

I-64 & Grinstead Drive CSO Basin

IOAP Public Input Meeting
January 24th, 2012



Overview

- Why and How the Original Plan was Developed
- Why and What are the Proposed Changes
- Previous Public Input
- Significant Opportunities for Green Practices
- Moving Forward



Why and How the Original Plan was Developed

I-64 & Grinstead Drive CSO Basin



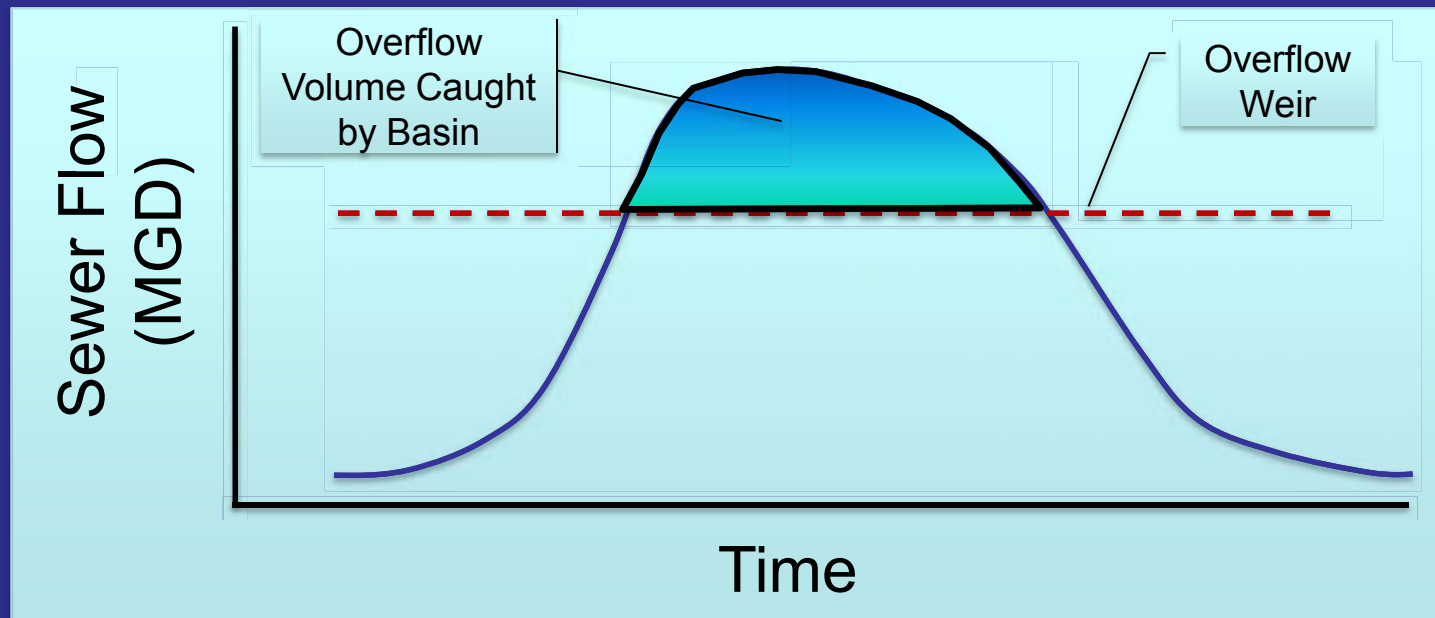
2009 IOAP Recommendations

- General
 - Component of the overall plan to reduce Combined Sewer Overflows (CSO's)
 - CSO's were grouped, when possible, to minimize the overall number of required improvements and maximize cost efficiency



