

PROJECT MANUAL
including specifications
for the construction of

Arnold Heights Furnace Replacement - 2024

Scattered Sites in Arnold Heights
Lincoln, Nebraska

OWNER: Housing Authority of the City of Lincoln
5700 "R" Street
Lincoln, Nebraska 68505

DATE: February 16, 2024

PROJECT NUMBER: CI-2025-03

LINCOLN HOUSING AUTHORITY
ARNOLD HEIGHTS FURNACE REPLACEMENT - 2024

Scattered Sites
Lincoln, Nebraska

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INVITATION TO BID

Notice is given hereby that the Owner,

HOUSING AUTHORITY OF THE CITY OF LINCOLN

will accept sealed bids on a single, firm, fixed-price contract to include all work for

LINCOLN HOUSING AUTHORITY

ARNOLD HEIGHTS FURNACE REPLACEMENT - 2024

according to the Drawings and Specifications prepared Bob Goggins of Lincoln Housing Authority, and described in general as follows:

Remove and replace 34 existing furnaces at scattered sites in Arnold Heights, Lincoln, Nebraska.

The Housing Authority will receive sealed bids until:

2:00 P.M., Tuesday, March 26, 2024,

at the offices of The Housing Authority, City of Lincoln

5700 "R" Street

Lincoln, Nebraska, 68505

The bids will be publicly opened and read aloud at that time and place. Bids received after that time will not be accepted. Interested parties are invited to attend.

Bidders may secure copies of the proposed Contract Documents from:

1. <https://www.l-housing.com/Vendors.html>
2. <http://www.buildersbureau.com/ipin/MainLogin.asp>
3. No paper sets will be issued.

All bids shall remain in effect and may not be modified, withdrawn or canceled for a period of 30 calendar days after the scheduled closing time for the receipt of bids.

The Owner reserves the right to reject any or all bids and to waive any informalities or irregularity in any bid received.

Construction time may be a consideration in the award of the Bid.

Quality and craftsmanship are important to the Owner and may be a consideration in the award of the Bid. Contractor shall bid only the highest quality installation of the materials specified.

Submittals for approval of proposed substitutions must be received by the Architect not later than 7 full calendar days prior to the bid date. See Section 01 60 01 for details of submittal requirements.

END OF INVITATION TO BID

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

The Bidding Documents include the Invitation to Bid, Instructions to Bidders, the Bid Form, other sample bidding and contract forms and the proposed Contract Documents including any Addenda issued prior to receipt of bids. The Contract Documents proposed for the Work consist of the Owner-Contractor Agreement, the General and Supplementary Conditions, the Drawings, the Specifications and all Addenda issued prior to and all Modifications issued after execution of the Contract. All definitions set forth in the General Conditions of the Contract, AIA Document A104-2017, or in other Contract Documents are applicable.

Addenda are written or graphic instruments issued by the Architect prior to execution of the Contract, which modify or interpret the proposed Contract Documents by additions, deletions, clarifications, or corrections.

2. SECURING PROPOSED CONTRACT DOCUMENTS

Copies of the proposed Contract Documents may be obtained as stated in the Invitation to Bid.

3. PROOF OF COMPETENCY OF BIDDER

A bidder may be required to furnish evidence, satisfactory to Lincoln Housing Authority, that he and his proposed subcontractors have sufficient means and experience, in the types of work called for, to assure completion of the Contract in a satisfactory manner.

4. EXAMINATION OF DOCUMENTS AND THE SITE OF THE WORK

Use complete sets of the proposed Contract Documents in preparing bids. Neither the Owner, nor the Architect assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of the proposed Contract Documents.

Before submitting a bid, carefully examine the Drawings, read the Specifications and all other proposed Contract Documents, and visit the sites of the Work. Contact Lincoln Housing Authority to coordinate access to sites by phoning Bob Goggins at 402-429-9616. (Do not visit sites without first contacting Mr. Goggins.) Become fully informed as to all existing conditions and limitations under which the Work is to be performed, and include in the bid a sum to cover all costs of all items necessary to perform the Work as set forth in the proposed Contract Documents. No allowance will be made to a bidder, nor will any subsequent financial adjustments to the Contract be made with any bidder because of lack of such examination or knowledge. The submission of a bid will be construed as conclusive evidence that the bidder has made such examination.

5. INTERPRETATION OR CORRECTION OF THE PROPOSED CONTRACT DOCUMENTS PRIOR TO BIDDING

If doubt exists as to the true meaning of any part of the proposed Contract Documents, or discrepancies in or omissions from any part of the proposed Contract Documents are discovered, notify the Architect and request an interpretation thereof not later than seven days before bids will be opened.

Any interpretation, correction, or change of the proposed Contract Documents will be made only by Addendum, and will be mailed or delivered to each bidder of record, and will be available at the Architect's office. Interpretations, corrections or changes made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections, and changes.

6. PREBID INSPECTION OF SITES

Contact Lincoln Housing Authority to coordinate access to sites by phoning Bob Goggins at 402-429-9616. Comply with LHA notification policies.

7. BIDDING PROCEDURES

Prepare and submit bids using only the printed bid form provided by the Architect. Properly sign and fill in all blanks on the bid form. Do not change the wording of the bid form, and do not add words to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid will be cause for rejection of the bid. If alterations by erasure or interlineation are made for any reason, explain over such erasure or interlineation with a signed statement from the bidder.

Each bidder shall determine, prior to submitting his bid that he has received all Addenda issued, and he shall acknowledge their receipt in his Bid.

No telegraphic bid or telegraphic modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the bidder unopened.

Address bids to Lincoln Housing Authority, and deliver to the address given in the Invitation To Bid on or before the day and hour set for opening the bids. Enclose each bid in an opaque, sealed envelope bearing the title of the Work, the name of the Bidder, and the date and hour of the bid opening. It is the sole responsibility of the bidder to see that his bid is received on time.

Submit the original signed copy of the bid and a Bid Security of 5%.

8. BID SECURITY

A Bid Security is required and must accompany each bid. Bid Security shall be made payable to Housing Authority of the City of Lincoln in the amount of five percent (5%) of the Base Bid. Bid Security shall be either a certified check drawn on a Nebraska Bank or a Bid Bond issued by a Surety licensed to conduct business in the State of Nebraska. **Form of Bid Bond shall be AIA Document A310.**

The successful Bidder's security will be retained until he has signed the Contract and has furnished the required bonds or other forms of security and certificates of insurance. Lincoln Housing Authority reserves the right to retain the security of the next 3 lowest Bidders until the successful Bidder enters into the Contract or until 30 days subsequent to the receipt of bids, whichever is sooner. All other Bid Security will be returned as soon as practicable. If any Bidder refuses to enter into a contract, Lincoln Housing Authority may retain his Bid Security as liquidated damages, but not as a penalty.

9. WITHDRAWAL OF BIDS

A bidder may withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening bids. Written requests by facsimile machine will be accepted. No bidder may withdraw his bid for a period of thirty (30) calendar days after the date set for opening thereof, and bids shall be subject to acceptance by the Owner during this period. Negligence on the part of the bidder in preparing his bid confers no right of withdrawal or modification of his bid.

10. AWARD OR REJECTION OF BIDS

The Contract, if awarded, will be awarded to the responsible bidder who has proposed the lowest Contract Sum, subject to Lincoln Housing Authority's right to reject any or all bids and to waive any informalities or irregularity in any bid received and in the bidding process. Contractor's past performance in regard to quality of work on similar projects and completion of work within the contract time will be considerations for award of the contract.

11. PERFORMANCE & PAYMENT BONDS

If Bid amount exceeds \$100,000.00, at or prior to the execution of the Contract, the successful bidder shall secure and post a Performance Bond and a Labor and Materials Payment Bond, in the amount of 100% of the Contract Sum, written by a Surety Company licensed to do business in the State of Nebraska. **The prescribed form of the bond is the AIA Document A312.** The successful bidder shall require the Attorney in Fact who executes the required bond on behalf of the Surety to affix thereto a certified and current copy of his Power of Attorney, indicating the monetary limit of such power. Include cost of Bond in bid amount.

12. EQUAL OPPORTUNITY FORM

The successful bidder shall complete and submit as a post bid submittal the Equal Opportunity Form, a copy of which is included herein.

13. E-VERIFY CERTIFICATION

The successful bidder shall complete and submit as a post bid submittal the E-Verify Certification Form, a copy of which is included herein.

14. IRS FORM W-9

If the Contractor has not previously contracted with the Lincoln Housing Authority, the Contractor shall furnish and deliver to the Housing Authority an executed Internal Revenue Service Form W-9.

