

Scope Management



Presented By Robert Quigley, P.E.

Agenda

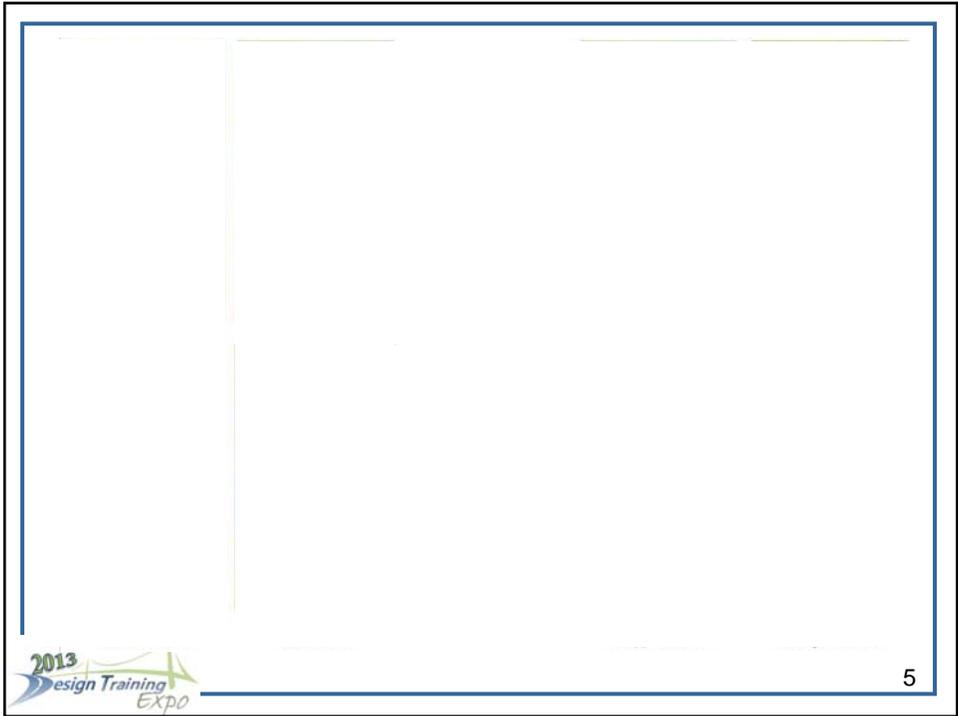
- ◆ Agenda
- ◆ Objectives
- ◆ Scope Overview
- ◆ Procedures/Background
- ◆ PM Roles/Responsibilities
- ◆ Standard Scope of Services
- ◆ Scope Development Process
- ◆ Scope Management Process
- ◆ Future of Standard Scope of Services



Objectives of Training

- ◆ Provide Overview of Scope in Project Management
- ◆ Describe Background on Standard Scope of Services
- ◆ Describe the Standard Scope of Services
- ◆ Describe Scope Development Process
- ◆ Describe Scope Management Process
- ◆ Provide update on Standard Scope of Services

What is the Purpose of a Scope?



Needs & Management Fundamentals

What People Need To Know

Triple Constraints

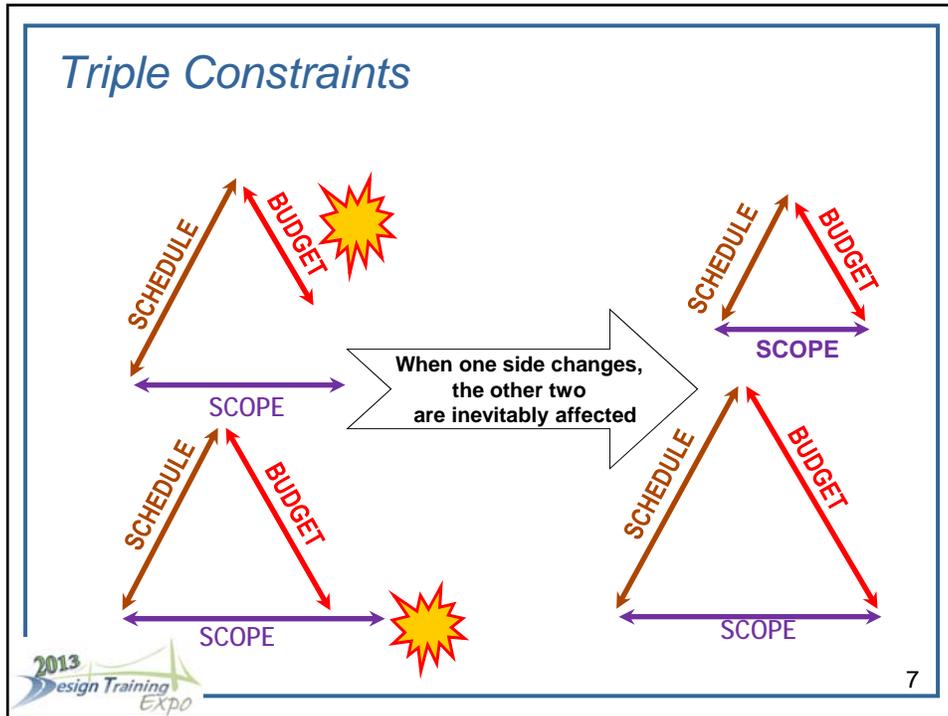
1. What are we getting?
2. How long will it take?
3. What's it going to cost?

⇒

1. **Prioritize**
2. **Optimize**
3. **Accept**

2013 Design Training Expo

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Authorizing Procedure

Procedure 375-030-020

3/26/2009: Pen & ink to change office name at request of Director, Office of Design.

