## Using a Mobile Device to Collect and Retrieve Pre-Plan Information for Fire Emergencies

Abstract: The New Jersey Meadowlands Commission (NJMC) is a regional planning agency that promotes sharing information and resources with District municipalities and assists Meadowlands towns in managing municipal assets and emergency preparedness. The Emergency Response Information Systems (ERIS) is an interactive web based mapping system with a mobile pre-plan App. The mobile application enables emergency responders to record pre-plan information of buildings and critical facilities in their towns using a tablet or a smart phone. During an emergency they can retrieve the information using the same mobile device. The system also allows emergency responders to retrieve and inspect floor plans of buildings and critical facilities from their smart phones and submit wireless incident reports when the emergency is over.



## 1. Capturing Pre-Planning Data

Building information is collected using a mobile device. The data is sent to the server where an authorized emergency official approves all submissions that are posted. Images of buildings can also be uploaded and posted.



FIRE ALARM CONTROL PANI LOCATIONS ADMIN BLD. BEHIND RECEPTION DESK . ENVIRONMENT CENTER BLC SPRINKLER VALVE ROOM

**FACP** Panel

Property Address

Building Address



**General Information** 



Knox Box

PV Solar Energy System Present

Occupancy Type

Roof Type

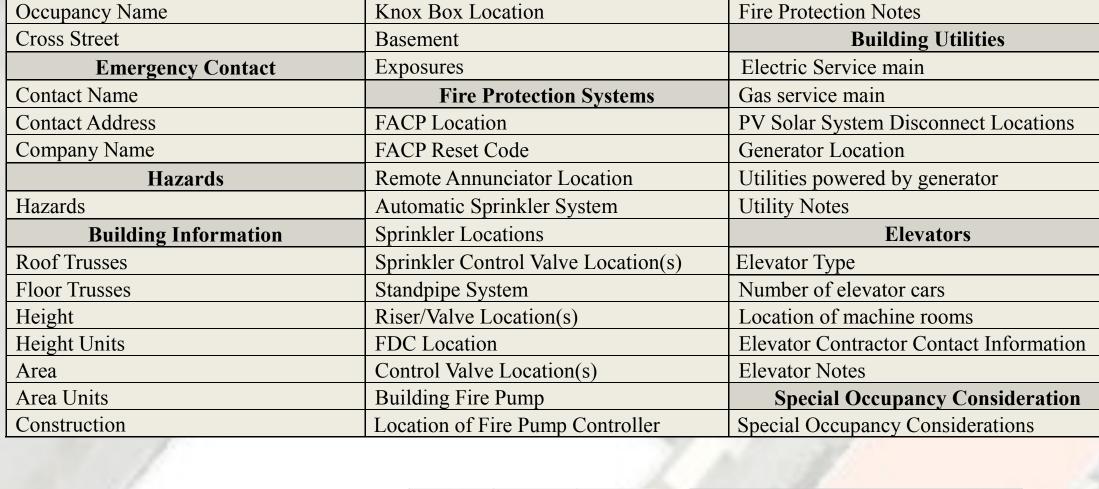
**Data Captured For Pre-Plan** 

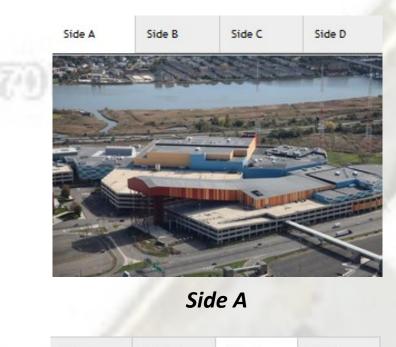




Fire Hydrant

Standpipe System **Roof Truss** Smoke Control System Location(s) served by Smoke Control Location of Smoke System Controller Fire Protection Notes **Building Utilities** 





