



Charlotte Mecklenburg Utilities

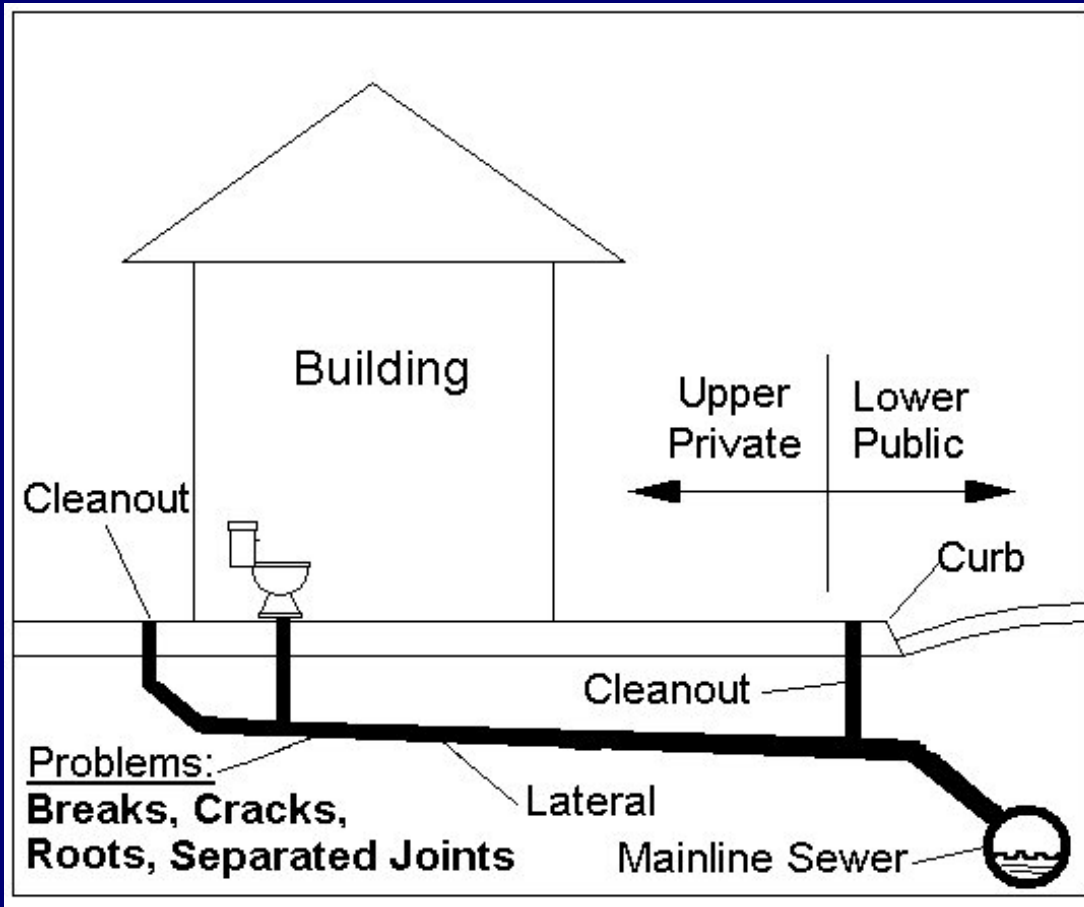


Wastewater Treatment Plants 120 MGD

- McAlpine WWTP 64 MGD
- Sugar WWTP 20 MGD
- Irwin WWTP 15 MGD
- Mallard WWTP 12 MGD
- McDowell WWTP 12 MGD