15. NEBRASKA NEW HIRE REPORTING FORM

If the Contractor is an Independent Contractor, Housing Authority of the City of Lincoln will register the Contractor as a New Hire on www.ne-newhire.com as required under Nebraska Statute 48-2301 for the purposes of facilitating the collection of child support. To that end, the Contractor, if an Independent Contractor, must complete the Employee Section of the Nebraska New Hire Reporting Form for himself and submit to LHA. This form is not applicable if the Contractor is a corporation, partnership, or other entity.

16. SUBMITTALS

Upon notification of acceptance of the Bid, the successful bidder shall, within seven (7) days thereafter, submit the following:

- A. A designation of the work to be performed by the successful bidder, with his own forces.
- B. A list of names of the subcontractors or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for such portions of the Work as may be designated in the proposed Contract Documents; or if no portions are so designated, the names of subcontractors proposed for the principal portions of the Work.
- C. A list of itemized Base Bid costs on AIA Form G703 as described in Section 01 29 00, Paragraph 1.3.
- D. Contractor's Insurance Certificate.
- E. Surety as described in Paragraph 11 above.
- F. Equal Opportunity Form as described in Paragraph 12 above.
- G. E-Verify Certification as described in Paragraph 13 above.
- H. Internal Revenue Service W-9 form **if required** in Paragraph 14 above.
- I. Nebraska New Hire Reporting Form **if required** in Paragraph 15 above.

The Owner reserves the right to award the contract to the next Bidder if a Contractor awarded the Bid fails to make complete and correct post bid submittals within the above listed seven days after award of the bid.

Prior to the award of the Contract, the Architect will notify the successful bidder in writing if Lincoln Housing Authority, after due investigation, has reasonable objection to any such proposed subcontractor, person or organization. If Lincoln Housing Authority has reasonable objection, the successful bidder may submit an acceptable substitute subcontractor, person or organization with an adjustment in his bid price to cover the difference in cost occasioned by such substitution.

Subcontractors, persons, or organizations proposed by the successful bidder and to whom Lincoln Housing Authority has made no reasonable objection, must be used on the Work for which they were proposed and shall not be changed except with the written consent of Lincoln Housing Authority.

17. TAXES

Bidders shall include in their Bid the cost of all taxes per General Conditions Article 9.5 as amended by Supplementary Conditions Paragraph i. Housing Authority of the City of Lincoln is a tax exempt organization and will provide State Department of Revenue Form 17, "Purchasing Agent Appointment", which shall appoint the Contractor a purchasing agent. In turn the Contractor shall submit to each subcontractor and materials supplier, State Department of Revenue Form 13, "Nebraska Resale or Exempt Sales Certificate", so they may purchase materials exempt from sales tax.

18. PERMITS

The Contractor shall secure and pay for all required permits. See Paragraph 9.6 of the General Conditions.

19. EXECUTION OF THE AGREEMENT

The form of Agreement, which the successful Bidder will be required to execute, will be AIA Document A104 - 2017, "Standard Abbreviated Form of Agreement Between Owner and Contractor".

The bidder to whom the Contract is awarded shall, within seven (7) calendar days after notice of award and receipt of Agreement forms from the Architect, sign and deliver required copies to the Architect along with all the submittals listed in paragraph 16 above.

Bond and Certificates of Insurance shall be approved by Lincoln Housing Authority before the successful bidder may proceed with the Work. Failure or refusal to provide Bond or Certificates of Insurance in a form satisfactory to the Lincoln Housing Authority shall subject the successful bidder to loss of time from the allowable construction period equal to the time delay in furnishing the required material, or Lincoln Housing Authority may award the contract to the next Bidder if a Contractor awarded the Bid fails to make post bid submittals within the listed time.

20. SUBSTITUTIONS OF MATERIALS AND APPROVAL

Bidders are directed to take note of Section 01 60 01 - Substitutions of Materials and Approval, as found in Division One - General Requirements. **No substitutions shall be allowed, if not pre-approved.**

21. TIME OF COMMENCEMENT OF THE WORK AND COMPLETION

The Work shall **not** start prior to Notice to Proceed and the Contractor shall complete all Work under the Contract within the time stated on his Bid Form. Bidders are instructed to read **Paragraphs e. & f. of the Supplementary Conditions which will be strictly enforced.**

END OF INSTRUCTIONS TO BIDDERS

BID FORM

A Proposal of: _____
(Name of Business, herein called "Bidder")

To: HOUSING AUTHORITY of the CITY OF LINCOLN here-in called "Owner"

1. Pursuant to and in compliance with the Invitation to Bid and the proposed Contract Documents relating to construction of:

ARNOLD HEIGHTS FURNACE REPLACEMENT located at Scattered Sites in Arnold Heights, Lincoln, Nebraska,

including Addenda _____

the undersigned, having become thoroughly familiar with the terms and conditions of the proposed Contract Documents and with local conditions affecting the performance and costs of the Work at the place where the Work is to be completed, and having fully inspected the sites in all particulars, hereby proposes and agrees to fully perform the Work within the time stated and in strict accordance with the proposed Contract Documents, including furnishing any and all labor and materials, and to do all the work required to construct and complete said Work in accordance with the Contract Documents, for the following sum of money:

A. Total Base Bid: All labor, materials, services and equipment necessary for completion of the work at Sites 1 thru 34 as shown on the Drawings and in the Specifications:

_____ Dollars (\$) _____
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

B. Alternate One: **Deduct** to delete all labor, materials, services and equipment necessary for completion of Sites 31 thru 32 as shown & specified:

_____ Dollars (\$) _____
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

C. Alternate Two: Deduct to delete all labor, materials, services and equipment necessary for completion of Sites 33 and 34 as shown & specified:

_____ Dollars (\$ _____)
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

D. Unit Price Bid: All labor, materials, services and equipment necessary for correction of gas leaks found during City Inspection not caused by completion of the Work under the Base Bid:

_____ Dollars (\$ _____)
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

2. Brand & models of new equipment proposed to be furnished under bid:

F-1 Furnace: _____.

3. The undersigned Bidder agrees to complete the work in _____
_____ calendar days from the date a
Notice to Proceed is issued.

4. By submitting this bid, the Bidder certifies to the Owner that the Bidder is an Equal Opportunity Employer and does not discriminate in his/her hiring or work practices.

5. I understand that the Owner reserves the right to reject this bid, or to waive any informality or irregularity in any bid received.

6. I understand that this bid shall remain good and may not be withdrawn for a period of 30 days from the bid date.

7. If written notice of the acceptance of this bid is mailed or delivered to the undersigned within thirty days after the date set for the opening of this bid, or at any other time thereafter before it is withdrawn, the undersigned will execute and deliver the Contract Documents to the Owner in accordance with this bid as accepted, and will also furnish and deliver to the Owner the Performance Bond, Labor and Material Payment Bond, and proof of insurance coverage, all within seven calendar days after personal delivery or after deposit in the mails of the notification of acceptance of this bid.

Respectfully submitted,

BIDDER:

(Name of Business)

(Address)

(City, State and Zip Code)

(Telephone Number)

The undersigned certifies that he/she is duly authorized to bind the Bidder to the terms and conditions of this bid proposal:

(Name of Bidder)

(Signature)

(Title)

Type of business entity:

(Corporation, Co-Partnership, Individual, Etc.)

()
(CORPORATE)
(SEAL)
()
()

Individual members of the firm:

President of the corporation: _____

Secretary of the corporation: _____

Corporation is organized under the laws of the State of _____

Bid dated this _____ day of _____, 2024.

END OF BID FORM

Equal Employment Opportunity

SF 100

Company Name: _____

Employment at this establishment - Report all permanent full-and part-time employees including apprentices and on-the-job trainees unless specifically excluded as set forth in the instructions. Enter the appropriate figures on all lines and in all columns. Blank spaces will be considered as zeros.

Job Categories	Number of Employees (Report employees in only one category)														Total A-N
	Race/Ethnicity														
	Hispanic or Latino							Not-Hispanic or Latino							
	Male			Female				Male			Female				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Exec/Senior Level Officials & Managers 1.1															
First/Mid-level Officials & Managers 1.2															
Professionals 2															
Technicians 3															
Sales Workers 4															
Administrative Support Workers 5															
Craft Workers 6															
Operatives 7															
Laborers and Helpers 8															
Service Workers 9															
TOTAL 10															
Previous Year Total 11															

1. Date(s) of payroll period used: _____

Instructions for Equal Employment Opportunity (Standard Form 100)

The Lincoln Housing Authority uses the Equal Employment Opportunity (Standard Form 100) to internally to evaluate our programs for insuring equal employment opportunity within the agency and the award of contracts.

