
SAINT-GOBAIN PERFORMANCE PLASTICS LIBERTY STREET						
VILLAGE OF HOOSICK FALLS RENSSELAER COUNTY, NEW YORK						
C.T. MALE ASSOCIATES Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY						
<div><div>  www.ctmale.com</div><div>C-101 SHEET 1 OF 2 DWG. NO: 21-</div></div>						



1 SITE PLAN
 C-102 SCALE: 1"=10'
 CROSS REFERENCE: NONE



PLAN



SECTION

NOTES:

1. DECONTAMINATION PAD SHALL BE INSTALLED PRIOR TO ANY WORK THAT INVOLVES CONTACT WITH SITE SOILS.
2. DECONTAMINATION PAD IS INTENDED TO CLEAN PORTIONS OF EQUIPMENT THAT COME INTO CONTACT WITH THE SITE SOILS, NOT FOR HOUSING THE ENTIRE CONSTRUCTION VEHICLE.
3. DECONTAMINATION SHALL BE PERFORMED WITH BRUSHES AND/OR PRESSURE WASHING EQUIPMENT IN A MANNER THAT CONTAINS ALL WASH WATER AND SEDIMENT. MODIFY CLEANING METHODS OR PAD IF NOT BEING FULLY CONTAINED TO THE DECONTAMINATION PAD.
4. COVER THE DECONTAMINATION PAD WHEN NOT IN USE ESPECIALLY AT THE END OF EACH WORK DAY.
5. AVOID PLACING EQUIPMENT DIRECTLY ON THE FLOOR OF THE DECONTAMINATION PAD. USE WOOD PALLET TO STAGE EQUIPMENT DURING CLEANING TO PREVENT PUNCTURE OF THE DECONTAMINATION PAD LINER.
6. ALL DECONTAMINATED WATER SHALL BE IMMEDIATELY TRANSFERRED FROM THE DECONTAMINATION PAD TO 55-GALLON DRUMS AFTER EACH CLEANING ACTIVITY OR DIRECTLY INTO FRAC TANK.
7. ALL ACCUMULATED SEDIMENT AND PLASTIC SHALL BE TRANSFERRED TO ROLL-OFF UPON COMPLETION OF PROJECT UNLESS THE AMOUNT OF SEDIMENT IS INHIBITING THE SATISFACTORY FUNCTION OF THE DECONTAMINATION PAD IN WHICH CASE THE SEDIMENT SHALL BE CAREFULLY REMOVED WITHOUT DAMAGING THE DECONTAMINATION PAD LINER.

2

C-102

EQUIPMENT DECONTAMINATION PAD

SCALE: NONE

CROSS REFERENCE: NONE

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		△						SAINT-GOBAIN PERFORMANCE PLASTICS LIBERTY STREET		
		△						DESIGNED: LJS		
		△						DRAFTED : SMW		
		△						CHECKED : LJS		
		△						PROJ. NO : 16.6132		
		△						SCALE : AS NOTED		
		△						DATE : MARCH, 2021		
		△						VILLAGE OF HOOSICK FALLS RENSSELAER COUNTY, NEW YORK		
		△						C.T. MALE ASSOCIATES Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY		
							