Approved:  Effective: May 19, 2005
 Office: Production Support
 Topic No.: 375-030-020-d

Jose Abreu, P.E.
Secretary

STANDARD SCOPE and STAFF HOUR ESTIMATION GUIDELINES for PROJECT DEVELOPMENT and ENVIRONMENT (PD&E) STUDIES and DESIGN SERVICES

PURPOSE:
 The Department of Transportation (Department) employs consultant services for the purposes of PD&E Studies and Design Services. The Standard Scope and Staff Hour Estimation Guidelines is to provide guidance for efficient and uniform negotiations of these professional services contracts statewide. The Guidelines consist of the Scope of Services files, Staff Hour Forms and Staff Hour Estimation Basis. The purpose of this procedure is to implement the required use of the Standard Scope and Staff Hour Estimation Guidelines for Project Development and Environment Studies (PD&E) and Design services Projects.

The Guidelines for both PD&E Studies and Design Services are posted on the Project Management Office's web site: <http://www.dot.state.fl.us/projectmanagementoffice/>

AUTHORITY:
 Section 287.055, Florida Statutes (F.S.) and 23 Code of Federal Regulations (CFR), Part 172.

SCOPE:
 The Scopes of Services files, Staff Hour Forms and Staff Hour Estimation Basis (hereafter referred to as Guidelines) shall be utilized by both the Department and Consultant Project Managers in scoping and negotiating all consultant contracts for PD&E Studies and Design Services.

REFERENCES:
 Acquisition of Professional Services, Topic No. 375-030-002

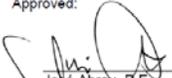
2013 Design Training Expo

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Background

- Original work done July 2000 to July 2002
- Over 2,500 hours invested in original work
- Implemented July 1, 2002
- Major update by all Disciplines 2008
- Minor updates as needed
- Always has been an FDOT / FICE joint effort



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Background

- Roadway Analysis and Roadway Plans tested by Roadway Task Team on three different projects (minor and major) – comparisons were very close
- Roadway Forms also tested by FDOT and consultant members of Roadway Task Team during District 7 negotiations – estimate very close to staff hours negotiated using current forms
- All other task teams performed similar testing with respective forms



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Background

Comparison – D7 Project

FIRM	Old Format	New Format
FDOT	948	994
KCA	1200	1274
Negotiated		1006



PM Roles and Responsibilities

FDOT PM MUST

Consultant PM MUST

SCOPE	<ul style="list-style-type: none"> ◆ Develop the scope of services. Coordinate input from support services and the project team ◆ Know and understand the scope ◆ Be accountable to management for the success of the project. ◆ Approve modifications to the scope and update the document ◆ Watch for Scope of Work Creep ◆ Watch for Scope of Services Creep 	<ul style="list-style-type: none"> ◆ Completely understand and fulfill the scope of services ◆ Not work beyond the scope of services ◆ Be accountable to both FDOT and firm management for the success of the project ◆ Watch for Scope of Work Creep ◆ Watch for Scope of Services Creep
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Ref: PMH P1, Ch 7



Scope of Work vs. Scope of Services

- **Scope of Work** refers to the project as whole – what is being constructed.
 - **Overall improvements to the transportation facility**
- **Scope of Services** refers to what the consultant is doing; what activities will accomplish the Scope of Work.
 - **Establishes which activities to accomplish the work are specifically included in the contract**
 - **Establishes which of the activities will be the responsibility of the CONSULTANT or the DEPARTMENT**



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Scope of Work vs. Scope of Services

- | | |
|--|---|
| <ul style="list-style-type: none"> • Scope of Work: <ul style="list-style-type: none"> • Overall project improvements <ul style="list-style-type: none"> – Widen of SR 500 from 2 to 4 lanes – Mile post 0.000 to 2.541 – Replace bridge over Florida River – Develop closed drainage system | <ul style="list-style-type: none"> • Design Scope of Services <ul style="list-style-type: none"> • Activities to accomplish Scope of Work <ul style="list-style-type: none"> – Roadway design – Bridge Design – Drainage design – Public involvement – Signing and Marking – Refer to Sections 2 through 34 of the contracted Scope of Services |
|--|---|



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Standard Scope of Services

<http://www.dot.state.fl.us/projectmanagementoffice/Scope/default.shtm>

Production Support Office

[Production Support](#) > FDOT Design Scope and Staff Hours

Standard Scope of Services and Staff Hour Estimation

Roadway & Bridge Structural Design Scope

[Design Staff Hour Estimation \(SHE\) Guidelines](#) - an excel file containing over 30 worksheets
(Right click on file and save file.)

[Staff Hour Estimation Forms](#) - an Excel file containing over 30 worksheets with formulas. (Right click on link and save file.) (Revised 6-8-2010)

[Design Standard Scope of Services](#) - (Updated December 13, 2010) This word document that should be completely filled out for the project. (Right click on link and save file.) The scope file is the complete Standard Scope which includes all design activities and should be used on every design Project. If you are creating a new scope, contact the nearest District Project Management Office for an electronic copy or download the Standard Scope (above) that includes all the files necessary to complete a scope of services for a project.

[Design Standard Scope Zip File](#) - (Updated December 13, 2010) This is a very large file containing all the Word files necessary to create a standard scope document using a Word Macro. To use this file, save it then extract all the files. The "Workbook" file has a list of all documents. This file is highlighted to create a master file. Then, the macro is run and it generates a Standard Scope. Instructions are in the zip file.



