

| | | | |
|--|------------------------------------|----------------------------------|--------------------------------|
| 2. AMENDMENT/MODIFICATION NO. 72 | 3. EFFECTIVE DATE See Block 16C | 4. REQUISITION/PURCHASE REQ. NO. | 5. PROJECT NO. (If applicable) |
|--|------------------------------------|----------------------------------|--------------------------------|

| | |
|--|--|
| ISSUED BY John F. Kennedy Space Center, NASA Procurement Office – ODIN – OP-MS Kennedy Space Center, FL 32899 | 7. ADMINISTERED BY (If other than Item 6) CODE |
|--|--|

| | | |
|---|-----|---|
| 8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code) OAO Corporation 7500 Greenway Center Drive Greenbelt MD 20770 | (x) | 9A. AMENDMENT OF SOLICITATION NO. 9B. DATED (SEE ITEM 11) 10A. MODIFICATION OF CONTRACT/ORDER NO. NAS5-98144/CC90303B 10B. DATED (SEE ITEM 13) December 1, 2001 |
|---|-----|---|

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning ___ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

| | |
|---|--|
| X | A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b). C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: NAS5-98144 Contract Clause C.7 Technology Refreshment Process and FAR Clause 52.212-4 Contract Terms and Conditions-Commercial Items, (c) Changes D. OTHER (Specify type of modification and authority) |
|---|--|

E. IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office.

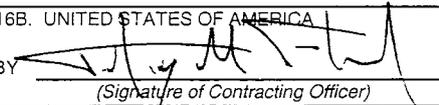
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Stennis Space Center --- ODIN SERVICES

Technology Infrastructure (FAST TRACK): SWR NJ00 L3AB 00, NJ00 E3AF 00, P203 3N03 00, P203 3N05 00, UX00 NT03 00, BB53 91N4 00, and BB51 NET,W 00

Change in Delivery Order Price: \$42,267.64 (INCREASE)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

| | |
|--|--|
| 15A. NAME AND TITLE OF SIGNER (Type or print) Lisa A. Nicholson Contracts Manager | 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Timothy M. Freeland Contracting Officer |
| 15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign) | 15C. DATE SIGNED 1-13-03 |
| 16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer) | 16C. DATE SIGNED 1-16-02 |

1. In accordance with Master Contract NAS5-98144, C.7, Technology Refreshment Process, the technology refreshment services referenced below are hereby incorporated into this Delivery Order at a fixed price of \$42,267.64.

| SWR # | Subject | Amount |
|--------------|--|--------------------|
| NJ00 L3AB 00 | Cable Plant Expansion in Room 164 of B1002 for NAVOCEANO | \$9,648.22 |
| NJ00 F3AF 00 | Cable Plant Expansion in Room 221 of B1002 for NAVOCEANO | \$11,389.31 |
| P203 3N03 00 | Installation of 2 GFE Cisco 3080 VPN devices | \$4,187.10 |
| P203 3N05 00 | Replace Existing Cabletron Network Hubs | \$4,715.72 |
| UX00 NT03 00 | Install 6 Cat5e wires from room 221 to room 113 in B1103 for ITD | \$1,147.50 |
| BB53 91N4 00 | Cable Plant Relocation | \$9,741.21 |
| BB51 NETW 00 | Relocate existing MCSI Network Hub | \$1,438.58 |
| | TOTAL | \$42,267.64 |

2. SWR NJ00 L3AB 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (2) Cat5 wires and (1) multimode fiber to (7) unclassified locations in room 164 of B1002. Install (1) Cat5 wire and (1) multimode fiber to (7) classified locations in room 164 of B1002 as identified in OAO proposal dated November 13, 2002.

- a. The contractor shall perform the following tasks:

- (1) Install (2) Cat5 wires and (1) multimode fiber to (7) unclassified locations in room 164.
- (2) Install (1) Cat5 wire and (1) multimode fiber to (7) classified locations in room 164.
- (3) Install Panduit raceway below the ceiling in room 164 for the classified Cat5 and fiber and place in existing rigid conduit from room 164 to room 178.
- (4) Install unclassified Cat5 & fiber above the ceiling from room 164 to room 178.
- (5) Install (1) 110 jack panel in room 178 and terminate all the unclassified Cat5 wires.
- (6) Install (1) 96-port fiber cabinet and terminate all the unclassified fiber into ST connectors and place in cabinet.
- (7) Terminate all the classified Cat5 wires on existing 110 jack panels in room 178.
- (8) Terminate all the classified fiber in ST connectors and place in existing fiber cabinets.
- (9) Test and label all Cat5 wiring at both ends.
- (10) Test and label all fiber at both ends.
- (11) Update drawings.