2009 IOAP Recommendations

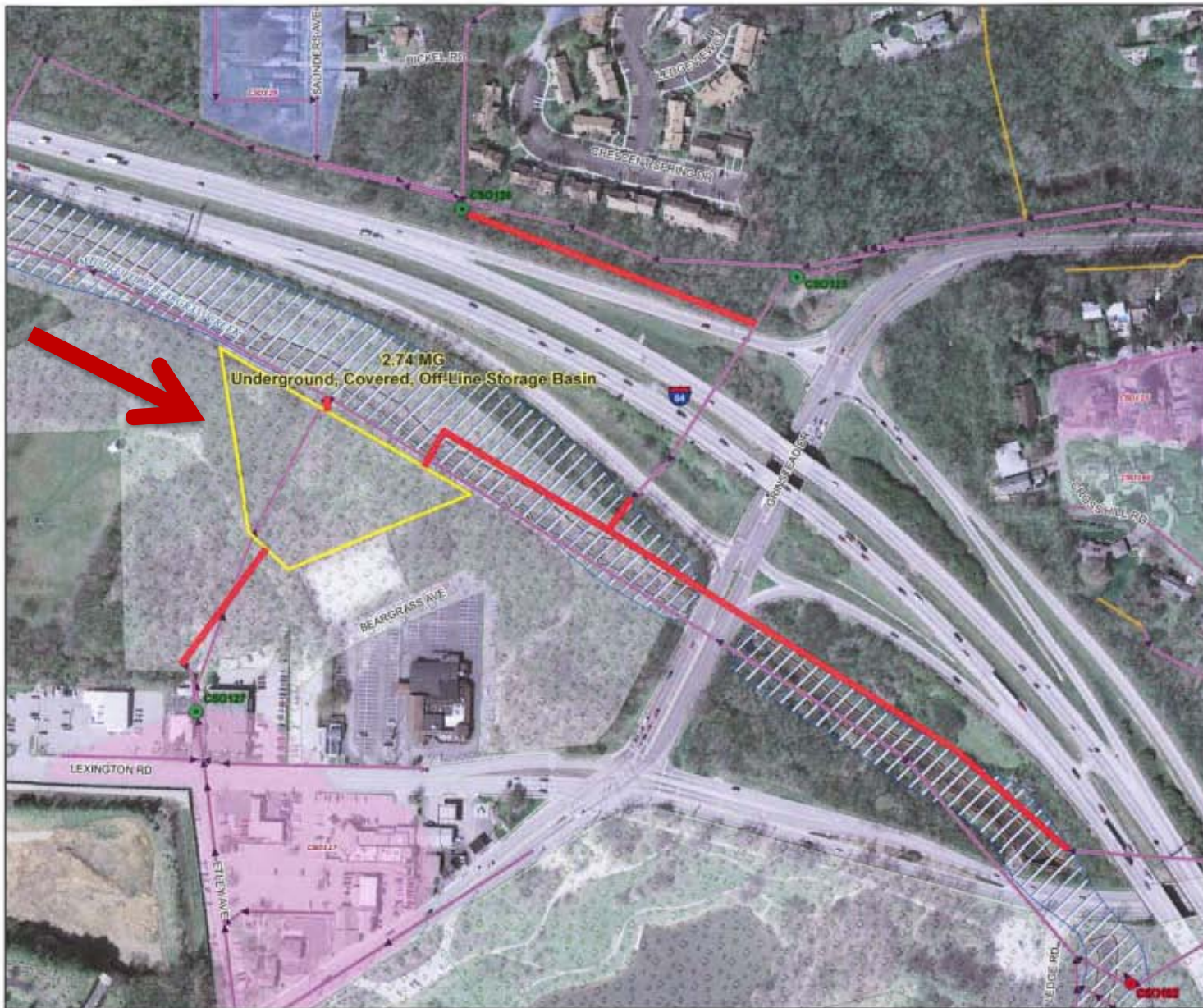
- General
 - Integrated Overflow Abatement Plan (IOAP) identified large-scale basins as the most cost effective and proven solution



2009 IOAP Recommendations

- I-64 & Grinstead Drive CSO Basin
 - Size
 - 2.74 MG Basin
 - Conveyance from CSO's 125, 126, 127, 166
 - Location
 - Vacant and undeveloped property southwest of I-64 & Grinstead Drive intersection, behind Jim Porters
 - Completion Date
 - December 31, 2014





