

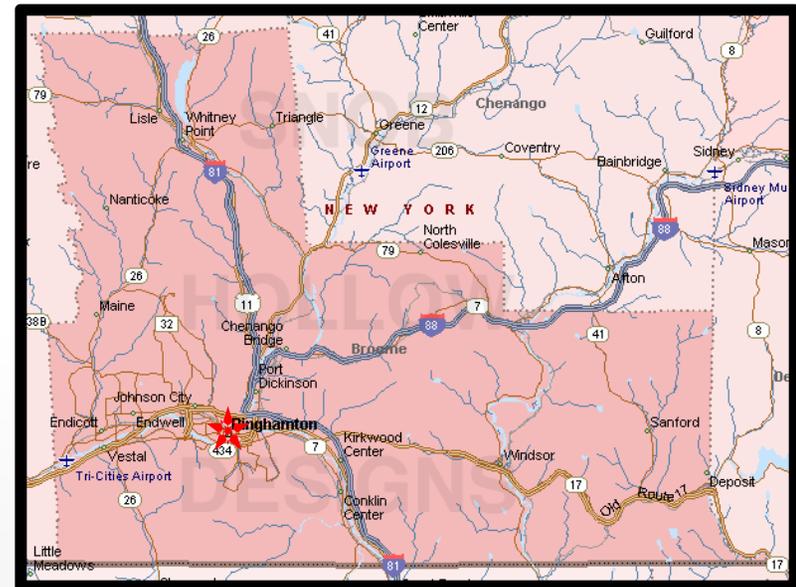
Union-Endicott HS & Lourdes Hospital Flood Mitigation Projects



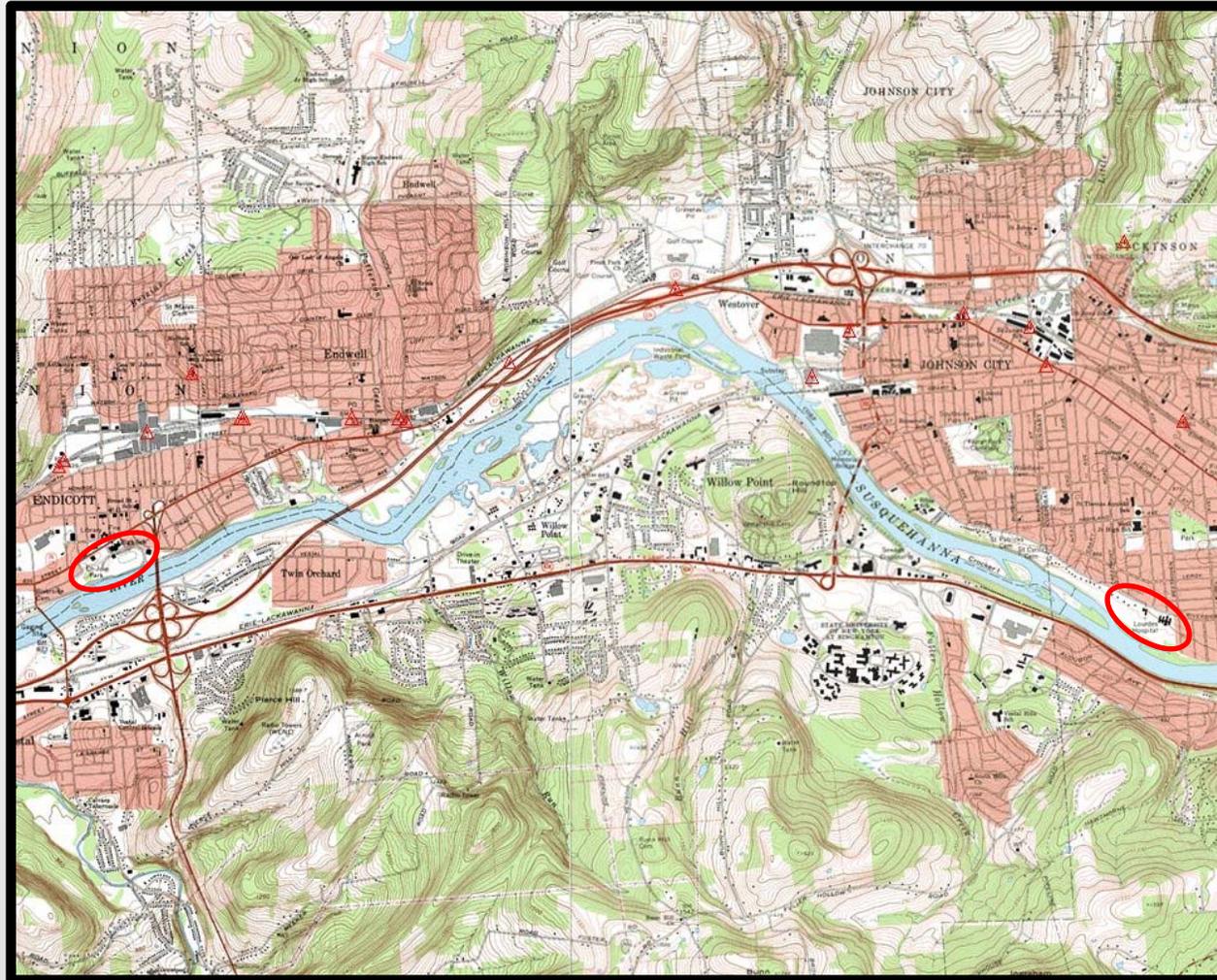
presented by: Charles F. "Rick" Woidt, Jr., PE, CFM
Woidt Engineering & Consulting, P.C.



