

**AUTHORIZED FEDERAL SUPPLY SERVICE
SCHEDULE 871:
PROFESSIONAL ENGINEERING SERVICES (PES)
PRICE LIST (Revision Through Mod PO 02)
Prices Shown Herein are Net (Discount Deducted)**

Scope of Contract

Special Item No. 871-1, Strategic Planning for Technology Programs/Activities
Special Item No. 871-2, Concept Development and Requirements Analysis
Special Item No. 871-3, System Design, Engineering, and Integration
Special Item No. 871-4, Test and Evaluation
Special Item No. 871-5, Integrated Logistics Support
Special Item No. 871-6, Acquisition and Life Cycle Management

Primary Engineering Disciplines – Aerospace

**Mechanical Engineering
Electrical Engineering**



**Swales & Associates, Inc.
5050 Powder Mill Road
Beltsville, Maryland 20705
Phone: 301-595-5500; Fax: 301-902-4114
Internet Address: www.swales.com**

Contract Number: GS-23F-0118J

Contract Period: August 31, 2004 – August 31, 2009 (since 9/20/1999 w/ 5-yr option)

Business Size: Small Business under SIC 8731/Aerospace exceptions

<p>General Services Administration Federal Supply Service</p> <p>Ordering information and terms and conditions in this Authorized FSS Professional Engineering Services Schedule Pricelist are also available by accessing the Federal Supply Service's Home Page via the Internet at http://www.fss.gsa.gov/</p>	 <p>Federal Supply Schedule Contract No. GS-23F-0118J</p>
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CUSTOMER INFORMATION

1. This contract covers Special Item Numbers 871-1 through 871-6
 - 871-1 Strategic Planning for Technology Programs / Activities
 - 871-2 Concept Development and Requirements Analysis
 - 871-3 System Design, Engineering, and Integration
 - 871-4 Test and Evaluation
 - 871-5 Integrated Logistics Support
 - 871-6 Acquisitions and Life Cycle Management

Disciplines: Electrical, Mechanical

Please see Table 2 for Labor Rates by category for each contract year. Descriptions of labor categories are provided in summary form in Table 3 (for non-manufacturing categories) and Table 4 (for manufacturing categories). More detailed text descriptions of the labor categories follow Tables 3 and 4.

Note: The same prices and labor categories apply for all SINs (871-1 through 871-6). Non-Manufacturing and Manufacturing Rates are listed. As shown in Table 2, annual escalation rate of 3.5% applies to this contract.

On-Site Discount:

In the event that customers utilize services that require placement of Swales employees at customer facilities on a dedicated basis, Swales is offering to discount the hourly labor prices included in the Schedule by 7.5%. This reduction is based on the customer providing all necessary facilities, equipment, software, furnishings, etc., to perform the task. Customer site assignment on a dedicated basis is typically observed as a period in excess of 9 (nine) months.

Handling Fee – Other Direct Costs:

All other direct costs are billed at ACTUAL direct cost plus G&A / handling fee of 12%.

2. Maximum Order Threshold for all SINs under this Schedule is \$750,000.
Note: The maximum order as specified is the suggested renegotiation point whereby agencies should seek additional concessions (in accordance with FAR 8.404).
3. Minimum Order: \$100.
4. Geographic Scope of Contract: Worldwide
5. Point(s) of production: Beltsville, Prince George's County, Maryland, unless otherwise noted
6. Prices shown herein are net (discount deducted)
7. Other Discounts: None (except as noted above for on-site assignments)
8. Prompt Payment Discount: None
9. Government purchase cards are accepted both below and above the micro-purchase threshold

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10. Contractor's Ordering Address: *Please send orders to:*
Swales & Associates, Inc.
Attention: J.M. Sims Haas, Sr. Contract Administrator
5050 Powder Mill Road
Beltsville, MD 20705-1913
Phone: 301-902-4495 Fax: 301-902-4114
Email: jmhaas@swales.com
11. Payment Address: *Please make payment to:*
Swales Accounts Receivable
5050 Powder Mill Road
Beltsville, MD 20705-1913
12. The following telephone number(s) can be used by ordering agencies to obtain technical and/or ordering assistance:

Arthur Chomas, Vice President / Director, Business Development: 301-902-4330
J.M. Sims Haas, Sr. Contract Administrator: 301-902-4495
Main Switchboard: 301-595-5500
13. Statistical Data for Government Ordering Office Completion of Standard Form 279:

Block 9: **G. Order / Modification Under Federal Schedule**
Block 16: Data Universal Numbering System (DUNS) Number: **03-251-6361**
Block 30: Type of Contractor – **Swales is a small business under the NAICS 541710 (SIC 8731) /1000 employee standard.**
Block 31: Woman-Owned Small Business – **No**
Block 36: Contractor's Taxpayer Identification Number (TIN): **52-111-5706**
CAGE Code: **8V543**
Contractor has registered with the Central Contractor Registration Database.

SPECIAL NOTICE TO AGENCIES

Small Business Participation

SBA strongly supports the participation of small business concerns in the Federal Supply Schedules Program. To enhance Small Business Participation, SBA policy allows agencies to include in their procurement base and goals the dollar value of orders expected to be placed against the Federal Supply Schedules and to report accomplishments against these goals.

For orders exceeding the micropurchase threshold, FAR 8.404 requires agencies to consider the catalogs / pricelists of at least three schedule contractors or consider reasonably available information by using the GSA *Advantage!*TM on-line shopping service (www.fss.gsa.gov). The catalogs / pricelists, GSA *Advantage!*TM, and the Federal Supply Service Home Page (www.fss.gsa.gov) contain information on a broad array of products and services offered by small business concerns.

This information should be used as a tool to assist ordering activities in meeting or exceeding established small business goals. It should also be used as a tool to assist in including small, small disadvantaged, and women-owned small businesses among those considered when selecting pricelists for a best value determination.

For orders exceeding the micropurchase threshold, customers are to give preference to small business concerns when two or more items at the same delivered price will satisfy their requirement.

Swales Aerospace Corporate Experience and Capabilities

Swales Aerospace has a **twenty-five year history** of providing exceptional services and products to our Government and commercial customers. During this time, Swales has become an **employee-owned company** and has grown to over 900 employees, establishing a reputation for integrity, excellence, and responsiveness. **The heart of our business is providing aerospace engineering services.** In the last five years, **Swales has become a producer of spaceflight qualified thermal control and structural products and an instrument / spacecraft system developer.** Recent major structural systems projects include a composite tower for a communications satellite application, the optical bench for the Hubble Space Telescope Wide Field Camera 3, and the largest embedded heat pipe radiator panel to be flown in space for the International Space Station. Swales Aerospace products range from devices such as constant conductance and variable conductance heat pipes, loop heat pipes and capillary pump loops, through integrated thermal / mechanical / structural solutions such as deployable embedded heat pipe radiators and low CTE optical benches.

Engineering Services:

Swales holds the primary engineering services contract for the NASA / Goddard Space Flight Center (GSFC) Mechanical Systems Center. In this capacity, Swales provides engineering services for instruments, free-flying satellites, and Space Shuttle / International Space Station payloads. Swales has supported virtually every major project at NASA/GSFC over the past 15+ years and has performed or supported concept definition, design, and studies and analyses across the whole project life cycle, both in specific disciplines and at the systems engineering levels. We utilize our state-of-the-art CAD/CAE capabilities and facilities to perform preliminary and detailed design and multidisciplinary analysis.