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

Middle Fork Beargrass Creek
SolutionID # L_MI_MF_127_M_09B_B_A_8
I-64 and Grinstead Drive Storage Basin

**Preliminary - For Budget Development Only
Legend**

- Proposed Pump Station Solution
- Active CSO
- Eliminated CSO
- Pump Station
- Proposed Pipe Solution
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Streams
- ▭ Proposed Storage Solution
- ▭ Floodway
- ▭ Metro Parks
- ▭ County Boundary

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch equals 200 feet
Scaleable when printed on 11" X 17" paper
Some boundaries are uniquely symbolized within the map.
Map Revision
December 3, 2008
Aerial Date: 2005



Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT AND LOUISVILLE WATER COMPANY. LOUISVILLE METRO GOVERNMENT AND JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR. PUBLISHED BY LCMC.

2009 IOAP Recommendations

| CSO | CSO Area (ac.) | 2009 AAOV (MG/yr) | # Overflows per year | Post LTCP AAOV (MG/yr) | Post LTCP # Overflows per year |
|-----|----------------|-------------------|----------------------|------------------------|--------------------------------|
| 125 | 391.03 | 48.38 | 54 | 7.63 | 8 |
| 126 | 35.29 | 0.58 | 13 | 0.56 | 8 |
| 127 | 192.26 | 4.62 | 21 | 1.07 | 8 |
| 166 | 696.65 | 10.12 | 19 | 3.32 | 8 |

