

**DISTRICT 1**

**VILLAGE OF LOMBARD**  
**REQUEST FOR BOARD OF TRUSTEES ACTION**  
For Inclusion on Board Agenda

    X     Resolution or Ordinance (Blue)          X     Waiver of First Requested  
           Recommendations of Boards, Commissions & Committees (Green)  
           Other Business (Pink)

**TO:** PRESIDENT AND BOARD OF TRUSTEES

**FROM:** Scott Niehaus, Village Manager

**DATE:** April 9, 2024 (COW) (B of T)      **Date:** April 18, 2024

**TITLE:** Charles Lane Basin Improvements  
Design Engineering - Amendment No. 3

**SUBMITTED BY:** David Gorman, P.E., Assistant Director of Public Works *DRG*

**BACKGROUND/POLICY IMPLICATIONS:**

Please see the attached memo.

**FISCAL IMPACT/FUNDING SOURCE:**



This Item: \$46,400.00/Water Sewer Fund  
Account Number: 520.790.715.75420 Water/Sewer Capital Reserve  
Total Contract Amount: \$142,012.00 (\$95,612.00 + \$46,400)  
Project Number: SS 18 01 Charles Lane Basin Improvements  
P.O. Number: 2024-00000345

Review (as necessary):  
Village Attorney X \_\_\_\_\_ Date \_\_\_\_\_  
Finance Director X \_\_\_\_\_ Date \_\_\_\_\_  
Village Manager X \_\_\_\_\_ Date \_\_\_\_\_

**NOTE:** All materials must be submitted to and approved by the Village Manager's Office by 12:00 noon, Wednesday, prior to the Agenda Distribution.

## Interoffice Memo



**To:** Scott Niehaus, Village Manager  
**From:** David Gorman, P.E, Assistant Director of Public Works   
**Through:** Carl Goldsmith, Public Works Director   
**Date:** April 8, 2024  
**Subject:** Charles Lane Basin Improvements Project  
Design Engineering Amendment #3

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Attached please find an amendment for \$46,400.00 to the design engineering contract for the Charles Lane Basin Improvements Project. The amendment is for Full Equation (FEQ) modeling as required by DuPage County to consider approving any proposed improvements to the Charles Lane Basin. The purpose of the project is to reduce the frequency of flooding on Finley Road and Charles Lane.

The County is primarily concerned about negative downstream impacts that may be caused by any change(s) made to the Charles Lane Basin. Secondly, they are concerned that any revision(s) may violate previous detention requirements achieved by the initial construction of the facility. The goal of the modeling is to illustrate that compensatory storage can be achieved by performing modifications to the existing pond and pump station. Potential revisions include raising the berm, eliminating the spillway, and making modifications to the storm sewer entering and leaving the pump station.

Based on discussions with the County, Engineering Resource Associates (ERA) staff believes that the FEQ modeling can demonstrate an overall watershed benefit. In turn, the County would support a potential variance to the County Stormwater Ordinance. The County has indicated to ERA that they are willing to assist with some of the FEQ modeling tasks with the hydrology portion of the FEQ analysis.

Supplemental engineering services were not funded within the 2024-2032 CIP. Funding for the entire amendment amount will come from the Sewer Investigation Program project (RM PROG 53).

Please present this contract amendment to the President and Board of Trustees for their review and approval at their regular meeting on April 18, 2024. If approved, please return a signed copy to Public Works Engineering for further processing.

**RESOLUTION**  
**R \_\_\_\_\_**

**A RESOLUTION AUTHORIZING AN AMENDMENT TO A PROFESSIONAL SERVICES CONTRACT INVOLVING AN INCREASE/DECREASE IN THE DOLLAR AMOUNT OF THE CONTRACT OF \$10,000 OR MORE AND/OR EXTENDING/SHORTENING THE TIME IN WHICH THE CONTRACT IS TO BE COMPLETED BY THIRTY (30) DAYS OR MORE**

**WHEREAS**, pursuant to Illinois Compiled Statutes, Chapter 720, Section 5/33E-9, units of local government are required to make specific findings prior to authorizing any amendment relative to a contract which would increase or decrease the dollar amount of the contract by \$10,000 or more, or would extend or shorten the time in which the contract is to be completed by thirty (30) days or more; and

