

LETTER OF AGREEMENT  
BETWEEN THE DEPARTMENT OF THE ARMY  
AND  
CITY OF FORT WORTH  
FOR  
FLOODPLAIN MANAGEMENT SERVICES  
Base Flood Elevations for selected Fort Worth Floodway Sumps

THIS LETTER OF AGREEMENT is entered into this \_\_\_\_ day of \_\_\_\_\_, 2016, by and between the Department of the Army (hereinafter called the "Government"), represented by the U.S. Army Engineer, Southwestern Division, and the City of Fort Worth (hereinafter called the "Non-Federal Sponsor"), represented by the Assistant City Manager, Jesus J. Chapa, collectively referred to as the "Parties."

WITNESSETH, THAT:

WHEREAS, Section 206 of the Flood Control Act of 1960, 33 U.S.C. § 709a (as amended) authorizes the Secretary of the Army, acting through the Chief of Engineers, to compile and disseminate information on floods and flood damages and to provide engineering advice in planning to ameliorate the flood hazard to Federal and non-Federal interests, referred to as the "Flood Plain Management Services Program;" and to collect from Federal agencies and private persons fees for the purpose of recovering the cost of providing the requested services and to accept funds voluntarily contributed by state, regional, or local governments for the purpose of expanding the scope of the services requested by the entities; and

WHEREAS, the Government and the Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate with the terms of this Letter of Agreement ("LOA").

NOW, THEREFORE, the Parties agree to the following:

1. The Government, using funds contributed by the Non-Federal Sponsor, shall use its best efforts to expeditiously complete the Base Flood Elevations for selected Fort Worth Floodway Sumps ("Floodplain Services") in compliance with the Scope of Work attached as Exhibit A, in conformity with applicable federal laws and regulations, and mutually acceptable standards of engineering practice.
2. The total cost of the Floodplain Services estimated for this LOA is \$100,000. As of the effective date of this LOA, \$0.00 of Federal funds is currently projected to be available for the Floodplain Services. The total cost to the Non-Federal Sponsor is limited to \$100,000. The Non-Federal Sponsor shall voluntarily contribute in cash 100 percent of the estimated costs of the Floodplain Services; provided that the Government shall not obligate any cash contribution by the Non-Federal Sponsor toward costs of the Floodplain Services until such cash contribution has actually been made available to it by the Non-Federal Sponsor.

3. Within thirty (30) days after the effective date of this LOA, the Non-Federal Sponsor agrees to provide a cashier or certified check(s) or an Electronic Funds Transfer in accordance with procedures established by the Government in the amount of \$100,000. Payments shall be made payable to FOA, USAED, Fort Worth District. No Floodplain Services shall be commenced until payment in the full amount of \$100,000 is received. Payments by the Non-Federal Sponsor may be sent to “FAO, USAED, Fort Worth District” to the US Army Corps of Engineers Finance Center, CEFC-AD-C-EROC M2, 5722 Integrity Drive, Millington, TN 38054-5005, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

4. No later than 120 days after the LOA is executed, and quarterly thereafter for as long as this agreement remains in effect, the Government will provide the Non-Federal Sponsor with an updated budget estimate of costs, including any proposed changes in the level of staffing. The Government’s budget estimate, which is included in the Scope of Work attached as Exhibit A and incorporated herein by reference, will be revised quarterly to reflect estimated costs by mutual agreement of the Parties without necessitating a formal revision or amendment to this LOA; provided, the revisions do not result in an increase in the total funding amount specified in paragraph 2.

5. If at any time the Government forecasts its actual costs for providing the agreed upon level of service will exceed the amount of funds available, the Government will promptly notify the Non-Federal Sponsor of the additional funds needed to complete the work under this LOA. The Non-Federal Sponsor will either initiate an amendment to this LOA to increase the funding amount, agree to a reduced level of service, or direct termination of work under this LOA pursuant to paragraph 8.

6. The Government will carry over any unobligated funds from year to year, or will return such unobligated funds if this LOA is terminated.

7. The Government and the Non-Federal sponsor shall keep books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this LOA to the extent and in such detail as will properly reflect total costs for the Floodplain Services. The Government and the Non-Federal Sponsor shall maintain such items for a minimum of three years after completion of services and resolution of any claims and shall make available at their offices at reasonable times such items for inspection and audit by authorized representatives of the Parties to this LOA.

8. Upon thirty (30) days written notice, either Party may terminate or suspend performance of future Floodplain Services without penalty. Upon such notice, the Government will stop performance of the Floodplain Services under the LOA immediately. If the Floodplain Services are terminated, the LOA shall terminate within sixty (60) days after the completion of the final accounting as provided in paragraph 9.

