STATE OF SOUTH CAROLINA **COUNTY OF RICHLAND**	)	**BEFORE THE CHIEF PROCUREMENT OFFICER FOR CONSTRUCTION**
IN THE MATTER OF: BID PROTEST	)	**DECISION**
NUCOR BUILDING SYSTEMS - SWANSEA	)	**CASE NO. 2010-002**
v.	)	
SOUTH CAROLINA DEPARTMENT OF CORRECTIONS	)	**POSTING DATE: NOVEMBER 2, 2009**
WATEREE RIVER CORRECTIONAL INSTITUTE FARM DAIRY EXPANSION MILKING CENTER PROJECT N04-9674-MJ-C	)	

This matter is before the Chief Procurement Officer for Construction (CPOC) pursuant to a request by Nucor Building Systems-Swansea (Nucor), under the provisions of section 11-35-4210 of the South Carolina Consolidated Procurement Code, for an administrative review of Addendum #1 to the solicitation for bids on the Wateree River Correctional Institute Farm Dairy Expansion Milking Center ("the Project"), for the South Carolina Department of Corrections (DOC). On October 28, 2009, pursuant to S.C. Code Ann. §11-35-4210(4), the CPOC conducted an administrative review by hearing. At the hearing, Al Behr, Nucor Building Systems general manager, represented Nucor and Sharon Scott, DOC's Manager Architectural/Engineering Services, represented DOC. Present as witnesses were Darrell Watts and Joseph Guido, architects with CDA Architects, the project architect contracted by DOC to design the project. During the hearing, the CPO received Exhibits 1 through 8 into evidence, heard oral arguments, and took testimony from all parties. This decision is based on the testimony and evidence presented at the hearing and applicable law.

NATURE OF THE PROTEST

Nucor's statement of protest is attached. [Ex. A] In its letter of protest, Nucor states that it is protesting "the decision by the architect (CDA Architects) not to list Nucor Building Systems as an approved supplier of the metal building on the ... project." In the following paragraph, Nucor notes that Addendum #1 added United Structures of America as an approved metal building supplier and then states that it (Nucor) is "qualified and capable to supply this project and hereby requests approval to bid." At the end of its letter, Nucor places great emphasis on the fact that it is located in Swansea, South Carolina and that a large percentage of the steel contained in its product is "melted and cast" in South Carolina.

FINDINGS OF FACT

The following dates and facts are relevant to the protest:

1. On September 7, 2009, DOC advertised for bids to construct the Project. Pursuant to this advertisement, bidders were to submit their bids on or before October 8, 2009. [Hearing Ex. 1]

2. Included in the bid documents were specifications for the Metal Building System, which is a part of the project. These specifications include a list of six approved metal building system manufactures (suppliers). Nucor is not included on the list of approved suppliers. [Hearing Ex. 2]

3. On October 2, 2009, DOC issued Addendum #1, which added United Structures of America to the approved metal building supplier's list. [Hearing Ex. 3]

4. On October 9, 2009, Nucor protested DOC's decision to not list Nucor as an approved metal building supplier.

5. On October 26, 2009, the CPOC received from DOC a motion to dismiss Nucor's protest for failure to comply with the requirements of the solicitation in order to be considered for inclusion in the solicitation as an approved supplier. [Ex. B]

DISCUSSION

Nucor is a manufacturer and supplier of metal buildings located in Swansea, South Carolina. As a manufacturer and supplier, Nucor has supplied or currently is supplying a metal building to DOC's contractor for metal tunnel barns on Phase 2 of the dairy complex expansion project at Wateree River Correctional Institute Farm ("the Farm").

This project is the third and final phase of dairy complex expansion project at the Farm. This project provides for the construction of a milking parlor and milk processing building. The initial solicitation document for construction of this third phase does not list Nucor as an approved metal building supplier. Included as a part of this document were Instructions to Bidders. Section 3.3 of the Instructions to Bidders provides instruction for bidders that desire to bid a substitute for any product or approved supplier listed in the specifications. Section 3.3.2 provides:

> No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect **at least ten days prior to the date for receipt of Bids**. ... The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

In light of the date for receipt of bids published in the solicitation, DOC and CDA interpreted this provision to require receipt of a request for substitution on or before September 28, 2009. DOC and CDA pointed out this September 28, 2009 deadline to potential bidders at the pre-bid meeting. The evidence showed that DOC and CDA adhered strictly to this date. Indeed, the last supplier to be considered as a substitute supplier, United Structures of America, submitted its request on September 28, 2009. [Testimony of Watts]

Both Mr. Behr and Mr. Watts agreed on the following facts regarding this matter. Late in the day on September 29, 2009, Mr. Behr called CDA to inquire as to why Nucor was not listed in the solicitation as an approved metal building supplier. During the ensuing telephone conversation, Mr. Behr and Mr. Watts agreed to meet on September 30, 2009, to discuss the matter. During the meeting on September 30, 2009, Mr. Watts advised Mr. Behr why, despite being the supplier on Phase 2, Nucor was not included in the solicitation as an approved metal building supplier on this project.[1] Mr. Behr asked that CDA re-consider Nucor for inclusion in the solicitation as an approved supplier and give Nucor the opportunity to make amends for any shortcomings on Phase II. At some point in the conversation, Mr. Watts advised Nucor that the last day to submit a request for consideration as an approved supplier was September 28, 2009, and, therefore, it was too late to consider Nucor for addition to the solicitation by addendum.[2]

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[1] DOC and CDA presented testimony and evidence (Hearing Exhibits 5 through 7) on why they did not list Nucor in the solicitation as an approved metal building supplier.

[2] DOC and CDA also emphasized the fact that the Instructions to Bidders required the request to be in writing and that Nucor never submitted a written request.

The evidence presented at the hearing showed that DOC and CDA treated Nucor no differently than they treated other suppliers in refusing to consider Nucor's untimely oral request. CDA received two other requests for substitution after September 28, 2009, which DOC and CDA did not consider because the requests were late.[3] [Testimony of Mr. Watts]

Nucor's Protest fails to State a Claim

It is fundamental that a protest must be based on either a requirement imposed by law or a procedure established in the solicitation. *SC Code Ann § 11-35-4210(2)(a), ("A protest ... must ... set forth the grounds of the protest and the relief requested with enough particularity to give notice of the issues to be decided"). See e.g. Protest of Blue Cross and Blue Shield of South Carolina, Case No. 1996-9 ("BCBS does not specify how Pearce's bid is not in compliance, nor does it specify what parts of the law to which Pearce's bid is not in compliance. The Panel grants Pearce's motions to dismiss as vague the issue of Pearce's bid violating age rating guidelines in federal law."); Matter of: Alascom, Inc., 1993 WL 188688(Comp. Gen.), ([O]ur Bid Protest Regulations require that protests include a detailed statement of the legal and factual grounds of protest, 4 C.F.R. § 21.1(c)(4), and that the grounds stated be legally sufficient. 4C.F.R. § 21.1(e). This requirement contemplates that protesters will provide, at a minimum, either allegations or evidence sufficient, if uncontradicted, to establish the likelihood of ... improper agency action... In this regard, our Regulations clearly state that we may summarily dismiss a protest ... when on its face a protest does not state a valid basis of protest.").* Neither in its letter of protest nor at the hearing did Nucor allege a violation of any duty on the part of DOC and its agent CDA in deciding not to list Nucor in the solicitation as an approved metal building supplier. Moreover, Nucor did not present any evidence of a violation of any duty. Nucor did not protest the timeline provided in the solicitation for submitting a request for substitution and presented no claim or evidence that the timeline was in violation of any requirement of law. Nucor did not protest DOC and CDA's application of the timeline nor did Nucor present any evidence that DOC and CDA erroneously applied the timeline. Nucor did not protest the solicitation's requirement that any request be in writing nor did Nucor present any evidence that this requirement violated any law. Nucor did not deny that it did not submit a written request for substitution, nor did Nucor deny that it submitted its oral request for substitution after the deadline for submitting a request had passed. Nucor did not protest, did not allege, and did not show that

[3] Unlike Nucor's request, these other two requests were submitted in writing as required by the solicitation.

