Outline

- Problem and Challenges
- Solution analysis
- Proposed Plan
- Project benefits
BACKGROUND

- Located northwest of Milwaukee downtown
- Corridor stretches for 5-miles along the railroad
- Major industries along Canadian Pacific Railroad
BACKGROUND

- North Corridor and South Corridor watersheds
- 11-square miles drainage area
- North Corridor
- South Corridor
  - Combined Sewer system
  - Partial separation near west area
- MMSD and City facilities
30th STREET INDUSTRIAL CORRIDOR CHALLENGES

- 3,000 plus properties reported basement backups
- Approximately 50 locations experienced flooding
- Private sector damages alone exceeded $32 million
30th STREET INDUSTRIAL CORRIDOR CHALLENGES

- 1,000 plus foreclosure and tax delinquent properties
- Major industries moving away
- Among the highest violent and property crime rates
- 770 acres of brownfields
- Very low property values compared to the adjacent neighborhoods
- Economically depressed
PROJECT OBJECTIVES

- M M SD initiated the North Corridor stormwater study in 2012
- M M SD and WHEDA initiated South Corridor stormwater study in 2013 to address the flooding problems while facilitating economic development efforts
- Collaborated to create a vision of Greenway Corridor that will not only address the drainage problems, but would also serve as a platform for revitalization and redevelopment of the Corridor
“Identify and characterize basement backups and regional stormwater drainage problems and solutions in the Corridor area and formulate a complementary Greenway Corridor strategy to enable smart redevelopment and an enhanced quality of life for business and residents in the area.”

“Greenway Corridor is a multipurpose drainageway that incorporates infrastructure to address flooding problems and also provide opportunities to enhance and complement existing development and redevelopment of the Corridor area”
BASELINE ANALYSIS

- Existing EPA SWMM model for North Corridor
- Hydrologic and hydraulic models were built in HSPF and MIKE URBAN
- Models used for characterizing surface flooding problems, basement backups and the system capacity
- Most of the South Corridor system provides a 5-year level of service and North Corridor provides a 25-year
SOLUTION ANALYSIS - DESIGN CRITERIA

- Consistent with M M SD and City of Milwaukee objectives
- Regulatory Compliance – City, M M SD, State and Federal Regulations
- 100-year level of service/protection
- 1-foot of freeboard for stormwater management improvements
- Street flow/ponding depth – Maximum of 6 inches or within the right of way
- Parking lot ponding depth – Maximum of 6 inches

“Buy-in from Stakeholders”
SOLUTION ANALYSIS – POTENTIAL SOLUTIONS

- Underground sewer/tunnel improvements
- Separation of the existing system

“Traditional solutions were not feasible due to downstream limitations and cost. The solution should prevent basement backups and complement Greenway Corridor vision”

- Proposed solution concept
  - Street inlet control
  - Greenway Corridor
SOLUTION ANALYSIS – GREENWAY CORRIDOR CONCEPT

- Green Corridor route/ location analysis process
  - Desktop analysis (Route)
    - Drainage backbone
    - Land ownership
    - Institutional investment
SOLUTION ANALYSIS – GREENWAY CORRIDOR CONCEPT

- Green Corridor route / location analysis process
  - Desktop analysis (Route)
    - Drainage backbone
    - Land ownership
    - Institutional investment
  - In the field (locations)
    - Block by block windshield survey
    - Minimize impacts
  - Feedback from stakeholders
GREEN CORRIDOR LOCATION CONCEPT

- Continuous Connector
- Re-imaged Environment
- Neighborhood Amenity
- Linking Institutions
- Redevelopment Sites

Courtesy: American Design Inc.
SOLUTION ANALYSIS – STREET INLET CONTROL CONCEPT

Surcharging = Basement backups
SOLUTION ANALYSIS – STREET INLET CONTROL CONCEPT

- “Restrictors” in inlets
- Stormwater on street
- Surface flow management
- Basement backup solution
### SOLUTION ANALYSIS – IMPROVEMENTS

<table>
<thead>
<tr>
<th>Drainage Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet Restrictors</td>
<td>5,000 street inlet restrictors placed in selected subbasins (South Corridor)</td>
</tr>
<tr>
<td>Stormwater Conveyance</td>
<td>7,000 feet of 72- to 144-inch storm sewer from the south end of the drainage way at W. Vliet and N. 27th Street to the Menomonee River (South Corridor)</td>
</tr>
<tr>
<td></td>
<td>2,200 feet of 24-inch storm sewer for street flow relief in the W. Center Street and N. 32nd Street area (South Corridor)</td>
</tr>
<tr>
<td></td>
<td>1,500 feet of 5.5 x 8.5-foot box culvert from the intersection of N. 35th Street and W. Capital Drive to the Bee Bus Storage basin near Lincoln Creek (North Corridor)</td>
</tr>
<tr>
<td></td>
<td>1,200 feet of 5 x 8-foot box culvert from N. 27th Street and W. Hope Avenue to the DRS East Basin (North Corridor)</td>
</tr>
<tr>
<td></td>
<td>965 feet of 4 x 6-foot box culvert connecting the East Basin to the North Basin (North Corridor)</td>
</tr>
<tr>
<td>Stormwater Storage</td>
<td>52.2 Million Gallons (MG) of stormwater storage at nine locations in South and North Corridors</td>
</tr>
<tr>
<td>Drainage Way</td>
<td>13,500 feet (or 2.6 miles) of drainage way from W. Auer Avenue to W. Vliet Street (South Corridor)</td>
</tr>
</tbody>
</table>
PROJECT BENEFITS

- Environmental Enhancement
- Neighborhood Re-imaging
- Health & Social Connectivity
- Economic Advancement
- Cost Savings
- Educational Opportunities
- Community Connectivity
- Recreational Opportunities

30th Street Industrial Corridor Redevelopment Program
# Project Benefits

<table>
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<tr>
<th>Social</th>
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<tbody>
<tr>
<td>Recreational Opportunities</td>
<td>Playfields, game courts, and walk /bike path trails</td>
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<tr>
<td>Jobs Creation</td>
<td>1,290 short term and 70 long term jobs</td>
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<tr>
<td>Connectivity to Neighborhoods</td>
<td>8.5 miles of porous pavement bike path</td>
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</table>

<table>
<thead>
<tr>
<th>Economic</th>
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<tbody>
<tr>
<td>Foreclosed Property Maintenance</td>
<td>$1.5 million in annual savings</td>
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<tr>
<td>Property Values</td>
<td>Enhance property values by 2 to 3 times</td>
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</table>

<table>
<thead>
<tr>
<th>Environmental</th>
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<tbody>
<tr>
<td>Water Quality Benefits</td>
<td>Reduce CSO volumes by 20 to 90 million gallons</td>
</tr>
<tr>
<td>Flood Damage Reductions</td>
<td>Savings of $130 million over 20 years</td>
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<tr>
<td>Area of Green Space</td>
<td>65 acres of green space</td>
</tr>
</tbody>
</table>
Thank you

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