

**Housing Authority of the Borough of Highland Park
242 South Sixth Avenue, Highland Park, NJ 08904**

Phone: (732) 572-4420 Fax: (732) 985-6485

Donna Brightman, Executive Director

January 11, 2017

Invitation for Bids

**Window Replacement at
Samuel J. Kronman Building and
Park Terrace Apartments**

Located in

Highland Park, NJ 08904

Sealed Bids due at 2:00 PM on February 21, 2016

Project Engineer:
Aparri Engineering LLC
131 Main Street, Suite 180
Hackensack, NJ 07601
(201) 343-7747

Welcome to the Highland Park Housing Authority

In 1937 Congress passed the US Housing Act to “alleviate unemployment and to remedy unsafe and unsanitary housing conditions and the acute shortage of decent, safe and sanitary dwelling for families of low income.” The legislation was designed to encourage construction, create employment opportunities, and provide shelter for low-income families and clear sub-standard housing. Emphasizing local control of its programs, the Housing Act provided for housing in which rents would relate to the tenant’s ability to pay.

The Highland Park Housing, New Jersey, was created on May 15, 1956.

The Authority is composed of 24 units of family public housing, 100 units of senior citizen public housing and 145 units of Section 8 housing.

The purpose of the Highland Park Housing Authority is to create and maintain safe, decent and sanitary housing for those individuals of low to moderate income.

Mission Statement

Our aim is to ensure safe, decent and affordable housing; create opportunities for residents’ self-sufficiency and economic independence; and assure fiscal integrity by all program participants.

In order to achieve this mission, we will:

- Recognize the residents as our ultimate customer.
- Improve PHA management and service delivery efforts through oversight, assistance, and selective intervention by highly skilled, diagnostic, and results-oriented field personnel.
- Seek problem-solving partnerships with PHA, resident, community, and government leadership.
- Act as an agent for change when performance is unacceptable and we judge that local leadership is not capable or committed to improvement.
- Efficiently apply limited HUD resources by using risk assessment techniques to focus our oversight efforts

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SECTION I

Housing Authority of the Borough of Highland Park

INVITATION FOR BIDS

Window Replacement at Samuel J Kronman Building and Park Terrace Apartments

I. INTRODUCTION

The Housing Authority of the borough of Highland Park (Authority) will receive sealed bids for the window and sliding door replacements at the Samuel J. Kronman Building, a 100 unit, six story high rise located at 242 So. Sixth Avenue in Highland Park, NJ and at Park Terrace Apartments, a 24 unit , 3 building garden style apartment complex located on So. Sixth Avenue, So. Seventh Avenue and Benner Street in Highland Park, NJ as per the technical specifications and drawings outlined in Section II of this Invitation for Bids (IFB).

Any prospective bidder who wishes to challenge a bid specification shall file such challenges in writing with the Authority no less than three business days prior to the opening of the bids. Challenges filed after that time shall be considered void and having no impact on the Authority unit or the award of a contract.

Sealed bids will be received until 2:00 PM prevailing time on February 21, 2017 at the Authority offices, 242 So. Sixth Avenue in Highland Park, NJ, at which time all bids will be publicly opened and read aloud.

All permitting fees, if any, relating to the construction of this project will be paid for by the contractor with no expense to the Authority.

All bidders must be licensed to do business in the State of New Jersey and shall have the equipment, knowledge, capability and manpower to successfully and expertly perform the work as per the specifications contained herein.

The contractor must also demonstrate through references that they, or their principles assigned to the project, have successfully completed services similar to the technical specifications section of this (IFB). Please refer to the Bidder's or Sub-Contractors Qualifications pages (included herein) for required qualifications.

The contractor must submit bids in the manner set forth in the Bid Submission section of this IFB. All applicable documents must be submitted at the Bid Opening.

Contractor must be licensed and certified and insured as required by state and federal regulations.

II. PRE-BID MEETING

A pre-bid meeting will be held at the Kronman Building, 242 So. Sixth Avenue, Highland Park, NJ 08904 on January 27, 2017 at 10:00 AM. The purpose of the pre-bid meeting is for all interested parties to familiarize themselves with the project so that a more accurate bid may be submitted. Attendance is not mandatory but is **strongly recommended**. Questions must be submitted by February 1, 2017 at 10:00 AM in order to leave time for the issuance of addenda, if necessary.

III. SCOPE OF SERVICES

The scope of services, including warranty information and drawings for this contract, is outlined in Section II of these specifications.

IV. AWARD OF CONTRACT

One contract for the work shall be awarded to the lowest responsive, responsible bidder(s). Please refer to form HUD – 5370, a copy of which is attached herein, for general conditions of the contract, as these will be made part of the final contract.

After the contract has been awarded, but before any work is started against the contract, the Contract Administrator shall conduct an orientation conference with the Contractor and appropriate representatives of the Authority. The purpose of the orientation conference is to aid both Authority and Contractor personnel to achieve a clear and mutual understanding of general contract requirements. However, this conference shall not relieve the Contractor of responsibility for complying with any of the terms and conditions of the contract.

In the rare event of equal bids, where two or more low bids are considered equal in all respects (including the evaluation of qualifications by the Authority's architect), the award will be decided by drawing lots in the presence of the bidders who submitted the tie bids.

If the post-award orientation is held, the Contract Administrator will provide specific details regarding the date, time, and location of the conference, and information regarding the items/topics to be discussed.

After the contract has been awarded, the Authority may at its sole discretion assign the contract, in whole or in part, to an affiliate or instrumentality of the Authority or an entity controlled by the Authority, its affiliate, or its instrumentality. Assignment of the contract by the Authority does not relieve the Contractor of responsibility for complying with any of the terms and conditions of the contract. the Authority's right to assign the contract is unilateral and does not create any assignment rights for the Contractor.

V. CHANGE ORDERS

If, during the course of work, the Contractor encounters unforeseen conditions which impact the work and which could not initially be evaluated, the Contractor shall not proceed without written authorization from an authorized Authority representative. If price is affected, the Contractor and the Authority must agree upon a change order which states an agreement between the Contractor and the Authority for:

1. A change in work
2. The amount of the adjustment in Contract Sum

3. The amount of the adjustment in Contract Time

Once the change order has been approved and properly procured, Contractor will receive written authorization to continue.

VI. COMPENSATION

A. The Bid Breakdown included herein shall be completed in its entirety and submitted by the bidder. Requests for periodic payments to the contractors shall be discussed before the award of the contract.

VII. INSTRUCTIONS TO BIDDERS

A. General: In addition to form HUD-5369, Instruction to Bidders for Contracts, included herein, all Bidders shall follow the following instructions (please note that in the event that the HUD form and the following instructions do not agree, the stricter condition shall apply):

1. All bids must be delivered by mail or in person to the Authority, 242 So. Sixth Avenue in Highland Park, NJ 08904 by the due date and time. All late bids received by the Authority shall be returned unopened to the Bidder.
2. To ensure fair consideration for all bidders, the Authority prohibits communication to or with any employee of the Authority during the submission process. Additionally, the Authority prohibits communications initiated by a bidder to **any** Authority official or employee evaluating or considering the proposals before the time an award decision has been made. Any communication between bidder and the Authority will be initiated by the appropriate Authority official or employee in order to obtain information or clarification needed to develop a proper, accurate evaluation of the bid. Such communications initiated by a bidder may be grounds for disqualifying the offending bidder from consideration for award of the bid and/or any future bid.
3. In order to be acceptable, **two (2) copies (one original and one copy) of the bid must be submitted in a sealed envelope on the outside of which shall be plainly marked "Window Replacement at Samuel J. Kronman Building and Park Terrace Apartments, together with the name and address of the firm submitting the bid.** Bids will be received until **2:00 PM** or hand delivered no later than **2:00 PM** on February 21, 2017 at which time they will be publicly opened and read aloud at the offices of the Authority, 242 So. Sixth Avenue in Highland Park, NJ 08904.
4. A copy of the contract to be entered into with the successful bidder is included as Attachment "A".

B. Submission Requirements: The following **must** be submitted with your bid:

1. A signed and notarized Stockholder Disclosure Certification (attached herein):

N.J.S.A. 52:25-24.2 provides that no corporation or partnership shall be awarded any contract for the performance of any work or the furnishing of any goods and services, unless, prior to the receipt of the bid or accompanying the bid of said corporation or partnership. Bidders shall submit a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own ten percent or more of its stock of any class, or of all individual partners in the partnership who own a ten percent or greater interest therein. The included Statement of Ownership shall be completed and attached to the bid proposal. This requirement applies to all forms of corporations and partnerships, including, but not limited to, limited partnerships, limited

liability corporations, limited liability partnerships and Subchapter S corporations. Failure to submit a stockholder disclosure document shall result in rejection of the bid.

2. A signed and notarized Non-Collusion Affidavit (attached herein).

3. A Business Registration Certificate-for more information visit

<http://www.state.nj.us/treasury/revenue/busregcert.htm>. N.J.S.A. 52:32-44 requires that each bidder (contractor) submit proof of business registration before contract award. Proof of registration shall be a copy of the bidder's Business Registration Certificate (BRC). A BRC is obtained from the New Jersey Division of Revenue. Information on obtaining a BRC is available on the internet at www.nj.gov/njbgs or by phone at (609) 292-1730. N.J.S.A. 52:32-44 imposes the following requirements on contractors and all subcontractors that **knowingly** provide goods or perform services for a contractor fulfilling this contract:

- 1) The contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the contractor;
- 2) Prior to receipt of final payment from a contracting agency, a contractor must submit to the contracting agency an accurate list of all subcontractors or attest that none was used;
- 3) During the term of this contract, the contractor and its affiliates shall collect and remit, and shall notify all subcontractors and their affiliates that they must collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into this State.

A contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements is available by calling (609) 292-9292.

4. The Bid Breakdown (Bid Form) (attached herein). Failure to submit the bid breakdown shall result in rejection of the bid.

5. A Bid Guarantee- Bidder shall submit with the bid a certified check, cashier's check or bid bond in the amount of ten percent (**10%**) of the total price bid, but not in excess of \$20,000, payable unconditionally to the owner. When submitting a Bid Bond, it shall contain Power of Attorney for full amount of Bid Bond from a surety company authorized to do business in the State of New Jersey and acceptable to the owner. The check or bond of the unsuccessful bidder(s) shall be returned pursuant to N.J.S.A. 40A:11-24a. The check or bond of the bidder to whom the contract is awarded shall be retained until a contract is executed and the required performance bond or other security is submitted. The check or bond of the successful bidder shall be forfeited if the bidder fails to enter into a contract pursuant to N.J.S.A. 40A:11-21.

Failure to submit a bid guarantee shall result in rejection of the bid.

6. Consent of Surety-Bidder shall submit with the bid a Certificate (Consent of Surety) with Power of Attorney for full amount of bid price from a Surety Company authorized to do business in the State of New Jersey and acceptable to the owner stating that it will provide said bidder with a Performance Bond in the full amount of the bid. This certificate shall be obtained in order to confirm that the bidder to whom the contract is awarded will furnish Performance and Payment Bonds from an acceptable surety company on behalf of said bidder, any or all subcontractors or by each respective subcontractor or by any combination thereof which results in performance

security equal to the total amount of the contract, pursuant to N.J.S.A. 40A:11-22. The Department of the Treasury's Listing of Approved Sureties may be obtained at http://www.fms.treas.gov/c570/c570_a-z.html .

Failure to submit a Consent of Surety form shall result in rejection of the bid.

7. A signed Acknowledgement of Receipt of Addenda (attached herein)-Bidders shall submit this form whether or not an addendum has been issued. Failure to submit this form shall result in rejection of the bid.

8. Public Works Contractor Registration Certificate-The Public Works Contractor Registration Act (PWCRA) requires that all contractors, including named subcontractors, be registered with the Department of Labor as a Public Works Contractor at the time of the bid opening for contracts over the prevailing wage threshold. The prevailing wage threshold is \$2,000 for all non-municipal entities, such as boards of education, authorities, fire districts, counties, etc. Please see Section IX for more information.

9. Affirmative Action Compliance Notice (Attached Herein)

10. References Please submit at least 3 comparable references.

11. Equipment Certification (Attached Herein)

12. Listing of Subcontractors/Subcontractor Certification Form (attached herein)-Pursuant to N.J.S.A. 40A:11-16 et. seq., a list of all subcontractors to be used for this project shall be included with the bid, including the subcontractors' business registration certificates. All subcontractors must be licensed to do business in the State of New Jersey. All subcontractors shall be expected, prior to award, to demonstrate sufficient man power and expertise to complete the applicable portion of the project in its entirety. All payments to subcontractors shall be made directly to the subcontractors who shall be expected to submit payroll certifications before payment to the subcontractor is made.

Electrical subcontractors, if applicable, must be licensed electrical contractors recognized by the New Jersey State Board of Electricians, have a current license and business permit and must submit documents proving such status.

All subcontractors not listed in this section shall be properly licensed to do business in the State of New Jersey, and shall submit proof of such licensure.

Failure to submit a listing of subcontractors and certification forms for each subcontractor shall result in rejection of the bid.

13. Bidder's or Subcontractor's Qualifications (attached herein) All bidders and subcontractors must fill out this form in its entirety. Failure to submit this form for the bidder and each subcontractor shall result in rejection of the bid. See section XII for more information.

14. Form HUD 2530, Previous Participation Certificate (attached herein)

15. Form HUD 5369-A, Representations, Certifications of Bidders (attached herein)

16. Section 3 Requirements Documents (attached herein)

C. BONDING REQUIREMENTS

1. **Performance Bond**-Bidder shall simultaneously with the delivery of the **executed contract**, submit an executed bond in the amount of one hundred percent (100%) of the acceptable bid as security for the faithful performance of this contract.

Failure to submit this with the executed contract shall be cause for declaring the contract null and void pursuant to N.J.S.A. 40A:11-22.

2. **Labor and Material Payment Bond**-Bidder shall with the delivery of the performance bond submit an executed payment bond to guarantee payment to laborers and suppliers for the labor and material used in the work performed under the contract.

Failure to submit a labor and material bond with the performance bond shall be cause for declaring the contract null and void.

The performance bond provided shall not be released until final acceptance of the whole work and then only if any liens or claims have been satisfied. The surety on such bond or bonds shall be a duly authorized surety company authorized to do business in the State of New Jersey pursuant to N.J.S.A. 17:31-5.

3. **Maintenance Bond**-Upon acceptance of the work by the owner, the contractor shall submit a maintenance bond (N.J.S.A. 40A:11-16.3) in an amount not to exceed 100% of the project costs guaranteeing against defective quality of work or materials for the period of one year.

VIII. INSURANCE REQUIREMENTS

A. REQUIRED INSURANCE

1. Worker's Compensation Insurance

Workers Compensation insurance shall be maintained in full force during the life of the contract, covering all employees engaged in performance of the contract pursuant to N.J.S.A. 34:15-12(a) and N.J.A.C. 12:235-1.6.

2. General Liability Insurance

General liability insurance shall be provided with limits of not less than \$1,000,000.00 any one person for bodily injury and \$1,000,000.00 aggregate for property damage, and shall be maintained in full force during the life of the contract.

3. Automobile Liability Insurance

Liability shall be carried on all owned and non-owned motor vehicles used on the site(s) or in connection therewith for combined single limit for bodily injury and property damage of not less than \$500,000.00 per occurrence.

B. CERTIFICATES OF THE REQUIRED INSURANCE

Certificates of Insurance for those policies required above shall be submitted with the contract. Such coverage shall be with an insurance company authorized to do business in the State of New Jersey and shall name the owner as an additional insured.

Self-insured contractors shall submit an affidavit attesting to their self-insured coverage and shall name the owner as an additional insured.

IX. PREVAILING WAGE ACT INFORMATION

A. THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT

The Public Works Contractor Registration Act (PWCRA) requires that all contractors, including named subcontractors, to register with the Department of Labor prior to submitting price proposals or engaging on certain public works contracts that exceed the prevailing wage threshold. The prevailing wage rate is \$2,000 for all non-municipal entities, such as boards of education, authorities, fire districts, counties, etc.

All named contractors in a bid proposal (including out-of-state contractors) must be registered with the Department of Labor's Division of Wage and Hour Compliance at the time proposals **are received** by the public entity.

For clarity, Local Finance Notice 2004-9 dated 4/28/04 uses the following term: "Received," in context of when "proposals are received," means the deadline or moment in time when proposals are formally opened and no other proposals are accepted.

The law requires contractors to submit certificates after a bid proposal is received and prior to awarding the contract. (N.J.S.A. 34:11-56.55)

The contracting agent must review the certificates to be sure they were in effect at the time the bid proposals were received.

Non-listed subcontractors do not have to be registered until they physically start the public work assigned to them.

Emergency work is covered under the provisions of the Prevailing Wage Act and the PWCRA.

Additional information on the PWCRA can be obtained from the:

Contractor Registration Unit
Division of Wage and Hour
Compliance

New Jersey Department of Labor
PO Box 389

Trenton, New Jersey 08625-0389

Telephone: 609-292-9464
Fax: 609-633-8591

E-mail: contreg@dol.state.nj.us

Web site:
www.nj.gov/labor/lssc/lspubcon.html

Contact the Division of Local Government Services at (609) 292-7842, by fax at (609) 633-6243 or by e-mail at lpcl@dca.state.nj.us for assistance in the application of the Local Public Contracts Law or related PWCRA issues. As specific situations are presented to the contracting unit, local legal advisors should review this guidance as to its applicability.

B. PAYROLL SUBMISSION

Pursuant to N.J.S.A. 34:11-56.25 et seq., contractors on projects where public monies are spent shall adhere to all requirements of the New Jersey Prevailing Wage Act. The contractor shall be required to submit a certified payroll record to the owner within ten (10) days of the payment of the

wages. The contractor is also responsible for obtaining and submitting all subcontractors' certified payroll records within the aforementioned time period. The contractor shall submit said certified payrolls in the form set forth in N.J.A.C. 12:60-6.1(c). It is the contractor's responsibility to obtain any additional copies of the certified payroll form to be submitted by contacting the New Jersey Department of Labor and Workforce Development, Division of Workplace Standards. [Additional information is available at www.state.nj.us/labor/lssse/lspubcon.html](http://www.state.nj.us/labor/lssse/lspubcon.html).

C. PREVAILING WAGE DETERMINATION

The New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., requires that the Department of Labor and Workforce Development establish and enforce a prevailing wage level for workers in order to safeguard their efficiency and general well being and to protect them as well as their employers from the effects of serious and unfair competition.

The Authority is Federally funded, and therefore requires all contractors to pay their employees the applicable Davis Bacon Wage Rates. For more information please visit www.dol.gov. The Wage Determination applicable for the Kronman Building is as follows: General Decision Number: NJ170036 1/6/17 NJ36 Building. The Wage Determination applicable for the Park Terrace Apartments is as follows: NJ170024 1/6/17 NJ24 Residential. Both Determinations may be viewed at <http://www.wdol.gov>.

Bidders are responsible for checking for updates to the rates, if any, to properly bid this contract, and in no way are to assume that the rates listed herein are current.

The Contractor shall be responsible for maintaining payroll records and must make such records available to the PHA and/or to HUD, on request. The Contractor may use form WH-347 available online or by request to the Authority.

X. CAUSES FOR REJECTING BIDS

- A. All bids pursuant to N.J.S.A. 40A:11-13.2;
- B. If more than one bid is received from an individual, firm or partnership, corporation or association under the same name;
- C. Multiple bids from an agent representing competing bidders;
- D. The bid is inappropriately unbalanced;
- E. The bidder is determined to possess, pursuant to N.J.S.A. 40A:11-4b, Prior Negative Experience; or,
- F. If the successful bidder fails to enter into a contract within 21 days, Sundays and holidays excepted, or as otherwise agreed upon by the parties to the contract. In this case at its option, the owner may accept the bid of the next lowest responsible bidder. (N.J.S.A. 40A:11-24b)

XI. TERMINATION OF CONTRACT

- A. If, through any cause, the contractor shall fail to fulfill in a timely and proper manner obligations under the contract or if the contractor shall violate any of the requirements of the contract, the owner shall there upon have the right to terminate the contract by giving written notice to the

contractor of such termination and specifying the effective date of termination. Such termination shall relieve the owner of any obligation for balances to the contractor of any sum or sums set forth in the contract. Owner will pay only for goods and services accepted prior to termination.

- B. Notwithstanding the above, the contractor shall not be relieved of liability to the owner for damages sustained by the owner by virtue of any breach of the contract by the contractor and the owner may withhold any payments to the contractor for the purpose of compensation until such time as the exact amount of the damage due the owner from the contractor is determined.
- C. The contractor agrees to indemnify and hold the owner harmless from any liability to subcontractors/suppliers concerning payment for work performed or goods supplied arising out of the lawful termination of the contract by the owner under this provision.
- D. In case of default by the contractor, the owner may procure the goods or services from other sources and hold the contractor responsible for any excess cost.
- E. Continuation of the terms of the contract beyond the fiscal year is contingent on availability of funds in the following year's budget. In the event of unavailability of such funds, the owner reserves the right to cancel the contract.

XII. QUALIFICATIONS

- a. Prospective bidders and all subcontractors shall complete the Bidder's or Sub-Contractor's Qualifications questionnaire attached herein. Steps shall be taken as deemed necessary to determine the ability of the bidders to perform the obligations under the Contract and the bidder shall furnish to the Authority with such information and data for this purpose as the Authority may request. The right is reserved to reject any proposal where the investigation of the evidence does not satisfy the Authority that the bidder is qualified to properly carry out the terms of the Contract.
- b. General Contractor must list (where applicable) with their bid all subcontractors who will actually be used for:
 - (a) Plumbing and Gas fitting of all kindred work.
 - (b) Steam and hot water heating and ventilating apparatus and all kindred work.
 - (c) Electrical Work
 - (d) Structural Steel and Ornamental Iron Work
- c. In addition to the requirements stated above, the General Contractor:
 - (a) Must be prepared to demonstrate that each of the listed subcontractors is qualified to perform the specific work for which they are listed in the bid. Each subcontractor must submit with the bid the attached Bidder's or Sub-Contractor's Qualifications questionnaire.
 - (b) Must provide evidence of performance security for each subcontractor with the bid. The evidence or performance security shall, for the purpose of statutory and administrative compliance, consist of documents (such as a consent of surety) issued by a qualified surety company. Evidence of performance security may be supplied by the General Contractor on its own behalf and on behalf of any or all of its listed subcontractors, or by the respective listed subcontractors themselves, or by any combination thereof which results in evidence of performance security equaling the total amount of bid.
 - (c) May not substitute unlisted subcontractors, or use subcontractors if they are not identified in bid, following award of the contract.

- (d) Will be held strictly accountable for proper and timely performance of work by their designated subcontractors. In the event of award, such General Contractor shall furnish the Authority with a true copy of a performance bond contract.
- (e) The attention of all bidders is directed to the provisions of New Jersey Statutes 40A:11-16.
- (f) All Bidders who intend to use 'in house plumbers' to perform the plumbing work on the contract, are directed to the provisions of New Jersey Statutes 45:14C-21; New Jersey Statutes 45:14C-21; and New Jersey Administrative Code 13:32-1.5(A)(2). These provisions limit and restrict the ability of a licensed master plumber to be utilized as a company employee and apply for a plumbing permit, unless that plumber holds not less than 10% of the issued corporate stock, or 10% of the partnership capital of a partnership. You are advised that the Authority is required to insist upon full compliance with these State regulations.
- (g) In the event the General Contractor will perform work specified in paragraph B (a)(b)(c)(d) (Plumbing/Gas; HVAC; Electrical; Structural Steel/Ornamental Iron) with its own salaried non-subcontracted work force, then the General Contractor must so designate itself on bidding documents, and furnish the Authority prior to award of the contract with required information establishing qualifications in such trade(s).
- (h) The General Contractor is advised that once they advise the Authority in their bid documents, they will perform the designated trade(s) with their own salaried force, they will not later be permitted to perform same by subcontractor or otherwise.

Thank you for your interest!

INVITATION FOR BID

PUBLIC NOTICE

Housing Authority of the Borough of Highland Park

Window Replacement at Samuel J. Kronman Building and Park Terrace Apartments

The Housing Authority of the borough of Highland Park (Authority) will receive sealed bids for the window replacement at the Samuel J. Kronman Building, a 100 unit, six story high rise located at 242 So. Sixth Avenue in Highland Park, NJ and at Park Terrace Apartments, a 24 unit , 3 building garden style apartment complex located on So. Sixth, So. Seventh and Benner Streets in Highland Park, NJ as per the technical specifications and drawings outlined in Section II of the Invitation for Bids (IFB).

Bids will be received until 2:00 PM prevailing time on February 21, 2017 at the Authority offices, 242 So. Sixth Avenue, Highland Park, NJ 08904, at which time all bids will be publicly opened and read aloud. A pre-bid meeting will be held on January 27, 2017 at 10:00 AM at the same location. Attendance is not mandatory but is **strongly recommended**. Questions shall be due by February 1, 2017.

Bidding documents including technical specifications and drawings may be obtained at no cost at the Authority website at www.HighlandParkHousing.org beginning January 11, 2017.

A bid guarantee in the form of a bid bond executed by the bidder and acceptable sureties, certified check or bank draft, payable to the Housing Authority of the Borough of Highland Park shall be submitted with each bid. The bid guarantee shall be in an amount equal to but not less than ten percent (10%) of the total amount (not to exceed \$20,000). Bids bonds must be obtained from a New Jersey licensed company that appears on the latest edition of the US Treasury Circular Number 570, List of Approved Sureties.

Bidders must be registered with the New Jersey Department of Treasury, Division of Revenue and with the New Jersey Department of Labor as a Public Works contractor at the time the bids are received.

The Authority does not discriminate on the basis of race, religion, sex, national origin, creed, color, ancestry, age, marital status, affectional or sexual orientation, familial status, liability for service in the Armed Forces of the United States, or nationality.

The Authority invites the participation of and Minority-Owned Business Enterprises in this solicitation and reserves the right to reject any or all bids or to waive any informality in bidding. Bidders must also make positive efforts to offer employment, training and contracting opportunities in accordance with Section 3 of the Housing and Urban Development Act of 1968. Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the contract.

The above and all other contract and bid requirements are described in the bid documents.

Advertised 1/11/17 and 1/18/17 in the Home News Tribune

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)
N.J.A.C. 17:27

CONSTRUCTION CONTRACTS

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

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such action shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable 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 age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it 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 this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the applicable employment goal prescribed by N.J.A.C. 17:27-7.3; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the applicable employment goal established in accordance with N.J.A.C. 17:27-7.3. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative

action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to attempt to hire or schedule minority and women workers directly, consistent with the applicable employment goal. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire or schedule minority and women workers directly, consistent with the applicable employment goal, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines or is so notified by the Division that the union is not referring minority and women workers consistent with the applicable employment goal.

(B) If the hiring or scheduling of a workforce consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions consistent with the applicable county employment goals:

(1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area until such time as the workforce is consistent with the employment goal;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and women employees remain on the site consistent with the employment goal; and to employ any minority and women workers laid off by the contractor on any other construction site on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing N.J.S.A. 10:5-31 et. seq.;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall hire or schedule those individuals who satisfy appropriate qualification standards. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who

qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(ii) If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of any interested women or minority individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.

(iii) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) provided to the public agency by the Division for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Contract Compliance & EEO as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Contract Compliance & EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

AMERICANS WITH DISABILITIES ACT OF 1990

Equal Opportunity for Individuals with Disability

The contractor and the Housing Authority of the Borough of Highland Park, (hereafter "owner") do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "Act") (42 *U.S.C. §12101* et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event that the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the owner's grievance procedure, the contractor agrees to abide by any decision of the owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the owner, or if the owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the owner or any of its agents, servants, and employees, the *owner shall* expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or other process received by the owner or its representatives.

It is expressly agreed and understood that any approval by the owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the owner pursuant to this paragraph.

It is further agreed and understood that the owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

BUSINESS REGISTRATION CERTIFICATE

Contractor must provide State Division of Revenue issued Business Registration Certificate before contract award but must be registered at the time bids are received.

**ACCORDING TO STATE LAW, FAILURE TO SUBMIT YOUR BUSINESS
REGISTRATION CERTIFICATE BEFORE CONTRACT AWARD *WILL* RESULT IN
THE DISQUALIFICATION OF YOUR BID!**

Model Public Works Bid Specification Language
Withdrawal of Bid
(N.J.S.A. 40A:11-23.3)

Permission for Bidder to Withdraw a Bid Due to a Mistake in Certain Circumstances

N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of a public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an **unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both, from the final bid computation.**

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, **in writing**, by certified or registered mail to:

Donna Brightman, Executive Director
242 So. Sixth Avenue
Highland Park, NJ 08904

The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after the receipt and opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered mailing, the Purchasing Agent may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

A bidder's request to withdraw the bid **shall** contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the public owner's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.

The public owner will not consider any written request for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in the preparation of a bid proposal unless the postmark of the certified or registered mailing is within the five business days following the opening of bids.

Housing Authority of the Borough of Highland Park
Form of Bid
Window and Sliding Door Replacement at Samuel J. Kronman Building
and
Park Terrace Apartments

Please refer to the specifications for the Bid Breakdown

Housing Authority of the Borough of Highland Park

AFFIRMATIVE ACTION COMPLIANCE NOTICE

N.J.S.A. 10:5-31 and N.J.A.C. 17:27

GOODS AND SERVICES CONTRACTS (INCLUDING PROFESSIONAL SERVICES)

This form is a summary of the successful bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

The successful bidder shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

a. A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

b. A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

c. A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

The successful vendor may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful vendor(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27 and agrees to furnish the required forms of evidence.

The undersigned vendor further understands that his/her bid shall be rejected as non-responsive if said contractor fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

COMPANY: _____ SIGNATURE: _____

PRINT NAME: _____ TITLE: _____ DATE: _____

Housing Authority of the Borough of Highland Park

STOCKHOLDER DISCLOSURE CERTIFICATION

This Statement Shall Be Included with Bid Submission

Name of Business _____

☐ I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

OR

☐ I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

Check the box that represents the type of business organization:

☐ Partnership ☐ Limited Liability Corporation ☐ Corporation ☐ Sole Proprietorship
☐ Limited Partnership ☐ Limited Liability Partnership ☐ Subchapter S Corporation

Sign and notarize the form below, and, if necessary, complete the stockholder list below.

Stockholders:

Name: _____

Name: _____

Home Address: _____

Home Address: _____

Name: _____

Name: _____

Home Address: _____

Home Address: _____

Subscribed and sworn before me this ____ day of _____, 2__.

(Notary Public)

My Commission expires:

(Affiant)

(Print name & title of affiant)

(Corporate Seal)

Housing Authority of the Borough of Highland Park

NON-COLLUSION AFFIDAVIT

State of New Jersey
County of Middlesex

I, _____ residing in _____
(name of affiant) (name of municipality)
in the County of _____ and State of _____ of full age, being duly
sworn according to law on my oath depose and say that:

I am _____ of the firm of _____
(title or position) (name of firm)

_____ the bidder making this Proposal for the bid
entitled _____, and that I executed the said proposal with
(title of bid proposal)
full authority to do so that said bidder has not, directly or indirectly entered into any agreement, participated in any
collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named
project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with
full knowledge that the _____ relies upon the truth of the statements contained in said
Proposal
(name of contracting unit)

and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract
upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide
employees or bona fide established commercial or selling agencies maintained by
_____.

Subscribed and sworn to before me this day _____

Date

Signature

(Type or print name of affiant under signature)

Notary public of _____

My Commission expires _____

(Seal)

Housing Authority of the Borough of Highland Park

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

<u>Addendum Number</u>	<u>Dated</u>	<u>Acknowledge Receipt</u> (initial)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

☐ **No addenda were received:**

Acknowledged for: _____
(Name of Bidder)

By: _____
(Signature of Authorized Representative)

Name: _____
(Print or Type)

Title: _____

Date: _____

Housing Authority of the Borough of Highland Park

EQUIPMENT CERTIFICATION

The undersigned Bidder hereby certifies as follows:

The bidder owns or controls all the necessary equipment required to accomplish the work described in the specifications.

Name of Bidder: _____

By: _____
(Signature)

Name of above: _____
(Print)

Title: _____

Date: _____

Housing Authority of the Borough of Highland Park

REFERENCES

List at least 3 references. Please fill completely.

REFERENCE #1

Company Name _____

Contact Name/Title _____

Phone Number/Fax Number _____

REFERENCE #2

Company Name _____

Contact Name/Title _____

Phone Number/Fax Number _____

Reference #3

Company Name _____

Contact Name/Title _____

Phone Number/Fax Number _____

Housing Authority of the Borough of Highland Park

SUBCONTRACTOR LISTING

Please list the names of all subcontractors and/or sub-consultants to be used on this project (add additional sheets if necessary). The subcontractor certification form must be completed for each firm listed.

All subcontractors designated by the bidding company shall be capable of doing the work and must have adequate financial resources and experience to perform the work specified. Information regarding the work experience of the designated subcontractor shall also be provided in the bid. Specifically, the bidding company shall include a listing of all relevant jobs performed by the subcontractor within the past two (2) years.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

___ Check here if the bidding company will not be using any subcontractors.

THIS FORM IS TO BE SIGNED, NOTARIZED AND SUBMITTED BY THE BIDDING COMPANY WITH THE BID.

Name of bidding company

Signature of authorized representative

Printed name of authorized representative

Title

Sworn and subscribed to me this _____ day of _____, 2017

(SEAL)

Notary Public

Housing Authority of the Borough of Highland Park

SUBCONTRACTOR CERTIFICATION FORM pg 1

All subcontractors/consultants designated by the bidding company shall be capable of doing the work and must have adequate financial resources and experience to perform the work specified.

Information regarding the work experience of the designated subcontractor shall also be provided in the bid. Specifically, the bidding company shall include a listing of all relevant jobs performed by the subcontractor within the past two (2) years.

Please print the following information legibly. NOTE: Provide this information on additional sheets, as required, in accordance with the following format.

How many years has the subcontractor been engaged in this particular field? _____ years.

Subcontractor/consultant

Firm Name _____

Address _____

Contact Person _____

Telephone # _____

Fax # _____

Trade _____

State License # _____

THIS FORM IS TO BE SIGNED, NOTARIZED AND SUBMITTED BY EACH SUBCONTRACTOR WITH THE BID.

Name of company

Signature of authorized representative

Printed name of authorized representative

Title

Sworn and subscribed to me this _____ day of _____, 2017

Notary Public

(SEAL)

SUBCONTRACTOR CERTIFICATION FORM pg 2

Provide a list of relevant contracts (company/firm) completed by proposed subcontractors/consultants within the last two (2) years.

DO NOT INCLUDE WORK FOR THE HIGHLAND PARK HOUSING AUTHORITY
(This form may be duplicated to include additional relevant contracts)

1.	<hr/>	<hr/>	<hr/>
	Company Name	Telephone #	Complete Date
	<hr/>	<hr/>	
	Address	Contact Person	
	<hr/>	<hr/>	
	City/State/Zip	Contract Amount	
2.	<hr/>	<hr/>	<hr/>
	Company Name	Telephone #	Complete Date
	<hr/>	<hr/>	
	Address	Contact Person	
	<hr/>	<hr/>	
	City/State/Zip	Contract Amount	
3.	<hr/>	<hr/>	<hr/>
	Company Name	Telephone #	Complete Date
	<hr/>	<hr/>	
	Address	Contact Person	
	<hr/>	<hr/>	
	City/State/Zip	Contract Amount	
4.	<hr/>	<hr/>	<hr/>
	Company Name	Telephone #	Complete Date
	<hr/>	<hr/>	
	Address	Contact Person	
	<hr/>	<hr/>	
	City/State/Zip	Contract Amount	
5.	<hr/>	<hr/>	<hr/>
	Company Name	Telephone #	Complete Date
	<hr/>	<hr/>	
	Address	Contact Person	
	<hr/>	<hr/>	
	City/State/Zip	Contract Amount	

BIDDER'S OR SUB-CONTRACTOR'S QUALIFICATIONS

Complete sets of qualification section must be submitted for each bidder and each sub-contractor. Photocopy this section as needed, and check the appropriate box to indicate bidder/subcontractor.

Bid for: Window Replacement at Samuel J. Kronman Building and Park Terrace Apartments

BIDDER ☐

SUBCONTRACTOR ☐

Name of Bidder or
Subcontractor: _____

Address: _____

It shall be necessary for the bidder to present evidence that he is the general contractor and that he has been in business for at least 5 years in this particular field and can submit a suitable record of satisfactorily completing similar projects. In addition, he shall submit evidence that his company has the necessary equipment to carry out this type of operation.

How many years have you been or engage in construction under your present firm or trade name?
_____ Years.

How many years has your organization been performing the work required under this contract?
_____ Years.

If a corporation, answer the following:

Date of incorporation: _____

State of Incorporation: _____

President's Name: _____

Vice President's Name(s): _____

If a partnership, answer the following:

Date of Organization: _____

We normally perform _____ % of the work with our own forces. Describe the general character of work performed by your company.

What equipment do you own that is available and intended to be used on this project? Provide a description as to the quantity, size, type and capacity of this equipment along with its present condition.

What equipment to you intend to lease or purchase for use on this project should the contract be awarded to you? Provide a description of the quantity, size, type and capacity of the equipment you intend to lease or purchase.

Have you ever failed to complete any work awarded to you? If so, state the circumstances.

Has any officer or partner of your organization ever been an officer or partner of some other organization that failed to complete a construction contract? If so, state the name of the individual, the other organization and the circumstances.

Has any officer or partner in your organization ever failed to complete a construction contract handled in his own name? If so, state the name of the individual and the circumstances.

Are there any liens of any character filed against your company at this time? If so, specify the nature and amount of the lien.

In what manner have you inspected the proposed project?

The work, if awarded to you, will have the personal supervision of whom?

Do you intend to subcontract any portion of the work? If so, state which portion is to be subcontracted and complete the Subcontractor Certification Form.

Have you made contracts or received firm offers for all materials within price use regarding your proposal? Do not give names of dealers or manufacturers.

Give Trade references.

Give bank references.

Give full information concerning all of your contracts in progress, whether private or government contracts, whether prime or sub-contracts, whether in construction or awarded but not yet begun, or whether you are the low bidder pending formal award of contract.

Owner - Location - Description - Contract Amount - % Completed - Estimated Completion Date

List the most important contracts completed by your company in the last five years, stating the gross cost for each and the month and year started and completed.

Owner - Location - Description

Contract Amount - Start Date - Completion Date

AFFIDAVIT

State of _____

SS.

County of _____

_____ being first duly sworn deposes and says:
(Individual's name)

THAT he is _____,
(Owner, Officer or Partner of the firm of etc.)

the party making the foregoing proposal or bid for the Window Replacements at Samuel J. Kronman Building and Park Terrace Apartments in Highland Park, New Jersey; that all answers to the foregoing questions and all statements contained in this questionnaire are true and correct, and that he hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Housing Authority of the Borough of Highland Park in verification of the recitals contained in this questionnaire.

(Signature of Bidder)

Subscribed and sworn to before me, this ____ day of _____, 2017.

Notary Public

My Commission expires _____

**U.S. Department of Housing
and Urban Development**
Office of Public and Indian Housing

**Representations, Certifications,
and Other Statements of Bidders**
Public and Indian Housing Programs

Representations, Certifications, and Other Statements of Bidders Public and Indian Housing Programs

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1. Certificate of Independent Price Determination

(a) The bidder certifies that--

(1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to (i) those prices, (ii) the intention to submit a bid, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a competitive proposal solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory--

(1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

_____. [insert full name of person(s) in the bidder's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the bidder deletes or modifies subparagraph (a)2 above, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

[] [Contracting Officer check if following paragraph is applicable]

(d) Non-collusive affidavit. (applicable to contracts for construction and equipment exceeding \$50,000)

(1) Each bidder shall execute, in the form provided by the PHA/IHA, an affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted in response to this solicitation. If the successful bidder did not submit the affidavit with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the affidavit by that date may render the bid nonresponsive. No contract award will be made without a properly executed affidavit.

(2) A fully executed "Non-collusive Affidavit" [] is, [] is not included with the bid.

2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

"Bona fide employee" means a person, employed by a bidder and subject to the bidder's supervision and control as to time, place, and manner of performance, who neither exerts, nor proposes to exert improper influence to solicit or obtain contracts nor holds out as being able to obtain any contract(s) through improper influence.

"Improper influence" means any influence that induces or tends to induce a PHA/IHA employee or officer to give consideration or to act regarding a PHA/IHA contract on any basis other than the merits of the matter.

(b) The bidder represents and certifies as part of its bid that, except for full-time bona fide employees working solely for the bidder, the bidder:

(1) [] has, [] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [] has, [] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(c) If the answer to either (a)(1) or (a)(2) above is affirmative, the bidder shall make an immediate and full written disclosure to the PHA/IHA Contracting Officer.

(d) Any misrepresentation by the bidder shall give the PHA/IHA the right to (1) terminate the contract; (2) at its discretion, deduct from contract payments the amount of any commission, percentage, brokerage, or other contingent fee; or (3) take other remedy pursuant to the contract.

3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (applicable to contracts exceeding \$100,000)

(a) The definitions and prohibitions contained in Section 1352 of title 31, United States Code, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The bidder, by signing its bid, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989 that:

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of a contract resulting from this solicitation;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the bidder shall complete and submit, with its bid, OMB standard form LLL, "Disclosure of Lobbying Activities;" and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(d) Indian tribes (except those chartered by States) and Indian organizations as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) are exempt from the requirements of this provision.

4. Organizational Conflicts of Interest Certification

The bidder certifies that to the best of its knowledge and belief and except as otherwise disclosed, he or she does not have any organizational conflict of interest which is defined as a situation in which the nature of work to be performed under this proposed contract and the bidder's organizational, financial, contractual, or other interests may, without some restriction on future activities:

- (a) Result in an unfair competitive advantage to the bidder; or,
- (b) Impair the bidder's objectivity in performing the contract work.

☐ In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

5. Bidder's Certification of Eligibility

(a) By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government, HUD, or the State in which this contract is to be performed; or,

(2) Participate in HUD programs pursuant to 24 CFR Part 24.

(b) The certification in paragraph (a) above is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal contract programs.

6. Minimum Bid Acceptance Period

(a) "Acceptance period," as used in this provision, means the number of calendar days available to the PHA/IHA for awarding a contract from the date specified in this solicitation for receipt of bids.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The PHA/IHA requires a minimum acceptance period of [Contracting Officer insert time period] calendar days.

(d) In the space provided immediately below, bidders may specify a longer acceptance period than the PHA's/IHA's minimum requirement. The bidder allows the following acceptance period: calendar days.

(e) A bid allowing less than the PHA's/IHA's minimum acceptance period will be rejected.

(f) The bidder agrees to execute all that it has undertaken to do, in compliance with its bid, if that bid is accepted in writing within (1) the acceptance period stated in paragraph (c) above or (2) any longer acceptance period stated in paragraph (d) above.

7. Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it --

(a) ☐ is, ☐ is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) ☐ is, ☐ is not a women-owned business enterprise. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) ☐ is, ☐ is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

- | | |
|---|---|
| <input type="checkbox"/> Black Americans | <input type="checkbox"/> Asian Pacific Americans |
| <input type="checkbox"/> Hispanic Americans | <input type="checkbox"/> Asian Indian Americans |
| <input type="checkbox"/> Native Americans | <input type="checkbox"/> Hasidic Jewish Americans |

8. Indian-Owned Economic Enterprise and Indian Organization Representation (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

The bidder represents and certifies that it:

(a) ☐ is, ☐ is not an Indian-owned economic enterprise. "Economic enterprise," as used in this provision, means any commercial, industrial, or business activity established or organized for the purpose of profit, which is at least 51 percent Indian owned. "Indian," as used in this provision, means any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act.

(b) ☐ is, ☐ is not an Indian organization. "Indian organization," as used in this provision, means the governing body of any Indian tribe or entity established or recognized by such governing body. Indian "tribe" means any Indian tribe, band, group, pueblo, or

community including Native villages and Native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

9. Certification of Eligibility Under the Davis-Bacon Act (applicable to construction contracts exceeding \$2,000)

(a) By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of the contract resulting from this solicitation shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

10. Certification of Nonsegregated Facilities (applicable to contracts exceeding \$10,000)

(a) The bidder's attention is called to the clause entitled **Equal Employment Opportunity** of the General Conditions of the Contract for Construction.

(b) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(c) By the submission of this bid, the bidder certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in the contract.

(d) The bidder further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) prior to entering into subcontracts which exceed \$10,000 and are not exempt from the requirements of the Equal Employment Opportunity clause, it will:

(1) Obtain identical certifications from the proposed subcontractors;

(2) Retain the certifications in its files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause of the prime contract. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

Note: The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

11. Clean Air and Water Certification (applicable to contracts exceeding \$100,000)

The bidder certifies that:

(a) Any facility to be used in the performance of this contract [] is, [] is not listed on the Environmental Protection Agency List of Violating Facilities:

(b) The bidder will immediately notify the PHA/IHA Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the bidder proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and,

(c) The bidder will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

12. Previous Participation Certificate (applicable to construction and equipment contracts exceeding \$50,000)

(a) The bidder shall complete and submit with his/her bid the Form HUD-2530, "Previous Participation Certificate." If the successful bidder does not submit the certificate with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the certificate by that date may render the bid nonresponsive. No contract award will be made without a properly executed certificate.

(b) A fully executed "Previous Participation Certificate" [] is, [] is not included with the bid.

13. Bidder's Signature

The bidder hereby certifies that the information contained in these certifications and representations is accurate, complete, and current.

(Signature and Date)

(Typed or Printed Name)

(Title)

(Company Name)

(Company Address)

Previous Participation Certification

OMB Approval No. 2502-0118
(Exp. 02/29/2016)

US Department of Housing and Urban Development
Office of Housing/Federal Housing Commissioner

US Department of Agriculture
Farmers Home Administration

Part I to be completed by Principals of Multifamily Projects (See instructions)		For HUD HQ/FmHA use only	
Reason for submission:			
1. Agency name and City where the application is filed			
3. Loan or Contract amount \$	4. Number of Units or Beds	5. Section of Act	6. Type of Project (check one) <input type="checkbox"/> Existing <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Proposed (New)
7. List all proposed Principals and attach organization chart for all organizations			
Name and address of Principals and Affiliates (Name: Last, First, Middle Initial) proposing to participate			
8 Role of Each Principal in Project		9. Expected % Ownership in Project	10. SSN or IRS Employer Number

Certifications: The principal(s) listed above hereby apply to HUD or USDA FmHA, as the case maybe, for approval to participate as principal(s) in the role(s) and project listed above. The principal(s) each certify that all the statements made on this form are true, complete and correct to the best of their knowledge and belief and are made in good faith, including any Exhibits attached to this form. **Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. The principal(s) further certify that to the best of their knowledge and belief:

- Schedule A contains a listing, for the last ten years, of every project assisted or insured by HUD, USDA FmHA and/or State and local government housing finance agencies in which the principal(s) have participated or are now participating.
- For the period beginning 10 years prior to the date of this certification, and except as shown on the certification:
 - No mortgage on a project listed has ever been in default, assigned to the Government or foreclosed, nor has it received mortgage relief from the mortgagee;
 - The principals have no defaults or noncompliance under any Conventional Contract or Turnkey Contract of Sale in connection with a public housing project;
 - There are no known unresolved findings as a result of HUD audits, management reviews or other Governmental investigations concerning the principals or their projects;
 - There has not been a suspension or termination of payments under any HUD assistance contract due to the principal's fault or negligence;
 - The principals have not been convicted of a felony and are not presently the subject of a complaint or indictment charging a felony. (A felony is defined as any offense punishable by imprisonment for a term exceeding one year, but does not include any offense classified as a misdemeanor under the laws of a State and punishable by imprisonment of two years or less);
 - The principals have not been suspended, debarred or otherwise restricted by any Department or Agency of the Federal Government or of a State Government from doing business with such Department or Agency;
 - The principals have not defaulted on an obligation covered by a surety or performance bond and have not been the subject of a claim under an employee fidelity bond;
 - All the names of the principals who propose to participate in this project are listed above.
- None of the principals is a HUD/FmHA employee or a member of a HUD/FmHA employee's immediate household as defined in Standards of Ethical Conduct for Employees of the Executive Branch in 5 C.F.R. Part 2635 (57 FR 35006) and HUD's Standard of Conduct in 24 C.F.R. Part 0 and USDA's Standard of Conduct in 7 C.F.R. Part 0 Subpart B.
- None of the principals is a participant in an assisted or insured project as of this date on which construction has stopped for a period in excess of 20 days or which has been substantially completed for more than 90 days and documents for closing, including final cost certification, have not been filed with HUD or FmHA.
- None of the principals have been found by HUD or FmHA to be in noncompliance with any applicable fair housing and civil rights requirements in 24 CFR 5.105(a). (If any principals or affiliates have been found to be in noncompliance with any requirements, attach a signed statement explaining the relevant facts, circumstances, and resolution, if any).
- None of the principals is a Member of Congress or a Resident Commissioner nor otherwise prohibited or limited by law from contracting with the Government of the United States of America.
- Statements above (if any) to which the principal(s) cannot certify have been deleted by striking through the words with a pen, and the relevant principal(s) have initiated each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances.

Name of Principal	Signature of Principal	Certification Date(mm/dd/yyyy)	Area Code and Tel. No.
This form prepared by (print name)			Area Code and Tel. No.

Previous editions are obsolete

OMB Approval No. 2502-0118
(Exp. 02/29/2016)

need more space. Double check for accuracy. If no previous projects, write by your name, **“No previous participation, First Experience”**.

1. Principals Name (Last, First)	2. List of previous projects (Project name, project ID and, Govt. agency involved)	3.List Principals' Role(s) (indicate dates participated, and if fee or identity of interest participant)	4. Status of loan (current, defaulted, assigned, foreclosed)	5. Was the Project ever in default during your participation Yes No If yes explain	6. Last MOR rating and Physical Insp. Score and date

Received and checked by me for accuracy and completeness; recommend approval or refer to Headquarters after checking appropriate box.

Date (mm/dd/yyyy)		Tel No. and area code		<input type="checkbox"/> A. No adverse information; form HUD-2530 approval recommended. <input type="checkbox"/> C. Disclosure or Certification problem	
Staff		Processing and Control		<input type="checkbox"/> B. Name match in system <input type="checkbox"/> D. Other (attach memorandum)	
Supervisor		Director of Housing/Director, Multifamily Division		Approved <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Date (mm/dd/yyyy)	

ref Handbook 4065.1 Form HUD-2530 (02/2013)

<p>Instructions for Completing the Previous Participation Certificate, form HUD-2530</p> <p>Carefully read these instructions and the applicable regulations. A copy of those regulations published at 24 C.F.R. 200.210 to 200.245 can be obtained from the Multifamily Housing Representative at any HUD Office. Type or print neatly in ink when filling out this form. Mark answers in all blocks of the form. If the form is not filled completely, it will delay approval of your application.</p> <p>Attach extra sheets as you need them. Be sure to indicate "Continued on Attachments" wherever appropriate. Sign each additional page that you attach if it refers to you or your record.</p> <p>Carefully read the certification before you sign it.</p> <p>Any questions regarding the form or how to complete it can be answered by your HUD Office Multifamily Housing Representative.</p> <p>Purpose: This form provides HUD with a certified report of all previous participation in HUD multifamily housing projects by those parties making application. The information requested in this form is used by HUD to determine if you meet the standards established to ensure that all principal participants in HUD projects will honor their legal, financial and contractual obligations and are acceptable risks from the underwriting standpoint of an insurer, lender or governmental agency. HUD requires that you certify your record of previous participation in HUD/USDA-FmHA, State and Local Housing Finance Agency projects by completing and signing this form, before your project application or participation can be approved.</p> <p>HUD approval of your certification is a necessary precondition for your participation in the project and in the capacity that you propose. If you do not file this certification, do not furnish the information requested accurately, or do not meet established standards, HUD will not approve your certification.</p> <p>Note that approval of your certification does not obligate HUD to approve your project application, and it does not satisfy all other HUD program requirements relative to your qualifications</p> <p>Who Must Sign and File Form HUD-2530:</p> <p>Form HUD-2530 must be completed and signed by all principals applying to participate in HUD multifamily housing projects, including those who have no previous participation. The form must be signed and filed by all principals and their affiliates who propose participating in the HUD project. Use a separate form for each role in the project unless there is an identity of interest.</p> <p>Principals include all individuals, joint ventures,</p>	<p>partnerships, corporations, trusts, non-profit organizations, any other public or private entity that will participate in the proposed project as a sponsor, owner, prime contractor, turnkey developer, managing agent, nursing home administrator or operator, packager, or consultant. Architects and attorneys who have any interest in the project other than an arm's length fee arrangement for professional services are also considered principals by HUD.</p> <p>In the case of partnerships, all general partners regardless of their percentage interest and limited partners having a 25 percent or more interest in the partnership are considered principals. In the case of public or private corporations or governmental entities, principals include the president, vice president, secretary, treasurer and all other executive officers who are directly responsible to the board of directors, or any equivalent governing body, as well as all directors and each stockholder having a 10 percent or more interest in the corporation.</p> <p>Affiliates are defined as any person or business concern that directly or indirectly controls the policy of a principal or has the power to do so. A holding or parent corporation would be an example of an affiliate if one of its subsidiaries is a principal.</p> <p>Exception for Corporations – All principals and affiliates must personally sign the certificate except in the following situation. When a corporation is a principal, all of its officers, directors, trustees and stockholders with 10 percent or more of the common (voting) stock need not sign personally if they all have the same record to report. The officer who is authorized to sign for the corporation or agency will list the names and title of those who elect not to sign. However, any person who has a record of participation in HUD projects that is separate from that of his or her organization must report that activity on this form and sign his or her name. The objective is full disclosure.</p> <p>Exemptions – The names of the following parties do not need to be listed on form HUD-2530: Public Housing Agencies, tenants, owners of less than five condominium or cooperative units and all others whose interests were acquired by inheritance or court order.</p> <p>Where and When Form HUD-2530 Must Be Filled: The original of this form must be submitted to the HUD Office where your project application will be processed at the same time you file your initial project application. This form must be filed with applications for projects, or when otherwise required in the situations listed below:</p> <ul style="list-style-type: none"> • Projects to be financed with mortgages insured under the National Housing Act (FHA). 	<p>the State or local housing finance agency project or contract number. Include all project or contract identification numbers that are relevant to the project. Also enter the name of the city in which the project is located, and the ZIP Code.</p> <p>Block 3: Fill in the dollar amount requested in the proposed mortgage, or the annual amount of rental assistance requested.</p> <p>Block 4: Fill in the number of apartment units proposed, such as "40 units." For hospital projects or nursing homes, fill in the number of beds proposed, such as "100 beds."</p> <p>Block 5: Fill in the section of the Housing Act under which the application is filed.</p> <p>Block 7: Definitions of all those who are considered principals and affiliates are given above in the section titled "Who Must Sign and File..."</p> <p>Block 8: Beside the name of each principal, fill in the appropriate role. The following are examples of possible roles that the principals may assume: Owner/Mortgagor, Managing Agent, Sponsor, Developer, General Contractor, Packager, Consultant, Nursing Home Administrator etc.</p> <p>Block 9: Fill in the percentage of ownership in the proposed project that each principal is expected to have.</p> <p>Block 10: Fill in the Social Security Number or IRS employer number of every principal listed, including affiliates.</p> <p>Instructions for Completing Schedule A:</p> <p>Be sure that Schedule A is filled-in completely, accurately and the certification is properly dated and signed, because it will serve as a legal record of your previous experience. All Multifamily Housing projects involving HUD/ FmHA, and State and local Housing Finance Agencies in which you have previously participated must be listed. Applicants are reminded that previous participation pertains to the individual principal within an entity as well as the entity itself. A newly formed company may not have previous participation, but the principals within the company may have had extensive participation and disclosure of that activity is required.</p> <p>Column 2: All previous projects must be listed or your certification cannot be processed. Include the name of all projects, project number, city where it is located and the governmental agency (HUD, USDA-FmHA or state or local housing finance agency) that was involved.</p> <p>Column 3: List the role(s) as a principal, dates participated and if fee or identity of interest (IOI) with owners.</p>	<p>• Projects to be financed according to Section 202 of the Housing Act of 1959 (Elderly and Handicapped).</p> <ul style="list-style-type: none"> • Projects in which 20 percent or more of the units are to receive a subsidy as described in 24 C.F.R. 200.213. • Purchase of a project subject to a mortgage insured or held by the Secretary of HUD. • Purchase of a Secretary-owned project. • Proposed substitution or addition of a principal or principal participation in a different capacity from that previously approved for the same project. • Proposed acquisition by an existing limited partner of an additional interest in a project resulting in a total interest of 25 percent or more or proposed acquisition by a corporate stockholder of an additional interest in a project resulting in a total interest of 10 percent or more. • Projects with USDA, Farmers Home Administration, or with state or local government housing finance agencies that include rental assistance under Section 8 of the Housing Act of 1937. For projects of this type, form HUD-2530 should be filed with the appropriate applications directly to those agencies. <p>Review of Adverse Determination: If approval of your participation in a HUD project is denied, withheld, or conditionally granted on the basis of your record of previous participation, you will be notified by the HUD Office. You may request reconsideration by the HUD Review Committee. Alternatively, you may request a hearing before a Hearing Officer. Either request must be made in writing within 30 days from your receipt of the notice of determination.</p> <p>If you do request reconsideration by the Review Committee and the reconsideration results in an adverse determination, you may then request a hearing before a Hearing Officer. The Hearing Officer will issue a report to the Review Committee. You will be notified of the final ruling by certified mail.</p> <p>Specific Line Instructions:</p> <p>Reason for submitting this Certification: e.g., refinancing, change in ownership, change in management agent, transfer of physical assets, etc.</p> <p>Block 1: Fill in the name of the agency to which you are applying. For example: HUD Office, Farmers Home Administration District office, or the name of a State or local housing finance agency. Below that, fill in the name of the city where the office is located.</p> <p>Block 2: Fill in the name of the project, such as "Greenwood Apts." If the name has not yet been selected, write "Name unknown." Below that, enter the HUD contract or project identification number, or the Farmers Home Administration project number, or</p>	<p>the State or local housing finance agency project or contract number. Include all project or contract identification numbers that are relevant to the project. Also enter the name of the city in which the project is located, and the ZIP Code.</p> <p>Block 3: Fill in the dollar amount requested in the proposed mortgage, or the annual amount of rental assistance requested.</p> <p>Block 4: Fill in the number of apartment units proposed, such as "40 units." For hospital projects or nursing homes, fill in the number of beds proposed, such as "100 beds."</p> <p>Block 5: Fill in the section of the Housing Act under which the application is filed.</p> <p>Block 7: Definitions of all those who are considered principals and affiliates are given above in the section titled "Who Must Sign and File..."</p> <p>Block 8: Beside the name of each principal, fill in the appropriate role. The following are examples of possible roles that the principals may assume: Owner/Mortgagor, Managing Agent, Sponsor, Developer, General Contractor, Packager, Consultant, Nursing Home Administrator etc.</p> <p>Block 9: Fill in the percentage of ownership in the proposed project that each principal is expected to have.</p> <p>Block 10: Fill in the Social Security Number or IRS employer number of every principal listed, including affiliates.</p> <p>Instructions for Completing Schedule A:</p> <p>Be sure that Schedule A is filled-in completely, accurately and the certification is properly dated and signed, because it will serve as a legal record of your previous experience. All Multifamily Housing projects involving HUD/ FmHA, and State and local Housing Finance Agencies in which you have previously participated must be listed. Applicants are reminded that previous participation pertains to the individual principal within an entity as well as the entity itself. A newly formed company may not have previous participation, but the principals within the company may have had extensive participation and disclosure of that activity is required.</p> <p>Column 2: All previous projects must be listed or your certification cannot be processed. Include the name of all projects, project number, city where it is located and the governmental agency (HUD, USDA-FmHA or state or local housing finance agency) that was involved.</p> <p>Column 3: List the role(s) as a principal, dates participated and if fee or identity of interest (IOI) with owners.</p>
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<p>Column 4. Indicate the current status of the loan. Except for current loan, the date associated with the status is required. Loans under a workout arrangement are considered assigned. For all noncurrent loans, an explanation of the status is required.</p> <p>Column 5. Explain any project defaults during your participation.</p> <p>Column 6. Provide the latest Management Review (MOR) rating and Physical Inspection score.</p> <p>Certification: After you have completed all other parts of</p>	<p>form HUD-2530, including schedule A, read the certification carefully. In the box below the statement of the certification, fill in the names of all principals and affiliates as listed in block 7. Each principal should sign the certification with the exception in some cases of individuals associated with a corporation (see "Exception for Corporations" in the section of the instructions titled "Who Must Sign and File Form HUD-2530). Principal who is signing on behalf of the entity should attach signature authority document. Each principal who signs the form have struck out on the certification. Item 2c relates to felony convictions within the past 10 years. If you are convicted of a felony within the past 10 years, strike out 2c. and attach statement of explanation. A felony conviction will not necessarily cause your participation to be disapproved unless there is a criminal record or other evidence that your previous conduct or method of doing business has been such that your participation in the project would make it an unacceptable risk from the underwriting stand point of an insurer, lender or governmental agency.</p>	<p>should fill in the date of the signature and a telephone number. By providing a telephone number, HUD can reach you in the event of any questions.</p> <p>If you cannot certify and sign the certification as it is printed because some statements do not correctly describe your record, use a pen to strike through these parts that differ with your record, and then sign and certify. Attach a signed statement of explanation of the items you have struck out on the certification. Item 2c relates to felony</p>	<p>The Department of Housing and Urban Development (HUD) is authorized to collect this information by law (42 U.S.C. 3535(d) and 24 C.F.R. 200.217) and by regulation at 24 CFR 200.210. This information is needed so that principals applying to participate in multifamily programs can become HUD-approved participants. The information you provide will enable HUD to evaluate your record with respect to established standards of performance, responsibility and eligibility. Without prior approval, a principal may not participate in a proposed or existing multifamily project. HUD uses this information to evaluate whether or not principals pose an unsatisfactory underwriting risk. The information is used to evaluate the potential principals and approve only individuals and organizations that will honor their legal, financial and contractual obligations.</p> <p>Privacy Act Statement: The Housing and Community Development Act of 1987, 42 U.S.C. 3543 requires persons applying for a Federally-insured or guaranteed loan to furnish his/her Social Security Number (SSN). HUD must have your SSN for identification of your records. HUD may use your SSN for automated processing of your records and to make requests for information about you and your previous records with other public agencies and private sector sources. HUD may disclose certain information to Federal, State and local agencies when relevant to civil, criminal, or regulatory investigations and prosecutions. It will not be otherwise disclosed or released outside of HUD, except as required and permitted by law. You must provide all of the information requested in this application, including your SSN.</p> <p>Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.</p> <p>A response is mandatory. Failure to provide any of the information will result in your disapproval of participation in this HUD program.</p>
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Mandatory Section 3 Requirements

Form 1-Explanation of Section 3 Program and Bidder Requirements

1.0 Introduction: The purpose of this document is to, in simplified terms, explain to bidders/proposers major issues pertaining to the Section 3 Business Preference program required by the Highland Park Housing Authority's (Authority) funding source, the U.S. Department of Housing and Urban Development (HUD). Also, hereinafter, a Section 3 Business Preference will be referred to as "Preference."