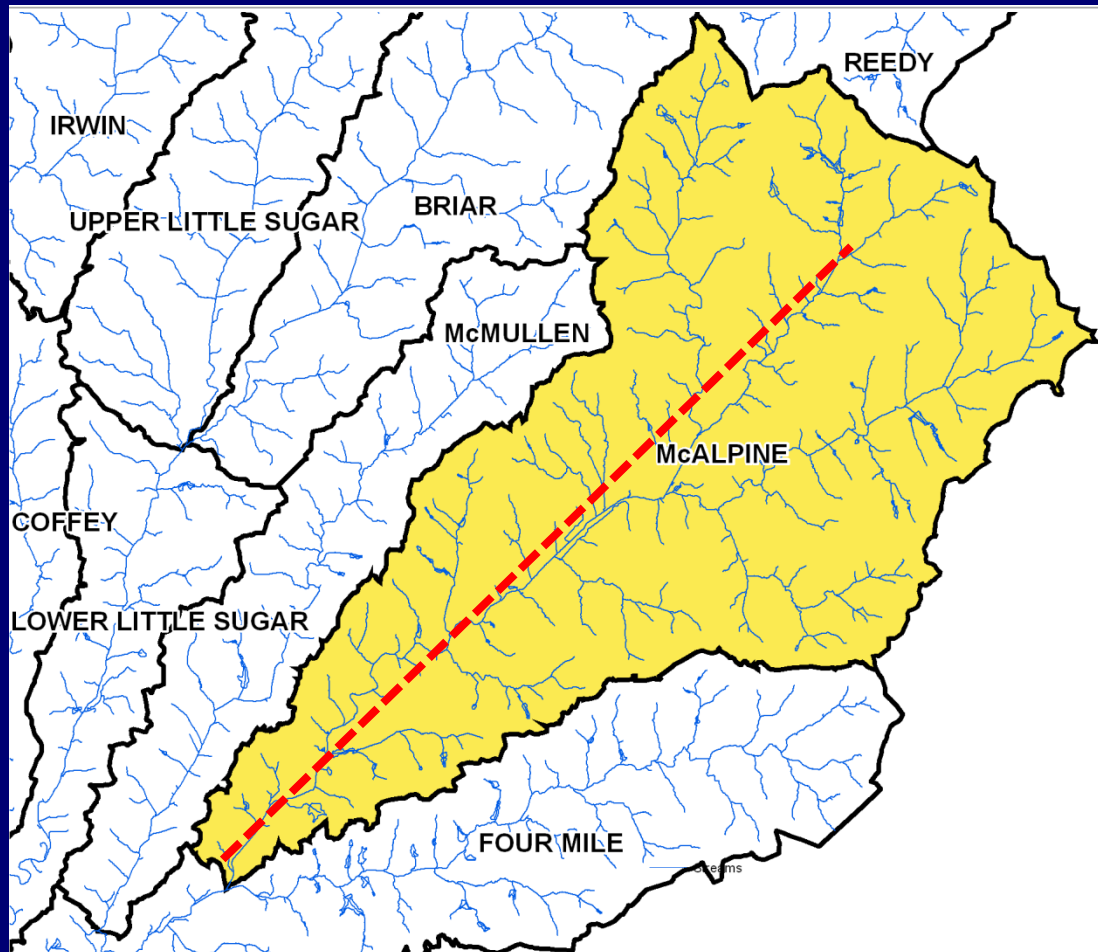
Miles of pipe 4,047
Lift Stations 74

Wastewater Collection 101



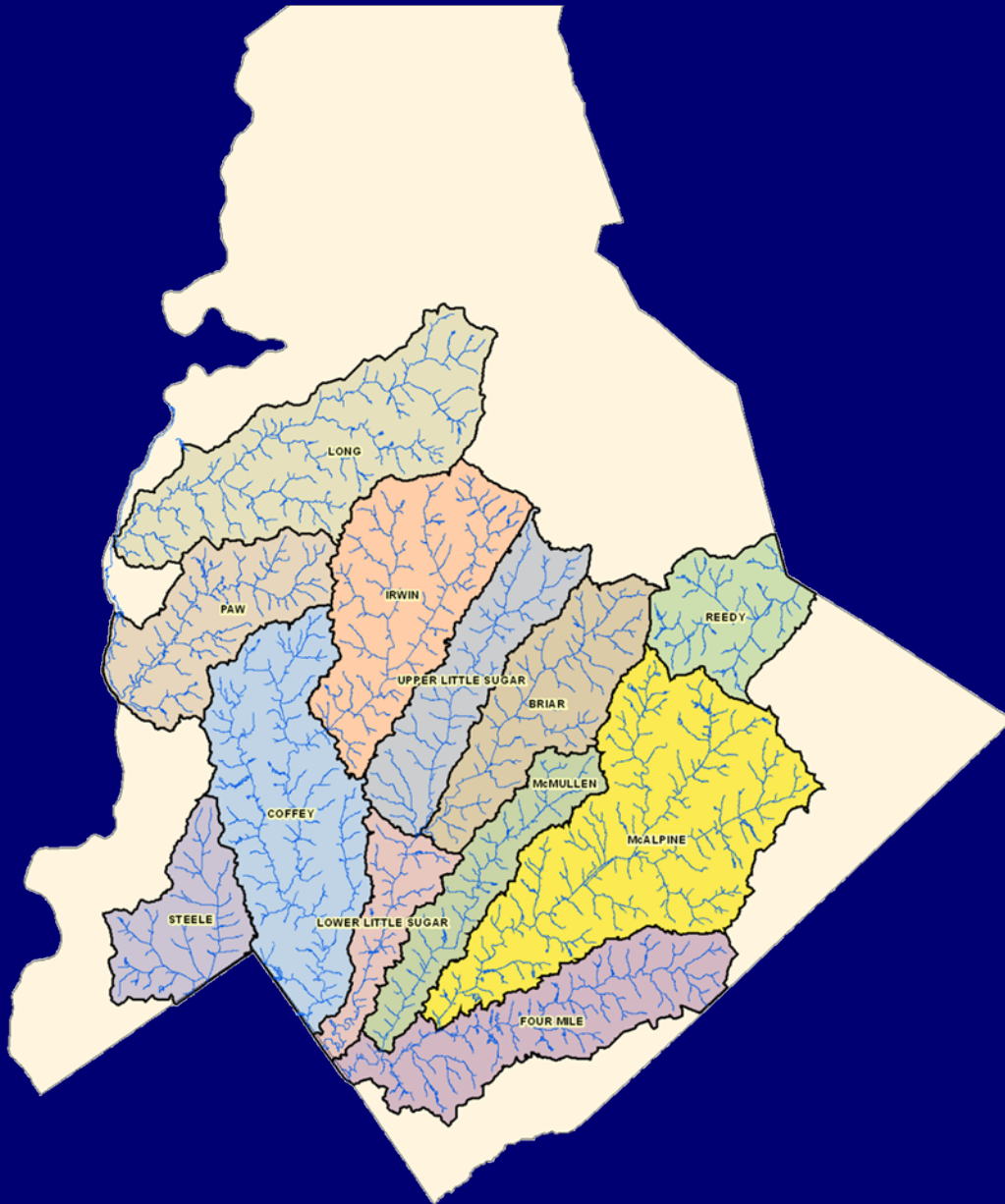
- Wastewater flows from customer to pipeline in the street
- From there it flows to a low point in the road

