

## TERMS AND CONDITIONS OF SOLICITATION

**SOLICITATION: NNM13449166Q**  
**FIRM FIXED PRICE (FFP)**

**CONTRACT ADMINISTRATOR:**  
**Denece A. Norris(ARCS)**  
**Denece.a.norris@nasa.gov**

### **I. DELIVERY AND PERFORMANCE REQUIREMENTS:**

**ADDITIONAL ITEM DESCRIPTION, SPECIFICATION, OR STATEMENT OF WORK:**

See attachments:

1. Combined Synopsis/Solicitation: Pages 1-5
2. Contract Clauses/Terms and Conditions: Section A – Pages 1- 16
3. Structural Loads Test Measurement Acquisition Systems Specifications: Section B- Pages 1-29
4. Solicitation Provisions: Section C - Pages 1-26

**THIS ORDER IS A RATED ORDER UNDER DPAS (15 CFR 700). THE RATING FOR THIS ORDER IS DO-C9**

**DELIVERY DATE: See delivery schedule within the specifications under Section B, Page 27.\***

**PARTIAL DELIVERY/PAYMENT ACCEPTABLE.\***

\*The contractor shall be paid upon acceptance of all deliverables described in the delivery schedule in Section B, Page 27 of the specifications.

### **II. INVOICING AND PAYMENT INFORMATION.**

The contractor shall submit invoices as follows:

- (a) The original and two(2) copies of all invoices, with the exception of the final invoice, shall be sent directly to the payment office designated on the contract cover page at the address listed below. The last invoice, clearly marked "FINAL" on its face, shall be sent to the Contract Administration official designated on the contract cover page that will coordinate review and approval with the NASA Contracting Officer and assure transmission to the payment office once a determination has been made that all requirements of the contract have been met.
- (b) Payment on this contract will be made upon receipt and acceptance of deliverables.

**Invoices shall be submitted in duplicate to:**

**NASA Shared Services Center (NSSC)  
Financial Management Division (FMD) – Accounts Payable  
Bldg 1111, C. Road  
Stennis Space Center, MS 39529  
Email: NSSC-AccountsPayable@nasa.gov  
Fax: 866-209-5415  
Fed Tax Exempt #: 63-0422638**

**TAX IDENTIFICATION NUMBER (TIN) MUST BE PROVIDED WITH THE INVOICE FOR PAYMENT**

**III. APPLICABLE COMMERCIAL ITEM SOLICITATION CLAUSES:**

This order is for a commercial item subject to the terms and conditions of FAR 52.212-4, Contract Terms and Conditions – Commercial Items (FEB 2012), incorporated by reference; FAR 52.212-5, Contract Terms and Conditions Required to Implement Statutes and Executive Orders, Commercial Items (JAN 2013) attached to this order; and any additional terms and conditions checked below or included as a Center specific requirements as addenda to 52.212-4.

**52.252-2 Clauses Incorporated by Reference (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): <http://procurement.nasa.gov/far/>

**A. FEDERAL ACQUISITION REGULATION (48CFR CHAPTER 1) CLAUSES INCORPORATED BY REFERENCE:**

- 52.204-4 Printed or Copied Double-Sided on Postconsumer Fiber Content Paper (MAY 2011)
- 52.247-34 F.O.B. Destination (NOV 1991)

**B. NASA FEDERAL ACQUISITION REGULATION SUPPLEMENT (48CFR CHAPTER 18) CLAUSES INCORPORATED BY REFERENCE:**

- 1852.223-75 Major Breach of Safety or Security (FEB 2002) with Alternate I(FEB 2006)
- 1852.225-70 Export License (FEB 2000)

**C. ADDITIONAL COMMERCIAL ITEM(CI) CONTRACT CLAUSES IN FULL TEXT:**

**1852.215-84 OMBUDSMAN (NOV 2011)**

- (a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the pre-award and post-award phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the contracting officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution.
- (b) If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman, whose name, address, telephone number, facsimile number, and email address may be found at:  
[http://prod.nais.nasa.gov/pub/pub\\_library/Omb.html](http://prod.nais.nasa.gov/pub/pub_library/Omb.html). Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the Agency ombudsman identified at the above URL. Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

(End of Clause)

**1852.216-78 FIRM FIXED PRICE (DEC 1988)**

The total firm fixed price of this contract is \$ **TO BE DETERMINED**

(End of Clause)

**1852.219-76 NASA 8 PERCENT GOAL (JUL 1997)**

- (a) Definitions.

“Historically Black Colleges or University,” as used in this clause means an institution determined by the Secretary of Education to meet the requirements of 34 CFR Section 608.2. The term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

“Minority institutions,” as used in this clause, means an institution of higher education meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20

U.S.C. 1135d–5(3)) which for the purposes of this clause includes a Hispanic-serving institution of higher education as defined in section 316(b)(1) of the Act (20 U.S.C. 1059c(b)(1)).

“Small disadvantaged business concern”, as used in this clause, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

“Women-owned small business concern”, as used in this clause, means a small business concern (1) which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women, and (2) whose management and daily business operations are controlled by one or more women.

(b) The NASA Administrator is required by statute to establish annually a goal to make available to small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns, at least 8 percent of NASA's procurement dollars under prime contracts or subcontracts awarded in support of authorized programs, including the space station by the time operational status is obtained.

(c) The contractor hereby agrees to assist NASA in achieving this goal by using its best efforts to award subcontracts to such entities to the fullest extent consistent with efficient contract performance.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns.

(End of Clause)

**1852.223-72 SAFETY AND HEALTH (SHORT FORM) (APR 2002)**

(a) Safety is the freedom from those conditions that can cause death, injury, occupational illness: damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.

(b) The Contractor shall take all reasonable safety and occupational health measures consistent with standard industry practice in performing this contract. The Contractor shall comply with all Federal, State, and local laws applicable to safety and occupational health and with the safety and occupational health standards, specifications, reporting requirements, and any other relevant requirements of this contract.

(c) The Contractor shall take, or cause to be taken, any other safety, and occupational health measures the Contracting Officer may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the Changes clause of this contract; provided, that no adjustment shall be made under this Safety and Health clause for any change for which an equitable adjustment is expressly provided under any other clause of the contract.

(d) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. In situations where the Contracting Officer becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value mission critical equipment or property, the Contracting Officer shall notify the Contractor orally, with written confirmation. The Contractor shall promptly take and report any necessary corrective action. The Government may pursue appropriate remedies in the event the Contractor fails to promptly take the necessary corrective action.

(e) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (e) and any applicable Schedule provisions, with appropriate changes of designations of the parties, in subcontracts of every tier that exceed the micro-purchase threshold.

(End of Clause)

**1852.237-73 RELEASE OF SENSITIVE INFORMATION (JUN 2005)**

(a) As used in this clause, "sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.

(b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

(c)(1) The Contractor shall identify any sensitive information submitted in support of this proposal or in performing this contract. For purposes of identifying sensitive information, the Contractor may, in addition to any other notice or legend otherwise required, use a notice similar to the following:

Mark the title page with the following legend:

This proposal or document includes sensitive information that NASA shall not disclose outside the Agency and its service providers that support management activities and administrative functions. To gain access to this sensitive information, a service provider's contract must contain the clause at NFS 1852.237-72, Access to Sensitive Information. Consistent with this clause, the service provider shall not duplicate, use, or disclose the information in whole or in part for any purpose other than to perform the services specified in its contract. This restriction does not limit the Government's right to use this information if it is obtained from another source without restriction. The information subject to this restriction is contained in pages : N/A. Mark each page of sensitive information the Contractor wishes to restrict with the following legend:

Use or disclosure of sensitive information contained on this page is subject to the restriction on the title page of this proposal or document.

(2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.

- (d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:
- (1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.
  - (2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.
  - (3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.
  - (4) Allow access to sensitive information only to those employees that need it to perform services under its contract.
  - (5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider's organization.
  - (6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to safeguard it from unauthorized use and disclosure.
  - (7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.
  - (8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.
- (e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.

(f) This clause does not affect NASA's responsibilities under the Freedom of Information Act.

(g) The Contractor shall insert this clause, including this paragraph (g), suitably modified to reflect the relationship of the parties, in all subcontracts that may require the furnishing of sensitive information.

(End of Clause)

**52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS-COMMERCIAL ITEMS (JAN 2013)**

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.222-50, Combating Trafficking in Persons (FEB 2009) 22 U.S.C 7104(g)).  
Alternate I (Aug 2007) of 52.222-50 (22 U.S.C. 7104(g)).

(2) 52.233-3, Protest After Award (AUG 1996) (31 U.S.C. 3553).

(3) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.203-6, Restrictions on Subcontractor Sales to the Government (SEP 2006), with Alternate I(OCT 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

(2) 52.203-13, Contract Code of Business Ethics and Conduct (APR 2010) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 Note))

(3) 52.203-15, Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (JUN 2010) (Section 1553 of Pub. L. 111-5).

(4) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (AUG 2012) (Pub. L. 109-282) (31 U.S.C. 6101 note).

(5) 52.204-11, American Recovery and Reinvestment Act—Reporting Requirements (JUL 2010) (Pub. L. 111-5).

(6) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (DEC 2010) (31 U.S.C. 6101 note).

(7) 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters (FEB 2012) (41 U.S.C. 2313).

- (8) 52.209-10, Prohibition on Contracting with Inverted Domestic Corporations (MAY 2012) (section 740 of Division C of Pub. L. 111-117, section 743 of Division D of Pub. L. 111-8, and section 745 of Division D of Pub. L. 110-161)
- (9) 52.219-3, Notice of Total HUBZone Set-Aside (NOV 2011) (15 U.S.C. 657a).
- (10) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 2011) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).
- (11) [Reserved]
- (12) (i) 52.219-6, Notice of Total Small Business Set-Aside (NOV 2011) (15 U.S.C. 644).
- (ii) Alternate I (NOV 2011) of 52.219-6.
- (iii) Alternate II (NOV 2011) of 52.219-6.
- (13)(i) 52.219-7, Notice of Partial Small Business Set-Aside (JUN 2003) (15 U.S.C. 644).
- (ii) Alternate I (OCT 1995) of 52.219-7.
- (iii) Alternate II (MAR 2004) of 52.219-7.
- (14) 52.219-8, Utilization of Small Business Concerns (JAN 2011) (15 U.S.C. 637(d)(2) and (3)).
- (15)(i) 52.219-9, Small Business Subcontracting Plan (JAN 2011) (15 U.S.C. 637(d)(4)).
- (ii) Alternate I (OCT 2001) of 52.219-9.
- (iii) Alternate II (OCT 2001) of 52.219-9.
- (iv) Alternate III (JUL 2010) of 52.219-9
- (16) 52.219-13, Notice of Set-Aside of Orders (NOV 2011) (15 U.S.C. 644 (r))
- (17) 52.219-14, Limitations on Subcontracting (NOV 2011) (15 U.S.C. 637(a)(14)).
- (18) 52.219-16, Liquidated Damages—Subcontracting Plan (JAN 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- (19) (i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 2008) (10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- (ii) Alternate I (JUN 2003) of 52.219-23
- (20) 52.219-25, Small Disadvantaged Business Participation Program—Disadvantaged Status and Reporting (DEC 2010) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (21) 52.219-26, Small Disadvantaged Business Participation Program—Incentive Subcontracting (OCT 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (22) 52.219-27, Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (NOV 2011) (15 U.S.C. 657 f).
- (23) 52.219-28, Post Award Small Business Program Re-representation (APR 2012) (15 U.S.C. 632(a)(2)).
- (24) 52.219-29, Notice of Set-Aside for Economically Disadvantage Women-Owned Small Business (EDWOSB) Concerns (APR 2012)
- (25) 52.219-30, Notice of Set-Aside for Women-Owned Small Business (WOSB) Concerns Eligible Under the Woman-Owned Small Business Program (APR 2012)
- (26) 52.222-3, Convict Labor (JUN 2003) (E.O. 11755). ✓

- (27) 52.222-19, Child Labor—Cooperation with Authorities and Remedies (MAR 2012) (E.O. 13126).
- (28) 52.222-21, Prohibition of Segregated Facilities (FEB 1999).
- (29) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).
- (30) 52.222-35, Equal Opportunity for Veterans (SEP 2010) (38 U.S.C. 4212).
- (31) 52.222-36, Affirmative Action for Workers with Disabilities (OCT 2010) (29 U.S.C. 793).
- (32) 52.222-37, Employment Reports on Veterans, (SEP 2010) (38 U.S.C. 4212).
- (33) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O. 13496).
- (34) 52.222-54, Employment Eligibility Verification (JUL 2012). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)
- (35) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA–Designated Items (MAY 2008)) (42 U.S.C. 6962(c)(3)(A)(ii)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (ii) Alternate I (MAY 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (36) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007) (42 U.S.C. 8259b).
- (37) (i) 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).
- (ii) Alternate I (DEC 2007) of 52.223-16.
- (38) 52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011) (E.O. 13513).
- (39) 52.225-1, Buy American Act—Supplies (FEB 2009) (41 U.S.C. 10a-10d)
- (40) 52.225-3, Buy American Act—Free Trade Agreements—Israeli Trade Act (Nov 2012) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, Pub. L. 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, and 110-138).
- (ii) Alternate I (MAR 2012) of 52.225-3
- (iii) Alternate II (MAR 2012) of 52.225-3
- (iv) Alternate III (Nov 2012) of 52.225-3
- (41) 52.225-5, Trade Agreements (NOV 2012) (19 U.S.C. 2501, *et seq.*, 19 U.S.C. 3301 note).
- (42) 52.225-13, Restrictions on Certain Foreign Purchases (JUN 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- (43) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (NOV 2007) (42 U.S.C. 5150).
- (44) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (NOV 2007) (42 U.S.C. 5150).
- (45) 52.232-29, Terms for Financing of Purchases of Commercial Items (FEB 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
- (46) 52.232-30, Installment Payments for Commercial Items (OCT 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

- (47) 52.232-33, Payment by Electronic Funds Transfer—Central Contractor Registration (OCT 2003) 31 U.S.C. 3332).
- (48) 52.232-34, Payment by Electronic Funds Transfer—Other than Central Contractor Registration (MAY 1999) (31 U.S.C. 3332).
- (49) 52.232-36, Payment by Third Party (FEB 2010) (31 U.S.C. 3332).
- (50) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).
- (51)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).
- (ii) Alternate I (APR 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

- (1) 52.222-41, Service Contract Act of 1965, as Amended (Nov 2007) (41 U.S.C. 351, et seq.).
- (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (MAY 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- (3) 52.222-43, Fair Labor Standards Act and Service Contract Act-Price Adjustment (Multiple Year and Option Contracts) (SEP 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- (4) 52.222-44, Fair Labor Standards Act and Service Contract Act-Price Adjustment (SEP 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- (5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (NOV 2007) (41 U.S.C. 351, et seq.).
- (6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services--Requirements (FEB 2009) (41 U.S.C. 351, et seq.).
- (7) 52.222-17, Nondisplacement of Qualified Workers (JAN 2013) (E.O. 13495).
- (8) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (MAR 2009) (Pub. L. 110-247).
- (9) 52.237-11, Accepting and Dispensing of \$1 Coin (SEP 2008) (31 U.S.C. 5112(p)(1)).

