

# TECHNICAL MEMORANDUM NO. 1

## COST EVALUATIONS REVIEW

### DAVIE COUNTY PUBLIC UTILITIES

*AUGUST 3, 2015*



HIGHFILL  
INFRASTRUCTURE  
ENGINEERING, P.C.

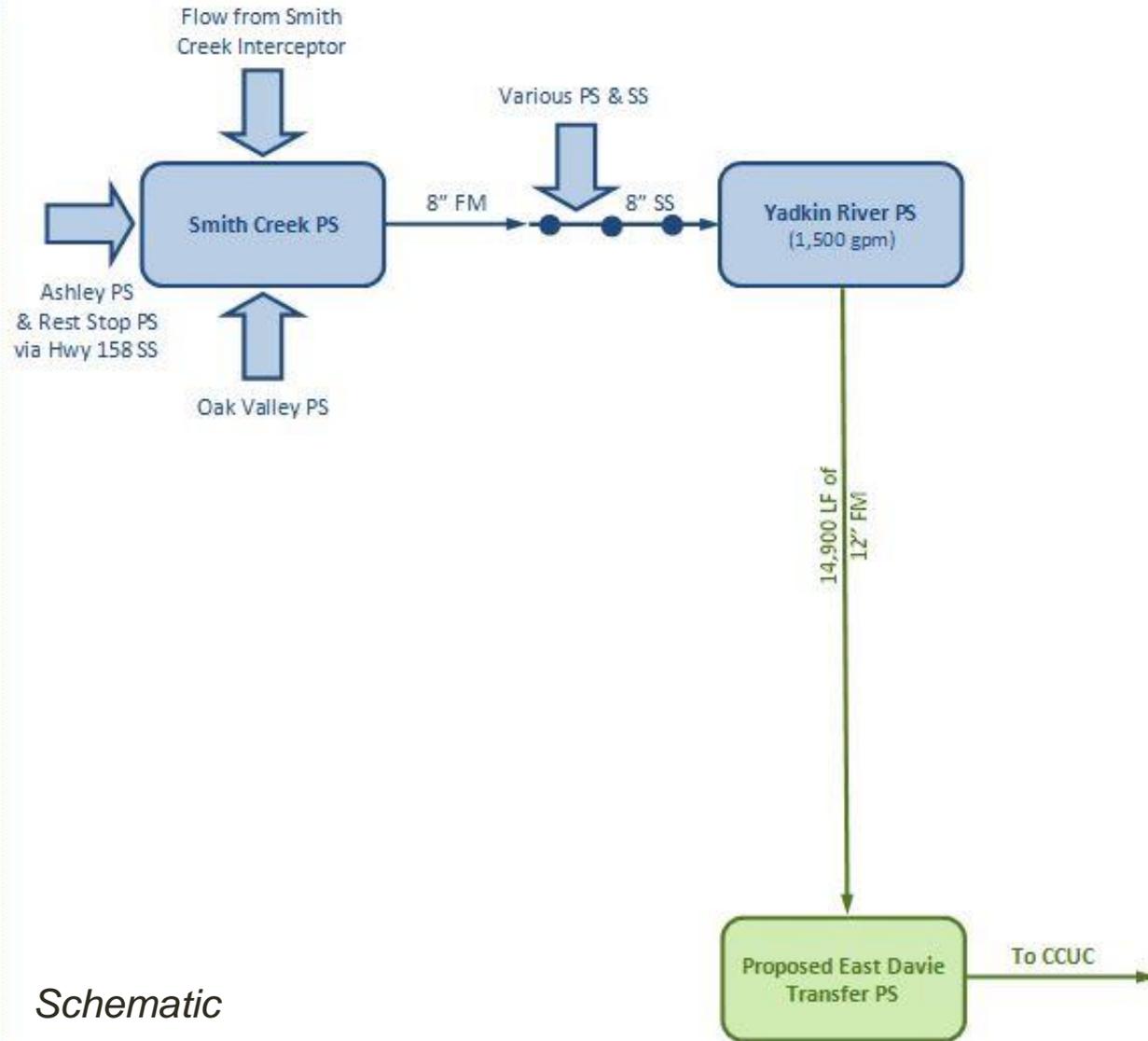


# Objectives

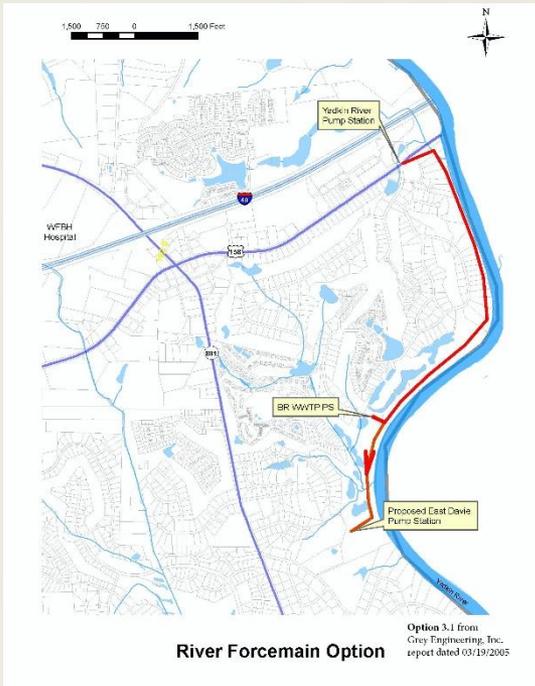
