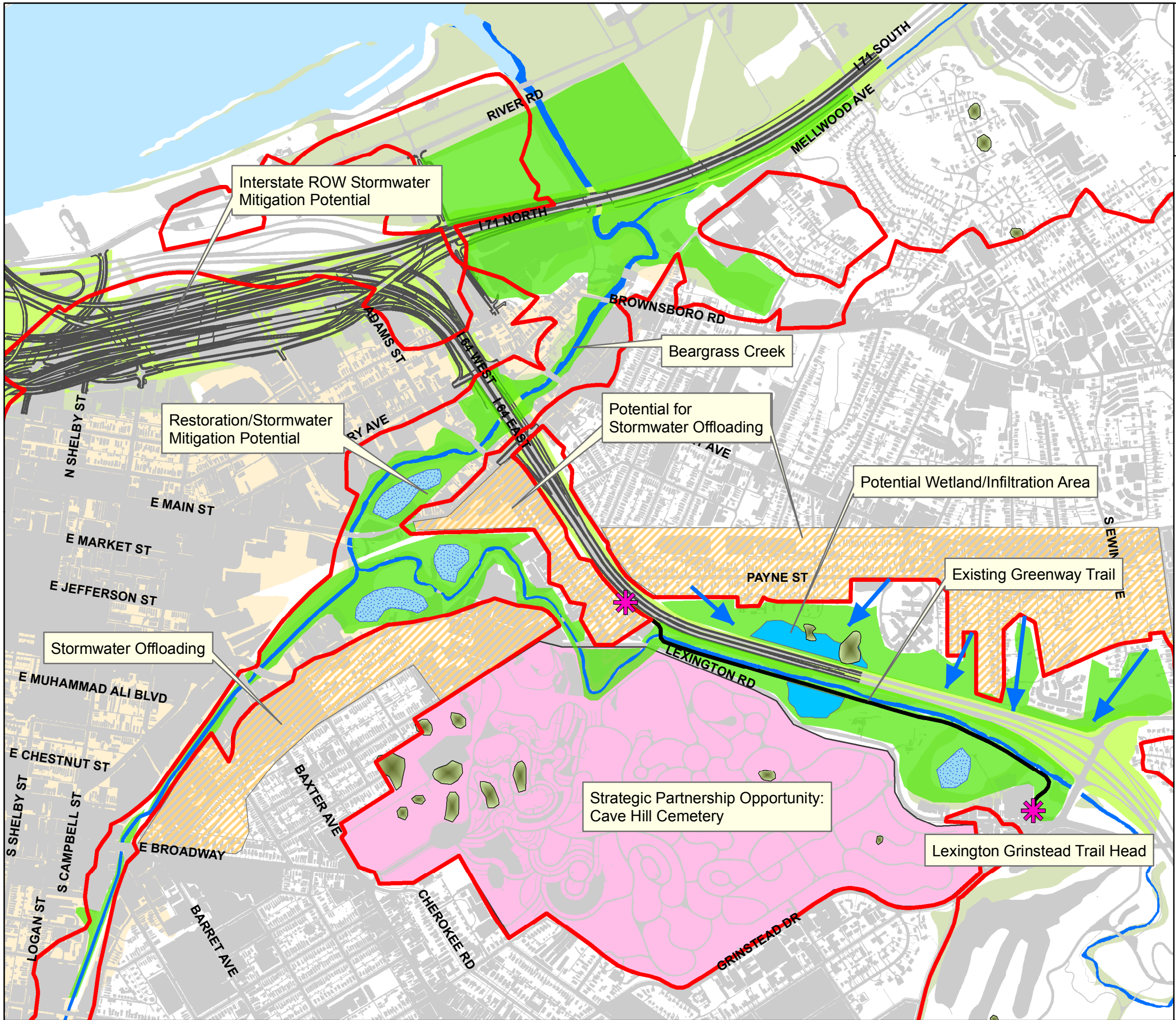


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Vol. 2 - Final CSO Long-Term Control Plan  
**FIGURE 3.2.13**  
**NORTHEAST GREEN FOCUS AREA**



**LEGEND**

- \* Trailhead
- Kennedy Interchange
- Trail
- CSO Boundary
- Stormwater Mitigation Sites
- Sinkholes
- Potential Infiltration Area
- Stream Restoration
- Stormwater Offloading
- Ohio River
- Impervious Surfaces
- Right of Way
- Stream
- Strategic Partnership Opportunity
- Glacial outwash (Wisconsinan)
- Alluvium

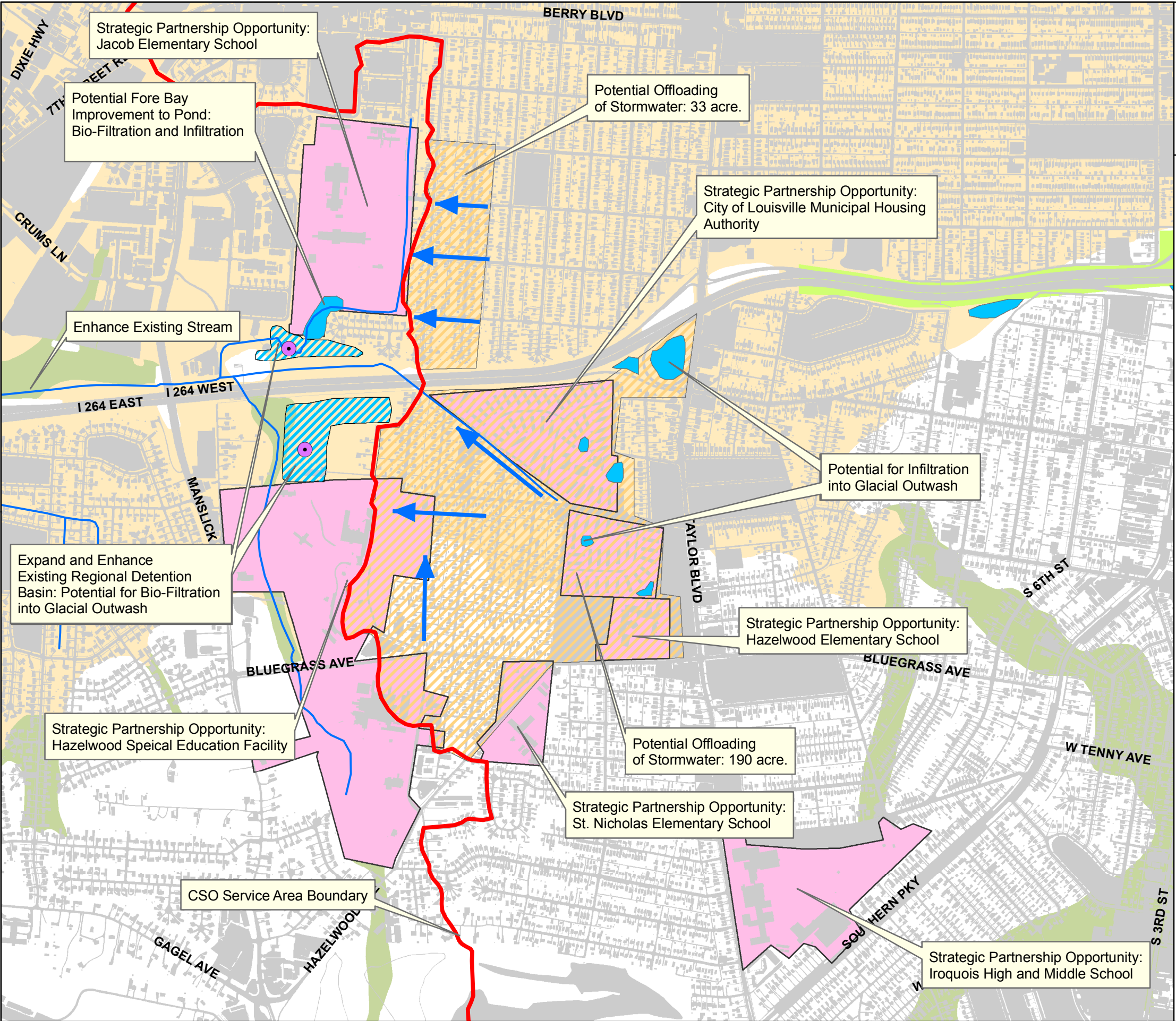
| Features                            | Area (Acres) |
|-------------------------------------|--------------|
| Stream Restoration                  | 289          |
| Stormwater Offloading Area          | 216          |
| Strategic Partner Opportunity       | 324          |
| Potential Wetland/Infiltration Area | 9            |
| Stormwater Mitigation Sites         | 12           |
| Interstate ROW Mitigation Potential | 167          |



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**Vol. 2 - Final CSO Long-Term Control Plan**  
**FIGURE 3.2.14**  
**SOUTH CENTRAL WEST**  
**GREEN FOCUS AREA**



