



City of Austin, Texas
Federal Emergency Management Agency
Cooperating Technical Community
Mapping Activity Statement

Agreement No. 1- Digital Base Map Data Sharing

In accordance with the Cooperating Technical Community (CTC) Memorandum of Agreement dated May 23, 2000 between the City of Austin, Texas and the Federal Emergency Management Agency (FEMA), Agreement No. 1 is as follows:

- 1. Objective and Scope:** The objective of this Mapping Activity is the sharing of locally prepared digital base map data for use in preparing Digital Flood Insurance Rate Maps (DFIRMs). The digital base map data will meet FEMA's base map standards. be provided in a format compatible with FEMA's DFIRM specifications, and be available for distribution to the public.

FEMA's base map standards include standards for planimetric information in vector format, as well as provision for raster data such as digital orthophotos. FEMA encourages communities that have not already developed digital base map data to consider partnering with the U.S. Geological Survey (USGS) or other entities for the development of Digital Orthophoto Quarter Quadrangles (DOQs).

This Mapping Activity is for the sharing of digital base map data for the City of Austin and all or parts of the surrounding communities of City of Westlake Hills, City of Sunset Valley, Village of San Leanna, City of Cedar Park, City of Round Rock, City of Pflugerville, City of Manor, and Travis County, Texas.

- 2. Period of Performance:** This Mapping Activity will begin on September 30, 2000 and end no later than September 30, 2001. This Mapping Activity may be terminated at the option of FEMA or City of Austin in accordance with the provisions of the May 23, 2000 CTC Memorandum of Agreement.
- 3. Funding/Cost-Sharing:** This activity will be funded by City of Austin, Texas; FEMA funding will not be provided for this activity.
- 4. Standards:** The following documents are relevant to the creation of DFIRMs and this Mapping Activity:
 - *Guidelines and Specifications for Study Contractors* (FEMA 37) available via the internet at http://www.fema.gov/mit/tsd/EN_reg.htm.
 - *Base Map Standards for DFIRMs* (FEMA). This document provides minimum base map standards for DFIRMs. These include the following requirements for DFIRM base map data:
 - cover the community(s) or county(s) completely;
 - be distributable by FEMA to the public;

- meet the minimum accuracy requirements outlined in the document; and
- include all required features.

- *Digital Flood Insurance Rate Map (DFIRM) Specifications*. (FEMA is in the process of developing specifications for its new DFIRM product. Once those specifications are complete, they will apply to this Mapping Activity.) This document will provide information about graphic specifications for hardcopy DFIRM products as well as minimum standards for the DFIRM database that accompanies the mapping files.
- *Standards for Digital Orthophotos* (U.S. Geological Survey, National Mapping Program, December 1996).
- *Content Standards for Digital Geospatial Metadata* (Federal Geographic Data Committee, 1998).

5. Products: City of Austin shall make available the following products:

- Digital base map files in one of the GIS file formats specified in FEMA's *Base Map Standards for DFIRMs*.
- Database files for the layers included in the digital base map in one of the database formats specified in FEMA's *Digital Flood Insurance Rate Map (DFIRM) Specifications*. These files should also be provided on CD-ROM.
- A completed Checklist Template provided by FEMA (to be developed). This checklist will contain basic information about the base map data.
- Metadata files describing the digital base map data will be provided. These files will include the required information and follow the examples shown in FEMA's *Digital Flood Insurance Rate Map (DFIRM) Specifications*.
- Certification that the base map data meet FEMA's minimum standards and specifications.
- Other products specified in Attachment J, Summary of Deliverables and Schedule of Tasks.

6. Schedule and Milestones: Upon completion, final products will be provided to the FEMA Project Officer in accordance with the period of performance defined in Section 2 of this Mapping Activity Statement.

7. Certification: The digital base map data will be accompanied by certification that the digital base map data meet FEMA's minimum standards and specifications. In addition, the metadata files will include a description of the horizontal and vertical accuracy of the digital base map information.

8. Technical Assistance and Resources: General technical and programmatic information can be downloaded from FEMA's Flood Hazard Mapping web site (www.fema.gov/mit/tsd). Specific technical and programmatic support may be provided through FEMA's Mapping Coordination Contractor (MCC); such assistance should be requested through the FEMA Project Officer specified in Section 12 of this Mapping Activity Statement and may include:

- Preparation of a DFIRM panel layout and panel grid in electronic format;
- Example DFIRM mapping and database files;

- Technical assistance in the form of training and technical guidance; and
- DFIRM production tools, software, cell libraries, automated QA/QC tools, etc., that FEMA has developed for its own use.

9. Subcontractors: City of Austin may procure and manage professional consultant services to assist with preparation of digital base maps.

10. Quality Assurance/Quality Control (QA/QC) Procedures: FEMA encourages its CTC partners to perform internal QA/QC on their digital base map data before sharing those data with FEMA. Examples of recommended QA/QC review items include the following:

- Complete data capture of base map features.
- Horizontal and vertical accuracy.
- Topological fidelity of vector files. This includes reviews for overshoots or dangles, gaps, node errors, label errors, pseudo nodes, and closed area features.
- Edgematching.
- Complete data capture of all appropriate spatial database attributes. Logical data encoding checks should be performed to assure consistency within the base map database.

11. Reporting: City of Austin will report activities pursuant to this Mapping Activities agreement to FEMA on a quarterly basis.

12. Points of Contact: The FEMA Project Officer is Jack B. Quarles, P.E. and the CTC's Project Manager is J. David Walker, P.E., or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities.

Each party has caused this Mapping Activity Statement to be executed by its duly authorized representatives.

CTC Partner's authorized representative

date

FEMA authorized representative

date