Best Management Practices for
Stormwater Management to Preserve Water

Stormwater Management Plan

FOR KALAMAZOO VALLEY COMMUNITY COLLEGE

MARCH 2022 Revision

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Enforcement Response Procedure

Kalamazoo Valley Community College (Kalamazoo Valley) agrees to comply with all necessary measures to report, address, and resolve stormwater quality issues, using the City of Kalamazoo's ordinances or other regulatory plans. These procedures have previously been prepared and formally adopted by the Kalamazoo City Commission and/or are part of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) approved Stormwater Phase II National Pollutant Elimination Discharge System (NPDES) Individual Permit (Permit). These measures include the implementation of the municipal separate storm sewer system (MS4) Illicit Discharge Elimination Plan (IDEP), and the enforcement of City of Kalamazoo Ordinances that are associated with water quality, primarily:

- Chapter 29 of the City of Kalamazoo Code of Ordinances (Stormwater System) (refer to Section 5 of the City's 2022 Stormwater NPDES Permit Application),
- Chapter 30 of the City of Kalamazoo Code of Ordinances (Soil Erosion and Sedimentation),
- Ordinance 1825 (Wellhead Protection Overlay), and,
- Ordinance 1826 (Performance Standards).

Refer to Appendix A, Table 1A for a list of Kalamazoo Valley's stormwater points of discharge to surface water.

Kalamazoo Valley would respond to any violations, such as an illicit connection or a soil erosion and sedimentation issue by issuing a work order utilizing Asset Essentials software by Energy and Materials Handling Manager, Nathan Rickey, to report, address, and resolve violations as necessary and maintain compliance with the City of Kalamazoo's ordinances and regulatory plans.

Kalamazoo Valley would track instances of non-compliance utilizing Asset Essentials software, including as appropriate, the name of the person responsible for violating Kalamazoo Valley's regulatory mechanism, the date and location of the violation, a description of the violation, a description of the enforcement response used, a schedule for returning to compliance, and the date the violation was resolved.

Public Participation/Involvement Program (PPP)

Purpose

The purpose of the PPP is to establish an effective framework for involving those within the Kalamazoo Urbanized Area, including stormwater management permittees, agencies, organizations, and the general public, and to help implement and modify Stormwater Management Plans (SWMPs). Kalamazoo Valley will assist the City of Kalamazoo with its efforts towards public participation and involvement as outlined in Section 5 of the City's 2022 Stormwater NPDES Permit Application. Below is a summary of the City of Kalamazoo's plan.

Procedure for Making the SWMP Available for Public Inspection and Comment

Best Management Practices (BMPs)

Kalamazoo Valley will utilize the City's public notification process regarding the SWMP via the City's websites www.protectyourwater.net and the general City website www.kalamazoocity.org/. These websites will serve as the primary BMP source.

The SWMP will be available for review on the City's website in the Stormwater Section at www.protectyourwater.net/stormwater-regulations. Opportunities for comment are provided on the websites by use of the Water Contact Section at www.protectyourwater.net/contact.

Kalamazoo Valley and the City will also consider utilizing other communication opportunities to reach the public about the SWMP, including publications (e.g., newsletters), and announcements at internal and external organizational meetings, etc. The City will primarily work independently to perform the PPP but will work collaboratively with Kalamazoo Valley when applicable and possibly with other regional partners as appropriate – notably the Kalamazoo Stormwater Working Group (KSWG) for general issues and educational outreach, and the Total Maximum Daily Loads (TMDL) Non-Point Source groups.

BMP Method of Assessment

The City follows the BMPs provided in their 2022 NPDES MS4 Stormwater Discharge Permit. In conjunction and with approval of the City, Kalamazoo Valley will utilize the BMPs listed below for the *method of assessment*. Other communication strategies will be considered as publication schedules and internal discussions are made.

BMP	Description	Schedule	Method of Assessment
Public Notice	The City will publicize the document is available for review and comment on the City's website. The City, if producing and distributing a community newsletter, will also publicize that the SWMP document is available on the website. If no community newsletter exists during the duration of the permit, the notice of the community's SWMP document being available for review and comment will be flagged/publicized on the community's homepage with a link to the SWMP.	1st Year of new permit issuance Promote document twice per permit cycle	Copy of the website showing the document was available and the number of comments. Copy of the community newsletter (if applicable) showing the document was available on the website. If no newsletter was used, a screenshot of the homepage showing the documented was linked from the community's homepage.
Website	The City's web site will be utilized to explain the SWMP program and opportunities for public involvement and participation.	Ongoing	Number of comments.
Community Website Updates / Promote TMDL activities	The City will promote events put together by the Kalamazoo River Watershed Council, such as "Rain Barrel Sale", Kanoe the Kazoo", etc., or other appropriate agency's events that are appropriate for this community.	Ongoing	Number of programs promoted on website. A link to the KSWG website or other agency's website that is promoting various event activities is on the Community's homepage and/or the event information is promoted directly on the community website's homepage.

BMP measurable goal A: BMP Public Notice - The SWMP will be available on www.protectyourwater.net by June 2022, and throughout the Permit cycle. Kalamazoo Valley will include information on the SWMP in the future using a newsletter publication, social media resources and/or their website (which ever delivery mechanism is applicable and/or available), which will include a link to www.protectyourwater.net. Kalamazoo Valley's involvement will target their stakeholders and school students as part of the community outreach.

Measurement of assessment: Number of website visits and viewer engagements to the designated stormwater website page, the number and type of comments received from the public, and the number and type of other communication strategies implemented during the Permit cycle.

Schedule for implementation and interim milestones: Kalamazoo Valley and City staff will review submitted public comments monthly, and if appropriate and/or necessary, revise the SWMP annually, taking into consideration the public comments and other available information.

Frequency of the BMP: First Year or monthly in the first year pending applicability.

BMP measurable goal B: BMP Website Education - The website (www.protectyourwater.net/KSWG/) and Kalamazoo Valley's social media resources (as applicable and/or as available), will be utilized throughout the Permit cycle for public education, involvement opportunities and comment. Kalamazoo Valley's involvement will target their stakeholders and school students as part of the community outreach.

Measurement of assessment: 1) Number and type of comments received from the public, 2) Number and type of other communication strategies implemented during the Permit cycle, 3) Number of programs promoted on website.

A link to the KSWG website or other agency's website that is promoting various event activities is on the Community's homepage and/or the event information is promoted directly on the community website's homepage.

Schedule for implementation and interim milestones: Continual operation.

Frequency of the BMP: Semi-annually or more frequently as necessary.

BMP measurable goal C: BMP Community Updates and Activities – Kalamazoo Valley will utilize a newsletter publication, social media resources and/or their website (which ever delivery mechanism is applicable and/or available) throughout the Permit cycle for promoting events including planetarium presentations of Habitat Earth at the Kalamazoo Valley Museum and the Kalamazoo area Master Rain Gardener Certification. Kalamazoo Valley's involvement will target their stakeholders and school students as part of the community outreach.

Measurement of assessment: Number of website visits to the designated stormwater website page, the number and type of comments received from the public, and, the number and type of other communication strategies implemented during the Permit cycle.

Schedule for implementation and interim milestones: Continual operation.

Frequency of the BMP: Continual operation.

Other

For the purposes of this Stormwater Permit, the City's Environmental Programs Manager serves as the Stormwater Program Manager and will be the City's point of contact (269-337-8583) for all related issues.

Public Education Plan (PEP)

The City of Kalamazoo follows the PEP provided in their 2022 NPDES MS4 Stormwater Discharge Permit Application (NPDES Permit). The primary mechanism is to provide free public education material to residents via the City's website, utilize a social media campaign to cover each PEP topic, and to promote ongoing stormwater education activities by other groups and agencies. The City uses each educational event as an opportunity to educate and in most cases, distribute materials, and occasionally provide demonstrations of various educational models. Generally, City and other staff and/or volunteers use a broad-based water quality presentation technique, discussing stormwater, TMDL, wellhead protection, and risk minimization strategies (e.g. best management practices).

The City's PEP outlines the strategies its KSWG partners can participate in to educate the public about stormwater issues and concerns. As a member of the KSWG partners and being nested under the City's NPDES permit, Kalamazoo Valley will adopt the City's long-term strategy to change societal attitudes and subsequent behavior associated with water quality issues. Kalamazoo Valley's PEP participation is not based on quantities but rather quality efforts. In conjunction with the City's PEP, Kalamazoo Valley will utilize its expertise, contacts, and resources to provide specific watershed and environmental education utilizing the City of Kalamazoo's *Stormwater Public Education Plan – Revised 2022* Table included in Appendix B.

The City has and will continue to contract professional website and social media vendors to determine the effectiveness of the public education outreach strategies. The results or "metrics" are conducted in year 1 and annually every year of the permit. For the PEP, Kalamazoo Valley and the City will cooperate with the KSWG MS4 partners to promote and disseminate quality education on the 10 NPDES-required stormwater topics utilizing a collaborative webpage www.protectyourwater.net/KSWG/).

Kalamazoo Valley commits to the following minimum schedule of PEPs (referenced as Appendix B, the City's *Stormwater Public Education Plan – Revised 2022* Table0), to be reviewed annually between the City and Kalamazoo Valley, and if possible, additional PEPs may be included each year as available time permits.

Kalamazoo Valley Implementation Schedule & PEP Table Assignment

PEP Reference A *(listed in Appendix B, PEP Table, Row 9 Column 4)*

Year 1: Installation of 1 raingarden, ACC campus (completed 2020)

- Benefits of Native Vegetation
  - Delivery Mechanism or Activity

PEP Reference B *(listed in Appendix B, PEP Table, Row 1 Column 4)*

Year 1: Installation of 1 cistern, BHLC campus (completed 2020)

- Personal Watershed Stewardship
  - Delivery Mechanism or Activity

PEP Reference C *(listed in Appendix B, PEP Table, Row 1 Column 4, Row 4 Column 4, Row 5 Column 4, Row 6 Column 4,* and *Row 7 Column 4)*

Year 1-20: Stormwater & watershed specific material enhancing distribution mechanism; annual ongoing

- Personal Watershed Stewardship
  - Delivery Mechanism or Activity
- Personal Actions that Can Impact the Watershed
  - Delivery Mechanism or Activity
- Waste Management Assistance
  - Delivery Mechanism or Activity

PEP Reference D *(listed in Appendix B, PEP Table, Row 2 Column 4, and Row 9 Column 4)*

Year 3: Raingarden signage, 2, KVM and AWH (planned 2022-2023)

- Benefits of Native Vegetation
  - Delivery Mechanism or Activity

PEP Reference E *(listed in Appendix B, PEP Table, Row 1 Column 4)*

Year 3: Cistern signage, 1, FIC (planned 2022-2023)

- Personal Watershed Stewardship
  - Delivery Mechanism or Activity

PEP Reference F *(listed in Appendix B, PEP Table, Row 1 Column 7, Row 4 Column 7, Row 5 Column 7, Row 6 Column 7, Row 7 Column 7, Row 9 Column 7 and Row 10-1 Column 7)*

Year 4: Kalamazoo Valley Campus-Specific Community Awareness Assessment, 1 survey, KVM (based on current opportunities) (planned 2023-2024)

- Personal Watershed Stewardship
  - Evaluation Method
- Personal Actions that Can Impact the Watershed
  - Evaluation Method
- Waste Management Assistance
  - Evaluation Method
- Benefits of Native Vegetation
  - Evaluation Method

PEP Reference G *(listed in Appendix B, PEP Table, Row 1 Column 4, and Row 4 Column 4)*

Year 6-8: Printed Media (first poster/flyer), enhancing promotion of City's PEP

- Can be included in any of the City's Public Education Messages, depending on media topic

PEP Reference H *(listed in Appendix B, PEP Table, Row 1 Column 4, and Row 4 Column 4)*

Year 9-14: Video Media (first production), enhancing promotion of City's PEP

- Can be included in any of the City's Public Education Messages, depending on media topic

PEP Reference I *(listed in Appendix B, PEP Table, Row 1 Column 4, Row 4 Column 4, Row 5 Column 4, Row 6 Column 4 and Row 7 Column 4)*

Year 16-20: Showcase Existing Exhibits, based on availability of resources, applicability of buildings.

- Personal Watershed Stewardship
  - Delivery Mechanism or Activity
- Personal Actions that Can Impact the Watershed
  - Delivery Mechanism or Activity
- Waste Management Assistance
  - Delivery Mechanism or Activity

PEP Reference J *(listed in Appendix B, PEP Table, Row 2 Column 4)*

Year 16-20: Showcase Existing Exhibits, based on availability of resources, applicability of buildings.

- Benefits of Native Vegetation
  - Delivery Mechanism or Activity

Illicit Discharge Elimination Plan (IDEP)

Introduction

The purpose of the City of Kalamazoo's Illicit Discharge Elimination Plan is to prohibit and eliminate illicit discharges and connections, including discharges of sanitary wastewater to the City of Kalamazoo's municipal separate storm sewer system. The separate storm sewer system includes both open and enclosed drainage systems that are owned or operated by the City and discharge to a surface water of the State or to a separate stormwater drainage system operated by another public agency.

Kalamazoo Valley will comply with the City of Kalamazoo's IDEP and the following is the Standard Operating Procedure (SOP) Kalamazoo Valley will enact. Kalamazoo Valley will utilize the City of Kalamazoo's *Stormwater Management Plan – Revised 2022* Table included in Appendix C.

Roles and Responsibilities

Kalamazoo Valley will utilize its own employees, equipment and material as much as possible and practical to investigate illicit connects and discharges.

The Kalamazoo Valley management staff has developed a program that administers and manages the IDEP. Nathan Rickey, Energy and Materials Handling Manager (or designee), serves as Kalamazoo Valley's primary MS4 IDEP contact for the City of Kalamazoo, including general administration, all written correspondence and verbal communication with the City of Kalamazoo, IDEP implementation and reporting, scheduling and facilitating internal meetings, and providing general prioritization and guidance of IDEP related work. If Nathan Rickey is unavailable, TBD, Director of Facilities and Construction Management Services, and Dannie Alexander, Vice President for Campus Planning and Operations, are designated as the MS4 IDEP contacts.

Finding and Eliminating Illicit Connections and Discharges

Kalamazoo Valley will adhere to Attachment C of the City's 2022 Stormwater NPDES Permit Application to actively identify and eliminate illicit connections and discharges to the stormwater system affecting the Phase II NPDES Permit. The Portage Creek/Arcadia Creek watershed is the primary watershed covering the City of Kalamazoo. It includes Portage Creek, the West Fork of Portage Creek, Arcadia Creek, and Axtell Creek. The Kalamazoo River Main Stem Corridor 3 is the secondary watershed, including Davis Creek (Davis-Olmstead Drain). Kalamazoo Valley has two main "campuses", one within the Arcadia Creek watershed and one within the Portage Creek watershed.

Kalamazoo Valley's Stormwater Sewer System Map including the two Kalamazoo Valley campuses covered under the City of Kalamazoo's MS4 Permit is provided in Appendix D. Additional detailed maps are also included in Appendix D showing specific features of each building's stormwater sewer system, and the identification of all Kalamazoo Valley's stormwater assets.

Kalamazoo Valley's Stormwater Sewer System Map (and all updated versions) will be available for public inquiries at Anna Whitten Hall upon request via Nathan Rickey, Energy and Materials Handling Manager, or TBD, Director of Facilities and Construction Management Services. The map will also be available as part of the SWMP posted utilizing a newsletter publication, social media resources and/or their website (which ever delivery mechanism is available) for review and comment.

a) Stormwater sewer system maps

Kalamazoo Valley's Stormwater Sewer Systems located on the two Kalamazoo Valley watersheds covered under the City of Kalamazoo's MS4 Permit are as follows:

Arcadia Creek Watershed

- The Anna Whitten Hall (AWH), 202 N. Rose Street, Kalamazoo, MI 49007
- The Center for New Media (CNM), 100 E. Michigan Avenue, Kalamazoo, MI 49007
- Kalamazoo Valley Museum (KVM), 230 N. Rose Street, Kalamazoo, MI 49007

Portage Creek Watershed

- The Food Innovation Center (FIC), 224 E. Crosstown Parkway, Kalamazoo, MI 49007 and,
- The Culinary/Allied Health Building (CAH), 418 E. Walnut Street, Kalamazoo, MI 49007.

b) Prioritizing areas for dry weather screening

Kalamazoo Valley has 19 discharge points into the City of Kalamazoo's MS4 system. On a once per four-year basis, Kalamazoo Valley will conduct dry weather screening to identify illicit discharges or connections that exist within its system. At a minimum Kalamazoo Valley will conduct 4 outfall field evaluations each year for dry weather flow.

c) Performing dry weather screening

Kalamazoo Valley will perform dry weather screening utilizing the City's IDEP Action Chart for Outfall Field Evaluation, the Dry Weather Screening Form for field documentation and the IDEP Follow-up Investigation Report Form. (Template forms are provided in Appendix E.)