2.0 What is Section 3?

2.1 Section 3 is a provision of the Housing and Urban Development Act of 1968, which recognizes that HUD funds are typically one of the largest sources of federal funding expended in communities, including Middlesex County, New Jersey. Section 3 is intended to ensure that when a contractor has need to hire additional people as the result of receiving a contract from the Authority preference must be given to low- and very low-income persons residing in Middlesex County, New Jersey (Section 3 resident), or Section 3 business concerns.

2.2 The requirements pertaining to Section 3 apply only to purchases and contracts the Authority completes for work--the requirements of Section 3 DO NOT apply to purchases or contracts the Authority completes solely for commodities or equipment; meaning, "no work provided, no Section 3 required."

2.3 Section 3 is race and gender neutral in that preferences are based on income-level and location.

3.0 What does the term "Section 3 resident" mean?

3.1 A "Section 3 resident" is:

3.1.1 a public housing resident of the Authority; or

3.1.2 a low- or very low-income resident of Middlesex County, New Jersey.

3.1.2.1 Low- and very low-income within Middlesex County, New Jersey, are defined as residents within the following income levels for FY 2015 (Median Income = \$_____):

Income Limit Category	(1) Person	(2) Persons	(3) Persons	(4) Persons	(5) Persons	(6) Persons	(7) Persons	(8) Persons
Very Low (50%)	\$20,600	\$23,550	\$26,500	\$29,400	\$31,800	\$34,150	\$36,500	\$38,850
Extremely Low (30%)	\$12,400	\$14,150	\$15,900	\$17,650	\$19,100	\$20,500	\$21,900	\$23,300
Low (80%)	\$32,950	\$37,650	\$42,350	\$47,050	\$50,850	\$54,600	\$58,350	\$62,150

Income Limit figures are based on FY2015 Fair Market Rent (FMR). For a detailed account of how these limits are derived, please see our associated FY2015 FMR documentation.

4.0 What does the term "Section 3 business concern" mean?

- 4.1 A "Section 3 business concern" is a business that can provide evidence that it meets one of the following:
- 4.1.1 It is 51% or more owned by a Section 3 resident; or
 - 4.1.2 At least 30% of its full time employees include person that are currently Section 3 residents, or within 3 years of the date of first employment with the business concern were Section 3 residents; or
 - 4.1.3 Provides evidence of a commitment to subcontract in excess of 25% of the dollar award of all subcontracts to be awarded to business concerns that meet the qualifications within the preceding 3.1.1 or 3.1.2.

5.0 Is participation in Section 3 optional?

- 5.1 Except for purchases or contracts solely for commodities and equipment, as a part of the solicitation the Authority will offer all bidders and proposers the option of a Preference.
- 5.2 In response to a competitive solicitation (quotes; bids; RFP's), bidders and proposers are not required to respond to the Authority with a claim of a Preference (meaning, such claim is optional and failure to respond with a claim of a Preference will not cause the bidder or proposer to be deemed non-responsive); however, if a bidder or proposer does claim a Preference, then the Authority will consider, investigate, and determine the validity of each such claim for a Preference.
- 5.3 Regardless of whether or not a bidder or proposer claims a Preference in response to a solicitation, the recipient of the award will be required to, "to the greatest extent feasible," implement the requirements of Section 3 during the ensuing awarded contract term.

6.0 Must a contractor receiving an award from the Authority take part in the Section 3 program?

- 6.1 The short answer is "Yes," as detailed following, each contractor must, "to the greatest extend feasible," take part in the program.
 - 6.1.1 If the contractor wishes, he/she may claim a Preference during the competitive solicitation process (please see Attachment D, most specifically Section 2.0 thereon).
 - 6.1.1.1 Pertaining to Quotations for Small Purchases (QSP's), the Authority will give a Preference of 10% to any quoter deemed to be eligible to receive such Preference ("deemed," based on information the quoter submits in response to the QSP issued). This means that for a quoter deemed eligible to receive a Preference, though he/she, for example, submits a quote of \$10,000, such quote will be considered by the Authority to be \$9,000 (10% less), even though, if awarded, the Authority will pay the quoter the full \$10,000 originally quoted.

6.1.1.2 Pertaining to Invitations For Bids (IFB's), the Authority will give a Preference based upon the following:

	Preference = lesser of:
When the lowest responsive bid is less than \$100,000	10% of that bid or \$9,000
When the lowest responsive bid is:	
At least \$100,000 but less than \$200,000	9% of that bid, or \$16,000
At least \$200,000 but less than \$300,000	8% of that bid, or \$21,000
At least \$300,000 but less than \$400,000	7% of that bid, or \$24,000
At least \$400,000 but less than \$500,000	6% of that bid, or \$25,000
At least \$500,000 but less than \$1,000,000	5% of that bid, or \$40,000
At least \$1,000,000 but less than \$2,000,000	4% of that bid, or \$60,000
At least \$2,000,000 but less than \$4,000,000	3% of that bid, or \$80,000
At least \$4,000,000 but less than \$7,000,000	2% of that bid, or \$105,000
\$7,000,000 or more	1 1/2% of lowest responsive bid, with no dollar limit

6.1.1.3 Pertaining to Request For Proposals (RFP's) and Request For Qualifications (RFP/QBS), the Authority will give a Preference based upon the following:

MAX POINT VALUE	FACTOR TYPE	FACTOR DESCRIPTION
	Objective	SECTION 3 BUSINESS PREFERENCE PARTICIPATION: (NOTE: A maximum of 15 points awarded).
15 points		Priority I, Category 1a: Business concerns that are 51 percent or more owned by residents of the housing development or developments for which the Section 3-covered assistance is expended.
13 points		Priority II, Category 1b: Business concerns whose workforce includes 30 percent of residents of the housing development for which the Section 3-covered assistance is expended, or within three (3) years of the date of first employment with the business concern, were residents of the Section 3-covered housing development.
11 points		Priority III, Category 2a: Business concerns that are 51 percent or more owned by residents of any other housing development or developments.
9 points		Priority IV, Category 2b: Business concerns whose workforce includes 30 percent of residents of any other public housing development or developments, or within three (3) years of the date of first employment with the business concern, were "Section 3" residents of any other public housing development.
7 points		Priority V, Category 3: Business concerns

		participating in HUD Youth-build programs being carried out in the metropolitan area in which the Section 3-covered assistance is expended.
5 points		Priority VI, Category 4a: Business concerns that are 51 percent or more owned by Section 3 residents in the metropolitan area, or whose permanent, full-time workforce includes no less than 30 percent of Section 3 residents in the metropolitan area, or within three (3) years of the date of employment with the business concern, were Section 3 residents in the metropolitan area.
3 points		Priority VII, Category 4b: Business concerns that subcontract in excess of 25 percent of the total amount of subcontracts to Section 3 business concerns.
15 points		Maximum Preference Points (Additional)

6.1.2 It is possible that a contractor may demonstrate, to the Authority's satisfaction, that he/she has made a good faith and reasonable effort to comply with the requirements of Section 3, but it is not feasible to implement any portion of the Section 3 program. Such failure must be fully documented by the contractor and approved by the Authority or that contractor may be deemed not responsible by the Authority and the contract may be, at the Authority's discretion, not awarded or terminated.

7.0 Be aware that, as detailed within §138.38, the following Section 3 Clause will be a part of every applicable contract the Authority executes, and when a contractor executes the contract he/she is thereby agreeing to comply with the following:

SECTION 3 CLAUSE

- A. The work to be performed under this contract is project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U. S. C. 1701u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given to lower income residents of the area of the Section 3 covered project and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the Section 3 covered project.
- B. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR, Part 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability, which would prevent them from complying with these requirements.
- C. The contractor will send to each labor organization or representative of workers with which s/he has a collective bargaining agreement or other contract or understanding, if

any, a notice advising the said labor organization or workers' representative of its commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

- D. The contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR, Part 135, the contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR, Part 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of this regulation.
- E. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR, Part 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient, its contractors and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided and to such sanctions as are specified by 24 CFR, Part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with Section 3 covered Indian housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and Section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

Mandatory Section 3 Requirements
Form 2-Business Preference Submittal Form
Bidders Who are Claiming a Section 3 Preference Must Complete this Form

- 1.0 Introduction: This form must be fully completed, accompanied by all required attachments, for any bidder/proposer claiming a Section 3 Business Preference (hereinafter, "Preference").
- 1.1 This fully completed form and any attachments thereto, will become a part of any ensuing contract.
- 1.2 Each bidder/proposer shall mark an "X" where provided following for all that apply to his/her claim of a Preference.
- 1.3 The bidder/proposer shall provide as an attachment to this completed form a detailed work plan clearly explaining how each following "denoted effort" or "claim" will be accomplished). Failure on the part of the bidder/proposer to include any such required attachment fully explaining the claim of the bidder/proposer shall result in the Authority not considering the claim for a Preference (though the Authority will, if awarded, later require the bidder/proposer to submit the information to satisfy the Section 3 requirements of the ensuing contract).
- 1.4 Please note that, even if a bidder/proposer does not complete and submit this form claiming a Preference, the Authority may require this form to be completed by the successful bidder/proposer as an attachment to the ensuing contract to document the Section 3 Plan required for the ensuing contract.
- 2.0 Current Section 3 Status: The undersigned bidder/proposer hereby claims that it is a Section 3 business concern and claims such preference in that he/she can provide evidence that (the bidder/proposer has attached justifying documentation for each item following marked with an "X"):
- 2.1 ☐ It is 51% or more owned by a Section 3 resident:
- 2.1.1 ☐ Authority resident lease;
- 2.1.2 ☐ Evidence of participation in a public assistance program;
- 2.1.3 ☐ Articles of Incorporation;
- 2.1.4 ☐ Fictitious or Assumed Business Name Certificate;
- 2.1.5 ☐ List of owners/stockholders and % of each;
- 2.1.6 ☐ Latest Board minutes appointing officers;
- 2.1.7 ☐ Organization chart with names and titles and brief functional statement;
- 2.1.8 ☐ Partnership Agreement;
- 2.1.9 ☐ Corporation Annual Report.
- 2.2 ☐ At least 30% of its full time employees include persons that are currently Section 3 residents, or within 3 years of the date of first employment with the business concern were Section 3 residents:

2.2.1 To justify this claim, please see the immediate following:

(1) Classification	(2) Total Number of Current Permanent Employees	(3) Total Number of Section 3 Resident Employees
Trainees		
Apprentices		
Journeypersons		
Laborers		
Supervisory		
Superintendent		
Professional		
Clerical		
Other:		

2.2.2 Attach a listing of all employees listed within column (3) above, including name and total annual income.

2.3 ____ He/she has a commitment to subcontract in excess of 25% of the dollar award of all subcontracts to be awarded to a Section 3 business concern.

2.3.1 To justify this claim, please see the immediate following:

(1) Name of Section 3 Firm Receiving the Subcontract	(2) Total Amount of Subcontract(s)	(3) Percentage the Subcontract(s) is/are of the Total Proposed Contract Amount
	\$	%
	\$	%
	\$	%

2.3.2 Attach for each firm listed immediately above:

2.3.2.1 A detailed description of the subcontracted activity; and

2.3.2.2 A fully completed Profile of Firm form.

3.0 Section 3 Preference Claim, Training and Employment Opportunities: The undersigned bidder/proposer hereby claims that it will, as detailed within 24 CFR §135.34, provide such "opportunities" as denoted following; to:

3.1 ____ Residents of the housing development or developments for which the section 3 covered assistance is expended (category 1 residents);

- 3.2 ___ Residents of other housing developments managed by the Authority that is expending the section 3 covered housing assistance (category 2 residents);
- 3.3 ___ Participants in HUD Youth build programs being carried out in the metropolitan area (or nonmetropolitan county) in which the section 3 covered assistance is expended (category 3 residents);
- 3.4 ___ Other section 3 residents.

4.0 Section 3 Preference Claim, Section 3 Business Concerns: The undersigned bidder/proposer hereby claims that it will, as a result of the contract award, and as detailed within 24 CFR §135.36, provide such "opportunities" as denoted following; to:

- 4.1 ___ Business concerns that are 51 percent or more owned by residents of the housing development or developments for which the section 3 covered assistance is expended, or whose full-time, permanent workforce includes 30 percent of these persons as employees (category 1 businesses);
- 4.2 ___ Business concerns that are 51 percent or more owned by residents of other housing developments or developments managed by the Authority that is expending the section 3 covered assistance, or whose full-time, permanent workforce includes 30 percent of these persons as employees (category 2 businesses); or
- 4.3 ___ HUD Youth build programs being carried out in the metropolitan area (or nonmetropolitan county) in which the section 3 covered assistance is expended (category 3 businesses).
- 4.4 ___ Business concerns that are 51 percent or more owned by section 3 residents, or whose permanent, full-time workforce includes no less than 30 percent section 3 residents (category 4 businesses), or that subcontract in excess of 25 percent of the total amount of subcontracts to business concerns identified in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.

5.0 As further detailed herein, which of the following priority are you claiming? (NOTE: Mark with an "X" the highest claimed Priority only.)

PRIORITY CLAIMED (Mark "X")	MAX POINT VALUE	FACTOR TYPE	FACTOR DESCRIPTION
		Objective	SECTION 3 BUSINESS PREFERENCE PARTICIPATION: (NOTE: A maximum of 15 points awarded).
	15 points		Priority I, Category 1a: Business concerns that are 51 percent or more owned by residents of the housing development or developments for which the Section 3-covered assistance is expended.
	13 points		Priority II, Category 1b: Business concerns whose workforce includes 30 percent of residents of the

			housing development for which the Section 3-covered assistance is expended, or within three (3) years of the date of first employment with the business concern, were residents of the Section 3-covered housing development.
	11 points		Priority III, Category 2a: Business concerns that are 51 percent or more owned by residents of any other housing development or developments.
	9 points		Priority IV, Category 2b: Business concerns whose workforce includes 30 percent of residents of any other public housing development or developments, or within three (3) years of the date of first employment with the business concern, were "Section 3" residents of any other public housing development.
	7 points		Priority V, Category 3: Business concerns participating in HUD Youth-build programs being carried out in the metropolitan area in which the Section 3-covered assistance is expended.
	5 points		Priority VI, Category 4a: Business concerns that are 51 percent or more owned by Section 3 residents in the metropolitan area, or whose permanent, full-time workforce includes no less than 30 percent of Section 3 residents in the metropolitan area, or within three (3) years of the date of employment with the business concern, were Section 3 residents in the metropolitan area.
	3 points		Priority VII, Category 4b: Business concerns that subcontract in excess of 25 percent of the total amount of subcontracts to Section 3 business concerns.

6.0 As detailed within 24 CFR §135, Appendix I, *Examples of Efforts To Offer Training and Employment Opportunities to Section 3 Residents*, denote the "efforts" your firm hereby formally commits to implement if you are awarded a contract:

- 6.1 ___ Entering into "first source" hiring agreements with organizations representing Section 3 residents.
- 6.2 ___ Sponsoring a HUD-certified "Step-Up" employment and training program for section 3 residents.
- 6.3 ___ Establishing training programs, which are consistent with the requirements of the Department of Labor, for public and Indian housing residents and other section 3 residents in the building trades.
- 6.4 ___ Advertising the training and employment positions by distributing flyers (which identify the positions to be filled, the qualifications required, and where to obtain additional information about the application process) to every occupied dwelling unit in the housing development or developments where category 1 or category 2 persons (as these terms are defined in §135.34) reside.
- 6.5 ___ Advertising the training and employment positions by posting flyers (which identify the positions to be filled, the qualifications required, and where to obtain additional

information about the application process) in the common areas or other prominent areas of the housing development or developments. For Authorities, post such advertising in the housing development or developments where category 1 or category 2 persons reside; for all other recipients, post such advertising in the housing development or developments and transitional housing in the neighborhood or service area of the section 3 covered project.

- 6.6 ____ Contacting resident councils, resident management corporations, or other resident organizations, where they exist, in the housing development or developments where category 1 or category 2 persons reside, and community organizations in HUD-assisted neighborhoods, to request the assistance of these organizations in notifying residents of the training and employment positions to be filled.
- 6.7 ____ Sponsoring (scheduling, advertising, financing or providing in-kind services) a job informational meeting to be conducted by an Authority or contractor representative or representatives at a location in the housing development or developments where category 1 or category 2 persons reside or in the neighborhood or service area of the section 3 covered project.
- 6.8 ____ Arranging assistance in conducting job interviews and completing job applications for residents of the housing development or developments where category 1 or category 2 persons reside and in the neighborhood or service area in which a section 3 project is located.
- 6.9 ____ Arranging for a location in the housing development or developments where category 1 persons reside, or the neighborhood or service area of the project, where job applications may be delivered to and collected by a recipient or contractor representative or representatives.
- 6.10 ____ Conducting job interviews at the housing development or developments where category 1 or category 2 persons reside, or at a location within the neighborhood or service area of the section 3 covered project.
- 6.11 ____ Contacting agencies administering HUD Youth build programs, and requesting their assistance in recruiting HUD Youth build program participants for the Authority's or contractor's training and employment positions.
- 6.12 ____ Consulting with State and local agencies administering training programs funded through JTPA or JOBS, probation and parole agencies, unemployment compensation programs, community organizations and other officials or organizations to assist with recruiting Section 3 residents for the Authority's or contractor's training and employment positions.
- 6.13 ____ Advertising the jobs to be filled through the local media, such as community television networks, newspapers of general circulation, and radio advertising.
- 6.14 ____ Employing a job coordinator, or contracting with a business concern that is licensed in the field of job placement (preferably one of the section 3 business concerns identified in part 135), that will undertake, on behalf of the Authority, other recipient or contractor, the efforts to match eligible and qualified section 3 residents with the training and employment positions that the Authority or contractor intends to fill.

- 6.15 ____ For an Authority employing section 3 residents directly on either a permanent or a temporary basis to perform work generated by section 3 assistance. (This type of employment is referred to as "force account labor" in HUD's Indian housing regulations. See 24 CFR §905.102, and §905.201(a)(6).)
- 6.16 ____ Where there are more qualified section 3 residents than there are positions to be filled, maintaining a file of eligible qualified section 3 residents for future employment positions.
- 6.17 ____ Undertaking job counseling, education and related programs in association with local educational institutions.
- 6.18 ____ Undertaking such continued job training efforts as may be necessary to ensure the continued employment of section 3 residents previously hired for employment opportunities.
- 6.19 ____ After selection of bidders but prior to execution of contracts, incorporating into the contract a negotiated provision for a specific number of public housing or other section 3 residents to be trained or employed on the section 3 covered assistance.
- 6.20 ____ Coordinating plans and implementation of economic development (e.g., job training and preparation, business development assistance for residents) with the planning for housing and community development.
- 7.0 As detailed within 24 CFR §135, Appendix II, *Examples of Efforts To Award Contracts to Section 3 Business Concerns*, denote following the "efforts" your firm hereby formally commits to implement if you are awarded a contract:
- 7.1 ____ Utilizing procurement procedures for section 3 business concerns similar to those provided in 24 CFR part 905 for business concerns owned by Native Americans (see section III of this Appendix).
- 7.2 ____ In determining the responsibility of potential contractors, consider their record of section 3 compliance as evidenced by past actions and their current plans for the pending contract.
- 7.3 ____ Contacting business assistance agencies, minority contractors associations and community organizations to inform them of contracting opportunities and requesting their assistance in identifying section 3 businesses which may solicit bids or proposals for contracts for work in connection with section 3 covered assistance.
- 7.4 ____ Advertising contracting opportunities by posting notices, which provide general information about the work to be contracted and where to obtain additional information, in the common areas or other prominent areas of the housing development or developments owned and managed by the Authority.
- 7.5 ____ For Authorities, contacting resident councils, resident management corporations, or other resident organizations, where they exist, and requesting their assistance in identifying category 1 and category 2 business concerns.

- 7.6 ___ Providing written notice to all known section 3 business concerns of the contracting opportunities. This notice should be in sufficient time to allow the section 3 business concerns to respond to the bid invitations or request for proposals.
- 7.7 ___ Following up with section 3 business concerns that have expressed interest in the contracting opportunities by contacting them to provide additional information on the contracting opportunities.
- 7.8 ___ Coordinating pre-bid meetings at which section 3 business concerns could be informed of upcoming contracting and subcontracting opportunities.
- 7.9 ___ Carrying out workshops on contracting procedures and specific contract opportunities in a timely manner so that section 3 business concerns can take advantage of upcoming contracting opportunities, with such information being made available in languages other than English where appropriate.
- 7.10 ___ Advising section 3 business concerns as to where they may seek assistance to overcome limitations such as inability to obtain bonding, lines of credit, financing, or insurance.
- 7.11 ___ Arranging solicitations, times for the presentation of bids, quantities, specifications, and delivery schedules in ways to facilitate the participation of section 3 business concerns.
- 7.12 ___ Where appropriate, breaking out contract work items into economically feasible units to facilitate participation by section 3 business concerns.
- 7.13 ___ Contacting agencies administering HUD Youth build programs, and notifying these agencies of the contracting opportunities.
- 7.14 ___ Advertising the contracting opportunities through trade association papers and newsletters, and through the local media, such as community television networks, newspapers of general circulation, and radio advertising.
- 7.15 ___ Developing a list of eligible section 3 business concerns.
- 7.16 ___ For Authorities, participating in the “Contracting with Resident-Owned Businesses” program provided under 24 CFR part 963.
- 7.17 ___ Establishing or sponsoring programs designed to assist residents of public or Indian housing in the creation and development of resident-owned businesses.
- 7.18 ___ Establishing numerical goals (number of awards and dollar amount of contracts) for award of contracts to section 3 business concerns.
- 7.19 ___ Supporting businesses which provide economic opportunities to low income persons by linking them to the support services available through the Small Business Administration (SBA), the Department of Commerce and comparable agencies at the State and local levels.

- 7.20 ____ Encouraging financial institutions, in carrying out their responsibilities under the Community Reinvestment Act, to provide no or low interest loans for providing working capital and other financial business needs.
- 7.21 ____ Actively supporting joint ventures with section 3 business concerns.
- 7.22 ____ Actively supporting the development or maintenance of business incubators which assist Section 3 business concerns.

8.0 The undersigned bidder/proposer hereby declares:

- 8.1 The information within this completed form (and any attachments) is, to the best of his/her knowledge, true and accurate.
- 8.2 He/she is aware that if the Authority discovers that any such information is not true and accurate, such shall allow the Authority to:
 - 8.2.1 NOT award the bidder/proposer a Preference; and
 - 8.2.2 If the Authority deems such is warranted (e.g. in the case of submitting information the bidder/proposer knows to be untrue), declare such bidder/proposer to be nonresponsive and not allow the bidder/proposer to receive an award.
- 8.3 He/she is aware that if he/she receives an award as the result of this competitive solicitation, even though he/she may not receive a Preference from the Authority as a result of this submittal, he/she will still be required to, to the greatest extent feasible, implement a Section 3 Plan, including a commitment to interview and consider hiring Section 3 persons (most specifically, residents of the Authority) whenever the successful bidder/proposer has need to hire additional employees during the term of the ensuing contract.

Mandatory Section 3 Requirements
Form 3-Business Preference Submittal Form
For Bidders Who are NOT Claiming a Section 3 Preference Must Complete this Form

POTENTIAL STATUS AS A SECTION 3 FIRM: "As described in" 24 CFR 135.5, *Section 3 business concern*, I hereby declare that my firm does not qualify as a Section 3 business concern; in that:

(1) I am the sole owner and my income does not meet the Section 3 guidelines. Accordingly, my firm is not "51 percent or more owned by section 3 residents;" and

(2) As I am the sole employee, I have no "permanent, full-time employees." Accordingly, there are no Section 3 residents employed at my firm; and

(3) I do not have any intention to "subcontract in excess of 25 percent of the dollar award of all subcontracts to be awarded to . . . [a] section 3 business concern." As I will not be subcontracting any of the contract to any other business concern, claim of this is not "feasible."

MY PROPOSED SECTION 3 PLAN: (a) Within 24 CFR 135.1(a), HUD states that the purpose of the Section 3 requirements is to ". . . ensure that employment and other economic opportunities . . . shall, to the greatest extent feasible, . . . be directed to low- and very low-income persons . . ." (NOTE: Underlining added by me).

(b) Subcontracting. I hereby state that it is not "feasible" or reasonable for me to hire or retain any other person, much less a section 3 person, to assist in the performance of the ensuing contract. To explain in detail: It is clear that performance of the work detailed within the contract requires a very specialized skill-set and extensive knowledge and experience. It is extremely unlikely that I would be able to locate a Section 3 person with the requisite knowledge and experience to perform this work. If the work was extensive enough, I have other skilled sources and could retain another contractor to help; however, the work listed is well within my capabilities and abilities and it is my decision that the Authority would be best served by my performing the contract myself.

(c) Numerical Goals. As the award of this contract to my firm would not at any time result in any new hires, the "numerical goals" detailed within 24 CFR 135.30(a)(4)(b) do not apply to my firm; nor do the optional subcontract awards detailed within the following 24 CFR 135.30(a)(4)(c)(2).

(d) Section 3 Offer. Within the Appendix to Part 135, *Examples of Efforts To Award Contracts to Section 3 Business Concerns*, HUD details a number of things that the Authority may implement to increase the effectiveness of its Section 3 efforts. I am pleased to make this offer: consistent with the level set within 24 CFR 135.30(c)(2), as requested by the Authority, I will donate not less than 3% of my time contracted by the Authority to assist the Authority to effectively implement HUD requirements and these recommendations within the Authority's Section 3 plan, procedures and efforts. I believe that this offer meets the HUD requirement of "to the greatest extent feasible" as I ascertain how I can help the Authority with this most important issue.

BID DOCUMENT CHECKLIST

Housing Authority of the Borough of Highland Park

BID DOCUMENT CHECKLIST*

Required by owner	Submission Requirement	Initial each required entry and if required submit the item
<input type="checkbox"/>	Bid Breakdown	
<input type="checkbox"/>	Bid Guarantee	
<input type="checkbox"/>	Consent of Surety (with Power of Attorney for full amount of Bid Price)	
<input type="checkbox"/>	Affirmative Action Compliance Certification	
<input type="checkbox"/>	Stockholder Disclosure Certification	
<input type="checkbox"/>	Business Registration Certificate	
<input type="checkbox"/>	Public Works Contractor Certificate (Prevailing Wage) for Bidder and Each Sub-Contractor	
<input type="checkbox"/>	Non-Collusion Affidavit	
<input type="checkbox"/>	Equipment Certification	
<input type="checkbox"/>	References	
<input type="checkbox"/>	Subcontractor Listing/Certification Form(s)	
<input type="checkbox"/>	Acknowledgement of Receipt of Addenda (regardless of issuance of addenda)	
<input type="checkbox"/>	Statements and Qualifications of Bidders and Subcontractors (one for each bidder and subcontractor)	
<input type="checkbox"/>	Previous Participation Certificate	
<input type="checkbox"/>	Representations, Certifications and Other Statements of Bidders	
<input type="checkbox"/>	Section 3 Documents	

***Please submit this form as the first page of your bid and the
Bid Breakdown as the second page.**

ATTACHMENT A
SAMPLE CONTRACT-do not submit with your bid

Form of Contract
**Window Replacement at Samuel J. Kronman Building and Park
Terrace Apartments**

This CONTRACT made this ____ day of _____ in the year ____ by and between

(Name of Contractor)
(Address)

hereinafter called the "Contractor," and the

Housing Authority of the Borough of Highland Park
242 So. Sixth Avenue
Highland Park, NJ 08904

hereinafter called the "Authority".

WITNESSETH that the Contractor and the Authority for the consideration stated herein mutually agree as follows:

Article 1. Statement of Services. The Contractor shall furnish all labor, materials, tools and equipment and shall perform and complete all work required for the window and sliding door replacements at the Samuel J. Kronman Building, a 100 unit, six story high rise located at 242 So. Sixth Avenue in Highland Park, NJ and at Park Terrace Apartments, a 24 unit , 3 building garden style apartment complex located on So. Sixth Avenue, So. Seventh Avenue and Benner Street in Highland Park, NJ as per the technical specifications and drawings outlined in Section II of the Invitation for Bids (IFB) dated February 21, 2017 which is incorporated herein by reference and made a part hereof.

Article 2. Term of Contract. The Contractor shall complete all work as specified within 90 days of receipt of a written Notice to Proceed or receipt of applicable permits, if any. If the Contractor fails to complete the work within 90 days, the Contractor shall pay the Authority as liquidated damages, the sum of \$500.00 for each day of delay as outlined in form HUD-5370. To the extent that the Contractor's delay or nonperformance is excused liquidated damages shall not be due to the Authority. The Contractor remains liable for damages caused other than by delay.

Article 3. Scope of Work. The scope of work includes the labor, materials and equipment to perform all work per the technical specifications and drawings prepared by Element Architectural Group which are incorporated by reference and made a part hereof.

Article 4. Performance of Work, Work Requirements and Contractor's Responsibility. The Contractor shall be responsible for furnishing all materials, equipment, labor and transportation necessary to perform the work.

The Contractor shall not sub-contract any work under this contract without express prior written approval of the Authority or as listed in the subcontractor certificate.

Contractor will schedule and perform the work between the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday, unless prior written permission is granted by the Authority to perform work at other times. The Contractor shall coordinate all his activities with the Authority. The Authority may charge to the contractor any additional costs for inspections or testing.

The Contractor shall at all times keep the work area orderly and free from accumulations of waste materials. After completing the work, the Contractor shall remove all equipment materials and tools that are not the property of the Authority and leave the work area in a neat, clean and orderly condition. The Contractor shall dispose of all debris off-site in accordance with all applicable Federal, State and local statutes, ordinances and regulations.

The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence, and shall take all necessary health and safety precautions to protect the work, the workers, the public, and the property of others. The Contractor shall hold and save the Authority, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

The Contractor shall apply and pay for any applicable permits related to the work. Fees for Building permits issued through the City Code Enforcement office are waived. No final payments shall be processed without furnishing written documentation the work has been inspected and the Borough of Highland Park Code Enforcement Department has closed out the permit.

Article 5. Rates and Payments. The Authority shall pay the contractor a lump sum fee of _____ dollars and ____ cents (\$_____.____) after all (or periodic) work has been satisfactorily completed and tested. The Authority shall make payments not more frequently than monthly upon the completion of work by the Contractor and the presentation of an invoice. The invoice must be accompanied by certified payrolls for the period that is invoiced. Payment shall be due within 30 days of receipt of the invoice by the Authority. No payments shall be processed without attached certified payrolls covering payment period.

Article 6. Insurance. Before performing any work, the Contractor shall furnish the Authority with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:

1. Workers' Compensation, in accordance with New Jersey Workers' Compensation laws.
2. Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$1,000,000.00 per occurrence to protect the Contractor and the Authority against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "claims-made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract, and the extended reporting period may not be less than five years following the completion date of the Contract.
3. Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$500,000.000 per occurrence.

All Insurance shall be carried with companies, which are financially responsible and admitted to do business in the State of New Jersey. If any such insurance is due to expire during the construction period, the Contractor shall not permit the coverage to lapse and shall furnish evidence of coverage to the Authority. All certificates of insurance, as evidence of coverage, shall provide that no coverage

maybe canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Authority.

Article 7. New Jersey Business Registration Requirements. The contractor shall provide to the Authority proof of the contractor's business registration with the New Jersey Division of Taxation before contract award. Bidders shall be registered, however, at the time of the bid opening.

The contractor shall provide written notice to its subcontractors and suppliers of the responsibility to submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the Authority, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of this Agreement, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-49(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L. 2001, c.34 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L. 1977, c.110 (C.5:12-92), or that provides false business registration under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

Article 8. Section 3 Requirements.

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

Article 9. Assignment of Contract. The Authority may at its sole discretion assign the contract, in whole or in part, to an affiliate or instrumentality of the Authority or an entity controlled by the Authority, its affiliate, or its instrumentality. Assignment of the contract by the Authority, does not relieve the Contractor of responsibility for complying with any of the terms and conditions of the contract. The Authority's right to assign the contract is unilateral and does not create any assignment rights for the Contractor.

Article 10. Contract Documents. Contract Documents shall consist of the following component parts:

1. This instrument;
2. General Contract Conditions - Construction, form HUD-5370;
3. Drawings;
4. Technical Specifications;
5. Invitation for Bids dated 2/21/17;
6. Bid submitted by the contractor dated 2/21/17;
7. Addenda (if any).

This instrument together with the document enumerated in this Article form the Contract, and they are fully a part of the Contract as if hereto attached or herein repeated. In the event that any provision in one of the component parts of the Contract conflicts with any provision of any other component part, the provision in the component part first enumerated in this Article 8 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed the date and year first above written.

In the presence of:

_____ by _____
(Name) (Title)
(Company Name)
(Phone Number)

In the presence of:

_____ by _____
Donna F. Brightman
Executive Director
Housing Authority of the
Borough of Highland Park

**U.S. Department of Housing and
Urban Development**
Office of Public and Indian Housing

**Instructions to Bidders for Contracts
Public and Indian Housing Programs**

Instructions to Bidders for Contracts

Public and Indian Housing Programs

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1. Bid Preparation and Submission

(a) Bidders are expected to examine the specifications, drawings, all instructions, and, if applicable, the construction site (see also the contract clause entitled **Site Investigation and Conditions Affecting the Work** of the *General Conditions of the Contract for Construction*). Failure to do so will be at the bidders' risk.

(b) All bids must be submitted on the forms provided by the Public Housing Agency/Indian Housing Authority (PHA/IHA). Bidders shall furnish all the information required by the solicitation. Bids must be signed and the bidder's name typed or printed on the bid sheet and each continuation sheet which requires the entry of information by the bidder. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority. (Bidders should retain a copy of their bid for their records.)

(c) Bidders must submit as part of their bid a completed form HUD-5369-A, "Representations, Certifications, and Other Statements of Bidders."

(d) All bid documents shall be sealed in an envelope which shall be clearly marked with the words "Bid Documents," the Invitation for Bids (IFB) number, any project or other identifying number, the bidder's name, and the date and time for receipt of bids.

(e) If this solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "No Bid" in the space provided for any item on which no price is submitted.

(f) Unless expressly authorized elsewhere in this solicitation, alternate bids will not be considered.

(g) Unless expressly authorized elsewhere in this solicitation, bids submitted by telegraph or facsimile (fax) machines will not be considered.

(h) If the proposed contract is for a Mutual Help project (as described in 24 CFR Part 905, Subpart E) that involves Mutual Help contributions of work, material, or equipment, supplemental information regarding the bid advertisement is provided as an attachment to this solicitation.

2. Explanations and Interpretations to Prospective Bidders

(a) Any prospective bidder desiring an explanation or interpretation of the solicitation, specifications, drawings, etc., must request it at least 7 days before the scheduled time for bid opening. Requests may be oral or written. Oral requests must be confirmed in writing. The only oral clarifications that will be provided will be those clearly related to solicitation procedures, i.e., not substantive technical information. No other oral explanation or interpretation will be provided. Any information given a prospective bidder concerning this solicitation will be furnished promptly to all other prospective bidders as a written amendment to the solicitation, if that information is necessary in submitting bids, or if the lack of it would be prejudicial to other prospective bidders.

(b) Any information obtained by, or provided to, a bidder other than by formal amendment to the solicitation shall not constitute a change to the solicitation.

3. Amendments to Invitations for Bids

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date on the bid form, or (3) by letter, telegram, or facsimile, if those methods are authorized in the solicitation. The PHA/IHA must receive acknowledgement by the time and at the place specified for receipt of bids. Bids which fail to acknowledge the bidder's receipt of any amendment will result in the rejection of the bid if the amendment(s) contained information which substantively changed the PHA's/IHA's requirements.

(c) Amendments will be on file in the offices of the PHA/IHA and the Architect at least 7 days before bid opening.

4. Responsibility of Prospective Contractor

(a) The PHA/IHA will award contracts only to responsible prospective contractors who have the ability to perform successfully under the terms and conditions of the proposed contract. In determining the responsibility of a bidder, the PHA/IHA will consider such matters as the bidder's:

- (1) Integrity;
- (2) Compliance with public policy;
- (3) Record of past performance; and
- (4) Financial and technical resources (including construction and technical equipment).

(b) Before a bid is considered for award, the bidder may be requested by the PHA/IHA to submit a statement or other documentation regarding any of the items in paragraph (a) above. Failure by the bidder to provide such additional information shall render the bidder nonresponsible and ineligible for award.

5. Late Submissions, Modifications, and Withdrawal of Bids

(a) Any bid received at the place designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail, or if authorized by the solicitation, was sent by telegram or via facsimile, and it is determined by the PHA/IHA that the late receipt was due solely to mishandling by the PHA/IHA after receipt at the PHA/IHA; or

(3) Was sent by U.S. Postal Service Express Mail Next Day Service - Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and observed holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date and the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the PHA/IHA is the time/date stamp of PHA/IHA on the proposal wrapper or other documentary evidence of receipt maintained by the PHA/IHA.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and Failure by a bidder to acknowledge receipt of the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the PHA/IHA will be considered at any time it is received and may be accepted.

(g) Bids may be withdrawn by written notice, or if authorized by this solicitation, by telegram (including mailgram) or facsimile machine transmission received at any time before the exact time set for opening of bids; provided that written confirmation of telegraphic or facsimile withdrawals over the signature of the bidder is mailed and postmarked prior to the specified bid opening time. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

6. Bid Opening

All bids received by the date and time of receipt specified in the solicitation will be publicly opened and read. The time and place of opening will be as specified in the solicitation. Bidders and other interested persons may be present.

7. Service of Protest

(a) Definitions. As used in this provision:

"Interested party" means an actual or prospective bidder whose direct economic interest would be affected by the award of the contract.

"Protest" means a written objection by an interested party to this solicitation or to a proposed or actual award of a contract pursuant to this solicitation.

(b) Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgement from —

[Contracting Officer designate the official or location where a protest may be served on the Contracting Officer]

(c) All protests shall be resolved in accordance with the PHA's/IHA's protest policy and procedures, copies of which are maintained at the PHA/IHA.

8. Contract Award

(a) The PHA/IHA will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the PHA/IHA considering only price and any price-related factors specified in the solicitation.

(b) If the apparent low bid received in response to this solicitation exceeds the PHA's/IHA's available funding for the proposed contract work, the PHA/IHA may either accept separately priced items (see 8(e) below) or use the following procedure to determine contract award. The PHA/IHA shall apply in turn to each bid (proceeding in order from the apparent low bid to the high bid) each of the separately priced bid deductible items, if any, in their priority order set forth in this solicitation. If upon the application of the first deductible item to all initial bids, a new low bid is within the PHA's/IHA's available funding, then award shall be made to that bidder. If no bid is within the available funding amount, then the PHA/IHA shall apply the second deductible item. The PHA/IHA shall continue this process until an evaluated low bid, if any, is within the PHA's/IHA's available funding. If upon the application of all deductibles, no bid is within the PHA's/IHA's available funding, or if the solicitation does not request separately priced deductibles, the PHA/IHA shall follow its written policy and procedures in making any award under this solicitation.

(c) In the case of tie low bids, award shall be made in accordance with the PHA's/IHA's written policy and procedures.

(d) The PHA/IHA may reject any and all bids, accept other than the lowest bid (e.g., the apparent low bid is unreasonably low), and waive informalities or minor irregularities in bids received, in accordance with the PHA's/IHA's written policy and procedures.

(e) Unless precluded elsewhere in the solicitation, the PHA/IHA may accept any item or combination of items bid.

(f) The PHA/IHA may reject any bid as nonresponsive if it is materially unbalanced as to the prices for the various items of work to be performed. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(g) A written award shall be furnished to the successful bidder within the period for acceptance specified in the bid and shall result in a binding contract without further action by either party.

9. Bid Guarantee (applicable to construction and equipment contracts exceeding \$25,000)

All bids must be accompanied by a negotiable bid guarantee which shall not be less than five percent (5%) of the amount of the bid. The bid guarantee may be a certified check, bank draft, U.S. Government Bonds at par value, or a bid bond secured by a surety company acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. In the case where the work under the contract will be performed on an Indian reservation area, the bid guarantee may also be an irrevocable Letter of Credit (see provision 10, Assurance of Completion, below). Certified checks and bank drafts must be made payable to the order of the PHA/IHA. The bid guarantee shall insure the execution of the contract and the furnishing of a method of assurance of completion by the successful bidder as required by the solicitation. Failure to submit a bid guarantee with the bid shall result in the rejection of the bid. Bid guarantees submitted by unsuccessful bidders will be returned as soon as practicable after bid opening.

10. Assurance of Completion

(a) Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation. This assurance may be [Contracting Officer check applicable items] —

[] (1) a performance and payment bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

[] (2) separate performance and payment bonds, each for 50 percent or more of the contract price;

[] (3) a 20 percent cash escrow;

[] (4) a 25 percent irrevocable letter of credit; or,

[] (5) an irrevocable letter of credit for 10 percent of the total contract price with a monitoring and disbursements agreement with the IHA (applicable only to contracts awarded by an IHA under the Indian Housing Program).

(b) Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. Individual sureties will not be considered. U.S. Treasury Circular Number 570, published annually in the Federal Register, lists companies approved to act as sureties on bonds securing Government contracts, the maximum underwriting limits on each contract bonded, and the States in which the company is licensed to do business. Use of companies listed in this circular is mandatory. Copies of the circular may be downloaded on the U.S. Department of Treasury website <http://www.fms.treas.gov/c570/index.html>, or ordered for a minimum fee by contacting the Government Printing Office at (202) 512-2168.

(c) Each bond shall clearly state the rate of premium and the total amount of premium charged. The current power of attorney for the person who signs for the surety company must be attached to the bond. The effective date of the power of attorney shall not precede the date of the bond. The effective date of the bond shall be on or after the execution date of the contract.

(d) Failure by the successful bidder to obtain the required assurance of completion within the time specified, or within such extended period as the PHA/IHA may grant based upon reasons determined adequate by the PHA/IHA, shall render the bidder ineligible for award. The PHA/IHA may then either award the contract to the next lowest responsible bidder or solicit new bids. The PHA/IHA may retain the ineligible bidder's bid guarantee.

11. Preconstruction Conference (applicable to construction contracts)

After award of a contract under this solicitation and prior to the start of work, the successful bidder will be required to attend a preconstruction conference with representatives of the PHA/IHA and its architect/engineer, and other interested parties convened by the PHA/IHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract (e.g., Equal Employment Opportunity, Labor Standards). The PHA/IHA will provide the successful bidder with the date, time, and place of the conference.

12. Indian Preference Requirements (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

(a) HUD has determined that the contract awarded under this solicitation is subject to the requirements of section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)). Section 7(b) requires that any contract or subcontract entered into for the benefit of Indians shall require that, to the greatest extent feasible

(1) Preferences and opportunities for training and employment (other than core crew positions; see paragraph (h) below) in connection with the administration of such contracts or subcontracts be given to qualified "Indians." The Act defines "Indians" to mean persons who are members of an Indian tribe and defines "Indian tribe" to mean any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; and,

(2) Preference in the award of contracts or subcontracts in connection with the administration of contracts be given to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452). That Act defines "economic enterprise" to mean any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, except that the Indian ownership must constitute not less than 51 percent of the enterprise; "Indian organization" to mean the governing body of any Indian tribe or entity established or recognized by such governing body; "Indian" to mean any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act; and Indian "tribe" to mean any Indian tribe, band, group, pueblo, or community including Native villages and Native groups (including

corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

(b) (1) The successful Contractor under this solicitation shall comply with the requirements of this provision in awarding all subcontracts under the contract and in providing training and employment opportunities.

(2) A finding by the IHA that the contractor, either (i) awarded a subcontract without using the procedure required by the IHA, (ii) falsely represented that subcontracts would be awarded to Indian enterprises or organizations; or, (iii) failed to comply with the contractor's employment and training preference bid statement shall be grounds for termination of the contract or for the assessment of penalties or other remedies.

(c) If specified elsewhere in this solicitation, the IHA may restrict the solicitation to qualified Indian-owned enterprises and Indian organizations. If two or more (or a greater number as specified elsewhere in the solicitation) qualified Indian-owned enterprises or organizations submit responsive bids, award shall be made to the qualified enterprise or organization with the lowest responsive bid. If fewer than the minimum required number of qualified Indian-owned enterprises or organizations submit responsive bids, the IHA shall reject all bids and readvertise the solicitation in accordance with paragraph (d) below.

(d) If the IHA prefers not to restrict the solicitation as described in paragraph (c) above, or if after having restricted a solicitation an insufficient number of qualified Indian enterprises or organizations submit bids, the IHA may advertise for bids from non-Indian as well as Indian-owned enterprises and Indian organizations. Award shall be made to the qualified Indian enterprise or organization with the lowest responsive bid if that bid is -

(1) Within the maximum HUD-approved budget amount established for the specific project or activity for which bids are being solicited; and

(2) No more than the percentage specified in 24 CFR 905.175(c) higher than the total bid price of the lowest responsive bid from any qualified bidder. If no responsive bid by a qualified Indian-owned economic enterprise or organization is within the stated range of the total bid price of the lowest responsive bid from any qualified enterprise, award shall be made to the bidder with the lowest bid.

(e) Bidders seeking to qualify for preference in contracting or subcontracting shall submit proof of Indian ownership with their bids. Proof of Indian ownership shall include but not be limited to:

(1) Certification by a tribe or other evidence that the bidder is an Indian. The IHA shall accept the certification of a tribe that an individual is a member.

(2) Evidence such as stock ownership, structure, management, control, financing and salary or profit sharing arrangements of the enterprise.

(f) (1) All bidders must submit with their bids a statement describing how they will provide Indian preference in the award of subcontracts. The specific requirements of that statement and the factors to be used by the IHA in determining the statement's adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement shall be rejected as nonresponsive. The IHA may require that comparable statements be provided by subcontractors to the successful Contractor, and may require the Contractor to reject any bid or proposal by a subcontractor that fails to include the statement.

(2) Bidders and prospective subcontractors shall submit a certification (supported by credible evidence) to the IHA in any instance where the bidder or subcontractor believes it is infeasible to provide Indian preference in subcontracting. The acceptance or rejection by the IHA of the certification shall be final. Rejection shall disqualify the bid from further consideration.

(g) All bidders must submit with their bids a statement detailing their employment and training opportunities and their plans to provide preference to Indians in implementing the contract; and the number or percentage of Indians anticipated to be employed and trained. Comparable statements from all proposed subcontractors must be submitted. The criteria to be used by the IHA in determining the statement(s)'s adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement(s), or that includes a statement that does not meet minimum standards required by the IHA shall be rejected as nonresponsive.

(h) Core crew employees. A core crew employee is an individual who is a bona fide employee of the contractor at the time the bid is submitted; or an individual who was not employed by the bidder at the time the bid was submitted, but who is regularly employed by the bidder in a supervisory or other key skilled position when work is available. Bidders shall submit with their bids a list of all core crew employees.

(i) Preference in contracting, subcontracting, employment, and training shall apply not only on-site, on the reservation, or within the IHA's jurisdiction, but also to contracts with firms that operate outside these areas (e.g., employment in modular or manufactured housing construction facilities).

(j) Bidders should contact the IHA to determine if any additional local preference requirements are applicable to this solicitation.

(k) The IHA [] does [] does not [Contracting Officer check applicable box] maintain lists of Indian-owned economic enterprises and Indian organizations by specialty (e.g., plumbing, electrical, foundations), which are available to bidders to assist them in meeting their responsibility to provide preference in connection with the administration of contracts and subcontracts.

General Conditions for Construction Contracts - Public Housing Programs

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 1/31/2017)

Applicability. This form is applicable to any construction/development contract greater than \$100,000.

This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 24 CFR 85.36, and those requirements set forth in Section 3 of the Housing and Urban Development Act of 1968 and its amendment by the Housing and Community Development Act of 1992, implemented by HUD at 24 CFR Part 135. The form is required for construction contracts awarded by Public Housing Agencies (PHAs).

The form is used by Housing Authorities in solicitations to provide necessary contract clauses. If the form were not used, HAs would be unable to enforce their contracts.

Public reporting burden for this collection of information is estimated to average 1.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Responses to the collection of information are required to obtain a benefit or to retain a benefit.

The information requested does not lend itself to confidentiality.

HUD may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB number.

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1. Definitions

- (a) "Architect" means the person or other entity engaged by the PHA to perform architectural, engineering, design, and other services related to the work as provided for in the contract. When a PHA uses an engineer to act in this capacity, the terms "architect" and "engineer" shall be synonymous. The Architect shall serve as a technical representative of the Contracting Officer. The Architect's authority is as set forth elsewhere in this contract.
- (b) "Contract" means the contract entered into between the PHA and the Contractor. It includes the forms of Bid, the Bid Bond, the Performance and Payment Bond or Bonds or other assurance of completion, the Certifications, Representations, and Other Statements of Bidders (form HUD-5370), these General Conditions of the Contract for Construction (form HUD-5370), the applicable wage rate determinations from the U.S. Department of Labor, any special conditions included elsewhere in the contract, the specifications, and drawings. It includes all formal changes to any of those documents by addendum, change order, or other modification.
- (c) "Contracting Officer" means the person delegated the authority by the PHA to enter into, administer, and/or terminate this contract and designated as such in writing to the Contractor. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer also designated in writing. The Contracting Officer shall be deemed the authorized agent of the PHA in all dealings with the Contractor.
- (d) "Contractor" means the person or other entity entering into the contract with the PHA to perform all of the work required under the contract.
- (e) "Drawings" means the drawings enumerated in the schedule of drawings contained in the Specifications and as described in the contract clause entitled Specifications and Drawings for Construction herein.
- (f) "HUD" means the United States of America acting through the Department of Housing and Urban Development including the Secretary, or any other person designated to act on its behalf. HUD has agreed, subject to the provisions of an Annual Contributions Contract (ACC), to provide financial assistance to the PHA, which includes assistance in financing the work to be performed under this contract. As defined elsewhere in these General Conditions or the contract documents, the determination of HUD may be required to authorize changes in the work or for release of funds to the PHA for payment to the Contractor. Notwithstanding HUD's role, nothing in this contract shall be construed to create any contractual relationship between the Contractor and HUD.
- (g) "Project" means the entire project, whether construction or rehabilitation, the work for which is provided for in whole or in part under this contract.
- (h) "PHA" means the Public Housing Agency organized under applicable state laws which is a party to this contract.
- (i) "Specifications" means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.
- (j) "Work" means materials, workmanship, and manufacture and fabrication of components.
- (a) The Contractor shall furnish all necessary labor, materials, tools, equipment, and transportation necessary for performance of the work. The Contractor shall also furnish all necessary water, heat, light, and power not made available to the Contractor by the PHA pursuant to the clause entitled Availability and Use of Utility Services herein.
- (b) The Contractor shall perform on the site, and with its own organization, work equivalent to at least [] (12 percent unless otherwise indicated) of the total amount of work to be performed under the order. This percentage may be reduced by a supplemental agreement to this order if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the PHA.
- (c) At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.
- (d) The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor shall hold and save the PHA, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.
- (e) The Contractor shall lay out the work from base lines and bench marks indicated on the drawings and be responsible for all lines, levels, and measurements of all work executed under the contract. The Contractor shall verify the figures before laying out the work and will be held responsible for any error resulting from its failure to do so.
- (f) The Contractor shall confine all operations (including storage of materials) on PHA premises to areas authorized or approved by the Contracting Officer.
- (g) The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. After completing the work and before final inspection, the Contractor shall (1) remove from the premises all scaffolding, equipment, tools, and materials (including rejected materials) that are not the property of the PHA and all rubbish caused by its work; (2) leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer; (3) perform all specified tests; and, (4) deliver the installation in complete and operating condition.
- (h) The Contractor's responsibility will terminate when all work has been completed, the final inspection made, and the work accepted by the Contracting Officer. The Contractor will then be released from further obligation except as required by the warranties specified elsewhere in the contract.