Spacecraft Hardware: Fabrication, Assembly, Integration, and Testing

Swales Beltsville facilities provide fabrication, assembly, integration, and test capabilities from the component to the spacecraft levels. We employ these to develop a wide range of mechanical, electromechanical, structural, opto-mechanical, electronics packaging, thermal, and integrated spaceflight qualified hardware and aerospace ground equipment. We also hold major prime contracts with the Jet Propulsion Laboratory (JPL), NASA/Langley Research Center (LaRC), the Naval Research Laboratory (NRL), the Air Force Research Laboratories, university space research programs, and large aerospace industry contractors.

Corporate Facilities

Our corporate headquarters in Beltsville, Maryland, includes 115,500 sq. ft. office/engineering design space, 89,500 sq. ft. of manufacturing space, and 16,000 sq. ft. of integration and test (I&T) space. In addition to SCI briefed employees, Swales-Beltsville has 1,000 sq. ft. of accredited SCIF space with CWAN connectivity. Our Pasadena, California, facilities include 32,000 sq. ft. of office/engineering design space and 5,000 sq. ft. of lab space. We have satellite offices in Texas, Virginia, and Florida. Our engineering design facilities include 150+ licensed Pro/E CAD workstations, and our complement of engineering design and analysis software includes an extensive suite of software for each of our major engineering disciplines.

Swales Aerospace Awards

Swales received the **George M. Low Award**, NASA's highest honor for quality products and services in 2000 in the Small Business-Products category. In 1997 and again in 2000, Swales received the **Goddard Contractor Excellence Award**. In 2001, we were awarded the **Boeing Exceptional Company Performance Award** for our two-phase thermal management solutions for the International Space Station. The company and our staff have received numerous awards from Federal and State Government organizations and large businesses. Our Cost Accounting System, Purchasing, and Property Control systems have been reviewed and approved by applicable Government agencies. Swales **quality management system is certified by the BVQi** to be compliant with the requirements of ISO 9001 and ANSI/ISO/ASQ Q9001. **Swales is a small business under the NAICS 541710/1000 employee standard.**

TABLE 1A, SWALES CORE COMPETENCIES AND TYPICAL PRODUCTS / SERVICES

CORE COMPETENCY	TYPICAL SWALES AEROSPACE PRODUCTS / SERVICES	APPLICABLE TO:					
		SIN 871-1	SIN 871-2	SIN 871-3	SIN 871-4	SIN 871-5	SIN 871-6
Program / Project Management	Project planning, budgeting, cost analysis, scheduling, configuration management, system safety, quality control, logistics planning, project reviews.	✓	✓	✓	✓	✓	✓
Mission Systems Engineering	Mission planning, operations procedures development/simulation, link studies, coordination with end-users, science ops planning.	✓	✓	✓	✓	✓	✓
Flight Systems Engineering	Conceptual design, feasibility studies, design reviews, margin/budget management, specification development/review, interface definition/control, Risk Management, and technology validation.	✓	✓	✓	✓	✓	✓
Multidisciplinary Analysis	Application of a comprehensive suite of modeling, design, simulation, and analysis tools, including Structural / Thermal / Optical (STOP) Analysis tools developed in-house.		✓	✓	✓		✓
Mechanical Structural	Design, modeling, development, fabrication, test, and alignment of precision structures and mechanical interfaces/enclosures. Spacecraft and Launch Vehicle accommodation studies. Mechanical, structural, and stress analysis. Design and fabrication of Mechanical Ground Support Equipment (MGSE).	✓	✓	✓	✓	✓	✓
Mechanisms	Design, modeling, development, fabrication, test, and integration of mechanisms, actuators, crew aids/tools, and control electronics.	✓	✓	✓	✓	✓	✓
Electrical Systems	Design, analysis, modeling, assembly, and test of instrument and spacecraft subsystems, including C&DH, TT&C, ACS, PSE, data storage, servo controllers, electronic thermostats, processing and memory systems, Electrical Ground Support Equipment (EGSE), and parts engineering.	✓	✓	✓	✓	✓	✓
Thermal Systems	Detailed thermal analysis at the board, box, instrument, and spacecraft levels, including temperature gradient prediction/control, electronic packaging analysis, and bulk temperature / transient response / aerodynamic heating predictions, and contamination control. Design, fabrication, and test of two-phase thermal control devices and integrated systems, such as heat pipes, loop heat pipes, capillary pumped loops, heat-pipe embedded radiators and equipment panels, and deployable radiators.	✓	✓	✓	✓	✓	✓

TABLE 1B, SWALES CORE COMPETENCIES AND TYPICAL PRODUCTS / SERVICES

CORE COMPETENCY	TYPICAL SWALES AEROSPACE PRODUCTS / SERVICES	APPLICABLE TO:					
		SIN 871-1	SIN 871-2	SIN 871-3	SIN 871-4	SIN 871-5	SIN 871-6
Cryogenic Devices / Systems	State-of-the-art design, analysis, and development of cryogenic thermal switches, thermal storage units, thermal transport (cryo loop heat pipe), bimetallic and high purity flexible conductive links, and isolation/support systems.	✓	✓	✓	✓	✓	✓
Contamination Control	Design, analysis, modeling, and insitu testing for particulate and molecular contamination at all levels of assembly. FTIR and Mass Spec for in-house analysis. Precision cleaning and bakeout facilities.	✓	✓	✓	✓	✓	
Materials	Design, analysis, and test of metal, ceramic, polymer, and composite materials. Failure prediction and analysis of environmental effects (thermal and chemical).	✓	✓	✓	✓		
Optical / RF	Ray trace, optics design, STOP analysis, Microwave receiver design/analysis, design/fabrication of optical benches and stray light baffles and doors.	✓	✓	✓	✓		✓
Guidance, Navigation and Control (GN&C)	Design, analysis, attitude determination and estimation, ACS simulations, multi-body dynamics analyses and simulations, including separation mechanism kinematics, hardware/software specifications and interfaces, GN&C algorithm development, technical monitoring, and test support.	✓	✓	✓	✓		✓
Integration and Test	In-house installation and integration planning and execution of mechanical, thermal, electrical, and optical components and systems. Test planning, procedure development, analysis support, and test direction at all levels of assembly.		✓	✓	✓	✓	
Mission Operations	Spacecraft flight operations, anomaly investigation and resolution, procedures development.	✓	✓		✓	✓	✓
Aerodynamics and Acoustics	Aerodynamic Analysis and Design, Aerothermodynamic Analysis, Computational Fluid Dynamics Support, Aeroacoustics Test and Analysis, Aeroacoustics Computational Support, Structural Acoustics, Wind Tunnel Models and operations, Computational Simulation, and Hypersonic Vehicle Analysis.	✓	✓	✓	✓	✓	

Table 2, Labor Rates by Category - Applicable to all Special Item Numbers (SINs)