(d) *Comptroller General Examination of Record*. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records—Negotiation.

- (1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (i) through (vii) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause—

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (APR 2010) (Pub L.) 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-8, Utilization of Small Business Concerns (DEC 2010) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) 52.222-17 Nondisplacement of Qualified Workers. (JAN 2013)

(iv) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).(v) 52.222-35, Equal Opportunity for Veterans, (SEP 2010) (38 U.S.C. 4212).

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (OCT 2010) (29 U.S.C. 793).

(vii) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O.13496). Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.

(29 U.S.C. 793).

(vii) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O.13496). Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.

(viii) 52.222-41, Service Contract Act of 1965 (NOV 2007) (41 U.S.C. 351, et seq.).

(ix) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

\_\_\_\_ Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).

(x) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (NOV 2007) (41 U.S.C. 351, et seq.).

(xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

(xii) 52.222-54, Employment Eligibility Verification (JUL 2012).

(xiii) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (MAR 2009) (Pub. L. 110-247). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.

(xiv) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of Clause)

**REPRESENTATION ON ACQUISITION OF INFORMATION TECHNOLOGY SYSTEMS FROM ENTITIES OWNED, DIRECTED OR SUBSIDIZED OF THE PEOPLE'S REPUBLIC OF CHINA.**

(a) Definitions

“Acquire” means procure with appropriated funds by and for the use of NASA through purchase or lease.

“Entity owned, directed or subsidized by the People’s Republic of China” means any company incorporated under the laws of the People’s Republic of China.

“Information technology system” means any equipment, or interconnected system(s) or subsystem(s) of equipment, that is used in the automatic acquisition, storage, analysis,

evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency.

(1) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency that requires --

(i) Its use; or

(ii) To a significant extent, its use in the performance of a service or the furnishing of a product.

(2) The term “information technology” includes computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including support services), and related resources.

(3) The term “information technology” does not include any equipment that--

(i) Is acquired by a contractor incidental to a contract; or

(ii) Contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology.

(b) In accordance with Section 516 of the Consolidated and Further Continuing Appropriation Act, 2013 (Pub. L.113-6), the contractor represents none of the funds made available by the Act will be used to acquire an information technology system that is produced, manufactured, or assembled by an entity owned, directed or subsidized by the People’s Republic of China.

(End of clause)

**RESTRICTION ON ACQUIRING INFORMATION TECHNOLOGY SYSTEMS FROM ENTITIES OWNED, DIRECTED OR SUBSIDIZED BY THE PEOPLE’S REPUBLIC OF CHINA.**

(a) Definitions –

“Acquire” means procure with appropriated funds by and for the use of NASA through purchase or lease.

“Entity owned, directed or subsidized by the People’s Republic of China” means any company incorporated under the laws of the People’s Republic of China.

“Information technology system” means any equipment, or interconnected system(s) or subsystem(s) of equipment, that is used in the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency.

(1) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency that requires --

(i) Its use; or

(ii) To a significant extent, its use in the performance of a service or the furnishing of a product.

(2) The term “information technology” includes computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including support services), and related resources.

(3) The term “information technology” does not include any equipment that--

(i) Is acquired by a contractor incidental to a contract; or

(ii) Contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology.

(b) Section 516 of the Consolidated and Further Continuing Appropriation Act, 2013 (Pub. L.113-6), restricts NASA from acquiring an information technology system that is produced, manufactured, or assembled by an entity owned, directed or subsidized by the People’s Republic of China using funds appropriated on or after March 26, 2013. The contractor shall not acquire an information technology system for use by NASA from an entity owned, directed or subsidized by the People’s Republic of China for an information technology system.

(c) Subcontracts - The contractor shall include the substance of this clause in all subcontracts made hereunder involve the procurement of IT systems and also use funds from Public Law 113-6.

(End of clause)

**REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF  
OFFERORS OR QUOTERS INCORPORATED BY REFERENCE**

The Representations, Certifications, and Other Statements of Offerors or Quoters (FAR 52.212-3 of the solicitation document) as completed by the Contractor are hereby incorporated in their entirety by reference, with the same force and effect as if they were given in full text.

(End of Clause)

### **Structural Loads Test Measurement Acquisition Systems(SLTMAS) Specifications**

The vendor shall assemble the components listed in Sections 1 and 2, according to the assembly requirements in Section 3 to fabricate a mobile, self-contained structural strength test Data Acquisition System(DAS) as designed by the Marshall Space Flight Center. These instructions are for a single unit. Individual data systems are also identified by the abbreviation RDH.

In addition to the fabrication of the DAS, the vendor shall also provide the supporting equipment specified in Section B, Pages 26-27.

Listed below are the sections and locations for the required DAS.

Section B—Parts List—Pages 2-5

Section B—Diagrams—Pages 6-22

Section B—Assembly Guidelines—Pages 23-25

Section B - Supporting SLTMAS Equipment—Pages 26-27

Section B - Delivery, Acceptance, Payment Milestones and Shipping—Page 27

Section B—Notes—Pages 27-29

1. Parts Lists

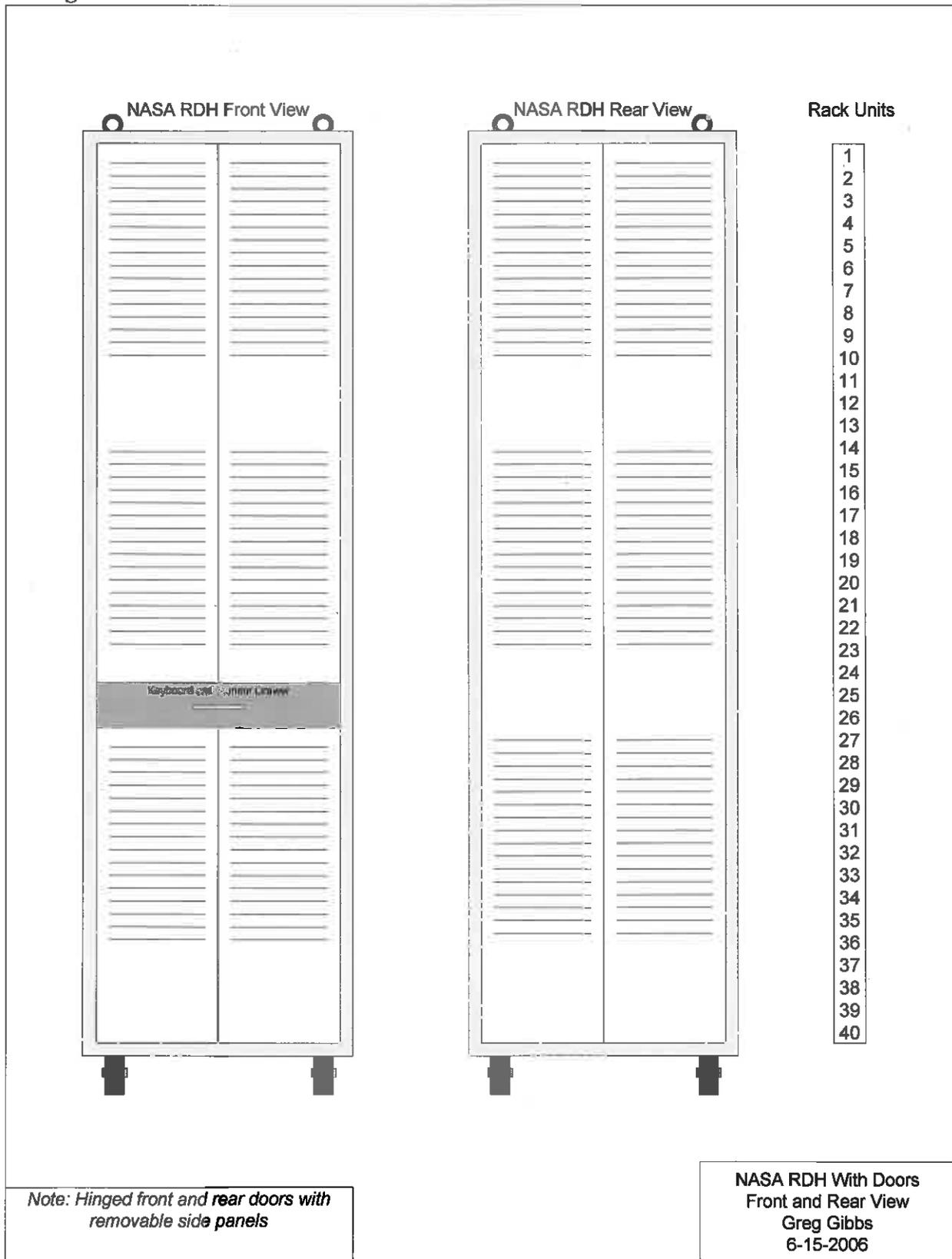
<b>Same as or equal to Emcor Parts</b>		
Part number	Description	Quantity per Unit
XFR-367019	VERTICAL FRAME	1
XSP-3670-V	SIDE PANEL w Latch Wing	2
DS-XSL-7019	Rear Door	1
DF-HVL-2419	Front Door Lower	1
DF-HVL-4219	Front Door Upper	1
XLA-3619-LV	LVRD PANEL WITH LIFTING EYES	1
XPB-3619	PONTOON BASE	1
HW-408	CASTER	4
XMA-70	Mounting angles (additional)	2 pair
HW-104	MACHINE SCREW	200
AHWX-092-003219	CLIP NUT	200
XCG-20	CHASSIS GUIDE	4 pair
AHWX-722-102025	Machine Screw	30
AHWX-192-002025	Captive Clip Nut	30
Latch/Wing	Wing Latches on Side Panels	4
XPN-0119	Solid formed closure panel to be modified by integrator.	1
Finish	TX-NUP	
<b>Same as or equal to CyberPower Parts</b>		
CPS1215RM	15 Amp, rack mount power strip with 10 rear outlets.	1
<b>Same as or equal to Eaton Parts</b>		
PW9130L1500-XL2U	Rack mount UPS, 1500VA, 1350watts, 6 outlets, include rack mounting hardware option	1
<b>Same as or equal to RackSolutions.com Parts</b>		
2UKVM-125-4-19V	Keyboard/Monitor drawer with 19" monitor and small keyboard/touch pad, USB adapter.	1
<b>Same as or equal to Cisco Parts</b>		
SR2016T-NA	16 port switch 10/100/1000 Mbps with rack mount hardware.	1
<b>Same as or equal to Hobbs Parts</b>		
Honeywell Model 20017-14	AC Hour meter, 108-132 VAC, 60Hz, 3 screw mount.	1

<b>Same as or equal to the described Miscellaneous System Parts</b>		
Vendor modified	Modify the Emcor XPN-0119 panel to make 1 U (rack unit) rear BNC Cal Bus & Sync cable connector panel cable assembly per diagram <u>NASA Sync and Cal Panel with Cable Assembly.</u>	1
Microsoft Office 2003 Professional Edition	Installed on PXI-8115 Embedded Controller	1
Coleman Cable Yellow Jacket 2883	Extension Cord 25' long, 12/3 heavy duty 15 Amp SJTW with lighted ends	1
Vendor Fabricated	Hour Meter Bracket – See Drawing	1

<b>Data System Parts – Same as or equal to National Instruments</b>			
Part number	Model	Description	Quantity per unit
779199-01	PXI-1050	PXI/SCXI split chassis 8 PXI 4 SCXI	1
776571-01	SCXI-1001	12 Slot Chassis US 120 VAC	3
781860-00	PXI-8115	Dual Core 2.5 GHz Embedded Controller	1
781736-8192		Upgrade to 8 GB RAM	1
781413-03		Windows 7 64 Bit NI PXI Embedded controller	1
777849-01		LabVIEW RT Deployment License for NI PXI Controllers	1
779123-01	PXI-6289	A to D	1
778271-01	PXI-4071	Voltmeter	2
960450-03		Compliant Calibration for NI Digital Multimeter	2
186338-01	SCXI-1520	8-Channel Strain/Bridge Module – Section 6(g) for further details	32
779514-01	SCXI-1502	32 Channel TC amplifier - Section 6(g) for further details	2
182671-01	SCXI-1349	End of multi-chassis chain adapter	1
776574-46	SCXI-1346	Multi-chassis adapter	2
777509-01	TC-2095	32 Channel TC connector	2
779709-01	SCXI-2097 RevD	Terminal Block - Section 6(g) for further details	32
183228-01	SH96-96	Shielded cable 1m	34
192061-01	SHC68-68-EPM	Cable	1
184749-01	SH68-68-EP	Shielded cable	2
776576-61	SCXI-1361	Rear Panel Filler with through hole for grounding strap	4
776576-60	SCXI-1360	Front Panel Filler	2
776577-70	SCXI-1370	Rack Mount Kit	4
<b>Data System Parts - Custom Built using same as or equal to NI SCXI-1181</b>			
CS001-a	NASA SCXI Cal and Sync Module	NASA SCXI Cal and Sync Module with front surface modifications and circuit per diagrams: <u>NASA SCXI Cal and Sync Module Connector</u> and <u>NASA SCXI Cal and Sync Module</u> . Modification and parts list are specified in the diagrams. Section 6(h) and 6(i) for further details.	1
CS001-b	NASA SCXI Cal and Sync Module	NASA SCXI Cal and Sync Module with front surface modifications and circuit per diagrams: <u>NASA SCXI Cal and Sync Module Connector</u> and <u>NASA SCXI Cal and Sync Module</u> . Modification and parts list are specified in the diagrams. Section 6(h) and 6(i) for further details.	3
		Set of drawings and instructions used to fabricate CS001-a and CS001-b	1