Project Vicinity/Location Maps



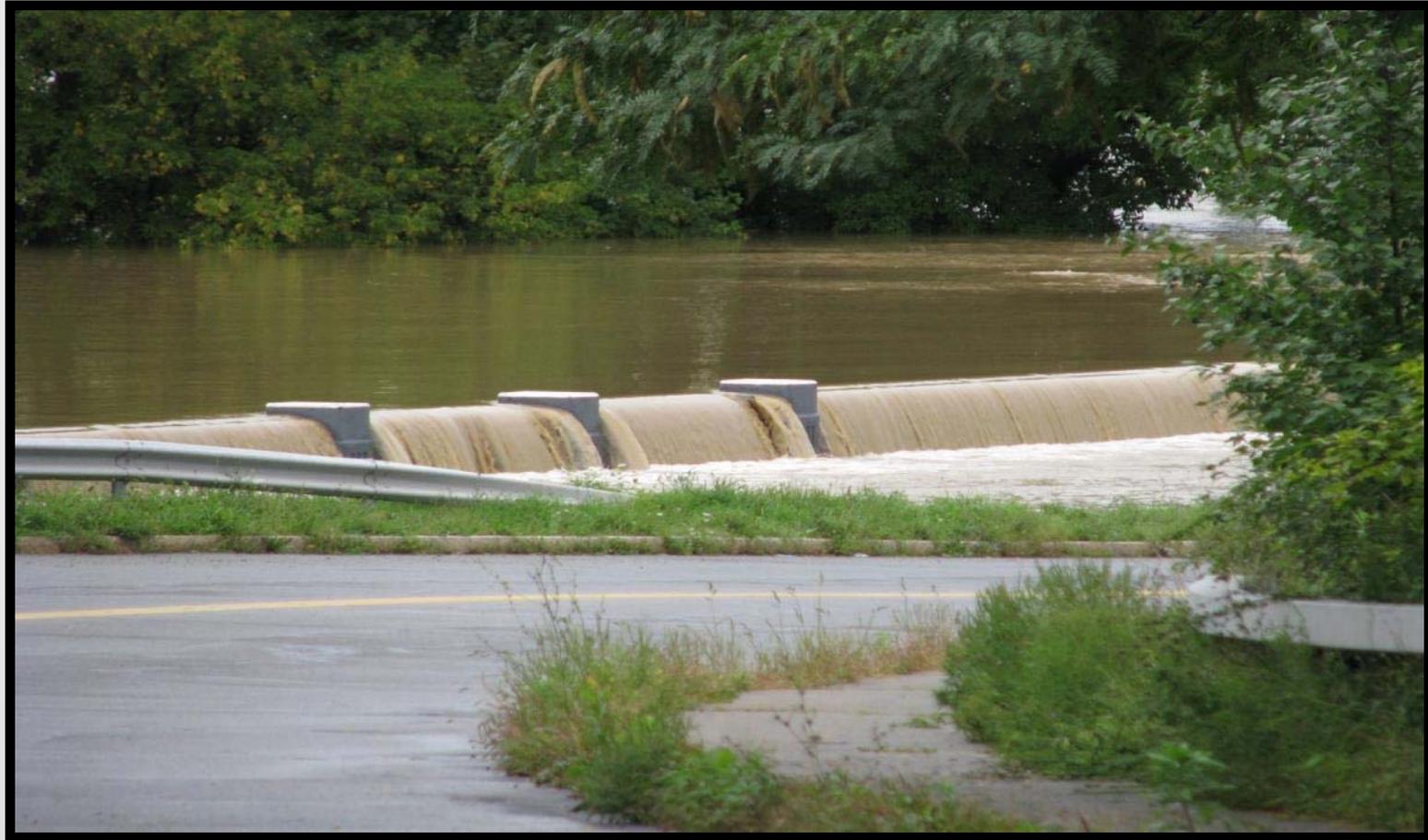
Project Vicinity/Location Maps



September 2006 Flood



September 2011 Flood



MacArthur Elementary School September 2011



Union-Endicott High School



Union-Endicott High School – June 2006



