



# The Advantages and Disadvantages of Alternative Delivery Projects for Stormwater

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# Overview

- 1) Introduction**
- 2) Types of Project Delivery**
- 3) Advantages & Disadvantages to Alternative Delivery Projects**
- 4) Questions & Discussion**



# Introduction to AKRF

- Environmental, Planning and Engineering Consulting Firm
- Approximately 350 professionals in 9 Offices
- Local Offices in Harrisburg and Philadelphia
- Water Resources Services include:
  - Aquatic System Restoration
  - Watershed Management
  - Green Stormwater Infrastructure
  - Regulatory Compliance



# Types of Project Delivery

- Traditional Delivery
- Alternative Delivery
  - Full Delivery
  - Public/Private Partnerships (P3)
  - Grant/Incentive Programs



# Traditional Delivery



- Project Owner hires Design Firm
- Design Firm completes design and prepares bid documents
- Owner bids Project
- Design Firm assists with bidding
- Bids are evaluated and construction contract is awarded
- Design firm acts agent of the Owner during construction
- Contractor Builds project
- Payment to the Design Firm and Contractor occurs monthly

# Traditional Delivery

- Advantages
  - Owner has a high level of control in the project
  - Multiple decision making points where Owner can change or stop the project
  - Familiar/Comfortable



# Traditional Delivery

- Disadvantages
  - High level of involvement by Municipality
  - Longer schedule
  - High cost
  - Possible Design inefficiencies
  - High potential for Change Orders
  - Requirements to award construction to low bidder





# Full Delivery



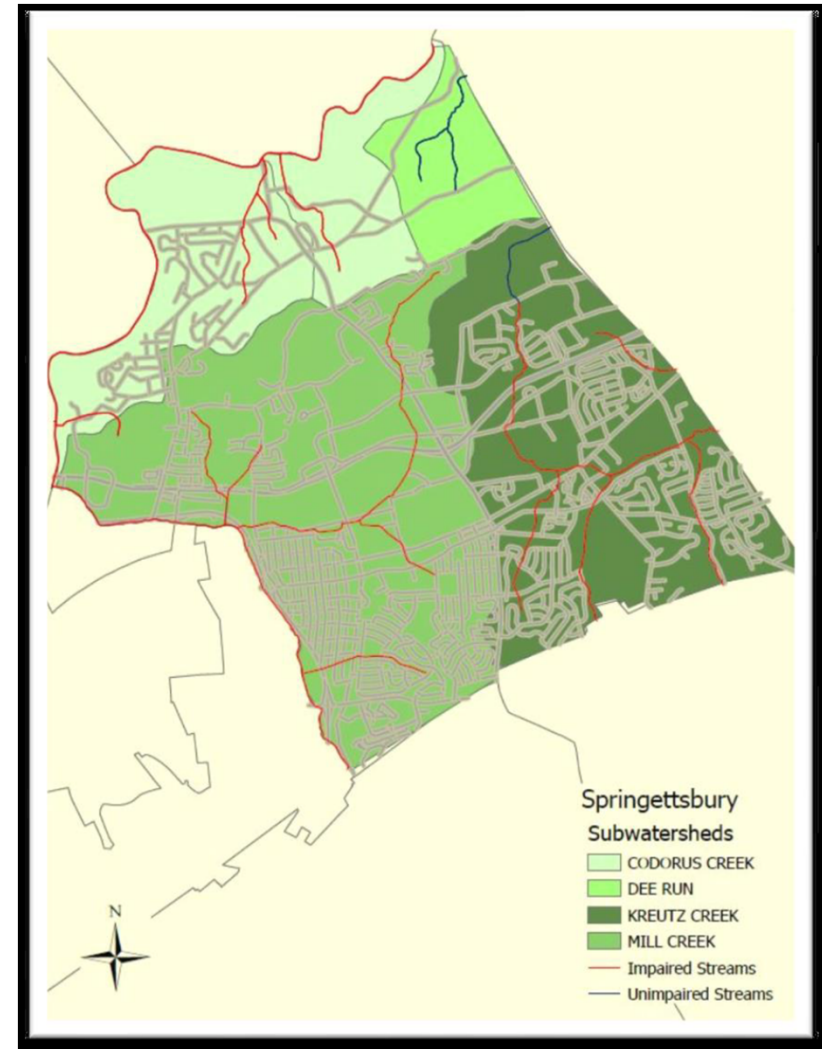
- Municipality issues an RFP based on performance criteria
  - Municipality acts as Program Manager, handles asset management and reporting and tracking
- Design/build team identifies potential stormwater projects and proposes projects to meet performance criteria
- One or more design/build teams are selected to implement projects
  - Design/build team designs, permits, constructs, permits, maintains and monitors project for some period of time
- Payment is typically based on achieving milestones or pre-defined incentives