**LEGEND**

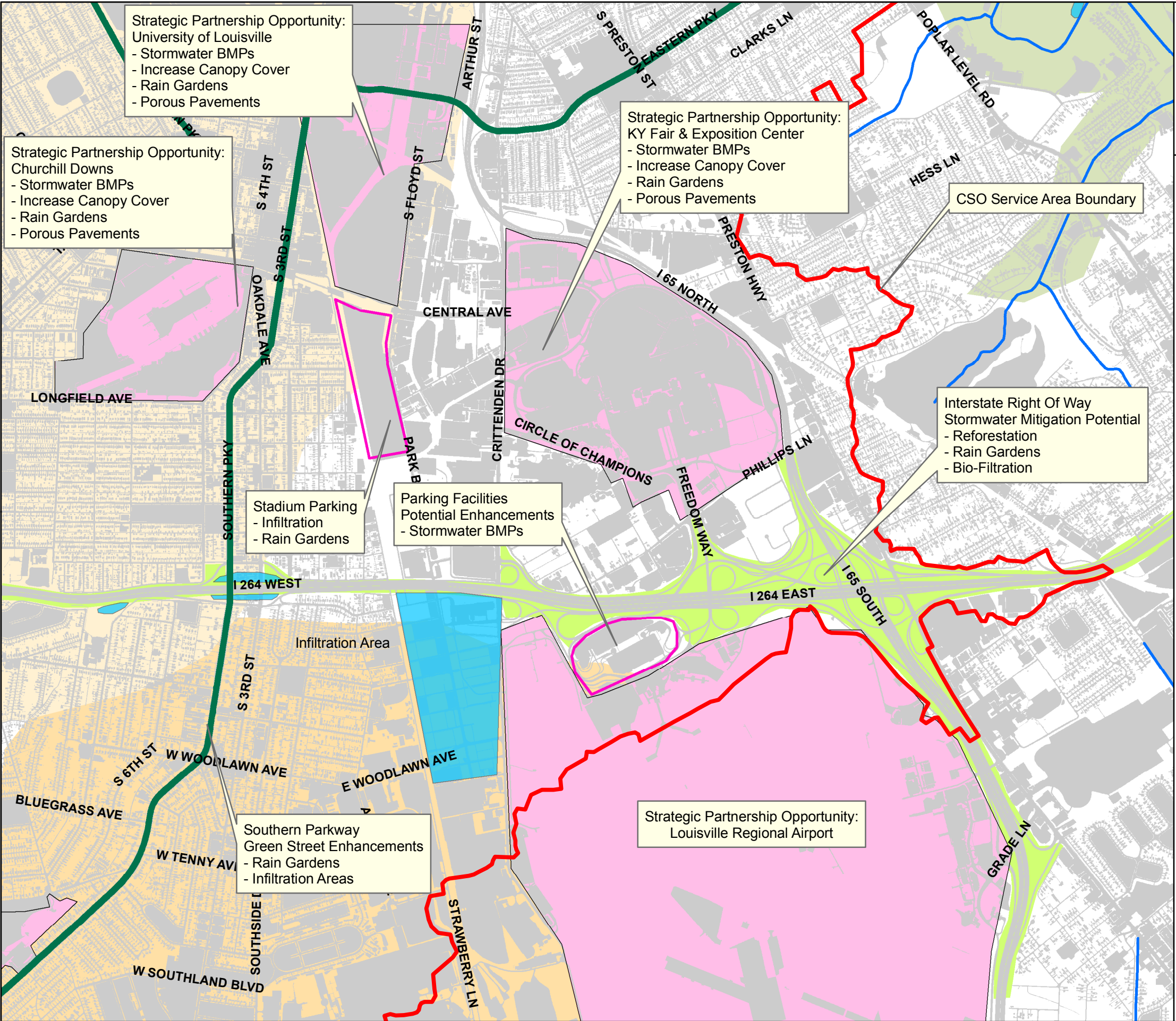
- MSD Detention Basins
- Streams
- CSO Boundary
- Existing Detention Basins
- Potential Infiltration Area
- Stormwater Offloading
- Strategic Partnership Opportunity
- Impervious Surfaces
- Glacial outwash (Wisconsinan)
- Alluvium

| Features                      | Area (Acres) |
|-------------------------------|--------------|
| Stormwater Offloading Area    | 223          |
| Strategic Partner Opportunity | 254          |
| Potential Infiltration Area   | 6            |
| Existing Detention Basins     | 15           |



Integrated Overflow Abatement Plan  
Vol. 2 - Final CSO Long-Term Control Plan

FIGURE 3.2.15  
SOUTH CENTRAL EAST  
GREEN FOCUS AREA



LEGEND

- Streams
- CSO Boundary
- Parking Enhancement Opportunity
- Olmsted Parkway System
- Potential Infiltration Area
- Strategic Partnership Opportunity
- Impervious Surfaces
- Right of Way
- Alluvium
- Outwash
- Terrace

| Features                            | Area (Acres) |
|-------------------------------------|--------------|
| Strategic Partner Opportunity       | 2540         |
| Potential Wetland/Infiltration Area | 113          |
| Parking Enhancement Potential       | 75           |
| Interstate ROW Mitigation Potential | 172          |



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Vol. 2 - Final CSO Long-Term Control Plan

FIGURE 3.2.16  
SOUTHWESTERN PARKWAY  
GREEN FOCUS AREA



LEGEND

- MSD Detention Basins
- Streams
- Green Alley
- Green Street
- CSO Boundary
- Olmsted Parkway System
- Stormwater Offloading
- Potential Infiltration Area
- Existing Detention Basins
- Metro Parks & Open Space
- Ohio River
- Impervious Surfaces
- Strategic Partnership Opportunity
- Right of Way
- Alluvium
- Glacial outwash (Wisconsinan)
- Artificial fill

| Features                          | Area (Acres) |
|-----------------------------------|--------------|
| Strategic Partnership Opportunity | 68           |
| Potential Infiltration Area       | 13           |
| Green Streets Right of Way        | 45           |
| Storm Water Off Loading           | 56           |
| Existing Detention Basins         | 6            |
| Interstate Right of Way *         | 121          |

\* Including Interstate ROW in both Southwestern Area and Southwest Greenway & Parkway Area

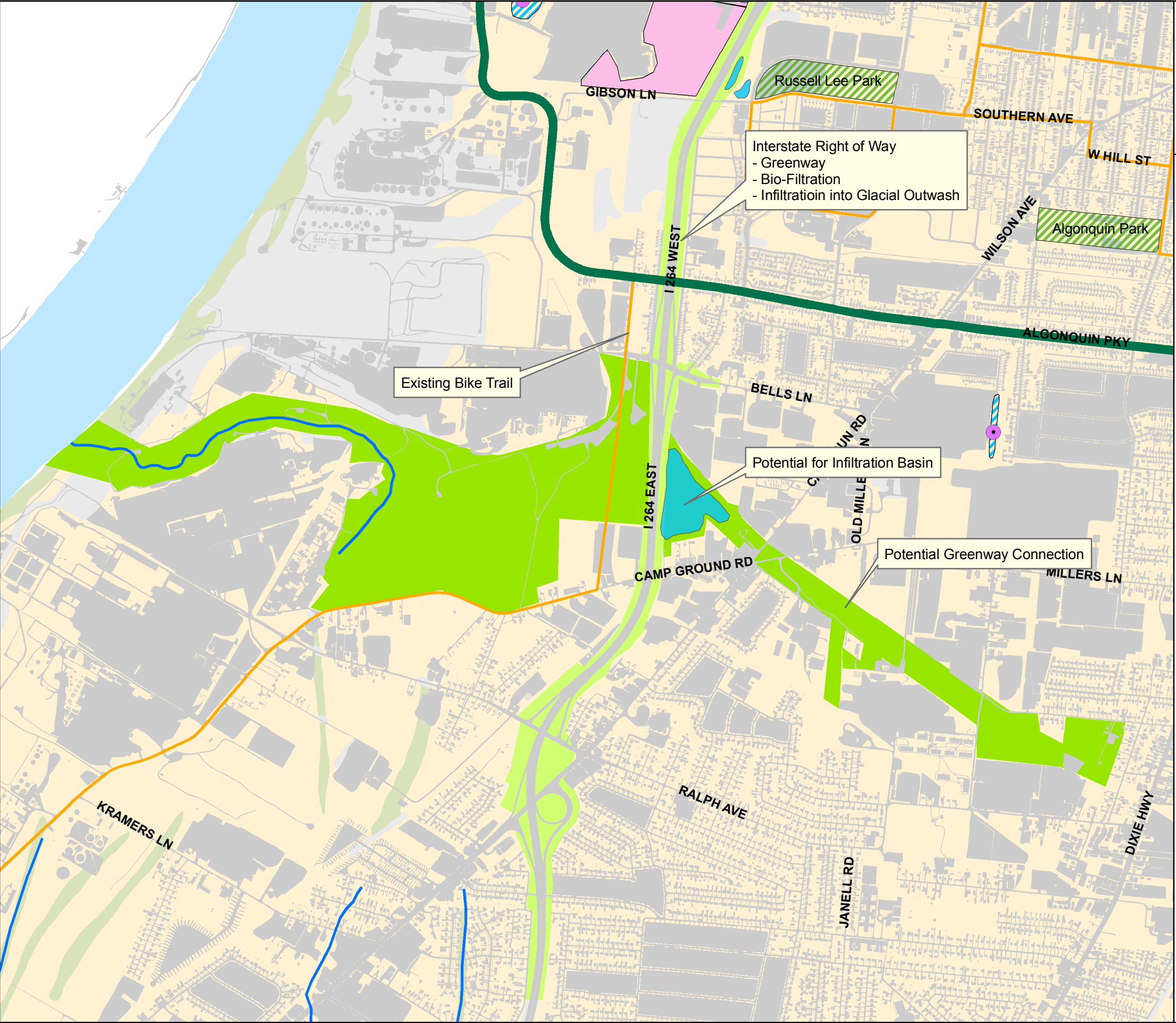


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Vol. 2 - Final CSO Long-Term Control Plan

**FIGURE 3.2.17**  
**SOUTHWEST GREENWAY**  
**AND PARKWAY GREEN FOCUS AREA**



**LEGEND**

- MSD Detention Basins
- Streams
- Bike Route
- Olmsted Parkway System
- Potential Infiltration Area
- Existing Detention Basins
- Metro Parks & Open Space
- Ohio River
- Strategic Partnership Opportunity
- Impervious Surfaces
- Right of Way
- Greenway Connection
- Alluvium
- Glacial outwash (Wisconsinan)
- Artificial fill

| Features                    | Area (Acres) |
|-----------------------------|--------------|
| Potential Infiltration Area | 13           |
| Greenway Connection         | 331          |
| Existing Detention Basins   | 1.5          |



