



Information Technology Group

• Information Technology Group Monthly Activities for April 2025

Summary

This report provides a summary of activities related to the Information Technology Group for April 2025.

Purpose

Informational

Detailed Report

Over time, earthquakes have impacted critical infrastructure, both structural and non-structural, throughout the Southern California region. The consequences of non-structural component failures within some Metropolitan facilities could potentially impact the ability to reliably deliver water to member agencies. Non-structural components of a facility include all elements that are not a part of a building's structural system, including architectural details, mechanical, electrical, and instrumentation equipment, plumbing/process piping systems, and miscellaneous furniture and fixtures.

As part of the Metropolitan's seismic resiliency program, a "rapid evaluation" methodology was developed for these non-structural components with an established goal of assessing potential deficiencies and recommending improvements to address their overall structural integrity and safety performance during and after seismic events. Initially, an observation and hazard checklist form was created to document findings from field investigations, but the paper-based format proved to be inefficient and delayed improvement projects. A request was made to develop a software application that could be utilized by staff in the field on mobile devices and improve the technical workflow.

By creating a GIS application, IT streamlined and optimized the workflow by creating smart forms on a tablet and having a central data repository. The standardized smart forms eliminate the laborious paper-based processes and easily capture data anywhere, on any device, from any location. The application consists of drop-down or pick-list type questions for a more intuitive user experience and uses formula-based fields where survey questions will be based on the previous answers. Survey questions are grouped into four categories:

- Architectural components
- Mechanical, electrical, and process/plumbing components
- Furniture, fixtures, equipment, and content
- Emergency systems

There are over 305 non-structural components with checklist questions in the application. Each component may also be repeated multiple times, as well as have photos or PDF attachments. Submissions are synced in real time and are displayed on a GIS web application to visualize and analyze the data in one place. Since the application's release, the team has received positive feedback from our customers, and this has proven to improve efficiency.

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The image shows a web-based application interface for "Rapid Seismic Evaluation". The interface is organized into several sections:

- Evaluation Information:** This section contains input fields for "Facility Name", "Building Name", and "Observation date" (with a date picker icon). Below these are fields for "Observed by" and "Reference drawing(s)".
- Building Information:** This section includes fields for "Building type", "Year built", "Basement" (with radio buttons for "Yes" and "No"), and "No. of story". It also has fields for "Story height", "Total height", "Approx. plan dimensions" (with a location pin icon), and "Location".
- Observation Form and Hazard Checklist:** This section contains a list of checkboxes:
 - Architectural Components
 - Mechanical, Electrical and Process/Plumbing Components
 - Furnitures, Fixtures & Equipment and Content
 - Emergency Systems
- Mechanical Equipment:** This section is currently collapsed, indicated by a right-pointing arrow.

Photo of the application interface