Union-Endicott High School Flood Protection Project

- ▶ Design/Permitting 2007 and 2008
- ▶ Constructed in Summer and Fall of 2009



Union-Endicott High School Flood Protection Project

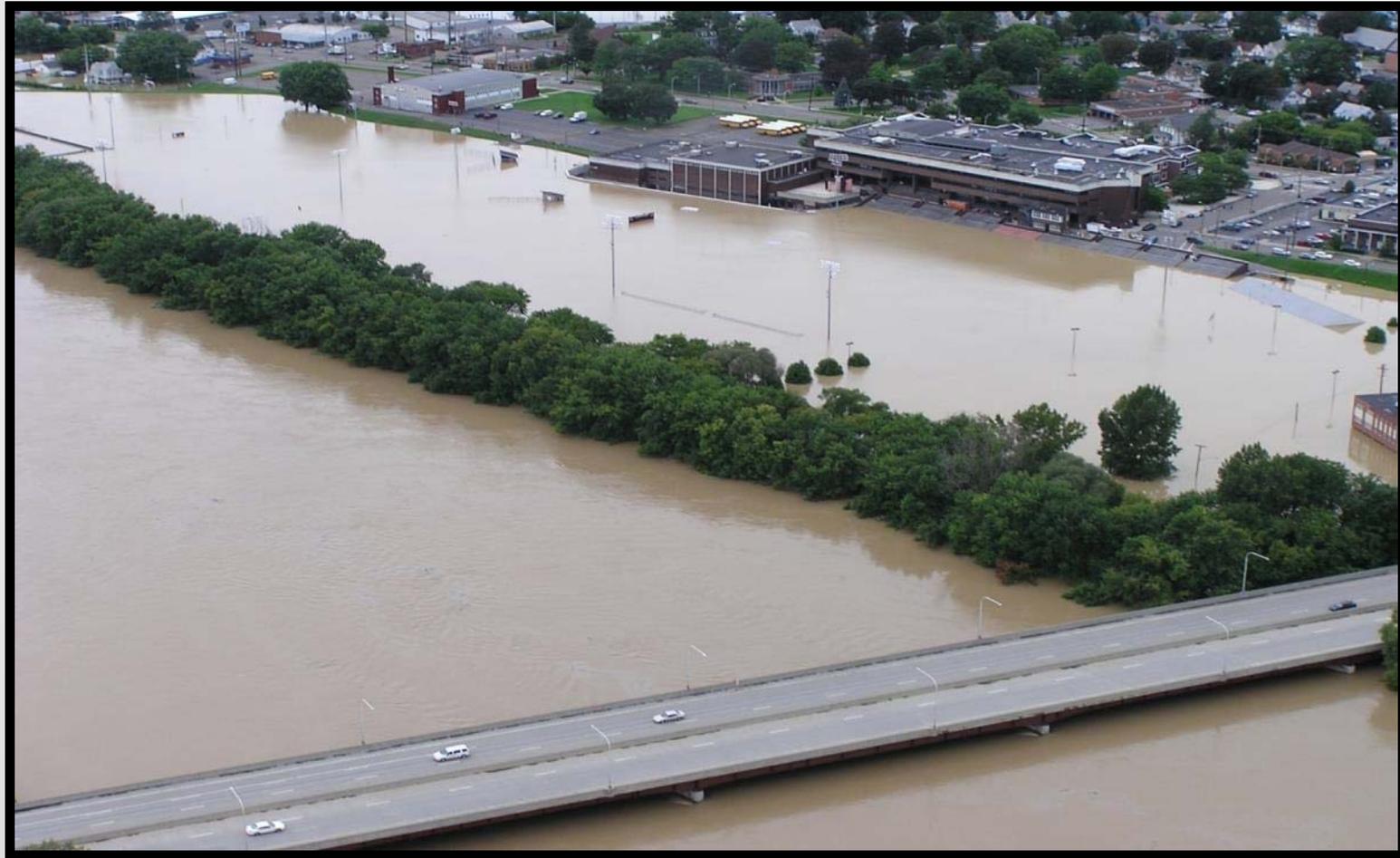
- ▶ Construction completed end of 2009
- ▶ Engineering & Construction Cost = \$4,400,000