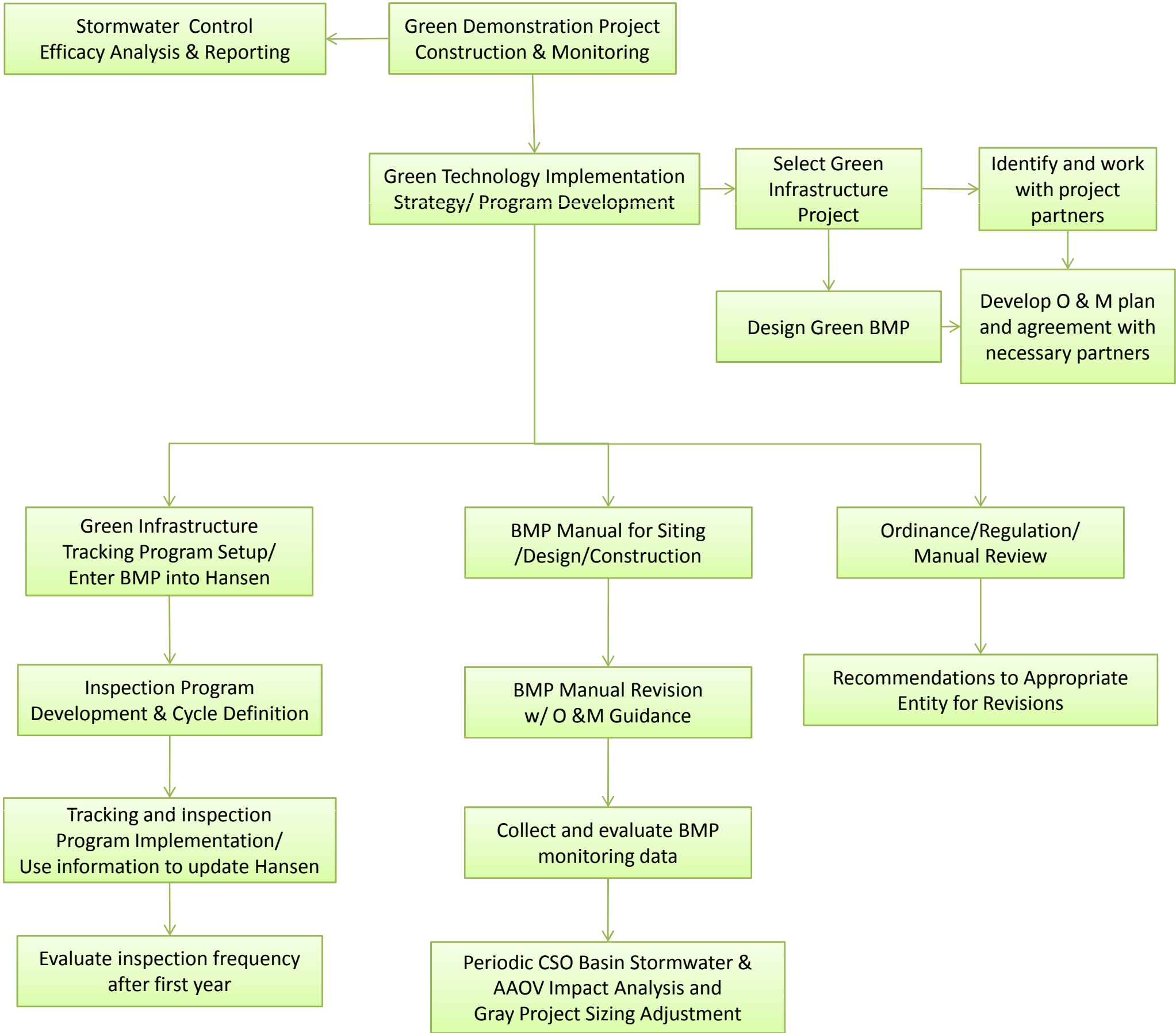
FIGURE 3.2.18  
CENTRAL BUSINESS DISTRICT  
GREEN FOCUS AREA  
GREEN STREET CONCEPT PLAN



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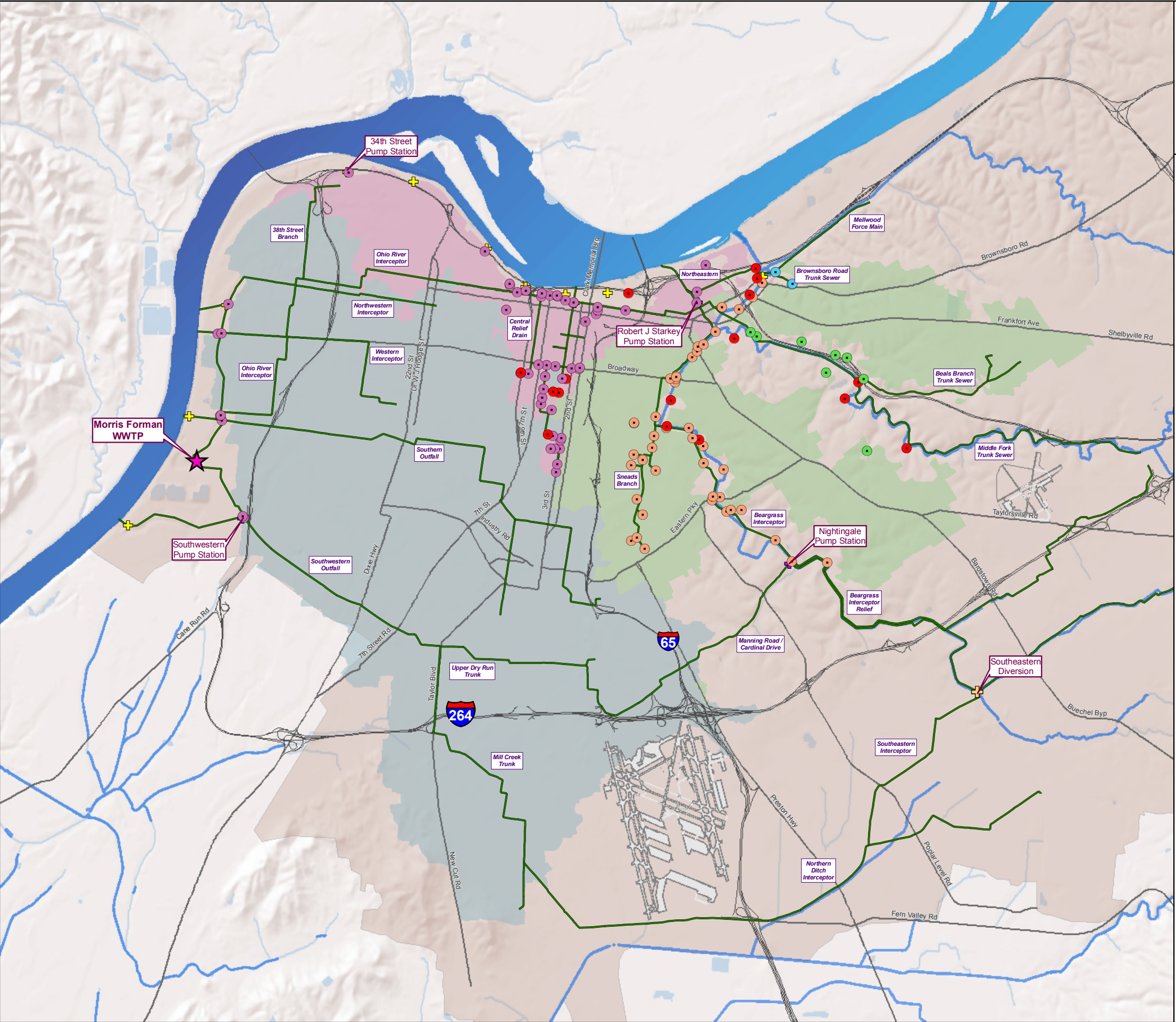


FIGURE 3.2.19  
Green Infrastructure Program  
Implementation Preliminary Flow  
Diagram





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Vol. 2 - Final CSO Long-Term Control Plan  
**FIGURE 3.2.20**  
**CSO DISTRIBUTION**  
**BY REGION**



**LEGEND**

CSO by Region

- Ohio River
- Middle Fork Beargrass Creek
- Muddy Fork Beargrass Creek
- South Fork Beargrass Creek
- Eliminated CSO
- ✚ Flood Pump Station
- ✚ Sanitary Pump Station
- ✚ Southeastern Diversion
- ★ Wastewater Treatment Plant
- Major Sewer Line
- Interstate
- Major Road

Regional Boundaries

- Beargrass Creek
- Ohio River North
- Ohio River West
- Morris Forman Service Area
- Water Feature



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Figure 3.2.21  
Off-Line Storage  
Pumped Effluent  
Flow Diagram