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Standard Scope of Services

Benefits

- ◆ It provides for consistent and predictable project results!
- ◆ Keeps Department and Consultant on the same page
- ◆ It is the primary input into project management functions
- ◆ Ensures greater likelihood of on-time delivery
- ◆ Facilitates scope control
- ◆ Easier to accommodate change
- ◆ Identifies all of the project deliverables (external and internal)
- ◆ Is the basis for performance reporting during project execution



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Standard Scope of Services

- ◆ 36 Sections (31 Work Activities)
- ◆ Over 1,100 Identified Tasks
- ◆ 16 Possible Disciplines
- ◆ Can be over 150 Pages when completed for a project
- ◆ Staff Hour Guidelines include over 30 Worksheets

Standard Scope of Services

- ◆ Project Purpose (Section 1)
- ◆ Project Description (Section 2)
- ◆ Project Common & General Tasks (Section 3)
- ◆ Discipline Specific Activities (Sections 4-34)
- ◆ Project Requirements (Section 35)
- ◆ Invoicing Limits (Section 36)

Project Scope of Services

Making the *Standard Scope of Services* a *Project Scope of Services*

Work tasks described in the Standard Scope **should be utilized “as is” to the maximum extent possible** and modified only when required to produce project or District specific results.



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Project Scope of Services

- ◆ Determine the Activities applicable to project
- ◆ Select the Tasks
- ◆ Fill in the Blanks
- ◆ Determine WHO is Responsible
- ◆ Provide Project Specific Information
- ◆ Provide District Specific requirements



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Project Scope of Services

Scope

(Section 2) Project Description

2.1 Roadway – Y/N

Plan Type: Describe type of roadway plans, i.e., plan/profile, plan only, letter plans or as directed.

Typical Section: List number and description of typical sections, i.e., mainline: four-lane divided urban curb and gutter, 4-foot bike lanes, 5-foot sidewalk, 3-foot utility strip both directions; four-lane divided rural with 5-foot paved shoulders, no sidewalks each direction.

Limits: SR ___ from ___ to ___

Major Intersections/Interchanges: List all intersections/interchanges that will require additional plan sheets.

Variations/Exceptions: List of anticipated variations/exceptions.

Back of Sidewalk Profiles – Y/N

Level of TCP Plans: Identify Level 1, 2, or 3.

Temporary Signals – Y/N: Provide list of locations.

Temporary Lighting – Y/N: Provide limits.

Temporary Signs – Y/N: Provide description.

Project Scope of Services

All changes to the Standard Scope shall be shown as to alert the user that the scope requirements have changed from the standard.

- ✓ All additions shall be shown in ***Bold Italics*** to alert the user that the scope requirements have changed from the standard.
- ✓ All sections that are **not applicable** to the project shall be indicated with “***N/A***” shown next to the section heading.

Project Scope of Services

All changes to the Standard Scope shall be shown as to alert the user that the scope requirements have changed from the standard

(Continued)

- ✓ **Minor deletions** of portions of text that do not apply to the project shall be shown in ~~striethrough~~.
- ✓ **Major deletions** of text require the entire paragraph to be shown in ~~striethrough~~ and rewritten in ***Bold Italics***.

Project Scope of Services

“Other” Activities

- ◆ Not a “catch-all”
- ◆ Must identify specific activities not covered elsewhere in that Section
- ◆ Corresponding description in “Comments” column in Staff Hour Forms to justify hours
- ◆ Activities 4, 6, 8, 19, 21, 23, 25, 30, 32 & 33

Scope Tips

Do's

- ◆ Describe what needs to be done, not how to do it
- ◆ The more detail, the better
- ◆ Keep changes to a minimum to ensure consistent & uniform work effort requirements
- ◆ Make changes with care – District/Project specific
- ◆ Get Discipline Experts involved