3. Architect's Duties, Responsibilities, and Authority

- (a) The Architect for this contract, and any successor, shall be designated in writing by the Contracting Officer.

2. Contractor's Responsibility for Work

Previous editions are obsolete
Replaces form HUD-5370-A

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form HUD-5370 (1/2014)

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- (b) The Architect shall serve as the Contracting Officer's technical representative with respect to architectural, engineering, and design matters related to the work performed under the contract. The Architect may provide direction on contract performance. Such direction shall be within the scope of the contract and may not be of a nature which: (1) institutes additional work outside the scope of the contract; (2) constitutes a change as defined in the Changes clause herein; (3) causes an increase or decrease in the cost of the contract; (4) alters the Construction Progress Schedule; or (5) changes any of the other express terms or conditions of the contract.
- (c) The Architect's duties and responsibilities may include but shall not be limited to:
- (1) Making periodic visits to the work site, and on the basis of his/her on-site inspections, issuing written reports to the PHA which shall include all observed deficiencies. The Architect shall file a copy of the report with the Contractor's designated representative at the site;
 - (2) Making modifications in drawings and technical specifications and assisting the Contracting Officer in the preparation of change orders and other contract modifications for issuance by the Contracting Officer;
 - (3) Reviewing and making recommendations with respect to - (i) the Contractor's construction progress schedules; (ii) the Contractor's shop and detailed drawings; (iii) the machinery, mechanical and other equipment and materials or other articles proposed for use by the Contractor; and, (iv) the Contractor's price breakdown and progress payment estimates; and
 - (4) Assisting in inspections, signing Certificates of Completion, and making recommendations with respect to acceptance of work completed under the contract.

4. Other Contracts

The PHA may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with PHA employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by PHA employees

Construction Requirements

5. Pre-construction Conference and Notice to Proceed

- (a) Within ten calendar days of contract execution, and prior to the commencement of work, the Contractor shall attend a preconstruction conference with representatives of the PHA, its Architect, and other interested parties convened by the PHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract. The PHA will provide the Contractor with the date, time, and place of the conference.
- (b) The contractor shall begin work upon receipt of a written Notice to Proceed from the Contracting Officer or designee. The Contractor shall not begin work prior to receiving such notice.

6. Construction Progress Schedule

- (a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring labor, materials, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments or take other remedies under the contract until the Contractor submits the required schedule.
- (b) The Contractor shall enter the actual progress on the chart as required by the Contracting Officer, and immediately deliver three copies of the annotated schedule to the Contracting Officer. If the Contracting Officer determines, upon the basis of inspection conducted pursuant to the clause entitled Inspection and Acceptance of Construction, herein that the Contractor is not meeting the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the PHA. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
- (c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the Default clause of this contract.

7. Site Investigation and Conditions Affecting the Work

- (a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to, (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is

- reasonably ascertainable from an inspection of the site, including all exploratory work done by the PHA, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the PHA.
- (b) The PHA assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the PHA. Nor does the PHA assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

8. Differing Site Conditions

- (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site(s), of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
- (b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. Work shall not proceed at the affected site, except at the Contractor's risk, until the Contracting Officer has provided written instructions to the Contractor. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, the Contractor shall file a claim in writing to the PHA within ten days after receipt of such instructions and, in any event, before proceeding with the work. An equitable adjustment in the contract price, the delivery schedule, or both shall be made under this clause and the contract modified in writing accordingly.
- (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.
- (d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.
- promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.
- (b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.
- (c) Where "shown" "indicated", "detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place" that is "furnished and installed".
- (d) "Shop drawings" means drawings, submitted to the PHA by the Contractor, subcontractor, or any lower tier subcontractor, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials of equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The PHA may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.
- (e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with other contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the PHA's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.
- (f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Architect approves any such variation and the Contracting Officer concurs, the Contracting Officer shall issue an appropriate modification to the contract, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.
- (g) It shall be the responsibility of the Contractor to make timely requests of the PHA for such large scale and full size drawings, color schemes, and other additional information, not already in his possession, which shall be

9. Specifications and Drawings for Construction

- (a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be

required in the planning and production of the work. Such requests may be submitted as the need arises, but each such request shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay.

- (h) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the PHA and one set will be returned to the Contractor. As required by the Contracting Officer, the Contractor, upon completing the work under this contract, shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the work is completed and accepted.
- (i) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all shop drawings prepared by subcontractors are submitted to the Contracting Officer.

10. As-Built Drawings

- (a) "As-built drawings," as used in this clause, means drawings submitted by the Contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract. "As-built drawings" shall be synonymous with "Record drawings."
- (b) As required by the Contracting Officer, the Contractor shall provide the Contracting Officer accurate information to be used in the preparation of permanent as-built drawings. For this purpose, the Contractor shall record on one set of contract drawings all changes from the installations originally indicated, and record final locations of underground lines by depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks.
- (c) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all as-built drawings prepared by subcontractors are submitted to the Contracting Officer.

11. Material and Workmanship

- (a) All equipment, material, and articles furnished under this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the contract to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of, and as approved by the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.
- (b) Approval of equipment and materials.
 - (1) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the

machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

- (2) When required by the specifications or the Contracting Officer, the Contractor shall submit appropriately marked samples (and certificates related to them) for approval at the Contractor's expense, with all shipping charges prepaid. The Contractor shall label, or otherwise properly mark on the container, the material or product represented, its place of origin, the name of the producer, the Contractor's name, and the identification of the construction project for which the material or product is intended to be used.
- (3) Certificates shall be submitted in triplicate, describing each sample submitted for approval and certifying that the material, equipment or accessory complies with contract requirements. The certificates shall include the name and brand of the product, name of manufacturer, and the location where produced.
- (4) Approval of a sample shall not constitute a waiver of the PHA right to demand full compliance with contract requirements. Materials, equipment and accessories may be rejected for cause even though samples have been approved.
- (5) Wherever materials are required to comply with recognized standards or specifications, such specifications shall be accepted as establishing the technical qualities and testing methods, but shall not govern the number of tests required to be made nor modify other contract requirements. The Contracting Officer may require laboratory test reports on items submitted for approval or may approve materials on the basis of data submitted in certificates with samples. Check tests will be made on materials delivered for use only as frequently as the Contracting Officer determines necessary to insure compliance of materials with the specifications. The Contractor will assume all costs of retesting materials which fail to meet contract requirements and/or testing materials offered in substitution for those found deficient.
- (6) After approval, samples will be kept in the Project office until completion of work. They may be built into the work after a substantial quantity of the materials they represent has been built in and accepted.
- (c) Requirements concerning lead-based paint. The Contractor shall comply with the requirements concerning lead-based paint contained in the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846) as implemented by 24 CFR Part 35.

12. Permits and Codes

- (a) The Contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules and regulations. Notwithstanding the requirement of the Contractor to comply with the drawings and specifications in the contract, all work installed shall comply with all applicable codes and regulations as amended by any

waivers. Before installing the work, the Contractor shall examine the drawings and the specifications for compliance with applicable codes and regulations bearing on the work and shall immediately report any discrepancy it may discover to the Contracting Officer. Where the requirements of the drawings and specifications fail to comply with the applicable code or regulation, the Contracting Officer shall modify the contract by change order pursuant to the clause entitled Changes herein to conform to the code or regulation.

- (b) The Contractor shall secure and pay for all permits, fees, and licenses necessary for the proper execution and completion of the work. Where the PHA can arrange for the issuance of all or part of these permits, fees and licenses, without cost to the Contractor, the contract amount shall be reduced accordingly.

13. Health, Safety, and Accident Prevention

- (a) In performing this contract, the Contractor shall:
- (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;
 - (2) Protect the lives, health, and safety of other persons;
 - (3) Prevent damage to property, materials, supplies, and equipment; and,
 - (4) Avoid work interruptions.
- (b) For these purposes, the Contractor shall:
- (1) Comply with regulations and standards issued by the Secretary of Labor at 29 CFR Part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96), 40 U.S.C. 3701 et seq.; and
 - (2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.
- (c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904.
- (d) The Contracting Officer shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.
- (e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as the PHA, the Secretary of Housing and Urban Development, or the Secretary of Labor shall direct as a means of enforcing such provisions.

14. Temporary Heating

The Contractor shall provide and pay for temporary heating, covering, and enclosures necessary to properly protect all work and materials against damage by dampness and cold, to dry out the work, and to facilitate the completion of the work. Any permanent heating equipment used shall be turned over to the PHA in the condition and at the time required by the specifications.

15. Availability and Use of Utility Services

- (a) The PHA shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the PHA or, where the utility is produced by the PHA, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.
- (b) The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the PHA, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

16. Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements

- (a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed under this contract, and which do not unreasonably interfere with the work required under this contract.
- (b) The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this contract, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.
- (c) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. Prior to disturbing the ground at the construction site, the Contractor shall ensure that all underground utility lines are clearly marked.
- (d) The Contractor shall shore up, brace, underpin, secure, and protect as necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be affected by the excavations or other operations connected with the construction of the project.
- (e) Any equipment temporarily removed as a result of work under this contract shall be protected, cleaned, and replaced in the same condition as at the time of award of this contract.

- (f) New work which connects to existing work shall correspond in all respects with that to which it connects and/or be similar to existing work unless otherwise required by the specifications.
- (g) No structural members shall be altered or in any way weakened without the written authorization of the Contracting Officer, unless such work is clearly specified in the plans or specifications.
- (h) If the removal of the existing work exposes discolored or unfinished surfaces, or work out of alignment, such surfaces shall be refinished, or the material replaced as necessary to make the continuous work uniform and harmonious. This, however, shall not be construed to require the refinishing or reconstruction of dissimilar finishes previously exposed, or finished surfaces in good condition, but in different planes or on different levels when brought together by the removal of intervening work, unless such refinishing or reconstruction is specified in the plans or specifications.
- (i) The Contractor shall give all required notices to any adjoining or adjacent property owner or other party before the commencement of any work.
- (j) The Contractor shall indemnify and save harmless the PHA from any damages on account of settlement or the loss of lateral support of adjoining property, any damages from changes in topography affecting drainage, and from all loss or expense and all damages for which the PHA may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
- (k) The Contractor shall repair any damage to vegetation, structures, equipment, utilities, or improvements, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

17. Temporary Buildings and Transportation of Materials

- (a) Temporary buildings (e.g., storage sheds, shops, offices, sanitary facilities) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the PHA. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.
- (b) The Contractor shall, as directed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

18. Clean Air and Water

The contractor shall comply with the Clean Air Act, as amended, 42 USC 7401 et seq., the Federal Water Pollution Control Water Act, as amended, 33 U.S.C. 1251 et seq., and standards issued pursuant thereto in the facilities in which this contract is to be performed.

19. Energy Efficiency

The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under the contract is performed.

20. Inspection and Acceptance of Construction

- (a) Definitions. As used in this clause -
 - (1) "Acceptance" means the act of an authorized representative of the PHA by which the PHA approves and assumes ownership of the work performed under this contract. Acceptance may be partial or complete.
 - (2) "Inspection" means examining and testing the work performed under the contract (including, when appropriate, raw materials, equipment, components, and intermediate assemblies) to determine whether it conforms to contract requirements.
 - (3) "Testing" means that element of inspection that determines the properties or elements, including functional operation of materials, equipment, or their components, by the application of established scientific principles and procedures.
- (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. All work is subject to PHA inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- (c) PHA inspections and tests are for the sole benefit of the PHA and do not: (1) relieve the Contractor of responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for loss or damage of the material before acceptance; (3) constitute or imply acceptance; or, (4) affect the continuing rights of the PHA after acceptance of the completed work under paragraph (j) below.
- (d) The presence or absence of the PHA inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the Contracting Officer's written authorization. All instructions and approvals with respect to the work shall be given to the Contractor by the Contracting Officer.
- (e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The PHA may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The PHA shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

- (f) The PHA may conduct routine inspections of the construction site on a daily basis.
- (g) The Contractor shall, without charge, replace or correct work found by the PHA not to conform to contract requirements, unless the PHA decides that it is in its interest to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
- (h) If the Contractor does not promptly replace or correct rejected work, the PHA may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor, or (2) terminate for default the Contractor's right to proceed.
- (i) If any work requiring inspection is covered up without approval of the PHA, it must, if requested by the Contracting Officer, be uncovered at the expense of the Contractor. If at any time before final acceptance of the entire work, the PHA considers it necessary or advisable, to examine work already completed by removing or tearing it out, the Contractor, shall on request, promptly furnish all necessary facilities, labor, and material. If such work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray all the expenses of the examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the Contracting Officer shall make an equitable adjustment to cover the cost of the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
- (j) The Contractor shall notify the Contracting Officer, in writing, as to the date when in its opinion all or a designated portion of the work will be substantially completed and ready for inspection. If the Architect determines that the state of preparedness is as represented, the PHA will promptly arrange for the inspection. Unless otherwise specified in the contract, the PHA shall accept, as soon as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines and designates can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the PHA's right under any warranty or guarantee.

21. Use and Possession Prior to Completion

- (a) The PHA shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the PHA intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The PHA's possession or use shall not be deemed an acceptance of any work under the contract.
- (b) While the PHA has such possession or use, the Contractor shall be relieved of the responsibility for (1) the loss of or damage to the work resulting from the PHA's possession or use, notwithstanding the terms of the clause entitled Permits and Codes herein; (2) all maintenance costs on the areas occupied; and, (3) furnishing heat, light, power, and water used in the areas

occupied without proper remuneration therefore. If prior possession or use by the PHA delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

22. Warranty of Title

The Contractor warrants good title to all materials, supplies, and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereto.

23. Warranty of Construction

- (a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of _____ (one year unless otherwise indicated) from the date of final acceptance of the work. If the PHA takes possession of any part of the work before final acceptance, this warranty shall continue for a period of (one year unless otherwise indicated) from the date that the PHA takes possession.
- (b) The Contractor shall remedy, at the Contractor's expense, any failure to conform, or any defect. In addition, the Contractor shall remedy, at the Contractor's expense, any damage to PHA-owned or controlled real or personal property when the damage is the result of—
 - (1) The Contractor's failure to conform to contract requirements; or
 - (2) Any defects of equipment, material, workmanship or design furnished by the Contractor.
- (c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for (one year unless otherwise indicated) from the date of repair or replacement.
- (d) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect or damage.
- (e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the PHA shall have the right to replace, repair or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- (f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:
 - (1) Obtain all warranties that would be given in normal commercial practice;
 - (2) Require all warranties to be executed in writing, for the benefit of the PHA; and,
 - (3) Enforce all warranties for the benefit of the PHA.
- (g) In the event the Contractor's warranty under paragraph (a) of this clause has expired, the PHA may bring suit at its own expense to enforce a subcontractor's, manufacturer's or supplier's warranty.

- (h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defect of material or design furnished by the PHA nor for the repair of any damage that results from any defect in PHA furnished material or design.
- (i) Notwithstanding any provisions herein to the contrary, the establishment of the time periods in paragraphs (a) and (c) above relate only to the specific obligation of the Contractor to correct the work, and have no relationship to the time within which its obligation to comply with the contract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to its obligation other than specifically to correct the work.
- (j) This warranty shall not limit the PHA's rights under the Inspection and Acceptance of Construction clause of this contract with respect to latent defects, gross mistakes or fraud.

24. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

Administrative Requirements

25. Contract Period

The Contractor shall complete all work required on this contract within _____ calendar days of the effective date of the contract, or within the time schedule established in the notice to proceed issued by the Contracting Officer.

26. Order of Provisions

In the event of a conflict between these General Conditions and the Specifications, the General Conditions shall prevail. In the event of a conflict between the contract and any applicable state or local law or regulation, the state or local law or regulation shall prevail; provided that such state or local law or regulation does not conflict with, or is less restrictive than applicable federal law, regulation, or Executive Order. In the event of such a conflict, applicable federal law, regulation, and Executive Order shall prevail.

27. Payments

- (a) The PHA shall pay the Contractor the price as provided in this contract.
- (b) The PHA shall make progress payments approximately every 30 days as the work proceeds, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. The PHA may, subject to written determination and approval of the Contracting Officer, make more frequent payments to contractors which are qualified small businesses.
- (c) Before the first progress payment under this contract, the Contractor shall furnish, in such detail as requested by the Contracting Officer, a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a

basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be acceptable to HUD. If the contract covers more than one project, the Contractor shall furnish a separate breakdown for each. The values and quantities employed in making up this breakdown are for determining the amount of progress payments and shall not be construed as a basis for additions to or deductions from the contract price. The Contractor shall prorate its overhead and profit over the construction period of the contract.

- (d) The Contractor shall submit, on forms provided by the PHA, periodic estimates showing the value of the work performed during each period based upon the approved breakdown of the contract price. Such estimates shall be submitted not later than _____ days in advance of the date set for payment and are subject to correction and revision as required. The estimates must be approved by the Contracting Officer with the concurrence of the Architect prior to payment. If the contract covers more than one project, the Contractor shall furnish a separate progress payment estimate for each.
- (e) Along with each request for progress payments and the required estimates, the Contractor shall furnish the following certification, or payment shall not be made: I hereby certify, to the best of my knowledge and belief, that
 - (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
 - (2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements; and,
 - (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

Name: _____

Title: _____

Date: _____

- (f) Except as otherwise provided in State law, the PHA shall retain ten (10) percent of the amount of progress payments until completion and acceptance of all work under the contract; except, that if upon completion of 50 percent of the work, the Contracting Officer, after consulting with the Architect, determines that the Contractor's performance and progress are satisfactory, the PHA may make the remaining payments in full for the work subsequently completed. If the Contracting Officer subsequently determines that the Contractor's performance and progress are unsatisfactory, the PHA shall reinstate the ten (10) percent (or other percentage as provided in State law) retainage until such time as the Contracting Officer determines that performance and progress are satisfactory.
- (g) The Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration when computing progress payments.

Material delivered to the Contractor at locations other than the site may also be taken into consideration if the Contractor furnishes satisfactory evidence that (1) it has acquired title to such material; (2) the material is properly stored in a bonded warehouse, storage yard, or similar suitable place as may be approved by the Contracting Officer; (3) the material is insured to cover its full value; and (4) the material will be used to perform this contract. Before any progress payment which includes delivered material is made, the Contractor shall furnish such documentation as the Contracting Officer may require to assure the protection of the PHA's interest in such materials. The Contractor shall remain responsible for such stored material notwithstanding the transfer of title to the PHA.

- (h) All material and work covered by progress payments made shall, at the time of payment become the sole property of the PHA, but this shall not be construed as (1) relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or, (2) waiving the right of the PHA to require the fulfillment of all of the terms of the contract. In the event the work of the Contractor has been damaged by other contractors or persons other than employees of the PHA in the course of their employment, the Contractor shall restore such damaged work without cost to the PHA and to seek redress for its damage only from those who directly caused it.
- (i) The PHA shall make the final payment due the Contractor under this contract after (1) completion and final acceptance of all work; and (2) presentation of release of all claims against the PHA arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. Each such exception shall embrace no more than one claim, the basis and scope of which shall be clearly defined. The amounts for such excepted claims shall not be included in the request for final payment. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned.
- (j) Prior to making any payment, the Contracting Officer may require the Contractor to furnish receipts or other evidence of payment from all persons performing work and supplying material to the Contractor, if the Contracting Officer determines such evidence is necessary to substantiate claimed costs.
- (k) The PHA shall not; (1) determine or adjust any claims for payment or disputes arising there under between the Contractor and its subcontractors or material suppliers; or, (2) withhold any moneys for the protection of the subcontractors or material suppliers. The failure or refusal of the PHA to withhold moneys from the Contractor shall in no wise impair the obligations of any surety or sureties under any bonds furnished under this contract.

28. Contract Modifications

- (a) Only the Contracting Officer has authority to modify any term or condition of this contract. Any contract modification shall be authorized in writing.
- (b) The Contracting Officer may modify the contract unilaterally (1) pursuant to a specific authorization stated in a contract clause (e.g., Changes); or (2) for administrative matters which do not change the rights or

responsibilities of the parties (e.g., change in the PHA address). All other contract modifications shall be in the form of supplemental agreements signed by the Contractor and the Contracting Officer.

- (c) When a proposed modification requires the approval of HUD prior to its issuance (e.g., a change order that exceeds the PHA's approved threshold), such modification shall not be effective until the required approval is received by the PHA.

29. Changes

- (a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract including changes:
 - (1) In the specifications (including drawings and designs);
 - (2) In the method or manner of performance of the work;
 - (3) PHA-furnished facilities, equipment, materials, services, or site; or,
 - (4) Directing the acceleration in the performance of the work.
- (b) Any other written order or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances and source of the order and (2) that the Contractor regards the order as a change order.
- (c) Except as provided in this clause, no order, statement or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.
- (d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for a adjustment based on defective specifications, no proposal for any change under paragraph (b) above shall be allowed for any costs incurred more than 20 days (5 days for oral orders) before the Contractor gives written notice as required. In the case of defective specifications for which the PHA is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.
- (e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause, or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting a written statement describing the general nature and the amount of the proposal. If the facts justify it, the Contracting Officer may extend the period for submission. The proposal may be included in the notice required under paragraph (b) above. No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.
- (f) The Contractor's written proposal for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following details:

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- (1) Direct Costs. Materials (list individual items, the quantity and unit cost of each, and the aggregate cost); Transportation and delivery costs associated with materials; Labor breakdowns by hours or unit costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs when size of change warrants revision.
- (2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.
- (3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change. The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.
- (g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.
- (h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.
- (i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.
- (j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

30. Suspension of Work

- (a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the PHA.
- (b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified (or within a reasonable time if not specified) in this contract an adjustment shall be made for any increase in the cost of performance of the contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have

been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or for which any equitable adjustment is provided for or excluded under any other provision of this contract.

- (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and, (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

31. Disputes

- (a) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the contract, unlike a claim relating to the contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
- (b) Except for disputes arising under the clauses entitled Labor Standards - Davis Bacon and Related Acts, herein, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.
- (c) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.
- (d) The Contracting Officer shall, within 60 (unless otherwise indicated) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (e) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within (30 unless otherwise indicated) days after receipt of the Contracting Officer's decision.
- (f) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

32. Default

- (a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to

proceed with the work (or separable part of the work) that has been delayed. In this event, the PHA may take over the work and complete it, by contract or otherwise, and may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the PHA resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

- (b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if—
- (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God, or of the public enemy, (ii) acts of the PHA or other governmental entity in either its sovereign or contractual capacity, (iii) acts of another contractor in the performance of a contract with the PHA, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and
- (2) The Contractor, within days (10 days unless otherwise indicated) from the beginning of such delay (unless extended by the Contracting Officer) notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the Disputes clause of this contract.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been for convenience of the PHA.

33. Liquidated Damages

- (a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, as specified in the clause entitled Default of this contract, the Contractor shall pay to the PHA as liquidated damages, the sum of \$ _____ [Contracting Officer insert amount] for each day of delay. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another clause in this contract, liquidated damages shall not be due the PHA. The Contractor remains liable for damages caused other than by delay.
- (b) If the PHA terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final

completion of the work together with any increased costs occasioned the PHA in completing the work.

- (c) If the PHA does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

34. Termination for Convenience

- (a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.
- (b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.
- (c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.
- (d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

35. Assignment of Contract

The Contractor shall not assign or transfer any interest in this contract; except that claims for monies due or to become due from the PHA under the contract may be assigned to a bank, trust company, or other financial institution. Such assignments of claims shall only be made with the written concurrence of the Contracting Officer. If the Contractor is a partnership, this contract shall inure to the benefit of the surviving or remaining member(s) of such partnership as approved by the Contracting Officer.

36. Insurance

- (a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:
- (1) Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.
- (2) Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$ _____ [Contracting Officer insert amount]

- per occurrence to protect the Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.
- (3) Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$ _____ [Contracting Officer insert amount] per occurrence.
- (b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.
- (c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

37. Subcontracts

- (a) Definitions. As used in this contract -
- (1) "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime contract or a subcontract.

- (2) "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another subcontractor.
- (b) The Contractor shall not enter into any subcontract with any subcontractor who has been temporarily denied participation in a HUD program or who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or of the state in which the work under this contract is to be performed.
- (c) The Contractor shall be as fully responsible for the acts or omissions of its subcontractors, and of persons either directly or indirectly employed by them as for the acts or omissions of persons directly employed by the Contractor.
- (d) The Contractor shall insert appropriate clauses in all subcontracts to bind subcontractors to the terms and conditions of this contract insofar as they are applicable to the work of subcontractors.
- (e) Nothing contained in this contract shall create any contractual relationship between any subcontractor and the PHA or between the subcontractor and HUD.

38. Subcontracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms

The Contractor shall take the following steps to ensure that, whenever possible, subcontracts are awarded to small business firms, minority firms, women's business enterprises, and labor surplus area firms:

- (a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (b) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;
- (c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;
- (d) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises; and
- (e) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies.

39. Equal Employment Opportunity

During the performance of this contract, the Contractor agrees as follows:

- (a) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, or handicap.
- (b) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, or handicap. Such action shall include, but not be limited to, (1) employment, (2) upgrading, (3) demotion, (4) transfer, (5) recruitment or recruitment advertising, (6) layoff or termination, (7) rates of pay or other forms of compensation, and (8) selection for training, including apprenticeship.

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- (c) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.
 - (d) The Contractor shall, 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, color, religion, sex, national origin, or handicap.
 - (e) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (f) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.
 - (g) The Contractor shall furnish all information and reports required by Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto. The Contractor shall permit access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (h) In the event of a determination that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts, or Federally assisted construction contracts under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.
 - (i) The Contractor shall include the terms and conditions of this clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as the Secretary of Housing and Urban Development or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.
 - (j) Compliance with the requirements of this clause shall be to the maximum extent consistent with, but not in derogation of, compliance with section 7(b) of the Indian Self-Determination and Education Assistance Act and the Indian Preference clause of this contract.

40. Employment, Training, and Contracting Opportunities for Low-Income Persons, Section 3 of the Housing and Urban Development Act of 1968.

- (a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- (c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each, and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- (d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.
- (e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.
- (f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- (g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

41. Interest of Members of Congress

No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

42. Interest of Members, Officers, or Employees and Former Members, Officers, or Employees

No member, officer, or employee of the PHA, no member of the governing body of the locality in which the project is situated, no member of the governing body of the locality in which the PHA was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this contract or the proceeds thereof.

43. Limitations on Payments made to Influence Certain Federal Financial Transactions

- (a) The Contractor agrees to comply with Section 1352 of Title 31, United States Code which prohibits the use of Federal appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) The Contractor further agrees to comply with the requirement of the Act to furnish a disclosure (OMB Standard Form LLL, Disclosure of Lobbying Activities) if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

44. Royalties and Patents

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and shall save the PHA harmless from loss on account thereof; except that the PHA shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified and the Contractor has no reason to believe that the specified design, process, or product is an infringement. If, however, the Contractor has reason to believe that any design, process or product specified is an infringement of a patent, the Contractor shall promptly notify the Contracting Officer. Failure to give such notice shall make the Contractor responsible for resultant loss.

45. Examination and Retention of Contractor's Records

- (a) The PHA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until 3 years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.
- (b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders not exceeding \$10,000.
- (c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the Disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the PHA, HUD, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

46. Labor Standards - Davis-Bacon and Related Acts

If the total amount of this contract exceeds \$2,000, the Federal labor standards set forth in the clause below shall apply to the development or construction work to be performed under the contract.

- (a) Minimum Wages.
 - (1) All laborers and mechanics employed under this contract in the development or construction of the project(s) involved will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the regular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall

be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (2) (i) Any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met: (A) The work to be performed by the classification requested is not performed by a classification in the wage determination; and (B) The classification is utilized in the area by the construction industry; and (C) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employee Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (a)(2)(ii) or (iii) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in classification.
- (3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the

amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- (b) Withholding of funds. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.
- (c) Payrolls and basic records.
- (1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working in the construction or development of the project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)
- (ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c) (1) of this clause and that such information is correct and complete;
- (B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3; and
- (C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.
- (iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.
- (3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to

make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

- (d) (1) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship and Training, Employer and Labor Services (OATELS), or with a State Apprenticeship Agency recognized by OATELS, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (2) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under

- the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (3) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (e) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.
- (f) Contract termination; debarment. A breach of this contract clause may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.
- (g) Compliance with Davis-Bacon and related Act requirements. All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (h) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this clause shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the PHA, HUD, the U.S. Department of Labor, or the employees or their representatives.
- (i) Certification of eligibility.
- (1) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a United States Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.
- (j) Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.
- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in subparagraph (j)(1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic (including watchmen and guards) employed in violation of the provisions set forth in subparagraph (j)(1) of this clause, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in subparagraph (j)(1) of this clause.
- (3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in subparagraph (j)(2) of this clause.
- (k) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

47. Non-Federal Prevailing Wage Rates

- (a) Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State or tribal law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds:
 - (1) The applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;
- (b) An applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or
- (c) An applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

48. Procurement of Recovered Materials.

- (a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.
- (b) Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of \$10,000 of the item both under and outside that contract.

SECTION II

TECHNICAL SPECIFICATIONS AND DRAWINGS

CREATED BY:

Aparri Engineering LLC
131 Main Street, Suite 180
Hackensack, NJ 07601
(201) 343-7747

Please direct all questions pertaining to this section to:

lsaparri@aparri.net

AND

LS@WoodbridgeHousingAuthority.org

The following technical specifications and drawings include:

BID FORM – 4 PAGES

TECHNICAL SPECIFICATIONS – 140 PAGES

DRAWINGS – 14 PAGES INCLUDING COVER

BID BREAKDOWN
REPLACEMENT OF EXISTING WINDOWS AND DOORS
AT SAMUEL J. KRONMAN BUILDING & PARK TERRACE APARTMENTS
HIGHLAND PARK, NEW JERSEY

I have received the Contract Documents entitled “Replacement of Existing Windows and Doors (Window Replacement)” issued by the Borough of hi, New Jersey. I have examined all parts of the Documents, including the Technical Specifications, Drawings, federal, state and local requirements, and all Addenda. I have visited the site and have clear understanding of the Scope of Work for which I submit the following bid.

In submitting this bid, I agree:

1. To hold my bid open for **sixty (60)** days after bid opening.
2. To enter into and execute a contract, if awarded on the basis of this bid, and to furnish insurance and other requirements as stated and required in the Contract Documents.
3. To accomplish the work in accordance with the requirements of the Contract Documents.
4. To complete the work on time and to the quality required in the Contract Documents.

I will furnish all labor, materials, equipment, tools, and other services required to construct this project for the base bid lump sum price of:

_____ Words _____ dollars
 (\$ _____)
 Figures

The above lump sum, which includes all costs, is broken down as follows:

<i>Item No.</i>	<i>Description of Cost Item</i>	<i>Costs</i>
	Division 1 – General Requirements	
1	Bonds and Insurances	\$ _____
2	General Conditions/General Requirements: (Refer to Division 1 – General Requirements of the Technical Specifications and HUD General Conditions of the Contract for Construction). Include other Items not itemized below.	\$ _____
	Division 2 – Existing Condition	
3	Project Survey and Measurements/Photographs	\$ _____
4	Demolish/Dispose of Existing Doors in Samuel J. Kronman Building (80 Each)	Include Cost in Division 8, Each Type
5	Demolish/Dispose of Existing Windows in Samuel J. Kronman Building (132 windows in 128 existing rough opening)	Include Cost in Division 8, Each Type

BID BREAKDOWN
REPLACEMENT OF EXISTING WINDOWS AND DOORS
AT SAMUEL J. KRONMAN BUILDING & PARK TERRACE APARTMENTS
HIGHLAND PARK, NEW JERSEY

<i>Item No.</i>	<i>Description of Cost Item</i>	<i>Costs</i>
6	Demolish/Dispose of Existing Windows in Park Terrace Apartments (196 windows in 118 existing rough opening)	Include Cost in Division 8, Each Type
	Division 7 – Thermal and Moisture Protection	
7	Window sealants, caulking, adhesive sheet flashing and all other necessary thermal and moisture protection as per drawings and specification.	Include Cost in Division 8, Each Type
	Division 8 - Openings	
8	Preparation of Window Openings, including removal of drapes, curtains, etc. Include moving of furniture as needed (LS)	Include Cost in Division 8, Each Type
9	Type DS1: 80 Aluminum Sliding Double Sliding Doors in 80 Rough Opening. Door Size: 5'-11" Width by 6'-8" Height	\$_____
10	Type WS1: 92 Aluminum Sliding Windows in 92 Rough Openings. Window Size: 4'-11" Width by 5'-3" Height	\$_____
11	Type WS2: 11 Aluminum Sliding Windows in 11 Rough Openings. Window Size: 3'-0" Width by 2'-10" Height	\$_____
12	Type WS3: 4 Fixed and 4 Project-Out Aluminum Windows in 4 Rough Openings. Window Size: 4'-0" Width by 4'-0" Height	\$_____
13	Type WS4: 11 Aluminum Sliding Windows in 11 Rough Openings. Window Size: 5'-11 Width by 4'-10" Height	\$_____
14	Type WP1: 4 Aluminum Double Hung Windows in 4 Rough Openings. Window Size: 2'-0" Width by 3'-2" Height	\$_____
15	Type WP2: 12 Aluminum Double Hung Windows in 12 Rough Openings. Window Size: 2'-8" Width by 4'-2" Height	\$_____
16	Type WP3: 2 Aluminum Double Hung Windows in 2 Rough Openings. Window Size: 3'-8" Width by 4'-2" Height	\$_____
17	Type WP3E: 2 Aluminum Casement (Egress) Windows in 2 Rough Openings. Window Size: 3'-8" Width by 4'-2" Height	\$_____
18	Type WP4: 24 Aluminum Double Hung Windows in 12 Rough Openings. Window Size: (2) 2'-8" Width by 4'-1/2" Height	\$_____
19	Type WP4E: 18 Aluminum Double Hung Windows and 18 Aluminum Casement (Egress) Windows in 18 Rough Openings. Window Size: (2) 2'-8" Width by 4'-1/2" Height	\$_____
20	Type WP5: 52 Aluminum Double Hung Windows in 26 Rough Openings. Window Size: (2) 3'-0" Width by 4'-1/2" Height	\$_____
21	Type WP5E: 14 Aluminum Double Hung Windows and 14 Aluminum Casement (Egress) Windows in 14 Rough Openings. Window Size: (2) 3'-0" Width by 4'-1/2" Height	\$_____
22	Type WP6: 8 Aluminum Double Hung Windows in 4 Rough Openings. Window Size: (2) 3'-4" Width by 4'-1/2" Height	\$_____
23	Type WP7E: 8 Aluminum Casement (Egress) Windows in 4 Rough Openings. Window Size: (2) 3'-4" Width by 4'-1/2" Height	\$_____
	Division 9 - Finishes	

**BID BREAKDOWN
REPLACEMENT OF EXISTING WINDOWS AND DOORS
AT SAMUEL J. KRONMAN BUILDING & PARK TERRACE APARTMENTS
HIGHLAND PARK, NEW JERSEY**

<i>Item No.</i>	<i>Description of Cost Item</i>	<i>Costs</i>
24	Scrape/Painting, All Lintels Prior to Window Installation	Include Cost in Division 8, Each Type
25	Patch-up / Repair damaged surfaces Paint walls adjacent to windows	Include Cost in Division 8, Each Type
	COSTS OF ADDENDA, IF ANY. (Show Addendum No.; Separate costs for each Addendum; Itemized work items; provide brief description of work	
	TOTAL BASE BID	\$_____

The Base Bid Cost shall include all costs necessary to complete all the required work described in the Contract Documents and issued addenda. The above costs shall include all mark-up, overhead & profit, benefits, etc. No additional costs shall be incurred by the Authority. **The quantities shown above are for the benefit of the Bidder/Contractor.** Bidder/Contractor shall verify the quantities for accuracy.

B. Unit Costs: Each Bidder shall submit the following with his/her bid:

1. Cost for the following items. These unit costs will be used for adding or subtracting work from the Contract the types of window indicated. Cost per window shall be completed and shall include demolition, thermal and moisture protection, material, labor, equipment, scrape/painting lintels, patch-up the surfaces and adjacent wall and other incidental work to complete the work.
 - a. Type DS1 Replacement: \$_____/EA
 - b. Type WS1 Replacement: \$_____/EA
 - c. Type WS2 Replacement: \$_____/EA
 - d. Type WS3 Replacement: \$_____/EA
 - e. Type WS4 Replacement: \$_____/EA
 - f. Type WP1 Replacement: \$_____/EA
 - g. Type WP2 Replacement: \$_____/EA
 - h. Type WP3 Replacement: \$_____/EA
 - i. Type WP3E Replacement: \$_____/EA

**BID BREAKDOWN
REPLACEMENT OF EXISTING WINDOWS AND DOORS
AT SAMUEL J. KRONMAN BUILDING & PARK TERRACE APARTMENTS
HIGHLAND PARK, NEW JERSEY**

- j. Type WP4 Replacement: \$_____/EA
- k. Type WP4E Replacement: \$_____/EA
- l. Type WP5 Replacement: \$_____/EA
- m. Type WP5E Replacement: \$_____/EA
- n. Type WP6 Replacement: \$_____/EA
- o. Type WP7E Replacement: \$_____/EA

This Bid Breakdown shall be completed. Otherwise the Authority may consider bid Non-Responsive

The undersigned acknowledges to have familiarized himself/herself/themselves with local conditions affecting the cost of the work, and with the Contract Documents (including Invitation for Bids, Instruction to Bidders, this Bid, the form of Bid Bond, the form of Non-Collusive Affidavit, the Specifications and Drawings, all federal, state, and local provisions and requirements, and Addenda) and other documents pertaining to these Contract Documents.

Date: _____	_____
	Bidder's Name
By: _____	
Signature	
_____	_____
Title	Address
_____	_____
Tel. #	Fax #

TECHNICAL SPECIFICATIONS

REPLACEMENT OF EXISTING WINDOWS AND DOORS

AT

SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY
HIGHLAND PARK, NEW JERSEY

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SECTION 01 11 00 SUMMARY OF WORK AND REQUIREMENTS

PART 1 - GENERAL

1.01 General Work Requirements

- A. Provide all labor, materials, tools, equipment, supplies, utilities, appurtenances and other items, and services necessary for the proper and complete replacement of windows and doors for Samuel J. Kronman Building and Park Terrace Apartments of the Authority.
- B. Obtain and pay for all required permits; perform and complete the work in a manner that promotes expedited construction consistent with safety of life and property; protect construction materials and completed work during construction; provide material and equipment storage facilities and security of material; clean up the work area daily; do all work and pay all costs incidental thereto and deliver the work in the best condition.
- C. Incidental Work: Perform all work and pay all costs of cutting, protecting, supporting, maintaining and restoring all existing surface, subsurface, and overhead structures, and all other property in the vicinity and at the site of the work, including but not limited to pipes, conduits, ducts, tubes, appurtenances, landscaping, electrical and mechanical appurtenances, and buildings and other structures; repairing the same if damaged, and restoring to their original condition to the full satisfaction of the Authority and architect/engineer.
- D. Necessary and Essential Work Deemed Included: Perform all needed work or supply materials which in the opinion of the Consultant is necessary and essential for the completion of the project, including work and material necessary for the proper operation and use of the work installed and included herein. Include all work needed and necessary to operate the installed system(s) safely and efficiently, even if not specifically mentioned or indicated in the Contract Documents.
- E. Where there are discrepancies in the Specifications and Drawings, perform the most stringent and/or costly requirements, unless waived in writing by the Authority.
- F. OSHA Mandated Safety Requirements: Perform work in full compliance with OSHA requirements. Safety of workers, residents and the public at the work area is the sole responsibility of the contractor. Provide all safety signs and other materials needed.

1.02 Project Identification

- A. Project Name and Location:

Replacement of Existing Windows and Doors at
Samuel J. Kronman Building & Park Terrace Apartments
Highland Park, New Jersey

- 1. Samuel J. Kronman Building
Address: 242 South Sixth Street Highland Park, NJ
- 2. Park Terrace Apartments
Address: 205 – 219 South Sixth Avenue Highland Park, NJ

602 – 616 Benner Street Highland Park, NJ
 206 – 220 South Seventh Avenue Highland Park, NJ

B. Owner:

Borough of Highland Park Housing Authority
 242 S 6th Ave #1, Highland Park NJ 08904

1.03 Work Included

A. Samuel J. Kronman Building (Six-Story High Rise) consists of 15 Studio, 80 One-Bedroom, and 5 Two-Bedroom Apartment units. There are total of 80 sliding doors and 132 windows (in 128 existing window rough openings) to be replaced.

B. Park Terrace Apartment Development consists of 3 buildings A-1, A-2 and A-3. Buildings A-1 and A-2 each consists of 4 One-Bedroom, 2 Two-Bedroom, and 2 Three-Bedroom Apartment units. Building B consist of 4 One-Bedroom, 2 Two-Bedroom and 2 Four-Bedroom Apartment units. There are total of 196 windows (in 118 existing window rough openings) to be replaced.

C. Types of windows and doors of Samuel J. Kronman Building are as follow:

1. Type DS1: 80 Aluminum Double Sliding Doors in 80 Rough Opening.
 - a. Door Size: 5'-11" Width by 6'-8" Height
2. Type WS1: 92 Aluminum Sliding Windows in 92 Rough Openings.
 - a. Window Size: 4'-11" Width by 5'-3" Height
3. Type WS2: 11 Aluminum Sliding Windows in 11 Rough Openings.
 - a. Window Size: 3'-0" Width by 2'-10" Height
4. Type WS3: 4 Fixed and 4 Project-Out Aluminum Windows in 4 Rough Openings.
 - a. Window Size: 4'-0" Width by 4'-0" Height
5. Type WS4: 11 Aluminum Sliding Windows in 11 Rough Openings.
 - a. Window Size: 5'-11 Width by 4'-10" Height

Table 1: Windows or Doors quantity (# of Rough Opening) of Samuel J. Kronman Building

	DS1	WS1	WS2	WS3	WS4	TOTAL
Samuel J. Kronman Bldg	80 (80)	92 (92)	11 (11)	8 (4)	21 (21)	212 (208)

D. Types of windows of Park Terrace Building are as follow:

1. Type WP1: 4 Aluminum Double Hung Windows in 4 Rough Openings.
 - a. Window Size: 2'-0" Width by 3'-2" Height
2. Type WP2: 12 Aluminum Double Hung Windows in 12 Rough Openings.
 - a. Window Size: 2'-8" Width by 4'-2" Height
3. Type WP3: 2 Aluminum Double Hung Windows in 2 Rough Openings.

- a. Window Size: 3'-8" Width by 4'-2" Height
4. Type WP3E: 2 Aluminum Casement (Egress) Windows in 2 Rough Openings.
 - a. Window Size: 3'-8" Width by 4'-2" Height
5. Type WP4: 24 Aluminum Double Hung Windows in 12 Rough Openings.
 - a. Window Size: (2) 2'-8" Width by 4'-1/2" Height
 - b. Size of mullion between windows shall be measured and verified in field.
6. Type WP4E: 18 Aluminum Double Hung Windows and 18 Aluminum Casement (Egress) Windows in 18 Rough Openings.
 - a. Window Size: (2) 2'-8" Width by 4'-1/2" Height
 - b. Size of mullion between windows shall be measured and verified in field.
7. Type WP5: 52 Aluminum Double Hung Windows in 26 Rough Openings.
 - a. Window Size: (2) 3'-0" Width by 4'-1/2" Height
 - b. Size of mullion between windows shall be measured and verified in field.
8. Type WP5E: 14 Aluminum Double Hung Windows and 14 Aluminum Casement (Egress) Windows in 14 Rough Openings.
 - a. Window Size: (2) 3'-0" Width by 4'-1/2" Height
 - b. Size of mullion between windows shall be measured and verified in field.
9. Type WP6: 8 Aluminum Double Hung Windows in 4 Rough Openings.
 - a. Window Size: (2) 3'-4" Width by 4'-1/2" Height
 - b. Size of mullion between windows shall be measured and verified in field.
10. Type WP7E: 8 Aluminum Casement (Egress) Windows in 4 Rough Openings.
 - a. Window Size: (2) 3'-4" Width by 4'-1/2" Height
 - b. Size of mullion between windows shall be measured and verified in field.

Table 2: Windows Quantity (# of Rough Opening) of Park Terrace Apartments

	WP1	WP2	WP3	WP3E	WP4	WP4E	WP5	WP5E	WP6	WP7E	TOTAL
A-1	8(8)	4(4)			8(4)	12(6)	16(8)	8(4)	4(2)	4(2)	64(38)
A-2	8(8)	4(4)			8(4)	12(6)	16(8)	8(4)	4(2)	4(2)	64(38)
B	8(8)	4(4)	2(2)	2(2)	8(4)	12(6)	20(10)	12(6)			68(42)
TOTAL	24(24)	12(12)	2(2)	2(2)	24(12)	36(18)	52(26)	28(14)	8(4)	8(4)	196(118)

E. The sizes of the windows and window openings shown on the drawings are approximate. Verify sizes of each opening prior to ordering the windows. New windows that do not fit openings shall be replaced without additional cost to the Authority.

F. Any reference to window project shall include all the windows.

G. The window replacement work includes, but is not limited to, the following:

1. Meet all applicable requirements of the NJ Rehabilitation sub-code pertaining to window replacement and installation.
2. Verify the number of apartment windows and the existing surrounding conditions that may affect construction.
3. Provide dust control. Protect apartment units, furniture, equipment and the residents from dusts. Prevent migration of dust from the work areas (rooms) to other areas (rooms) of the apartment units. Clean work area daily, including dusts that migrated to other areas due to Contractor operation. All Contractor equipment and supplies shall be properly stored at

approved locations.

4. Remove all existing windows to be replaced, including existing windows frame. Cut windows frame nailfin and remove existing windows completely including frames. Repair the rough opening and then install new windows. Protect and reinstall sill plate as necessary
5. Temporarily remove existing curtain rods and/or shade brackets. Temporarily remove, disconnect and/or relocate appliances, equipment, furniture, and similar items of property to allow performance of the work in this Contract. Coordinate with the Authority and residents.
6. Remove other existing construction and materials as necessary for properly installing new windows. Removal shall be in accordance with all applicable and pertinent federal, state and local laws and regulations.
7. Perform removal work in a manner to prevent:
 - a. Damage to adjoining areas and structures.
 - b. Entry of debris to buildings, piping, etc.
 - c. Leakage of material contained in pipes, etc.
 - d. Flooding of the work and surrounding areas.
8. Dispose of all materials specified to be removed or demolished from the work area. Legally dispose of off-site all removed windows, resulting debris, and other similar materials.
9. Properly prepare window openings prior to new window installation. Provide treated wood blocking, fillers and nailers, needed for a secure and air leakage-free installation. Provide insulated panels and frames as required.
10. Provide new factory glazed thermally broken aluminum windows as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings. Provide bathroom windows with obscured or frosted glass.
11. Install new windows in accordance with the recommendations and instructions of the window manufacturers.
12. Provide fiberglass insulation between window frames and adjacent construction.
13. Seal the entire perimeter of window units to the surrounding structure prior to finishing the window surrounding. There shall be no gap between window frame and the structure to which they are installed.
14. After each window is installed, reinstall curtain rods or shade brackets. Reinstall and reconnect all temporarily removed, relocated and disconnected furniture, appliances, equipment, plumbing, electrical and other systems.
15. Restore and/or replace all other disturbed, removed, damaged systems and facilities including sidewalk pavements, asphalt pavements, concrete curbs, building walls, re-grading, etc. This work shall include restoration of all damages resulting from Contractor operations, such as damages or disturbance due to installation of temporary facilities, and similar work.

H. The scope of services further includes, but is not limited to the following:

1. Perform measurements to establish existing conditions and to accurately layout the required Work. All dimensions shown on the drawings shall be checked by the Contractor. Determine locations of all utility lines (underground, surface and overhead) that may be disturbed during construction.

2. Take photographs of existing conditions at the work areas and at surrounding areas which could be misconstrued as damaged resulting from the Contractor's operation.
 3. Provide one set of existing conditions photographs to the Authority and Engineer. Failure to file existing conditions photographs with the Authority and Engineer, prior to starting construction operation, shall forfeit Contractor's claim as existing condition any damages of facilities worked on and damaged in the work area vicinity and surrounding areas.
 4. Repair and replace damaged equipment and material as a result of Contractor's operation. Replace and/or repair, to the satisfaction of the Authority and without additional cost to the Authority, any equipment, building component and system damaged during the work performance including during moving, relocation and reconnection of the equipment, furniture and similar material and systems.
 5. Provide safety measures, activities and equipment needed for the protection of the workers, the residents and the public; protection of adjacent areas of demolition work from damage; protection of utility lines (electric, water, sewer, storm, telephone, etc.) and the proper and immediate removal and disposal of demolished and removed materials.
 6. Protect residents from accidents during work and non-work hours. The apartment units are occupied during the performance of the work. Implement/provide safety measures to prevent accidents, etc. Ensure that residents have full use of all apartment facilities at end of each work day.
- I. Include in bid the cost of all the above work and services, and other services, equipment, labor, construction facilities, etc. described and mentioned in these Specifications, Contract Drawings and HUD and Housing Authority requirements.

1.04 Inspection Before Bidding

- A. Refer to HUD requirements including the clause "Site Investigation and Conditions affecting the Work"- HUD General Conditions of the Contract for Construction.
- B. Before bidding on the work, inspect the locations/sites of the work, examine all existing materials to be removed and disposed of, examine all structures that will be or may be disturbed or temporarily removed during the performance of the Contract, determine needed equipment and machinery to complete the job and determine and collect all other information that the Bidder/Contractor needs to conduct all work activities for properly performing the Contract. The Contractor/Bidder shall obtain all necessary information and make his own determination of any and all conditions, including proper and safe means and methods of construction.
- C. Inspect all window areas and other areas in the building and inside the apartment units that are necessary to establish the work conditions for the performance of the work in this Project.
- D. Take steps necessary to ascertain the nature and location of the work. Investigate and determine the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling and storage of materials, (2) availability of labor, water, electric power and roads, (3) the character of equipment and facilities needed preliminary to and during work performance, and (4) uncertainties of weather and other physical conditions at the site.
- E. Take necessary steps to determine the existing plumbing, electrical and other systems and components and accessories that may be disturbed and affected in the performance of the work. The Contractor acknowledges that the effect and/or costs of these systems on the work are included in the bid.
- F. Any failure of the Contractor/Bidder to take the actions described in these paragraphs shall not relieve the Contractor from responsibility for estimating properly the difficulty and cost of

performing the work, or for proceeding to perform the work without additional expense to the Authority.

1.05 Qualification of Contractor

- A. Contractors/Bidders shall be firms with at least **three (3) years** of experience in window replacement and installations.
- B. The Contractor/Bidder shall provide description of at least two (2) similar window replacement or retrofit projects completed during the last five years with the names, telephone number and address of his/her clients and references.
- C. The Contractor/Bidder shall ensure that he/she meets all the requirements in the Contractor & Sub-contractor Qualification Questionnaire including the number of years the Contractor/Bidder and Subcontractors have been Business in this particular field.
- D. The Contractor/Bidder shall be fully familiar with the requirements of the New Jersey Rehabilitation Sub-code particularly those pertaining to replacement of windows. The Contractor/Bidder shall call the attention of the Engineer/Architect for any requirement herein that does not conform to the Sub-code. The bid shall be prepared with all work bid fully in accordance with code requirements.
- E. Contractor shall be fully familiar with all OSHA requirement for worker safety and provide all needed temporary and permanently installed equipment without additional cost to the Authority.

1.06 Character of Work

- A. All work shall be in accordance with all applicable and pertinent building and safety codes.
- B. The Contractor shall employ qualified supervisor(s) who shall provide adequate and efficient coordination of the work. The supervisor shall be present on site while work is being performed and have the authority to act on behalf of the Contractor.
- C. Work shall be performed in a safe procedure, in accordance with the best modern practice, with materials and workmanship of the highest quality, and to the satisfaction of the Authority.

1.07 Means and Methods of Construction

- A. The means and methods of construction shall be such as the Contractor may choose; subject, however, to the Authority's right to reject means and methods proposed by the Contractor which to the Authority's judgment:
 - 1. Will constitute or create a hazard to the work, or to persons and property; or
 - 2. Will not produce finished work in accordance with the terms of the Contract.
- B. The Engineer and/or Authority's approval of the Contractor's means and methods of construction, or its failure to exercise its right to reject such means and methods, shall not relieve the Contractor of his/her obligation to accomplish the result intended by the Contract; nor shall the exercise of such right to reject create a cause of action for damages.
- C. The means and methods of construction shall meet all safety requirements of OSHA and the State of New Jersey. Provide all temporary and permanent safety equipment.

1.08 Compliance with Laws and Regulations

- A. All work performed in this Contract shall conform to all applicable laws, ordinances, rules and regulations, and directives of the City/Township, State of New Jersey, Federal Government and any other entity having jurisdiction.
- B. The Contractor shall bear all costs for work, repair, demolition and reconstruction, and reinstallation arising from work done contrary to such laws, ordinances, rules and regulations and directives.

1.09 Safeguard and Protection of Property and Equipment

- A. During the performance of this Contract, the Contractor shall take all necessary measures to safeguard against any damage or injury to existing structures, buildings, vegetation, utilities, electric conduit, wiring and accessories and appurtenances, equipment, piping, machinery and private property. The Contractor shall be responsible for any such damage or injury resulting from his operation and shall repair and pay for such damage immediately and to the satisfaction of the Authority.
- B. The Contractor shall protect finished and unfinished work against any damage, loss or injury; and in the event of damage, loss or injury, the Contractor shall promptly repair or replace such work, whichever the Authority shall determine to be preferable.
- C. The Contractor shall restore to its original condition, and/or replace with same kind or size any damaged structures, building components, lawn areas, trees and bushes, pavement areas, sidewalks, fences, posts, etc.
- D. The Contractor shall be held responsible for any damage resulting from negligence, carelessness, or lack of skill on his/her part or that of his/her agents and workers.

1.10 Disposal of Waste Materials

- A. All materials resulting from demolition, construction activity, clearing and grubbing and not scheduled for reuse shall become the property of the Contractor and shall be suitably disposed of off-site in accordance with all applicable laws, ordinances, and rules and regulations. Such disposal shall be performed as promptly as possible after removal of the material and shall not be left until the final period of cleaning up.

1.11 Traffic Protection

- A. The Contractor shall be responsible for implementation of traffic protection in accordance with the requirements of local authorities having jurisdiction. The Contractor shall be responsible for providing authorities with any required drawings or permit applications for any temporary traffic protection required relative to this Contract.
- B. The Contractor shall furnish, maintain, and remove (after work completion) all temporary barricades, signs, lights, safety devices, and provide flagmen as required or directed by the Local Officials. All traffic protection measures shall be maintained throughout working and non-working hours including weekends and holidays.

- C. Vehicles hauling materials shall have tight bodies and tailgates with adequate freeboard and covers to prevent any spillage during transport. Any material dropped or spilled on roads and other areas shall be removed immediately to prevent the creation of traffic/pedestrian hazards.

1.12 Owner Occupancy

- A. During the entire period of construction, the buildings are occupied. The Contractor shall cooperate fully with the Authority during construction operation to facilitate building and parking lot usages. The work shall be performed so as not to interfere or minimized interference with residents' activities.

