

TEXAS PARKS & WILDLIFE DEPARTMENT  
LOCAL PARK GRANT PROGRAM  
PROJECT NUMBER 51-000065

BIDDING AND CONTRACT DOCUMENTS

For

Boys and Girls Club Recreation Center  
City of Weslaco, Texas

February, 2013

Architect:

Alcocer Garcia Associates, Inc.  
McAllen, TX

Structural/ Civil Engineer:

Hinojosa Engineering, Inc.  
Mission, TX

Mechanical & Electrical Engineer:

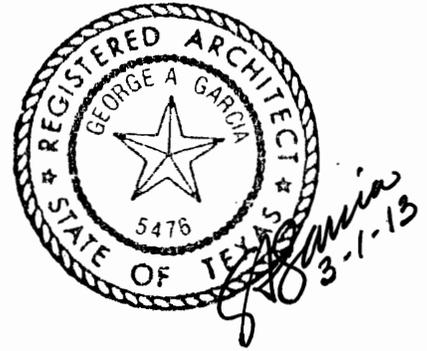
MEP Solutions, Inc.  
McAllen, TX

SET NO. \_\_\_\_\_



Project: Weslaco Boys and Girls Club Recreation Center  
 Owner: City of Weslaco, Texas  
 Architect: Alcócer Garcia Associates, Inc.

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License expiration date: 8-31-13

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Texas Parks and Wildlife Department  
Local Park Grant Program  
Project Number: 51-000065  
Project: Weslaco Boys and Girls Club Recreation Center  
Owner: City of Weslaco, Texas  
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## STRUCTURAL SPECIFICATIONS

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## Invitation to Bidders

The City of Weslaco, Texas, with funding Assistance through the Texas Recreation & Parks Account Program Administered by Texas Parks and Wildlife Department, Project Number 51-000065, invites separate sealed bids according to the following:

\_\_\_\_\_, Construction Manager for the City of Weslaco, will receive sealed bids from Sub-Contractors for the construction of a project titled **Boys and Girls Club Recreation Center**, until \_\_\_\_\_ on \_\_\_\_\_, **2013**, at the Commissioner's Meeting Room, Weslaco City Hall, located at 255 S. Kansas., Weslaco, Texas 78596.

Bids to be submitted in a sealed envelope indicating Bidders name and marked "**Bid for Boys and Girls Recreation Center, Specification Section .....**" and addressed to \_\_\_\_\_ 255 S. Kansas, Weslaco, TX 78596-6285.

Submit separate bids for any of the following Specification Sections: 02831 Chain Link Fencing, 04230 Concrete Masonry , 06100 Rough Carpentry, 06100 Finish Carpentry 06402, Architectural Woodwork , 07200 Insulation, 07900 Joint Sealers, 08110 Steel Doors & Frames, 08211 Flush Wood Doors, 08630 Sectional Doors, 08710 Finish Hardware, 08800 Glass & Glazing, 09100 Non-Structural Metal Framing, 09300 Tile, 09250 Gypsum Drywall, 09105 Acoustical Ceiling Suspension System, 09511 Acoustical Ceiling Lay-In Panels, 09650 Resilient Flooring, 09900 Painting, 10100 Marker Boards & Tack Boards, 10160 Toilet Partitions, 10260 Wall Corner Guards, 10440 Identifying Devices, 10522 Fire Extinguishers, 10800 Toilet & Bath Accessories, and for Division 15 HVAC, Division 15 Plumbing Division 16 Electrical.

Work indicated on the Structural drawings and specifications to be bid as "Structural Section.....".

Bid/Contract Documents are on file at the Rio Grande Valley AGC Plan Rooms, Dodge Reports and Builders Exchange of Texas at which locations the plans may be examined.

Copies of the Bid/Contract Documents may be obtained by depositing \$ 120.00 for each set of documents obtained. Obtain copies from the architect, Alcocer Garcia Associates, Inc., 1333 E. Jasmine Ave., McAllen, Texas 78501 (pho.: 956- 618-2007) (fax: 956-618-2008), The deposit will be refunded if the documents and drawings are returned in good condition within 10 days following the bid opening.

Attention is called to the fact that not less than the federally determined prevailing wage rates (Davis-Bacon and Related Acts) must be paid on this project. In addition, successful bidders must ensure that employees and applicants for employment are not discriminated against because of race, religion, color, sex, age, disability or national origin.

\_\_\_\_\_ reserves the right to reject any or all bids or to waive any informalities in the bidding. Bids may be held for a period not to exceed 45 days from the date of the bid opening for the purpose of reviewing the bids and investigation of the bidders qualifications prior to awarding construction contracts.

\_\_\_\_\_ does not discriminate on the basis of race, religion, creed, color, sex, age, disability or national origin in employment or provision of service.

By \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
Title Date

## INSTRUCTIONS TO BIDDERS

### 1. RECEIPT AND OPENING OF BIDS

The **City of Weslaco, Texas.**, (herein called the "OWNER"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the OWNER at the time and place stated in the published Advertisement for Bids. The envelopes containing the bids must be sealed, addressed to:

\_\_\_\_\_, **Construction Manager**  
**City of Weslaco, Texas**  
**Bid for Boys and Girls Club Recreation Center**  
**Specifications Section \_\_\_\_\_, titled " \_\_\_\_\_ "**

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 45 days after the actual date of the opening thereof.

### 2. PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid price must be filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

### 3. SUBCONTRACTS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a contract for work on this project must be acceptable to the Owner.

### 4. TELEGRAPHIC MODIFICATIONS

Any bidder may modify his bid by telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the Owner prior to the closing time, and provided further, the Owner is satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. the telegraphic communication should not reveal the bid price but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two (2) days from the closing time, no consideration will be given to the telegraphic modification.

### 5. METHOD OF BIDDING

Competitive sealed bids.

## **6.QUALIFICATIONS OF BIDDERS**

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for the purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

## **7.BID SECURITY AND PERFORMANCE AND PAYMENT BONDS**

When required, the bidder shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company licensed to do business in the State of Texas and satisfactory to the Owner.

## **8..CONDITIONS OF THE WORK**

Each bidder must inform himself of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the contractor, in carrying out his work, must employ such methods of means as will not cause any interruption of or interference with the work of any other contractor.

## **9. ADDENDA AND INTERPRETATIONS**

No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to the Owner and, to be given consideration must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed or telecommunicated vis facsimile to interested bidders, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum of interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

## **10. POWER OF ATTORNEY**

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

## **11 .NOTICE OF SPECIAL CONDITIONS**

Attention is particularly called to those parts of the contract documents and specifications which deal with: Insurance requirements, Wage rates, Stated allowances.

## 12. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract the same as though herein written out in full. The City of Weslaco is a tax-exempt public entity.

## 13. METHOD OF AWARD - LOWEST QUALIFIED BIDDER

If at the time a contract is to be awarded, the sum of the bids does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded.

## 14. OBLIGATIONS OF BIDDER

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents ( including all addenda ). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

## 15. SAFETY STANDARDS AND ACCIDENT PREVENTION

With respect to all work performed under this contract, the Owner and each contractor shall:

1. Comply with the safety standards provisions of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction " published by the Associates General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 ( Public Law 91-596 ), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, No. 75, Saturday, April 17, 1971.
2. Exercise every precaution at all times for the prevention of accidents and the protection of persons ( including employees ) and property.

The Contractor is to maintain, at his office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital of a doctor's care of persons (including employees ), who may be injured on the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

END

## **CIVIL RIGHTS REQUIREMENTS**

The contractor is required to comply with regulations issued pursuant to the Civil Rights Act of 1964 with respect to nondiscrimination in assisted programs of the Department.

The following provisions, known as the EQUAL OPPORTUNITY CLAUSE are to be incorporated verbatim in each contract and must be included in the plans and specifications submitted for TPWD review.

“During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, creed, color, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, creed, color, or national origin. Such action shall include but not be limited to employment, upgrading, demotion or transfer, recruitment or retirement, advertising, layoff or termination, rates of pay or other forms of compensation, and selection training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the non-discrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, creed, color, sex, or national origin.
3. The contractor will send to each labor union or representative of workers with whom he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order Number 11246, as amended in 3 CFR 169 (1974), and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The contractor will comply with all provisions of Executive Order Number 11246, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The contractor will furnish all information and reports required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the contractor's non-compliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order Number 11246, as amended or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.

7. The contractor will include the provisions of Paragraphs 1 and 7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order Number 11246, as amended, so that such provisions will be binding upon each subcontractor or purchase order, as the contracting agency may direct as a means of enforcing such provisions, including sanctions for non-compliance; provided however, that in the event the contractor becomes involved in or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interest of the United States."

## **CONTRACT AND BOND REQUIREMENTS**

Contracts awarded under the grant are required to follow Texas competitive bidding procedures in accordance with Local Government Code Chapters 252, 262, and 375.

Standard construction practices recommend a bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

Pursuant to the Texas Uniform Grant and Contract Management Act, the following minimum requirements apply to all contracts exceeding \$50,000 in total value:

1. A Performance Bond on the part of the contractor for 100 percent (%) of the contract price. A Performance Bond is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such a contract.
2. A Payment Bond on the part of the contractor for 100 percent (%) of the contract price. A payment Bond is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and materials in the execution of the work provided for in the contract.
3. In lieu of the bond requirements for contracts less than \$50,000 a provision that no money will be paid to the contractor until completion and acceptance may be included in the contract.

The sponsor shall include, in addition to provisions to define a sound and complete contract agreement, the following provision in all contracts:

1. Contracts shall contain such contractual provisions or conditions which will allow for administrative, contractual, or legal remedies where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.
2. All contracts, amounts for which are in excess of \$10,000 shall contain suitable provisions for termination by the sponsor including the manner by which it will be affected and the basis for settlement. In addition, such contracts shall describe conditions under which the contract may be terminated or default as well as conditions where the contract may be terminated because of circumstances beyond the control of the contractor.

## **WAGES**

Contractors are required to comply with the Texas prevailing wages requirements established in Government Code Ch. 2258.

## **WORKERS' COMPENSATION**

The sponsor shall comply with the Reporting Requirements for Building or Construction Projects for Governmental Entities of 28 TAC 110.110.

Additional information regarding these requirements may be obtained from:

Texas Department of Insurance  
Division of Workers' Compensation (DWC)  
7551 Metro Center Drive, Suite 100  
Austin, TX 78744-1609  
512/804-4000  
<http://www.tdi.state.tx.us/wc/indexwc.html>

## **PERMITS**

The sponsor shall insure that all applicable permits or approvals have been obtained prior to construction. A copy of these approvals or permits shall be provided to the Department. Examples include, but are not limited to:

1. Comptroller of Public Accounts for tax permits
2. Corps of Engineers Permit for construction in water of the United States
3. Texas Department of Health approval of new water or sewage systems
4. Texas Commission on Environmental Quality for storm water and air permitting

## INSURANCE REQUIREMENTS

The Bidder awarded the contract shall furnish proof of insurance, which will also include any subcontractor that is subcontracted by the bidder in at least the following limits, to be in place prior to providing any services under this Contract and to continue at all times in force in effect during the term of this Contract:

1. A Five Hundred Thousand Dollar (\$500,000.00) Comprehensive General Liability insurance policy providing additional coverage to all underlying liabilities of County.
2. Automobile liability insurance policy with limits of at least Three Hundred Thousand Dollars (\$300,000.00) per person and Five Hundred Thousand Dollars (\$500,000.00) per occurrence. Coverage should include injury to or death of persons and property damage claims with limits up to Five Hundred Thousand (\$500,000.00) arising out of the services provided to City of Alamo hereunder.
3. Uninsured/Underinsured motorist coverage in an amount equal to the bodily injury limits set forth immediately above;
4. Workers compensation insurance in amounts established by Texas law, unless the Bidder is specifically exempted from the Texas Workers Compensation Act, Texas Labor Code Chapter 401, et. seq.

Certificates of insurance naming the City of Weslaco, Texas as an additional insured entity shall be submitted to the City of Weslaco for approval prior to any services being performed by Contractor.

Each policy of insurance required hereunder shall extend for a period equivalent to, or longer than the term of the Contract, and any insurer hereunder shall be required to give at least thirty (30) days written notice to the City of Weslaco prior to the cancellation of any such coverage on the termination date, or otherwise. This Contract shall be automatically suspended upon the cancellation, or other termination, of any required policy of insurance hereunder, and such suspension shall continue until evidence of adequate replacement coverage is provided to the City of Weslaco. If replacement coverage is not provided within thirty (30) days following suspension of the Contract, this Contract shall automatically terminate.

# B I D

Project: Boys and Girls Club Recreation Center  
Owner: City of Weslaco, Texas  
Texas Parks and Wildlife Department Project Number 51-000065

Proposal from: \_\_\_\_\_  
Bidder

To: \_\_\_\_\_, Construction Manager,  
255 S. Kansas, Weslaco, TX 78596.

Having fully examined the Instructions to Bidders, the Specifications and Drawings related to the above project, as well as the site and conditions affecting the work, bidder proposes to furnish all materials, equipment and labor, as applicable, called for by the entire and complete work in accordance with before mentioned documents for the sum of:

(Specification Section & title)

BID FOR \_\_\_\_\_  
(IN WORDS)

BID AMOUNT\_ \_\_\_\_\_  
(IN FIGURES)

The Undersigned hereby declares that he has visited the Site and has carefully examined the Drawings, Specifications and the other Contract Documents related to the work covered by his Bid.

Upon receipt of " NOTICE OF AWARD ", the Undersigned will immediately execute the formal Contract ( Agreement ).

This Proposal, the Agreement, the Drawings, the Specifications and any Addenda shall all become a part of the Contract.

Bidder acknowledges receipt of the following Addenda: \_\_\_\_\_

SIGNED BY: \_\_\_\_\_ TITLE : \_\_\_\_\_

DATE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

**BID BOND**

KNOWN ALL MEN BY THESE PRESENTS, that we, the undersigned,

\_\_\_\_\_ as

Principal \_\_\_\_\_ and

\_\_\_\_\_ as Surety, are hereby held

and firmly bound unto

\_\_\_\_\_ as Owner in the penal sum of \$ \_\_\_\_\_

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors an assigns.

**Signed, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.**

The condition of the above obligation is such that whereas the Principal has submitted to

\_\_\_\_\_ a certain Bid, attached hereto and

hereby made a part hereof to enter a contract in writing, for the

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NOW THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract and for the payment of all persons performing labor or using furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set with hands and seals, and such of them as are corporation have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_(L.S.)  
PRINCIPAL

\_\_\_\_\_  
SURETY

SEAL:

BY: \_\_\_\_\_

# CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

### OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2  Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

\_\_\_\_\_  
Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

Yes  No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

Yes  No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

Yes  No

D. Describe each employment or business relationship with the local government officer named in this section.

4

\_\_\_\_\_  
Signature of person doing business with the governmental entity

\_\_\_\_\_  
Date

**Certification  
Regarding Debarment, Suspension and Ineligibility**

As is required by the Federal Regulations Implementing Executive Order 12549, Debarment and Suspension, 45 CFR Part 76, Government-wide Debarment and Suspension, the applicant certifies, to the best of his or her knowledge and belief, that both it and its principals:

- A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency;
- B. Have not within a three-year period preceding this bid proposal and/or application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction, violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- C. Are not presently indicted for or otherwise criminally or civilly charged by a government entity with commission of any of the offenses enumerated herein; and
- D. Have not within a three-year period preceding this bid proposal and/or application had one or more public transactions terminated for cause or default.

Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Date: \_\_\_\_\_

If the bidder is unable to certify to all of the statements in this Certification, such bidder should attach an explanation to this proposal.

# Non-Collusion Affidavit

State of Texas           §  
                                  §  
County of Hidalgo    §

\_\_\_\_\_, being first duly sworn, deposes and days that:

- (1) He is \_\_\_\_\_, of \_\_\_\_\_, the Bidder that has submitted the attached Bid:
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such bid:
- (3) Such bid in genuine and is not a collusive or sham Bid:
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) \_\_\_\_\_  
\_\_\_\_\_  
(Title)

Subscribed and sworn to before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20 \_\_\_\_\_.

\_\_\_\_\_  
\_\_\_\_\_  
(Title)  
My Commission expires \_\_\_\_\_

**PERFORMANCE BOND**

A performance bond as described by Texas Government Code, Section 2253.021 (b) for the benefit of Hidalgo County-Urban County Program:

KNOW ALL MEN BY THESE PRESENTS, that \_\_\_\_\_  
\_\_\_\_\_ (hereinafter called the Principal(s), as  
Principal (s), and \_\_\_\_\_ hereinafter call the  
Surety(s), as Surety(s), are held and firmly bound unto \_\_\_\_\_  
\_\_\_\_\_ (hereinafter called the Oblige), in the amount of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$\_\_\_\_\_) for the payment whereof, the said Principal and Surety bind  
themselves, and their heirs, administrators, executors, successors and assigns, jointly and  
severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Oblige,  
dated the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, for the \_\_\_\_\_  
\_\_\_\_\_ which contract is hereby referred to and made a part hereof  
as fully and to the same extent as if copies at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the  
said Principal shall faithfully perform the work in accordance with the plans,  
specifications and contract documents, then this obligation shall be void; otherwise to  
remain in full force and effect.

IN WITNESS WHEREOF, this instrument is executed in four counter parts, each one of  
which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, A.D.,  
20\_\_\_\_.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Principal) Secretary

\_\_\_\_\_  
PRINCIPAL  
\_\_\_\_\_  
Signature

(Seal)

PERFORMANCE BOND CONTINUED:

\_\_\_\_\_  
\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
\_\_\_\_\_  
Print/Type Name

\_\_\_\_\_  
\_\_\_\_\_  
Address

\_\_\_\_\_  
\_\_\_\_\_  
Address

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Surety Secretary

\_\_\_\_\_  
\_\_\_\_\_  
Surety  
\_\_\_\_\_  
Attorney-in-Fact (Signature)

\_\_\_\_\_  
\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
\_\_\_\_\_  
Print/Type Name

\_\_\_\_\_  
\_\_\_\_\_  
Address

\_\_\_\_\_  
\_\_\_\_\_  
Address

Note: Date of Bond must be prior to date of Contract

(1) Correct Name of Contractor; (2) A Corporation, A Partnership or an individual, as case may be; (3) Correct Name of Surety; (4) Correct name of Owner; (5) County or Parish and State; (6) Owner; (7) if Contractor is Partnership, all partners should execute Bond.

## PAYMENT BOND

A payment bond as described by Texas Government Code, Section 2253.021 (c) for the beneficiaries described by such sub section.

