Engineering Services Consultant Forum

JUNE 5, 2024
Welcome!

Meeting Purpose

• Introductions
• Make connections
• Provide timely updates and lessons learned
• Support each other to complete great projects...on time and on budget!

House Keeping

• Exits, restrooms, and refreshments
• Please hold your questions until Q&A (at the end)
• Current and upcoming opportunities

Agenda Overview
Agenda

- Welcome & Purpose 10 minutes
- Engineering Services Division Updates 45 minutes
- Project Controls Division Updates 15 minutes
- Break/Networking Session 30 minutes
- Landscape Management Updates 15 Minutes
- PROWAG Updates 25 Minutes
- Construction, Survey and Utility Division Updates 15 Minutes
- Questions/Discussion 15 Minutes
- Closing
Title Sheet / Project Team Sign-Off Changes

- **Out with the Old**
  
  City Project Team Signature Block on plan cover sheet

- **In with the New**
  
  City Project Team Signatures occur in separate document implemented by City PM

Back and forth pdfs of the final plans
Waiting for all team signatures to obtain permits

Project Engineer (consultant) to include Keith Bryant in workflow for final plan signoff on cover sheet
Updated Consultant Scope Template

**ES Scope Document**
- Evolution of scopes in the division
- Why it was updated

**Scope Changes**
- Pretty much EVERY section
  - Added space for assumptions
  - Added quantity and calculations required for all submittals
  - Moved 30% plans to the Planning phase & added storm drainage
  - Preliminary Design clean up
  - Signal design to be by consultant
  - Final Design – clean up of scope
- Revisions may still happen

**When will this go into effect?**
Updated ES Checklist

ES Checklist
- Mirror scope
- Add notes/comments

Changes/Revisions
- Added storm drainage to 30% plans
- Added check for environmental documentation (if needed)
- Signal Plans – starting at 50% submittal
- Project special provisions at 90% for ICE
- Sidewalk & Bike mileage and ADA Summary table

Will be uploaded to website soon
Complex Projects in a Fast Moving World

Site Constraints:
- Charlotte Water Sanitary Sewer Easement
- Duke Energy Transmission Corridor
- Brownfield Property
- Existing Wetlands
- Little Sugar Creek Floodplain
- Elevation differential between existing ground and Rail
- Active Residential Community
- Norfolk Southern Railway

1. Norfolk Southern coordination for grade-separated aerial crossing for user safety
2. No impacts to FEMA regulated parcels on Cullinan Avenue
3. High Cost of Real Estate
4. Relocation of existing utilities along Cullinan Avenue
5. Trail loops under itself to have enough length for accessible grades
6. Impact to existing retaining wall
7. Contaminated soils
8. Privately owned bridge and roadway — requiring real estate for construction access (easement donated)
9. Connectivity to developer constructed portion of XCLT

Key Takeaways:
- Great communication
- Being agile
- Thinking outside the box

CROSS CHARLOTTE TRAIL — MATHESON TO CRAIGHEAD (XCLT-M2C)
Sidewalk and Bicycle Facility Mileage & Curb Ramp Summary

Why do we need this data?
- City has established goals for how many miles of sidewalks and bike facilities are installed per year (10-miles/year of each).
  - CIP plays a large role in achieving these goals.
- ADA Transition Plan
  - Currently ±32K noncompliant curb ramps throughout the city. Obligation to the federal government for remediation.