DOC treated Nucor any differently than any other supplier that failed to submit a timely request for inclusion in the solicitation by addendum as an approved supplier. Moreover, the testimony indicated that Nucor accepted the determination that its request was late but asked DOC, through its agent CDA, to consider all late requests for inclusion as approved suppliers. [Testimony of Behr] However, Nucor did not allege nor did Nucor show any duty on the part of DOC to consider this late request.

Both in its letter of protest and at the hearing, Nucor placed great emphasis on the fact that it was located in South Carolina, that much of the steel used in its product is melted and cast in South Carolina and using Nucor will employ South Carolinians. Moreover, Nucor noted that none of the approved suppliers is located in South Carolina. However, simply residing in South Carolina does not entitle a company to expect the State and its agencies such as DOC to ignore the procedures set forth in the solicitation. *See e.g. Protest of Cathcart and Associates, Inc., Case No. 1990-1, (Cathcart protested that its response was" most advantageous to the State because its price is lower and Cathcart is a South Carolina corporation." The Panel dismissed this item of protest stating: "The Panel finds as a matter of law that this grounds for relief fails to state a claim.").*

Nucor simply has failed to allege or show a violation of any duty on the part of DOC and the CPOC can find none. Therefore, Nucor has failed to state a claim.

Nucor's Protest is Untimely

Even had Nucor stated a claim, its protest would fail as an untimely protest of the solicitation. Nucor is protesting the fact that it is not listed in the solicitation as an approved supplier. This fact was obvious on September 7, 2009, the day the initial solicitation document was issued. Section 11-35-4210(a) provides that a "prospective bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the solicitation ... shall protest ... within fifteen days of the date of the issuance of the ... solicitation documents." However, Nucor protested a full month later.

As the metal building supplier on Phase 2, Nucor should have considered its omission as an approved supplier in the Phase 3 solicitation to be an omission of concern. Instead of acting immediately to address this omission, Nucor waited until after the deadline for doing so had passed. After missing all required deadlines for protesting or being considered for substitution, Nucor latched on to Addendum #1 in the hopes that it would be able to obtain its objective via a protest. However, Addendum #1 did not provide new or different information regarding Nucor's status and, therefore, did not extend the period for Nucor to protest its omission from the solicitation as an approved metal building supplier.

In general, any protest regarding an issue raised by the solicitation documents is regarded as a protest of the solicitation. *Protest of Amdahl Corp. and International Bus. Mach., Case No. 1986-6, (The Panel dismissed protest grounds as untimely where the gravamen of the protest, which involved the specifications, went to the solicitation documents and should have been raised when they were published.)* Further, the fifteen days for protesting is not extended by an amendment issued when the amendment merely confirms the solicitation. *Protest of Mechanical Contractors Assoc of SC, Case No. 1995-12 (The Panel found that an amendment would only be "at issue" if it provided new or different information than in the solicitation documents because otherwise the fifteen days for protesting the solicitation would be extended by any amendment issued.); See also, Protest of S.C. Ass'n of the Deaf,* Case No. 2008-2.

DECISION

It is the decision of the Chief Procurement Officer for Construction that Nucor's protest is untimely and fails to state a claim.

For the foregoing reasons, the Protest is dismissed.

John St. C. White
Chief Procurement Officer for Construction

2 Nov 09
Date

Columbia, South Carolina

STATEMENT OF RIGHT TO FURTHER ADMINISTRATIVE REVIEW

The South Carolina Procurement Code, in Section 11-35-4210, subsection 6, states:

> (6) Finality of Decision. A decision pursuant to subsection (4) is final and conclusive, unless fraudulent or unless a person adversely affected by the decision requests a further administrative review by the Procurement Review Panel pursuant to Section 11-35-4410(1) within ten days of posting of the decision in accordance with subsection (5). The request for review must be directed to the appropriate chief procurement officer, who shall forward the request to the panel or to the Procurement Review Panel, and must be in writing, setting forth the reasons for disagreement with the decision of the appropriate chief procurement officer. The person also may request a hearing before the Procurement Review Panel. The appropriate chief procurement officer and an affected governmental body shall have the opportunity to participate fully in a later review or appeal, administrative or judicial.

Copies of the Panel's decisions and other additional information regarding the protest process is available on the internet at the following web site: www.procurementlaw.sc.gov

FILE BY CLOSE OF BUSINESS: Appeals must be filed by 5:00 PM, the close of business. *Protest of Palmetto Unilect, LLC*, Case No. 2004-6 (dismissing as untimely an appeal emailed prior to 5:00 PM but not received until after 5:00 PM); *Appeal of Pee Dee Regional Transportation Services, et al.*, Case No. 2007-1 (dismissing as untimely an appeal faxed to the CPO at 6:59 PM).

FILING FEE: Pursuant to Proviso 83.1 of the 2008 General Appropriations Act, "[r]equests for administrative review before the South Carolina Procurement Review Panel shall be accompanied by a filing fee of two hundred and fifty dollars ($250.00), payable to the SC Procurement Review Panel. The panel is authorized to charge the party requesting an administrative review under the South Carolina Code Sections 11-35-4210(6), 11-35-4220(5), 11-35-4230(6) and/or 11-35-4410(4). . . . . Withdrawal of an appeal will result in the filing fee being forfeited to the panel. If a party desiring to file an appeal is unable to pay the filing fee because of hardship, the party shall submit a notarized affidavit to such effect. If after reviewing the affidavit the panel determines that such hardship exists, the filing fee shall be waived." 2008 S.C. Act No. 310, Part IB, § 83.1. PLEASE MAKE YOUR CHECK PAYABLE TO THE "SC PROCUREMENT REVIEW PANEL."

LEGAL REPRESENTATION: In order to prosecute an appeal before the Panel, a business must retain a lawyer. Failure to obtain counsel will result in dismissal of your appeal. *Protest of Lighting Services*, Case No. 2002-10 (Proc. Rev. Panel Nov. 6, 2002) and *Protest of The Kardon Corporation*, Case No. 2002-13 (Proc. Rev. Panel Jan. 31, 2003).

EXH. A

NUCOR
BUILDING SYSTEMS-SWANSEA

200 WHETSTONE ROAD
SWANSEA, SC 29160
www.nucorbuildingsystems.com

PH: (803) 568-2100
FAX: (803) 568-2121

October 9, 2009

John St. C. White, P.E.
Office of State Engineer
1201 Main Street
Suite 600
Columbia, SC 29201

Re: Wateree River Correctional Institution – Dairy Facility Expansion
Project number: N04-9674-MJ

Dear Mr. White:

This letter is to protest the decision by the architect (CDA Architects) not to list Nucor Building Systems as an approved supplier of the metal building on the above referenced project. This protest is filed under section 11-35-4210 of the SC Consolidated Procurement Code.

Addendum No. 1 was issued on October 2, 2009 which added United Structures of America as an approved metal building supplier. (Addendum No. 1, Specifications section, item 8) Nucor is qualified and capable to supply this project and hereby requests approval to bid.

Nucor also requests a stay of procurement until a decision regarding this protest is rendered.

Nucor Building Systems is located in Swansea, SC and will fabricate and ship in excess of 1,500 buildings to all parts of the Southeastern US and Caribbean islands. In addition, approximately 60% of the steel contained in our product is melted and cast in Nucor facilities in South Carolina.

Thank you for your consideration in this matter.