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- Prepare cost opinion on three “options” identified in Grey Engineering’s March 2015 Report.
- No review or update of flow projections
- No new alternatives

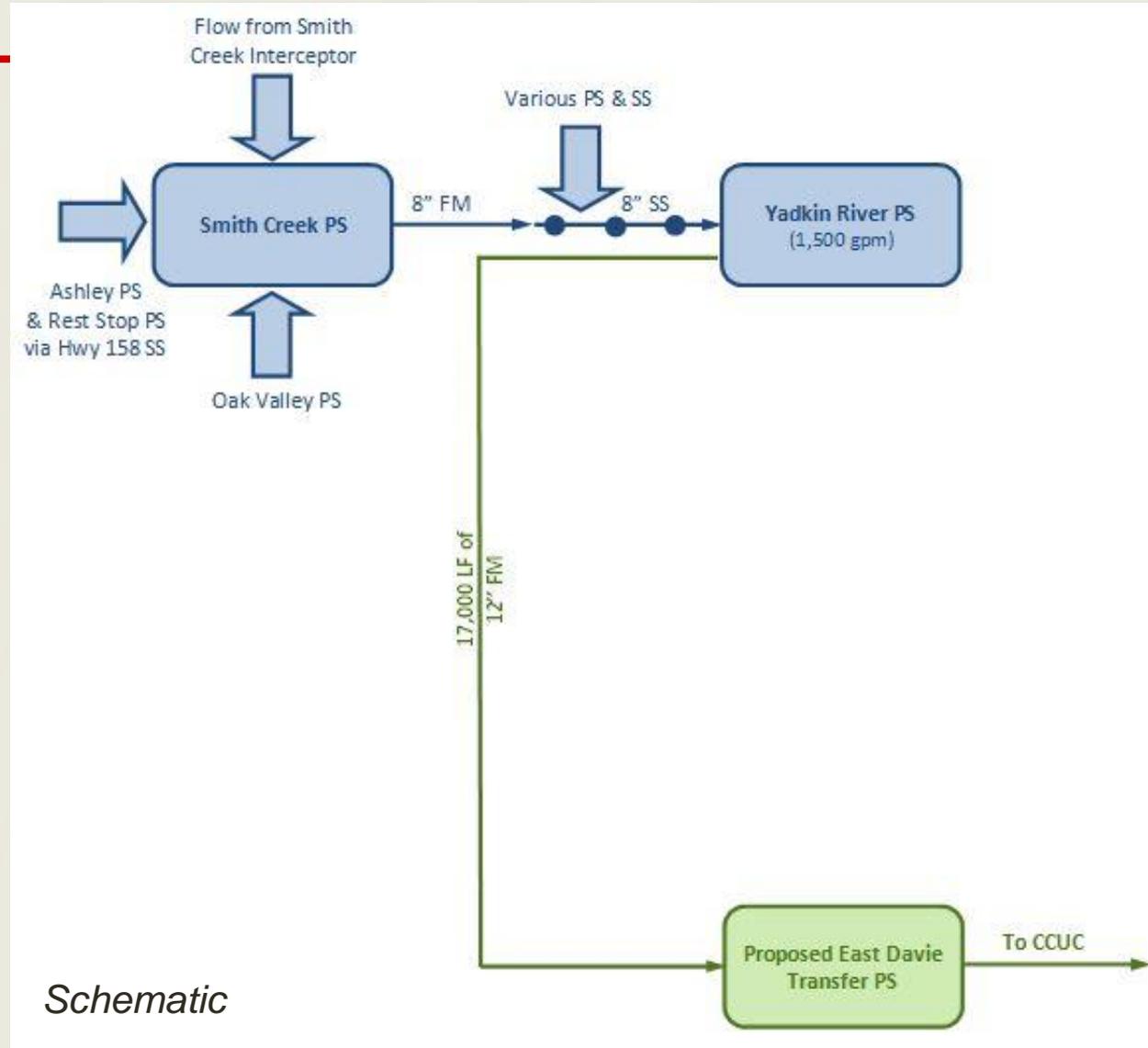
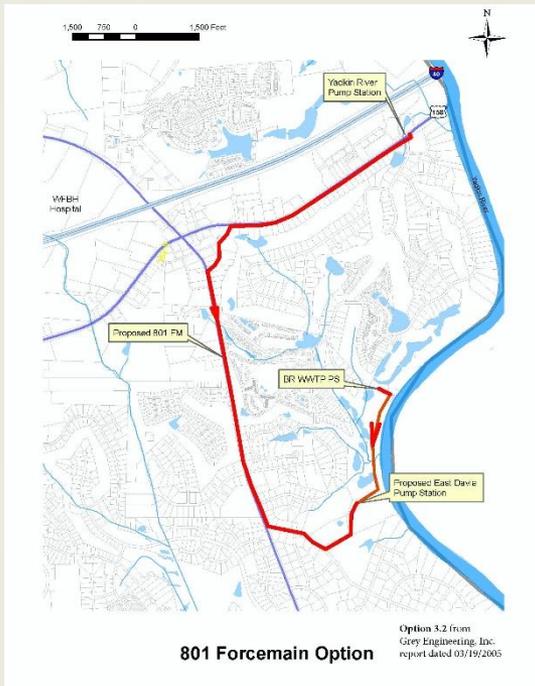
# Option 3.1 - River FM