# Full Delivery

## Springettsbury Township Turnkey Performance Based Stormwater Project

- RFP Issued January 2019 for Turnkey performance based projects to meet sediment reductions required for Stormwater NPDES permit compliance
- Work Scope includes:
  - Prepare PRP
  - Identify project sites and acquire property
  - Design, permit and construct projects to achieve an anticipated 697,000 pounds of sediment reduction.
  - Operate, Monitor and Maintain project for duration of the permit cycle



# Full Delivery

- Advantages
  - Shorter delivery timeline
  - More efficient design
  - Less decision making/less involvement by the Owner
  - Fewer RFIs and questions
  - Minimizes change orders



# Full Delivery

- Disadvantages
  - Less control by the Owner
  - Limited ability to stop a project or change members of the project delivery team
  - More time in upfront negotiations





# Public Private Partnership (P3)



- Municipality Issues an RFP for Operation and Management of their Stormwater Program
- Delivery Contractor is hired to Operate and Manage Stormwater Programs and assets for some period of time
  - Delivery Contractor manages existing assets and is responsible for bringing new assets online for regulatory compliance
  - Delivery Contractor acts as Program Manager, handles procurement, standards, asset management, regulatory compliance and reporting and tracking
- Delivery Contractor sources projects to one or more contractors to design and build the projects
  - Contractors design, build, operate and maintain facilities

# Public Private Partnership (P3)

## City of Chester Community Based Public Private Partnership (P3) Program

- RFP Issued September 2016 for Establishing a P3 for the Stormwater Authority of the City of Chester, PA
- Program is a 30-year contract to establish a partnership with a Private Sector Partner to implement, manage and maintain integrated green infrastructure driven stormwater controls to meet regulatory mandates.
- Program Goals:
  - Meet MS4 Permit Requirements
  - Flood & Resilience Planning
  - Economic Development/Reinvigoration
  - Address TMDL conditions in Chester Creek & Ridley Creek



# Public Private Partnership (P3)

- Advantages
  - Long contract period for operating and maintaining all stormwater assets
  - Municipality retains ownership of the assets
  - Little to no decision making/ involvement by the Owner
  - Delivery contractor has incentive to control costs throughout the program lifecycle
  - Ability to leverage private financing
  - No public bidding requirements



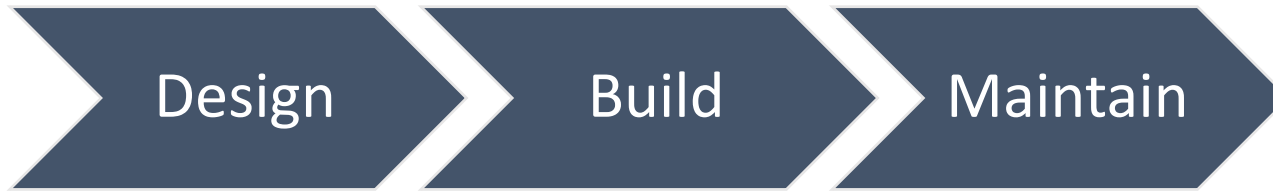


# Public Private Partnership

- Disadvantages
  - Lack of Competition – costs are fixed over time
  - Little control by the Municipality
  - Almost no ability to stop a project
  - Heavy upfront negotiations
  - Regulatory burden primarily remains with the Municipality