Engineering Services - Swales Site Rates		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		Thru									
Labor Category	Prerequisites	08/31/05	08/31/06	08/31/07	08/31/08	08/31/09	08/31/10	08/31/11	08/31/12	08/31/13	08/31/14
PM Program Manager	BS+21 w/5mgt.	\$152.52	\$157.86	\$163.38	\$169.10	\$175.02	\$181.15	\$187.49	\$194.05	\$200.84	\$207.87
PM2 Corporate Manager	BS+20 w/10 mgt.	\$153.43	\$158.80	\$164.36	\$170.11	\$176.07	\$182.23	\$188.61	\$195.21	\$202.04	\$209.11
OE7-Engineering Consultant	BS+31	\$134.43	\$139.14	\$144.01	\$149.05	\$154.26	\$159.66	\$165.25	\$171.04	\$177.02	\$183.22
OE6- Sr. Principal Engineer	BS+21	\$119.51	\$123.69	\$128.02	\$132.50	\$137.14	\$141.94	\$146.91	\$152.05	\$157.37	\$162.88
OE5-Principal Engineer	BS+16	\$94.17	\$97.47	\$100.88	\$104.41	\$108.06	\$111.85	\$115.76	\$119.81	\$124.01	\$128.35
OE4- Senior Engineer	BS+11	\$87.09	\$90.14	\$93.29	\$96.56	\$99.94	\$103.44	\$107.06	\$110.80	\$114.68	\$118.70
OE3- Engineer	BS+6	\$71.58	\$74.08	\$76.67	\$79.36	\$82.13	\$85.01	\$87.98	\$91.06	\$94.25	\$97.55
OE2- Junior Engineer	BS+0	\$61.27	\$63.42	\$65.64	\$67.93	\$70.31	\$72.77	\$75.32	\$77.96	\$80.68	\$83.51
OE1- Associate Engineer	BS+0 or AS+2	\$53.42	\$55.29	\$57.23	\$59.23	\$61.30	\$63.45	\$65.67	\$67.97	\$70.34	\$72.81
SME-2 Sr. Subject Matter Expert	BS+21	\$133.44	\$138.11	\$142.94	\$147.95	\$153.13	\$158.48	\$164.03	\$169.77	\$175.71	\$181.87
SME-1 Subject Matter Expert	BS+16	\$89.18	\$92.30	\$95.53	\$98.88	\$102.34	\$105.92	\$109.62	\$113.46	\$117.43	\$121.54
O7-Proj. Consultant	BA+31	\$96.32	\$99.69	\$103.18	\$106.79	\$110.53	\$114.40	\$118.40	\$122.55	\$126.84	\$131.27
O6- Sr Principal Designer/Analyst	BA+21	\$85.61	\$88.61	\$91.71	\$94.92	\$98.24	\$101.68	\$105.24	\$108.92	\$112.73	\$116.68
O5-Principal Designer/Analyst	BA+16	\$77.15	\$79.85	\$82.65	\$85.54	\$88.54	\$91.63	\$94.84	\$98.16	\$101.60	\$105.15
O4- Senior Designer/Analyst	BA+11	\$64.38	\$66.63	\$68.97	\$71.38	\$73.88	\$76.46	\$79.14	\$81.91	\$84.78	\$87.74
O3- Designer/Analyst	BA+6	\$58.87	\$60.94	\$63.07	\$65.28	\$67.56	\$69.92	\$72.37	\$74.90	\$77.53	\$80.24
O2- Junior Designer/Analyst	BA+21	\$57.85	\$59.88	\$61.97	\$64.14	\$66.39	\$68.71	\$71.12	\$73.60	\$76.18	\$78.85
O1- Associate Designer/Analyst	BA+0 or AS+2	\$40.58	\$42.00	\$43.47	\$45.00	\$46.57	\$48.20	\$49.89	\$51.63	\$53.44	\$55.31
OA0-4 Sr. Technical Assistant	HS/GED+20	\$60.57	\$62.69	\$64.89	\$67.16	\$69.51	\$71.94	\$74.46	\$77.07	\$79.76	\$82.56
OA0-3 Technical Assistant	HS/GED+10	\$46.39	\$48.01	\$49.69	\$51.43	\$53.23	\$55.09	\$57.02	\$59.02	\$61.08	\$63.22
OA0-2 Jr. Technical Assistant	HS/GED+3	\$43.42	\$44.94	\$46.51	\$48.14	\$49.83	\$51.57	\$53.38	\$55.24	\$57.18	\$59.18
OA0-1 Associate Technical Assistant	HS/GED+0	\$33.56	\$34.73	\$35.95	\$37.20	\$38.51	\$39.85	\$41.25	\$42.69	\$44.19	\$45.73

Contract No. GS-23F-0118J (Mod PO 02)
Professional Engineering Services



Engineering Services - Customer Site Rates		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Labor Category	Prerequisites	Thru 08/31/05	Thru 08/31/06	Thru 08/31/07	Thru 08/31/08	Thru 08/31/09	Thru 08/31/10	Thru 08/31/11	Thru 08/31/12	Thru 08/31/13	Thru 08/31/14
PM Program Manager	BS+21 w/5mgt.	\$141.08	\$146.02	\$151.13	\$156.42	\$161.89	\$167.56	\$173.42	\$179.49	\$185.78	\$192.28
PM2 Corporate Manager	BS+20 w/10 mgt.	\$141.92	\$146.89	\$152.03	\$157.35	\$162.86	\$168.56	\$174.46	\$180.57	\$186.89	\$193.43
OE7-Engineering Consultant	BS+31	\$124.35	\$128.70	\$133.21	\$137.87	\$142.70	\$147.69	\$152.86	\$158.21	\$163.75	\$169.48
OE6- Sr. Principal Engineer	BS+21	\$110.55	\$114.42	\$118.42	\$122.57	\$126.86	\$131.30	\$135.89	\$140.65	\$145.57	\$150.67
OE5-Principal Engineer	BS+16	\$87.11	\$90.16	\$93.31	\$96.58	\$99.96	\$103.46	\$107.08	\$110.83	\$114.71	\$118.72
OE4- Senior Engineer	BS+11	\$80.56	\$83.38	\$86.30	\$89.32	\$92.44	\$95.68	\$99.03	\$102.49	\$106.08	\$109.79
OE3- Engineer	BS+6	\$66.21	\$68.52	\$70.92	\$73.40	\$75.97	\$78.63	\$81.39	\$84.23	\$87.18	\$90.23
OE2- Junior Engineer	BS+0	\$56.68	\$58.66	\$60.71	\$62.84	\$65.04	\$67.31	\$69.67	\$72.11	\$74.63	\$77.25
OE1- Associate Engineer	BS+0 or AS+2	\$49.41	\$51.14	\$52.93	\$54.79	\$56.70	\$58.69	\$60.74	\$62.87	\$65.07	\$67.35
SME-2 Sr. Subject Matter Expert	BS+21	\$123.43	\$127.75	\$132.22	\$136.85	\$141.64	\$146.60	\$151.73	\$157.04	\$162.54	\$168.23
SME-1 Subject Matter Expert	BS+16	\$82.49	\$85.38	\$88.37	\$91.46	\$94.66	\$97.97	\$101.40	\$104.95	\$108.63	\$112.43
O7-Proj. Consultant	BA+31	\$89.10	\$92.21	\$95.44	\$98.78	\$102.24	\$105.82	\$109.52	\$113.35	\$117.32	\$121.43
O6- Sr Principal Designer/Analyst	BA+21	\$79.19	\$81.96	\$84.83	\$87.80	\$90.87	\$94.05	\$97.34	\$100.75	\$104.28	\$107.93
O5-Principal Designer/Analyst	BA+16	\$71.37	\$73.87	\$76.45	\$79.13	\$81.90	\$84.76	\$87.73	\$90.80	\$93.98	\$97.27
O4- Senior Designer/Analyst	BA+11	\$59.55	\$61.64	\$63.79	\$66.03	\$68.34	\$70.73	\$73.20	\$75.77	\$78.42	\$81.16
O3- Designer/Analyst	BA+6	\$54.46	\$56.36	\$58.34	\$60.38	\$62.49	\$64.68	\$66.94	\$69.29	\$71.71	\$74.22
O2- Junior Designer/Analyst	BA+21	\$53.51	\$55.39	\$57.33	\$59.33	\$61.41	\$63.56	\$65.78	\$68.08	\$70.47	\$72.93
O1- Associate Designer/Analyst	BA+0 or AS+2	\$37.54	\$38.85	\$40.21	\$41.62	\$43.08	\$44.59	\$46.15	\$47.76	\$49.43	\$51.16
OA0-4 Sr. Technical Assistant	HS/GED+20	\$56.03	\$57.99	\$60.02	\$62.12	\$64.30	\$66.55	\$68.88	\$71.29	\$73.78	\$76.36
OA0-3 Technical Assistant	HS/GED+10	\$42.91	\$44.41	\$45.96	\$47.57	\$49.24	\$50.96	\$52.74	\$54.59	\$56.50	\$58.48
OA0-2 Jr. Technical Assistant	HS/GED+3	\$40.16	\$41.57	\$43.02	\$44.53	\$46.09	\$47.70	\$49.37	\$51.10	\$52.89	\$54.74
OA0-1 Associate Technical Assistant	HS/GED+0	\$31.04	\$32.13	\$33.25	\$34.41	\$35.62	\$36.87	\$38.16	\$39.49	\$40.87	\$42.30

