Tsunami Evacuation Wayshowing Project

Claudine Jaenichen, Chapman University

Cognition / Comprehension

Semiotics

Implementation

Maximum Visibility

Cognition / Comprehension

Theories that effect decision-making

Unconscious personality (subconscious reaction)

Tunnel vision (weakness in problem-solving)

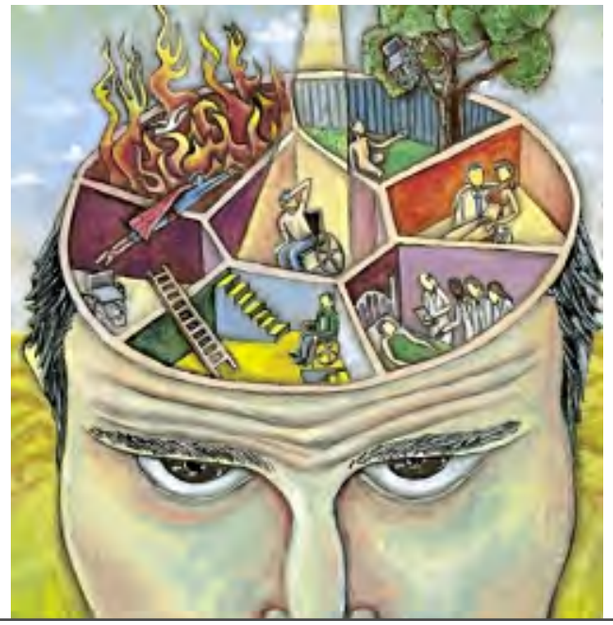
Leader influence (physical presence of authority)

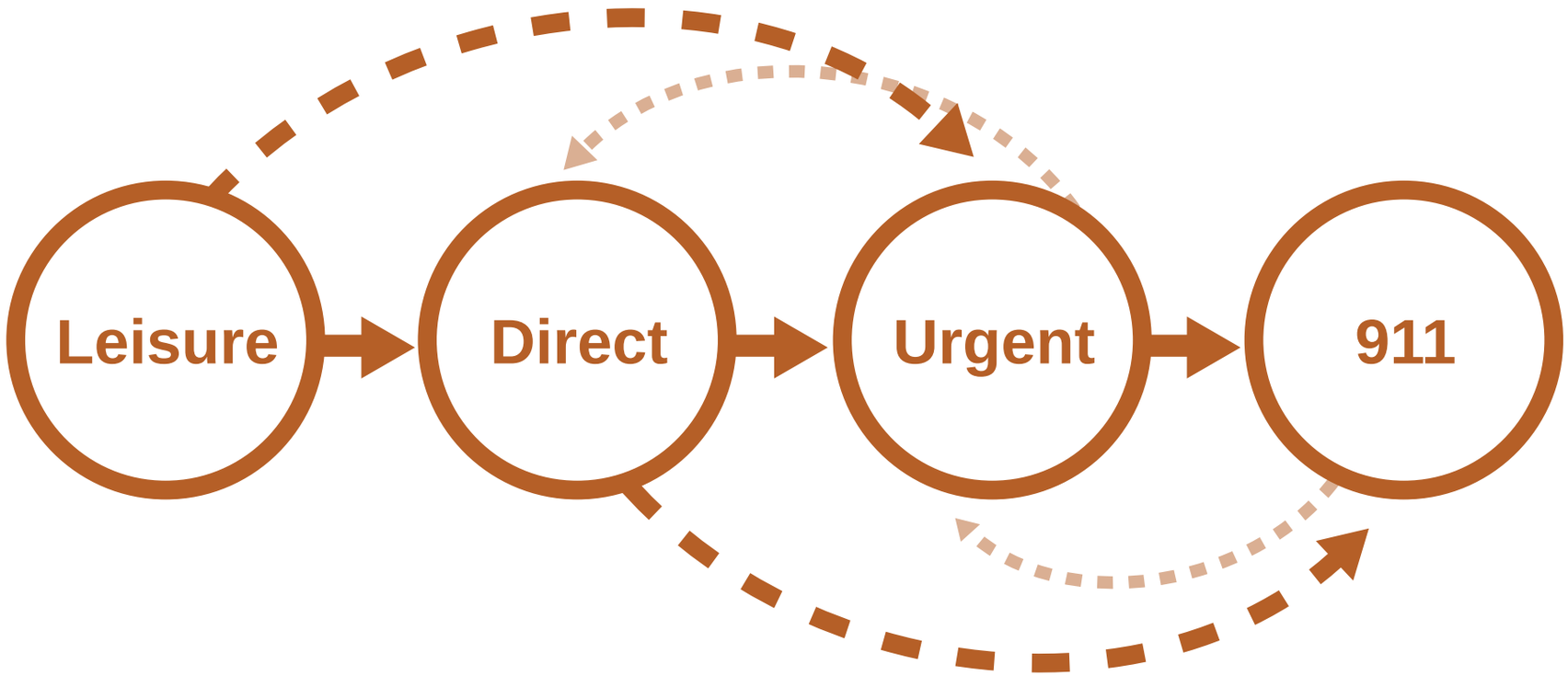
Collective behavior (what the neighbor's are doing)

From *Reactive* to *Preventive*

Environmental influence (wayshowing/signage)