9. Within ninety (90) days upon completion of the Floodplain Services in Exhibit A or notice of early termination of this LOA pursuant to paragraph 8 above, whichever occurs

first, the Government shall prepare a final accounting of the costs of the Floodplain Services, which shall display: (1) funds provided by the Non-Federal Sponsor, and (2) disbursements by the Government of those funds. Within thirty (30) days after the final accounting, the Government shall return to the Non-Federal Sponsor any funds advanced in excess of the actual costs as then known. Such an accounting shall in no way limit the Non-Federal Sponsor's duty in accordance with Paragraph 13 to pay for any costs, such as contract claims or other liability, which may become known after the final accounting.

10. This LOA shall not affect any pre-existing or independent relationships or obligations between the Non-Federal Sponsor and the Government. The provisions of this LOA which require performance after the expiration or termination of this LOA shall remain in force notwithstanding the expiration or termination of this LOA.

11. This LOA and all documents and actions pursuant to it shall be governed by the applicable statutes, regulations, directives, and procedures of the United States. Unless otherwise required by law, all contract work undertaken by the Government shall be governed by applicable Federal regulations, policies, and procedures unless specified otherwise. The authority of the Non-Federal Sponsor to enter into this LOA shall be governed by applicable Texas law.

12. All claims and disputes by third party contractors arising under or relating to contracts awarded by the Government shall be resolved in accordance with Federal law and the terms of the individual contract. The Government shall have dispute resolution authority for these claims; shall be responsible for handling all litigation involving disputes and appeals; and for coordinating with the Department of Justice as appropriate. The Government shall notify the Non-Federal Sponsor of any such litigation and afford the Non-Federal Sponsor an opportunity to review and comment on the litigation proceedings and any resulting settlement negotiations.

13. If liability of any kind is imposed on the United States relating to the Government's provision of goods or services under this LOA, except for liability based upon the Government's or its contractor's negligence or other fault, the Non-Federal Sponsor shall remain responsible as the program component for providing such funds as are necessary to discharge the liability, and all related costs. Notwithstanding the above, this LOA does not confer any liability upon the Non-Federal Sponsor for claims payable by the Government under the Federal Tort Claims Act. Provided further that nothing in this LOA is intended or will be construed to create any rights or remedies for any third party and no third party is intended to be a beneficiary of this LOA.

14. Before any Party to this LOA may bring suit in any court concerning any issues relating to this LOA, such Party must first seek in good faith to resolve the issue through negotiation or other form of non-binding alternate dispute resolution mutually acceptable to the Parties.

15. The Non-Federal Sponsor shall hold and save the Government free from all damages arising from the activities of this LOA, except for damages due to the fault or negligence of the Government or its contractors.

16. In the event that any of the provisions of this LOA are found to be invalid, illegal, or unenforceable by a court of competent jurisdiction, the validity of the remaining provisions shall not in any way be affected or impaired, and the remaining provisions shall continue in effect until the LOA is completed.

17. In the exercise of the Non-Federal Sponsor's rights and obligations under this LOA, the Non-Federal Sponsor agrees to comply with all applicable Federal and State laws and regulations, including Section 601 of Title VI of the Civil Rights Act of 1964 (Pub. L. No. 88-352) and Department of Defense Directive 5500.11 issued pursuant thereto and published in 32 C.F.R. Part 195, as well as Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Government."

18. The Floodplain Services, including any guides, pamphlets, supporting studies, and reports, as well as non-Corps publications furnished by the U.S. Army Corps of Engineers, Headquarters, shall be disseminated or made available to Federal, state, area-wide, and local planning agencies, libraries, universities, clearing houses, and others, as appropriate, and shall not be considered proprietary.

19. The Parties may modify this LOA by written amendment, signed by the Parties.

20. The project manager for the Government is Juli Ansay, who can be reached at (817) 886-1563. The project manager for the Non-Federal Sponsor is Clair Davis, who can be reached at (817) 392-5981. The project manager for either party may be changed by written notice to the other party without necessitating a formal revision or amendment to this LOA. All notices, correspondence, or other documents required by this LOA shall be delivered or mailed to the following addresses:

For the Government:

For the Non-Federal Sponsor:

IN WITNESS WHEREOF, the Parties have executed this LOA that shall become effective upon the date it is signed by the Division Engineer.

BY \_\_\_\_\_  
CALVIN C. HUDSON II  
Colonel, EN  
Commanding

BY \_\_\_\_\_  
Jesus J. Chapa  
Assistant City Manager  
City of Fort Worth

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

CERTIFICATE OF AUTHORITY

I, Douglas W. Black, do hereby certify that I am a Senior Assistant City Attorney of the City of Fort Worth, that the City of Fort Worth is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and the City of Fort Worth in connection with the Base Flood Elevations for selected Fort Worth Floodway Sumps, and to pay damages, if necessary, in the event of the failure to perform in accordance with the terms of this Agreement and that the persons who have executed this Agreement on behalf of the City of Fort Worth have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

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Douglas W. Black  
Senior Assistant City Attorney  
City of Fort Worth

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

\_\_\_\_\_  
Jesus J. Chapa  
Assistant City Manager  
City of Fort Worth

DATE: \_\_\_\_\_

## EXHIBIT A

### SCOPE OF WORK

**BLUF:** This analysis will benefit USACE, the Tarrant Regional Water District (local sponsor), and the City of Fort Worth (jurisdictional entity) in maintaining a safe environment for the Fort Worth Floodway. A better understanding of where encroachments and development have occurred will be gained. Base Flood Elevations will be determined so that encroachments in the sump areas will be regulated as part of the Flood Insurance Program in the future.