Contract No. GS-23F-0118J (Mod PO 02)
Professional Engineering Services



Production (AP) Rates		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		Thru									
Labor Category	Prerequisites	08/31/05	08/31/06	08/31/07	08/31/08	08/31/09	08/31/10	08/31/11	08/31/12	08/31/13	08/31/14
Administrative	HS/GED+16	\$238.34	\$246.69	\$255.32	\$264.26	\$273.51	\$283.08	\$292.99	\$303.24	\$313.85	\$324.84
Checker	BS+11	\$92.20	\$95.43	\$98.77	\$102.22	\$105.80	\$109.51	\$113.34	\$117.31	\$121.41	\$125.66
Config Management 3	HS/GED+6	\$44.88	\$46.45	\$48.08	\$49.76	\$51.50	\$53.30	\$55.17	\$57.10	\$59.10	\$61.17
Config Management 4	HS/GED+11	\$52.63	\$54.47	\$56.38	\$58.35	\$60.39	\$62.51	\$64.69	\$66.96	\$69.30	\$71.73
Corp Tech Mgr.	BS+0	\$332.48	\$344.12	\$356.17	\$368.63	\$381.53	\$394.89	\$408.71	\$423.01	\$437.82	\$453.14
Corporate Technical Manager	BS+0	\$180.51	\$186.83	\$193.37	\$200.14	\$207.14	\$214.39	\$221.90	\$229.66	\$237.70	\$246.02
Design Eng 5	BS+16	\$102.53	\$106.12	\$109.84	\$113.68	\$117.66	\$121.78	\$126.04	\$130.45	\$135.02	\$139.74
Designer 3	AS+6	\$67.88	\$70.26	\$72.72	\$75.26	\$77.90	\$80.62	\$83.45	\$86.37	\$89.39	\$92.52
Designer 4	AS+11	\$72.99	\$75.55	\$78.19	\$80.93	\$83.76	\$86.69	\$89.73	\$92.87	\$96.12	\$99.48
Designer 5	AS+16	\$76.87	\$79.56	\$82.35	\$85.23	\$88.21	\$91.30	\$94.50	\$97.80	\$101.23	\$104.77
Designer 6	AS+21	\$75.58	\$78.22	\$80.96	\$83.80	\$86.73	\$89.76	\$92.91	\$96.16	\$99.52	\$103.01
KOMO Operator	HS/GED+16	\$97.77	\$101.19	\$104.73	\$108.40	\$112.19	\$116.12	\$120.18	\$124.39	\$128.74	\$133.25
Machinist CNC 5	HS/GED+16	\$97.23	\$100.63	\$104.15	\$107.80	\$111.57	\$115.48	\$119.52	\$123.70	\$128.03	\$132.51
Machinist CNC 6	HS/GED+21	\$104.96	\$108.64	\$112.44	\$116.38	\$120.45	\$124.66	\$129.03	\$133.54	\$138.22	\$143.06
Machinist Manual 5	HS/GED+16	\$97.23	\$100.63	\$104.15	\$107.80	\$111.57	\$115.48	\$119.52	\$123.70	\$128.03	\$132.51
Machinist Programmer	HS/GED+21	\$105.80	\$109.50	\$113.33	\$117.30	\$121.41	\$125.66	\$130.05	\$134.61	\$139.32	\$144.19
Oven/Autoclave Operator	HS/GED+11	\$103.29	\$106.90	\$110.64	\$114.51	\$118.52	\$122.67	\$126.96	\$131.41	\$136.01	\$140.77
Prod Cntl 3	HS/GED+6	\$75.88	\$78.54	\$81.29	\$84.13	\$87.08	\$90.12	\$93.28	\$96.54	\$99.92	\$103.42
Prod Cntl 5	HS/GED+16	\$85.63	\$88.63	\$91.73	\$94.94	\$98.26	\$101.70	\$105.26	\$108.95	\$112.76	\$116.71
Product Assurance 5 AP	HS/GED+16	\$106.79	\$110.53	\$114.40	\$118.40	\$122.54	\$126.83	\$131.27	\$135.87	\$140.62	\$145.54
Product Assurance 6 ENG	HS/GED+21	\$144.60	\$149.66	\$154.90	\$160.32	\$165.93	\$171.74	\$177.75	\$183.97	\$190.41	\$197.07
Proj/Sys Eng 2	BS+3	\$109.22	\$113.04	\$117.00	\$121.09	\$125.33	\$129.72	\$134.26	\$138.96	\$143.82	\$148.85
Proj/Sys Eng 3	BS+6	\$151.13	\$156.42	\$161.89	\$167.56	\$173.42	\$179.49	\$185.77	\$192.28	\$199.01	\$205.97
Proj/Sys Eng 4 AP	BS+11	\$173.92	\$180.01	\$186.31	\$192.83	\$199.58	\$206.57	\$213.79	\$221.28	\$229.02	\$237.04
Proj/Sys Eng 5 AP	BS+16	\$217.38	\$224.99	\$232.87	\$241.02	\$249.45	\$258.18	\$267.22	\$276.57	\$286.25	\$296.27
Proj/Sys Eng 6 AP	BS+21	\$234.49	\$242.69	\$251.19	\$259.98	\$269.08	\$278.50	\$288.24	\$298.33	\$308.77	\$319.58
Proj/Sys Eng 7 AP	BS+31	\$249.53	\$258.27	\$267.31	\$276.66	\$286.34	\$296.37	\$306.74	\$317.48	\$328.59	\$340.09
QA Inspector 3 AP	HS/GED+6	\$80.89	\$83.72	\$86.65	\$89.68	\$92.82	\$96.07	\$99.43	\$102.91	\$106.51	\$110.24
QA Inspector 4 AP	HS/GED+11	\$103.56	\$107.18	\$110.93	\$114.82	\$118.83	\$122.99	\$127.30	\$131.75	\$136.36	\$141.14
QA Inspector 5 AP	HS/GED+16	\$91.48	\$94.68	\$98.00	\$101.43	\$104.98	\$108.65	\$112.45	\$116.39	\$120.46	\$124.68
QA Inspector 5 ENG	HS/GED+16	\$48.70	\$50.40	\$52.17	\$53.99	\$55.88	\$57.84	\$59.86	\$61.96	\$64.12	\$66.37
Structural Eng 5	BS+16	\$105.26	\$108.94	\$112.75	\$116.70	\$120.78	\$125.01	\$129.39	\$133.92	\$138.60	\$143.45
Tech Assy/Integ Tech 3	HS/GED+6	\$97.26	\$100.66	\$104.19	\$107.83	\$111.61	\$115.51	\$119.56	\$123.74	\$128.07	\$132.55

