

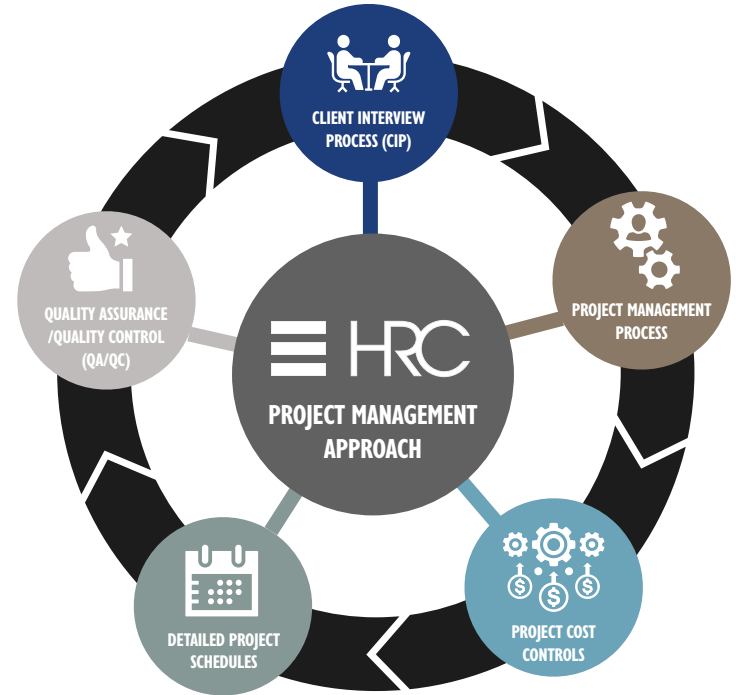
C. PROPOSED WORK PLAN

CONTRACT MANAGEMENT

HRC has a well-defined process to control scope, schedule, and total project costs. This process, as shown in the figure to the right, includes fully understanding the goals of the project, constantly being aware of the items that could affect these goals, fully understanding the client's "must haves" and, as importantly, the client's "must NOT haves." The foundation of this process is identifying and closely following key issues that affect the project's scope, schedule, and budget.

HRC's Project Manager, John Balint, knows the City of Ann Arbor very well. This knowledge, along with his expertise, will provide an immediate response to all types of requests.

We developed procedures that ensure projects are at a high level of competency while meeting the required financial, scheduling, and technical goals. These include:



Client Interview Process (CIP) is used to identify, communicate, track, document, and measure our client's expectations, not just technical, but ALL expectations.

A robust **Project Management Process** ensures the client's expectations are met while maintaining a business model that retains and rewards the employees of HRC.

- Developing a work plan that clearly defines all aspects of the project for HRC staff, including non-technical items.
- Establishing communication methods with the City and the project team to ensure timely and efficient responses.
- Creating concise status reports.
- Deploying a risk management process to alert the City early of significant risks.
- Recognizing that while there is typically more than one way to solve a problem, there is one solution that often stands out when measured against the project's goals.
- Utilizing the vast expertise and experience of HRC's personnel to assist and brainstorm on projects or tasks that may require a more in-depth review of an issue.
- Analyzing team member assignments so they best suit the needs of the project. This task includes an analysis of disciplines required for the project, current obligations, and evaluating the staff with the tools to best fit the City's technical, financial, and scheduling goals.

Early confirmation of construction cost estimates immediately provide information for the City to make informed decisions going forward based on the available budget. A detailed project schedule, will be developed, which includes deliverable dates for reviews by the City, agencies, and other stakeholders.

Lessons learned from our experience working on previous City projects and applying them to future ones.

A **QA/QC** process that includes reviews by highly experienced staff members.

Effective management must include the controlling of costs, both engineer's estimates, and construction. Estimating accurately allows the City to confidently make decisions with minimal surprises that can impact other projects. HRC's methods to ensure our construction cost estimates are accurate start with our Project Management Process, which confirms the scope of work and budget. In addition, HRC staff's experience and technical expertise are critical to successful and accurate estimates. HRC is also familiar with the planning phase of projects, which includes developing conceptual cost estimates often used for budget purposes and includes reasonable contingencies based on the unknowns of a project's scope.