<b>Same as or equal to the described Cables, Connectors, and Fasteners</b>	
<b>Description</b>	<b>Quantity</b>
RG-58 Coax Cable 40" with BNC both ends, shrink labeled "Cal Bus"	3
RG-58 Coax Cable 52" with BNC both ends, shrink labeled "Cal Bus"	1
RG-58 Coax Cable 18" with BNC both ends, shrink labeled "Cal Bus"	1
RG-58 Coax Cable 9" with BNC both ends, shrink labeled "Cal Bus"	1
20" Ribbon Cable with 50 pin connector on both ends	1
Adapter, BNC female to dual banana plug	2
Adapter, BNC Tee, jack/plug/jack	1
Adapter, BNC Tee, jack /jack/plug	1
BNC Isolated from Chassis Bulkhead Adapter Panel Mount Amphenol 31-4803-RFX	1
AMP Tyco Electronics Universal Mate-N-Lock Panel Mount Connectors 1-480699-0	2
Socket Style pins for above connector 350550-1	4
Sync Cable 10 ft Twisted pair 2 conductor 24 gauge or larger stranded, insulated copper wire	1
AMP Tyco Electronics Universal Mate-N-Lock Connector 1-480698-0	2
Pins for above connector 350552-1	4
4 gauge grounding strap with lugs - 15" long	1
4 gauge grounding strap with lugs - 19" long	1
4 gauge grounding strap with lugs - 39" long	1
1/4 - 20 x 1/2 Button head hex socket screw, steel	4
1/4 - 20 stop nut with nylon insert, steel	4
5' CAT5e Network Cable with RJ45 connectors on both ends	1

## 2. Diagrams





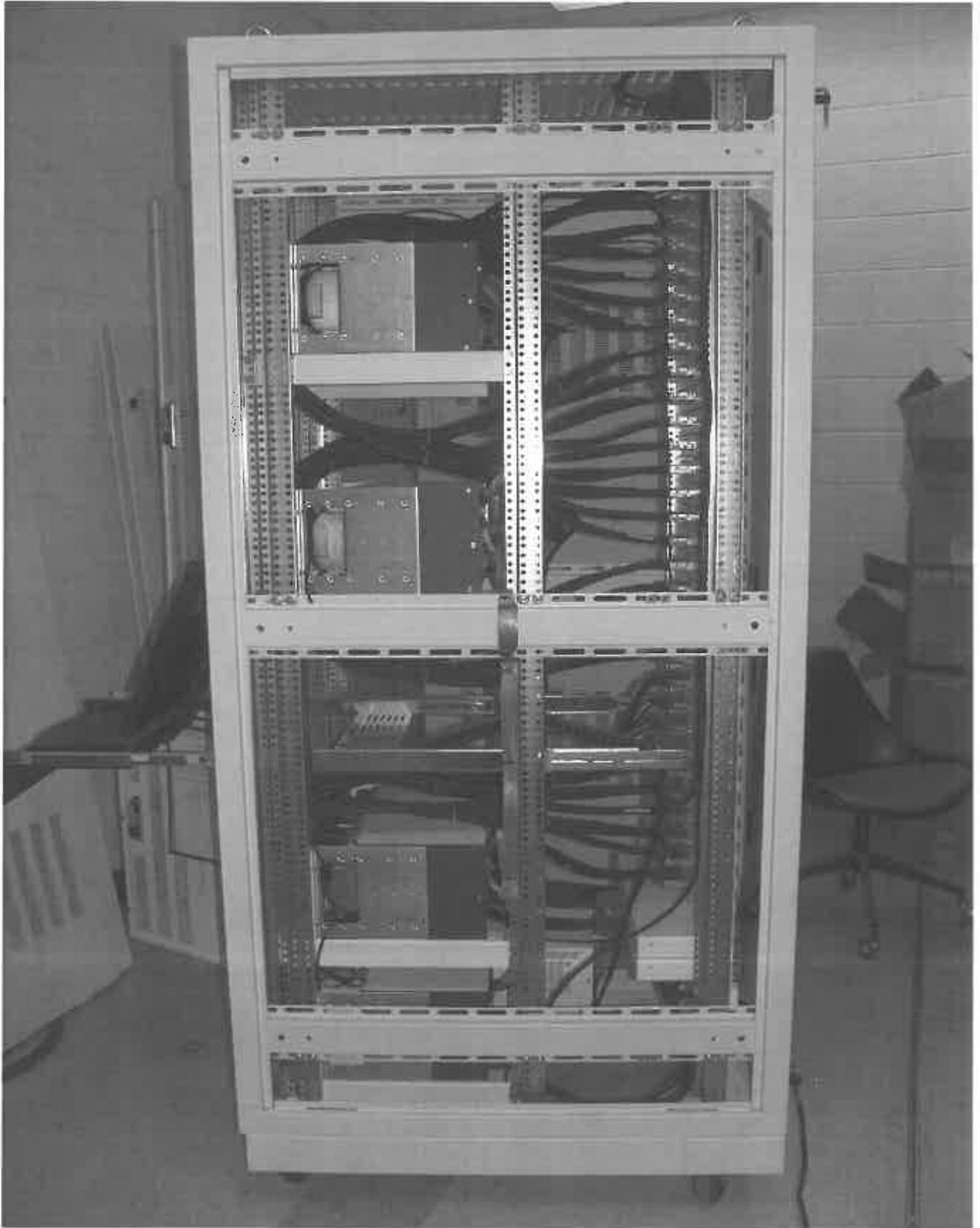
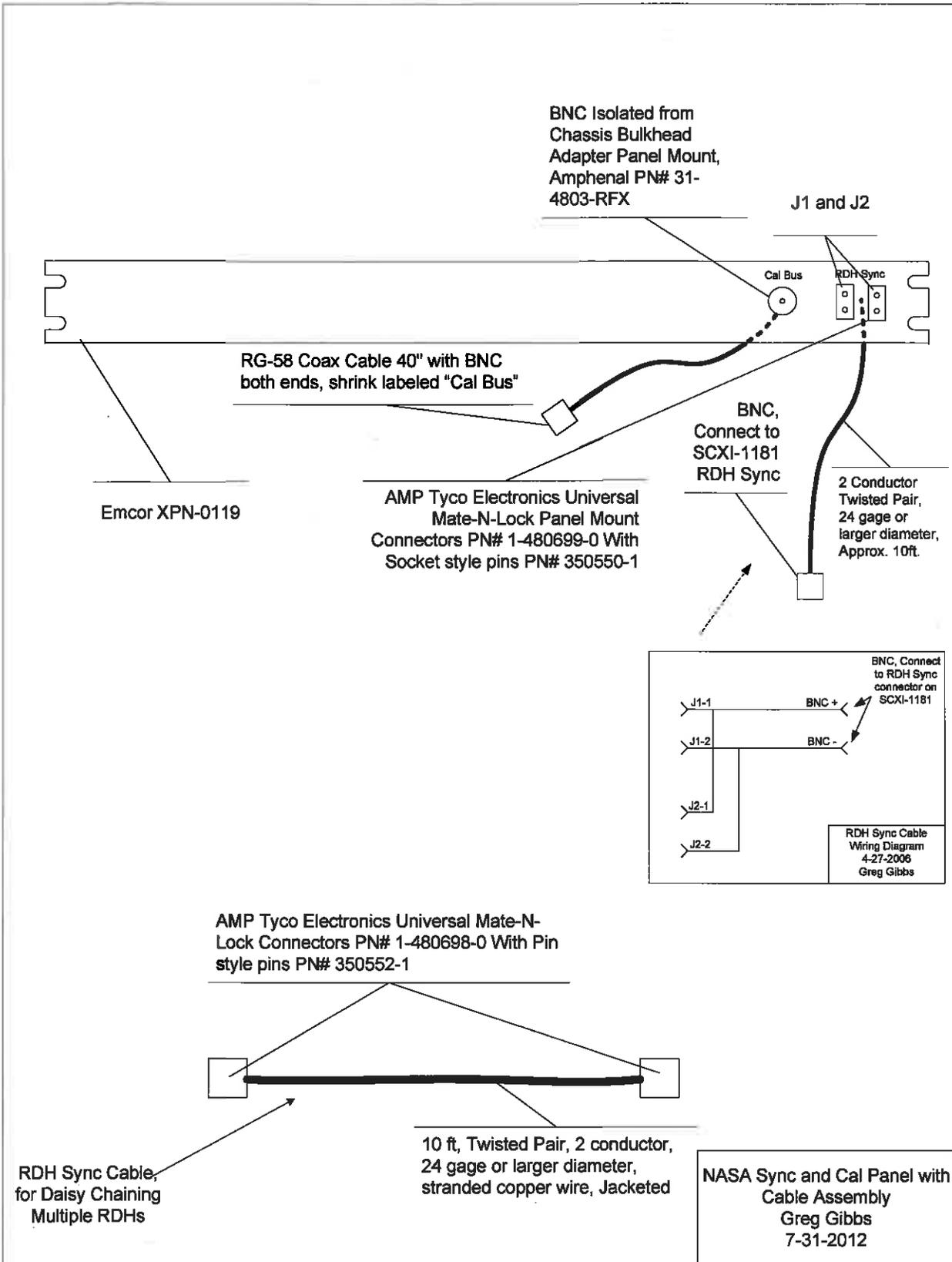
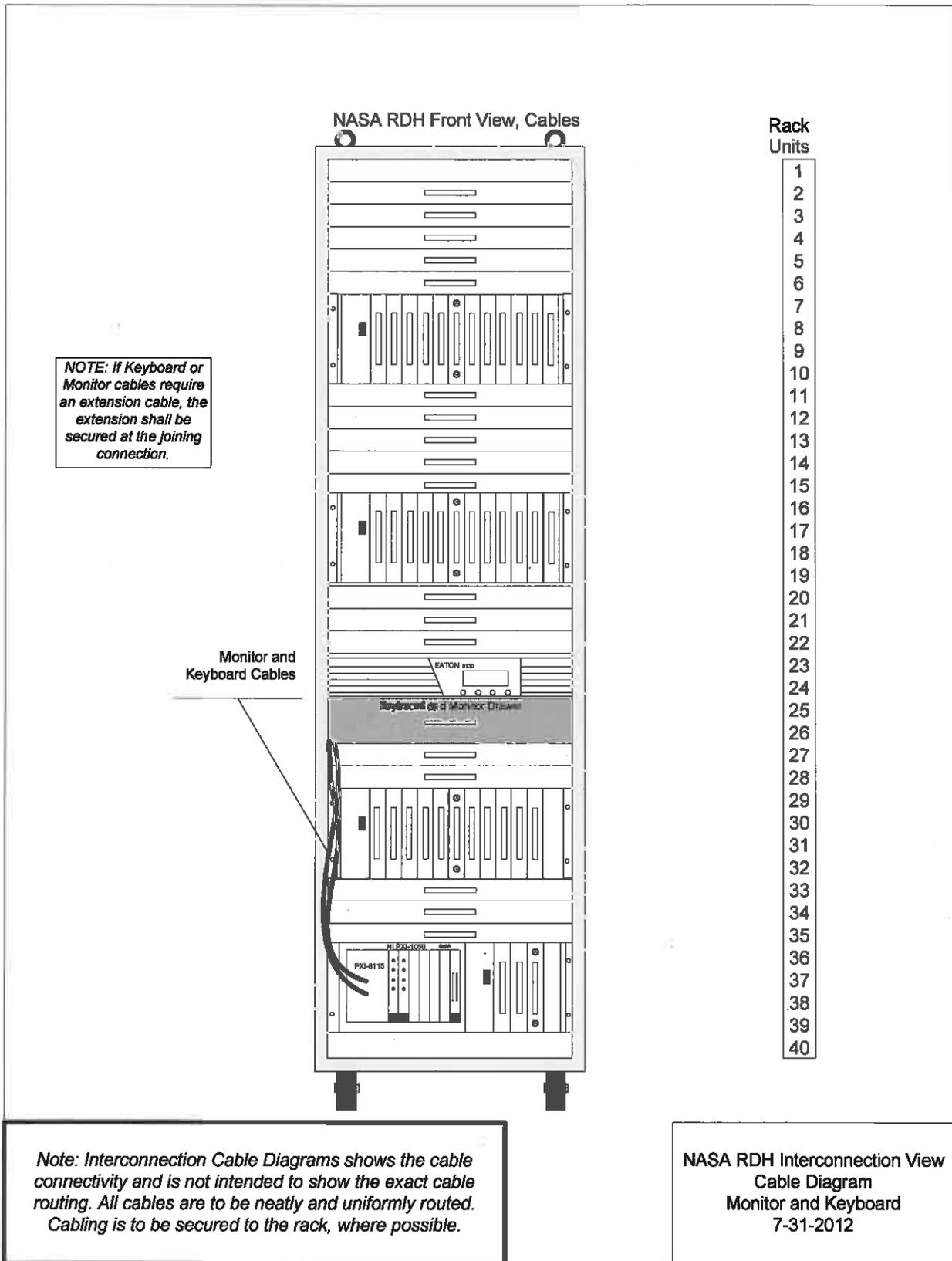
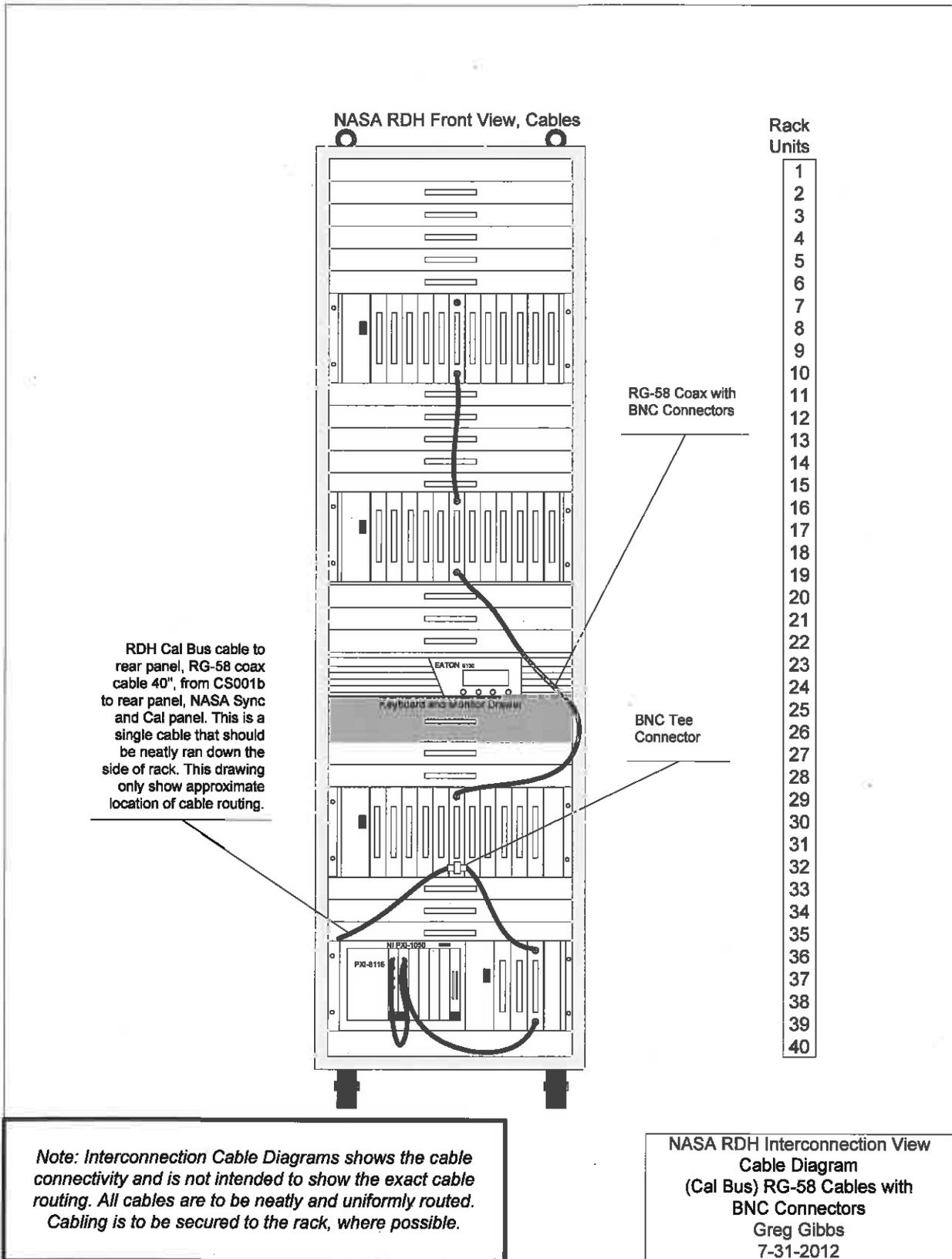
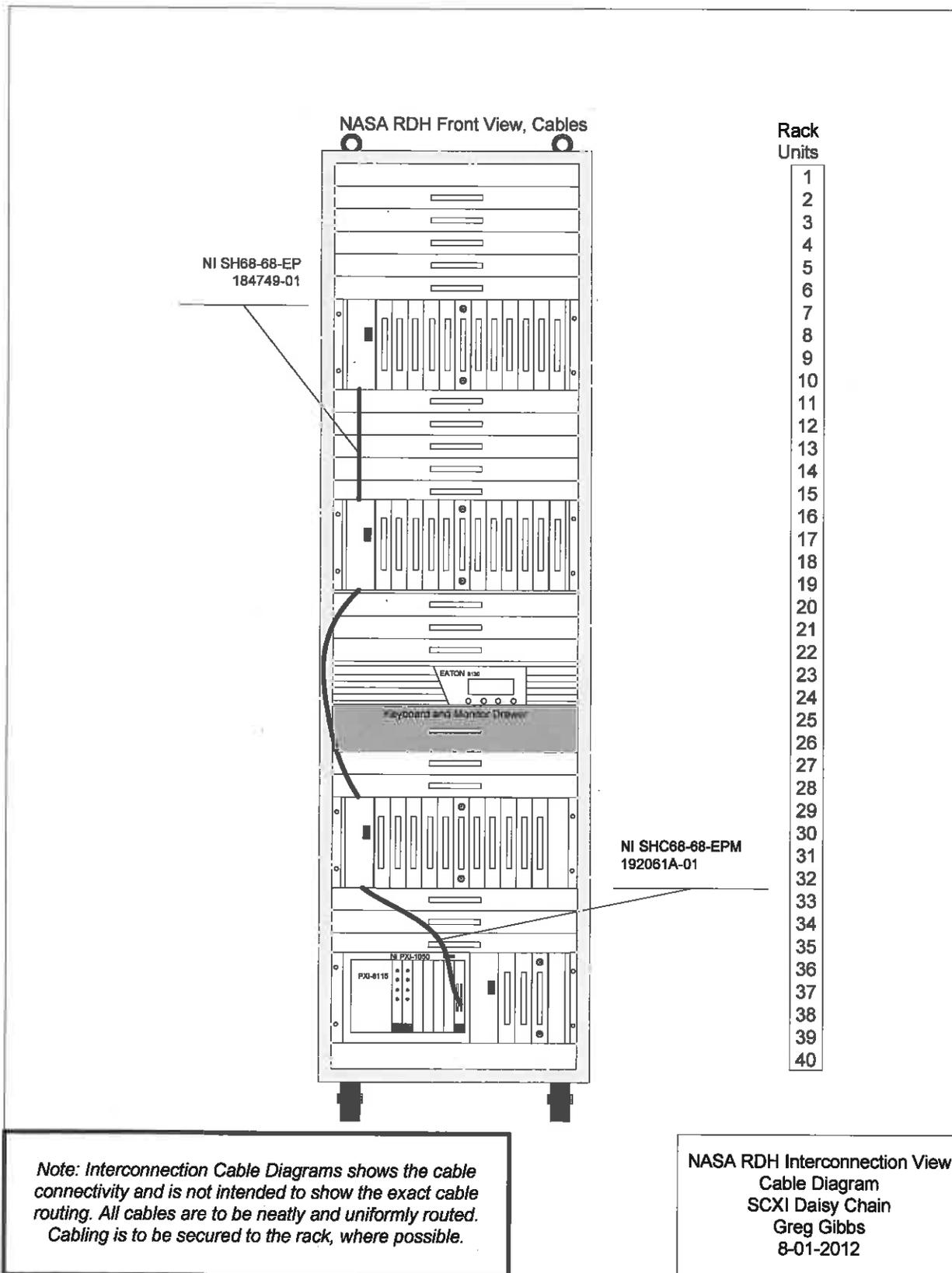