Side C

The aerials of American Dream shows an example of uploaded

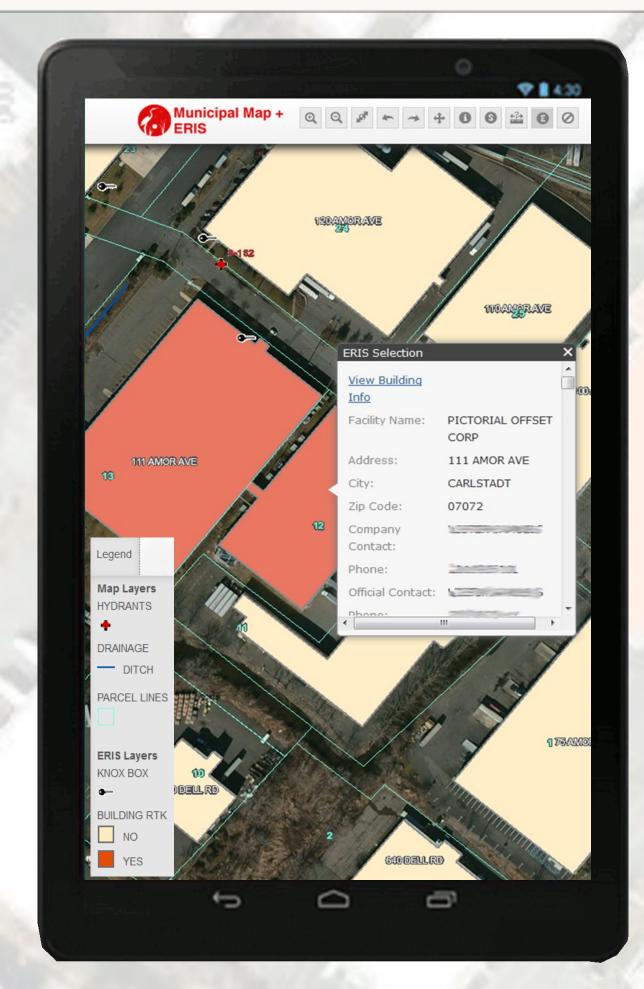




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NEW JERSEY MEADOWLANDS COMMISSION

ERIS is a web application using HTML5 and ESRI JavaScript API to display map information from MERI-GIS ArcGIS server. It is created with a responsive design to be easily displayed on desktop and mobile devices. MERI-GIS uses crowd source building information from emergency responders.







**MERI's SQL Enterprise GIS Database** 

## 2. Accessing Pre-Planning Data

On the scene of a fire, emergency personnel can easily access pre-plan information previously posted. Officials can view fire hydrant location and strategic firefighting infrastructure associated with each building, floor plans, types of hazardous substances and the associated fact sheet.





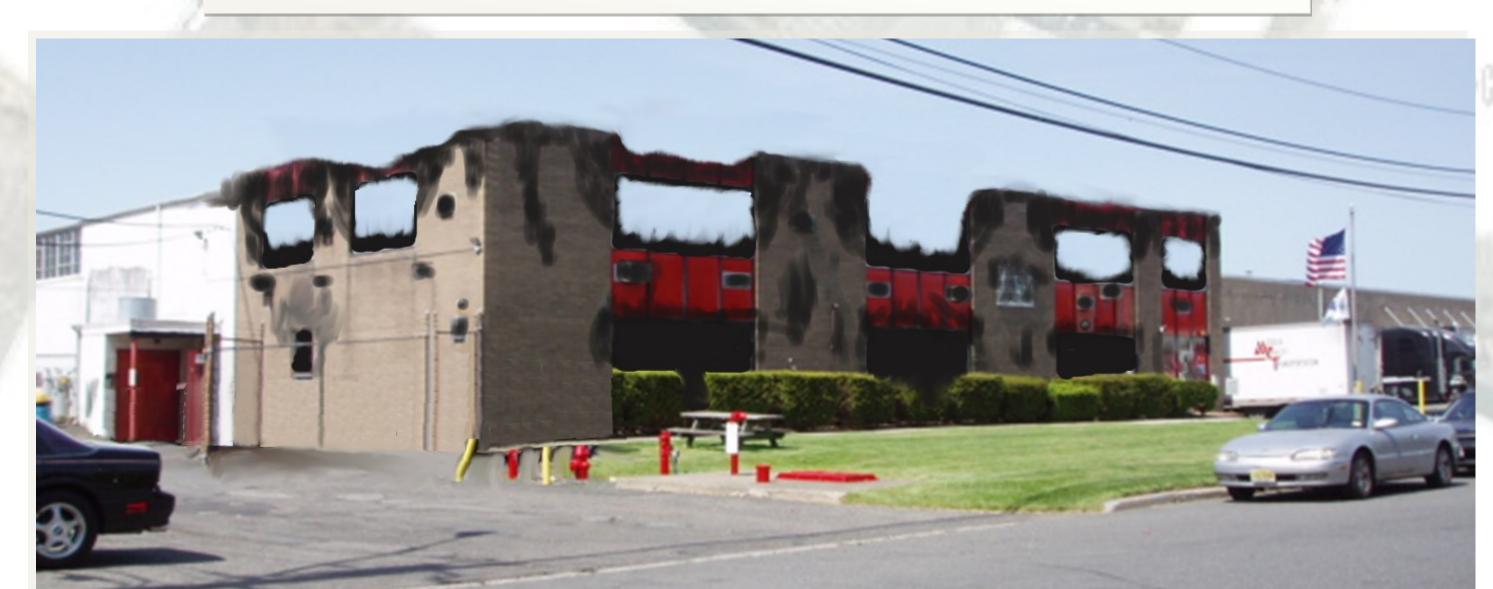
Tablet showing building floor plan.