Outfalls will be screened on a once every four-year cycle, minimally 4 per year. Dry weather screening will be performed after at least 48 hours of any precipitation. Observations will be recorded on the field logs developed for the program. When flow is observed, staff will conduct field screening and document any unusual conditions, such as the presence/absence of flow, changes in water clarity, color, and odor; the presence of suds, oil sheens, sewage, floatable materials, bacterial sheens, algae, and slimes; and the staining of the banks or unusual vegetative growth. If warranted based on observations of unusual conditions or if the source of the illicit discharge is unknown, water samples from the outfall will be attempted for analysis including: temperature, pH, surfactants, ammonia, fecal coliform and/or fluoride. In addition, staff will also investigate undocumented connections and the integrity of the discharge structure.

Procedure: *(A minimum of two employees should investigate outfalls for safety reasons.)*

1. Locate outfalls to be investigated during a field investigation.
2. Conduct field observations to determine if any dry weather flow is present. If the source is not identified, the field screening will be conducted the same day for further investigation.
3. Conduct field screening if flow is observed at an outfall or point of discharge, and the source of an illicit discharge is not identified during the field observations. Record any unusual conditions, such as the:

    - presence/absence of flow, changes in water clarity, color, and odor;
    - the presence of suds, oil sheens, sewage, floatable materials, bacterial sheens, algae, and slimes; and,
    - the staining of the banks or unusual vegetative growth.

4. Investigate undocumented connections and the integrity of the discharge structure. Check outfalls during this reporting period that had dry weather flows for those confirmed as being either from dewatering, groundwater infiltration, surface water infiltration, air conditioning condensate, and/or NPDES discharge permits.

5. If warranted based on observations of unusual conditions, water samples from the outfall will be attempted for analysis including:

    - temperature,
    - pH,
    - surfactants,
    - ammonia,
    - fecal coliform and/or,
    - fluoride.

6. Record observations on the Dry Weather Screening Form.
7. Record GPS coordinates if no coordinates are in the system.
8. Take a picture of the outfalls.

Dry Weather Flow Present:

If flow from the outfall is obviously sanitary sewage discharged from the City of Kalamazoo's sanitary system, or if the source of flow from the outfall is not obvious, contact the City for assistance in identifying the source.

For reports from the public regarding illicit discharges and connections, follow the call information presented below in the "*Public Calls and Other Contacts*" section.

Illicit Discharge Source Identification

Once an illicit discharge has been detected and the source is not obvious, the City will assist Kalamazoo Valley with conducting further investigation in accordance with the City's SWMP in Section 5 of the City's 2022 Stormwater NPDES Permit Application, and it's Appendix for the documentation forms. Tracking, identification and elimination will be recorded on the investigation report (Appendix E). Kalamazoo Valley will use any of the following methods:

- Upstream manhole investigation, to be completed on the day the discharge was detected,
- Indicator parameter testing, to be completed on the day the discharge was detected,
- Video testing,
- Dye testing,
- Smoke testing,
- Drainage area investigations,
- Documented visual observation or physical indicators, and/or
- Homeowner surveys and surface condition inspections for on-site sewage disposal systems.

Eliminating Illicit Discharges, Prioritization Schedule

If an illicit discharge is reported, or a complaint is filed, it will be investigated within 24 hours. If an illicit discharge is reported, identified and confirmed, through sampling or other means described above, Kalamazoo Valley will further assist to identify the source, and the source will be stopped immediately. Downstream stormwater sewers will be cleaned and vactored within 24-hours to prevent any further influence on surface waters. Illicit discharge response activities will be fully documented and kept in a separate file maintained by Kalamazoo Valley staff. Illicit discharge response activities along with field inspection sheets will be kept during each permit reporting period. IDEP response information is outlined below in further detail.

The prioritization schedule detailed below will be implemented to eliminate confirmed illicit discharges.

Conditions-Highest To Lowest Priority	Permanent Fix Timeline
Dry Weather Significant Illicit Discharges - untreated or partially treated human sewage	24 hours to eliminate the discharge; 72 hours response activities complete
Dry Weather Significant Illicit Discharges – non-sewage related, but meets 24-hour notification criteria	24 hours to eliminate the discharge; 72 hours response activities complete
Dry Weather Significant Illicit Discharges - does not meet 24-hour notification criteria	48 hours to eliminate the discharge; 60 days response activities complete
Dry Weather Non-Significant Illicit Discharges	48 hours to eliminate the discharge; 60 days response activities complete
Wet Weather Illicit Discharges	24 hours to eliminate the discharge; 60 days response activities complete

Responding to Illegal Dumping and Spills

Kalamazoo Valley's response to illegal spills and dumping will be in line with the Section 7 of the City's 2022 Stormwater NPDES Permit Application.

Public Calls and Other Contacts

A public reporting system for illicit discharges and/or connections has been prepared by the City to record, investigate, source identify, and perform corrective action in an attempt to resolve reports to the maximum extent practicable. Kalamazoo Valley's response to public calls and other contacts will be in accordance with the Section 5 of the City's 2022 Stormwater NPDES Permit Application. It is important to note that neither City nor Kalamazoo Valley staff are certified or trained as "First Responders" to chemical spills. Consequently, decisions regarding any required immediate and/or remedial actions will be directed to the Kalamazoo County HazMat Team who will make the determination whether they contact an appropriate remedial firm to perform the necessary remedial action and invoice the responsible party, or if the responsible party will directly retain the necessary firm. The City has pre-qualified firms available to perform emergency remedial work if a responsible party is not immediately identified. Subsequently, the City would attempt to identify a responsible party to collect reimbursement for accrued expenses. As necessary, Kalamazoo Valley may contact an appropriate remedial firm to perform the necessary remedial action.

The public reporting system for incidents within the City of Kalamazoo limits is as follows:

- For emergency or non-emergency incidents during regular business hours (8 a.m. to 5 p.m.) affecting City utilities, calls/reports from the public regarding illicit discharges and connections, dial 311 or 269-337-8000. Inquiries are typically made to the Kalamazoo Environmental Programs Manager at 269-337-8583 or the Environmental Compliance Supervisor at 269-337-8365.

- If the incident involves sanitary sewage discharged from the City of Kalamazoo's sanitary system, or if the source of flow from the outfall is not obvious, immediately contact the City of Kalamazoo's dial 311 or 269-337-8000, or the Environmental Compliance Supervisor at 269-337-8365. Sanitary sewer overflows (SSOs) should be reported to EGLE Water Resources Division, Water Quality Unit, Marcus Tironi at 269-330-9468.

- For emergency incidents during non-business hours (5 p.m. to 8 a.m.) affecting City utilities, calls or reports from the public regarding illicit discharges or connections, should be made to 911. For a non-emergency, call the Kalamazoo Department of Public Safety (Central Dispatch) at 269-488-8911 to request that the Hazmat Team respond to the report. If appropriate or the incident is outside the City, contact the Kalamazoo County IDEP Hotline at 269-381-3171 and the EGLE's 24/7 Pollution Emergency Alert System (PEAS) Hotline at 800-292-4706.

Kalamazoo Valley Contacts:
For all emergency or non-emergency incidents, calls/reports from the public are made to the Kalamazoo Valley Public Safety Department at 269-488-4575.

All Kalamazoo Valley recipients of these calls are directed to forward these calls to Public Safety. Public Safety will report these calls to Kalamazoo Valley management staff. Management staff will consider each report and prioritize it based on all available information. Management staff will then determine the appropriate response, based on the information provided and the availability of staff. Response options include, but are limited to, sending facilities staff to the site to perform an initial field assessment regarding the need for field/source investigations, or whether the Public Safety Central Dispatch at 269-488-8911 should be contacted to request that the Hazmat Team be dispatched to the site, or staff may immediately contact Central Dispatch prior to performing an initial field assessment.

Training Staff

The City follows the Employee and Contractor training process as outlined in their SWMP Table provided in their 2022 Stormwater NPDES Permit Application. Kalamazoo Valley will utilize the City of Kalamazoo's *Stormwater Management Plan – Revised 2022* Table included in Appendix C. In conjunction and with approval of the City, Kalamazoo Valley will utilize the City's training process summarized below. Other communication strategies will be considered as publication schedules and internal discussions are made.

Training will be given to existing staff who are involved in illicit discharge-related activities on a once per five-year cycle (i.e. 2022-2027). New staff will be trained within the first year of hire.

Contractors hired by Kalamazoo Valley performing work that may affect the MS4 system will be required to have training per the contract specifications. Kalamazoo Valley will integrate stormwater control requirements into bid specifications, contractor training/certification and documentation.

The training will include:

- The definition of illicit discharges and connections;
- Techniques for finding illicit discharges, including field screening, source identification, and recognizing illicit discharges and connections;
- Methods for eliminating illicit discharges and the proper enforcement response;
- Techniques for sampling, analyzing, and recording information;
- Recognition of naturally occurring phenomena and their sources (bacteria sheens, slimes, and films; bryozoans, pollen, blue-green algae, green algae, tannins, and foams); and,
- Continued use of the Excel DVD "Storm Watch Municipal Storm Water Pollution Prevention, the MDEQ DVD "Storm Water Employee Training" for employee training, and the more specific IDEP focused DVD "Illicit Discharge Detection & Elimination A Grate Concern."

Illicit Discharge Elimination Program Effectiveness

Kalamazoo Valley will review the effectiveness of the IDEP in a manner similar to the City's SWMP in Sections 5 and other IDEP requirements in Section 7 of the2022 Stormwater NPDES Permit Application. The IDEP will be evaluated by using the following:

- Kalamazoo Valley outfalls will be screened once per four-year cycle. Annual reports will include information on screening activities. In addition, reports will include an assessment of the screening.

- The number of illicit discharges/connections identified versus the number eliminated will be reported in annual reports. Also, difficulties in identifying, correcting illicit discharges/connections, and any enforcement issues will be contained in reports.
- Annual reports will contain information on any complaints by the regarding illicit discharges.
- The frequency of staff/contractor training will also be assessed during the permit period.

Annual Reporting

Kalamazoo Valley will document actions taken to eliminate illicit discharges and connections. Kalamazoo Valley will prepare IDEP reports in a manner approved by the City and in accordance with their SWMP, Attachment C. Annual reports will summarize the total estimated volume and pollutant load eliminated for the main pollutants of concern, and the locations of the discharges into both the City MS4s and the receiving water, if applicable. The annual report can be submitted to the City using the Annual Phase II Municipal Separate Storm Sewer System Report included in Appendix F or any future format required by the MDEQ.

Recordkeeping

Kalamazoo Valley will keep and maintain all IDEP records of:

- IDEP investigations and field logs,
- Records of actions taken to eliminate illicit discharges,
- Records of total estimated volume and pollutant loads eliminated, and
- Employee training records.

Illicit Discharge Ordinance

Kalamazoo Valley implementation and the enforcement of the IDEP will be in accordance with the City of Kalamazoo's Ordinances that are associated with water quality, primarily:

- Chapter 29 of the City of Kalamazoo Code of Ordinances (Stormwater System),
- Chapter 30 of the City of Kalamazoo Code of Ordinances (Soil Erosion and Sedimentation),
- Ordinance 1825 (Wellhead Protection Overlay), and,
- Ordinance 1826 (Performance Standards).

Chapter 29 of the City of Kalamazoo Code of Ordinances is included in the City's SWMP as Attachment A, 29-4A. Answers to specific questions in the City's Permit Application, SECTION VII. STORMWATER MANAGEMENT PROGRAM, Illicit Discharge Ordinance, are provided below after the permit application question number:

21. See Attachment A, 29-4A.
22. See Attachment A, 29-4A(3).
23. See Attachment A, 29-4A(3).
24. See Attachment A, 29-4A and 4B.
25. See Attachment A, 29-4A and 4B.
26. See Attachment A, 29-7, 8, 11.
27. See Attachment A, 29-11, 13, 14.

Construction Stormwater Runoff Control Program

Kalamazoo Valley's implementation of the Construction Stormwater Runoff Control (CSRC) Program will be in accordance with Chapter 30 of the City of Kalamazoo Code of Ordinances (Soil Erosion and Sedimentation). Kalamazoo Valley agrees to comply with all necessary measures to report, address, and resolve stormwater

quality issues, using the City of Kalamazoo's ordinances or other regulatory plans, related to construction stormwater runoff control. These efforts include the training of appropriate staff and contractors on construction stormwater runoff control and the use of approved Best Management Practices.

The City is the Municipal Enforcing Agency (MEA) for Part 91 of Act 451, and as such, Kalamazoo Valley will follow the City's SWMP in Section 5 and CSRC program in Section 8 of the City's 2022 Stormwater NPDES Permit including the following:

- "Construction Stormwater Runoff Control", "Notifications," and Chapter 30 of the City Code of Ordinances "Soil Erosion and Sedimentation Control."
- The City Code of Ordinances "Soil Erosion and Sedimentation Control."
- "MEA for SESC," and the "City of Kalamazoo Code of Ordinances Appendix A – Zoning Ordinance" Section 8.3 H1.d and H7.l.

For all CSRC program issues related to Ordinance 30, Kalamazoo Valley will directly interact with the City's MEA, the Department of Community Planning and Economic Development, Code Administration Division, by calling 269-998-6355. For all CSRC program issues related to utility work within a right-of-way, Kalamazoo Valley will directly interact with the City's MEA, the Department of Public Services, Engineering Division, by calling 269-337-8454.

To report discharges of sediment to surface waters of the state, Kalamazoo Valley will:

1. Follow the IDEP procedures.
2. Contact the MEA soil erosion agent at the City of Kalamazoo.
3. Contact the Michigan EGLE, Kalamazoo District Office, Water Resources Division at 269-568-2699 or 269-567-3500.
4. As necessary, contact the PEAS Hotline at 800-292-4706.

When required during construction projects, Kalamazoo Valley will obtain a Part 91 Soil Erosion and Soil Control permit through the City's MEA in accordance with Rule 1709 promulgated under the authority of Part 91, Soil Erosion and Sedimentation Control (SESC), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. A copy of the City's SESC permit application is provided in Appendix G.

Post Construction Stormwater Control for New Development and Redevelopment Projects

Post-construction controls are necessary to maintain or restore stable hydrology in receiving waters by limiting surface runoff rates and volumes, and reducing pollutant loadings from sites that undergo development or significant redevelopment.

- Kalamazoo Valley will comply with their December 3, 2013, Stormwater Management Procedures (refer to CMOP 2072) to implement their Post-Construction Stormwater Controls. (Please note that the title of the person responsible to "promulgate procedures/guidelines" is not current. The title should now read "Executive Vice President for Enrollment and Campus Operations".)
- Kalamazoo Valley will comply with existing and future City of Kalamazoo ordinances or regulatory mechanisms to implement the Post-Construction Stormwater Controls.
- On at least a once every five-year basis or within the first year of hire, Kalamazoo Valley will provide training to appropriate staff on post-construction site stormwater runoff control and the use of approved BMPs.

- Kalamazoo Valley will provide documentation to the City of Kalamazoo of the use of Post-Control Stormwater Control BMPs to control runoff.
- Kalamazoo Valley will respond to any complaints received regarding stormwater runoff control at the facilities and inform the City of the details of the complaint and its resolution within 14 days.

As an example, Kalamazoo Valley's most recent 2017 Stormwater Calculations for Pre- and Post-Development are provided along with the stormwater system maps in Appendix D.

Pollution Prevention and Good Housekeeping Activities for Municipal Operations

Introduction

The Pollution Prevention and Good Housekeeping (P2/GH) Program is designed to help reduce pollutants in surface runoff from facilities. Kalamazoo Valley outlines specific actions and implementation schedules for P2/GH to minimize pollutant runoff to the maximum extent practicable from its operations that have the potential to discharge stormwater to surface waters of the state.

Kalamazoo Valley's Stormwater Sewer System Map (and all updated versions) will be available for public inquiries at Anna Whitten Hall upon request via Nathan Rickey, Energy and Materials Handling Manager, or TBD, Director of Facilities and Construction Management Services. The map will also be available as part of the SWMP posted utilizing a newsletter publication, social media resources and/or their website (which ever delivery mechanism is available) for review and comment.

Municipal Facility and Structural Stormwater Control Inventory

Kalamazoo Valley is considered a "Public School" which owns municipal properties and maintains a variety of structural stormwater controls. Below is a summary of the facilities and structural stormwater controls owned or operated within the urbanized area of Kalamazoo. Updating and revising the inventory is performed within 30 days following the adding or removing of a facility or structural stormwater control. Kalamazoo Valley staff will report changes to the City of Kalamazoo and the Information Technology staff that manage the assets database and maps to make the necessary changes to properly update the information. Changes to the facilities and structural storm water controls include additions, removals, or other structures no longer owned or operated by Kalamazoo Valley. This information will also be included in the City's Annual Phase II Municipal Separate Storm Sewer System Report (Appendix F).

List of Kalamazoo Valley Stormwater Assets – March 2022

- 19 outfalls
- 10 catch basins and outlets
- 2 manholes
- 4 raingardens
- 1 cistern
- 3 porous pavements
- 3 porous paver sidewalks
- 2 bioswales

A list of Kalamazoo Valley's stormwater points of discharge to surface water is provided as Appendix A, Table 1. Kalamazoo Valley's Stormwater Sewer System Map including the two Kalamazoo Valley campuses covered under the City of Kalamazoo's MS4 Permit is provided in Appendix D. Additional detailed maps are also included in Appendix D showing specific features of each building's stormwater sewer system, and the

identification of all Kalamazoo Valley's stormwater assets.