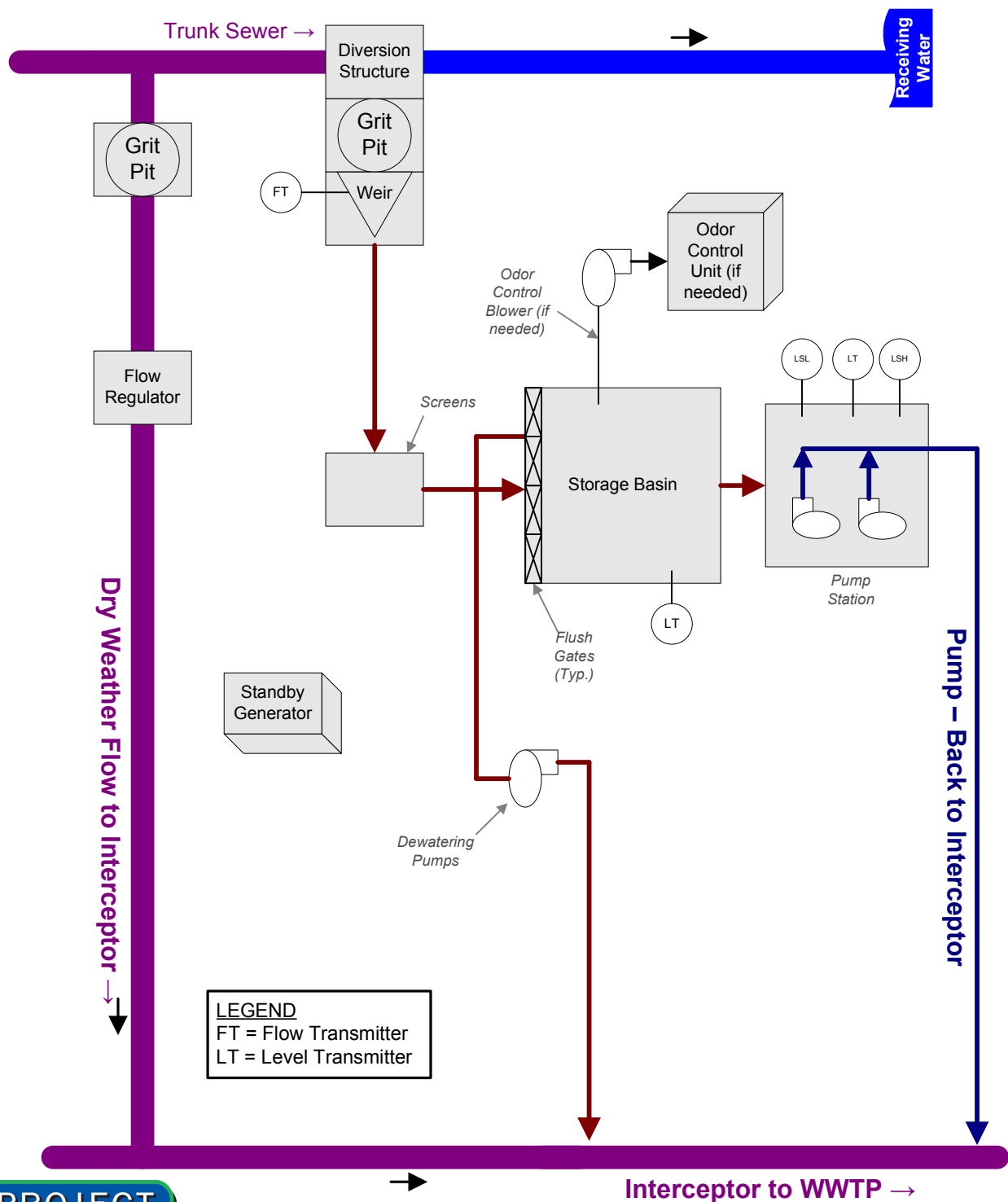




Figure 3.2.22  
Off-Line Storage  
Gravity Effluent  
Flow Diagram

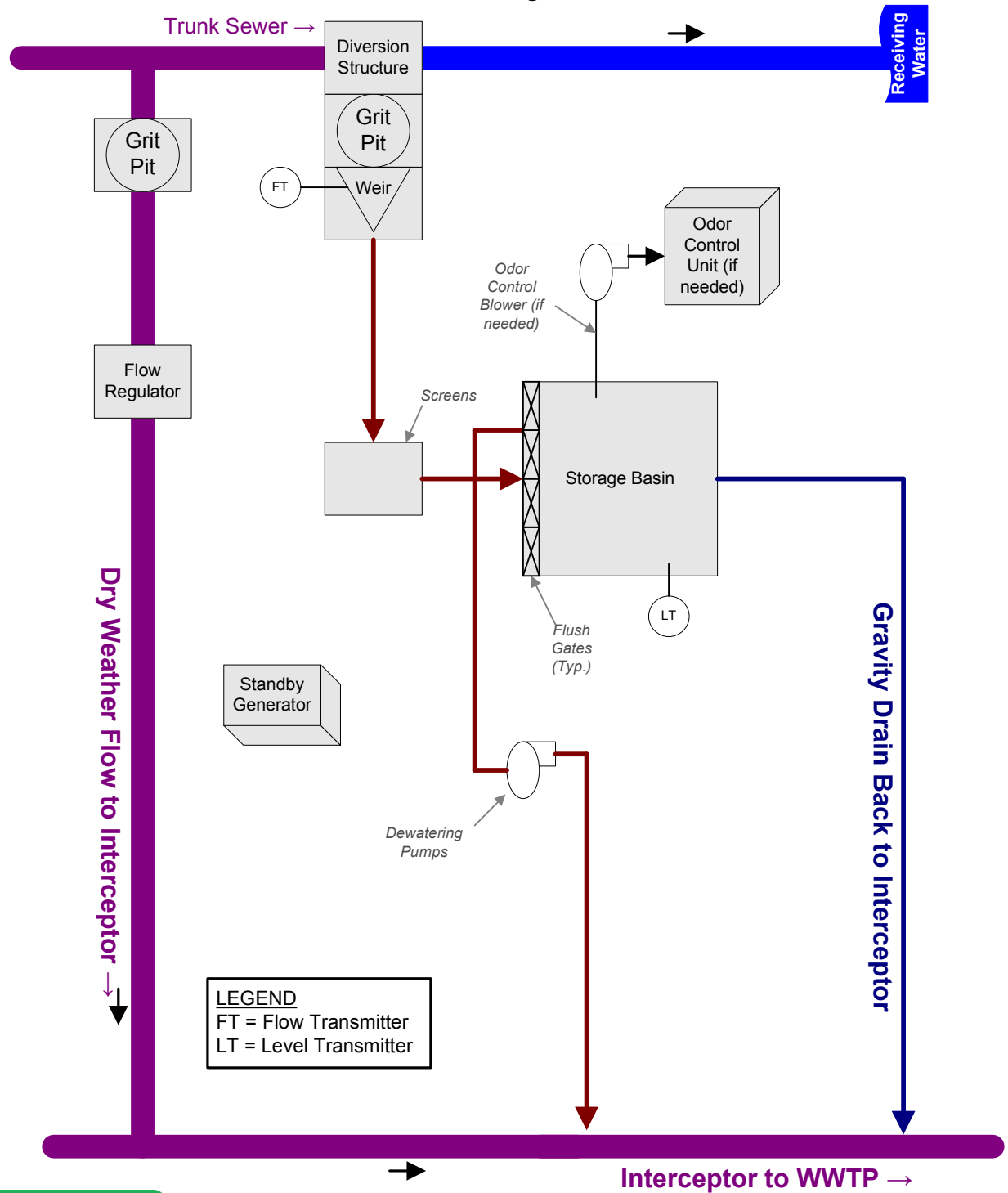




Figure 3.2.23  
Retention Treatment Basin  
Process Flow Diagram

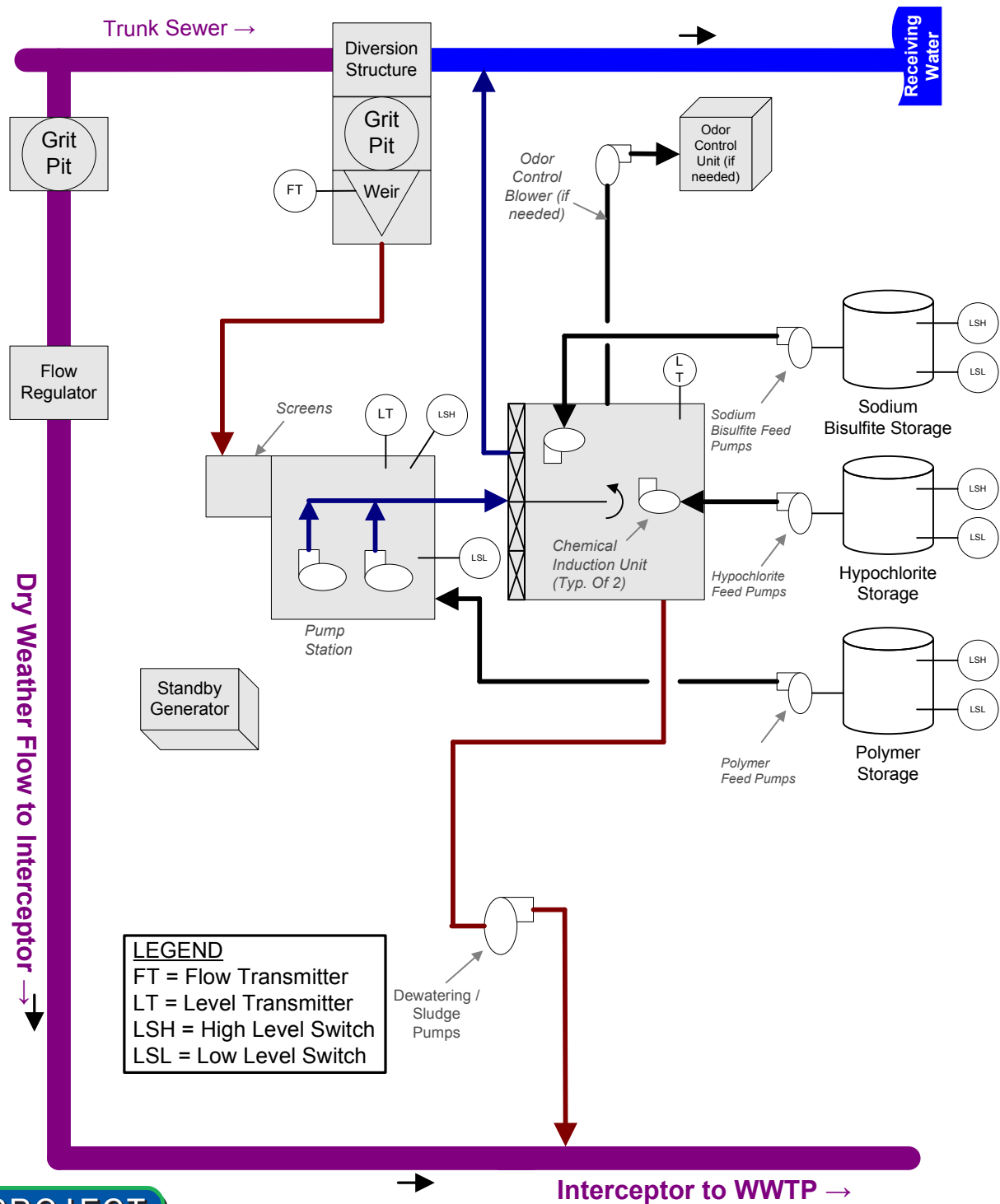




Figure 3.2.24  
Ballasted Flocculation  
Process Flow Diagram