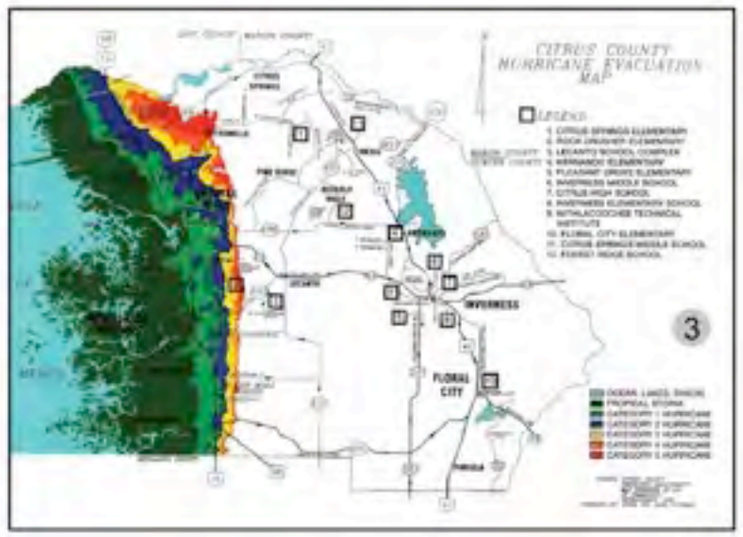
Path knowledge (improving cognitive map

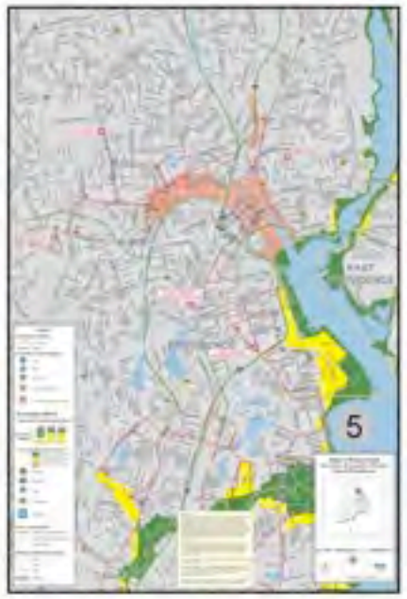



Leisure
Direct
Urgent
911

1

EMERGENCY PLANNING ZONE
(EPZ) Evacuation Routes
2


CITRUS COUNTY
HURRICANE EVACUATION
MAP
LEGEND
INVERNESS
FLORAL CITY
3

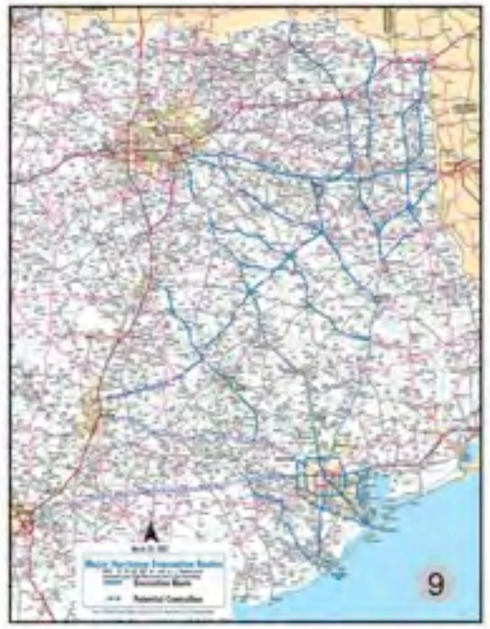

5

4

6

7

8

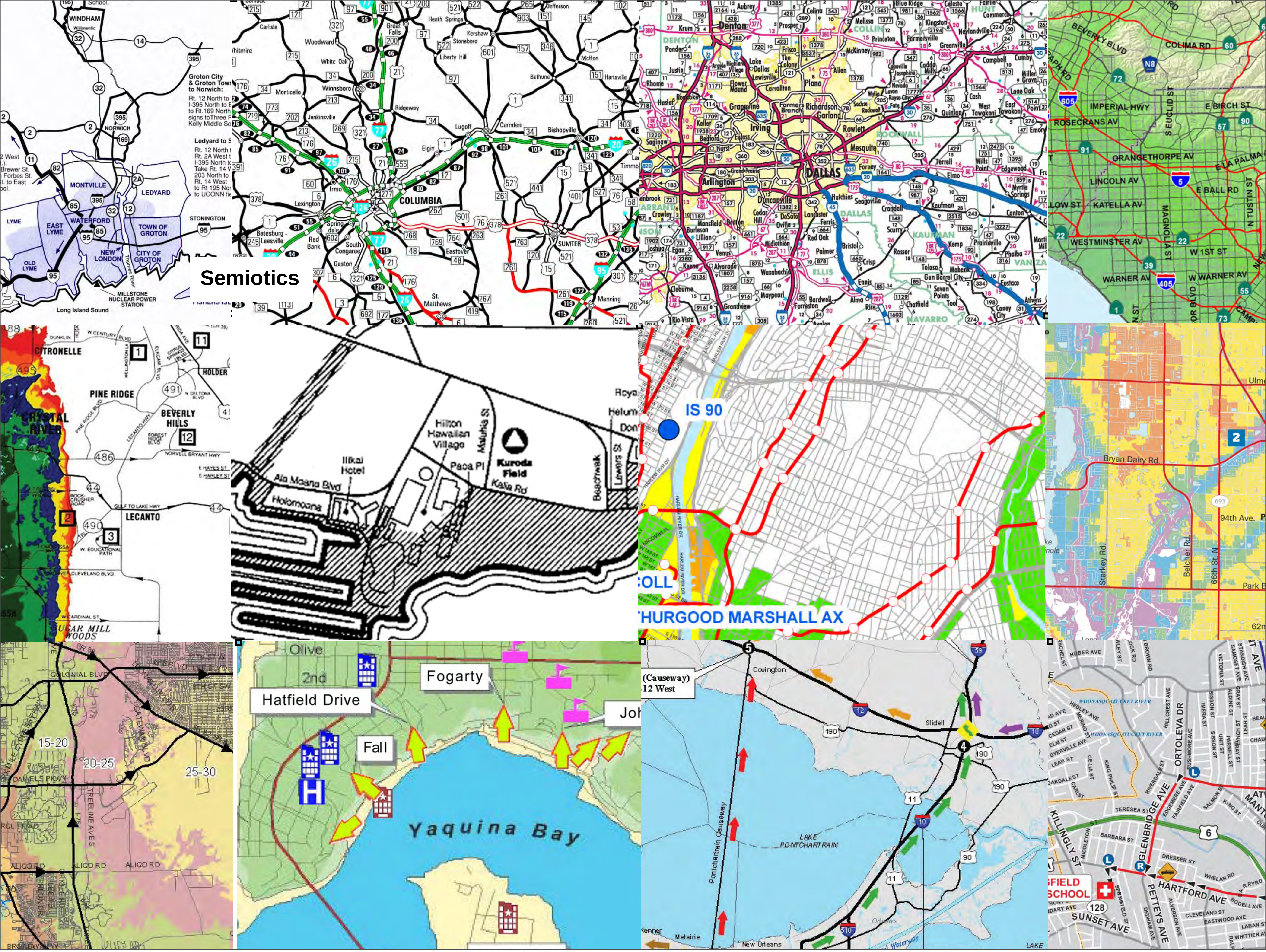

9

Map 1: Waikiki
10

Newport Tsunami Evacuation Map– South
11

Manhattan Hurricane Evacuation Zones
Legend
12
OEM
Hurricane Evacuation Zones

Semiotics



Sunday, December 1, 13

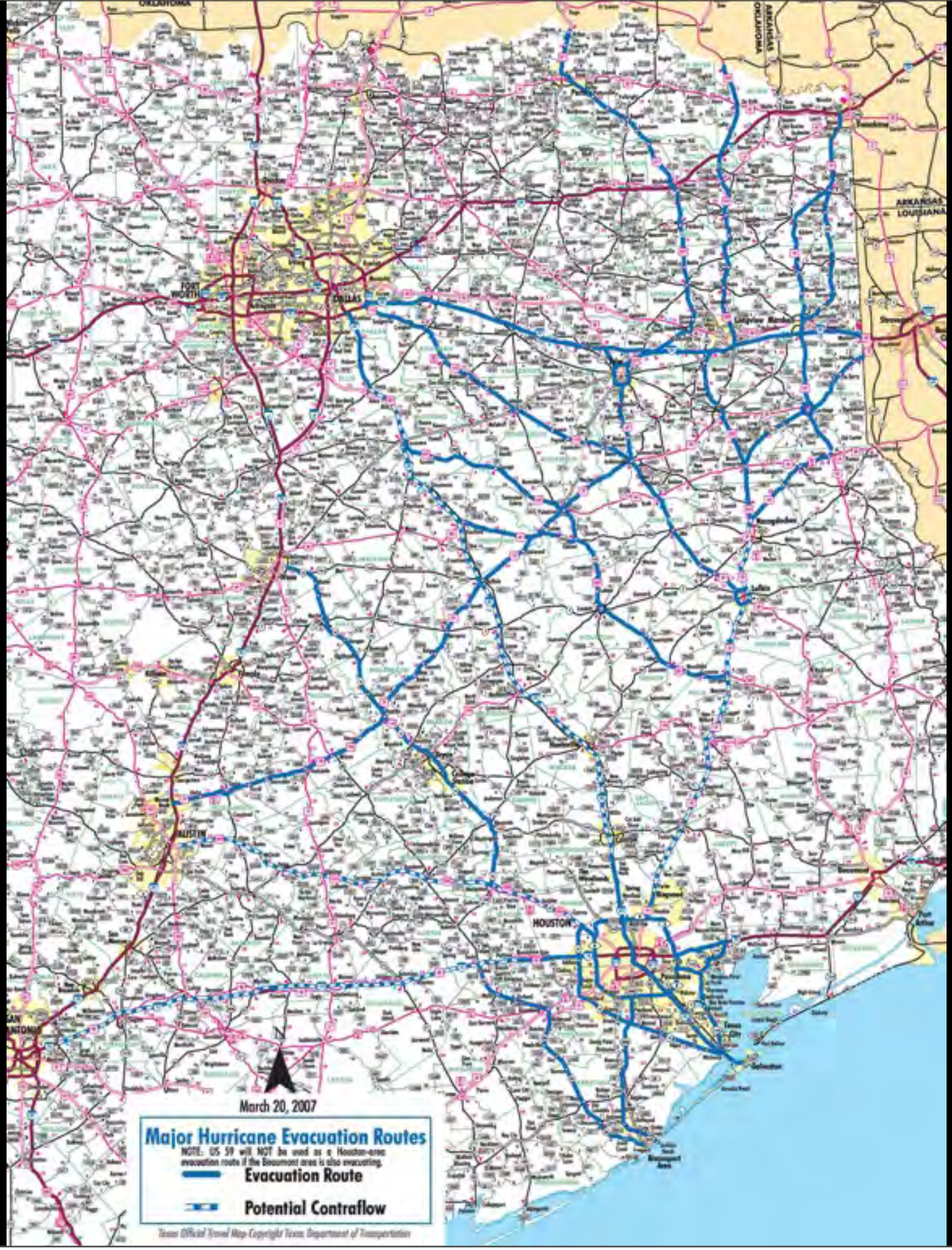
Rules of Legibility

Graphic density

Angular legibility

Length of components

Level of components

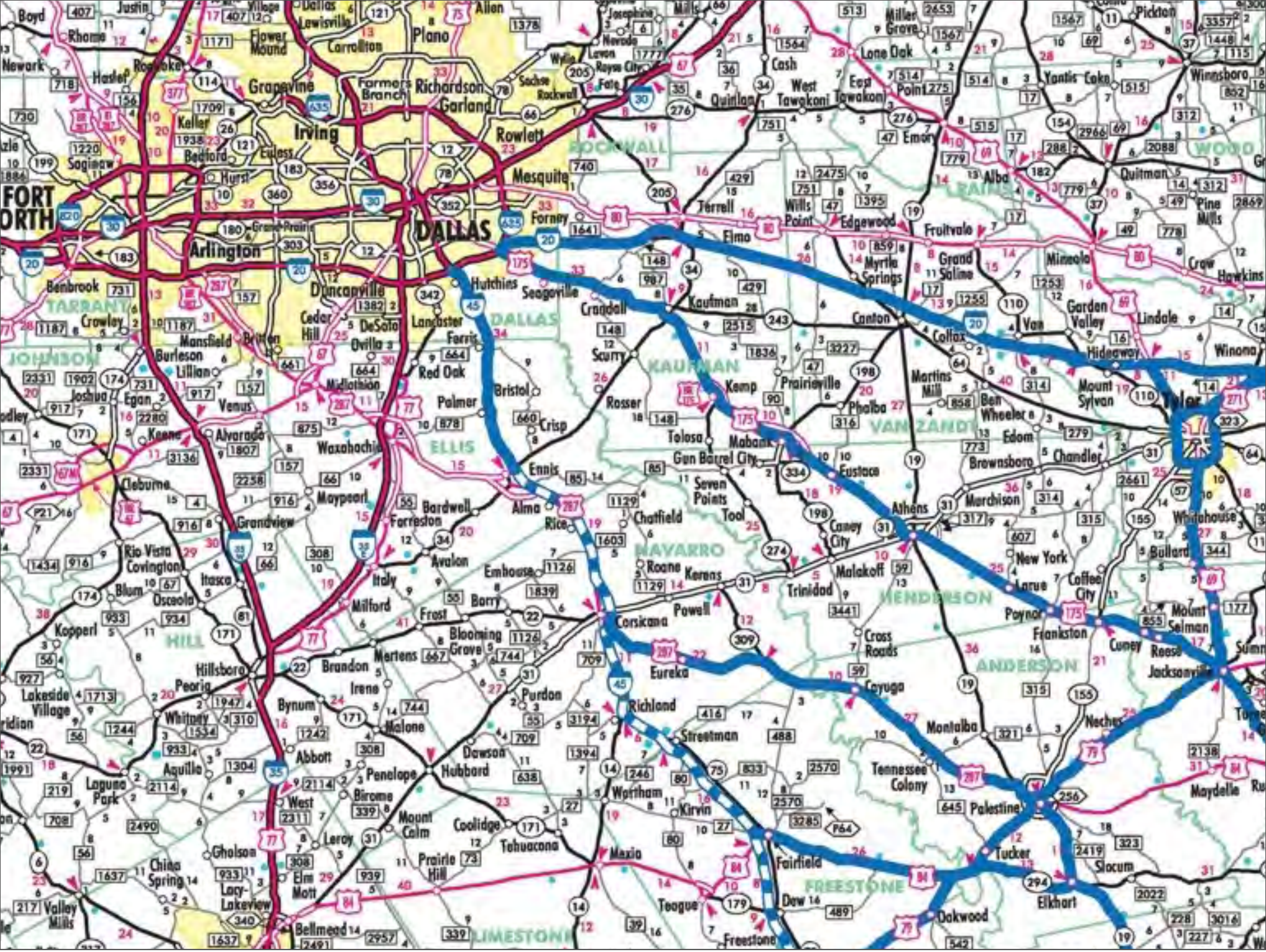


Level of components

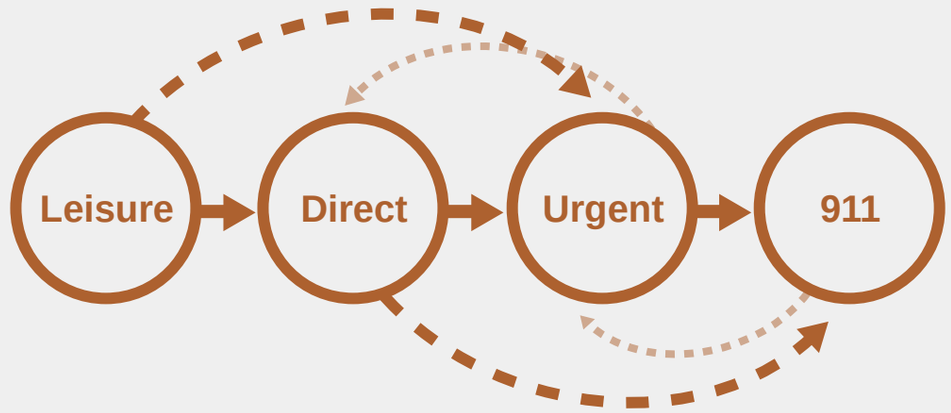
Town of Waterford, Connecticut

South Carolina Department of Transportation

Texas Division of Emergency Management, Houston


FORT WORTH
DALLAS
Arlington
Irving
Grapevine
Keller
Bedford
Euless
Hurst
Grand Prairie
Saginaw
Benbrook
Crowley
Mansfield
Britton
Burleson
Lillian
Joshua
Egan
Venus
Keene
Alvarado
Cleburne
Grandview
Rio Vista
Covington
Blum
Itasca
Osceola
Kopperl
Hillsboro
Peoria
Whitney
Lakeside Village
Laguna Park
Aquilla
Abbott
West
Gholson
China Spring
Lacy-Lakeview
Bellmead
Elm Mott
Leroy
Valley Mills
Boyd
Rhome
Newark
Haslet
Roanoke
Justin
Flower Mound
Lewisville
Carrollton
Farmers Branch
Plano
Allen
Richardson
Garland
Sachse
Rockwall
Wylie
Rowlett
Mesquite
Forney
Duncanville
Cedar Hill
DeSoto
Lancaster
Ovilla
Red Oak
Midlothian
Waxahachie
Maypearl
Forreston
Italy
Milford
Avalon
Bardwell
Ennis
Alma
Rice
Palmer
Ferris
Hutchins
Seagoville
Crandall
Bristol
Crisp
Scurry
Rosser
Kaufman
Terrell
Elmo
Kemp
Mabank
Tolosa
Gun Barrel City
Seven Points
Tool
Chatfield
Emhouse
Corsicana
Barry
Frost
Blooming Grove
Mertens
Brandon
Irene
Bynum
Malone
Purdon
Dawson
Hubbard
Penelope
Birome
Mount Calm
Coolidge
Tehuacana
Prairie Hill
Mexia
Wortham
Richland
Streetman
Kirvin
Teague
Fairfield
Dew
Freestone
Eureka
Powell
Kerens
Roane
Trinidad
Malakoff
Caney City
Eustace
Athens
Murchison
Brownsboro
Chandler
Edom
Ben Wheeler
Martins Mill
Phalba
Prairieville
Canton
Colfax
Van
Mount Sylvan
Hideaway
Tyler
Lindale
Garden Valley
Winona
Whitehouse
Bullard
Mount Selman
Jacksonville
Reese
Cuney
Frankston
Coffee City
Poynor
Larue
New York
Cross Roads
Cayuga
Montalba
Tennessee Colony
Palestine
Neches
Tucker
Elkhart
Slocum
Oakwood
Maydelle
Wills Point
Edgewood
Myrtle Springs
Fruitvale
Grand Saline
Mineola
Hawkins
Crow
Alba
Emory
Quitman
Pine Mills
Winnsboro
Yantis
Coke
Pickton
Lone Oak
Miller Grove
East Tawakoni
West Tawakoni
Point
Cash
Quinlan
Fate
Royse City
Lavon
Nevada
Josephine
TARRANT
JOHNSON
HILL
ELLIS
DALLAS
ROCKWALL
KAUFMAN
NAVARRO
VAN ZANDT
HENDERSON
ANDERSON
FREESTONE
LIMESTONE
RAINS
WOOD