The submission of this form to the Authority does not satisfy federal law requiring any employer having a government contract or any federally-assisted construction contract, subcontract, or purchase order amounting to \$50,000 or more; who have 50 or more employees; and who are not exempt as provided by 41 CFR 60-1.5 to file the form by September of each year with the Equal Employment Opportunity Commission (Executive Order 11246, as Amended).

Detailed instructions for the completion of Standard Form 100 Equal Employment Opportunity are available upon request from the Lincoln Housing Authority. The instructions include detailed definitions of the term "employee", race and ethnic identification categories, descriptions of job categories and recommendations regarding the retention of records.

Self-identification is the preferred method of identifying the race and ethnic information necessary for this form. Employers are required to attempt to allow employees to use self-identification to complete the form. If an employee declines to self-identify, employment records or visual surveys of the work force may be used. Employers, at their option, may acquire the information necessary for completion of the form by the maintenance of post-employment records as to the identity of employees where the same is permitted by State law. Use of post-employment records are not prohibited by the State of Nebraska. However, the Equal Employment Opportunity Commission recommends the maintenance of a permanent record as to the racial or ethnic identity of an individual for purpose of completing the form only where the employer keeps such records separately from the employee's basic personnel file or other records available to those responsible for personnel decisions.

Lincoln Housing Authority E-Verify Certification

The undersigned has a contract or sub-contract with the Lincoln Housing Authority, a governmental entity in the State of Nebraska, and acknowledges that for the purposes of Nebraska Revised Statutes, Chapter 4, 4-114, they meet the definition of a "Public Contractor". The undersigned hereby certifies to the Lincoln Housing Authority that they will register with and use the federal immigration verification system, known as the E-Verify Program, to determine the work eligibility status of new employees physically performing services under the above-referenced contract or sub-contract as required under the provisions of the statute.

Name of Company

By

Print Name

Title

Date

Additional information regarding the E-Verify Program is available at <https://e-verify.uscis.gov/emp/>

SUPPLEMENTARY CONDITIONS

a. General: The "General Conditions" for this Contract are found in the Agreement Form, "Abbreviated Form of Agreement Between Owner and Contractor", AIA Document A104, 2017 Edition, **as amended with Owner's standard amendments and bound into this Project Manual**. The following supplements modify, change, delete from or add to the General Conditions. Where any article of the General Conditions is modified, or any paragraph, subparagraph or clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that article, paragraph, subparagraph or clause shall remain in effect.

b. Contractor's construction schedules: Add to Paragraph 9.8 the following subparagraph 9.8.3:

9.8.3 Contractor shall schedule work to comply with Owner's tenant notification policy. LHA as Owner will send a general notice to all tenants affected by this project. Where the work will require entrance into an individual Tenant's unit, the Contractor shall notify that tenant and the LHA Project Coordinator (Bob Goggins at 402-429-9616) at least 48 hours prior to the commencement of the work at that site. Contractor shall post notice in form provided by the Owner (contact Project Coordinator).

c. Submittals: Add to Paragraph 9.9 the following: "Contractor's submittals shall comply with Specifications Section 01 33 01."

d. Contractor's use of the sites: Add to Paragraph 9.10 the following: "Contractor's shall limit their use of the sites to the immediate area around the area requiring work. The Contractor shall provide for his own water and sanitary requirements. No heavy vehicles will be allowed on lawns. No storage will be provided by the Owner at the LHA Maintenance Facility or any other location. Materials and equipment required at individual unit site in quantities required for the work at that unit may be stored on that site subject to the time limitations of Paragraphs "e" and "f" below.

e. Amount of Work Started: Add to Article 14 the following Paragraph 14.6:

14.6 No site shall be started and not fully completed for more than three (3) calendar days without being 100% complete. The Owner may regard Contractor's failure to abide by the Contract sufficient cause to refuse to award any future work to Contractor.

f. Limitation of work times: Add to Article 14 the following Paragraph
14.7:

14.7 No work shall be commenced prior to 8:00 AM or continued after 5:00 PM. Work shall be on week days only, no work shall be permitted on Saturdays or Sundays or holidays as determined by LHA.

END OF SUPPLEMENTARY AND SPECIAL CONDITIONS

SECTION 01 22 16 – UNIT PRICES

PART ONE - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

1.3 DEFINITIONS

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

B. Measurement and Payment: Contractor shall repair gas leaks at valves and or piping not modified as part of the Work as found by the City Inspector. If this repair cannot be made at time of City Inspection and requires a separate trip to the Site by the Contractor, the Contractor shall make the trip, repairing the gas leaks as required by the City Inspector. If after the reinspection the repair is still found to be leaking, the Contractor shall make additional repair at no additional cost to the Owner until the repair is corrected to the satisfaction of the City Inspector.

1.5 LIST OF UNIT PRICES

A. A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price No. 1 – Repair of gas leaks at gas valves or gas piping not modified as part of the Work:

1. Description: Repair gas leaks in existing gas valves or gas piping not modified as part of the Work as found during City Inspection of the Work.
2. Unit of Measurement: One trip to the Site.
3. Unit Price: Contractor indicate on Bid Form.

END OF SECTION

SECTION 01 23 00 - ALTERNATES**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: To enable the Owner to compare total costs where alternate materials and methods might be used, or where the scope of the work may be increased or decreased, Alternates have been established as described on the Drawings and in this Section of these Specifications.

1.1.2 Related work described elsewhere: Materials and methods to be used in the Base Bid and in the Alternates have been described on the Drawings and in pertinent Sections of these Specifications. The method for stating the proposed Contract Sum and Alternates is described in the Bid Form.

1.2 SUBMITTALS

All Alternatives described in this Section are required to be reflected on the Bid Form as submitted by bidders. However, do not submit alternatives other than as described herein.

PART TWO - PRODUCTS

2.1 ALTERNATE NUMBER ONE

Amount to **deduct** to delete for all labor, materials, services and equipment necessary for completion of the work as shown & specified for Site 31 – 5118 W Vale and Site 32 – 4000 NW 50.

2.2 ALTERNATE NUMBER TWO

Amount to **deduct** to delete for all labor, materials, services and equipment necessary for completion of the work as shown & specified for Site 33 – 4006 NW 50 and Site 34 – 4012 NW 50.

PART THREE - EXECUTION

3.1 ORDER OF ACCEPTANCE

The Owner may select deductive alternates in numerical order as listed until the award can be made within available funds.

3.2 ADVANCE COORDINATION

Immediately after award of the Contract, or as soon thereafter as the Owner has made decision on which, if any, Alternates will be selected, thoroughly and clearly advise all necessary personnel and suppliers as to the nature and extent of Alternates selected by the Owner. Use all means necessary

to alert all personnel and suppliers as to all changes in the Work caused by the Owner's selection or rejection of Alternates.

END OF SECTION

SECTION 01 29 00 - PROGRESS PAYMENTS AND FINAL PAYMENT

1.1 Work included: This Section establishes requirements, for the Contractor in applying for payment and, for the Architect, in certifying payments to be made by the Owner.

1.2 Subcontractor payment: The Contractor's payments to his subcontractors and material suppliers are the Contractor's responsibility and are not part of this Section's content.

1.3 Schedule of values: Immediately after the contracts are awarded, the Contractor shall prepare and submit to the Architect a Schedule of Values allocated to the various portions of the Work aggregating the total sum of the contract. AIA Document G703, Certificate for Payment, Continuation Sheet shall be used for the Schedule of Values, and must be prepared in such a manner that **each dwelling unit is shown as a single line item**. In applying for payment, the Contractor shall submit a statement based on this schedule.

1.4 Application and certificate for payment form: AIA Document G702, Application and Certificate for Payment and G703 Continuation Sheet, shall be used in applying for progress payments.

1.5 Application and certificate for payment submittals: Application for payment shall be submitted to the Architect no later than the 5th day of each month for work completed through the last day of the preceding month. Each application shall be signed **and notarized**. Weekly payroll submittals per Section 1 10 61, Paragraph 3.1, must be up to date for the period included in the pay application.

1.6 Retainage: Upon certification by the Architect, the Owner shall pay to the Contractor, on account of the Contract, 90% of the value of labor and materials incorporated in the Work. Payments for 90% of the actual value of materials stored off site as documented in copies of invoices from material suppliers may be paid by the Owner only if all of the following requirements have been met: If approved in advance by the Owner, payment may be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

1.7 Final payment: After final completion, and upon receipt of application for final payment, accompanied by the items listed below, and upon certification of the Architect, the Owner shall pay the Contractor the entire balance of the Contract Sum.