Facility-Specific Stormwater Management

Facilities are assessed for the potential to discharge any of the following pollutants to surface water of the state such as sediment, salt, lawn clippings, oil sheens from dripping vehicles, nutrients from soil and fertilizer, heavy metals, phosphorus attached to soil particles. The BMPs are necessary to prevent pollutants from discharging to the surface water.

The following factors were considered for selection of the BMPs:

- Amount of urban pollutants stored at the site,
- Identification of improperly stored materials,
- The potential for polluting activities to be conducted outside,
- Proximity to waterbodies,
- Poor housekeeping practices, and
- Discharge of pollutants of concern to impaired waters.

Updating and revising the assessment will be 30 days prior to discharging stormwater from a new facility, and within 30 days of determining a need to update/revise the facility assessment. Data can be documented using a form similar to the following:

Facility	Facility Description	Address	Potential Pollutant Discharge to Surface Water	Potential Pollutant Activities	Prioritized Facilities
AWH	Classroom building	202 N. Rose St.	Low	Storm water runoff from street to raingardens 1 & 2 ***BMP1, BMP2, BMP3, BMP4, BMP5, BMP6, BMP7***	3 - New raingardens will catch most pollutants
CNM	Classroom building	100 E. Michigan Ave.	Low	None ***BMP1, BMP2, BMP3, BMP5, BMP6, BMP7***	5 - Only roof drains at this building
KVM	Museum	230 N. Rose St.	Low	Sidewalk salting ***BMP1, BMP1, BMP2, BMP3, BMP5, BMP6, BMP7***	4 - New raingarden will catch runoff
FIC	Self-contained greenhouse	224 E. Crosstown Pkwy.	Low	Parking lot runoff and sidewalk salting ***BMP1, BMP2, BMP3, BMP4, BMP5, BMP6, BMP7***	2 – 3-year old structures. Worked with DEQ to design; riparian O&M
CAH	Classroom & lab building	418 E. Walnut St.	Low	Parking lot runoff and sidewalk salting ***BMP1, BMP2, BMP3, BMP4, BMP5, BMP6, BMP7***	1 – 3-year old structures; Worked with DEQ to design; riparian O&M

Kalamazoo Valley facilities have parking lots with stormwater discharge. Implemented BMPs (provided in Appendix C, SWMP are referenced in the table above. Utilized BMPs are described below:

- Snow removal and deicing operations for Kalamazoo Valley are contracted and snow is stored mostly in lawn areas to minimize runoff (*Reference **BMP1** listed in Appendix C, SWMP, Row 16).*
- Pavement maintenance is contracted including street sweeping and vactoring for pervious pavement (*Reference **BMP2** listed in Appendix C, SWMP, Row 11).*
- Property /grounds and riparian buffer strip maintenance is contracted. Kalamazoo Valley will comply with the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways". The contractor knows to keeps clippings and leaves picked up, to mow at scheduled frequencies, and maintain the natural vegetative buffer strips *(Reference **BMP3** listed in Appendix C, SWMP, Rows 12, 13 & 23).*
- Pesticide and herbicide use by a certified pesticide applicator only occurs when vegetation cannot be handled by mowing and poses a traffic hazard. Fertilizer is used to encourage growth in the lawn areas. This fertilizer contains no phosphorus (*Reference **BMP4** listed in Appendix C, SWMP, Row 24).*
- Vehicle Maintenance and fueling is done at the “vehicles building” at our Texas Township Campus (*Reference **BMP5** listed in Appendix C, SWMP, Row 4).*
- Small quantities of chemicals for facility maintenance are stored indoors away from storm drains. Trash receptacles are placed where the discharge of contaminants to surface water is unlikely. Dumpsters are maintained to minimize impact to the storm sewer system. Lids are kept closed**.** Kalamazoo Valley owns and operates stormwater control structures including catch basins and outfalls, pervious pavement parking lots, rain gardens, and cistern (*Reference **BMP6** listed in Appendix C, SWMP, Row 10).*
- Kalamazoo Valley has approximately 9 catch basins to maintain at both the BLHC and ACC campuses (*Reference **BMP7** listed in Appendix C, SWMP, Row 15).*

Structures are inspected on an annual basis by the Kalamazoo Valley facilities staff and maintenance is recommended to Field Services as necessary.

Structural Stormwater Control Operation and Maintenance (O&M)

O&M inspection and updating/revising the O&M assessment data should be conducted routinely. Data can be documented using a form similar to the following:

Structure/ ID#	Location	O&M Completed

Note: * denotes outlets to surface waters of the State

Catch Basins: Inspection/Maintenance/Cleaning Prioritization and Location

Catch basin inspection, maintenance, and cleaning are based on heavy traffic areas and problem spots for Kalamazoo Valley. Top priority is given to those catch basins in heavy traffic areas. Kalamazoo Valley prioritizes catch basin cleanout annually based on facility staff inspections and functionality of the system. Catch basin/inlet cleanings are only done primarily in response to reports of localized flooding due to obstructions or sediment build-up. The criteria used to determine if cleanout is necessary will typically be when the sump is 1/3 to 1/2 full of sediment.

Catch Basin Maintenance/Inspection Procedure

Kalamazoo Valley has several catch basins at both facilities. During the spring, summer, and fall seasons, Kalamazoo Valley facilities staff will inspect catch basins and raingarden for damage, sediment buildup, and functional ability. Kalamazoo Valley surface cleans catch basins at a minimum of once per season or as necessary for flooding or unpredictable incidences.

If surface cleaning is insufficient or when the catch basin becomes 1/3 to 1/2 full of sediment, Kalamazoo Valley facilities staff will contract to have a vactor truck remove debris and water. The contractor will be responsible for the proper disposal of the removed debris and water. This process is in line with the City's process for catch basin maintenance and inspection procedure.

Kalamazoo Valley contracts to repair or replace damaged infrastructure based on reports of failing or failed structures or planned road improvements. Catch basins are also inspected during IDEP investigations, and when functional problems are observed or reported. Disposal of maintenance waste materials is always performed in accordance with regulatory requirements.

The amount of sediment collected, the location, and the frequency of devices being cleaned is tracked.

Additional Stormwater Controls Inspection/Maintenance Procedures

Below are the inspection and maintenance procedures for addition stormwater structural controls. Updating and revising the procedure will be 30 days following the implementation of a new structural stormwater control.

Municipal Operations and Maintenance Activities

The City follows the operations and maintenance processes as outlined in their SWMP Table, Rows 1, 8, 10, 11, 14, 16, 17, 18, and last column as provided in their 2022 Stormwater NPDES Permit Application. In conjunction with the City, Kalamazoo Valley will utilize the City's applicable processes as summarized below.

Kalamazoo Valley will utilize the City of Kalamazoo's Stormwater Management Plan – Revised 2022 Table included in Appendix C. Kalamazoo Valley utilizes the same BMPs for operations and maintenance activities as are outlined in the Facility-Specific Stormwater Management processes:

- *Reference **BMP1** listed in Appendix C, SWMP, Row 16*
- *Reference **BMP2** listed in Appendix C, SWMP, Row 11*
- *Reference **BMP3** listed in Appendix C, SWMP, Rows 12, 13 & 23*
- *Reference **BMP4** listed in Appendix C, SWMP, Row 24*
- *Reference **BMP5** listed in Appendix C, SWMP, Row 4*
- *Reference **BMP6** listed in Appendix C, SWMP, Row 10*
- *Reference **BMP7** listed in Appendix C, SWMP, Row 15*

Roadways, Parking Lots, and Bridges

Parking lot maintenance: Pavement maintenance operations such as sweeping, sealing, saw cutting, vactoring and tack coating for new pavement placement are contracted or conducted by Kalamazoo Valley personnel as necessary. Prioritization of pavement maintenance operations is determined on an as needed basis. The prioritization schedule is reviewed annually.

Sweeping: Sweeping operations are contracted and completed bi-annually or as necessary based on observed conditions throughout the year. The prioritization is based on the current conditions and use of the parking lots, which is reviewed annually.

Vactoring: Vactoring pervious pavement operations are contracted and completed bi-annually or as necessary based on observed conditions throughout the year. As necessary and based on prioritization, the City will assist Kalamazoo Valley with vactoring capabilities. The prioritization is based on the current conditions and use of the pervious parking lots, which is reviewed annually.

Snow Removal/Salt Application: Snow removal and deicing operations are contracted and snow is stored to minimize runoff.

Vehicle Washing: Vehicle maintenance and fueling is done at the "vehicles building" located at our Texas Township Campus.

Managing Vegetated Properties

Kalamazoo Valley contractors mow the building grounds. Contractors are trained as certified chemical applicators and are allowed to apply fertilizers, pesticides and herbicides.

- Fertilizers – Kalamazoo Valley lawn care contractors use fertilizer to encourage growth in the lawn areas. The fertilizers do not contain phosphorus.
- Pesticides – On occasion, pesticides are used for wasp control and grub control.
- Herbicides – Herbicides have been used for weed control on a spot treatment basis.

Riparian Buffer Strips

Contractors hired to perform lawn maintenance activities within riparian buffer strips along the streams running through Kalamazoo Valley's property are expected to comply with pollution prevention and good housekeeping BMPs. Lawn care contractors are required to manage the riparian buffer zone by mowing at recommended frequencies taking care not to allow woody growth, but rather to encouraging the native plant growth. Contractors are inspected by the Kalamazoo Valley staff. Contract language has been modified to include P2/GH expectations.

Contractor Requirements and Oversight

Contractors hired to perform maintenance activities are expected to comply with pollution prevention and good housekeeping BMPs. Contractors are inspected by the Kalamazoo Valley staff. Contract language has been modified to include P2/GH expectations.

Employee Training

Training will be given to existing staff who are involved in Kalamazoo Valley facilities operations outlined above on a once per five-year cycle. New staff will be trained within the first year of hire. Specific training for contractors will be done prior to work being performed.

The training topics will include the effects of pollutants on water quality entering the MS4, such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, stormwater system maintenance, and any other activities as specified in the permit. The training schedule is listed below and outlined in the following table:

- For existing employees, one training session within the first year of the Nested Jurisdiction Agreement with the City of Kalamazoo;
- For new employees, one training session during the first year ofemployment; and,
- For contractors, the permittee shall ensure that the contractors are trained before they perform the contract work. (Note: Kalamazoo Valley includes stormwater control requirements in their bid specifications.)

Employees	Training Frequency
Kalamazoo Valley Facilities Staff	1 per 5-year permit cycle
Seasonal	At time of hire
Contractors	As needed and before contract work is performed.

Total Maximum Daily Load - Total Phosphorus

Total Phosphorus

The Kalamazoo River Watershed and Lake Allegan, an impoundment of the Kalamazoo River, have a designated Total Maximum Daily Load (TMDL) for phosphorus. A "Cooperative Agreement" was created and enacted by the wastewater (point) dischargers within the watershed to voluntarily reduce their NPDES permitted phosphorus loadings during the key growing period of the year, April through September. Through studies by the EGLE, 33% of the phosphorus load was estimated to be from point sources of pollution. Non-point source (NPS) pollution, the more diffuse and difficult type of pollution to control, was estimated to comprise 76% of the phosphorus inputs to the watershed.

The effort to reduce both point source and NPS pollution necessitated the development of the document "Lake Allegan/Kalamazoo River Watershed TMDL Implementation Strategic Plan for 2012 and Beyond – Revision 2021" (TMDL Strategic Plan). Currently Kalamazoo Valley does not utilize fertilizers or other products with phosphorus. Kalamazoo Valley will adhere to the TMDL Strategic Plan by implementing BMPs when opportunities arise including but not limited to reduced discharge, sweeping, installation of rain gardens or asset cleaning. If in the future the circumstances change, this document outlines several strategies that Kalamazoo Valley could employ to reduce phosphorus including but not limited to soil erosion prevention, sweeping and the operation and maintenance of the facilities assets. Kalamazoo Valley will pursue sediment and phosphorus reduction efforts as applicable and will participate in the public education and outreach efforts as outlined in Section 9 of the City's 2022 Stormwater NPDES Permit, and the Stormwater Public Education Plan – Revised 2022 Table included in Appendix C of this document.

E. Coli

EGLE periodically reassesses and updates the list of impaired streams. TMDLs addressing recreational and aquatic life use impairments have been developed for several waterways in the Kalamazoo River Watershed (KRW) using limited data gathered in 2010 by the local health department. Because bacteria are used to assess recreation use impairment, target concentrations for E. Coli have been developed for the TMDLs addressing bacteria impairments. As of March 2022, three sub watersheds within the Kalamazoo River Watershed were determined by EGLE to be designated with a TMDL E. Coli impairment status: Arcadia Creek, Davis Creek, and Axtell Creek. Please note, Kalamazoo Valley's Downtown campuses only have MS4 discharges to Arcadia Creek.

Given the need to address the requirements in the TMDLs, the Kalamazoo Stormwater Working Group (KSWG) determined that it would be to the benefit of the KRW if TMDL-related activities and other water quality monitoring were done in a collaborative, uniform manner throughout the watershed. Kalamazoo Valley will participate with the KSWG MS4 communities, as a nested permittee of the City of Kalamazoo's MS4 permit, in the TMDL E. Coli impairment assessment as outlined in Section 9 of the City's 2022 Stormwater NPDES Permit.

Appendices

Appendix A - MS4 NPDES Application: Table 1 – KVCC MS4 Points of Discharge

MS4 NPDES Application: Table 1 - KVCC MS4 Points of Discharge

Outfall ID	Location Description	Discharge Type	Pipe Size	Discharge Location	GPS Location
AWH GWS1	Anna Whitten Hall	Ground water sump	6"	City Storm @ Water St.	42.292790,-85.584406
AWH RD1	Anna Whitten Hall	Roof drains	8"	City Storm @ Water St.	42.292790,-85.584406
AWH RG1	Anna Whitten Hall	Infiltration structure with overflow	6"	City Storm @ Water St.	42.292679,-85.583817
AWH RG2	Anna Whitten Hall	Infiltration structure with overflow	6"	City Storm @ Water St.	42.292683,-85.583573
AWH RG3	Anna Whitten Hall	Infiltration structure with overflow	6"	City Storm @ Water St.	42.292726,-85.583682
CNM RD1	Center for New Media	Roof drains	4"	City Storm @ Kalamazoo Mall/E. Michigan Ave.	42.292004,-85.583118
CNM RD2	Center for New Media	Roof drains	8"	City Storm @ Kalamazoo Mall/E. Michigan Ave.	42.292242,-85.583054
CAH PLD1	Culinary & Allied Health	Pervious lot drain	8"	Portage Creek	42.285243,-85.577491
CAH PLD2	Culinary & Allied Health	Pervious lot drain	8"	Portage Creek	42.285538,-85.577130
CAH PLD3	Culinary & Allied Health	Pervious lot drain	8"	Portage Creek	42.285679,-85.577035
CAH RD1	Culinary & Allied Health	Roof drains	8"	Portage Creek	42.285832,-85.577695
CAH RD2	Culinary & Allied Health	Roof drains	12"	Portage Creek	42.285491,-85.578196
FIC PLD1	Food Innovation Center	Pervious lot drain	8"	Portage Creek	42.280125,-85.578042
FIC PLD2	Food Innovation Center	Pervious lot drain	8"	Portage Creek	42.280419,-85.578104
FIC PLD3	Food Innovation Center	lot drain and overflow for cistern	8"	Portage Creek	42.280604,-85.578304
FIC RD1	Food Innovation Center	Roof drains	12"	Axtell Creek	42.281071,-85.580165
KVM RD1	Kalamazoo Valley Museum	Roof drains	8"	City Storm @ Eleanor St.	42.293405,-85.583636
KVM SD1	Kalamazoo Valley Museum	Sidewalk drain	6"	City Storm @ Rose St.	42.293211,-85.584732
KVM RG1	Kalamazoo Valley Museum	Infiltration structure with overflow	6"	City Storm @ Rose St.	42.293281,-85.584520

Appendix B - Stormwater Public Education Plan Revision 2022 Table

Stormwater Public Education Program - Revised 2022

Column >	1	2	3	4	5	6	7
Row	Public Education Topic	Key Messages	Target Audiences	Delivery Mechanism or Methodology	Timetable	Evaluation / Measured Element	Measurable Goal
1	**Public Responsibility and Stewardship in Watershed**	Definition of a watershed; education on specific watershed(s) that public can affect; purpose for protecting watershed; ways human activities can affect watersheds.	Broad Audience: Residents, visitors, public employees, students; businesses, institutions, construction contractors, and developers.	A representative of the MS4 community or agency participates in the TMDL Steering Committee, Kalamazoo Stormwater Working Group (KSWG) or other active group with education activities. **KVCC Ref. B, C, E, G, H & I**	As needed.	Meeting attendance and participation in TMDL, KSWG or other applicable active group.	Representative present at 50% or more of TMDL, KSWG, or other meetings. Participation by volunteering manpower, materials, or promoting educational activities on the website. **KVCC Reference F**
				Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Ref. B, C, E, G, H & I**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.
2	**Ultimate Stormwater Discharge Location and Potential Impacts**	Discharges to surface water and potential water quality impacts.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Reference D**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.
3	**Public Reporting of Illicit Discharges**	Definition of illicit discharges/connections; illicit discharges can adversely impact surface and groundwater; importance of, and how to detect and report known and suspected illicit discharges to County, City and/or EGLE; City ordinances.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material.	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.
4	**Promote Preferred Cleaning Materials and Procedures for Car, Pavement, and Power Washing**	Environmentally friendly cleaning materials, and procedures for washing cars, pavement, and power washing.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Ref. C, G, H & I**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. **KVCC Reference F**

Stormwater Public Education Program - Revised 2022

Column >	1	2	3	4	5	6	7
Row	Public Education Topic	Key Messages	Target Audiences	Delivery Mechanism or Methodology	Timetable	Evaluation / Measured Element	Measurable Goal
5	**Inform and Education the Public on Proper Application and Disposal of Pesticides, Herbicides, and Fertilizers**	Improper disposal of chemicals can adversely impact surface water/ importance of using the Kalamazoo County Household Hazardous Waste Center; best management practices (BMPs) can prevent adverse impacts to surface water.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Ref. C & I**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. **KVCC Reference F**
6	**Promote Proper Disposal Practices for Grass Clippings, Leaf Litter, and Animal Wastes that May Enter the MS4**	Keep yard and pet waste from getting to the street/storm inlets to prevent negative impact to surface waters.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Ref. C & I**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. **KVCC Reference F**
	Identify and Promote the Availability, Location, and Requirements of Facilities for Collection or Disposal of Household Hazardous Wastes, Travel Trailer Sanitary Wastes, Chemicals, and Motor Vehicle Fluids	Improper disposal of chemicals and solid waste can adversely impact surface water; availability of and importance of using the Kalamazoo County Household Hazardous Waste Center and the City's solid waste collection services (e.g., leaf, brush, bulk trash, and recyclables).	Residents, visitors, public employees, students; businesses, institutions, construction contractors, and developers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Ref. C & I**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. **KVCC Reference F**
8	**Septic Tank Care and Maintenance**	Proper septic system O & M; how to recognize system failure and its potential impact on water quality; proper disposal of pumped waste; where to get information; existing ordinances.	Septic system owners; septage haulers.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material.	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.

