ATTACHMENT A
(SCOPE OF SERVICES)

1. GENERAL

Generally, the scope of services includes a drainage study whereby detailed hydrologic and hydraulic analysis for the purpose of flood mitigation is conducted on a project area bounded by Robinson Street, 48th Avenue NW, West Main Street, and Lamp Post Road. A hydrologic and hydraulic technical memo with a future-project detailed scope is the final deliverable for the project.

2. HYDROLOGIC AND HYDRAULIC SCOPING STUDY

Garver will perform the following tasks to develop a project scope for the Midway Drive Flood Mitigation project:

1. Data Collection

Garver will collect topographic data through both publicly available online sources as well as topographic survey. The best publicly available lidar data will be used for general mapping of the project site and hydraulic modeling. Topographic survey will be used to confirm lidar elevations, determine elevations of underground storm sewer, and collect any topographical features that are not well represented in the publicly available lidar data.

Historical construction plans, as-builts, and engineering studies will be collected and analyzed for projects in the study area. All previous studies will be provided by the Owner.

Property data will be collected by locating existing monumentation representing right of way and/or easements based on record data and identifying property owner information for each parcel within the property survey limits.

Information regarding underground storm sewer in the project area will be collected using non-destructive means. Information about the type, size, condition, material and other characteristics of underground features will be collected with the survey.

2. Hydrologic Analysis

Hydrologic Analysis for the study will be performed using methods selected by Garver and in accordance with the Owner's Engineering Design Criteria. The study watershed will include the entire area with stormwater potentially flowing to the study location.

3. Hydraulic Analysis

Hydraulic Analysis for the study will be performed using methods selected by Garver and in accordance with the Owner's Engineering Design Criteria.

a. The existing hydraulic conditions will be analyzed to determine the existing flooding issues in the project area. This analysis will identify the main contributing factors to flooding at the repetitive loss properties on Midway Drive.

b. The existing conditions hydraulic model will be used to develop three (3) conceptual

alternatives to mitigate flooding at Midway Drive. This scope does not include detailed analysis of more than three alternatives, but additional alternatives may be analyzed as Extra Work as discussed in section 8.

c. Hydraulic analysis of the three conceptual alternatives will be performed utilizing the existing conditions hydraulic model. The model will be modified to represent the hydraulic aspects of the conceptual alternatives.

4. Garver will determine an opinion of probable construction cost (OPCC) for each conceptual alternative.

5. The demonstrated hydraulic benefits and OPCC for each alternative will be presented to the Owner and coordination with appropriate stakeholders will be utilized to determine a preferred alternative for the scope of a future construction project at the study location. Three (3) in-person or virtual meetings are anticipated for this project, but additional meetings may be added as “Extra Work.”

6. A hydrology and hydraulics report will be prepared to document the methods and results of the drainage study. This report will include the preferred alternative and detailed project scope for the future construction project. The report will include detailed Geographic Information System (GIS) exhibits of the study area hydrology and hydraulic conditions.

7. Garver will coordinate with the City to prepare a competitive Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) grant application. This effort will include preparing a detailed benefit-cost analysis and GIS exhibits to support a grant application narrative. Additional grant funding opportunities other than BRIC may require additional scope of work over what is anticipated for the BRIC grant application. Additional scope of work for the grant application process may be performed as “Extra Work".

3. SURVEYS

3.1. Design Surveys

Garver’s subconsultant will perform a topographic and property survey for the project area, and this survey will be tied to the Owner’s control network. Extents of the survey are shown in Exhibit A.

Garver’s subconsultant will conduct field surveys, utilizing radial topography methods, at intervals and for distances at and/or along the Project site as appropriate for modeling the existing ground, including locations of pertinent features or improvements. Garver’s subconsultant will locate buildings and other structures, streets, drainage features, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owners and/or representatives, and any other pertinent topographic features that may be present at and/or along the Project site. Garver’s subconsultant will establish control points for use during construction.

3.2. Property Surveys

Garver’s subconsultant will locate existing monumentation representing right of way and/or easements based on record data which will be provided by an abstractor under a subconsultant agreement with Garver.

4. GEOTECHNICAL SERVICES

Geotechnical is not anticipated for the completion of the project and not included in this scope of services. Any information provided by Owner to Garver is assumed as correct.

5. ENVIRONMENTAL SERVICES

Environmental Services are not anticipated for the completion of the Project and not included in this scope of services and can be added by amendment. Any information provided by Owner to Garver is assumed as correct.

6. PROJECT DELIVERABLES

The following will be submitted to the Owner, or others as indicated, by Garver:

A. Three (3) copies of the Hydrology and Hydraulics Scoping Report.
B. Electronic files as requested.

7. EXTRA WORK

The following items are not included under this agreement but will be considered as extra work:

A. Reanalysis or redesign for the Owner's convenience or due to changed conditions after previous alternate direction and/or approval.
B. Analysis of more than three (3) conceptual alternatives for proposed conditions
C. More than four (4) meetings for the project duration
D. Preparation of property acquisition documents
E. Submittals or deliverables in addition to those listed herein.
F. Any construction plans or drawings of the project area.
G. Design of any utilities relocation.
H. Retaining walls or other significant structural design.
I. Street lighting or other electrical design.
J. Preparation of a Storm Water Pollution Prevention Plan (SWPPP). The construction contract documents will require the Contractor to prepare, maintain, and submit a SWPPP to DEQ.
K. Construction materials testing.
L. Environmental Handling and Documentation, including wetlands identification or mitigation plans or other work related to environmentally or historically (culturally) significant items.
M. Preparation/submittal of a CLOMR and/or LOMR to FEMA.
N. Preparation of grant application for grant programs other than BRIC.

Extra Work will be as directed by the Owner in writing for an additional fee as agreed upon by the Owner and Garver according to the labor rates included in Attachment B.

8. SCHEDULE

Garver shall begin work under this Agreement within ten (10) days of a Notice to Proceed (NTP) and shall complete the work in accordance with the schedule below:

Phase Description	Calendar Days
Hydrology and Hydraulics Scoping Study	150 days
Grant Application	45 days
Surveys – Design and Property	60 days