**WHEREAS**, staff has presented and recommended the proposed amendment to the contract between the Village of Lombard and Engineering Resource Associates regarding the Charles lane Basin Improvements project, as attached hereto as Exhibit "A" and made part hereof, (the "Amendment") to the Corporate Authorities of the Village of Lombard; and

**WHEREAS**, said Amendment attached hereto as Exhibit "A" would increase the dollar amount of the contract by \$46,400.00, bringing the total dollar amount of the contract to \$142,012.00; and

**WHEREAS**, said Amendment attached hereto as Exhibit "A" **would not** extend the time period in which the contract is to be completed.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LOMBARD, DU PAGE COUNTY, ILLINOIS, as follows:

**SECTION 1:** That after reviewing the explanation of staff as to the necessity of and reasons for the Amendment attached hereto as Exhibit "A", the President and Board of Trustees find as follows:

- A That the circumstances which necessitated said Amendment were not reasonably foreseeable at the time the contract was entered into.
- B That the basis of the Amendment was not within the contemplation of the contract when the contract was signed.
- C That it is in the best interests of the Village of Lombard to approve the Amendment in its proposed form.
- D That to the extent that it may have been necessary to go to bid relative to the work contemplated by said Amendment, bidding is hereby specifically waived as to the Amendment work.

**SECTION 2:** That having made the findings set forth in Section 1 above, the President and Board of Trustees hereby approve the Amendment attached hereto as Exhibit "A", and direct and authorize the Village President and Village Clerk to execute said Amendment on behalf of the Village.

Adopted this 18th day of April 2024, pursuant to a roll call vote as follows:

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent: \_\_\_\_\_

Approved by me this 18th day of April 2024

\_\_\_\_\_  
**Keith Giagnorio**  
**Village President**

ATTEST:

\_\_\_\_\_  
**Liz Brezinski**  
**Village Clerk**

**Additional Work Authorization**Sent via email to Ray Schwab | [schwabr@villageoflombard.org](mailto:schwabr@villageoflombard.org)

<b>Date:</b>	4/03/2024	<b>Client:</b>	Village of Lombard, Illinois
<b>Project Name:</b>	Charles Lane Basin Improvements	<b>ERA Project No.:</b>	W22049.00

The work described in this Additional Work Authorization (AWA) is outside of the original scope of work anticipated for the professional service contract between Engineering Resource Associates, Inc. (ERA) and the Village of Lombard (Village). ERA will proceed as expeditiously as possible to complete the described services upon written authorization.

**Reason(s) for Services:**

The first DuPage County permit review and subsequent permit review meeting has made it clear that DuPage County will require FEQ modeling to demonstrate that proposed improvements to Charles Lane Pond will provide a watershed benefit. To demonstrate that the project is a watershed benefit the County is requiring FEQ modeling to show the following:

1. Pond improvements do not create negative impacts downstream (unacceptable increases in flow or flood elevations within the East Branch and Tributary)
2. Show that providing compensatory storage by either raising the pond berm a few inches or eliminating the berm all together does not negatively impact flood flows and elevations and/or is effective floodplain storage.
3. Revisions to Charles Lane Pond do not violate any detention requirements that the facility may have been constructed for.

It is our understanding that if the above described FEQ modeling demonstrates a watershed benefit the County would likely support a potential variance to the County ordinance for detention and floodplain requirements for a regional stormwater facility improvement. It is also our understanding that DuPage County will assist ERA and the Village with the hydrology portion of the FEQ analysis as described in Task 2 below.

Included in this AWA is the FEQ modeling efforts, assistance in the DuPage County variance process, additional design of Charles Lane Pond control features that may be required to show a watershed benefit which may include revisions to the storm sewer coming into the pump station, revision to the storm sewer leaving the pump station, revisions to the spillway, etc.

**SCOPE OF WORK****Task 1 – Additional Progress and Permitting Meetings**

The expansion of the scope of work requires additional design and progress meetings with the Village of Lombard (virtual and in-person) and additional meetings with DuPage County permitting department.

**Task 2 – FEQ Modeling, Results Analysis and Documentation**

ERA will update the regulatory FEQ hydrologic and hydraulic models for Charles Lane Basin. The following subtasks are anticipated to complete the modeling.