b. The contractor shall provide the following material:

- (1) 2000 FT corning MIC duplex fiber cable (370-949-FDDDI-02)
- (2) 2000 FT Belden Cat5 Blue (CMP-00424BEL-5U-06)
- (3) 1000 FT Belden Cat5 Red (CM-0024BEL-5U-03)
- (4) 60 each P2020C-C-125 multimode ST connectors (118974)
- (5) 20 each Panduit LD10 raceway (131155)
- (6) 14 each IMO II PCB fiber insert (162979)
- (7) 14 each IMO II PCB singlegang faceplate (148025)
- (8) 14 each IMO II PCB blanks modules (148027)
- (9) 10 each Panduit LD3 raceway (131157)
- (10) 8 each Panduit outlet boxes (205872)
- (11) 7 each IMO II PCB single Cat5 jack (149321)
- (12) 7 each IMO II PCB dual Cat5 jack (148031)
- (13) 2 packs Panduit outside corner (131228)
- (14) 2 packs Panduit inside corners (131130)
- (15) 1 pack Panduit Tees (142140)
- (16) 1 pack Panduit right angle (131126)
- (17) 1 pack Panduit reducer fitting (142141)
- (18) 1 pack Panduit end cap (131132)
- (19) 1 each Century 96-port fiber cabinet (FCL-96SL-LM96)
- (20) 1 each Avaya 110 jack panel block (200666)

c. Schedule: This effort shall be complete by three weeks after "Fast Track" approval to begin work, or December 13, 2002.

3. SWR NJ00 F3AF 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to remove all old wiring and jacks and update with new ones to match the other ones that have been installed in other parts of the building. Install (2) Cat5 wires, 1 Cat3 and (1) duplex multimode fiber cable to (10) unclassified locations. Install (1) Cat5 wire and (1) duplex multimode fiber cable to (5) classified locations as identified in OAO proposal dated November 6, 2002.

a. The contractor shall perform the following tasks:

- (1) Install (2) Cat5 wires, (1) Cat3 wire and (1) multimode duplex fiber jumper to (10) unclassified locations in room 221.
- (2) Install (1) Cat5 wires and (1) multimode duplex fiber jumper to (5) classified locations in room 221 in Panduit raceway within room 221 out through rigid conduit to room 228 then down to room 128.
- (3) Install (1) 96-port fiber cabinet in room 128 to be used for the classified fibers.
- (4) Install Panduit outlet boxes under cubicles for classified Cat5 and fiber.
- (5) Terminate one end of Cat5 wiring on existing 110 jack panels in room 128 and the other end on T568B Cat5e jacks for classified and unclassified locations.
- (6) Terminate one end of Cat3 on existing 66 blocks in room 128 and the other end on Cat3 jacks at all unclassified locations.

- (7) Terminate both ends of the fiber into ST connectors and place one end in new 96-port classified cabinet in room 128 and the other end into (1) duplex fiber insert and put in faceplate in room 221.
- (8) Terminate both ends of the multimode fiber into St connectors and place one end in existing 96-port unclassified cabinet in room 128 and the other end into (1) duplex fiber insert and put in faceplate in room 221.
- (9) Remove all wiring that is presently hanging from ceiling back to wiring closet.

b. The contractor shall provide the following material:

- (1) 4,000 feet of Cat5e blue plenum wire (CMP-00424BEL-5U-06)
- (2) 3,000 feet of Corning plenum MIC duplex fiber cable (370-949-FDDI-02)
- (3) 3,000 feet of Cat3 white plenum wire (CMP-00424MAX-3U)
- (4) 2,000 feet of Cat5e red plenum wire (CMP-00424BEL-5U-03)
- (5) 60 each P2020C-C-125 multimode ST connectors (118974)
- (6) 25 each Panduit LD10 raceway (131155)
- (7) 15 each IMO II PCB singlegang faceplates (148025)
- (8) 10 each IMO II PCB dual USOC jacks (148035)
- (9) 10 each IMO II PCB dual T568B jacks (148031)
- (10) 8 each Panduit LD3 raceway (131157)
- (11) 5 each Panduit deep outlet boxes (205872)
- (12) 5 each IMO II PCB fiber inserts (162979)
- (13) 5 each IMO II PCB blank modules (148027)
- (14) 5 each IMO II PCB T568B single jack (149321)
- (15) 2 pack Panduit outside corner (131128)
- (16) 2 pack Panduit inside corners (131128)
- (17) 1 pack Panduit Tees (142140)
- (18) 1 pack Panduit right angle (131126)
- (19) 1 pack Panduit reducer fitting (142141)
- (20) 1 pack Panduit end cap (131132)
- (21) 1 each Century 96-port fiber cabinet (FCL-96SL-LM96)

c. Schedule: This effort shall be complete by three weeks after "Fast Track" approval to begin work, or December 13, 2002.