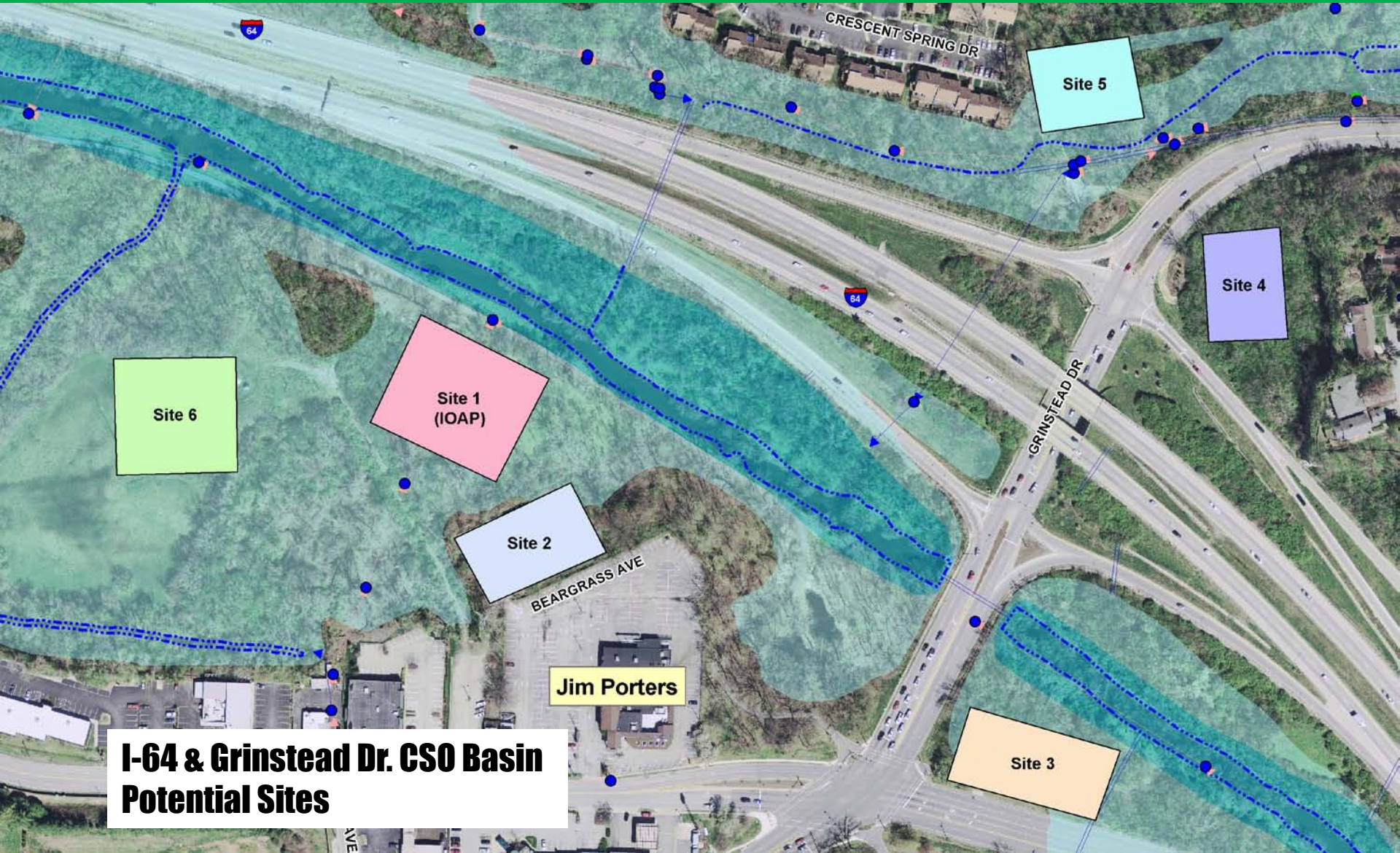
AAOV: Average Annual Overflow Volume



2009 IOAP Recommendations

- I-64 & Grinstead Drive CSO Basin
 - Site Selection
 - IOAP recommended site lies within I-64 ROW
 - 5 alternative sites were identified (6 total)
 - Each site was analyzed based on:
 - Conveyance requirements
 - Specific environmental concerns
 - Construction feasibility
 - Construction, restoration, and acquisition costs





**I-64 & Grinstead Dr. CSO Basin
Potential Sites**

Site 5

Site 4

Site 6

Site 1
(IOAP)