COMMUNICATION & COORDINATION

Communication is the foundation of a successful project. Throughout the project, HRC will stay in contact with the City's Project Manager and other impacted parties, including permitting agencies and stakeholders. This communication will include updates on design, studies, or construction, providing input early so as not to delay the project or impact costs, providing options for design, or getting preliminary approval for the design. HRC's Project Manager will be the primary contact with the City's Project Manager and will be responsible for coordinating all work with the City. As previously discussed, HRC has current working relationships with numerous City staff members. Many of the key staff identified for this proposal are currently working with the City on other projects. This knowledge of the City and your procedures will provide the quick response most as-needed contracts require.

PHILOSOPHY

HRC's philosophy in providing as-needed services starts with understanding the scope of work, and the client's desired outcomes, as identified in our Client Interview. Understanding the scope includes:

- **Early interviews with the City and stakeholders to understand their must-haves and must NOT have.**
- **Early meetings with permit agencies to understand their requirements and lead time for applications.**
- **Early identification of those critical items that could affect costs or scheduling.**

Based on a complete understanding of the scope, HRC's Project Manager will develop an internal Work Plan to meet these goals and requirements. This plan will include a detailed schedule indicating deliverable dates for items such as plan review submittals, permit application submittals, and stakeholder meetings.

The plan also includes items regarding the scope of work, key personnel, budget, and identification of risk-related items that could impact the project. Each Work Plan is created from scratch for any given individual project, based on our experience, and used throughout the project as a roadmap.

Once the work has begun, whether it is a study, design or construction project, there are numerous aspects occurring simultaneously. HRC's leadership will stay focused on those items representing the most risk to the project. Our method includes:

- Further investigating those essential items identified early.
- Providing the City with a range of solutions to critical items, including pros and cons, costs, and risks for consideration.
- Managing other aspects of project development **while the key issues are being discussed for resolution.**

Meeting the City's scheduling and financial goals will also be a focal point for the entire team. Having everyone dedicated to these goals has proven successful in the past and provides opportunities for the whole team to be engaged in risk assessment and problem-solving.

Over the past several years, HRC has established a sound working relationship and trust with the City. This trust has evolved into becoming a genuine team member with the City, including an unrivaled motivation to provide efficient and effective solutions when requested. Responsiveness in the design, construction, and consulting industry can include quick turnarounds on studies and design-related tasks, full-service design tasks, and also construction-related inquiries, which are often the most critical. HRC's depth of staff and management allows the opportunity to react quickly to staff a project, even when many of our personnel are currently assigned to other projects. HRC's goal is to continue utilizing our staff with prior City experience, but with additional qualified staff, we can meet the most challenging assignments and deadlines. We also have the project management team to ensure this work meets the City's expectations.

UNDERSTANDING OF PROJECT

Over the past several years, City of Ann Arbor staff have received numerous complaints regarding drainage issues on gravel roads under your jurisdiction. In many instances, these gravel roads were constructed prior to being annexed into the City and may not adhere to current City (or any reasonable) design standards. Over the years, there have been numerous spot location attempts to address individual drainage complaints, but none that addressed the larger legacy stormwater management issues in a holistic and comprehensive manner.

The City of Ann Arbor is seeking proposals for the analysis and design recommendations to address public or right-of-way drainage issues on an estimated 13 miles of publicly owned gravel roads within the City. This project will span four years (with the first two years funded), with recommendations proposed at the end of each study year for the areas undertaken.

Our Team’s recommendation options will include conventional paving and storm sewer installation and the do-nothing option to “bookend” the available remedies with green infrastructure (BMP/LID) included in the middle as the normal consideration where applicable. However, our Team will focus on more atypical solutions such as local storage in outlots, vacant parcels purchased, foreclosed properties, parks, common areas, and other smaller areas for micro storage, larger regional storage before flows reach the gravel roads or within the study areas, conveyance to move water through the system where downstream conditions permit or impacts can be mitigated, lineal storage such as ditch enclosure pipe, infiltration systems where soils permit, tree planting or vegetation enhancements, purchasing previously flooded areas to convert to true storage areas. While the solutions will strive to meet certain design storm intervals, for example, 2, 10, and 100 year, some areas may be small, so the maximum storage volume possible may be the goal and thus won’t meet any certain standard but could still mitigate or resolve smaller problems.

Essentially, no solution is off the table to cost-effectively meet the overall project goals and implement projects that solve these numerous problem types. We envision a wide range and number of solutions per study area even on a street-by-street basis will be needed that does not include just paving the road.

In the end, each area will have specific recommendations made that address current precipitation patterns, climate resiliency factors, water quality as a tangent issue to conveyance, maintenance implications, watershed development pressures, neighborhood character, aesthetics, costs, and long-term resolution of the issues. More specifically, the recommendations of each study area, subdivision, or street segment must be clearly articulated for direct inclusion in the City Capital Improvement Plan (CIP) with some public engagement completed and local buy-in already in place.



