22nd Street Reconstruction
City of Elwood
22nd Street Reconstruction

Design

Construction

Unique Local Funding Mechanism
Project Features

- Approximately one mile reconstruction
- Two - 12 foot lanes
- Curb and gutters
- New sidewalks
- ADA Compliant Curb ramps
- Enclosed storm sewer
- New waterline
- New sanitary sewer
- Improved intersection radii for Red Gold trucks
- Reconstructed side street & driveway approaches
- New railroad crossing and warning light and gates
- Approx. $500k RR crossing upgrades
- $6 Million Construction Cost
Coordination with Red Gold

- Ongoing through design, for truck operation, drainage and project updates
- Improve intersection radii for Red Gold trucks
- Design MOT phases to avoid truck route interruptions during peak harvest season
Needed Improvements:

• Great Importance to Elwood due to Red Gold Manufacturing Facility & Headquarter
• Age and Deficiency of the existing roadway
• Elwood Utilities:
  • Old Brick Combined Sewer
  • Challenges due to aging infrastructure, and other underground utilities
  • Limited Waterline maps - Waterline Relocation
  • Limited information on Combined sewer laterals
Needed Improvements:

- No ADA ramps at street approaches throughout the Project
- Missing sidewalk connections
- No Pedestrian Accessible Route (PAR)
is water may become contaminated with sewage or wastewater for several days during or after periods of rainfall or melting snow. People who swim in, wade in or ingest this water may become ill.

Please contact Elwood City Utilities for more information at 552-9844.

Needed Improvements:

• At-grade Railroad crossing near “C” Street.

• Steep grade at the crossing creating a “hump” (1 Fatality)

• Existing Drainage collected in Combined Sewer outlets
Existing Historic Bricks

- Historic Star Bricks
- Bricks removed and salvaged
- Approximately 2200 SYS
Dunn Rite Products
Building Adjacent to 22nd Street

- Alignment shifted approximately 13’ to west
- Provided 10’ clear zone between the curb and Gutter and building face.
Typical Section

- Proposed Storm Trunk Line
- Proposed Sanitary Line
- Proposed Water Line
Storm Sewer, Sanitary and Water Line Facilities

- Existing Old Brick Combined Sewer system generally located along center of 22nd Street
- Existing water line had to be relocated due to conflict
- New 30”/36” Storm Sewer under new southbound lanes
- New 18”/24” Sanitary sewer under new northbound lanes
- New 8” Water line (upgrade from 6” – non-participating)
- As per the Ten State Standards (Recommended Standards for Water Works), the water line was relocated a minimum of 10 feet clear of either the new sanitary line or storm line.
Avoid Impacts to Bridge on South M Street

Avoid Impact to Parking Street Along South Lot Located Adjacent to P Street

Improve Access to Red Gold Manufacturing Facility

At Grade NS RR Crossing

Little Duck Creek

Abandoned Railroad Crossing

Red Gold Inc. Manufacturing Building

Lift Station: Serving Mostly East/West of 22nd Street Along South P Street
Norfolk Southern Railroad Crossing

- Approaches were redesigned/raised to reduce approaching roadway grades
- Added new ADA compliant sidewalks and detectable warning surfaces
- New railroad signal and cantilever structure
- New pavement markings and signs
Flangeway Gaps. Flangeway gaps at pedestrian at-grade rail crossings shall be 64 mm (2.5 in) maximum on non-freight rail track and 75 mm (3 in) maximum on freight rail track.

Figure R302.7.4 Flangeway Gaps

Advisory R302.7.4 Flangeway Gaps. Flangeway gaps are necessary to allow the passage of train wheel flanges. Flangeway gaps pose a potential hazard to pedestrians who use wheelchairs because the gaps can entrap the wheelchair casters.

Norfolk Southern Railroad Crossing

- ADA Accessible sidewalks/Curb ramps on both sides of Railroad crossing
- Maintain a minimum of 15’ of distance from edge of the DWS to center of the tracks
- Flangeway gaps to be a maximum of 2.5”
Pedestrian Facilities

- 3,800 SYS of New sidewalk
- 46 new curb ramps
- ADA Compliant railroad crossing
Construction
The first day of the project was interesting as the snow moved in.
Unique Aspects of Project

• Historic brick sidewalk preservation
  • Existing brick sidewalks were salvaged for future reuse due to their historical significance

• New water and sanitary lines while existing lines were still in service
  • Insertion valves and line stops were utilized due to a lack of valves in the original water system.

• Unknown water service line connections
  • Size and types of service connections were unknown due to age of existing infrastructure
Project Challenges

- Working around existing utilities
- Unknown Existing Water Mains
  - Water main in the middle was unknown by the City until exploratory digging was performed.
Unknown existing water mains. Water main on left was unknown until exploratory digging was done.
Project Challenges

- Keeping People from going where they are not supposed to go.
- Keeping property owners and the traveling public happy.
Construction Progress
Construction Progress
What made this project a success?

• Regular communication with the City of Elwood and INDOT regarding progress of project and discussing solutions surprises came up.
  • Due to the location of the project and the aging infrastructure underground there were many unknowns from lateral drains, buried inlets, buried manholes, unknown sanitary sewer connections, underground storage tanks.
  • The City and INDOT were instrumental with working with us to help develop effective solutions as these issues came up.
  • From the secretary to the Mayor, communication with us regarding project progress and project issues helped make it successful.
Elwood Utilities was a big help, especially with video inspections of unknown utilities.

- A representative of Elwood Utilities was usually onsite virtually every day we had water line, sanitary line, and storm line construction on the project.
- They were very helpful with providing video inspection services for the contractor for sanitary sewer lines and sanitary sewer line connections.
- They also assisted when unknown pipes were discovered to help verify if they were active or abandoned.
- They played a HUGE part with making this project successful.
What made this project a success?

• Coming up with innovative ways to control the budget, especially with the water lines.
  • Due to the age of the infrastructure the City was unsure of all water lines that were along the corridor unless they had done repairs to those lines. Work was tracked via force account to create line items that were representative to water line work being done specific to this project.
  • This process was very effective due to water line work being pretty project specific and unique on INDOT projects.
  • Substantial cost savings was realized compared to original quotes provided by the contractor, again due to how unique and project specific this work is.
What made this project a success?

- Regular communication with property owners on the project and quick response to property owner’s concerns helped diffuse several issues before they became problematic.
  - With this project being in the middle of town and with it being a two-season project it impacted several property owners on the project.
  - I met with many of them throughout the duration of the project to hear their concerns. With few exceptions we were fortunate to be able to accommodate the majority them as issues developed.
  - The intent was to always try to diffuse the issue before it became a problem that either the City or INDOT had to deal with.
Unique Local Funding Mechanism
Project History & Funding

Collaboration with Red Gold
- IEDC Committed $1.4M in 2014

Coordination with INDOT & MCCOG
- Awarded Federal Funds (80/20 Match)
  - $5.6M in Federal Funds
  - Additional Funding Award – Approx. $850,000 During Design
  - Approx. $400,000 for Railroad

IEDC Funds Towards Local Match
- $1.4M IEDC Funds
- City Out of Pocket Cost – Approx. $200,000

Total Project Cost | $7.8M