4. SWR P203 3N03 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (2) (GFE) Cisco 3080 VPN devices to replace (2) existing Cisco 5002 VPN devices in room 116 of B1201 for NASA as identified in OAO proposal dated November 13, 2002.

a. The contractor shall perform the following tasks:

- (1) Install (2) each GFE Cisco 3080 VPN devices
- (2) Remove (2) Cisco 5002 VPN devices
- (3) Provide project plan to NASA
- (4) Provide Updated Network drawing to NASA
- (5) Provide Rack Layout

- b. The contractor shall not be required to provide any material for this effort.
- c. Schedule: This effort shall be complete by six weeks after "Fast Track" approval to begin work, or January 13, 2003.

5. SWR P203 3N05 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to replace existing Cabletron network hub with (2) Fore ES3810 network hubs as identified in OAO proposal dated November 08, 2002.

- a. The contractor shall perform the following tasks:
 - (1) Install new 7 foot open rack
 - (2) Install two Marconi ES3810s with OC-3 MM uplinks and 72 10Mbps ports in new rack.
 - (3) Run new 144 Cat5E hand off cables from the ES3810s to 1110 blocks and terminate.
 - (4) Connect both ES3810s to 1201-ATM5
 - (5) Remove 1103-H1 Cabletron and all wiring connected from network hub and 110 wiring blocks
 - (6) Provide project plan to NASA
 - (7) Provide Updated Network drawing to NASA
 - (8) Provide Rack Layout
- b. The contractor shall provide the following material:
 - (1) 144 each 30 FT solid copper station cords (M54AAPBBL-30)
 - (2) 30 each velcro ties
 - (3) 15 packs of 110C-4 connectors for 110 wiring blocks (073039)
 - (4) 10 each D-rings
 - (5) 2 each double sided vertical trough (166031)
 - (6) 2 each 110AW2-300 wiring block (154071)
 - (7) 2 each 2 meter ST/SC multi-mode jumpers
 - (8) 2 each 3 meter MTRJ/ST multi-mode jumpers
 - (9) 1 each 7 meter ST/ST multi-mode jumper
 - (10) 1 each 19" x 84" aluminum equipment rack
- c. Schedule: This effort shall be complete by six weeks after "Fast Track" approval to begin work, or January 13, 2003.

6. SWR BB51 NETW 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to relocate existing MSCI network hub from room F602B in B1105 to room 120 in B1210 as identified in OAO proposal dated December 04, 2002.

- a. The contractor shall perform the following tasks:

- (1) Install (1) 300-pair 110 wiring block behind existing network cabinet in room 120 of B1210.
 - (2) Install (1) spare Cisco 3548 network hub in existing network cabinet in room 120 of B1210.
 - (3) Install (48) 20-foot solid copper cables from 48-port network hub mounted in existing network cabinet to new 110 wiring block and terminate.
 - (4) Label solid copper cables at network hub.
 - (5) Label 110 wiring block to match network hub ports.
 - (6) Place fiber jumper to activate network hub.
- b. The contractor shall provide the following material:
- (1) 50 each 110C-4 connectors for 110 wiring block (073039)
 - (2) 48 each 20-foot solid copper station cords (M54AAPBBL-020)
 - (3) 20 each Velcro ties
 - (4) 3 each D rings
 - (5) 1 each 110AW2-300 wiring block (154071)
 - (6) 1 each 2-meter singlemode ST/SC fiber jumper (152037)
 - (7) 1 each 5-meter singlemode ST/ST fiber jumper (151989)
 - (8) 1 each 6-meter singlemode ST/SC fiber jumper (FSMD-2277-07)
- c. Schedule: This effort shall be complete by four weeks after "Fast Track" approval to begin work, or January 10, 2003.