# Grant/Incentive Program



- Municipality or Third Party administers grant program
- Grants are offered to Private Property Owners to implement Stormwater Projects
- Landowner identify projects and applies for grant
- Landowner hires a contractor to design and build the project
- Landowner is required to operate and maintain the project for some period of time
- Typically used in conjunction with Stormwater Fee Credit Program

# Grant/Incentive Program

## Philadelphia Water Department SMIP/GARP Program

- Grants are offered to Private Property Owners to implement Stormwater Projects
- City will pay up to \$200,000 per greened acre
- Grant Funds can be used for project development , design, permitting & construction costs
- Program is administered through PIDC
- Funding priority is for private projects that also control public runoff
- Property owner gets a reduced stormwater fee through the Stormwater Credit Program





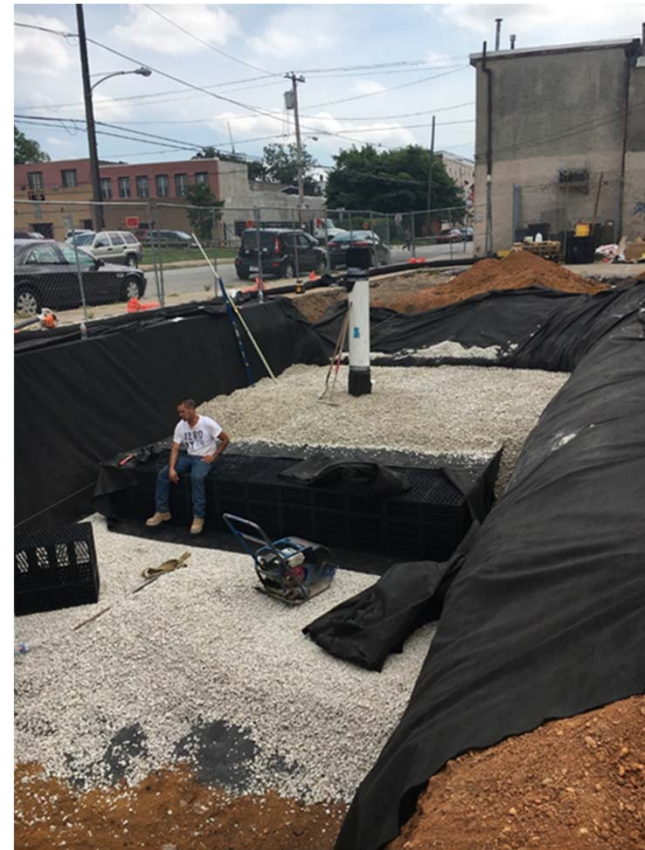
# Grant/Incentive Program

- Advantages
  - Promotes projects on Private Property
  - Can be used as an Outreach Tool
  - Lower cost than projects in the Public Right-of-Way



# Grant/Incentive Program

- Disadvantages
  - Numerous contracts with landowners
  - Landowners may be inexperienced with Capital Projects
  - High administrative burden to Municipality
  - Low participation rates
  - Easier to implement in urban areas
  - Need a large amount of impervious area to benefit landowner
  - Legal constraints



# Things to Consider for Alternative Delivery Projects

- Type of Alternative delivery Project is the best fit for Municipality
- Contract time
- Legal Considerations
- Clarity of performance Metrics
- Project Scale
- Incentives for exceeding schedule or performance standards
- Longer time is needed for RFP and Proposal development
- Mitigation of Risk Factors:
  - Qualifications & Experience of Delivery Contractor
  - Financial Stability of Delivery Contractor
  - Land Control







# Q&A and Discussion

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