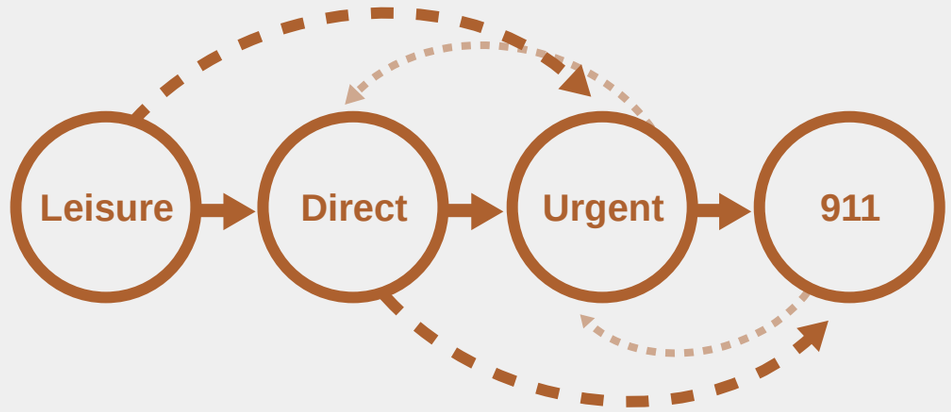
Implementation: Pilot City, Santa Barbara



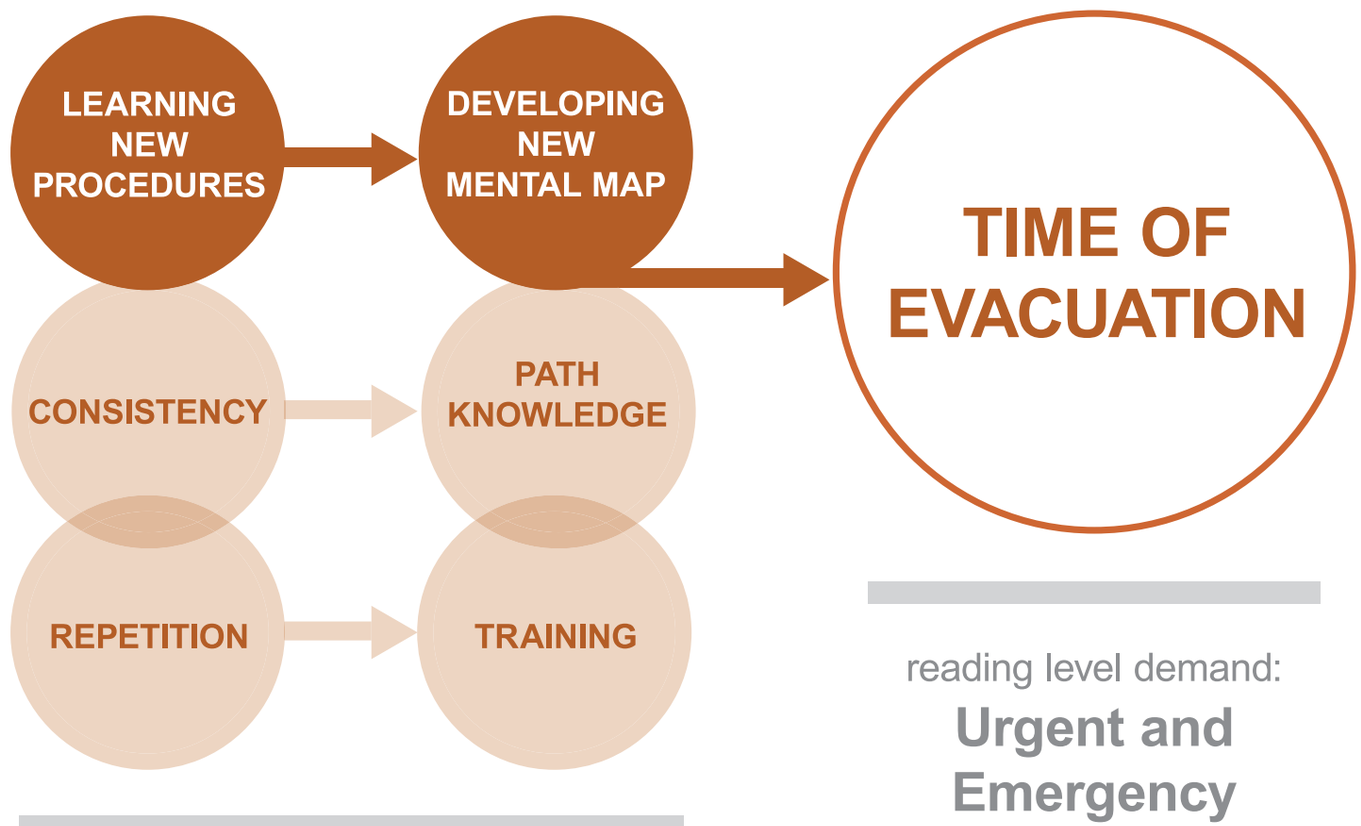
CURRENT MODEL

reading level demand:

Urgent and Emergency



NEW MODEL



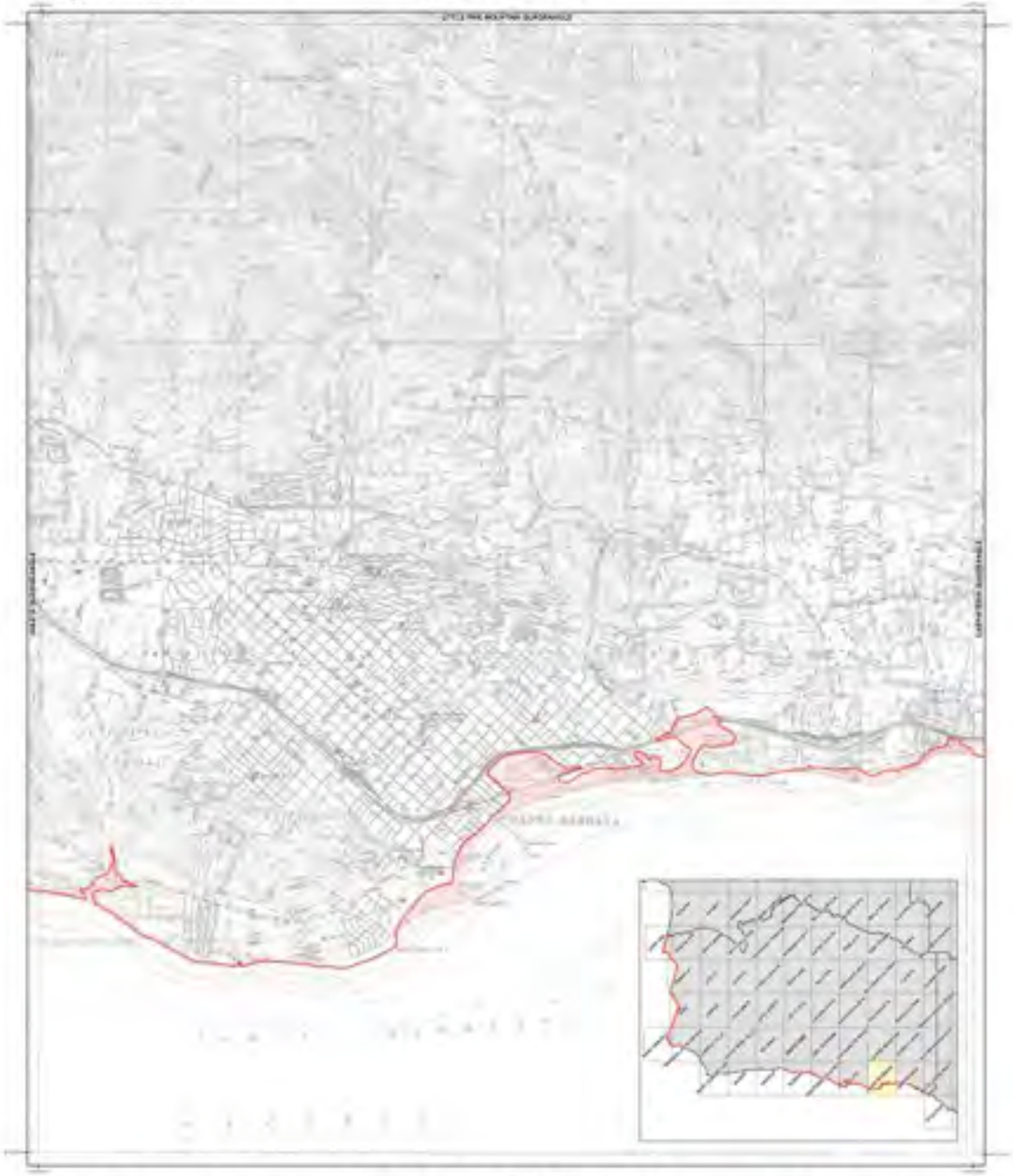
optimal reading levels
for comprehension:
Leisure and Direct

reading level demand:
Urgent and Emergency

California Emergency Management Agency
California Geological Survey
University of Southern California