YEAR	AREA	LINEAR FEET	MILES	PERCENTAGE OF CITY-MAINTAINED GRAVEL ROADS	TOTAL PER STUDY AREA
1	Valley/Evergreen Sub	17,624	3.3	26%	26%
2	Kimberly	7,921	1.5	12%	27%
2	Swift Run Area	9,068	1.7	13%	
2	Alexandra	1,058	0.2	2%	
3	North Geddes	5,119	1.0	8%	17%
3	South Geddes Area	3,614	0.7	5%	
3	Westover/Park Lake Area	2,906	0.6	4%	
4	Chalmers	1,178	0.2	2%	28%
4	Other Areas	18,003	3.4	27%	
n/a	Elmwood (Geddes Farm)	1,096	0.2	2%	2%
		67,587	12.8	100%	100%

CLARIFICATIONS

Use of the City Stormwater Model – As noted, the City’s stormwater model will be available for use. This project is not intended to update or calibrate the model. Instead, our Team will use the model for base data such as flows and volumes, run proposed improvements for the design event to prove proof of concept, and test for climate resiliency.

Drawings – Our Team will produce preliminary plans highlighting the known drainage issues and potential solutions. These plans will be suitable for inclusion in the CIP, create realistic budgets, and be presented to the stakeholders.

PROJECT ORGANIZATION AND STAKEHOLDERS

We suggest creating a four-tier project organization hierarchy to streamline communication and make the most effective use of City staff, local agencies, and the public’s time. Generally, this will follow the below tiers:

Tier 1 – Project Management - will be made up of the City staff directly responsible for this project, HRC’s project management team, our subconsultants when necessary, and likely City/Team public engagement leadership. This group will meet at least on a monthly basis and focus on scope, budget, schedule, and planning for upcoming tasks and events. This group will also conduct the annual feedback process to make adjustments in future years.

Tier 2 – Technical - above Tier 1 personnel plus the technical stakeholders including other City departments (Maintenance, Engineering, Building, and Public Relations), County Water Resources Commissioner, the County Road Commission and or MDOT if adjacent roads are theirs, and our subconsultant team. This group will meet as needed but likely a few times in the early phases of each year, once to discuss findings and recommendations to confirm buy-in, and once at the end of each year to debrief on the project and set up the next year.

Tier 3 – Public Engagement - above Tier 1 personnel plus all public engagement specialists from the project team and City. This group will meet as needed, but likely a few times in the early phases of each year, to collaborate on general or overall materials, before and after each public engagement event such as a neighborhood meeting or street walk, and at the end of each year to debrief on the project and set up the next year.

Tier 4 – Public - all of the above tiers plus elected officials and property owners on each street or area. We will meet with this group at least three times per area and year, one full study area open house meeting, the street-by-street site walk, and a final study presentation. We also propose a fourth interaction after the presentation of the overall study results for property owners to meet one on one with our team if they have questions or specific concerns.

Please note the above list of stakeholders is an initial suggestion to open a conversation with the City. We should discuss adding more or removing stakeholders to any Tier above. We will work with the City to refine this list during the initial stages of this assignment.

TEAM ROLES

Before we describe our full work plan per study year, we would like to introduce our overarching plan for project roles and responsibilities. We propose to divide tasks for each study area across six Teams. This will enable each Team to address their specific area efficiently, limit overlap of hours, enable the team to work simultaneously on parallel tracks, and fully leverage the resources of each firm without creating capacity problems that could jeopardize the project budget and schedule. Beneath each Team description, we have included the project Requirements (Note #3, pgs. 14-15 of the RFP) so the City can see exactly how and with whom we will manage these tasks.



Team 1 – Administration (HRC)

As the prime contractor, HRC will be responsible for managing the overall team, meeting with the City regularly, producing all reports, coordinating work, managing scope, budget, and schedule.