	Hazardous S			
100	Common Name: PROPANE			
1.34	Synonyms: Dimethylmethane; Propyl Hydride	CAS Number:	74-98-6	
187	Chemical Name: Propane	RTK Substance Number:		
1.5	Date: May 2004 Revision: May 2010	DOT Number:	UN 1978	
	Description and Use	EMERGENCY RESPO	NDERS >>>> SEE	LAST PAG
1 3	Propane is a colorless, odorless gas when pure or it may have	Hazard Summary		
1/2	a faint petroleum-like odor. It is usually shipped as a liquefied gas with a foul-smelling odorant added, and is used as a fuel.	Hazard Rating	NJDOH	NFPA 2
1 4	refrigerant, solvent and serosol propellant.	FLAMMABILITY	- :	4
1.73		REACTIVITY		0
	> 0.00CR THRESHOLD - 20,000 ppm - Code tresholds very greetly. Do not rely on odor alone to determine potentially hazardous exposures.  FLAMMABLE POISONDUS GASES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLICICE IN FIRE Hazard Raino Very Companied. Traidat & Processes Control of the Companied Control of the Companied Control of the Contro			
	<ul> <li>Propane is on the Right to Know Hazardous Substance List because it a bed by OSHA. ACID, HOT, MOSH, LEP, NEPS, and EPA.</li> <li>This Americal is on the Special Health Hazard Substance List.</li> </ul>	<ul> <li>Propane can affect you when inhaled.</li> <li>Contact with (jueded Propane may cause frostble.</li> <li>Exposure to high concentrations of Propane can decrease the amount of Oxygen in the air and cause sufficient with a contact of the propagation of the prop</li></ul>		
	SEE GLOSSARY ON PAGE 5.	Workplace Exposure Limits		mits
	FIRST AID Eve Contact	OSHA: The legal airborne permissible exposure limit (PEL): 1,000 ppm averaged over an 3-hour workshift.  NICSH: The recommended airborne exposure limit (REL) is 1,000 ppm averaged over a 10-hour workshift.		
	Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while flushing. Seek medical attention.			
	Skin Contact  ➤ Immerse affected part in warm water. Seek medical attention.	ACGIH: The threshold limit value (TLV) is 1,000 ppm sveraged over an 8-hour workshift.  Propane decreases the amount of available Oxygen. Routinely measure Oxygen content to make sure it is at let		
	Inhalation  Remove the person from exposure.  Begin rescue breathing (using universal precautions) if	19.5% by volume.		
	breathing has stopped and CPR if heart action has stopped.  Transfer promptly to a medical facility.			
	EMERGENCY NUMBERS			
	Poison Control: 1-800-222-1222			
L-1	CHEMTREC: 1-800-424-9300			
21.0	NJDEP Hotline: 1-877-927-6337 National Response Center: 1-800-424-8802			
	nauvna nesponse Center, 1-000-424-0002			

**Tablet showing hazardous** substance fact sheet.

## 3. Incident Report

Once the emergency is over, officials can submit an incident report via their smart phone or tablet, which populates an incident database accessible only to authorized emergency personnel.



**Incident Report** Responder Name Responder Designation Type of Incident ondition Locations Actions Taken

Location of Command