Subject: City of Houston Enterprise Geographic Information System	EO 1-9
	Effective Date: Upon Approval

1. BACKGROUND

Over the past two decades, Geographic Information Systems (GIS) have evolved from exotic computing technology to a mainstay of modern engineering, planning and modeling. As the technology has advanced, specialized GIS applications have been developed and variously adopted by individual professional groups to meet their specific needs. Today, GIS technology is scalable to the enterprise level, supporting large organizations with varied applications.

The City Of Houston, like many organizations, has adopted GIS for a host of applications among different departments and at various times. The independent development of Geographic Information System operations has resulted in department-level systems that are managed, staffed and funded differently, incurring unnecessarily high operating costs, creating incompatible data structures and hampering access to enterprise information resources.

The *Enterprise GIS (E-GIS)* concept, as an industry term, includes GIS software products, server/storage systems, network communications and configuration designs. In a complex, multi-function organization, E-GIS also embraces executive sponsorship and collaborative development of implementation strategies, which create the framework for successful deployment. The advantages of Enterprise GIS are many, including lower hardware costs, better utilization of computing and storage capacities, application of universal data standards, improved data transportability, enhanced security and more modest staffing requirements. Perhaps most significantly, enterprise GIS enables organizations, such as governmental entities, to identify and collectively establish the means to most effectively share critical information with each other and to better engage and inform the public.

2. OBJECTIVES

The purpose of this Executive Order is to facilitate the seamless integration of Geographic Information Systems for the City Of Houston. The system will be designed to provide a robust and cost-effective service, with the specific goals of:

- Making critical GIS data transparently accessible across departments;
- Increasing project and issues collaboration among departments;
- Ensuring an IT standards-compliant enterprise GIS;
- Reducing the total cost of ownership for GIS operations;
- Lessening redundancy of labor among departments;
- Integrating workflows into a common operational model;

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- Providing highly effective decision support resources to decision makers;
- Enhancing citizen access to public information;
- Fostering technical innovation in support of local and regional governance;
- Integrating the City's GIS System with other regional entities;
- Identifying uses by regional GIS partners that will benefit the City.

3. SCOPE

This policy directive is applicable to all City of Houston departments and personnel, as it relates to the Geographic Information Systems and related processes. This Executive Order applies to, but is not limited to, the following technology-related functions and tasks: Streamline and standardize the creation and distribution of new address information for COH. Participating departments will contribute to the updates and maintenance with standardized formats.

- Develop uniform data design standards for data interchange that will allow for more efficient utilization of all GIS-related data among COH departments.
- Develop standards for seamless relational database systems for GIS.
- Develop standards to ensure documentation of all citywide GIS data and GIS applications.
- Coordinate and establish a Formal Disaster Recovery Plan for critical GIS data assets.
- Provide centralized GIS software license distribution, with first-line technical support to departments needing assistance.
- Maintain a Core GIS Technical Services Group to support departments requiring assistance.
- Promote integrated regional GIS through coordinated efforts with other agencies within the local arena. Develop and establish City procedures for coordination with other regional entities that develop GIS-based data for purposes of beneficial data sharing and updating.
- Develop and establish new information service delivery tools, such as Web portals and use-specific applications for better service to staff, lawmakers, citizens and industry.
- Develop a review and coordination methodology for all GIS-related software and development contracts. Pursue cost-effective purchasing opportunities for commercial GIS data, of value to COH.
- Identify resource requirements (initial and O & M) for GIS improvements. Coordinate and develop required budget support that conforms with implementation schedules.
- Ensure that citywide GIS improvements are accomplished without service disruptions, or system performance degradation.

4. POLICIES

4.1 Organization

Based on the objectives previously defined within the *Scope* (3), the City of Houston will

develop an integrated GIS network, inclusive of all departments that utilize GIS technologies, either as producers, or as end users. The Planning and Development Deputy Director for GIS, will make policy recommendations to the Governance Committee and provide direction, in the implementation of a collaboratively designed E-GIS. The Planning and Development Department will assemble and maintain a core group of technical professionals to provide specialized, GIS-related technical support, license management, programming services, mapping and analysis services, database management systems, Web-enabled GIS, and application development services at the enterprise level, as well as support to departments needing assistance in these areas. The Core GIS Services Group, in partnership with the City of Houston Information Technology Department, will centrally host enterprise-level GIS application servers, file servers, Internet Map Servers, Storage Area Networks and backup systems.

Each COH department shall retain and bear undivided responsibility for their operating units' production GIS services, including data entry, accuracy, integrity and ownership. Departments may maintain independent asset management, service and emergency response/mobilization systems. With the assistance of the Core GIS Services Group, department-level GIS data of an enterprise nature shall be replicated to the Enterprise-level GIS system for the purposes of enabling interdepartmental access and Disaster Recovery services.

This policy will become effective upon signature of the Mayor. The review of the Policy will be determined by the GIS Governance Committee.

4.2 Committees

Both executive and technical level management will participate in the formulation and evolution of GIS policy and architecture, through two standing committees: the GIS Governance Committee and the GIS Technical Committee.

GIS Governance Committee

The GIS Governance Committee will guide the development of GIS-related resources in a manner that leverages the City's GIS investment into an enterprise decision support system, employing current Best Practices models for GIS.

The Planning and Development Deputy Director for GIS will chair the Governance Committee, which will be comprised of department directors, or their executive level designees, representing each department with either a GIS presence, or a need to utilize GIS data for daily operations. The Committee will define and prioritize issues related to GIS data collection, use and distribution, both within the City and externally. The Committee will consider and may undertake various cooperative projects that involve sharing resources to accomplish mutual goals. The Committee will also review established milestones to measure intermediate success in the achievement of the Executive Order's objectives, as defined in 4.1.

GIS Technical Committee

The GIS Technical Committee will plan and enable GIS technology to support the vision of the Governance Committee.

The Planning and Development Deputy Director will chair the GIS Technical Committee, which will be comprised of senior level technical staff, selected by department directors and/or managers as best qualified to both contribute to, and benefit from, a forum on GIS and related technologies. The Technical Committee will be charged with creating and ensuring compliance with standards for addressing, data types, data formats, universal/unique IDs, metadata and other attributes relevant to data interchange. The

Committee may make recommendations for projects and priorities to the Governance Committee. The GIS Technical Committee will provide guidance regarding responsibility for ensuring that all data destined for the enterprise system meets the established integrity and structure requirements.

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