Other items required, before Final Payment will be certified include the following:

- 1) AIA Document G706 "Contractor's Affidavit of Payment of Debts and Claims"; AIA Document G706A "Contractor's Affidavit of Release of Liens"; and an executed Waiver of Mechanic's Lien from each Subcontractor and Supplier;
- 2) AIA Document G707 "Consent of Surety to Final Payment";
- 3) Certificate and Release;
- 4) Completion of all "punch List" items. ("Punch list" items are defined as an inspection report which lists all items requiring completion or corrective action by the Contractor.);
- 5) Any additional records or information as may be required by HUD.

END OF SECTION

SECTION 01 33 01 - SHOP DRAWINGS AND SAMPLES**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: Make all submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

1.1.2 Related work: Individual requirements for submittals also may be described in pertinent Sections of these Specifications.

1.2 QUALITY ASSURANCE

Prior to each submittal, carefully review and coordinate all aspects of each item being submitted and verify that each item and the submittal for it conforms in all respects with the requirements of the Contract Documents. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.

PART TWO - PRODUCTS

2.1 MANUFACTURER'S LITERATURE

2.1.1 General: Where the contents of submitted literature include data not pertinent to the submittal, **clearly indicate which portion of the contents is being submitted for review**.

2.1.2 Number of copies required: Submit the number of copies which are desired to be returned plus two (2) copies which will be retained by the Architect.

PART THREE - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

3.1.1 General: Consecutively number all submittals. Accompany each submittal with a letter of transmittal containing all pertinent information required for identification and checking of submittals.

3.1.2 Resubmittals: When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new submittal number. On resubmittals, indicate the original submittal number for reference purposes.

3.2 TIMING OF SUBMITTALS

3.2.1 General: Make all submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.

3.2.2 Architect's review time: In scheduling, allow at least 10 calendar days for review by the Architect following receipt of the submittal.

3.2.3 Delays: Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the Contract completion date.

3.3 ARCHITECT'S REVIEW

3.4.1 General: Review by the Architect shall not be construed as a complete check, but only for the limited purpose of checking for conformance with information given in the Contract Documents. Review shall not relieve the Contractor from responsibility for errors which may exist in the submitted data.

3.3.2 Authority to proceed: The notations "Approved" or "Approved as Noted" authorize the Contractor to proceed with fabrication, purchase, or both, of the items so noted, subject to the revisions, if any, required by the Architect's review comments.

3.3.3 Revisions: If submittals are noted "Not Approved" or "Revise and Resubmit", make all revisions required by the Architect and resubmit. Make only those revisions directed or approved by the Architect. Show each drawing revision by number, date and subject in a revision block on the Shop Drawings. If the Contractor considers any required revision to be a change, he shall so notify the Architect as provided for under Article 13 in the General Conditions.

END OF SECTION

SECTION 01 50 01 - TEMPORARY UTILITIES AND FACILITIES**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: Temporary utilities and facilities required for this Work include, but are not necessarily limited to:

- 1) Temporary utilities such as water, electricity, heat and telephone service;
- 2) Field offices and sheds;
- 3) Sanitary facilities;
- 4) Enclosures such as tarpaulins, barricades and canopies.

1.2 PRODUCT HANDLING

Use all means necessary to maintain temporary facilities in a proper and safe condition throughout the progress of the Work.

1.3 JOB CONDITIONS

The Owner can not require Tenants to provide utilities for work under this contract. The Contractor shall not use a Tenant's water or electricity without specific permission from the Tenant. The Contractor shall provide other sources for utilities as required.

PART TWO - PRODUCTS

2.1 UTILITIES

2.1.1 General: All temporary utilities shall be subject to the Architect's approval.

2.1.2 Water: Furnish and install any required temporary water throughout the construction period. The Contractor shall pay all costs of temporary water service, including costs of installation, maintenance and removal of pipe and equipment. Do not use Tenant's existing water supply unless specific permission is obtained.

2.1.3 Electricity: Furnish and install all necessary temporary power and lighting facilities by portable generator or other acceptable means. The Contractor shall pay all costs of temporary electrical power, including costs of installation, maintenance and removal. The Contractor shall pay all costs of all electrical energy used during the construction period. Do not use Tenant's existing electrical service unless specific permission is obtained from the Tenant.

2.1.4 Telephone: The Contractor shall make all necessary arrangements and pay all costs for the installation and operation of telephone service as required for the Contractor's own use.

2.2 FIELD OFFICES AND SHEDS

No space on the sites will be available for a field office or storage sheds. The Contractor shall provide all required storage and office space off site.

2.3 SANITARY FACILITIES

Provide temporary sanitary facilities in the quantity required for use by all personnel. Maintain in a sanitary condition at all times. Do not use Tenant's existing toilet facilities.

2.4 ENCLOSURES

Furnish, install and maintain for the duration of construction all required scaffolds, tarpaulins, fences, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the Work in compliance with all safety and other regulations.

PART THREE - EXECUTION

3.1 MAINTENANCE AND REMOVAL

Maintain all temporary facilities as long as needed for the safe and proper completion of the work. Remove all such temporary facilities as rapidly as progress of the Work will permit.

END OF SECTION

SECTION 01 60 01 - SUBSTITUTION OF MATERIALS AND APPROVAL

1.1 Work included: Wherever possible throughout the Specifications, the minimum acceptable quality of materials, products, equipment and methods of installation has been defined by manufacturer's name and catalog number, reference to recognized industry and government standards, or description of required attributes and performance. To ensure that the specified quality of materials, products, equipment and methods of installation is furnished, procedures have been established for approval of proposed substitutions.

1.2 Approval required: The Contract is based on the materials, products, equipment and methods of installation described in the Contract Documents. Do not substitute materials, products, equipment, or methods of installation unless such substitution has been specifically approved for this Work by the Architect or Owner. Where two or three materials, products, pieces of equipment or methods are noted or specified, the choice of one of these shall be optional with the Contractor. The Architect and Owner will consider proposals for substitution of materials, products, equipment and methods only as described in Paragraph "1.3" below.

1.3 Requesting approval: Each proposal shall be made in writing to the Architect and shall include the name of the material, product, equipment or method for which the proposal is to be substituted and a complete description of the proposed substitute including drawings, brochures, performance and test data and all other information required by the Architect and Owner to make an evaluation. The Bidder shall request approval of proposed substitutions not later than ten (10) full calendar days prior to the bid date.

Where such substitutions alter the design or space requirements indicated on the Drawings, the Contractor shall include in his bid all items of cost for the revised design and construction including costs of all allied trades involved. A statement describing the changes in other materials, equipment or other Work, that incorporation of the substitute would require, shall be included with the proposal for substitution.

1.4 Form of approval: If the Architect and Owner approve any proposed substitution, such approval will be set forth in an Addendum, to be issued prior to the receipt of bids. Bidders shall not rely upon approvals made in any other manner.

1.5 Products not requiring approval: Materials, products, equipment and methods specified by reference to standard specifications, such as ASTM and similar standards, do not require further approval except for interface within the Work. Where two or more materials, products, pieces of equipment or methods are specified, and the Contractor chooses one of these for use in the work, no further approval is required, except for approval of the interface within the Work.

1.6 "Or equivalent as approved by the Architect": Where the phrase "or an approved equivalent" occurs in the Specifications; or where a Bidder desires to furnish an unlisted material, product, piece of equipment or method of installation he considers equivalent, the Bidder shall request approval of proposed substitutions at least ten (10) days prior to the date designated for the receipt of bids. The Architect's approval of any proposed substitution shall be indicated in writing, by an Addendum as described in paragraph 1.4 above.

1.7 "No Substitute": Where the phrase "No Substitute" occurs in the Specifications, provide and install such materials, products and equipment as specified.

1.8 Availability of specified items: Verify prior to bidding that all specified items will be available in time for installation during orderly and timely progress of the Work. In the event specified items will not be so available, notify the Architect prior to receipt of bids. Requests for extension of the Contract completion date, or requests for extra compensation, due to delay because of nonavailability of specified items, when such delays could have been avoided by the Contractor, will not be granted.

END OF SECTION

SECTION 01 73 01 - PROGRESS AND FINAL CLEANING

1.1 Work included: Throughout the construction period, maintain the building and site in a standard of cleanliness as described in this Section. In addition to the standards described in this Section, comply with all requirements for cleaning up as described in various other Sections of these Specifications.

1.2 Cleaning materials and equipment: Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

1.3 Progress cleaning:

- 1) General: Do not allow the accumulation of scrap, debris, waste material, and other items not required for construction of this Work. Perform all cleaning prior to leaving site.
- 2) Sites: Daily, pick up all scrap, debris, and waste material and remove from the sites. Maintain the sites and all adjacent properties in a safe and orderly condition at all times. At all times during the daily progress of the Work, prevent any and all debris from blowing onto adjacent property.