Stormwater Public Education Program - Revised 2022

Column >	1	2	3	4	5	6	7
Row	Public Education Topic	Key Messages	Target Audiences	Delivery Mechanism or Methodology	Timetable	Evaluation / Measured Element	Measurable Goal
9	**Educate the Public on and Promote the Benefits of Green Infrastructure and Low Impact Development**	Using native vegetation is usually beneficial, especially for surface water buffers since they typically are relatively low maintenance (do not need chemicals), they effectively absorb stormwater, decrease the need for mowing, and improve wildlife habitat. Benefits of green infrastructure and LID.	Property owners; City employees, especially Parks & Recreation staff; site plan applicants; contractors; general citizens.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. **KVCC Ref. A & D**	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshoots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. **KVCC Reference F**
10	**Identify and Educate Commercial, Industrial, and Institutional Entities as Likely Contributors of Pollutants to Stormwater Runoff**	Importance of proper management of chemicals and disposal practices; existing City ordinances/regulations.	Business specific sectors; City-wide operations & maintenance; City Environmental Managers.	Visit facilities (as necessary) for personal education.	As needed	Number of facilities visited, and number of employees educated.	Facilities are aware of where their on-site stormwater goes.
10-1	**Public Education Delivery Mechanism**	All 10 topics	Residents, families, visitors, public employees, students, businesses, construction contractors, and developers.	To be determined by Environmental Programs Manager. This may include Facebook or other social media outlet, newspaper publications, post card mailings, or other delivery mechanism.	Perform survey in year 1 or 2 to establish baseline. Perform survey in year 4 or 5 to measure change.	Webpage and Facebook metrics for KSWG and community websites, if available.	Obtain new ideas on how to reach out and educate residents. Evaluate responses to previous delivery mechanism to determine if it reached the target audience. Increase in the number of respondents with correct answers to storm water questions. **KVCC Reference F**

BMP = Best Management Practices
EGLE = Michigan Department of Environment, Great Lakes & Energy
KVCC = Kalamazoo Valley Community College, nested under the City of Kalamazoo MS4 NPDES permit
KSWG-MS4 Group = Kalamazoo Stormwater Working Group - MS4 Collaborative Stormwater Group
O & M = Operation and Maintenance
TMDL = Total Maximum Daily Load

Appendix C - Stormwater Management Plan Revision 2022

Stormwater Management Plan - Revised 2022

Column >	1	2	3	4	5	6	7	8	9	10	11
			Minimum Measures								
Row	BMP/Action	Description/Method of Implementation	PPP	PEP	IDEP	CSC	PCC	P2/GH	TMDL	Frequency/Schedule	Method of Evaluating Effectiveness
1	**Enforcement Response Procedures (ERPs)**	See Chapter 29 of City of Kalamazoo Code of Ordinances - Stormwater and Chapter 30 of Code - Soil Erosion and Sedimentation Control; Appendix A of Code, Section 8.3H (Site Plan Review); Section 10 (Violations, Penalties and Enforcement).			X	X	X			As needed.	Enforcement as necessary.
2	**Public Participation/ Involvement Program**	See Section 6	X							See Section 6	See Section 6
3	**Public Education Plan**	See Section 6: Attachment A		X						See Section 6: Attachment A	See Section 6: Attachment A
4	**Illicit Discharge Elimination Plan** ***KVCC BMP5***	IDEP outfall screening; Section 7: Attachment A, Figures 3 and 4, Tables 1 and 4.			X					See Section 7: Attachment: Attachment A - IDEP for 4-year schedule for dry weather outfall screening and retention/detention basins.	See Section 7: Attachment A - IDEP for dry weather screening program, and Section 9 of the 2022 Permit Renewal Application
5	**Construction Stormwater Runoff Control Program**	Continue Soil Erosion & Sedimentation Control Program. Per Ordinance 1790, permit and enforce soil erosion and sedimentation controls associated with construction sites, per Part 31. Both the City's Code Enforcement Division and the Engineering Division are APAs for Part 91, addressing construction sites and street/utility work, respectively.				X				Continue APA status for enforcing Act 91.	See Construction Stormwater Runoff Control, permit application Questions 28-31 (Revision January, 2017), and Map of Designated Areas of Snow Plowing and Street Sweeping. Continued certification for APA status; number of Permits issued; enforcement of Ordinances and policies; reduction in TSS.
6	**Documentation of Post-Construction Stormwater Control for New and Redevelopment Projects.**	Current: Performance Standards for Groundwater Protection within Wellhead Protection Capture Zones and Stormwater Quality Management (Ordinance No. 1826); Pending: Updates.					X			Continuous. Updated October 1, 2015	See Section 8 of the 2022 Permit Renewal Application: Post-Construction Runoff Program (permit Questions 32-59). Effective use and enforcement of Ordinance; Ordinances and Performance Standards updates in 2015.
7	**Continue Site Plan Review process using the Wellhead Protection Zoning Overlay Ordinance and Performance Standards Ordinance.**	Per Ordinances 1825 and 1826, require stormwater pre-treatment prior to discharge into the City's MS4 or directly into the surface waters. Appendix A of Code, Section 8.3. Pending: Updates for Performance Standards.				X	X			Continuous. Updated October 1, 2015	Number of site plans reviewed; number of required pre-treatment BMPs; number of natural BMPs; reduction in TSS; Ordinances and Performance Standards updates in 2015.
8	**Employee and Contractor Training.**	Continue use of the Excal DVD "Storm Watch Municipal Storm Water Pollution Prevention" and/or the EGLE DVD "Storm Water Employee Training" for employee training. In addition, the Technician 3 staff will watch the more specific IDEP focused DVD "Illicit Discharge Detection & Elimination A Grate Concern."						X		All staff within 5 year Permit cycle. New hires within 1 year of hire. Contractors to begin viewing Storm Watch DVD in 2016 if they do not have staff with Stormwater Certification.	Number of employees trained; integration of stormwater control requirements into bid specifications. Contractor training/certification documentation.

Stormwater Management Plan - Revised 2022

Column >	1	2	3	4	5	6	7	8	9	10	11
			Minimum Measures								
Row	BMP/Action	Description/Method of Implementation	PPP	PEP	IDEP	CSC	PCC	P2/GH	TMDL	Frequency/Schedule	Method of Evaluating Effectiveness
9	**List structural Stormwater Controls (pre-treatment units).**	List by Table all municipally owned properties with stormwater structural controls (pre-treatment units).						X	X	Continuous maintenance of list of municipal properties and structural stormwater controls with locations.	See Procedure for Updating and Revising the Existence, Location, Structural Stormwater Controls and Potential to Discharge Pollutants to the Surface Waters of the State (January 2017). Completion of list with locational information; Section 9 of the 2022 Permit Renewal Application.
10	**Inspect, perform maintenance, and evaluate all Stormwater Controls (pre-treatment units).** ***KVCC BMP6***	Annual year plan to inspect, perform maintenance and evaluate for effectiveness each City-owned stormwater control (pre-treatment unit) identified within the SWMP.						X	X	Annual Inspection & Maintenance	See Section 9 of the 2022 Permit Renewal Application
11	**Continue street sweeping program.** ***KVCC BMP2***	Use up to three Elgin Pelican series street sweepers to clean streets. A contractor removes the dumpsters that the sweepers deposit the debris in and delivers it to a Class II landfill. The same contractor tracks the volume of the debris accumulated.						X	X	On average, weekly sweeping for downtown area, and two to three times annually for the remaining City.	See Section 9 of the 2022 Permit Renewal Application
12	**Continue Leaf Collection Program.** ***KVCC BMP3***	Residents are asked to rake their leaves in the late fall into the edge of the street in accordance with a published schedule. City crews then use a combination of tractors, front-end loaders and compactor trucks to collect the leaves. Cycle is repeated (weather permitting). Collected leaves are hauled and deposited at a city composting facility.						X	X	Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of leaves collected and disposed; estimated pounds of phosphorus prohibited from entering surface waters and clogging storm sewers; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling"; reduction in phosphorus loadings.
13	**Continue Brush Pick-up Program.** ***KVCC BMP3***	A private contractor currently performs brush collection once a month from May through October on the same day as bulk trash (see below). Residents are asked to place bundled brush in the curb lawn for collection in accordance with the published monthly bulk trash collection schedule.						X	X	Per published monthly schedule from May through October on the same day as bulk trash. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of brush collected; estimated pounds of phosphorus prohibited from entering surface waters, and clogging storm sewer; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling"; reduction in phosphorus loadings.
14	**Continue Bulk Trash Collection Program.**	A private contractor performs bulk trash collection for the City. Curbside collection is provided to residential properties with four units or less. All other properties must contract individually with private companies for trash removal. Residents place bulk trash near the curb for collection in accordance with a published schedule. A limit of 7.7 cubic yards per property per month is currently in place.						X		Monthly, per published schedule. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of bulk trash collected; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."

Stormwater Management Plan - Revised 2022

Column >	1	2	3	4	5	6	7	8	9	10	11
			Minimum Measures								
Row	BMP/Action	Description/Method of Implementation	PPP	PEP	IDEP	CSC	PCC	P2/GH	TMDL	Frequency/Schedule	Method of Evaluating Effectiveness
15	**Catch Basin/Inlet Cleaning.** *KVCC BMP7*	A dedicated vactor truck and crew for the city-wide cleanout plan of all catch basins/inlets, and manholes was initiated in 2018. Also, cleanings are performed on a requested and urgently needed basis (e.g., localized flooding), and associated with IDEP investigations as needed. Waste collected is by vactor trucks or by hand and are disposed of at the Wastewater Treatment Plant, unless it is determined that it be necessary to dispose of it at a Type II Landfill or by a certified hazardous waste hauler determined location.						X	X	In 2018, the COK obtained one dedicated vactor truck and crew for our city-wide cleanout plan of all catch basins/inlets, and manholes. One cycle of the cleanout plan is estimated between 10-20 years.	See section 9 of the 2022 Permit Renewal Application. All catch basins will need to be cleaned out when the sediment level in the sup reaches between 1/3 and 1/2 full based on sediment depth using rods.
16	**Snow and Ice Removal Program.** *KVCC BMP1*	The City applies rock salt, rock salt with liquid calcium chloride, rock salt with sand mix, a pre-wetting de-icing material,-. Product use is largely dependent upon weather conditions. In addition, the Kalamazoo Mall uses a snowmelt system instead of salting.						X		As needed.	See Section 9 of the 2022 permit renewal application. The amount of rock salt and sand mix used under appropriate conditions. Strategy to reduce the use of sand
17	**Continue Use of Enclosed Salt Storage Facility.**	Rock salt is stored in an enclosed above-ground salt storage facility with a capacity of 7,000 tons, above the 100-year flood plain elevation.						X		Continuous: Use enclosed salt storage facility located at the Harrison Street Facility.	Continued use of enclosed above-ground facility; compliance with SWPPP for wastewater treatment plant.
18	**Continue implementation of SWPPP for the 415 Stockbridge Avenue Facility.**	Since this the fleet maintenance operation at this location meets the criteria for which a SWPPP is necessary, one was prepared and updated in 2021.						X		Continuous: Fleet Director or representative to maintain stormwater certified operator status, implement inspections and continue BMPs.	Section 9 of the 2022 Permit renewal application for inspection/maintenance programs. Acquired Stormwater Certified Operator License(s); number of inspections; number of BMPs implemented; overall SWPPP compliance.
19	**Continue Recyclable Material Collection Program.**	There are three components to the City's residential recycling program: weekly curbside residential collection for all residential properties with four units or less; multi-unit collection for those property owners or managers willing to participate; and a recycling drop-off facility is available to all citizens.						X		Annual evaluation to continue program. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of materials collected and number of participants; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."
20	**Continue Household Hazardous Waste Collection.**	City residents are able to dispose of their hazardous waste at the Kalamazoo County Household Hazardous Waste Center, 1301 Lamont Avenue, free of charge. Each year the City enters into a contract with Kalamazoo County, which shares proportionally the cost with all participants to operate the program.						X		Re-evaluate and propose renewal of contract on an annual basis. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Continued contracts with Kalamazoo County; volume and type of materials collected and number of participants; continued Bi-Annual publication and COK website ads of "A View From the Curb The City's Guide to Waste & Recycling."