Don'ts

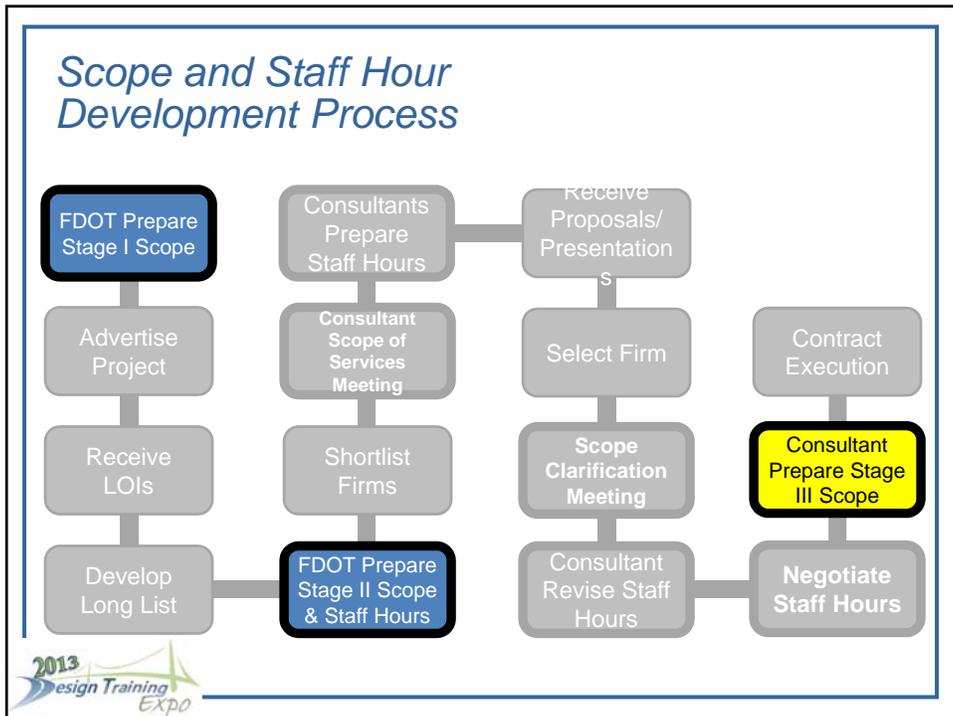
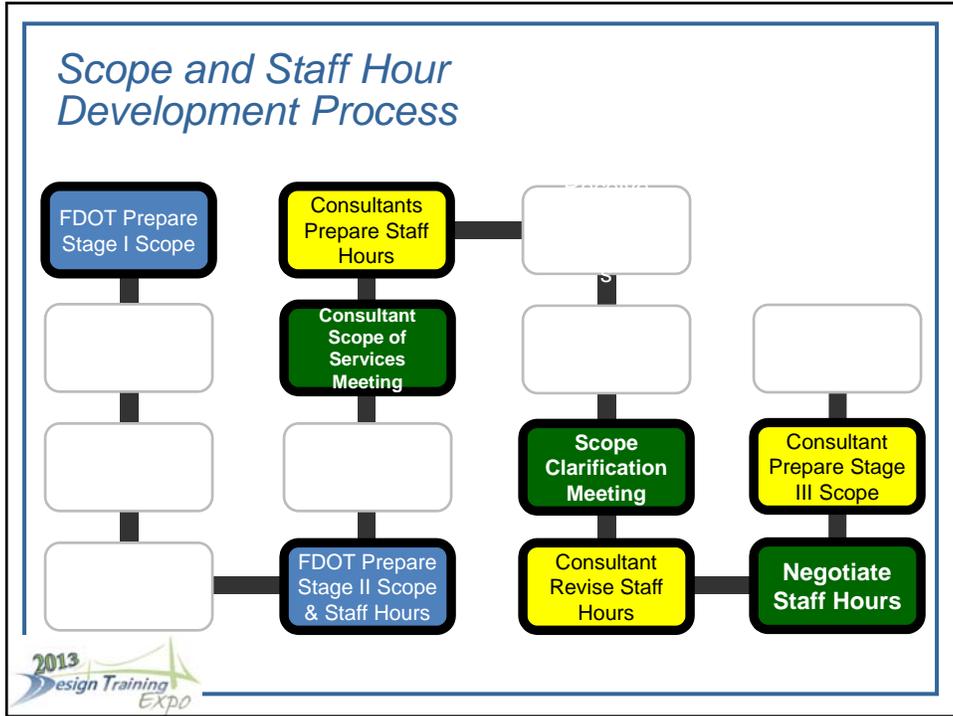
- ◆ Don't blindly copy a scope from a similar project
- ◆ Don't repeat what the manuals say
- ◆ Don't show versions or dates of references



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Scope Development





Scope Development Process



Stage I Scope

Used for project advertisement

Stage II Scope

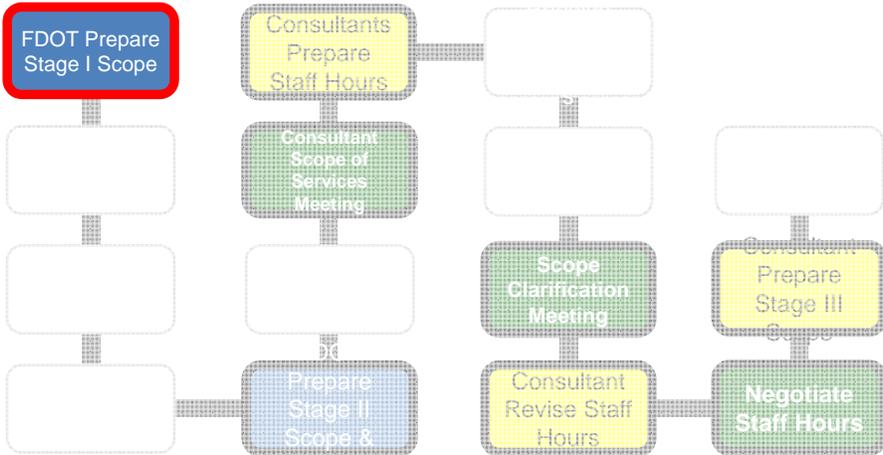
Contains more detail
Provided to short listed firms

Stage III Scope

Final scope used in contract



Scope and Staff Hour Development Process



Scope Development Process

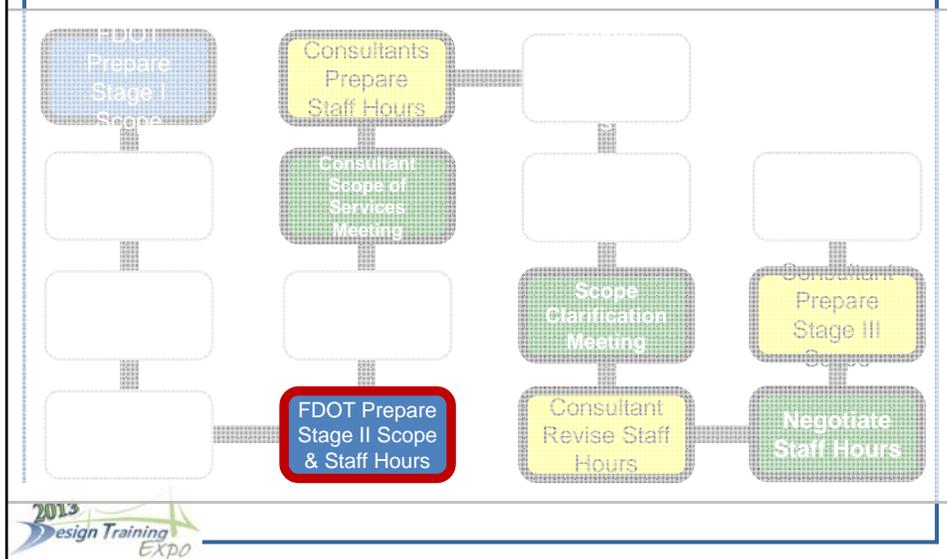
Project Manager's responsibilities throughout the Scope of Services development process



