Developing A Good Scope

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CAP Scoping Process

- **Collect Readily Available Project Concept Data**
  - Financial Management System (FM/BlueZone)
  - PSM Project Schedule Activities (INFONET)
  - Straight Line Diagram
  - Video Log/Aerial Photography
  - PD&E Study
  - Enhancement Application (Local Gov't)
  - District Specific Concept Documents

CAP Scoping Process

- **Prepare First Draft Scope (PM or Others)**
  - Use Word's "Track Changes" Mode To Document Template Edits
  - Cover Sheet Consistent w/ FM
  - Work Mixes, Work Groups, Alternative Contracting Methods
  - Task-Driven, Delayed NTP's, Goes-With, etc.
  - Two Or More Projects In One Contract/Scope
  - Non-Applicable Sections: Retain Heading & Numbering
  - Automated Table of Contents Codes

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CAP Scoping Process

- **Scope Development Kickoff Meeting**
  - After First Draft Scope Is Ready (Attach To Invitation)
  - Invite All Technical & Support Design Disciplines
  - Attach Staff-Hour Workbook
  - Handouts (Loc. Map, SLD, FM, Schedule Milestones)
  - Video Log/Aerial Photography
  - Discipline Discussion in Section 2 Order
  - 2 Rounds of Review Comments
  - Encourage Related Disciplines To Copy Each Other
  - Request Dept. Staff-Hour Estimates

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CAP Scoping Process

- **Scope Clarification Meeting (Post-Selection)**
  - ✓ Distribute Current Scope (Changes Since Advertisement)
  - ✓ Invite Contract Services, Prime, Subs, Dept. Disciplines
  - ✓ Establish Scope Understanding
  - ✓ Discuss Needed Scope Revisions
  - ✓ Revise Department Staff-Hour Estimate?
  - ✓ Basis For Consultant's Estimate
  - ✓ Basis For Negotiations

Section 2 – Heart of the Design Scope

- **Section 2 is the key section of the scope**
- **Summarizes all the significant work activities**
- **Strive for accuracy and completeness, resulting in accurate staff-hour estimates**

Public Involvement

- Services are highly variable
- Accurately define high end graphics – High cost items
  - Before/after renderings
  - Fly-throughs (length, level of detail, narration)

2.1	**Roadway (Activities 3.0, 4.0 and 5.0)**
	Public Involvement: ***Describe CAP level, number of public meetings, number of other meetings, number of newsletters, required graphics (type, fly-through, narrated script, before/after renderings), etc.***

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Plan Type

- Clearly identify plan type to be utilized – Plan, Plan & Profile, or Letter Plans
- Identify special profiles if known

2.1	**Roadway (Activities 3.0, 4.0 and 5.0)**
	Plan Type: ***The roadway plans shall be prepared in a Plan format. Profile sheets shall be provided, if necessary, to show the vertical controls that are needed for the construction of these projects. The plan (and profile) sheet shall be plotted at a horizontal scale of 1" = _'. Identify special profiles if known.***

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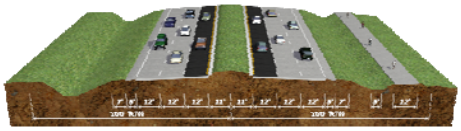
Typical Section

- Include all typical section components
- Identify typical sections for all roadway types included in the Scope of Work
- Include typical section(s) for side streets requiring more than minimal work



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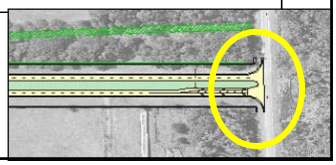
Major Intersections/Interchanges

- Scopes frequently are silent on the level of effort expected on intersections and interchanges
- Describe work to be performed on side streets, frontage roads, and ramps.

2.1	Roadway (Activities 3.0, 4.0 and 5.0)
Major Intersections/Interchanges:	***List all intersections/interchanges that will require additional plan sheets. Identify extent of work on side streets, ramps and frontage roads.***



Variations and Exceptions

- Identify anticipated Design Variations and Exceptions
  - From PD&E Study, Concept Report, Field Review
  - Provide all information available
  - Discuss the level of effort needed to gain approval

2.1 Roadway (Activities 3.0, 4.0 and 5.0)
Variations/Exceptions: ***Design variation and/or exception requests shall be prepared for any situations not meeting current FDOT and/or FHWA requirements, as appropriate. The CONSULTANT shall prepare design Variation and Exception reports for the purpose of estimating design and construction needs based on initial observations. The CONSULTANT shall recommend, to the DEPARTMENT, either correction of any deficiencies, or obtaining the appropriate design variations or exceptions, including applicable benefit-cost analyses, in accordance with DEPARTMENT procedures. Currently known or suspected features requiring analysis include: _. Include list of known or anticipated variations and/or exceptions.***