1.4 Final cleaning:

- 1) Definition: Except as otherwise specifically provided, "clean" (for the purpose of this Article) shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality maintenance equipment and materials;
- 2) General: Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste.
- 3) Exteriors of Structures: Visually inspect all exterior surfaces and remove all traces of soil, smudges, and other foreign matter resulting from work under this Contract.
- 4) Interiors of Structures: Visually inspect all interior surfaces and remove all traces of soil, smudges, and other foreign matter resulting from work under this Contract. Remove all traces of splashed materials from adjacent surfaces. Use only the specified cleaning materials and equipment.
- 5) Furnace: Clean furnace by removing all dirt, soil, debris, etc. created by the construction process. Clean all new ductwork installed. Notify LHA staff if irregularities or deficiencies are observed in the existing equipment to remain.
- 6) Timing: Perform final cleaning within the time allowed for completion of each site before leaving site.

END OF SECTION

SECTION 22 00 00 - PLUMBING SYSTEMS**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: Rework natural gas piping and provide vent and combustion air piping as required to install replacement furnaces.

1.1.2 Related work described elsewhere:

- 1) Heating, ventilating and air conditioning systems: Section 23 50 00.

1.1.3 Substitutions of materials and approval: Comply with the provisions of Section 01 60 01 of these Specifications, in making all proposed substitutions.

1.2 QUALITY ASSURANCE

1.2.1 Standards: Comply with standards specified in this Section.

1.2.2 Qualifications of installers: Use sufficient journeyman plumbers and competent supervisors in execution of this portion of the Work to ensure proper and adequate installation throughout. In the acceptance or rejection of installed plumbing, no allowance will be made for lack of skill on the part of workmen.

1.2.3 Codes and regulations: In addition to complying with the specified requirements, comply with pertinent regulations and codes of governmental agencies having jurisdiction, including the requirements of the National Fire Protection Association, latest editions. In the event of conflict between or among specified requirements and pertinent regulations and codes, the conflict shall be brought to the attention of the Architect, and the more stringent requirement shall govern.

1.3 PRODUCT HANDLING

1.3.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the existing surrounding construction.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS**2.1 PIPE**

2.1.1 Gas piping: Provide standard weight black steel pipe, conforming to Schedule 40 of ASA B36-10-1935 except provide galvanized pipe where pipe is exposed to the weather. Provide threaded, black malleable iron fittings, conforming to ASA B16c-1939 or fittings suitable for welding. Provide galvanized fittings where exposed to weather. Threads shall comply with the American Standard for Taper Pipe Threads, ASA B2-1942 or the latest revision thereof. All gas piping concealed in walls, non-ventilated ceilings or furred spaces shall be black steel pipe with welded fittings and joints. All gas piping in rooms or spaces ventilated by windows or mechanical means shall be black steel pipe with threaded malleable iron fittings and screwed joints.

2.1.2 Vent and intake piping: Provide PVC pipe and fittings conforming to current code. PVC pipe joints shall be glued type as approved by codes.

2.2 VALVES

Provide gas cock type valves, or gas pressure regulators as required and conforming to the local plumbing code.

2.3 HANGERS AND SUPPORTS

Provide hangers and supports as allowable by local codes and the Lincoln Plumbing Code.

2.4 ISOLATION

Isolate all dissimilar metals with isolators equaling or exceeding the quality of "EPCO" dielectric unions.

2.5 OTHER MATERIALS

All other materials, not specifically described but required for a complete and proper installation of the work of this Section, shall be new, first quality of their respective kinds, and as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION**3.1 INSPECTION**

Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

3.2.1 Coordination: Coordinate as necessary with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section. Coordinate the installation of gas piping with the schedule for work of other trades to prevent unnecessary delays in the total Work.

3.2.2 Scheduling: Schedule all work with General Contractor to comply with Supplementary Conditions Paragraphs d, e, and f.

3.3 INSTALLATION, GENERAL

Install all piping in accordance with the following:

- 1) Install all piping, thoroughly cleaning first and then promptly capping or plugging all open ends, to exclude dirt until final connections are made;
- 2) Install all piping generally level and plumb, free from traps, and in a manner to conserve space for other work. Firmly anchor all pipes into position. Install pipes to clear all beams and obstructions. Support piping independently from all equipment so that weight of pipe is not supported by equipment;
- 3) Do not cut into or reduce the size of any load-carrying member without the prior approval of the Architect. When pipes are within 1" of the edge of a wall stud, protect pipe from drywall fastening by placing an 18 gauge strap metal plate on stud;
- 4) Provide complete isolation of all dissimilar metals;
- 5) Inspect each piece of pipe, couplings, fittings, and equipment for defects and obstructions. Promptly remove all defective material from the site;
- 6) Provide unions and shut off valves suitably located in gas systems, to facilitate regulation, maintenance and removal of equipment or fixtures. Locate valves for easy accessibility and maintenance;
- 7) Install all gas piping in strict accordance with NFPA 54 and 58. Provide in sizes with all stop valves, unions and drip legs as required by the local gas utility or plumbing inspector. Test all concealed gas piping before it is enclosed;

3.4 PIPE JOINTS

3.4.1 Screwed piping: Cut pipe square, remove burrs and properly ream out pipe. Do not ream exceeding internal diameter of pipe. Cut all threads properly, complying with ANSI B2.1. Apply code approved sealant to male pipe threads prior to joining.

3.4.2 Plastic pipe: Cut pipe square, clean the cut and pipes interior. Solvent weld joints together in strict accordance with manufacturer's recommendations.

3.4.3 Leaky joints: Remake with new material, removing the leaky section and/or fitting as directed. Do not use thread cement or sealant to stop leaks.

3.5 PIPE HANGERS AND SUPPORTS

Install code approved hangers to prevent strains and stresses which would exceed the structural strength of the pipe. Hangers and supports shall not compress, distort, cut or abrade the piping and shall allow free movement for expansion and contraction.

3.6 TESTING

3.6.1 General: Furnish all test pumps, gages, equipment, and personnel required, and test as necessary to demonstrate the integrity of the finished installation to the approval of all pertinent authorities and the Architect.

3.6.2 Valves: Test all valves for tightness. Test operate all valves at least once from closed-to-open-to-closed positions while valve is under pressure.

3.7 CITY INSPECTION

If, during the City Inspection of the Work, leaks are found in existing valves or piping that were not modified by the Contractor as part of this Work, the Contractor shall make required repairs to the satisfaction of the City Inspector. The cost of these repairs shall be renumerated the Contractor in amount set by Unit Price provided on the Bid Form.

END OF SECTION

SECTION 23 01 30.51 –HVAC AIR DUCT CLEANING**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: This section includes specifications for cleaning duct and HVAC systems on this project. Including the following:

- 1) Return-air duct as shown in drawings;

1.1.2 Related work described elsewhere:

- 1) Central HVAC Equipment: Section 23 70 00

1.1.3 Substitutions of materials and approval: Comply with the provisions of Section 01 60 01 of these Specifications, in making all proposed substitutions.

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of installers: For the actual fabrication, installation, and testing of work under this Section, use only thoroughly trained and experienced workmen completely familiar with the operations required to meet the specified standards. The HVAC system cleaning contractor shall have a minimum of one (1) AIR System Cleaning Specialist (ASDS) certified by NADCA.

1.2.2 Standards: The HVAC system cleaning contractor shall perform the services specified here in accordance with the current published NADCA Standard ACR. NADCA Standard ACR must be followed with no modifications or deviations being allowed.

1.3 SUBMITTALS

1.3.1 General: Comply with the provisions of Section 01 33 01.

1.3.2 Certification: Submit documentation of ASCS certification of person(s) to supervise the duct cleaning on site.

1.4 PRODUCT HANDLING

1.4.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the existing surrounding work and materials.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 GENERAL

All equipment and materials used for duct cleaning shall comply with the current published NADCA Standard ACR.

PART THREE - EXECUTION

3.1 GENERAL

Perform the services specified here in accordance with the current published standards of the National Air Duct Cleaners Association (ACR and NADCA HVAC Inspection Manual).

3.2 PREPARATION

3.2.1 Coordination: Coordinate as necessary with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section. Coordinate duct cleaning with the schedule for work of other trades to prevent unnecessary delays in the total work.

3.2.2 Scheduling: Schedule all work with the General Contractor to comply with Supplementary Conditions Paragraphs "e" and "f".

3.3 DUCT CLEANING

3.3.1 Cleaning methods: All HVAC components included in the scope of work shall be cleaned by using a suitable agitation device to dislodge contaminants from the HVAC component surface and then capturing the contaminants with a vacuum collection device. Acceptable methods will include those which will not potentially damage the integrity of the duct, nor damage porous surface materials such as liners inside the duct or system components.

3.3.2 Access: Remove diffusers and grills as required for physical and mechanical entry into ducts. Protect existing finished surfaces.