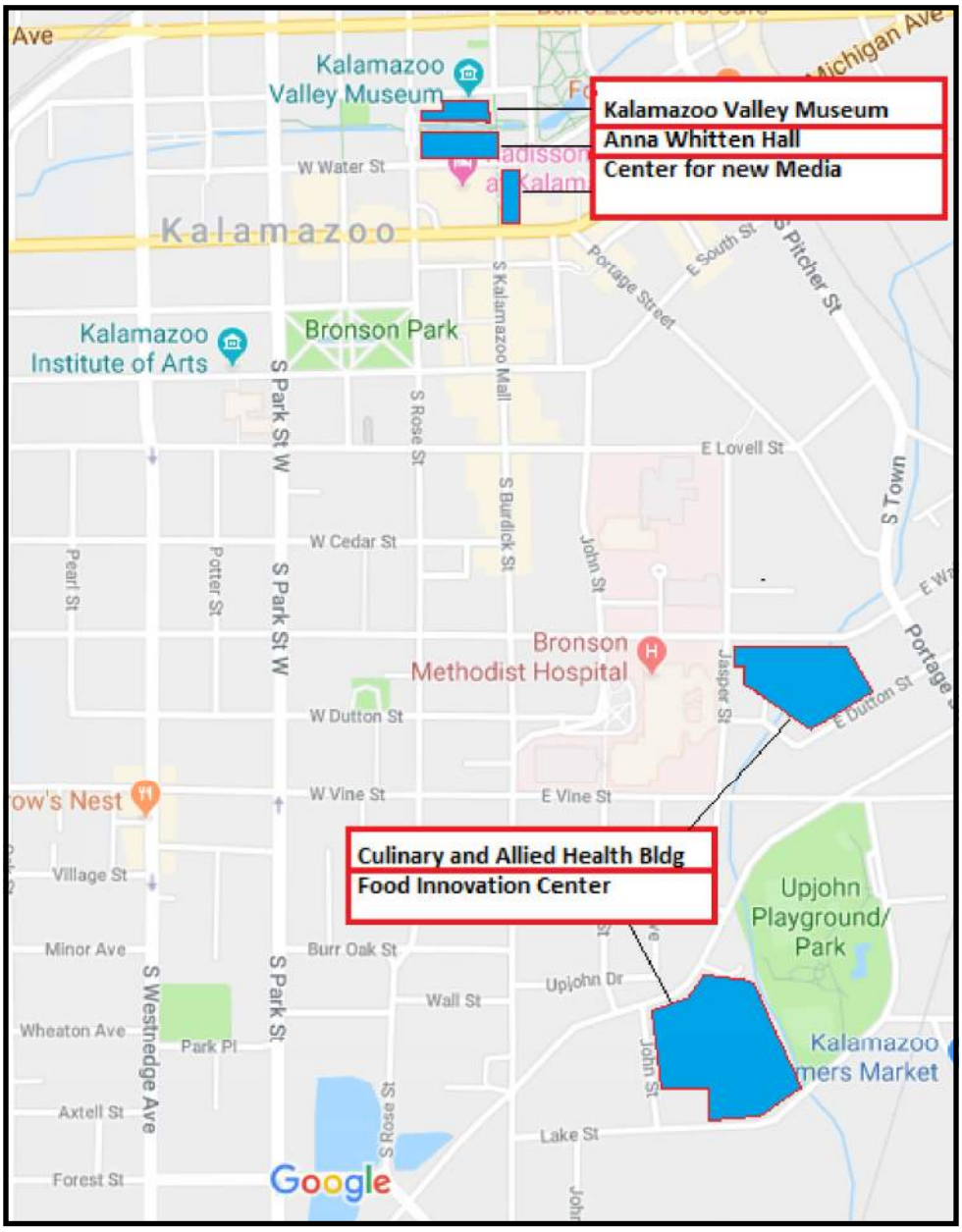
Stormwater Management Plan - Revised 2022

Column >	1	2	3	4	5	6	7	8	9	10	11
			Minimum Measures								
Row	BMP/Action	Description/Method of Implementation	PPP	PEP	IDEP	CSC	PCC	P2/GH	TMDL	Frequency/Schedule	Method of Evaluating Effectiveness
21	**Environmental Safer Products.**	The City Commission Policy for "Procurement of Recycled & Environmentally Friendly Products" is provided as Attachment 1.						X		Continue current policy	Continuation and/or enhancement of existing policy.
22	**Waterway Vegetative Buffers.**	Continue use of the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways" and discussion with staff and seasonal employees during annual "training day."						X		Continue current policy	Continuation and/or enhancement of existing policy; number of existing vegetative buffers maintained and new ones installed along waterways. Incorporation of specifications into contracts.
23	**Lawn Care Guidelines.** ***KVCC BMP3***	Continue use of the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways" and discussion with staff and seasonal employees during annual "training day."						X		Continue current policy	Continuation and/or enhancement of existing policy. Effective communication with lawn maintenance employees and temporary seasonal hires regarding policy. Incorporation of specifications into contracts.
24	**Reduction of Pesticides, Herbicides, and Fertilizers.** ***KVCC BMP4***	The City has a "Pesticide/Herbicide Advisory Committee" to monitor the use of pesticides and herbicides in the City and recommend policies and guidelines. Also, continue use of the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways" and discussion with staff and seasonal employees during annual "training day."						X	X	Continue current policy: Review and consider updates/revisions.	See Section 9 of the 2022 Permit renewal application for pesticide information, and N " TMDL Implementation Plan". Continuation and/or enhancement of existing policies.

PPP - Public Participation/Involvement Program
PEP - Public Education Program
CSC - Construction Stormwater Runoff Control Program
IDEP - Illicit Discharge Elimination Program
PCC - Post-Construction Control Stormwater Runoff Program
TMDL - Total Maximum Daily Load Implementation Plan

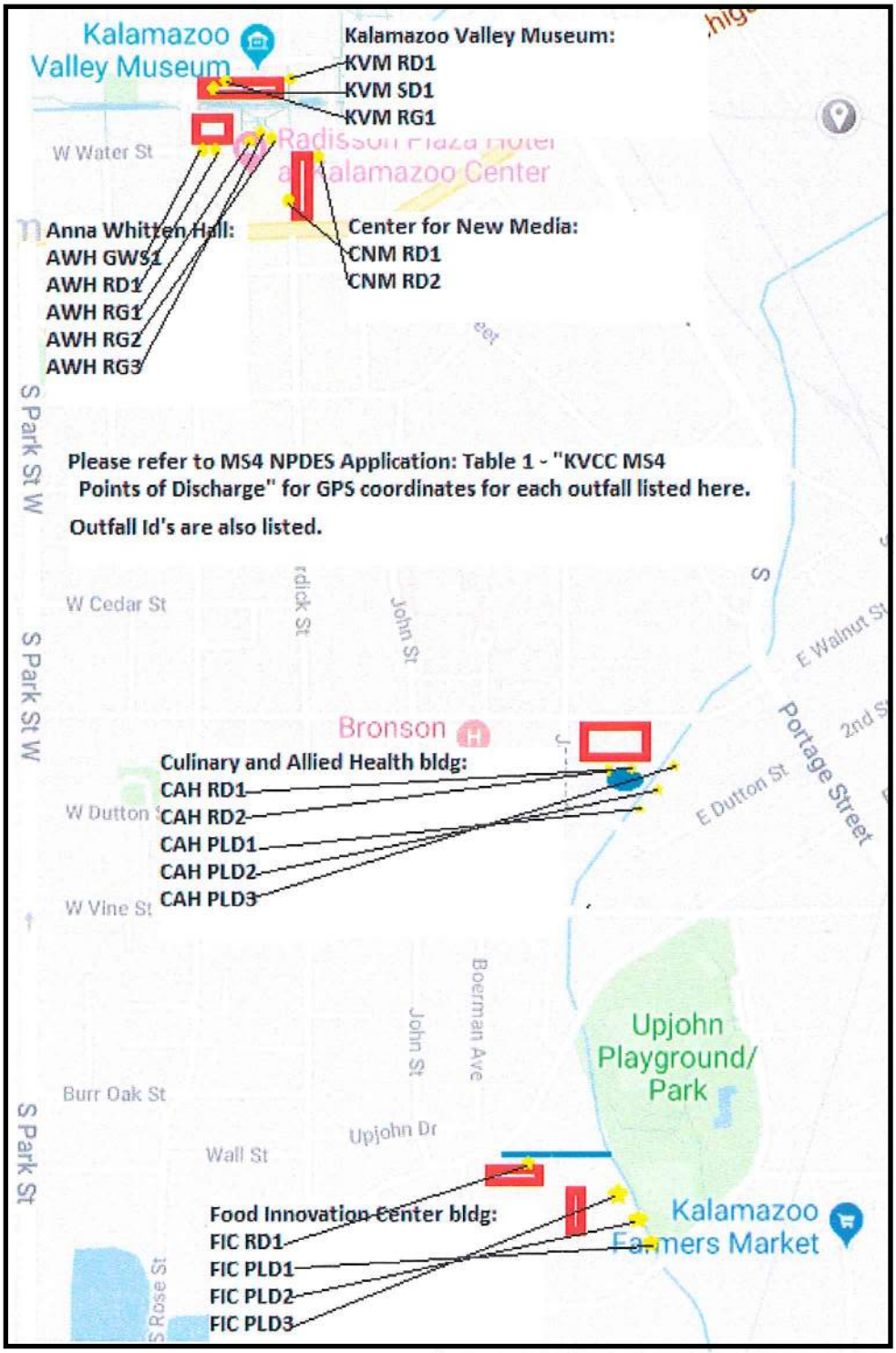
Appendix D - KVCC Stormwater Sewer System Maps, Stormwater Asset Identification, and Pre- and Post-Construction Calculations

KVCC STORMWATER SEWER SYSTEM LOCATION MAP



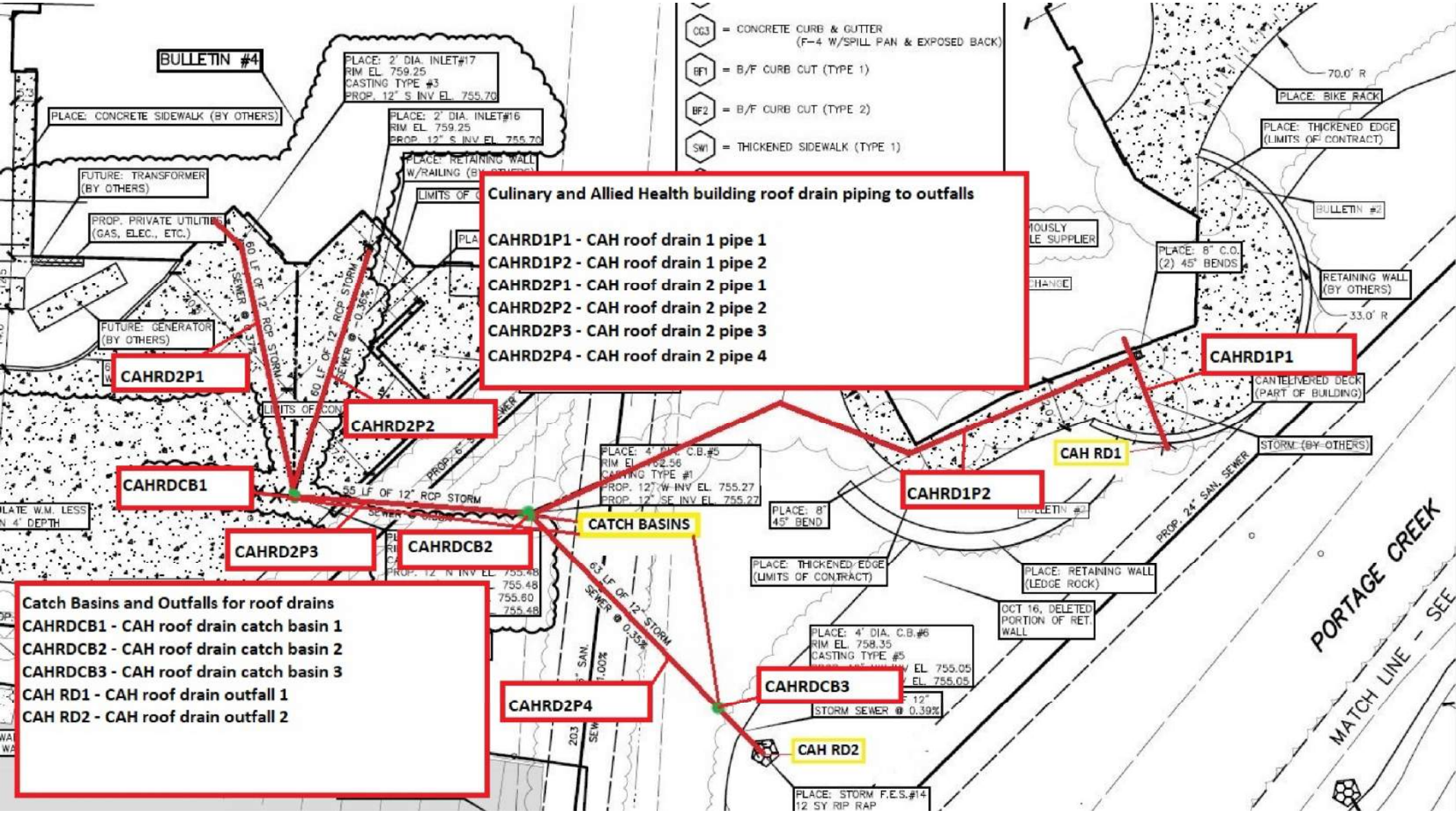
Blue shading indicates the property boundary of the facility location

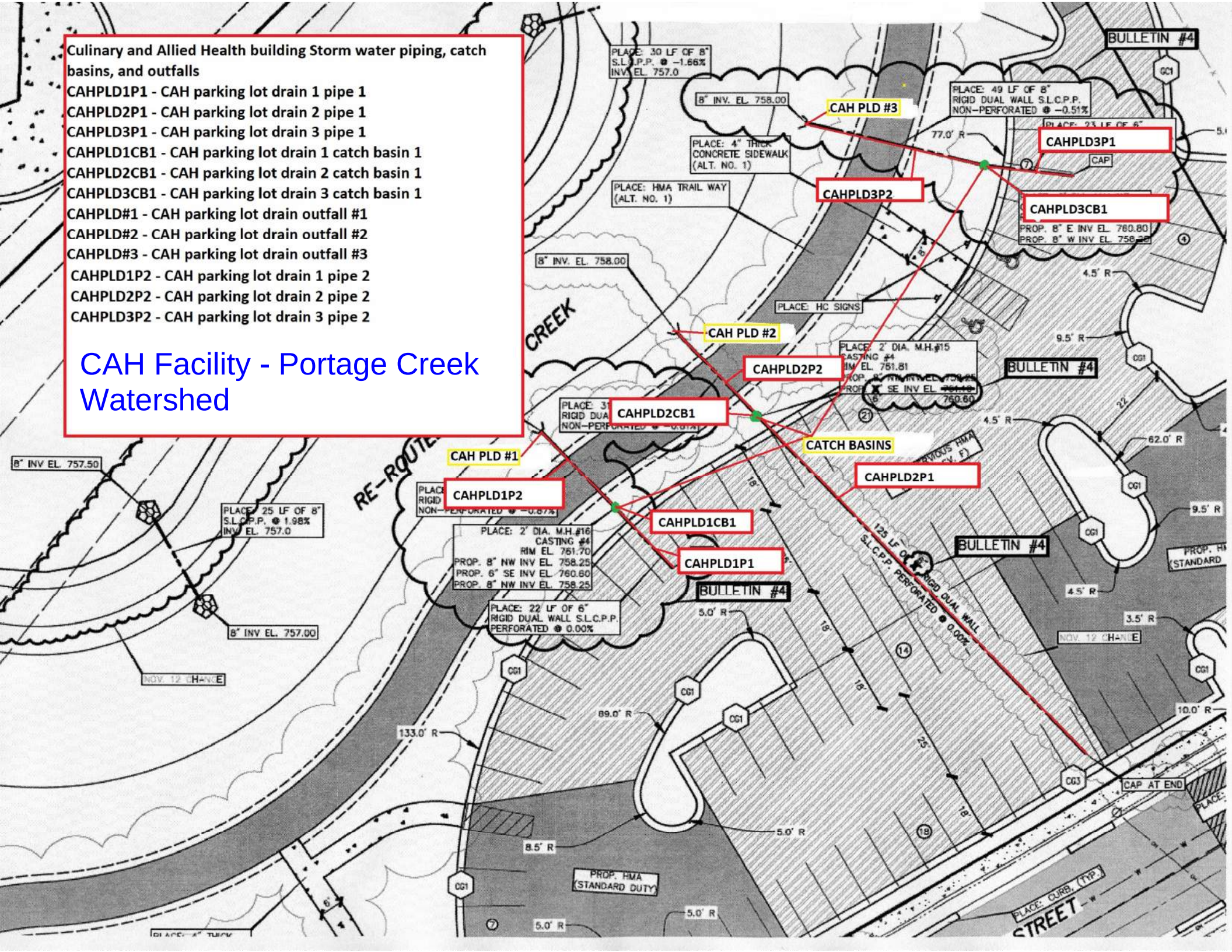
KVCC BUILDINGS AND STORMWATER SYSTEM ASSET IDENTIFICATIONS

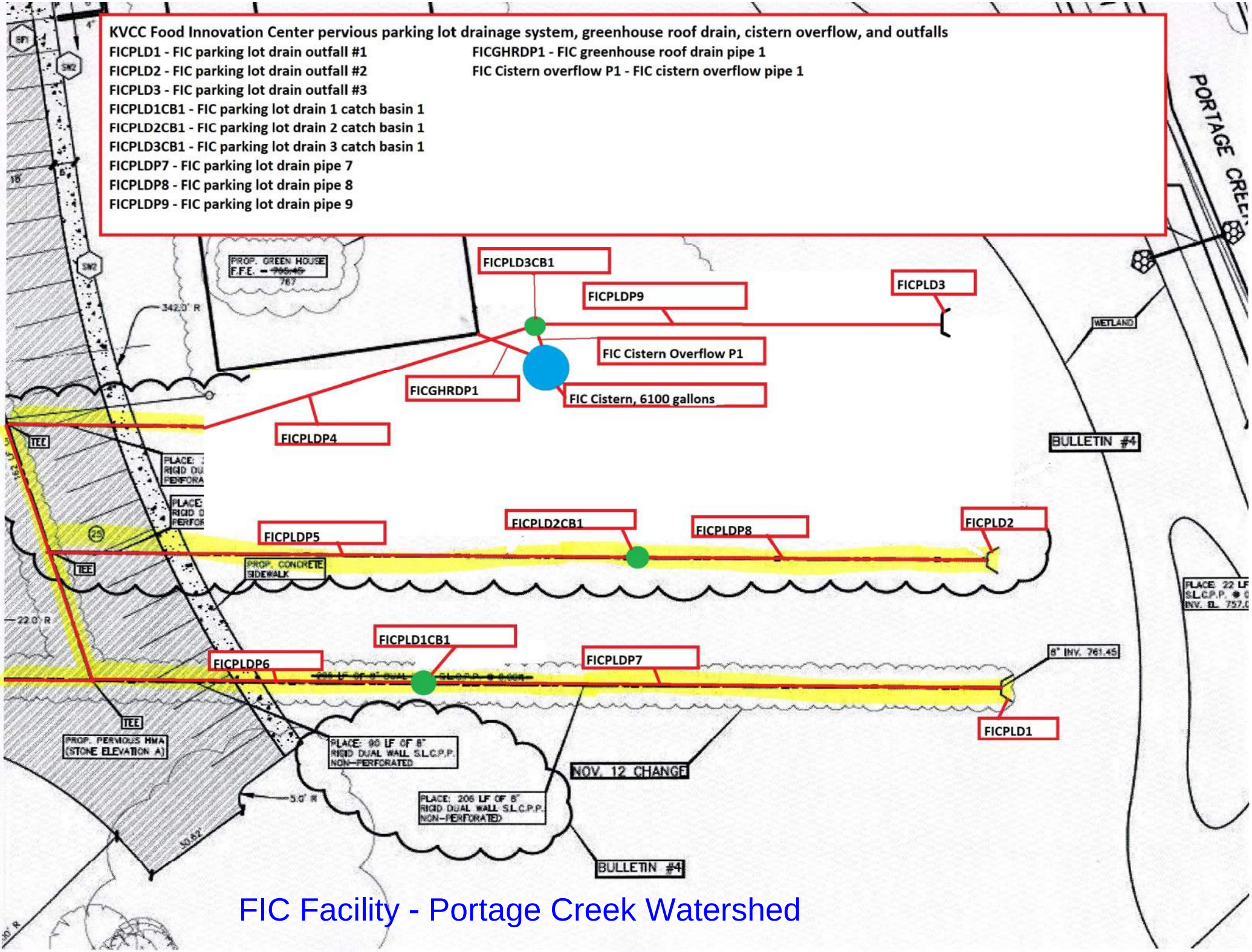


Buildings are outlined in red and assets have yellow symbols.