Construction Cost Estimating

- Construction Cost Estimates
  - No. of LRE/TRNS*PORT updates, when
  - No. of Engineer's Est. updates, when
  - District specific documentation requirements

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FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 413041-1-32-01 **Letting Date:** 05/2008

Description: I-75 FROM SOUTH OF SR 78 TO CHARLOTTE C/L

District: 01 **County:** 12 - LEE **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 5.740 MI

Project Manager: MGR-ELG-NEM

Version 7 Project Grand Total **$13,383,194.72**

Description: Reconstruct Vertical Curve on I-75 over SR 78 so that AASHTO Criteria is met. Add SR 78 construction (new Sequence 2). Shift curves so that construction is not necessary on Pojash. Use a Two-Span, AASHTO Beam bridge over SR 78 to accomodate future 6-lane. Construction on I-75 from Sta. 1287+50 to Sta. 1124+00.

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 0.502 MI

Description: WORK INCLUDES BRIDGE CONSTRUCTION AND FIXING VERTICAL CURVE. Construction on I-75 (SR 93) From South Of SR 78 To North Of SR 78.

Special Conditions: PURPLE PROFILE

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	80.00 / 80.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.000
Top of Structural Course For Begin Section	0.00
Top of Structural Course For End Section	0.00
Horizontal Elevation For Begin Section	0.00
Horizontal Elevation For End Section	0.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay Item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.74	AC	$25,000.00	$243,500.00

X-Items

Pay Item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	65,600.00	CY	$16.29	$1,068,624.00

Earthwork Component Total $1,312,124.00

2.1 Roadway (Activities 3.0, 4.0 and 5.0)
Construction Cost Estimating: ***Identify frequency of construction cost updates for both LRE's and Engineer's Estimates***

Drainage

- Can be an uncertain component
- Important to identify expected drainage components
- Number of pond sites
- Number of cross drains

2.2	**Drainage (Activity 6.0):** ☐Y ☐N.
	Describe expected systems, i.e., open, closed, ditches, ponds, exfiltration floodplain involvement, etc.
	List number of ponds sites to be studied per basin.
	List number of cross drains.

Signing and Pavement Markings

- Identify plan type
  - Many projects can utilize "reduced content" plans for signing and typical details for striping, in lieu of full plan sheets

2.6	**Signing and Pavement Markings (Activities 19.0 and 20.0):** ☐Y ☐N.
	List number and location of sign structures; i.e., cantilevers, overhead, etc. Identify special plan requirements such as use of typical sections and details in lieu of full plan sheets.

Signals

- Clearly identify what traffic data will be provided by the Department
- Also identify what traffic data will be collected by the Consultant
- Identify required studies and reports

2.7 Signals (Activity 21.0 and 22.0): ☐Y ☐N.

Intersections: ***List all existing and proposed signalized intersections and requirements (loop replacement, mast arms, etc.).***

Traffic Data Collection: ☐Y ☐N. ***List all locations that will require data collection. Describe data to be collected at each location.***

Traffic Studies: ☐Y ☐N. ***List all studies required and locations.***

Count Stations: ☐Y ☐N. ***List number of count station(s).***

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Guidelines Staff Hour Ranges

- Philosophy – Ranges not intended to cover all projects.
- The ranges represent neither the minimum nor maximum hours that may be negotiated for a particular task on a specific project.

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Range of Projects

- Staff Hour Estimation Guidelines define projects in each range
- Two critical points:
  - Some Activities (disciplines) may be in a different range than the project overall
  - Individual line items may be in a different range than the discipline overall

Lower End of Range	Middle of Range	Upper End of Range
Rural 2-lane 3R (Minor safety, earthwork and utility involvement)	Rural 2-lane 3R (Major safety, earthwork and utility involvement)	Rural 2-lane to 4-lane widening/resurfacing (major ROW, earthwork and utility impacts)
Rural 4-lane 3R (Minor safety, earthwork and utility involvement	Rural 4-lane 3R (Major safety, earthwork and utility involvement)	Rural 2-lane to urban multi-lane reconstruction
Urban 3R (Minor safety, earthwork, and utility involvement)	Rural 2-lane multi-lane widening/resurfacing (minor ROW, earthwork and utility impacts)	Rural 2-lane to urban multi-lane widening / resurfacing

Questions?

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