3.3.3 Cleaning: Clean duct systems as follows:

- 1) Clean metal duct systems using mechanical cleaning methods that extract contaminants from within duct systems and remove contaminants from building;
- 2) Use vacuum-collection devices that are operated continuously during cleaning. Connect vacuum device to downstream end of duct sections so areas being cleaned are under negative pressure;

- 3) Use mechanical agitation to dislodge debris adhered to interior duct surfaces without damaging integrity of metal ducts, duct liner, or duct accessories;
- 4) Clean fibrous-glass duct liner with HEPA vacuuming equipment; do not permit duct liner to get wet. Replace fibrous-glass duct liner that is damaged, deteriorated, or delaminated, or that has friable material, mold, or fungus growth;
- 5) Apply biocidal agents if fungus is present; apply in accordance with manufacturer's written instructions after removal of surface deposits and debris.

3.3.4 Particulate collection: All methods used shall incorporate the use of vacuum collection devices that are operated continuously during cleaning. A vacuum collection device shall be connected to the component being cleaned through a predetermined opening. The vacuum collection device must be of sufficient power to render all areas being cleaned under negative pressure, such that containment of debris and the protection of the indoor environment are assured. When the vacuum collection device is used to convey air with debris, it shall maintain a sufficient velocity and negative pressure differential in the portion of the mechanical system being cleaned. If venting vacuuming system inside the building, use HEPA filtration with 99.97 percent collection efficiency for 0.3-micron size (or larger) particles. When venting vacuuming system to the outside, use filtration to contain debris removed from HVAC system and locate exhaust down wind and away from air intakes and other points of entry into building.

3.3.5 Cleanliness verification: Verify cleanliness after mechanical cleaning and before application of treatment, including biocidal agents and protective coatings. Visually inspect metal ducts and other components for contaminants. Where contaminants are discovered, re-clean and re-inspect ducts and components.

3.4 DISPOSAL OF DEBRIS

All debris removed from the HVAC System shall be disposed of in accordance with applicable federal, state and local requirements. To prevent cross-contamination, all contaminated materials removed from the HVAC system shall be properly contained prior to removal from the building. Materials deemed to be hazardous by governmental agencies shall be handled in strict accordance with any applicable local, regional or national codes.

END OF SECTION

SECTION 23 50 00 - HEATING, VENTILATING AND AIR-CONDITIONING**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: Provide replacement gas furnaces, as specified herein and as needed for a complete and proper installation including, but not necessarily limited to:

- 1) Natural gas fired, high efficiency forced air furnaces;
- 2) Extension of plenums and other ductwork as required to install new furnaces;
- 3) Provision of required exhaust piping and combustion air piping to and thru exterior walls;
- 4) Rework existing filter racks with slide doors and related return air ductwork as required;
- 5) Cooling coil support racks;
- 6) All other items required for complete and operating gas heating systems in compliance with current applicable codes.

1.1.2 Related work described elsewhere:

- 1) Gas piping: Section 22 00 00
- 2) Service wiring and control wiring: Section 26 00 00

1.1.3 Substitutions of materials and approval: Comply with the provisions of Section 01 60 01 of these Specifications, in making all proposed substitutions.

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of installers: For the actual fabrication, installation, and testing of work under this Section, use only thoroughly trained and experienced workmen completely familiar with the items required and the manufacturer's current recommended methods of installation. In acceptance or rejection of installed work, the Architect will make no allowance for lack of skill on the part of workmen.

1.2.2 Codes and standards: in addition to complying with all pertinent codes and regulations, comply with all pertinent recommendations contained in "Duct Manual and Sheet Metal Construction for Ventilating and Air-conditioning Systems," latest edition, as published by the Sheet Metal and Air-conditioning Contractor's National Association.

1.3 SUBMITTALS

1.3.1 General: Comply with the provisions of Section 01340.

1.3.2 Product data: Furnish Shop Drawings containing the following information:

- 1) Complete materials list of all items proposed to be furnished and installed under this Section;
- 2) Manufacturers specifications, catalog cuts and other data required to demonstrate compliance with the specified requirements.

1.3.3 Manual: Upon completion of the Work, and as a condition of its acceptance, deliver to the Owner one Owner's Manual for each furnace installed by placing manual in a clear plastic pouch adhered to the new furnace or ducts.

1.4 PRODUCT HANDLING

1.4.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the existing surrounding work and materials.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

1.5 GUARANTEES

1.5.1 General: Deliver all guarantees and warranties on this portion of the work to the Owner. All equipment, materials, and workmanship shall be guaranteed to be free from defects for a period of at least 5 years following date of Substantial Completion. Replace all parts proven defective during that time to the approval of the Architect and at no additional cost to the Owner.

1.5.2 Additional warranties: The furnace heat exchanger shall be guaranteed for not less than 20 years.

PART TWO - PRODUCTS

2.1 GENERAL EQUIPMENT

2.1.1 Furnaces: Provide furnaces of the capacity and types scheduled in the Drawings and provide a listed manufacturer and model number, or an equivalent approved in advance of the bid opening by the Architect, in accordance with the provisions of Section 01 60 01 of these Specifications. All **furnaces shall meet Energy Star requirements** with not less than 95% AFUE, hot surface ignition, aluminized steel primary heat exchanger, stainless steel secondary heat exchanger, one stage operation, high efficiency blower motor, and integrated furnace control with diagnostics.

2.1.2 Flues: Provide new code compliant flue and air intake thru exterior walls.

2.1.4 Filters: Provide filters of standard sizes, and types not less than recommended by the manufacturer of the equipment. Rework/replace external filter rack if required to achieve manufacturer's recommended size. If a new rack is required, label filter size on ductwork in black permanent ink. New external filter rack is to be fabricated so that filter slides in from the side or front. Provide door to seal filter opening in side of return ductwork. Hem edges of door grip or otherwise permanently eliminate sharp edges to the approval of the Architect. Fabricate tracks for filter doors to slide in and out and secure tracks to ductwork. Friction fit doors on pivots may be used where there is not adequate clearance to install a slide door. If new racks are required, provide and install one sample filter rack for Owner's approval prior to fabricating additional filter racks.

2.1.5 Isolation pads: Provide solid rubber pads approximately 4"x4"x1/2" at each corner of each new furnace cabinet to isolate cabinets from concrete floors. Isolation pads are not required at plywood floors.

2.1.6 Thermostats: Contractor shall verify existing thermostat is in good working condition. If existing thermostat is found to be in poor condition, Contractor shall contact LHA Maintenance for a replacement thermostat.

2.1.7 Support rail: Provide evaporator coil support rail at each plenum. Support rail shall be not less than as detailed in the Drawings.

2.2 SHEET METAL DUCT WORK

All sheet metal ductwork shall conform with SMACNA low velocity duct design and shall be 24 gauge galvanized iron or 0.025 gauge aluminum ductsheet or thicker. Aluminum sheets, when used shall have not more than 0.40% copper, a minimum tensile strength of 16,000 PSI, and the ability to satisfactorily make a Pittsburgh lock seam. Provide carefully fitted and sealed solid ductwork. Flexible connections may be provided at Contractor's option.

2.3 OTHER MATERIALS

All other materials, not specifically described but required for a complete and proper installation, shall be as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 PREPARATION

3.1.1 Notification: The Owner will send a general notice to all Tenants affected by this project. The Contractor shall notify each Tenant and the Owner's Maintenance Director at least 48 hours prior to the commencement of the work at each site.

3.1.2 Inspection: Prior to work of this Section, carefully inspect the existing installation, and verify that the work of this Section may be completed in strict accordance with all pertinent codes and regulations, the approved Shop Drawings, and the manufacturer's recommendations.

3.1.3 Discrepancies: In the event of discrepancy, immediately notify the Architect and Owner's representative. Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.

3.1.4 Scheduling: Schedule all work (including subcontractor work) to comply with Supplementary Conditions Paragraph 5, Sub-paragraphs d, e, and f.

3.2 INSTALLATION OF EQUIPMENT

3.2.1 Locations: Install all equipment in the same locations as the existing equipment, except where different locations are specified here-in or where specifically otherwise approved on the job by the Architect. Existing furnace is to be removed and legally disposed of off site by the Contractor.

3.2.2 Interferences: Avoid interference with structure, and with work of other trades, preserving adequate headroom and clearing all doors and passageways to the approval of the Architect.

3.2.3 Inspection: Check each piece of equipment in the system for defects, verifying that all parts are properly furnished and installed, that all items function properly, and that all adjustments have been made.

3.2.4 Installation: Install new furnace and related equipment in compliance with approved submittals, manufacturer's instructions, and all applicable codes.