CAH Facility - Portage Creek Watershed

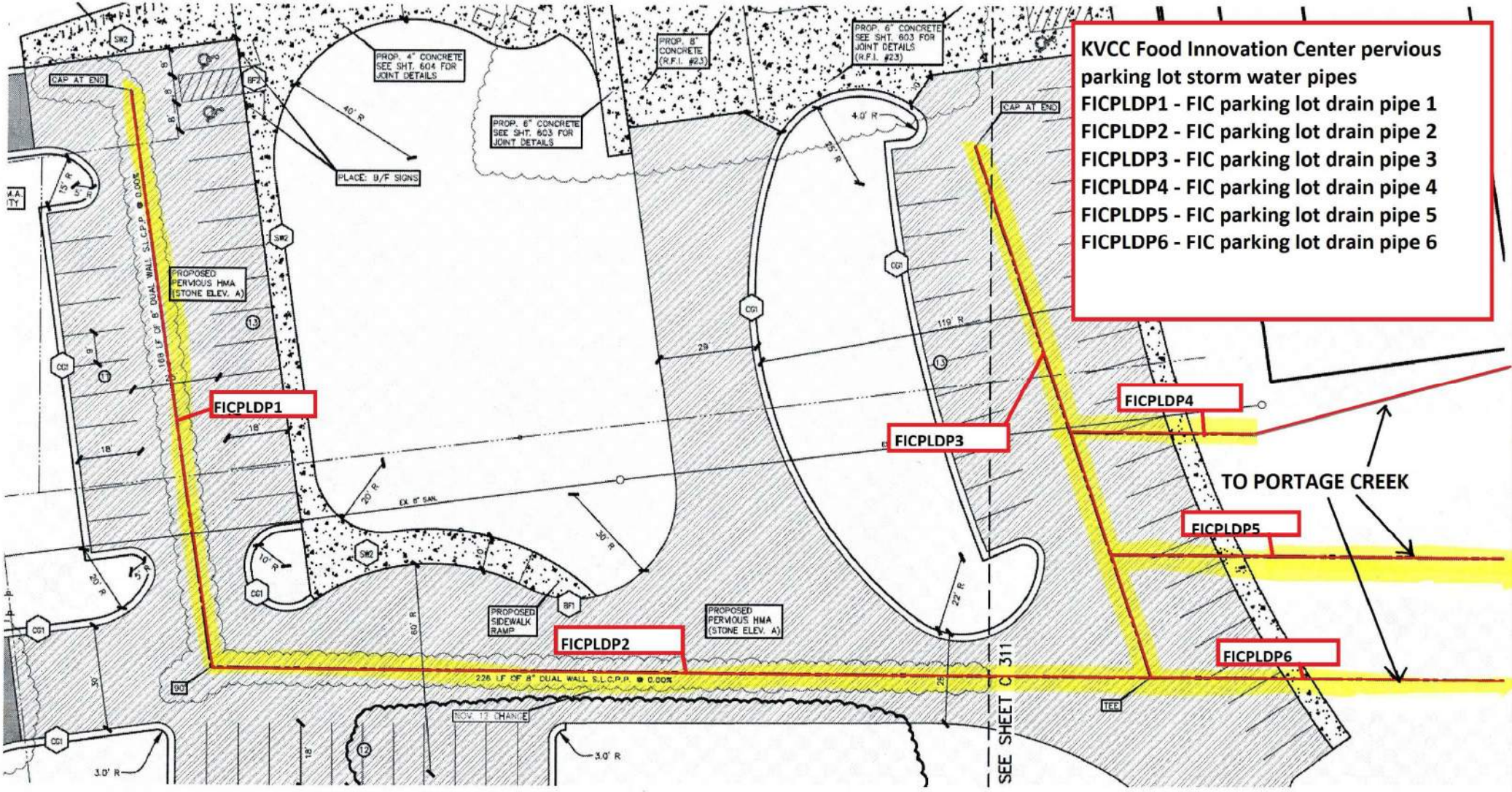



Culinary and Allied Health building Storm water piping, catch basins, and outfalls
CAHPLD1P1 - CAH parking lot drain 1 pipe 1
CAHPLD2P1 - CAH parking lot drain 2 pipe 1
CAHPLD3P1 - CAH parking lot drain 3 pipe 1
CAHPLD1CB1 - CAH parking lot drain 1 catch basin 1
CAHPLD2CB1 - CAH parking lot drain 2 catch basin 1
CAHPLD3CB1 - CAH parking lot drain 3 catch basin 1
CAHPLD#1 - CAH parking lot drain outfall #1
CAHPLD#2 - CAH parking lot drain outfall #2
CAHPLD#3 - CAH parking lot drain outfall #3
CAHPLD1P2 - CAH parking lot drain 1 pipe 2
CAHPLD2P2 - CAH parking lot drain 2 pipe 2
CAHPLD3P2 - CAH parking lot drain 3 pipe 2
CAH Facility - Portage Creek Watershed
CAH PLD #3
CAH PLD #2
CAH PLD #1
CAHPLD3P1
CAHPLD3P2
CAHPLD3CB1
CAHPLD2P2
CAHPLD2CB1
CAHPLD2P1
CAHPLD1P2
CAHPLD1CB1
CAHPLD1P1
CATCH BASINS
BULLETIN #4
CREEK
RE-ROUTE
PLACE: 30 LF OF 8" S.L.C.P.P. @ -1.66% INV. EL. 757.0
8" INV. EL. 758.00
PLACE: 49 LF OF 8" RIGID DUAL WALL S.L.C.P.P. NON-PERFORATED @ -0.51%
PLACE: 4" THICK CONCRETE SIDEWALK (ALT. NO. 1)
PLACE: HMA TRAIL WAY (ALT. NO. 1)
PROP. 8" E INV EL. 760.80
PROP. 8" W INV EL. 758.80
PLACE: HC SIGNS
PLACE: 2' DIA. M.H.#15
PLACE: 2' DIA. M.H.#16 CASTING #4 RIM EL. 751.70 PROP. 8" NW INV EL. 758.25 PROP. 6" SE INV EL. 760.60 PROP. 8" NW INV EL. 758.25
PLACE: 22 LF OF 6" RIGID DUAL WALL S.L.C.P.P. PERFORATED @ 0.00%
125 LF OF S.L.C.P.P. PERFORATED @ 0.00% RIGID DUAL WALL
8" INV EL. 757.50
PLACE: 25 LF OF 8" S.L.C.P.P. @ 1.98% INV. EL. 757.0
8" INV EL. 757.00
NOV. 12 CHANGE
PROP. HMA (STANDARD DUTY)
PLACE: CURB, (TYP.)
STREET
CAP AT END
CAP
CG1
CG3
4.5' R
9.5' R
62.0' R
89.0' R
133.0' R
5.0' R
8.5' R
3.5' R
10.0' R

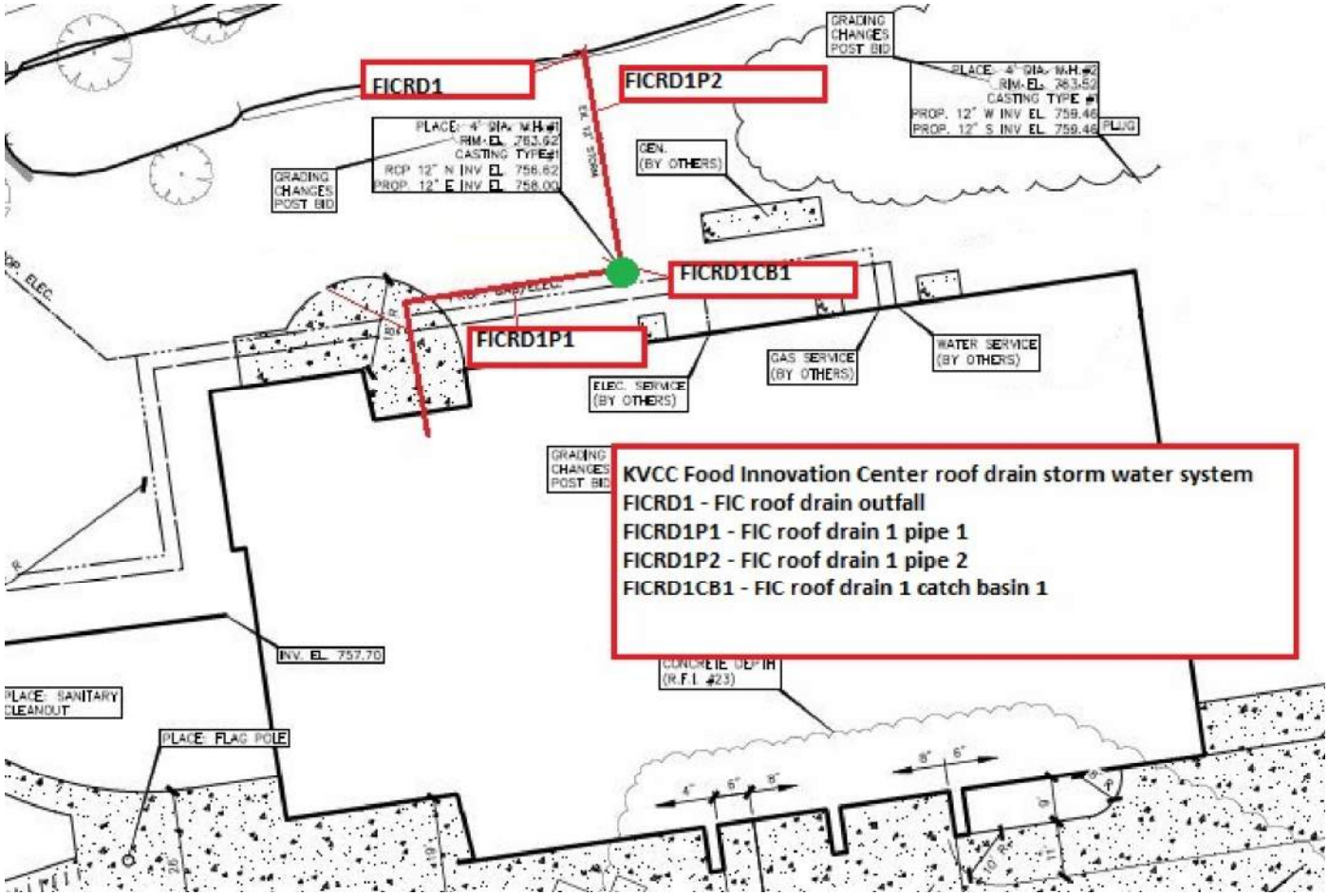

KVCC Food Innovation Center pervious parking lot drainage system, greenhouse roof drain, cistern overflow, and outfalls
FICPLD1 - FIC parking lot drain outfall #1
FICPLD2 - FIC parking lot drain outfall #2
FICPLD3 - FIC parking lot drain outfall #3
FICPLD1CB1 - FIC parking lot drain 1 catch basin 1
FICPLD2CB1 - FIC parking lot drain 2 catch basin 1
FICPLD3CB1 - FIC parking lot drain 3 catch basin 1
FICPLDP7 - FIC parking lot drain pipe 7
FICPLDP8 - FIC parking lot drain pipe 8
FICPLDP9 - FIC parking lot drain pipe 9
FICGHRDP1 - FIC greenhouse roof drain pipe 1
FIC Cistern overflow P1 - FIC cistern overflow pipe 1
PORTAGE CREEK
PROP. GREEN HOUSE F.F.E. = 765.45
767
342.0' R
FICPLD3CB1
FICPLDP9
FICPLD3
WETLAND
FIC Cistern Overflow P1
FICGHRDP1
FIC Cistern, 6100 gallons
FICPLDP4
TEE
BULLETIN #4
FICPLDP5
FICPLD2CB1
FICPLDP8
FICPLD2
PROP. CONCRETE SIDEWALK
22.0' R
FICPLD1CB1
FICPLDP6
FICPLDP7
8" INV. 761.45
FICPLD1
PROP. PERVIOUS HMA (STONE ELEVATION A)
PLACE: 90 LF OF 8" RIGID DUAL WALL S.L.C.P.P. NON-PERFORATED
NOV. 12 CHANGE
5.0' R
PLACE: 206 LF OF 8" RIGID DUAL WALL S.L.C.P.P. NON-PERFORATED
BULLETIN #4
FIC Facility - Portage Creek Watershed