McAlpine Drainage Basin



- The wastewater flows in pipes that follow the natural slope of the land
- Until it reaches the interceptor pipeline that conveys the flow to the treatment plant

Why is this Project Needed

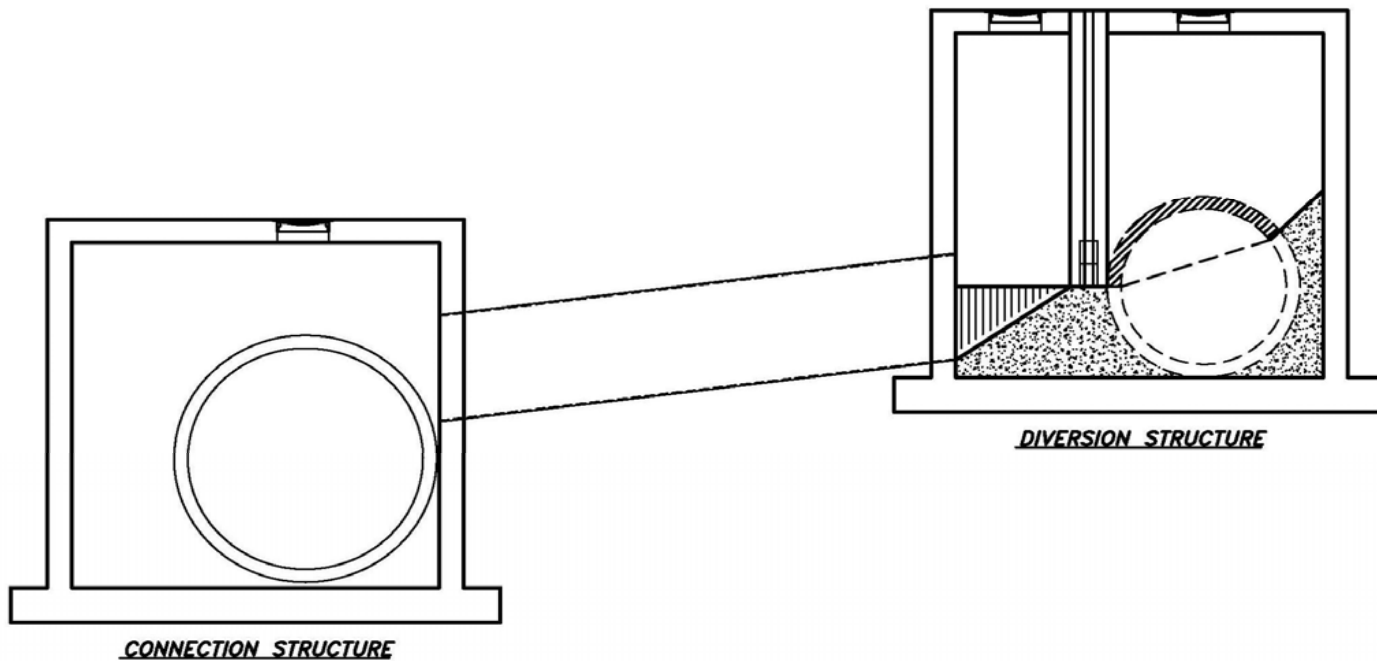


- Study performed in mid - 90s
- Computer model developed
- Parallel Interceptor Sewer identified for the McAlpine Basin
 - Additional sewer capacity
 - Eliminate overflows