3.2.5 Flues: Provide new code compliant flue and air intake thru exterior walls. Rework existing flue to serve existing water heater in compliance with all applicable codes.

3.2.6 Protection: Protect existing central air conditioning to remain. Guard against damage to stair walls, doors, etc. when transporting new or existing furnaces in or out of the units. Use drop cloths on floors around furnaces to eliminate rust and other debris from dropping on floor during removal of existing or installation of new furnaces units. Rust ground into existing floor surfaces will not be acceptable. Take all steps required to protect Owner's Tenants from temperatures below 60°F while dwelling unit is without a functioning furnace.

3.3 INSTALLATION OF DUCTWORK

3.3.1 General: Fabricate and install all ductwork in strict accordance with the referenced standards and all applicable codes. Interface new equipment for a complete and operable system.

3.3.2 Sheet metal ductwork: Cross-break or kink all flat surfaces to prevent vibration.

3.3.3 Connection: Install and make all necessary connections required for the complete systems, including all duct work, transitions, connections, fasteners, hangers, and other items required. Properly support ductwork at flexible connections. Take all required precautions to ensure that drain pan at existing coil is securely supported at correct elevations for proper drainage of condensate. Seal all joints, including corners.

3.4 CLEANING THE SYSTEM

3.4.1 Ductwork: After the ductwork has been tested and proved tight, thoroughly clean all new components of the ductwork and remove all dirt, scale, oil, and other foreign substances which may have accumulated during the installation process.

3.4.2 Equipment: After the equipment has been started and proved operational, carefully clean all accessible parts of each new piece of equipment, thoroughly removing all traces of dirt, oil, grease, and other foreign substance.

3.5 COOPERATION WITH OTHER TRADES

Do all things necessary to cooperate with other trades in order that all systems in the Work may be installed in the best arrangement.

3.6 TESTING AND ADJUSTING

Provide all necessary personnel, equipment, and services and perform all tests necessary to demonstrate the integrity of the completed installation to the approval of the Architect and all other authorities having jurisdiction. All thermostats, control devices, burners, fans, etc. shall be adjusted for proper and efficient operation.

END OF SECTION

SECTION 26 00 00 - ELECTRICAL SYSTEMS**PART ONE - GENERAL**

1.1 DESCRIPTION

1.1.1 Work included: Provide all electrical work required to connect replacement furnaces to the existing power and existing thermostats.

1.1.2 Related work described elsewhere:

- 1) Heating, ventilating, and air conditioning system: Section 23 50 00;

1.1.3 Substitutions of materials and approval: Comply with the provisions of Section 01 60 01 of these Specifications, in making all proposed substitutions.

1.2 QUALITY ASSURANCE

1.2.1 Standards: Comply with the specified standards.

1.2.2 Qualifications of installers: Use sufficient journey-man electricians and competent supervisors in execution of this portion of the Work to ensure proper and adequate installation throughout. In the acceptance or rejection of installed work, no allowance will be made for lack of skill on the part of workmen.

1.2.3 Codes and regulations: In addition to complying with the specified requirements, comply with pertinent regulations and codes of governmental agencies having jurisdiction, including the National Electrical Code, latest edition, requirements of the National Fire Protection Association, latest editions, and local utility company regulations. In the event of conflict between or among specified requirements and pertinent regulations and codes, bring the conflict to the attention of the Architect. The more stringent requirement shall govern.

Without additional cost to the Owner, provide such other labor and materials as are required to complete the work of this Section in accordance with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents.

1.3 PRODUCT HANDLING

1.3.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect existing construction and the work and materials of all other trades.

1.3.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCT

2.1 GENERAL

Provide only materials that are new, and of the type and quality specified. Where Underwriters' Laboratories, Inc. has established standards for such materials, provide only materials bearing the UL label.

2.2 DISCONNECT SWITCHES

Provide disconnect (safety) switches where required by the National Electrical Code. Existing equipment in good condition may be reused if approved by current codes.

2.3 TEMPERATURE CONTROL WIRING

Provide all wiring for temperature controls as required. Provide the type of wiring required for a complete and operable system. All thermostats will be existing or, where existing is not functioning properly, will be furnished by LHA Maintenance.

2.4 OTHER MATERIALS

Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to the timely and proper completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

3.2.1 Coordination: Coordinate as necessary with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section. Coordinate the installation of electrical items with the schedule for work of other trades to prevent unnecessary delays in the total Work.

3.2.2 Scheduling: Schedule all work with General Contractor to comply with Supplementary Conditions Paragraph d, e, and f.

3.3 CUTTING FLOORS, WALLS, OR CEILINGS

Using skilled craftsmen, provide all cutting, fitting, patching and repairing required for the installation of the work of this Section. Do not weaken any structural member.

3.4 INSTALLATION OF RACEWAYS AND FITTINGS

Wherever nonmetallic-sheathed cable is not permitted by Code, install a complete raceway system to interconnect all electrical equipment. Conceal all raceway systems in walls, above ceilings, below floors, or in furred-out spaces, except in unfinished areas. Where conduit is exposed, run parallel to or at right angle with line of the building. Make bends with standard conduit elbows or conduit bent not less than the same radius. Make bends free from dents and flattening. Install conduit to avoid proximity to heating ducts and hot water pipes. Where such crossings are unavoidable, install conduit to clear ducts or piping by at least 6 inches or as allowed by code and approved by Architect.

3.5 INSTALLATION OF POWER EQUIPMENT AND CONTROL WIRING

Install wiring for all temperature controls. Verify requirements, type and size of wiring, etc. with the HVAC contractor and by examination of existing thermostats to remain. Contractor shall verify existing thermostat is in good working condition. If existing thermostat is found to be in poor condition, Contractor shall contact LHA Maintenance for a replacement thermostat and shall install the new thermostat provided by Owner. Secure unprotected low voltage wires to flex or gas pipe with tape or other acceptable system. Tape all wire splices to minimize potential damage from tenant's children.

3.6 INSTALLATION OF CONDUCTORS

Install all conductors to conform to the applicable requirements of NEC. Install conductors in NM cable where allowed by Code.

3.7 GROUNDING

Except where specifically indicated other-wise, ground all noncurrent-carrying metallic parts of the electrical system, in an approved manner, in accordance with the current edition of the National Electrical Code and all local codes.

3.8 TESTING AND INSPECTION

Provide personnel and equipment, make required tests, and secure required approvals from the Architect and codes enforcing agencies having jurisdiction. Test all parts of the electrical system and verify that all items function electrically in the required manner.

3.9 PROJECT COMPLETION

3.9.1 Cleaning: Upon completion of the work of this Section, remove from the building and the site, all rubbish and debris resulting from electrical work. Clean all exposed portions of the electrical installation, removing all traces of soil, labels, grease, oil, and other foreign material. Use only cleaners and methods recommended by the manufacturers of the various items.

3.9.2 Painted surfaces: Refinish damaged areas of factory finished electrical equipment. The refinished surface shall be equivalent in every respect to the original surface including color, texture and smoothness of finish.