7. SWR BB53 91N4 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to relocate existing Cat5 wiring and network hub from existing closet to new closet that will have to be constructed due to remodeling of area for ESAD from B1210 to B1105. Replace Cisco 3548 with Cisco 6509 as identified in OAO proposal dated November 14, 2002

- a. The contractor shall perform the following tasks:
- (1) Move current wiring closet to new location yet to be determined
 - (2) Remove 1105F-CSC1(NASA Cisco 3548)
 - (3) Install new Cisco 6509 to replace 1105-CSC1
 - (4) Move 2 each 48 port 10/100 cards from 1210-CSC1 to the new Cisco 6509 in 1105F wing.
 - (5) Move 1 each 16 port Gig Card from 1210-CSC1 to the new Cisco 6509 in 1105F wing.
 - (6) Move 1 each 16 port Gig Card from 1210-CSC1 to 1105C-CSC1
 - (7) Provide Updated Network drawing to NASA
 - (8) Provide Rack Layout
 - (9) Install (48) solid copper cables from network hub to 110 wiring blocks.
- b. The contractor shall provide the following material:
- (1) 1 each GFE Cisco 6509
 - (2) 1 each GFE Cisco

- (3) 1 each GFE Cisco WS-X6K-SUP1A-2GE
- (4) 1 each GFE Cisco WS-X6416-GBIC
- (5) 1 each GFE Cisco WS-X6348
- (6) 2 each ST/SC 10 meter single mode fiber jumpers
- (7) 2 each ST/SC 3 meter single mode fiber jumpers
- (8) 48 each solid copper cables (M54AAPBBL-020)

c. Schedule: This effort shall be complete by six weeks after “Fast Track” approval to begin work, or January 24, 2003.

8. SWR UX00 NT03 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (6) Cat5e 4-pair wires from room 221 down to room 113 in B1103 for ITD as identified in OAO proposal dated December 4, 2002

a. The contractor shall perform the following tasks:

- (1) Install (6) Cat5e wires from room 221 down to room 113.
- (2) Terminate the Cat5e wire on GFE patch panel in room 113 and terminate the other end on existing 110 wiring blocks in room 221.
- (3) Test and label Cat5 wiring on both ends.
- (4) Update data drawings

b. The contractor shall provide the following material:

- (1) 1000 feet of plenum Cat5e blue wire (CMP-00424BEL-5U-06)

c. Schedule: This effort shall be complete by two weeks after “Fast Track” approval to begin work, or December 31, 2002.

9. Part II “Contract Administration Data”, Item 4, is revised as indicated below to incorporate the increase of \$42,267.64 for these infrastructure upgrades:

4. TOTAL DELIVERY ORDER VALUE (through Mod No. 72)

| | |
|---|-------------------------|
| Ordered Seats and Services | \$ 4,760,379.37 |
| Catalog Actuals | \$ 303,608.48 |
| Specialized Services Actuals | \$ 3,900.00 |
| Infrastructure upgrades | \$ 1,256,903.21 |
| Fast Track Mods Authorized | \$ - |
| Subtotal | \$ 6,324,791.06 |
| Less credits | \$ (2,625.55) |
| Less retainage not earned | \$ (50,887.00) |
| Subtotal | \$ 6,271,278.51 |
| Seats/service levels projected through 11/30/04 | \$ 8,667,316.79 |
| Total Estimated Delivery Order Value | \$ 14,938,595.30 |

7. Part V “Technology Infusion (Infrastructure Upgrades)”, Item 2 is modified to include the subject infrastructure upgrades. The signed date and completion date will be completed in a future infrastructure upgrade modification.

| Mod. No. | Description of Work | Date Signed | Completion Date | Modification Value |
|-----------------|--|--------------------|------------------------|---------------------------|
| 72 | SWR NJ00 L3AB 00 Cable Plant Expansion in Room 164 of B1002 for NAVOCEANO | | | \$9,648.22 |
| 72 | SWR NJ00 F3AF 00 Cable Plant Expansion in Room 221 of B1002 for NAVOCEANO | | | \$11,389.31 |
| 72 | SWR P203 3N03 00 Installation of 2 GFE Cisco 3080 VPN devices | | | \$4,187.10 |
| 72 | SWR P203 3N05 00 Replace Existing Cabletron Network Hubs | | | \$4,715.72 |
| 72 | SWR UX00 NT03 00 Installation of 6 Cat5e wires from room 221 to room 113 in B1103 for ITD | | | \$1,147.50 |
| 72 | SWR BB53 91N4 00 Cable Plant Relocation | | | \$9,741.21 |
| 72 | SWR BB51 NETW 00 Relocate existing MCSI Network Hub | | | \$1,438.58 |

8. Payment Schedule: Invoicing and Payment for this modification will be made in accordance with Master Contract NAS5-98144, FAR 52.212-4: Commercial Items (May 1997) (Modified).
9. Reporting requirements: The contractor shall provide monthly status reports to the SSC Alternate DOCOTR, with a copy to the DOCO. These reports shall include, as a minimum, installation progress, and potential problem areas.
10. In consideration of the modification agreed to herein as complete equitable adjustment for the changes set forth, the Contractor hereby releases the Government from any and all liability under this delivery order for further equitable adjustments attributable to such facts or circumstances giving rise to these changes.
11. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.