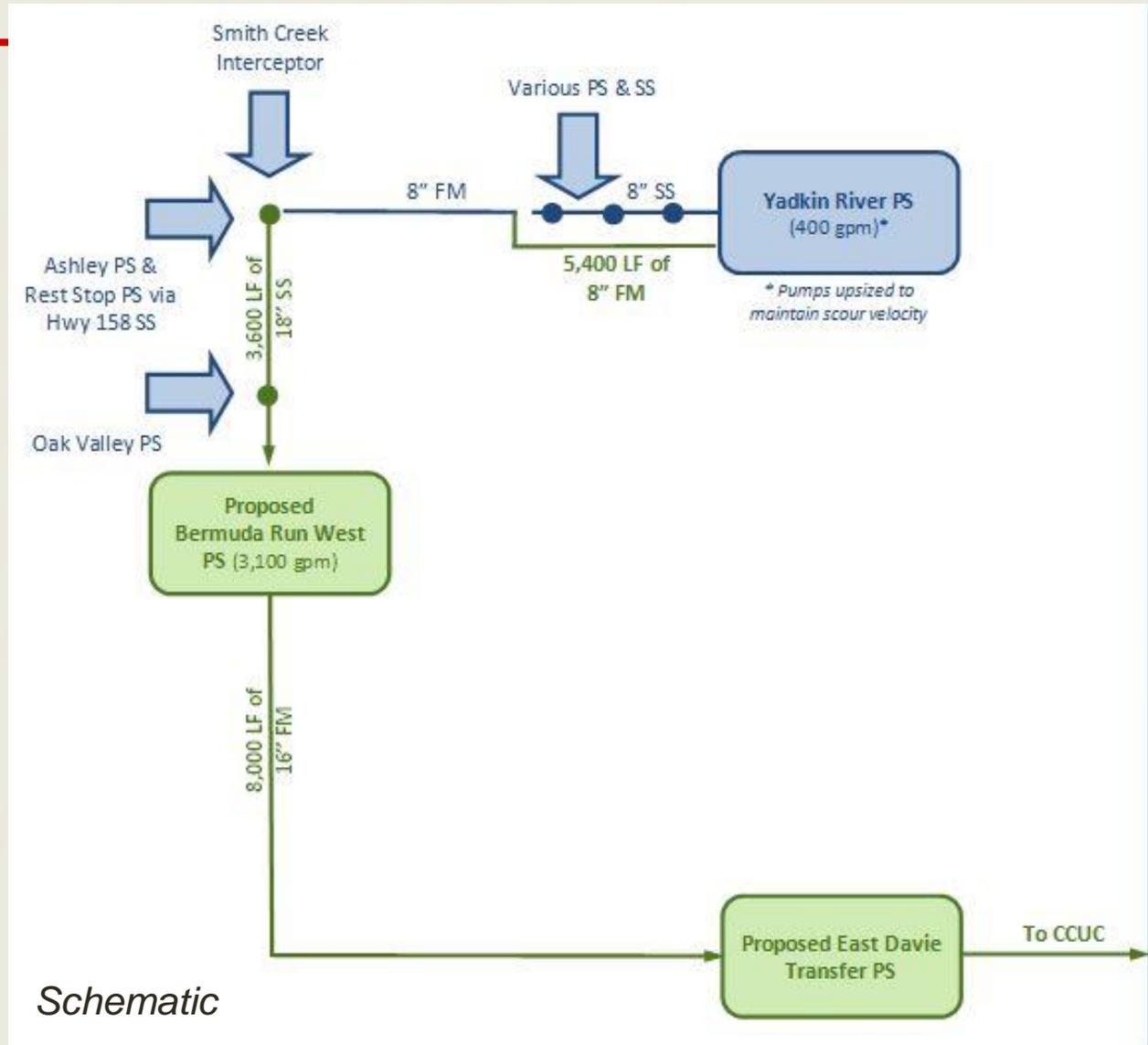
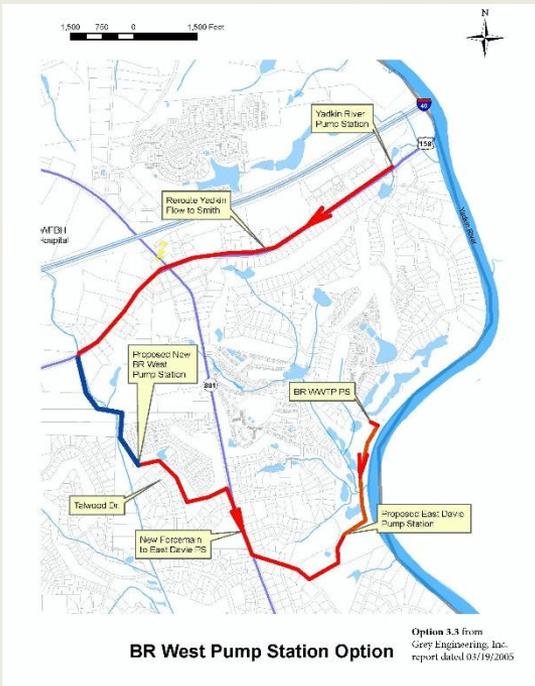
*Schematic*