Tsunami Inundation Map for Emergency Planning
Santa Barbara Quadrangle

State of California
County of Santa Barbara



METHOD OF PREPARATION

TSUNAMI INUNDATION MAP FOR EMERGENCY PLANNING

State of California ~ County of Santa Barbara
SANTA BARBARA QUADRANGLE

January 31, 2009

MAP EXPLANATION

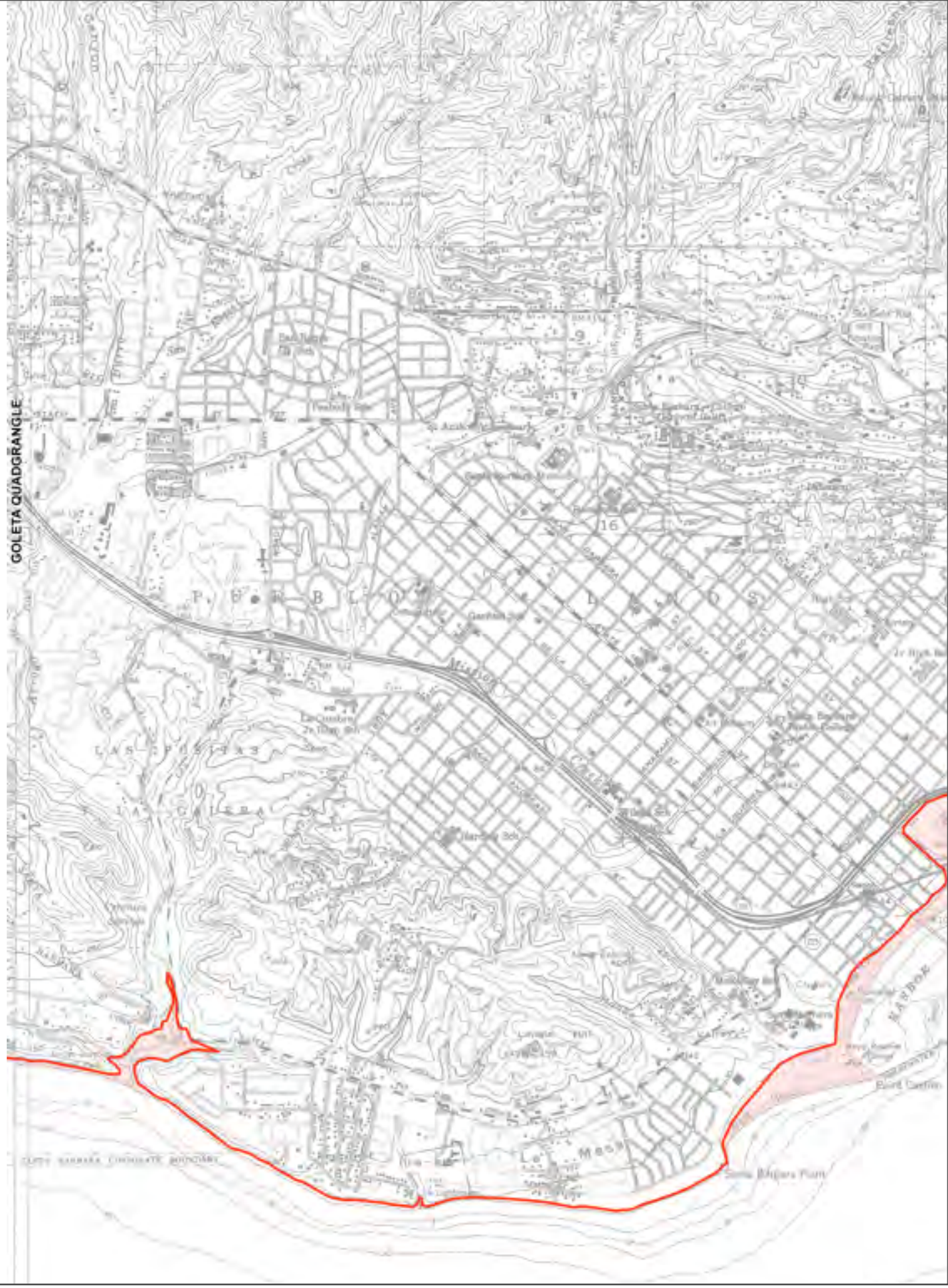
Tsunami Inundation Line

Tsunami Inundation Area

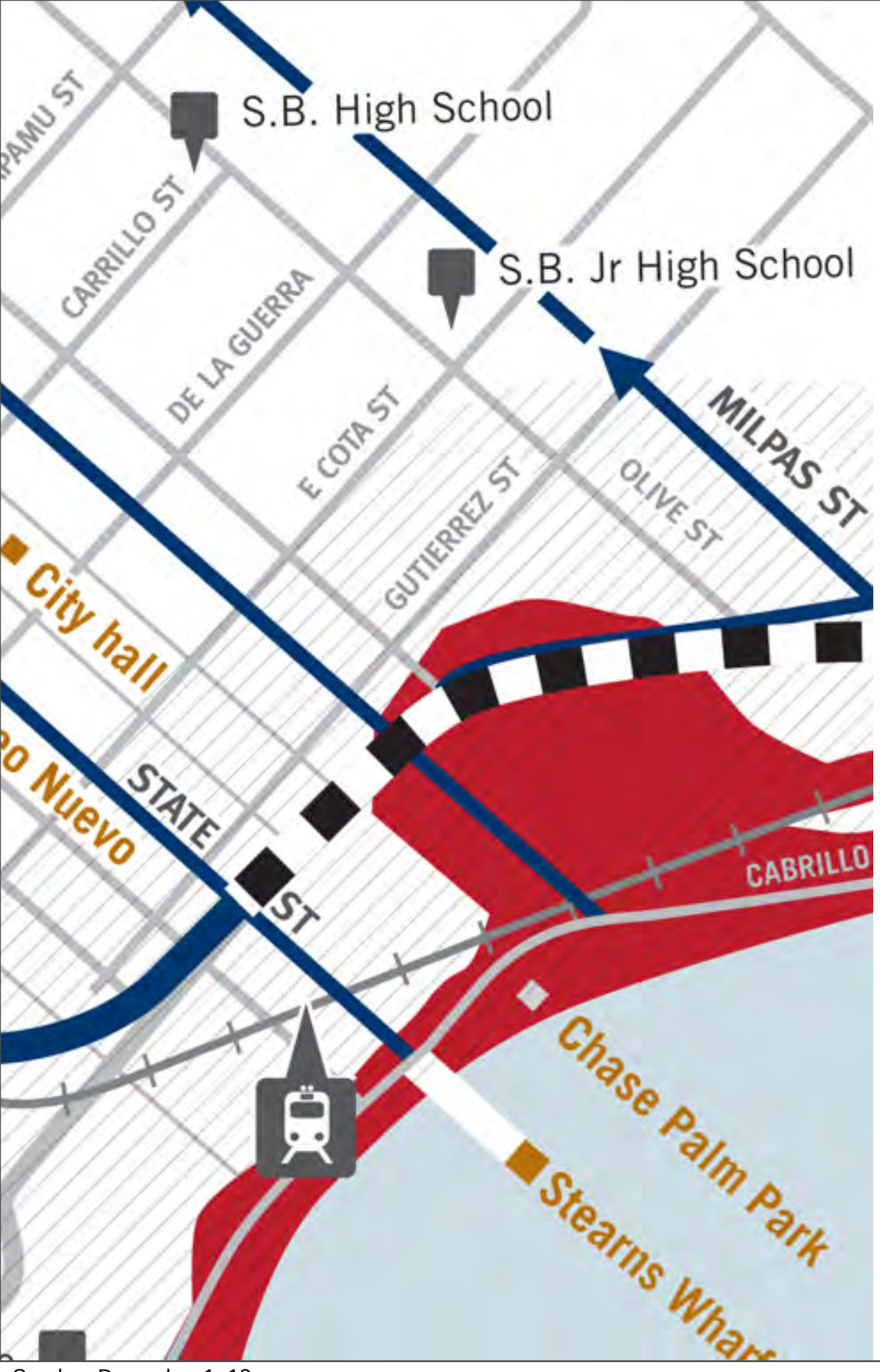
PURPOSE OF THIS MAP

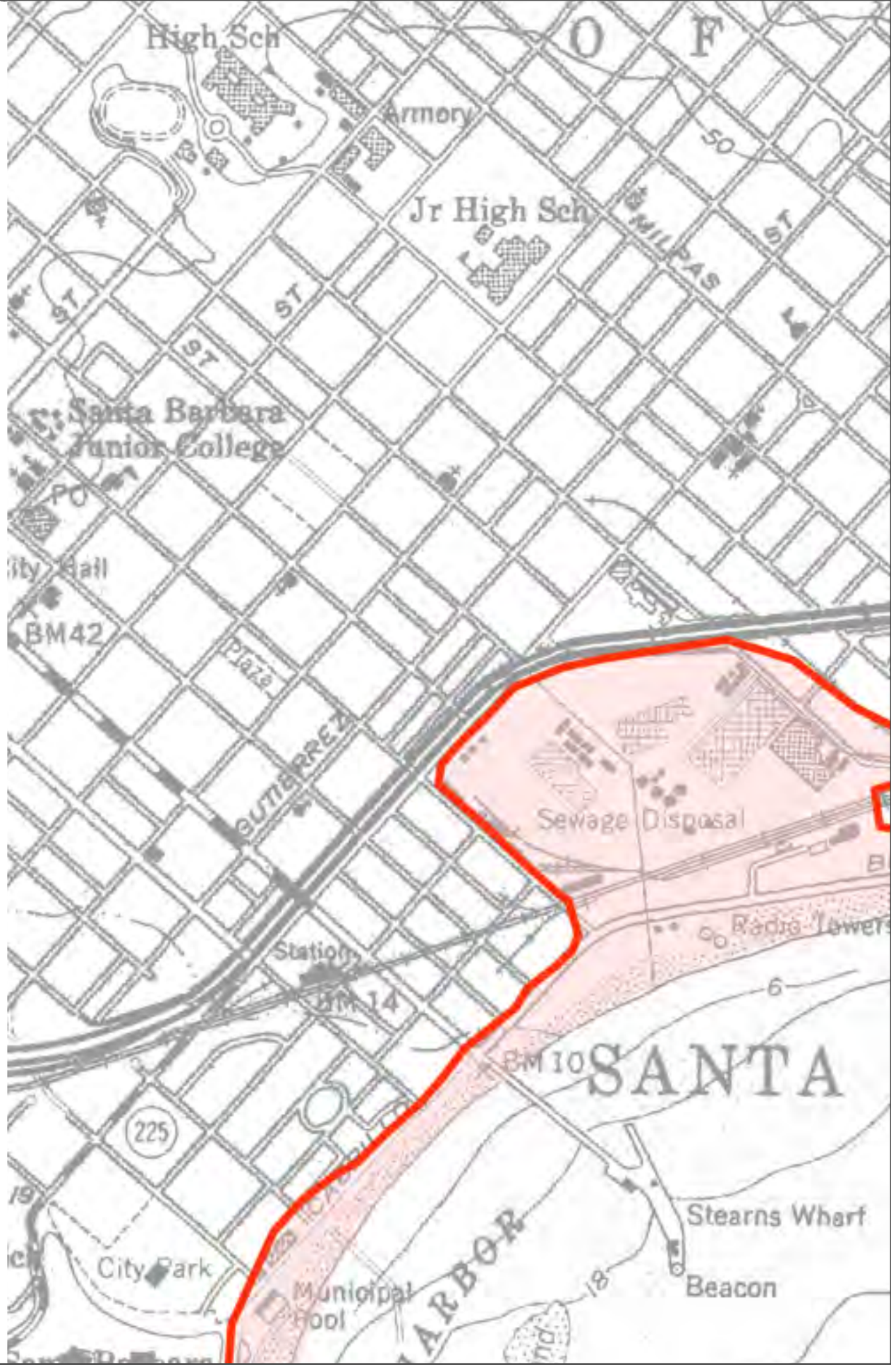
MAP BASE

DISCLAIMER



shorten length of components

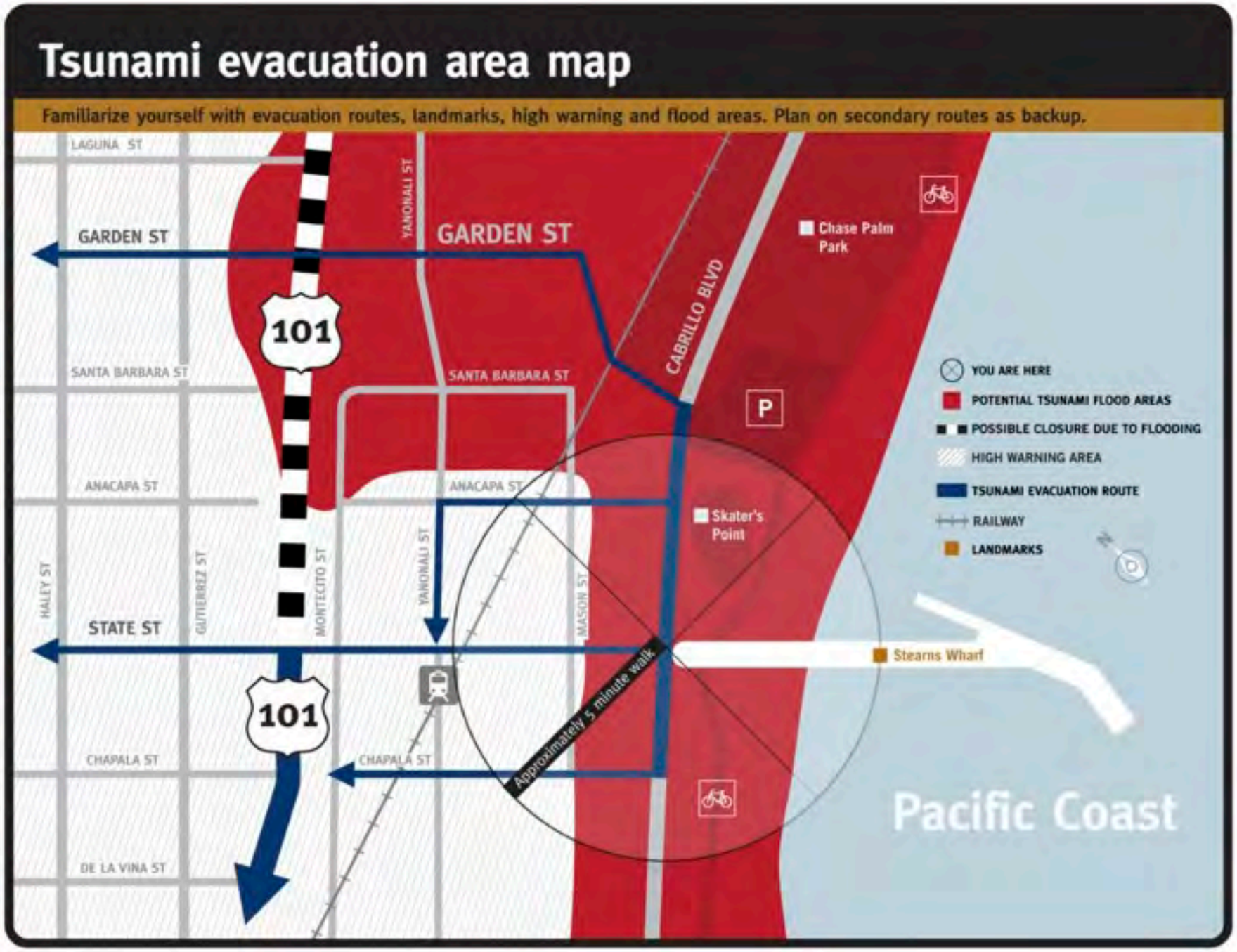

S.B. High School
S.B. Jr High School
PAMU ST
CARRILLO ST
DE LA GUERRA
E COTA ST
GUTIERREZ ST
OLIVE ST
MILPAS ST
City hall
Nuevo
STATE
ST
CABRILLO
Chase Palm Park
Stearns Wharf


High Sch
Armory
Jr High Sch
MILPAS
ST
Santa Barbara
Junior College
PO
City Hall
BM42
Plaza
Sewage Disposal
Radio Towers
Station
BM 14
BM 10
SANTA
225
City Park
Municipal
Pool
HARBOR
Stearns Wharf
Beacon

Tsunami evacuation plan

Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.

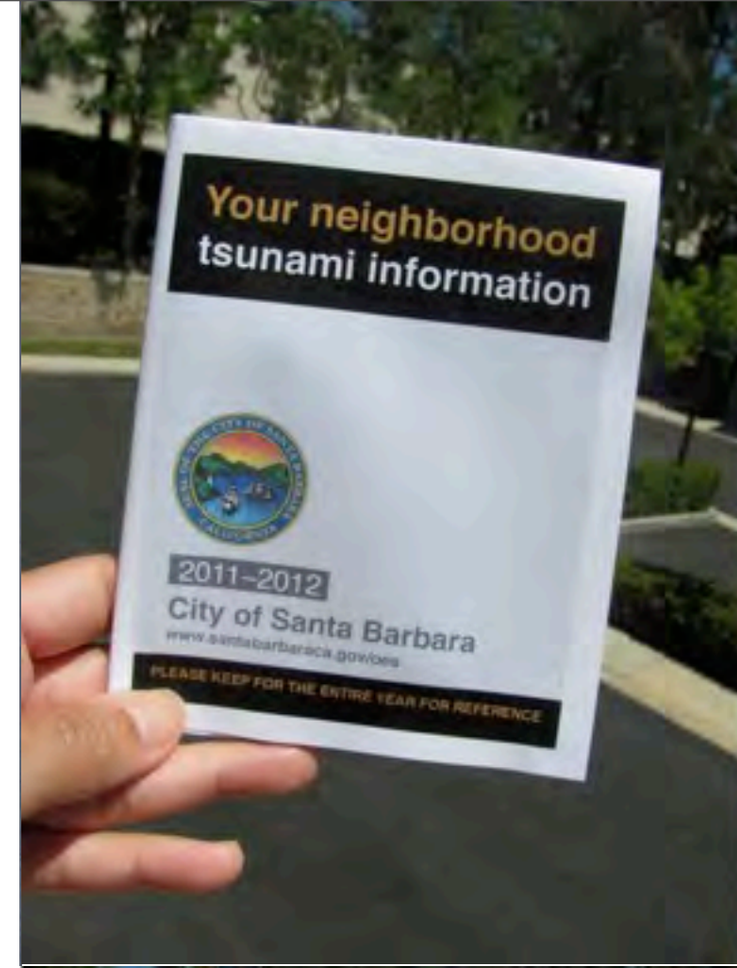
TSUNAMI HAZARD ZONE
IN CASE OF EARTHQUAKE GO TO HIGH GROUND OR INLAND

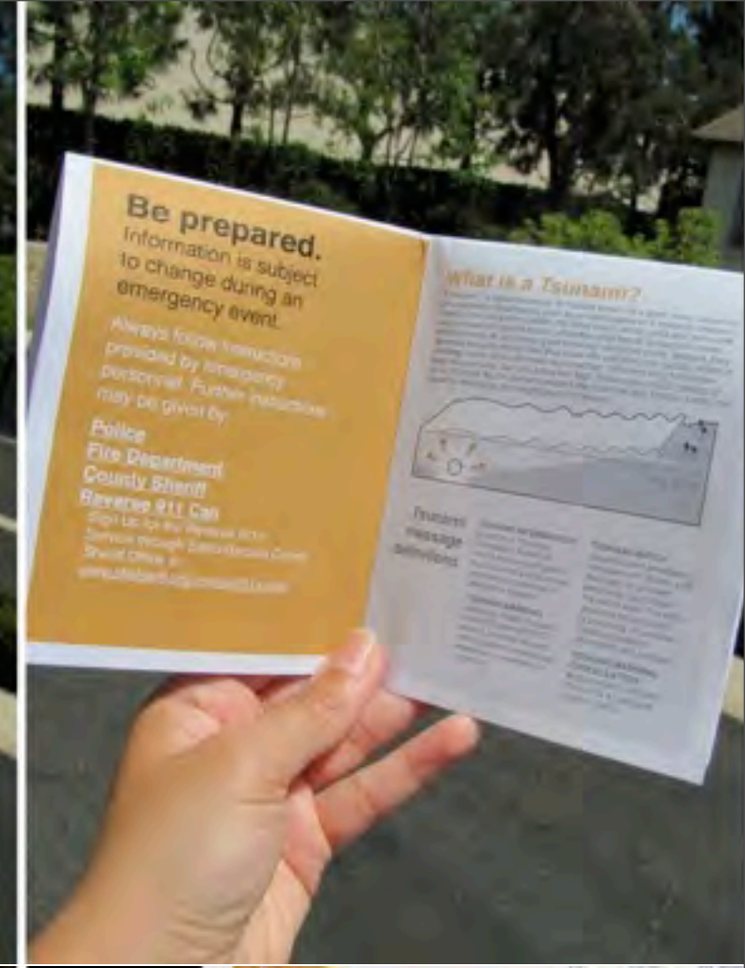

Tsunami evacuation area map
Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.
LAGUNA ST
GARDEN ST