Figure 1. RDH Side View

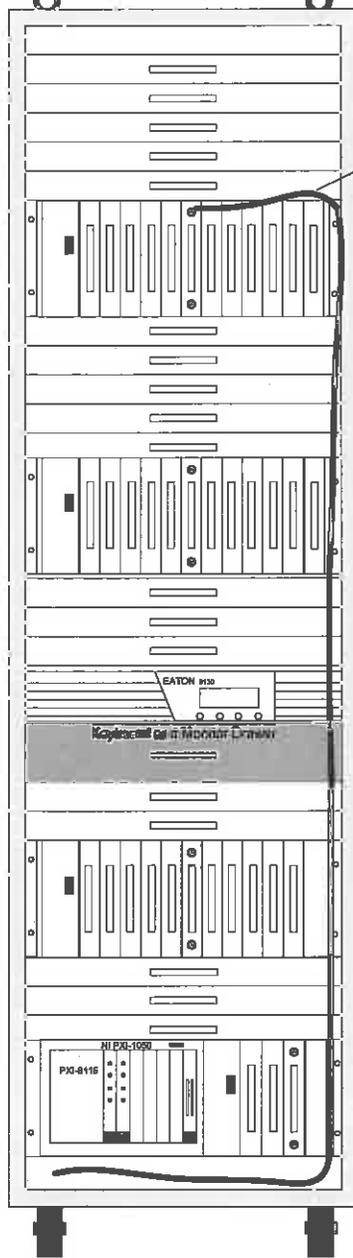








NASA RDH Front View, Cables



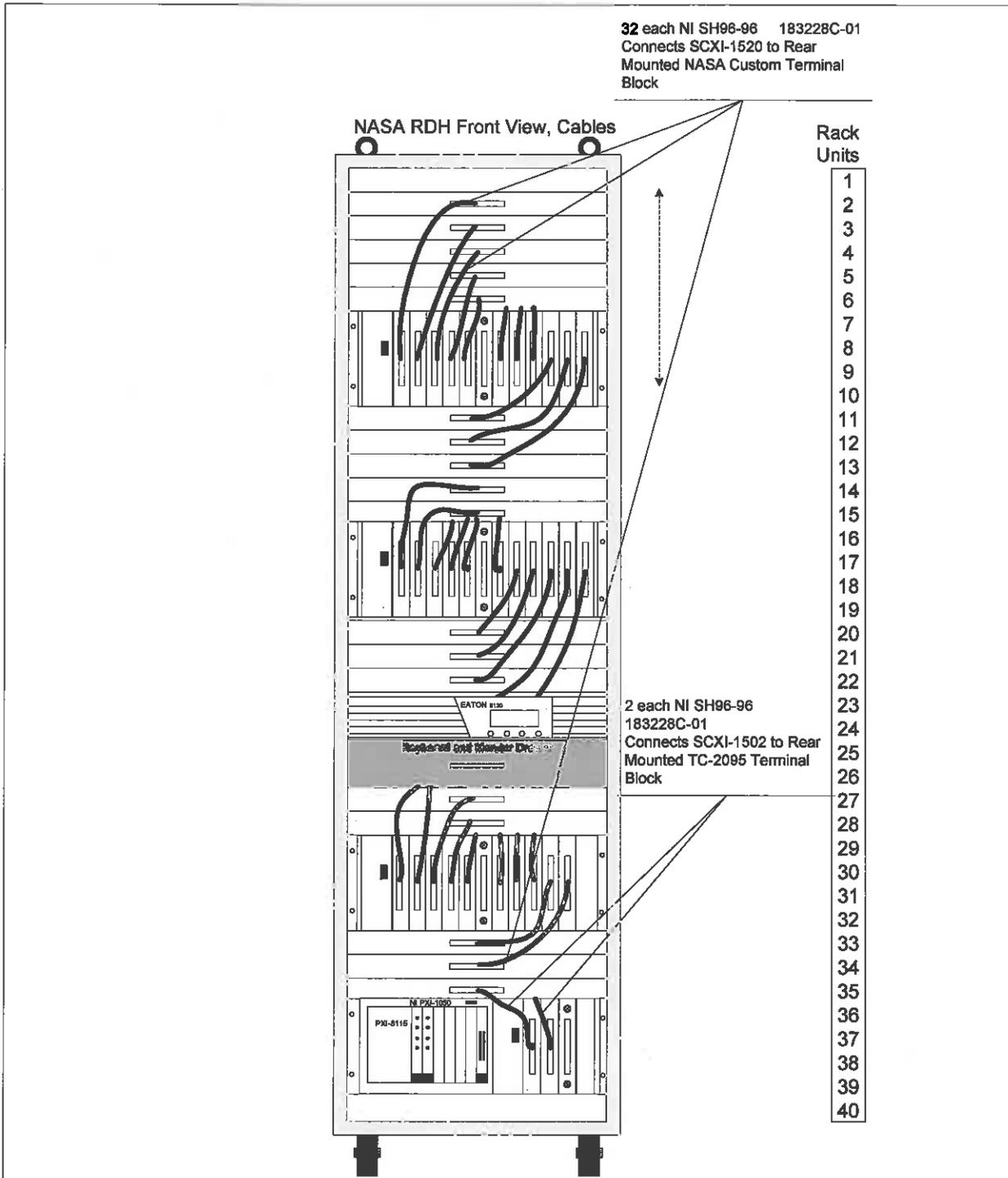
RDH Sync Cable, Twisted Pair, From SCXI-1181 to Rear Connector Panel, This is a single cable that should be neatly ran down the side of rack. This drawing only show approximate location of cable routing.

Rack Units

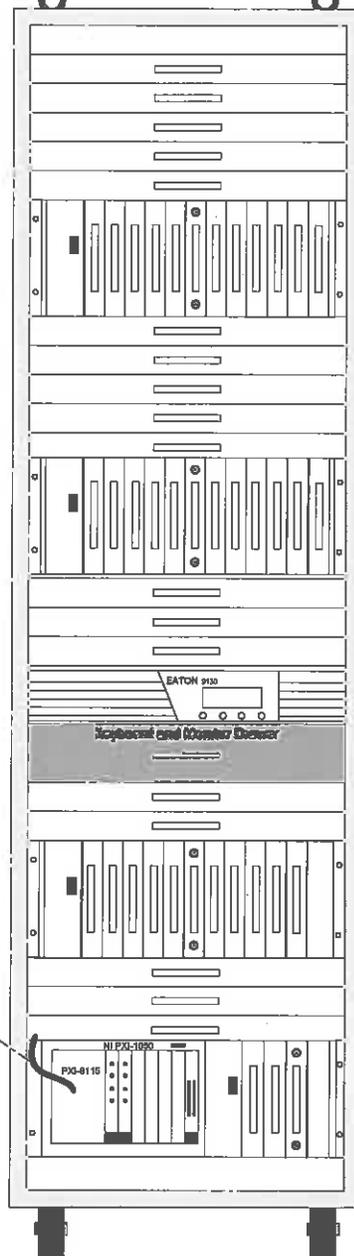
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40

*Note: Interconnection Cable Diagrams shows the cable connectivity and is not intended to show the exact cable routing. All cables are to be neatly and uniformly routed. Cabling is to be secured to the rack, where possible.*

