

Memorandum



To: Dave DeAngelis, Village of Elm Grove
From: Nick Jordan and Marty Melchior, Inter-Fluve
Date: July 30th, 2021
Re: Underwood Creek Scope Modification

As discussed on July 15, 2021, modifications to Inter-Fluve's scope are necessary to meet the needs of the project for the Village's preferred alternative of relocating Underwood Creek in the project reach. The proposed scope modifications are:

1. **Design:** To provide adequate time for design and drafting of deliverables,
2. **Hydraulic Modeling:** In addition to the hydrologic and hydraulic analysis described in Inter-Fluve's existing scope, Inter-Fluve will develop a georeferenced 1D HEC-RAS model of existing and proposed conditions within the project area. Boundary conditions will be applied to the model from existing effective model cross sections upstream and downstream of the project area. The geo-referenced model output will be used to develop project designs and will be also used for developing necessary outputs for floodplain permitting and LOMR activities.

Deliverables:

- Results of hydraulic modeling will be incorporated into design and permitting activities.

Assumptions:

- Grading changes requiring model updates requested after the 90% design submittal will require contract modification.

3. **WDNR Permitting:** Based on conversations with Luke Roffler at WDNR, we understand that a Chapter 30 individual permit (IP) will be needed for a creek relocation project, rather than the bank stabilization general permit assumed in the project contract. All permitting fees will be paid by the Village. Inter-Fluve will coordinate as necessary with WDNR to complete the permit application, and will facilitate a pre-permitting meeting prior to 50% design.

Deliverables:

- Facilitation of a pre-permitting meeting for WDNR and USACE permits.
- Electronic copies of completed permit documents as described.

Assumptions:

- The Village will submit and pay for all permits.
 - The Village will draft and submit any public notices associated with permitting.
 - This task does not include a wetland delineation. Conversations with WDNR indicate that a wetland delineation will most likely **not** be required.
 - Surveys or work associated with Section 106 NHPA or SHPO requirements, or Endangered Resources review are not included in this scope.
4. **FEMA LOMR Permitting:** Based on conversations with Michelle Hase at WDNR, we anticipate that a Letter of Map Revision (LOMR) will be required for a creek relocation project. This opinion is based on her experience with FEMA on recent projects of similar scope and assumes the project will not result in a rise to the base flood elevation. A Village Floodplain Development permit and No-Rise certification memo will be prepared prior to project construction as described in our existing contract scope. Additional activities associated with the LOMR will include the following scope items:
- 4.1. In conjunction with the Village floodplain permit, Inter-Fluve will prepare a list of properties affected by the proposed changes to water surface elevations, if applicable. Inter-Fluve will draft a letter to be sent by the Village to all affected property owners affected by the revised floodway or floodplain boundaries.
 - 4.2. Following project construction, an as-built survey will be conducted by Inter-Fluve to update the “post-project” model. Previously developed hydraulic models will be updated with this survey data.
 - 4.3. Inter-Fluve will complete FEMA form MT-2, including forms 1 and 2, including certified topographic work maps prepared with guidance found on FEMA form MT-2, supporting data tables, annotated FIRMs, and a narrative description of methodology. The materials will be sealed by a Professional Engineer and submitted to the Village, who will serve as the Requester and submit materials to WDNR and FEMA. The Village will be responsible for application fees associated with LOMR submittal.
 - 4.4. Coordination: Substantial coordination between Inter-Fluve, the Village, WDNR, and FEMA is expected during the LOMR submittal process. Currently, we budget 40 hours of coordination during the LOMR process. Should additional coordination effort be required, hours may be added via contract amendment.

Deliverables:

- Draft letter for property owner notification of proposed floodplain changes.
- As-built survey of completed project.
- Completed FEMA form MT-2, certified topographic workmap, and associated modeling results necessary for LOMR submittal. Electronic modeling files will be delivered as required by agencies.

- Up to 40 hours of coordination with the Village and agencies during the LOMR process.

Assumptions:

- The Village will send letters to property owners and provide coordination as needed to answer questions about the proposed project. We assume no preparation for or attendance at a public meeting.
- The Village will submit and pay for all fees associated with the LOMR.
- The project and constructed project are expected to result in no rise to the base (regulatory) flood profile. If a no-rise condition cannot be met during the project design phase, a Conditional LOMR (CLOMR) may be required prior to construction. Work associated with a CLOMR can be added via contract amendment.
- We assume a floodway model run will not be required, per WDNR guidelines. If FEMA requires floodway simulations, those simulations may be added via contract amendment.
- We assume agency response times will be in line with the agencies' guidelines.

Fee: This contract modification has an associated fee increase of \$35,500 and is broken down in the table below. The total contract amount would be increased to \$110,629.

Major Task	Fee
Additional Hydraulic Modeling	\$5,300
WDNR Individual Permit Application (in addition to hours already budgeted for WDNR General Permit application)	\$2,900
As-Built Survey, LOMR Preparation, and Coordination	\$27,300

Schedule: We propose the following schedule for the remaining elements of the project:

Milestone	Schedule
50% Design Deliverable	Late September 2021
90% Design Deliverable	6 weeks after receipt of comments from Village
Permit Applications	2 weeks after 90% design deliverable
100% Design Deliverable	4 weeks after receipt of WDNR and Village comments on 90% Design Deliverable
LOMR activities	TBD following project construction