# Option 3.2 - Hwy 801 FM



# Option 3.3 - Bermuda Run West PS



# Summary of 3 Options

Comparison Factor	Options		
	3.1 (River FM)	3.2 (Hwy 801 FM)	3.3 (BR West PS)
Impacts to Ex. Facilities	Minor	Minor	Minor
No. of Easements Required (Approx.)	24	2*	6*
NCDOT Coordination	Minor	Moderate	Moderate
Construction Sequencing	Minor Complexity	Minor Complexity	Most Complex
New Service Areas	None	None	Yes
Environmental Impacts	Minimal	Minimal	Moderate
Operating Cost per Volume Collected	2 <sup>nd</sup> Highest	Highest	Lowest
Construction Duration	210 days	320 days	465 days
Recommended Project Budget	\$1.9 million	\$2.4 million	\$4.2 million

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# Compare overall budgets

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- Overall project budget includes Option 3.3 and East Davie Transfer (Cornatzer) PS
- Recommended project budget:
  - HIGHFILL (July): \$17.0M
  - Grey Engineering (March): \$14.7M
  - Delta: \$2.3M (13%)

# Differences in overall budgets

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- Market adjustments
- FM pipe material change in Forsyth County to ductile iron
- Some changes in recommended pipe sizes
- Two different engineer's opinions on a conceptual level plan

# Path Forward

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- County decision on how to proceed
  - Recommend Option 3.3
- Continue with the next phases
  - Survey pipeline corridors for selected alternative
  - Evaluate East Davie PS layout and FM route alternatives
  - Proceed with planning, design, and permitting phases of wastewater system