FIC Facility - Portage Creek Watershed

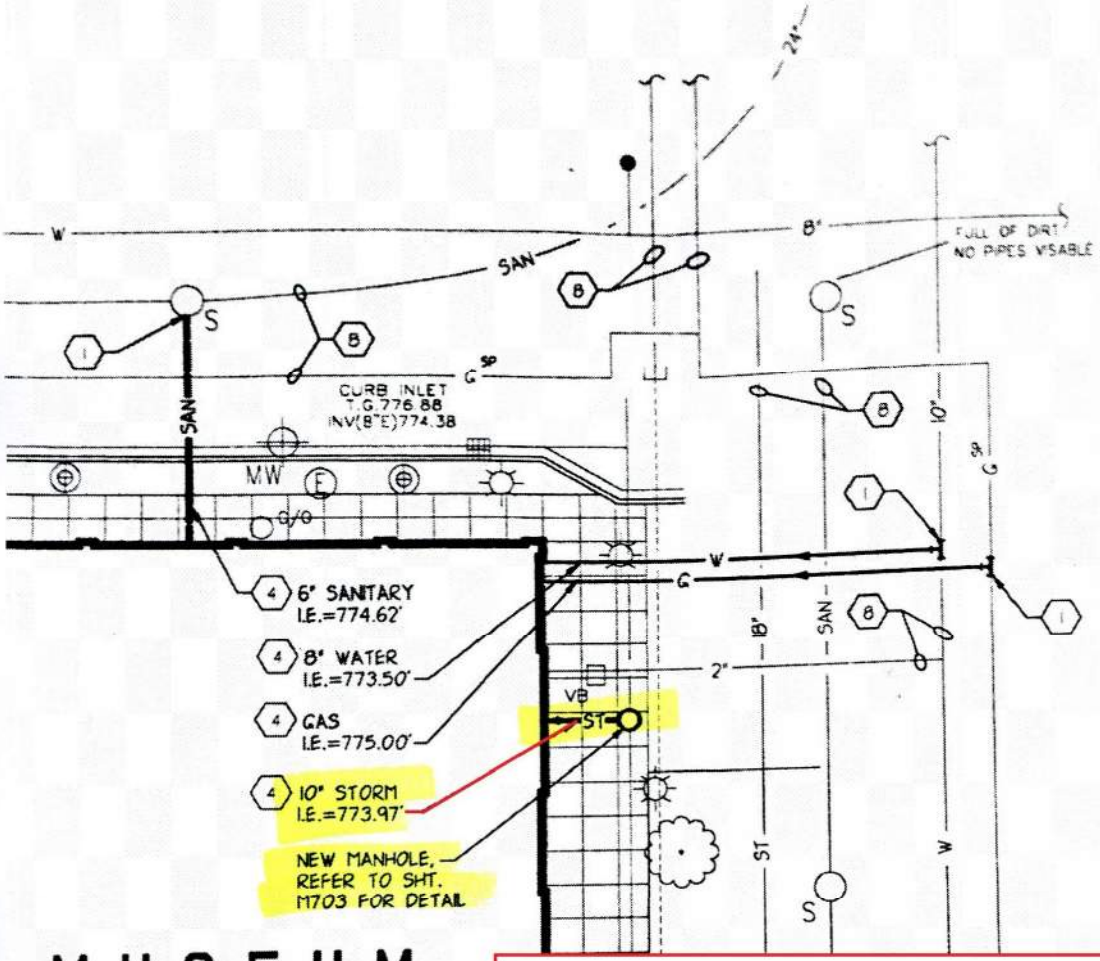
FOOD INNOVATION CENTER PERVIOUS PARKING LOT DRAINAGE SYSTEM



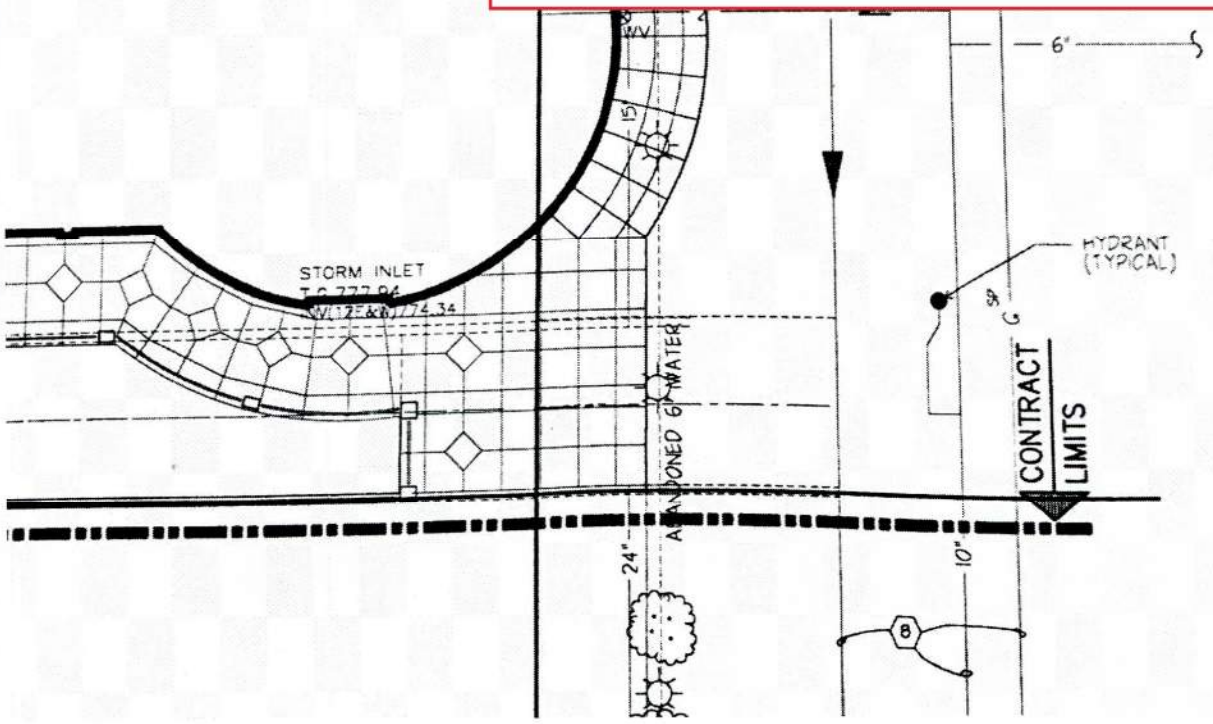
FIC Facility - Portage Creek Watershed



KVM Facility - Arcadia Creek Watershed



Kalamazoo Valley Museum roof drain system
KVMRD1 connects to city system under Mall sidewalk to City manhole.



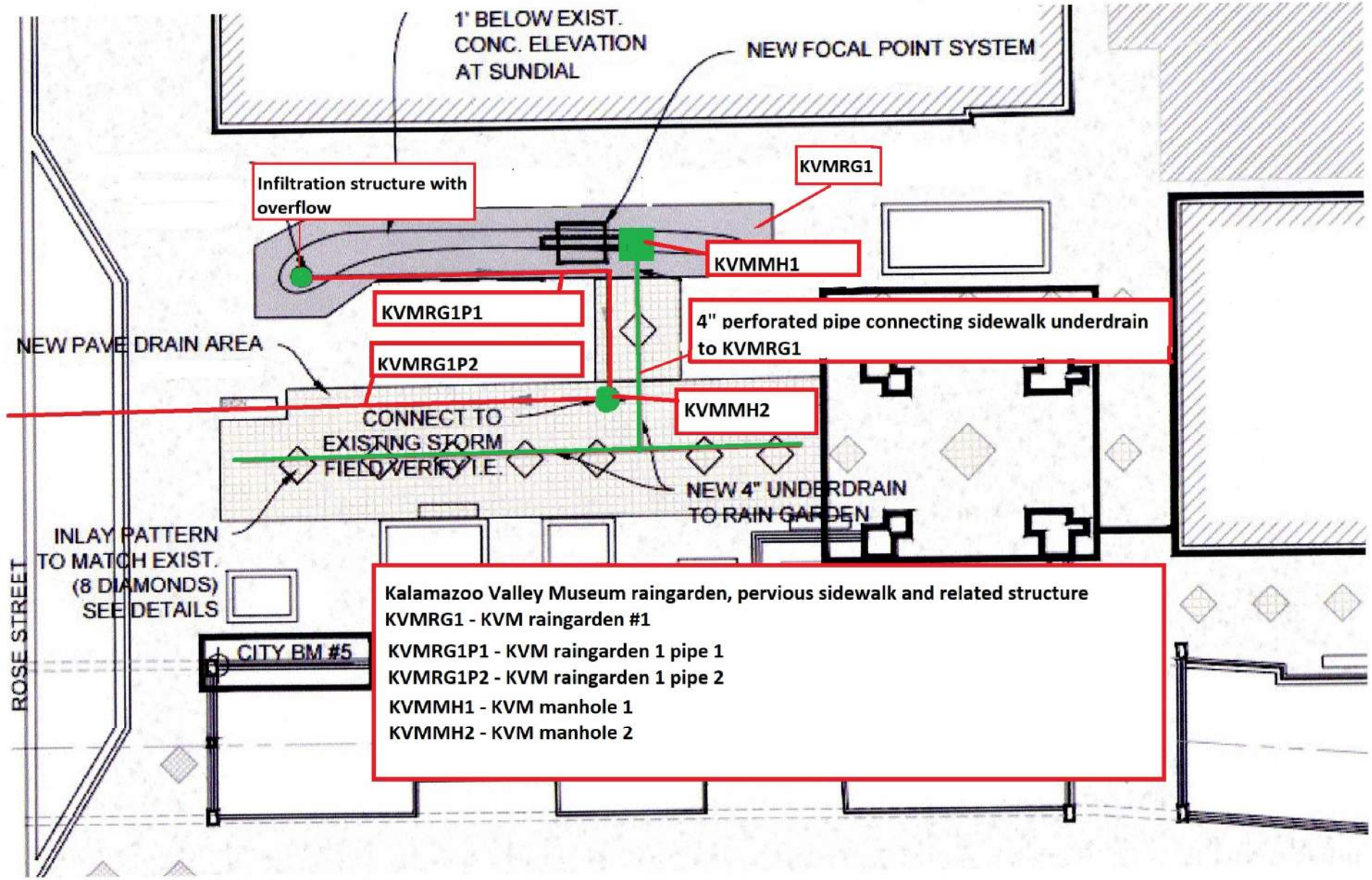
MECHANICAL SITE PLAN

THE NEW MUSEUM

KALAMAZOO VALLEY COMMUNITY COLLEGE

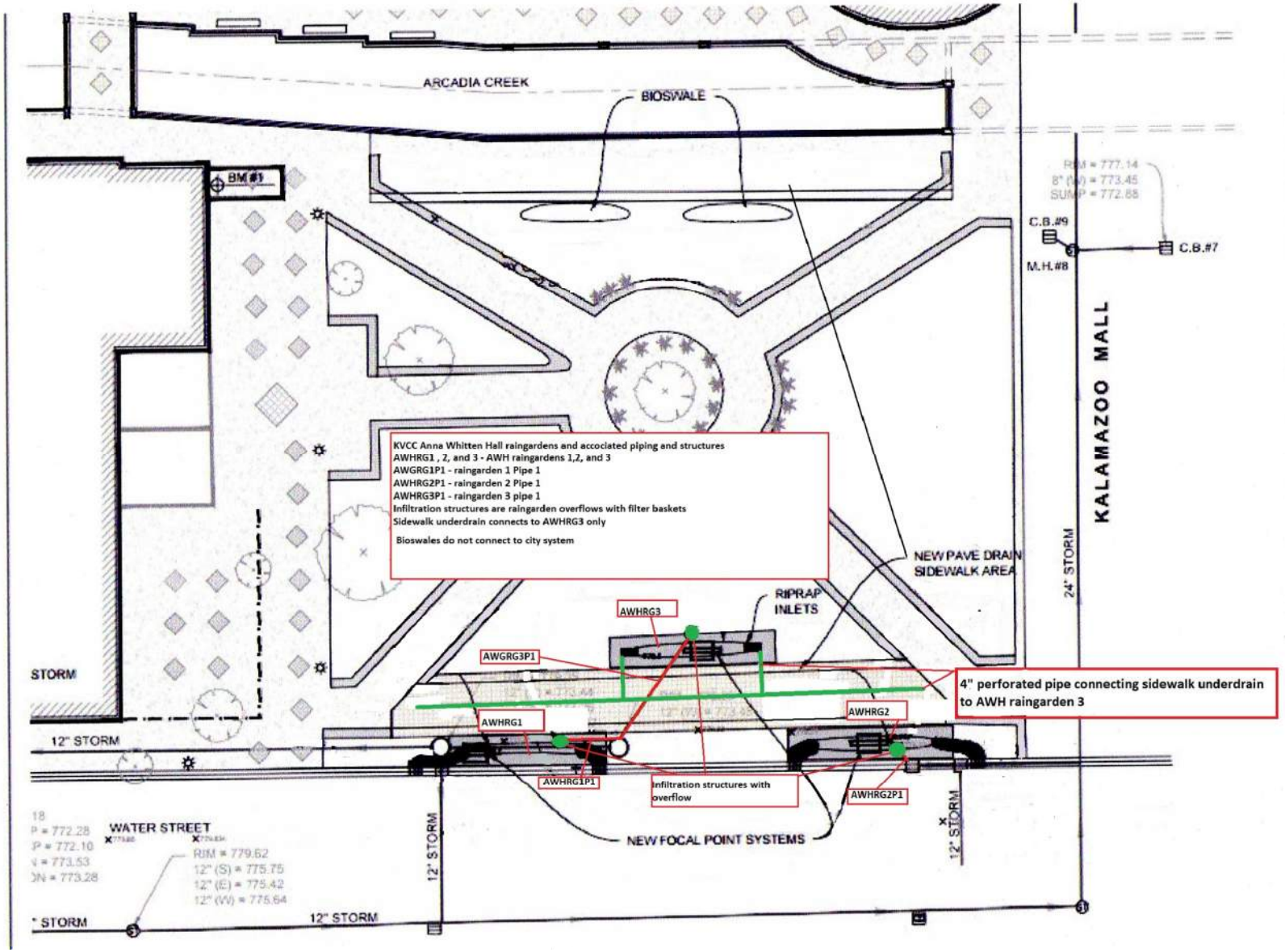
KALAMAZOO, MICHIGAN

V. 15, 1993
0165\MUSM001



KVM Facility - Arcadia Creek Watershed

AWH Facility - Arcadia Creek Watershed



BENCHMARK DATA

(VERTICAL DATUM BASED ON A PUBLISHED ELEVATION OF MANHOLE #1 OF 780.50')

BM#1 ELEV. = 778.87'
SET SQUARE CUT IN CONCRETE 0.3' NORTH OF THE NORTHEAST CORNER OF KALAMAZOO VALLEY COMMUNITY COLLEGE, ANNA WHITTEN HALL BUILDING.

BM#2 ELEV. = 778.71'
FOUND CUT "X" IN THE NORTHWEST TOP FLANGE BOLT OF FIRE HYDRANT LOCATED 15' NORTH OF THE NORTH RIGHT-OF-WAY LINE OF WEST WATER STREET, WITHIN THE RIGHT-OF-WAY OF KALAMAZOO MALL DRIVE, ON THE SOUTHEAST SIDE OF A GRASS ISLAND CONTAINING 2 EVERGREEN TREES.

STORM STRUCTURE DATA

MH#1 - 4'Ø CONCRETE
RIM = 780.50
INV (N) 8" IRON = 773.85
INV (NE) 6" IRON = 773.60
INV (E) 10" RCP = 772.60
INV (W) 6" RCP = 772.42

MH#2 - 4'Ø BLOCK
RIM = 779.67
INV (E) 18" RCP = 773.67
INV (W) 10" RCP = 773.89
INV (S) SIZE AND TYPE UNKNOWN DUE TO DEBRIS BLOCKING PIPE

CB#3 - 2'Ø BLOCK
RIM = 779.39
BOTTOM OF BLOCK = 777.07
NO PIPES VISIBLE

MH#4 - 4'Ø BLOCK
RIM 779.52
INV (W) 18" RCP = ~773.8+/-
BOTTOM OF STRUCTURE
FULL OF SILT AND DEBRIS

CB#5 - 2'Ø BLOCK
RIM = 779.04
INV (E) 8" CLAY = 777.04
SUMP = 776.8

CB #6 - 2'Ø BLOCK
RIM = 779.13
INV (W) 8" CLAY = 776.83
BOTTOM OF BLOCK = 776.73

CB#7 - 4'Ø BLOCK
RIM = 777.44
INV (SW) 6" PVC = 773.
SUMP = 773.2

MH#8 - 4'Ø CONCRETE
RIM = 777.66
INV (S) 6" PVC = 768.32

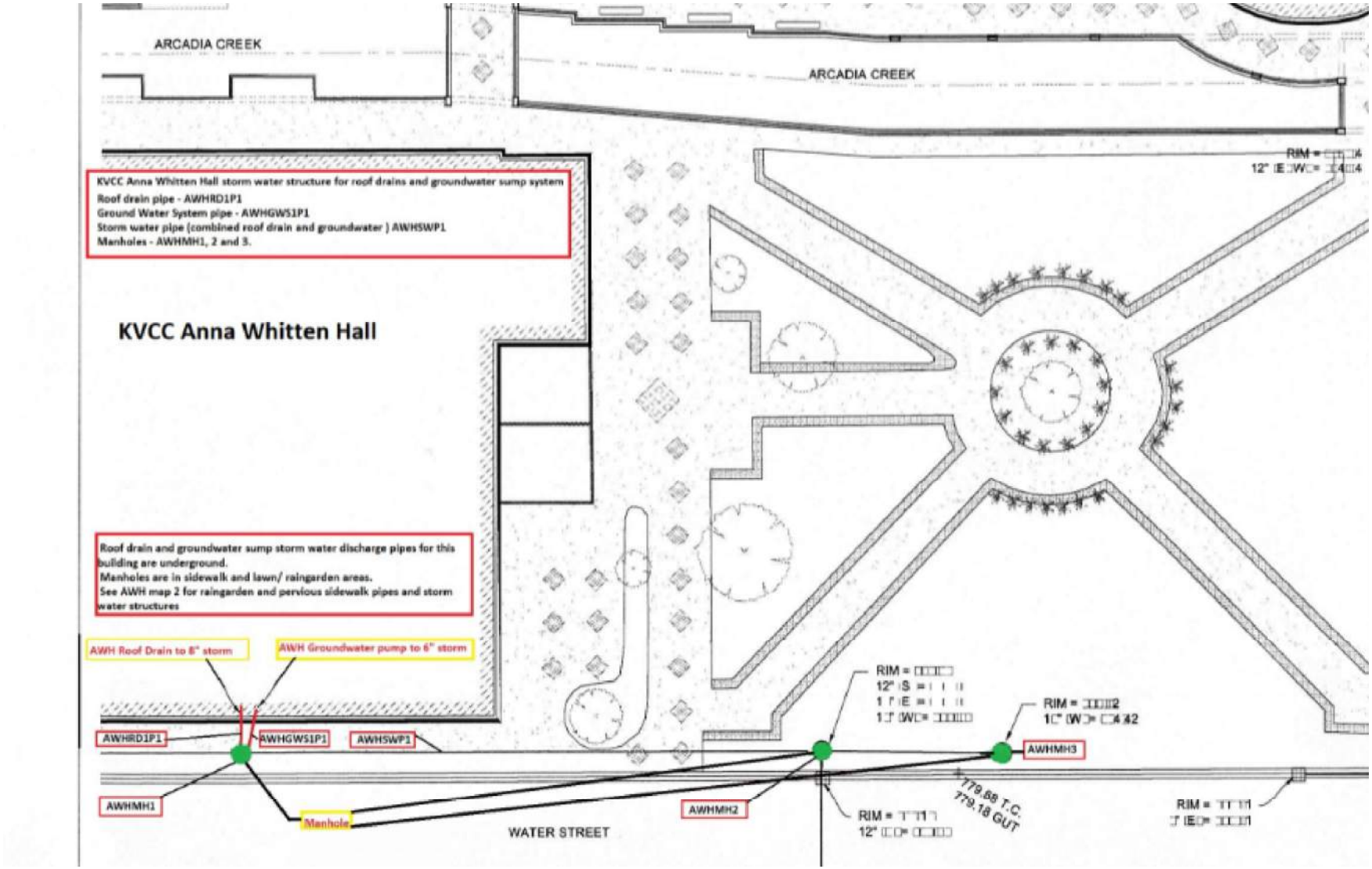
CB#9 - 2'Ø BLOCK
RIM = 777.78
INV (SE) 12" SLCPP = 7
SUMP = 774.20

CB#10 - 2'Ø CONCRETE
RIM = 777.86
INV (N) 6" PVC 775.34
SUMP = 775.40

CB#11 - 2'Ø CONCRETE
RIM = 777.91
INV (N) 6" PVC = 775.2
INV (S) 6" PVC = 775.31
INV (W) 6" PVC = 775.4
SUMP = 774.90

CB#12 - 2'Ø CONCRETE
RIM = 777.89
INV (S) 6" PVC = 775.31
SUMP = 774.90

AWH Facility - Arcadia Creek Watershed



Kalamazoo Valley Community College
Bronson Downtown Campus

Stormwater Runoff Calculations (Pre & Post Development)

Volume = Use 2 yr. 24 hr. Storm = 2.37"

Flow = Use Q = c i A for 2 yr. Storm i = 96 ÷ T + 16 (Used 20 min. for time of concentration)
c = .9 for Impervious
A = Area in Acres
Q = cfs

FIB BEFORE

119,371 sq.ft. Impervious = 2.74 Acres

Flow = c i A
.9 x 2.67 x 2.74 A = **6.58 cfs**

Volume = c A x 2.37" = .9 x 119,371 sq.ft. x 2.37" ÷ 12" = **21,218 cft**

FIB AFTER

North 1/2 building plus 2 driveways = 13,266 sq.ft. = .30 Acres
All remaining is pervious pavement or drains to on-site detention/retention pond.