1.13 Warranties

- A. The Contractor warrants good title to all materials, supplies and equipment incorporated in the works and agrees to deliver all improvements free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have the right to a lien on any completed work or anything appurtenant thereto.
- B. The Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of **one (1) year** from the date of final acceptance of the work or **one (1) year** from the date that the Authority takes possession of any equipment or system.
- C. The Contractor shall remedy, at Contractor's expense, any failure to conform, or any defect. In addition, the Contractor shall remedy, at Contractor's expense, any damage to Authority and/or resident owned or controlled real or personal property when the damage is the result of (1) Contractor's failure to conform to contract requirements; or (2) any defects of equipment, material, workmanship or design furnished by the Contractor.
- D. The Contractor shall restore any work damaged in fulfilling the terms and conditions of these warranties. The Contractor's warranty with respect to work repaired or replaced shall run for **one (1) years** from the date of repair or replacement.
- E. The Authority will notify the Contractor, in writing, within reasonable time after the discovery of any failure, defect or damage. If the Contractor fails to remedy any failure, defect or damage within reasonable time after receipt of notice, the Authority shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- F. With respect to all warranties, express or implied, from subcontractors, manufacturers or suppliers for work performed and materials furnished under this contract, the Contractor shall:
 - 1. Obtain all warranties specified herein or if not specified, warranties that would be given in normal commercial practice.
 - 2. Require all warranties to be executed in writing for delivery to the Authority.
- G. In the event the Contractor's warranty for workmanship and material defects had expired, the Authority may bring suit at its own expense to enforce a subcontractor's, manufacturer's or supplier's warranty.

- H. Notwithstanding any provisions herein to the contrary, the establishment of time periods above relate only to the specific obligation of the Contractor to correct the work, and have no relationship to the time within which its obligation to comply with the contract may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to its obligation other than specifically to correct the work.

1.14 Payments to Contractor

- A. Refer to the requirements of the clause "Payments"- HUD General Conditions of the Contract for Construction and any other requirements by the Authority.
- B. Payments shall be on a monthly basis. Minimum amount of work completed for partial payment shall be \$1,000.00 except for final payment.
- C. The General Requirements/General Condition cost shall be prorated over the construction period of the Contract, unless approved by the Authority otherwise.
- D. Each payment request shall be submitted to the Consultant for review and shall be accompanied with certified payroll accounting for all wages paid during the period covered in the payment request.

1.15 Rejection of Bid(s)

- A. The Authority reserves the right to reject any and all bids or any bid in any way incomplete or irregular.

1.16 Basis of Award

- A. The Contract will be awarded to the responsible bidder with the lowest total contract price for material delivered and installed. If two lowest bids that are less than 0.1% or \$100 between each other, the Authority shall consider these bids equal and have the right select the Contractor for the award of the Project.
- B. The Contractor/Bidder ensures that his/her completed works are guaranteed to successfully operate, useful to the Authority and meets all the requirements of the Contract Documents. The Contractor/Bidder ensures to deliver and install the complete work or system on schedule as set forth elsewhere in this Contract.

END OF SECTION

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SECTION 01 11 12 CONTRACT DRAWINGS AND SPECIFICATIONS

PART 1 - GENERAL

1.01 Work Included

- A. The Contract Documents consist of the Contract Drawings and Project Manual.
- B. Contract Drawings: The Engineer's Drawings serve as the bidding Contract Drawings. They indicate the program requirements as required by the Authority. The Drawings are schematic in nature, and are not intended to be used as construction working drawings. These are used in conjunction with the Specifications to define interrelationship and quality of materials and workmanship and other construction contractual requirements. The Drawings are used to schematically indicate locations, arrangement and assemblies of required structure systems, materials, and equipment and other needed facilities. The Contract Drawings are also referred to herein as "Drawings" or "Plans".
 - 1. The Engineer's Drawings may be revised by the Engineer at the request of and/or with the approval of the Authority by issuing detailed supplementary drawings and/or revised specifications. The Contractor shall conform to all reasonable minor adjustments without extra cost to the Authority.
 - 2. Construction working drawings shall be developed and submitted by the Contractor for review in the form of working/shop drawings, manufacturers' literature and product data, etc. as specified elsewhere in these Contract Documents.
- C. Project Manual: The Project Manual includes the Invitation to Bids, Instructions to Bidders, Bid Submittal Documents, Conditions of Contract, Contract Forms, Technical Specifications and other requirements of the Authority. The Project Manual serves as the bidding and the procurement specifications. The Project Manual indicates the terms of the Contractual Agreement and other contractual provisions and requirements that shall be adhered to in the performance of the Work. The Technical Specifications of the Project Manual indicates the types and qualities of materials to be used, the conditions of installation, the quality of workmanship and other descriptions of the Work to be performed. The Technical Specifications is also referred to herein as "Specifications".

1.02 Precedence of Documentary Coverage

- A. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- B. In cases of difference between the Drawings and the Specifications, the specifications shall normally govern except when the Engineer or the Authority decides otherwise. When there is conflict between the Drawings and Specifications, or between the details of the Drawings or between the provisions of the Specifications, the Contractor shall bid and follow the most stringent and/or most costly requirement. The construction material or equipment selected by the Engineer or the Authority as most appropriate for the project shall be provided by the Contractor

without additional cost to the Authority. Discrepancies between Drawings and Specifications shall promptly be brought to the attention of Engineer for a decision or correction.

- C. Wherever in the specifications or upon the drawings the words “directed”, “required”, “ordered”, or “designated” and words of like import are used, it shall be understood that the “direction”, “requirement”, “order”, or “designation” of the Engineer is intended; and similarly the words “approved”, “acceptable”, “satisfactory”, or words of like import shall mean “approved by”, or “acceptable to”, or “satisfactory to” the Engineer unless otherwise expressly stated.
- D. Where “as shown”, “as indicated”, “as detailed”, or words of similar import are used, it shall be understood that the reference is made to the Drawings and Specifications accompanying this contract unless stated otherwise. The word “provided” as used herein shall be understood to mean “provide complete in place”, that is “furnished and installed”.

1.03 Contractor’s File Retention of Contract Documents

- A. Keep on the work site a copy of the Drawings and Project Manual and all approved shop drawings, change orders and directives issued by the Engineer. At all times, give the Authority and Consultant personnel access thereto.

END OF SECTION

SECTION 01 26 00 CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 Work Included

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.02 Contract Changes

- A. Changes to this Contract be only made through Change Orders as duly authorized by the Authority. All such changes, modifications and amendments will become a part of the original Contract. Contractors deviating from original Contract requirements without a duly approved Change Order document, or written Contract modification or amendment, do so at their own risk.
- B. Contract changes will be made only for necessary additional work not included in the original scope of the Contract, and for non-material changes to the scope of the Contract. Contract changes may include any Contract revision deemed necessary by the Authority.

1.03 Change Order Proposal Requests

- A. Proposal requests for changes requested by the Authority will be issued by the Engineer. These requests usually require adjustment to the Contract Amount and Time of Completion. The requests will include detailed description of the proposed change accompanied with supplemental or revised drawings and Specifications. Proposal requests are for information only and shall not be considered as instruction to stop work in progress, or to execute the change.
- B. Unless otherwise indicated, within ten (10) work days of receipt from the Engineer, the Contractor shall submit an estimate of cost to execute the required changes included in each Proposal Request.
- C. Include list of quantities of products to be purchased and unit costs, along with the amount of purchases to be made. If requested, furnish survey data to substantiate quantities.
- D. Indicate delivery charges, equipment rental, and amounts of trade discounts.
- E. Indicate hourly rates, labor breakdown and percentage allowed for overhead, profit, and/or commissions.
- F. Include a statement indicating the effect the proposed change in the Work will have on the Contract time.
- G. Include full backup data for his/her proposal, such as subcontractor's letter of proposal, material quotes, material specifications or similar information.

1.04 Contractor Initiated Change Order Proposal Requests

- A. When unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a change request to the Authority and Engineer. These shall include changes in construction completion because delays due to inclement weather, etc. Under these conditions, the Contractor shall fully document and detail the causes and reasons of delay for review and approval by the Authority. Undocumented and unjustified claims of delay will not be granted and the Contractor shall complete the Work as the Contract calls for. Failure to do so shall be subject to Liquidated Damages.
- B. For changes in the work, provide complete description of the proposed change. Include a statement outlining reasons for the change. Indicate effect of the proposed change on the Contract Sum and Time.
 - 1. Include a list of quantities of products to be purchased and unit costs, along with amount of purchases to be made. If requested, furnish survey data to substantiate quantities.
 - 2. Indicate applicable delivery charges, equipment rental, and amount of trade discounts.
 - 3. Include full backup data such as subcontractor's letter of proposal or similar information.

1.05 Construction Change Directive

- A. When the Authority and the Contractor are not in agreement on terms of a Change Order Proposal Request, the Architect may issue Construction Change Directive on AIA form G714, instructing the Contractor to proceed with a change, for subsequent inclusion in a Change Order.
- B. Construction Change Directive will contain a complete description of the change and designate method to be followed to determine change in the Contract Sum or Time.

1.06 Documentation

- A. Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
- B. After completion of the change submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the contract.

1.07 Change Order Procedures

- A. Upon the Engineer's recommendation and the Authority's approval of the Change Order Proposal Request, the Engineer will issue a Change Order for signatures of the Authority and Contractor as provided in the Conditions of the Contract.

END OF SECTION

**SECTION 01 31 13
PROJECT COORDINATION**

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, material, equipment and other services necessary to coordinate the work and other construction activities to ensure efficient and orderly installation of all elements and components of the project.
- B. Plan and submit proposed order or sequence of construction. The goals are as follows:
 - 1. Complete the project on schedule.
 - 2. Schedule work to minimize disruption of residents' activities.
 - 3. Work is in accordance with the Contract Documents.
- C. During the pre-construction conference, designate representative who shall be responsible for coordinating the work.

1.02 Sequence of Construction

- A. Five (5) working days after the pre-construction meeting, prepare and submit for review by the Authority and Architect/Engineer, a practicable construction sequence along with construction schedule showing the interrelationship of all items of work including the following:
 - 1. Lead times for material procurement.
 - 2. Starting dates of work in the various apartments.
- B. Prepare a schedule and sequence of construction to ensure prevention of work delays.

1.03 Coordination

- A. Coordinate with manufacturers. Ensure that all new, repair and rehabilitation materials are delivered on time. Ensure that manufacturers' representatives are available and ready when needed to assist in the installation.
- B. Coordinate work with subcontractors, if any. Ensure that they are available and ready when their part of the work must be installed.
- C. Coordinate work with the Authority. The Authority is normally required to send notices to the residents prior to performances of certain types of work, interruption of any services or similar inconveniences. Notify the Authority at least 5 days prior to interruption of services and any similar inconveniences.
- D. Coordinate with state and local governments having jurisdiction for timely issuance of permits or for their timely inspection of the work, if needed.
- E. Include requirements of Police Department, Zoning Officials, Code Enforcement, Fire Department, City Engineer, etc.

- F. Coordinate with Engineer. Submit one copy each of all coordination correspondence to the Engineer and to the Authority.

END OF SECTION

**SECTION 01 31 19
PROJECT MEETINGS AND CONFERENCES**

PART 1 - GENERAL

1.01 Work Included

- A. This Section specifies requirements for attendance in project meetings and conferences.

1.02 Pre-Bid Conference

- A. A pre-bid conference and site visit will be held on the date indicated in the Invitation to Bid. Attendance to the pre-bid conference and site visit is not mandatory unless otherwise in the Invitation for Bid. However, only questions about the project asked and/or submitted in writing at this scheduled conference will be recorded and responded to in writing. No additional questions and responses will be allowed at any time and during additional site visits requested by bidders.

1.03 Pre-Construction Conference

- A. A Pre-Construction Conference will be conducted by the Authority following the selection of Contractor. The conference will serve to acquaint the project participants with the general plan of the construction operation and to clarify contract requirements and administration procedures. The conference will be scheduled following the Authority's issuing of Notice to Proceed, and prior to actual start of the work. The Authority will provide the time, date and place of the conference.
- B. The conference will be attended by:
1. Authority staff and interested City, State and Federal officials.
 2. Authorized representatives of the Contractor and subcontractors.
 3. Consultant's representatives.
- C. The Authority and/or Consultant will prepare the meeting agenda. Contract provisions or items of work and other agenda items that the Contractor needs to be clarified shall be provided to the Consultant at least 24 hours before the conference.
- D. Meeting agenda: Agenda items includes:
1. Authority requirements - HUD and government agency requirements such as labor rates, securing of permits, etc. Note: No work shall be done until all necessary permits are secured. One copy each of the permits shall be provided to the Consultant and to the Authority.
 2. Contract Documents Requirements, including provisions of HUD General and Supplementary Conditions.
 3. Procedures for submittal of shop drawings, material samples, etc.

4. Procedure for submitting partial payment requests.
 5. Review of construction schedule. The Contractor shall provide a project schedule and describe his/her work approach including sequence of critical work.
 6. Other rules and regulations governing performance of the work.
 7. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.
 8. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, material suppliers, and the Consultant.
 9. Channels and procedures for communication.
 10. Processing of field decisions and Change Orders.
- E. The Contractor shall submit during the Pre-Construction conference the following:
1. The names, addresses, telephone and fax numbers of the Contractor during regular working hours and emergency contact.
 2. The names, addresses, telephone and fax numbers, and contact person of proposed manufacturers, materialmen, dealers/suppliers who are to furnish equipment, accessories, and other material required in this contract.
 3. The names, addresses, telephone and fax numbers, and contact numbers of proposed subcontractors.
- F. Conference minutes will be prepared by the Consultant for distribution with copies provided to the Authority and Contractor in about five (5) working days.

1.04 Project Meetings

- A. The Contractor or his/her duly authorized representative(s) shall attend job meetings required and requested by the Authority and/or the Consultant. The meetings will be held in the Authority's offices or at the jobsite at 10:00 A.M.
- B. The meetings shall be attended by the Contractor's superintendent and other representatives as may be needed, local and HUD officials and any other interested parties (e.g. public utility, local government representatives, manufacturer's representatives, etc.). Project meetings requested by the Contractor shall also be attended by the Authority and Consultant staff.
- C. The meetings shall be to review the progress of the work, to resolve outstanding issues and to coordinate the efforts of all concerned.
- D. The meetings shall include review of Contractor's Construction Schedule, whether on time or ahead or behind schedule. If the work is behind schedule the Contractor shall be prepared to show how the construction will be expedited to complete the project within the Contract Time and provide revised schedule.

E. Review of other issues including such items as:

1. Equipment/material delivery schedules
2. Off-site fabrication problems
3. Temporary facilities and services
4. Prevention of hazards and risks to residents
5. Quality of work

F. The Consultant will prepare and distribute copies of minutes of meeting in about five (5) days after the meeting.

END OF SECTION

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SECTION 01 33 00 SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 Work Included

- A. Submit for the review and/or approval of the Authority and Architect proposed construction schedule, construction progress, schedule of values, working/shop drawings and catalog cuts, material samples, as-built drawings and all other pertinent documents and materials required in accordance with the provisions of this and other sections of these specifications.
- B. When required by the Architect/Engineer, revise and enter review comments of the Authority and Architect/Engineer, and resubmit the submittals to the full satisfaction of the Authority and Architect/Engineer.
- C. Prior to each submittal, review all material and documents. Ensure that work included in the submittal fully meets and conforms to the requirements of these specifications.
- D. Coordinate each submittal with all subcontractors, manufacturers, suppliers, and various trades to ensure that each submittal is complete and that there are no conflicts regarding any detail and timing of construction.
- E. **Prior to submittal, carefully review the material being submitted, affix on each submittal the signature of a responsible Contractor** official to indicate compliance to the review and coordination requirements herein. Submittals without the signatures of the Contractor are not in conformance with the requirements of these specifications and shall be returned not reviewed. The Contractor shall be responsible for any time delay and cost increase as a result of this non-conformance.
- F. Designate representative who shall be responsible in coordinating the review of shop drawings during the pre-construction conference.
- G. Make submittals in advance of scheduled equipment installation and construction to allow time for Authority and Architect/Engineer review, for securing needed public agency and other entity approvals, for providing adequate delivery time, etc. At least ten (10) working days shall be allowed for Architect/Engineer review exclusive of time for mailing and securing needed public agency or other entity approvals.
- H. Each submittal or re-submittal shall be accompanied by a transmittal letter. Number the Transmittal Letters consecutively. Show the following information in the Transmittal Letter:
 - 1. Submittal Number, Project Title and date of submittal.
 - 2. Name of the Owner (Authority).
 - 3. Itemized listing of drawings, catalog cuts, material samples and other material submitted.
 - 4. Contract Drawing Number, Specification Section, and name of item of work to which the submittal applies.

5. Any deviation from the Contract documents. Include evidence of prior agreement of the Authority and Architect/Engineer for the deviations. Only deviations with prior agreement by the Authority and Architect/Engineer will be reviewed.
6. Names and addresses of subcontractors, equipment suppliers, manufacturers, etc. including names and telephone numbers of contact persons.
7. Indicate whether submittal is original submittal or re-submittal. For re-submittals, use the same number as the prior original submittal followed by the letter R.

I. The Contractor shall provide six (5) sets of each submittal to the Consultant.

1.02 Construction Progress Schedule

- A. The Contractor shall, within five (5) working days after the pre-construction meeting, prepare and submit to the Engineer for review and approval a practicable construction schedule, showing the following:
 1. Order or sequence in which the Contractor proposes to perform the project.
 2. Lead time allowed for material procurement.
 3. Dates the Contractor plans on starting and completing the installation of the project
 4. Other salient features of the work.
- B. The schedule shall be in the form of a progress bar chart of suitable scale to indicate appropriately the percentage of work scheduled for completion at any given date during the construction period. The Construction Progress Schedule shall show that the construction duration allowed in the Contract is not exceeded.
- C. Include in the Construction Progress Schedule, dates of submittal for shop drawings and other documents to be submitted as specified herein and other Sections and Provisions of the Contract.
- D. The Contractor shall enter the actual progress on the chart weekly, and immediately deliver a copy of each of the annotated schedule to the Authority and the Engineer. If it is determined, based upon inspection conducted by the Authority and/or Engineer, that the Contractor is not meeting approved schedule, the Contractor shall take steps necessary to improve its progress without additional cost to the Authority.
- E. The Contractor shall revise and resubmit the Construction Progress Schedule if the installation of any work item falls one (1) week behind schedule. The revised schedule shall indicate the reason for the delay and how the work will be expedited to meet the contract construction duration.

1.03 Schedule of Values

- A. Within ten (10) calendar days after execution of the Contract, the Contractor shall submit a proposed schedule of values on HUD issued forms for approval and agreement of the Authority and Engineer. The schedule shall provide a detailed breakdown of the agreed Contract Sum showing values to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.

- B. The schedule of values shall accurately reflect the Contractor's bid prices and Construction Progress Schedule. The Authority and the Engineer reserve the right to amend the amounts during the course of the project if percentage of payments exceeds percentage of completion.

1.04 Contractor's Working Drawings, Design and Shop Drawings

- A. Promptly prepare and submit layout and detail drawings and shop drawings for all parts of the work to be known as working drawings. Work items constructed without shop drawings are at Contractor's risk. Shop drawings shall reflect measurements made by the Contractor to confirm and verify the dimensions, distances, etc. shown on the Drawings.
- B. Prepare working drawings on sheets 22" high by 34" wide with ½-inch margin on three sides and 1½ -inch margin on the left side using 20# bond paper or as required by the Authority. Use AutoCAD or similar quality drafting to prepare working drawings. Hand sketches are not acceptable. Working drawings on sheets 11" high by 17" wide may be allowed for small details with prior approval of the Architect/Engineer. Catalog cuts shall be on sheets 8 ½" by 11" or 11" by 17".
- C. Provide working drawings with title blocks. Provide plans, sections, elevations, details, etc. with titles. Clearly indicate which part of the work each shop drawing is prepared for, including Contract specifications and/or drawing.
- D. The Contractor shall advise his/her subcontractors and suppliers of submittal requirements and shall be responsible for the proper submittal of working/shop drawings.
- E. Working drawing submittal shall be consecutively numbered and shall accurately and distinctly include and present the following:
 1. Shop drawing transmittal letter numbered consecutively. List all documents, materials and drawings included in the submittal.
 2. Specifications Section and Paragraph; and applicable Contract Drawing to which the working drawings are applicable and complying to.
 3. The locations or points at which the materials and/or equipment are to be installed in the work.
 4. All working and erection dimensions.
 5. Arrangement and sectional views.
 6. Details, including complete information for making connections between work under this Contract, other on-going projects, if any, and existing facilities.
 7. Kinds and types of material and finishes.
 8. Parts list and description thereof.
- F. The working/shop drawings shall be of suitable scale as approved by the Engineer. As a minimum the scale shall be equal or larger than those used in the Contract Drawings. The drawings shall include all details needed to perform the work.

- G. The Contractor shall submit for approval six (6) sets of working/shop drawings. Three (3) sets will be retained for Authority records, one (1) set to be retained by the Consultant, and two returned to the Contractor.
- H. The Engineer will review all working/shop drawings and place an “action stamp” on them, either:
1. “RAR”– Revise and Re-submit; “FAC” – Furnish as Corrected; “FAS” Furnish as Submitted; “R” Rejected.
 2. The Contractor shall not order or install any material until he/she has received shop drawing marked “FAS” or “FAC”.
 - a. On working/shop drawings stamped “FAC” the Contractor shall agree to perform the work in accordance with corrections marked on the shop drawings. If he/she disagrees with the corrections, the Contractor shall give written notice within three (3) working days of receipt of the marked shop drawings with detailed reasons for the disagreement. The work included in the shop drawings shall not be performed until after a re-submittal of the shop drawings and subsequently stamped “FAS”.
 3. Working drawings stamped with “RAR” shall be corrected and resubmitted to meet the requirements of the Contract Documents.
 4. Working/shop drawings not prepared and not conforming to the requirements of the paragraphs of this Section and other pertinent and applicable requirement of these Specifications shall be stamped “R” or Rejected. “Returned for Correction”.
 - a. The Contractor shall be responsible for any work delay resulting from improper submittal of shop drawings or any Contract deviation without prior approval.
- I. Materials and equipment ordered prior to approved working drawings shall be at Contractor’s risk. He/she shall remove these materials and equipment at his/her cost and shall provide specified materials, equipment and appurtenances.
- J. Working drawings detailing electrical and mechanical connections shall show the equipment in the proposed installation position and the details of attachments and connections required, with equipment locations referred to each other and to the structure.
1. Mechanical and electrical equipment requiring service utility connections shall have their respective shop drawings accompanied by manufacturers’ certified rough-in drawings, indicating accurate locations and sizes of all service utility connections.
- K. The approval by the Authority and Engineer of working drawings shall not relieve the Contractor from his/her responsibility to the requirements of the Contract Documents and his/her responsibility to ensure the safety of all operations, the equipment to be installed and his personnel nor will it relieve him/her from his/her responsibility not to damage the buildings, parts or members thereof or other installed equipment. He/she shall make good, repair or replace any damaged or injured items, structural, mechanical, electrical, architectural or landscaping, promptly and effectively to the satisfaction of the Authority and Engineer at no extra cost to the Authority.

- L. Upon completion of the work, the Contractor shall submit one complete set of reproducible (mylar) of all final working drawings or computer disc(s) as may be required by the Authority.

1.05 Product Data/Manufacturer's Literature

- A. The Contractor shall submit manufacturer's literature that provides product data and description of the materials and equipment proposed for the project. The literature shall clearly mark the product data and description of equipment applicable to the submittal.
1. Circle data applicable to the submittal, and
 2. Cross out all information that is not applicable.
- B. It is reiterated herein that the Contractor indicate the pertinent Drawing Number(s), Specification Section(s) and item(s) of work or equipment that the submittal is for or applies. Submittals that do not identify the above items shall be returned and stamped "R" or returned not reviewed.
- C. Each submittal shall be complete for each system. When more than one manufacturer is involved, the equipment or parts of the system that each manufacturer supplies shall be clear. The data and information to be submitted shall include the following:
1. Manufacturer's printed recommendations.
 2. Compliance with specified and recognized trade association standards.
 3. Compliance with specified and recognized testing agency standards.
 4. Application of testing agency labels and seals.
 5. Notation of dimensions verified by field measurements.
- D. When submitting product data and manufacturers' literature of material or equipment different from those used as the basis for the preparation of the Contract Documents (or substitutions approved prior to bid opening) the Contractor shall prepare detailed installation drawings and itemized list of all changes that include the following:
1. Description of the material or equipment being substituted and the Specification Section where it is described.
 2. The Contract Drawing Number(s) where the material or equipment is shown.
 3. Detailed description of the proposed material or equipment substitution.
 4. Written statement and proof (e.g. prior installation, etc.) that the proposed change will provide performance equal to or better than the system, material, work, etc. called for in the Contract Documents.
 5. Detailed installation drawings for the substitution material, including changes to other parts of the project as a result of the substitution as required in Section 01600 – Materials and Equipment.

1.06 Samples of Materials and Accessories

- A. Samples of materials and accessories shall be submitted in duplicate or as required in these Specifications, or as requested by the Authority and/or Engineer.
- B. The samples shall be properly tagged and submitted sufficiently in advance of the time when they are to be used so that rejections thereof will not delay the approved construction schedules. The samples will be reviewed as to kind, color, pattern, and texture, and other characteristics.

1.07 Manufacturer's Installation Procedures and Requirements

- A. The Contractor shall submit complete and detailed manufacturer's installation procedures and requirements as specified in these Specifications for information. All mechanical and electrical/electronic equipment shall be installed in accordance with the manufacturer's recommendations and requirements.
- B. Certification from manufacturer(s) that Contractor is pre-qualified as installer of their product(s), where required for issuance of manufacturer warranty.

1.08 Spare Parts and Special Tools

- A. Spare parts and special tools, when required in these specifications, shall be furnished to Authority as specified.
- B. All spare parts and materials shall be boxed and tagged, and clearly marked for identification as to description and their location in the equipment.
- C. Two (2) each of special tools shall be furnished to the Authority.

1.09 Warranties

- A. Contractor Project Warranty: The Contractor shall provide the Authority two executed copies of **1-year warranty**, covering labor and material for Work in this Project, including all repair work completed in this contract.
- B. Manufacturer's Warranty: The Contractor shall provide the Authority executed copy of Manufacturer's Warranty signed by an Authorized representative of the manufacturer.

1.10 As-Built Drawings

- A. In addition to the submission of the final working drawings, the Contractor shall prepare and furnish the Authority as approved by the Engineer, As-Built Drawings showing the actual construction of the works as performed by the Contractor.
- B. Initially two (2) sets of prints shall be submitted for review and comments. One (1) set will be returned for Contractor to enter necessary corrections or revisions. When the As-built drawings are acceptable to the Authority and Engineer, a set of final reproducible mylar originals shall be submitted for all systems of the project. In addition five (5) sets of prints shall be submitted.

1.11 Other Submittals

A. Other submittals required are described in pertinent Sections of these Specifications.

END OF SECTION

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SECTION 01 41 00 REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 Codes

- A. All construction work shall be in accordance with applicable federal, state and local building and construction codes. All construction work shall be in accordance with the latest requirements of the New Jersey Uniform Construction Code (NJUCC). Check also the requirements of the City/Municipality where project is located.
- B. The following Sub-codes shall be verified by the Contractor to ensure that these represent current requirements. Call to the attention of the Engineer if more stringent requirements are in effect or followed by local Authorities. Check with the Department of Consumer Affairs for new requirements, if any.
 - 1. Building Sub-code: N.J.A.C. 5:23-3.14 (International Building Code 2009, NJ Edition) Chapter 34 which pertains to work in Existing Buildings is amended.
 - 2. Plumbing Sub-code: N.J.A.C. 5:23-3.15 (National Standard Plumbing Code/2009)
 - 3. Electrical Sub-code: N.J.A.C. 5:23-3.16 (National Electrical Code 2008)
 - 4. Fire Protection Sub-code: N.J.A.C. 5:23-3.17 (See listed Chapters and sections of the Building Sub-code, NEC/2008, International Mechanical Code/2009 and International Fuel Gas Code/2009)
 - 5. Energy Sub-code: N.J.A.C. 5:23-3.18 (International Energy Conservation Code/2009)
 - 6. Manufactured Home Sub-code: N.J.A.C. 5:23-3.19 (Federal Manufactured Home Construction and Safety Standards).
 - 7. Mechanical Sub-code: N.J.A.C. 5:23-3.20 (International Mechanical Code/2009)
 - 8. One- and Two-Family Sub-code: N.J.A.C. 5:23-3.21 (International Residential Code/2009)
 - 9. Fuel Gas Sub-code: N.J.A.C. 5:23-3.22 (International Fuel Gas Code/2009)
 - 10. Rehabilitation Sub-code: N.J.A.C. 5:23-6. This sub-code covers work in existing buildings.
- C. The Bidder/Contractor shall be fully familiar with the requirements of the New Jersey Uniform Construction in effect during construction. The Bidder/Contractor shall call to the attention of the Engineer items of work not meeting codes. Use the Sub-codes in effect during bid.

1.02 Laws and Rules

- A. All Contractor work and operations shall be in accordance with applicable federal, state and local laws and regulations.
- B. All work shall be performed as required by Occupational Health and Safety Administration.

1.03 Permit Requirements

- A. The Contractor shall obtain and pay for all necessary federal, state and local construction and installation permits, and give all necessary notices in connection to the performance of the work under this Contract. The Contractor shall provide one copy each of all permits, licenses, etc. to

the Authority and another set of copies to the Engineer.

- B. The Contractor shall be responsible for acquiring all required information, filing application, securing permits, payment for all permit fees. In addition to securing and paying for all required permits and application fees, the Contractor shall be responsible for providing and paying required number of copies of documents required by all agencies and municipalities having jurisdiction.
- C. At the completion of the work, the Contractor shall obtain from all agencies having jurisdiction certifications that all work has met and has been approved by the agencies.
- D. Fines due to method and/or permit violations shall be the sole responsibility of the Contractor.

END OF SECTION

SECTION 01 42 00 REFERENCE STANDARDS, DEFINITIONS AND ABBREVIATIONS

PART 1 - GENERAL

1.01 Reference Standards

- A. All work herein shall be performed and provided in accordance with and in compliance with applicable standards of the construction industry whether or not mentioned or referred to herein. These shall have the same force and effect, as if copied directly into Contract Documents, or as if published copies were bound herein.
- B. Whenever a material, article or piece of equipment is specified by reference to a governmental, trade association or similar standard, it shall comply with the requirements of the latest publication thereof and amendments thereto in effect on the bid date.
- C. Where compliance with two (2) or more industry standards or sets of requirements is specified, and there is overlapping of requirements with conflicting minimums or levels of quality, the most stringent or most costly requirement will be enforced, unless specifically detailed language written into the Contract Documents clearly indicates that a less stringent requirement is to be fulfilled. Refer to Consultant for decision on apparently equal but different requirements, and uncertainties as to which level of quality is more stringent before proceeding.
- D. Standards referenced directly in Contract Documents or by governing regulations have precedence over non-referenced standards which are recognized in industry for applicability to work.
- E. For road, bridge and pavement design or resurfacing of parking lots and roads, refer to NJDOT Standard Specifications for Road and Bridge Construction, 2007.
- F. Manufacturers Installation Procedures. Installation procedures and other requirements for all equipment identified herein shall be as recommended by the manufacturers.

1.02 Definitions

- A. A substantial amount of specification language constitutes definitions for terms found in other Contract Documents, including drawings, which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in Contract Documents are defined in the General Requirements and in other Sections of these Specifications.
- B. General requirements apply to entire work of Contract and, where so indicated, to other elements which are included in the Project.
- C. Basic Contract definitions are included in the General Conditions.
 - 1. "Approved", used in conjunction with Engineer's action on submittals, applications, and other requests, is limited to the Engineer's duties and responsibilities stated in General and Supplementary Conditions. In no case will "approval" by the Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of the Contract Documents.
 - 2. "Completion" or "Completion of the Work" shall occur 1) when the Work has been satisfactorily completed in all respects in accordance with the Contract Documents, 2) the Project is ready for use as required by the Contract, and 3) the Contractor has satisfactorily

executed and delivered to the Engineer all documents, certificates and proofs of compliance required by the Contract Documents.

3. “Contract” or “Contract Documents” includes all the documents listed in the Table of Contents, if any, or bound and incorporated herewith such as Invitation for Bids, Technical Specifications, Drawings, General Conditions, Addenda, Change Orders, etc. both as a whole or severally.
4. “Directed”: Terms such as “directed”, “requested”, “authorized”, “selected”, “approved”, “required”, and “permitted” mean “directed by the Authority or Consultant”, “requested by the Authority or Consultant”, and similar phrases. No such implied meaning will be interpreted to extend responsibility of Authority or Consultant into Contractor’s area of construction supervision.
5. “Engineer”: Whenever the terms “Engineer”, “Designer” or “Consultant” is used, it shall mean the Engineering or Architectural Company preparing the Contract Documents for a particular project.
6. “Furnish” means “supply and deliver to project site, ready for unloading, unpacking, assembly, installation, and similar operations”.
7. “Indicated” refers to graphic representations, notes, or schedules on Drawings; “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.
8. “Install” describes operations at the site including “unloading, unpacking, assembly, erection, anchoring, applying, working to dimension, protecting, cleaning, and similar operations”.
9. “Installer” is the Contractor or an entity engaged by the Contractor as 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.

The term “experienced” when used with “Installer” means having a minimum of five (5) previous projects similar in size to this Project and being familiar with the precautions required and with requirements of the authority having jurisdiction.
10. “Means and Method of Construction” shall mean the labor, materials in temporary structures, tools, plant and construction equipment, and the manner and time of their use necessary to accomplish the result intended by this Contract.
11. “Project” shall mean the construction or public improvement to which this Contract relates.
12. “Project Site” or Work Area is the space available for construction activities, either exclusively or with others performing other construction on the Project. The extent of the Project Site if shown on the Drawings may or may not be identical with the description of the land upon which the Project is to be built.
13. “Provide” means “furnish and install, complete and ready for use”.
14. “Regulation” includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry

that control performance of the Work.

15. “Substantial Completion” shall occur when the performance of all Work on the Project has been completed, except repair work considered minor by the Engineer, landscaping work (if applicable), and final cleanup; and that in the opinion of the Engineer 1) the Project is safe and convenient for use by the intended users and the public, and 2) failure to complete the work and repairs excepted does not result in the deterioration of other completed work. Workmanship issues brought out by the Authority must be resolved prior to substantial completion.
16. “Testing Laboratory”: A “testing laboratory” is an independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.
17. “Typical”: Whenever the word “typical” is used in the Drawings, it shall mean to indicate that the material, equipment, detail or note is the same and therefore performed and followed in repetitive areas as though the material, equipment, detail and note is shown repeatedly.
18. “Work” shall mean the furnishing of all labor, services, materials, equipment, tools, transportation, supplies, and other incidentals necessary or convenient for the successful completion by the Contractor of the construction described in the Contract Documents and carrying out of all duties and obligations imposed by the Contract Documents on the Contractor.

1.03 Abbreviations and Symbols

- A. Abbreviations and Names: Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating origination, authority having jurisdiction, or other entity applicable. Refer to the “Encyclopedia of Associations”, published by Gale Research Company.
- B. Reference to a technical society, organization or body may be made in the Specification by Abbreviations. Some abbreviations maybe used herein include:

AASHTO	- American Association of State Highway and Transportation Officials
ACI	- American Concrete Institute
AISC	- American Institute of Steel Construction
AISI	- American Iron and Steel Institute
ANSI	- American National Standards Institute
API	- American Petroleum Institute
ASHRAE	- American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	- American Society of Mechanical Engineers
ASTM	- American Society of Testing Materials
AWPA	- American Wood Preservers Association
AWS	- American Welding Society
AWWA	- American Water Works Association
BOCA	- Building Officials Code Administrators International, Inc.
CRSI	- Concrete Reinforcing Steel Institute
EEI	- Edison Electrical Institute
EPA	- U.S. Environmental Protection Agency
FM	- Factory Mutual
FHWA	- Federal Highway Administration
FSS	- Federal Specifications and Standards, General Services Administration
IEEE	- Institute of Electrical and Electronics Engineers

IBC	- International Building Code
ICEA	- Insulated Cable Engineers Association
IMSA	- International Municipal Signal Association
ISO	- International Organization for Standardization
MUTCD	- Manual of Uniform Traffic Control Devices
NEC	- National Electrical Code
NEMA	- National Electrical Manufacturers Association
NFPA	- National Fire Protection Association
NIST	- National Institute for Standards and Technology
NJDOT	- New Jersey Department of Transportation
NJUCC	- New Jersey Uniform Construction Code
OSHA	- Occupational Safety and Health Administration
PCI	- Pre-stressed Concrete Institute
SI	- International System of Units
SSPC	- Steel Structures Painting Council
SMACNA	- Steel Metal and Air Conditioning Contractors' National Association
UL	- Underwriters Laboratories Inc.
USACE	- US Army Corps of Engineers
USCG	- US Coast Guard

END OF SECTION

SECTION 01 45 00 QUALITY CONTROL

PART 1 - GENERAL

1.01 Work Included

- A. Provide inspections, tests, and other quality control services required by governing agencies and authorities for the type of work included in the Contract and as described herein or as specified in individual specifications sections. These services include those normally performed by independent agencies. Include all cost for quality control services in the Bid.
- B. Provide the following, as needed:
 - 1. Install, build or perform mock-ups, as needed.
 - 2. Provide manufacturers' field services and reports – to ensure proper installation and successful testing and operation of works installed.
 - 3. Provide inspection and field services required by governing governmental agencies and authorities.
 - 4. Collect field samples needed for the type of work in the Contract.
- C. Mock-Up:
 - 1. When work involves multiple units of similar construction, construct and install one complete full size unit as Mock-up unit of each type of windows and doors. The mock-up unit will be used by the Authority as standard for the following:
 - a. Color and appearance of construction.
 - b. Details and fit with adjacent components.
 - c. The quality of material.
 - d. The quality of workmanship.
 - 2. Use only acceptable products and material. Install materials and products using manufacturer's approved installation methods.
 - 3. Initially, procure only products and materials needed for the mock-up unit. Procurement of materials and products prior to the acceptance of the mock-up unit is at Contractor risks. If the products are not acceptable as to detail and color, etc., the Contractor shall replace same until acceptable to the Authority.
 - 4. When approved, maintain the mock-up unit during construction of the other similar units. A completed mock-up unit approved by the Authority will be used as model for the construction of other units.
 - 5. For this window installation 2 mock-up units shall be installed as follows:
 - a) One Aluminum Sliding Window at Samuel J. Kronman Building.
 - b) One Aluminum Sliding Door at Samuel J. Kronman Building.
 - c) One Double Hung Window(Twin) at Park Terrace Apartment Building

d) One Double Hung/Casement combination window at Park Terrace Apartment Building.

1.02 Definitions

- A. Quality control services include inspections, tests, and related work including preparation of reports, performed by the Contractor, independent agencies, and governing authorities. Contract administration and enforcement activities performed by the Consultant are not included.

1.03 Quality Assurance

- A. Perform work with skilled workers and other persons qualified to produce the workmanship of specified quality.
- B. Perform all work in good and workmanlike manner.
- C. Monitor quality control over products, services, site conditions and workmanship to produce work of specified quality.
- D. Comply with manufacturers' instructions following steps and sequence of installation. Request clarifications if manufacturers' instruction conflicts with Contract Documents.
- E. Comply with specified standards as a minimum quality of work except where more stringent tolerances, codes, and precise workmanship are specified.

END OF SECTION

SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 Work Included

- A. Provide labor, materials, equipment, and temporary facilities including temporary storage facility (for tools, supplies, equipment and other material) and sanitary facilities as the Contractor deems needed.
- B. Arrange for the installation of any temporary facility deemed needed for the construction including contact with utility companies. The cost for furnishing and maintaining the facilities shall be included in the bid of the Contractor.
- C. Maintain temporary facilities in proper and safe condition throughout the duration of the project.

1.02 Temporary Utilities

- A. Provide and properly maintain all sanitary conveniences and accommodations required by law for the use of Contractor employees/workers. The provision of temporary water supply and electricity for the work areas shall be as deemed necessary by the Contractor.
- B. Provide and be responsible for all security measures necessary for protection of the temporary facilities, equipment, materials and supplies for use in this project, and for completed work. The Authority will not provide security for material and supplies brought to the Authority premises.
- C. Locate the temporary storage and sanitary facilities as designated and directed by the Authority. The Contractor shall block-off the designated area during the entire construction period.
- D. Promptly remove all temporary facilities and signs after completion of the construction work. After removal of temporary facilities and equipment, restore the area to at least equal to its original condition, including repair of lawns, pavements, and other facilities. As required elsewhere in these Specifications, take clear photographs of the location of the temporary facilities for use as record of the pre-construction condition of the area. One set of photographs shall be provided to the Consultant.
- E. Use electrical power located in the Authority's buildings, if prior approval and agreement of the Authority is granted, and as long as the use does not interfere with the residents' activities. The Contractor shall furnish electric cords to convey power from source to construction site or temporary site office. The electric cords shall be disconnected at the end of each day. All temporary power used shall be located and installed in a manner to prevent accidents to the workers, Authority personnel, residents (tenants) and the public at large.
- F. Provide means of protection of the workers and public from accidents, including but not limited to overhead routing, coverings, signs and other security measures for accident prevention. The Contractor shall be responsible for injuries and accidents resulting from his/her operations and temporary facilities.

- G. Make all construction facilities and amenities available to the Authority, his representatives and the Consultant when present at the site.

1.03 Temporary Controls

- A. Erosion & Sediment Control: Provide all labor and materials for necessary prevent erosion and sediment transport as required by governing agencies.
- B. Dust Control: Provide necessary measure to control dust during construction.

1.04 Temporary Project Signage

- A. Provide all necessary signs to protect the public, the residents and Authority staff from danger of the construction operations.
- B. If required by the Authority or other agencies having jurisdiction, provide temporary project identification or signage. The signage shall be as required by the Authority or funding agencies or other agencies having jurisdiction. Provide 4 x 8 foot project sign of exterior grade plywood and wood frame construction, painted with exhibit lettering or approved equal. No other signs shall be permitted without Authority permission.

1.05 Removal of Utilities, Facilities and Controls

- A. After the project is completed, remove all temporary utilities, equipment, facilities, materials and signs in accordance with requirements herein or with Authority instructions.
- B. Clean and repair damages caused by installation or use of temporary work.

END OF SECTION

SECTION 01 60 00 PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 Quality of Materials and Equipment

- A. Provide materials and equipment that are new and correctly designed and of standard first-grade quality. Materials and equipment which, in the opinion of the Authority and Architect/Engineer, are inferior or of a lower grade than indicated, specified or required, will not be accepted. Perform installation and construction work and assembly of material in a neat, first class and workmanlike manner.
- B. Use only material and equipment from and by reputable manufacturers having plants of ample capacity. Use materials and equipment of a type that has been satisfactorily used in other installations for the same purpose and condition for at least five (5) years.
- C. The quality of materials required are sometimes defined herein by reference to a manufacturer(s)' product by Catalog Number and Model Number along with material description. Only products equal to or better than the published features of the referenced product(s) will be accepted.
- D. When there are discrepancies between the referenced Catalog Number product and the description of the equipment or material provided in these specifications, bid shall be based on the higher quality, more stringent equipment, and provide the equipment and material selected by the Architect/Engineer, without additional cost to the Authority.
- E. When material and equipment are shown or described differently in two or more places in the Contract Documents (Specifications and Drawings), use the higher quality product and more stringent requirement as basis for Bid. The final material or equipment to be used shall be as approved or selected by the Engineer.

1.02 Based Named Manufacturer

- A. Whenever an equipment, apparatus, material or article is specified by manufacturer's or dealer's (system integrator) name, or by reference to the catalog number of a dealer or manufacturer, it shall be taken as intending to mean or specify the equipment, apparatus, material or article so designated; or any other equal or better equipment, apparatus, material or article providing equal or better design, quality, finish, durability, and function, and which is equally serviceable for the purposes for which it is or they are intended.
- B. On the Contract Drawings and in these Specifications, the first or the only manufacturer's (or dealer or system integrator) named, if any, is the "Base Named Manufacturer". The Base Named Manufacturer's (or System Integrator) product or system described or identified by Catalog/Model number or name is used as **basis for design**. The features, materials of construction, quality, durability, etc. of the product or material so identified have been determined to suit the application. The layout and dimensions shown in the Contract Drawings is based on the materials and equipment and Model Number of the Base Named Manufacturer.

- C. Use equipment, materials and systems that are from a single dealer or manufacturer, to ensure compatibility, unless approved by the Authority and Engineer.
- D. For items, supplies, materials, tools, equipment, accessories, appliances and other material without named manufacturers, submit proposed manufacturers including material, equipment, etc. data and description for review and approval. Submit only names of manufacturers whose products meet the performance and service requirements, material type, etc. to the satisfaction of the Authority and Engineer. Submit manufacturers regularly engaged in the manufacture of the specified equipment, materials and systems of the types and features described, and whose products have been in satisfactory use in similar service for not less than five (5) years. As a minimum, only commercial grade items, supplies, materials, tools, equipment, appliances, accessories and other materials shall be acceptable.

1.03 Work Incidental to Proposed Substitution

- A. When manufacturers other than or in addition to, the Based Named Manufacturer (or System Integrator) are named/listed for a specific material and/or equipment, it shall only mean that these manufacturers are recognized as reputable manufacturers having plants of ample capacity. It shall not mean that any of their products, equipment or materials is suitable for the work.
- B. When using equipment, material and other products other than those by the Based Named Manufacturer, but by manufacturers named or listed in these specifications, submit shop drawings that reflects the changes in equipment layout, structural requirement for equipment support, piping re-arrangement, etc. that are different from Contract Documents.
- C. The naming or listing of a manufacturer shall not be construed that any of their product is acceptable. It shall mean that the manufacturer(s) is considered as capable of manufacturing the specified equipment or material that meets the specifications relative to construction, capacity, finish, durability, function, service life, etc. compared to those named in the Contract Documents.
- D. All additional work and changes in connection to the substitution shall be performed by the Contractor without additional cost to the Authority.
- E. When using substitute equipment and/or material by manufacturers other than those named in the specifications, but approved by the Authority and Engineer, provide all construction and design work resulting from any proposed substitution of equipment or material without additional cost to the Authority.
- F. Perform design work under the direction of a Professional Engineer or Architect licensed to practice in New Jersey, including the following:
 - 1. Detailed design analyses and new specifications.
 - 2. Layout drawings.
 - 3. Installation details of equipment and materials.
 - 4. Piping system re-arrangement.
 - 5. Design changes to structures and electrical systems.
 - 6. Connections to other systems and equipment.

- G. Additional time required to redesign work will be not considered by the Authority and Engineer to justify an extension in the Contract Time of Completion

1.04 Approval of Substitute Manufacturers and/or Equipment

- A. Written Approval: Obtain prior approval of the Authority and Engineer in writing when proposing to use substitute or alternate equipment and materials by manufacturers other than those named in these Specifications, or proposing to use different Model(s) of the named manufacturers.
- B. Submit proof that the proposed equipment, material, etc. are equal to or better than those specified. If the proof is not satisfactory to the Authority, the substitution will not be approved.
- C. The documentation needed to prove and show that the proposed equipment, material etc. are equal or superior to those specified shall include, but not necessarily limited to, the following:
1. Reason for proposing a substitution.
 2. Comparison Sheet between the specified and proposed substitute equipment, material, etc. The comparison criteria shall include all features, capacity, material of construction, cost, etc.
 3. Technical information about the proposed substitution. Provide model number, capacity, nature, efficiency, etc.
 4. Proof that the proposed manufacturer meets all qualification required in these specifications.
 5. Detailed comparison with the specified manufacturers' equipment as to material of construction, function, capacity, equipment efficiency, and other pertinent comparison parameters. Show and compare in writing that the proposed equipment, materials, etc. are equal or better in design, construction, capacity, finish, durability, function, etc. compared to those named in the Contract Documents.
 6. Names of three (3) projects within 50 miles of the offices of the Authority where the proposed products are installed including the complete address of the installations, and the complete address, telephone number, and name of contact person for each project.
 7. That approval of the substitution will not result in delay for completion of the project.
 8. Cost savings to be credited to the Authority.
 9. The comparison shall state prominently the following: "We declare that the proposed substitution is equal to or superior in material, design, construction, capacity, finish, durability, function, service life, etc. compared to those named in the Contract Documents as supported by the materials submitted". This statement shall be signed and certified by both the Contractor and Manufacturer.
- D. When a Comparison Sheet is provided herein, fill out the comparison sheet completely. The comparison sheet must show that the proposed substitution is superior in very aspect to that specified, otherwise it shall not be acceptable.

- E. Allow 15 calendar days (minimum) for Authority and Engineer review and research. This time duration shall be included as part of the Construction Duration of the Work.

1.05 Dealings with Manufacturer and Subcontractors

- A. All transactions with the manufacturers and subcontractors shall be through the Contractor, unless the Contractor requests in writing to the Authority that the manufacturer and/or subcontractors may deal directly with the Authority and Engineer.
- B. Any direct transaction with manufacturers and/or subcontractors by the Authority or Architect/Engineer shall not in any way release the Contractor from his full responsibility under the Contract.

1.06 Storage and Protection

- A. Except as otherwise approved by the Authority, determine and comply with manufacturer's recommendations on product handling, storage and protection.
- B. Deliver products to the job site in their manufacturer's original container, with labels intact and legible. Maintain packaged materials with seals unbroken and labels intact until time of use. Promptly remove damaged materials and unsuitable items from the job site, and promptly replace with materials meeting the specified requirements, at no additional cost to the Authority.
- C. The Consultant may reject as non-complying such material and products that do not bear identification satisfactory to the Consultant as top manufacturer, grade, quality, and other pertinent information.
- D. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Authority and the Engineer.
- E. In the event of damage, promptly make replacements and repairs to the approval of the Authority and Engineer at no additional cost to the Authority.
- F. Additional time required to secure replacements and to make repairs shall not be a basis to justify an extension in the Contract Time of Completion.

END OF SECTION

**SECTION 02 21 00
PROJECT MEASUREMENTS AND LAYOUT**

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, material, equipment, tools and other services needed to conduct measurements to accurately layout and set up correct elevations of new windows, new work, equipment, piping, accessories, structures and other materials in accordance with the requirements of the Contract Documents.
- B. Check, record and verify all dimensions, elevations, quantities and location shown on the Contract Documents prior to bid and prior to ordering any equipment and material required in this Contract. Dimensions and quantities shown and indicated in the Contract Documents are to be considered approximate and shall not be used to layout and fit equipment, piping and other material furnished and installed by the Contractor. Verify and check quantities before bidding the work.
- C. Determine and confirm the location of the existing underground and overhead facilities, equipment, piping and accessories, including the location and layout of all underground and surface piping, utility lines, sewers and similar structures that may be in the way or affected by the construction.

1.02 Quality Assurance

- A. Employ qualified personnel experienced in site facilities surveys and measurements for the type of work in this project and who are familiar with the requirements and the methods needed for proper performance of the work.

1.03 Site Survey/Measurements

- A. If needed, make available qualified personnel and adequate equipment and tools to survey and maintain control points, layout, and all lines and grades throughout the duration of the Contract.
- B. Locate existing utilities and mark their locations prior to the commencement of work. Safe and proper protection of these facilities shall be implemented during the construction. Damage to any of the utility lines shall be immediately repaired or restored at the Contractor's expense.

1.04 Layout and Elevations of Work

- A. Check the accuracy of all elevations shown on the drawings, if any, that were taken during the design stage. It shall be assumed that some elevations have changed since that time.

END OF SECTION

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SECTION 02 41 00 DEMOLITION AND REMOVAL WORK

PART 1 - GENERAL

1.01 Work Included

- A. Demolish and remove from site those items so indicated on the Drawings, described in these Specifications or required for the proper installation of the Works. The Bidder/Contractor shall be fully responsible for quantifying the actual amount of demolition work required based on his/her selected construction method(s). All costs of demolition shall be included in his/her bid.
- B. Assess and evaluate the needed demolition to be included in bid.
- C. The demolition work shall consist of the safe and proper removal and disposal of the following:
 - 1. Existing windows and doors, frames, trims, fasteners, panning, window lintel panning, caulking, and other materials.
 - 2. Existing windows and door security guards and attachment materials.
 - 3. Existing window shade brackets, if required.
 - 4. Other accessories needed to be removed to allow and to facilitate the new construction.
 - 5. Demolition work shall include removal of debris and other construction materials in the all areas of work as required by the Authority to keep the area clean.

1.02 Quality Assurance

- A. Use adequate number of skilled workmen thoroughly trained, experienced and familiar with the specified requirements and methods needed for the proper performance of the demolition work specified herein.

1.03 Schedule of Demolition

- A. Perform demolition work only when all window material and equipment to be installed (at the particular apartment) are available. The installation of windows shall be completed in the shortest possible time after demolition work is started.
- B. Schedule work so that inconvenience to the residents is minimized. Provide at least 5 - day prior notice to the Authority and residents before any work in a particular apartment is initiated.

1.04 Regulations, Codes and Standards

- A. Comply with pertinent rules and regulations, codes and standards of all local, state, and federal agencies and authorities having jurisdiction.
- B. Obtain and pay for all permits required by all agencies and authorities.

1.05 Noise and Disruption

A. Keep noise levels within the requirements of the Occupational Safety and Health Act of 1970, Article 1910.95 and revisions thereof.

1. Noise and vibration during demolition shall be avoided or be kept to a minimum. Any work that causes unavoidable disruption or inconvenience to the residents shall be done only with the prior approval of the Authority and in accordance with any agreed upon Schedule of Work.

PART 2 – PRODUCTS**2.01 Demolished Materials**

- A. All demolished materials shall become the property of the Contractor and shall be completely removed from the job site.
- B. Upon completion and during performance of demolition work, remove tools, equipment and waste material from the site.
- C. Perform off-site disposal of demolished material in accordance with applicable and relevant local, State, and Federal Laws and Regulations.

2.02 Replacement of Cut Materials

- A. Use materials that are identical to the existing materials.
- B. If identical materials are no longer available, use materials complying with pertinent Sections of these Specifications or materials that match the color, texture and structural integrity of the existing adjacent surfaces.
- C. Patching Material: Use material compatible with the new material and existing material.

PART 3 - EXECUTION**3.01 Preparation Prior to Demolition**

- A. Provide necessary and required protection including, but not limited to, shoring, bracing, and support to maintain structural integrity of new and existing work.
- B. Utility shut-down shall be done with:
 1. Five (5) days prior notice to the Authority and the residents.
 2. Disruption of service shall be four (4) hours maximum in any 8-hour workday.

3.02 Moving of Furniture

- A. Move furniture and equipment from the window area to locations designated by the Authority and/or resident prior to the start of the demolition work. All furniture and apartment equipment

shall be protected from damage and dust.

- B. Connect as necessary, electrical equipment in another room that is convenient to the residents. Coordinate closely with the Authority and residents.
- C. Enclose work area to prevent dusts and dirt (resulting from the construction activities) from migrating to other rooms and parts of the apartment. The Contractor shall thoroughly clean the apartment if necessary measures to prevent dust migration are not implemented.
- D. The Contractor shall protect from damage all electrical wires, conduits, receptacles, switches, etc.
- E. The Contractor shall protect from damage existing windows, equipment and other building components.

3.03 Cutting and Patching

- A. Perform cutting and patching work identified below:
 - 1. Cutting and patching window openings prior to window installation.
 - 2. Cutting and patching walls and other building components damaged during Contractor work and operation.
- B. Perform cutting and patching work for the following:
 - 1. Make all parts fit properly.
 - 2. Make new and existing contiguous facilities continuous, uniform, even and aesthetically compatible.
 - 3. Repair and patch any and all existing facilities, equipment and material damaged by the Contractor and his workers.
 - 4. Cut and patch existing facilities to allow construction/installation of new facilities.
 - 5. Remove and replace work items not conforming to the requirements of the Contract Documents and all applicable codes and regulations.
 - 6. Remove and replace defective work.
 - 7. Provide containment of dusts, debris and other waste material.
- C. Perform cutting and patching work in accordance with procedures identified herein and in accordance with best practice of the particular trade. Perform cutting and patching work in a manner that do not result in:
 - 1. Reduced capacity of cut components
 - 2. Increased maintenance.
 - 3. Decreased safety.
- D. Perform cutting and patching work required or needed to properly accomplish all the construction work included in this Contract, whether or not explicitly indicated or described. “Cut” areas or removed material shall be replaced with material of equal or better performance characteristics or finished with materials specified and shown on the Contract Documents.

- E. Restore exposed finishes of patched areas and extend restoration into adjoining existing construction in a manner that eliminates evidence of patching and refinishing. Paint entire wall or other building components as needed.
- F. Cut existing construction using methods least likely to damage adjoining construction.
- G. Meet all applicable codes and standards when performing cutting and patching.

3.04 Replacements

- A. Demolition of items not so scheduled to be demolished shall be immediately replaced to the full satisfaction of the Authority and/or Architect/Engineer at no additional cost to the Authority.
- B. Replacement of demolished or removed items shall be of materials complying with pertinent Sections of these Specifications.
- C. Restoration and replacement work shall match existing systems and material of construction.