Stage I Scope	Stage II Scope	Stage III Scope
<p>Develop & coordinate initial detailed scope used for project advertisement</p> <p>FDOT PM prepare draft Risk Analysis</p> <p>The more detail the better</p>	<p>Conduct Risk Analysis</p> <p>Coordinate & update scope based on LOI's & finalize Risk Analysis</p> <p>Obtain discipline input</p> <p>Add as much detail as possible to the scope!!</p> <p>Provide Scope to short listed firms</p>	<p>Coordinate & finalize scope after negotiations</p> <p>Consultant can "red-line" scope for District review and approval</p> <p>Final scope given to PSU & consultant</p>



Scope and Staff Hour Development Process



Scope Development Process

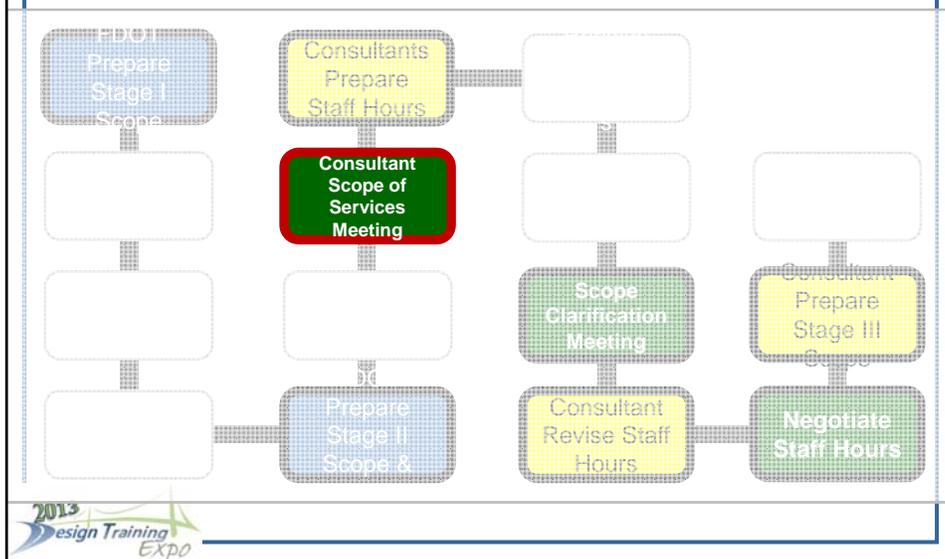
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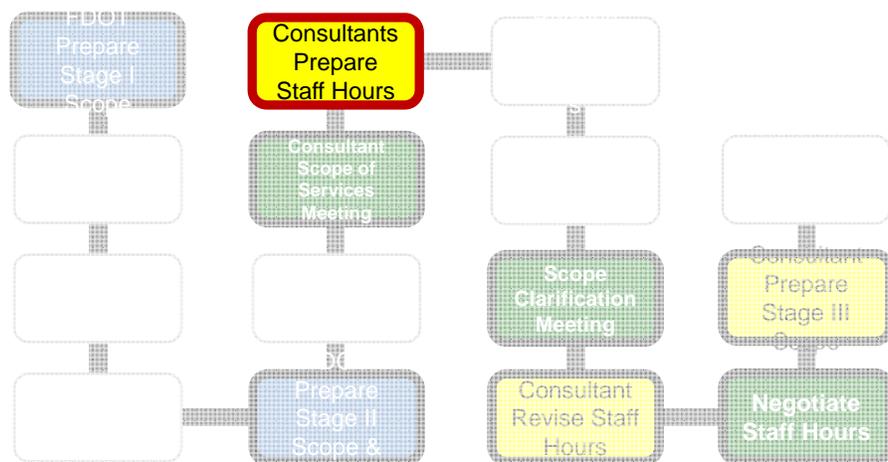


Consultant Scope of Services Meeting For Shortlisted Firms

- ◆ Provide Stage II scope
- ◆ FDOT representative from each discipline provides clarification on the scope
- ◆ Consultant asks questions
- ◆ FDOT PM amends Stage II Scope based on meeting and reissues Stage II Scope



Scope and Staff Hour Development Process



Consultant Prepare Staff Hours

- ◆ Based on Stage II Scope
- ◆ Document assumptions in comments
- ◆ Submit only “Staff Hour Summary – Firm” sheet for prime and all subs

Task No.	Task	Units	No of Units	Hours / Unit	Total Hours	Comments
4.1	Typical Section Package	LS	1	36	36	Typical section package approved 12/22/08 for 3 sections. Need three additional typical sections (EB slip ramp, WB lanes approaching Bypass, Meadow Pointe). 20 hours for 1st, 8 hrs for each other
4.2	Pavement Design Package	LS	1	120	120	Four pavement designs (mainline, shoulders, resurfacing mainline, Meadow Pointe) (50 hours for initial, 8 hours for shoulder, 10 for resurfacing mainline and 12 for Meadow Pointe). 40 hours for Pavement Type Selection Report. Assume complete reconstruction of pavement.
4.3	Access Management	LS	1	115	115	16 hours/mile. Driveway documentation is only required on driveways with work outside the ROW. Assume 10 driveways will require documentation booklet @ 4 hrs each.