Sincerely,

Al Behr
General Manager
Nucor Building Systems - SC

Enc: Addendum No. 1, pages 1 and 2 only

CDA Architects
Architecture • Interiors • Planning

1523 Huger Street
Columbia, South Carolina 29201

(803) 799-6502 FAX (803) 799-2014
www.cdaarchitectsinc.com

ADDENDUM #1

PROJECT: Wateree River
Correctional Institute Farm
Dairy Expansion – Milking Center
State Project #: No4-9674-MJ-C

October 02, 2009

TOTAL PAGES: 47

This Addendum modifies the Drawings and Specifications for the above-referenced project dated 07/10/09. Changes noted herein will become part of the Contract. Except as noted herein, original drawings and any previous addendum(s) will apply.

GENERAL:

1 With respect to Form SE-310 the Pre-bid Meeting was non-mandatory, please find attached a list of plan holders who have attended the pre-bid meeting.(see attached sign-in sheets)

2 **In the SE-310 for "Bid Closing Time", change to 3:00 PM.**

3 With respect to the **SE-310** which states that Pre-bid Meeting held at 10:00 am on 09/22/09 was **not** mandatory, the following is a list of plan holders that attended the meeting: (see attached sign sheet).

4 **CLARIFICATION**: The Civil drawings and Waste Management drawings are included in the bid package for reference only. These sheets were provided for coordination purposes only. The work associated with civil and waste management are not within the scope of work for this project.

5 Response to questions presented to Architect (See attached).

SPECIFICATIONS:

1. **Table of Contents**, Division 1, add: **Section 015650 Security Measures**.....2 pages. (see attached specification section 015650)

2. **Table of Contents,** Division 6, add **Section 061000 Rough carpentry**.....4 pages. (see attached specification section 061000)

3. **Table of Contents**, Division 32, delete: **Section 329200 Turf and Grasses**.....6 pages.

4. **Section 011000, Summary**....4 pages, delete entire specification and replace with revised **Section011000, Summary**.....5 pages (see attached revised specification).

5. **Section 033000, Cast-In-Place Concrete**.....24 pages, delete entire specification and replace with revised **Section 033000, Cast-In-Place Concrete**.....22 pages (see attached revised specification).

6. **Section 096723, Resinous Flooring,** paragraph 2.1, A: add the following manufacturer:

    5. Key Resin Company

7. **Section 099113, Exterior Painting**, paragraph 2.1,A: add the following manufacturer:

    8. RoseTalbert

8. **Section 133419, Metal building Systems**:

    A. Under paragraph 1.3, B, add the following:

        4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches:
            1. Flashing and trim.
            2. Gutters.
            3. Downspouts

    B. Under paragraph 2.1, A: add the following manufacturer to the list approved metal building suppliers:

        "7. United Structures of America."

    C. Under paragraph 2.3, B, 2, sub-paragraph b: replace with the following:

        b. Girts: Horizontal deflection of L/120 of the span for supporting metal Horizontal deflection of L/240 of the span for supporting masonry

    D. Under paragraph 2.5, B: change "Tapered-Rib-Profile, Metal Liner Panels", to "Tapered-Rib-Profile, Metal Soffit Panels".

    E. Under paragraph 2.5, C, 1: change "24 gauge nominal thickness", to "26 gauge nominal thickness".

    F. Add paragraphs 2.7, F and 2.7, G to read the following:

        F. Gutters: Formed from minimum 0.0159-inch- thick, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."

EXH. B

South Carolina Department of Corrections

MARK SANFORD, Governor
JON OZMINT, Director

October 26, 2009

Mr. John St. C. White, PE
Chief Procurement Officer for Construction
Office of State Engineer (OSE)
1201 Main St, Suite 600
Columbia, SC 29201

RE: Wateree River CI – Dairy Expansion N04-9674-MJ-C
Nucor's Bid Protest

Dear Mr. White:

The South Carolina Department of Corrections (SCDC) is requesting OSE to dismiss the request of the protest by Nucor Building Systems. Nucor did not submit documentation to CDA (reference CDA letter to Ms. Jordan dated Oct 20, 2009, letter -- attached) requesting substitution approval. Therefore, the protest request is not valid and the stay should be dismissed.

Additionally, the designer has the final decision for approval or disapproval of all proposed substitutions per the AIA documents.

Time is of the essence for this project. SCDC has started making interest payments on the construction loan. The equipment is arriving on-site for the milking parlor and processing areas. Construction of the tunnel barns is on-going. It is critical the solicitation process for the milking center general contractor proceed without further delay.

Sincerely,

Sharon Scott

Sharon E. Scott
Manager for A/E Services

CDA ARCHITECTS

Curt Davis, President
David R. Yensan, Vice President
Darrell W. Watts, Principal
Sheryl A. Abbott, Principal

October 20, 2009

Margaret Jordan, PE, LEED AP, CBO
Project Manager
Office of State Engineer
1201 Main Street Suite 600
Columbia, SC 29201

Reference: SCDC Wateree River Correctional Institute Farm
Dairy Expansion-Milking Center
State Project #: N04-9674-MJ-C

Subject: Nucor's Bid Protest

Dear Margaret,

CDA Architects is in receipt of the October 9th letter from Nucor, protesting the above referenced solicitation (see attached). We are also in receipt of the October 13th letter from the SC Budget and Control Board establishing a "Notification of Hearing" for October 28th to review the protest (see attached), as well as the July 2003 Protest Before the Chief Procurement Officers pamphlet.

Please accept this letter as our position regarding Nucor's protest.

In the "Starting Process" of the "Protest Before the Chief Procurement Officers" pamphlet, it states that, *"...the protest letter must set forth the grounds of the protest and the relief requested with enough particularity to give notice of the issues to be decided...."* In Nucor's letter, they sight Addendum #1, which added United Structures of America to the specifications, and they state that they (Nucor) are also capable of supplying this project. On 09/28/09 (within 10 days prior to the bid date), CDA Architects received written correspondence requesting that we add United Structures of America to the specifications. Subsequently, their written submission was reviewed and approved by CDA Architects as a metal building provider. To date, CDA Architects has not received any written or electronic request from Nucor to add their name to the approved manufacturers listed in the specifications. The AIA 701, section 3.3.2 states that, *"No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least 10 days prior to date for receipt of Bids."* It goes on to say that, *"The Architect's decision of approval or disapproval of a proposed substitution shall be final."*

CDA Architects has abided by the AIA 701 and the 00201-OSE guidelines as prescribed by the SC Budget and Control Board, Materials Management Office. Nucor has failed to provide the required information

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Phone 803.799.6502 • Fax 803.799.2014

for substitution in the time allowed; their protest is invalid. We request that the Office of the State Engineer consider Nucor's protest invalid, and deny this protest prior to the scheduled October 28, 2009 hearing, based on the information above.

To avoid further delay on this project, we also request that OSE allow the Bid Closing in (9) nine days so as not to further confuse or unfairly prejudice those bidders who have followed the specifications.

Sincerely,
CDA Architects

Darrell W. Watts, AIA,
Principal

Sharon Scott

From: Joseph Guido [Jguido@cdaarchitectsinc.com]
Sent: Tuesday, October 20, 2009 11:26 AM
To: 'Jordan, Margaret'
Cc: Darrell Watts; Sharon Scott
Subject: Wateree River Correctional Institute Farm - Milking Center - Protest
Attachments: 091020 Margaret Jordan re Bid Protest.pdf; Nucor Protest letter.pdf; B&CB protest letter.pdf

Dear Margaret,

Please accept the attached letter as our position to Nucor's protest. By the shear nature of an eleventh-hour protest CDA Architects, the State Engineers Office as well as the Dept. of Corrections were forced to consider establishing a protest hearing without the opportunity to respond or even question the validity of the protest. Having had a moment to review the claims, CDA would like to formerly present its response and request that the protest hearing be waived so that we may proceed with this project.