McAlpine Relief Sewer

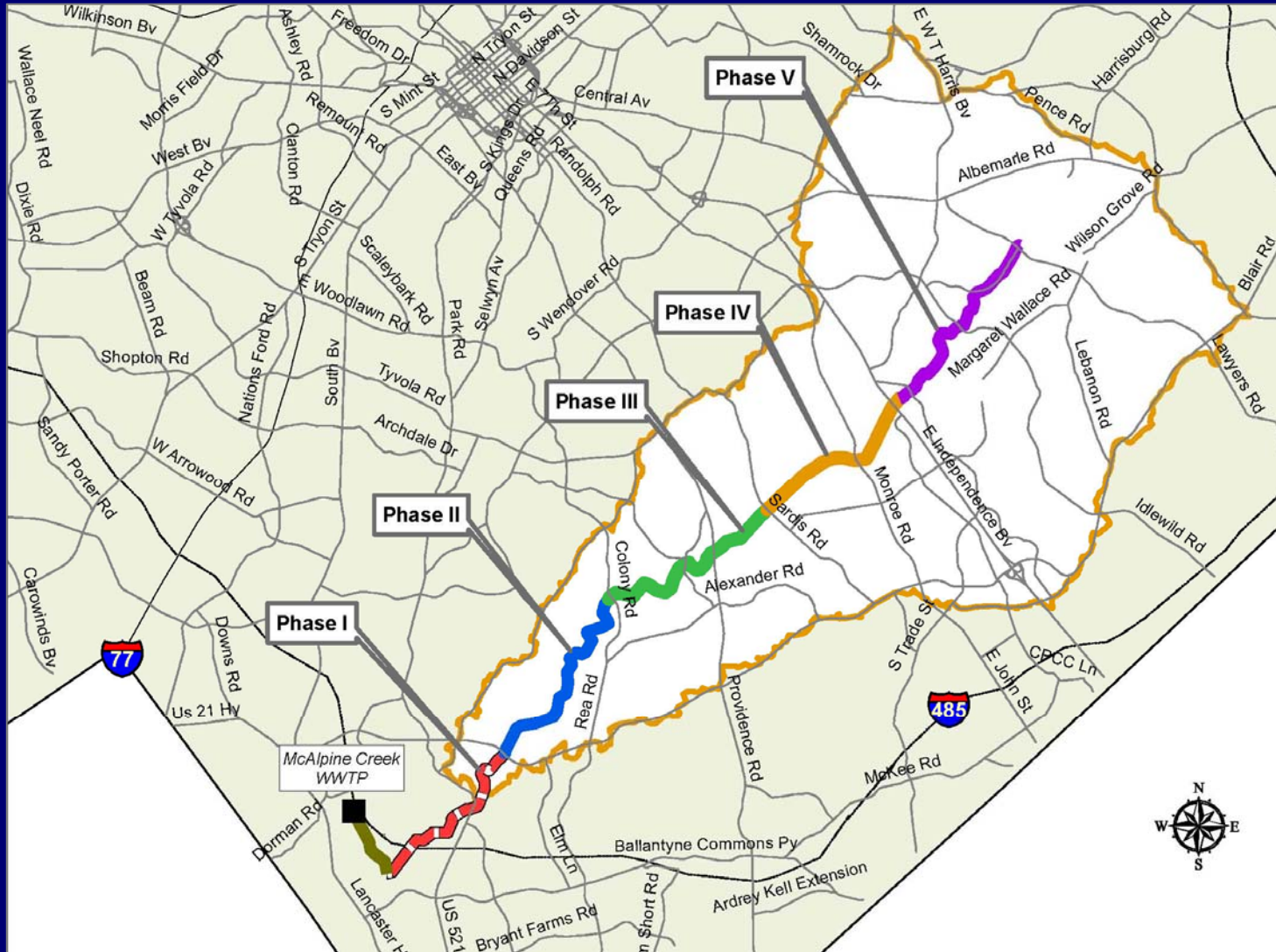


- Diversion Structure
- Transfers excess flow from existing interceptor to relief sewer