Site 2

Site 3

Jim Porters

CRESCENT SPRING DR

BEARGRASS AVE

GRINSTEAD DR

64

64

2009 IOAP Recommendations

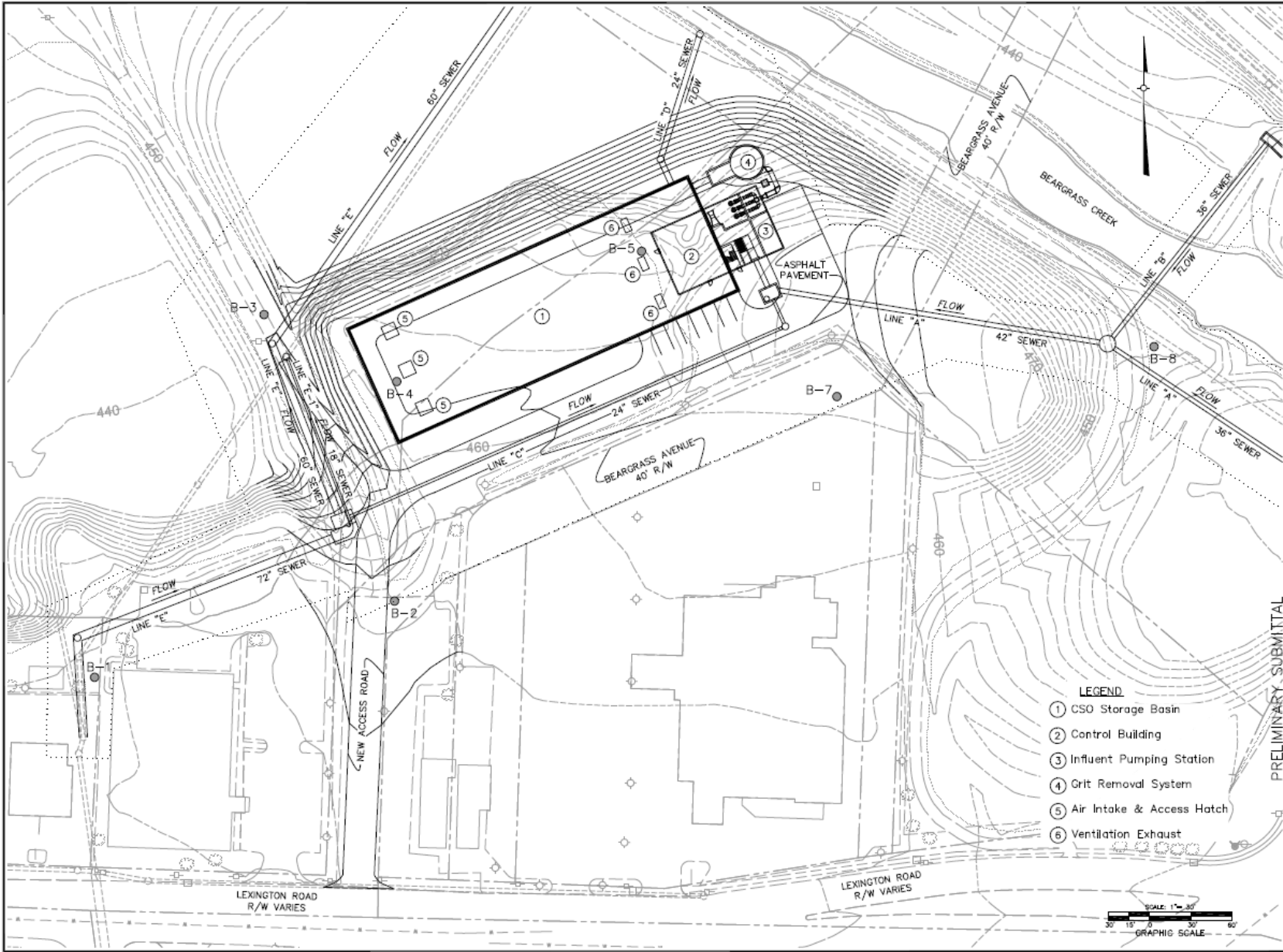
- I-64 & Grinstead Drive CSO Basin
 - Critical Findings
 - IOAP recommended “Gravity In – Gravity Out” configuration not possible
 - “Pump In – Gravity Out” and “Gravity In – Pump Out” configurations are both feasible
 - Site 2 was selected from the original six alternates



2009 IOAP Recommendations

- I-64 & Grinstead Drive CSO Basin
 - Recommendations
 - Move forward into final design for Site 2
 - Continue in discussions with Metro Parks and KYTC
 - Property is currently leased to Metro Parks and designated as a passive recreation area
 - Identify and create a stakeholder group and ask for public input
 - Obvious concern for the existing bike path and constructed wetlands in the area





| | |
|--|---|
| Prepared Engineer's Seal _____ Date: _____ | |
| DESIGNED BY: HRP 10/21/11 | CHECKED BY: HRP 10/21/11 |
| DRAWN BY: HRP 10/21/11 | FILE NAME: 10017_PRELIMINARY.dwg PLOT DATE: 10/21/11 |
| PLANS PREPARED AND SUBMITTED BY:  MSD <small>MEMPHIS SANDS DEVELOPMENT, INC. 10000 WOODLAND DRIVE, MEMPHIS, TN 38117 TEL: 901.525.1000 FAX: 901.525.1001 WWW.MSDMEMPHIS.COM</small> | |
| NO. REVISION | DATE |
| | |
| | |
| | |
| SHEET TITLE: SITE 2 GRADING PLAN PROJECT TITLE: LG4 & GRINSTEAD DRIVE CSO STORAGE BASIN | |
| BUDGET NO. | H09121 |
| CONTRACT NO. | XXXXXX |
| ORDER NO. | 15590 |
| DRAWING NO. | 6 |
| PRELIMINARY - SUBMITTAL SHEET 6 OF 19 | |

U:\31601000 - Shared - 3.4.4 Storage - 6-10-11\p0131601000_P0131601000.dwg, 10/22/2011, 1:44:52 PM

