South Elgin, Illinois

Riverside Avenue
Case Study in Creative Floodplain Management
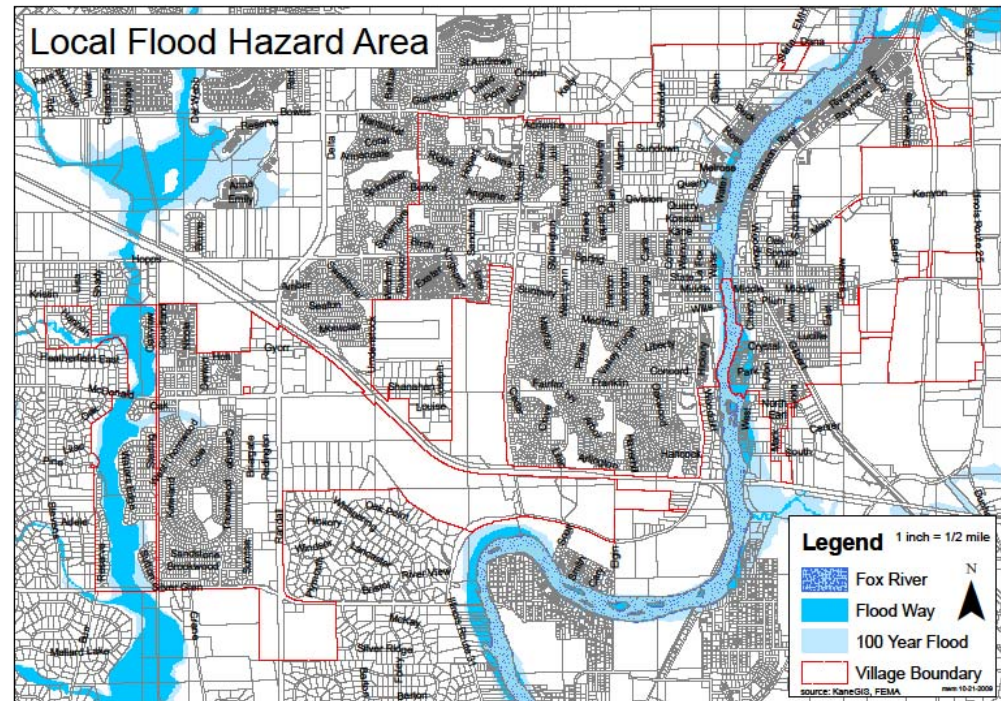
Kurt Baumann, PE CFM

Riverside Avenue Floodway LOMR

- ## South Elgin
  - Population ~21,000
  - 6.4 mi^2

Local Flood Hazard Area

Legend — 1 inch = 1/2 mile
- Fox River
- Flood Way
- 100 Year Flood
- Village Boundary

source: KaneGIS, FEMA

Riverside Avenue Floodway LOMR

- Fox River
  - 1540 mi^2 watershed
  - 12,250 cfs
  - Great natural resource
  - Significant flood damage potential
  - Riverfront property – desirable
  - Numerous pre-FIRM residences

Riverside Avenue Floodway LOMR

Study Area

Riverside Avenue Floodway LOMR

- IDNR delegated community
- Village certified to enforce SWO
- Residential permit application
  - Met applicable floodplain standards
    - First floor 3′ above BFE
    - MEP at or above FPE
    - Garage 6″ above BFE

Riverside Avenue Floodway LOMR

- Building Permit Issued
  - Work proceeded

Riverside Avenue Floodway LOMR

- Inadvertently permitted

Riverside Avenue Floodway LOMR

- Stop Work – August '03
- Builder hired an attorney
- Village explored options:
  - Relocation of houses
    - land swap for adjacent parcels
  - Relocation of floodway
    - west side of river
    - Kane County Forest Preserve property
    - excavation 500′ x 20′ x 8′
- Occupancy permit could not be issued