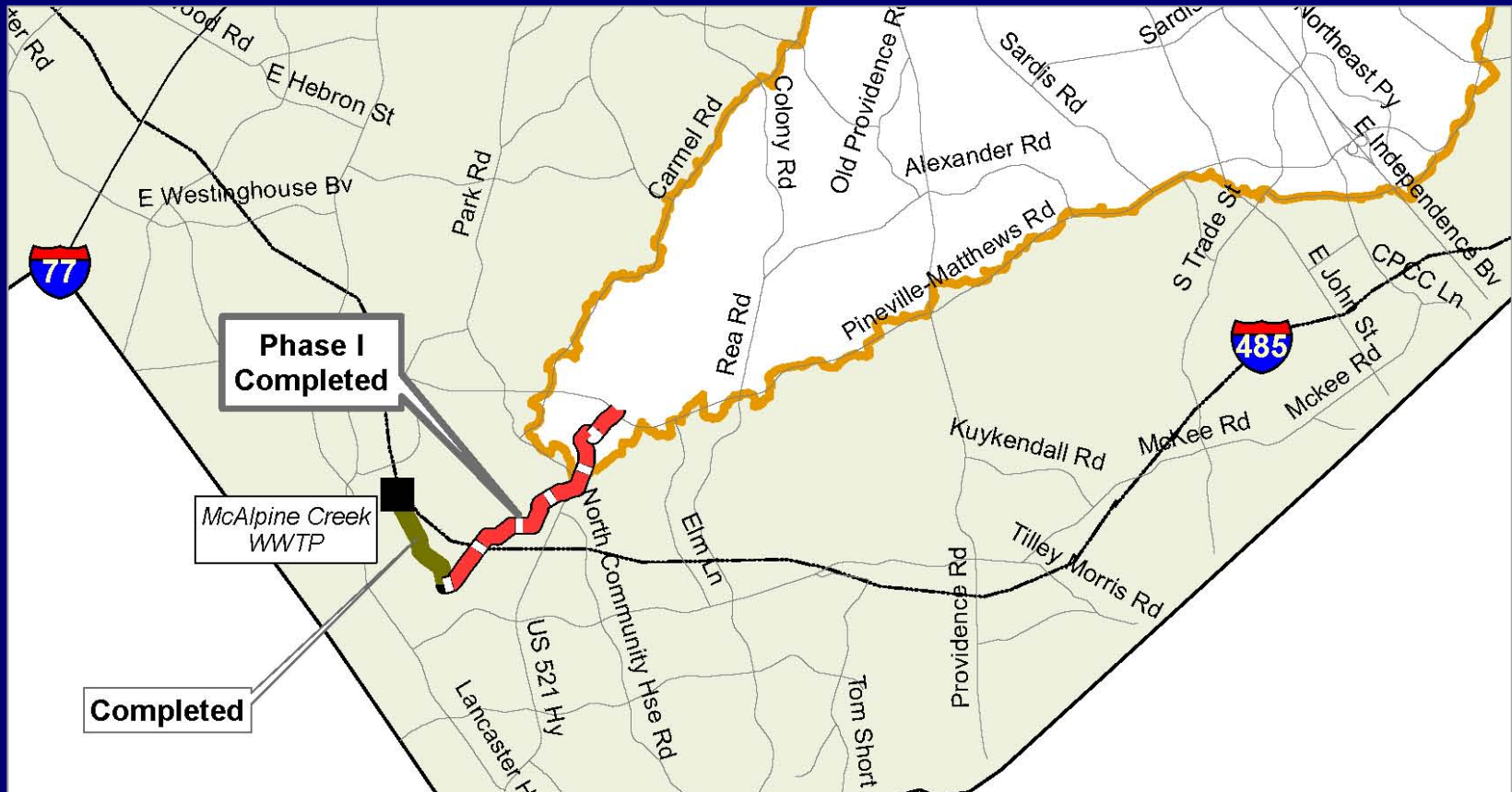
McAlpine Relief Sewer

- Original Interceptor Sewer installed in the mid 70's
- Relief Sewer to be constructed in 5 phases



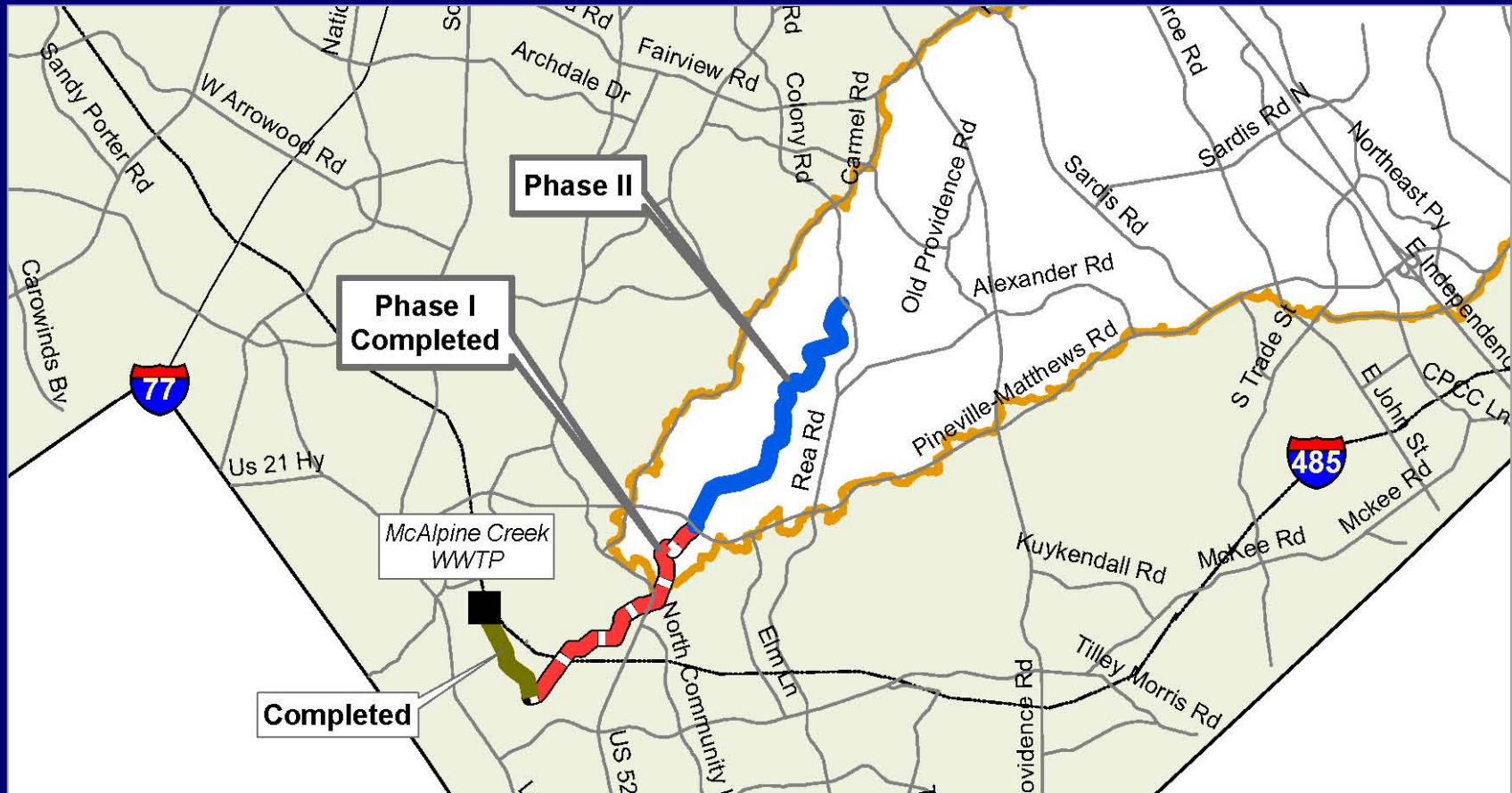
McAlpine Relief Sewer Phase I

- Six Mile Section constructed in 1998-1999
- Phase I constructed in 2008-2009 - \$18M
- 78" to 72" Diameter
- Diversion Structure
- Four Mile Lift Station eliminated