YANONALI ST
GARDEN ST
CABRILLO BLVD
Chase Palm Park
101
SANTA BARBARA ST
SANTA BARBARA ST
P
ANACAPA ST
ANACAPA ST
Skater's Point
YOU ARE HERE
POTENTIAL TSUNAMI FLOOD AREAS
POSSIBLE CLOSURE DUE TO FLOODING
HIGH WARNING AREA
TSUNAMI EVACUATION ROUTE
RAILWAY
LANDMARKS
HALEY ST
GUTIERREZ ST
MONTECITO ST
YANONALI ST
MASON ST
STATE ST
Stearns Wharf
101
Approximately 5 minute walk
CHAPALA ST
CHAPALA ST
DE LA VINA ST
Pacific Coast

TSUNAMI
HAZARD
ZONE
Tsunami evacuation area map

Tsunami evacuation area map
Familiarize yourself with evacuation routes, landmarks, high warning and flood areas.
Plan on secondary routes as backup.
HALEY ST
DE LA VINA ST
CHAPALA ST
STATE ST
ANACAPA ST
SANTA BARBARA ST
GARDEN ST
LAGUNA ST
GUTIERREZ ST
101
MONTECITO ST
YANONALI ST
YANONALI ST
CHAPALA ST
STATE ST
ANACAPA ST
SANTA BARBARA ST
GARDEN ST
MASON ST
CABRILLO BLVD
Approximately 5 minute walk
Skater's Point
P
Stearns Wharf
Chase Palm Park
Pacific Coast
YOU ARE HERE
POTENTIAL TSUNAMI FLOOD AREAS
POSSIBLE CLOSURE DUE TO FLOODING
HIGH WARNING AREA
TSUNAMI EVACUATION ROUTE
RAILWAY
LANDMARKS

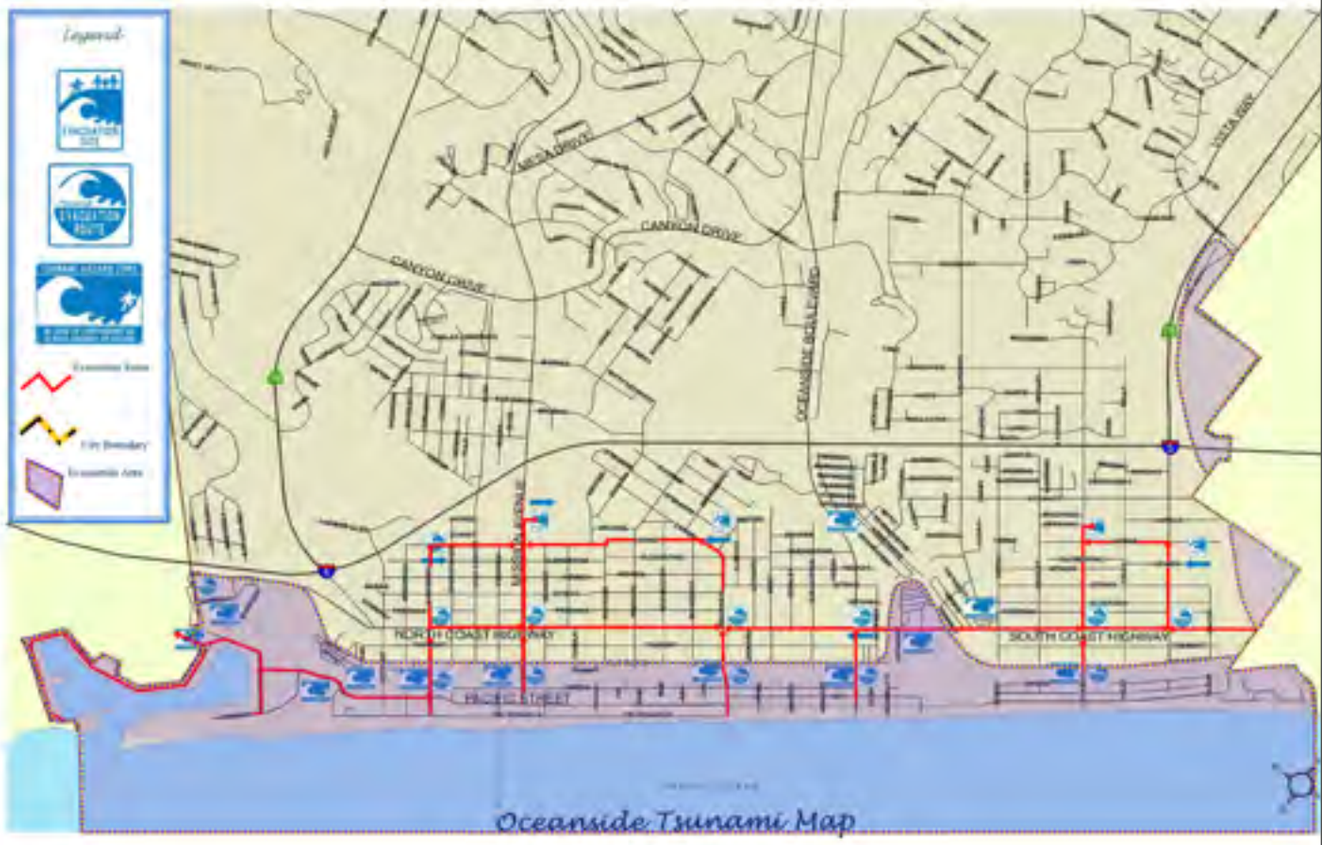
Your tsunami evacuation routes


Your neighborhood
tsunami information
2011–2012
City of Santa Barbara
www.santabarbaraca.gov/oes
PLEASE KEEP FOR THE ENTIRE YEAR FOR REFERENCE