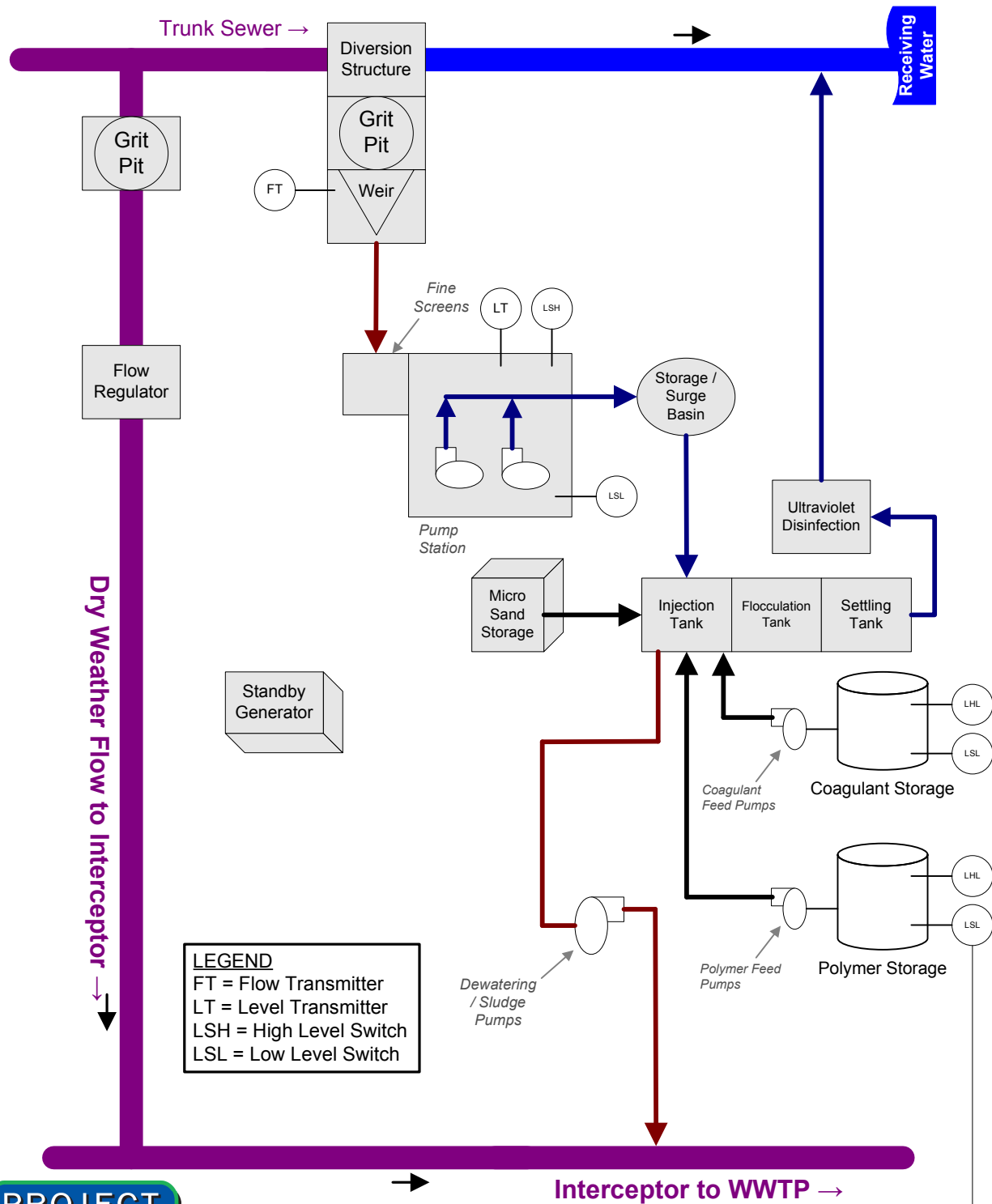




Figure 3.2.25  
Hybrid Technology:  
Off-Line Storage with Real Time Control  
Pumped Effluent  
Flow Diagram

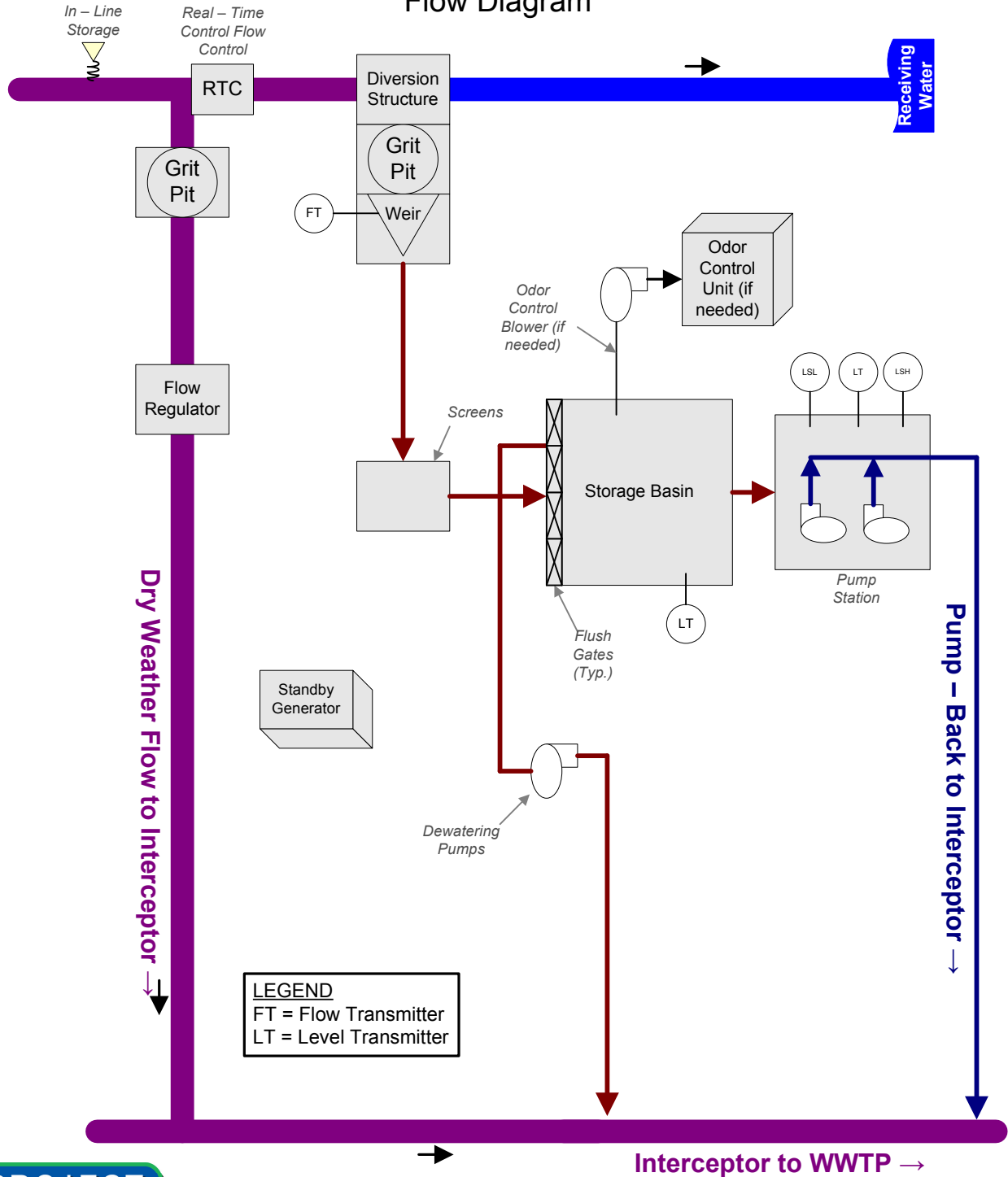




Figure 3.2.26  
Hybrid Technology:  
Off-Line Storage with Real Time Control  
Gravity Effluent  
Flow Diagram