Why and What are the Proposed Changes

I-64 & Grinstead Drive CSO Basin



Revised Modeling Impact

| Model | Limit Of Control (# Overflows per year) | Size (MG) | Estimated Cost |
|---------------|---|--------------|-------------------|
| LTCP | 8 | 2.74 | \$12,950,000 |
| Re-assessment | 4 | 15.13 | \$48,970,000 |

| CSO | LTCP AAOV (MG/yr) | LTCP # Overflows per year | Re-assessed AAOV (MG/yr) | Re-assessed # Overflows per year |
|-----|-------------------------|---------------------------------|--------------------------------|--|
| 125 | 48.38 | 54 | 121.97 | 40 |
| 126 | 0.58 | 13 | 42.69 | 43 |
| 127 | 4.62 | 21 | 7.11 | 27 |
| 166 | 10.12 | 19 | 64.79 | 36 |

AAOV: Average Annual Overflow Volume

Previous Public Input

I-64 & Grinstead Drive CSO Basin



Previous IOAP Meeting

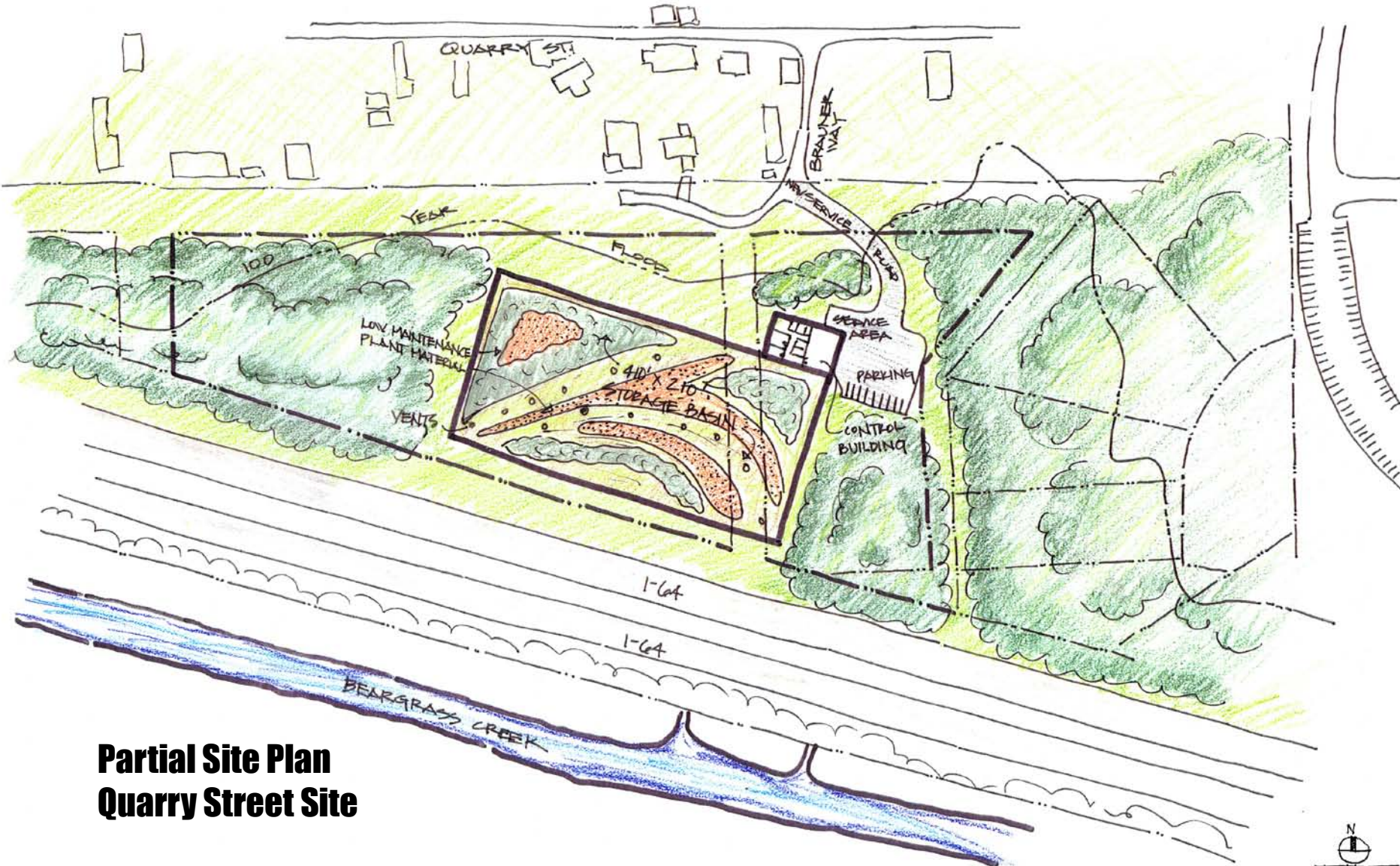
- September 27, 2011
- Public input on this project included:
 - Do not disturb the constructed wetlands
 - Do not disturb the existing bike path
 - Reconsider green infrastructure to reduce size
 - Analyze Quarry Street (1973 Quarry Street) site
 - Combine project with Lexington Road & Payne Street basin
 - River Metals site (1371 Lexington Road)