3.05 Cleaning of Premises

- A. Thoroughly clean areas and spaces where demolition work, cutting and patching, repairs, etc. is performed or used as access to the work area. Clean on a daily basis before leaving the work area.
- B. Completely remove and dispose of debris, waste material, paint, mortar, oil putty and other similar items prior to leaving work area.

3.06 Traffic

- A. Removal of debris shall ensure that minimum interference with roads, streets, sidewalks, and pedestrian walkways and other adjacent facilities. Streets, walks and other facilities shall not be closed or obstructed unless prior permission from the Authority and from other city agencies having jurisdiction is obtained. Provide alternate routes or temporary walkways around closed or obstructed traffic ways if required by the Authority and other governing agencies.

END OF SECTION

SECTION 06 10 00 ROUGH CARPENTRY (WOOD NAILERS & BLOCKING)

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, material, accessories, tools, equipment and other services necessary to install wood nailers and blocking needed for each window installation as shown in the Drawings or as needed or as described herein.

1.02 References

- A. Comply with all pertinent and applicable Federal, State, and Local codes and regulations and with the standards and recommendations of the following:
 - 1. National Forest Products Association, "Product Use Manual".
 - 2. American Plywood Association, "Plywood Specification and Grade Guide".
 - 3. American Wood-Preservers' Association (AWPA), "Standard C1, All Timber Products - Preservative Treatment by Pressure Process".
 - 4. AWPA, Standard C2, "Lumber, Timbers, Bridge Ties and Mine Ties".
 - 5. AWPA, Standard C9, "Plywood".
 - 6. AWPA, "Standard C18, Marine Construction"
 - 7. AWPA, "Standard M4, "Care of Preservative-Treated Wood Products.
 - 8. National Institute of Standards and Technology (NIST), "PS 1, U.S Product Standard for Construction and Industrial Plywood".
 - 9. NIST, "PS 20 American Softwood Lumber Standard".
 - 10. Western Wood Preservers Institute, "Best Management Practices for the Use of Treated Wood in Aquatic Environment".

1.03 Quality Assurance

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Mill and Producer Stamp: Each piece of lumber shall bear stamp indicating type, grade, mill and grading agency.
- C. Wood Treatment Facility: Provide treated materials that have been produced under an American Lumber Standard Committee (ALSC) recognized quality assurance program.

1.04 Delivery, Storage and Handling

- A. Deliver the materials to the job site and store in a safe area out of the way of traffic and shored up above the ground surface.
- B. Care shall be used in off loading of lumber to prevent damage, splitting and breaking of materials.

PART 2 - PRODUCTS

2.01 Materials

A. Lumber:

1. Use standard grade Douglas Fir, Hem-Fir, White Pine or Southern Pine.
2. Use lumber pressure preservative treated in accordance with the American Wood Preservers Bureau (AWPB) LP-2 treatment and kiln dried to 19 percent moisture content after treatment.

B. Nails, Screws and Bolts:

1. Use stainless steel screws and bolts for fastening to aluminum or steel.
2. For other usage, use galvanized, or zinc or cadmium plated.

C. Expansion Anchors:

1. Use galvanized steel wedge anchors, conforming to Federal Specification FF-S-325, Group II, Type 4, Class 1.

D. Toggle Bolts:

1. Use cadmium or zinc plated tumble wing type, conforming to Fed. Specification FF-B-588.

E. Self Threading Masonry Screws:

1. Use zinc plated screws similar to the following:
 - a. Tapcon
Elco Industries, Inc.
1111 Samuelson Road
Rockford, IL

PART 3 - EXECUTION

3.01 Installation

- A. Install nailers and blocking true to line and plane within a tolerance of 1/8" in 10 feet. Blockings shall be at least 4" wide by 3/4" thick by (as needed) length and spaced not more than 16" on centers as shown on the drawings.
- B. Fit joints neatly with no more than 1/16-inch space between abutting members.
- C. Attach nailers and blocking securely to properly support the materials and other items that will be attached to them.
- D. Space fasteners equally at 8 inches spacing (on centers) and 4 inches from the end of each member.

E. Attach/secure nailers and blocking as follows or as approved by the Authority:

1. To cast-in-place concrete, solid concrete masonry units and brick: Use expansion anchors or self-threading masonry screws.
2. To faces of hollow concrete masonry units: Use toggle bolts.
3. To tops of hollow concrete masonry units: Use anchor bolts extending to the course below, embedded in 3500 psi concrete filled cores.
4. To wood or lumber: Use nails or screws.
5. To metal: Use bolts or self-tapping screws.

F. Countersink fasteners if they interfere with the proper and smooth installation of items (custom casework and aluminum windows) to be attached to the nailers and blocking.

3.02 Clean Up

A. Clean the area of work daily. Dispose of all construction debris.

END OF SECTION

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SECTION 07 65 26 SELF-ADHERING SHEET FLASHING

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, material, equipment, accessories, and other services and tools needed for self-adhering sheet flashing work where required for positive barrier against passage of moisture and air.
 - 1. Section provides for a flexible rubberized asphalt adhesive based self-adhering flashing tape.
 - 2. Apply self-adhering sheet flashing around perimeter of window and door rough opening to ensure water and air tight construction.

1.02 Submittal:

- A. Product Data:
 - 1. Submit list of materials to be provided under this Section.
 - a. Provide manufacturer's specifications and other data needed to show compliance with the requirements herein specified.
 - b. Provide manufacturer's recommended installation procedures, which will be the basis for accepting or rejecting the actual installation of the product.

1.03 Quality Assurance

- A. Use adequate number of skilled workers thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this Section.

PART 2 - PRODUCTS

2.01 Materials

The basis of this specification is SELF-ADHERING SHEET FLASHING
as manufactured by: GRACE CONSTRUCTION PRODUCTS

- A. Flashing Description: 0.5 mm of a black colored rubberized asphalt adhesive integrally bonded to 0.1 mm of cross-laminated polyethylene film to provide a min. 0.6 mm (25 mil) thick membrane. Membrane shall be interleaved with silicone-coated release paper until installed. The Self-Adhering Sheet Flashing shall be as follow:
 - 1. Grace Vycor Plus Self-adhered flashing.
 - 2. Or Approved Equal.

B. Performance Requirements:

1. Meets or exceeds the requirements set forth in AAMA 711-13 voluntary specification for self-adhered flashing Level 3 requirement for elevated temperature exposure.
2. Meets or exceeds the requirements set forth in ASTM E2112 for Flashing Exterior Windows and Doors
3. Water Penetration around Nails: ASTM D1970 Section 7.9, modified per section 5.2.1 of AAMA 711 voluntary specification – Pass 1.2 in head of water
4. Tensile Strength: ASTM D412, Die C Modified – Min. 985 kPa (143 psi)
5. Thickness: ASTM 3652 – Min 25 mils
6. Color: Visual inspection – Black Film with White Printing
7. Product: Vycor® Plus Flashing manufactured by Grace Construction Products.

C. Flashing Accessories:**1. Primer:**

- a. Description: Water-based primer which imparts an aggressive, high tack finish on the treated substrate.
- b. Flash Point: No flash to boiling point
- c. Solvent Type: Water
- d. VOC Content: Not to exceed 10 g/L
- e. Application Temperature: -4°C (25°F) and above
- f. Freezing point (as packaged): -7°C (21°F)

PART 3 – EXECUTION**1.02 Surface Conditions**

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Proceed with the work only after satisfactory conditions are established.

1.02 Installation

- A. General: Install flashing to dry surfaces at air and surface temperatures of -4°C (25°F) and above in accordance with manufacturer's recommendations at locations indicated on Construction Documents. Primer is not required for most wood substrates including plywood and OSB provided they are clean and dry. On concrete, masonry, and Dens Glass Gold apply Perm-A-Barrier WB Primer prior to flashing.
- B. Flexible Wall Flashing:
 1. Precut pieces of flashing to easily handled lengths for each location.

2. Remove silicone-coated release paper and position flashing carefully before placing it against the surface.
3. When properly positioned, place against surface by pressing firmly into place by hand roller. Fully adhere flashing to substrate to prevent water from migrating under flashing.
4. Overlap adjacent pieces 50 mm (2 in.) and roll all seams with a steel hand roller.
5. Trim bottom edge 13 mm (1/2 in.) back from exposed face of the wall. Flashing shall not be permanently exposed to sunlight.
6. At heads, sills and all flashing terminations turn up ends a minimum of 50 mm (2 in.) and make careful folds to form an end dam, with the seams sealed.
8. Do not expose flashing membrane to sunlight for more than one hundred and twenty days prior to enclosure.

END OF SECTION

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**SECTION 07 92 00
SEALANTS AND CAULKING (WINDOWS AND DOORS)**

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, material, equipment, accessories, and other services and tools needed for sealing and caulking work where shown on the Drawings and where required for positive barrier against passage of moisture and air.
 - 1. Seal and caulk all joints and spaces between and around the new windows and rough opening to ensure water and air tight construction.

1.02 Submittals

- A. Product Data:
 - 1. Submit list of materials to be provided under this Section.
 - a. Provide manufacturer's specifications and other data needed to show compliance with the requirements herein specified.
 - b. Provide manufacturer's recommended installation procedures, which will be the basis for accepting or rejecting the actual installation of the product.
- B. Samples:
 - 1. Submit standard color of each sealant, backing material, primer and bond breaker that are proposed to be used.

1.03 Quality Assurance

- A. Use adequate number of skilled workers thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this Section.

PART 2 - PRODUCTS

2.01 Sealants

- A. As a minimum, and unless better material is required by the window manufacturer, use one-component polyurethane sealant conforming to Fed. Spec. TT-S-00230C, Type II non-sag compounds useable on both horizontal and vertical surfaces, subject to the primer material requirements. The sealants shall be as follows:
 - 1. "Dymonic FC": manufactured by TREMCO commercial sealant and water proofing.
 - 2. "Sika Construction Sealant": manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 (Tel 1 800 933 7452).

3. “MasterSeal NP-1”: manufactured by BASF Corporation Construction System. 889 Valley Park Drive, Shakopee, MN 55379 (Tel. 1 800 433 9517)

4. Or Approved Equal.

B. Provide products especially formulated for the proposed use, as recommended by the window manufacturer and approved by the Authority/Consultant.

C. Colors:

1. Colors of sealants shall be as selected by the Authority.
2. In fully or partially concealed installations, use standard gray or black sealant or as selected by the Authority.

2.02 Primers

A. Use only primers which have been tested for durability on the surfaces to be sealed and are specifically recommended for the installation by the manufacturer of the sealant to be used.

2.03 Backup Materials

A. Use only backup materials which are non-absorbent, non-staining, and specifically recommended for the installation of the sealant to be used.

2.04 Masking Tape

A. For masking around joints, provide masking tape which will effectively prevent installation of sealant on surfaces not scheduled to be sealed, and which is removable without damaging the substrate.

2.05 Other Materials

A. Provide other materials, not specifically described but required for a complete and proper installation.

PART 3 - EXECUTION

3.01 Surface Conditions

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Proceed with the work only after satisfactory conditions are established.

3.02 Preparation

A. Concrete Surfaces:

1. Install only on dry, sound, well-brushed and dust-free surfaces.
2. At open joints, remove dust by mechanically blown compressed air.

3. Remove oil and grease by sandblasting and wire brushing.
4. At treated surfaces, remove surface treatment by sandblasting and/or wire brushing.
5. Remove laitance and mortar from joint cavities.

B. Steel Surfaces in Contact with Sealant:

1. Sandblast surfaces as required for acceptable surface bond.
2. Where sandblasting would damage adjacent finish and/or surfaces, scrape or wire brush the metal to remove mill scale and rust.
3. Remove protective coatings by sandblasting or by using solvent which leaves no residue.

C. Aluminum Surfaces:

1. Use no-staining solvents to remove protective coatings recommended by the aluminum work manufacturer.

3.03 Installation of Backup Material

- A. When using backup of tube or rod stock, avoid lengthwise stretching of the material.
- B. Place backup material smoothly and uniformly to the depth shown on the Drawing or otherwise required for good workmanship.
- C. Compress the backup material 25% to 50% and secure a positive fit.
- D. Use and provide a blunt-surfaced tool of wood or plastic having shoulders that ride on the adjacent finished surfaces and a protrusion that provide a uniform depth of backup material below the sealant.

3.04 Priming

- A. Apply primers in accordance with the recommendations of the manufacturer.

3.05 Bond-Breaking Installation

- A. Apply bond-breakers in accordance with manufacturer's recommendations.

3.06 Installation of Sealants

- A. Mask joints thoroughly and completely to prevent appearance of primer and sealant would be objectionable.
- B. Apply sealant in accordance with the recommendation of the manufacturer, thoroughly filling joints and using recommended tools.
- C. Tool joints to uniform profile. Provide uniformly smooth joints with slightly concave surface.

3.07 Cleaning Up

- A. Remove masking tape immediately after joints have been tooled.
- B. Clean adjacent surfaces free from sealant as the installation progresses. Use cleaning agent recommended by the sealant manufacturer.
- C. Promptly remove from the job site all debris, empty containers and surplus material.

END OF SECTION

SECTION 08 52 00 ALUMINUM SLIDING DOOR

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, materials, equipment, accessories and other similar services and items needed and required to install aluminum sliding doors as shown on the Drawings and as described and specified herein. As minimum, the doors shall be commercial grade in accordance with AAMA classification system. The work includes the following:
1. Provision of new factory glazed thermally broken aluminum doors as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings
 2. Removal of other existing construction and door materials necessary for proper installation of new doors.
 3. Removal and legal disposal off site of all removed doors, resulting debris, and other similar materials.
 4. Preparation of the door opening, prior to new door installation.
 5. Installation of the new doors in accordance with the recommendations and instructions of the door manufacturer.
 6. Provision of insulated panels and frames as required.
 7. Provision of treated wood blocking, fillers and nailers, as required for a secure door installation.
 8. Fiberglass insulation between door frames and adjacent construction.
 9. Sealing of entire perimeter of door units to the surrounding conditions after installation. No draft around the door perimeter shall be allowed.
- B. Survey and examine the condition of existing door sill, head and jambs prior to bidding. The contractor shall be responsible for quantifying and providing new blockings.

1.02 References

- A. AAMA – American Architectural Manufacturers Association:

1. AAMA/WDMA/CSA 101/IS.2/A440-05 "North American Fenestration Standard/Specification for Windows, Doors, and Skylights"
2. AAMA/WDMA/CSA 101/IS.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"
3. AAMA 502-08 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
4. AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum
5. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.

6. AAMA 800-07 - Voluntary Specifications and Test Methods for Sealants.
7. AAMA 902-07 - Voluntary Specification for Sash Balances.
8. AAMA 910-93 - Voluntary Life Cycle' Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
9. AAMA 1503-98 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections.
10. AAMA 2603-02 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
11. AAMA 2604-05 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
12. AAMA 2605-05 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM – American Society for Testing and Materials:

1. ASTM E 283-04 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
2. ASTM E 330-02 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
3. ASTM E 331-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 547-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential.
5. ASTM F 588; 1997 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
6. ASTM E 2190-02 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

C. NFRC – National Fenestration Rating Council.

1. NFRC 100-04 - Procedure for Determining Fenestration Product U Factors.
2. NFRC 102-04 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
3. NFRC 500-04 - Procedure for Determining Fenestration Product Condensation Resistance Values.

D. IGCC – Insulating Glass Certification Council.

E. SGCC – Safety Glazing Certification Council.

1. Z97.1-04 American National Standard for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.
2. 16 CFR 1201 Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations.

F. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.

G. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC.)

1.03 Quality Assurance

A. Product Requirements: For maximum performance, doors for this project must meet both the testing requirements as contained herein and the minimum material requirements specified. doors that carry the applicable AAMA rating but do not meet the material thicknesses, depths, etc. shall not be acceptable for use on this project.

B. Qualifications & Manufactures Qualifications: An installer acceptable to aluminum door manufacturer for installation of units required for this Project.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum doors and are based on the specific system indicated.

1. Do not modify intended aesthetic effects, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Fenestration Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440-08, "Standard/Specification for Windows, Doors, and Unit Skylights" for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with more stringent requirements if indicated.

1. Provide AAMA-certified aluminum doors.

E. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.

F. Pre-installation Conference: If requested, conduct conference at project site to review methods and procedures related to aluminum doors including, but not limited to, the following:

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review, discuss, and coordinate the interrelationship of aluminum doors with other exterior wall components.
3. Review and discuss the sequence of work required to construct a watertight and weather tight exterior building envelope.
4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

- G. Mock-up Units: Complete one door installation at each site for approval of the Authority. The doors to be completed as mock-up units will be as designated by the Authority. The approved mock-up units will be used as standard for appearance and workmanship. The mock-up unit will be used by the Authority to verify the following:
1. Fit of doors to the opening.
 2. The quality of construction.
- H. Provide test report from AAMA accredited laboratories certifying performance for Structural and Thermal as specified. Test report shall be submitted with shop drawings.

1.04 Testing and Performance Requirements

- A. The test reports provided pursuant to Paragraph 1.03 must provide test results from an AAMA accredited laboratory certifying the door performance specified hereinafter. The test reports shall not be more than 4 years old. Products tested at less than the minimum sizes specified will be automatically rejected.
- B. Submit test reports accompanied by the door manufacturer's Letter of Certification stating that the tested door meets or exceeds the referenced criteria for the appropriate AAMA/NWWDA 101/I.S. 2/A440-08 door type.
- C. Provide doors that meet the testing requirements below.
- D. Provide the minimum material thicknesses and depths specified elsewhere in these Specifications.
- E. AAMA Designation SD-C40
1. General
 - a. Provide aluminum doors capable of complying with performance requirements indicated, based on testing manufacturer's doors that are representative of those specified, and that are of minimum test size indicated below:
 - b. Sliding Door: 95" x 83"
 2. Test Procedures and Performance
 - a. Air, Water and Structural Performance Requirements: When tested in accordance with cited test procedures, doors shall meet or exceed the following performance criteria, as well as those indicated in AAMA 101 and 101/I.S.2/A440-08 for performance grade of unit specified unless otherwise noted herein.

(1) Air Test Performance Requirements: Air infiltration maximum 0.30 cfm per square foot at 1.6 psf pressure differential when tested in accordance with ASTM E283 for sliding sealed products.

(2) Water Test Performance Requirements: No uncontrolled water leakage at 6 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.

(3) Structural Test Performance Requirements:

(a) Uniform Load Deflection Test

- No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of $L/175$ at both a positive and negative load of design test pressure when tested in accordance with ASTM E330.
- Structural reinforcing that is not standard on units being furnished is not allowed.

(b) Uniform Load Structural Test:

- Unit to be tested at 1.5 X design test pressure, both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
- No glass breakage; permanent damage to fastener, hardware parts, or anchors; damage to make doors inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

b. Forced Entry Resistance Test: ASTM F 588, Type and Grade as indicated for each Product.

c. Thermal Performance Requirements

- (1) Perform thermal computer simulation in accordance with the configuration specified in NFRC 100.
- (2) Thermal Transmittance (U-Value) shall not exceed 0.46 BTU/hr/sq.ft/degree F for the whole door assembly.
- (3) Solar Heat Gain Coefficient (SHGC) shall not exceed 0.39 for the whole door assembly.

1.05 Submittals

- A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum door indicated.
- B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:
 1. Elevation for each style door specified indicating its size, glazing type, muntin type and design.
 2. Mullion details, including reinforcement and stiffeners.
 3. Joinery details.
 4. Weather-stripping details.
 5. Thermal-break details.
 6. Glazing details.

7. Schedule: Provide a door schedule indicating the type, size, color, and operation of each unit specified. Coordinate with door mark types found in the Contract Drawings.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
1. Include similar samples of hardware and accessories involving color selection.
- D. Maintenance Data: For operable door sash, operating hardware and finishes to include in maintenance manuals.
- E. Warranty: Special warranty specified in this Section.
- F. Test Reports: Submit certified independent testing agency reports indicating door units meet or exceed specified performance requirements.

1.06 Delivery, Storage and Handling

- A. Deliver and store the doors and other materials to the job site in a safe area out of the way of traffic and shored up above the ground surface.
- B. Deliver all products in original factory package bearing the identification of the product, name of manufacturer, model number and batch number.
- C. Promptly replace damaged materials and unsuitable products with material meeting the specified requirements at no additional cost to the Authority.

1.07 Special Project Warranties

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum doors that fail in materials or workmanship within specified warranty period.
- B. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
 2. Structural failures including excessive deflection, water leakage, or air infiltration.
 3. Faulty operation of movable sash and hardware.
 4. Deterioration of metals or other materials beyond that which is normal.
 5. Failure of insulating glass.
- C. Manufacturer's Warranty Period:
1. Door: 2 years from final acceptance of the work
 2. Insulated Glazing: (5-year warranty from final acceptance of the work)
 3. Painted Metal Finishes:
 - a. 10 years from date from final acceptance of the work for AAM A 2605 High Performance Organic Coating.

PART 2 - PRODUCTS

2.01 Manufacturer

A. The basis of this specification is SERIES 1240 SD-C40 SLIDING DOOR as manufactured by:

1. Crystal Window & Door Systems, Ltd.
31-10 Whitestone Expressway, Flushing, NY 11354
Tel: 718. 961.7300; Tel: 800. 472.9988

B. Approval of proposed substitution shall be as approved by the Authority.

2.02 Material Description

A. Door Types:

SERIES 1240 SD-C40 SLIDING DOOR,

B. AAMA/WDMA Performance Requirements: Provide aluminum doors of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440-08.

1. Performance Class and Grade: Class 1240 SD-C40

C. Construction: 4 9/16 inch frame depth. Wall thickness: 0.062"/0.062" frame/sill; 0.062" sash. Factory finished extruded aluminum frame and sash members with integral structural polyurethane thermal break. Rail shall be tubular profile.

A. Aluminum: Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.

B. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).

D. Thermal Barrier:

1. Structural Thermal Barrier:

- a. Structural thermal barrier shall consist of poured-in-place polyurethane polymer that shall transfer shear during bending and provide composite action between frame components.

2. Non Structural Thermal Barriers:

- a. Non-structural thermal barriers are used only in conjunction with structural thermal barriers. The purpose of non-structural thermal barriers is to enhance thermal performance of the primary structural thermal barriers (polyamide struts) by inhibiting heat transfer through thermal radiation and convection. Non-structural thermal barriers shall not be used as primary load carrying members.
- b. Rigid non-structural thermal barriers shall be constructed of extruded polyvinylchloride (PVC).

E. Glass

1. Glazing Materials:

- a. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical. Design glass to resist design wind pressure based on glass type factors for short-duration load.
- b. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- c. Strength: Where float glass is indicated, provide annealed float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- d. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated.
 - (1) U-Factors: Total-glazing values, according to NFRC 100 and based on LBL'S WINDOW 5.2 computer program, expressed as BTU/sq. ft x h x deg F (W/sq. m x K).
 - (2) Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's Door 5.2 computer program.
 - (3) Visible Reflectance: Center-of-glazing values, according to NFRC 300.
- e. Float Glass: ASTM C 1036, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated.
- f. Coated Glass: ASTM C 1376, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.
- g. Laminated Glass: ASTM C 1172, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.

2. Insulating Glass Units:

Factory-assemble units consisting of sealed lites of glass separated by a PPG Intercept Spacer system consisting of a one-piece, metallic, U-channel design that creates an effective thermal barrier to help reduce conducted heat loss through the door.

- a. Insulating glass units shall be sealed with an integral desiccant matrix and a butyl sealant extruded around the entire perimeter of the spacer to achieve a seal. The sealant applied is to be Dual Seal Equivalent (DSE). Interspace to be filled with air or argon gas as required by thermal computer simulation.
- b. Insulating Glass Types: Low-E coated, insulating glass units.
 - (1) Overall Unit Thickness: 1" (25.4 mm)
 - (2) Thickness of Each Glass Lite: 1/8"
 - (3) Outdoor Lite: Class 1 (Clear) fully tempered float glass.
 - (4) Interspace Content: Argon Gas.
 - (5) Indoor Lite: Class 1 (Clear) fully tempered float glass.
 - (6) Low-E Coating: Third surface.
 - (7) Glass Winter Night Time U-Value: 0.27 maximum.
 - (8) Solar Heat Gain Coefficient: 0.46 maximum.

(9) Provide safety glazing labeling, if necessary.

F. Hardware

1. Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum doors and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.

2. Provide the following operating hardware:

- a. Rollers: Two adjustable stainless steel tandem rollers shall be recessed into the bottom rail of each movable panel.
- b. Handle: Each movable panel shall have a black color locking handle set at one of its stiles.

G. Finishes

1. Conforming to AAMA 2604-05 specification, finish on all extruded aluminum shall consist of zero or near-zero VOC, organic POWDER COAT with a baked on super-durable thermosetting polyester resin, electro-statically applied on five-stage pre-treated aluminum surface. Equivalent to 50% Kynar polyvinylidene fluoride liquid paint finishes. Powder coat material to be as manufactured by Sherwin Williams or PPG Powder Coatings.

2. Color to be selected from Manufacturer's Standard Color Chart (or custom-matched as required by project Architect/Owner).

H. Door Accessories

1. Provide the following accessories as specified in the contract drawings. Finish to match door frames or as selected by the Architect:

- a. Wrap Around Panning
- b. Present Panning
- c. Snap Trim/Clips
- d. Expanders
- e. Receptors
- f. Subsills and Subsill Anchors
- g. Mullions and Mullion Covers
- h. Exterior Sills
- i. Interior Stools

I. Insect Screens

- 1. Screen frames shall consist of tubular extruded aluminum profiles with finish to match door frames.
- 2. Fiberglass mesh (18 X 16) with PVC spline.

J. Steel components including attachment fasteners shall be 300 series stainless steel except as noted.

K. Thermoplastic or thermo-set plastic caps, housings and other components shall be injection-molded nylon, extruded PVC, or other suitable compound.

L. Sealants

1. Sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
2. Frame joinery sealants shall be suitable for application specified and as tested and approved by door manufacturer.

PART 3 – Execution

3.01 Examination

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather-tight door installation.

1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.
5. A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Installation

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing doors, hardware, accessories, and other components.
- B. Install doors level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.

- D. Install doors and components to drain condensation, water penetrating joints, and moisture migrating within doors to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 Adjusting, cleaning, and protection

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather-tight closure. Lubricate hardware and moving parts.
- B. Manufacturer shall clean all glass and aluminum prior to shipment.
- C. Protection of newly installed doors and/or final cleaning of glass and aluminum to remove any accumulations that may have occurred during the construction period is to be the responsibility of the General Contractor or Owner.
- D. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weather-tight when in locked position.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 08 51 10 ALUMINUM CASEMENT WINDOWS

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, materials, equipment, accessories and other similar services and items needed and required to install aluminum single hung windows as shown on the Drawings and as described and specified herein. As minimum, the windows shall be commercial grade in accordance with AAMA classification system. The work includes the following:
1. Provision of new factory glazed thermally broken aluminum windows as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings
 2. Removal of other existing construction and window materials necessary for proper installation of new windows.
 3. Removal and legal disposal off site of all removed windows, resulting debris, and other similar materials.
 4. Preparation of the window opening, prior to new window installation.
 5. Installation of the new windows in accordance with the recommendations and instructions of the window manufacturer.
 6. Provision of insulated panels and frames as required.
 7. Provision of treated wood blocking, fillers and nailers, as required for a secure window installation.
 8. Fiberglass insulation between window frames and adjacent construction.
 9. Sealing of entire perimeter of window units to the surrounding conditions after installation. No draft around the window perimeter shall be allowed.
- B. Survey the condition of existing window sill, head and jambs prior to bidding. The contractor shall be responsible for quantifying and providing new blockings.

1.02 References

- A. AAMA – American Architectural Manufacturers Association:

1. AAMA/WDMA/CSA 101/IS.2/A440-08 "North American Fenestration Standard/Specification for Windows, Doors, and Skylights"
2. AAMA/WDMA/CSA 101/IS.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"
3. AAMA 502-08 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
4. AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum
5. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.
6. AAMA 800-07 - Voluntary Specifications and Test Methods for Sealants.

7. AAMA 902-07 - Voluntary Specification for Sash Balances.
8. AAMA 910-93 - Voluntary Life Cycle' Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
9. AAMA 1503-98 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections.
10. AAMA 2603-02 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
11. AAMA 2604-05 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
12. AAMA 2605-05 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM – American Society for Testing and Materials:

1. ASTM E 283-04 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
2. ASTM E 330-02 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
3. ASTM E 331-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 547-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential..
5. ASTM F 588; 1997 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
6. ASTM E 2190-02 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

C. NFRC – National Fenestration Rating Council.

1. NFRC 100-04 - Procedure for Determining Fenestration Product U Factors.
2. NFRC 102-04 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
3. NFRC 500-04 - Procedure for Determining Fenestration Product Condensation Resistance Values.

D. IGCC – Insulating Glass Certification Council.

E. SGCC – Safety Glazing Certification Council.

1. Z97.1-04 American National Standard for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.
2. 16 CFR 1201 Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations.

F. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.

G. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC.)

1.03 Quality Assurance

- A. Product Requirements: For maximum performance, windows for this project must meet both the testing requirements as contained herein and the minimum material requirements specified. Windows that carry the applicable AAMA rating but do not meet the material thicknesses, depths, etc. shall not be acceptable for use on this project.
- B. Qualifications & Manufactures Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated.
 - 1. Do not modify intended aesthetic effects, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Fenestration Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440-08, "Standard/Specification for Windows, Doors, and Unit Skylights" for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with more stringent requirements if indicated.
 - 1. Provide AAMA-certified aluminum windows.
- E. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.
- F. Pre-installation Conference: If requested, conduct conference at project site to review methods and procedures related to aluminum windows including, but not limited to, the following:
 - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components.
 - 3. Review and discuss the sequence of work required to construct a watertight and weather tight exterior building envelope.
 - 4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

- G. Mock-up Units: Complete one window installation at each site for approval of the Authority. The windows to be completed as mock-up units will be as designated by the Authority. The approved mock-up units will be used as standard for appearance and workmanship. The mock-up unit will be used by the Authority to verify the following:
1. Fit of windows to the opening.
 2. The quality of construction.
- H. Provide test report from AAMA accredited laboratories certifying performance for Structural and Thermal as specified. Test report shall be submitted with shop drawings.

1.04 Testing and Performance Requirements

- A. The test reports provided pursuant to Paragraph 103 must provide test results from an AAMA accredited laboratory certifying the window performance specified hereinafter. The test reports shall not be more than 4 years old. Products tested at less than the minimum sizes specified will be automatically rejected.
- B. Submit test reports accompanied by the window manufacturer's Letter of Certification stating that the tested window meets or exceeds the referenced criteria for the appropriate AAMA/NWWDA 101/I.S. 2/A440-08 window type.
- C. Provide windows that meet the testing requirements below.
- D. Provide the minimum material thicknesses and depths specified elsewhere in these Specifications.
- E. AAMA Designation AW-PG90-C
1. General
 - a. Provide aluminum windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of minimum test size indicated below:
 - b. Casement Outswing Windows: size of 36" x 60"
 2. Test Procedures and Performance
 - a. Air, Water and Structural Performance Requirements: When tested in accordance with cited test procedures, windows shall meet or exceed the following performance criteria, as well as those indicated in AAMA 101 and 101/I.S.2/A440-08 for performance grade of unit specified unless otherwise noted herein.

(1) Air Test Performance Requirements: Air infiltration maximum 0.10 cfm per square foot at a static air pressure differential of 6.2 psf differential when tested in accordance with ASTM E283 for sliding sealed products.

(2) Water Test Performance Requirements: No uncontrolled water leakage at 12 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.

(3) Structural Test Performance Requirements:

(a) Uniform Load Deflection Test

- No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of $L/175$ at both a positive and negative load of design test pressure when tested in accordance with ASTM E330.
- Structural reinforcing that is not standard on units being furnished is not allowed.

(b) Uniform Load Structural Test:

- Unit to be tested at 1.5 X design test pressure, both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
- No glass breakage; permanent damage to fastener, hardware parts, or anchors; damage to make windows inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

b. Forced Entry Resistance Test: ASTM F 588, Type and Grade as indicated for each Product.

c. Thermal Performance Requirements

(1) Perform thermal computer simulation in accordance with the configuration specified in NFRC 100.

(2) Computer Thermal Transmittance (U-Value) shall not exceed 0.51 BTU/hr/sq.ft/degree F for the whole window assembly.

(3) Computer Solar Heat Gain Coefficient (SHGC) shall not exceed 0.31 for the whole window assembly.

1.05 Submittals

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum window indicated.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:

1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
2. Mullion details, including reinforcement and stiffeners.
3. Joinery details.
4. Weather-stripping details.
5. Thermal-break details.
6. Glazing details.

7. Schedule: Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
1. Include similar samples of hardware and accessories involving color selection.
- D. Maintenance Data: For operable window sash, operating hardware and finishes to include in maintenance manuals.
- E. Warranty: Special warranty specified in this Section.
- F. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.06 Delivery, Storage and Handling

- A. Deliver and store the windows and other materials to the job site in a safe area out of the way of traffic and shored up above the ground surface.
- B. Deliver all products in original factory package bearing the identification of the product, name of manufacturer, model number and batch number.
- C. Promptly replace damaged materials and unsuitable products with material meeting the specified requirements at no additional cost to the Authority.

1.07 Special Project Warranties

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
- B. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
 2. Structural failures including excessive deflection, water leakage, or air infiltration.
 3. Faulty operation of movable sash and hardware.
 4. Deterioration of metals or other materials beyond that which is normal.
 5. Failure of insulating glass.
- C. Manufacturer's Warranty Period:
1. Window: 2 years from final acceptance of the work
 2. Insulated Glazing: (5-year warranty from final acceptance of the work)
 3. Painted Metal Finishes:
 - a. 10 years from date from final acceptance of the work for AAM A 2605 High Performance Organic Coating.

PART 2 - PRODUCTS

2.01 Manufacturer

- A. The basis of this specification is SERIES 8000 AW-PG90-C CASEMENT OUTSWING WINDOW
as manufactured by:

1. Crystal Window & Door Systems, Ltd.
31-10 Whitestone Expressway, Flushing, NY 11354
Tel: 718. 961.7300; Tel: 800. 472.9988

- B. Approval of proposed substitution shall be as approved by the Authority.

2.02 Material Description

- A. Window Types:
SERIES 8000 AW-PG90-C CASEMENT OUTSWING WINDOW
- B. AAMA/WDMA Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440-08.
1. Performance Class and Grade: Class AW-PG90-C
- C. Construction: 2 ¼ inch frame depth. Wall thickness: 0.125" frame/sill; 0.125" sash. Factory finished extruded aluminum frame and sash members with integral structural polyurethane thermal break.
1. Aluminum: Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.
 2. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).
- D. Thermal Barrier:
1. Structural Thermal Barrier:
Structural thermal barrier shall consist of poured-in-place polyurethane polymer that shall transfer shear during bending and provide composite action between frame components.
 2. Non Structural Thermal Barriers:
 - a. Non-structural thermal barriers are used only in conjunction with structural thermal barriers. The purpose of non-structural thermal barriers is to enhance thermal performance of the primary structural thermal barriers (polyamide struts) by inhibiting heat transfer through thermal radiation and convection. Non-structural thermal barriers shall not be used as primary load carrying members.

- b. Rigid non-structural thermal barriers shall be constructed of extruded polyvinylchloride (PVC).

E. Glass

1. Glazing Materials:

- a. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical. Design glass to resist design wind pressure based on glass type factors for short-duration load.
- b. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- c. Strength: Where float glass is indicated, provide annealed float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- d. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated.
 - (1) U-Factors: Total-glazing values, according to NFRC 100 and based on LBL'S WINDOW 5.2 computer program, expressed as BTU/sq. ft x h x deg F (W/sq. m x K).
 - (2) Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 - (3) Visible Reflectance: Center-of-glazing values, according to NFRC 300.
- e. Float Glass: ASTM C 1036, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated.
- f. Coated Glass: ASTM C 1376, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.
- g. Laminated Glass: ASTM C 1172, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.

2. Insulating Glass Units:

- a. Factory-assemble units consisting of sealed lites of glass separated by a PPG Intercept Spacer system consisting of a one-piece, metallic, U-channel design that creates an effective thermal barrier to help reduce conducted heat loss through the window.
- b. Insulating glass units shall be sealed with an integral dessicant matrix and a butyl sealant extruded around the entire perimeter of the spacer to achieve a seal. The sealant applied is to be Dual Seal Equivalent (DSE). Interspace to be filled with air or argon gas as required by thermal computer simulation.
- c. Insulating Glass Types: Low-E coated, insulating glass units.
 - (1) Overall Unit Thickness: 1" (25.4mm)
 - (2) Thickness of Each Glass Lite: 1/8"
 - (3) Outdoor Lite: Class 1 (Clear) fully tempered float glass.
 - (4) Interspace Content: Argon Gas.
 - (5) Indoor Lite: Class 1 (Clear) fully tempered float glass.
 - (6) Low-E Coating: Third surface.

- (7) Glass Winter Night Time U-Value: 0.27 maximum.
- (8) Solar Heat Gain Coefficient: 0.46 maximum.
- (9) Provide safety glazing labeling, if necessary.

F. Hardware

1. Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum windows and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.

2. Provide the following operating hardware:

- a. Sash Locks: Two rows of 1/4" diameter hollow bulb gasket shall be used around the sash perimeter to minimize air infiltration.
- b. Securely stake and join at corners. Provide drainage to exterior as necessary

G. Finishes

1. Conforming to AAMA 2604-05 specification, finish on all extruded aluminum shall consist of zero or near-zero VOC, organic POWDER COAT with a baked on super-durable thermosetting polyester resin, electro-statically applied on five-stage pre-treated aluminum surface. Equivalent to 50% Kynar polyvinylidene fluoride liquid paint finishes. Powder coat material to be as manufactured by Sherwin Williams or PPG Powder Coatings.

2. Color to be selected from Manufacturer's Standard Color Chart (or custom-matched as required by project Architect/Owner).

H. Window Accessories

- 1. Provide the following accessories as specified in the contract drawings. Finish to match window frames or as selected by the Architect:
 - a. Wrap Around Panning
 - b. Present Panning
 - c. Snap Trim/Clips
 - d. Expanders
 - e. Receptors
 - f. Subsills and Subsill Anchors
 - g. Mullions and Mullion Covers
 - h. Exterior Sills
 - i. Interior Stools
 - j. Muntins (Faux)

I. Insect Screens

1. Screen frames shall consist of tubular extruded aluminum profiles with finish to match window frames.
 2. Fiberglass mesh (18 X 16) with PVC spline.
- J. Steel components including attachment fasteners shall be 300 series stainless steel except as noted.
- K. Thermoplastic or thermo-set plastic caps, housings and other components shall be injection-molded nylon, extruded PVC, or other suitable compound.
- L. Sealants
1. Sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
 2. Frame joinery sealants shall be suitable for application specified and as tested and approved by window manufacturer.

PART 3 – Execution

3.01 Examination

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather-tight window installation.
1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
 2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
 3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
 4. Proceed with installation only after unsatisfactory conditions have been corrected.
 5. A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Installation

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support.

- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.
- D. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 Adjusting, cleaning, and protection

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather-tight closure. Lubricate hardware and moving parts.
- B. Manufacturer shall clean all glass and aluminum prior to shipment.
- C. Protection of newly installed windows and/or final cleaning of glass and aluminum to remove any accumulations that may have occurred during the construction period is to be the responsibility of the General Contractor or Owner.
- D. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weather-tight when in locked position.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 08 52 00 ALUMINUM DOUBLE HUNG WINDOWS

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, materials, equipment, accessories and other similar services and items needed and required to install aluminum single hung windows as shown on the Drawings and as described and specified herein. As minimum, the windows shall be commercial grade in accordance with AAMA classification system. The work includes the following:
1. Provision of new factory glazed thermally broken aluminum windows as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings
 2. Removal of other existing construction and window materials necessary for proper installation of new windows.
 3. Removal and legal disposal off site of all removed windows, resulting debris, and other similar materials.
 4. Preparation of the window opening, prior to new window installation.
 5. Installation of the new windows in accordance with the recommendations and instructions of the window manufacturer.
 6. Provision of insulated panels and frames as required.
 7. Provision of treated wood blocking, fillers and nailers, as required for a secure window installation.
 8. Fiberglass insulation between window frames and adjacent construction.
 9. Sealing of entire perimeter of window units to the surrounding conditions after installation. No draft around the window perimeter shall be allowed.
- B. Survey the condition of existing window sill, head and jambs prior to bidding. The contractor shall be responsible for quantifying and providing new blockings.

1.02 References

- A. AAMA – American Architectural Manufacturers Association:
1. AAMA/WDMA/CSA 101/IS.2/A440-05 "North American Fenestration Standard/Specification for Windows, Doors, and Skylights"
 2. AAMA/WDMA/CSA 101/IS.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"
 3. AAMA 502-08 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
 4. AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum
 5. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.

6. AAMA 800-07 - Voluntary Specifications and Test Methods for Sealants.
7. AAMA 902-07 - Voluntary Specification for Sash Balances.
8. AAMA 910-93 - Voluntary Life Cycle' Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
9. AAMA 1503-98 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections.
10. AAMA 2603-02 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
11. AAMA 2604-05 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
12. AAMA 2605-05 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM – American Society for Testing and Materials:

1. ASTM E 283-04 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
2. ASTM E 330-02 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
3. ASTM E 331-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 547-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential..
5. ASTM F 588; 1997 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
6. ASTM E 2190-02 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

C. NFRC – National Fenestration Rating Council.

1. NFRC 100-04 - Procedure for Determining Fenestration Product U Factors.
2. NFRC 102-04 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
3. NFRC 500-04 - Procedure for Determining Fenestration Product Condensation Resistance Values.

D. IGCC – Insulating Glass Certification Council.

E. SGCC – Safety Glazing Certification Council.

1. Z97.1-04 American National Standard for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.
2. 16 CFR 1201 Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations.

F. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.

G. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC.)

1.03 Quality Assurance

- A. Product Requirements: For maximum performance, windows for this project must meet both the testing requirements as contained herein and the minimum material requirements specified. Windows that carry the applicable AAMA rating but do not meet the material thicknesses, depths, etc. shall not be acceptable for use on this project.
- B. Qualifications & Manufactures Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated.
 - 1. Do not modify intended aesthetic effects, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Fenestration Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440-08, "Standard/Specification for Windows, Doors, and Unit Skylights" for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with more stringent requirements if indicated.
 - 1. Provide AAMA-certified aluminum windows.
- E. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.
- F. Pre-installation Conference: If requested, conduct conference at project site to review methods and procedures related to aluminum windows including, but not limited to, the following:
 - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components.
 - 3. Review and discuss the sequence of work required to construct a watertight and weather tight exterior building envelope.
 - 4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

- G. Mock-up Units: Complete one window installation at each site for approval of the Authority. The windows to be completed as mock-up units will be as designated by the Authority. The approved mock-up units will be used as standard for appearance and workmanship. The mock-up unit will be used by the Authority to verify the following:
1. Fit of windows to the opening.
 2. The quality of construction.
- H. Provide test report from AAMA accredited laboratories certifying performance for Structural and Thermal as specified. Test report shall be submitted with shop drawings.

1.04 Testing and Performance Requirements

- A. The test reports provided pursuant to Paragraph 103 must provide test results from an AAMA accredited laboratory certifying the window performance specified hereinafter. The test reports shall not be more than 4 years old. Products tested at less than the minimum sizes specified will be automatically rejected.
- B. Submit test reports accompanied by the window manufacturer's Letter of Certification stating that the tested window meets or exceeds the referenced criteria for the appropriate AAMA/NWWDA 101/I.S. 2/A440-08 window type.
- C. Provide windows that meet the testing requirements below.
- D. Provide the minimum material thicknesses and depths specified elsewhere in these Specifications.
- E. AAMA Designation H-HC50
1. General
 - a. Provide aluminum windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of minimum test size indicated below:
 - b. Double Hung Windows: size of 60" x 99"
 2. Test Procedures and Performance
 - a. Air, Water and Structural Performance Requirements: When tested in accordance with cited test procedures, windows shall meet or exceed the following performance criteria, as well as those indicated in AAMA 101 and 101/I.S.2/A440-08 for performance grade of unit specified unless otherwise noted herein.

(1) Air Test Performance Requirements: Air infiltration maximum 0.30 cfm per square foot at a static air pressure differential of 6.2 psf differential when tested in accordance with ASTM E283 for sliding sealed products.

(2) Water Test Performance Requirements: No uncontrolled water leakage at 7.5 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.

(3) Structural Test Performance Requirements:

(a) Uniform Load Deflection Test

- No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of $L/175$ at both a positive and negative load of design test pressure when tested in accordance with ASTM E330.
- Structural reinforcing that is not standard on units being furnished is not allowed.

(b) Uniform Load Structural Test:

- Unit to be tested at 1.5 X design test pressure, both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
- No glass breakage; permanent damage to fastener, hardware parts, or anchors; damage to make windows inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

b. Forced Entry Resistance Test: ASTM F 588, Type and Grade as indicated for each Product.

c. Thermal Performance Requirements

(1) Perform thermal computer simulation in accordance with the configuration specified in NFRC 100.

(2) Computer Thermal Transmittance (U-Value) shall not exceed 0.47 BTU/hr/sq.ft/degree F for the whole window assembly.

(3) Computer Solar Heat Gain Coefficient (SHGC) shall not exceed 0.35 for the whole window assembly.

1.05 Submittals

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum window indicated.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:

1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
2. Mullion details, including reinforcement and stiffeners.
3. Joinery details.
4. Weather-stripping details.
5. Thermal-break details.
6. Glazing details.

7. Schedule: Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
1. Include similar samples of hardware and accessories involving color selection.
- D. Maintenance Data: For operable window sash, operating hardware and finishes to include in maintenance manuals.
- E. Warranty: Special warranty specified in this Section.
- F. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.06 Delivery, Storage and Handling

- A. Deliver and store the windows and other materials to the job site in a safe area out of the way of traffic and shored up above the ground surface.
- B. Deliver all products in original factory package bearing the identification of the product, name of manufacturer, model number and batch number.
- C. Promptly replace damaged materials and unsuitable products with material meeting the specified requirements at no additional cost to the Authority.

1.07 Special Project Warranties

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
- B. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
 2. Structural failures including excessive deflection, water leakage, or air infiltration.
 3. Faulty operation of movable sash and hardware.
 4. Deterioration of metals or other materials beyond that which is normal.
 5. Failure of insulating glass.
- C. Manufacturer's Warranty Period:
1. Window: 2 years from final acceptance of the work
 2. Insulated Glazing: 5-year warranty from final acceptance of the work
 3. Painted Metal Finishes:
 - a. 10 years from date from final acceptance of the work for AAM A 2605 High Performance Organic Coating.

PART 2 - PRODUCTS

2.01 Manufacturer

A. The basis of this specification is SERIES 5000 H-HC50 DOUBLE-HUNG TILT WINDOW as manufactured by:

1. Crystal Window & Door Systems, Ltd.
31-10 Whitestone Expressway, Flushing, NY 11354
Tel: 718. 961.7300; Tel: 800. 472.9988

B. Approval of proposed substitution shall be as approved by the Authority.

2.02 Material Description

A. Window Types:

DOUBLE HUNG WINDOWS SERIES 5000 H-HC50

B. AAMA/WDMA Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440-08.

1. Performance Class and Grade: Class H-HC50

C. Construction: 3 ¼ inch frame depth. Wall thickness: 0.062"/0.078" frame/sill; 0.062" sash. Factory finished extruded aluminum frame and sash members with integral structural polyurethane thermal break. Rail shall be tubular profile.

1. Aluminum: Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.

2. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).

D. Thermal Barrier:

1. Structural Thermal Barrier:

Structural thermal barrier shall consist of poured-in-place polyurethane polymer that shall transfer shear during bending and provide composite action between frame components.

2. Non Structural Thermal Barriers:

- a. Non-structural thermal barriers are used only in conjunction with structural thermal barriers. The purpose of non-structural thermal barriers is to enhance thermal performance of the primary structural thermal barriers (polyamide struts) by inhibiting heat transfer through thermal radiation and convection. Non-structural thermal barriers shall not be used as primary load carrying members.

- b. Rigid non-structural thermal barriers shall be constructed of extruded polyvinylchloride (PVC).

E. Glass

1. Glazing Materials:

- a. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical. Design glass to resist design wind pressure based on glass type factors for short-duration load.
- b. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- c. Strength: Where float glass is indicated, provide annealed float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- d. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated.
 - (1) U-Factors: Total-glazing values, according to NFRC 100 and based on LBL'S WINDOW 5.2 computer program, expressed as BTU/sq. ft x h x deg F (W/sq. m x K).
 - (2) Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 - (3) Visible Reflectance: Center-of-glazing values, according to NFRC 300.
- e. Float Glass: ASTM C 1036, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated.
- f. Coated Glass: ASTM C 1376, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.
- g. Laminated Glass: ASTM C 1172, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.

2. Insulating Glass Units:

Factory-assemble units consisting of sealed lites of glass separated by a PPG Intercept Spacer system consisting of a one-piece, metallic, U-channel design that creates an effective thermal barrier to help reduce conducted heat loss through the window.

- a. Insulating glass units shall be sealed with an integral dessicant matrix and a butyl sealant extruded around the entire perimeter of the spacer to achieve a seal. The sealant applied is to be Dual Seal Equivalent (DSE). Interspace to be filled with air or argon gas as required by thermal computer simulation.
- b. Insulating Glass Types: Low-E coated, insulating glass units.
 - (1) Overall Unit Thickness: 1" (25.4mm)
 - (2) Thickness of Each Glass Lite: 1/8"
 - (3) Outdoor Lite: Class 1 (Clear) fully tempered float glass.
 - (4) Interspace Content: Argon Gas.
 - (5) Indoor Lite: Class 1 (Clear) fully tempered float glass.
 - (6) Low-E Coating: Third surface.

- (7) Glass Winter Night Time U-Value: 0.27 maximum.
- (8) Solar Heat Gain Coefficient: 0.46 maximum.
- (9) Provide safety glazing labeling, if necessary.

F. Hardware

1. Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum windows and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.

2. Provide the following operating hardware:

- a. Counterbalancing Mechanism: Comply with AAMA 902.
Sash Balance: Class 4 Spring Balance E-Z Lift capable of lifting 60% of sash weight
- b. Tilt Lock: Design window and provide with concealed zinc die cast tilt latches (plastic will not be acceptable) and pivot bar hardware to permit tilting of sash inward for cleaning both sides of sash from interior.
- c. Rollers: Two roller housing shall be installed into each bottom rail of the sash. Two stainless steel bearing in two roller housings shall be recessed into each bottom rail of the movable sash. One stainless steel roller tracks shall be installed into the sill.
- d. Sash Locks: Automatic continuous aluminum spring-loaded snap lock shall secure both sashes to the jamb in closed position.
- e. Handle: Continuous, integral lift rail on bottom rail of lower sash and pull down rail on top rail of upper sash.

G. Finishes

1. Conforming to AAMA 2604-05 specification, finish on all extruded aluminum shall consist of zero or near-zero VOC, organic POWDER COAT with a baked on super-durable thermosetting polyester resin, electro-statically applied on five-stage pre-treated aluminum surface. Equivalent to 50% Kynar polyvinylidene fluoride liquid paint finishes. Powder coat material to be as manufactured by Sherwin Williams or PPG Powder Coatings.

2. Color to be selected from Manufacturer's Standard Color Chart (or custom-matched as required by project Architect/Owner).

H. Window Accessories

- 1. Provide the following accessories as specified in the contract drawings. Finish to match window frames or as selected by the Architect:
 - a. Wrap Around Panning
 - b. Present Panning
 - c. Snap Trim/Clips

- d. Expanders
- e. Receptors
- f. Subsills and Subsill Anchors
- g. Mullions and Mullion Covers
- h. Exterior Sills
- i. Interior Stools

I. Insect Screens

- 1. Screen frames shall consist of tubular extruded aluminum profiles with finish to match window frames.
- 2. Fiberglass mesh (18 X 16) with PVC spline.

J. Steel components including attachment fasteners shall be 300 series stainless steel except as noted.

K. Thermoplastic or thermo-set plastic caps, housings and other components shall be injection-molded nylon, extruded PVC, or other suitable compound.

L. Sealants

- 1. Sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
- 2. Frame joinery sealants shall be suitable for application specified and as tested and approved by window manufacturer.

PART 3 – Execution

3.01 Examination

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather-tight window installation.

- 1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
- 2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
- 3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
- 4. Proceed with installation only after unsatisfactory conditions have been corrected.
- 5. A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Installation

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.
- D. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 Adjusting, cleaning, and protection

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather-tight closure. Lubricate hardware and moving parts.
- B. Manufacturer shall clean all glass and aluminum prior to shipment.
- C. Protection of newly installed windows and/or final cleaning of glass and aluminum to remove any accumulations that may have occurred during the construction period is to be the responsibility of the General Contractor or Owner.
- D. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weather-tight when in locked position.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

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SECTION 08 51 12 ALUMINUM FIXED WINDOWS

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, materials, equipment, accessories and other similar services and items needed and required to install aluminum single hung windows as shown on the Drawings and as described and specified herein. As minimum, the windows shall be commercial grade in accordance with AAMA classification system. The work includes the following:
1. Provision of new factory glazed thermally broken aluminum windows as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings
 2. Removal of other existing construction and window materials necessary for proper installation of new windows.
 3. Removal and legal disposal off site of all removed windows, resulting debris, and other similar materials.
 4. Preparation of the window opening, prior to new window installation.
 5. Installation of the new windows in accordance with the recommendations and instructions of the window manufacturer.
 6. Provision of insulated panels and frames as required.
 7. Provision of treated wood blocking, fillers and nailers, as required for a secure window installation.
 8. Fiberglass insulation between window frames and adjacent construction.
 9. Sealing of entire perimeter of window units to the surrounding conditions after installation. No draft around the window perimeter shall be allowed.
- B. Survey the condition of existing window sill, head and jambs prior to bidding. The contractor shall be responsible for quantifying and providing new blockings.

1.02 References

- A. AAMA – American Architectural Manufacturers Association:
1. AAMA/WDMA/CSA 101/I.S.2/A440-08 "North American Fenestration Standard/Specification for Windows, Doors, and Skylights"
 2. AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"
 3. AAMA 502-08 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
 4. AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum
 5. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.

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2. ASTM E 330-02 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
3. ASTM E 331-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 547-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential..
5. ASTM F 588; 1997 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
6. ASTM E 2190-02 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

C. NFRC – National Fenestration Rating Council.

1. NFRC 100-04 - Procedure for Determining Fenestration Product U Factors.
2. NFRC 102-04 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
3. NFRC 500-04 - Procedure for Determining Fenestration Product Condensation Resistance Values.

D. IGCC – Insulating Glass Certification Council.

E. SGCC – Safety Glazing Certification Council.

1. Z97.1-04 American National Standard for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.
2. 16 CFR 1201 Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations.

F. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.

G. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC.)

1.03 Quality Assurance

A. Product Requirements: For maximum performance, windows for this project must meet both the testing requirements as contained herein and the minimum material requirements specified. Windows that carry the applicable AAMA rating but do not meet the material thicknesses, depths, etc. shall not be acceptable for use on this project.

B. Qualifications & Manufactures Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated.

1. Do not modify intended aesthetic effects, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Fenestration Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440-08, "Standard/Specification for Windows, Doors, and Unit Skylights" for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with more stringent requirements if indicated.

1. Provide AAMA-certified aluminum windows.

E. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.

F. Pre-installation Conference: If requested, conduct conference at project site to review methods and procedures related to aluminum windows including, but not limited to, the following:

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components.
3. Review and discuss the sequence of work required to construct a watertight and weather tight exterior building envelope.
4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

- G. Mock-up Units: Complete one window installation at each site for approval of the Authority. The windows to be completed as mock-up units will be as designated by the Authority. The approved mock-up units will be used as standard for appearance and workmanship. The mock-up unit will be used by the Authority to verify the following:
1. Fit of windows to the opening.
 2. The quality of construction.
- H. Provide test report from AAMA accredited laboratories certifying performance for Structural and Thermal as specified. Test report shall be submitted with shop drawings.

1.04 Testing and Performance Requirements

- A. The test reports provided pursuant to Paragraph 103 must provide test results from an AAMA accredited laboratory certifying the window performance specified hereinafter. The test reports shall not be more than 4 years old. Products tested at less than the minimum sizes specified will be automatically rejected.
- B. Submit test reports accompanied by the window manufacturer's Letter of Certification stating that the tested window meets or exceeds the referenced criteria for the appropriate AAMA/NWWDA 101/I.S. 2/A440-08 window type.
- C. Provide windows that meet the testing requirements below.
- D. Provide the minimum material thicknesses and depths specified elsewhere in these Specifications.
- E. AAMA Designation AW-PG85
1. General
 - a. Provide aluminum windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of minimum test size indicated below:
 - b. Aluminum Fixed Windows: size of 60" x 99"
 2. Test Procedures and Performance
 - a. Air, Water and Structural Performance Requirements: When tested in accordance with cited test procedures, windows shall meet or exceed the following performance criteria, as well as those indicated in AAMA 101 and 101/I.S.2/A440-08 for performance grade of unit specified unless otherwise noted herein.