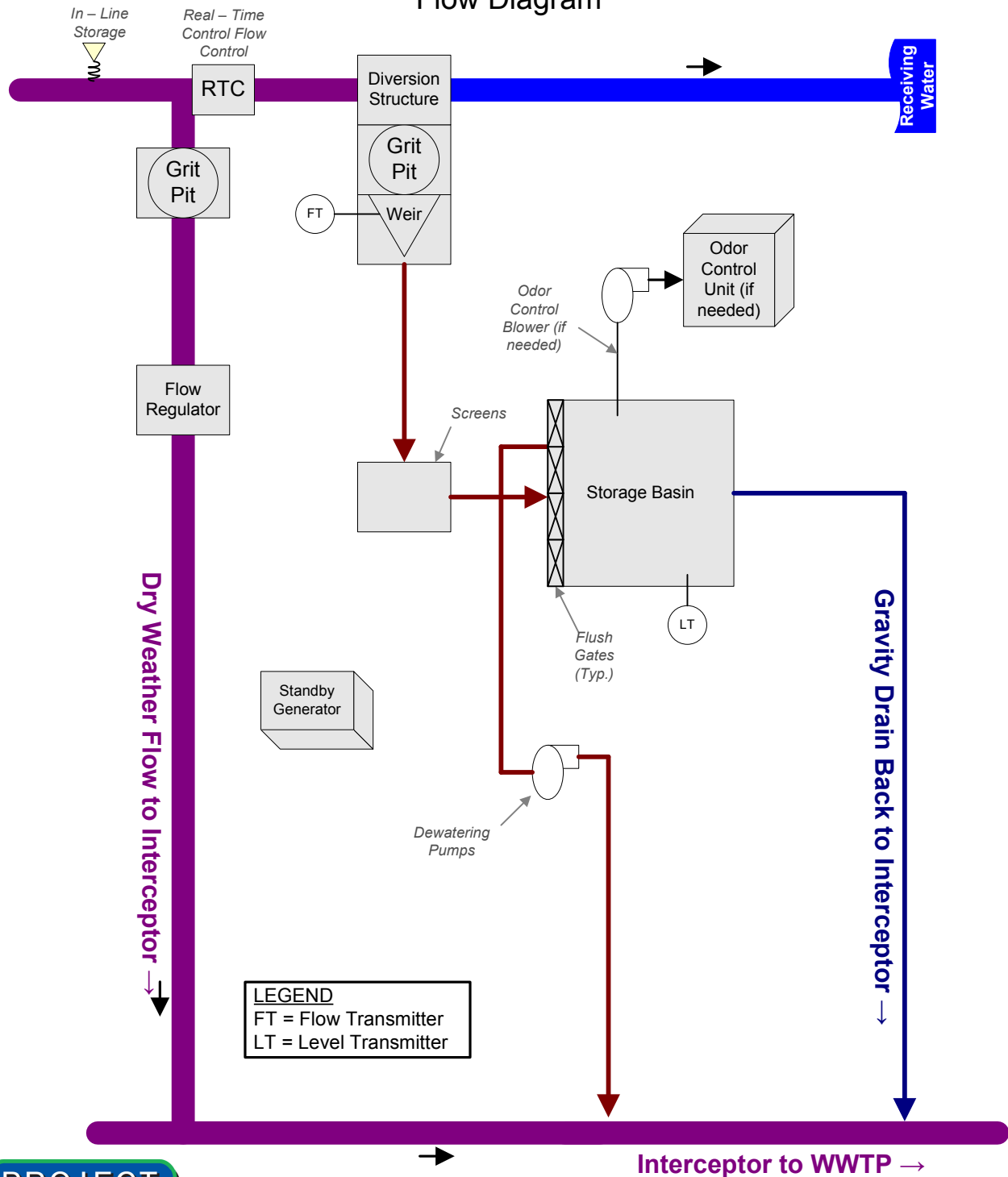
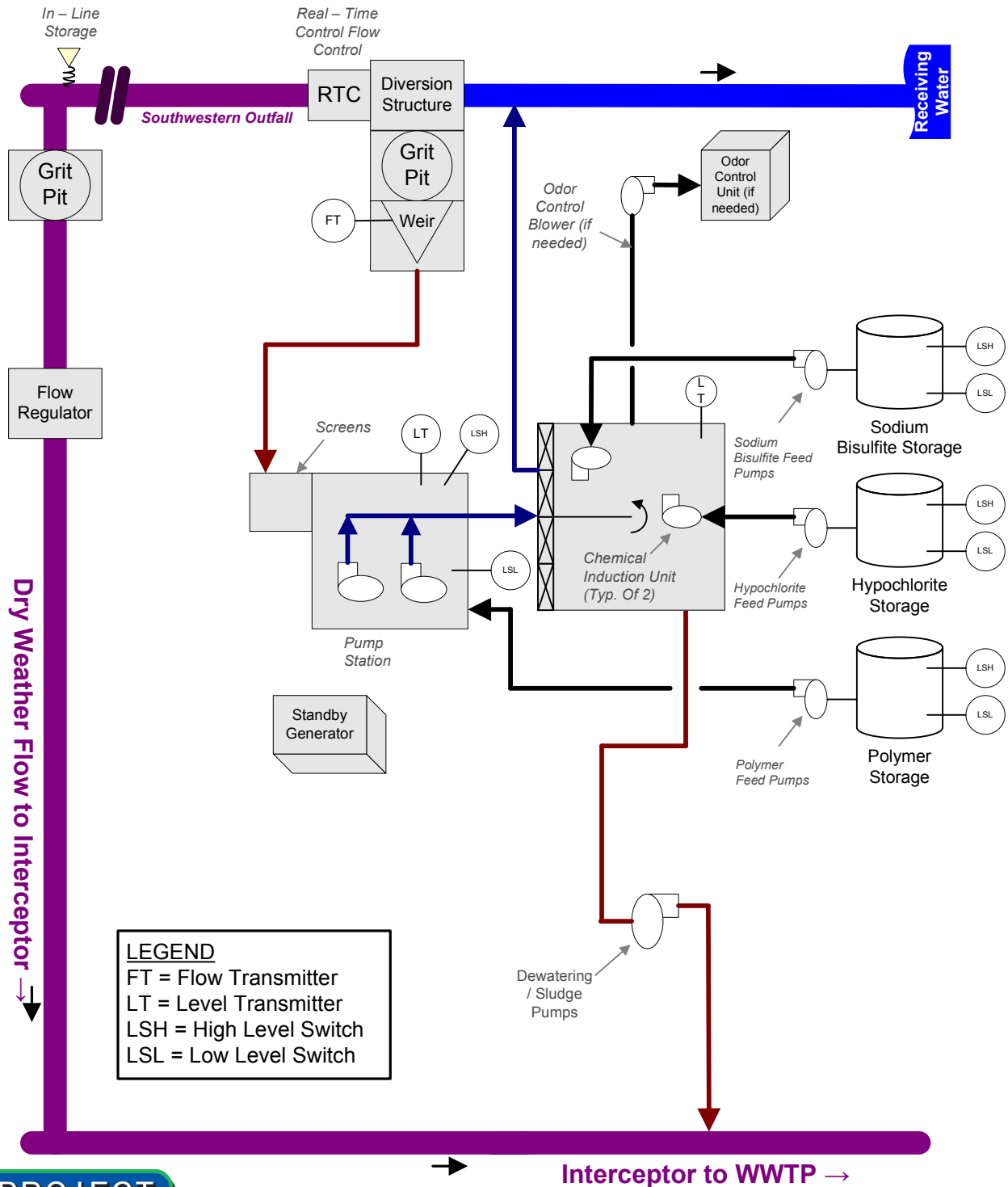


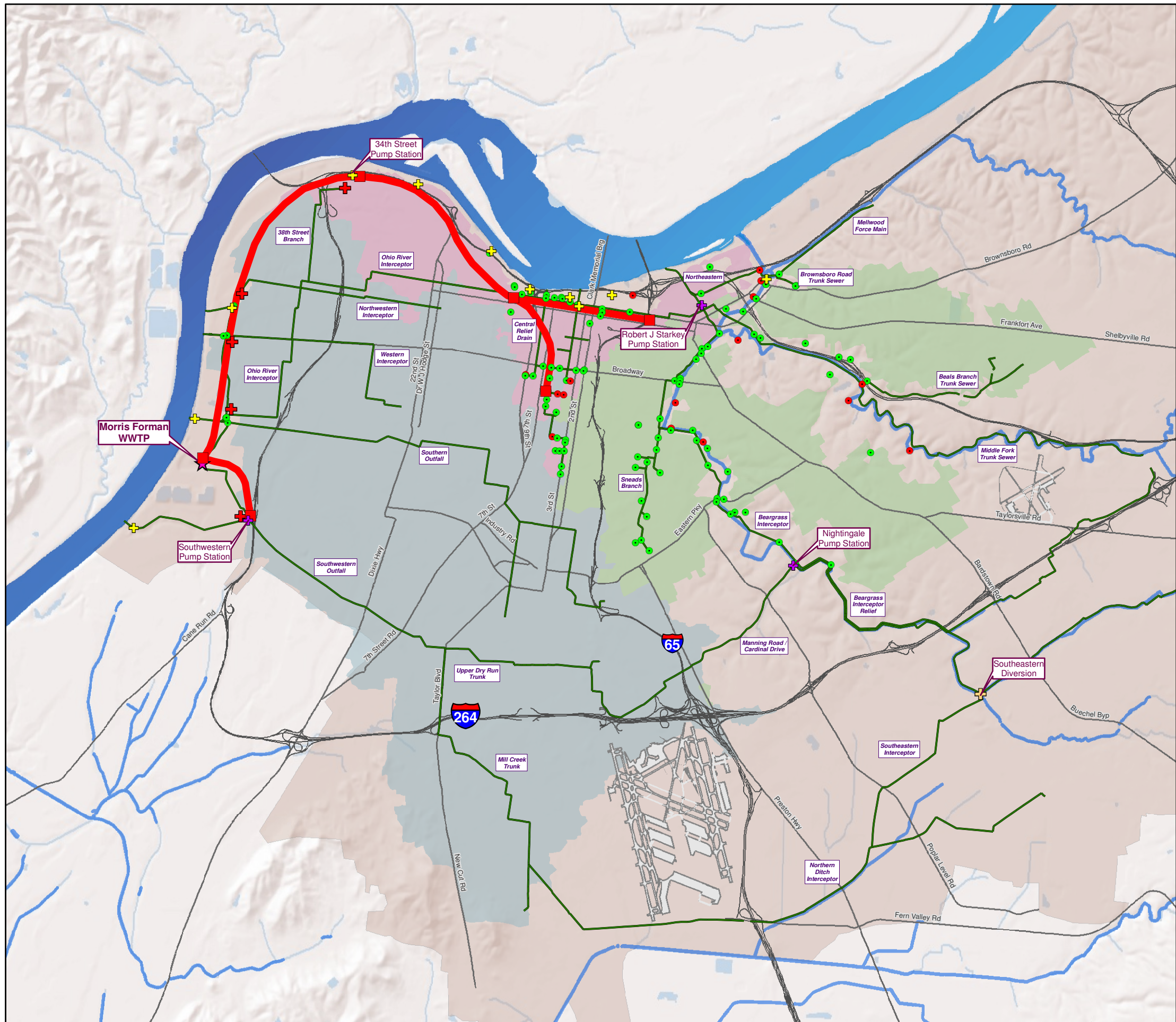
Figure 3.2.27  
Hybrid Technology:  
Treatment Basin with Real-Time Control  
Process Flow Diagram