KNOW ALL MEN BY THESE PRESENTS, that \_\_\_\_\_  
(hereinafter called the Principal(s)), as Principal(s), and \_\_\_\_\_  
(hereafter called the Surety(s)), as Surety(s), are held and firmly bound unto  
\_\_\_\_\_ (hereinafter called the Oblige), in the amount of  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment whereof, the said Payment and  
Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly  
and severally, firmly by these presents. \_

WHEREAS, the Principal has entered into a certain written contract with the Oblige, dated  
the \_\_\_ day of \_\_\_\_\_, 20\_\_\_, for the \_\_\_\_\_ which contract is  
hereby referred to and made a part hereof as fully and to the same extent as if copies at length  
herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said  
Principal shall pay all claimants supplying labor and material to him or a subcontractor in the  
prosecution of the work provided for in said contract, then, this, obligation shall be void;  
otherwise to remain in full force and effect.

**PAYMENT BOND CONTINUED:**

IN WITNESS WHEREOF, this instrument is executed in four counter parts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_.

ATTEST:

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
(Principal) Secretary  
(Seal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
Print/Type Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

ATTEST:

\_\_\_\_\_  
Surety

\_\_\_\_\_  
(Surety) Secretary  
(Seal)

\_\_\_\_\_  
Attorney-in-Fact (Signature)

\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
Print/Type Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

Note: Date of Bond must be prior to date of Contract

(1) Correct Name of Contractor; (2) A Corporation, A Partnership or an individual, as case may be; (3) Correct Name of Surety; (4) Correct name of Owner; (5) County or Parish and State; (6) Owner; (7) if Contractor is Partnership, all partners should execute Bond.



General Decision Number: TX130005 01/04/2013 TX5

Superseded General Decision Number: TX20120005

State: Texas

Construction Types: Building and Residential

Counties: Cameron and Hidalgo Counties in Texas.

BUILDING AND RESIDENTIAL CONSTRUCTION PROJECTS (including single family homes and garden apartments up to and including 4 stories).

Modification Number      Publication Date  
 0                              01/04/2013

\* SUTX1990-013 05/01/1990

	Rates	Fringes
BOILERMAKER		
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 16.35	2.315
BRICKLAYER		
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
CARPENTER (Including Drywall Hanging and Acoustical Ceiling Installation)		
BUILDING CONSTRUCTION ONLY Excluding Batt Insulation..	\$ 7.25	
CARPENTER		
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
CEMENT MASON/CONCRETE FINISHER (Excluding Form Setting)		
BUILDING CONSTRUCTION ONLY..	\$ 7.25	
CEMENT MASON/CONCRETE FINISHER		
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
ELECTRICIAN		
BUILDING CONSTRUCTION ONLY..	\$ 8.30	
Electricians: (Residential)		
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
FLOOR LAYER: CARPET (SOFT)		
FLOOR		
BUILDING CONSTRUCTION ONLY..	\$ 7.25	
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
Insulation Installer		
RESIDENTIAL CONSTRUCTION		

ONLY.....	\$ 7.25	
IRONWORKER, REINFORCING RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
Laborer, common BUILDING CONSTRUCTION ONLY..	\$ 7.25	
LABORER RESIDENTIAL CONSTRUCTION ONLY Pipelayer.....	\$ 7.25	
Unskilled.....	\$ 7.25	
PAINTER (Including Drywall Finishing, Taping, and Bedding) BUILDING CONSTRUCTION ONLY..	\$ 7.25	
PAINTER RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
PIPEFITTER (Including HVAC Work) BUILDING CONSTRUCTION ONLY..	\$ 7.28	.12
Plasterer tender BUILDING CONSTRUCTION ONLY..	\$ 7.25	
PLASTERER BUILDING CONSTRUCTION ONLY..	\$ 8.41	
RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
PLUMBER (Excluding HVAC Work) BUILDING CONSTRUCTION ONLY..	\$ 7.50	.48
Plumbers and Pipefitters RESIDENTIAL CONSTRUCTION ONLY.....	\$ 8.20	
Power equipment operators: BUILDING CONSTRUCTION ONLY Backhoe.....	\$ 7.25	.48
RESIDENTIAL CONSTRUCTION ONLY Backhoe.....	\$ 7.25	
Grader.....	\$ 7.25	
Loader.....	\$ 7.25	
ROOFER, Including Built Up, Composition and Single Ply Roofs RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
Sheet metal worker RESIDENTIAL CONSTRUCTION ONLY.....	\$ 7.25	
Sheet Rock Installer RESIDENTIAL CONSTRUCTION		

ONLY.....\$ 7.25

SHEETMETAL WORKER (Including HVAC duct Work)

BUILDING CONSTRUCTION ONLY..\$ 7.25

TILE SETTER

BUILDING CONSTRUCTION ONLY..\$ 7.25

RESIDENTIAL CONSTRUCTION

ONLY.....\$ 7.25

TRUCK DRIVER

BUILDING CONSTRUCTION ONLY..\$ 7.25

RESIDENTIAL CONSTRUCTION

ONLY.....\$ 7.25

-----  
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====  
Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----  
The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

## Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

-----

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
 Wage and Hour Division  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====  
END OF GENERAL DECISION

EarthCo Project No. G-1285033

## Geotechnical Site Assessment

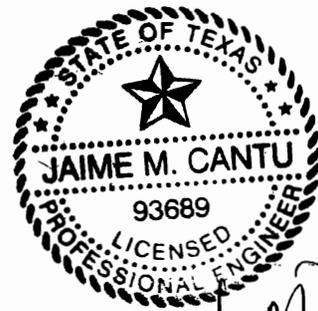
**Proposed**  
Boys and Girls Club  
N. Iowa Avenue  
Weslaco, Texas 78550

Prepared for:

City of Weslaco  
255 S. Kansas Avenue  
Weslaco, Texas 78596-6285

Prepared by:  
**EarthCo, LLC**  
1110 W. Jackson Street  
Harlingen, Texas 78550  
Ph. (956)428-2443  
Fax (956)202-0491  
TBPE Firm # F-10895

November 17, 2012



*Jaime M. Cantu*  
11/17/2012

**A Geotechnical Engineering and Materials Testing Company**

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## **1.0 INTRODUCTION**

### **1.1 Purpose**

This report presents the results of a Geotechnical Site Assessment prepared by EarthCo, LLC for the proposed Boys and Girls Club Building to be located N. Iowa Avenue and E. 1<sup>st</sup> Street in Weslaco, Texas. The purpose of the assessment was to provide recommendations for the design of foundations and other geotechnical aspects of the proposed construction.

### **1.2 Scope of Services**

The scope of work included the following:

- . • Review of available data pertinent to the site.
- . • Conduct a subsurface investigation.
- . • Conduct basic laboratory testing of select soils.
- . • Perform a geotechnical engineering analysis regarding the proposed construction, using the information obtained from the subsurface investigation and laboratory testing.
- . • Prepare this report of our findings, conclusions, and tentative recommendations for the geotechnical engineering aspects of the proposed construction.
- .

### **1.3 Authorization**

This assessment was performed and the report prepared in general accordance with our proposal. EarthCo received authorization from Mr. Erasmo Lozano- Public Facilities Assistant Director for the City of Weslaco to proceed with the work.

### **1.4 Standard of Care**

The services performed by EARTHCO were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the geotechnical profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, expressed or implied, is made.

Limitations of this report are discussed in Appendix A. These limitations further explain the realities of geotechnical engineering and the limitations that exist in evaluating geotechnical issues.

This report has been prepared for the exclusive use of City of Weslaco and the design team for the specific application to the proposed project.

## **2.0 PROJECT DESCRIPTION**

### **2.1 Proposed Development**

It is understood that the proposed development will consist of a new Boys and Girls Club Building with approximately 13,000 square feet in plan area to be built at the site described above located in Weslaco, Texas. The site plan of the proposed improvements was provided at the time of this subsurface exploration and boring locations and depths were selected and performed by EarthCo as indicated on the attached site plan. Actual square footage of the buildings or structural loading information was not available to EarthCo at the time of this subsurface exploration.

If the location of the assumed loadings, proposed structure, floor elevations, or any other site features change from what is shown on the site plan included in this report, EARTHCO should be notified so that the changes can be reviewed to determine if the recommendations presented in this report are still applicable.

### **2.2 Site Description**

The site of the proposed Boys and Girls Club is located on the northeast corner of N. Iowa Avenue and E. 1<sup>st</sup> Street in Weslaco, Texas. It was previously used as the playground for Horton Elementary School and is located directly to the north of school campus. Refer to the enclosed boring location plan in Appendix B.

The general topography of the site is relatively flat with a slight grade to the northwest away from existing parking and canopy areas.

## **3.0 INVESTIGATION AND TESTING**

### **3.1 Subsurface Investigation**

The field investigation to determine the engineering characteristics of the subsurface materials included a reconnaissance of the project site, drilling of boring, performing standard penetration tests and obtaining disturbed split-barrel samples, and auger samples.

The drilling consisted of two (2) borings in the proposed building area near the locations depicted on the Site Plan (Appendix B). The drilling was carried out on 11/09/2012 using a drilling rig equipped with a rotary head contracted from Southwest Drilling.

Borings B1 & B2 were drilled on the proposed Building Pad Site (13,000 sf). Soil samples were obtained at selected intervals in the soil test borings. Disturbed soil samples were obtained in general accordance with ASTM D-1586 (Penetration Test and Split-Barrel Sampling of Soils). A split-spoon sampler is a 2-inch O.D. tube that is driven into the soil to be sampled that can be split open lengthwise for easy removal and visual inspection of the soil obtained. All samples were identified according to project number, boring number and depth, placed in plastic bags to protect against moisture loss, and transported to our laboratory.

During the sampling procedures, standard penetration tests were performed in the borings in conjunction with the split-barrel sampling. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling thirty inches, required to advance the split-spoon sampler one-foot into the soil (ASTM D-1585).

The sampler is lowered to the bottom of the drill hole and the number of blows recorded for each of the three successive increments of six inches penetration. The "N" value is obtained by adding the second and third incremental numbers. The results of the standard penetration test indicate the relative density and comparative consistency of the soils, and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components.

Water level observations were made during the boring operations and the results are noted on the boring logs. In relatively pervious soils, such as sandy soils, the indicated elevations are considered reliable ground water levels.

In relatively impervious soils, the accurate determination of the ground water elevation may not be possible even after several days of observation. Seasonal variations, temperature and recent rainfall conditions may influence the levels of the ground water table and volumes of water will depend on the permeability of the soils.

A field log was prepared for each boring. Each log-contained information concerning the boring method, samples attempted and recovered, indications of the presence of various materials such as silt, clay, gravel or sand and observations of ground water. It also contained an interpretation of subsurface conditions between samples. Therefore, these logs included both factual and interpretive information. The boring logs are included in Appendix C.

On completion of each borehole, the hole was filled in with cuttings from the drilling operations.

Special backfilling with sand and gravel and sealing the top with cement was not deemed necessary at this project site. The holes were covered with the cuttings from our drilling operations.

### **3.2 Laboratory Testing**

Laboratory tests were carried out in a number of selected soil samples in order to acquire necessary information with regards to the physical and mechanical properties of the soil layers and further on to evaluate and determine the parameters required for the calculations. All phases of the laboratory-testing program were performed in general accordance with the applicable ASTM Specifications.

The following tests were conducted on the selected soil samples:

- 14 Moisture Tests
- 4 Atterberg Limits Tests
- 4 -200 Sieve Wash Tests

The samples collected will be stored for 30 days from the date of issue of this report, and then disposed of unless otherwise instructed in writing by the client.

## **4.0 SUBSURFACE CONDITIONS**

### **4.1 Stratigraphy**

The following soil types were encountered in the soil test borings performed at the site:

From the surface to a depth of eight (8) feet, a stratum of FAT CLAY (CH) was encountered with consistencies ranging from firm to very stiff. Below the FAT CLAY (CL), and extending to the boring termination depth of 20 feet, a stratum of CLAYEY SAND (SC) was encountered with loose to medium consistencies.

Detailed description of the type of soil layers encountered during drilling is given in the borehole logs (*Appendix B*). The lines designating the interface between soil strata on the boring logs represent approximate boundaries, transition between materials may be gradual.

### **4.2 Groundwater**

Groundwater was encountered at nine (9) feet below the surface and measured at eleven (11) feet upon completion of the drilling operations. Caving depth information is included in the boring logs.

Groundwater levels may fluctuate with seasonal climatic variations and changes in the land use. Low permeability soils will require several days or longer for groundwater to enter and stabilize in the test borings.

## **5.0 RECOMMENDATIONS**

The recommendations presented in the following sections of this report are based on the information available regarding the proposed construction, the results obtained from our soil test borings and laboratory tests, and our experience with similar projects. Because the test borings represent a very small statistical sampling of subsurface conditions, it is possible that conditions may be encountered during construction that are substantially different from those indicated by the soil test borings. In these instances adjustments to design and construction may be necessary.

This geotechnical report is based on the Site Plan and project information developed by EARTHCO and the assumptions stated in this report. Changes in the proposed location or design of the structures can have significant effects on the conclusions and recommendations of the geotechnical report. EARTHCO should be contacted in the event of such changes.

### **5.1 Site Preparation**

Concrete pavement, building rubble, concrete foundations and any other debris noted at or below the existing ground surface should be removed as part of the site preparation for the proposed construction area. In all new fill and excavation areas, vegetation, topsoil, roots and other deleterious materials (typically 6 to 12 inches), deemed unsuitable shall be removed from the proposed construction areas, and replaced with controlled fill. Site clearing, grubbing and stripping will need to be performed only during dry weather conditions. Operation of heavy equipment on the site during wet conditions could result in excessive rutting and mixing of organic debris with the underlying soils.

### **5.2 Excavations**

Temporary construction slopes should be designed and excavated in strict compliance with the rules and regulations of the Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA), 29 CFR, Part 1926. This document was prepared to better insure the safety of workers entering trenches or excavations, and requires that all excavations conform to the new OSHA guidelines.

The contractor is solely responsible for protecting excavations by shoring, sloping, benching or

other means as required to maintain stability of both the excavation sides and bottom. EARTHCO does not assume any responsibility for construction site safety or the activities of the contractor.

### **5.3 Structural Fill**

It is recommended that structural fills be constructed as controlled, well-compacted engineered fills. Structural engineered fill should be inorganic, low plastic clay, sand, or gravel. Any existing soils with a high organic content (browns) are suitable for reuse as fill in landscaping areas only. It is recommended that only granular fill be used within the foundation footprint and within 5 feet of the foundation footprint. Fill materials should be free of organic or other deleterious materials, have a maximum particle size less than two (2) inches, have a liquid limit less than 40 percent and plasticity index between seven (7) and 17. The intent of these recommendations is to reduce the potential for consolidation and settlement of new fills.

Laboratory testing should be performed on the fill materials to determine the appropriate moisture-density relationship of the fill being placed. Adjustments to the soil moisture by wetting or drying should be made as needed during fill placement.

During grading operations, representative samples of the proposed imported structural fill materials should be periodically checked via laboratory testing. A full-time representative from the testing agency should be on site to monitor excavation and grading operation as well as the suitability of fill materials.

Suitable fill material should be placed in thin lifts (lift thickness depends on type of compaction equipment, but in general, lifts of 8 inches loose measurements are recommended). The soil should be compacted by the necessary compaction equipment to meet the specified compaction recommendations.

Self-propelled compactors similar to Caterpillar Model 815 with tamping feet or sheepfoot rollers may be required to adequately compact fine-grained fill material (silts and clay). If the fill material is granular (sands and gravels) with less than 10% clays and silts, smooth-drum vibratory compactors should be used. In addition, a smooth-drum roller should be provided to “seal” the fill at the end of each workday to reduce the impact of precipitation. In areas undergoing removal of seepage water, the engineered fill should be limited to well-graded sand and gravel or crushed stone.

Within small excavations, such as in utility trenches (less than 24 inches in width), around manholes or behind retaining walls, we recommend the use of "wacker packers", "Rammax" compactors or vibrating plate compactors to achieve the specified compaction. Loose lift thickness of 4 inches are recommended in small area fills.

We recommend that structural fill and backfill be compacted in accordance with the criteria stated in Table 1. A qualified field representative should periodically observe fill placement operations and perform field density tests at various locations throughout each lift, including trench backfill, to indicate if the specified compaction is being achieved.

**TABLE 1 STRUCTURAL FILL PLACEMENT GUIDELINES**

Areas of Fill Placement	Compaction Recommendation (ASTM D698-Standard Proctor)	Moisture Content (Percent of Optimum)
Granular cushion beneath Floor Slab and over Footings	95%	-3% to +3%
Structural fill supporting Footings	98%	-3% to +3%
Structural fill placed within 5 feet beyond the perimeter of the building pad	95%	-3% to +3%
Grade-raise fill placed within 1 foot of the base of the pavement	92%	-3% to +3%
Structural fill placed below the base of the Pavement Soil Subgrade	95%	-3% to +3%
Utility Trenches - Within building and pavement areas	98%	-3% to +3%
Beneath Landscaped/Grass Areas	98%	-3% to +3%

Compaction of any fill by flooding is not considered acceptable. This method will generally not achieve the desired compaction and the large quantities of water will tend to soften the foundation soils.

#### **5.4 Potential Vertical Rise**

Potential Vertical Rise, PVR, expressed in inches, is defined as the latent or potential ability of a soil material, at a given density, moisture and loading condition, when exposed to capillary or surface water, to swell and thereby increase the elevation of its upper surface along with anything resting on it.

The estimated PVR is calculated using the State Department of Highways and Public

Transportation – Materials and Testing Division, Test Method Tex-124E using the Atterberg Limit test results of the site soils within a 10 feet seasonal active zone. This method is based on a proposed floor system constructed at present grade elevations and applying a sustained surcharge load of approximately one (1) pound per square inch of the subgrade soils. The values represents the increase in elevation that could be experienced by dry subsoils if they are allow to become completely saturated due to a combination of poor drainage conditions and introduction of moisture near or directly underneath structures. The actual movement will be dependent on the degree of saturation of the site soils. A maximum of one (1) inch of PVR is recommended to reduce the possibility of noticeable foundation movements.

Base on laboratory test results, the estimated PVR at this site is approximately 1-1/2 inches in its present condition. Placing non-expansive select fill between the existing soils and the building slab will help reduce the PVR to approximately one (1) inch or less. Replacing the upper two (2) feet of the in situ soils with non-expansive select fill material and adding 18 inches of select fill above existing grades will reduce the PVR to approximately one (1) inch or less and improve the site by reducing the potential for differential movements.

### **5.5 Foundation Design – Footings (for All Three Building Sites)**

The planned construction may be supported on conventional spread footing foundations bearing a minimum of two (2) feet below final subgrade elevations after replacement of the upper two (2) feet of existing soils with select fill and the addition of at least 18 inches of select fill above existing grades for a proposed slab-on-grade foundation. Spread footings for building columns and continuous footings for bearing walls can be designed for an allowable soil bearing pressure of **2,000 psf** based on dead load plus design live load. This value contains a factor of safety of three (3). Minimum dimensions of 24 inches for column footings and 18 inches for continuous footings should be used in foundation design to minimize the possibility of a local bearing capacity failure.