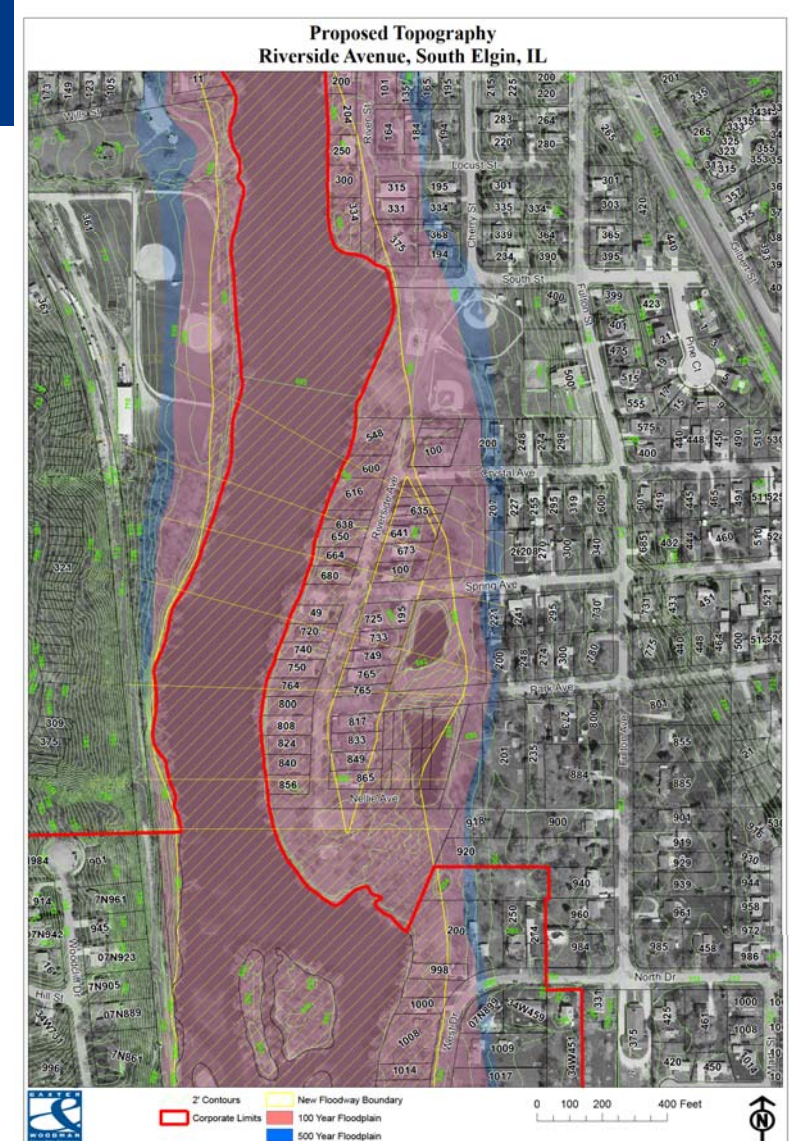# *Riverside Avenue Floodway LOMR*

- 2004 – 2006: litigation ongoing
- November 2006
  - Met with IDNR
    - Familiar with location
    - Receptive to floodway island concept
    - Requested FEMA comment
  - FEMA receptive to concept

Riverside Avenue Floodway LOMR

- Options
  - Village owned parcels
  - Corridor east of Riverside
  - Considered excavation
  - Needed corridor at north end