NASA RDH Interconnection View  
 Cable Diagram  
 RDH Sync Cable  
 8-01-2012



NASA RDH Front View, Cables



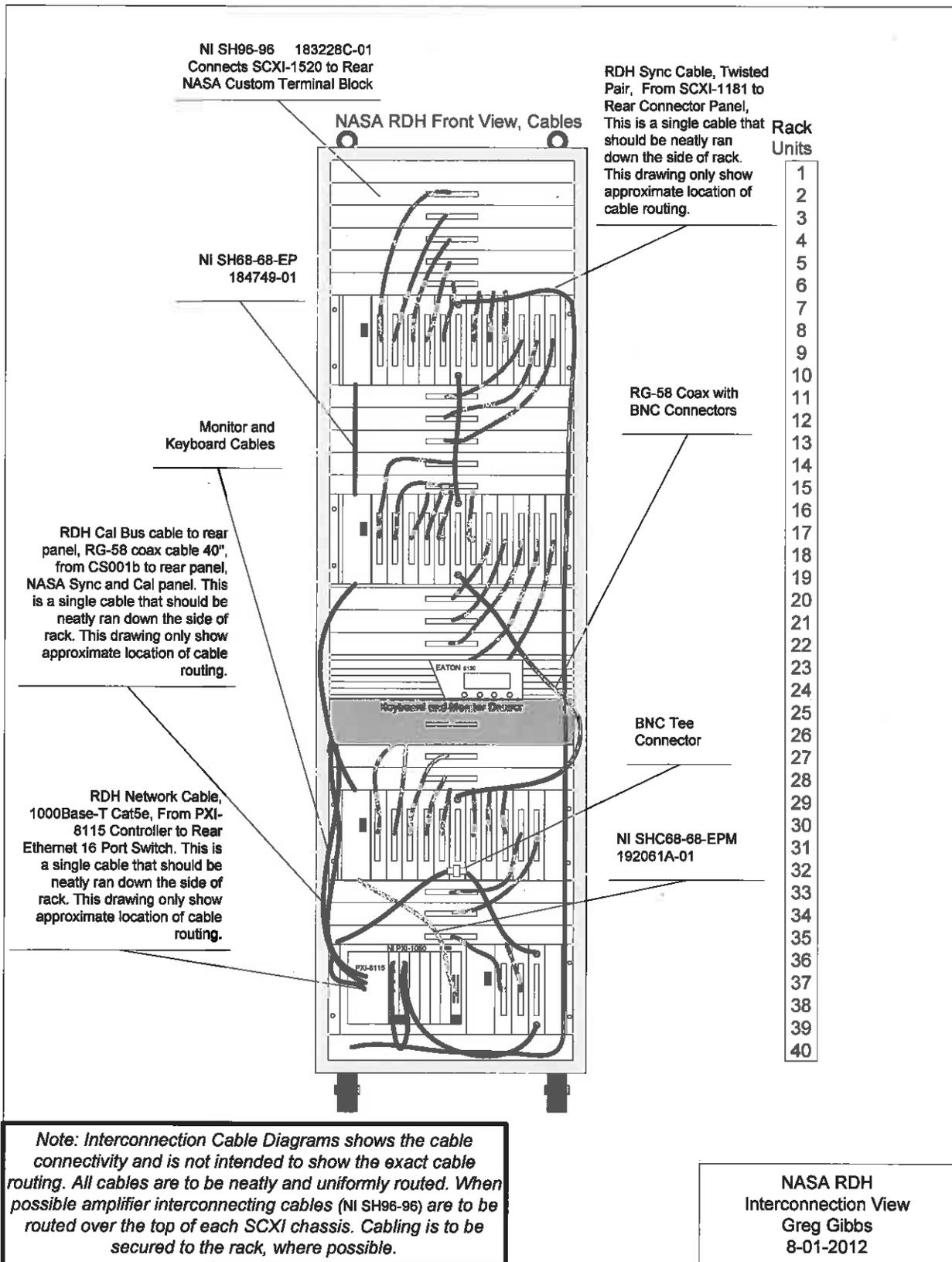
Rack Units

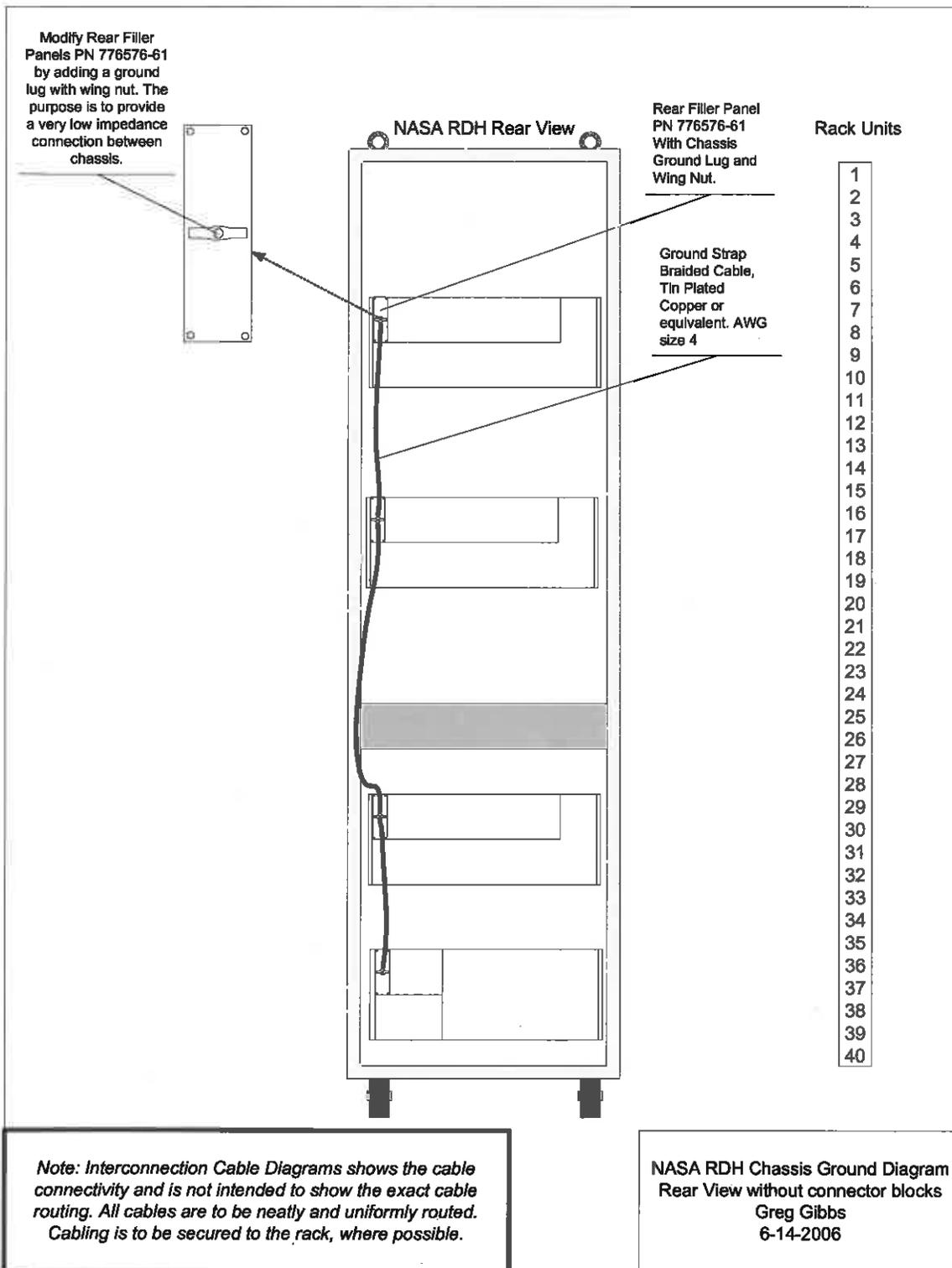
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40

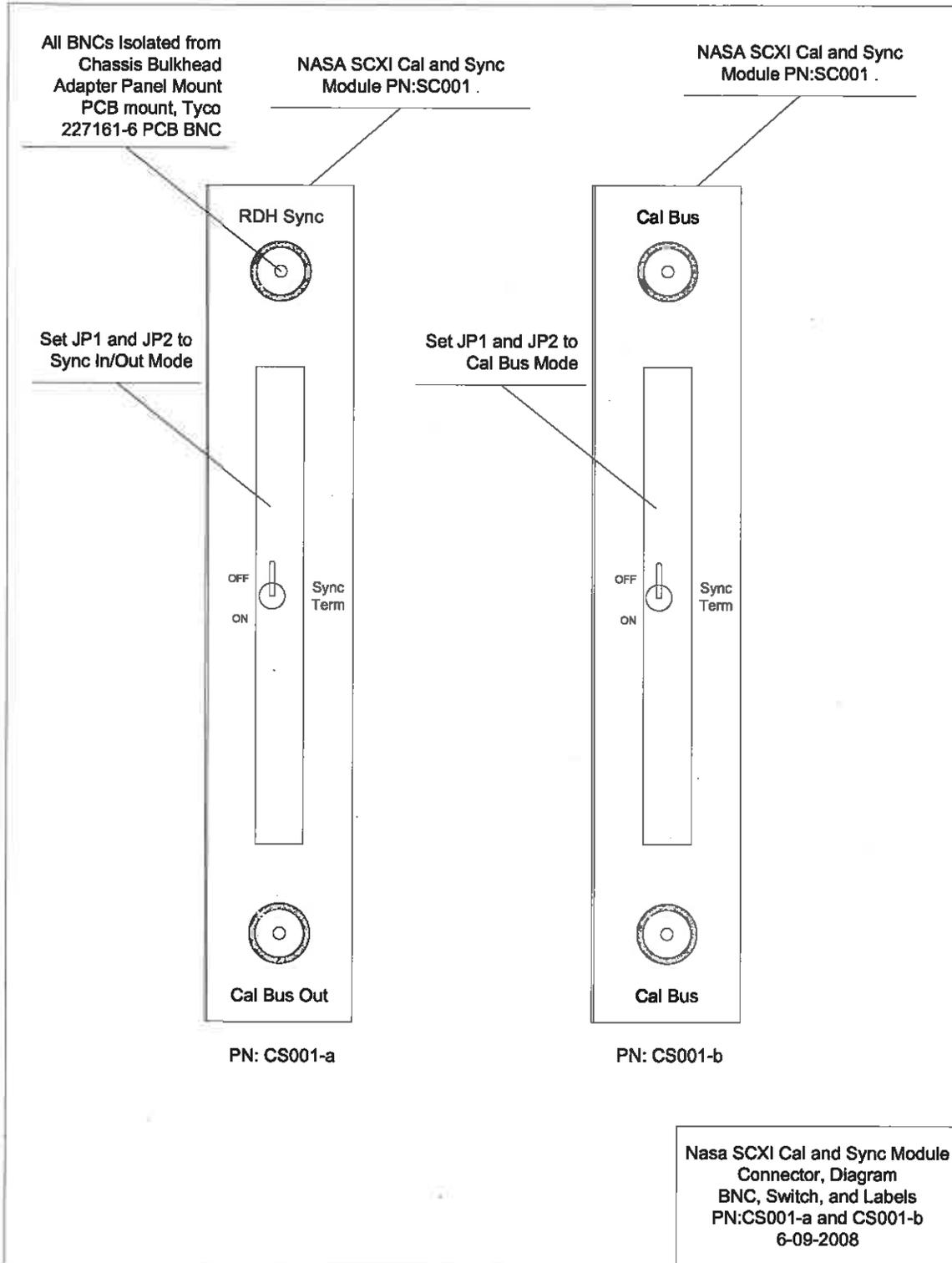
RDH Network Cable, 1000Base-T Cat5e, From PXI-8115 Controller to Rear Ethernet 16 Port Switch. This is a single cable that should be neatly ran down the side of rack. This drawing only show approximate location of cable routing.

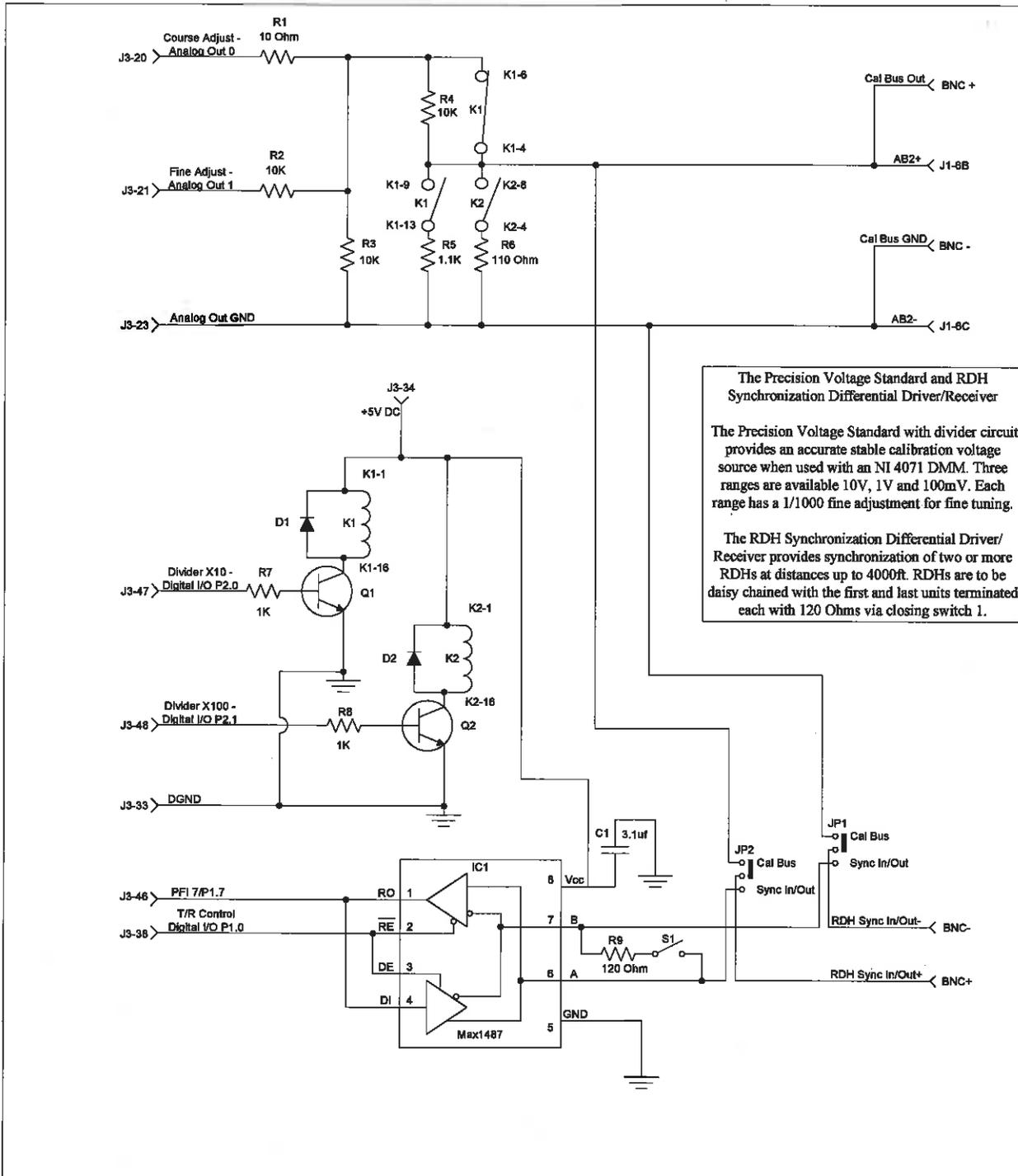
*Note: Interconnection Cable Diagrams shows the cable connectivity and is not intended to show the exact cable routing. All cables are to be neatly and uniformly routed. Cabling is to be secured to the rack, where possible.*