Consultant Prepare Staff Hours

Tips

1. Clearly state the basis for hours of all proposed hours.
2. Provide formula for hour calculations.

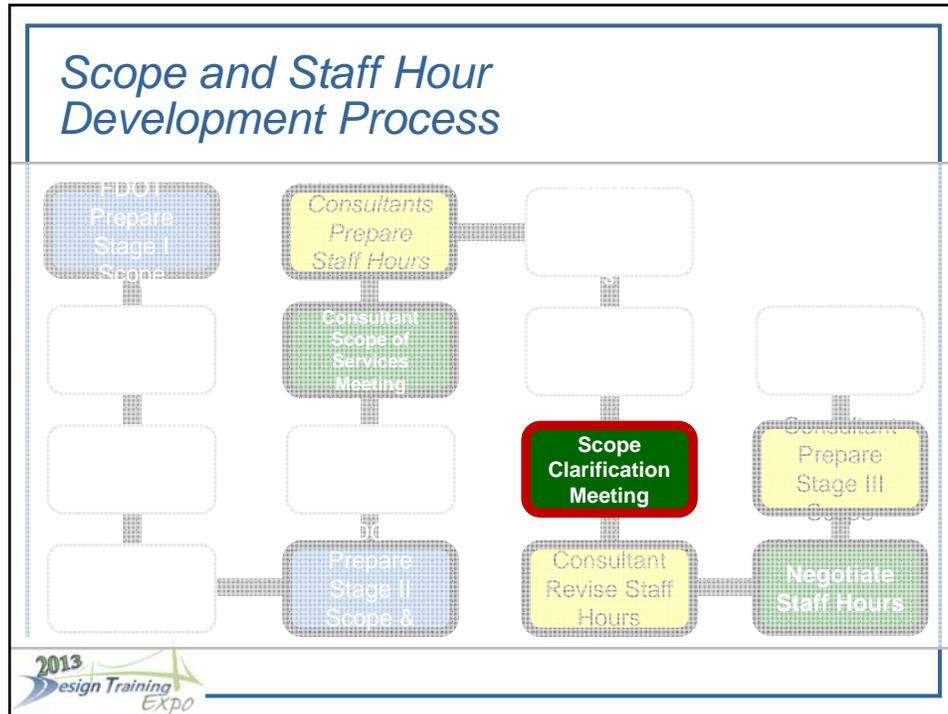
- ◆ Submit only “Staff Hour Summary – Firm” sheet

Four pavement designs (mainline, shoulders, resurfacing mainline, Meadow Pointe) (50 hours for initial, 8 hours for shoulder, 10 for resurfacing mainline and 12 for Meadow Pointe). 40 hours for Pavement Type Selection Report. Assume complete reconstruction of pavement.

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4.3	Access Management	LS	1	115	115	16 hours/mile. Driveway documentation is only required on driveways with work outside the ROW. Assume 10 driveways will require documentation booklet @ 4 hrs each.

$$=50+8+10+12+40$$



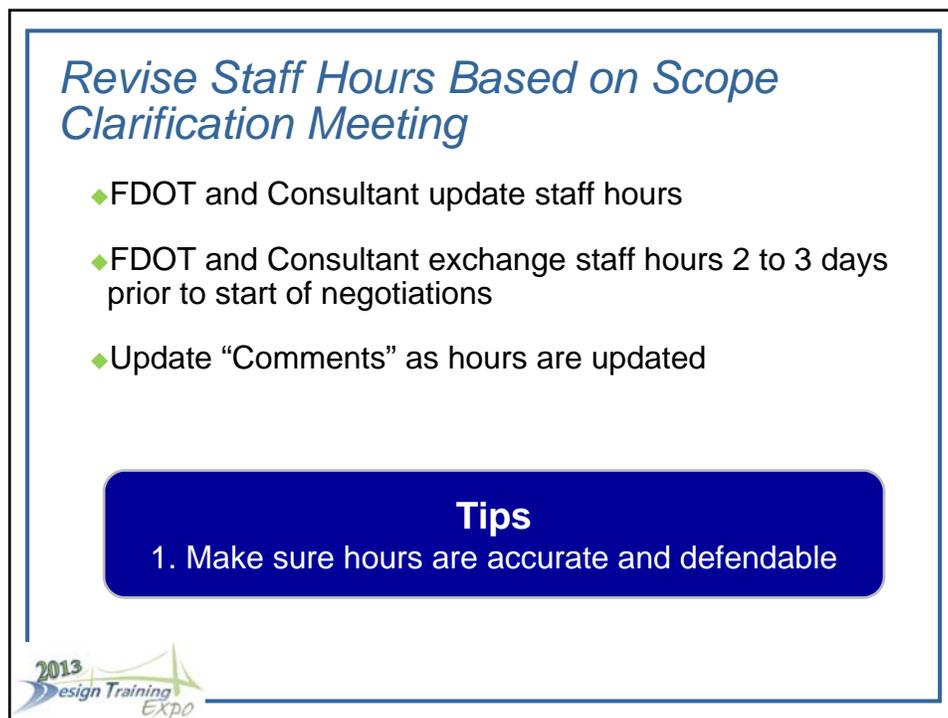
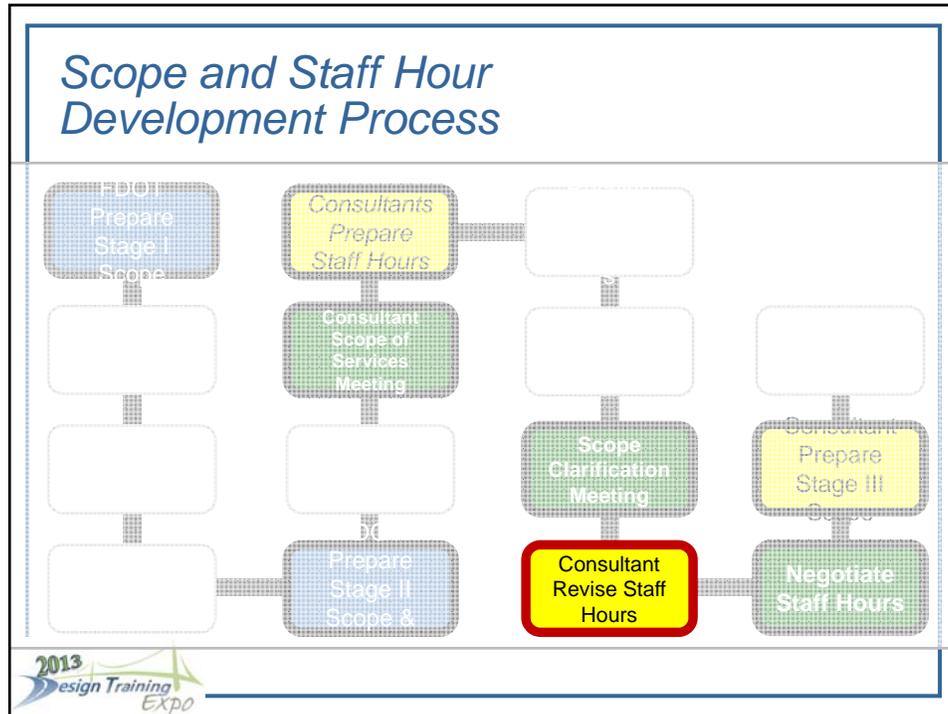