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Tech Assy/Integ Tech 4	HS/GED+11	\$104.35	\$108.00	\$111.78	\$115.69	\$119.74	\$123.93	\$128.27	\$132.76	\$137.41	\$142.22
Tech Assy/Integ Tech 5	HS/GED+16	\$99.99	\$103.49	\$107.11	\$110.86	\$114.74	\$118.76	\$122.91	\$127.22	\$131.67	\$136.28
Tech HP-LHP 3	HS/GED+6	\$73.97	\$76.56	\$79.24	\$82.02	\$84.89	\$87.86	\$90.93	\$94.12	\$97.41	\$100.82
Tech HP-LHP 4	HS/GED+11	\$72.72	\$75.27	\$77.90	\$80.63	\$83.45	\$86.37	\$89.39	\$92.52	\$95.76	\$99.11
Tech HP-LHP 5	HS/GED+16	\$79.88	\$82.67	\$85.56	\$88.56	\$91.66	\$94.87	\$98.19	\$101.62	\$105.18	\$108.86
Tech Layup/Consol 3	HS/GED+6	\$86.18	\$89.20	\$92.32	\$95.55	\$98.90	\$102.36	\$105.94	\$109.65	\$113.49	\$117.46
Tech Surface Finish 4	HS/GED+11	\$72.72	\$75.27	\$77.90	\$80.63	\$83.45	\$86.37	\$89.39	\$92.52	\$95.76	\$99.11
Tech Surface Finish 5	HS/GED+16	\$90.85	\$94.03	\$97.32	\$100.72	\$104.25	\$107.90	\$111.67	\$115.58	\$119.63	\$123.81
Tech Test Lab	HS/GED+21	\$103.29	\$106.90	\$110.64	\$114.51	\$118.52	\$122.67	\$126.96	\$131.41	\$136.01	\$140.77
Welder 5	HS/GED+16	\$79.88	\$82.67	\$85.56	\$88.56	\$91.66	\$94.87	\$98.19	\$101.62	\$105.18	\$108.86

Engineering Services Labor Category Descriptions

Engineering services are performed by degreed engineers and other professionals (designer / analysts), supported by assistants / operators, with categories as shown in Table 3. Non-manufacturing engineering services are performed either at Swales facilities or at customer facilities. As such, infrastructure support for these categories generally includes basic office space, furnishings, and equipment. Desktop computers, engineering workstations, and related general purpose and engineering software are provided and charged separately at a fixed hourly rate per hour of actual computer use. Incidental use of some laboratory facilities is also included at no additional charge.

TABLE 3, NON-MANUFACTURING LABOR CATEGORY SUMMARY

Engineering and Technical Services (non-manufacturing)			
	Labor Category Title	Minimum Quals Education / Years Relative Experience	Engineering and Technical Disciplines
PM	Program Manager	BS+21 w/ 5 mgmt	Program / Project Management Aerospace Systems Engineering Structural / Stress Engineering Mechanical Engineering Electrical Engineering Electro-Mechanical / Mechanisms Engineering Guidance, Navigation and Control
PM-2	Corporate Manager	BS +20 w/10 mgmt	
OE-7	Engineering Consultant	BS+31	Thermal Engineering Optical / RF Engineering and Physics
OE-6	Senior Principal Engineer	BS+21	
OE-5	Principal Engineer	BS+16	Contamination Control
OE-4	Senior Engineer	BS+11	Performance / Product Assurance
OE-3	Engineer	BS+6	Flight Systems Safety
OE-2	Junior Engineer	BS+2	Materials and EEE Parts Engineering
OE-1	Associate Engineer	BS+0 or AS+2	Integration and Test Engineering Computer Systems / Science
SME-2	Senior Subject Matter Expert	BS+21	
SME-1	Subject Matter Expert	BS+16	
O-7	Project Consultant	BA*+31	Electrical Design (CAD) Mechanical Design (CAD/CAM) Computer Operations / Modeling Cost Estimation / Analysis / Budgeting Scheduling Technical Writing
O-6	Senior Principal Designer / Analyst	BA*+21	Mission Operations / Flight Operations
O-5	Principal Designer / Analyst	BA*+16	Configuration and Data Management
O-4	Senior Designer / Analyst	BA*+11	Technical Graphics / Animations
O-3	Designer / Analyst	BA*+6	Project Management / Support

O -2	Junior Designer / Analyst	BA*+2	Purchasing
O -1	Associate Designer / Analyst	BA*+0 or AA+2	Contract Management / Administration
OA0-4	Senior Admin / Tech Asst / Operator	HS/GED+20	Electrical Tech Assistant Mechanical Tech Assistant Thermal Tech Assistant Computer Operator
OA0-3	Admin / Tech Asst / Operator	HS/GED+10	Computer / MIS Support
OA0-2	Junior Admin / Tech Asst / Operator	HS/GED+3	Technical Publications / Graphics
OA0-1	Assoc Admin / Tech Asst / Operator	HS/GED+0	Project Support
* Non-technical baccalaureate degree; additional years of experience plus formal and on-the-job training in a related field (e.g., CAD software, aerospace scheduling, computer systems) can be substituted for a baccalaureate degree for designer / analysts.			

Engineering Services Labor Categories (Non-manufacturing)

Engineers at Swales all hold technical degrees from accredited universities and have demonstrated experience in related applications of their specific field. Swales engineers represent nearly every aerospace discipline, as well as spacecraft, launch vehicle, and instrument flight systems and mission/ground systems engineering specialties.

Program Management

Program Manager

Commercial Job Title	Program Manager (PM)
Minimum / General Experience	Twenty-one (21) years of professional experience, at least five (5) of which must have been spent in managing large or multi-task projects in discipline and/or systems engineering or in managing manufacturing, integration and/or test activities.
Functional Responsibility	Plans and manages technical, cost, schedule, and programmatic performance of multidisciplined, multi-task projects. Functions as primary point of contact for the customer and liaison between technical, facilities, finance, contractual, and corporate management organizations. Ensures that projects are appropriately staffed with properly trained personnel, coordinates non-personnel resource requirements, and ensures contractual compliance and best value performance.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Corporate Manager

Commercial Job Title	Corporate Manager (PM-2)
Minimum / General Experience	Twenty (20) or more years of professional experience in discipline and/or systems engineering, at least ten (10) of which must have been spent in managing large or multi-task projects on a corporate level, in discipline and/or systems engineering or in managing manufacturing, integration and/or test activities.
Functional Responsibility	On a corporate level plans and manages technical, cost, schedule and programmatic performance of multi-disciplined, multi-task projects. Functions as

	primary point of contact for the customer and liaison between technical, facilities, finance, contractual and corporate management organizations. Ensures that projects are appropriately staffed with properly trained personnel, coordinates non-personnel resource requirements and ensures contractual compliance and best value performance.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineers

Engineer – Level 7

Commercial Job Title	Engineering Consultant (OE-7)
Minimum / General Experience	Thirty-one (31) years of professional experience in discipline and/or systems engineering. Technical expert from a systems perspective or in a specific engineering discipline (such as mechanical engineering, electrical engineering, etc.) performing design, analysis, development, or test/V&V activities.
Functional Responsibility	Functions as technical consultant, project/task technical manager for complex efforts, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineer – Level 6

Commercial Job Title	Sr. Principal Engineer (OE-6)
Minimum / General Experience	Twenty-one (21) years of professional experience in discipline and/or systems engineering. Technical expert from a systems perspective or in a specific engineering discipline (such as mechanical engineering, electrical engineering, etc.) performing design, analysis, development, or test/V&V activities.
Functional Responsibility	Functions as technical consultant, task/group technical manager, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineer – Level 5

