Trail Planning, Design and Construction

14th Annual Carolina Thread Trail Forum
Alfred Benesch & Company
December 2, 2021
Presenters

Jeff Ashbaugh, PLA
Senior Project Manager
Landscape Architecture Group Manager

Emily Reinicker, PE, CFM
Director of Operations and Design
Ecosystem Restoration Team

Jon Wood, PLA, CLARB
Senior Project Manager

Brian Bennett, PLA, ASLA
Project Manager
Mecklenburg County Asset & Facility Management
Agenda

• Project Background
• Map Your Trail/Breakout Group
• Points of Access
• Trail Facilities
• Material Selection
• Creek Crossings
• Floodplains/Floodways
• Roadway Crossing
• Other Considerations
• Questions

🌟 Please be sure to sit in front of a map
Mecklenburg County Greenway Master Plan

Legend
- Greenway - Existing/Developed
- Greenway - Funded - In Construction
- Greenway - Funded - In Design
- Greenway - Funded - By Others
- Greenway - Future
- Overland Connectors
- Creeks and Streams
- Mooresville to Charlotte Trail
- Cross Charlotte Trail (XCLT)
- Carolina Thread Trail
- Lakes and Ponds
- Undeveloped Park Property
- Developed Park Property

Irvins Creek Greenway
Irvin Creek Greenway Pre-Design
Map Your Trail

Considerations:

- Greenway Access Points
- Parking
- Local Destinations and Points of Interest
- Trail Surface and Width
- Creek & Road Crossings
- Environmental Impacts
Where are the access points for the greenway?
Where is parking?
What destinations have been connected?
What are the points of interest?
What was the trail surface and why?
How wide was the trail and why?
Points of Access
Trail Support Facilities
Material Selection

- Compacted ABC with stone edging
- Pea gravel, filter fabric, and with asphalt tack
- Yard waste mulch or Engineered Wood fiber (Fibar, Wood Carpet)
- Compacted pit gravel (similar to “Chapel Hill” gravel)
Material Selection

- Asphalt
- Concrete
- Crushed Recycled Concrete
- Pervious Pavers
Creek Crossings & Wetlands

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Creek Crossings

Wetlands or Small Stream Crossings
Creek Crossings
Creek Crossings

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Creek Crossings

Span length drives bridge cost
choose the narrowest crossing location
Creek Crossings - Floodplains & Floodways

Mecklenburg County FIRM

NC Flood Maps Iredell County DFRM
Creek Crossings - Floodplains & Floodways

100-YEAR FLOODPLAIN

FLOOD FRINGE  FLOODWAY  FLOOD FRINGE

100-YEAR FLOOD ELEVATION

NORMAL BASEFLOW
Creek Crossings & Wetlands
Roadway Crossings

Mecklenburg County Park and Recreation

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Roadway Crossings
Roadway Crossings – Underpass
Roadway Crossings – Underpass
Roadway Crossings – At Grade
Roadway Crossings – At Grade
Other Considerations

- Getting support for your trails
- Acquisition & Easements
- Regulatory permits
  - Agency Coordination
- Utility Coordination
- Delivery Methods/Bid Format
- Funding/Budget
- Schedule
Questions?
Irvin's Creek Greenway: Process Overview

- Design-Bid-Build Delivery Method
- Unit-price bid format
  (similar to NCDOT funded projects)
- Construction Schedule: 365 days
- Funding: County Budget
Roadway Crossings – Underpass
Roadway Crossings – At Grade
Creek Crossings - Floodplains & Floodways