Flow = c i A
.9 x 2.67 x .3 = **.72 cfs**

Volume = c A x 2.37" = .9 x 13,266 sq.ft. x 2.37" ÷ 12" = **2,358 cft**

CMH BEFORE

26,302 sq.ft. Impervious = .60 Acres

Flow = c i A
.9 x 2.67 x .6 A = **1.44 cfs**

Volume = c A x 2.37" = .9 x 26,302 sq.ft. x 2.37" ÷ 12" = **4,675 cft**

CMH AFTER

2 driveways of impervious = 4,650 sq.ft. = .11 Acres
All remaining drains to pervious parking lot.

Flow = c i A
.9 x 2.67 x .11 A = **.26 cfs**

Volume = c A x 2.37" = .9 x 4,650 sq.ft. x 2.37" ÷ 12" = **827 cft**

CULINARY & DUTTON PARKING BEFORE

94,098 sq.ft. Impervious = 2.16 Acres

Flow = c i A
.9 x 2.67 x 2.16 A = **5.19 cfs**

Volume = c A x 2.37" = .9 x 94,098 sq.ft. x 2.37" ÷ 12" = **16,726 cft**

CULINARY & DUTTON PARKING AFTER

824 sq.ft. Impervious = .02 Acres
All remaining drains to pervious parking or to detention/retention pond.

Flow = c i A
.9 x 2.67 x .02 A = **.05 cfs**

Volume = c A x 2.37" = .9 x 824 sq.ft. x 2.37" ÷ 12" = **146 cft**

Appendix E - Dry Weather Screening Form for Field Documentation and IDEP Follow-up Investigation Report Form

FACILITY: KALAMAZOO VALLEY COMMUNITY COLLEGE
DRY WEATHER SCREENING FORM

Outfall ID: _____ Date: ___/___/___ Time: _____ am/pm By: _____

Weather Conditions: _____ Temp: _____ Wind: _____

Description and condition of outfall structure: _____ _____

Location GPS? **Y / N** Picture of Outfall? **Y / N**

Observation	Y / N	Comments	Follow Up? Y / N
Dry Weather Flow?			
Water Clarity?			
Odor?			
Suds?			
Oil Sheen?			
Floatables?			
Bacti Sheen?			
Algae?			
Slimes?			
Staining of banks?			
Unusual veg.?			
Color?			
Sample Taken?			

If a sample was taken, record results below:

Parameter	Value	Units
Temperature		**°C**
pH		**S.U.**
Fluoride		**mg/L**
Surfactant		**mg/L**
Ammonia		**mg/L**
Fecal Coliform		**#/100 mL**

FACILITY: KALAMAZOO VALLEY COMMUNITY COLLEGE

IDEP FOLLOWUP INVESTIGATION REPORT

FACILITY INFORMATION

Facility Name:

Facility Address:

Outfall ID:

INSPECTION INFORMATION

Inspection Start Date:

Inspection End Date:

KVCC Inspector(s):

Inspection Summary/Notes (include information on suspected source):

Explain Action Required: Yes / No / NA

Due Date:

Was the source eliminated? Yes / No

Is Enforcement Action Required? Yes / No

Comments:

Completed by_____ Date_____

Appendix F - Annual Phase II Municipal Separate Storm Sewer System Report

Kalamazoo Valley Community College

Annual Phase II Municipal Separate Storm Sewer System Report

Address:

Reporting Period:

PURPOSE:

The purpose of this report is to summarize Phase II Municipal Separate Storm Sewer System (MS4) permit activities between October 1, 20___ and September 30, 20__ for Kalamazoo Valley Community College. Decisions, actions, and results performed are explained below:

A. Environment Response Plan (ERP)

(Choose between the two options below)

No actions to report

Or

Report actions here.

B. Public Education Plan (PEP) – See PEP table for specific actions, Appendix B

C. Illicit Discharge Elimination Program (IDEP)

IDEP Action Description	*Actions #/Yes/No/NA*	*Explanation*
Number of outfalls/points of discharge?		
Was dry weather screening performed?		
Any illicit discharges identified this period? If so, how many?		
Were illicit discharges eliminated within 90 days? If not, explain when or include a plan.		
Was IDEP training provided in accordance with the program? If yes, provide documentation. If no, provide explanation.		

Summarize the evaluation and effectiveness		
Will you continue to implement the approved IDEP during the next reporting cycle? *(Respond: yes, yes with changes, or no)* *If yes with changes or no, submit revisions.		

D. Construction Stormwater Runoff Control

Construction Stormwater Runoff Control Action Description	*Actions #/Yes/No/NA*	*Explanation*
Were any Soil Erosion and Sedimentation Control (SESC) permits obtained per Ordinance?		
Did soil or sediment discharge into the MS4 from construction activity? If so, was the City of Kalamazoo notified?		

E. Post-Construction Stormwater Runoff Program

Post-Construction Stormwater Runoff Control Action Description	*Actions #/Yes/No/NA*	*Explanation*
Were post-construction performance standards applied to all projects subject to the City of Kalamazoo stormwater ordinance and performance standards?		
Were any site plans reviewed and approved to ensure compliance with the City of Kalamazoo stormwater ordinance and performance standards? If no, describe exceptions.		

F. Pollution Prevention and Good Housekeeping Program

Were the inspection, maintenance, and cleaning activities for the following structural controls implemented in accordance with the approved procedure? Provide documentation.

Structural Control Type	*Inspection & Maintenance Activities Conducted in Accordance with Approved Procedures? (Yes/No)*	*If no, provide explanation*	*Certify inspection and/or maintenance date*
Detention Basins			
Oil/Water Separators			
Secondary Containment			
Vegetated Swales			
Infiltration Basins/Trenches			

Porous Pavement			
Rain Gardens			
Other Structural Controls: (Add space as needed)			

Are you implementing BMPs in accordance with your approved procedures to prevent or reduce pollutant runoff from the following operating and maintenance activities?

Activity	*BMPs Implemented? Yes/No/ NA*	*If no, provide explanation*
Road, Parking Lot, and Sidewalk Maintenance (e.g. pothole, sidewalk, and curb and gutter repair)		
Cold Weather Operations (e.g. plowing, sanding, application of deicing agents, and snow pile disposal)		
Maintenance of college-owned vehicles, including certifying that no vehicles are washed with a discharge to the regulated MS4.		

Are you following the procedures/actions below?

Activity	*Procedures followed: #/Yes/No/NA*	*If no, provide explanation*
Was P2/GH training provided in accordance with the program? If yes, provide documentation. If no, provide explanation		
Contractor training: provide training materials/Information in bid documents and/or preconstruction meetings.		
Is your pesticide applicator certified by the State of Michigan		

G. Total Maximum Daily Load (TMDL)

Activity	*BMPs Implemented? Yes/No/ NA*	*If no, provide explanation*
Determine innovative and ecologic actions to meet TMDL goals		
Continue with overall TMDL public events		
Address TMDL Phosphorus reductions, Pollution Prevention & Good Housekeeping		

Appendix G - Permit Application for Part 91 Soil Erosion and Sedimentation Control Form

APPLICANT RESPONSIBILITIES

All construction or work for which a permit is required shall be subject to inspection by the City and all such construction or work shall remain accessible and exposed for inspection purposes until approved by the City.

- It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes.
- It shall be the duty of the person doing the work authorized by permit to notify the Building Official that such work is ready for inspection.
- Every request for inspection must be scheduled at least one (1) working day before such inspection is desired.
- It shall be the duty of the person requesting any inspections required by this code to provide access to and means for inspection of such work.
- Final Inspection: To be made after all finished work is completed.
- Other Inspections: In addition to the required inspections specified above, the City may make or require other inspections of any work to ascertain compliance with the provisions of the Soil Erosion and Sedimentation Control (SESC) and other laws and ordinances which are enforced by the City.
- Re-inspections: A re-inspection fee may be assessed when such portion of work for which a re-inspection is scheduled, but is not complete or when required corrections are not made.

CERTIFICATE OF COMPLETION

- Certificate of Completion: It is the applicants responsibility to contact the City to request a Certificate of Completion after all final inspections have been conducted and approved.
- Issuance: After the City inspects the work and finds no violations of the provisions of applicable codes or other laws and ordinances that are enforced by the code enforcement agency, the City shall issue a Certificate of Completion.

EXPIRATION OF PERMIT

- A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within sixty days (60) after issuance of the permit or if the authorized work is suspended or abandoned for a period of sixty days (60) after the time of commencing the work.

BA PAY ENV

PERMIT APPLICATION for Part 91
SOIL EROSION AND SEDIMENTATION CONTROL
(SESC Permit)

THE CITY OF Kalamazoo

DEVELOPMENT CENTER
415 STOCKBRIDGE AVENUE
KALAMAZOO, MICHIGAN 49001
(269) 337-8026

Required documents/documentation:

A Soil Erosion and Sediment Control Plan including drawings and documentation to clearly describe the proposed earth change which describes steps to be taken to effectively reduce accelerated soil erosion and sediment or both, and which shall include but not be limited to the following information:

- ☐ **A MAP AT A SCALE OF NOT MORE THAN 200 FEET TO THE INCH INCLUDING A LEGAL DESCRIPTION AND SITE LOCATION SKETCH WHICH INCLUDES THE PROXIMITY OF ANY PROPOSED EARTH CHANGES TO LAKES OR STREAMS, OR BOTH; AND CONTOUR INTERVALS OR SLOPE DESCRIPTION.**
- ☐ **A SOILS SURVEY OR WRITTEN DESCRIPTION OF THE SOIL TYPES OF THE EXPOSED LAND AREA CONTEMPLATED FOR EARTH CHANGE.**
- ☐ **A DESCRIPTION AND LOCATION OF THE PHYSICAL LIMITS OF EACH PROPOSED EARTH CHANGE.**
- ☐ **A DESCRIPTION AND LOCATION OF ALL EXISTING AND PROPOSED ON-SITE DRAINAGE FACILITIES.**
- ☐ **THE TIMING A SEQUENCE OF EACH PROPOSED EARTH CHANGE.**
- ☐ **A DESCRIPTION AND THE LOCATION OF ALL PROPOSED TEMPORARY SOIL EROSION CONTROL MEASURES.**
- ☐ **A DESCRIPTION AND LOCATION OF ALL PROPOSED PERMANENT SOIL EROSION CONTROL MEASURES.**
- ☐ **A PROGRAM PROPOSAL FOR THE CONTINUED MAINTENANCE OF ALL PERMANENT SOIL EROSION CONTROL FACILITIES WHICH REMAIN AFTER THE PROJECT COMPLETION, INCLUDING THE DESIGNATION OF THE PERSON RESPONSIBLE FOR THE MAINTENANCE. (SUCH MAINTENANCE RESPONSIBILITIES SHALL BECOME PART OF ANY SALES OR EXCHANGE AGREEMENT FOR THE LAND ON WHICH THE PERMANENT SOIL EROSION CONTROL MEASURES ARE LOCATED)**

APPLICATION DATE _____ DATE ISSUED _____ FEE $ _____ PERMIT # ENV _____

EXPIRATION DATE _____

AUTHORITY: PART 91, 1994 PA451 & CHAPTER 30 COMPLETION: MANDATORY TO OBTAIN PERMIT PENALTY: PERMIT WILL NOT BE ISSUED	THIS DEPARTMENT WILL NOT DISCRIMINATE AGAINST ANY INDIVIDUAL OR GROUP BECAUSE OF RACE, SEX, RELIGION, AGE, NATIONAL ORIGIN, COLOR, MARITAL STATUS, HANDICAP, OR POLITICAL BELIEFS.

1. APPLICANT (Please check if applicant is the landowner or designated agent*)

NAME ☐ LANDOWNER ☐ DESIGNATED AGENT

ADDRESS

CITY	STATE	ZIP CODE	AREA CODE / TELEPHONE NUMBER

2. LOCATION

SECTION	TOWN	RANGE	TOWNSHIP	CITY / VILLAGE	COUNTY

SUBDIVISION	LOT NO.	PROPERTY TAX ID NUMBER	STREET ADDRESS

3. PROPOSED EARTH CHANGE

PROJECT TYPE: ☐ RESIDENTIAL ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL ☐ LAND BALANCING

DESCRIBE PROJECT	SIZE OF EARTH CHANGE (acres or square feet)

NAME OF **AND** DISTANCE TO NEAREST LAKE, STREAM , OR DRAIN	DATE PROJECT TO START	DATE PROJECT TO BE COMPLETED

4. SOIL EROSION AND SEDIMENTATION CONTROL PLAN (Refer to Rule 323.1703)

Note: _____ complete sets of plans must be attached.

ESTIMATED COST OF EROSION AND SEDIMENT CONTROL

PLAN PREPARER'S NAME AND TELEPHONE NUMBER AREA CODE

5. PARTIES RESPONSIBLE FOR EARTH CHANGE

NAME OF LANDOWNER (If not provided in Box No. 1 above)		ADDRESS	

CITY	STATE	ZIP CODE	AREA CODE / TELEPHONE NUMBER

NAME OF INDIVIDUAL "ON SITE" RESPONSIBLE FOR EARTH CHANGE		COMPANY NAME		

ADDRESS	CITY	STATE	ZIP CODE	AREA CODE / TELEPHONE NUMBER

6. PERFORMANCE BOND

AMOUNT REQUIRED $ _____ ☐ CASH ☐ CERTIFIED CHECK ☐ IRREVOCABLE LETTER OF CREDIT ☐ SURETY BOND

NAME OF SURETY COMPANY

ADDRESS	CITY	STATE	ZIP CODE	AREA CODE / TELEPHONE NUMBER

I (we) affirm that the above information is accurate and that I (we) will conduct the above described earth change in accordance with Part 91, Soil Erosion Sedimentation Control, of the Natural Resource and Environmental Protection Act, 1994 PA 451, as amended, applicable local ordinances, and the documents accompanying this application.

LANDOWNER'S SIGNATURE	PRINT NAME	DATE

DESIGNATED AGENT'S SIGNATURE*	PRINT NAME	DATE

*Designated agent must have a written statement from landowner authorizing him/her to secure a permit in the landowner's name.

Rev. 7/03

GENERAL CONDITIONS

In accordance with Rule 1709 promulgated under the authority of Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and in addition to the information on the attached plan(s) and special conditions, the following general conditions apply to the earth change authorized by this permit:

- Design, construct, and complete the earth change in a manner that limits the exposed area of disturbed land for the shortest period of time.
- Remove sediment caused by accelerated soil erosion from runoff water before it leaves the site of the earth change.
- Temporary or permanent control measures shall be designed and installed to convey water around, through, or from the earth change at a non-erosive velocity.
- Install temporary soil erosion and sedimentation control measures before or upon commencement of the earth change activity and maintain the measures on a daily basis. Remove temporary soil erosion and sedimentation control measures after permanent soil erosion measures are in place and the area is stabilized. ("Stabilized" means the establishment of vegetation or the proper placement, grading, or covering of soil to ensure its resistance to soil erosion, sliding, or other earth movement.)
- Complete permanent soil erosion control measures for the earth change within five calendar days after final grading or upon completion of the final earth change. If it is not possible to permanently stabilize the earth change, then maintain temporary soil erosion and sedimentation control measures until permanent soil erosion control measures are in place and the area is stabilized.

SPECIFIC CONDITIONS