**Integrated Overflow Abatement Plan**  
**Vol. 2 - Final CSO Long-Term Control Plan**

**FIGURE 3.3.2**  
**REGIONAL CONSOLIDATION**  
**ALTERNATIVE 1**



**LEGEND**

- Construction Access Shaft
- + Drop Shaft  $\geq 12$  MGD
- Active CSO Location
- Eliminated CSO Location
- + Flood Pump Station
- + Sanitary Pump Station
- ★ Wastewater Treatment Plant
- Regional Consolidation Alternative
- Major Sewer Line
- Interstate
- Major Road
- Regional Boundaries
- Beargrass Creek
- Ohio River North
- Ohio River West
- Morris Forman Service Area
- Water Feature



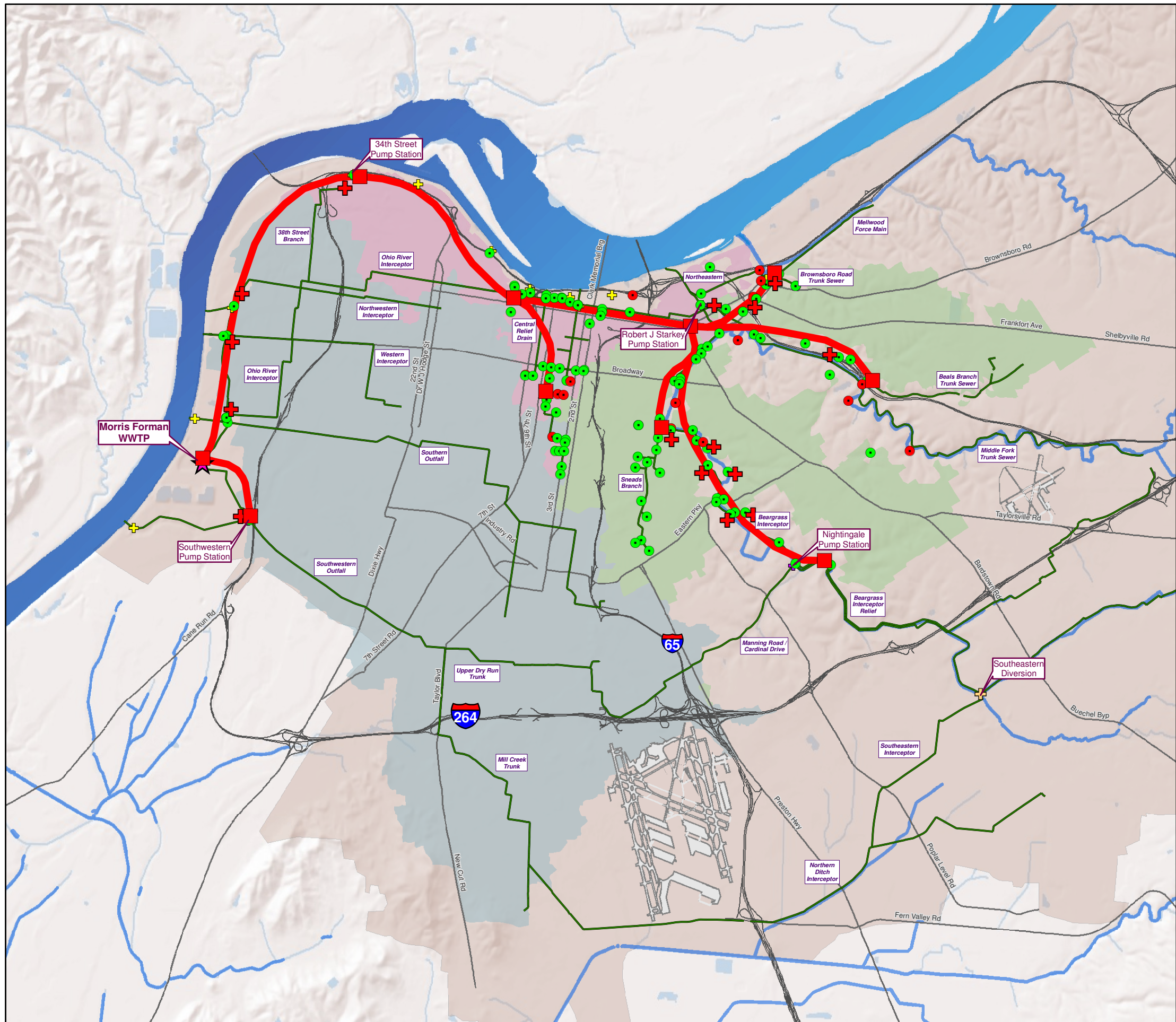
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Vol. 2 - Final CSO Long-Term Control Plan

FIGURE 3.3.3  
REGIONAL CONSOLIDATION  
ALTERNATIVE 2



LEGEND

- Construction Access Shaft
- Drop Shaft  $\geq 12$  MGD
- Active CSO Location
- Eliminated CSO Location
- Flood Pump Station
- Sanitary Pump Station
- Wastewater Treatment Plant
- Regional Consolidation Alternative
- Major Sewer Line
- Interstate
- Major Road
- Regional Boundaries
  - Beargrass Creek
  - Ohio River North
  - Ohio River West
  - Morris Forman Service Area
- Water Feature



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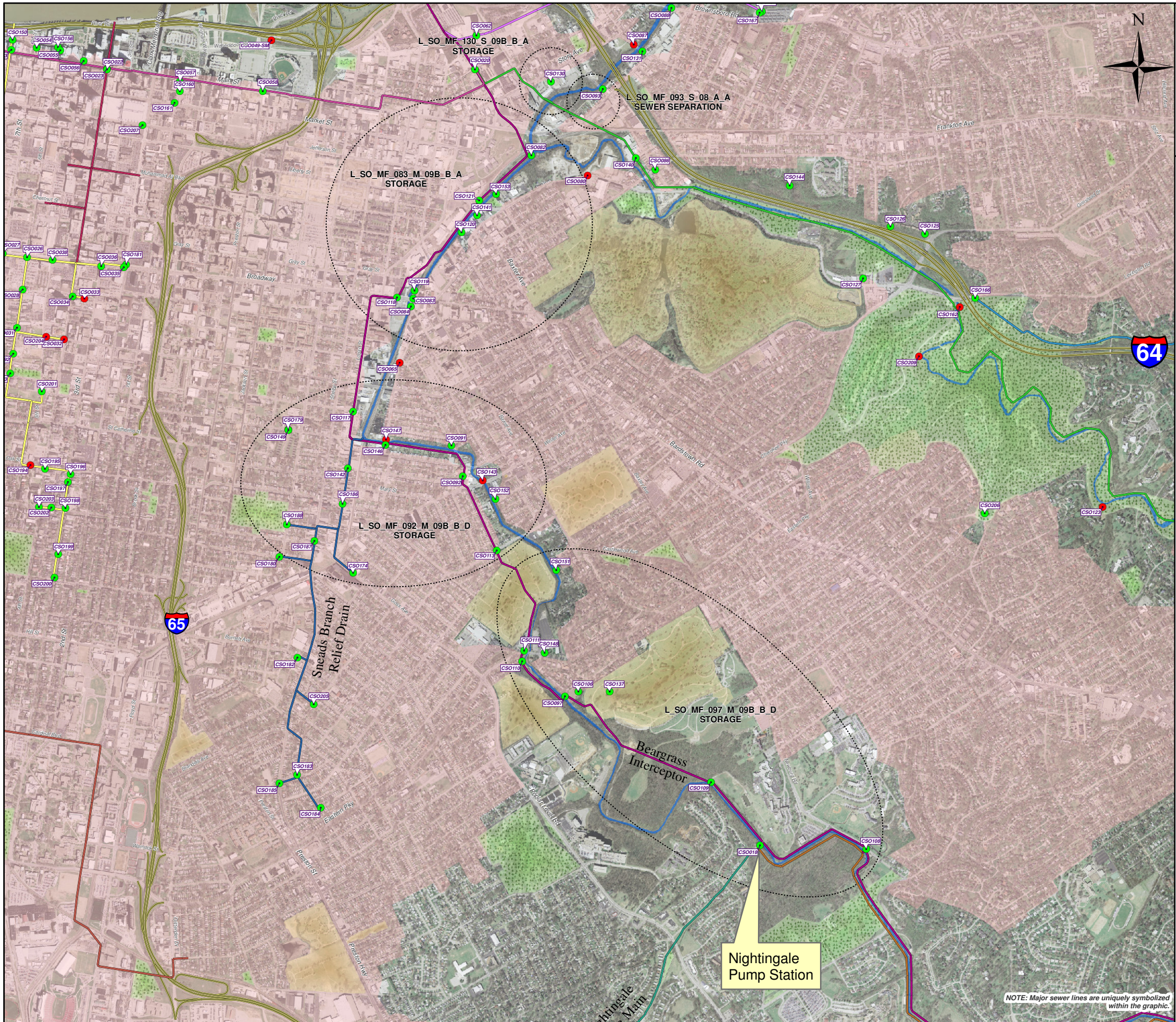
FIGURE 3.3.4  
BEARGRASS CREEK SOUTH FORK  
INITIAL SOLUTIONS