AFFECTED PROPERTIES
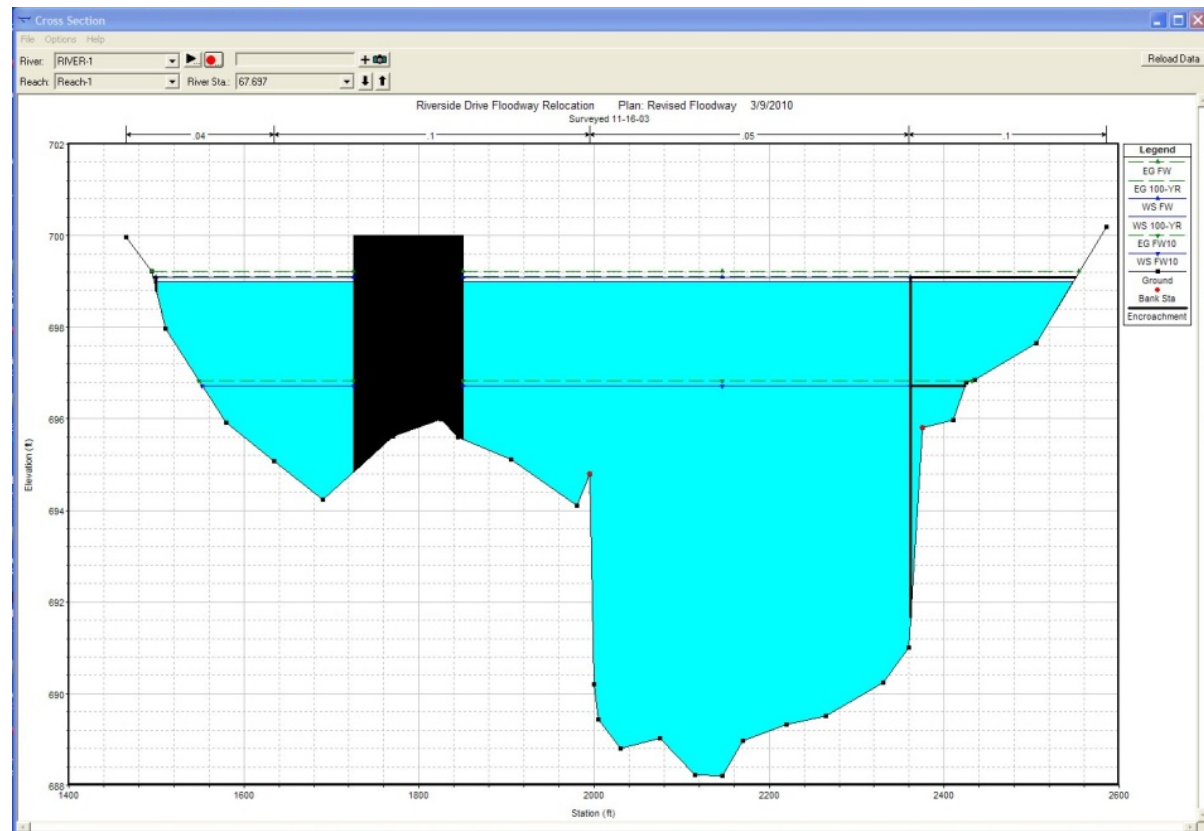RIVERSIDE AVENUE, SOUTH ELGIN, IL

Riverside Avenue Floodway LOMR

- Initial concept
- Meeting with residents
- Easements
    - 100 Crystal
    - 635 Riverside

Proposed Topography
Riverside Avenue, South Elgin, IL

Riverside Avenue Floodway LOMR

- Technical Analysis
  - Water surface profile
  - Conveyance
  - Velocity
  - Storage

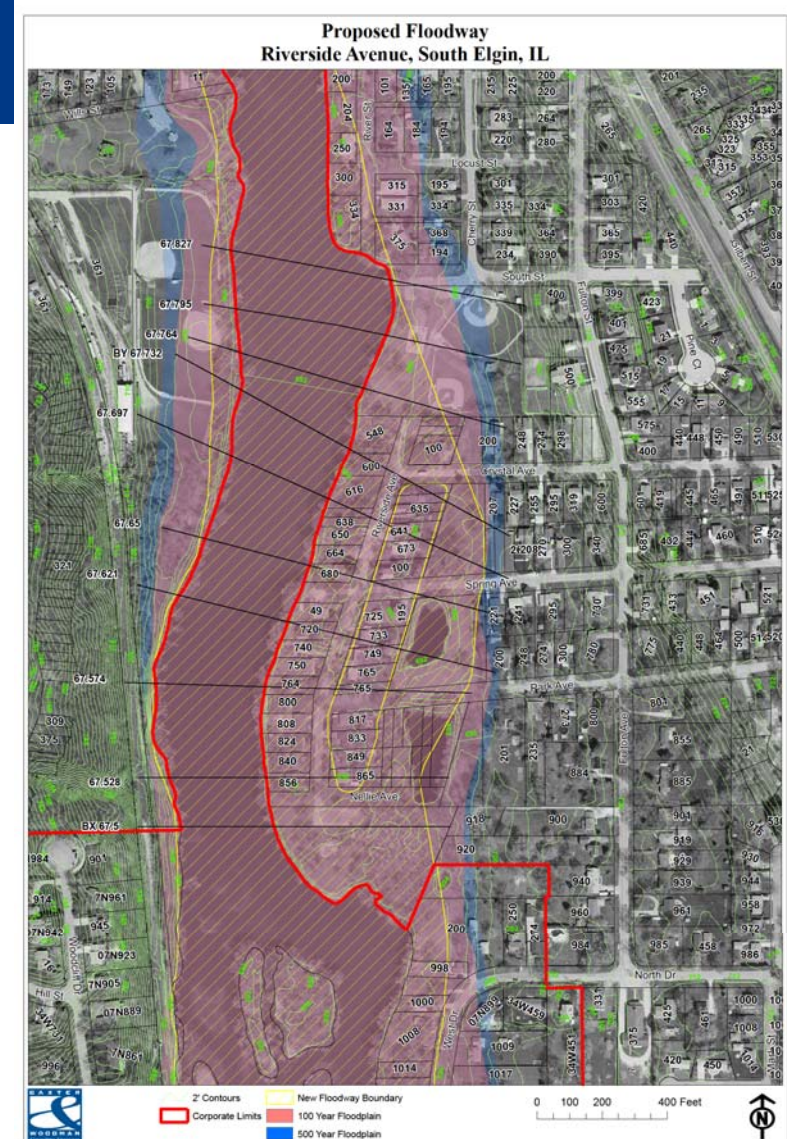**BAXTER & WOODMAN** *Consulting Engineers*