When do we need this data?
- Sidewalk and Bicycle Facility Mileage
  - 30% plans: Initial draft
  - Final plans: Final draft
  - Closeout: Any revisions due to changes during construction
- ADA Curb Ramp Data
  - 90% Plan Submittal OR whenever you are beginning the Real Estate Phase
  - Closeout: Any revisions due to changes during construction
Case Study for 1.5 miles of road being reviewed for proposed improvements

Existing Cross Section:
- 7.5 ft sidewalk on one side
- Four 11 ft travel lanes
- 3.5 ft buffer on other side between road and barrier rail (no sidewalk)
  = 55 ft wide cross section

Existing SUP Mileage: 0 miles
Existing Sidewalk Mileage: 1.5 miles
Existing Bike Lane Mileage: 0 miles
Existing Cycle Track Mileage: 0 miles
Sidewalk and Bicycle Facility Mileage Calculation Example

Case Study for 1.5 miles of road being reviewed for proposed improvements

Using the proposed cross section to the left:
New SUP Mileage: 0 miles
New Sidewalk Mileage: 1.5 miles
New Bike Lane Mileage: 0 miles
New Cycle Track Mileage: 3 miles

Best practice note: please round to the nearest tenth
Sidewalk and Bicycle Facility Mileage & Curb Ramp Summary

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**Ramps**

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**Curb Ramp Summary Table**
Project Controls Division Updates

**Independent Cost Estimate (ICE) Reconciliation**
- Background info
- Goal
  - Prepare best/most accurate cost estimate for project
- Formal reconciliation meeting
- Additional follow-up

**Inflation Trends**
- Inflation increases overall not as significant as prior years
- Bid price changes lag behind material price changes
- Some input material prices still very high (per PPI)
  - Concrete – particularly pipe (up 10.3% since July 2023)
  - Asphalt (was up 9.8% since July 2023 but came down some in April)
  - Construction wages and salaries (up 3.2% over last 3 quarters)
- Review most recent bid price recommendations
  - Details & Consultant Resources - City of Charlotte (charlottenc.gov)
    - February 2024 construction cost update
Break / Networking
Landscape Management Updates

CIP Inhouse Landscape Design & Tree Preservation

Kourtnie Vincent, PLA
Program Manager
Landscape Management Division
Discussion Topics

Design Elements & Maintenance

• Trees
• Medians & Roundabouts (City & State)
• Landscape Design & Install
• Property Types & Maintenance
Trees

Project Design & Construction – Existing Canopy

- Tree Surveys – need trees located outside easement. Critical root zones
- Cut and Fill lines, utility locates, proximity of infrastructure, design changes
- Identify Heritage Trees and Private Tree Saves early on (UDO impacts)
- CIP Arborist must be involved at beginning of project & throughout
- CIP Arborist reviews for Tree Risk (TRAQ). Our role to preserve, protect, & determine removal. Assist in alternative design & construction techniques
Medians & Roundabouts

Project Design & Construction –
City Standard Landscaped Medians CLDS 40.08 A-C

- Call out detail on all landscape medians & City maintained roundabouts
- Required subdrainage and approved planting mix soils
- CIP Landscape maintains an approved soil vendors list
- Tips of all medians and median less than 4’ wide need concrete caps
- All State maintained roads with Roundabouts shall receive turf to remain under the State’s maintenance. Permanent seeding in hardscape contract
Landscape Design & Install

Project Design & Construction

• 90% and 100% landscape plans – Preliminary design by PM request.

• Consultant to provide LM final project AutoCAD files in City Standards.

• Planting Season – October 15th-April 15th  LM manages landscape construction process.

• Min. 8’ planting strip – large maturing trees. Min. 4’ planting strip for small maturing trees

• Medians – same as planting strip requirements. If smaller than 4’ wide, it needs to be capped with concrete

• NCDOT maintained roads require State planting permit. Restrictive planting clear zone requirements.
Property & Maintenance

Project Design & Construction

• City owned property
• Dead end streets
• ROW remnants
• New reverse frontage and changed private lots
• Hardships created – access, guardrails, handrails, slopes, walls
• Storm Water control measures
• Code requirements of maintain to the curb
• LM maintenance to begin at final acceptance with or without landscape installed (SCMs, medians, hardships, city property)
PROWAG Updates

- Ramp Camp Slides
Construction, Survey and Utilities Division Updates

CSU Slides