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Chapter 29: Consultants Deliverables

Introduction

Throughout the life of the contract, Consultants will be required to submit their files (Deliverables Items) to EFLHD. If these standards are followed, the Consultant will only need to write their directory structure to a CD and submit with only a brief description of Geopak chain names, profile names, and file naming convention.

Deliverable Items - Items that the Contractor provides the Government under the terms of the contract, including reports, documents, plans, maps, and other required items.

Government Provided Data:

The following items are provided to the Contractor:

No.	Item Description	Format ^{(1) (2)}
	PDDM	World Wide Web
	FLH A/E Task Order Procedures Manual	World Wide Web
	EFLHD Construction Manual with EFLHD Slope Staking Procedures	.pdf
	Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP03	.pdf
	NPS Park Road Standards	
	NPS Sign Manual located at http://www.nps.gov/npsigns/ or http://www.nps.gov/hfc/acquisition/uniqueguide.htm	World Wide Web
	Streetscape Manual located at http://www.nps.gov/streetscape/	World Wide Web
	Design Scoping Report and Updates	
	Library of Specifications (LOS)	Word 2000
	EFLHD Special Contract Requirement Development Guidelines	
	GEOPAK standard input files	
	Microstation seed files (level and symbology, etc)	
	Photogrammetric mapping and horizontal and vertical datum	
	EFLHD Supplemental Survey Specifications	
	As-Builts	.pdf
	Bridge Inspection Reports	
	Soils and Foundation (Geotechnical) Report	.pdf
	Engineering Study	.pdf
	Traffic Safety Study	.pdf
	Traffic and Accident Data	.pdf
	FLH / EFLHD Standards and Details	



Sample Typical Sections, Drainage Summary Sheets, and Sign Schedule Sheets	
Engineer's Estimate System (EES) Program, EFLHD Pay Item Lists, and Bid History	
Environmental Documentation	.pdf
Highway Design Standards form	
Roadside Design Guidelines form	
PS&E Forms	
PS&E Checklist	.pdf
Sample Invoice Format	
Sample PS&E Package for each Design Phase described in the Statement of Work, including:	.pdf
A. Sample Plans	
B. Sample Special Contract Requirements (SCR)	
C. Sample Engineer's Estimate (EE)	
D. Sample Unit Price Analysis (UPA) and sample UPA forms	
E. Sample Slope Stake Books	
F. Sample Critical Path Method (CPM) Schedule	
G. Sample Design Narrative	
H. Sample Traffic Control Narrative, if separate from the plans	
I. Sample Sediment & Erosion Control Narrative, if separate from the plans	
J. Sample Highway Design Standards form	
K. Sample Utility Status Report	

Table 29-1

- (1) Unless otherwise noted, all Government Provided Data will be in electronic format on CD-ROM or DVD.
- (2) Electronic versions of select items listed here as well as other design related resources can be downloaded from <http://www.efl.fhwa.dot.gov/design/design.htm>.
- (3) The latest version of the pay item files for the ESS can be downloaded from <http://www.cflhd.gov/design/ee.prog/>



Plans Provided by Consultant:

Provide plans that are similar in character and assembly to the sample plans provided by the Government, with all text being fully legible when the plans are printed at half size. Careful attention must be paid to the layout, format, and appearance of the plans. The Government will not accept Plans that are excessively cluttered with information, are poorly organized, or do not meet the general requirements of the Project Development Design Manual (PDDM). Provide Plans that contain the following where applicable:

<u>No.</u>	Description	<u>Notes</u>
	Title Sheet	
	Conventional Symbols and Abbreviations Sheet	Provide symbology and abbreviation legend.
	Location Map and Construction Signing Sheet	Provide sheets containing the location (overall site) of each roadway, indicating beginning and ending of construction, the Partner Agency's right-of-way, preliminary traffic control, etc.
	Survey Information Sheets	For new and existing centerlines, survey control, baselines, or P-lines. Provide sheets containing an overall site (location) map showing locations of primary and secondary control points, sketches of references, NEZ coordinate table of control points, horizontal and vertical datum notes, level of SUE survey conducted (Quality Level " "), etc.
	Typical Section Sheets	
	Tabulation of Quantity Sheets	Using the EES program.
	Schedules and Summaries	Mileage tabulation, removals, erosion control devices, earthwork, paving and pavement patching, drainage, underdrain, guardrail, permanent striping, permanent sign, remove and reset sign, construction sign, etc.
	Plan & Profile Sheets	Provide alternative rehab options.
	Construction Plan Sheets	Provide sheets indicating the work to be performed.



Special Plan Views	Separate blow-up views of all intersections requiring work, and other necessary locations requiring increased detail.
Pavement Elevation Sheets	For areas of pavement not shown in the plan and profile sheets or construction plan sheets.
Erosion Control Narrative and Plans	Provide separate sheets for erosion control narrative and plan views.
Landscaping Plans	
Temporary and Permanent Signing and Striping Plans	Provide separate sheets for temporary signs/striping and permanent signs/striping.
Traffic Control Plans	Including construction phasing, if necessary.
Signal, Lighting, and Electrical Plans	Traffic signal, showing heads, loops, poles, mast, and other appurtenances, and required phasing. Include locations for street lights, conduits, manholes, pull boxes, etc.
Drainage and Utility Plans and Profiles	Provide separate plan and profile for storm drainage systems, any box culvert construction or extensions. Show headwater depths and hydraulic grade-lines.
Drainage Cross Sections	For highway culvert and inlet replacements, and extensions. Show headwater depth, limits of spread, and hydraulic grade-line for all culverts >36". ------(Choose one or both as applicable)----- ----- For all closed system storm sewers (all sizes).
Detail Sheets	Retaining walls, traffic signals, streetlights, box culvert repairs including headwalls, and special inlets.
EFLHD Standard Details and Standard Drawings	Provide separate sheets for special details for any details not included in the standard library.
Roadway Cross Sections	Provide roadway cross-sections at 50' intervals.
Bridge Plans and Details	Show areas needing repair and types of repair for: (Insert specifics)