Riverside Avenue Floodway LOMR

- Residential fire
  - 100 East Spring Avenue
  - Substantial damage
- Flood – August 2007
  - 100 East Crystal Avenue
  - Substantial damage
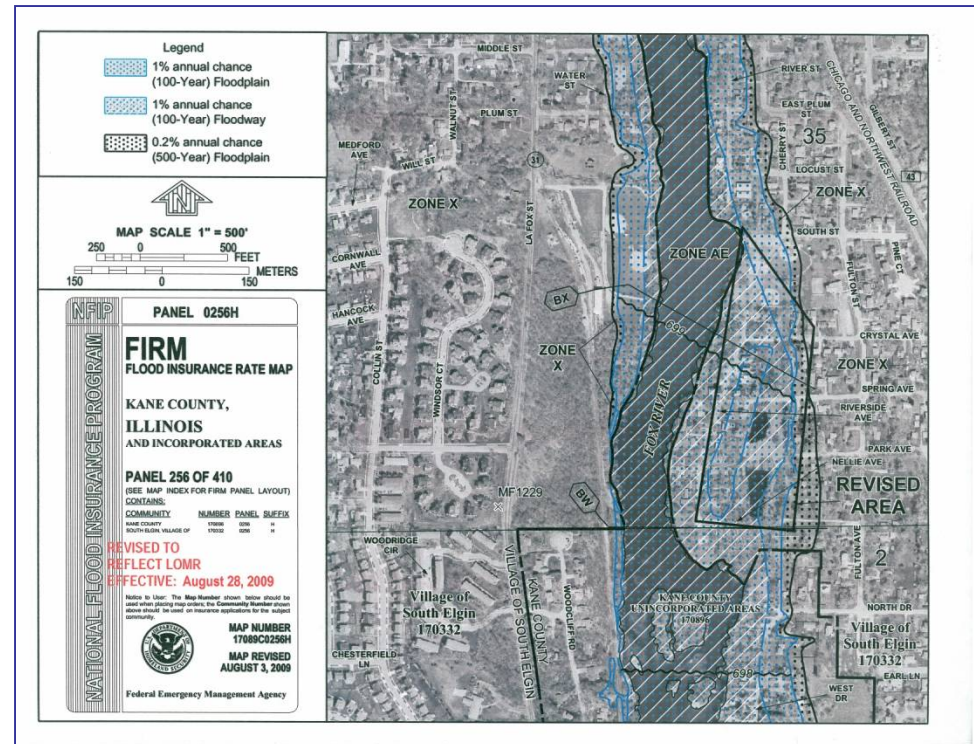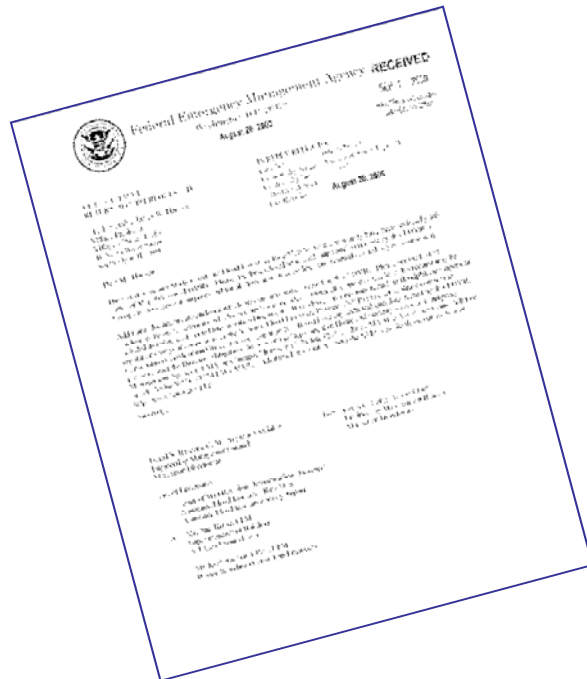 - Opportunity for Village

Riverside Avenue Floodway LOMR

- Final Concept
- IDNR Floodway agreement
- IDNR Approval
  - December 2008
- FEMA Approval
  - August 2009

Proposed Floodway
Riverside Avenue, South Elgin, IL

- Floodway LOMR
  - Resolved legal dispute
  - Relocated floodway 'burden' to public property
  - Allows private residences to be re-built after substantial damage
  - Does not reduce flood risk

Questions?