#### **Purpose**

The purpose of this work is to develop new Base Flood Elevations (BFEs) for selected sumps in the city of Fort Worth, TX. This information will be used to update floodplain maps of the sumps and submit that information to the Federal Emergency Management Agency (FEMA).

#### **Background**

The Fort Worth Floodway is a system of levees constructed by the US Army Corps of Engineers Fort Worth District (FWD) in the early 1950's. As a part of this construction, sumps were constructed for local interior drainage behind the levees. Tarrant Regional Water District (TRWD) is the levee sponsor and operates and maintains the levees and sumps. Along with the FWD, the TRWD performs inspections and evaluates the levees for performance according to the latest USACE criteria. The sumps to be studied as part of this work plan are all located within the city of Fort Worth. The Dallas – Fort Worth metropolitan area has experienced rapid growth and population is currently projected to double from 6.5 million to 13 million by the year 2060. Encroachment of development is a significant problem in the vicinity of the sumps and the current FEMA Flood Insurance Rate Maps do not have Base Flood Elevations (BFEs), rather the sumps are mapped as Zone A (approximate). These encroachments into the sump areas are a threat to safe operation of the levee system. Information from this study will be used to determine BFEs for the sumps.



## Proposed Analysis

Analysis will be performed for selected sumps in the City of Fort Worth. The sumps are listed in priority order below.

- Crestwood (11W, 13W)
- Howards Branch (18C)
- Brookside Annex (10W, 12W)
- Greenway Addition (28, 29, 30)
- Waterworks Levee (19C, 20C, 21C)
- Remaining Clear Fork sumps (17C, 22C, 23C, 24C)
- Remaining West Fork sumps (1W, 2W, 3W, 4W, 5W, 6W, 7W, 8W, 9W)
- Bailey Industrial (16W, 25C)
- Sump 26
- Sump 31

The City of Fort Worth will provide topographic mapping developed by the Texas Water Development Board. This mapping is commonly referred to as TNRIS lidar mapping and the mapping used for this study will be circa 2009 or later if available to the City. The City of Fort Worth will also provide the engineering plans for the storm drainage system in the various sumps. Operating plans for the sluice gates will be obtained from TRWD if not readily available in the FWD files.

Hydrologic modeling for the sumps will be done using HEC-Hydrologic Modeling System (HEC-HMS) and a full range of annual exceedance probabilities will be analyzed including the 50%, 20%, 10%, 4%, 2%, 1%, and 0.2% annual chance exceedance (ACE) which correspond to the 2, 5, 10, 25, 50, 100 and 500 year flood events. Drainage areas will be delineated based on storm drain systems which convey runoff directly to the sump areas and for drainage areas that produce overflow into the sumps. Rainfall depths will be derived from Technical Paper 40 and Hydro 35. Snyder's unit hydrograph methodology, with SWF regional adaptations will be used.

In order to properly assess the capacity of the existing storm drain outfalls to the river, coincident river tailwater elevations will be established. The establishment of the appropriate riverine tailwater elevations relative in time to the periods of passage of sump inflows through the sluice structures is important in understanding how the tailwater elevation affects both the starting point at which stored flood waters can begin to be at least partially drained as well as the effectiveness with which outflow can be passed for a given differential head. The CDC/CWMS hydraulic model for the

Clear Fork and West Fork of the Trinity River run as an unsteady model will be used.

## **Deliverables**

The deliverables for this study will be:

- Geo-referenced hydrologic model with discharges developed for the 50%, 20%, 10%, 4%, 2%, 1% and 0.2% ACE events
- Geo-referenced floodplain delineations for the 1% and 0.2% ACE events
- Base Flood Elevations for the 1% ACE event

These deliverables will be used to update the FEMA Flood Insurance Rate Maps for each of the sumps studied.

## **Study Costs**

The cost to obtain and set up the TNRIS lidar data is a one-time cost and is estimated at \$1000. The cost per sump study is approximately \$20,000. The following five sump groups will be analyzed for a total cost \$100,000:

- Crestwood (11W, 13W)
- Howards Branch (18C)
- Brookside Annex (10W, 12W)
- Greenway Addition (28, 29, 30)
- Waterworks Levee (19C, 20C, 21C)

If additional funds become available, additional sumps will be studied at a cost of \$20,000 per sump study as shown in the following priority order:

- Remaining Clear Fork sumps (17C, 22C, 23C, 24C)
- Remaining West Fork sumps (1W, 2W, 3W, 4W, 5W, 6W, 7W, 8W, 9W)
- Bailey Industrial (16W, 25C)
- Sump 26
- Sump 31