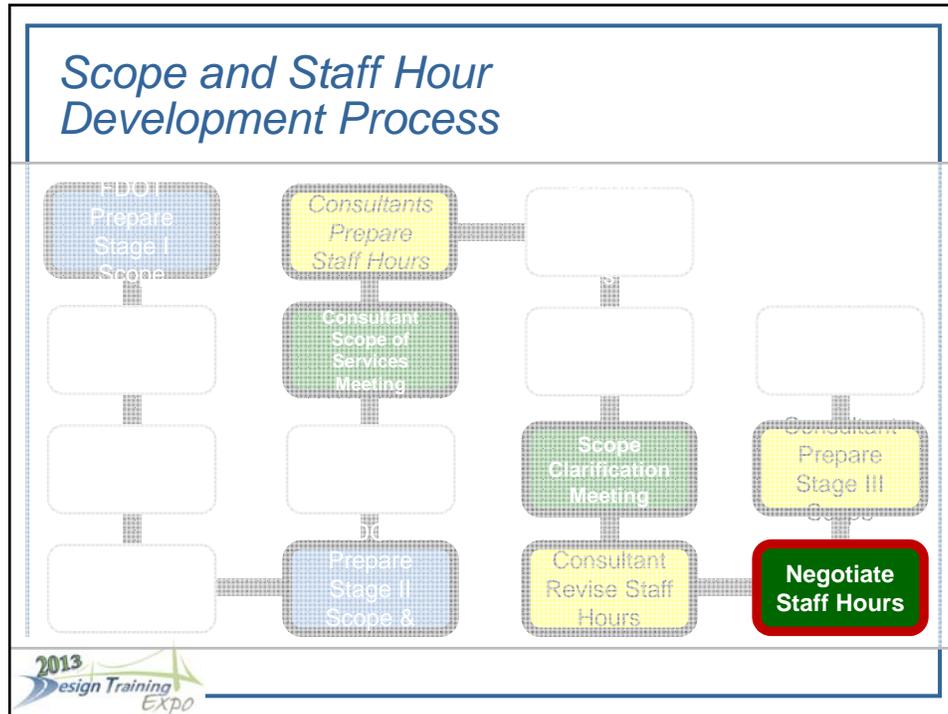
Scope Clarification Meeting with Selected Firm

- ◆ FDOT and Consultant staff from all disciplines discuss scope
- ◆ Scope changes are based on information learned during selection process
- ◆ Consultant is responsible to document scope changes
- ◆ FDOT and Consultant update staff hours
- Determine appropriate range for each discipline

Tips

1. Consultant have all subconsultants attend the meeting.
2. Consultant should take good notes.





Negotiate Staff Hours

- ◆ Follow FDOT Negotiations Handbook (Mutual Gains)