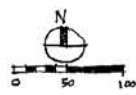
Quarry Street Site

- Considerations
 - Increased conveyance under I-64 and Beargrass Creek
 - CSO166 & CSO127 outfalls are currently located on the opposite side of I-64
 - Existing overflow structures under I-64 for CSO125 & CSO126 currently drain away from this site
 - Increased clearing of forested areas





**Partial Site Plan
Quarry Street Site**



River Metals Site

- Considerations
 - Increased conveyance to site
 - 5,700' of 132" (11' diameter) gravity sewer
 - OR dual 48" force main and pump station
 - Environmental concerns
 - Approximately 13 acres (5700' x 100' wide corridor) of clearing for conveyance
 - Required mitigation and clean-up for basin site will remain unknown until further studies can be completed





**Partial Site Plan
River Metals Site**

I-64 & Grinstead Drive Site

- Considerations
 - Limited environmental impacts, comparably
 - Restore public access features (bike path)
 - Increased aesthetic requirements
 - Only control building and vents will be visible
 - Mimic existing features (rock outcroppings)



Partial Site Plan I-64 & Grinstead Site





**Aerial From The North
I-64 & Grinstead Site**

Significant Opportunities for Green Practices

I-64 & Grinstead Drive CSO Basin



Green Opportunities

- MSD has worked diligently with EPA to implement an acceptable method of analysis for Green Projects in order to reduce/eliminate the need for Gray Projects
 - CSO 130 Project potentially eliminates the required basin

AWAITING
FINAL
APPROVAL



Green Opportunities

- CSO 130
 - 28 ac. watershed
 - 0.04 MG Storage Basin
 - 0.166 MG of Green Practices
- I-64 & Grinstead
 - 1,280 ac. watershed
 - 15.13 MG Storage Basin
 - Assuming similar characteristics, approximately 60 MG of Green Practices required for elimination of basin