Respectfully
Joseph F. Guido
Project Manager
CDA Architects
1523 Huger Street
Columbia, SC 29201
(803) 799-6502
(803) 799-2014 (F)
jguido@cdaarchitectsinc.com
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October 9, 2009

John St. C. White, P.E.
Office of State Engineer
1201 Main Street
Suite 600
Columbia, SC 29201

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Project number: N04-9674-MJ

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Nucor also requests a stay of procurement until a decision regarding this protest is rendered.

Nucor Building Systems is located in Swansea, SC and will fabricate and ship in excess of 1,500 buildings to all parts of the Southeastern US and Caribbean Islands. In addition, approximately 60% of the steel contained in our product is melted and cast in Nucor facilities in South Carolina.

Thank you for your consideration in this matter.

Sincerely,

Al Behr
General Manager
Nucor Building Systems - SC

Enc: Addendum No. 1, pages 1 and 2 only

SOUTH CAROLINA
BUSINESS OPPORTUNITIES

Published by Materials Management Office – R. Voight Shealy, Director

September 7, 2009 **Volume 29, Issue 71**

Sealed Bids Listed in This Publication Will Be Received at the Time, Place & Date Indicated in the Announcements & Then Be Publicly Opened & Read Aloud. The State/Owner Reserves the Right to Reject Any Or All Bids & to Waive Technicalities.

ARCHITECT / ENGINEERING SERVICES

Invitation for Professional Services

SCBO Notes referred to in State Agency advertisements appearing in the Architect / Engineering Section of SCBO can be found at http://www.mmo.sc.gov/MMO/ops/SCBONotes.pdf Please verify requirements for non-State agency advertisements by contacting the agency / owner.

Project Name: INDEFINITE DELIVERY CONTRACT FOR ARCHITECTURE, INTERIOR DESIGN, & RELATED SERVICES
Project Number: H12-D146-JM
Location: Clemson University
Applicable SCBO Notes: 1, 4, & 5
Location at Which Public Notice of Meetings Will Be Posted: Gentry Hall, 191 Old Greenville Hwy., Clemson, SC 29634-5951
Description of Project: Consulting services related to architecture & interior design of various facilities & assets of Clemson University. Typical architectural projects include the design, renovation or upfit of campus buildings. Interior design work includes working with architects, project managers & users to design & specify furnishings, signage, materials, & finishes on major & minor projects. Work typically includes meeting with users to understand project needs, the development of alternative designs, finalizing work with specifications & working drawings, & following through with observation of installation. The contract period for an IDC is limited to two years & may not be amended to exceed this time limit. Total fees shall not exceed $300,000, excluding reimbursable expenses. The fee for any individual project shall not exceed $100,000, excluding reimbursable expenses. Multiple firms may be selected for this commission. The professional may be subject to a performance appraisal at the close of the project. Any questions concerning the terms & conditions of the proposed contract must be addressed to the Agency Coordinator listed below.
Description of All Professional Services Anticipated for Project: Architecture, Interior Design. Provide all A/E services necessary for a full scope of potential projects, including feasibility studies, design documentation through construction documents & specification preparation, bidding & construction administration as required. One feasibility study anticipated to be assigned under this contract involves the design of an inter-faith, memorial chapel to be located on the main campus of Clemson University. Qualification Statements should highlight experience with similar chapel projects
Information To Be Submitted In Addition to the Current Standard Federal Forms 254 & 255: Provide current contact information for at least three references directly relevant to this project. You may also provide additional information as necessary to fully inform the selection committee of the abilities & characteristics of the team. Provide six Qualification Statements in standard printed format & one in electronic format on a Compact Disc (CD). Each printed copy should contain a copy of the 254 & 255 forms. The CD is to contain only one file that is to be in Adobe Acrobat PDF format. The file is to be identical in content to the printed copies
Resume Deadline: 9/28/09 – 4:00pm
Number of Copies: See above
Agency/Owner: Clemson University
Name & Title of Agency Coordinator: Peter M. Knudsen, AICP, LEED AP, Assistant Campus Master Planner
Agency Address: Gentry Hall, 191 Old Greenville Hwy., Clemson, SC 29634-5951
Agency Phone: (864) 656-1108
Agency Fax: (864) 656-0167
Agency Coordinator E-mail: pknudse@clemson.edu

Description: PROFESSIONAL SERVICES FOR SOLID WASTE TRANSFER STATION FATAL FLAW ANALYSIS FOR ONE OR MORE PRE-DETERMINED SITES
Solicitation Number: 3918/100928
Delivery Point: Beaufort, SC
Pre-Proposal Conf.: 9/17/09 – 11:00am in the Beaufort Industrial Village #2 Conference Room, 102 Industrial Village Rd., Beaufort, SC 29906-4291. All offerors are strongly encouraged to attend
Submit Offer By: 9/30/09 – 3:00pm
Purchasing Entity: Beaufort County Purchasing Department, 102 Industrial Village Rd., Beaufort Industrial Village, Building 2, Beaufort, South Carolina 29906
Direct Inquiries To: David L. Thomas, phone (843) 470-2739 or E-mail dthomas@bcgov.net
Fax Request for Forms/Questions To: David L. Thomas, (843) 470-2738
Download Solicitation From: www.bcgov.net

Project Name: INDEFINITE DELIVERY CONTRACT FOR LAND SURVEYING SERVICES
Project Number: 456-529
Location: School District of Oconee County
Description: Land surveying services for the School District of Oconee County. Firms should submit written information about the firm & qualifications to the School District.
Anticipated Cost Range: $300,000 over a two-year period / individual projects not to exceed $100,000 per project.
Description of All Professional Services

Required for Project: Land surveying for property purchases, construction projects & any other surveying work required by the school district. The School District may select one or more firms for this IDC work.
Resume Deadline/Time: 9/22/09 – 2:00pm
Number of Copies: 3
Agency/Owner: School District of Oconee County
Name & Title of Agency Coordinator: Wayne Putnam, Coordinator of Purchasing
Address: 125 South Cove Rd., Seneca, SC 29672
Phone: (864) 886-4423
Email: waynep@oconee.k12.sc.us

REQUEST FOR QUALIFICATIONS

Project Name: CLASS A BUSINESS & INDUSTRIAL PARK FOR FAIRFIELD COUNTY
Project Number: RFQ 10-0909
Location: Fairfield County
Description: Fairfield County, SC, is requesting Statements of Qualifications from individual firms or a team of firms providing architectural, engineering, geotechnical / environmental & industrial / business park planning services to assist & advise Fairfield County, SC, in preparing a comprehensive land use & project site master plan for the development of a 600-acre Class A Business & Industrial Park. Proposals shall be prepared in accordance with the RFQ instructions which are available by contacting the Fairfield County Procurement Office at the address below.
Resume Deadline/Time: 9/25/09 – 12:00pm
Number of Copies: 7
Agency/Owner: Fairfield County
Name & Title of Agency Coordinator: Sheila Pickett, Director of Procurement
Address: PO Drawer 60, 350 Columbia Rd., Winnsboro, SC 29180
Phone: (803) 712-6503
Email: spickett@fairfieldsc.com
Website: www.fairfieldsc.com

CONSTRUCTION

Invitation for Construction Bids

SCBO Notes referred to in State Agency advertisements appearing in the Construction Section of SC Business Opportunities can be found at http://www.mmo.sc.gov/MMO/ops/SCBONotes.pdf Please verify requirements for non-State agency advertisements by contacting the agency / owner.