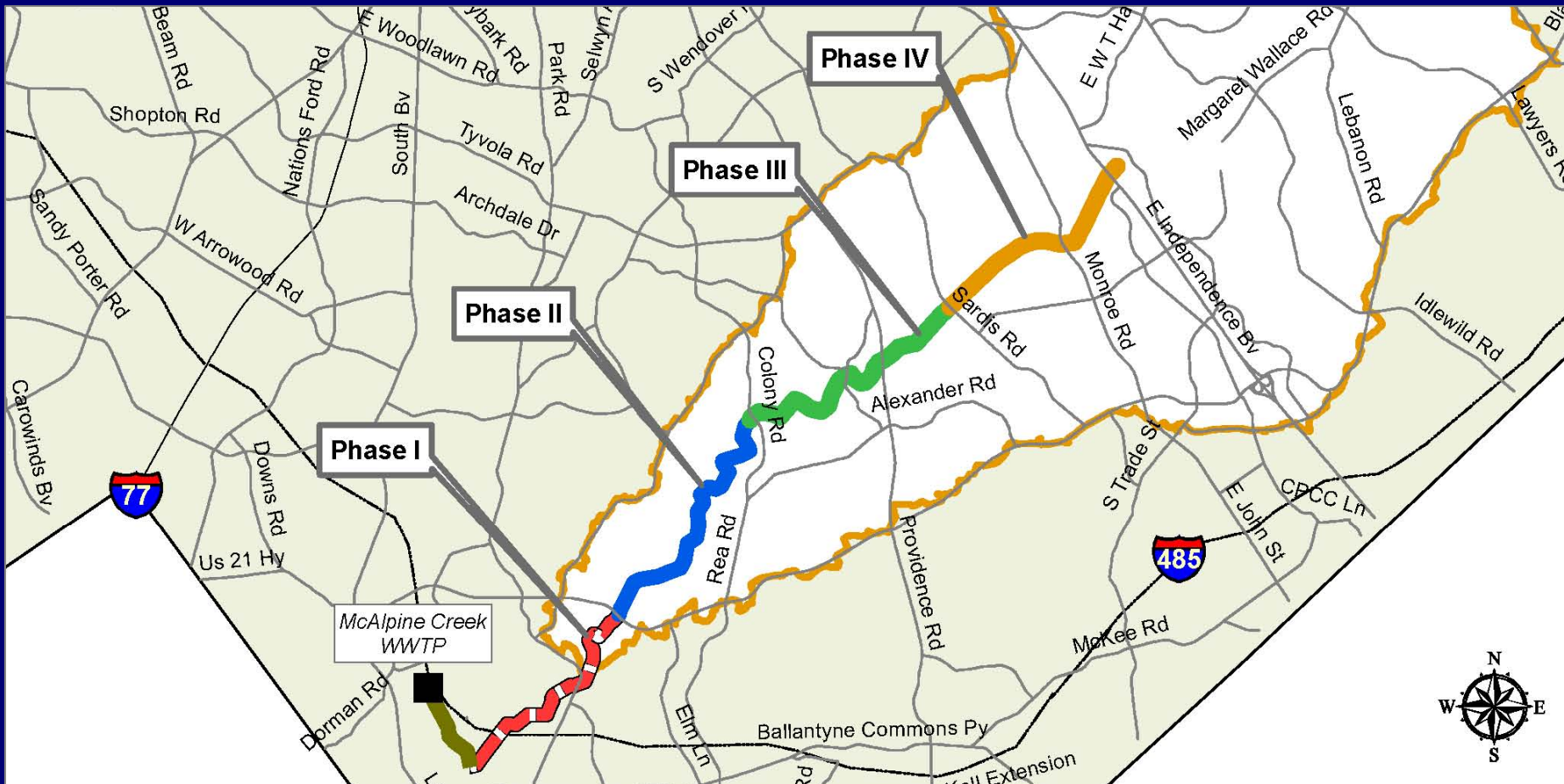
McAlpine Relief Sewer Phase II

- Constructed in 2009-2011 - \$12M
- 72" to 66" Diameter
- Pipe passes thru Carmel Country Club
- Diversion Structure