(1) Air Test Performance Requirements: Air infiltration maximum 0.10 cfm per square foot at a static air pressure differential of 6.2 psf differential when tested in accordance with ASTM E283 for sliding sealed products.

(2) Water Test Performance Requirements: No uncontrolled water leakage at 12 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.

(3) Structural Test Performance Requirements:

(a) Uniform Load Deflection Test

- No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of $L/175$ at both a positive and negative load of design test pressure when tested in accordance with ASTM E330.
- Structural reinforcing that is not standard on units being furnished is not allowed.

(b) Uniform Load Structural Test:

- Unit to be tested at 1.5 X design test pressure, both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
- No glass breakage; permanent damage to fastener, hardware parts, or anchors; damage to make windows inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

b. Forced Entry Resistance Test: ASTM F 588, Type and Grade as indicated for each Product.

c. Thermal Performance Requirements

(1) Perform thermal computed simulation in accordance with the configuration specified in NFRC 100.

(2) Computed Thermal Transmittance (U-Value) shall not exceed 0.36 BTU/hr/sq.ft/degree F for the whole window assembly.

(3) Computed Solar Heat Gain Coefficient (SHGC) shall not exceed 0.40 for the whole window assembly.

1.05 Submittals

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum window indicated.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:

1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
2. Mullion details, including reinforcement and stiffeners.
3. Joinery details.
4. Weather-stripping details.
5. Thermal-break details.
6. Glazing details.

7. Schedule: Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
1. Include similar samples of hardware and accessories involving color selection.
- D. Maintenance Data: For operable window sash, operating hardware and finishes to include in maintenance manuals.
- E. Warranty: Special warranty specified in this Section.
- F. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.06 Delivery, Storage and Handling

- A. Deliver and store the windows and other materials to the job site in a safe area out of the way of traffic and shored up above the ground surface.
- B. Deliver all products in original factory package bearing the identification of the product, name of manufacturer, model number and batch number.
- C. Promptly replace damaged materials and unsuitable products with material meeting the specified requirements at no additional cost to the Authority.

1.07 Special Project Warranties

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
- B. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
 2. Structural failures including excessive deflection, water leakage, or air infiltration.
 3. Faulty operation of movable sash and hardware.
 4. Deterioration of metals or other materials beyond that which is normal.
 5. Failure of insulating glass.
- C. Manufacturer's Warranty Period:
1. Window: 2 years from final acceptance of the work
 2. Insulated Glazing: 5-year warranty from final acceptance of the work
 3. Painted Metal Finishes:
 - a. 10 years from date from final acceptance of the work for AAM A 2605 High Performance Organic Coating.

PART 2 - PRODUCTS

2.01 Manufacturer

A. The basis of this specification is SERIES 8100 AW-PG85-FW FIXED WINDOW as manufactured by:

1. Crystal Window & Door Systems, Ltd.
31-10 Whitestone Expressway, Flushing, NY 11354
Tel: 718. 961.7300; Tel: 800. 472.9988

B. Approval of proposed substitution shall be as approved by the Authority.

2.02 Material Description

A. Window Types:
SERIES 8100 AW-PG85-FW FIXED WINDOW

B. AAMA/WDMA Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440-08.

1. Performance Class and Grade: Class AW-PG100-FW

C. Construction: 2 ¼ inch frame depth. Wall thickness: 0.125"/0.125". Factory finished extruded aluminum frame and sash members with integral structural polyurethane thermal break.

1. Aluminum: Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.
2. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).

D. Thermal Barrier:

1. Structural Thermal Barrier:

Structural thermal barrier shall consist of poured-in-place polyurethane polymer that shall transfer shear during bending and provide composite action between frame components.

2. Non Structural Thermal Barriers:

a. Non-structural thermal barriers are used only in conjunction with structural thermal barriers. The purpose of non-structural thermal barriers is to enhance thermal performance of the primary structural thermal barriers (polyamide struts) by inhibiting heat transfer through thermal radiation and convection. Non-structural thermal barriers shall not be used as primary load carrying members.

b. Rigid non-structural thermal barriers shall be constructed of extruded polyvinylchloride (PVC).

E. Glass

1. Glazing Materials:

- a. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical. Design glass to resist design wind pressure based on glass type factors for short-duration load.
- b. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- c. Strength: Where float glass is indicated, provide annealed float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- d. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated.
 - (1) U-Factors: Total-glazing values, according to NFRC 100 and based on LBL'S WINDOW 5.2 computer program, expressed as BTU/sq. ft x h x deg F (W/sq. m x K).
 - (2) Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 - (3) Visible Reflectance: Center-of-glazing values, according to NFRC 300.
- e. Float Glass: ASTM C 1036, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated.
- f. Coated Glass: ASTM C 1376, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.
- g. Laminated Glass: ASTM C 1172, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.

2. Insulating Glass Units:

Factory-assemble units consisting of sealed lites of glass separated by a PPG Intercept Spacer system consisting of a one-piece, metallic, U-channel design that creates an effective thermal barrier to help reduce conducted heat loss through the window.

- a. Insulating glass units shall be sealed with an integral dessicant matrix and a butyl sealant extruded around the entire perimeter of the spacer to achieve a seal. The sealant applied is to be Dual Seal Equivalent (DSE). Interspace to be filled with air or argon gas as required by thermal computer simulation.
- b. Insulating Glass Types: Low-E coated, insulating glass units.
 - (1) Overall Unit Thickness: 1" (25.4mm)
 - (2) Thickness of Each Glass Lite: 1/8"
 - (3) Outdoor Lite: Class 1 (Clear) fully tempered float glass.
 - (4) Interspace Content: Argon Gas.
 - (5) Indoor Lite: Class 1 (Clear) fully tempered float glass.
 - (6) Low-E Coating: Third surface.
 - (7) Glass Winter Night Time U-Value: 0.27 maximum.
 - (8) Solar Heat Gain Coefficient: 0.46 maximum.
 - (9) Provide safety glazing labeling, if necessary.

F. Finishes

1. Conforming to AAMA 2604-05 specification, finish on all extruded aluminum shall consist of zero or near-zero VOC, organic POWDER COAT with a baked on super-durable thermosetting polyester resin, electro-statically applied on five-stage pre-treated aluminum surface. Equivalent to 50% Kynar polyvinylidene fluoride liquid paint finishes. Powder coat material to be as manufactured by Sherwin Williams or PPG Powder Coatings.
2. Color to be selected from Manufacturer's Standard Color Chart (or custom-matched as required by project Architect/Owner).

H. Window Accessories

1. Provide the following accessories as specified in the contract drawings. Finish to match window frames or as selected by the Architect:

J. Steel components including attachment fasteners shall be 300 series stainless steel except as noted.

K. Thermoplastic or thermo-set plastic caps, housings and other components shall be injection-molded nylon, extruded PVC, or other suitable compound.

L. Sealants

1. Sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
2. Frame joinery sealants shall be suitable for application specified and as tested and approved by window manufacturer.

PART 3 – Execution

3.01 Examination

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather-tight window installation.

1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.
5. A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Installation

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.
- D. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 Adjusting, cleaning, and protection

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather-tight closure. Lubricate hardware and moving parts.
- B. Manufacturer shall clean all glass and aluminum prior to shipment.
- C. Protection of newly installed windows and/or final cleaning of glass and aluminum to remove any accumulations that may have occurred during the construction period is to be the responsibility of the General Contractor or Owner.
- D. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weather-tight when in locked position.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 08 52 00 ALUMINUM SLIDING WINDOWS

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, materials, equipment, accessories and other similar services and items needed and required to install aluminum single hung windows as shown on the Drawings and as described and specified herein. As minimum, the windows shall be commercial grade in accordance with AAMA classification system. The work includes the following:
1. Provision of new factory glazed thermally broken aluminum windows as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings
 2. Removal of other existing construction and window materials necessary for proper installation of new windows.
 3. Removal and legal disposal off site of all removed windows, resulting debris, and other similar materials.
 4. Preparation of the window opening, prior to new window installation.
 5. Installation of the new windows in accordance with the recommendations and instructions of the window manufacturer.
 6. Provision of insulated panels and frames as required.
 7. Provision of treated wood blocking, fillers and nailers, as required for a secure window installation.
 8. Fiberglass insulation between window frames and adjacent construction.
 9. Sealing of entire perimeter of window units to the surrounding conditions after installation. No draft around the window perimeter shall be allowed.
- B. Survey the condition of existing window sill, head and jambs prior to bidding. The contractor shall be responsible for quantifying and providing new blockings.

1.02 References

- A. AAMA – American Architectural Manufacturers Association:

1. AAMA/WDMA/CSA 101/IS.2/A440-05 "North American Fenestration Standard/Specification for Windows, Doors, and Skylights"
2. AAMA/WDMA/CSA 101/IS.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"
3. AAMA 502-08 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
4. AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum
5. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.

6. AAMA 800-07 - Voluntary Specifications and Test Methods for Sealants.
7. AAMA 902-07 - Voluntary Specification for Sash Balances.
8. AAMA 910-93 - Voluntary Life Cycle' Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
9. AAMA 1503-98 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections.
10. AAMA 2603-02 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
11. AAMA 2604-05 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
12. AAMA 2605-05 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM – American Society for Testing and Materials:

1. ASTM E 283-04 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
2. ASTM E 330-02 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
3. ASTM E 331-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 547-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential.
5. ASTM F 588; 1997 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
6. ASTM E 2190-02 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

C. NFRC – National Fenestration Rating Council.

1. NFRC 100-04 - Procedure for Determining Fenestration Product U Factors.
2. NFRC 102-04 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
3. NFRC 500-04 - Procedure for Determining Fenestration Product Condensation Resistance Values.

D. IGCC – Insulating Glass Certification Council.

E. SGCC – Safety Glazing Certification Council.

1. Z97.1-04 American National Standard for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.
2. 16 CFR 1201 Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations.

F. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.

G. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC.)

1.03 Quality Assurance

A. Product Requirements: For maximum performance, windows for this project must meet both the testing requirements as contained herein and the minimum material requirements specified. Windows that carry the applicable AAMA rating but do not meet the material thicknesses, depths, etc. shall not be acceptable for use on this project.

B. Qualifications & Manufactures Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated.

1. Do not modify intended aesthetic effects, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Fenestration Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440-08, "Standard/Specification for Windows, Doors, and Unit Skylights" for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with more stringent requirements if indicated.

1. Provide AAMA-certified aluminum windows.

E. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.

F. Pre-installation Conference: If requested, conduct conference at project site to review methods and procedures related to aluminum windows including, but not limited to, the following:

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components.
3. Review and discuss the sequence of work required to construct a watertight and weather tight exterior building envelope.
4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

- G. Mock-up Units: Complete one window installation at each site for approval of the Authority. The windows to be completed as mock-up units will be as designated by the Authority. The approved mock-up units will be used as standard for appearance and workmanship. The mock-up unit will be used by the Authority to verify the following:
1. Fit of windows to the opening.
 2. The quality of construction.
- H. Provide test report from AAMA accredited laboratories certifying performance for Structural and Thermal as specified. Test report shall be submitted with shop drawings.

1.04 Testing and Performance Requirements

- A. The test reports provided pursuant to Paragraph 1.03 must provide test results from an AAMA accredited laboratory certifying the window performance specified hereinafter. The test reports shall not be more than 4 years old. Products tested at less than the minimum sizes specified will be automatically rejected.
- B. Submit test reports accompanied by the window manufacturer's Letter of Certification stating that the tested window meets or exceeds the referenced criteria for the appropriate AAMA/NWWDA 101/I.S. 2/A440-08 window type.
- C. Provide windows that meet the testing requirements below.
- D. Provide the minimum material thicknesses and depths specified elsewhere in these Specifications.
- E. AAMA Designation HS-AW40
1. General
 - a. Provide aluminum windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of minimum test size indicated below:
 - b. Sliding Windows: 99" x 79"
 2. Test Procedures and Performance
 - a. Air, Water and Structural Performance Requirements: When tested in accordance with cited test procedures, windows shall meet or exceed the following performance criteria, as well as those indicated in AAMA 101 and 101/I.S.2/A440-08 for performance grade of unit specified unless otherwise noted herein.

(1) Air Test Performance Requirements: Air infiltration maximum 0.30 cfm per square foot at a static air pressure differential of 6.2 psf differential when tested in accordance with ASTM E283 for sliding sealed products.

(2) Water Test Performance Requirements: No uncontrolled water leakage at 8 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.

(3) Structural Test Performance Requirements:

(a) Uniform Load Deflection Test

- No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of $L/175$ at both a positive and negative load of design test pressure when tested in accordance with ASTM E330.
- Structural reinforcing that is not standard on units being furnished is not allowed.

(b) Uniform Load Structural Test:

- Unit to be tested at 1.5 X design test pressure, both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
- No glass breakage; permanent damage to fastener, hardware parts, or anchors; damage to make windows inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

b. Forced Entry Resistance Test: ASTM F 588, Type and Grade as indicated for each Product.

c. Thermal Performance Requirements

(1) Perform thermal computer simulation in accordance with the configuration specified in NFRC 100.

(2) Computer Thermal Transmittance (U-Value) shall not exceed 0.47 BTU/hr/sq.ft/degree F for the whole window assembly.

(3) Computer Solar Heat Gain Coefficient (SHGC) shall not exceed 0.35 for the whole window assembly.

1.05 Submittals

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum window indicated.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:

1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
2. Mullion details, including reinforcement and stiffeners.
3. Joinery details.
4. Weather-stripping details.
5. Thermal-break details.
6. Glazing details.

7. Schedule: Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
1. Include similar samples of hardware and accessories involving color selection.
- D. Maintenance Data: For operable window sash, operating hardware and finishes to include in maintenance manuals.
- E. Warranty: Special warranty specified in this Section.
- F. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.06 Delivery, Storage and Handling

- A. Deliver and store the windows and other materials to the job site in a safe area out of the way of traffic and shored up above the ground surface.
- B. Deliver all products in original factory package bearing the identification of the product, name of manufacturer, model number and batch number.
- C. Promptly replace damaged materials and unsuitable products with material meeting the specified requirements at no additional cost to the Authority.

1.07 Special Project Warranties

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
- B. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
 2. Structural failures including excessive deflection, water leakage, or air infiltration.
 3. Faulty operation of movable sash and hardware.
 4. Deterioration of metals or other materials beyond that which is normal.
 5. Failure of insulating glass.
- C. Manufacturer's Warranty Period:
1. Window: 2 years from final acceptance of the work
 2. Insulated Glazing: 5-year warranty from final acceptance of the work
 3. Painted Metal Finishes:
 - a. 10 years from date from final acceptance of the work for AAM A 2605 High Performance Organic Coating.

PART 2 - PRODUCTS

2.01 Manufacturer

A. The basis of this specification is SERIES 5600 HS-AW40 HORIZONTAL SLIDING WINDOW, as manufactured by:

1. Crystal Window & Door Systems, Ltd.
31-10 Whitestone Expressway, Flushing, NY 11354
Tel: 718. 961.7300; Tel: 800. 472.9988

B. Approval of proposed substitution shall be as approved by the Authority.

2.02 Material Description

A. Window Types:

SERIES 5600 HS-AW40 HORIZONTAL SLIDING WINDOW,

B. AAMA/WDMA Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440-08.

1. Performance Class and Grade: Class HS-AW40

C. Construction: 3 ¼ inch frame depth. Wall thickness: 0.080"/0.094" frame/sill; 0.062" sash. Factory finished extruded aluminum frame and sash members with integral structural polyurethane thermal break. Rail shall be tubular profile.

A. Aluminum: Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.

B. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).

D. Thermal Barrier:

1. Structural Thermal Barrier:

Structural thermal barrier shall consist of poured-in-place polyurethane polymer that shall transfer shear during bending and provide composite action between frame components.

2. Non Structural Thermal Barriers:

- a. Non-structural thermal barriers are used only in conjunction with structural thermal barriers. The purpose of non-structural thermal barriers is to enhance thermal performance of the primary structural thermal barriers (polyamide struts) by inhibiting heat transfer through thermal radiation and convection. Non-structural thermal barriers shall not be used as primary load carrying members.

- b. Rigid non-structural thermal barriers shall be constructed of extruded polyvinylchloride (PVC).

E. Glass

1. Glazing Materials:

- a. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical. Design glass to resist design wind pressure based on glass type factors for short-duration load.
- b. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- c. Strength: Where float glass is indicated, provide annealed float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- d. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated.
 - (1) U-Factors: Total-glazing values, according to NFRC 100 and based on LBL'S WINDOW 5.2 computer program, expressed as BTU/sq. ft x h x deg F (W/sq. m x K).
 - (2) Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 - (3) Visible Reflectance: Center-of-glazing values, according to NFRC 300.
- e. Float Glass: ASTM C 1036, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated.
- f. Coated Glass: ASTM C 1376, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.
- g. Laminated Glass: ASTM C 1172, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.

2. Insulating Glass Units:

- a. Factory-assemble units consisting of sealed lites of glass separated by a PPG Intercept Spacer system consisting of a one-piece, metallic, U-channel design that creates an effective thermal barrier to help reduce conducted heat loss through the window.
- b. Insulating glass units shall be sealed with an integral dessicant matrix and a butyl sealant extruded around the entire perimeter of the spacer to achieve a seal. The sealant applied is to be Dual Seal Equivalent (DSE). Interspace to be filled with air or argon gas as required by thermal computer simulation.
- c. Insulating Glass Types: Low-E coated, insulating glass units.
 - (1) Overall Unit Thickness: 1" (22mm)
 - (2) Thickness of Each Glass Lite: 1/8"
 - (3) Outdoor Lite: Class 1 (Clear) fully tempered float glass.
 - (4) Interspace Content: Argon Gas.
 - (5) Indoor Lite: Class 1 (Clear) fully tempered float glass.
 - (6) Low-E Coating: Third surface.

- (7) Glass Winter Night Time U-Value: 0.27 maximum.
- (8) Solar Heat Gain Coefficient: 0.46 maximum.
- (9) Provide safety glazing labeling, if necessary.

F. Hardware

1. Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum windows and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.
2. Provide the following operating hardware:
 - a. Rollers: Two roller housing shall be installed into each bottom rail of the sash. Two stainless steel bearing in two roller housings shall be recessed into each bottom rail of the movable sash. One stainless steel roller tracks shall be installed into the sill.
 - b. Sash Locks: Automatic continuous aluminum spring-loaded snap lock shall secure both sashes to the jamb in closed position.

G. Finishes

1. Conforming to AAMA 2604-05 specification, finish on all extruded aluminum shall consist of zero or near-zero VOC, organic POWDER COAT with a baked on super-durable thermosetting polyester resin, electro-statically applied on five-stage pre-treated aluminum surface. Equivalent to 50% Kynar polyvinylidene fluoride liquid paint finishes. Powder coat material to be as manufactured by Sherwin Williams or PPG Powder Coatings.
2. Color to be selected from Manufacturer's Standard Color Chart (or custom-matched as required by project Architect/Owner).

H. Window Accessories

2. Provide the following accessories as specified in the contract drawings. Finish to match window frames or as selected by the Architect:
 - a. Wrap Around Panning
 - b. Present Panning
 - c. Snap Trim/Clips
 - d. Expanders
 - e. Receptors
 - f. Subsills and Subsill Anchors
 - g. Mullions and Mullion Covers
 - h. Exterior Sills
 - i. Interior Stools

I. Insect Screens

1. Screen frames shall consist of tubular extruded aluminum profiles with finish to match window frames.
2. Fiberglass mesh (18 X 16) with PVC spline.

J. Steel components including attachment fasteners shall be 300 series stainless steel except as noted.**K. Thermoplastic or thermo-set plastic caps, housings and other components shall be injection-molded nylon, extruded PVC, or other suitable compound.****L. Sealants**

1. Sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
2. Frame joinery sealants shall be suitable for application specified and as tested and approved by window manufacturer.

PART 3 – Execution**3.01 Examination****A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather-tight window installation.**

1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.
5. A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Installation**A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.**

- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.
- D. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 Adjusting, cleaning, and protection

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather-tight closure. Lubricate hardware and moving parts.
- B. Manufacturer shall clean all glass and aluminum prior to shipment.
- C. Protection of newly installed windows and/or final cleaning of glass and aluminum to remove any accumulations that may have occurred during the construction period is to be the responsibility of the General Contractor or Owner.
- D. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weather-tight when in locked position.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

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SECTION 08 51 14 ALUMINUM PROJECT-OUT WINDOW WINDOWS

PART 1 - GENERAL

1.01 Work Included

- A. Provide all labor, materials, equipment, accessories and other similar services and items needed and required to install aluminum single hung windows as shown on the Drawings and as described and specified herein. As minimum, the windows shall be commercial grade in accordance with AAMA classification system. The work includes the following:
1. Provision of new factory glazed thermally broken aluminum windows as specified herein including necessary mullions, receptors, panning, trim, operating hardware, screens, and all other accessories specified herein and/or as shown on the Drawings
 2. Removal of other existing construction and window materials necessary for proper installation of new windows.
 3. Removal and legal disposal off site of all removed windows, resulting debris, and other similar materials.
 4. Preparation of the window opening, prior to new window installation.
 5. Installation of the new windows in accordance with the recommendations and instructions of the window manufacturer.
 6. Provision of insulated panels and frames as required.
 7. Provision of treated wood blocking, fillers and nailers, as required for a secure window installation.
 8. Fiberglass insulation between window frames and adjacent construction.
 9. Sealing of entire perimeter of window units to the surrounding conditions after installation. No draft around the window perimeter shall be allowed.
- B. Survey the condition of existing window sill, head and jambs prior to bidding. The contractor shall be responsible for quantifying and providing new blockings.

1.02 References

- A. AAMA – American Architectural Manufacturers Association:

1. AAMA/WDMA/CSA 101/I.S.2/A440-08 "North American Fenestration Standard/Specification for Windows, Doors, and Skylights"
2. AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"
3. AAMA 502-08 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
4. AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum
5. AAMA 701/702-04 - Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.

6. AAMA 800-07 - Voluntary Specifications and Test Methods for Sealants.
7. AAMA 902-07 - Voluntary Specification for Sash Balances.
8. AAMA 910-93 - Voluntary Life Cycle' Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
9. AAMA 1503-98 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections.
10. AAMA 2603-02 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
11. AAMA 2604-05 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
12. AAMA 2605-05 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM – American Society for Testing and Materials:

1. ASTM E 283-04 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
2. ASTM E 330-02 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
3. ASTM E 331-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 547-00 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential..
5. ASTM F 588; 1997 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact
6. ASTM E 2190-02 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

C. NFRC – National Fenestration Rating Council.

1. NFRC 100-04 - Procedure for Determining Fenestration Product U Factors.
2. NFRC 102-04 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
3. NFRC 500-04 - Procedure for Determining Fenestration Product Condensation Resistance Values.

D. IGCC – Insulating Glass Certification Council.

E. SGCC – Safety Glazing Certification Council.

1. Z97.1-04 American National Standard for Safety Glazing Materials used in Buildings - Safety Performance Specifications and Methods of Test.
2. 16 CFR 1201 Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations.

F. ANSI Z97.1 – American National Standard for Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.

G. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC.)

1.03 Quality Assurance

A. Product Requirements: For maximum performance, windows for this project must meet both the testing requirements as contained herein and the minimum material requirements specified. Windows that carry the applicable AAMA rating but do not meet the material thicknesses, depths, etc. shall not be acceptable for use on this project.

B. Qualifications & Manufactures Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated.

1. Do not modify intended aesthetic effects, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Fenestration Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440-08, "Standard/Specification for Windows, Doors, and Unit Skylights" for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with more stringent requirements if indicated.

1. Provide AAMA-certified aluminum windows.

E. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.

F. Pre-installation Conference: If requested, conduct conference at project site to review methods and procedures related to aluminum windows including, but not limited to, the following:

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components.
3. Review and discuss the sequence of work required to construct a watertight and weather tight exterior building envelope.
4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

- G. Mock-up Units: Complete one window installation at each site for approval of the Authority. The windows to be completed as mock-up units will be as designated by the Authority. The approved mock-up units will be used as standard for appearance and workmanship. The mock-up unit will be used by the Authority to verify the following:
1. Fit of windows to the opening.
 2. The quality of construction.
- H. Provide test report from AAMA accredited laboratories certifying performance for Structural and Thermal as specified. Test report shall be submitted with shop drawings.

1.04 Testing and Performance Requirements

- A. The test reports provided pursuant to Paragraph 103 must provide test results from an AAMA accredited laboratory certifying the window performance specified hereinafter. The test reports shall not be more than 4 years old. Products tested at less than the minimum sizes specified will be automatically rejected.
- B. Submit test reports accompanied by the window manufacturer's Letter of Certification stating that the tested window meets or exceeds the referenced criteria for the appropriate AAMA/NWWDA 101/I.S. 2/A440-08 window type.
- C. Provide windows that meet the testing requirements below.
- D. Provide the minimum material thicknesses and depths specified elsewhere in these Specifications.
- E. AAMA Designation AW-PG80-PO
1. General
 - a. Provide aluminum windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of minimum test size indicated below:
 - b. Project Out Windows: size of 60" x 36"
 2. Test Procedures and Performance
 - a. Air, Water and Structural Performance Requirements: When tested in accordance with cited test procedures, windows shall meet or exceed the following performance criteria, as well as those indicated in AAMA 101 and 101/I.S.2/A440-08 for performance grade of unit specified unless otherwise noted herein.

(1) Air Test Performance Requirements: Air infiltration maximum 0.10 cfm per square foot at a static air pressure differential of 6.2 psf differential when tested in accordance with ASTM E283 for sliding sealed products.

(2) Water Test Performance Requirements: No uncontrolled water leakage at 12 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.

(3) Structural Test Performance Requirements:

(a) Uniform Load Deflection Test

- No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of $L/175$ at both a positive and negative load of design test pressure when tested in accordance with ASTM E330.
- Structural reinforcing that is not standard on units being furnished is not allowed.

(b) Uniform Load Structural Test:

- Unit to be tested at 1.5 X design test pressure, both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
- No glass breakage; permanent damage to fastener, hardware parts, or anchors; damage to make windows inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

b. Forced Entry Resistance Test: ASTM F 588, Type and Grade as indicated for each Product.

c. Thermal Performance Requirements

(1) Perform thermal computer simulation in accordance with the configuration specified in NFRC 100.

(2) Computer Thermal Transmittance (U-Value) shall not exceed 0.51 BTU/hr/sq.ft/degree F for the whole window assembly.

(3) Computer Solar Heat Gain Coefficient (SHGC) shall not exceed 0.31 for the whole window assembly.

1.05 Submittals

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of aluminum window indicated.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:

1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
2. Mullion details, including reinforcement and stiffeners.
3. Joinery details.
4. Weather-stripping details.
5. Thermal-break details.
6. Glazing details.

7. Schedule: Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
1. Include similar samples of hardware and accessories involving color selection.
- D. Maintenance Data: For operable window sash, operating hardware and finishes to include in maintenance manuals.
- E. Warranty: Special warranty specified in this Section.
- F. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.06 Delivery, Storage and Handling

- A. Deliver and store the windows and other materials to the job site in a safe area out of the way of traffic and shored up above the ground surface.
- B. Deliver all products in original factory package bearing the identification of the product, name of manufacturer, model number and batch number.
- C. Promptly replace damaged materials and unsuitable products with material meeting the specified requirements at no additional cost to the Authority.

1.07 Special Project Warranties

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
- B. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
 2. Structural failures including excessive deflection, water leakage, or air infiltration.
 3. Faulty operation of movable sash and hardware.
 4. Deterioration of metals or other materials beyond that which is normal.
 5. Failure of insulating glass.
- C. Manufacturer's Warranty Period:
1. Window: 2 years from final acceptance of the work
 2. Insulated Glazing: 5-year warranty from final acceptance of the work
 3. Painted Metal Finishes:
 - a. 10 years from date from final acceptance of the work for AAM A 2605 High Performance Organic Coating.

PART 2 - PRODUCTS

2.01 Manufacturer

A. The basis of this specification is SERIES 8200 AW-PG80-PO PROJECT-OUT WINDOW as manufactured by:

1. Crystal Window & Door Systems, Ltd.
31-10 Whitestone Expressway, Flushing, NY 11354
Tel: 718. 961.7300; Tel: 800. 472.9988

B. Approval of proposed substitution shall be as approved by the Authority.

2.02 Material Description

A. Window Types:

SERIES 8200 AW-PG80-PO PROJECT-OUT WINDOW

B. AAMA/WDMA Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA/CSA 101/I.S.2/A440-08.

1. Performance Class and Grade: Class AW-PG80-PO

C. Construction: 2 ¼ inch frame depth. Wall thickness: 0.125" frame/sill; 0.125" sash. Factory finished extruded aluminum frame and sash members with integral structural polyurethane thermal break.

1. Aluminum: Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.

2. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).

D. Thermal Barrier:

1. Structural Thermal Barrier:

- a. Structural thermal barrier shall consist of poured-in-place polyurethane polymer that shall transfer shear during bending and provide composite action between frame components.

2. Non Structural Thermal Barriers:

- a. Non-structural thermal barriers are used only in conjunction with structural thermal barriers. The purpose of non-structural thermal barriers is to enhance thermal performance of the primary structural thermal barriers (polyamide struts) by inhibiting heat transfer through thermal radiation and convection. Non-structural thermal barriers shall not be used as primary load carrying members.

- b. Rigid non-structural thermal barriers shall be constructed of extruded polyvinylchloride (PVC).

E. Glass

1. Glazing Materials:

- a. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical. Design glass to resist design wind pressure based on glass type factors for short-duration load.
- b. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
- c. Strength: Where float glass is indicated, provide annealed float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- d. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated.
 - (1) U-Factors: Total-glazing values, according to NFRC 100 and based on LBL'S WINDOW 5.2 computer program, expressed as BTU/sq. ft x h x deg F (W/sq. m x K).
 - (2) Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 - (3) Visible Reflectance: Center-of-glazing values, according to NFRC 300.
- e. Float Glass: ASTM C 1036, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated.
- f. Coated Glass: ASTM C 1376, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.
- g. Laminated Glass: ASTM C 1172, Type 1, Quality-Q3, Class 1 (clear) unless otherwise indicated, of kind and condition indicated.

2. Insulating Glass Units:

- a. Factory-assemble units consisting of sealed lites of glass separated by a PPG Intercept Spacer system consisting of a one-piece, metallic, U-channel design that creates an effective thermal barrier to help reduce conducted heat loss through the window.
- b. Insulating glass units shall be sealed with an integral dessicant matrix and a butyl sealant extruded around the entire perimeter of the spacer to achieve a seal. The sealant applied is to be Dual Seal Equivalent (DSE). Interspace to be filled with air or argon gas as required by thermal computer simulation.
- c. Insulating Glass Types: Low-E coated, insulating glass units.
 - (1) Overall Unit Thickness: 1" (25.4mm)
 - (2) Thickness of Each Glass Lite: 1/8"
 - (3) Outdoor Lite: : Class 1 (Clear) fully tempered float glass.
 - (4) Interspace Content: Argon Gas.
 - (5) Indoor Lite: Class 1 (Clear) fully tempered float glass.
 - (6) Low-E Coating: Third surface.

- (7) Glass Winter Night Time U-Value: 0.27 maximum.
- (8) Solar Heat Gain Coefficient: 0.46 maximum.
- (9) Provide safety glazing labeling, if necessary.

F. Hardware

1. Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum windows and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.
2. Provide the following operating hardware:
 - a. Sash Locks: Automatic continuous aluminum spring-loaded snap lock shall secure both sashes to the jamb in closed position.
 - b. Hinges: Sash shall pivot at the top on two Four-bar HS/SS friction hinges located at top end of each jamb.
 - c. Handle shall be the locking device located at the bottom sash rail and shall ensure tight sash to jamb weather stripping compression.

G. Finishes

1. Conforming to AAMA 2604-05 specification, finish on all extruded aluminum shall consist of zero or near-zero VOC, organic POWDER COAT with a baked on super-durable thermosetting polyester resin, electro-statically applied on five-stage pre-treated aluminum surface. Equivalent to 50% Kynar polyvinylidene fluoride liquid paint finishes. Powder coat material to be as manufactured by Sherwin Williams or PPG Powder Coatings.
2. Color to be selected from Manufacturer's Standard Color Chart (or custom-matched as required by project Architect/Owner).

H. Window Accessories

2. Provide the following accessories as specified in the contract drawings. Finish to match window frames or as selected by the Architect:
 - a. Wrap Around Panning
 - b. Present Panning
 - c. Snap Trim/Clips
 - d. Expanders
 - e. Receptors
 - f. Subsills and Subsill Anchors
 - g. Mullions and Mullion Covers
 - h. Exterior Sills
 - i. Interior Stools

J. Steel components including attachment fasteners shall be 300 series stainless steel except as noted.

K. Thermoplastic or thermo-set plastic caps, housings and other components shall be injection-molded nylon, extruded PVC, or other suitable compound.

L. Sealants

1. Sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
2. Frame joinery sealants shall be suitable for application specified and as tested and approved by window manufacturer.

PART 3 – Execution

3.01 Examination

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather-tight window installation.

1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.
5. A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Installation

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.

- D. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.03 Adjusting, cleaning, and protection

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weather-tight closure. Lubricate hardware and moving parts.
- B. Manufacturer shall clean all glass and aluminum prior to shipment.
- C. Protection of newly installed windows and/or final cleaning of glass and aluminum to remove any accumulations that may have occurred during the construction period is to be the responsibility of the General Contractor or Owner.
- D. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weather-tight when in locked position.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

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**SECTION 09 90 00
PAINTING****PART 1 - GENERAL****1.01 Work Included**

- A. Provide all labor, materials and equipment necessary to paint surfaces as maybe needed and encountered in the window replacement work, including but not necessarily limited to the following:
1. Painting of all inside and outside walls affected by the installation of the windows.
 2. Painting of window wood sill and trims, etc.
 3. Priming and Painting of scraped window lintels.
 4. Painting of cut and patch surfaces to match properly with surrounding painted surfaces. Color of shall match the existing surface color.
 5. Painting of any surface not specifically mentioned to be painted herein or on drawings, but for which painting is obviously necessary to complete the job, or work which comes within the intent of these specifications, shall be included as though specified.
 6. Cleaning and preparation of surfaces scheduled to be refinished in strict accordance with the manufacturer's recommendations and specifications.
 7. Prime painting of all unprimed surfaces to be painted under this Section.
 8. Protection of all surfaces or items not scheduled to be painted including curtain rods, resident furniture, appliances, doors and frames, glass and frames, fire alarms hardware, switches and switch covers, thermostats, speakers, telephones, etc. Surfaces not to be painted shall be left completely free of paint droppings.
 9. Restoration of any surface or item subject to over-spray of spillage to a similar condition prior to the commencement of the work.
 10. Incidental painting and touching up as required to produce proper finish for all painted surfaces.
- B. Painting of Windows and Window Parts
1. Paint windows and window parts as specified in the window specifications, otherwise paint as specified herein using paints for the type of surface encountered.
- C. Definitions:
1. "Paint" as used herein, means coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers and other applied materials whether used as a prime, intermediate or finish coat.

1.02 Quality Assurance

- A. Use adequate numbers of skilled work persons who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work.

- B. Qualifications of Painters: Use only qualified journeymen painters for the mixing and application of paint on exposed surfaces.
- C. Paint Coordination: Provide finished coats that are compatible with the prime paints used. Review other Sections of these specifications in which prime paints are to be provided to ensure compatibility of the total coatings system for the various substrates. Provide barrier coats over incompatible primers or remove and re-prime as required.
- D. All paints must conform to the Volatile Organic Compounds (VOC) standards of prevailing codes.
- E. Safety Precautions: Always refer to Product MSDS before use. Painting shall be done in accordance with applicable OSHA requirements.

1.03 Environmental Conditions

- A. Apply solvent -thinned paints only when temperature of surfaces to be painted and the surrounding air temperatures are above 45°F, unless permitted by the materials manufacturer.
- B. Do not apply paint in snow, rain, fog or mist; or when relative humidity exceeds 85%; or to damp and wet surfaces.
- C. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. No painting shall commenced until all conditions are satisfactory.

1.04 Submittals

- A. Submit manufacturer's technical information, label analysis, and application instructions for each material proposed for used.
- B. Submit manufacturer's color charts to the Authority and Consultant.
- C. Material List: Before any paint materials are delivered to the job site, submit to the Engineer/Architect a complete list of all materials proposed to be furnished and installed under this portion of the work.
- D. This shall in no way be constructed as permitting substitution of materials for those specified or accepted for this work by the Engineer/Architect.
- E. Samples: Upon direction of the Engineer, prepare and deliver to the Engineer/Architect two (2) identical sets of samples of each of the selected colors and glosses painted onto 8-1/2" x 11" x 1/4" thick material; whenever possible, the material for Samples shall be the materials as that on which the coating will be applied in the work.
- F. Manufacturer's Recommendations: In each case where material proposed is not the material specified or specifically described as an acceptable alternate in this section of these specifications, submit for the Engineer's review the current recommended method of application published by the manufacturer of the proposed material.
- G. Copies of surface preparation instructions and recommendations prior to application of primers, paints, coatings, etc. shall be submitted to the Authority and Engineer for information and review.
- H. Submit data indicating that paint meets Performance Standards specified herein.

1.05 Delivery, Storage and Handling

- A. Deliver material to the job site in the manufacturer's original, unopened packages and containers bearing the manufacturer's name, label and the following information:
 - 1. Product Name or title of material.
 - 2. Product description (generic classification).
 - 3. Federal Specification No., if applicable.
 - 4. Manufacturer's stock number and age of manufacture.
 - 5. Contents by volume, or pigment and vehicle constituents.
 - 6. Thinning instructions.
 - 7. Application instructions.
 - 8. Color and Number.
- B. Store materials not in use in tightly covered containers in a well ventilated area at a minimum ambient temperature of 45°F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
- C. Protect from freezing. Keep storage area orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.
- D. Extra Stock: Upon completion of this portion of the Work, deliver to the Owner an extra stock of paint equaling approximately ten (10) percent of each color and gloss used in each coating material used, with all such extra stock tightly sealed in clearly labeled containers.

PART 2 - PRODUCTS

2.01 Paints and Coatings

- A. Provide best quality and grade painting and coating products for all necessary painting. Comply with number of coats and required minimum mil thickness as specified herein.
- B. Paint and Coating Thicknesses: Follow the specified minimum dry film thickness (dft) requirements for the various types of surface that may be encountered. The dft for 3-coat work shall not be less than 5 mils total. The dft for 2-coat work shall not be less than 4.0 mils total. The dft for each coat shall not be less than 2 mils or as specified below. The dft specified is predicated on average surface roughness.
- C. Provide Industrial and Marine Type Coatings DTM Acrylic Coating B66-200 Series (Semi-Gloss as manufactured by Sherwin Williams (Tel 1 800 321 8194) or equal.
 - 1. Concrete Block Walls
 - a. One coat: Heavy Duty Block Filler @ 10-18 mils/dft.
 - b. Two coats: DTM Acrylic Coating at 4.0 mils dft/coat.
 - 2. Concrete/Masonry Walls
 - a. Two coats: DTM Acrylic Coating at 4.0 mils dft./coat.
 - 3. Steel
 - a. One coat: DTM Acrylic Primer/Finish at 4 dft/coat
 - b. Two coats: DTM Acrylic Coating at 4.0 mils dft./coat.
 - 4. Aluminum
 - a. One coat: DTM Wash Primer at 1.5 mils dft.
 - b. Two coats: DTM Acrylic Coating at 4.0 mils dft./coat.

5. Drywall
 - a. One coat: PrepRite 200 Latex at 1.5 dft.
 - b. Two coats: DTM Acrylic Coating at 4.0 mils dft./coat.
6. Wood Interior
 - a. One Coat: PrepRite Wall and Wood Primer at 1.5 mils dft/
 - b. Two coats: DTM Acrylic Coating at 4.0 mils dft./coat.

D. Other Materials:

1. The materials required as fillers for concrete surfaces, primers for the various types of paints and coatings, cleaning materials (detergents) for the removal of grease, and other needed material to perform the work in this Section properly shall be in accordance with the recommendations and requirements of the paint/coating manufacturer(s).

E. The following ASTM and SSPC methods and other applicable requirements shall be followed:

1. ASTM D4258 Standard Practice for Cleaning Concrete
2. ASTM D4259 Standard Practice for Abrading Concrete
3. ASTM D4260 Standard Practice for Etching Concrete
4. ASTM D4263 Plastic Sheet Method for Checking Moisture in Concrete
5. SSPC-SP 13/NACE 6 Surface Preparation of Concrete
6. SSPC-SP 1 Solvent Cleaning
7. SSPC-SP2 Hand Tool Cleaning
8. SSPC-SP6/NACE 3 Commercial Blast Cleaning

PART 3 - EXECUTION

3.01 Inspection

- A. Examine the areas and conditions where painting and finishing is to be installed and notify the Engineer of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Engineer.

3.02 General Workmanship Requirements

- A. Only skilled painters shall be employed. Application shall be brush or roller. Spray application only upon acceptance from the Engineer in writing.
- B. The Contractor shall furnish the Engineer/Architect a schedule showing when he expects to have completed the respective coats of paint for the various areas and surfaces. This schedule shall be kept current as the job progresses.
- C. The Contractor shall protect his work at all times, and shall protect all adjacent work and materials by suitable covering or other methods during progress of his work. Upon completion of the work, he shall remove all paint and varnish spots from floors, glass and other surfaces. He shall remove from the premises all rubbish and accumulated materials of whatever nature not caused by others and shall leave his part of the work in clean, orderly and acceptable condition.
- D. Remove electrical panel box covers and doors before painting walls. Paint separately and re-install after all paint is dry.
- E. All materials shall be applied under adequate illumination, evenly spread and flowed-on smoothly to avoid runs, sags, holidays, brush marks, air bubbles and excessive roller stripple.

- F. Coverage and hide shall be complete. When color, stain, dirt or undercoats show through final coat of paint, the surface shall be covered by additional coats until the paint film is of uniform finish, color, appearance and coverage, at no additional cost to the owner.
- G. All coats shall be dry to manufacturer's recommendations before applying succeeding coats.
- H. All suction spots of "hot spots" in plaster and/or cement after the application of the first coat shall be touched up before applying the second coat.
- I. Where spray painting is permitted, the Contractor shall finish one hundred (100) square feet by spraying a sample of the finish upon the request of the Engineer.
- J. Surfaces to be stained shall appear uniform in shading with color variations caused only by the natural wood grain.

3.03 Preparation of Surfaces

- A. Surface preparation for the various types of primers, paints, coatings specified herein shall be in accordance with the requirements and recommendations of the manufacturer(s).
- B. Clean existing surfaces requiring paint or finishing, remove all loose and flaking paint and sand smooth as required to receive new paint or finish. No "telegraphing" of lines, ridges, flakes, etc., through new surfacing is permitted. Where this occurs, Contractor shall be required to sand smooth and refinish until surface meets with Engineer's approval.
- C. The Contractor shall be held wholly responsible for the finished appearance and satisfactory completion of painting work. Properly prepare all surfaces to receive paint, which includes cleaning, sanding, and touching-up of all prime coats applied under other Sections of the work. Broom clean all spaces before painting is started. All surfaces to be painted or finished shall be perfectly dry, clean and smooth.
 - 1. Perform all preparation and cleaning procedures in strict accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.
 - 2. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease with clean cloths and cleaning solvents prior to mechanical cleaning. Program the cleaning and painting so that dust and other contaminants from the cleaning process will not fall in wet, newly painted surfaces.
- D. Concrete Surfaces:
 - 1. Remove form oil or mold releases oil from concrete surfaces using a suitable solvent and then neutralize; remove all foreign matter from concrete surfaces to be painted including all grit, dirt, loose materials, mortar drippings and the like; remove all nibs, projections or protuberances from concrete surfaces to be painted.
 - 2. Concrete surfaces which are too smooth to receive paint finish, and all concrete slabs to receive paint coating, shall receive the following preparation to obtain better adhesion. Etch surface with a solution of muriatic acid. Mix ten (10) parts water to one (1) part 36c muriatic acid. Allow to etch 15-20 minutes and rinse thoroughly with clean water, neutralizing by flushing with a solution of ½ part of house hold ammonia to one (1) gallon of water and again rinse thoroughly before painting to prevent underfilm contamination of paint. Do not etch concrete without permission of Consultant.
 - 3. Patch concrete surfaces to be painted with Portland cement grout, filling all cracks, depressions, air holes and similar voids in order to provide smooth surfaces for painting.

E. Gypsum Drywall Surfaces:

1. Scrape off all projections and splatters, spackle all holes or depressions, including taped and spackled joints, sand smooth.

F. Wood Surfaces:

1. Sand to remove all roughness, loose edges, splinters, or splinters and then brush to remove dust. Wash off grease or dirt with an approved cleaner. Fill all cracks, splits, nail holes, screw holes and surface defects with putty after the priming coat has been applied. Putty shall be brought up flush with the surface and sanded smooth and touched-up with primer when dry. Putty in varnished work shall match finish color. Cover knots and sappy areas with two (2) coats of shellac after priming. Fire-retardant treated wood and preservative treated wood, required to be painted or stained, shall be primed on all surfaces prior to installation with shellac or other approved sealer, if and as recommended by treatment manufacturer to prevent bleeding or blooming of treatment.

G. Block Masonry Surfaces

1. Thoroughly clean off all grit, grease, dirt mortar drippings or splatters, and other foreign matter. Remove nibs or projections from masonry surfaces. Fill cracks, holes or voids, not filled under the “Masonry” Section, with Portland Cement grout, and bag surface so that it has approximately the same texture as the adjacent masonry surface.

H. Testing for Alkali

1. Contractor shall test all surfaces for the presence of alkali. If present, treat with a solution in proportion of two (2) lbs. Zinc sulphate crystals to one (1) gallon of water. Allow surface to dry twenty-four (24) hour, and remove crystals before applying paint. Re-coat hot spots, appearing after applying primer, until all suction is sealed. Surfaces which are to receive Latex Primer need no treatment.

I. Testing for Moisture Content

1. Contractor shall test all concrete, masonry and drywall surfaces for moisture content using a reliable electronic moisture meter. Contractor shall also test latex type fillers for moisture content before application of top coats of paint. Do not apply any paint or sealer top any surface or to latex type filler where the moisture content exceeds seven (7) percent as measured by the electronic moisture meter.

J. Touch-Up:

1. Prime paint all patched portions in addition to all other specified coats.

3.04 Materials Preparation

- A. Mix and prepare painting materials in strict accordance with the manufacturer’s directions.
- B. Store material not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.
- C. Stir all materials before application to produce a mixture of uniform density, and as required during the application of the materials. Do not stir any film which may form on the surface into the material. Remove the film and, if necessary, strain the material before using.

- D. Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are to be applied. Tint undercoats to match the color of the finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

3.05 Application

- A. General: Application shall be in accordance with the manufacturer's instructions, requirements, and recommendations. The following are to be considered minimum requirements.
1. Apply paint by brush or roller in accordance with the manufacturer's directions. Use brushes best suited for the type of material being applied. Use rollers of carpet, velvet back, or high pile sheep's wool as recommended by the paint manufacturer for material and texture required.
 2. The number of coats and paint film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has completely dried. Sand between each enamel coat application with fine sandpaper, or rub surfaces with pumice stone where required to produce an even, smooth surface in accordance with coating manufacturer's directions.
 3. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Give special attention to insure that all surfaces, including edges, corner, crevices, welds, and exposed fasteners receive a film thickness equivalent to that of flat surfaces.
 4. Paint surface behind movable equipment and furniture the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - a. "Exposed surfaces" is defined as those areas visible when permanent or built-in fixtures, grilles, or similar, are in place in areas scheduled to be painted.
 5. Paste wood filler applied on open grained wood after beginning to flatter, shall be wiped across the grain of the wood, then with a circular motion, to secure a smooth, filled, clean surface with filler remaining in open grain only. After overnight dry, sand surface with the grain until smooth before applying specified coat.

B. Scheduling Painting

1. Apply the first coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
2. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

C. Pigmented (Opaque) Finishes

1. Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage.

D. Prime Coats

1. Re-coat primed and sealed walls and ceilings where there is evidence of suction spots of unsealed areas in first coat to assure a finish coat with no burn-through or other defects due to insufficient sealing.

E. Transparent (Clear) Finishes

1. On exposed portions, use multiple coats to produce glass-smooth surface film continuity of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.

F. Touching-Up of Factory Finishes

1. Unless otherwise specified or shown, materials with a factory finish shall not be painted at the project site. To “touch-up”, the Contractor shall use the factory finished material manufacturer’s recommended paint materials to repair abraded, chipped, or otherwise defective surfaces.

G. Protection:

1. Protect work of other trades, whether to be painted or not, against damage by the painting and finishing work. Leave all such work undamaged. Correct any damages by cleaning, repairing or replacing and repainting, as acceptable to the Architect.
2. Provide “Wet Paint” signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.06 Cleaning

- A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- B. Upon completion of painting, clean window frames, glass and paint-spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.
- C. Touch-Up: At completion of all other work, touch-up and restore all painted and finished surfaces where damaged or defaced; leave entire work free of blemishes. Upon receipt of Architect’s Punch List of Contractor’s incomplete/unsatisfactory work, proceed forthwith to complete all such items, to Consultant’s satisfaction as to Contract requirements.

END OF SECTION

BOROUGH OF HIGHLAND PARK HOUSING AUTHORITY
242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

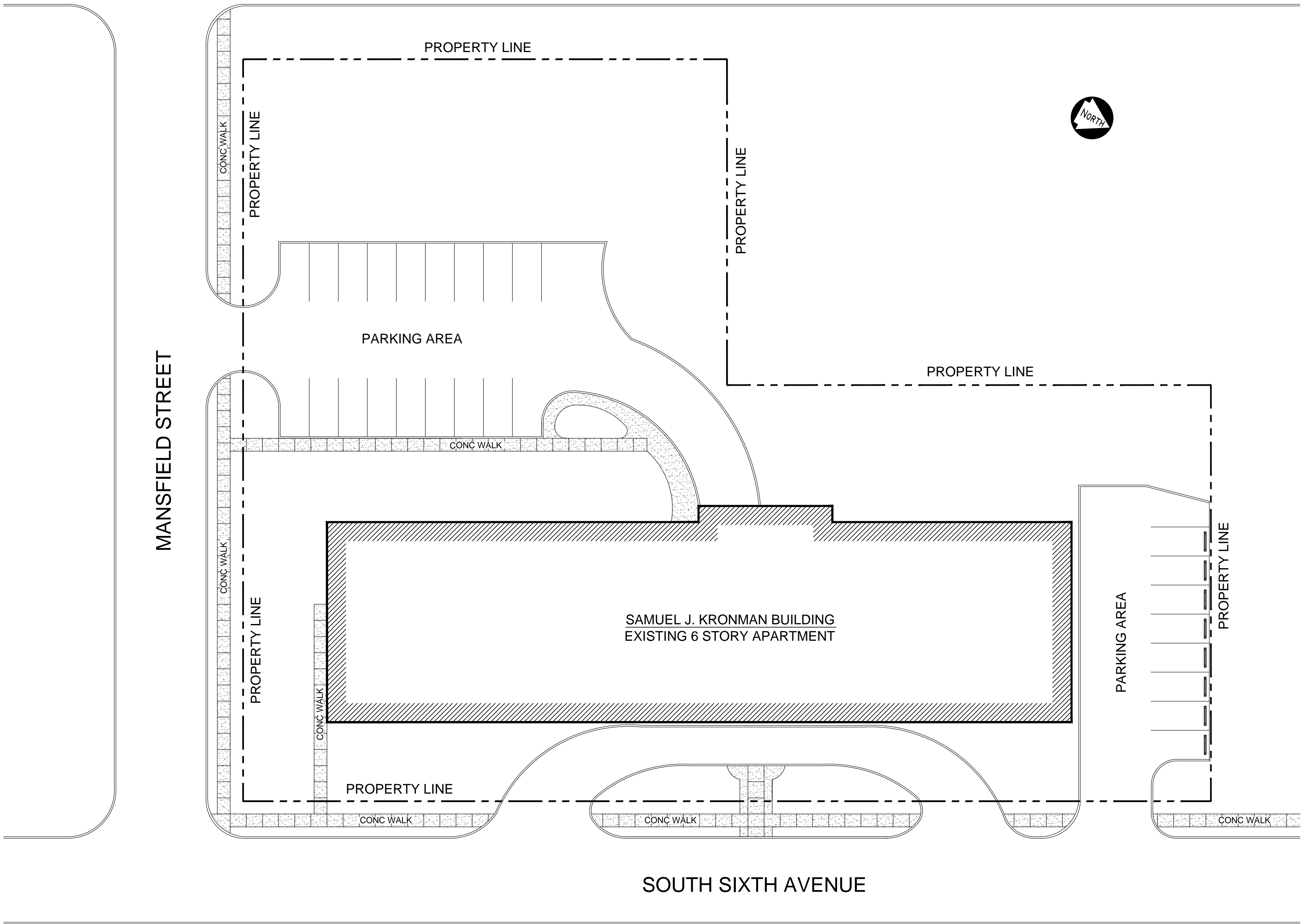
REPLACEMENT OF WINDOWS AT
SAMUEL J. KRONMAN BUILDING
PARK TERRACE APARTMENT

FEBRUARY 2016

LIST OF DRAWINGS		
SAMUEL J. KRONMAN BUILDING		
SHEET NO.	DWG NO.	TITLE
COVER	COVER	REPLACEMENT OF WINDOWS
1 OF 13	A-1	SAMUL J. KRONMAN BUILDING - SITE PLAN
2 OF 13	A-2	PARK TERRACE APARTMENTS - SITE PLAN
3 OF 13	A-3	SAMUEL J. KRONMAN BUILDING - FIRST FLOOR PLAN AND TYPICAL FLOOR PLANS
4 OF 13	A-4	SAMUEL J. KRONMAN BUILDING - ELEVATIONS
5 OF 13	A-5	SAMUEL J. KRONMAN BUILDING - WINDOW AND DOOR SCHEDULE
6 OF 13	A-6	SAMUEL J. KRONMAN BUILDING - WINDOW AND DOOR DETAILS
7 OF 13	A-7	PARK TERRACE APARTMENTS - FIRST FLOOR PLANS
8 OF 13	A-8	PARK TERRACE APARTMENTS - SECOND FLOOR PLANS
9 OF 13	A-9	PARK TERRACE APARTMENTS - ELEVATIONS (BUILDING A1)
10 OF 13	A-10	PARK TERRACE APARTMENTS - ELEVATIONS (BUILDING A2)
11 OF 13	A-11	PARK TERRACE APARTMENTS - ELEVATIONS (BUILDING B)
12 OF 13	A-12	PARK TERRACE APARTMENTS - WINDOW SCHEDULES
13 OF 13	A-13	PARK TERRACE APARTMENTS - WINDOW DETAILS



APARRI ENGINEERING LLC



1 SITE PLAN - SAMUEL J. KRONMAN BUILDING
A-1 SCALE: 1" = 20'-0"

NOTES

- REFER TO ALL CONTRACT DOCUMENT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW BOTH PLANS AND SPECIFICATIONS FOR WINDOW INSTALLATION. THE CONTRACTOR IS REQUIRED TO HAVE ONE COMPLETE SET OF DOCUMENTS AT THE SITE AT ALL TIMES.
- THE WORK IS IN THE HIGHLAND PARK HOUSING AUTHORITY LOCATED AS FOLLOW

SAMUEL J. KRONMAN BUILDING DEVELOPMENT:
242 SOUTH 6TH AVE, HIGHLAND PARK NEW JERSEY

PARK TERRACE APARTMENTS DEVELOPMENT:
APARTMENT A1: 602-616 BENNER STREET, HIGHLAND PARK, NJ
APARTMENT A2: 205-219 SOUTH 6TH AVE, HIGHLAND PARK, NJ
APARTMENT B: 206-220 SOUTH 7TH AVE, HIGHLAND PARK, NJ
- THERE ARE TOTAL OF 80 SLIDING DOORS AND 132 WINDOWS IN 128 EXISTING WINDOW ROUGH OPENINGS IN SAMUEL J. KRONMAN BUILDING.
- THERE ARE TOTAL OF 196 WINDOWS IN 118 EXISTING ROUGH OPENINGS IN PARK TERRACE APARTMENTS.
- QUANTITY AND DIMENSIONS SHOWN FOR ALL TYPES OF WINDOWS AND DOORS SHALL BE VERIFIED BY THE BIDDER/CONTRACTOR. ALL WINDOW AND DOOR SIZES SHOWN SHALL BE CONSIDERED APPROXIMATE.
- DEMOLITION WORK SHALL INCLUDE REMOVAL AND DISPOSAL OF DEBRIS AND OTHER REMOVED CONSTRUCTION MATERIALS AS REQUIRED BY THE HOUSING AUTHORITY.
- THE CONTRACTOR'S WORK SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:

A. REMOVAL OF EXISTING WINDOWS AND PATIO DOORS

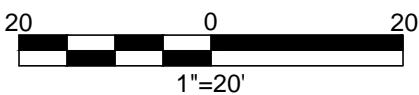
B. TEMPORARY REMOVAL OF EXISTING CURTAIN RODS AND/OR SHADE BRACKETS, FURNITURE, AIR CONDITIONER, AND SIMILAR ITEMS OF PROPERTY TO ALLOW PROPER INSTALLATION OF WINDOWS.