Horizontal loads acting on shallow foundations are resisted by friction along the foundation base and by passive pressure acting against the footing cast against the soil. For lateral loads, the coefficient of friction between the base of the footing and the subgrade soils is estimated to be 0.30. The ultimate passive earth pressure, in psf, can be computed by using an equivalent fluid pressure of 240 pcf/ft. A factor of safety of 2 is recommended for sustained loading conditions, and 1.5 for transient loading conditions.

Uplift resistance of shallow foundations formed in an open excavation should be taken as the weight of the foundation and soil above it. For design purposes, the uplift resistance should be based on effective unit

weights of 110 and 150 lbs. per cubic foot (pcf) for soil and concrete, respectively. A factor of safety of 2 is recommended for sustained loading conditions, and 1.5 for transient loading conditions.

Consolidation of the overburden resulting from the foundation loads will result in measurable but tolerable increments of soils settlements. Based on results of the field tests and the anticipated foundation loads, we estimate that the maximum foundation settlement will not exceed one (1) inch. Estimated differential settlement between two (2) adjacent columns should not exceed  $\frac{1}{2}$  to  $\frac{3}{4}$  inch.

The foundation excavations should be observed by a representative of EARTHCO prior to steel or concrete placement to assess that the foundation materials are capable of supporting the design loads and are consistent with the materials discussed in this report. This is especially important to identify the acceptability of the existing fill under the footing. Soft or loose soil zones encountered at the bottom of the footing excavations should be removed to the level of unyielding natural soils or adequately compacted fill as directed by the geotechnical Engineer. Cavities formed as a result of excavation of soft or loose soil zones should be backfilled with lean concrete or dense graded compacted crushed stone, as determined by the geotechnical Engineer.

After opening, footing excavations should be observed and concrete placed as quickly as possible to avoid exposure of the footing bottoms to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond. The foundation concrete should be placed during the same day the excavation is made. If it is required that footing excavations be left open for more than one day, they should be protected to reduce evaporation or entry of moisture.

## **5.6 Grade Supported Floor Slab**

The floor slab may be grade supported. The subgrade should be prepared as discussed in the sections entitled "Site Preparation", "Structural Fill" and "Potential Vertical Rise" in order to minimize soil movement beneath the floor slab.

If some vertical and differential floor movement can be tolerated, the floor slabs may consist of an independent slab-on-grade foundation which is not rigidly connected to the building walls, columns or foundations. If the floor slab is rigidly connected to the building walls, then it is likely that a hinge crack will develop in the slab parallel to the wall at a short distance from the wall. The severity of the cracking will be dependent on the amount of movement that occurs, the rigidity of the floor slab and the rigidity of the connection. In extreme cases, excessive movement and cracking of walls and foundations could occur if the connection of the floor slab is sufficiently rigid.

It is recommended that a vapor barrier such as polyethylene sheeting be provided directly beneath soil supported floor slabs. Adequate construction joints and reinforcement should be provided to reduce the potential for cracking of the floor slabs due to differential movement. A relatively consistent thickness of fill should be provided so that the floor slabs are more uniformly supported. Once the finished floor elevations are determined, EARTHCO should be given the opportunity to review and revise our PVR analyses.

### **5.7 Monolithic Slab-on-Grade Foundations (for All Three Building Sites)**

Alternatively to a spread footing foundation with a grade supported slab system recommended above, the building structure may be founded on a monolithic, steel reinforced (post-tensioned reinforcing), slab-on-grade foundation system with a waffle-type grade beam configuration provided that some differential movement can be tolerated and the recommended site work activities are performed accordingly. If the slab-on-grade foundations are founded directly on the natural site soils, the design Potential Vertical Rise (PVR) is on the order of 1-1/2 inches, assuming that the subgrade soils are allowed to increase in moisture content from a relatively dry condition to a relatively wet condition. Design values are presented below considering potential movements of 1-1/2 inches and one (1) inch or less provided remedial earthwork measures as performed as discussed in the "Site Preparation", "Structural Fill" and "Potential Vertical Rise" sections of this report.

Grade beams (stiffener beams) supported on the existing soils or on compacted fill soils may be designed using a maximum allowable bearing capacity of **2,000** pounds per square foot based on dead load plus design live load considerations. The grade beams should have a minimum width of 10 inches even if the actual bearing pressure is less than the design value. The perimeter grade beams should bear at least 12 inches below adjacent surface grades (i.e. bottoms of beams and pads should bear at least 12 inches below the adjacent ground surface). If soft or loose soils are encountered at the design bearing level, they should be undercut to stiff or dense soils and the excavation back-filled with concrete.

Uniform compaction of fill materials is important to reduce total and differential settlement. If the site is prepared as recommended, total settlement of the slab should not exceed one inch.

Utilizing the "Building Research Board No. 33" (Brab Report) as a guideline, the following design criteria are provided for this site considering the minimum site preparation previously presented:

TABLE 1 – BRAB DESIGN VALUES		
	PVR ≈ 1.5 inches (no remedial earthwork)	PVR ≈ 1 inch (remedial earthwork)
Climatic Rating (Cw)	15	15
Effective Plasticity Index	28	20
Support Index	0.88	0.90
Unconfined Compressive Strength (tsf)	1.125	1.125

Based on this information and using the "Design and Construction of Post-Tensioned Slabs-On-Ground", 2nd Edition, published by the Post-Tensioning Institute (PTI) as a guideline, the following design criteria may be used for this site considering the minimum site preparation previously presented.

TABLE 2 – PTI DESIGN PARAMETERS		
	PVR ≈ 1.5 inches (no remedial earthwork)	PVR ≈ 1 inch (remedial earthwork)
Edge moisture variation distance, em (ft.) for Center Lift	6	6
Differential movement, ym (in.) for Center Lift	2.185	1.793
Edge moisture variation distance, em (ft.) for Edge Lift	3	3
Differential movement, ym (in.) for Edge Lift	0.885	0.675

The Post-Tensioning Institute (PTI) design parameters provided above are for the full expansive potential of the subgrade soils in their present condition. These parameters consider a Thornthwaite moisture index value of -30, a soil suction of 3.4 pF, a moisture velocity of 0.7 inches/month and a montmorillonite clay type classification. The design should take into account the added effect of trees and non-seasonal moisture sources, such as irrigation, plumbing or drainage leaks and poor surface drainage.

Grade beam excavations should be observed and concrete placed as quickly as possible to avoid exposure of the footing bottoms to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond. The foundation concrete should be placed during the same day the excavation is made. If it is required that grade beam excavations be left open for more than one day, they should be protected to reduce evaporation or entry of moisture. The use of a vapor barrier such as polyethylene sheeting is recommended directly beneath the floor slab.

## **6.0 DRAINAGE AND GROUNDWATER CONSIDERATIONS**

The site should be graded to provide positive drainage to reduce storm water infiltration. A minimum gradient of one percent for asphalt areas should be maintained. A three percent gradient should be maintained for landscaped areas immediately adjacent (within 10 feet) to the building. In general, water should not be allowed to collect near the surface of the foundation or floor slab areas of the structures during or after construction. If water were allowed to accumulate next to the foundation, it would provide an available source of free water to the expansive soil underlying the foundation. Similarly, surface water drainage patterns or swales must not be altered so that runoff is allowed to collect next to the foundation.

Temporary drainage provisions should be established, as necessary, to minimize water runoff into the construction areas. Since soils generally tend to soften when exposed to free water, provisions should be made to remove seepage water from excavations, should it occur. Also, undercut or excavated areas should be sloped toward one corner to facilitate the collection and removal of rainwater or surface runoff. Adequate protection against sloughing of soils should be provided for workers and inspectors entering the excavations. This protection should meet O.S.H.A. and other applicable building codes.

Groundwater seepage was encountered in our borings during drilling. Some ground water seepage may be encountered within the proposed building foundation, utility trenches and grading excavations at the time of construction, especially after periods of heavy precipitation. Small quantities of seepage may be handled by conventional sump and pump methods of dewatering.

## 7.0 ADDITIONAL SERVICES

The recommendations presented in this report are contingent on EARTHCO observing and/or monitoring:

- Proofrolling and fill Subgrade conditions;
- Backfilling and compaction of excavations;
- Suitability of borrow materials;
- Fill placement and compaction;
- Foundation subgrades; and
- Compliance with the geotechnical recommendations.

## 8.0 CLOSURE

We trust that this report will assist you in the design and construction of the proposed project. EARTHCO appreciates the opportunity to provide our services on this project and looks forward to working with you during construction and on future projects. Should you have any questions, please do not hesitate to contact us.

This report was prepared by Jaime M. Cantu, P.E.

Respectfully submitted,

**EarthCo, Limited Liability Corporation**

  
Jaime M. Cantu, P.E.,

Geotechnical Project Engineer

**APPENDIX A**  
**LIMITATIONS**

This report was prepared for the exclusive use of City of Weslaco for the design of the proposed development described in Section 2. The report may not be relied upon by any other person or entity without the written permission of City of Weslaco and EarthCo, LLC. This report was prepared in accordance with current, generally accepted geotechnical engineering practices. No other warrantee is provided.

EARTHCO should be allowed the opportunity to review the geotechnical aspects of plans and specifications prior to construction, to allow confirmation of the correct interpretation of the recommendations provided in this report.

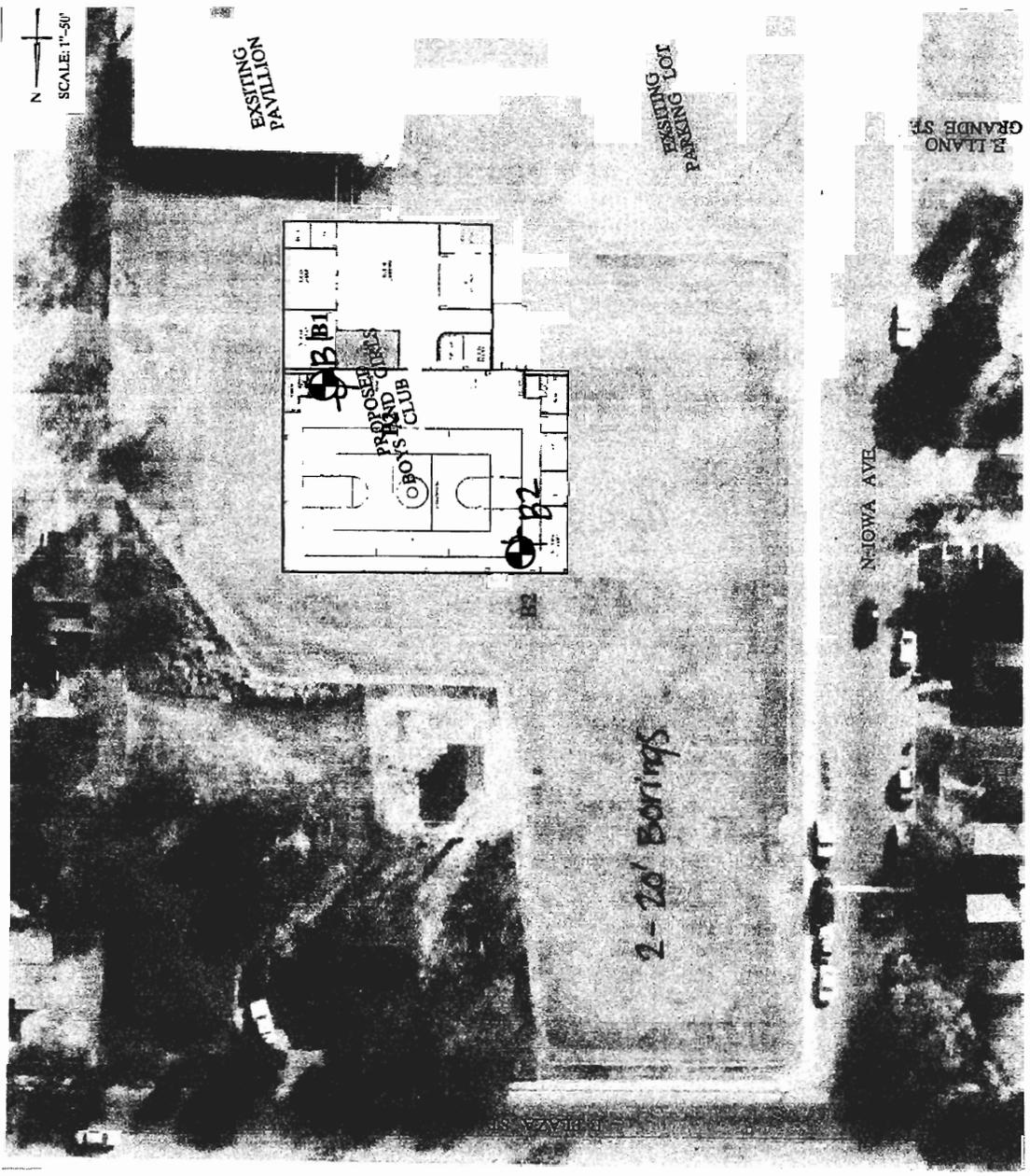
Foundation, earthworks, underground construction, and pavement construction should be undertaken only with full time monitoring by qualified personnel. EARTHCO can provide these services on request.

The conclusions and recommendations submitted in this report are based upon the data obtained from a limited number of widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction or further investigation. If variations or other latent conditions do become evident, it will be necessary to re-evaluate the recommendations of this report.

The recommendations contained herein are not intended to dictate construction methods or sequences. Instead, they are furnished solely to help designers identify potential construction problems related to foundation and earth plans and specifications, based upon findings derived from sampling. Depending upon the final design chosen for the project, the recommendations may also be useful to personnel who observe construction activity. Potential contractors for the project must evaluate potential construction problems on the basis of their review of the contract documents, their own knowledge of and experience in the local area, and on the basis of similar projects in other localities, taking into account their own proposed methods and procedures.

The Scope of Services did not include any environmental assessment for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site. Any statements in this report or on the boring logs regarding odors, colors or unusual or suspicious items or conditions are strictly for the information of the client.

**APPENDIX B**  
**DRAWING**



**Proposed Boys and Girls Club  
Weslaco, Texas**

**Boring Location Plan**

1110 W. Jackson Street  
Harlingen, TX 78550  
(956) 428-2443 - FAX (956) 202-0491



**APPENDIX C**  
**BOREHOLE LOGS**

# LOG OF BORING NO. B1

Boys and Girls Club  
Weslaco, Texas  
EarthCo Project No. : G-1285033

TYPE BORING: Straight Flight Auger

LOCATION: See Boring Location Plan

DEPTH, FT.	SYMBOL SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	BLOWS PER FOOT	LIQUID LIMIT	PLASTICITY INDEX	MOISTURE CONTENT	STRENGTH IN TSF			UNIT DRY WT. LB./CU FT.
								○ HAND PEN	● UNC CMP		
								2.00	3.00	4.00	
		SURF. ELEV.: n/a						PL	WC	LL	
								20	40	60	
		FAT CLAY (CH), brown, firm	83	6	53	30	14	X	●	●	
		FAT CLAY (CH), light brown, very stiff					13	X			
5							15	X			
		CLAYEY SAND (SC), light brown, medium					22	X			
10							21	X			
		loose					20	●	●	●	
15			48	7	26	11	20				
		loose					19	X			
20											

BORING DEPTH: 20.0 FEET  
DATE: 11/9/12

DEPTH TO WATER: Groundwater encountered at 9 feet  
DELAYED WATER READING: Groundwater measured at 11 feet



Geotechnical Engineering & Materials Testing Company  
Harlingen, Texas

# LOG OF BORING NO. B2

Boys and Girls Club  
Weslaco, Texas  
EarthCo Project No. : G-1285033

TYPE BORING: Straight Flight Auger

LOCATION: See Boring Location Plan

DEPTH, FT.	SYMBOL SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	BLOWS PER FOOT	LIQUID LIMIT	PLASTICITY INDEX	MOISTURE CONTENT	STRENGTH IN TSF			UNIT DRY WT. LB./CU FT.
								○ HAND PEN	● UNC CMP		
								PL	WC	LL	
		SURF. ELEV.: n/a						20	40	60	
		FAT CLAY (CH), brown, firm	9					X			
5		FAT CLAY (CH), light brown, very stiff	18	51	31	14		X	●	●	
			21					X			
10		CLAYEY SAND (SC), light brown, medium	17			22		X			
			17			18		X			
15		loose	6			23		X			
20		loose	5	28	12	22		●	●	●	

BORING DEPTH: 20.0 FEET  
DATE: 11/9/12

DEPTH TO WATER: Groundwater encountered at 9 feet  
DELAYED WATER READING: Groundwater measured at 11 feet



Geotechnical Engineering & Materials Testing Company  
Harlingen, Texas

# UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND		
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	$Cu > 4$ AND $1 < Cc < 3$	GW	WELL-GRADED GRAVEL		
		GRAVELS WITH FINES >12% FINES	$Cu > 4$ AND $1 > Cc > 3$	GP	POORLY-GRADED GRAVEL		
		SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINE	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL	
			SANDS AND FINES >12% FINES	FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL	
	FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT < 50	INORGANIC	$Pi > 7$ AND PLOTS > "A" LINE	CL	LEAN CLAY	
			ORGANIC	$Pi > 4$ AND PLOTS < "A" LINE	ML	SILT	
			ORGANIC	$LL$ (oven dried) $LL$ (not dried) $< 0.75$	OL	ORGANIC CLAY OR SILT	
		SILTS AND CLAYS LIQUID LIMIT > 50	INORGANIC	$Pi$ PLOTS > "A" LINE	CH	FAT CLAY	
INORGANIC			$Pi$ PLOTS < "A" LINE	MH	ELASTIC SILT		
ORGANIC			$LL$ (oven dried) $LL$ (not dried) $< 0.75$	OH	ORGANIC CLAY OR SILT		
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT		

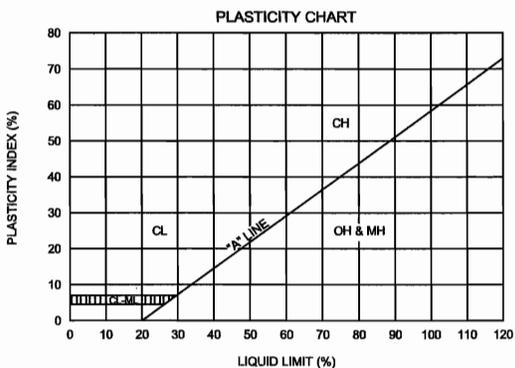
OTHER MATERIAL SYMBOLS	
	Poorly Graded Sand with Clay
	Clayey Sand
	Sandy Silt
	Low to High Plasticity Clay
	Poorly Graded Gravelly Sand
	Topsoil
	Well Graded Gravel with Clay
	Well Graded Gravel with Silt
	Sand
	Silt
	Well Graded Gravelly Sand
	Gravelly Silt
	Asphalt
	Boulders and Cobble

### SAMPLE TYPES

- Split Spoon
- Shelby Tube
- Rock Core
- Grab Sample

### ADDITIONAL TESTS

- |   |   |
|---|---|
| CA - CHEMICAL ANALYSIS (CORROSIVITY)      | (200) - (WITH % PASSING NO. 200 SIEVE)  |
| CD - CONSOLIDATED DRAINED TRIAXIAL        |   |
| CN - CONSOLIDATION                        | SW - SWELL TEST                         |
| CU - CONSOLIDATED UNDRAINED TRIAXIAL      | TC - CYCLIC TRIAXIAL                    |
| DS - DIRECT SHEAR                         | TV - TORVANE SHEAR                      |
| PP - POCKET PENETROMETER (TSF)            | UC - UNCONFINED COMPRESSION             |
| (3,0) - (WITH SHEAR STRENGTH IN KSF)      | (1.5) - (WITH SHEAR STRENGTH IN KSF)    |
| RV - R-VALUE                              |   |
| SA - SIEVE ANALYSIS: % PASSING #200 SIEVE | UU - UNCONSOLIDATED UNDRAINED TRIAXIAL  |
| - WATER LEVEL (WITH DATE OF MEASUREMENT)  | WA - WASH ANALYSIS                      |
|   | (200%) - (WITH % PASSING NO. 200 SIEVE) |



PENETRATION RESISTANCE (RECORDED AS BLOWS / 0.5 FT)				
SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	COMPRESSIVE STRENGTH (TSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.50
MEDIUM DENSE	10 - 30	FIRM	4 - 8	0.50 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

\* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

<h2 style="margin: 0;">EarthCo</h2>	<h2 style="margin: 0;">LEGEND TO SOIL DESCRIPTIONS</h2>	<h2 style="margin: 0;">FIGURE</h2> <h1 style="margin: 0;">1</h1>
Job No.		