RFP Tasks Included:

- H. Holding kickoff meeting with staff.
- I. Holding regularly scheduled project update meetings with staff

Team 2 – Survey and Base Drawings (Spicer)

Spicer will use their expertise in mobile LiDAR scanning to produce survey grade point clouds for all rights of way and extract the needed data to produce working drawings of each area. LiDAR is a cost-effective way to gather extremely large sets of survey data at a low cost. Data will be processed annually per Study Area to extract the data needed to complete this study. However, even the remaining data is valuable for future designers, City staff responding to issues in between this project and CIP implementation, and for our team to verify any resident claims from their perspective with real data without sending a crew out for more surveys. Base drawings will generally be a combination of aerial images, survey data, property lines from the City, existing utilities, known complaints from the City's database, and historic soil boring locations. Each sheet will have room to add photo documentation and notes from the Field Investigation (Team 4), then add details, graphics, and notes, of the proposed solutions. Further, overall drainage maps showing tributary areas to each Study Area will be created to then highlight any solutions that are not easily shown on a street-level plan.

RFP Tasks Included:

- A. Identify areas of known drainage concerns

Team 3 – Modeling, Design Criteria, Climate Resiliency (Limno Tech)

LTI will use the existing stormwater model to understand the local stormwater infrastructure that is present throughout each of the study areas to develop detailed 2D rain-on-grid model (PC-SWMM) of the model sub catchments where there are gravel road drainage issues. They will run the 2D model for a series of design storms (e.g. 1 through 100 year return period rainfall frequency for multiple durations – 1 hour through 24 hour) to identify areas of model predicted flooding. Additional topography for 2D model will be based on high-resolution LiDAR data collected by our team along the roadways stitched together with USGS high resolution DEMS for areas where the linear LiDAR data collection does not work. They will then verify the performance of the model with the identified drainage issues identified by City Staff and the public. Use the model predicted flooding depths for the design storms to identify if the model is resolved enough to predict flooding in those area.

RFP Tasks Included:

- F. Perform hydraulic analyses and prepare written reports for the proposed stormwater improvements.
- G. The proposed stormwater improvements shall address water quality and quantity during smaller, more frequent storm events and peak flow attenuation during larger storm design events.





Team 4 – Field Investigation (HRC lead supported by LimnoTech and Spicer)

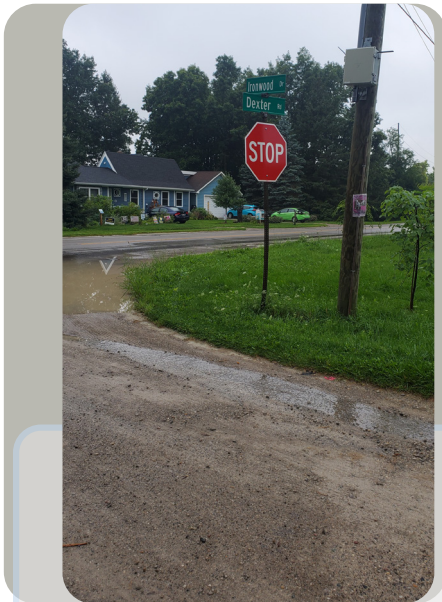
Study Area 1 will have duplicate field investigation time that may be able to be reduced in the later areas. Specifically, we are planning on doing our independent field investigation without residents or stakeholders to ensure our project technology and processes work. Further, we would like to better understand the drainage challenges before introducing the stakeholders and the property owners, along with their respective opinions and priorities. This would be a great opportunity for the City’s maintenance staff to meet and discuss their direct knowledge of issues on each street.

Our project team will create a GIS tool to perform field inspections, including photo documentation that we will collect on our individual site investigation and again when we walk each street with the local property owner stakeholders. This will be overlaid on the base maps by icons and reference numbers that can be cross-referenced with the GIS files. We will document each area from a ground perspective to confirm model, complaint, and staff recollection of issues and search for clear evidence of standing water, washouts, erosion/sedimentation, flow paths, and vegetation markers. Fieldwork during or immediately after rain events will be ideal but more difficult to manage. That’s where the site walk with the stakeholders will fill in gaps.



RFP Tasks Included:

- A. Identify areas of known drainage concerns.
- J. Propose and implement a public engagement and communications strategy for each identified area of study.
 - v. Plan to meet with a minimum of 20 individual stakeholders on-site to collect anecdotal drainage concern information per study area. These meetings will inform the consultant of specific drainage concerns from the stakeholders.



Team 5 – Proposed Solutions (HRC lead supported by LimnoTech and Spicer)

Pulling together the survey, base drawings, model outputs (existing, proposed, and resiliency design flows), and the results of our two field investigations, this Team will propose areas that should be addressed, options for improvements as noted herein, and the creation of an overall strategic plan for the area as well as individual projects as needed throughout each area. This will be achieved by added proposed solutions to the base street and subwatershed level drawings, written descriptions of each area, and supporting information. Project description, value of project or level of service expected, costs, right-of-way needs, potential impacts of note, obstacles to implementation, and priority will be documented in a manner that the City can easily use to input to the CIP.