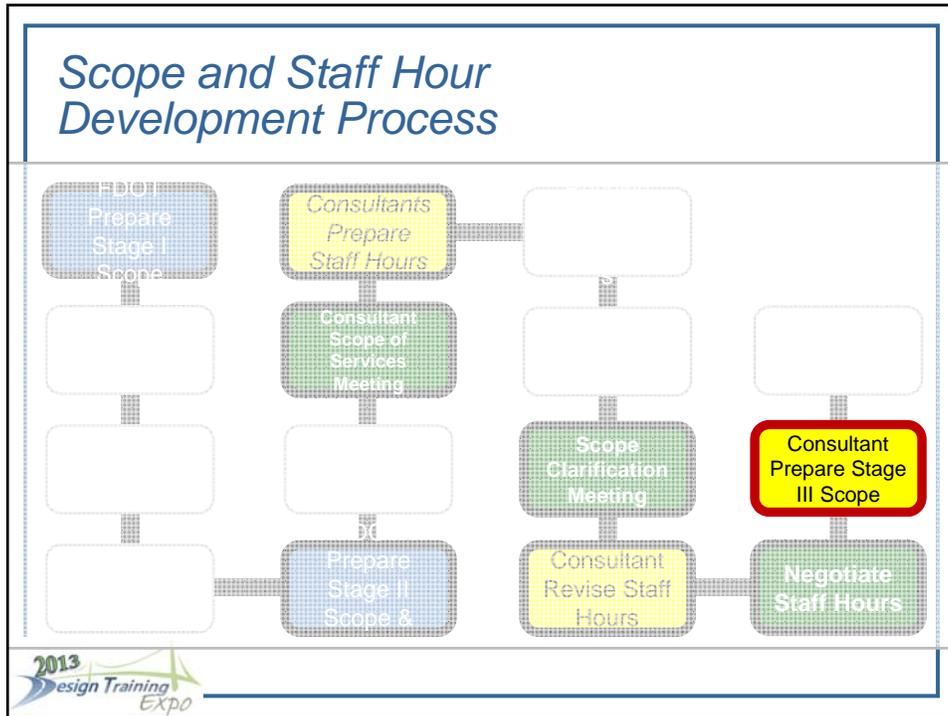
Negotiating Professional Services Contracts at FDOT

✓ <http://www.dot.state.fl.us/procurement/Negotiations.shtm>
- ◆ FDOT and Consultant sign-off on staff hour sheets and staff hour distribution for each discipline
- ◆ Consultant is normally responsible for updating Scope

Tips

1. Update staff hour comments, the more detail the better
2. Staff hours sheets become excellent backup documentation of the Scope of Services

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Scope Development Process

Project Manager's responsibilities throughout the Scope of Services development process

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Note: A globe icon is located to the right of the title.

Note: The '2013 Design Training Expo' logo is at the bottom left.

The Future

- ◆ Discipline Teams finished updates to Scope & Guidelines
- ◆ Updates to Activities Include
 - ✓ Eliminate non-standard language
 - ✓ Added new activities
 - ✓ Separated previously grouped activities
 - ✓ Adjusted staff hour ranges for some tasks
 - ✓ Other minor edits
- ◆ Final Review of Draft Scope & Staff Hour updates
- ◆ Post updates online



QUESTIONS?

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- OR -

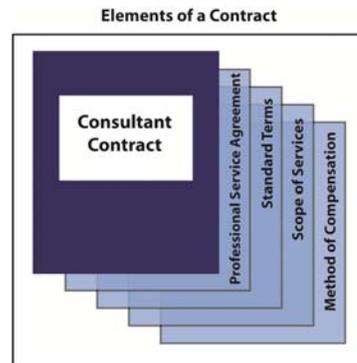
Mary Jane Hayden
(850) 414-4783
MaryJane.Hayden@dot.state.fl.us

Florida Department of Transportation
Production Support Office
605 Suwannee Street - MS-40
Tallahassee, Florida 32399-0450



Consultant Contract Management

- ◆ FDOT PMs Responsibilities include:
 - ✓ Reasonably and objectively evaluate consultant's performance
 - ✓ Review invoices
 - ✓ Monitor Schedule
 - ✓ Scope of Services conformance
 - ✓ Monitor Quality



Scope Management

- ◆ Monitor & Control
- ◆ Evaluate work performance
- ◆ Manage Change Requests
- ◆ Ensure project work is completed
(and only the required project work)

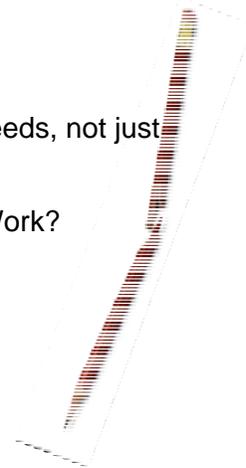
Scope Management

FDOT PMs role in implementing scope changes during execution (Scope of Services)



Scope Creep (Scope of Work)

- ◆ Work beyond that authorized in the scope of work is know as “scope creep”
- ◆ It is unnecessary and can be costly
- ◆ To be justified, it should meet stakeholder needs, not just expectations (requirement vs. desirement)
- ◆ What are the sources of creep in Scope of Work?
 - ✓ FDOT, local agency, permitting agency, et al
 - ✓ The consultant is NOT a source of creep in Scope of Work
- ◆ Changes to the Scope of Work will drive the Scope of Services



Scope Creep (Scope of Services)

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- ◆ It is unnecessary and can be costly
- ◆ To be justified, it should meet stakeholder needs, not just expectations (requirement vs. desirement)
- ◆ What are the sources of creep in Scope of Services?
 - ✓ Public, permitting agency, etc.
 - ✓ The consultant may be a source of creep in Scope of Services



Ref: PMH P1, Ch 7.1



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Ways to Avoid Scope Creep

Ways to Avoid Scope Creep

- Do not ask for services beyond the Scope of Services
- Do not volunteer work beyond the Scope of Work
- Stay focused on the Scope
- Know how and when to say “No”

Doing a better job of scoping in the planning phase will help avoid potential problems and creep later



Ref: PMH P1, Ch 14, Figure 4



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The Future

- ◆ Teams finished their updates to Scope & Guidelines
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