## SECTION 01050 - FIELD ENGINEERING

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. This Section specifies administrative and procedural requirements for field engineering services, including, but not necessarily limited to, the following:
  - 1. Land and improvements survey work, construction staking

#### 1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### 1.3 SUBMITTALS

- A. Certificates: Submit a certificate signed by the Land Surveyor or Professional Engineer certifying that the location and elevation of improvements comply with the Contract Documents.
- B. Final Property Survey: Submit 5 copies of the final property survey.

#### 1.4 QUALITY ASSURANCE

- A. Surveyor: Engage a Registered Land Surveyor registered in the State Of Texas to perform land surveying services required.

### PART 2 - PRODUCTS (Not Applicable)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. The Owner will identify existing control points and property line corner stakes.
- B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks before proceeding to layout the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
- C. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points, or requirements to relocate reference points because of necessary changes in grades or locations.
- D. Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.

- E. Establish and maintain a minimum of two permanent benchmarks on the site, referenced to data established by survey control points.
- F. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- G. Existing utilities and equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities and other construction.
- H. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer and water service piping.

### 3.2 PERFORMANCE

- A. Working from lines and levels established by the property survey, establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
- B. Advise entities engaged in construction activities, of marked lines and levels provided for their use. As construction proceeds, check every major element for line, level and plumb.
- C. Surveyor's Log: Maintain a surveyor's log of control and other survey Work. Make this log available for reference.
- D. Record deviations from required lines and levels, and advise the Architect when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
- E. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes and invert elevations by instrumentation and similar appropriate means.
- F. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels and control lines and levels required for mechanical and electrical Work.
- G. Existing Utilities: Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in, or affected by construction. Coordinate with local authorities having jurisdiction.

- H. Final Property Survey: Before Substantial Completion, prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the Surveyor, to the effect that principal metes, bounds and lines of the Project are accurately positioned as shown on the survey.

END OF SECTION

## SECTION 01090 - DEFINITIONS AND STANDARDS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions.
- B. Other Division-1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section specifies administrative requirements for compliance with governing regulations, codes and standards.
- B. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards. Refer to General and Supplementary Conditions for requirements for compliance with governing regulations.

#### 1.3 DEFINITIONS

- A. Definitions contained in this Article are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.
- B. Indicated: refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.
- C. Directed: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by the Architect", "requested by the Architect", and similar phrases. However, no implied meaning shall be interpreted to extend the Architect's responsibility into the Contractor's area of construction supervision.
- D. Approve: The term "approved," where used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the responsibilities and duties of the Architect stated in General and Supplementary Conditions. Such approval shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.
- E. Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work,

whether they are lawfully imposed by authorities having jurisdiction or not.

- F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."
- G. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."
- H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
- I. Installer: An "Installer" is an entity engaged by the Contractor, either as an employee, subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
- J. The term "experienced," when used with the term "Installer" means having a minimum of 5 previous projects similar in size and scope to this project, and familiar with the precautions required, and has complied with requirements of the authority having jurisdiction.
- K. Project Site: The space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other construction as part of the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.
- L. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.

#### 1.4 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. This Article is provided to help the user of these Specifications understand the format, language, implied requirements, and similar conventions. None of the explanations shall be interpreted to modify the substance of Contract requirements.
- B. Specification Content: This Specification has been produced employing the conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
- C. Abbreviated Language: Language used in the Specifications and other Contract Documents is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.

- D. Imperative Language is used generally in the Specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor, or by others when so noted.

## 1.5 DRAWING SYMBOLS

- A. Graphic symbols used on the Drawings are those recognized in the construction industry for purposes indicated.
- B. Mechanical/Electrical Drawings: Graphic symbols used on mechanical and electrical Drawings are generally aligned with symbols recommended by American Society of Heating, Refrigerating and Air-Conditioning Engineers. Where appropriate, they are supplemented by more specific symbols recommended by technical associations including American Society of Mechanical Engineers, American Society of Plumbing Engineers, Institute of Electrical and Electronic Engineers and similar organizations. Refer instances of uncertainty to the Architect for clarification before proceeding.

## 1.6 INDUSTRY STANDARDS

- A. Applicability of Standards: Applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.
- B. Referenced standards take precedence over standards that are not referenced but recognized in the construction industry as applicable.
- C. Unreferenced Standards: Except as otherwise limited by the Contract Documents, standards not referenced but recognized in the industry as applicable will be enforced for performance of the Work. The Architect will decide whether a code or standard is applicable, or which of several are applicable.
- D. Publication Dates: Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.
- E. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced.
- F. Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reason.
- G. Copies of Standards: Each entity engaged in construction on the Project is

required to be familiar with industry standards applicable to that entities' construction activity. Copies of applicable standards are not bound with the Contract Documents.

- H. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
- I. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations as referenced in Contract Documents are defined to mean the associated names. Names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of Contract Documents :

AA	Aluminum Association 900 19th St., NW, Suite 300 Washington, DC 20006	(202) 862-5100
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI 48219	(313) 532-2600
ADA	Americans with Disabilities Act Civil Rights Division U.S. Department of Justice P. O. Box 66118 Washington, DC 20035-6118	(202) 514-0301
AHA	American Hardboard Association 520 N. Hicks Rd. Palatine, IL 60067	(312) 934-8800
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740	(301) 277-4258
AIA	American Institute of Architects 1735 New York Ave., NW Washington, DC 20006	(202) 626-7300
AISC	American Institute of Steel Construction 400 N. Michigan Ave., 8th Floor Chicago, IL 60611	(312) 670-2400
ALSC	American Lumber Standards Committee P.O. Box 210 Germantown, MD 20874	(301) 972-1700
ANSI	American National Standards Institute	

	1430 Broadway New York, NY 10018	(212) 354-3300
APA	American Plywood Association P.O. Box 11700 Tacoma, WA 98411	(206) 565-6600
ASC	Adhesive and Sealant Council 1500 Wilson Blvd., Suite 515 Arlington, VA 22209	(703) 841-1112
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329	(404) 636-8400
ASME	American Society of Mechanical Engineers 345 East 47th St. New York, NY 10017	(212) 705-7722
ASPE	American Society of Plumbing Engineers 3617 Thousand Oaks Blvd., Suite 210 Westlake, CA 91362	(805) 495-7120
ASTM	ASTM 1916 Race St. Philadelphia, PA 19103	(215) 299-5400
AWI	Architectural Woodwork Institute 2310 S. Walter Reed Drive Arlington, VA 22206	(703) 671-9100
BHMA	Builders' Hardware Manufacturers Association 60 East 42nd St., Room 511 New York, NY 10165	(212) 682-8142
BIA	Brick Institute of America 11490 Commerce Park Drive, Suite 300 Reston, VA 22091	(703) 620-0010
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Rd. Schaumburg, IL 60195	(312) 490-1700
NEC	National Electric Code (by NFPA)	
NFPA	National Fire Protection Association	

Batterymarch Park  
Quincy, MA 02269 (617) 770-3000

SMACNA Sheet Metal and Air Conditioning  
Contractor's National Association  
P.O. Box 70  
Merrifield, VA 22116 (703) 790-9890

UL Underwriters Laboratories  
333 Pfingsten Rd.  
Northbrook, IL 60062 (312) 272-8800

END OF SECTION

## SECTION 01200 - PROJECT MEETINGS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions
- B. Other Division-1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:
  - 1. Pre-Construction Conference.
  - 2. Progress Meetings.

#### 1.3 PRE-CONSTRUCTION CONFERENCE

- A. Schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: The Owner, Architect and their consultants, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress including such topics as:
  - 1. Tentative construction schedule.
  - 2. Designation of responsible personnel.
  - 3. Procedures for processing Change Orders and Applications for Payment.
  - 4. Submittal of Shop Drawings, Product Data and Samples.
  - 5. Preparation of record documents.
  - 6. Use of the premises and trash disposal
  - 7. Office, Work and Storage areas.
  - 8. Safety procedures and First aid.
  - 9. Security.
  - 10. Working hours.

#### 1.4 PROGRESS MEETINGS

- A. Conduct progress meetings at the Project site at regularly scheduled intervals.

- B. Notify the Owner and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request
- C. Attendees: In addition to representatives of the Owner and Architect, each subcontractor supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.
- D. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.
- E. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time. Review the present and future needs of each entity present, including such items as:
  - 1. Interface requirements.
  - 2. Time requirements.
  - 3. Sequences of Work.
  - 4. Pending Deliveries.
  - 5. Hours of Work.
  - 6. Hazards and risks.
  - 7. Housekeeping.
  - 8. Quality and Work standards.
  - 9. Change Order status.
  - 10. Documentation of information for payment requests.
- F. Reporting: No later than 3 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
- G. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

END OF SECTION

## SECTION 00710 - CONSTRUCTION CONTRACTS AND GENERAL CONDITIONS

### CONSTRUCTION CONTRACT

The Contract is the American Institute of Architects Document A133-2009, "Standard Form of Agreement Between Owner and Construction Manager where basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price ", hereinafter referred to as the "Contract".

A copy of this Document is available at the Construction Manager's office, and shall apply to each and every Section of the Work as though written in full therein.

### GENERAL CONDITIONS:

The General Conditions of this Contract is the American Institute of Architects Document A201-2007, "General Conditions of the Contract for Construction", hereinafter referred to as the "General Conditions".

A copy of this Document is available at the Construction Manager's office, and shall apply to each and every Section of the Work as though written in full therein.

### OTHER

Contracts between Construction Manager and Subcontractors shall be the American Institute of Architects Document A401-2007, "Standard Form of Agreement Between Contractor and Subcontractor".

END OF SECTION

## SECTION 01010 - SUMMARY OF WORK

### GENERAL

Drawings and general provisions of Contract, including General Conditions .  
All Specification Sections, apply to this Section.

### PROJECT IDENTIFICATION

Title: Weslaco Boys and Girls Club Recreation Center  
Owner: City of Weslaco, Texas

### CONTRACTOR USE OF PREMISES

Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed. Keep driveways and entrances serving the premises clear and available to the Owner and the Owner's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

Burial of Waste Materials: Do not dispose of organic and hazardous material on site, either by burial or by burning.

### OWNER OCCUPANCY

Partial Owner Occupancy: The Owner reserves the right to occupy and to place and install equipment in completed areas of the building, prior to Substantial Completion provided that such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

Obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.

Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. and required inspections and tests shall have been successfully completed.

### MISCELLANEOUS PROVISIONS

No later than 300 days after the date of Substantial Completion, and after Owner occupancy and use of the Project, return and again inspect, test and adjust the Work.

Submit a report of results to the Owner.

Instruct the Owner's operating personnel on operational requirements needed to maintain compliance.

END OF SECTION

## SECTION 01020 - ALLOWANCES

### GENERAL

This Section specifies administrative and procedural requirements governing handling and processing allowances.

Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. Allowances are to cover the costs of labor and materials.

### SELECTION AND PURCHASE

At the earliest feasible date, the final selection and purchase of each product or system described by an allowance should be completed in order to avoid delay in the Work.

Owner to obtain proposals for each allowance for use in making final selections; and consider recommendations that are relevant to performance of the Work.

### SUBMITTALS

Suppliers and sub-contractors are to submit invoices or delivery slips to indicate actual quantities of materials delivered to the site for use in fulfillment of each allowance.

### INSPECTION

Inspect products covered by an allowance promptly upon delivery for damage or defects.

### PREPARATION

Contractor to coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related construction activities.

### ALLOWANCE AMOUNTS

<b>Utilities Extensions Allowance.....</b>	<b>\$ 40,000.00</b>
<b>Betterment Allowance.....</b>	<b>3,000.00</b>
<b>Materials Testing Allowance.....</b>	<b><u>5,000.00</u></b>
<b>Total.....</b>	<b>\$ 30,000.00</b>

END OF SECTION

## SECTION 01027 - APPLICATIONS FOR PAYMENT

### GENERAL

#### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### SUMMARY

This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

### APPLICATIONS FOR PAYMENT

Each Application for Payment shall be consistent with previous applications and payments as paid for.

The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

**Payment Application Times:** The date for each progress payment is the 20th day of each month. The period of construction Work covered by each Application for Payment is the period ending 7 days prior to the date for each progress payment and starting the day following the end of the preceding period.

**Payment Application Forms:** Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment or a form containing similar listings.

**Application Preparation:** Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.

Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

Include amounts of Change Orders issued prior to the last day of the construction period covered by the application.

**Transmittal:** Submit 3 executed copies of each Application for Payment to the Owner by means ensuring receipt within 24 hours.

**Initial Application for Payment:** Administrative actions and Submittals that must precede or coincide with SUBMITTAL of the first Application for Payment include the following:

List of subcontractors, if any.  
List of principal suppliers and fabricators.  
Schedule of Values.

Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

Administrative actions and Submittals that shall proceed or coincide with this application include:

- Warranties (guarantees) and maintenance agreements.
- Test/adjust/balance records.
- Maintenance instructions
- Start-up performance reports.
- Final cleaning.

Final Payment Application: Administrative actions and Submittals which must precede or coincide with submittal of the final Application for Payment include the following:

- Completion of Project closeout requirements.
- Completion of items specified for completion after Substantial Completion.
- Assurance that unsettled claims will be settled.
- Assurance that work not complete and accepted will be completed without undue delay.
- Transmittal of required Project construction records to Owner.
- Removal of temporary facilities and services.
- Removal of surplus materials, rubbish and similar elements.

END OF SECTION

## SECTION 01040 - PROJECT COORDINATION

### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

### SUMMARY

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

- Coordination of all work activities.
- Administrative and supervisory personnel.
- General installation provisions.
- Cleaning and protection of installations.

Recommendations for the Owner's Construction Schedule are included in Section "Submittals".

### COORDINATION

Contractor to coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

Make adequate provisions to accommodate items scheduled for later installation.

Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such activities include, but are not limited to, the following:

- Preparation of schedules.
- Installation of temporary facilities.
- Administration of contracts
- Field Supervision and documentation
- Quality control services
- Delivery and processing of Submittals.
- Progress meetings.
- Project Close-out activities.

## SUBMITTALS

**Coordination Drawings:** Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.

Show the interrelationship of components shown on separate Shop Drawings.

Indicate required installation sequences.

Comply with requirements contained in Section "Submittals."

Refer to Division-15 Section "Basic Mechanical Requirements," and Division-16 Section "Basic Electrical Requirements" for specific coordination Drawing requirements for mechanical and electrical installations.

**Staff Names:** Compile a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers. Post copies of the list in the Project the temporary field office.

## GENERAL INSTALLATION PROVISIONS

**Inspection of Conditions:** Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

**Manufacturer's Instructions:** Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

**Visual Effects:** Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

Recheck measurements and dimensions, before starting each installation.

Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

**Mounting Heights:** Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application

indicated, and in compliance with the Americans with Disabilities Act. Refer questionable mounting height decisions to the Architect for final decision.

## CLEANING AND PROTECTION

Contractors to clean and protect construction in progress and adjoining materials in place and to apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Contractors to clean and maintain completed construction as frequently as necessary through the remainder of the construction period and to adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Contractor to supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

- Excessive static or dynamic loading.
- Excessive internal or external pressures.
- Excessively high or low temperatures.
- Thermal shock.
- Excessively high or low humidity.
- Air contamination or pollution.
- Water or ice.
- Solvents.
- Chemicals.
- Light.
- Puncture.
- Abrasion.
- Heavy traffic. soiling, staining and corrosion.
- Bacteria.
- Rodent and insect infestation.
- Combustion.
- Electrical current.
- Unusual wear or other misuse.
- Contact between incompatible materials.
- Destructive testing.
- Misalignment.
- Excessive weathering.
- Unprotected storage.
- Improper shipping or handling.
- Theft.
- Vandalism.