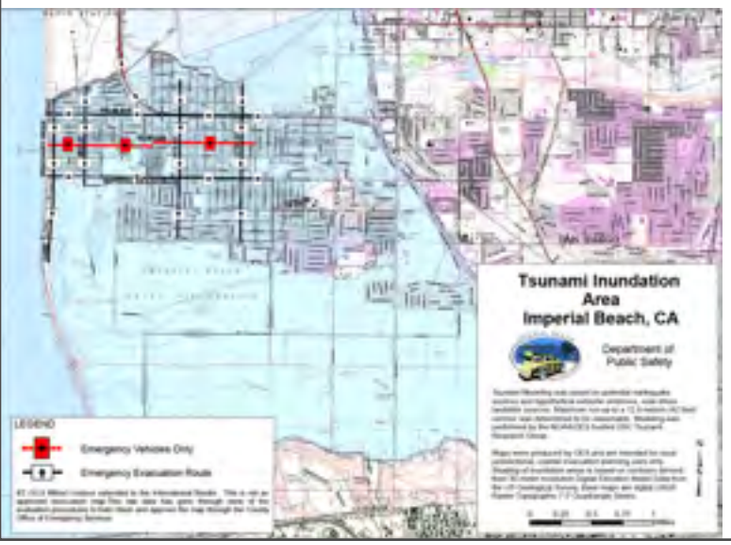

Be prepared.
Information is subject to change during an emergency event.
Always follow instructions provided by emergency personnel. Further instructions may be given by:
Police
Fire Department
County Sheriff
Reverse 911 Call
What is a Tsunami?

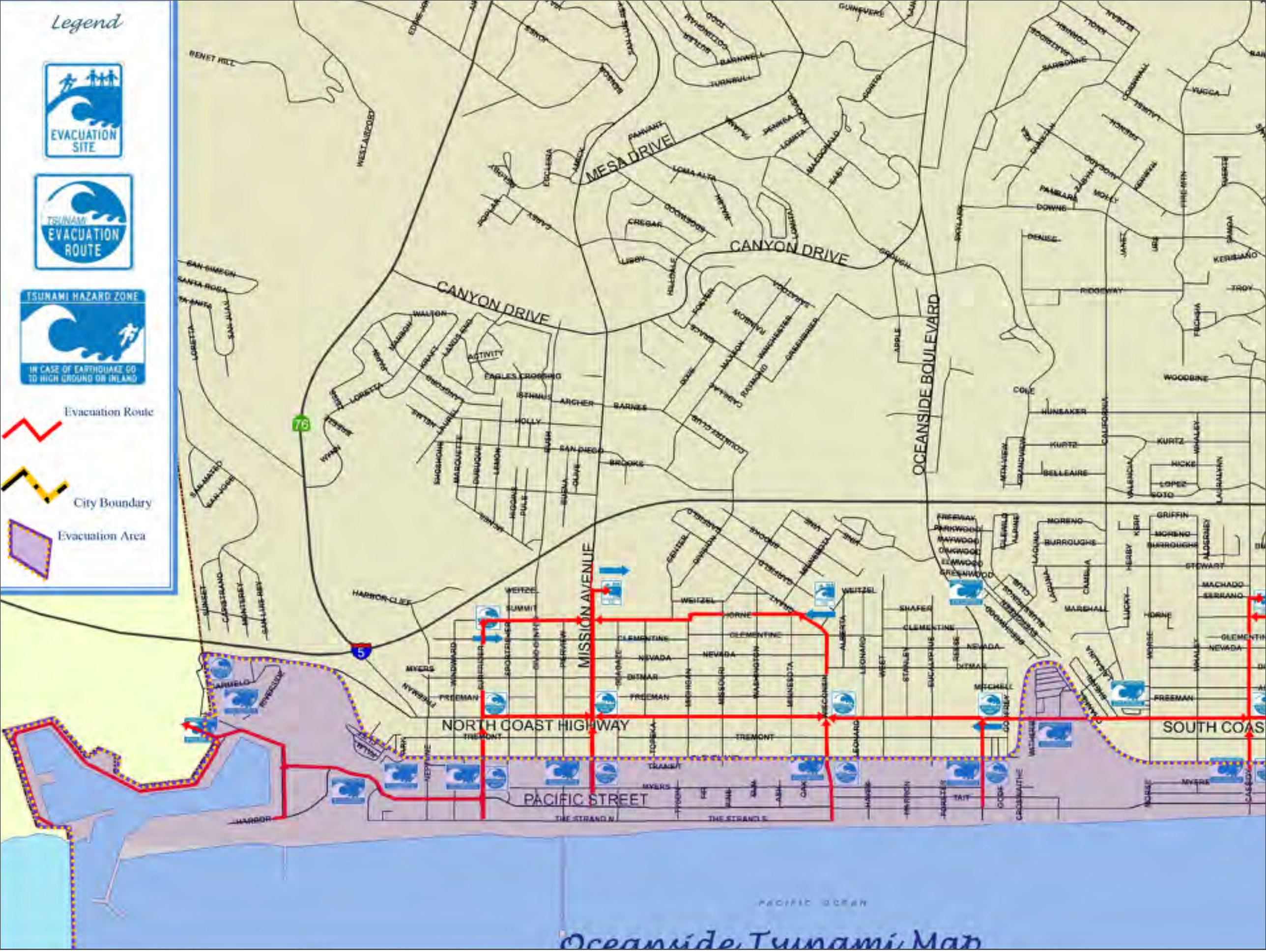
MOBILE PHONES AND THE INTERNET MAY BE OVERWHELMED DURING AN EVACUATION
Don't wait. Plan now.
What you should do during a tsunami emergency
Get Connected
Your tsunami evacuation area
Santa Barbara
Montecito
Goleta

What you should do during
Your tsunami evacuation area
Santa Barbara
Goleta



Implementation: San Diego County



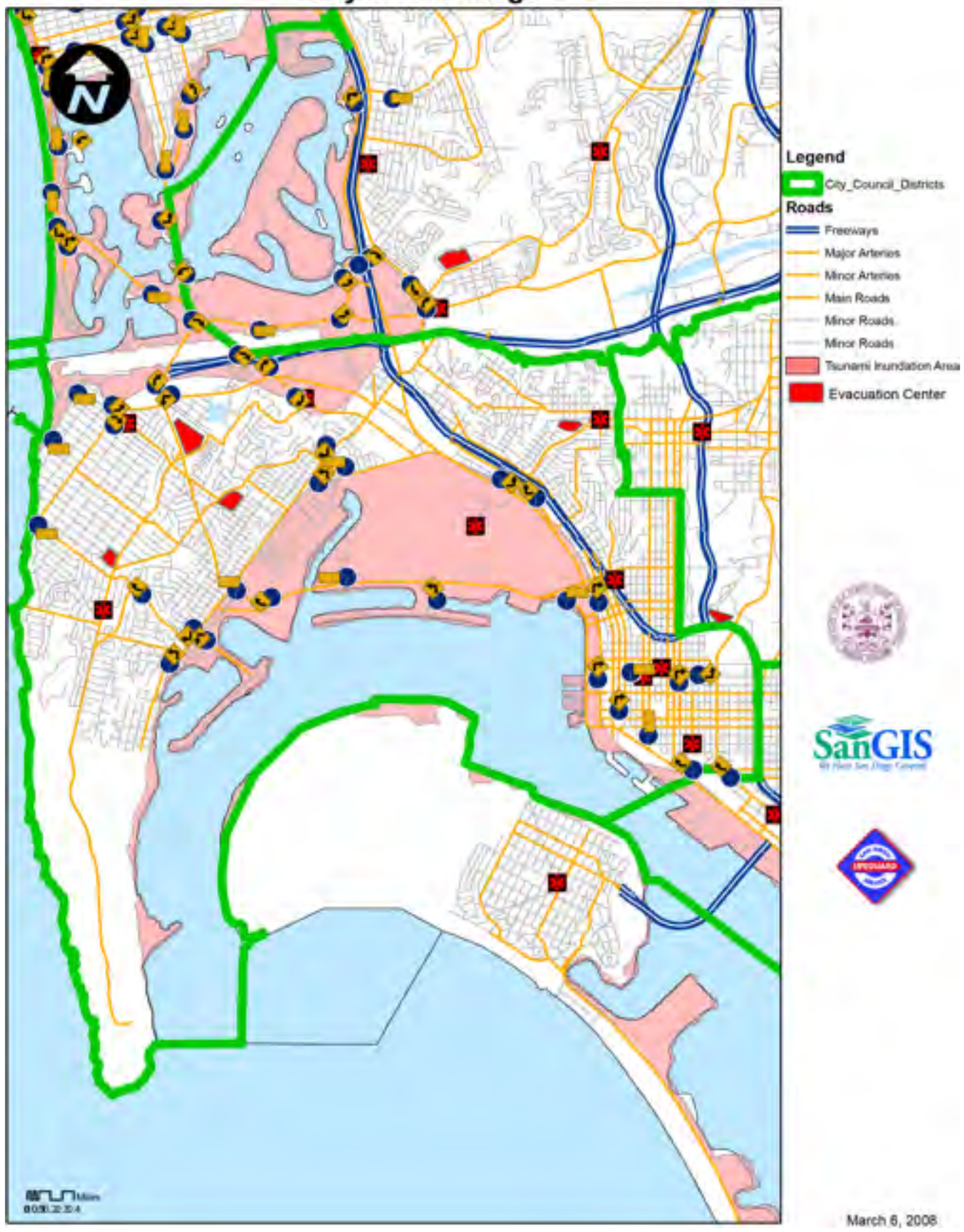

Legend
EVACUATION SITE
TSUNAMI EVACUATION ROUTE
TSUNAMI HAZARD ZONE
IN CASE OF EARTHQUAKE GO TO HIGH GROUND OR INLAND
Evacuation Route
City Boundary
Evacuation Area
MESA DRIVE
CANYON DRIVE
OCEANSIDE BOULEVARD
MISSION AVENUE
NORTH COAST HIGHWAY
PACIFIC STREET
SOUTH COAS
PACIFIC OCEAN
Oceanside Tsunami Map

Tsunami evacuation map

Familiarize yourself with evacuation routes, landmarks, and flood areas. Plan on secondary routes as backup.