Project Name: WATEREE RIVER CORRECTIONAL INSTITUTE FARM DAIRY EXPANSION – MILKING CENTER
Project Number: N04-9674-MJ-C
Location: 8200 State Farm Rd., Rembert, SC 29128
Applicable SCBO Notes: 2, 4, & 5
Bid Security Required: Yes
Performance Bond Required: Yes
Payment Bond Required: Yes
Description of Project: The work shall include the fabrication & erection of the milking center, cow holding pen & connection to the existing cow lanes & waste water management system. The milking center consists of a 9,201 SF processing building & a 12,210 SF milking parlor & holding pen. General contractor will be required to coordinate with the milking parlor & milk processing vendors for their installation of the milking equipment & milking systems, as provided by the Department of Corrections. Contractor may be subject to performance appraisal at close of project.
Construction Cost Range: $1,000,000 - $5,000,000
Architect/Engineer: CDA Architects
A/E Contact: Joseph Guido
A/E Address: 1523 Huger St., Columbia, SC 29201
A/E Telephone: (803) 799-6502
A/E Fax: (803) 799-2014
A/E E-mail: jguido@cdaarchitectsinc.com
Plans on File At:
AGC: Columbia, Greenville
Dodge: Columbia, Greenville
Other: HCAC, Columbia
Plans May Be Obtained From: A/E
Plan Deposit: $200.00, refundable
Pre-Bid Conf./Site Visit: Not mandatory
Pre-Bid Date/Time: 9/22/09 – 10:00am
Place: Wateree River Correctional Institution – Agricultural Office
Agency/Owner: SC Dept. of Corrections
Name & Title of Agency Coordinator: Sharon Scott, Manager for Architectural / Engineering Services
Address: Facilities Management, 4322 Broad River Rd., Columbia, SC 29210
Telephone: (803) 896-1713
Fax: (803) 896-1700
E-mail: scott.sharon@doc.state.sc.us
Bid Due Date/Time: 10/8/09 – 2:00pm
Place: SCDC, Facilities Management, 4322 Broad River Rd., Columbia
Hand Deliver Bids To: SC Department of Corrections, Division of Facilities Management, Attn.: Sharon Scott, 4322 Broad River Rd., Columbia, SC 29210
Mail Bids To: Same as hand delivery

Project Name: LEXINGTON-COLUMBIA FARMERS MARKET RELOCATION – CONFERENCE CENTER
Project Number: P16-9511-MJ-C
Location: Lexington County
Applicable SCBO Notes: 2, 4, & 5
Bid Security Required: Yes
Performance Bond Required: Yes
Payment Bond Required: Yes
Description of Project: Construction of a single-story meeting hall & office building. The building is conventional wood stud construction (2x6), 11,000 SF, with metal panel roofing & exterior veneer, brick masonry, drywall partitions, HVAC, plumbing & electrical. The roof structure is exposed glued-laminated wood trusses & rafters with acoustical metal decking. The building has a 1,400 SF food services component. Contractor may be subject to performance appraisal at close of project.
Construction Cost Range: $2,000,000 - $2,500,000
Architect/Engineer: GMK Associates, Inc.
A/E Contact: Anthony Lawrence
A/E Address: 1201 Main St., Ste. 2100, Columbia, SC 29201
A/E Telephone: (803) 256-0000
A/E Fax: (803) 255-7243
A/E E-mail: slawrence@gmka.com
Plans on File At:
AGC: Columbia
Dodge: Columbia
Plans May Be Obtained From: Maxine Chick, GMK Associates, phone (803) 256-0000 or E-mail mchick@gmka.com
Plan Deposit: $200.00, refundable
Pre-Bid Conf./Site Visit: Not mandatory
Pre-Bid Date/Time: 9/17/09 – 2:00pm
Place: SC Department of Agriculture Lab, 1101 Williams St., Columbia
Agency/Owner: SC Department of Agriculture
Agency Coordinator: Frank Spires
Address: 1101 Williams St., Columbia, SC 29201
Telephone: (803) 737-9702
Fax: (803) 737-9703
E-mail: fspires@scda.sc.gov
Bid Due Date/Time: 10/1/09 – 2:00pm
Place: SC Department of Agriculture Lab, 1101 Williams St., Columbia
Hand Deliver Bids To: SC Department of Agriculture, Attn.: Frank Spires, Williams Street Lab, 1101 Williams St., Columbia, SC 29201
Mail Bids To: SC Department of Agriculture, Attn.: Frank Spires, Williams Street Lab, 1101 Williams St., Columbia, SC 29201

SECTION 133419 - METAL BUILDING SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Structural-steel framing.
2. Metal roof panels.
3. Metal wall panels.
4. Thermal insulation.
5. Accessories.

B. Related Sections:

1. Division 08 Section "Overhead Coiling Doors".

1.2 DEFINITIONS

A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in referenced standards.

1.3 SUBMITTALS

A. Product Data: For each type of metal building system component. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:

1. Structural-steel-framing system.
2. Metal roof panels.
3. Metal wall panels.
4. Metal liner panels.
5. Insulation and vapor retarder facings.
6. Flashing and trim.
7. Accessories.

B. Shop Drawings: For the following metal building system components. Include plans, elevations, sections, details, and attachments to other work.

1. Anchor-Bolt Plans: Submit anchor-bolt plans and templates before foundation work begins. Include location, diameter, and projection of anchor bolts required to attach metal building to foundation. Indicate column reactions at each location.
2. Structural-Framing Drawings: Show complete fabrication of primary and secondary framing; include provisions for openings. Indicate welds and bolted connections, distinguishing between shop and field applications. Include transverse cross-sections.

3. Metal Roof and Wall Panel Layout Drawings: Show layouts of metal panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; show locations of exposed fasteners.

a. Show roof-mounted items including, equipment supports, pipe supports and penetrations, lighting fixtures, and items mounted on roof.
b. Show wall-mounted items including doors, windows, louvers, and lighting fixtures.

4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches:

a. Flashing and trim.
b. Gutters.
c. Downspouts.

C. Samples for Initial Selection: For units with factory-applied color finish.

D. Welding certificates.

E. Field quality-control reports.

F. Maintenance Data: For metal panel finishes and door hardware to include in maintenance manuals.

G. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer.

1. AISC Certification for Category MB: An AISC-Certified Manufacturer that designs and produces metal building systems and components in an AISC-Certified Facility.
2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

B. Land Surveyor Qualifications: A professional land surveyor who practices in jurisdiction where Project is located and who is experienced in providing surveying services of the kind indicated.

C. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

D. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

E. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

F. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

G. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings," for design requirements and allowable stresses.

H. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.

I. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to metal building systems including, but not limited to, the following:

    a. Condition of foundations and other preparatory work performed by other trades.
    b. Structural load limitations.
    c. Construction schedule. Verify availability of materials and erector's personnel, equipment, and facilities needed to make progress and avoid delays.
    d. Required tests, inspections, and certifications.
    e. Unfavorable weather and forecasted weather conditions.

2. Review methods and procedures related to metal roof panel assemblies including, but not limited to, the following:

    a. Compliance with requirements for purlin and rafter conditions, including flatness and attachment to structural members.
    b. Structural limitations of purlins and rafters during and after roofing.
    c. Flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
    d. Temporary protection requirements for metal roof panel assembly during and after installation.
    e. Roof observation and repair after metal roof panel installation.

3. Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:

    a. Compliance with requirements for support conditions, including alignment between and attachment to structural members.
    b. Structural limitations of girts and columns during and after wall panel installation.
    c. Flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
    d. Temporary protection requirements for metal wall panel assembly during and after installation.
    e. Wall observation and repair after metal wall panel installation.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements:

1. Established Dimensions for Foundations: Comply with established dimensions on approved anchor-bolt plans, establishing foundation dimensions and proceeding with fabricating structural framing without field measurements. Coordinate anchor-bolt installation to ensure that actual anchorage dimensions correspond to established dimensions.
2. Established Dimensions for Metal Panels: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal panels without field measurements, or allow for field trimming metal panels. Coordinate construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.7 COORDINATION

A. Coordinate sizes and locations of concrete foundations and casting of anchor-bolt inserts into foundation walls and footings. Concrete, reinforcement, and formwork requirements are specified in Division 03 Section "Cast-in-Place Concrete."