Table 29-2



Deliverables: The contract work and supporting documents will be created and delivered to the Government according to the following formats:

Electronic Transfer of Data: The Government requires the following to ensure compatibility with software used by the Government and to ensure the efficient and timely exchange of computer files between the Government and the Contractor.

All files submitted must be fully compatible with the software versions listed in Chapter 1 of this document without any conversion or editing by the Government. Any files requiring conversion and/or editing by the Government will not be accepted. All files shall be virus free. All files shall use the Government's file naming convention.

- 1. Computer Aided Design (CAD) Files:** All CAD files shall be provided in Microstation (*.DGN) compatible format and software versions as listed in Chapter 1 unless specifically exempted by the Government.
- 2. GEOPAK Interactive Highway Design Files:** The Government will provide the GEOPAK standard input files (*.GPK, *.INP, *.X, *.DDB) to the Contractor. These files include design standards, design criteria, slope selections, baseline name, profile names, contract plan sheet cells, guardrail information, etc. If the Contractor is required to modify the design criteria or any other files, the Government's Microstation level Library, color tables, line weights, symbology, etc., will be maintained. The Government will provide the Government's seed files, level library, color tables, line weights, symbology, font library, and cell files to the Contractor. When the design is completed, all project input/output files shall be provided to the Government in a format fully compatible with the software versions listed in Chapter 1.



The GEOPAK software has menu options to generate the following Government reports/files. The Contractor shall provide the Government the following reports/files in GEOPAK's current Government format:

Slope stakes
Red tops/Blue tops
Clearing
Seeding
Staking detail
Original cross section list
Design cross section list
Horizontal alignment
Profile grade
Earthwork volumes
HEC2 terrain ASCII file (input file for the HEC2 hydraulic analysis software)
WSPRO terrain ASCII file (input file for the WSPRO hydraulic analysis software)
Radial staking ASCII file (in order by station) which contains the x-y-z coordinates of all of the transit points and, for each terrain station, the x-y-z coordinates for the ROW lines, reference hubs, slope stakes, hinge points, shoulders, and centerline.

Table 29-3

3. **Location Survey Files:** The Contractor shall submit control point data in ASCII format with each record containing the point's identification (see PDDM, Chapter 5), north coordinate, east coordinate, and elevation. Digital terrain model high/low points and breakline points shall each have the same format as above.



4. **Photogrammetric Files:** The Government will provide the Contractor with the Government's Microstation seed files, level library, line weights, color table, symbology, font library, and cell files. Digital terrain model data shall be submitted in the most current 3-D Microstation software design files compatible with the software versions listed in Chapter 1. Contour and planimetric data shall be submitted in 2-D Microstation design files. Note: The Government will provide the Contractor with photogrammetric mapping, performed by the Government, in 3-D Microstation *.DTM files, 3-D mapping, and Microstation/GEOPAK *.TIN files.

5. **Word Processing, Spreadsheet, and Database Files:** For each Phase, all relevant files shall be provided in a format fully compatible, as appropriate, with the following:

Word Processing:	Microsoft Word 2003
Spreadsheets:	Microsoft Excel 2003
Databases:	Oracle, Microsoft Access 2003

6. **Engineer's Estimate Files:** The Contractor shall provide the Engineer's Estimate System (EES) in a format fully compatible for use as input to the Government's EES database. The Government will provide the Contractor with the current version of the EES program, including the pay item database and bid history. The EES is currently running on a Foxpro Database. Current versions of the EES pay items are available at <http://www.cflhd.gov/design/ee.prog/>.

These specifications will be updated as necessary to reflect changes in the Government software such as adding new software or updating to new versions of existing software. In such instances, the Contractor will be promptly notified.



Computer File Exchange Media: Electronic files shall be exchanged between the Government and the Contractor using the following media as appropriate for Windows Operating Systems:

1. **Compact Disc (CD):** Files on CD(s) should be actual size, not compressed.
2. **DVD:** Files on DVD should be actual size, not compressed.
3. **EMAIL:** Files 5 MB or smaller may be transferred via EMAIL. If compressed, the files should be self-extracting. Contact the COTR for access information.
4. Files may be placed on **EFLHD FTP** web site. Contact the COTR for access information.
5. Files may be submitted by **Portable Hard Drives, Flash Drives.** Contact the COTR for procedures.

Copies: The Contractor shall provide hard paper copies (plan size 11"X17") and electronic copies of the deliverables for each Phase of Work. For all deliverables, provide electronic copies in two electronic versions; an electronic version in the original electronic file format (i.e., Microstation (*.DGN), Microsoft Word (*.DOC), Microsoft Excel (*.XLS), etc.) and an electronic version in Adobe Acrobat (*.PDF) file format.