C. PROPER PREPARATION OF THE WINDOW AND DOOR ROUGH OPENINGS PRIOR TO NEW WINDOWS AND DOORS INSTALLATION.

D. INSTALLATION OF NEW WINDOWS AND DOORS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE WINDOW MANUFACTURER.
- FOR EACH APARTMENT UNIT, WORK COMPLETED SHALL INCLUDE REPAIR, REINSTALLATION, AND PATCH UP AND REQUIRED PAINTING OF ALL DISTURBED AND DAMAGED EQUIPMENT AND BUILDING COMPONENTS.
- THE CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE PROPER AND LEGAL DISPOSAL OF EXISTING WINDOWS, DOORS AND OTHER ACCESSORIES THAT ARE NOT TO BE REINSTALLED.
- DUST CONTROL SHALL BE MAINTAINED IN THE COMMON AREA, WORK AREA AND SURROUNDING.
- THE WORK SHALL BE PERFORMED SO AS NOT TO INTERFERE WITH TENANTS' ACTIVITIES. THE CONTRACTOR SHALL NOT ENTER OR WORK IN ANY APARTMENT WITHOUT THE TENANT OR TENANT REPRESENTATIVE PRESENCE / KNOWLEDGE.
- THE CONTRACTOR IS RESPONSIBLE FOR POSITIONING EACH NEW WINDOW UNIT AND ACCESSORIES SUCH THAT THE EXISTING PAINT LINE IS COVERED ON THE INTERIOR.

LEGEND

SYMBOL	DESCRIPTION
DR#	DOOR TYPE (SAMUEL J. KRONMAN BLDG)
WS#	WINDOW TYPE (SAMUEL J. KRONMAN BLDG)
WP#	WINDOW TYPE (PARK TERRACE APARTMENTS)
X A-XXX	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
X A-20X A-20X	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
D.H.	DOUBLE HUNG WINDOW
R.O.	ROUGH OPENING



△	02/19/16	INITIAL SUBMITTAL	
NO.	DATE:	DESCRIPTION	APPR'D BY:
REVISIONS			

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

DRAWING TITLE:

SAMUEL J. KRONMAN BUILDING
SITE PLAN

SCALE: 1"=20'-0"

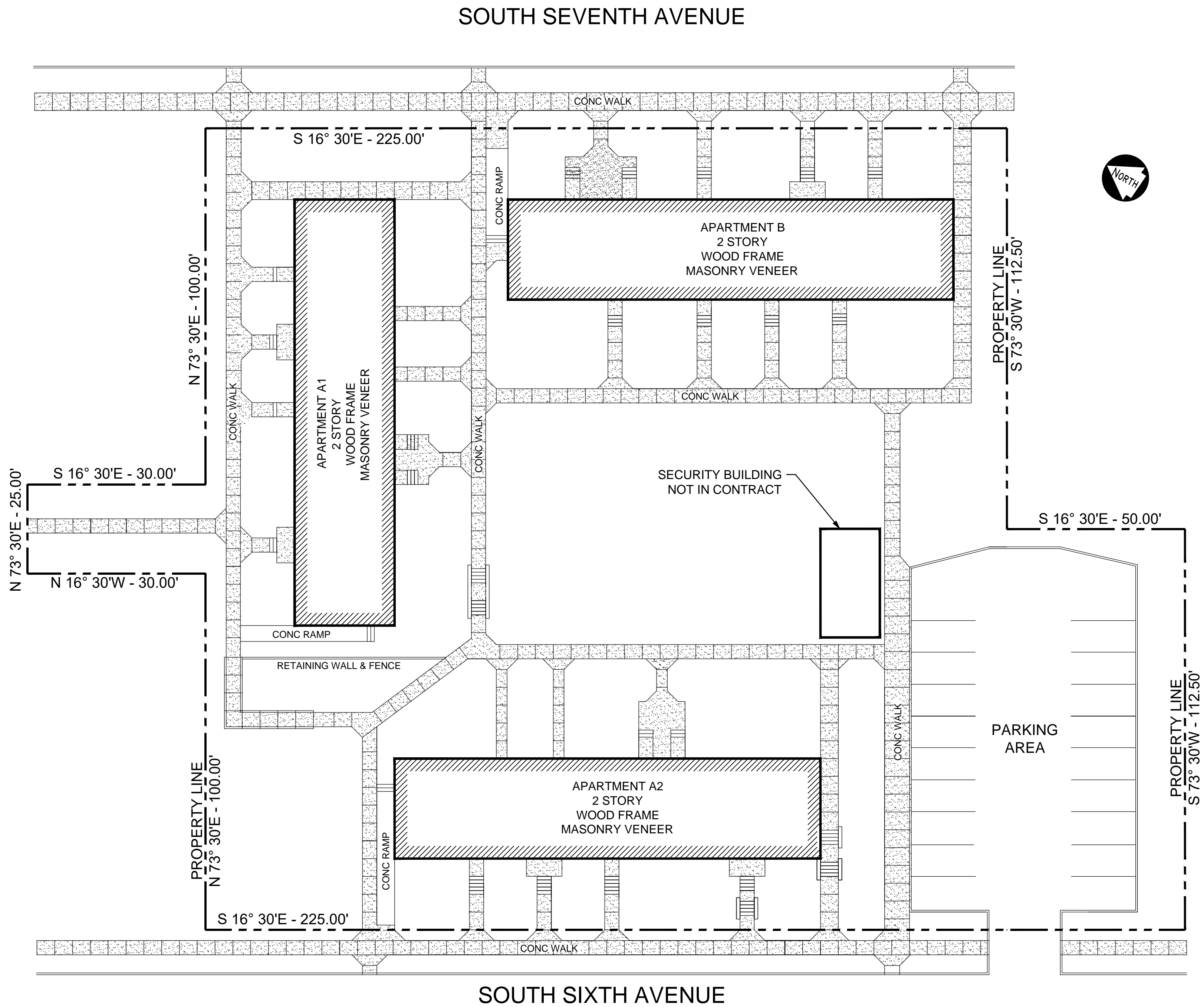
DATE: 02/19/2016

SHEET: 1 OF 13

DWG. NO.: A-1

NOTES

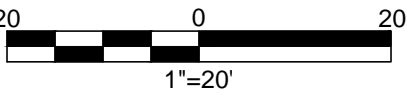
13. THE CONTRACTOR SHALL NOT DAMAGE EXISTING CONDITIONS SURROUNDING WINDOW OPENINGS AND REPAIR ANY DAMAGES AT CONTRACTOR'S EXPENSE.
14. ANY WINDOW OR ACCESSORIES THAT DO NOT FIT PROPERLY ARE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST OR REPLACE AT THEIR OWN EXPENSE AS NEEDED TO CORRECT THE PROBLEM. FIELD MEASURING MUST BE DONE TO DETERMINE CORRECT SIZES AND PREPARE SHOP DRAWINGS.
15. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE CONDITIONS AT EACH WINDOW AND DOOR OPENING. THE AUTHORITY IS NOT RESPONSIBLE FOR VARIATIONS FROM OPENINGS WITHIN THE BUILDING.
16. REMOVE EXISTING CAULK AT WINDOW PERIMETER, EXTERIOR AND INTERIOR PRIOR TO INSTALLING THE NEW WINDOW. RECAULK AND SEAL AFTER INSTALLATION OF NEW WINDOWS.
17. WHENEVER "TYPICAL" IS SHOWN, IT SHALL MEAN THE SAME TYPE OF WORK MUST BE DONE FOR ALL WINDOWS.
18. FOR ANY DISCREPANCY, CALL TO THE ATTENTION OF CONSULTANT FOR CONSTRUCTION



1 SITE PLAN - PARK TERRACE APARTMENTS
A-2 SCALE: 1" = 20'-0"

LEGEND

SYMBOL	DESCRIPTION
DR#	DOOR TYPE (SAMUEL J. KRONMAN BLDG)
WS#	WINDOW TYPE (SAMUEL J. KRONMAN BLDG)
WP#	WINDOW TYPE (PARK TERRACE APARTMENTS)
X A-XXX	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
X A-20X A-20X	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
D.H.	DOUBLE HUNG WINDOW
R.O.	ROUGH OPENING



NO.	DATE:	DESCRIPTION	APPR'D BY:
REVISIONS			

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

DRAWING TITLE:

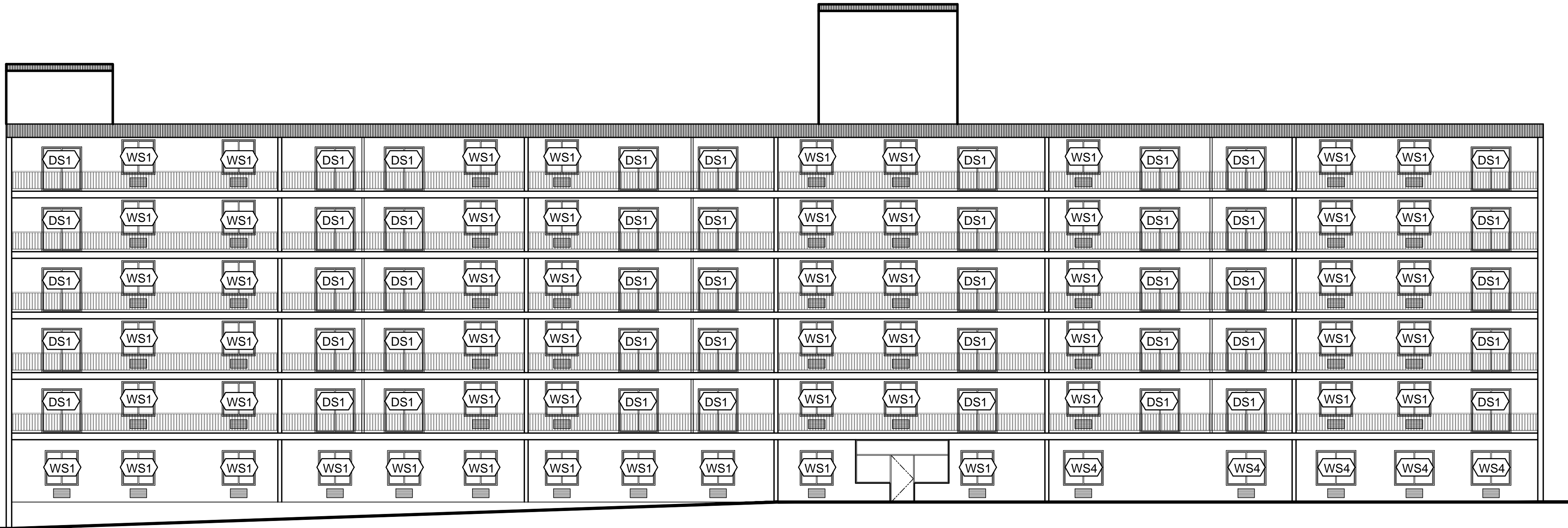
PARK TERRACE APARTMENTS
SITE PLAN

SCALE: 1"=0"=10'-0"

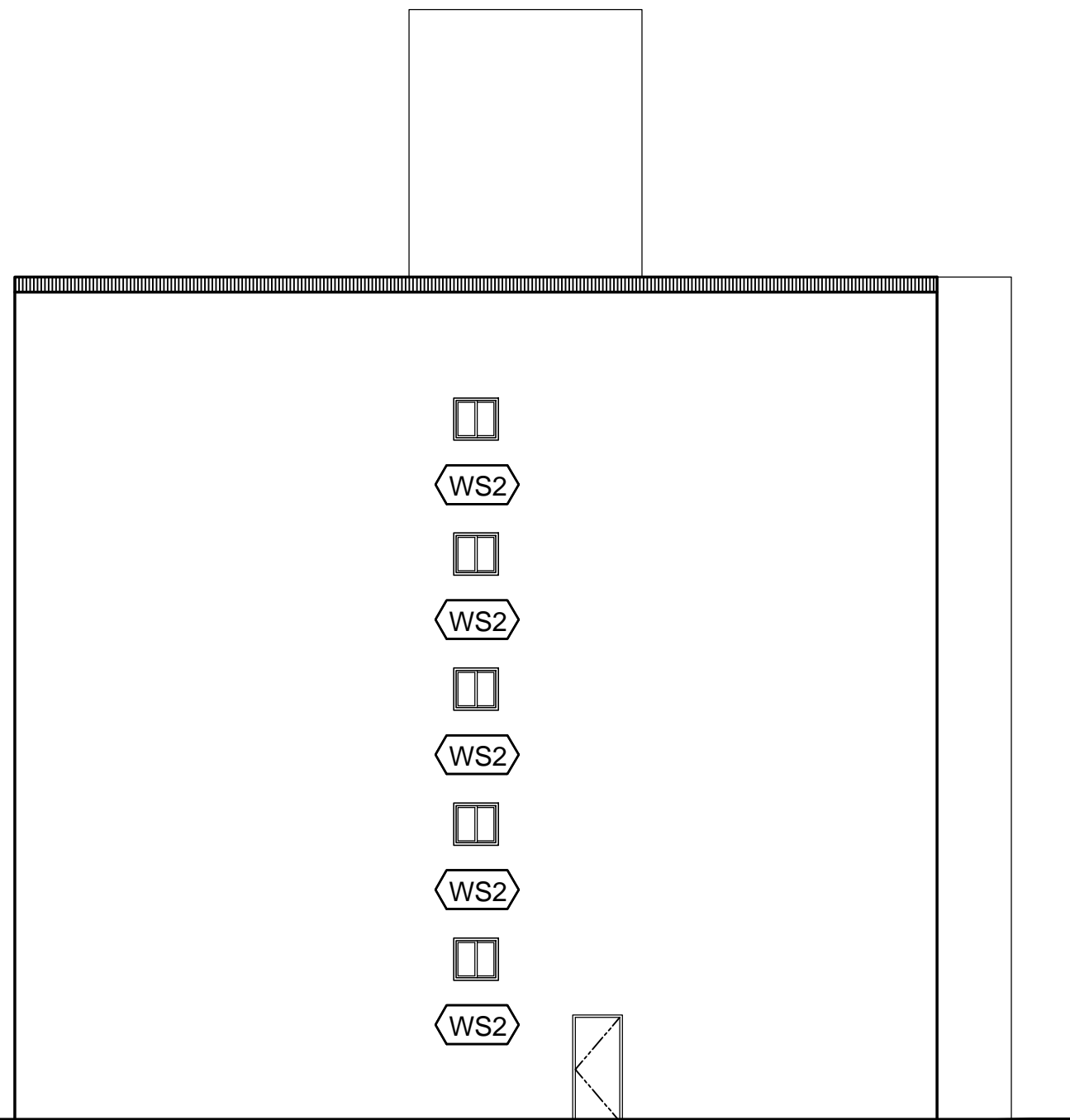
DATE: 02/19/2016

SHEET: 2 OF 13

DWG. NO.: A-2



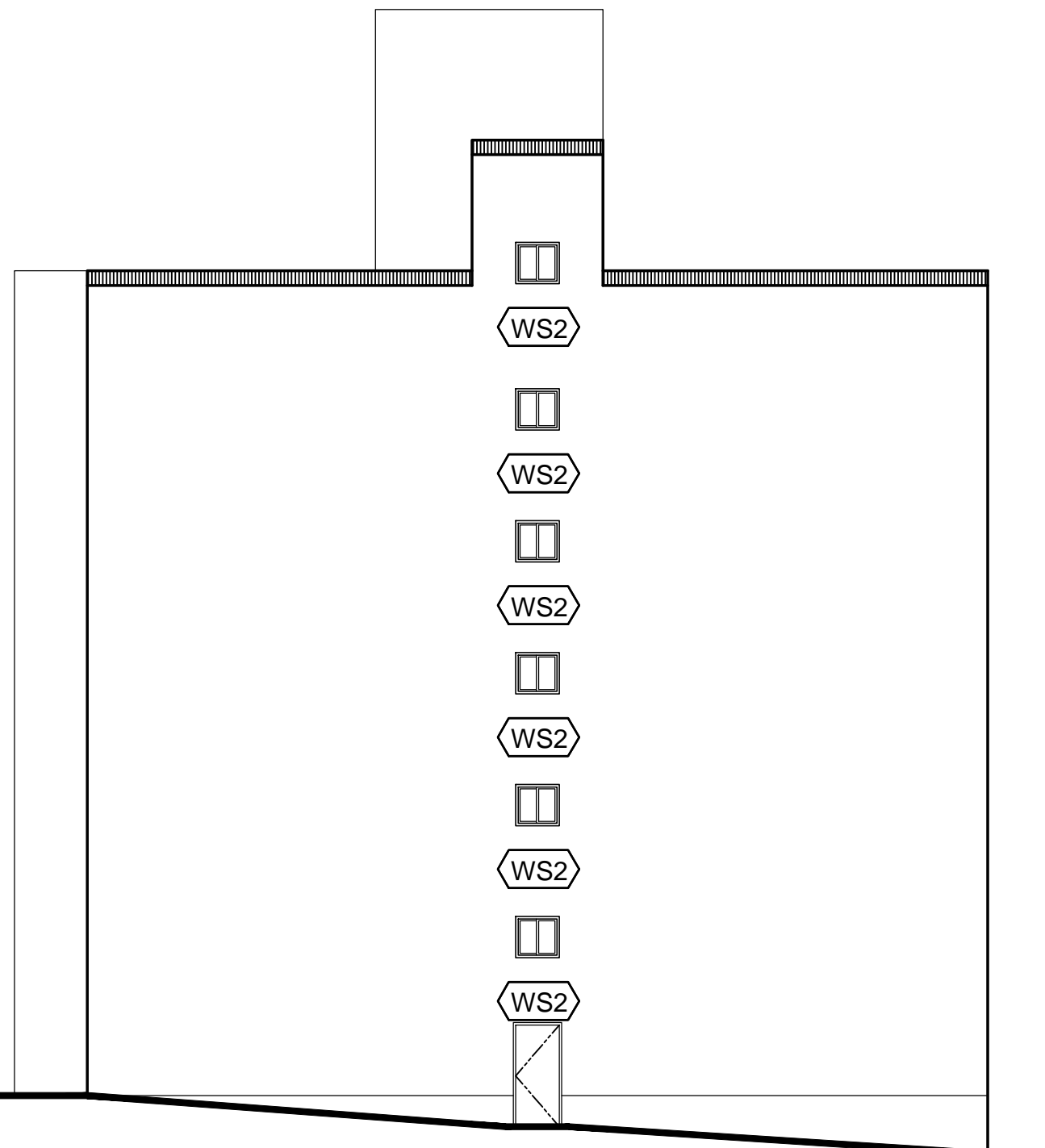
1 EAST ELEVATION
A-4 SCALE: 3/32" = 1'-0"



2 NORTH ELEVATION
A-4 SCALE: 3/32" = 1'-0"



3 WEST ELEVATION
A-4 SCALE: 3/32" = 1'-0"



4 SOUTH ELEVATION
A-4 SCALE: 3/32" = 1'-0"

02/19/16	INITIAL SUBMITTAL		
NO.	DATE:	DESCRIPTION	APPR'D BY:
REVISIONS			

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

DRAWING TITLE:

SAMUEL J. KRONMAN BUILDING
ELEVATIONS

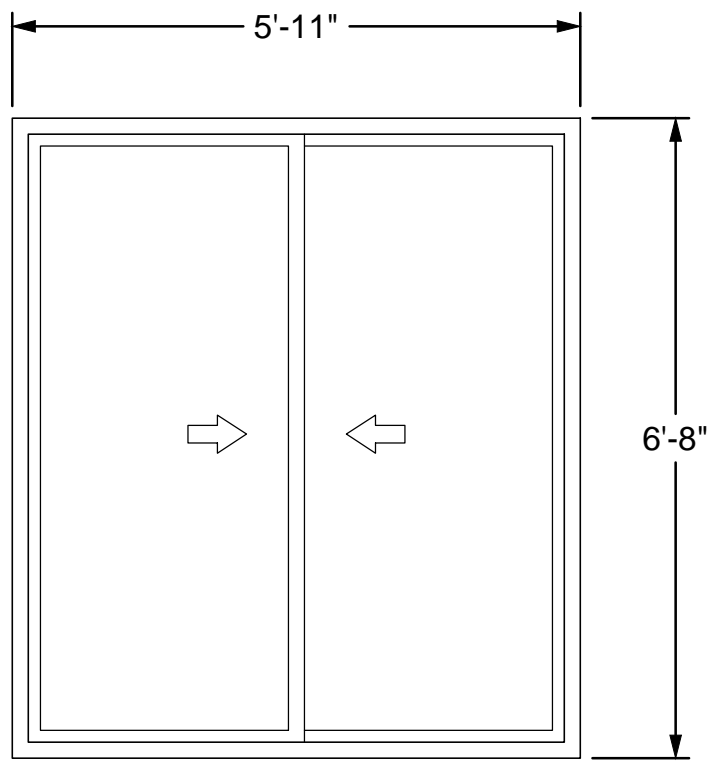
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DATE: 02/19/2016

SHEET: 4 OF 13

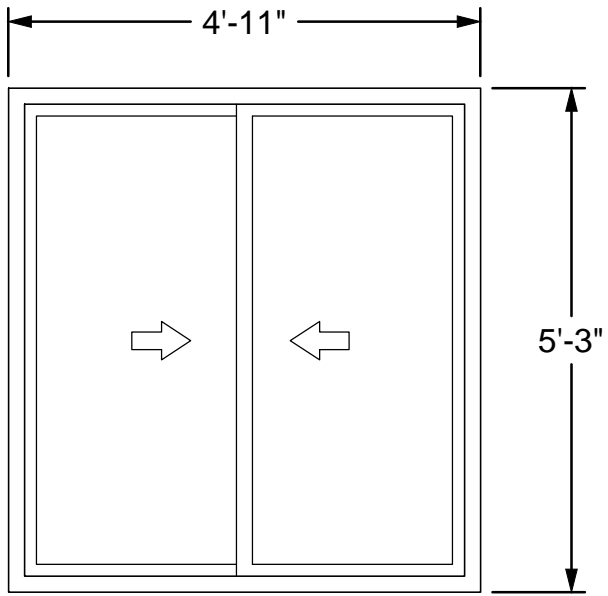
DWG. NO.: A-4

- NOTES:
1. ALL DIMENSIONS ARE APPROXIMATE. BIDDER / CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
2. THERE ARE TOTAL OF 80 SLIDING DOORS AND 132 WINDOWS IN 212 EXISTING WINDOW ROUGH OPENING (R.O.) IN SAMUEL J. KRONMAN BUILDING.



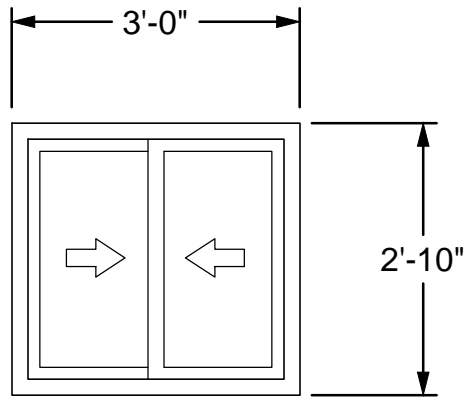
TYPE **DS1**
SLIDING DOOR

NO. OF ROUGH OPENING = 80
NO. OF SLIDING DOOR = 80



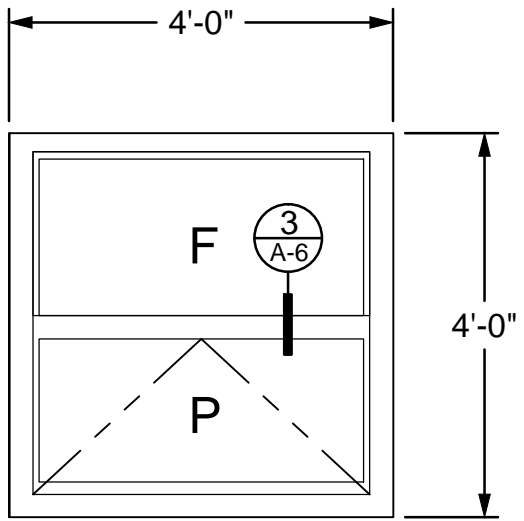
TYPE **WS1**
SLIDING WINDOW

NO. OF ROUGH OPENING = 92
NO. OF SLIDING WINDOW = 92



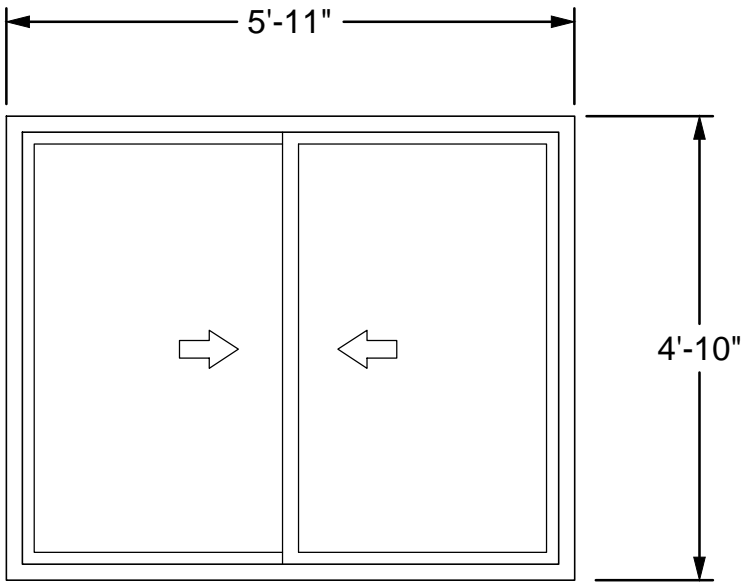
TYPE **WS2**
SLIDING WINDOW

NO. OF ROUGH OPENING = 11
NO. OF SLIDING WINDOW = 11



TYPE **WS3**
FIXED AND PROJECT-OUT WINDOW

NO. OF ROUGH OPENING = 4
NO. OF FIXED WINDOW = 4
NO. OF AWNING WINDOW = 4



TYPE **WS4**
SLIDING WINDOW

NO. OF ROUGH OPENING = 21
NO. OF SLIDING WINDOW = 21

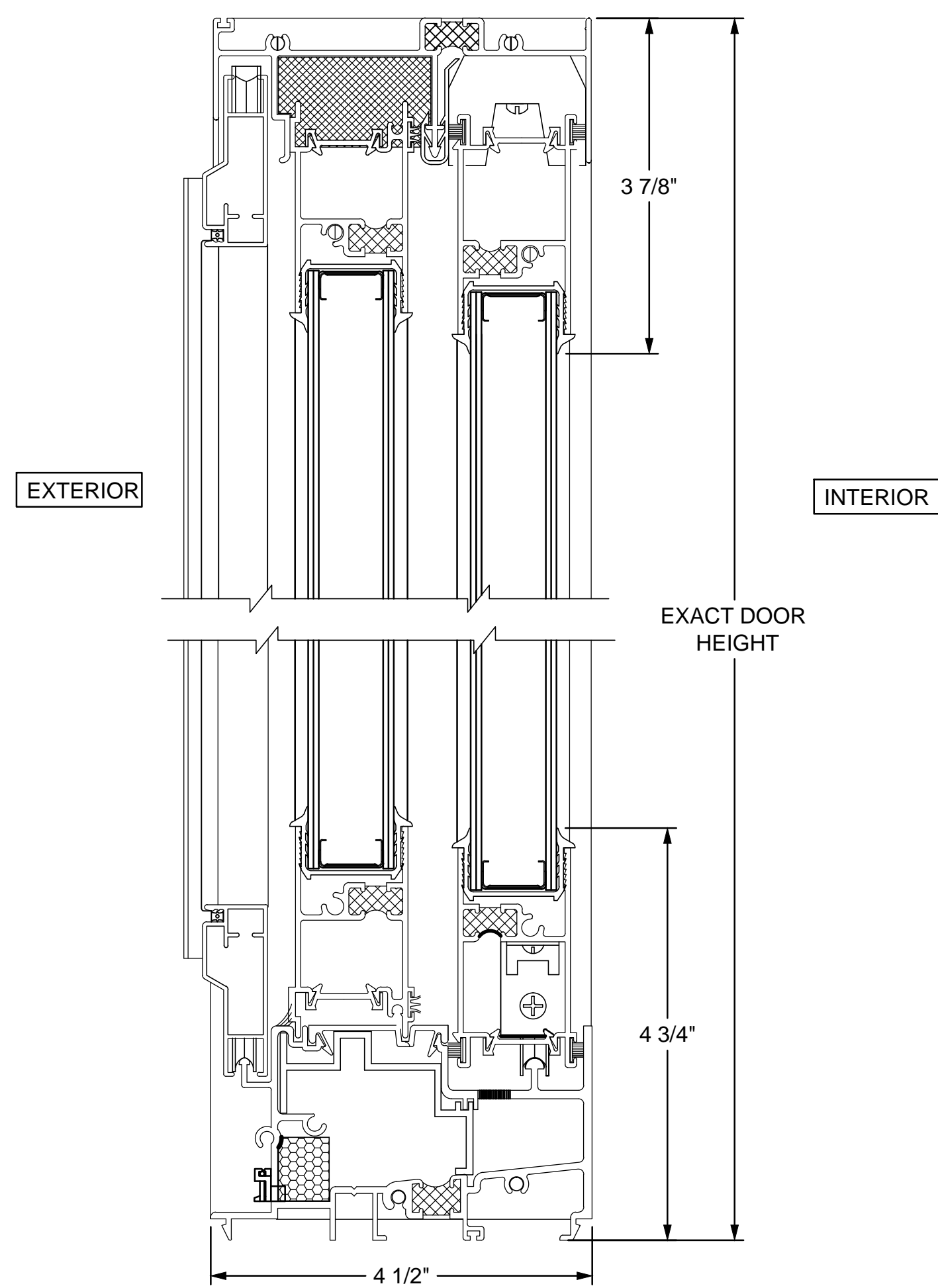
WINDOWS TYPE AND PERFORMANCE DATA										
OPERATION	SERIES NUMBER	MINIMUM TEST SIZE	TYPE	AAMA RATING	STRUCTURAL PERFORMANCE				THERMAL PERFORMANCE	
					WALL THICKNESS FRAME/SILL (IN)	UNIFORM LOAD (PSF)	AIR INFILTRATION (CFM/SF) AT 1.6 PSF PRESSURE	WATER RESISTANCE (PSF)	U-VALUES (BTU/HR/FT²°F)	SHGC
SLIDING DOOR (2 PANEL)	1240	95" X 83"	D1	SGD-C40	4 9/16"	60	0.30 MAX	6 PSF	0.4600	0.3900
SLIDING WINDOW	5600	99" X 79"	WS1, WS2, WS4	HS-AW40	3 1/4"	60	0.30 MAX	8 PSF	0.4700	0.3500
FIXED WINDOW	8100	60" X 99"	WS3	F-AW85	2 1/4"	150	0.30 MAX	12 PSF	0.4800	0.3500
PROJECT-OUT WINDOW	8200	60" X 36"	WS3	AW-PG80	2 1/4"	120	0.30 MAX	12 PSF	0.5100	0.3100

BASIS FOR DESIGN: CRYSTAL WINDOW & DOOR SYSTEMS, LTD.

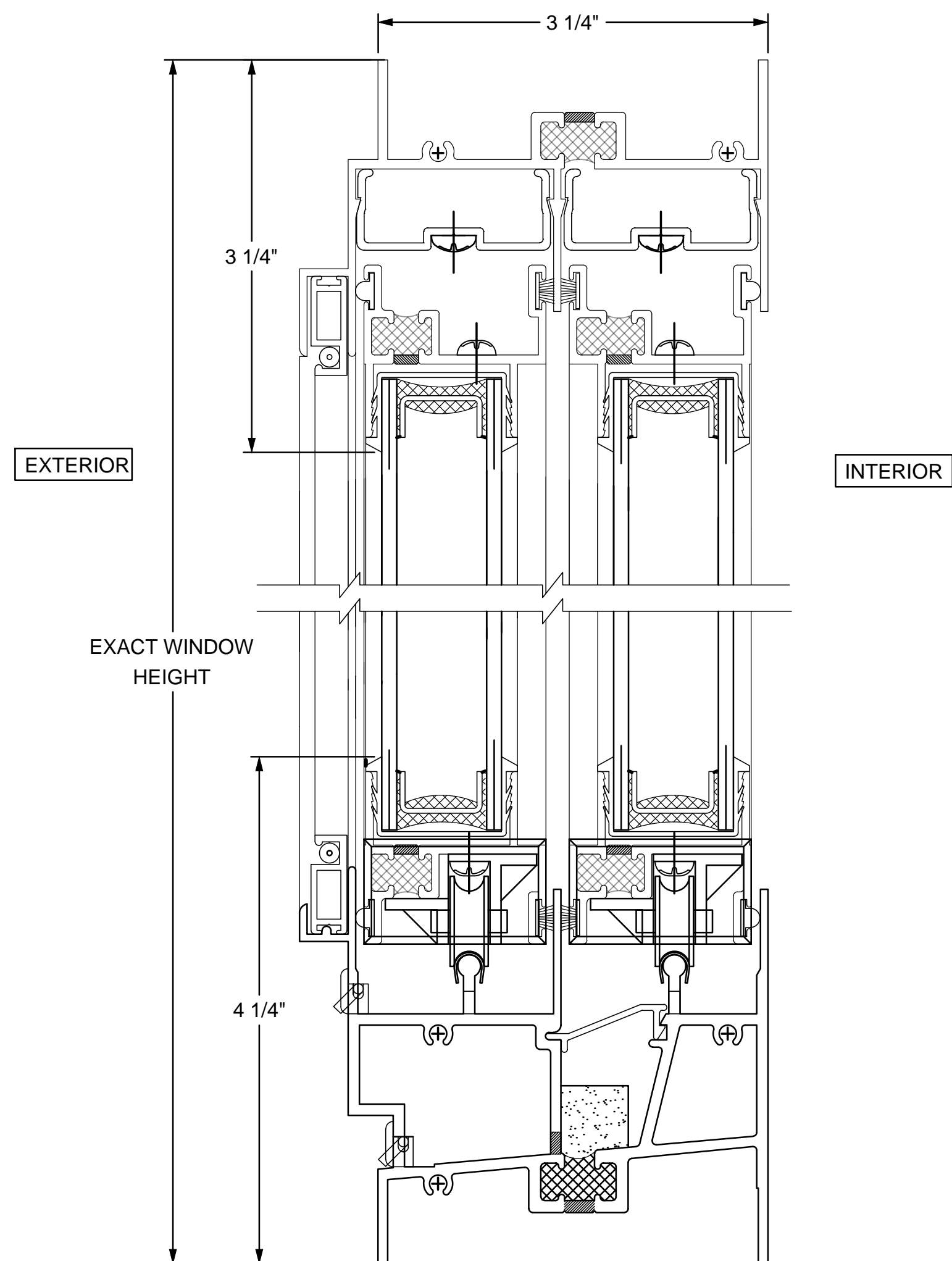
LOCATION	WINDOW QUANTITY (# OF ROUGH OPENING)					
	TYPE DS1	TYPE WS1	TYPE WS2	TYPE WS3	TYPE WS4	TOTAL
SAMUAL J. KRONMAN BLDG	80 (80)	92 (92)	11 (11)	8 (4)	21 (21)	212 (208)

LEGEND

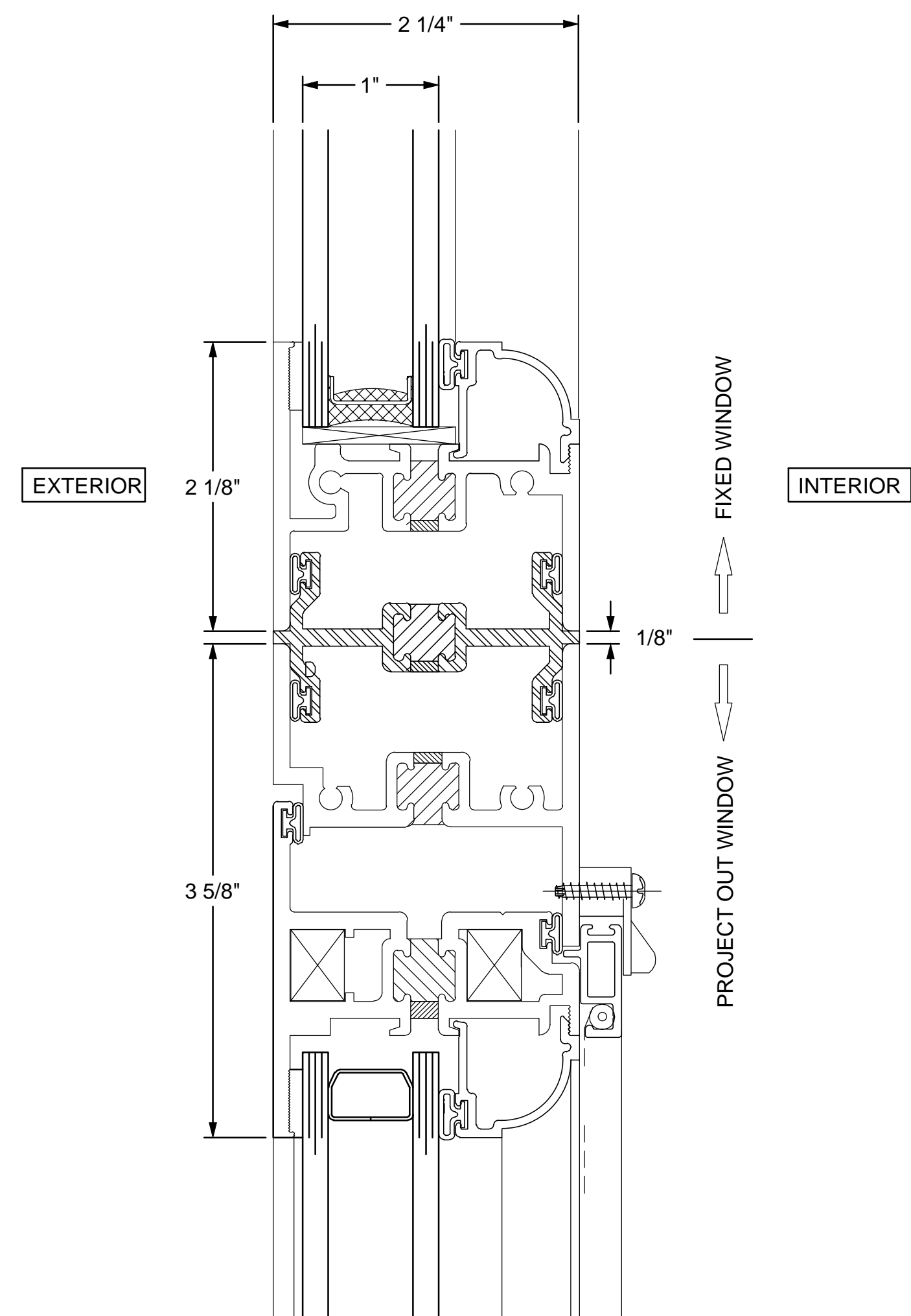
SYMBOL	DESCRIPTION
	DOOR TYPE (SAMUEL J. KRONMAN BLDG)
	WINDOW TYPE (SAMUEL J. KRONMAN BLDG)
	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
D.H.	DOUBLE HUNG WINDOW
R.O.	ROUGH OPENING



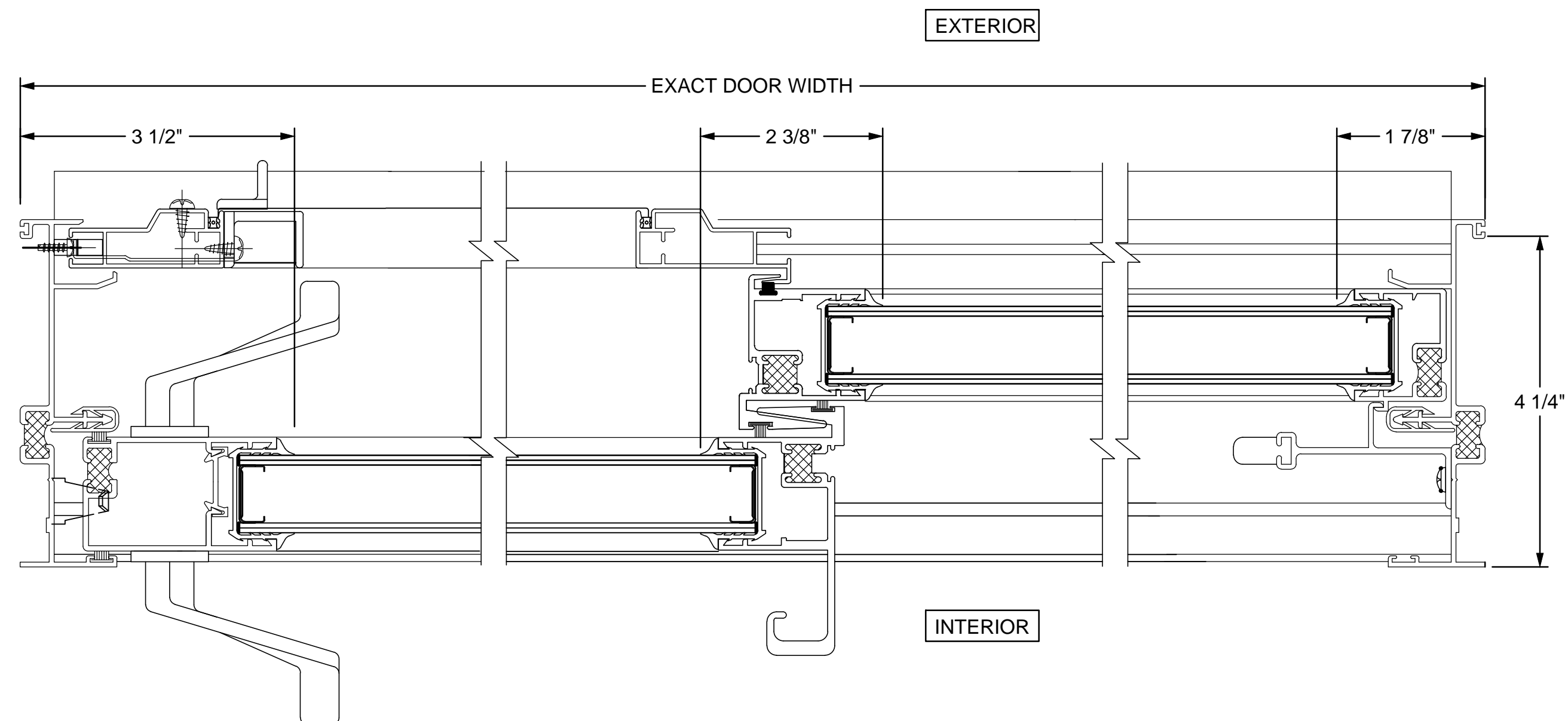
1
A-6
TYPICAL SLIDING DOOR SECTION DETAIL
SCALE: NTS.



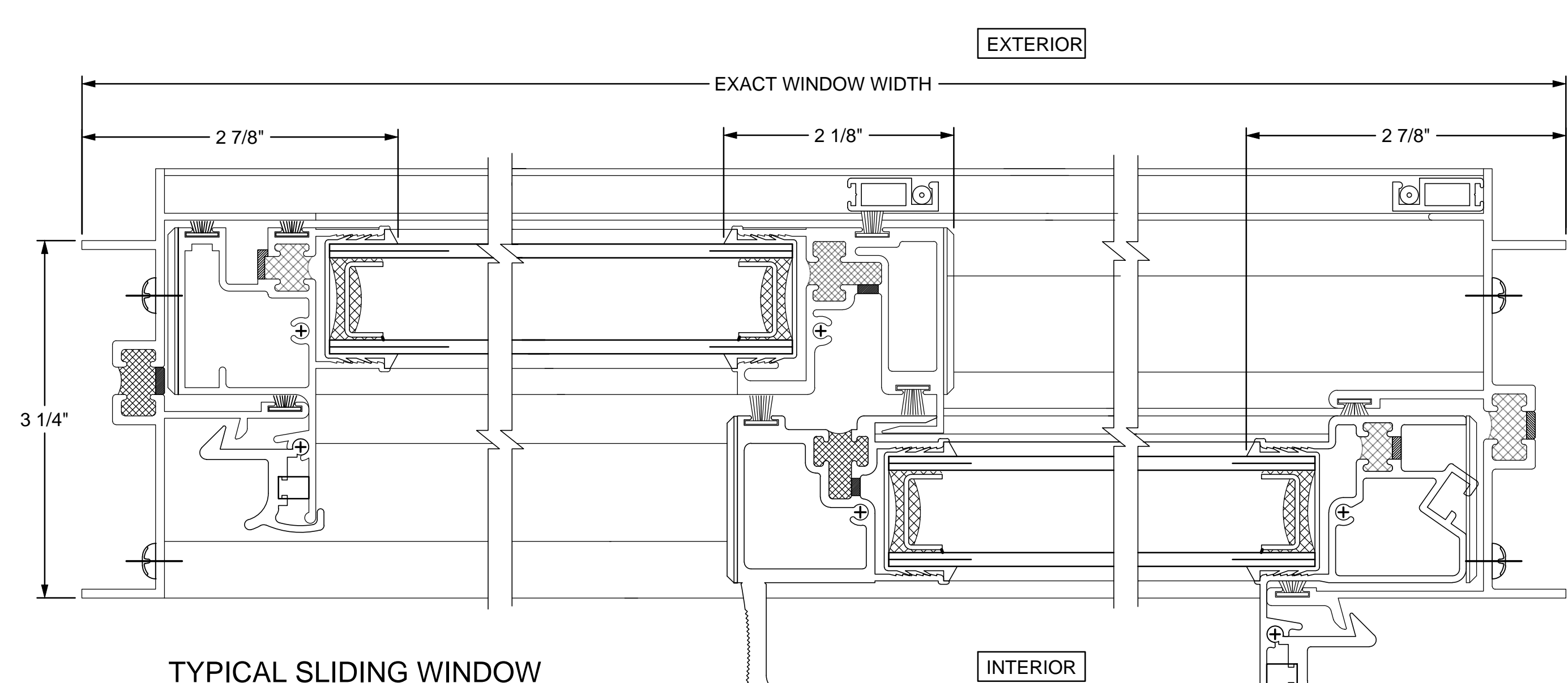
2
A-6
TYPICAL SLIDING WINDOW SECTION DETAIL
SCALE: NTS.



3
A-6
FIXED & PROJECT OUT WINDOW MID-MULLION DETAIL
SCALE: NTS.



4
A-6
TYPICAL SLIDING DOOR HORIZONTAL SECTION DETAIL
SCALE: NTS.



5
A-6
TYPICAL SLIDING WINDOW HORIZONTAL SECTION DETAIL
SCALE: NTS.

NO.	DATE:	DESCRIPTION	APPR'D BY:
		REVISIONS	

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

**BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY**

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

DRAWING TITLE:

**SAMUEL J. KRONMAN BUILDING
WINDOW AND DOOR DETAILS**

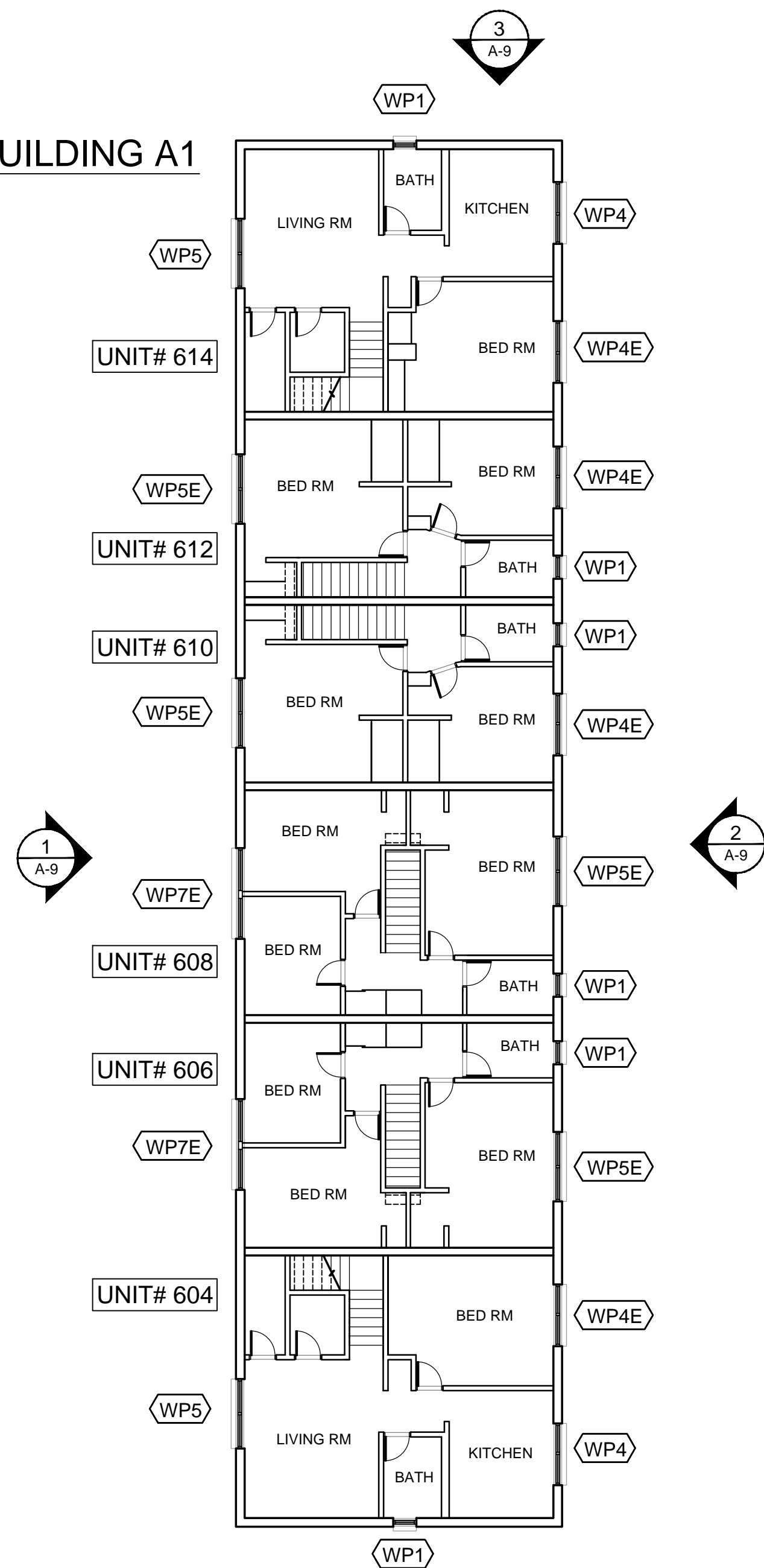
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DATE: 02/19/2016

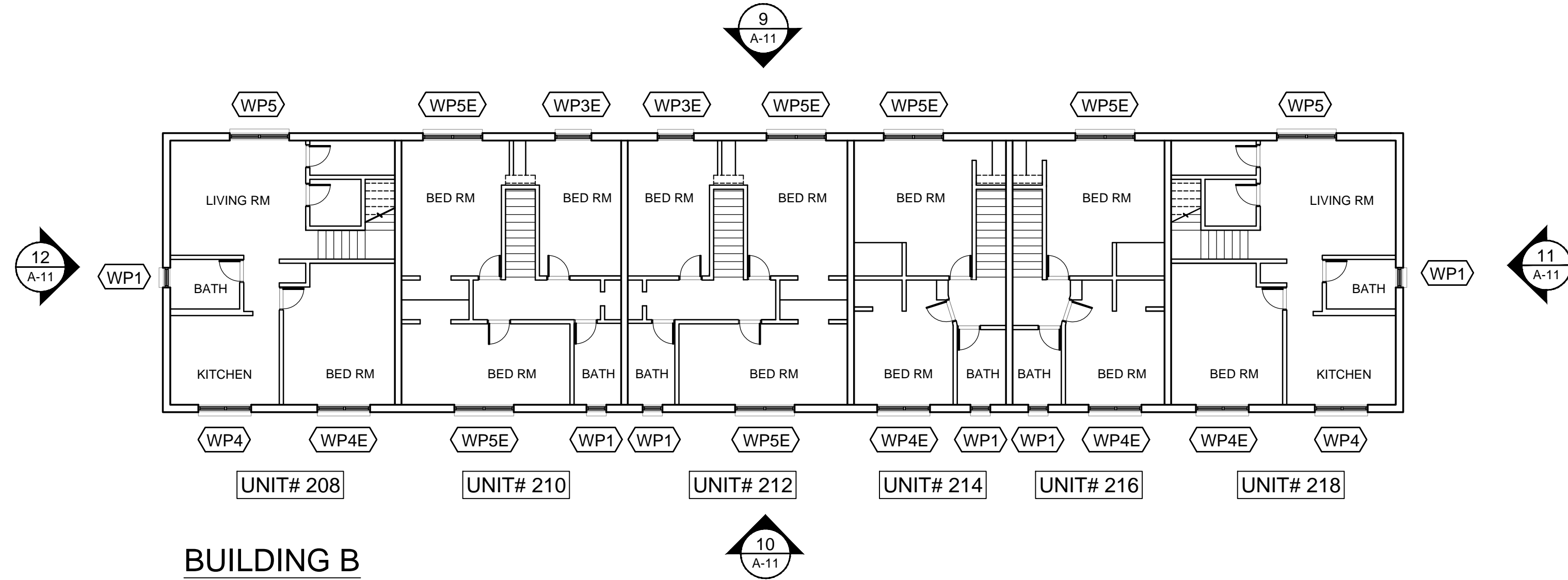
SHEET: 6 OF 13

DWG. NO.: A-6

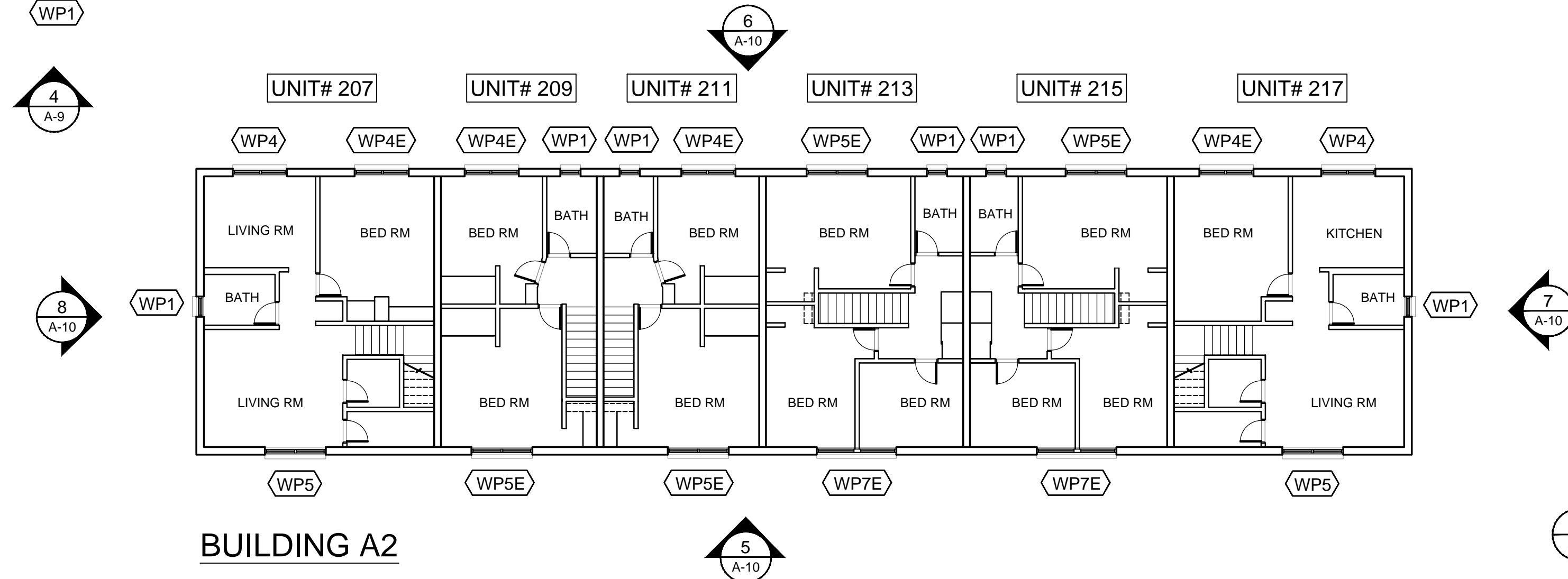
BUILDING A1



BUILDING B



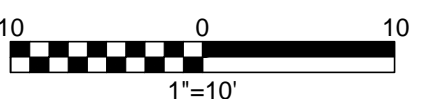
BUILDING A2



LEGEND

SYMBOL	DESCRIPTION
WP#	WINDOW TYPE (PARK TERRACE APARTMENTS)
X A-XXX	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
X A-20X A-20X	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
S.H.	SINGLE HUNG WINDOW
M.O.	MASONRY OPENING