Tsunami Inundation And Evacuation Routes

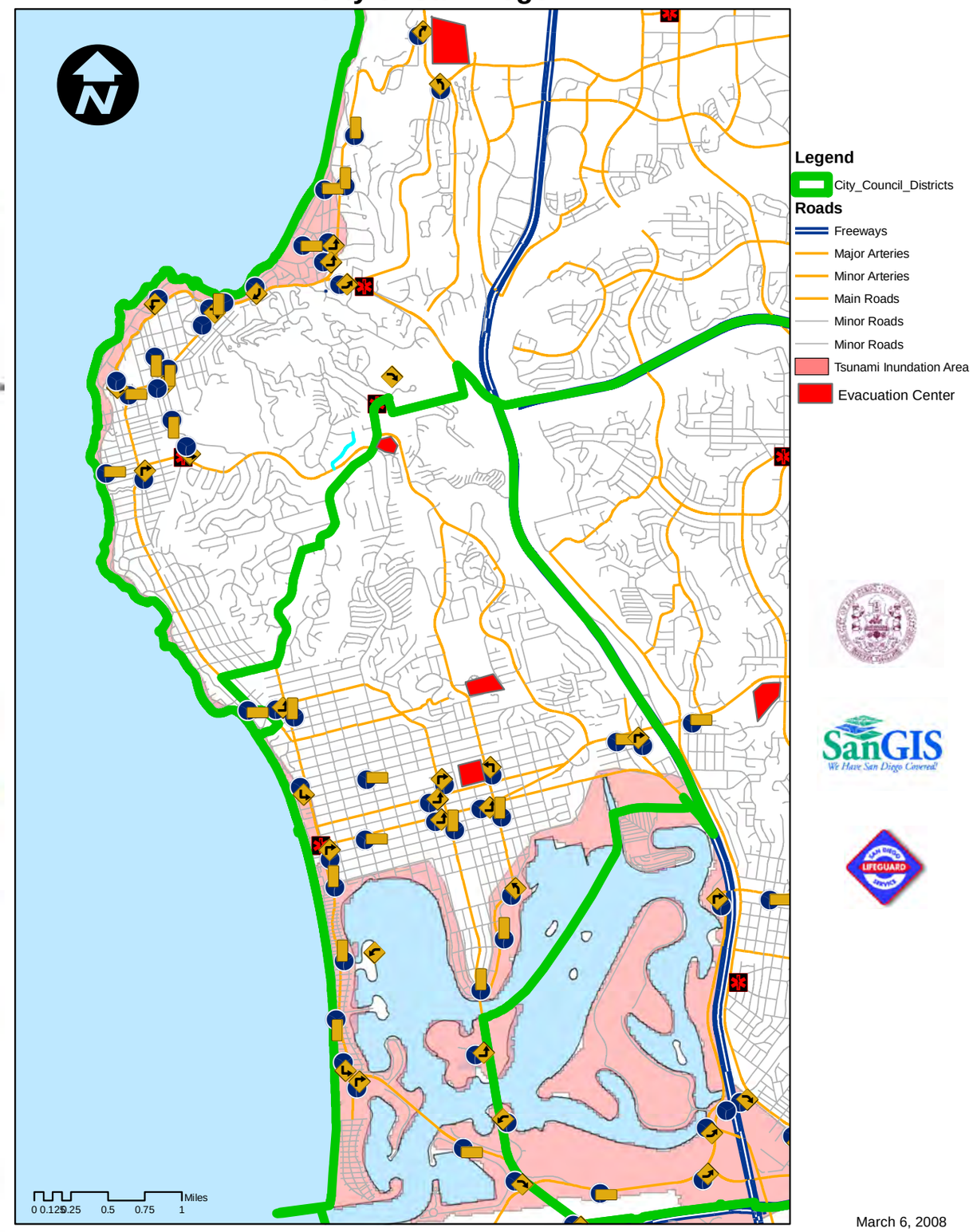
City of San Diego



March 6, 2008

Tsunami Inundation And Evacuation Routes

City of San Diego



March 6, 2008

Tsunami evacuation map

Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.

Tsunami evacuation map

Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.

Tsunami evacuation map

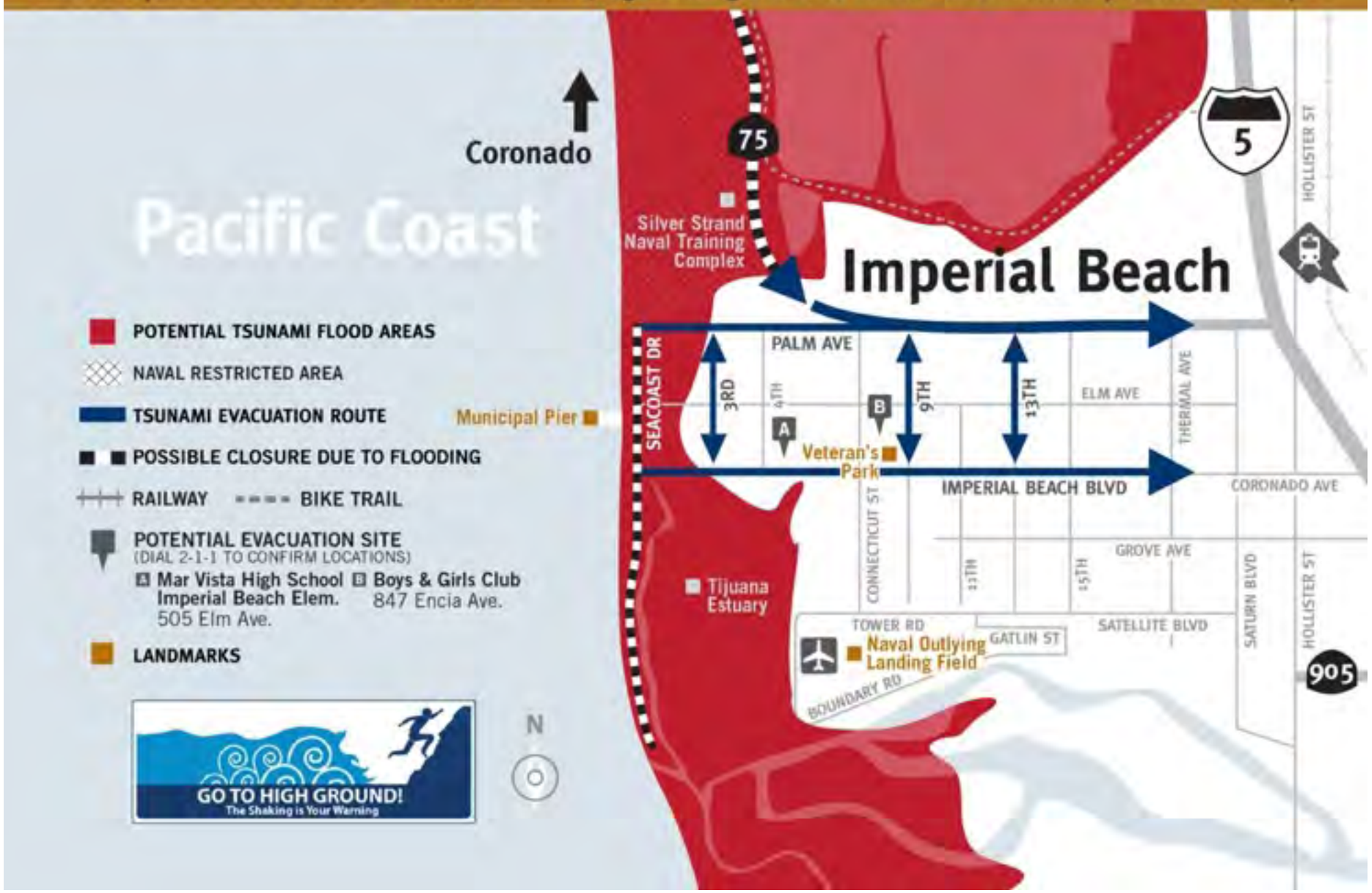
Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.

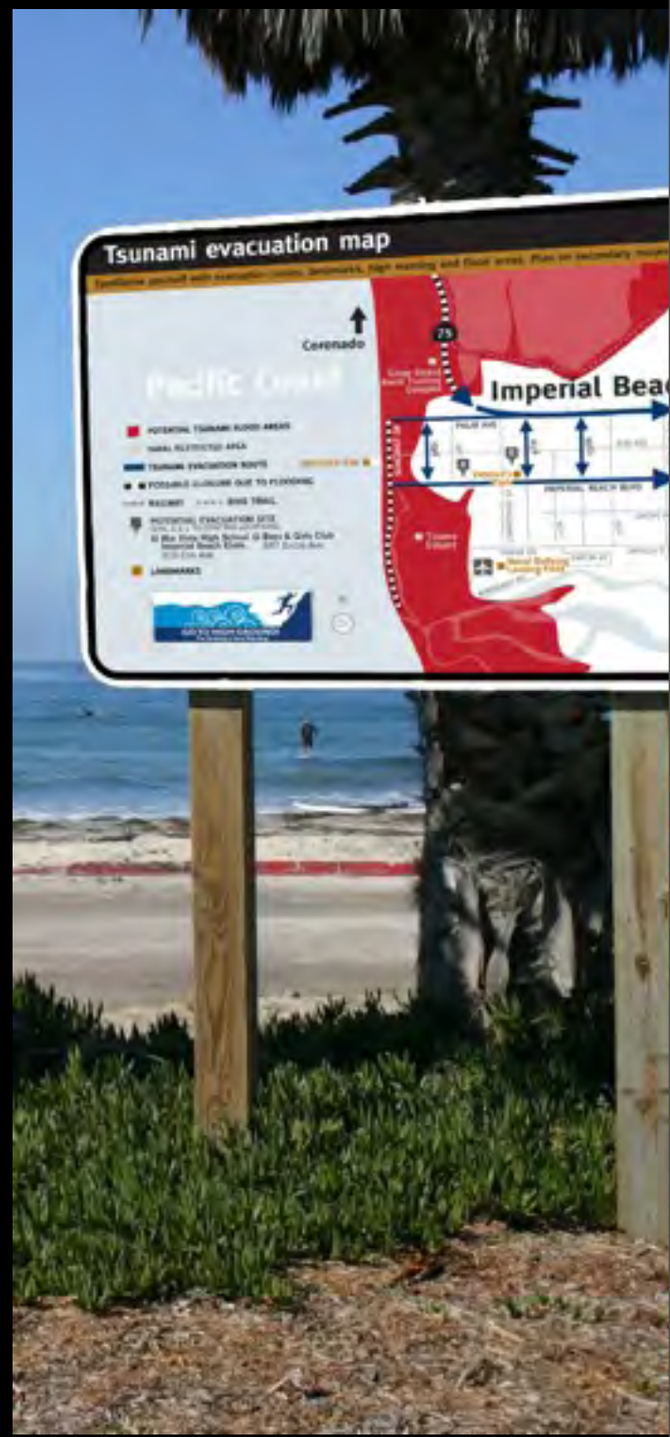
Tsunami evacuation map

Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.