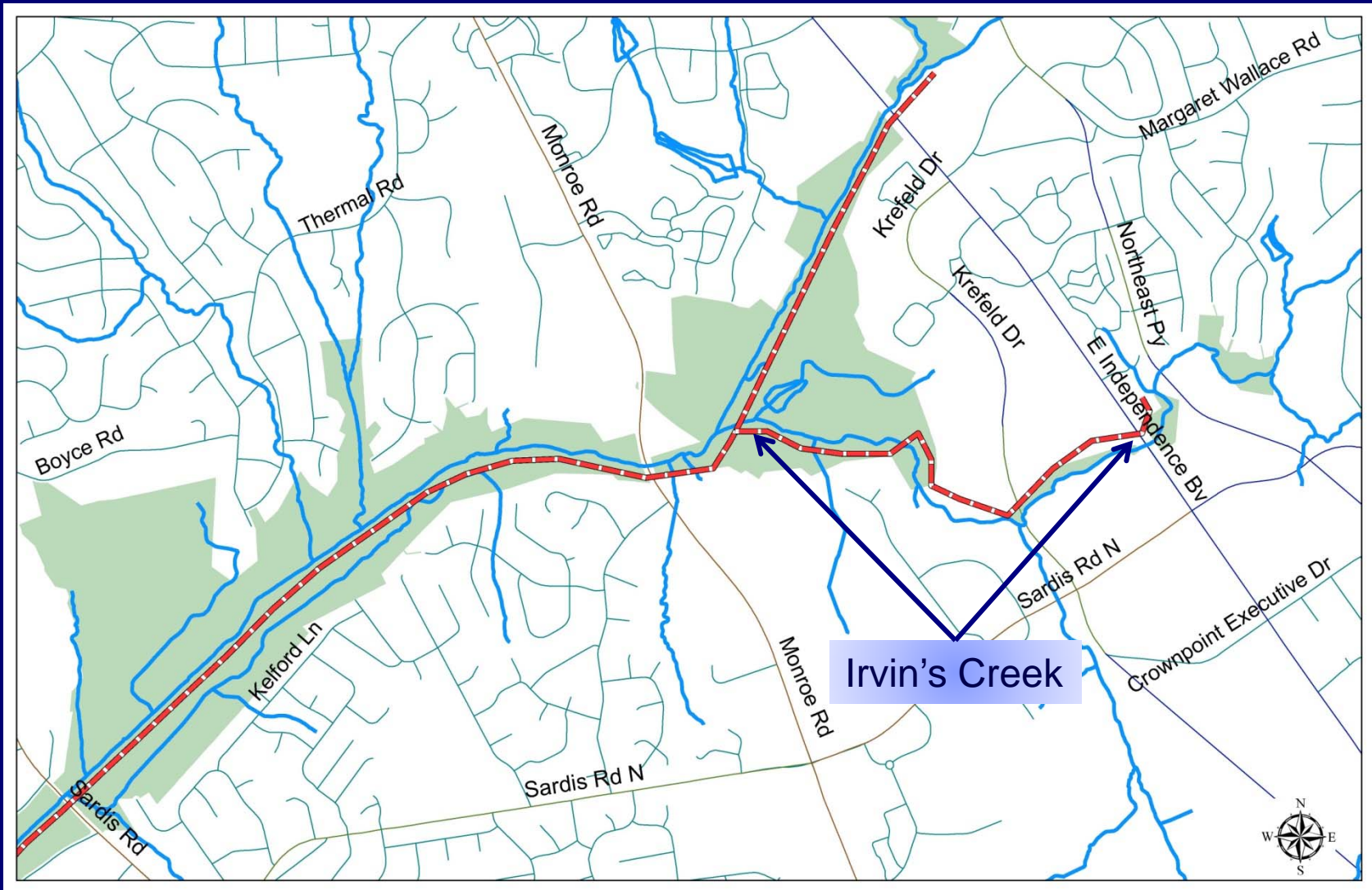
McAlpine Relief Sewer Phase IV

- Extends 16,000 linear feet
- 54" to 36" Diameter
- Diversion Structure
- Proposed Construction: 1st Quarter 2013 – 3rd Quarter 2014



McAlpine Relief Sewer Phase IV

- Irvin's Creek Parallel will be installed as part of this project





McAlpine Relief Sewer Phase IV



- To be installed between the existing Interceptor Sewer & the existing Piedmont Natural Gas line
- Utilities worked with Piedmont Natural Gas to identify construction methods to protect the gas line