END OF SECTION

## SECTION 01153 CHANGE ORDER PROCEDURES

### PROPOSED CHANGES:

- A. Upon discovery of circumstances leading to the conclusion that a construction change should be made, the Contractor will issue a Request for Change Order Proposal ( R.F.P.) form.
- B. Any work done by Contractor not authorized by the Owner shall be subject to removal at the Contractor's expense.
- C. The Owner will forward the RFP to the contractor for pricing. Typically, ten (10) working days will be allowed for pricing; however, additional time will be allowed for more extensive changes.
- D. The Contractor shall submit his price proposal along with all back-up information to the Owner. The submittal shall include separate breakdowns for general contract and subcontract work.
- E. The breakdowns shall show materials by quantities and unit prices, labor by crafts, hours and insurance mark-ups shown separately. Equipment shall be shown by type, hours and rates. Overhead and profit shall be shown separately. Quotation shall include all costs. No additional costs will be allowed for a proposed change.
- F. The Contractor's proposed change quotations will be reviewed by the Owner within a reasonable amount of time, usually not more than ten (10) working days. Conformance with the contract and the proposed change documents, as well as materials, labor and equipment quantities and costs, and allowed mark-up percentages will be verified. Requests for additional time will also be evaluated based on the contractor's written evidence submitted along with a revised construction schedule proving impact on final completion date.
- G. " Cost of Doing Business " items such as, but not limited to, supervision, field and home office expenses, warranty reserve, clean-up, and expendable supplies are a part of the overhead expense and as such shall not be included as a part of the change order proposal.
- H. Bond premiums may be included as an expense item in an additive R.F.P. if also included in a deductive R.F.P. Percentage allowed shall be limited to actual percentage paid by Contractor to bonding agent.

### AUTHORIZATION FOR CONSTRUCTION TO PROCEED:

Within a reasonable time, the Owner will notify the contractor whether the change will be implemented. If the change is approved, the Owner will issue a Change Order. The Change Order may be issued, at the Owner's discretion, immediately, or, in conjunction with several other approved R.F.P.'s if considered appropriate.

END OF SECTION

## SECTION 01300 - SUBMITTALS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

This Section specifies administrative and procedural requirements for Submittals required for performance of the Work, including, as applicable to the contractor's scope of the work

Product Data. Shop Drawings Samples

Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative Submittals. Such Submittals include, but are not limited to:

Permits.	Performance and payment bonds.
Insurance certificates.	List of Subcontractors.
Applications for payment.	

#### 1.3 SUBMITTAL PROCEDURES

Coordinate preparation and processing of Submittals with performance of construction activities. Transmit each SUBMITTAL sufficiently in advance of performance of related construction activities to avoid delay.

The Owner reserves the right to withhold action on a SUBMITTAL requiring coordination with other Submittals until related Submittals are received.

Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process Submittals, including time for re-submittals..

Place a permanent label or title block on each SUBMITTAL for identification.

Provide a space on Shop Drawings to record the contractor's review and approval markings and the action taken. Include the following information on the label for processing and recording action taken.

Project name.  
Name of Owner  
Name of Contractor.  
Date.  
Name and address of supplier or manufacturer.  
Drawing number and detail references, as appropriate.

Transmittal: Package each SUBMITTAL appropriately for transmittal and handling. Transmit

each SUBMITTAL from Contractor to Owner using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

#### 1.4 OWNER'S CONSTRUCTION SCHEDULE AND SUBMITTAL COORDINATION

Owner shall prepare a fully developed, horizontal bar-chart type Contractor's construction schedule indicating the date established for "Commencement of the Work".

The schedule is to provide a separate time bar for each significant construction activity, and use the same breakdown of units of the Work for preparing an Owner's "Schedule of Values".

Distribution: Owner to print and distribute copies of the proposed schedule to the contractors, and other parties required to comply with scheduled dates.

Schedule Updating: Owner to revise the schedule after each meeting or activity, where revisions have been recognized or made and issue the updated schedule to the contractors, and other parties required to comply with scheduled dates.

#### 1.5 OWNER'S SUBMITTAL SCHEDULE

After development of the Owner's construction schedule, Owner is to prepare a complete schedule of Submittals, and coordinate SUBMITTAL schedule with the list of contracts, schedule of values and the list of products.

When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

### PART 2 SUBMITTALS - PREPARATION AND PROCESSING

#### 2.1 SHOP DRAWINGS

Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

- Dimensions.
- Identification of products and materials included.
- Compliance with specified standards.
- Notation of coordination requirements.

Notation of dimensions established by field measurement.

Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 24" x 36".

Final SUBMITTAL: Submit 5 blue- or black-line prints.

One of the prints shall be marked-up and maintained as a " Owner's Record Document".

Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction..

## 2.2 PRODUCT DATA

Collect Product Data into a single SUBMITTAL for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

- Manufacturer's printed recommendations.
- Compliance with recognized trade association standards.
- Compliance with recognized testing agency standards.
- Application of testing agency labels and seals.
- Notation of dimensions verified by field measurement.
- Notation of coordination requirements.

Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

Preliminary SUBMITTAL: Submit a preliminary single-copy of Product Data where selection of options is required.

Submittals: Submit 5 copies of each required SUBMITTAL; submit 6 copies where required for maintenance manuals. The Owner will retain 2, and will return the others marked with action taken and corrections or modifications required.

Unless noncompliance with Contract Document provisions is observed, the SUBMITTAL may serve as the final SUBMITTAL.

Furnish copies of final SUBMITTAL to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession. Do not permit use of unmarked copies of Product Data in connection with construction.

## 2.1 SAMPLES

Submit fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Include the following:

- Generic description of the Sample.
- Sample source.
- Product name or name of manufacturer.
- Compliance with recognized standards.
- Availability and delivery time.

Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final SUBMITTAL and the actual component as delivered and installed.

Preliminary Submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

Preliminary Submittals will be reviewed and returned with the Architect's mark indicating selection and other action.

Submittals: Submit 2 sets; one will be returned marked with the action taken.

Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

Unless noncompliance with Contract Document provisions is observed, the SUBMITTAL may serve as the final SUBMITTAL.

Sample sets may be used to obtain final acceptance of the construction associated with each set..

## 2.2 OWNER'S ACTION

Except for Submittals for record, information or similar purposes, where action and return is required or requested, the Owner will review each SUBMITTAL, mark to indicate action taken, and return promptly.

Compliance with specified characteristics is the Contractor's responsibility

Action Stamp: Owner will stamp each SUBMITTAL with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

Final Unrestricted Release: Where Submittals are marked "Approved," that part of the

Work covered by the SUBMITTAL may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

When Submittals are marked "Approved as Noted," that part of the Work covered by the SUBMITTAL may proceed provided it complies with notations or corrections on the SUBMITTAL and requirements of the Contract Documents; final acceptance will depend on that compliance.

When submittal is marked "Not Approved, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new SUBMITTAL in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.

Do not permit Submittals marked "Not Approved, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.

Other Action: Where a SUBMITTAL is primarily for information or record purposes, special processing or other activity, the SUBMITTAL will be returned, marked "Action Not Required".

END OF SECTION

## SECTION 01400 - QUALITY CONTROL SERVICES

### GENERAL

#### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### SUMMARY

This Section specifies administrative and procedural requirements for quality control services.

Quality control services include inspections and tests and related actions including reports, performed by independent agencies for the Owner.

Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Owner of responsibility for compliance with Contract Document requirements.

Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as installation procedures.

Inspections, test and related actions specified are not intended to limit the Owner's quality control procedures that facilitate compliance with Contract Document requirements.

#### RESPONSIBILITIES

The Owner shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and as may be required by governing authorities, except where they are specifically indicated to be the contractor's responsibility.

The Owner will engage and pay for the services of an independent agency to perform inspections and tests only where specified as the Owner's responsibility.

Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless otherwise agreed in writing with the Owner.

**Retesting:** The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.

Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

Associated Services: The Owner shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.

Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.

Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.

Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.

Security and protection of samples and test equipment at the Project site.

The Owner will provide inspections, tests and similar quality control services for concrete testing, CMU concrete fill testing and building pad soil testing. Where testing is specifically indicated as the Contractor's responsibility, the Contractor is to provide.

Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Owner in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

The agency shall notify the Owner promptly of irregularities or deficiencies observed in the Work during performance of its services.

The testing agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.

The agency shall not perform any duties of the Owner or contractor.

Coordination: The Owner and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition, the Owner and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests. The Owner is responsible for scheduling times for inspections, tests, taking samples and similar activities.

## 1.1 SUBMITTALS

The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Owner, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

- Date of issue.
- Project title and number.
- Name, address and telephone number of testing agency.
- Dates and locations of samples and tests or inspections.
- Names of individuals making the inspection or test.
- Designation of the Work and test method.
- Identification of product and Specification Section.
- Complete inspection or test data.
- Test results and an interpretations of test results.
- Ambient conditions at the time of sample-taking and testing.
- Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
- Name and signature of laboratory inspector.
- Recommendations on retesting.

## QUALITY ASSURANCE

Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are pre-qualified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.

Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

## EXECUTION

### REPAIR AND PROTECTION

General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.

Protect construction exposed by or for quality control service activities, and protect repaired construction.

Repair and protection is the Owner's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION

## SECTION 01500 - TEMPORARY FACILITIES

### SUMMARY

This Section specifies requirements for temporary services and facilities, including construction and support facilities, security and protection. Temporary construction and support facilities required include but are not limited to:

- Temporary Project identification sign and bulletin boards.
- Waste disposal services.
- Construction aids and miscellaneous services and facilities.
- Temporary toilets

Security and protection facilities required include but are not limited to:

- Temporary fire protection.
- Barricades, warning signs, lights.
- Environmental protection.

### QUALITY ASSURANCE

Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:

- Building Code requirements.
- Health and safety regulations.
- Utility company regulations.
- Police, Fire Department and Rescue Squad rules.
- Environmental protection regulations.

Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70). Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

### 1.1 PROJECT CONDITIONS

Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

### MATERIALS

Provide new materials or undamaged, previously used materials in a serviceable and safe condition.

## EQUIPMENT

General: Provide new equipment; if acceptable to the Owner, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.

First Aid Supplies: Comply with governing regulations.

Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

## TEMPORARY SUPPORT FACILITIES INSTALLATION

Project Identification and Temporary Signs: Provide project identification and other signs necessary to ensure public safety. Install signs to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative treated wood or steel. Do not permit installation of unauthorized signs.

Collection and Disposal of Waste: Collect waste from construction areas and elsewhere to maintain an organized site free of loose trash. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

## SECURITY AND PROTECTION FACILITIES INSTALLATION

Locate fire extinguishers where convenient and effective for their intended purpose.

Store combustible materials in containers in fire-safe locations.

Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.

Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

Enclosure Fence: Before construction begins, install an enclosure fence with lockable entrance gates. Enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people and animals from easily entering the site.

Environmental Protection: Provide protection, operate facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

## 1.2 OPERATION, TERMINATION AND REMOVAL

Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

Termination and Removal: Remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

Materials and facilities that constitute temporary facilities are property of the Owner.

At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:

Replace air filters and clean inside of ductwork and housings.

Replace significantly worn parts and parts that have been subject to unusual operating conditions.

Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 01500

## SECTION 01631 - PRODUCT SUBSTITUTIONS

### GENERAL

#### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### SUMMARY

This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.

#### .DEFINITIONS

Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.

**Substitutions:** Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions." The following are not considered substitutions:

Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.

Revisions to Contract Documents requested by the Owner..

Specified options of products and construction methods included in Contract Documents.

The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

### SUBMITTALS

**Substitution Request SUBMITTAL:** Requests for substitution will be considered if received within 60 days after commencement of the Work. Requests received more than 60 days after commencement of the Work may be considered or rejected at the discretion of the Owner.

Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.

Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide the following information, as appropriate:

Product Data, including Drawings and descriptions of products, fabrication and

installation procedures.

Samples, where applicable or requested.

A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.

Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors, that will become necessary to accommodate the proposed substitution.

A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution.

Cost information, including a proposal of the net change, if any in the Contract Sum.

Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time, that may subsequently become necessary because of the failure of the substitution to perform adequately.

Owner's Action: Within one week of receipt of the request for substitution, the Owner will request additional information or documentation necessary for evaluation of the request. Within 2 weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, the Owner will notify the Contractor of acceptance or rejection of the proposed substitution.

## PRODUCTS

### SUBSTITUTIONS

Conditions: The Contractor's substitution request will be received and considered by the Owner when one or more of the following conditions are satisfied, as determined by the Owner; otherwise requests will be returned without action except to record noncompliance with these requirements.

Extensive revisions to Contract Documents are not required.

Proposed changes are in keeping with the general intent of Contract Documents.

The request is timely, fully documented and properly submitted.

The request is directly related to an "or equal" clause or similar language in the Contract Documents.

The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.

The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.

A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear.

The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.

The specified product cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.

The specified product cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.

The Contractor's SUBMITTAL and Owner's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

END OF SECTION

## SECTION 01700 - PROJECT CLOSEOUT

### GENERAL

#### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### SUMMARY

This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

- Inspection procedures.
- Project record document SUBMITTAL.
- Operating and maintenance manual SUBMITTAL.
- SUBMITTAL of warranties.

Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions-2 through -16.

#### SUBSTANTIAL COMPLETION

**Preliminary Procedures:** Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.

If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.

Advise Owner of pending insurance change-over requirements.

Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.

Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.

Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

**Inspection Procedures:** On receipt of a request for inspection, the Owner will either proceed with inspection or advise the Contractor of unfulfilled requirements. The Owner will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

The Owner will repeat inspection when requested and assured that the Work has been substantially completed. Results of the completed inspection will form the basis of requirements for final acceptance.

## FINAL ACCEPTANCE

**Preliminary Procedures:** Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

Submit an updated final statement, accounting for final additional changes to the Contract Sum.

Submit a certified copy of the Owner's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.

**Reinspection Procedure:** The Owner will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Owner.

Upon completion of reinspection, the Owner will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance. If necessary, reinspection will be repeated.

## RECORD DOCUMENT SUBMITTALS

**General:** Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Owner's reference during normal working hours.

**Record Drawings:** Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.

Note related Change Order numbers where applicable.

Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

**Record Specifications:** Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

Upon completion of the Work, submit record Specifications to the Owner for the Owner's records.

**Record Product Data:** Maintain one copy of each Product Data SUBMITTAL. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.

Upon completion of mark-up, submit complete set of record Product Data to the Owner for the Owner's records.

**Record Sample Submitted:** Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.

**Miscellaneous Record Submittals:** Refer to other Specification Sections for requirements of miscellaneous record-keeping and Submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Owner for the Owner's records.

**Maintenance Manuals:** Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

- Emergency instructions.
- Spare parts list.
- Copies of warranties.
- Wiring diagrams.
- Recommended "turn around" cycles.
- Inspection procedures.
- Shop Drawings and Product Data.
- Fixture schedule.

## CLOSEOUT PROCEDURES

Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

- Maintenance manuals.
- Record documents.
- Spare parts and materials.
- Tools.
- Lubricants.
- Identification systems.
- Control sequences.
- Hazards.
- Cleaning.
- Warranties and bonds.
- Maintenance agreements and similar continuing commitments.

As part of instruction for operating equipment, demonstrate the following procedures:

- Start-up.
- Shutdown.
- Emergency operations.
- Noise and vibration adjustments.
- Safety procedures.
- Economy and efficiency adjustments.
- Effective energy utilization.

## FINAL CLEANING

General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".

Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

- Remove labels that are not permanent labels.

- Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

- Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to

their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.

Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

**Removal of Protection:** Remove temporary protection and facilities installed for protection of the Work during construction.

**Compliance:** Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION

## SECTION 01740 - WARRANTIES

### GENERAL

#### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### SUMMARY

This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products.

General closeout requirements are included in Section "Project Closeout."

**Disclaimers and Limitations:** Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor. Each Contractor is responsible for warranties related to its own Contract.

#### DEFINITIONS

**Standard Product Warranties** are preprinted written warranties published by individual manufacturers for products and are specifically endorsed by the manufacturer to the Owner.

### WARRANTY REQUIREMENTS

**Related Damages and Losses:** When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

**Reinstatement of Warranty:** When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

**Replacement Cost:** Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefitted from use of the Work through a portion of its anticipated useful service life.

**Owner's Recourse:** Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies. The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

## SUBMITTALS

Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Owner's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.

When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within fifteen days of completion of that designated portion of the Work.

When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner for approval prior to final execution.

Forms for special warranties are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the Owner for approval prior to final execution.

Refer to individual Sections of Divisions-2 through -16 for specific content requirements, and particular requirements for submittal of special warranties.

Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES", the Project title or name, and the name of the Contractor.

When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

## SCHEDULE OF WARRANTIES

Warranties are to be provided for all products and installations as specified, including, but not limited to:

Termite Control Treatment  
Heating and Cooling Equipment  
Electrical Equipment

Fire Protection Equipment  
Plumbing equipment  
Wood Doors

END OF SECTION

## SECTION 04230 - COLOR-PIGMENTED CONCRETE MASONRY UNITS

### RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions apply to work of this section.

### RELATED SECTIONS

Perlite loose fill Insulation for exterior walls.

Engineer's notes and Specifications Sections pertaining to: masonry mortar and grout and to reinforced unit masonry assemblies and accessories

### DESCRIPTION OF WORK

Extent of smooth-faced, integrally-colored concrete masonry units is indicated on drawings.

### MASONRY UNITS

CMU: ASTM L-90, Nominal 8" x 8" x 16" . CMU, smooth-face units to be concrete blocks equal to units as manufactured by one of the following:

Innovative Block of South Texas, La Feria, TX  
Southwest Concrete Products, San Antonio, TX

CMU color: To be selected from manufacturer's standard range of integrally colored-pigmented smooth-face blocks. Provide representative samples for selection by Owner. Provide units for exterior corners with the exposed sides to match face of units.

Mortar color: Natural gray.

### EXTERIOR WALL BASE FLASHING

Include, as part of this work, flashing for the bottom of the CMU walls. Use product such as 'Aqua Flash 500' Manufactured by Fiberweb Div. of Clark / Hammerbeam Corp.. Product of other manufacturer will be considered for approval. Submit product data for review / approval.

### PREPARATION

Inspect existing conditions. Notify General Contractor of any conditions affecting the CMU work. Do not proceed until all corrective work necessary has been completed.

### INSTALLATION

Set units level and true. Cut with masonry saw. Running bond pattern.

Fill cells with where indicated.

Mortar joints to be tooled where exposed.

Clean blocks after installation. Use soft rags and/or sponges. Use only mild solvents.

Protect adjacent work.

END OF SECTION

## SECTION 04270 - GLASS UNIT MASONRY

### 1 PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

General requirements of Section "Unit Masonry" apply to work of this section.

#### 1.2 DESCRIPTION OF WORK

Extent of glass unit masonry work is indicated on drawings.

### 2 PART 2 - PRODUCTS

#### 2.1 MATERIALS

Glass Block: 73/4" x 73/4" x 37/8" thick, clear, colorless glass units equal to Pittsburgh Corning (Premier Series). Available at local Lowes. Product substitutions will be considered for approval.

### 3 PART 3 - EXECUTION

#### 3.1 INSTALLATION, GENERAL

Verify sizes of openings to receive glass block. If opening sizes require adjustments, do not proceed with installation until such changes have been made.

Install glass units as per manufacturer's printed instructions for (Mortar I System) installation.

Use only materials compatible with glass blocks.

Installations to be weather-tight.

Clean blocks after installation. Use soft rags and/or sponges. Use only mild solvents.