#### Data Collection, Research and Review

- A) Obtain plan information from Tollway Authority and review for relevant data.
- B) Investigate control structures for the Lombard Lagoons (Tollway Ponds)

#### Hydrology Work (DPC Dependent)

- A) Request floodplain mapping shapefile information for this drainage area from DPC. This data is important to maintain consistency within the East Branch DuPage River model tributary area boundaries.
- B) Identify those areas that may be inter-basin divides using ERA's XP-SWMM drainage areas as a guide.
- C) Subdivide areas based on anticipated hydraulics and inter-basin divides. Send new shapefile to DPC to rerun land cover for the project area. Place generated land cover information into existing conditions FEQ model.

#### Hydraulics Work

- A) Structures to include for existing conditions model:
  - a. Charles Lane Pond Direct Connection to the EB DuPage River,
  - b. Charles Lane Pond Pump,
  - c. Charles Lane Pond 687.5 grate rating,
  - d. Charles Lane Pond overflow,
  - e. Additional Charles Lane Pond hydraulic structures as model tolerances permit,
  - f. Unnamed EB DuPage River Reach Route 53 & I355 structure,
  - g. Unnamed EB DuPage River Reach Finley Road structure.
- B) Storm Sewers converging on the project area d/s of Finley Road, tie in with subcatchment design.
- C) Approximately 10 cross sections to be developed u/s of Route 53 through Finley Road.
- D) Maintain the Lombard Lagoons (Tollway Ponds) and d/s control structure as designed.

#### Existing Conditions Model

- A) Create an EB DuPage River stub to reduce computation time and simplify debugging. Do this for both the LNG and BIG time series files.
- B) Create FEQ model based on the hydraulic and hydrology elements determined/provided.
- C) Run FEQ model through the LNG series of storms (continuous series).
- D) Run FEQ model through the BIG series of storms (extreme series).
- E) Run BFILTER & PVSTATS and smooth the data using DPC hydraulic evaluation methodology.

#### Proposed Conditions Analysis Modeling

- A) Adjust the storage to the pond per design (Eliminating or raising berm).
- B) Adjust Finley Road structure.
- C) Revisions to Charles Lane outfall control structures (new culvert through berm, changes to the pond control structures, etc.) This assumes no change to the pump operations.
- D) Run Proposed FEQ model through the LNG series of storms (continuous series).
- E) Run Proposed FEQ model through the BIG series of storms (extreme series).
- F) Run BFILTER & PVSTATS and smooth the data using DPC hydraulic evaluation methodology.

#### Comparative Analysis

- A) Create a spreadsheet that directly compares existing and proposed PVSTATS outputs.
- B) Determine if Charles Lane Pond is detached from the 100-year floodplain or a part of it.
- C) Create a new map showing the floodplain information.

#### **Task 3 – Permitting Revisions/Variance Assistance**

ERA will revise the DuPage County permit submittal to show that the proposed improvements will be a regional watershed benefit. The resubmittal will go through the detention and floodplain section codes one by one to demonstrate how the design meets the ordinance requirements or why a variance should be supported.

**Task 4 – FEQ Related Design Revisions**

ERA will incorporate the additional design recommended by the FEQ analysis into the final plans. It is assumed that this will include some combination of berm revisions, overflow revisions, culvert addition through the berm, outfall improvements, control structure improvements, etc.

**BUDGET**

TASK No.	WORK DESCRIPTION	HOURS	WEIGHTED HOURLY RATE	FEE	% OF GRAND TOTAL
1	Additional Progress and Permitting Meetings	8	\$180	\$1,400.00	3.02%
2	FEQ Modeling Results Analysis and Documentation	220	\$146	\$32,000.00	68.97%
3	Permitting Revisions/Variance Assistance	36	\$154	\$5,600.00	12.07%
4	FEQ Related Design Revisions	58	\$127	\$7,400.00	15.95%
<b>TOTALS</b>		<b>322</b>	<b>\$159.99</b>	<b>\$46,400.00</b>	<b>100%</b>

By: Engineering Resource Associates, Inc.

Marty Michalisko

Principal



4/03/2024

Name

Title

Signature

Date

Agreement to perform the services is hereby granted under the terms and conditions set forth in the contract (contract document number SS 18 01) accepted on March 3, 2022 by the Village of Lombard President and Board of Trustees. I acknowledge the above and authorize ERA to proceed with the change of work as described above.

By: Village of Lombard, Illinois

Client

Authorized Name

Title

Signature

Date