Commercial Job Title	Principal Engineer (OE-5)
Minimum / General Experience	Sixteen (16) years of professional experience in discipline and/or systems engineering. Technical expert from a systems perspective or in a specific engineering discipline (such as mechanical engineering, electrical engineering, etc.) performing design, analysis, development, or test/V&V activities.
Functional Responsibility	Functions as technical consultant, task/group technical manager, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineer – Level 4

Commercial Job Title	Senior Engineer (OE-4)
Minimum / General Experience	Eleven (11) years of professional experience in discipline and/or systems engineering. Technically proficient, from a systems perspective or in a specific engineering discipline (such as mechanical engineering, electrical engineering, etc.), to perform design, analysis, development, or test/V&V activities.
Functional Responsibility	Functions in a research, design, analysis, and technical review or study role, either independently or as a senior team member. May function as task or group lead.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineer – Level 3

Commercial Job Title	Engineer (OE-3)
Minimum / General Experience	Six (6) years of professional experience in discipline and/or systems engineering. Technically proficient in a specific engineering discipline (such as mechanical engineering, electrical engineering, etc.) performing design, analysis, development, or test/V&V activities. May perform systems engineering/analysis under limited guidance.
Functional Responsibility	Functions in a research, design, analysis, and technical review or study role, either independently or as a team member.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineer – Level 2

Commercial Job Title	Junior Engineer (OE-2)
Minimum / General Experience	Two (2) years of professional experience in discipline engineering. Requires knowledge and demonstrated competence in a particular engineering discipline (such as mechanical engineering, electrical engineering, etc.).
Functional Responsibility	Supports senior engineers/analysts in a specific discipline performing design, analysis, development, or test activities.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Engineer – Level 1

Commercial Job Title	Associate Engineer (OE-1)
Minimum / General Experience	Entry-level position; zero (0) years of professional experience required. Requires knowledge in a particular engineering discipline (such as mechanical engineering, electrical engineering, etc.).
Functional Responsibility	Working under close supervision, supports senior engineers/analysts in a specific discipline performing design, analysis, development, or test activities.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university (or Associate of Science degree plus 2 years directly related experience).

Subject Matter Experts

Subject Matter Expert – Level 2

Commercial Job Title	Sr. Subject Matter Expert (SME-2)
Minimum / General Experience	A nationally recognized technical expert from a systems perspective or in a specific engineering discipline such as mechanical engineering, electrical engineering, etc. Twenty-one (21) years of professional experience in discipline and/or systems engineering or holds an active Top Secret Clearance or equivalent security clearance.
Functional Responsibility	Functions as technical consultant, project/task technical manager for complex efforts, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Subject Matter Expert – Level 1

Commercial Job Title	Subject Matter Expert (SME-1)
Minimum / General Experience	A nationally recognized technical expert from a systems perspective or in a specific engineering discipline such as mechanical engineering, electrical engineering, etc. Sixteen (16) years of professional experience in discipline and/or systems engineering or holds an active Top Secret Clearance or equivalent security clearance.
Functional	Functions as project/task technical manager, independent reviewer, and/or in

Responsibility	an independent research, design, analysis, and technical review or study role.
Minimum Education	Bachelor of Science in Engineering, Computer Science, Mathematics, Physics, or Technology from an accredited university.

Designer / Analysts

Designer / Analysts assist the Engineers and Program / Project managers in the performance of their engineering services. Designer / Analysts are professionals who generally hold a non-technical baccalaureate degree; however, additional years of experience plus formal and on-the-job training in a related field (e.g., CAD software, aerospace scheduling, life-cycle cost analysis, computer systems) can be substituted for a baccalaureate degree in those situations where the individual has appropriately demonstrated technical competence.

Designer / Analyst – Level 7

Commercial Job Title	Project Consultant (O-7)
Minimum / General Experience	Thirty-one (31) years of related professional experience in engineering design, analysis, integration and test, project support, or cost analysis.
Functional Responsibility	Functions as technical consultant, project/task technical manager for complex efforts, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Non-technical baccalaureate degree* from an accredited university.

Designer / Analyst – Level 6

Commercial Job Title	Sr. Principal Designer / Analyst (O-6)
Minimum / General Experience	Twenty-one (21) years of related professional experience in engineering design, analysis, integration and test, project support, or cost analysis.
Functional Responsibility	Functions as technical consultant, task/group technical manager, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Non-technical baccalaureate degree* from an accredited university.

Designer / Analyst – Level 5

Commercial Job Title	Principal Designer / Analyst (O-5)
Minimum / General Experience	Sixteen (16) years of related professional experience in engineering design, analysis, integration and test, project support, or cost analysis.
Functional Responsibility	Functions as technical consultant, task/group technical manager, and/or in an independent research, design, analysis, and technical review or study role.
Minimum Education	Non-technical baccalaureate degree* from an accredited university.

Designer / Analyst – Level 4

Commercial Job Title	Senior Designer / Analyst (O-4)
Minimum / General Experience	Eleven (11) years of related professional experience in engineering design, analysis, integration and test, project support, or cost analysis.
Functional Responsibility	Functions in a research, design, analysis, and technical review or study role, either independently or as a senior team member. May function as task or group lead.
Minimum Education	Non-technical baccalaureate degree* from an accredited university.

Designer / Analyst – Level 3

Commercial Job Title	Designer / Analyst (O-3)
Minimum / General Experience	Six (6) years of related professional experience in engineering design, analysis, integration and test, project support, or cost analysis.
Functional Responsibility	Functions in a research, design, analysis, and technical review or study role, either independently or as a team member.
Minimum Education	Non-technical baccalaureate degree* from an accredited university.

Designer / Analyst – Level 2

Commercial Job Title	Junior Designer / Analyst (O-2)
Minimum / General Experience	Two (2) years of related professional experience in engineering design,

Experience	analysis, integration and test, project support, or cost analysis.
Functional Responsibility	Supports senior engineers/analysts performing design, analysis, development, or test activities.
Minimum Education	Non-technical baccalaureate degree* from an accredited university.

Designer / Analyst – Level 1

Commercial Job Title	Associate Designer / Analyst (O-1)
Minimum / General Experience	Entry-level position; zero (0) years of professional experience required. Requires knowledge in a particular engineering/project support related field (e.g., CAD design software, cost analysis, project scheduling software, etc.).
Functional Responsibility	Working under close supervision, supports senior engineers/analysts performing design, analysis, development, or test activities.
Minimum Education	Non-technical baccalaureate degree* from an accredited university

* *Non-technical baccalaureate degree; additional years of experience plus formal and on-the-job training in a related field (e.g., CAD software, aerospace scheduling, computer systems) can be substituted for a baccalaureate degree for designer / analysts.*

Administrative / Technical Assistants and Operators

Administrative assistants, technical assistants, and operators are individuals without degrees who provide incidental support on engineering projects and tasks. Support activities are performed in office or lab settings at Swales facilities or at the customer site. Such engineering and project support may include technical publications and graphics support, data entry, purchasing support, administrative assistance or computer operations. It may also include technical assistance to an engineer performing design, analysis, modeling / simulations, limited assembly, or test activities. (Note: This category does not include non-exempt technicians and equipment operators working in a manufacturing or flight-quality integration and test environment.)