(Refer to Table 3.3.2 Beargrass Creek South Fork Matrix)

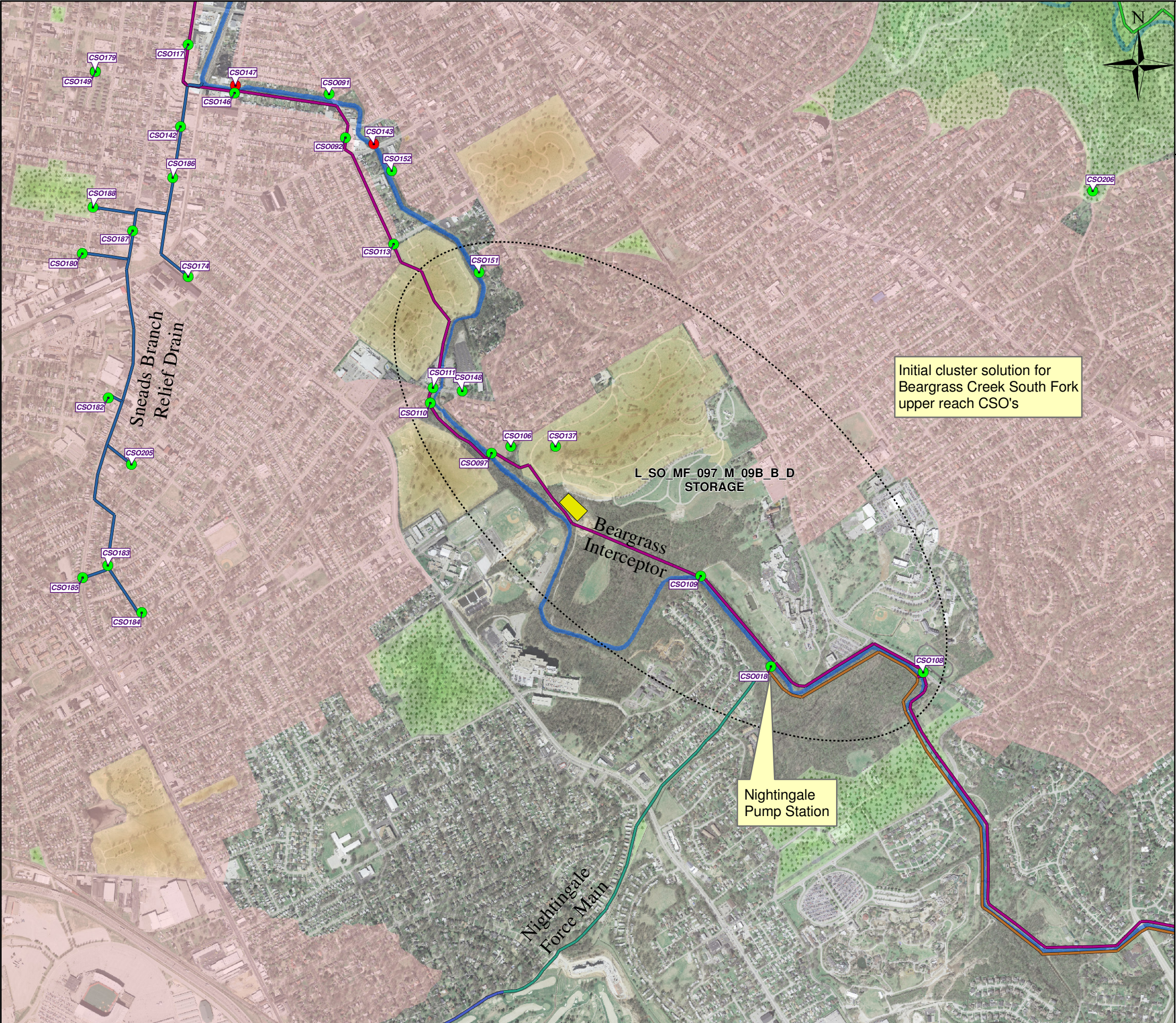
LEGEND

- Active CSO Location
- Eliminated CSO Location
- SFBCG Initial Cluster
- Cemetery
- Metro Park
- Major Stream
- CSO General Boundary

1 inch = 2,000 feet







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**Vol. 2 - Final CSO Long Term Control Plan**

**FIGURE 3.3.5**  
**BEARGRASS CREEK SOUTH FORK**  
**UPPER REACH SOLUTION**

(Refer to Table 3.3.2 Beargrass Creek South Fork Matrix)

**LEGEND**

- Active CSO Location
- Eliminated CSO Location
- Offline Storage Basin
- SFBCG Initial Cluster
- Cemetery
- Metro Park
- ~ Major Stream
- CSO General Boundary

1 inch = 1,400 feet



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Vol. 2 - Final CSO Long Term Control Plan

FIGURE 3.3.6  
BEARGRASS CREEK SOUTH FORK  
UPPER REACH FINAL SOLUTIONS

(Refer to Final Recommended Project List Table 4.1.5)

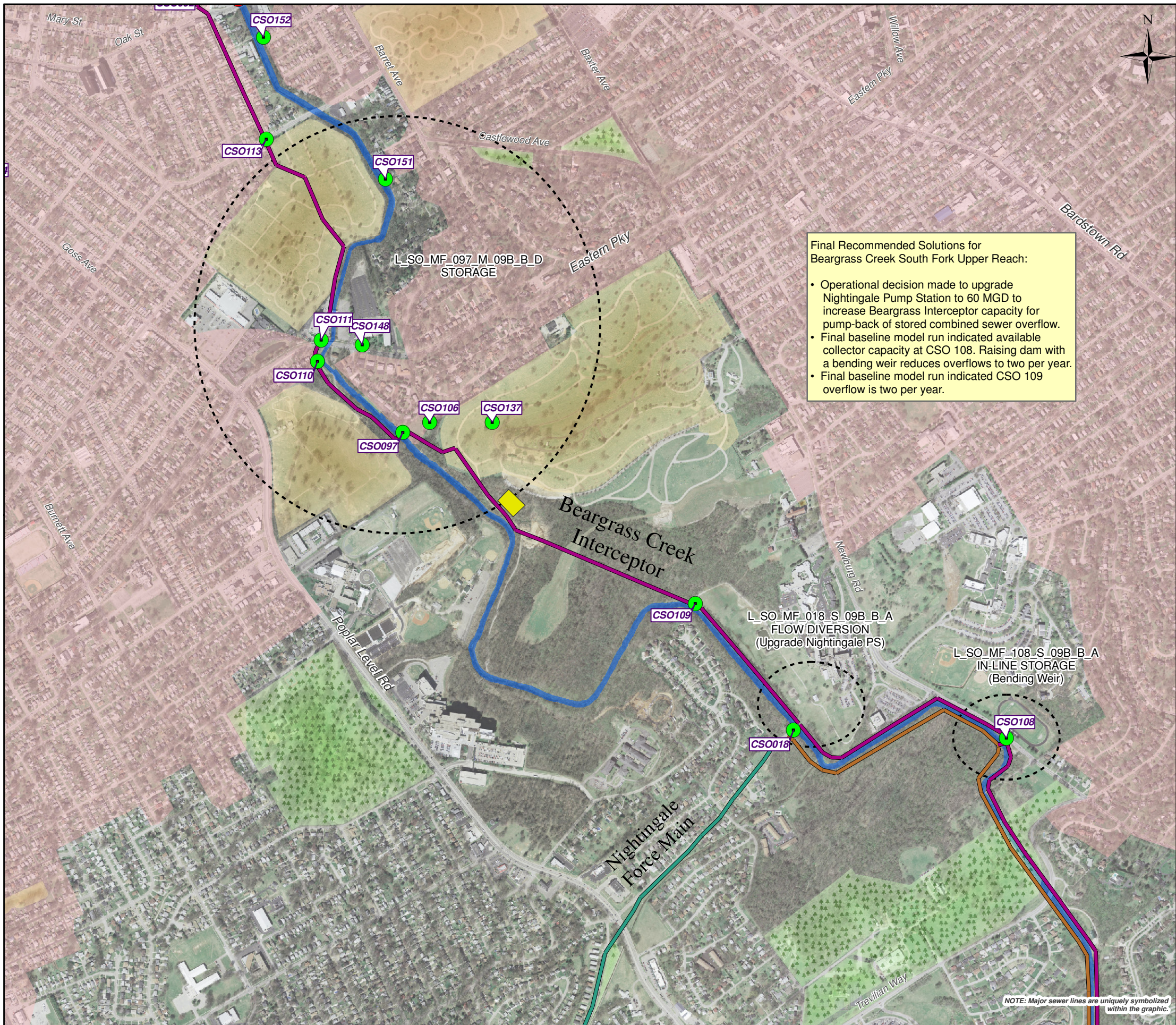
LEGEND

- Active CSO Location
- Eliminated CSO Location
- Offline Storage Basin
- SFBCG Final Cluster
- Major Stream
- Metro Park
- Cemetery
- CSO General Boundary

1 inch = 1,000 feet

Final Recommended Solutions for  
Beargrass Creek South Fork Upper Reach:

- Operational decision made to upgrade Nightingale Pump Station to 60 MGD to increase Beargrass Interceptor capacity for pump-back of stored combined sewer overflow.
- Final baseline model run indicated available collector capacity at CSO 108. Raising dam with a bending weir reduces overflows to two per year.
- Final baseline model run indicated CSO 109 overflow is two per year.



NOTE: Major sewer lines are uniquely symbolized within the graphic.



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