RFP Tasks Included:

- B. Identify areas for recommended drainage solutions.
- C. Evaluate and recommend green and gray infrastructure opportunities to alleviate surface flooding issues as reported by residents.
- D. Evaluate road drainage and determine if modification of existing stormwater system is needed within the project area.
- E. Develop strategic plans for each identified study area that include a spectrum of implementable recommendations.
- F. Perform hydraulic analyses and prepare written reports for the proposed stormwater improvements.

Team 6 – Public Engagement (HRC)

The Team will meet with the City’s communication specialists, complete the City’s PR Toolkit, refine the stakeholder list, and better define the roles and tasks between the City and Consultant. We will prepare overall project materials in collaboration with the City, explaining the process and specific Study Area materials that highlight the area to be evaluated. Our team will discuss various methods to reach out to the study area property owners, including but not limited to City website, Next Door posts, direct mailings, and temporary street signs. We will plan and execute an open house virtual meeting with stakeholders per each study area. The goal of this meeting will be to introduce them to the project, objectives, areas we are not addressing, timing and schedule, as well as some overall discussion of drainage in the Study Area. After Team 4’s initial review, we will plan and execute street walks with the Tier 4 stakeholders, with technical staff engaging directly with the property owners. Upon completion of Team 5’s tasks, the engagement team will plan and execute an open house virtual meeting with stakeholders per each study area. The goal of this meeting will be to present them with our findings, proposed solutions, and next steps. Likely, each resident will be more concerned about their individual problem. The Team

will set up virtual “office hours” to schedule one-on-one meetings with property owners to discuss their own problems. No additional field meetings will be scheduled with property owners. Our team will document all interactions with the public.

RFP Tasks Included:

- J. Propose and implement a public engagement and communications strategy for each identified area of study.
 - b. Facilitate public engagement in-person and virtual meetings for each study area. This should include at a minimum:
 - i. Exercises and presentations will be provided by the consultant that inform the public of the process and potential impacts and also solicit input from the public on their experiences with flooding in the neighborhood.
 - ii. Complete the City of Ann Arbor’s Community Engagement Toolkit with City staff (minimum of two hours)
 - iii. In collaboration with the City, develop a stakeholder list of who needs to be invited to participate and which methods will be used to reach them.
 - iv. In collaboration with the City, develop the project’s messaging and materials in collaboration with the City’s Communications staff for approval and distribution by the City.
- J. Systematically document the feedback provided by the public, incorporate this data into the analysis, and, if necessary, provide a graphic or creative way to share the results back to the public.
- K. Preparing public information materials in collaboration with the City’s Communications staff for approval and distribution by the City.

STUDY AREA ONE – SCOPE AND BUDGET IMPACTS

The Valleyview/Evergreen Subdivision is proposed as Study Area 1. The roads in this area are about one-quarter of the City's gravel roads (by length) but will require a larger percentage of the overall project budget. The success of this project will depend on providing a strong foundation for the four-year project in year one, but will also require flexibility so refinements can be made to the work plan each year to reflect items needing more attention and those that can still produce success at a lower effort. Specifically, Study Area 1 will be more effort because:

1. Project start-up costs – Project initiation, administration, confirming and refining the scope, getting the model running, inevitable higher attendance at early meetings, and overlap of time until the project is moving.
2. Templates – Later Study Areas will be able to build on Study Area 1's past work in creating plans, reports, public engagement materials, and model runs.
3. Data Gathering – We plan to collect all the data available from the City in year one, which will take time to collect and manage. For instance, we would like the City's database of complaints to map and to use as a base layer. We will also obtain all 13 Miles of LiDAR data in the beginning. This will limit mobilization costs. Study Area 1 will also have duplicate field investigation time that may be able to be reduced in the later areas. Specifically, we are planning on doing our independent field investigation without residents or stakeholders to ensure our project technology and processes work. Further, we would like to have a better understanding of the drainage challenges before introducing the stakeholders and the property owners along with their respective options and priorities. We hope this enables the process to remain transparent while addressing right-of-way drainage issues, applying a uniform and reasonable prioritization, and preventing private drainage matters from becoming public while helping property owners with resources and information to assist in addressing their own problems.
4. PR Toolkit – Most of the public engagement tools generated for this project will be created in year one and then revised and improved upon for implementation in later years.
5. Program Modifications – at the end of the first year, our Team will meet with the City and Stakeholders to discuss areas of success and where changes are needed.