B. Coordinate installation of equipment supports, which are specified in Division 07 Section "Roof Accessories."

C. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.8 WARRANTY

A. Special Warranty on Metal Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 7 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 30 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Butler Manufacturing Company; a BlueScope Steel company.
2. Chief Buildings; Division of Chief Industries, Inc.
3. VP Buildings; a United Dominion company.
4. American Building Company.
5. Ceco Building Systems.
6. Mesco Building Systems.

2.2 METAL BUILDING SYSTEMS

A. Description: Provide a complete, integrated set of metal building system manufacturer's standard mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior.

1. Provide metal building system of size and with bay spacings, roof slopes, and spans indicated.

B. Primary-Frame Type:

1. Rigid Clear Span: Solid-member, structural-framing system without interior columns.

C. End-Wall Framing:

1. Milk Processing Building

a. To be manufacturer's standard, for buildings not required to be expandable, consisting of load-bearing end-wall and corner columns and rafters.

2. Milking Parlor and Holding Pen

a. To be manufacturer's standard, for buildings not required to be expandable, consisting of primary frame, capable of supporting one-half of a bay design load, without end-wall columns.

D. Secondary-Frame Type: Manufacturer's standard purlins and joists and by-pass girts.

E. Eave Height: Manufacturer's standard height, as indicated by nominal height on drawings.

F. Bay Spacing: As indicated on drawings.

G. Roof Slope: 4 inch per 12 inches.

H. Roof System: Manufacturer's standard lap-seam metal roof panels with field-installed insulation.

I. Exterior Wall System: Manufacturer's standard tapered-rib, exposed-fastener metal wall panels with field-installed insulation.

2.3 METAL BUILDING SYSTEM PERFORMANCE

A. Delegated Design: Design metal building system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Structural Performance: Metal building systems shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to procedures in MBMA's "Metal Building Systems Manual."

1. Design Loads: As indicated on drawings.
2. Deflection Limits: Design metal building system assemblies to withstand design loads with deflections no greater than the following:

a. Purlins and Rafters: Vertical deflection of 1/180 of the span.
b. Girts: Horizontal deflection of 1/120 of the span.
c. Metal Roof Panels: Vertical deflection of 1/180 of the span.
d. Metal Wall Panels: Horizontal deflection of 1/120 of the span.

e. Design secondary-framing system to accommodate deflection of primary framing and construction tolerances, and to maintain clearances at openings.

3. Metal panel assemblies shall withstand the effects of gravity loads and loads and stresses within limits and under conditions indicated according to ASTM E 1592.

C. Seismic Performance: Metal building systems shall withstand the effects of earthquake motions determined according to seismic design category: D.

D. Thermal Movements: Allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 100 deg F , ambient; 150 deg F, material surfaces.

E. Air Infiltration for Metal Roof Panels: Air leakage through assembly of not more than 0.06 cfm/sq. ft. of roof area when tested according to ASTM E 1680 at negative test-pressure difference of 1.57 lbf/sq. ft..

F. Air Infiltration for Metal Wall Panels: Air leakage through assembly of not more than 0.06 cfm/sq. ft. of wall area when tested according to ASTM E 283 at static-air-pressure difference of 1.57 lbf/sq. ft..

G. Water Penetration for Metal Roof Panels: No water penetration when tested according to ASTM E 1646 at test-pressure difference of 2.86 lbf/sq. ft..

H. Water Penetration for Metal Wall Panels: No water penetration when tested according to ASTM E 331 at a wind-load design pressure of not less than 2.86 lbf/sq. ft..

I. Thermal Performance: Provide insulated metal panel assemblies with the following maximum U-factors and minimum R-values for opaque elements when tested according to ASTM C 1363 or ASTM C 518:

1. Milk Processing Building

a. Metal Roof Panel Assemblies: R-Value: R-30 (one layer of 4" faced insulation to be draped perpendicularly over roof purlins with enough looseness to allow for a layer of 6"unface blanket insulation to be laid above it parallel to the roof purlins).

b. Metal Wall Panel Assemblies: R-Value: R-13 (4" thick fiberglass insulation with reinforced scrim; WMP-10).

2. Milking Parlor and Holding Pen

a. Metal Roof Panel Assemblies: R-Value: R-13 (4" thick fiberglass insulation with reinforced scrim; WMP-10).

b. Metal Wall Panel Assemblies: No insulation.

2.4 STRUCTURAL-STEEL FRAMING

A. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafter, rake, and canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.

1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.

    a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Architect.

2. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes.

    a. Interior columns are not permitted.
    b. Rigid Clear-Span Frame: **Straight leg columns only, Base not to exceed 16 inches**.

B. End-Wall Framing: Manufacturer's standard primary end-wall framing fabricated for field-bolted assembly to comply with the following:

1. End-Wall and Corner Columns: I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates; or C-shaped, cold-formed, structural-steel sheet.
2. End-Wall Rafters: C-shaped, cold-formed, structural-steel sheet; or I-shaped sections fabricated from shop-welded, built-up steel plates or structural-steel shapes.
3. Non-Expandable Rigid End-Wall: I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates.

C. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed (galvanized coils are NOT an expectable substitution for the hot dipped galvanizing process):

1. Purlins: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; minimum 2-1/2-inch- wide flanges.

    a. Depth: As needed to comply with system performance requirements.
    b. Thickness: 14 gauge min. to resist against deforming during hot-dip galvanizing process.

2. Girts: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form ends of Z-sections with stiffening lips angled 40 to 50 degrees from flange, with minimum 2-1/2-inch- wide flanges.

    a. Depth: As required to comply with system performance requirements.
    b. Thickness: 14 gauge min. to resist against deforming during hot-dip galvanizing process.

3. Eave Struts: Unequal-flange, C-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; to provide adequate backup for metal panels.
4. Flange Bracing: Minimum 2-by-2-by-1/8-inch structural-steel angles or 1-inch diameter, cold-formed structural tubing to stiffen primary-frame flanges.
5. Sag Bracing: Minimum 1-by-1-by-1/8-inch structural-steel angles.
6. Base or Sill Angles: Minimum 3-by-2-inch zinc-coated (galvanized) steel sheet.
7. Purlin and Girt Clips: Manufacturer's standard clips fabricated from steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.
8. Secondary End-Wall Framing: Manufacturer's standard sections fabricated from zinc-coated (galvanized) steel sheet.
9. Framing for Openings: Channel shapes; fabricated from cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings and head, jamb, and sill of other openings.

10. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (galvanized) steel sheet; designed to withstand required loads.

D. Bracing: Provide adjustable wind bracing as follows:

1. Rods: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 ; or ASTM A 529/A 529M, Grade 50 ; minimum 1/2-inch- diameter steel; threaded full length or threaded a minimum of 6 inches at each end.
2. Diagonal bracing only at "Holding Pen" see drawings.

E. Provide hot-dip galvanized bolts for structural-framing components that are galvanized.

F. Materials:

1. W-Shapes: ASTM A 992/A 992M; Grade 50.
2. Channels, Angles, M-Shapes, and S-Shapes: ASTM A 36/A 36M; Grade 50;
3. Plate and Bar: ASTM A 36/A 36M; Grade 50;
4. Usually retain first two subparagraphs below only for interior columns of rigid modular or truss-frame modular framing systems.
5. Non-High-Strength Bolts, Nuts, and Washers: ASTM A 307, Grade A , carbon-steel, hex-head bolts; ASTM A 563 carbon-steel hex nuts; and ASTM F 844 plain (flat) steel washers.

    a. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

6. High-Strength Bolts, Nuts, and Washers: ASTM A 325 , Type 1, heavy-hex steel structural bolts; ASTM A 563 heavy-hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.

    a. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

7. High-Strength Bolts, Nuts, and Washers: ASTM A 490 , Type 1, heavy-hex steel structural bolts; ASTM A 563 heavy-hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers, plain.
8. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, heavy-hex-head steel structural bolts with spline ends.

    a. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.