END OF SECTION

## SECTION 05500 FABRICATED STEEL WINDOW GUARD

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. General: Metal fabrications include items made from iron and steel shapes, plates, bars, tubes pipes which are not a part of a structural steel or other metal systems specified elsewhere.
- B. Providing all labor, materials, equipment and incidentals as shown and specified and are required to furnish and install :
  - 1. Steel window guard

#### 1.2 RELATED DOCUMENTS

- A. Refer to drawings and details for materials, sizes, finishes and other construction requirements for fabricated item.

#### 1.3 QUALITY ASSURANCE

- A. Obtain item from single source. No substitution of materials will be accepted unless they are submitted for review and the Architect approves their use. Use only new materials.

#### 1.4 SUBMITTALS

- A. The contractor shall submit to the owner or its representative, for approval, shop drawings for fabrication and erection of the work. Include plans, and details of the work.
- B. The contractor shall submit anchor details and standard installation details. The contractor shall field-verify dimensions to ensure proper fit of item and mark each submittal with exact dimensions.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job-site in good condition and properly protected against damage to components or finished surfaces.
- B. Store material in a location and manner to avoid damage.

### PART 2 PREPARATION

#### 2.1 FABRICATION

- A. To the greatest extent possible, all required cutting, fitting and welding shall be performed in the manufacturer's shop in accordance with the approved shop drawings.

- B. Grind all joints smooth to eliminate rough edges or sharp corners.
- C. The primer coating shall be applied after all of the required fabrication is complete.
- D. The installing contractor shall prepare the site for installation, determining that deviations from the approved drawings are corrected prior to installation.

## 2.2 INSTALLATION

- A. Field Check and verify that all components of the structure required for installation are in place. Report any discrepancies to the Architect or contractor for corrective action by responsible parties prior to erection of stair.
- B. Unload and handle all items in a manner that will not strain, bend, deform or otherwise damage any items or work in place.
- C. Install item square, plumb, straight, true to line and level.
- D. Fasten items securely in place. Provide anchorage devices of the type and size to insure that the installations are secure and rigid.

## 2.3 FINAL WORK

- A. Touch-up metal primer areas affected by installations. Leave in a condition suitable to receive finish painting.
- B. Remove extra materials and debris. Leave work area clean..

END OF SECTION

## SECTION 06100 - ROUGH CARPENTRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 SUMMARY

Types of work in this section include rough carpentry for:  
Wood grounds, nailers and blocking, sheathing.  
Finish carpentry is specified in another section within Division 6.

#### 1.3 DEFINITIONS

Rough carpentry includes carpentry work not specified as part of other sections and which is generally not exposed.

#### 1.4 SUBMITTALS

Submit manufacturer's specifications and installation instructions for Underlayment.

Material Certificates: Where dimensional lumber is provided to comply with minimum allowable unit stresses, submit listing of species and grade selected for each use, and submit evidence of compliance with specified requirements. Compliance may be in form of a signed copy of applicable portion of lumber producer's grading rules showing design values for selected species and grade. Design values shall be as approved by the Board of Review of American Lumber Standards Committee.

#### 1.5 PRODUCT HANDLING

Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.

#### 1.6 PROJECT CONDITIONS

Coordination: Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow attachment of other work.

### PART 2 - PRODUCTS

#### 1.7 GENERAL LUMBER

Lumber Standards: Manufacture lumber to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.

Inspection Agencies: Inspection agencies and the abbreviations used to reference with lumber grades and species include the following:

SPIB - Southern Pine Inspection Bureau.

Grade Stamps: Factory-mark each piece of lumber with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.

For exposed lumber apply grade stamps to ends or back of each piece, or omit grade stamps entirely and issue certificate of grade compliance from inspection agency in lieu of grade stamp. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.

Provide dressed lumber, S4S, unless otherwise indicated. Provide seasoned lumber with 19 percent maximum moisture content at time of dressing and shipment for sizes 2" or less in nominal thickness, unless otherwise indicated.

## 1.8 DIMENSION LUMBER

For light framing (2" to 4" thick, 2" to 4" wide), provide the following grade and species:

No. 2 grade, pine or fir.

Fb (minimum extreme fiber stress in bending); 1500 psi.

E (minimum modulus of elasticity); 1,500,000 psi.

Where painted finish is indicated, provide No. 1 Boards per SPIB rules, Select Merchantable Boards per WCLIB rules, or No. 2 Common Boards & Better per WWPA rules.

Concealed Boards: Where boards will be concealed by other work, provide lumber of 19 percent maximum moisture content (S-DRY) and of following species and grade:

## 1.9 MISCELLANEOUS LUMBER

Provide wood for support or attachment of other work including rooftop equipment curbs and support bases, cant strips, bucks, nailers, blocking, furring, grounds, stripping and similar members. Provide lumber of sizes indicated, worked into shapes shown, and as follows:

Moisture content: 19 percent maximum for lumber items not specified to receive wood preservative treatment.

Grade: Standard Grade light framing size lumber of any species or board size lumber as required. No. 3 Common or Standard grade boards per WCLIB or WWPA rules or No. 3 boards per SPIB rules.

## 1.10 CONSTRUCTION PANELS ( Where shown on plans)

Construction Panel Standards: Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood" for plywood panels and, for products not manufactured under PS 1 provisions, with American Plywood Association (APA) "Performance Standard and Policies for

Structural-Use Panels", Form No. E445.

Trademark: Factory-mark each construction panel with APA trademark evidencing compliance with grade requirements.

Plywood Backing Panels: For mounting electrical or telephone equipment, provide fire-retardant treated plywood panels with grade designation, APA C-D PLUGGED INT with exterior glue, in thickness indicated, or, if not otherwise indicated, not less than 15/32".

#### 1.11 MISCELLANEOUS MATERIALS

Fasteners and Anchorages: Provide size, type, material and finish as indicated and as recommended by applicable standards, complying with applicable Federal Specifications for nails, staples, screws, bolts, nuts, washers and anchoring devices. Provide metal hangers and framing anchors of the size and type recommended by the manufacturer for each use including recommended nails.

Where rough carpentry work is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners and anchorages with a hot-dip zinc coating (ASTM A 153).

Building Paper: ASTM D 226, Type I; asphalt saturated felt, non-perforated, 30-lb. type.

#### PART 3 - INSTALLATION

Discard units of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.

Set carpentry work to required levels and lines, with members plumb and true to line and cut and fitted.

Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standards.

Countersink nail heads on exposed carpentry work and fill holes with wood filler.

Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required.

END OF SECTION

## SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

### PART 1 . GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A This Section includes the following:

**Plastic-laminate finishes**  
**Interior Wood Trim, shelves, counters**  
**Base and wall cabinets**

- B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 6 Section "Rough Carpentry" for framing , furring, blocking, shims, and hanging strips for installing interior woodwork and other carpentry work concealed in the wall.
2. Division 6 Section "Finish Carpentry" for interior carpentry exposed to view that is not specified in this Section.
3. Division 9 Section "Painting" for field finishing of installed interior architectural woodwork.

#### 1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction prior to woodwork installation.

#### 1.4 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of product and process specified and incorporated into items of architectural woodwork during fabrication, finishing, and installation.
- C. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
- E. Samples for initial selection of the following in the form of manufacturers' color charts consisting of actual units or sections of units showing the full range of colors, textures, and patterns available for :

Plastic laminate

## 1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Firm experienced in producing architectural woodwork similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units without delaying the Work.
- B. Single-Source Responsibility for Fabrication and Installation: Engage a qualified woodworking firm to assume undivided responsibility for fabricating, finishing, and installing woodwork specified in this Section.
- C. Quality Standard: Except as otherwise indicated, comply with the following standard:
  - 1. AWI Quality Standard: "Architectural Woodwork Quality Standards" of the Architectural Woodwork Institute for grades of interior architectural woodwork, construction, finishes, and other requirements.  
Provide AWI Certification Labels or Certificates of Compliance indicating that woodwork meets requirements of grades specified.
  - 2. Surface-Burning Characteristics: Not exceeding values indicated below, tested per ASTM E 84 for 30 minutes with no evidence of significant combustion. In addition, the flame front shall not progress more than 10-1/2 feet (3.2 m) beyond the center line of the burner at any time during the test.
    - a. Flame Spread: 25.
    - b. Smoke Developed: 450.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.
- B. Do not deliver woodwork until painting and similar operations that could damage, soil, or deteriorate woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas whose environmental conditions meet requirements specified in "Project Conditions."

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet-work is completed, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before fabrication, and show recorded measurements on final shop drawings.

## 1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

## PART 2 .PRODUCTS

### 2.1 MATERIALS

- A. General: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and quality grade indicated.

Softwood Plywood: PS 1.

Hardwood Plywood and Face Veneers: HPVA HP-i.

- B. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering high-pressure decorative laminates that may be incorporated in the Work include, but are not limited to, the following:

- a. Formica Corporation.
- b. Nevamar Corp.
- c. Ralph Wilson Plastics Co.

### 2.2 CABINET HARDWARE AND ACCESSORY MATERIALS - See Plans

### 2.3 INSTALLATION MATERIALS

- A. Screws: Select material, type, size, and finish required for each use. Comply with ASME BI 8.6.1 for applicable requirements.
- B. Nails: Select material, type, size, and finish required for each use. Comply with FS FFN-i 05 for applicable requirements.
- C. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage.

### 2.4 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Provide interior woodwork complying with the referenced quality standard and of the following grade: Custom
- B. Complete fabrication, including assembly, finishing, and hardware application, before shipment to Project site to maximum extent possible. Disassemble components only as necessary for shipment and installation. Trial fit assemblies at the fabrication shop that cannot be shipped completely assembled. Install connectors, and other fastening devices that can be removed after trial fitting.
- D. Shop-cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Smooth edges of cutouts and, where located in countertops and similar exposures, seal edges with a water-resistant coating.

2.5 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

- A. Quality Standard: Comply with AWI Section 300.
  - 1. Grade: Custom.
- B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- C. Wood Species: Any closed-grain hardwood listed in referenced woodworking standard.

2.6 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork where possible to eliminate functional and visual defects. Where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- C. Provide final protection and maintain conditions in a manner acceptable to fabricator and Installer that ensures that woodwork is without damage or deterioration at the time of Substantial Completion.

END OF SECTION

## SECTION 07200 - CEILING INSULATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK

Extent of insulation work is shown on drawings and indicated by provisions of this section.

Applications of insulation specified in this section include the following:

Blanket-type ceiling insulation.

#### 1.3 QUALITY ASSURANCE

**Thermal Resistivity:** Where thermal resistivity properties of insulation materials are designated by r-values they represent the rate of heat flow through a homogenous material exactly 1" thick, measured by test method included in referenced material standard or otherwise indicated. They are expressed by the temperature difference in degrees F between the two exposed faces required to cause one BTU to flow through one square foot per hour at mean temperatures indicated.

**Maximum Allowable Asbestos Content of Inorganic Insulations:** Provide insulations composed of mineral fibers or mineral ores which contain less than 0.25% by weight of asbestos of any type or mixture of types occurring naturally as impurities as determined by polarized light microscopy test per Appendix A of 40 CFR 763.

#### 1.4 SUBMITTALS

**Product Data:** Submit manufacturer's product literature and installation instructions for each type of insulation material and fasteners required.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

**General Protection:** Protect insulation from physical damage and from becoming wet, soiled, or covered with ice or snow. Comply with manufacturer's recommendations for handling, storage and protection during installation.

## 2 PART 2 - PRODUCTS

### 2.1 AVAILABLE MANUFACTURERS

Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

Owens Corning      Celotex Corp.      Manville Corp.

## 2.2 INSULATING MATERIALS

General: Provide insulating materials which comply with characteristics as indicated by the materials listed below.

Ceiling batt insulation: Fiberglas, Kraft paper one side, R-25, 24" X 48".

## PART 3 - EXECUTION

### 3.1 INSPECTION AND PREPARATION

Require Installer to examine substrates and conditions under which insulation work is to be performed. A satisfactory substrate is one that complies with requirements of the section in which substrate and related work is specified. Obtain Installer's written report listing conditions detrimental to performance of work in this section. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.

Clean substrates of substances harmful to insulations or vapor retarders, including removal of projections which might puncture vapor retarders.

### 2.3 INSTALLATION, GENERAL

Comply with manufacturer's instructions for particular conditions of installation in each case. If printed instructions are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with work. Extend insulation full thickness as shown over entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections which interfere with placement. Apply a single layer of insulation of required thickness.

## 4. PROTECTION

General: Protect installed insulation and from harmful weather exposures and from possible physical abuses, where possible by non-delayed installation of concealing work or, where that is not possible, by temporary covering or enclosure.

END OF SECTION

## SECTION 07210 - PERLITE MASONRY INSULATION

### PART 1 GENERAL

#### 1.1 SUMMARY

A. Section Includes:

Loose-fill insulation for concrete masonry units at building exterior walls.

B. Related Sections:

Reinforced Concrete Masonry Unit Walls ( Drawing sheet S1.1)

#### 2.1 REFERENCES

A. Definitions

1. Thermal Resistivity (r-value): Temperature difference in degrees F between the two (2) surfaces of a material exactly one (1) inch thick, required to make one (1) BTU of energy flow through one (1) square foot of the material in one (1) hour.

A. Reference Standards

1. American Society of Testing and Materials (ASTM)

C549 Specification for Perlite Loose Fill Insulation

E84 Test Method for Surface Burning Characteristics of Building Materials.

E119 Test Method for Fire Tests of Building Construction and Materials

2. Underwriters Laboratories, Inc. (UL)

Fire Resistance Directory

#### 1.2 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

A. Product Data: For product indicated.

B. Manufacturer's Certifications: Submit manufacturer's representative certification that the proposed product complies with specified requirements, and is compatible with substrate for the intended applications.

C. Product test reports.

D. Material Safety Data Sheets (MSDS)

## 1.1 QUALITY ASSURANCE

- A. **Single-Source Responsibility for Insulation Products:** Obtain insulation from a single source with resources to provide products complying with requirements without delaying progress of the work.
- B. **Installer Qualifications:** Engage an experienced installer, with not less than two (2) years experience as an installer who has completed building insulation applications similar in material, design and extent to that indicated for projects that have resulted in construction with a record of successful in-service performance.

## 2.1 DELIVERY, STORAGE, AND HANDLING

- A. **Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources.** Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

## 2.2 PROJECT CONDITIONS

- A. **Environmental Conditions:** Do not proceed with installation of insulation under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside the limits permitted by insulation manufacturer.
  - 2. When insulation is or is likely to become wet due to rain, frost, condensation or other causes.

## PART 2 PRODUCT

### 2.1 PERFORMANCE / DESIGN CRITERIA

- A. **Fire Test Response Characteristics:** Provide insulation and related materials with fire-test-response characteristics indicated on Contract documents, or specified elsewhere in this Section; to be determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
  - 1. **Surface Burning Characteristics:** ASTM E84.
  - 2. **Fire-Resistance Ratings:** ASTM E119.

3. Combustion Characteristics: ASTM E136.

## 2.2 MASONRY-CELL INSULATION

- A. Perlite Loose-Fill Insulation: Provide expanded perlite to comply with ASTM C549, Type II (surface treated for water repellency and limited moisture absorption) or IV (surface treated for water repellency and limited moisture absorption), r-values of 3.3 – 2.8 for densities of 4.1 – 7.4 pcf at 75 degrees F (24 degrees C). Retain first option in first subparagraph below if radiant barrier is to serve as vapor retarder; if not, retain second option.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that conditions comply with requirements of Contract documents.
- B. Verify that related work to be performed before installation of insulation within indicated spaces has been completed.
- C. Verify that substrates are in satisfactory condition to receive insulation.
1. Masonry substrates: Verify that masonry materials have dried sufficiently and have attained optimum moisture content.
- D. Do not proceed with installation of insulation until all unsatisfactory conditions have been corrected.

### 3.5 PREPARATION

- A. Clean substrates of substances harmful to insulations or vapor retarders, including removal of projections that might puncture vapor retarders, or interfere with insulation attachment.
- B. Close off openings in cavities receiving poured-in-place insulation to prevent the escape of insulation.

### 3.6 INSTALLATION OF MASONRY CELL INSULATION

- A. Seal holes and openings in cavities as necessary to prevent loss of insulation during construction.
- B. Install suitable screens inside cavities to maintain openings at drainage or ventilation openings.

- C. Remove any obstructions which might interfere with free flow of insulation to intended spaces during pouring. Completely fill indicated cavities and spaces. Leave no gaps or voids.
- D. During placement, do not allow insulation to fall a distance greater than one story, or 20 feet, whichever is less.
- E. Rod insulation frequently during installation to eliminate formation of air pockets. Apply according to ASTM C 1015 and manufacturer's written instructions.
- F. Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lbs per s.f.

### 3.7 CLEANING

- A. Remove all excess materials from the job site and leave the areas insulated ready for other trades.
- B. Prevent disposal of insulation scraps by reuse in ceiling and wall areas or other locations out of view.
- C. Remove all unusable excess materials from the job site and leave the areas insulated ready for other trades.

### 3.8 PROTECTION

- A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION

## SECTION 07610 METAL ROOF AND WALL PANELS

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Furnishing all labor, material, tools, equipment and services for a pre-formed metal roofing panel system as specified herein.
- B. Complete coordination with work of all other trades.
- C. Furnishing and installing all supplementary or miscellaneous items appurtenances and devices incidental to or necessary for a sound, secure and complete installation, whether or not these materials are indicated.

#### 1.2 RELATED DOCUMENTS

- A. Refer to drawings for pre-engineered steel building frame requirements.
- B. Refer to drawings for concrete tilt-up concrete wall panel notes.

#### 1.3 QUALITY ASSURANCE

- A. Applicable Standards
  - 1. AISC, 'Steel Construction Manual.
  - 2. AISI 'Cold Form steel Design Manual', American Iron and Steel Institute.
  - 3. UL580: 'Test for UpliftResistance of Roof Assemblies', Underwriters Laboratories, Inc.
  - 4. ASTM E 1514-93: 'Standard Specification for Structural Standing Seam Steel Roof Panel Systems', American Society for Testing and Materials.
  - 5. ASTM A792-83-AZ55 (Bare Galvalume Plus):Specification for Steel Sheet Aluminum-Zinc Alloy Coated by the Hot Dip Process, General Requirements , American Society for Testing and Materials.
- B. Manufacturer's Qualifications
  - 1. Manufacturer to have a minimum of five years experience in manufacturing of metal roof systems of the type specified.
  - 2. Roof panels to be to be produced in a factory environment (not with a portable Roll former with fixed-base roll forming equipment) and inline levelling t o assure the highest level of quality control.
- C. Installation Contractor's Qualifications
  - 1. Installation Contractor shall be a an approved installer that is certified by the manufacturer for the installation of the roof system specified.
  - 2. Installation Contractor to provide certification letter that installation Contractor has at least 3 years experience in the installation of metal roof systems and list at least 5 projects installer has performed of similar installation.
- D. Pre-Installation Conference
  - 1. Prior to installation of roofing system, conduct a pre-installation conference at the project site. Conference to be attended by Owner's representative, General Contractor, Project Job Superintendent, Installation Contractor and Architect. Discussion to include work details, scheduling and inspections.