In summary, year one will be the biggest and most costly year of the program, but the tools created and verified as effective will be used for the remaining three years of the program.



YEAR ONE TASKS

TEAM 1 – ADMINISTRATION (HRC)

- Kickoff meeting
- Tier 1 interactions (14 meetings)
- Gather historic information and break down per Study Area
- Project management (12 months)

TEAM 2 – SURVEY AND BASE DRAWINGS (SPICER)

- Mobile LiDAR all 13 miles
- Process limited data for Study Area 1
- Create base drawings for one to two streets to test
- Complete all base drawings after field verification test

TEAM 3 – MODELING, DESIGN CRITERIA, CLIMATE RESILIENCY (LIMNO TECH)

- Obtain City stormwater model
- Review model in Study Area 1
- Research and recommend climate resilience parameters
- Create toolkit for possible solutions
- Test proposed recommendations

TEAM 4 – FIELD INVESTIGATION (HRC LEAD SUPPORTED BY LIMNOTECH AND SPICER)

- Create GIS tool for collecting visual and anecdotal information
- Take base maps and GIS tool into field, walk one to two streets to test
- Update other Teams on revisions as needed
- Field investigations for entire area
- Meet with Tier 4 stakeholders to review in field

TEAM 5 – PROPOSED SOLUTIONS (HRC LEAD SUPPORTED BY LIMNOTECH AND SPICER)

- Identify areas for recommended drainage solutions
- Evaluate and recommend opportunities to alleviate drainage issues
- Evaluate road drainage and determine if modification of existing stormwater system is needed within the project area
- Meet with Tier 2 stakeholders to discuss draft findings and recommendations
- Develop strategic plans for each identified study area that include a spectrum of implementable recommendations
- Prepare Draft written report for the proposed stormwater improvements
- Meet with Tier 2 stakeholders
- Prepare Final written report

TEAM 6 – PUBLIC ENGAGEMENT (HRC)

- Complete the City PR Toolkit
- Refine stakeholder list
- Prepare overall project materials in collaboration with the City
- Prepare specific Study Area materials
- Meet with Tier 3 stakeholders
- Plan and execute an open house virtual meeting with stakeholders per each study area
- Plan and execute street walks with the Tier 4 stakeholders with technical staff engaging directly with the property owners
- Plan and execute an open house virtual meeting with stakeholders per each study area
- Set up virtual office hours to schedule one on one meetings with property owners to discuss their own problems
- Document all interactions with the public

YEAR TWO THROUGH FOUR TASKS

TEAM 1 – ADMINISTRATION (HRC)

- Kickoff meeting
- Tier 1 interactions (14 meetings)
- Project management (12 months)

TEAM 2 – SURVEY AND BASE DRAWINGS (SPICER)

- Process limited data for Study Area for that year
- Complete all base drawings

TEAM 3 – MODELING, DESIGN CRITERIA, CLIMATE RESILIENCY (LIMNO TECH)

- Review model in Study Area
- Create toolkit for possible solutions
- Test proposed recommendations

TEAM 4 – FIELD INVESTIGATION (HRC LEAD SUPPORTED BY LIMNOTECH AND SPICER)

- Field investigations for entire area
- Meet with Tier 3 stakeholders to review in field

TEAM 5 – PROPOSED SOLUTIONS (HRC LEAD SUPPORTED BY LIMNOTECH AND SPICER)

- Identify areas for recommended drainage solutions
- Evaluate and recommend opportunities to alleviate drainage issues
- Evaluate road drainage and determine if modification of existing stormwater system is needed within the project area
- Meet with Tier 2 stakeholders to discuss draft findings and recommendations
- Develop strategic plan for each identified study area that include a spectrum of implementable recommendations
- Prepare draft written report for the proposed stormwater improvements
- Meet with Tier 4 stakeholders
- Prepare final written report

TEAM 6 – PUBLIC ENGAGEMENT (HRC)

- Refine stakeholder list, if needed
- Update specific Study Area materials
- Plan and execute an open house virtual meeting with stakeholders per each study area
- Plan and execute street walks with the Tier 4 stakeholders with technical staff engaging directly with the property owners
- Plan and execute an open house virtual meeting with stakeholders per each study area
- Set up virtual office hours to schedule one on one meetings with property owners to discuss their own problems
- Document all interactions with the public