9. Unheaded Anchor Rods: ASTM F 1554, Grade 36.

    a. Configuration: Straight.
    b. Nuts: ASTM A 563 heavy-hex carbon steel.
    c. Plate Washers: ASTM A 36/A 36M carbon steel.
    d. Washers: ASTM F 436 hardened carbon steel.
    e. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

10. Threaded Rods: ASTM A 572/A 572M, Grade 50.

    a. Nuts: ASTM A 563 heavy-hex carbon steel.
    b. Washers: ASTM A 36/A 36M carbon steel.
    c. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

G. Finish: **All primary and secondary structural steel to have Hot-dip galvanized coating, G-90.**

2.5 METAL ROOF PANELS

A. Tapered-Rib-Profile, Lap-Seam Metal Roof Panels: Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps.

1. Material: Zinc-coated (galvanized) steel sheet, 26 gauge nominal thickness.

   a. Exterior Finish: Fluoropolymer.
   b. Color: As selected by Architect from manufacturer's full range.

2. Major-Rib Spacing: 12 inches o.c.
3. Panel Coverage: 36 inches.
4. Panel Height: 1.25 inches.

B. Tapered-Rib-Profile, Metal Liner Panels : Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps.

1. Material: Zinc-coated (galvanized) steel sheet, 26 gauge nominal thickness.

   a. Exterior Finish: Fluoropolymer.
   b. Color: As selected by Architect from manufacturer's full range.

2. Major-Rib Spacing: 12 inches o.c.
3. Panel Coverage: 36 inches.
4. Panel Height: 1.25 inches.

C. Tapered-Rib-Profile, Exposed-Fastener Metal Wall Panels: Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps.

1. Material: Zinc-coated (galvanized) steel sheet, 24 gauge nominal thickness.

   a. Exterior Finish: Fluoropolymer.
   b. Color: As selected by Architect from manufacturer's full range.

2. Major-Rib Spacing: 12 inches o.c.
3. Panel Coverage: 36 inches.
4. Panel Height: 1.25 inches.

D. Tapered-Rib-Profile, Metal Liner Panels: Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps.

1. Material: Zinc-coated (galvanized) steel sheet, 24 gauge nominal thickness.

   a. Exterior Finish: Fluoropolymer.
   b. Color: As selected by Architect from manufacturer's full range.

2. Major-Rib Spacing: 12 inches o.c.
3. Panel Coverage: 36 inches.
4. Panel Height: 1.25 inches.

E. Materials:

1. Metallic-Coated Steel Sheet: Restricted-flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

   a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
   b. Surface: Smooth, flat finish.

F. Finishes:

1. Exposed Coil-Coated Finish:

   a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

2.6 THERMAL INSULATION

A. Faced Metal Building Insulation: WMP-10; water vapor transmission 0.02 perms, mullen-bursting strength 65 psi, puncture resistance 130; 2-inch- wide, continuous, vapor-tight edge tabs; with a flame-spread index of 25 or less.

B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

2.7 ACCESSORIES

A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.

1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.

B. Roof Panel Accessories: Provide components required for a complete metal roof panel assembly including copings, fasciae, corner units, ridge closures, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same material as metal roof panels.
2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including copings, fasciae, mullions, sills, corner units, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same material as metal wall panels.

2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

D. Flashing and Trim: Formed from 0.0180-inch nominal-thickness, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match adjacent metal panels.

1. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers.
2. Opening Trim: Formed from **[0.022-inch]** **[0.034-inch]** nominal-thickness, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating. Trim head and jamb of door openings, and head, jamb, and sill of other openings.

E. Materials:

1. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide fasteners with heads matching color of materials being fastened by means of plastic caps or factory-applied coating.

a. Fasteners for Metal Roof Panels: Self-drilling, Type 410 stainless-steel or self-tapping, Type 304 stainless-steel or zinc-alloy-steel hex washer head, with EPDM washer under heads of fasteners bearing on weather side of metal panels.
b. Fasteners for Metal Wall Panels: Self-drilling, Type 410 stainless-steel or self-tapping, Type 304 stainless-steel or zinc-alloy-steel hex washer head, with EPDM sealing washers bearing on weather side of metal panels.
c. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
d. Blind Fasteners: High-strength aluminum or stainless-steel rivets.

2. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.
3. Metal Panel Sealants:

a. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene-compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape of manufacturer's standard size.
b. Joint Sealant: ASTM C 920; one-part elastomeric polyurethane or polysulfide; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended by metal building system manufacturer.

F. Gutters: Formed from minimum 0.0159-inch- thick, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."

1. Gutter Supports: Fabricated from same material and finish as gutters; spaced 36 inches o.c.
2. Strainers: Bronze, copper, or aluminum wire ball type at outlets.
3. Expansion joints as noted on plans.

G. Downspouts: Formed from 0.0159-inch- thick, zinc-coated (galvanized) steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match metal wall panels. Fabricate in minimum 10-foot- long sections, complete with formed elbows and offsets.

1. Mounting Straps: Fabricated from same material and finish as gutters; spaced 10 feet o.c

2.8 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.

B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.

C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.

1. Make shop connections by welding or by using high-strength bolts.
2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.
4. Weld clips to frames for attaching secondary framing.
5. Finish: Hot-dip galvanized coating, G-90.
6. Minimum size ¼" flange, 3/16" web.

D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll-forming or break-forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

1. Make shop connections by welding or by using non-high-strength bolts.
2. Minimum 16 gauge.
3. Finish: Hot-dip galvanized coating, G-90.

E. Metal Panels: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

1. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of metal panel.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.

1. Engage land surveyor to perform surveying.

C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.

B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION OF STRUCTURAL FRAMING

A. Erect metal building system according to manufacturer's written erection instructions and erection drawings.

B. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.

C. Set structural framing accurately in locations and to elevations indicated, according to AISC specifications referenced in this Section. Maintain structural stability of frame during erection.

D. Base Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.

F. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line. Level baseplates to a true even plane with full bearing to supporting structures, set with double-nutted anchor

bolts. Use grout to obtain uniform bearing and to maintain a level base-line elevation. Moist-cure grout for not less than seven days after placement.

1. Make field connections using high-strength bolts installed according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for bolt type and joint type specified.

    a. Joint Type: Snug tightened or pretensioned.

G. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.

1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
2. Locate and space wall girts to suit openings such as doors and windows.
3. Locate canopy framing as indicated.
4. Provide supplemental framing at entire perimeter of openings, including doors, windows, louvers, ventilators, and other penetrations of roof and walls.

H. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.

1. Tighten rod and cable bracing to avoid sag.
2. Locate interior end-bay bracing only where indicated.

I. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.

J. Erection Tolerances: Maintain erection tolerances of structural framing within AISC 303.

3.4 METAL PANEL INSTALLATION, GENERAL

A. Examination: Examine primary and secondary framing to verify that structural-panel support members and anchorages have been installed within alignment tolerances required by manufacturer.

1. Examine roughing-in for components and systems penetrating metal panels, to verify actual locations of penetrations relative to seams before metal panel installation.

B. General: Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Field cut metal panels as required for doors, windows, and other openings. Cut openings as small as possible, neatly to size required, and without damage to adjacent metal panel finishes.

    a. Field cutting of metal panels by torch is not permitted unless approved in writing by manufacturer.

2. Install metal panels perpendicular to structural supports unless otherwise indicated.
3. Flash and seal metal panels with weather closures at perimeter of openings and similar elements. Fasten with self-tapping screws.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Locate metal panel splices over, but not attached to, structural supports with end laps in alignment.
6. Lap metal flashing over metal panels to allow moisture to run over and off the material.

C. Lap-Seam Metal Panels: Install screw fasteners using power tools with controlled torque adjusted to compress EPDM washers tightly without damage to washers, screw threads, or metal panels. Install screws in predrilled holes.

1. Arrange and nest side-lap joints so prevailing winds blow over, not into, lapped joints. Lap ribbed or fluted sheets one full rib corrugation. Apply metal panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.