1 SECOND FLOOR PLANS
A-8 SCALE: 1" = 10'



NO.	DATE:	DESCRIPTION	APPR'D BY:
1	02/19/16	INITIAL SUBMITTAL	
REVISIONS			

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

**BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY**

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

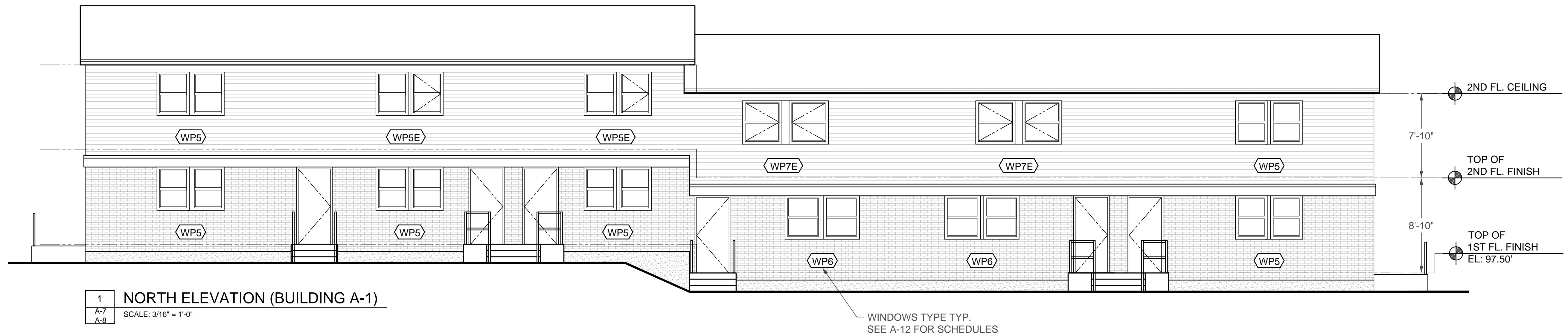
PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

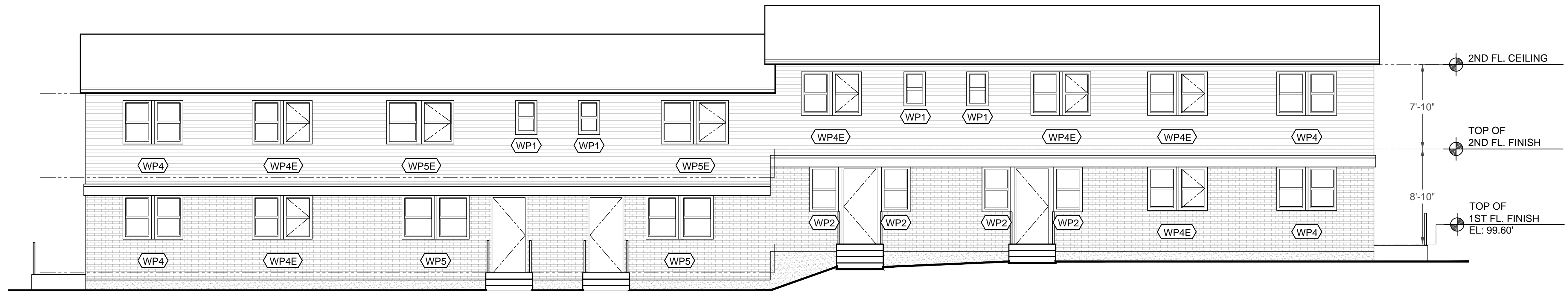
DRAWING TITLE:

PARK TERRACE APARTMENTS
SECOND FLOOR PLANS

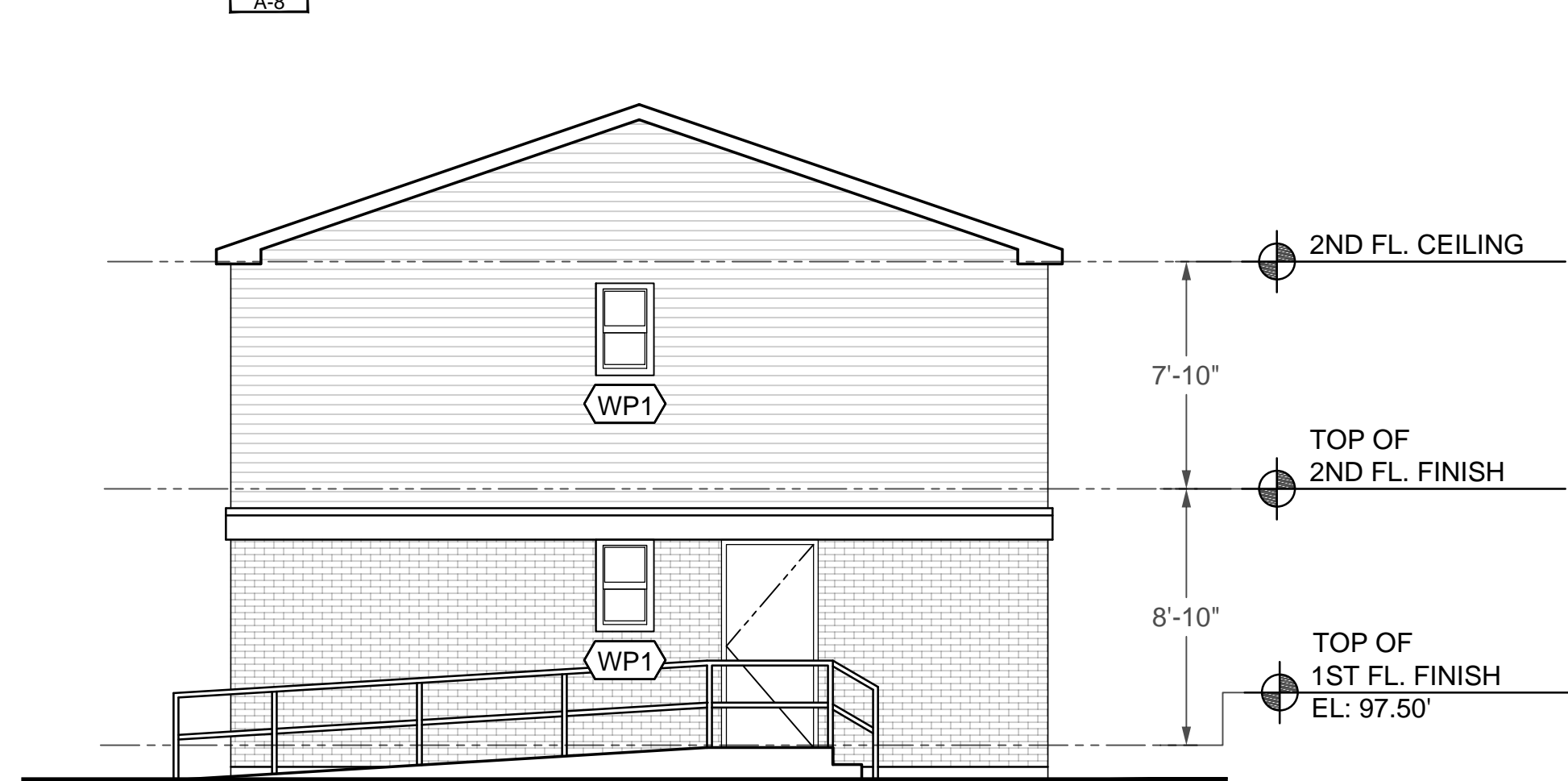
SCALE: 1" = 10'
DATE: 02/19/2016
SHEET: 8 OF 13
DWG. NO.: A-8



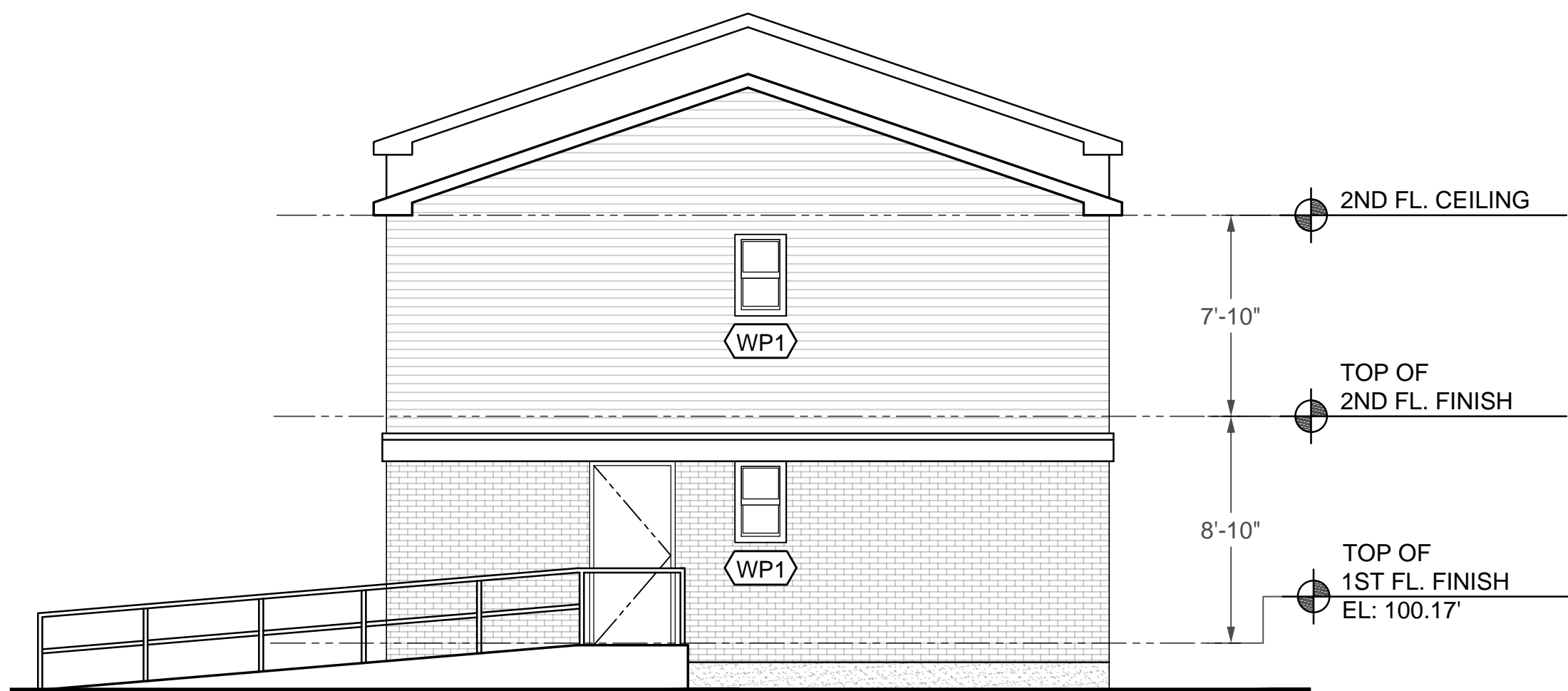
1 NORTH ELEVATION (BUILDING A-1)
A-7 SCALE: 3/16" = 1'-0"
A-8



2 SOUTH ELEVATION (BUILDING A-1)
A-7 SCALE: 3/16" = 1'-0"
A-8



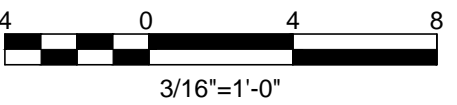
3 WEST ELEVATION (BUILDING A-1)
A-7 SCALE: 3/16" = 1'-0"
A-8



4 EAST ELEVATION (BUILDING A-1)
A-7 SCALE: 3/16" = 1'-0"
A-8

LEGEND

SYMBOL	DESCRIPTION
WP#	WINDOW TYPE (PARK TERRACE APARTMENTS)
X A-XXX	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
X A-20X A-20X	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
D.H.	DOUBLE HUNG WINDOW
R.O.	ROUGH OPENING



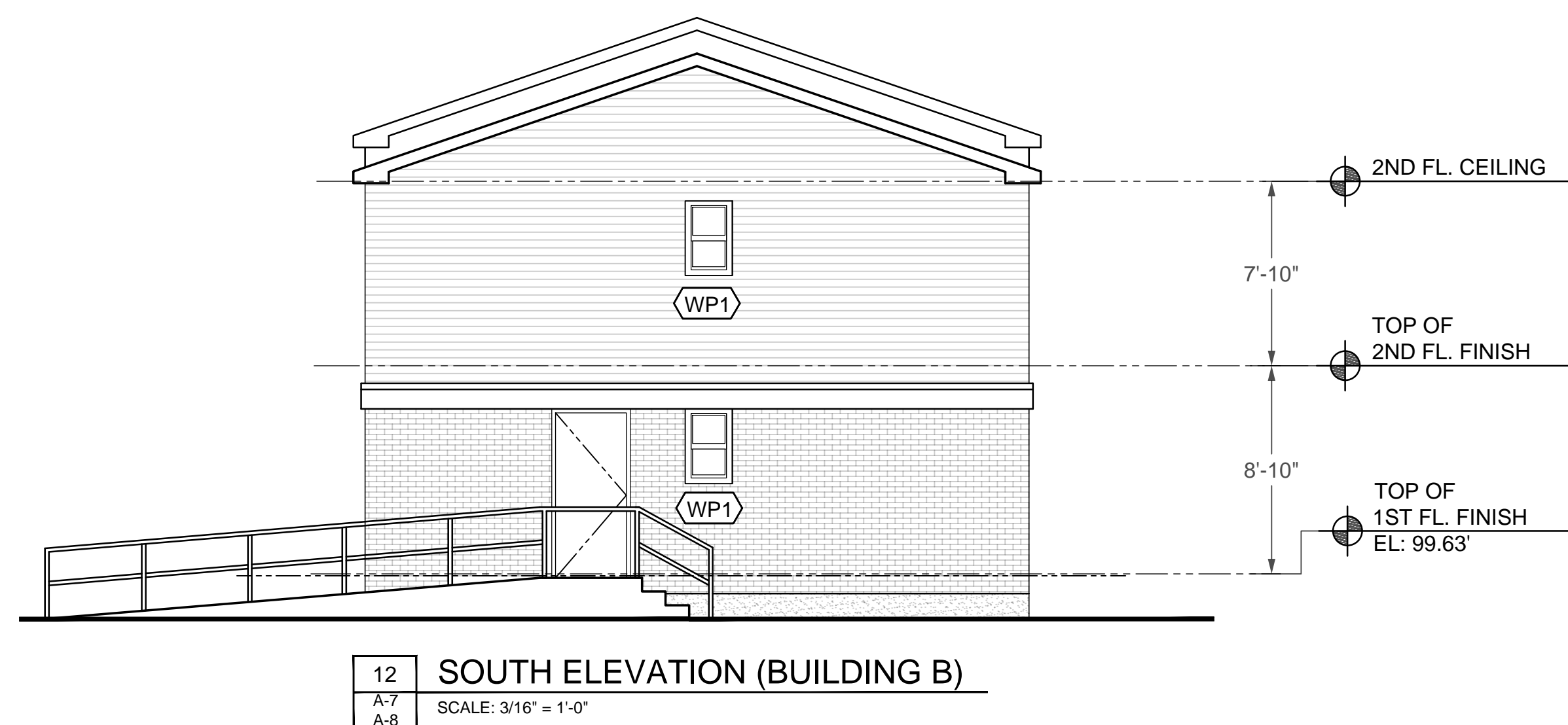
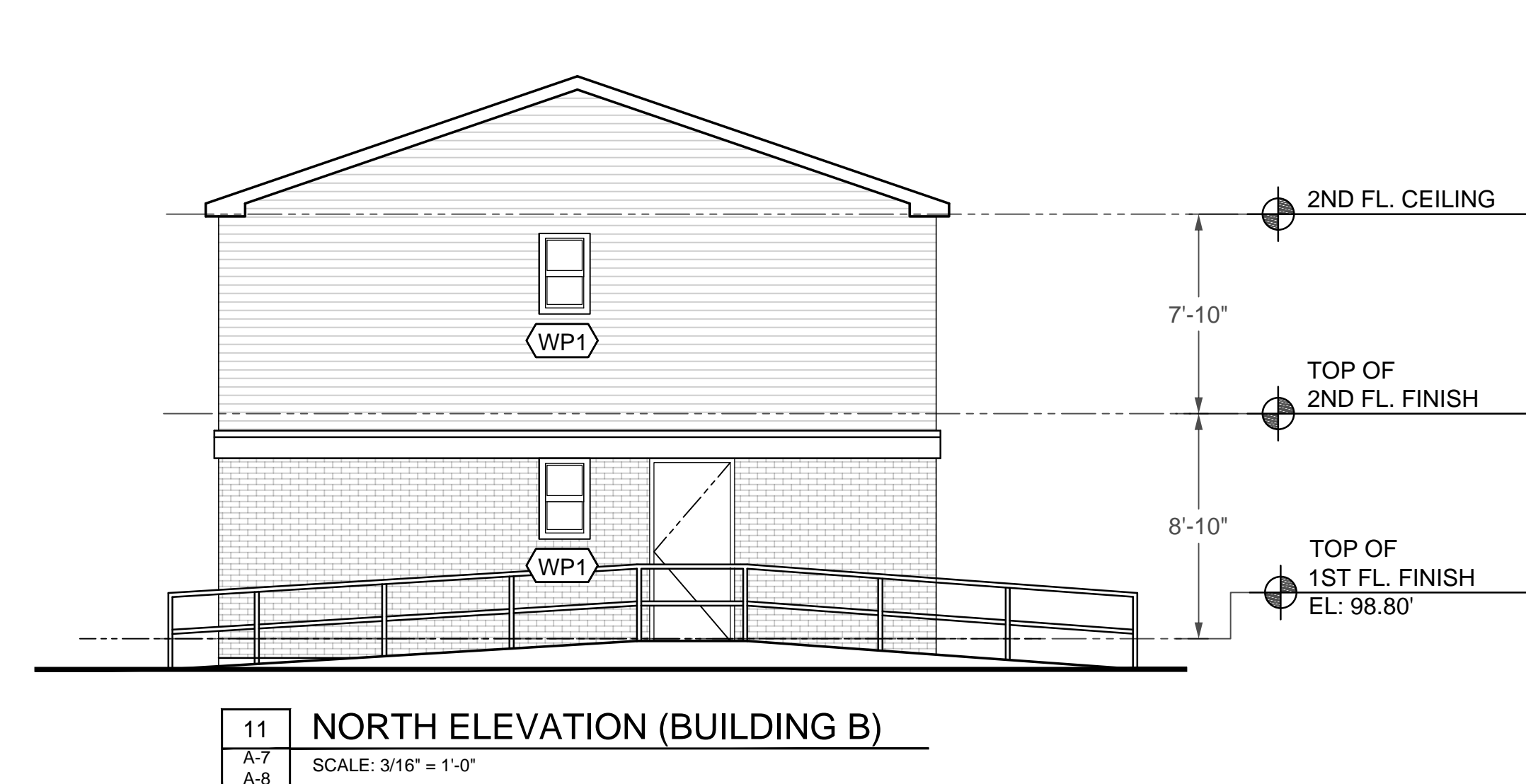
				LEO S. APARRI NJ PROFESSIONAL ENGINEER NO. 41771		DESIGNED BY: <u>YN</u>				APARRI ENGINEERING LLC 131 MAIN STREET SUITE 180 HACKENSACK, NEW JERSEY 07601		BOROUGH OF HIGHLAND PARK HOUSING AUTHORITY 242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904		PROJECT NAME & LOCATION: REPLACEMENT OF WINDOWS AT SAMUEL J. KRONMAN BUILDING AND PARK TERRACE APARTMENTS		DRAWING TITLE: PARK TERRACE APARTMENTS ELEVATIONS (BUILDING A-1)		SCALE: <u>3/16"=1'-0"</u> DATE: <u>02/19/2016</u> SHEET: <u>9</u> OF <u>13</u> DWG. NO.: <u>A-9</u>	
						DRAWN BY: <u>YN</u>													
						CHECKED BY: <u>LSA</u>													





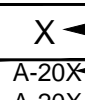
4 0 4 8

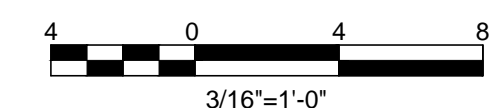
$3/16'' = 1'-0''$

				LEO S. APARRI NJ PROFESSIONAL ENGINEER NO. #1771		DESIGNED BY: <u>YN</u>				APARRI ENGINEERING LLC 131 MAIN STREET SUITE 180 HACKENSACK, NEW JERSEY 07601		BOROUGH OF HIGHLAND PARK HOUSING AUTHORITY		PROJECT NAME & LOCATION: REPLACEMENT OF WINDOWS AT SAMUEL J. KRONMAN BUILDING AND PARK TERRACE APARTMENTS		DRAWING TITLE: PARK TERRACE APARTMENTS ELEVATIONS (BUILDING A-2)		SCALE: <u>3/16"=1'-0"</u>	
							DRAWN BY: <u>YN</u>											DATE: <u>02/19/2016</u>	
	02/19/16	INITIAL SUBMITTAL					CHECKED BY: <u>LSA</u>											SHEET: <u>10</u> OF <u>13</u>	
NO.	DATE:	DESCRIPTION			APPR'D BY:													DWG. NO.: <u>A-10</u>	
REVISIONS																			



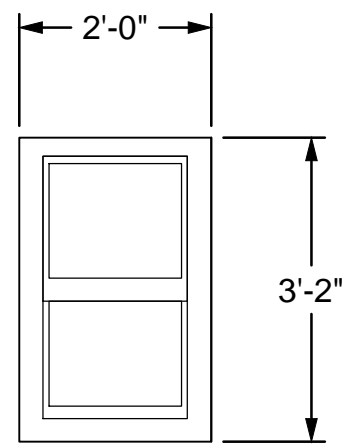
LEGEND

<u>SYMBOL</u>	<u>DESCRIPTION</u>
	WINDOW TYPE (PARK TERRACE APARTMENTS)
	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
D.H.	DOUBLE HUNG WINDOW
R.O.	ROUGH OPENING



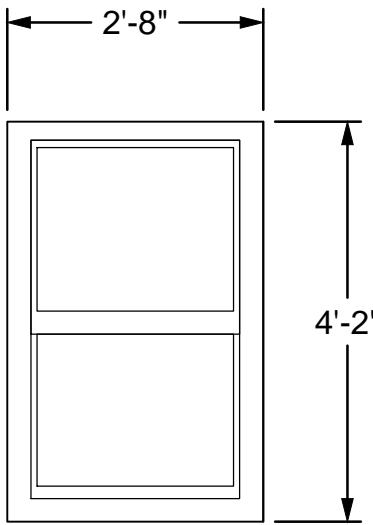
				LEO S. APARRI NJ PROFESSIONAL ENGINEER NO. #1771	DESIGNED BY: <u>YN</u>		APARRI ENGINEERING LLC 131 MAIN STREET SUITE 180 HACKENSACK, NEW JERSEY 07601	BOROUGH OF HIGHLAND PARK HOUSING AUTHORITY	242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904	PROJECT NAME & LOCATION: REPLACEMENT OF WINDOWS AT SAMUEL J. KRONMAN BUILDING AND PARK TERRACE APARTMENTS	DRAWING TITLE: PARK TERRACE APARTMENTS ELEVATIONS (BUILDING B)	SCALE: <u>3/16"=1'-0"</u>
				DRAWN BY: <u>YN</u>	DATE: <u>02/19/2016</u>							SHEET: <u>II</u> OF <u>13</u>
				CHECKED BY: <u>LSA</u>								DWG. NO.: <u>A-II</u>
	02/19/16	INITIAL SUBMITTAL										
NO.	DATE:	DESCRIPTION		APPR'D BY:								
REVISIONS												

- NOTES:
1. ALL DIMENSIONS ARE APPROXIMATE. BIDDER / CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
2. PROVIDE BATHROOM WINDOWS (WP1) WITH OBSCURED OR FROSTED GLASS
3. TYPE WP4, WP5, WP6 AND WP7 WINDOWS HAVE CENTER MULLION. CONTRACTOR SHALL VERIFY EXISTING SIZE AND CONDITION IN FIELD.



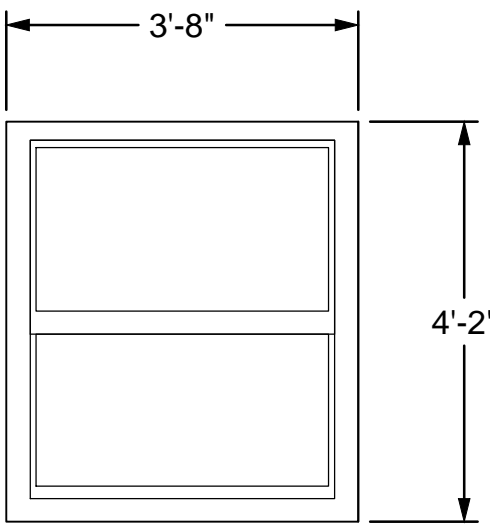
TYPE **WP1**
D.H. WINDOWS

NO. OF ROUGH OPENING = 24
NO. OF D.H. WINDOWS = 24



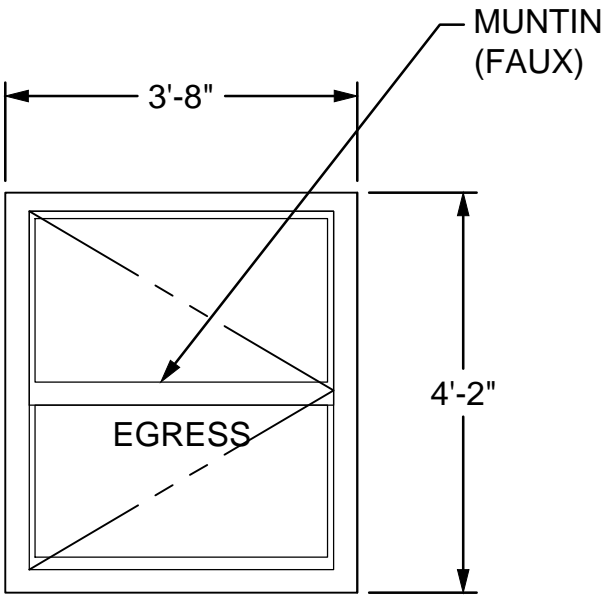
TYPE **WP2**
D.H. WINDOWS

NO. OF ROUGH OPENING = 12
NO. OF D.H. WINDOWS = 12



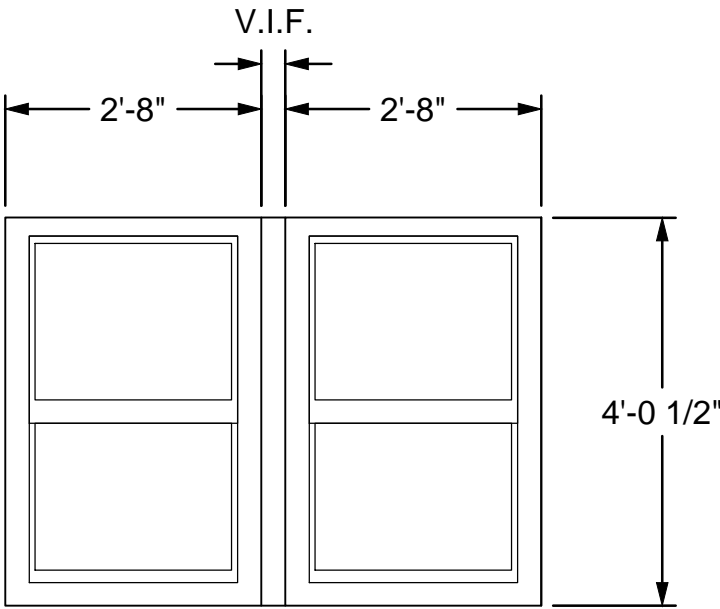
TYPE **WP3**
D.H. WINDOWS

NO. OF ROUGH OPENING = 2
NO. OF D.H. WINDOWS = 2



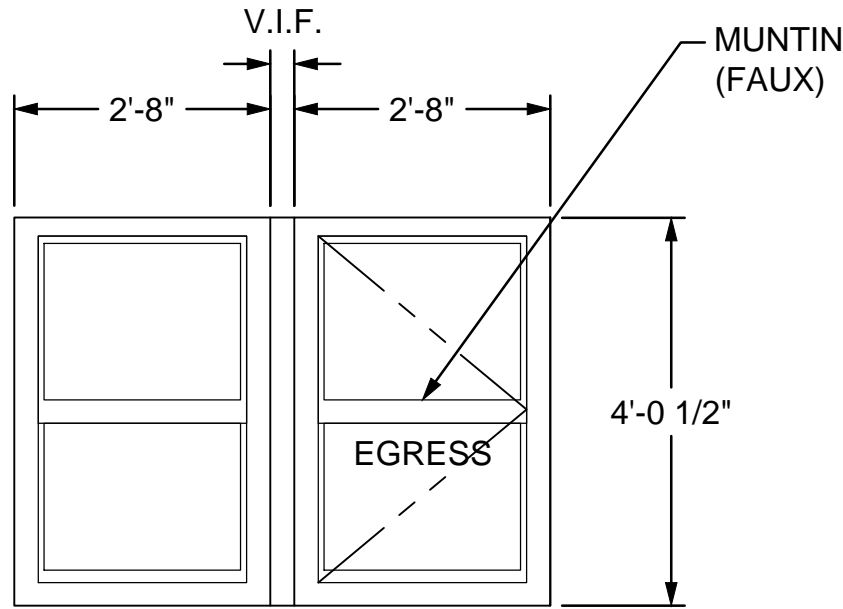
TYPE **WP3E**
CASEMENT WINDOWS

NO. OF ROUGH OPENING = 2
NO. OF CASEMENT WINDOWS = 2



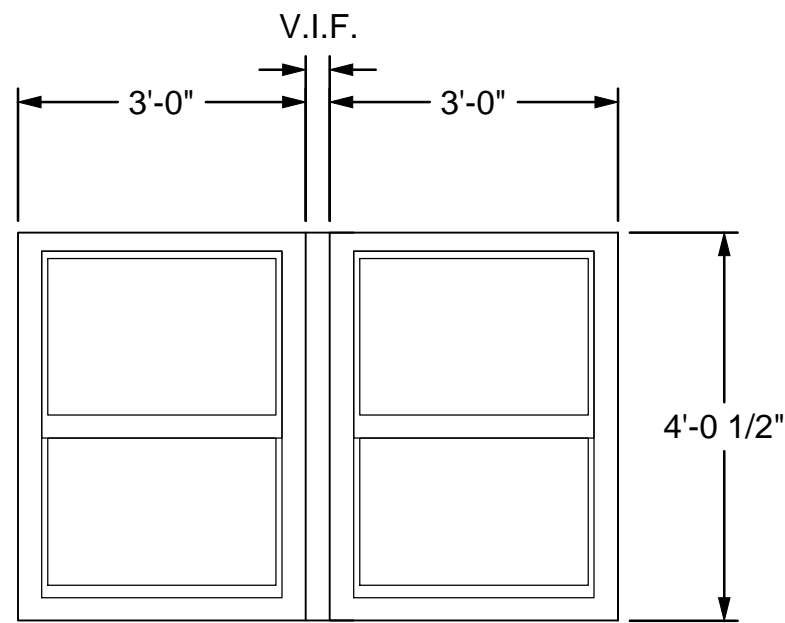
TYPE **WP4**
D.H. WINDOWS

NO. OF ROUGH OPENING = 12
NO. OF D.H. WINDOWS = 24



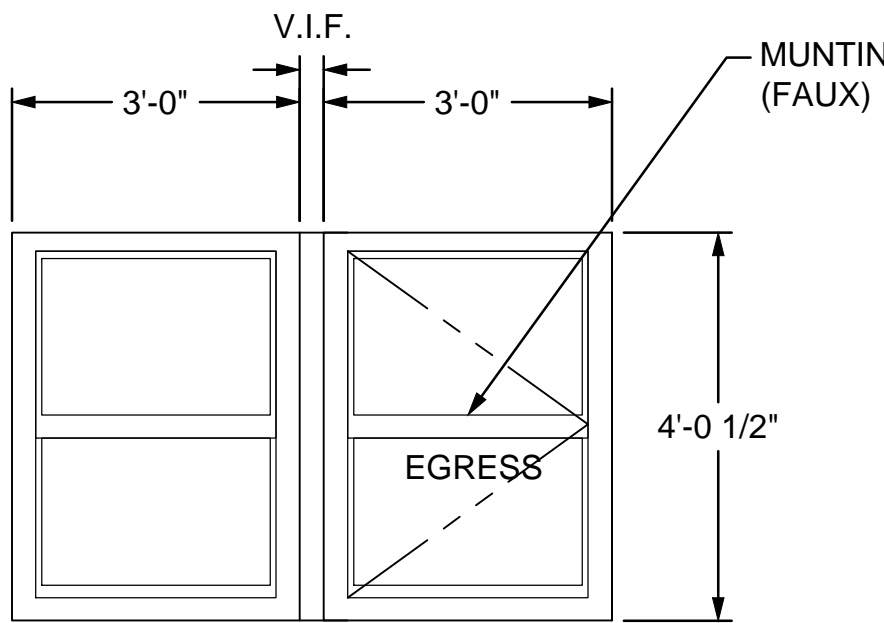
TYPE **WP4E**
D.H. AND CASEMENT WINDOWS

NO. OF ROUGH OPENING = 18
NO. OF D.H. WINDOWS = 18
NO. OF CASEMENT WINDOWS = 18



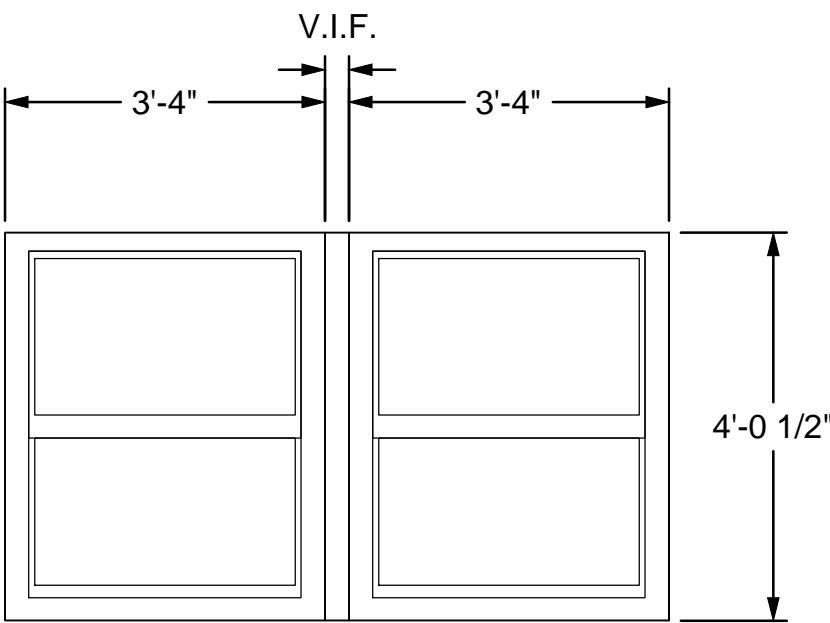
TYPE **WP5**
D.H. WINDOWS

NO. OF ROUGH OPENING = 26
NO. OF D.H. WINDOWS = 52



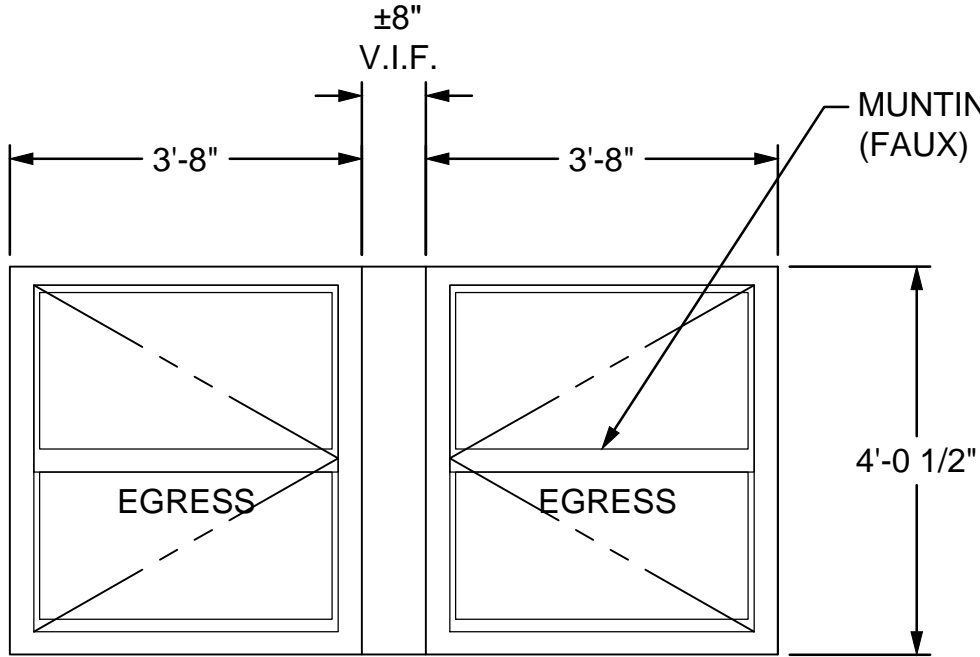
TYPE **WP5E**
D.H. AND CASEMENT WINDOWS

NO. OF ROUGH OPENING = 14
NO. OF D.H. WINDOWS = 14
NO. OF CASEMENT WINDOWS = 14



TYPE **WP6**
D.H. WINDOWS

NO. OF ROUGH OPENING = 4
NO. OF D.H. WINDOWS = 8



TYPE **WP7E**
CASEMENT WINDOWS

NO. OF ROUGH OPENING = 4
NO. OF CASEMENT WINDOWS = 8

WINDOWS TYPE AND PERFORMANCE DATA

OPERATION	SERIES NUMBER	MINIMUM TEST SIZE	TYPE	AAMA RATING	STRUCTURAL PERFORMANCE				THERMAL PERFORMANCE	
					WALL THICKNESS FRAME/SILL (IN)	UNIFORM LOAD (PSF)	AIR INFILTRATION CFM/SF AT 1.6 PSF PRESSURE	WATER RESISTANCE (PSF)	U-VALUES (BTU/HR/FT^2/°F)	SHGC
DOUBLE HUNG WINDOW	5000	95" X 83"	WP1, WP2, WP3, WP3E, WP4, WP4E, WP5, WP5E, WP6	H-HC50	3 1/4"	75	0.27 MAX	7.5 PSF	0.4700	0.3500
CASEMENT WINDOW	8000CA	99" X 79"	WP3E, WP4E, WP5E, WP7E	AW-PG90-C	2 1/4"	135	0.30 MAX	12 PSF	0.5100	0.3100

BASIS FOR DESIGN: CRYSTAL WINDOW & DOOR SYSTEMS, LTD.

WINDOW SCHEDULE

LOCATION	WINDOW QUANTITY (# OF ROUGH OPENING)										
	TYPE WP1	TYPE WP2	TYPE WP3	TYPE WP3E	TYPE WP4	TYPE WP4E	TYPE WP5	TYPE WP5E	TYPE WP6	TYPE WP7E	TOTAL
PARK TERRACE APARTMENT BLDG A-1	8 (8)	4 (4)			8 (4)	12(6)	16(8)	8(4)	4(2)	4(2)	64(38)
PARK TERRACE APARTMENT BLDG A-2	8 (8)	4 (4)			8 (4)	12(6)	16(8)	8(4)	4(2)	4(2)	64(38)
PARK TERRACE APARTMENT BLDG B	8 (8)	4 (4)	2 (2)	2 (2)	8 (4)	12(6)	20(10)	12(6)			68(42)
TOTAL	24 (24)	12 (12)	2 (2)	2 (2)	24 (12)	36(18)	52(26)	28(14)	8(4)	8(4)	196(118)

LEGEND

SYMBOL	DESCRIPTION
WP#	WINDOW TYPE (PARK TERRACE APARTMENTS)
	ELEVATION NUMBER DRAWING NUMBER WHERE ELEVATION IS DRAWN
	PLAN NUMBER DRAWING NUMBER WHERE FLOOR PLAN IS DRAWN
BLDG.	BUILDING
TYP.	TYPICAL
D.H.	DOUBLE HUNG WINDOW
R.O.	MASONRY OPENING
V.I.F.	VERIFY IN FIELD

	02/19/16	INITIAL SUBMITTAL	
NO.	DATE:	DESCRIPTION	APPR'D BY:
		REVISIONS	

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

DRAWING TITLE:

PARK TERRACE APARTMENTS
WINDOW SCHEDULES

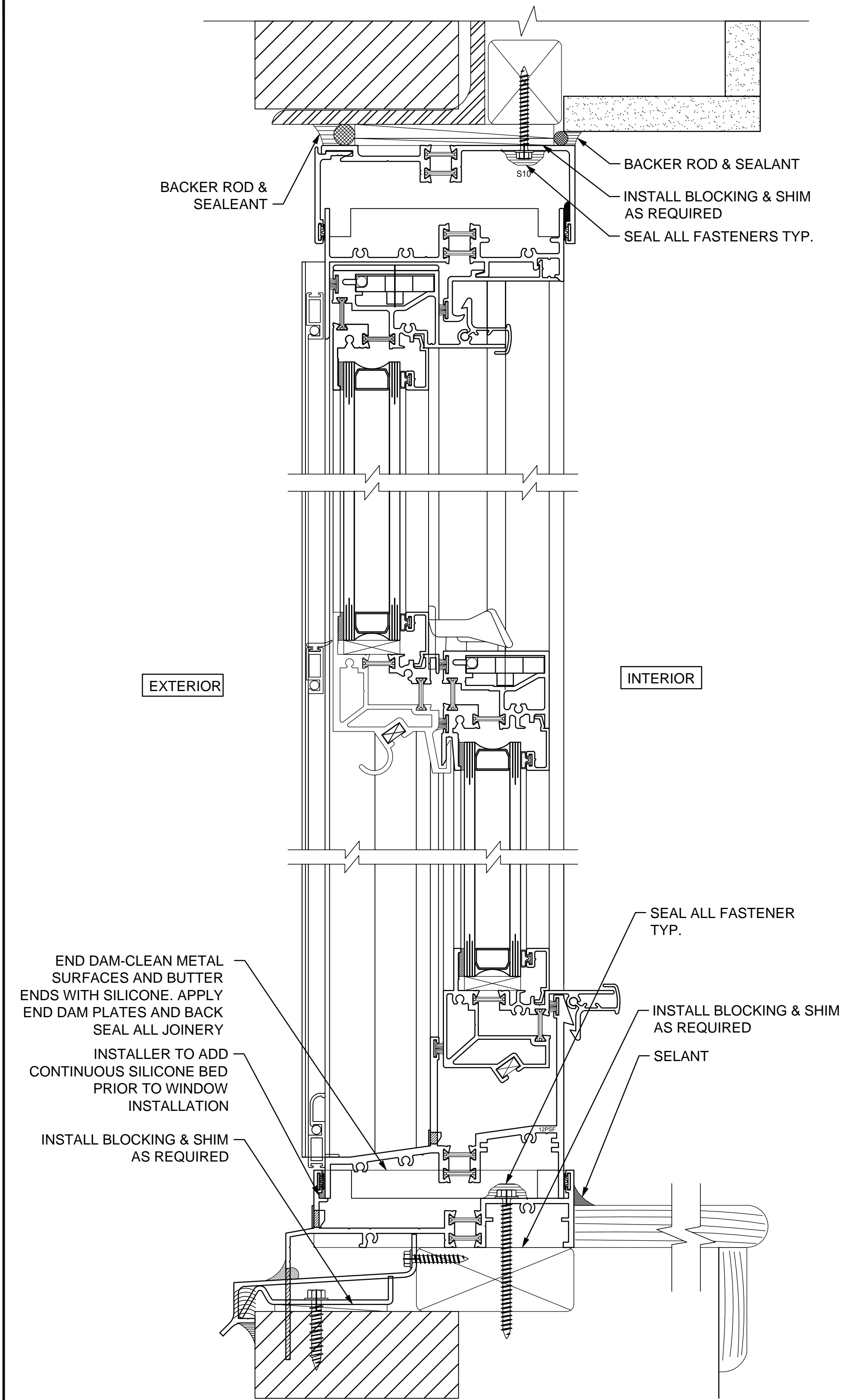
SCALE: AS NOTED

DATE: 02/19/2016

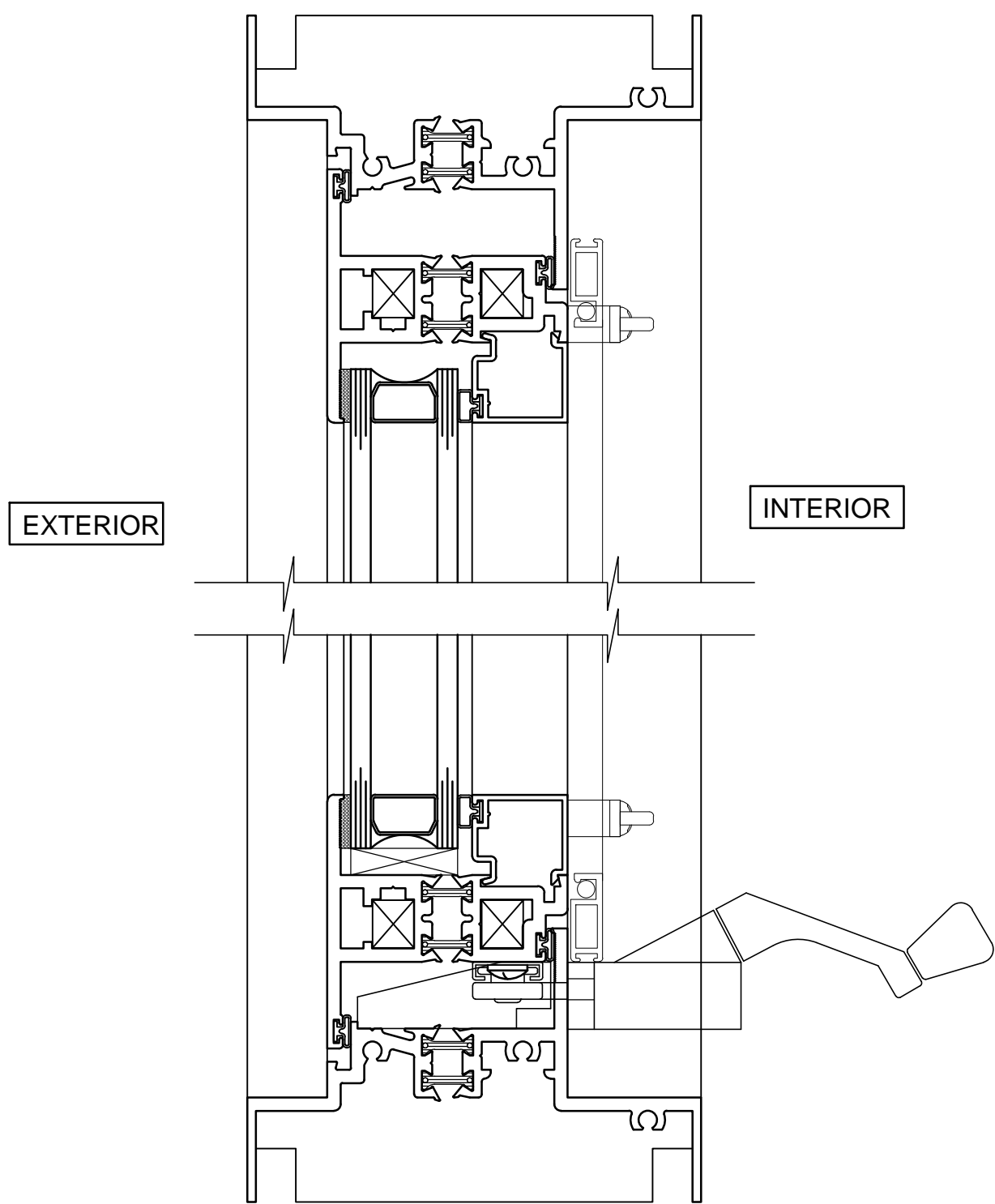
SHEET: 12 OF 13

DWG. NO.: A-12

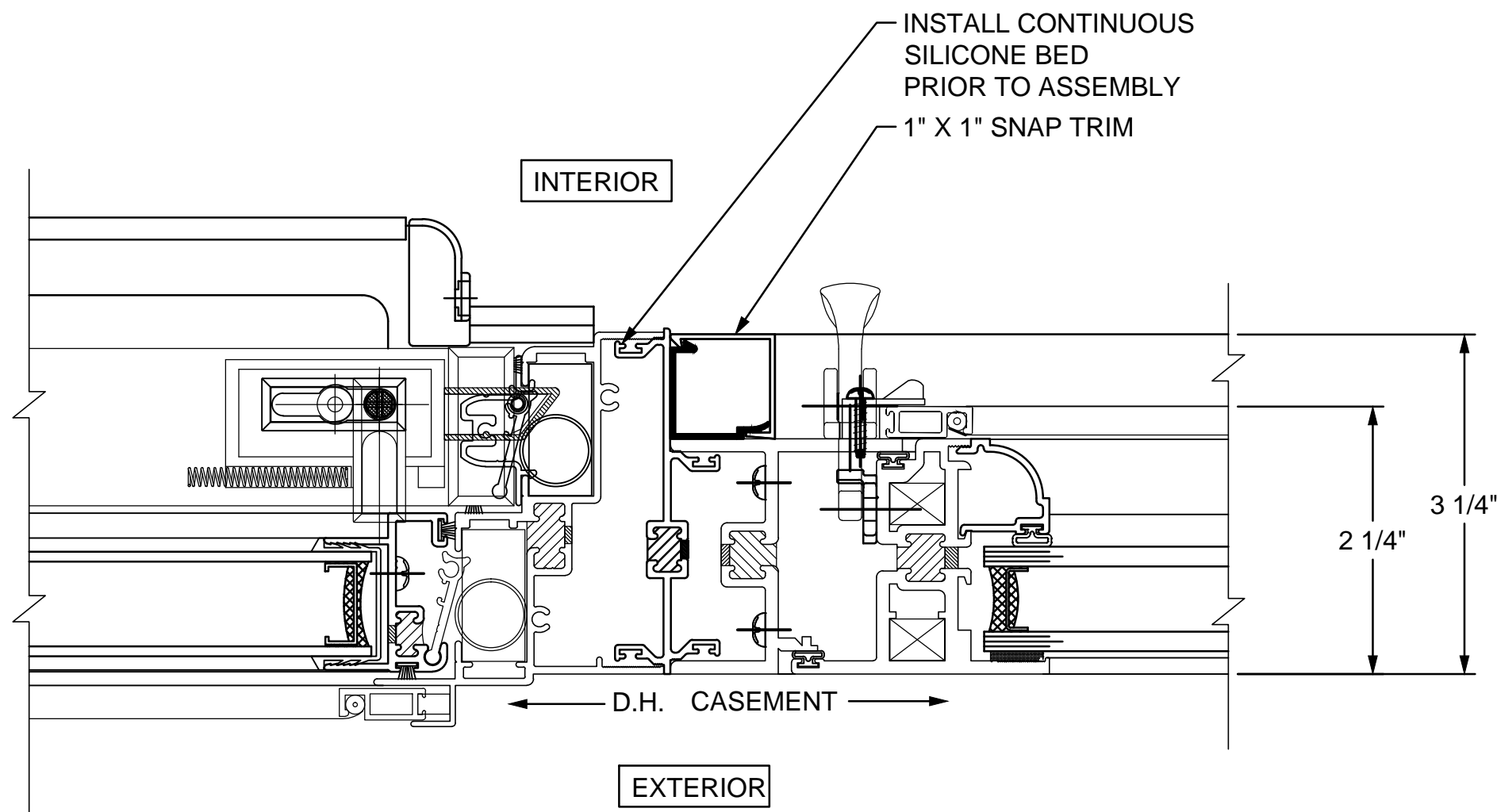
- NOTE:
1. INSTALL SELF-ADHESIVE FLASHING SHEET AT PERIMETER OF WINDOW OPENING TYP.
 2. CONTRACTOR TO SCRAPE / REPAIR / PREPARE / REPAINT ALL LINTELS (WINDOWS AND DOOR) PRIOR TO INSTALLATION OF NEW UNITS.



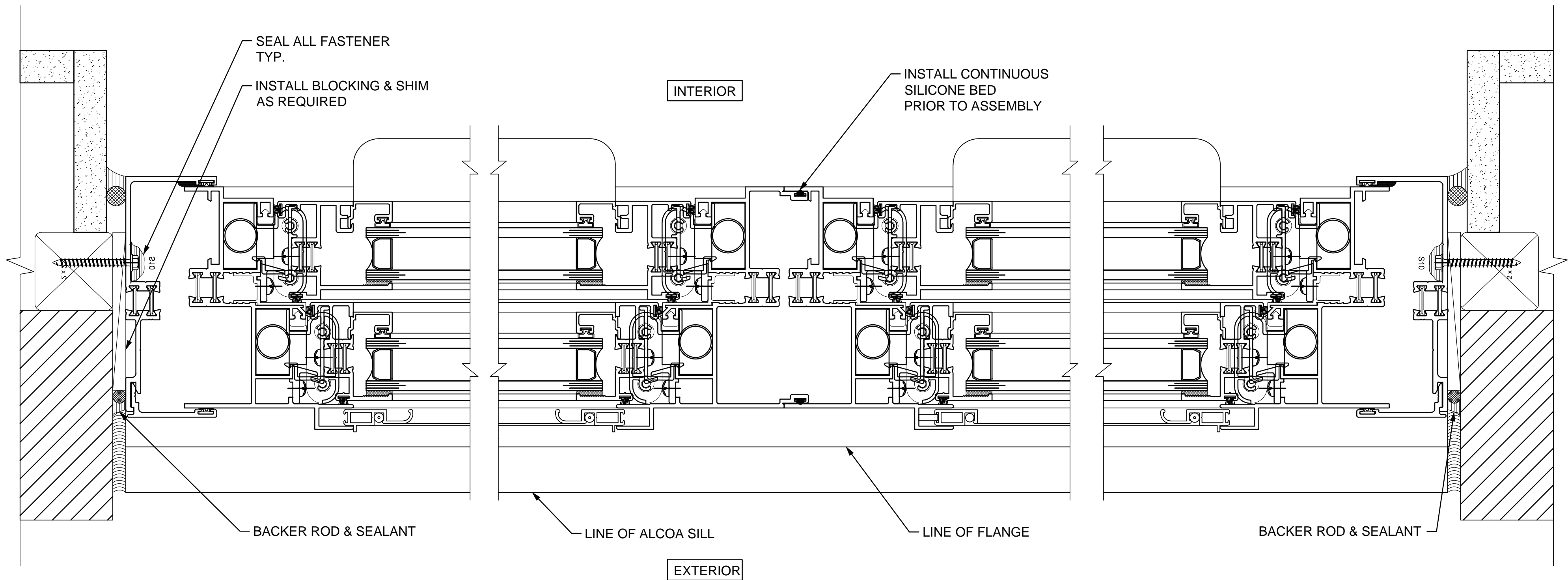
1 DOUBLE HUNG WINDOW SECTION DETAIL (HEAD AND SEAL)
SCALE: NTS.



2 CASEMENT WINDOW SECTION
SCALE: NTS.



3 WINDOW SELF MULLION DETAIL (D.H./CASEMENT)
SCALE: NTS.



4 WINDOW JAM DETAILS (D.H./D.H.)
SCALE: NTS.

02/19/16	INITIAL SUBMITTAL		
NO.	DATE:	DESCRIPTION	APPR'D BY:
REVISIONS			

LEO S. APARRI
NJ PROFESSIONAL ENGINEER NO. 41771

DESIGNED BY: YN
DRAWN BY: YN
CHECKED BY: LSA



APARRI ENGINEERING LLC
131 MAIN STREET SUITE 180
HACKENSACK, NEW JERSEY 07601

BOROUGH OF HIGHLAND PARK
HOUSING AUTHORITY

242 SOUTH 6TH AVENUE HIGHLAND PARK, NJ 08904

PROJECT NAME & LOCATION:

REPLACEMENT OF WINDOWS
AT SAMUEL J. KRONMAN BUILDING
AND PARK TERRACE APARTMENTS

DRAWING TITLE:

PARK TERRACE APARTMENTS
WINDOW DETAILS

SCALE: NOT TO SCALE

DATE: 02/19/2016

SHEET: 13 OF 13

DWG. NO.: A-13