NASA RDH Interconnection View  
 Cable Diagram  
 RDH Network Cable  
 8-01-2012









The Precision Voltage Standard and RDH Synchronization Differential Driver/Receiver

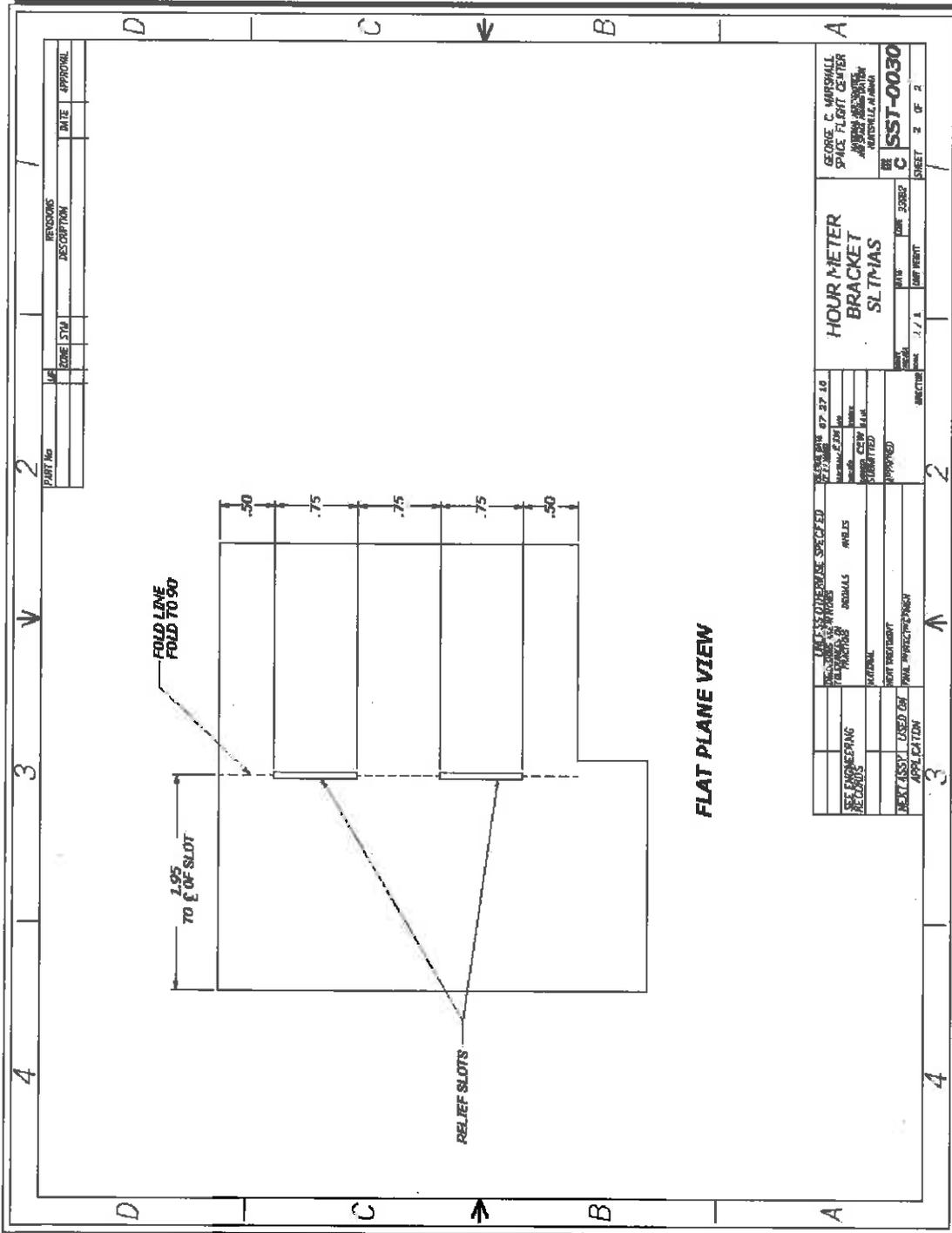
The Precision Voltage Standard with divider circuit provides an accurate stable calibration voltage source when used with an NI 4071 DMM. Three ranges are available 10V, 1V and 100mV. Each range has a 1/1000 fine adjustment for fine tuning.

The RDH Synchronization Differential Driver/Receiver provides synchronization of two or more RDHs at distances up to 4000ft. RDHs are to be daisy chained with the first and last units terminated each with 120 Ohms via closing switch 1.

**Parts List**

D1,D2	1N914 or Equivalent	Diode, Back EMF Suppression
Q1,Q2	2N2222A or Equivalent	NPN Switching
K1, K2	5VDC, AZ830-2C-5DE	DPDT Relay,
IC1	MAX1487CPA	IC, RS-485 T/R
C1	3.1uF, Ceramic or Equivalent	Cap, Decoupling
R1	10 Ohms, 1%, 0.6 watt, 50 ppm	Resistor, VISHAY BC COMPONENTS, PN: B0207C10R00F5T
R2, R3, R4	10K Ohms, 0.1%, 0.125 watt, 5 ppm	Resistor, VISHAY DALE, PN: PTF-58 10K B T-18
R5	1.1K Ohms, 1%, 0.5 watt, 50 ppm	Resistor, VISHAY BC COMPONENTS, PN: B0207C1K100F5T
R6	110 Ohms, 1%, 0.5 watt, 50 ppm	Resistor, MULTICOMP, PN: MFR1ZW-1%-110R
R7, R8	1K Ohms, 5%, 1/4 watt	Resistor,
R9	120 Ohm, 1%, 1/4 watt	Resistor, Termination
S1	CAT# MTS-542 or Equivalent	PC mount Toggle Switch, www.allelectronics.com
Housing	776572-81K	SCXI-1181K, Module Components Kit

NASA SCXI Cal and Sync Module  
Base Module PN: CS001  
Gregory A. Gibbs  
8-01-2012  
For ET30, NASA



PART NO	REV	DATE	APPROVAL
DESCRIPTION		DATE	APPROVAL

DESIGN NO	REV	DATE	APPROVAL
47-37-10			
PROJECT NO	REV	DATE	APPROVAL
204			
ENGINEERING	DESIGNED BY	DATE	APPROVAL
SEE ENGINEERING RECORDS	W. J. A.	1/1/62	
DESIGNED BY	CHECKED BY	DATE	APPROVAL
W. J. A.	W. J. A.	1/1/62	
DESCRIPTION	QUANTITY	UNIT WEIGHT	SHEET NO OF NO
HOUR METER BRACKET SLT-1A5	1	0.0002	2 OF 2
GEORGE C. MARSHALL SPACE FLIGHT CENTER MARSHALL AIR FORCE BASE MARSHALL, ALABAMA SSS-0030			





### 3. Assembly Requirements

Fabricate circuit for calibration bus per diagram NASA SCXI Cal and Sync Module. Parts list is on the diagram. This shall be a printed circuit with function selectable by jumper. The circuit board schematic and layout shall become the property of NASA, allowing for future modifications, trouble shooting, and the acquisition of additional units. See also Section 6(h) and 6(i) for further details.

Using the circuit fabricated for NASA SCXI Cal and Sync Module, assemble the specified CS001 modules.

Fabricate hour meter bracket shown in sheets 1 and 2 of drawing SST-0030, Hour Meter Bracket SLTMAS.

Modify the Emcor XPN-0119 panel to make a 1 U (rack unit) Cal Bus and RDH Sync Panel with cables per diagram NASA Cal Bus and RDH Sync Panel with Cable Assembly.

Enlarge slot in rear filler panels to accommodate 1/4-20 x 1/2 screw.

Attach ground straps to rear filler panels using 1/4-20 screw and stop nut. NASA RDH Chassis Ground Diagram Rear View Without Connector Blocks

Install 5th and 6th rails in middle of rack. Distance between front rail and middle rail mounting holes is 16". Figure 1 RDH Side View

Install 7th and 8th rails directly behind the rails in the front of the rack. These rails provide the attachment points for the SCXI and PXI chassis. Figure 1 RDH Side View

Install Cal Bus and RDH Sync Panel with Cable Assembly in rear of RDH, per Rear View of diagram NASA RDH Front and Rear View. Other end of the cal bus cable and BNC end of the sync cable shall be connected later.

Install Rack Solutions keyboard and monitor drawer. NASA RDH Front and Rear View

Install chassis guides, purchased with the EATON 9130 UPS, to support UPS just above keyboard/monitor drawer. NASA RDH Front and Rear View

Install EATON 9130 UPS. Plug UPS to extension cord that shall power the whole RDH.

Populate PXI/SCXI and SCXI chassis with modules and two SCXI front panel fillers. Refer to Front View of diagram NASA RDH Front and Rear View for configuration.

Topmost SCXI chassis shall have SCXI-1349 End of multi-chassis chain adapter installed behind slot 1.

Middle and lowest SCXI chassis shall have SCXI-1346 multi-chassis adapter installed behind slot 1.

Install chassis guides to support PXI/SCXI and SCXI chassis at locations shown in Front View of diagram NASA RDH Front and Rear View.

Using rack mount kits, install the PXI and SCXI chassis into the rack per the spacing and configuration shown in Front View of diagram NASA RDH Front and Rear View.

Set addresses on SCXI and PXI/SCXI chassis low to high from top to bottom with the upper SCXI chassis as address 0 and the lowest chassis, the split chassis, as address 3.

Connect twisted pair sync cable to the sync output located in the top SCXI chassis, SCXI-1181 module as shown in diagram NASA RDH Interconnection View Cable Diagram RDH Sync Cable.

Install 16 port network switch as shown in diagram NASA RDH Front and Rear View.

Connect network switch to embedded controller with the 5' ethernet cable as shown in diagram NASA RDH Interconnection View Cable Diagram RDH Network Cable.

Install monitor and keyboard.

Connect monitor and keyboard cables to PXI chassis module as shown in NASA RDH Interconnection View Cable Diagram Monitor and Keyboard.

Connect the 50 pin ribbon cable from the SCXI-1349 to the SCXI-1181 in the topmost chassis (address 0).

Connect jack/jack/plug BNC T adapter to Cal Bus connector on lowest SCXI chassis.

Connect calibration bus cables as shown on NASA RDH Interconnection View Cable Diagram (Cal Bus) RG-58 Cables with BNC Connectors. Each DVM shall include a BNC to Banana plug adapter. DVM 2 shall also include a jack/plug/jack BNC Tee adapter.

Connect free end of cal bus cable from Cal Bus and RDH Sync Panel to BNC Tee adapter on Cal Bus connector on lowest SCXI.

Connect chassis daisy chain cables as shown on diagram NASA RDH Interconnection View Cable Diagram SCXI Daisy Chain.

Install rear filler panels with chassis ground strap as shown on diagram NASA RDH Chassis Ground Diagram Rear View without connector blocks.

Install power strip in rear of rack as shown in Rear View of diagram NASA RDH Front and Rear View. Plug the power strip into the EATON UPS.

Install Hour Meter inside upper front left corner of the RDH. See Front View of diagram NASA RDH Front and Rear View for mounting location. See Hour Meter Bracket SLTMAS drawings for details of the mounting bracket.

Connect individual chassis power cords, monitor power cord, and hour meter power cord to interior side of power strip. Network switch cord plugs directly into an outlet on the Eaton UPS so that switch remains powered on even when the RDH is turned off.

Remove half loop pulls from all terminal blocks. Bag and box pulls and screws and include with system when delivered.

Install TC-2095s and NI Parts 779709-01 in rear of RDH as shown on Rear View of diagram NASA RDH Front and Rear View.

Connect NI SH96-96 cables from SCXI-1502 to TC2095 thermocouple reference junction as shown in diagram NASA RDH Interconnection View Cable Diagram NI SH96-96 PN:183228C-01 Rear Mounted Terminal Block to Amplifier Board Connection.

Connect NI SH96-96 cables from SCXI-1520 to PN: 779709-01 as shown in NASA RDH Interconnection View Cable Diagram NI SH96-96 PN:183228C-01 Rear Mounted Terminal Block to Amplifier Board Connection.

Install doors and side panels.

Verify the following:

- a) All components assembled and connected per specification.
- b) All powered components power on and off properly.
- c) The system processor boots up normally.
- d) The system RAM and hard drive are functioning normally.
- e) The system display, mouse and keyboard are functioning normally.
- f) All modules are detected by NI set up utility.

A full end to end checkout is not required to be performed by the vendor.

**4. Supporting SLTMAS Equipment(Please itemize and price each item)**

<b>SLTMAS Supporting Equipment same as or equal to the Model# and Part #'s</b>			
Part number	Model	Description	Quantity
HP Z820	B2C10UT	HP Z820 Workstation Computer Model B2C10UT Dual Xeon 8-Core E5-2650 2.00GHz processor 4GB RAM 500GB HDD Windows 7 Professional	60
2GB RAM	A2Z47AT	HP 2GB (1x2GB) DDR3-1600 MHz ECC RAM	500
AMD FirePro	V7900	2GB Workstation Video Card, 4-display	70
FS215AA		HP Broadcom NetXtreme PCI-Express x1 Gigabit Ethernet Card	70
Samsung MD230X3		23" Ultra-Thin Bezel LDC Multi-display monitor	60
Samsung MD230		23" Ultra-Thin Bezel LCD monitor	70
AFC Industries Work Station		SmartCart SC362436 with 2 each monitor holder AFCPOLE2MV-2	60
PW9130L1500 T-XL	Eaton 9130	Eaton 9130 PW9130L1500T-XL UPS	60
DDR2 667		RAM 2GB SO-DIMM DDR2 667	60
G75VW-DH71		Asus 17.3" Laptop 12 GB RAM 750 GB HDD	5
WGBS17288	EyeLevel	Lista EyeLevel 9 drawer cabinet Global Industrial part number WGBS17288	3
WG603357GY		Tennsco Upright Cabinet Global Industrial part number WG603357GY	3
779709-01	SCXI-2097 RevD	Terminal Block - Section 6(g) for further details	64
186338-01	SCXI-1520	8-Channel Strain/Bridge Module	80
779514-01	SCXI-1502	32 Channel TC amplifier - Section 6(g) for further details	10
776571-01	SCXI-1001	12 Slot Chassis US 120 VAC	13
781860-00	PXI-8115	Dual Core 2.5 GHz Embedded Controller	4
781736-8192		Upgrade to 8 GB RAM	4
781413-03		Windows 7 64 Bit NI PXI Embedded controller	4
777849-01		LabVIEW RT Deployment License for NI PXI Controllers	4
779123-01	PXI-6289	A to D Multifunction Module	4
778271-01	PXI-4071	Voltmeter	20

779199-01	PXI-1050	PXI/SCXI split chassis 8 PXI 4 SCXI	3
960450-03		Compliant Calibration for NI Digital Multimeter	20

**5. Delivery, Acceptance, Payment Milestones and Shipping.**

Estimated period of performance is 7 months  
 SLTMAS supporting equipment delivered 8 weeks after award.  
 RDHs can be delivered in groups of 5 or more spaced up to 1 month apart. Each delivery constitutes a milestone.