Tsunami evacuation map

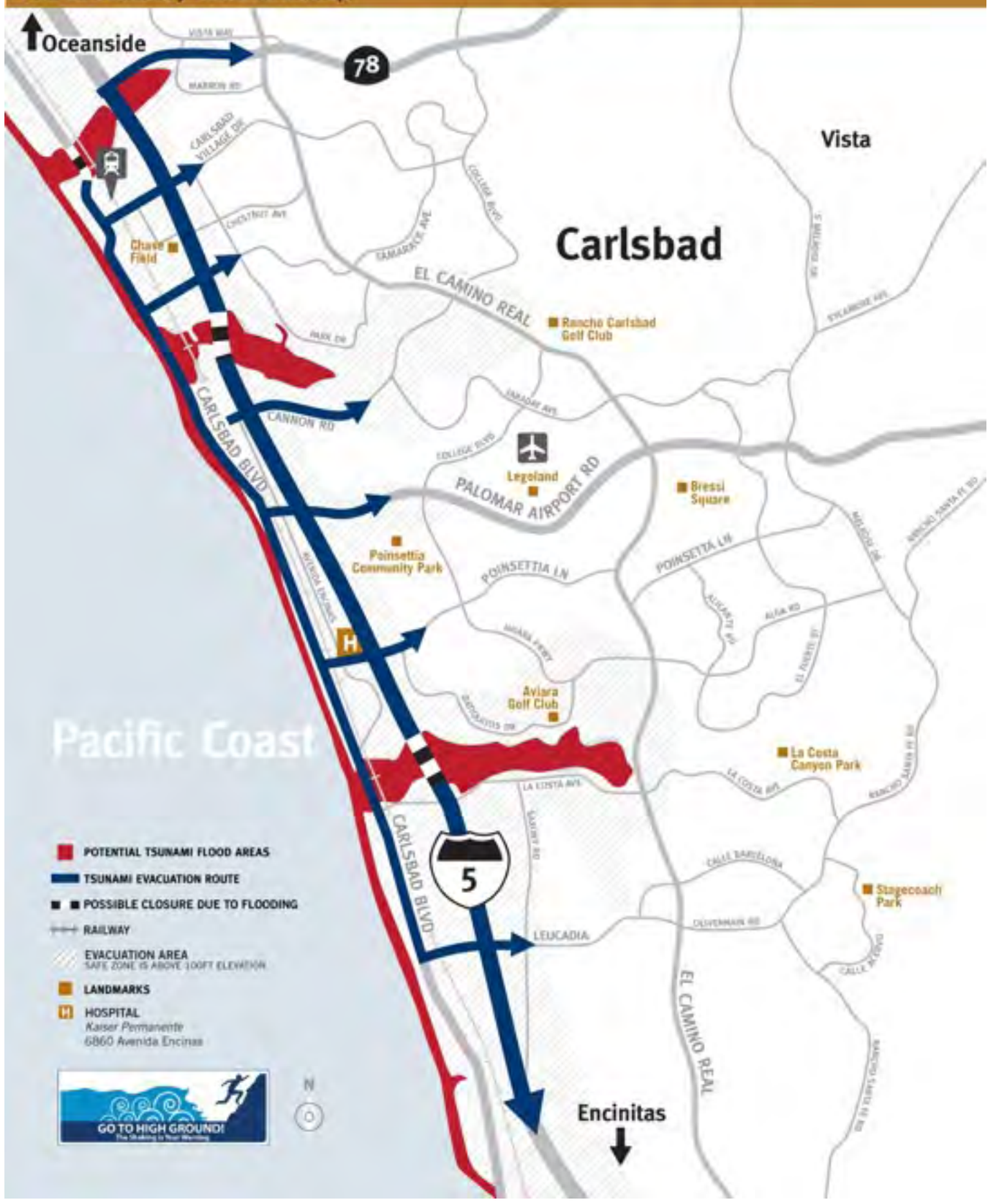
Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.





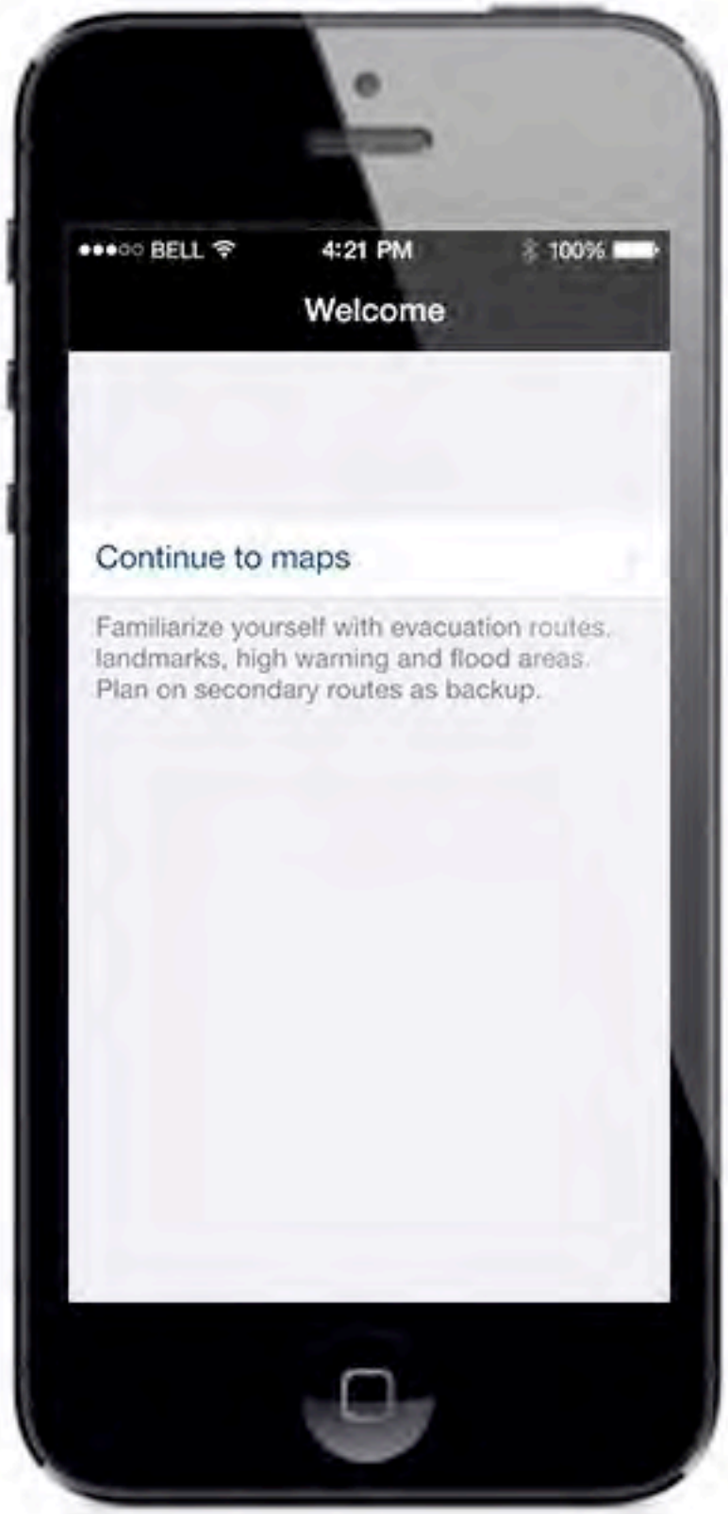
Tsunami evacuation map

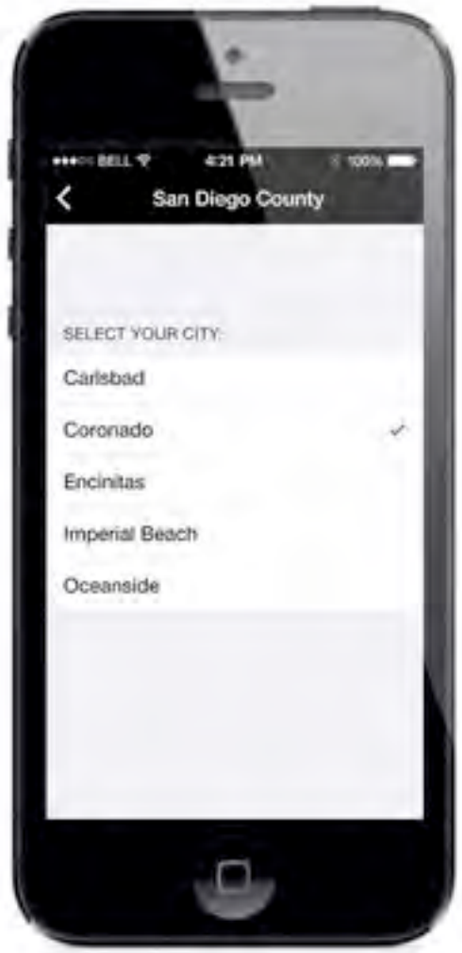
Familiarize yourself with evacuation routes, landmarks, high warning and flood areas.
Plan on secondary routes as backup.

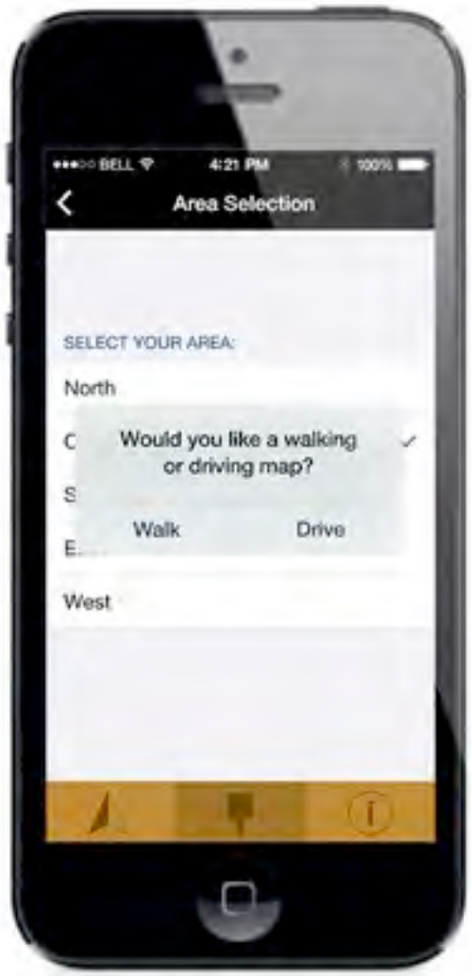


Tsunami evacuation map

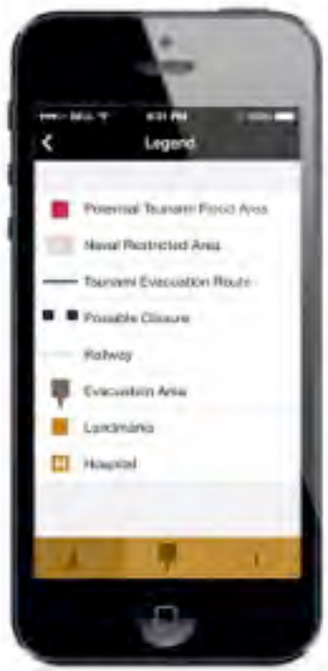
Familiarize yourself with evacuation routes, landmarks, and flood areas.
Plan on secondary routes as backup.


BELL
4:21 PM
100%
Welcome
Continue to maps
Familiarize yourself with evacuation routes, landmarks, high warning and flood areas. Plan on secondary routes as backup.


BELL
4:21 PM
100%
San Diego County
SELECT YOUR CITY:
Carlsbad
Coronado
Encinitas
Imperial Beach
Oceanside


BELL
4:21 PM
100%
Area Selection
SELECT YOUR AREA:
North
Would you like a walking or driving map?
Walk
Drive
West

BELL
4:21 PM
100%
Coronado


Legend

Maximum visibility
GET READY
SANTA BARBARA
OPEN
HOU

National Institutes of Health

IRB INSTITUTIONAL REVIEW BOARD SERVICES

INFORMATION PRESENTATION MODE

	INSPECTION PERIOD	VISUAL MAP	WRITTEN	AUDIO
brief	**Immediate** *2-min.*			
brief	**1-day**			
extended	**Immediate** *15-min.*			
extended	**1-day**			

Dr. Steven Schandler
Co-investigator / Professor in Psychology
Director of Cognitive Psychophysiology Laboratories

All members are certified by the National Institutes of Health (NIH) Office of Extramural Research and project is reviewed and monitored by the Institutional Review Board (IRB)

Undergraduate Graphic Design

Psychology / Sociology / Business