#### 1.4 SUBMITTALS

- A. Submit data in accordance with provisions of Section 01300.

- B. Performance Test
  - 1. Submit certified test results by a recognized testing laboratory or manufacturer's lab (witnessed by a professional engineer) in accordance with specific method for roof system specified.
- C. Shop Drawings
  - 1. Submit manufacturer-approved shop drawings and erection details. Do not proceed with manufacture of materials until architect has approved submittal.
- D. Calculations
  - 1. Provide engineering calculations defining all cladding loads based on design criteria, allowable clip loads and required number of fasteners to secure the clips to the substructure.
  - 2. Compute uplift loads on clip fasteners considering prying forces and eccentric clip loading.
  - 3. Calculate holding strength of fasteners in accordance with submitted test data provided by the fastener manufacturer based on the length of embedment and properties of metals.
  - 4. Submit thermal calculations and details of floating clip, flashings attachments and accessories certifying the free movement in response to the expansion/contraction forces resulting from a total temperature differential of 1110 degrees F.
- E.. Warranties
  - 1. Finish : Metal roof system manufacturer shall submit a specimen copy of the warranty covering bare metal against rupture, structural failure and perforation due to normal atmospheric corrosion exposure for a period of 20 years.
  - 2. Weather tightness: Metal roof system manufacturer shall submit a specimen copy of the manufacturer's Weathertightness Warranty and manufacturer's acceptance of the applicator and warranty conditions.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labelled packaging until ready for installation.
- B. Protect materials from exposure to moisture until ready for installation.
- C. Store materials in a dry, ventilated weathertight location

#### 1.7 WEATHERTIGHTNESS WARRANTY

- A. The Contractor shall provide to the Owner, a Standard Warranty signed by the roofing manufacturer of the standing seam roof system as outlined below:
- B. Standard Warranty
  - 1. For a period of ten (ten) years from the date of Substantial Completion, the roofing manufacturer warrants to the building Owner that the manufacturer's furnished roof panels, flashing and related items used to fasten the roof panels and flashing to the roof structure will not allow intrusion of water into the building envelope when exposed to ordinary weather conditions and ordinary wear and usage. The date of Substantial Completion is the date that is certified by the Architect, Owner or Owner's Representative, when the roofing manufacturer's roofing system is completed and accepted by or on behalf of the Owner.

2. The Roofing Installer shall have the sole and exclusive obligation for all warranty work commencing on the date of Substantial Completion up to and until the roof system has performed leak-free for 24 consecutive months  
The sole and exclusive obligation for all warranty work for all warranty work commencing on the date the roof has been leak free for 24 consecutive months and under all circumstances terminates on the 5-year anniversary of the date certified as substantial completion of the roofing manufacturer's roof system.
3. Roofing Manufacturer's Liability  
The total liability of the roofing manufacturer under this warranty is limited to solely to the invoice amount for the roof system. (Panels, fasteners, trim and accessories) to its customer. ( No structural material, freight or taxes included).

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. Metal Roof System Profile
  1. 1-3/4 inch high rib x 18 inch wide panel
- B. Panel Style
  1. Narrow rib, vertical leg concealed fasteners, positive snap lock standing seam utilizing male and female rib. Configurations, with factory applied hot melt mastic in female rib.
- C. Gauge
  1. 24 gauge, UL 90 Underwriters Laboratories.
- D. Substrate
  1. Galvalume steel sheet, 0.5 ounces /square foot, minimum yield of 50,000 PSI.
- E. Clip
  1. 18 gauge UL-rated clip with two fasteners to structural (UL Rated - Underwriters Laboratories)
- F. Texture
  1. Smooth with striations..
- G. Finish
  1. Bare Galvalume Plus (20 year warranty).
- H. Acceptable Manufacturers, subject to these specifications:
  1. MBCI
  2. McElroy Metal, Inc.
  3. Whirlwind Building Components
- I. Substitutions
  1. Product substitutions will be considered in accordance with Section 01631, 'Product Substitutions'.
- J. Prefabricated Roof Jacks
  1. SFS-INTECH
  2. ITW Buildex..

## 2.2 MISCELLANEOUS MATERIALS

### A. Fasteners

1. All self-tapping/self-drilling fasteners, bolts, nuts, self-locking rivets and other suitable fasteners shall be designed to withstand specific design loads.
2. Use long-life fasteners for all roof applications.
3. Provide neoprene washers under heads of exposed fasteners.
4. Locate and space all exposed fasteners in a true vertical and horizontal alignment. Use proper torque settings to obtain controlled uniform compression for a positive seal without rupturing the neoprene washer.

### B. Accessories

1. Provide all components required by the metal roof system manufacturer's approved shop drawings for a complete metal roof system to include panels, panel clips trim/flashing, fascias ridge, closures, sealants and all other required items.
  - a. All outside closures to be fabricated from Galvalume Plus of the same gauge as the roof panels.
  - b. All tape seal to a pressure sensitive, 100 percent solids, polyisobutylene compound sealing tape with a release paper backing. Provide permanently elastic, non-sagging, non-toxic, non-staining tape seal approved by the metal roof system manufacturer.
  - c. All joint sealant to be a one-part elastomeric polyurethane sealant approved by the metal roof system manufacturer.

## 2.3 FABRICATION

- A. Material shall be in-line leveled prior to roll forming the panel profile.
- B. Where possible, roll form panels in continuous lengths, full lengths of detailed runs.
- C. Standard panel length shall be no more than 40 feet long.
- D. Fabricate trim/flashing and accessories to detailed profiles.
- E. Fabricate trim/flashing from same material as roof panel.

## 2.4 PREFABRICATED ROOF JACKS

- A. Pipe flashings shall be a one-piece EPDM Molded rubber boot having a serviceable temperature range of -65 degrees F to 212 degrees F and shall be resistant to ozone and ultraviolet rays. Units shall have an aluminum flanged base ring. Do not install any pipe flashings through any panel seams. Install only in the flat portion of the roof panel.

## PART 3. EXECUTION

### 3.1 SURFACE CONDITIONS

#### A. Examination

1. Inspect installed work of other trades and verify that such work is complete

- to a point where this work may continue.
2. Verify that installation may be made in accordance with approved shop drawings and manufacturer's instructions. This specifically includes verifying that the secondary structural members are installed to meet UL and Building Code requirements. Coordinate with metal roof system manufacturer to ensure that reduced clip spacings at eave, ridge and corner areas are accommodated

B. Discrepancies

1. In the event of discrepancy, notify the Architect.
2. Do not proceed with installation until discrepancies have been resolved.

3.2 INSTALLATION

- A. Install metal roofing so it is weathertight, without waves, warps, buckles, Fastening stresses or distortion, allowing for expansion and contraction.
- B. Install metal roofing in accordance with manufacturer's instructions and shop drawings.
- C. Provide concealed anchors at all panel attachment locations.
- D. Install panels plumb, level and straight with seams and ribs parallel, conforming to design as indicated.

3.3 FIELD QUALITY CONTROL

A. Manufacturer's Field Service

1. During Installation, provide two on-site inspections of roof application by qualified technical representative of the manufacturer.
2. Upon completion of installation, provide final inspection by a technical representative of roofing manufacturer to confirm that roofing system has been installed in accordance with manufacturer's requirements.

3.4 CLEANING, PROTECTION

- A. Dispose of excess materials and remove debris from site.
- B. Clean work in accordance with manufacturer's recommendations.
- C. Protect work from damage until final acceptance. Replace or repair to the satisfaction of the Architect any work that becomes damaged prior to final acceptance.
- D. Touch-up inor scratches and abrasions with touch-up paint supplied by the metal roof system manufacturer.
- E. Do not allow panels or trim to come in contact with dissimilar metals such as Copper, lead or graphite. Water run-off from these materials is also prohibited. This specifically includes condensate from any A/C units.

PART 4 OTHER MATERIALS

- 4.1 WALL PANELS : Equal to MBCI "Shadow Rib" panel, 16" coverage, 24 ga., Signature

300 coating, color to be from standard manufacturer's chart. Provide fasteners, sealants, pre-coated trim, closures and all other items necessary to comply with manufacturer's installation instructions.

- 4.2 ROOF & WALL INSULATION : Provide and install fiberglass blanket type thermal insulation .Blankets to be 3" thick, 0.60 lbs. per cubic foot density. Install roof insulation concurrently with installation of roof and wall panels in accordance with manufacturer's published directions. Install blankets straight and true in one--piece lengths with both sets of tabs sealed to provide a complete vapor barrier. Locate insulation on the underside of roof sheets, extending across the top flange of purlin members and held taut and snug to roofing panels with poultry wire. Locate insulation on the interior side of wall sheets, extending across the outer edge of girt members and held taut and snug to wall panels with poultry wire.
- 4.3 THERMAL BLOCKS: Provide / install extruded polystyrene, 1" thick x 3" wide. Having R Value of 5 minimum. Drape wrapped insulation perpendicularly over steel purlins. Place thermal blocks on top of insulation, parallel to purlins. Use fastenings of type recommended by product manufacturer.

END OF SECTION

## SECTION 07650 - FLEXIBLE BASE FLASHING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK

Extent of flashing work is shown on drawings and indicated by provisions of this section.

Applications of materials specified in this section include the following:

Masonry exterior wall base flashing

#### 1.3 QUALITY ASSURANCE

Employ only workers experience in this trade. Do not cover installations until after obtaining inspection / approval from architect.

#### 1.4 SUBMITTALS

Product Data: Submit manufacturer's product literature and installation instructions for each type of material required.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

General Protection: Protect materials from physical damage and from becoming wet, soiled, or covered with ice or snow. Comply with manufacturer's recommendations for handling, storage and protection during installation.

### PART 2 - PRODUCTS

#### 2.1 AVAILABLE MANUFACTURERS

Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

Fiberweb Div. Of Clark / Hammerbeam Corp.

#### 2.2 MATERIAL

Masonry exterior wall base flashing: ***Aqua Flash 500***

## PART 3 - EXECUTION

### 3.1 INSPECTION AND PREPARATION

Require Installer to examine substrates and conditions under which insulation work is to be performed. A satisfactory substrate is one that complies with requirements of the section in which substrate and related work is specified. Obtain Installer's written report listing conditions detrimental to performance of work in this section. Do not proceed with installation of flashings until unsatisfactory conditions have been corrected.

Clean substrates of substances harmful to flashings, including removal of projections which might puncture materials.

### 3.2 INSTALLATION, GENERAL

Comply with manufacturer's instructions for particular conditions of installation in each case. If printed instructions are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with work. Apply a single layer of flashing of required thickness.

### 3.3 INSTALLATION OF FLASHING

Apply material to substrate by method indicated, complying with manufacturer's recommendations. If no specific method is indicated, bond units to substrate with compatible adhesive or use mechanical anchorage to provide permanent placement.

END OF SECTION

## SECTION 07900 - JOINT SEALERS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

Extent of each form and type of joint sealer is indicated on drawings and schedules.

This Section includes joint sealers for the following locations:

Exterior joints in vertical surfaces and non-traffic horizontal surfaces as indicated below.

- Joints between different materials listed above.
- Perimeter joints between materials listed above and frames of doors and windows.
- Other joints as indicated.

Interior joints in vertical surfaces and horizontal non-traffic surfaces as indicated below:

- Perimeter joints of exterior openings where indicated.
- Perimeter joints between interior wall surfaces and frames of interior doors & windows.
- Perimeter joints of toilet fixtures.
- Other joints as indicated.

#### 1.3 SYSTEM PERFORMANCES

Provide joint sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals.

#### 1.4 SUBMITTALS

Product Data from manufacturers for each joint sealer product required, including instructions for joint preparation and joint sealer application.

Samples for Initial Selection Purposes: Manufacturer's standard bead samples consisting of strips of actual products showing full range of colors available, for each product exposed to view.

Certificates from manufacturers of joint sealers attesting that their products comply with specification requirements and are suitable for the use indicated.

#### 1.5 QUALITY ASSURANCE

Installer Qualifications: Engage an Installer who has successfully completed within the last 3 years at least 3 joint sealer applications similar in type and size to that of this Project.

Single Source Responsibility for Joint Sealer Materials: Obtain joint sealer materials from a single manufacturer for each different product required.

## 1.6 DELIVERY, STORAGE, AND HANDLING

Deliver materials to Project site in original unopened containers. Store and handle materials in compliance with manufacturers' recommendations to prevent their deterioration or damage.

## 1.7 PROJECT CONDITIONS

Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:

When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer or below 40 deg F (4.4 deg C). When joint substrates are wet due to rain, frost, condensation, or other causes.

Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than allowed by joint sealer manufacturer for application indicated.

Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from joint substrates.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates.

Colors: Provide color of exposed joint sealers indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors.

### 2.2 ELASTOMERIC JOINT SEALANTS

Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920 requirements.

Additional capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the following percentage changes in joint width as

measured at time of application and remain in compliance with other requirements of ASTM C 920 for Uses indicated:

50 percent movement in both extension and compression for a total of 100 percent movement.

One-Part Nonacid-Curing Silicone Sealant: Type S, Grade NS, Class 25, and complying with the following requirements for Uses and additional joint movement capability:

Uses NT, M, G, A, and, as applicable to joint substrates indicated, O.

Available Products: Subject to compliance with requirements, elastomeric sealants which may be incorporated in the Work include, but are not limited to, the following:

One-Part Non-acid-Curing Silicone Sealant:

"Chem-Calk N-Cure 2000"; Bostik Construction Products Div.

"Dow Corning 790"; Dow Corning Corp.

"Silglaze N SCS 2501"; General Electric Co.

"Silpruf SCS 2000"; General Electric Co.

## 2,3 MISCELLANEOUS MATERIALS

Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealer-substrate tests and field tests.

Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaners of type which are acceptable to manufacturers of sealants and sealant backing materials,.

## PART 3 - EXECUTION

### 3.1 PREPARATION

Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:

Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; old joint sealers; oil; grease; waterproofing; water repellants; water; surface dirt; and frost.

Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile; and other nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.

Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience.

### 3.2 INSTALLATION OF JOINT SEALERS

General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications and conditions indicated.

Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.

### 3.3 CLEANING

Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

### 3.4 PROTECTION

Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and installations with repaired areas indistinguishable from original work

END OF SECTION

## SECTION 08110 - STEEL DOORS & FRAMES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK

Extent of standard steel frames is indicated and scheduled on drawings.  
Finish hardware is specified elsewhere in Division-8.

#### 1.3 QUALITY ASSURANCE

Provide frames complying with Steel Door Institute "Recommended Specifications: Standard Steel Doors and Frames" (SDI-100) and as herein specified.

#### 1.4 SUBMITTALS

Product Data: Submit manufacturer's technical product data substantiating that products comply with requirements. Provide schedule of frames using same reference numbers for details and openings as those on contract drawings.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

Deliver hollow metal work cartoned or crated to provide protection during transit and job storage. Provide additional sealed plastic wrapping for factory-finished doors. Inspect hollow metal work upon delivery for damage. Minor damages may be repaired provided refinished items are equal in all respects to new work and acceptable to Architect; otherwise, remove and replace damaged items as directed.

Store frames at building site under cover. Place units on minimum 4" high wood blocking. Avoid use of non-vented plastic or canvas shelters which could create humidity chamber. If cardboard wrapper on door becomes wet, remove carton immediately.

### PART 2 – PRODUCTS

1.1 Subject to compliance with requirements, manufacturers offering steel doors and frames may be incorporated in the work include; but are not limited to, the following:

Allied Steel Products, Inc.  
Steelcraft/Div. America  
Republic Builders Products Corp./Subs. Republic Steel.

#### 2.2 MATERIALS

Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568. (INTERIOR)

Galvanized Steel Sheets: Zinc-coated carbon steel sheets of commercial quality, complying with ASTM A 526, with ASTM A 525, G60 zinc coating, mill phosphatized. (EXTERIOR)

Supports and Anchors: Fabricate of not less than 18-gage galvanized sheet steel.

Inserts, Bolts, and Fasteners: Manufacturer's standard units, except hot-dip galvanize items to be built into exterior walls, complying with ASTM A 153, Class C or D as applicable.

Shop Applied Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints.

## 2.3 FABRICATION, GENERAL

Fabricate frame units to be rigid, neat in appearance and free from defects, warp or buckle. Wherever practicable, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at project site. Fabricate frames, concealed stiffeners, reinforcement, edge channels, louvers and moldings from either cold-rolled or hot-rolled steel (at fabricator's option).

## 2.4 STANDARD STEEL FRAMES

Fabricate frames of minimum 16-gage cold-rolled furniture steel. Fabricate frames with mitered corners, welded construction.

Door Silencers: Drill stops to receive 3 silencers on strike jambs of single-swing frames.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

Comply with provisions of SDI-105 "Recommended Erection Instructions For Steel Frames", unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.

### 3.2 ADJUST AND CLEAN

Prime Coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer. Check and readjust operating finish hardware items, leaving frames undamaged and in complete and proper operating condition.

END OF SECTION

## SECTION 08211 - WOOD DOORS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 SUMMARY

Extent and location of each type of wood door is indicated on drawings and in schedules. Types of doors required include the following:

Solid core flush wood doors with wood veneer faces.

#### 1.3. SUBMITTALS

Product Data: Door manufacturer's technical data for each type of door, including details of core and edge construction, trim for openings and louvers. Indicate dimensions and locations of cutouts for locksets and other cutouts.

#### 1.4 QUALITY ASSURANCE

Quality Standards: Comply with the following standards:

ANSI/WDMA I.S.1A -97, Industry Specification for Architectural Wood Flush Doors, of the Window and Door Manufacturers Association .

Manufacturer: Obtain doors from a single manufacturer.

#### 1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

Protect doors during transit, storage and handling to prevent damage, soiling and deterioration. Comply with manufacturer's instructions. Identify each door with individual opening numbers which correlate with designation system used on shop drawings for door, frames, and hardware, using temporary, removable or concealed markings.

#### 1.6 PROJECT CONDITIONS

Conditioning: Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during remainder of construction period to comply with the following requirements applicable to project's geographical location:

Referenced AWI quality standard including Section 100-S-3 "Moisture Content".

#### 1.7 WARRANTY

General: Warranties shall be in addition to, and not a limitation of, other rights the Owner

may have under the Contract Documents.

**Door Manufacturer's Warranty:** Submit written agreement on door manufacturer's standard form signed by Manufacturer, Installer and Contractor, agreeing to repair or replace defective doors that have warped (bow, cup or twist) or that show telegraphing of core construction in face veneers, or do not conform to tolerance limitations of referenced quality standards.