Partial payment at each milestone completion is authorized.

MSFC personnel shall perform acceptance checks on all 28 systems. Payment shall be authorized upon completion of the acceptance checks. Acceptance checks shall be completed within two weeks of delivery.

Acceptance checks performed by MSFC shall include a visual inspection for damage; visual inspection for required parts and connections; check of the controller and A to D functions; and an end to end check of the system operation on each channel using an automated instrument simulator.

Systems shall be packaged and shipped in such a way that shock and vibration are minimized, such as by air ride truck. Arrangements shall be made with MSFC Transportation Officer to ship directly to Building 4619, East High Bay to avoid unnecessary handling.

Shipping costs shall be included in the quote.

**6. Notes**

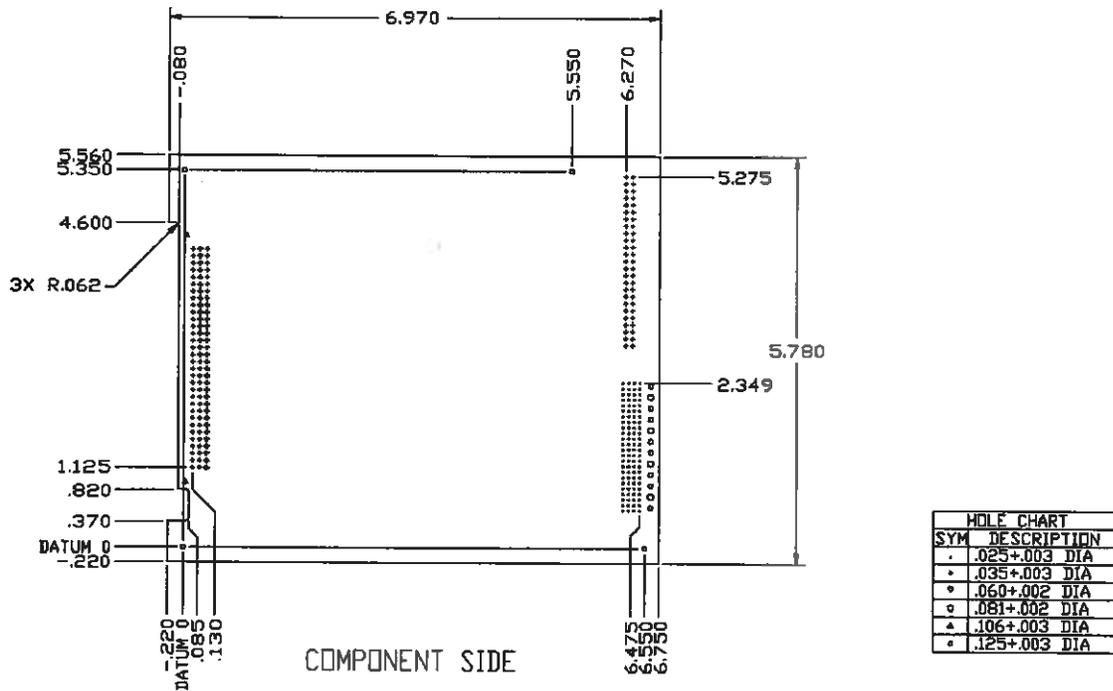
a) The only software applications required from the vendor for this system are: operating systems, software and drivers supporting the various components identified in the parts list which are supplied by National Instruments for the PXI-8115(or equal), and Microsoft Office 2003 Professional Edition.

b) Vendor installation of MSFC test software is not required. No software shall be provided by MSFC to the vendor.

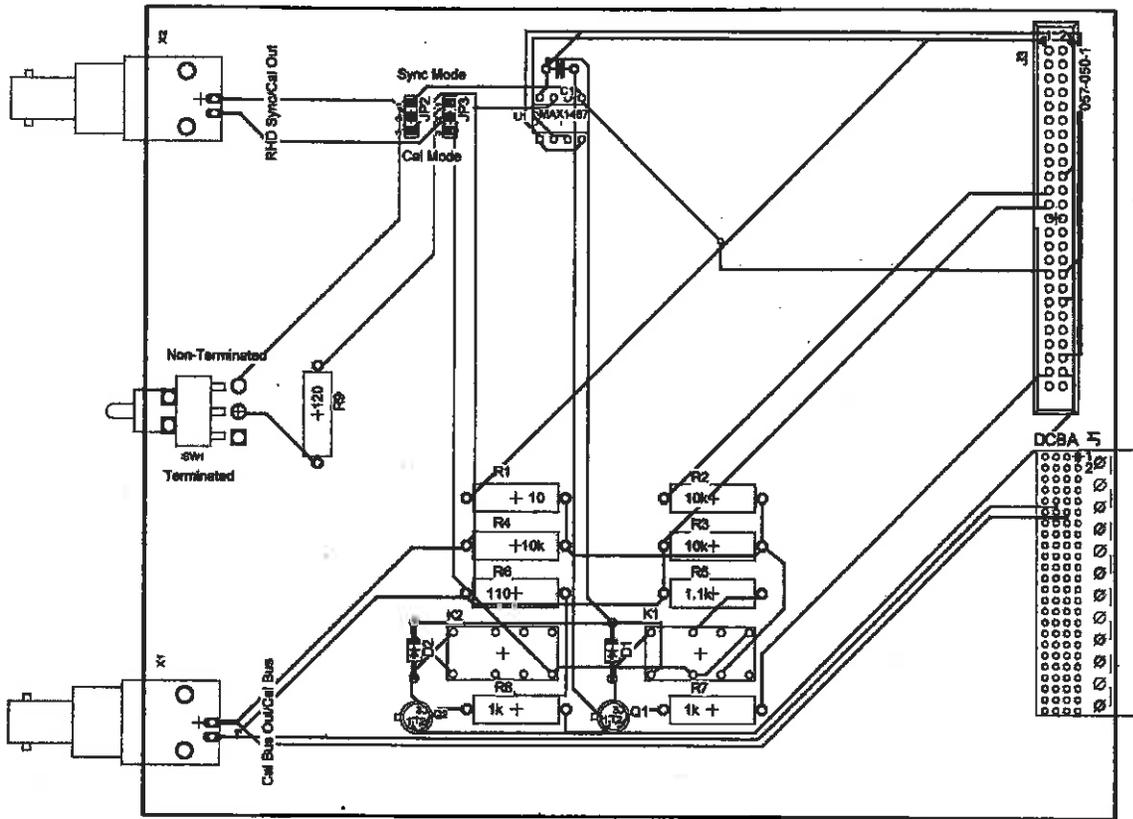
c) There is no requirement for vendors to visit MSFC or for MSFC personnel to conduct site visits at vendor facilities.

d) Vendor shall deliver with the systems all manufacturer supplied manuals, drawings, instructions, and documentation.

- e) Any warranty action for components determined to be broken or defective during the acceptance check shall go back through the vendor who assembled the system.
- f) The connector used on the NI 779709-01 terminal blocks is Amphenol 71-533723-10S(or equal).
- g) National Instruments parts 779709-01, 779514-01, 186338-01 are custom numbers by NI for this application.
- h) The drawing below shows the hole pattern requirements for the connectors. This is the NI drawing of the SCXI-1181 board.



- i) The drawing below shows one vendor's implementation of the requested circuit on a previous order. NASA is only specifying the function of the circuit. Since the availability, size and shape of the circuit elements may change, the vendor is free to make changes to the board layout as needed.



**Solicitation Provisions (some require fill-in information)**

**A. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) PROVISIONS INCORPORATED BY REFERENCE**

- 52.204-7 Central Contractor Registration (DEC 2012)
- 52.211-6 Brand Name Or Equal (AUG 1999)
- 52.212-1 Instructions to Offerors-Commercial Items (FEB 2012)
- 52.225-25 Prohibition on Contracting with Entities Engaging in Sanctioned Activities Relating to Iran-Representation and Certifications(NOV 2011)

**B. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) PROVISIONS INCORPORATED BY FULL TEXT:**

**52.212-2 EVALUATION-COMMERCIAL ITEMS (JAN 1999)**

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

1. Lowest price
2. Technically acceptable offeror with a proven 5 year history of satisfactory performance within the aerospace industry for Structural Loads Test Measurement Acquisition System design.
3. To determine satisfactory performance, provide company/agency name, contract number, point of contact and phone numbers for three (3) sources.

(b) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

(End of provision)

**52.209-7 INFORMATION REGARDING RESPONSIBILITY MATTERS (FEB 2012)**

(a) *Definitions.* As used in this provision—

“Administrative proceeding” means a non-judicial process that is adjudicatory in nature in

order to make a determination of fault or liability (*e.g.*, Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

“Federal contracts and grants with total value greater than \$10,000,000” means—

- (1) The total value of all current, active contracts and grants, including all priced options; and
- (2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

“Principal” means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (*e.g.*, general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror [ ] has [ ] does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the offeror checked “has” in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

- (i) In a criminal proceeding, a conviction.
- (ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.
- (iii) In an administrative proceeding, a finding of fault and liability that results in—
  - (A) The payment of a monetary fine or penalty of \$5,000 or more; or
  - (B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.
- (iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if

the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIIS as required through maintaining an active registration in the Central Contractor Registration database via <https://www.acquisition.gov> (see 52.204-7).

(End of provision)

**52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS-COMMERCIAL ITEMS (DEC 2012) ALTERNATE I (NOV 2011)**

An offeror shall complete only paragraph (b) of this provision if the offeror has completed the annual representations and certifications electronically via <https://www.acquisition.gov>. If an offeror has not completed the annual representations and certifications electronically at the ORCA website, the offeror shall complete only paragraphs (c) through (o) of this provision.

(a) *Definitions.* As used in this provision -

"Economically disadvantaged women-owned small business (EDWOSB) concern" means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business eligible under the WOSB Program.

"Forced or indentured child labor" means all work or service-

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

"Inverted domestic corporation", as used in this section, means a foreign incorporated entity which is treated as an inverted domestic corporation under 6 U.S.C. 395(b), i.e., a corporation that used to be incorporated in the United States, or used to be a partnership in the United States,

incorporated in a foreign country, that meets the criteria specified in 6 U.S.C. 395(b), applied in accordance with the rules and definitions of 6 U.S.C. 395(c). An inverted domestic corporation as herein defined does not meet the definition of an inverted domestic corporation as defined by the Internal Revenue Code at 26 U.S.C. 7874.

"Manufactured end product" means any end product in Federal Supply Classes (FSC) 1000-9999, except-

- (1) FSC 5510, Lumber and Related Basic Wood Materials;
- (2) Federal Supply Group (FSG) 87, Agricultural Supplies;
- (3) FSG 88, Live Animals;
- (4) FSG 89, Food and Related Consumables;
- (5) FSC 9410, Crude Grades of Plant Materials;
- (6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) FSC 9610, Ores;
- (9) FSC 9620, Minerals, Natural and Synthetic; and
- (10) FSC 9630, Additive Metal Materials.

"Place of manufacture" means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

"Restricted business operations" means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate--

- (1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;

- (2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;
- (3) Consist of providing goods or services to marginalized populations of Sudan;
- (4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;
- (5) Consist of providing goods or services that are used only to promote health or education; or
- (6) Have been voluntarily suspended.

"Sensitive technology"--

- (1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically--
  - (i) To restrict the free flow of unbiased information in Iran; or
  - (ii) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and
- (2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act (50 U.S.C. 1702(b)(3)).

"Service-disabled veteran-owned small business concern"-

- (1) Means a small business concern--
  - (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
  - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and size standards in this solicitation.

"Subsidiary" means an entity in which more than 50 percent of the entity is owned-

- (1) Directly by a parent corporation; or
- (2) Through another subsidiary of a parent corporation.

"Veteran-owned small business concern" means a small business concern-

- (1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

"Women-owned small business concern" means a small business concern-

- (1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.

"Women-owned small business (WOSB) concern eligible under the WOSB Program" (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

(b)(1) *Annual Representations and Certifications.* Any changes provided by the offeror in paragraph (b)(2) of this provision do not automatically change the representations and certifications posted on the Online Representations and Certifications Application (ORCA) website.

(2) The offeror has completed the annual representations and certifications electronically via the ORCA website accessed through <https://www.acquisition.gov>. After reviewing the ORCA database information, the offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR 52.212-3, Offeror Representations and Certifications--Commercial Items, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201), except for paragraphs \_\_\_\_\_. (Offeror to identify the applicable paragraphs at (c) through (o) of this provision that the offeror has completed for the purposes of this solicitation only, if any. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer. Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted electronically on ORCA.)

(c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.

(1) *Small business concern.* The offeror represents as part of its offer that it \_\_\_ is, \_\_\_ is not a small business concern.

(2) *Veteran-owned small business concern.* (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents as part of its offer that it \_\_\_ is, \_\_\_ is not a veteran-owned small business concern.

(3) *Service-disabled veteran-owned small business concern.* (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.) The offeror represents as part of its offer that it \_\_\_ is, \_\_\_ is not a service-disabled veteran-owned small business concern.

(4) *Small disadvantaged business concern.* (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents, for general statistical purposes, that it \_\_\_ is, \_\_\_ is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) *Women-owned small business concern.* (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents that it \_\_\_ is, \_\_\_ is not a women-owned small business concern.

(6) *WOSB concern eligible under the WOSB Program.* (Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(5) of this provision.) The offeror represents that-

(i) It [ ] is, [ ] is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It [ ] is, [ ] is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(6)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: -----  
-----.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(7) *Economically disadvantaged women-owned small business (EDWOSB) concern.* (Complete only if the offeror represented itself as a WOSB concern eligible under the WOSB Program in (c)(6) of this provision.) The offeror represents that-

(i) It [ ] is, [ ] is not an EDWOSB concern, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It [ ] is, [ ] is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(7)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture: -----  
-----.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

**Note:** Complete paragraphs (c)(8) and (c)(9) only if this solicitation is expected to exceed the simplified acquisition threshold.