Administrative / Technical Assistant / Operator – Level 4

Commercial Job Title	Senior Admin / Tech Assistant / Operator (OAO-4)
Minimum / General Experience	Twenty (20) years of related experience in technical publications, purchasing, administrative assistance, drafting/CAD, test, computer operations, or project support. Formal training and certification can substitute for up to two years of related experience.
Functional Responsibility	Functions in a project support, design support, and test or operations role, either independently or as a senior team member. May function as group lead.
Minimum Education	High school diploma or GED certificate.

Administrative / Technical Assistant / Operator – Level 3

Commercial Job Title	Admin / Tech Assistant / Operator (OAO-3)
Minimum / General Experience	Ten (10) years of related experience in technical publications, purchasing, administrative assistance, drafting/CAD, test, computer operations, or project support. Formal training and certification can substitute for up to two years of related experience.
Functional Responsibility	Functions in a project support, design, and test or operations role, either independently or as a senior team member. May function as group lead.
Minimum Education	High school diploma or GED certificate.

Administrative / Technical Assistant / Operator – Level 2

Commercial Job Title	Junior Admin / Tech Assistant / Operator (OAO-2)
Minimum / General Experience	Three (3) years of related experience in technical publications, purchasing, administrative assistance, drafting/CAD, test, computer operations, or project support. Formal training and certification can substitute for up to two years of related experience.
Functional Responsibility	Functions in a project support, design, and test or operations role, either in a quasi-independent role with limited supervision, or as a team member.
Minimum Education	High school diploma or GED certificate.

Administrative / Technical Assistant / Operator – Level 1

Commercial Job Title	Associate Admin / Tech Assistant / Operator (OAO-1)
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Minimum / General Experience	Entry-level position; zero (0) years of experience required.
Functional Responsibility	Working under close supervision, functions in a project support, design, test or operations role.
Minimum Education	High school diploma or GED certificate.

Manufacturing Engineering Services Labor Category Descriptions

Manufacturing Engineering services are managed by degreed engineers and master technicians and performed by master technicians and technician / operators with categories as shown in Table 4. Manufacturing engineering services are performed at Swales facilities in Beltsville, Maryland. Infrastructure support includes a range of facilities, equipment, and services directly related to manufacturing aerospace products and/or for performing spacecraft integration and test at the satellite, spacecraft bus, system, and subsystem levels. Desktop computers and engineering workstations and related general purpose and specialized engineering software are provided and charged at a fixed hourly rate per hour of actual use. Special facilities (e.g., I&T Cleanrooms, thermal vacuum chambers) and equipment charges apply and are charged as Other Direct Costs (ODCs).

TABLE 4, MANUFACTURING LABOR CATEGORY SUMMARY
Manufacturing Engineering Services

PRODUCTION ENGINEERING AND TECHNICAL SERVICES	
LABOR CATEGORY TITLE	Education Level (Minimum requirement provided) and Years of Experience
Administrative	HS/GED+16
Checker	BS+11
Config Management 3	HS/GED+6
Config Management 4	HS/GED+11
Corp Tech Mgr.	BS+0
Corporate Technical Manager	BS+0
Design Eng 5	BS+16
Designer 3	AS+6
Designer 4	AS+11
Designer 5	AS+16
Designer 6	AS+21
KOMO Operator	HS/GED+16
Machinist CNC 5	HS/GED+16
Machinist CNC 6	HS/GED+21
Machinist Manual 5	HS/GED+16
Machinist Programmer	HS/GED+21
Oven/Autoclave Operator	HS/GED+11
Prod Cntl 3	HS/GED+6
Prod Cntl 5	HS/GED+16
Product Assurance 5 AP	HS/GED+16
Product Assurance 6 ENG	HS/GED+21
Proj/Sys Eng 2	BS+3
Proj/Sys Eng 3	BS+6
Proj/Sys Eng 4 AP	BS+11
Proj/Sys Eng 5 AP	BS+16
Proj/Sys Eng 6 AP	BS+21
Proj/Sys Eng 7 AP	BS+31
QA Inspector 3 AP	HS/GED+6

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QA Inspector 4 AP	HS/GED+11
QA Inspector 5 AP	HS/GED+16
QA Inspector 5 ENG	HS/GED+16
Structural Eng 5	BS+16
Tech Assy/Integ Tech 3	HS/GED+6
Tech Assy/Integ Tech 4	HS/GED+11
Tech Assy/Integ Tech 5	HS/GED+16
Tech HP-LHP 3	HS/GED+6
Tech HP-LHP 4	HS/GED+11
Tech HP-LHP 5	HS/GED+16
Tech Layup/Consol 3	HS/GED+6
Tech Surface Finish 4	HS/GED+11
Tech Surface Finish 5	HS/GED+16
Tech Test Lab	HS/GED+21
Welder 5	HS/GED+16

Ordering Procedures for Services

The following is extracted from GSA/FSS RFP No. FCXB-B2-990001-N: Professional Engineering Services.

Procedures for services priced on GSA schedules at hourly rates

FAR 8.402 contemplates that GSA may occasionally find it necessary to establish special ordering procedures for individual Federal Supply Schedules or for some Special Item Numbers (SINs) within a Schedule. GSA has established special ordering procedures for services that are priced on Schedule at hourly rates. These special ordering procedures take precedence over the procedures in FAR 8.404.

The GSA has determined that the rates for services contained in the contractor's price list applicable to this schedule are fair and reasonable. However, the ordering office using this contract is responsible for considering the level of effort and mix of labor proposed to perform specific task being ordered and for making a determination that the total firm-fixed price or ceiling price is fair and reasonable.

When ordering services, ordering offices shall –

I. Prepare a Request for Quotes:

- A. A performance-based statement of work that outlines, at a minimum, the work to be performed, location of work, period of performance, deliverable schedule, applicable standards, acceptance criteria, and any special requirements (i.e., security clearances, travel, special knowledge, etc.) should be prepared.
- B. A request for quotes should be prepared which includes the performance-based statement of work and requests the contractors to submit either a firm-fixed price or a ceiling price to provide the services outlined in the statement of work. A firm-fixed price order shall be requested, unless the ordering office makes a determination that it is not possible at the time of placing the order to estimate accurately the extent or duration of the work or to anticipate cost with any reasonable degree of confidence. When such a determination is made, a labor hour or time-and-materials quote may be requested. The firm-fixed price shall be based on the hourly rates in the schedule contract and shall consider the mix of labor categories and level of effort required to perform the services described in the statement of work. The firm-fixed price of the order should also include any travel costs or other incidental costs related to performance of the services ordered, unless the order provides for reimbursement of travel costs at the rates provided in the Federal Travel or Joint Travel Regulations. A ceiling price must be established for labor-hour and time-and-materials orders.
- C. The request for quotes may request the contractors, if necessary or appropriate, to submit a project plan for performing the task and information on the contractor's experience and/or past performance performing similar tasks.
- D. The request for quotes shall notify the contractors what basis will be used for selecting the contractor to receive the order. The notice shall include the basis for determining whether the contractors are technically qualified and provide an explanation regarding the intended use of any experience and/or past performance information in determining technical acceptability of responses.

II. Transmit the Request for Quotes to Contractors:

- A. Based upon an initial evaluation of catalogs and price lists, the ordering office should identify the contractors that appear to offer the best value (considering the scope of services offered, hourly rates and other factors such as contractors' locations, as appropriate).
- B. The request for quotes should be provided to three (3) contractors if the proposed order is estimated to exceed the micro-purchase threshold, but not exceed the maximum order threshold. For proposed orders exceeding the maximum order threshold, the request for quotes should be provided to additional contractors that offer services that will meet the agency's needs. Ordering offices should strive to minimize the contractors' costs associated with responding to requests for quotes for specific orders. Requests should be tailored to the minimum level necessary for adequate evaluation and selection for order placement. Oral presentations should be considered, when possible.