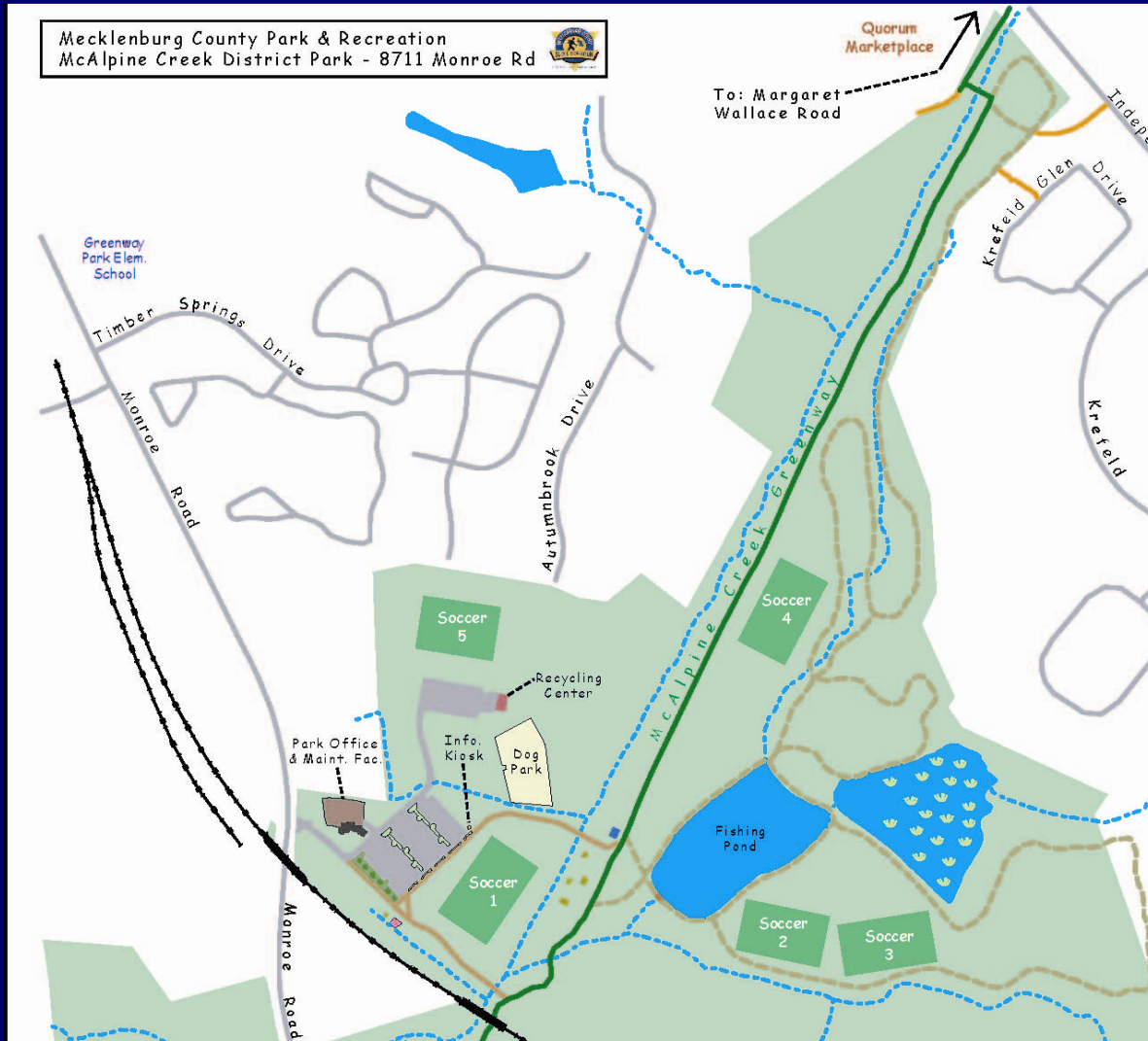


McAlpine Relief Sewer Phase IV



- Working area varies between 62' to 80' wide
- Work area will be fenced in the park to protect the public

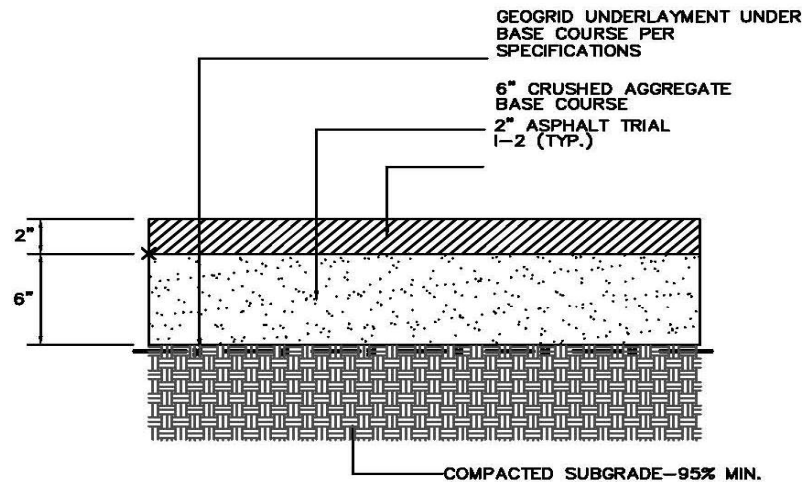
Management & Construction Plans



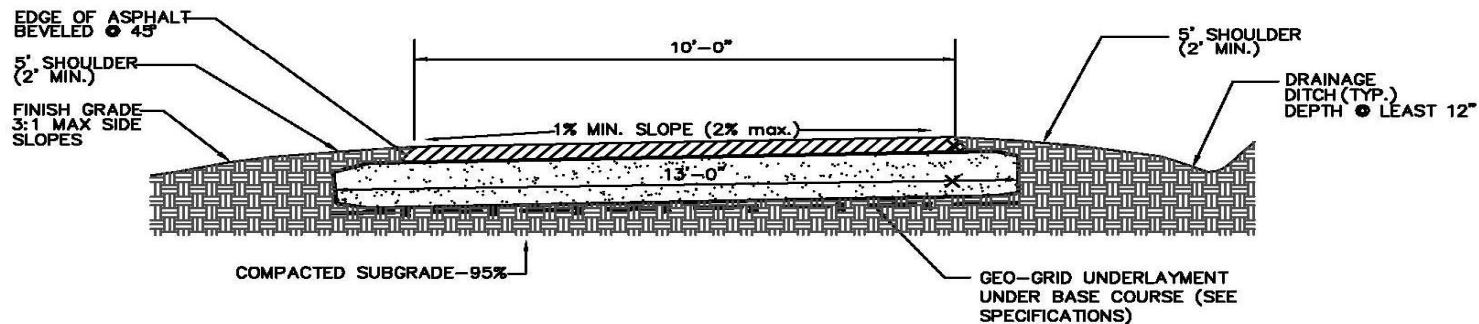
- Residents within 100 feet of the creek will receive project information
- No work will be performed in the park between August 1st – December 1st
- The construction corridor will be fenced to protect the public from the construction area

Status After Construction

- The area will be returned to the original elevation
- Grass seed sowed and maintained until a stand of grass is established
- The greenway trail will be re-established in a “meandering” configuration
- The trail will be rebuilt with ABC or unwashed crushed stone



TYPICAL ASPHALT SECTION



TYPICAL TRAIL SECTION





