D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.

E. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal panel assemblies. Provide types of gaskets, fillers, and sealants indicated; or, if not indicated, provide types recommended by metal panel manufacturer.

1. Seal metal panel end laps with double beads of tape or sealant the full width of panel. Seal side joints where recommended by metal panel manufacturer.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

3.5 METAL ROOF PANEL INSTALLATION

A. General: Provide metal roof panels of full length from eave to ridge unless otherwise indicated or restricted by shipping limitations.

1. Install ridge caps as metal roof panel work proceeds.
2. Flash and seal metal roof panels with weather closures at eaves and rakes. Fasten with self-tapping screws.

B. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with exposed fasteners at each lapped joint, at location and spacing recommended by manufacturer.

1. Provide metal-backed sealing washers under heads of exposed fasteners bearing on weather side of metal roof panels.
2. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
3. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps and on side laps of nesting-type metal panels, on side laps of ribbed or fluted metal panels, and elsewhere as needed to make metal panels weatherproof to driving rains.
4. At metal panel splices, nest panels with minimum 6-inch end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.

C. Metal Roof Panel Installation Tolerances: Shim and align metal roof panels within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 METAL WALL PANEL INSTALLATION

A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts, extending full height of building, unless otherwise indicated. Anchor metal

wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Unless otherwise indicated, begin metal panel installation at corners with center of rib lined up with line of framing.
2. Shim or otherwise plumb substrates receiving metal wall panels.
3. When two rows of metal panels are required, lap panels 4 inches minimum.
4. When building height requires two rows of metal panels at gable ends, align lap of gable panels over metal wall panels at eave height.
5. Rigidly fasten base end of metal wall panels and allow eave end free movement due to thermal expansion and contraction. Predrill panels.
6. Flash and seal metal wall panels with weather closures at eaves, rakes, and at perimeter of all openings. Fasten with self-tapping screws.
7. Install screw fasteners in predrilled holes.
8. Install flashing and trim as metal wall panel work proceeds.
9. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated; or, if not indicated, as necessary for waterproofing.
10. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws.
11. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.

B. Metal Wall Panels: Install metal wall panels on exterior side of girts. Attach metal wall panels to supports with fasteners as recommended by manufacturer.

C. Installation Tolerances: Shim and align metal wall panels within installed tolerance of 1/4 inch in 20 feet , nonaccumulative, on level, plumb, and on location lines as indicated, and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.7 THERMAL INSULATION INSTALLATION

A. General: Install insulation concurrently with metal panel installation, in thickness indicated to cover entire surface, according to manufacturer's written instructions.

1. Set vapor-retarder-faced units with vapor retarder toward warm side of construction unless otherwise indicated. Do not obstruct ventilation spaces except for firestopping.
2. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to the surrounding construction to ensure airtight installation.
3. Install factory-laminated, vapor-retarder-faced blankets straight and true in one-piece lengths, with both sets of facing tabs sealed, to provide a complete vapor retarder.
4. Install blankets straight and true in one-piece lengths. Install vapor retarder over insulation, with both sets of facing tabs sealed, to provide a complete vapor retarder.

B. Blanket Roof Insulation: Comply with the following installation method:

1. Over-Framing Installation: Extend insulation and vapor retarder over and perpendicular to top flange of secondary framing. Hold in place by metal roof panels fastened to secondary framing.

3.8 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install exposed flashing and trim that is without excessive oil-canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

C. Gutters: Join sections with riveted and soldered or lapped and sealed joints. Attach gutters to eave with gutter hangers spaced not more than 4 feet o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

D. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.

1. Provide elbows at base of downspouts to direct water away from building

2. Provide anchor brackets at 6 feet on center maximum.

3.9 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:

1. Steel special inspections shall be conducted in accordance with table 1704.3 "required verification and inspection of steel construction" of I 2003steel construction.

B. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

C. Tests and Inspections:

1. All steel fabricators shall be approved under section 1704.2.2 of IBC 2003 and shall submit documents to the engineer of record and architect of record confirming the approval.
2. RCSC prescribes inspection for snug-tightened joints and testing and inspection for each method of pretensioning joints.

3. High-Strength, Field-Bolted Connections: Connections shall be tested and inspected during installation according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
4. Welded Connections: In addition to visual inspection, field-welded connections shall be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at inspector's option:

    a. Liquid Penetrant Inspection: ASTM E 165.
    b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
    c. Ultrasonic Inspection: ASTM E 164.
    d. Radiographic Inspection: ASTM E 94.

D. Product will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.10 CLEANING AND PROTECTION

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Touchup Painting: After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing, bearing plates, and accessories.

1. Clean and prepare surfaces by SSPC-SP 2, "Hand Tool Cleaning," or by SSPC-SP 3, "Power Tool Cleaning."
2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.

C. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

1. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 133419

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ADDENDUM #1

PROJECT: Wateree River
Correctional Institute Farm
Dairy Expansion – Milking Center
State Project #: No4-9674-MJ-C

October 02, 2009

TOTAL PAGES: 47

This Addendum modifies the Drawings and Specifications for the above-referenced project dated 07/10/09. Changes noted herein will become part of the Contract. Except as noted herein, original drawings and any previous addendum(s) will apply.

GENERAL:

1 With respect to Form SE-310 the Pre-bid Meeting was non-mandatory, please find attached a list of plan holders who have attended the pre-bid meeting.(see attached sign-in sheets)

2 **In the SE-310 for "Bid Closing Time", change to 3:00 PM.**

3 With respect to the **SE-310** which states that Pre-bid Meeting held at 10:00 am on 09/22/09 was **not** mandatory, the following is a list of plan holders that attended the meeting: (see attached sign sheet).

4 **CLARIFICATION**: The Civil drawings and Waste Management drawings are included in the bid package for reference only. These sheets were provided for coordination purposes only. The work associated with civil and waste management are not within the scope of work for this project.

5 Response to questions presented to Architect (See attached).

SPECIFICATIONS:

1. **Table of Contents,** Division 1, add: **Section 015650 Security Measures**.....2 pages. (see attached specification section 015650)

2. **Table of Contents,** Division 6, add **Section 061000 Rough carpentry**.....4 pages. (see attached specification section 061000)

3. **Table of Contents,** Division 32, delete: **Section 329200 Turf and Grasses**.....6 pages.

4. **Section 011000, Summary**....4 pages, delete entire specification and replace with revised **Section011000, Summary**.....5 pages (see attached revised specification).

5. **Section 033000, Cast-In-Place Concrete**.....24 pages, delete entire specification and replace with revised **Section 033000, Cast-In-Place Concrete**.....22 pages (see attached revised specification).

6. **Section 096723, Resinous Flooring,** paragraph 2.1, A: add the following manufacturer:

    5. Key Resin Company

7. **Section 099113, Exterior Painting**, paragraph 2.1,A: add the following manufacturer:

    8. RoseTalbert

8. **Section 133419, Metal building Systems:**

    A. Under paragraph 1.3, B, add the following:

        4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches:
            1. Flashing and trim.
            2. Gutters.
            3. Downspouts

    B. Under paragraph 2.1, A: add the following manufacturer to the list approved metal building suppliers:

        "7. United Structures of America."

    C. Under paragraph 2.3, B, 2, sub-paragraph b: replace with the following:

        b. Girts: Horizontal deflection of L/120 of the span for supporting metal Horizontal deflection of L/240 of the span for supporting masonry

    D. Under paragraph 2.5, B: change "Tapered-Rib-Profile, Metal Liner Panels", to "Tapered-Rib-Profile, Metal Soffit Panels".

    E. Under paragraph 2.5, C, 1: change "24 gauge nominal thickness", to "26 gauge nominal thickness".

    F. Add paragraphs 2.7, F and 2.7, G to read the following:

        F. Gutters: Formed from minimum 0.0159-inch- thick, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."