III. Evaluate quotes and select the contractor to receive the order:

After responses have been evaluated against the factors identified in the request for quotes, the order should be placed with the schedule contractor that represents the best value and results in the lowest overall cost alternative (considering price, special qualifications, administrative costs, etc.) to meet the Government's needs.

The establishment of Federal Supply Schedule Blanket Purchase Agreements (BPAs) for recurring services is permitted when the procedures outlined herein are followed. All BPAs for services must define the services that may be ordered under the BPA, along with delivery or performance time frames, billing procedures, etc. The potential volume of orders under BPAs, regardless of the size of individual orders, may offer the ordering office the opportunity to secure volume discounts. When establishing BPAs ordering offices shall -

Inform contractors in the request for quotes (based on the agency's requirement) if a single BPA or multiple BPAs will be established, and indicate the basis that will be used for selecting the contractors to be awarded the BPAs.

- A. **SINGLE BPA:** Generally, a single BPA should be established when the ordering office can define the tasks to be ordered under the BPA and establish a firm-fixed price or ceiling price for individual tasks or services to be ordered. When this occurs, authorized users may place the order directly under the established BPA when the need for service arises. The schedule contractor that represents the best value and results in the lowest overall cost alternative to meet the agency's needs should be awarded the BPA.
 - B. **MULTIPLE BPAs:** When the ordering office determines multiple BPAs are needed to meet its requirements, the ordering office should determine which contractors can meet any technical qualifications before establishing the BPAs. When multiple BPAs are established, the authorized users must follow the procedures in II.B above, and then place the order with the Schedule contractor that represents the best value and results in the lowest overall cost alternative to meet the agency's needs.
- IV. Review BPAs periodically. Such reviews shall be conducted at least annually. The purpose of the review is to determine whether the BPA still represents the best value (considering price, special qualifications, etc.) and results in the lowest overall cost alternative to meet the agency's needs.
- V. The ordering office should give preference to small business concerns when two or more contractors can provide the services at the same firm-fixed price or ceiling price.
- VI. When the ordering office's requirement involves both products as well as professional services, the ordering office should total the prices for the products and the firm-fixed price for the services and select the contractor that represents the greatest value in terms of meeting the agency's total needs.
- VII. The ordering office, at a minimum, should document orders by identifying the contractor the services were purchased from, the services purchased, and the amount paid. If other than a firm-fixed price order is placed, such documentation should include the basis for the determination to use a labor-hour or time-and-materials order. For agency requirements in excess of the micro-purchase threshold, the order file should document the evaluation of Schedule contractors' quotes that formed the basis for the selection of the contractor that received the order and the rationale for any trade-offs made in making the selection.

Procedures for fixed prices on GSA Schedule

The ordering procedures set forth at FAR 8.404 should be used for those services based on fixed prices. The Contractor is advised that based on the specific task identified at the task order level, it may use Clause 552.238-76, Price Reduction, to provide a proposed fixed price to the agency to more accurately reflect the actual work required.

Special Provisions for Task Orders

Agencies may incorporate provisions in their task order that are essential to their requirements (e.g., security clearances, hazardous substances, special handling, key personnel, etc.). These provisions, when required, will be included in individual task orders. Any cost necessary for the contractor to comply with the provision(s) will be included in the task order proposal, unless otherwise prohibited by law.

Contractors are strongly encouraged to price all items in the contract, to the maximum extent practicable.

CONTRACT TERMS AND CONDITIONS—COMMERCIAL ITEMS (MAY 1999)

- (a) **Inspection/Acceptance.** The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.
- (b) **Assignment.** The Contractor or its assignee's rights to be paid amounts due as a result of performance of this contract, may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727).
- (c) **Changes.** The terms and conditions of this contract may be changed only by written agreement of the parties.
- (d) **Disputes.** This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.
- (e) **Definitions.** The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.
- (f) **Excusable delays.** The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.
- (g) **Invoice.** The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized,) to the address designated in the contract to receive invoices. An invoice must include—
 - (1) Name and address of the Contractor;
 - (2) Invoice date;
 - (3) Contract number, contract line item number and, if applicable, the order number;
 - (4) Description, quantity, unit of measure, unit price and extended price of the items delivered;
 - (5) Shipping number and date of shipment including the bill of lading number and weight of shipment if shipped on Government bill of lading;
 - (6) Terms of any prompt payment discount offered;
 - (7) Name and address of official to whom payment is to be sent; and
 - (8) Name, title, and phone number of person to be notified in event of defective invoice.Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. Contractors are encouraged to assign an identification number to each invoice.
- (h) **Patent indemnity.** The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.
- (i) **Payment.** Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt

Payment. If the Government makes payment by Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

- (j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:
 - (1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or
 - (2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.
- (k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.
- (l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred, which reasonably could have been avoided.
- (m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.
- (n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.
- (o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.
- (p) Limitation of liability. Except as otherwise provided by an express or implied warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.
- (q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.
- (r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.
- (s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

Teaming Arrangements

CONTRACTOR TEAM ARRANGEMENTS AND FEDERAL SUPPLY SCHEDULES

In the spirit of the Federal Acquisition Streamlining Act, all Federal agencies have been encouraged to facilitate innovative contracting/acquisition approaches. FAR Part 1.102 provides Guiding Principles on the Federal Acquisition System, outlining what the System will achieve –

- ⇒ Satisfy the customer (cost, quality, and timeliness of delivery)
- ⇒ Maximize use of commercial products and services
- ⇒ Consider contractor’s past performance
- ⇒ Promoting competition
- ⇒ Minimize administrative costs
- ⇒ Conduct business with integrity, fairness, and openness
- ⇒ Fulfill public policy objectives

The Federal Supply Schedule program is a source customers may use to achieve what the System has outlined for Acquisition Teams to follow.

Each member of the “Acquisition Team” is to exercise personal initiative and sound business judgment and is responsible for making acquisition decisions that deliver the best value product or service to meet the customers’ needs. FAR 1.102-4 further empowers Government Team members to make acquisition decisions within their areas of responsibility including selection, negotiation and administration. The contracting officer has the authority to the maximum extent practical, to determine the applications of rules, regulations, and policies.

In light of these changes, Federal Supply Schedule customers may refer to FAR 9.6 – Contractors Team Arrangements. The policy and procedures outlined in this part will provide more flexibility and allow innovative acquisition methods when using the Federal Supply Schedules. Customers are encouraged to review this section and should note this is permissible after contract award. Team Arrangements combined with the Federal Supply Schedule Program provides Federal customers a powerful commercial acquisition strategy.

BASIC GUIDELINES FOR USING “CONTRACTOR TEAM ARRANGEMENTS”

Federal Supply Schedule contractors may use “Contractor Team Arrangements” (see FAR 9.6) to provide solutions when responding to a customer agency requirements.

These Team Arrangements can be included under a Blanket Purchase Agreement (BPA). BPAs are permitted under all Federal Supply Schedule contracts.

Orders under a Team Arrangement are subject to terms and conditions of the Federal Supply Schedule contract.

Participation in a Team Arrangement is limited to Federal Supply Schedule contractors.

Customers should refer to FAR 9.6 for specific details on Team Arrangements.

Here is a general outline on how it works:

- ⇒ The customer identifies their requirements.
- ⇒ Federal Supply Schedule contractors may individually meet the customers needs, or
- ⇒ Federal Supply Schedule contracts may submit a Schedules “Team Solution” to meet the customer’s requirement.
- ⇒ Customers make a best value selection.