Union-Endicott High School

- ▶ Concrete T-Wall Design
- ▶ 500-year protection for Critical Facility
- ▶ Interior Stormwater Pumping Provisions
- ▶ Redundant Closure Structures (2)
- ▶ O&M Procedures in place

Union-Endicott High School September 2011 Flood



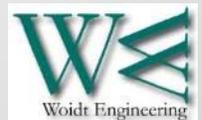
Union-Endicott High School September 2011 Flood



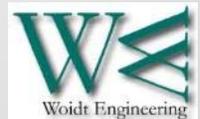
Union-Endicott High School September 2011 Flood



Union-Endicott High School September 2011 Flood



Lourdes Hospital – June 2006



Lourdes Hospital – June 2006

- ▶ \$23,000,000 ± of Damage



Lourdes Hospital Floodwall

- ▶ Design, Permitting 2008 & 2009
- ▶ Construction Completed 2010
- ▶ Construction + Engineering Cost = \$10,000,000±



Lourdes Hospital Floodwall

- ▶ Concrete T-Wall Design
- ▶ 500-year protection for Critical Facility
- ▶ Interior Stormwater Pumping Provisions
- ▶ Sanitary Pumping Provisions
- ▶ 10 Closure Structures (passive gates)
- ▶ O&M Procedures in place
- ▶ Flood Mitigation zero rise impacts

Lourdes Hospital – September 2011



Lourdes Hospital – September 2011



Lourdes Hospital – September 2011



Lourdes Hospital – September 2011



Lourdes Hospital – September 2011



Lourdes Hospital

- ▶ Floodplain Mitigation Area
- ▶ Zero Rise of Base Flood Elevation



Why projects were successful

- ▶ Designed to US Army Corps and FEMA Standards
- ▶ Utilized Updated DFIRM Flood Elevations
- ▶ Interior Stormwater Pumping Systems
- ▶ Redundant Closure Structures
- ▶ Access to Site Available During Flood Event
- ▶ O&M Procedures in place
- ▶ Mitigation of Floodplain Impacts

For further information or questions, please contact:

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