Warranty shall also include reinstallation which may be required due to repair or replacement of defective doors where defect was not apparent prior to hanging. Warranty shall be in effect during the following period of time after date of Substantial Completion.

**Solid Core Interior Doors:** 5 years

**Contractor's Responsibilities:** Replace or refinish doors where Contractor's work contributed to rejection or to voiding of manufacturer's warranty.

## PART 2 - PRODUCTS

1.1 Subject to compliance with requirements, manufacturers offering doors which may be incorporated in the work include, but are not limited to, the following:

Algoma Hardwoods, Inc.  
Buell Door Company.  
Cal-Wood Door Div., Timberland Industries, Inc.

2.2 Materials:

Solid Core Doors for transparent field-applied finish. Comply with the following requirements:

Faces: Birch veneer, Plain Cut  
Grade: Custom  
Construction: PC-7 (Particleboard core, 7-ply).

2.3 LIGHT FRAMES

Metal Frames for Light Openings : Manufacturer's standard frame formed of 18-gage cold-rolled steel, factory-primed.

2.4 FABRICATION

Fabricate doors to produce doors in sizes indicated, pre-machined, for job-site fitting.

## PART 3 – EXECUTION

3.1 EXAMINATION

Examine installed door frames prior to hanging door.  
Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.

Reject doors with defects.

Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

Hardware: For installation see Division-8 "Finish Hardware" section of these specifications.

Manufacturer's Instructions: Install wood doors to comply with manufacturer's instructions.

Field-Finished Doors: Refer to the following for finishing requirements:

Division-9 section "Painting".

### 2.3 ADJUSTING AND PROTECTION

Operation: Re-hang or replace doors which do not swing or operate freely.

Finished Doors: Refinish or replace doors damaged during installation.

Protect doors as recommended by door manufacturer to ensure that wood doors will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

## SECTION 08331 OVERHEAD COILING DOOR

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Provide / install Manually Operated Counter door. Two required. Mount tracks and hood on inside surface of masonry opening. ( Not within the opening ). Masonry openings: 6'-0" wide x 3'-4" high.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Operation-Cycle Requirements: Design overhead coiling door components and operator to operate for not less than 20,000 cycles.

#### 1.4 SUBMITTALS

- A. Include details of construction relative to materials, dimensions of individual components, profiles, and finish. Provide roughing-in diagram.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who is an authorized representative of the overhead coiling door manufacturer for both installation and maintenance of units required for this Project.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Overhead Door Corporation. Raynor Garage Doors. Southwestern Steel Rolling Door

#### 2.2 DOOR CURTAIN MATERIALS AND CONSTRUCTION

- A. Door Curtain: Fabricate overhead coiling door curtain of interlocking slats in a continuous length for width of door without splices. Provide slats of material thickness recommended by door manufacturer for performance, size, and type of door indicated, and as follows:

1. Stainless-Steel Door Curtain Slats: Type 300 series, ASTM A 240 (ASTM A 240M) or ASTM A 666. Provide manufacturer's standard flat-profile slats.

- B. Endlocks: Manufacturer's standard locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement
- C. Bottom Bar: Manufacturer's standard continuous channel or tubular shape, either stainless-steel or aluminum extrusions to suit type of curtain slats.
- D. Curtain jamb Guides: Fabricate curtain jamb guides of angles, or channels and angles of material and

finish to match curtain slats, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Provide continuous integral wear strips to prevent metal-to-metal contact and minimize noise of travel and removable stops on guides to prevent over travel of curtain.

### 2.3 HOOD AND ACCESSORIES

- A. Fabricate hood of stainless-steel sheet, Type 300 series, complying with ASTM A 240 (ASTM A 240M) or ASTM A 666, and not less than 0.025-inch (0.65mm) thick. Shape: Square.
- B. Provide galvanized steel lifting handles on each side of door.
- C. Slide Bolt: Fabricate with side locking bolt to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.

### 2.4 COUNTERBALANCING MECHANISM

- A. General: Counterbalance doors by means of adjustable-tension steel helical torsion spring, mounted around a steel shaft and contained in a spring barrel connected to door curtain with required barrel rings..
- B. Counterbalance Barrel: Fabricate spring barrel of hot-formed, structural-quality, welded or seamless carbon-steel pipe, of sufficient diameter and wall thickness to support rolled-up curtain without distortion.
- C. Provide spring balance of steel helical torsion springs. Size springs to counterbalance weight of curtain, with uniform adjustment accessible from outside barrel. Provide cast-steel barrel plugs to secure ends of springs to barrel and shaft.
- D. Fabricate torsion rod for counterbalance shaft of cold-rolled steel, sized to hold fixed spring ends and carry torsional load.
- E. Brackets: Provide mounting brackets of manufacturer's standard design, either cast-iron or cold-rolled steel plate with bell-mouth guide groove for curtain.

### 2.5 STAINLESS-STEEL FINISH

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Remove or blend tool and die marks and stretch lines into finish.
  - 1. Grind and polish surfaces to produce uniform, directional textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General: Install door complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports according to Shop Drawings, manufacturer's written instructions, and as specified. Lubricate bearings and sliding parts adjust doors to operate easily, free from warp, or twist.

END OF SECTION

## SECTION 08710 - FINISH HARDWARE:

### 1 PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK:

Definition: "Finish Hardware" includes items known commercially as finish hardware which are required for swinging doors.

Extent of finish hardware required is indicated on drawings and in Schedule.

#### 1.3 QUALITY ASSURANCE:

Manufacturer: Obtain each type of hardware (latch and lock sets, hinges, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.

Supplier: A recognized architectural finish hardware supplier, with warehousing facilities, who has been furnishing hardware in the project's vicinity for a period of not less than 2 years, and who is, or who employs an experienced architectural hardware consultant who is available, at reasonable times during the course of the work, for consultation about project's hardware requirements, to Owner, Architect and Contractor.

#### 1.4 SUBMITTALS:

Product Data: Submit manufacturers technical product data for each item of hardware in accordance with Division-1 section "Submittals". Include whatever information may be necessary to show compliance with requirements, and include instructions for installation and for maintenance of operating parts and finish.

Hardware Schedule: Submit final hardware schedule in manner indicated below. Coordinate hardware with doors, frames and related work to ensure proper size, thickness, hand, function and finish of hardware.

Final Hardware Schedule Content: Based on finish hardware indicated, organize hardware schedule into "hardware sets" indicating complete designations of every item required for each door or opening. Include the following information:

Keying: to be verified with Owner

#### 1.5 PRODUCT HANDLING:

Tag each item or package separately, with identification related to final hardware schedule, and include basic installation instructions with each item or package.

Packaging of hardware, is responsibility of supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.

Deliver individually packaged hardware items at the proper times to the project site for installation.

Provide secure lock-up for hardware delivered to the project, but not yet installed. Control handling and installation of hardware items which are not immediately replaceable, so that completion of the work will not be delayed by hardware losses, both before and after installation.

## 2 PART 2 - PRODUCTS

### 2.1 SCHEDULED HARDWARE:

Requirements for design, grade, function, finish, size and other distinctive qualities of each type of finish hardware is indicated on the following pages.

### 2.2 MATERIALS AND FABRICATION:

General:

**Base Metals:** Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units by applicable ANSI A156 series standard for each type hardware item and with ANSI A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated.

**Fasteners:** Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws.

Furnish screws for installation with each hardware item. Provide Phillips flat-head screws. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of such other work as closely as possible, including "prepared for paint" in surfaces to receive painted finish.

Provide concealed fasteners for hardware units which are exposed when door is closed, except to extent no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work, except where it is not feasible to adequately reinforce the work. In such cases, provide sleeves for each thru-bolt or use sex screw fasteners.

**Tools and Maintenance Instructions for Maintenance:** Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of finish hardware.

### 3 HARDWARE NOTES

- A. The type of hardware shown are for general guidelines to the requirements of the Owner. The hardware contractor shall use his expertise to bid and shall provide all finish hardware requirements for a complete finished project. When awarded the contract he shall furnish a complete hardware schedule for review.
- B. The finish for all hardware shall be 626. The Owner may select other finishes and any adjustments in contract price shall be made by way of Change Order.
- C. Locks and latches and trim shall be equal to "Schlage". All locks and latches shall be Grade I, equal to Schlage "D" series. Doors shall be equipped with lever handles equal to Schlage 'D' series, 'Rhodes' design. Backset for metal doors shall be template and 2 3/8" on wood doors. Other acceptable hardware manufacturers: Falcon, Sargent, Yale.
- D. Cabinet hardware to be furnished and installed by the millwork contractor.
- E. Closers shall have hold open arms and shall be equal to "LCN", "SMOOTHEE", closers with "Delay Action". Finish: 689. Other acceptable: Yale, Norton.
- F. Hinges shall be equal to "STANLEY" with US 26D finish. Use wrought brass or bronze on exterior , ball-bearing type. Provide ball bearing hinges type for doors with closers. Three hinges per door leaf, 4 1/2" x 4 1/2". Other acceptable: Hager, Bommer.. Provide NRP on out-swinging exterior doors.  
Continuous hinges: McKinneyMCK-24HD, 628.
- G. Door stops for walls shall be equal to IVES 401 1/2, 402 1/2, or 403 1/2, as required by wall material. Finish shall be PA28. Other acceptable: Hager, Quality.
- H. Thresholds, door silencers, weatherstripping, drips, and door bottom seals shall be equal to PEMKO, MAY, or National Guard.
- I. Exit Devices to be Sargent, Precision or Monarch. Finish: 630.
- J. Kick plates to be aluminum. Hager, Trimco, Rockwood
- K. Other products as noted on schedule.
- N. Key Cabinet: Lund or Telkee, 1 required.

**KEYING:** All locks shall be master keyed. **Furnish four (4) master keys.** Hardware Contractor shall verify all keying with the Owner prior to shipment of the locks to the job site.

**The following items are the basic requirements for this project. Include any additional items necessary to optimize the door function and to ensure fully equipped installations.**

## FINISH HARDWARE SCHEDULE

### **Set #1,** Pair of doors marked 1, 2, 3 & 4

Butts  
Exit device  
Rim cylinder, trim, thumb piece, round pull, plate  
Closers  
Aluminum mullion  
Astragal 305BN  
Threshold 2005AT  
Door Bottom weather seal 3452AV  
Weatherstripping 297AS  
Kick plate, 34"W x 10" H

### **Set #2,** Door marked 2A

Butts  
Deadbolt lock  
Passage latch  
Threshold 2005AT  
Door Bottom sweep 3452AV  
Door top protection 345A  
Weatherstripping 297AS

### **Set #3,** Pair of doors marked 5,

Butts  
Deadbolt lock  
Passage latch  
Sliding bolt  
Threshold 2005AT  
Chain stop  
Door Bottom sweep 3452AV  
Door top protection 345A  
Weatherstripping 297AS

### **Set #4,** Doors marked 6 (emergency exit)

Butts  
Exit Device  
Exit Alarm Lock, Von Duprin Series 2670 Guard -X with 210DT trim.  
Closer  
Threshold 2005AT  
Door bottom weather seal 3452AV  
Weatherstripping 297AS

### **Set #5,** Doors marked 7, 14, 18, 21 & 22

Butts  
Store Room lock  
Wall bumper  
Silencers

### **Set #6,** Doors marked 8, 9, 10, 13, 15, 19 & 20

Butts  
Office lock  
Wall bumper  
Silencers

con't

**Set #7**, Doors marked 11, 12, 16 & 17

Butts

Classroom lock

Closer

Wall bumper

Other: 196A floor plate for perimeter of synthetic flooring - longest lengths possible.

196A floor plate, six - 3' long each for flooring transitions

## PART 3 - EXECUTION

### 3.1 INSTALLATION:

Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.

Install each hardware item in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protection with finishing work specified in the Division-9 sections. Do not install surface-mounted items until finishes have been completed on the substrate.

Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant.

### 3.2 ADJUST AND CLEAN:

Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

Clean adjacent surfaces soiled by hardware installation.

Instruct Owner's Personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

END OF SECTION

## SECTION 08360 INSULATED STEEL SECTIONAL DOORS

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Insulated steel sectional overhead doors. Two required. Rough openings = 9'-4" W x 9'-4" H each.
- B. Electric operators and controls.
- C. Operating hardware, tracks, and support.

#### 1.2 RELATED SECTIONS

- A. Section 004200, Concrete Masonry Units
- B. Section 09900 - Paints and Coatings: Field painting.
- C. Section 16150 - Wiring Connections: Electrical service to door operators.

#### 1.3 REFERENCES

- A. ANSI/DASMA 102 - American National Standard Specifications for Overhead Type Doors.

#### 1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Design pressure of 100 lb/sq ft.
- B. Wiring Connections: N/A
- C. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

#### 1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Operation and Maintenance Data.

## 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Protect materials from exposure to moisture until ready for installation.
- C. Store materials in a dry, ventilated weather-tight location.

## 1.8 PROJECT CONDITIONS

- A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturers include, but are not limited to:
  - 1. Overhead Door Corporation
  - 2. Raynor
  - 3. Cornell
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

### 2.2 INSULATED SECTIONAL OVERHEAD DOORS

- A. Standard of reference: Overhead door Co. 599 Series.  
Insulated Steel Sectional overhead doors shall have the following characteristics:
  - 1. Door Assembly: Metal/foam/metal sandwich panel construction, with PVC thermal break and ship-lap design.
    - a. Panel Thickness: 2 inches (51 mm).
    - b. Exterior Surface: Flush
    - c. Exterior Steel: .015" galvanized
    - d. End Stiles: 16 gauge.
    - e. Springs: 25,000 cycles
    - f. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.
    - g Thermal Values: R Value of 17.5, U Value of 0.057
    - h. Air infiltration: 0.08cfm at 15 mph; 0.08 cfm at 25 mph.
    - g. Pass-Door: None.
    - h. Partial Glazing: None.
  - 2. Finish and Color: Two coat baked-on polyester with white exterior and white interior color.
  - 3. Windload Design: ANSI/DASMA 102 to meet applicable codes and standards.

4. Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.
5. Lock: Interior mounted slide lock.
6. Weatherstripping:
  - a. Bulb-type strip at bottom section.
  - b. Flexible Jamb seals.
  - c. Flexible Header seal.
7. Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
8. Operation: Manual, chain.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until openings have been properly prepared. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- B. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.
- B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.
- C. Anchor assembly to wall construction and building framing without distortion or stress.
- D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- E. Fit and align door assembly including hardware.

### 3.4 CLEANING AND ADJUSTING

- A. Adjust door assembly to smooth operation and in full contact with weatherstripping. Clean doors, frames and glass. Remove temporary labels and visible markings.

### 3.5 PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION

## SECTION 08520 ALUMINUM FIXED GLASS WINDOW (Interior)

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Providing the material, tools and labor for the complete installation of aluminum-framed windows with fixed glass glazing, and includes the interior and exterior perimeter sealing for a weather-tight condition for the exterior window.

#### 1.2 RELATED DOCUMENTS

- A. Refer to drawings for size of window openings.
- B. Refer to drawings for the location and extent of the work required.

#### 1.3 SUBMITTALS

- A. Submit manufacturer's product data, and standard details for each type of aluminum window unit required, including:
  - 1. Frame and glazing manufacturers technical information.
  - 2. Window Shop Drawings
  - 3. Aluminum Finish
  - 4. Accessories.

#### 1.4 QUALITY ASSURANCE

- A. Standards: Requirements for aluminum windows, terminology and standards of performance, and fabrication workmanship are those specified and recommended in AAMA 101-85 and applicable general recommendation published by AAMA and AA.
- B. Single Source Responsibility: Provide aluminum materials produced by a single manufacturer capable of showing prior production of units similar to those required.
- C. Design Criteria: Drawings indicate sizes, profiles and dimensional requirements of aluminum windows. Window units having minor deviations from indicated dimensions and profiles may be accepted, subject to the Architect's approval, provided such deviations do not materially detract from the design concept or intended performance.

#### 1.5 PROJECT CONDITIONS

- A. Field Measurements: Check actual window openings in construction work by accurate field measurement before installation. Coordinate installation schedule with construction progress as directed by the Contractor to avoid delay of work.

#### 1.6 WARRANTY

- A. Warranty period for aluminum windows is 3 years after the date of Substantial Completion.

### PART 2 - PRODUCTS

## 2.1 AVAILABLE MANUFACTURES

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
  - 1. Aluminum frames:
    - a. Kawneer
    - b. American Douglas Metal
  - 2. Glazing:
    - a. PPG Industries
    - b. Pinkerton

## 2.2 MATERIALS

- A. Aluminum Extrusions: Provide alloy and temper recommended by the window manufacturer for the strength, corrosion-resistance, and application of required finish, but not less than 22,000 psi ultimate tensile strength and not less than 0.062" thickness at any location. Clear anodized finish.
- B. Glazing: Clear safety glass.
- C. Anchors: Fabricate anchors of aluminum, non-magnetic stainless steel or hot-dip zinc coated steel or iron complying with the requirements of ASTM A 386; provide sufficient strength to withstand design pressure indicated.
- D. Compression Type Glazing Strips Unless otherwise indicated, and at the manufacturer's option, provide compressible stripping for glazing and such as molded EPDM or neoprene gaskets complying with AAMA SG-1 or with neoprene gaskets complying with ASTM C 509, Grade 4.
- E. Sealants: Provide products recommended by the manufacturer for joint size and movement. Sealant shall remain permanently elastic, non-shrinking, and non-migrating.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Inspect window opening before beginning installation. Verify that rough openings are correct and the surfaces of the openings are suitable for the frame anchors
- B. Rough opening surfaces shall be visibly dry and free of excess concrete and other construction debris. Unsuitable surfaces shall be corrected prior to beginning of installation.

### 3.2 INSTALLATION

- A. Comply with manufacturer's specifications and recommendations for installation of window components.
- B. Set components plumb, level and true to line, without warp or rack of frames. Provide proper support shims and anchor frames securely in place.
- C. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials by complying with the requirements specified under paragraph "Dissimilar Materials" in the Appendix to AAMA 101-85.

- D. Set glazing unit in place to provide a weather-tight gasketed system fully compatible with the frame configuration.

### 3.3 CLEANING

- A. Clean aluminum surfaces promptly after installation of windows. Exercise care to avoid damage to protective coatings and finishes. Remove excess sealant, dirt and other substances.
- B. Clean glazing promptly after installation of windows; comply with glass manufacturer's recommendations for cleaning and maintenance.

### 3.4 PROTECTION

- A. Initiate and maintain protection and other precautions required through the remainder of the construction period to ensure that, except for normal weathering, window units will be free of damage or deterioration at the time of Substantial Completion.

END OF SECTION