(8) *Women-owned business concern (other than small business concern).*

(Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.)  
The offeror represents that it \_\_\_ is a women-owned business concern.

(9) *Tie bid priority for labor surplus area concerns.* If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

\_\_\_\_\_

(10) (Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns, or FAR 52.219-25, Small Disadvantaged Business Participation Program-Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.)

(i) *General.* The offeror represents that either-

(A) It \_\_\_ is, \_\_\_ is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the CCR Dynamic Small Business Search database maintained by the Small Business Administration, and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It \_\_\_ has, \_\_\_ has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) *Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns.* The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(10)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: \_\_\_\_\_

(11) *HUBZone small business concern.* (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents, as part of its offer, that--

(i) It \_\_\_ is, \_\_\_ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR Part 126; and

(ii) It \_\_\_ is, \_\_\_ is not a HUBZone joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (c)(11)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: \_\_\_\_\_.] Each HUBZone small business concern participating in the HUBZone joint venture shall submit a separate signed copy of the HUBZone representation.

(d) Representations required to implement provisions of Executive Order 11246-

(1) *Previous contracts and compliance.* The offeror represents that-

(i) It \_\_\_ has, \_\_\_ has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and

(ii) It \_\_\_ has, \_\_\_ has not filed all required compliance reports.

(2) *Affirmative Action Compliance.* The offeror represents that-

(i) It \_\_\_ has developed and has on file, \_\_\_ has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or

(ii) It \_\_\_ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) *Certification Regarding Payments to Influence Federal Transactions* (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$150,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(f) *Buy American Act Certificate.* (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act-Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product." The terms "commercially available off-the-shelf (COTS) item," "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--Supplies."

(2) Foreign End Products:

Line Item No.	Country of Origin
---------------	-------------------

\_\_\_\_\_  
(List as necessary)

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)(1) *Buy American Act-Free Trade Agreements-Israeli Trade Act Certificate.* (Applies only if the clause at FAR 52.225-3, Buy American Act-Free Trade Agreements-Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end product," "commercially available off-the-shelf (COTS) item," "component," "domestic end product," "end product," "foreign end product," "Free Trade Agreement country," "Free Trade Agreement country end product," "Israeli end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act."

(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act":

Free Trade Agreement Country End Products (Other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

Line Item No.	Country of Origin
---------------	-------------------

\_\_\_\_\_  
(List as necessary)

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy American Act - Free Trade Agreements - Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product."

Other Foreign End Products

Line Item No.	Country of Origin
---------------	-------------------

\_\_\_\_\_  
(List as necessary)

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) *Buy American Act - Free Trade Agreements - Israeli Trade Act Certificate, Alternate I.* If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act - Free Trade Agreements - Israeli Trade Act":

Canadian End Products:

Line Item No.	Country of Origin
---------------	-------------------

\_\_\_\_\_  
(List as necessary)

(3) *Buy American Act - Free Trade Agreements - Israeli Trade Act Certificate, Alternate II.* If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act - Free Trade Agreements - Israeli Trade Act":

Canadian or Israeli End Products:

Line Item No.	Country of Origin
---------------	-------------------

\_\_\_\_\_ (List as necessary)

(4) *Buy American Act-Free Trade Agreements-Israeli Trade Act Certificate, Alternate III.* If Alternate III to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act":

Free Trade Agreement Country End Products (Other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

Line Item No.	Country of Origin
---------------	-------------------

\_\_\_\_\_ (List as necessary)

(5) *Trade Agreements Certificate.* (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(5)(ii) of this provision, is a U.S.-made or designated country end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made or designated country end products.



(i) Taxes are considered delinquent if both of the following criteria apply:

(A) The tax liability is finally determined. The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(B) The taxpayer is delinquent in making payment. A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(ii) *Examples.* (A) The taxpayer has received a statutory notice of deficiency, under I.R.C. Sec. 6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(B) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. Sec. 6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(C) The taxpayer has entered into an installment agreement pursuant to I.R.C. Sec. 6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(D) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. 362 (the Bankruptcy Code).

(i) Certification Regarding Knowledge of Child Labor for *Listed End Products* (Executive Order 13126). (The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).)

(1) *Listed end products.*

Listed End Product	Listed Countries of Origin
[ ]	[ ]

(2) *Certification.* (If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.)

\_\_\_ (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

\_\_\_ (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(j) *Place of manufacture.* (Does not apply unless the solicitation is predominantly for the acquisition of manufactured end products.) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly--

(1) \_\_\_ In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States);  
or

(2) \_\_\_ Outside the United States.

(k) *Certificates regarding exemptions from the application of the Service Contract Act.* (Certification by the offeror as to its compliance with respect to the contract also constitutes its certification as to compliance by its subcontractor if it subcontracts out the exempt services.) (The contracting officer is to check a box to indicate if paragraph (k)(1) or (k)(2) applies.)

(1) Maintenance, calibration, or repair of certain equipment as described in FAR 22.1003-4(c)(1). The offeror \_\_\_ does \_\_\_ does not certify that--

(i) The items of equipment to be serviced under this contract are used regularly for other than Governmental purposes and are sold or traded by the offeror (or subcontractor in the case of an exempt subcontract) in substantial quantities to the general public in the course of normal business operations;

(ii) The services will be furnished at prices which are, or are based on, established catalog or market prices (see FAR 22.1003-4(c)(2)(ii)) for the maintenance, calibration, or repair of such equipment; and

(iii) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract will be the same as that used for these employees and equivalent employees servicing the same equipment of commercial customers.

(2) Certain services as described in FAR 22.1003-4(d)(1). The offeror \_\_\_ does \_\_\_ does not certify that--

(i) The services under the contract are offered and sold regularly to non-Governmental customers, and are provided by the offeror (or subcontractor in the case of an exempt subcontract) to the general public in substantial quantities in the course of normal business operations;

(ii) The contract services will be furnished at prices that are, or are based on, established catalog or market prices (see FAR 22.1003-4(d)(2)(iii));

(iii) Each service employee who will perform the services under the contract will spend only a small portion of his or her time (a monthly average of less than 20 percent of the available hours on an annualized basis, or less than 20 percent of available hours during the contract period if the contract period is less than a month) servicing the Government contract; and

(iv) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract is the same as that used for these employees and equivalent employees servicing commercial customers.

(3) If paragraph (k)(1) or (k)(2) of this clause applies--

(i) If the offeror does not certify to the conditions in paragraph (k)(1) or (k)(2) and the Contracting Officer did not attach a Service Contract Act wage determination to the solicitation, the offeror shall notify the Contracting Officer as soon as possible; and

(ii) The Contracting Officer may not make an award to the offeror if the offeror fails to execute the certification in paragraph (k)(1) or (k)(2) of this clause or to contact the Contracting Officer as required in paragraph (k)(3)(i) of this clause.

(l) *Taxpayer Identification Number (TIN)* (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (l)(3) through (l)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) *Taxpayer Identification Number (TIN)*.

\_\_\_ TIN: \_\_\_\_\_.

\_\_\_ TIN has been applied for.

\_\_\_ TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of the Federal Government.

(4) *Type of organization.*

Sole proprietorship;

Partnership;

Corporate entity (not tax-exempt);

Corporate entity (tax-exempt);

Government entity (Federal, State, or local);

Foreign government;

International organization per 26 CFR 1.6049-4;

Other \_\_\_\_\_.

(5) *Common parent.*

Offeror is not owned or controlled by a common parent;

Name and TIN of common parent:

Name \_\_\_\_\_.

TIN \_\_\_\_\_.

(m) *Restricted business operations in Sudan.* By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(n) *Prohibition on Contracting with Inverted Domestic Corporations-* (1) *Relation to Internal Revenue Code.* An inverted domestic corporation as herein defined does not meet the definition of an inverted domestic corporation as defined by the Internal Revenue Code 25 U.S.C. 7874.

(2) *Representation.* By submission of its offer, the offeror represents that-

- (i) It is not an inverted domestic corporation; and
- (ii) It is not a subsidiary of an inverted domestic corporation.

(o) *Prohibition on contracting with entities engaging in certain activities or transactions relating to Iran.* (1) The offeror shall email questions concerning sensitive technology to the Department of State at CISADA106@state.gov.

(2) *Representation and certifications.* Unless a waiver is granted or an exception applies as provided in paragraph (o)(3) of this provision, by submission of its offer, the offeror-

(i) Represents, to the best of its knowledge and belief, that the offeror does not export any sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran;

(ii) Certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act; and

(iii) Certifies that the offeror, and any person owned or controlled by the offeror, does not knowingly engage in any transaction that exceeds \$3,000 with Iran's Revolutionary Guard Corps or any of its officials, agents, or affiliates, the property and interests in property of which are blocked pursuant to the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.) (see OFAC's Specially Designated Nationals and Blocked Persons List at

<http://www.treasury.gov/ofac/downloads/t11sdn.pdf>).

(3) The representation and certification requirements of paragraph (o)(2) of this provision do not apply if-

(i) This solicitation includes a trade agreements certification (e.g., 52.212-3(g) or a comparable agency provision); and

(ii) The offeror has certified that all the offered products to be supplied are designated country end products.

(End of provision)

**52.225-18 PLACE OF MANUFACTURE (SEP 2006)**

(a) *Definitions.* As used in this clause—

“Manufactured end product” means any end product in Federal Supply Classes (FSC) 1000-9999, except—

- (1) FSC 5510, Lumber and Related Basic Wood Materials;
- (2) Federal Supply Group (FSG) 87, Agricultural Supplies;
- (3) FSG 88, Live Animals;
- (4) FSG 89, Food and Related Consumables;
- (5) FSC 9410, Crude Grades of Plant Materials;
- (6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) FSC 9610, Ores;
- (9) FSC 9620, Minerals, Natural and Synthetic; and
- (10) FSC 9630, Additive Metal Materials.

“Place of manufacture” means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

(b) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly—

- (1)  In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States);  
or
- (2)  Outside the United States.

(End of provision)

**1852.209-73 REPRESENTATION BY OFFERORS THAT THEY ARE NOT THE ASSOCIATION OF COMMUNITY ORGANIZATIONS FOR REFORM NOW (ACORN) OR A SUBSIDIARY OF ACORN (DEVIATION FEB 2012)**

- (a) In accordance with section 534 of The Consolidated and Further Continuing Appropriation Act of 2012 (Pub. L.112-55) none of the funds made available by the Act may be distributed to the Association of Community Organizations for Reform Now (ACORN) or its subsidiaries.
- (b) The offeror represents, by submission of its offer, that it is not the Association of Community Organizations for Reform Now (ACORN) or a subsidiary thereof.

(End of provision)

**1852-209.74 CERTIFICATION BY OFFERORS REGARDING FEDERAL INCOME TAX FILING and FEDERAL INCOME TAX VIOLATIONS. (DEVIATION FEB 2012)**

- (a) In accordance with section 527 of The Consolidated and Further Continuing Appropriation Act of 2012 (Pub. L.112-55) none of the funds made available by the Act may be used to enter into a contract in an amount greater than \$5 Million unless the prospective contractor certifies in writing to NASA that, to the best of its knowledge and belief, the contractor has filed all Federal tax returns required during the three years preceding the certification, has not been convicted of a criminal offense under the Internal revenue Code of 1986, and has not, more than 90 days prior to certification, been notified of any unpaid Federal tax assessment for which the liability remains unsatisfied, unless the assessment is the subject of an installment agreement or offer in compromise that has been approved by the Internal Revenue Service and is not in default, or the assessment is the subject of a non-frivolous administrative or judicial proceeding.
- (b) The offeror's proposal shall include a signed written certification as follows –

To the best of my knowledge and belief, ---(name of offeror)--- has filed the Federal tax returns required during the three years preceding this certification, has not been convicted of a criminal offense under the Internal revenue Code of 1986, and has not, more than 90 days prior to certification, been notified of any unpaid Federal tax assessment for which the liability remains unsatisfied, unless the assessment is the subject of an installment agreement or offer in compromise that has been approved by the Internal Revenue Service and is not in default, or the assessment is the subject of a non-frivolous administrative or judicial proceeding.

Firm \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Date of execution \_\_\_\_\_

(End of Provision)

**1852.209-75 REPRESENTATION BY CORPORATIONS REGARDING AN UNPAID DELINQUENT TAX LIABILITY OR A FELONY CONVICTION UNDER ANY FEDERAL LAW (DEVIATION FEB 2012)**

(a) In accordance with sections 544 and 543 of The Consolidated and Further Continuing Appropriation Act of 2012 (Pub. L.112-55), none of the funds made available by that Act may be used to enter into a contract with any corporation that-

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government; or

(2) Was convicted (or had an officer or agent of such corporation acting on behalf of the corporation convicted) of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(b) The offeror represents that

(1) It is  is not  a corporation that has had any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and

(2) It is  is not  a corporation that was convicted, or had an officer or agent acting on behalf of the corporation convicted, of a felony criminal violation under a Federal law within the preceding 24 months.

(End of provision)

**REPRESENTATION ON ACQUISITION OF INFORMATION TECHNOLOGY SYSTEMS FROM ENTITIES OWNED, DIRECTED OR SUBSIDIZED OF THE PEOPLE'S REPUBLIC OF CHINA.**

(a) Definitions

“Acquire” means procure with appropriated funds by and for the use of NASA through purchase or lease.

“Entity owned, directed or subsidized by the People’s Republic of China” means any company incorporated under the laws of the People’s Republic of China.

“Information technology system” means any equipment, or interconnected system(s) or subsystem(s) of equipment, that is used in the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency.

(1) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency that requires --

(i) Its use; or

(ii) To a significant extent, its use in the performance of a service or the furnishing of a product.

(2) The term “information technology” includes computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including support services), and related resources.

(3) The term “information technology” does not include any equipment that--

(i) Is acquired by a contractor incidental to a contract; or

(ii) Contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology.

(b) In accordance with section 534 of the Consolidated and Further Continuing Appropriation Act, 2013 (Pub. L. 113-6), the offeror represents none of the funds made available by the Act will be used to acquire an information technology system that is produced, manufactured, or assembled by an entity owned, directed or subsidized by the People's Republic of China.

(End of provision)