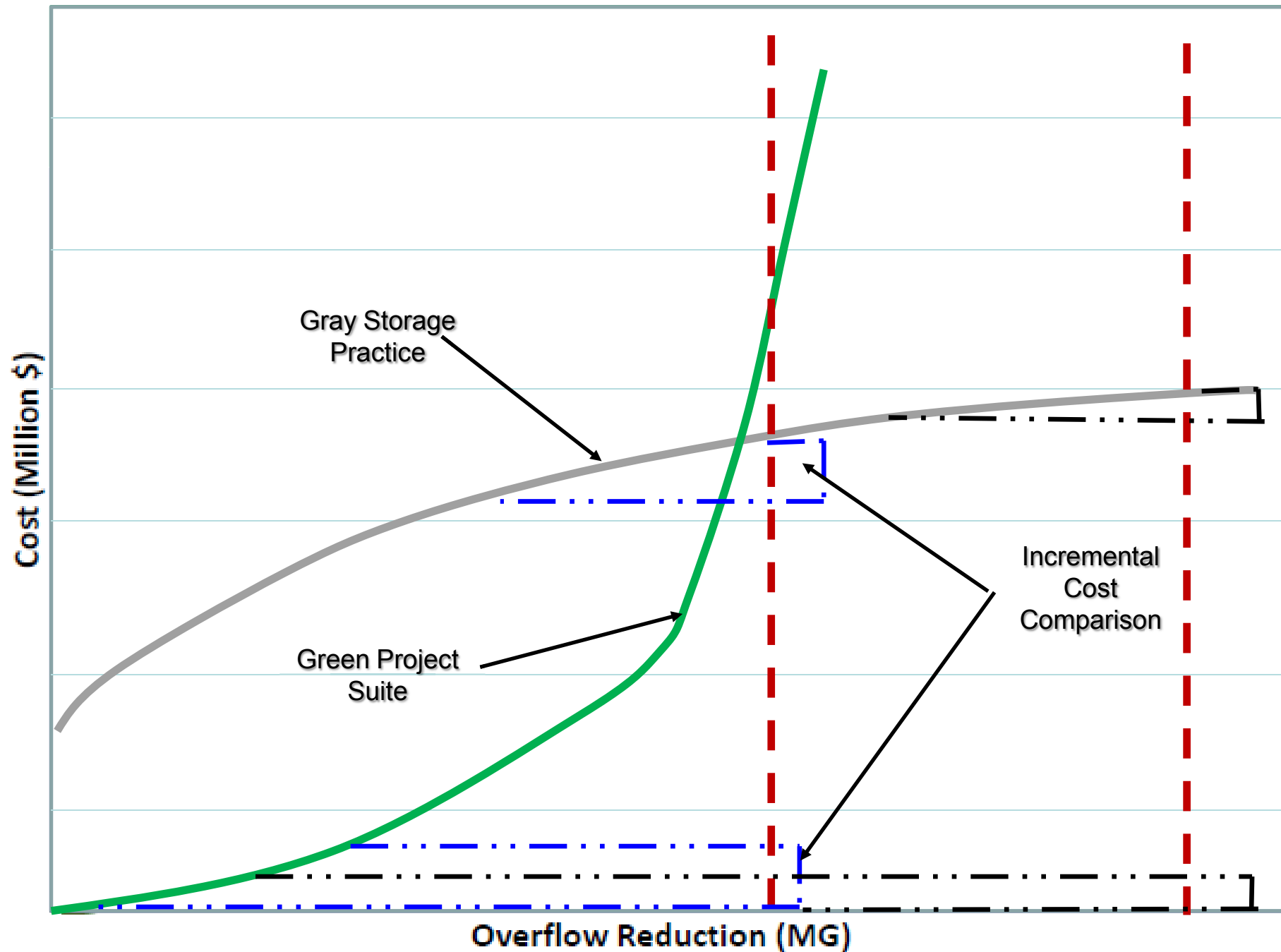


Green Opportunities

- By completing the same type of analysis in this location we hope to reduce the required basin size
 - It is anticipated that complete elimination of the basin is unrealistic
- MSD has identified the largest impervious areas in each CSO watershed and will work with the property owners to design and implement Green Projects



Gray to Green Right Sizing Trend



Moving Forward

I-64 & Grinstead Drive CSO Basin



Moving Forward

- MSD is requesting the completion date of the basin be moved to 2020 so we can:
 - Analyze the affect of Green Practices on the size of the proposed basin
 - Have adequate time to design and construct the larger basin
- Continue discussions with Metro Parks and KYTC regarding changes
- Continue discussions with EPA regarding completion date changes

Moving Forward

- Stakeholder involvement
 - Understand the changes
 - Continue to give informed opinions/feedback
 - Support the schedule date change in order to implement Green Practices

Public Input Sought

- Provide written comments by February 10, 2012
- Send comments via email
commentsIOAP@msdlouky.org
- Mail comments
MSD IOAP Project Comments
Attention: Project WIN Program Manager
700 West Liberty St.
Louisville, KY 40203