3.9.3 Identification: Identify all disconnect switches and starters as to the equipment they serve.

END OF SECTION

SITE LIST

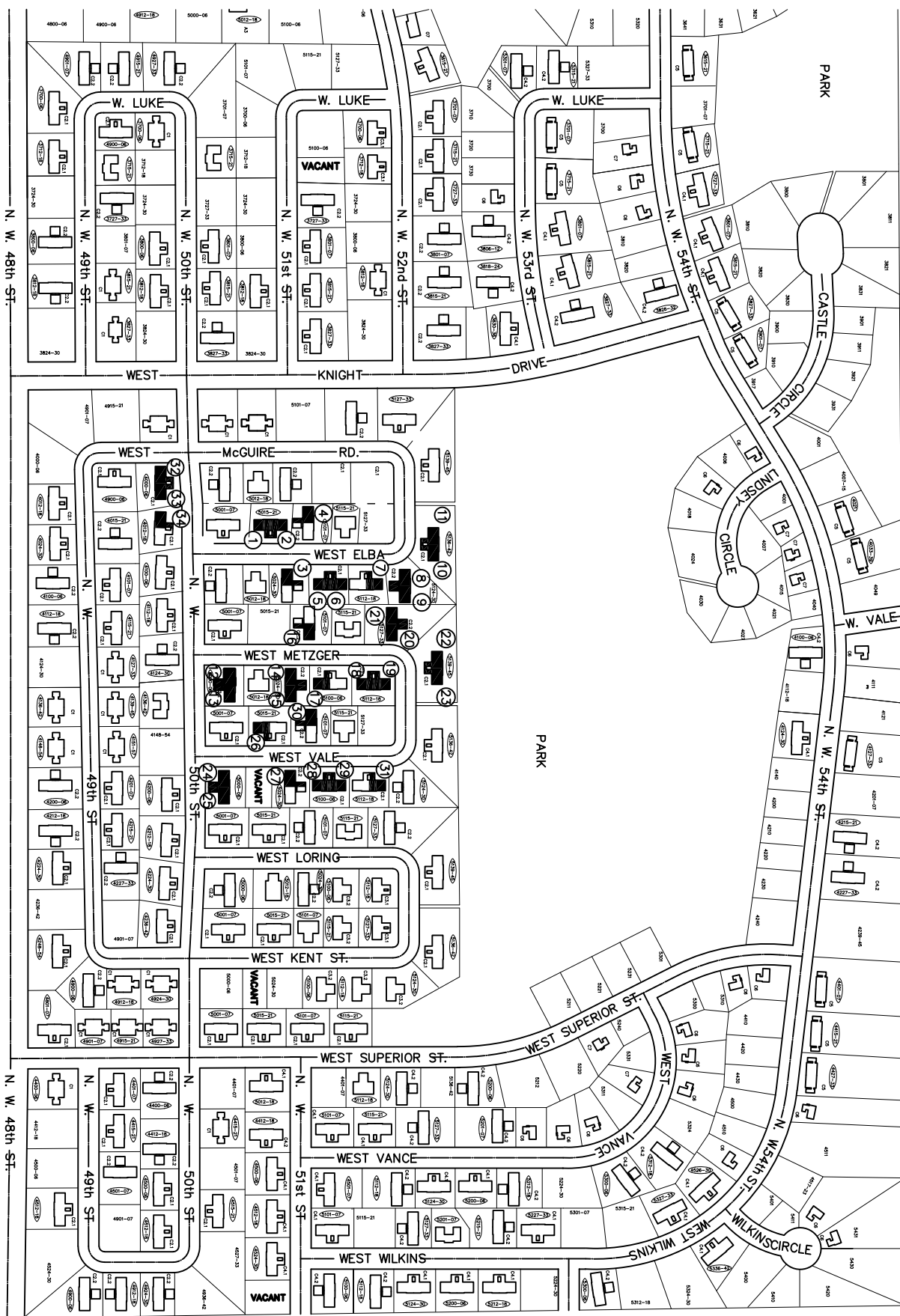
Site Address	Drawing	Furnace Type	Remarks
1. 5015 W Elba	M1	F-1	
2. 5021 W Elba	M1	F-1	
3. 5024 W Elba	M1	F-1	
4. 5107 W Elba	M1	F-1	
5. 5100 W Elba	M1	F-1	
6. 5106 W Elba	M1	F-1	
7. 5118 W Elba	M1	F-1	
8. 5124 W Elba	M1	F-1	
9. 5130 W Elba	M1	F-1	
10. 5136 W Elba	M1	F-1	
11. 5142 W Elba	M1	F-1	
12. 5000 W Metzger	M1	F-1	
13. 5006 W Metzger	M1	F-1	
14. 5024 W Metzger	M1	F-1	
15. 5030 W Metzger	M1	F-1	
16. 5101 W Metzger	M1	F-1	
17. 5100 W Metzger	M1	F-1	
18. 5112 W Metzger	M1	F-1	
19. 5118 W Metzger	M1	F-1	
20. 5127 W Metzger	M1	F-1	
21. 5133 W Metzger	M1	F-1	
22. 5139 W Metzger	M1	F-1	
23. 5145 W Metzger	M1	F-1	
24. 5000 W Vale	M1	F-1	
25. 5006 W Vale	M1	F-1	
26. 5015 W Vale	M1	F-1	
27. 5024 W Vale	M1	F-1	
28. 5100 W Vale	M1	F-1	
29. 5106 W Vale	M1	F-1	
30. 5107 W Vale	M1	F-1	
Alternate Number One			
31. 5118 W Vale	M1	F-1	
32. 4000 NW 50	M1	F-1	
Alternate Number Two			
33. 4006 NW 50	M1	F-1	
34. 4012 NW 50	M1	F-1	

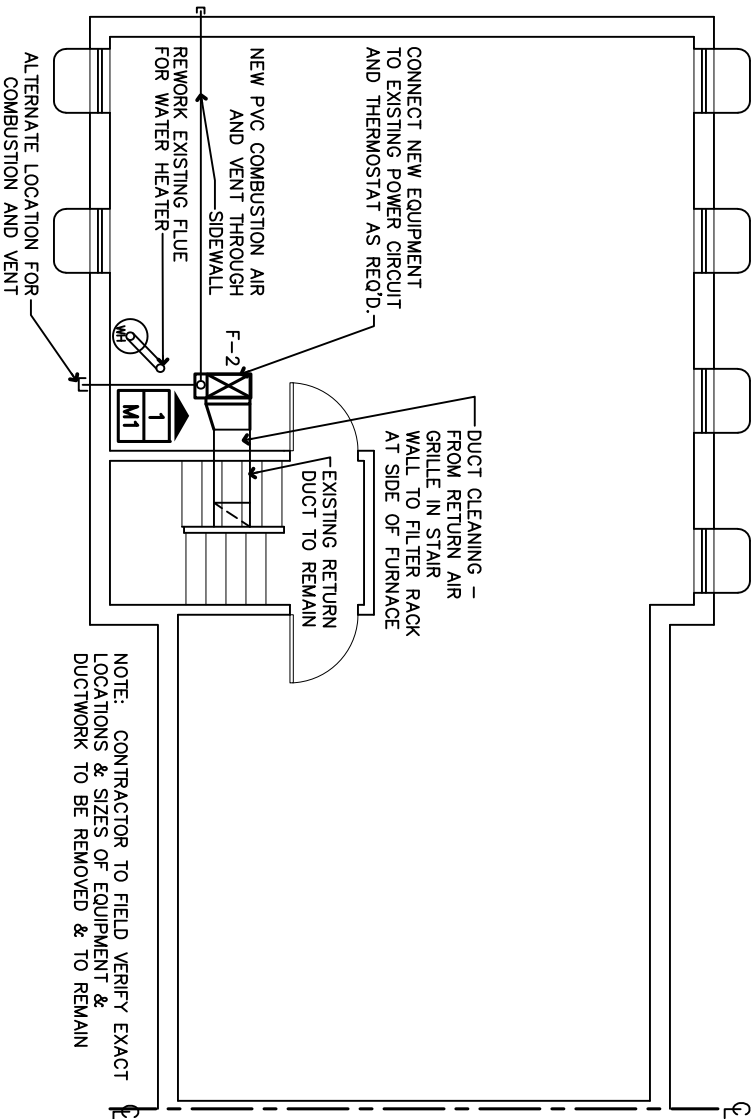
END OF SITE LIST

HOUSING AUTHORITY OF THE CITY OF LINCOLN ARNOLD HEIGHTS

LOCATION MAP

SCALE: NONE





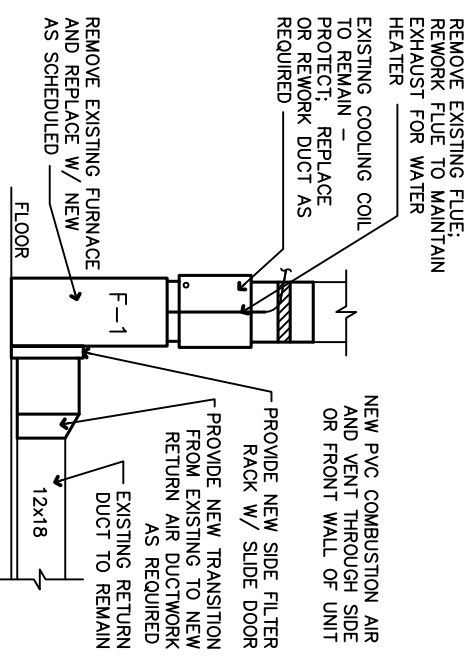
NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS & SIZES OF EQUIPMENT & DUCTWORK TO BE REMOVED & TO REMAIN

TYPE C2/C4 BASEMENT PLAN

SCALE :

1/8"

1'-0"



1 FURN. ELEV.

SCALE : NOT TO SCALE

SITES: (SOME UNITS ARE SIMILAR, REVERSED)

1	5015	W ELBA	18	5112	W METZGER
2	5021	W ELBA	19	5118	W METZGER
3	5024	W ELBA	20	5127	W METZGER
4	5107	W ELBA	21	5133	W METZGER
5	5100	W ELBA	22	5139	W METZGER
6	5106	W ELBA	23	5145	W METZGER
7	5118	W ELBA	24	5000	W VALE
8	5124	W ELBA	25	5006	W VALE
9	5130	W ELBA	26	5015	W VALE
10	5136	W ELBA	27	5024	W VALE
11	5142	W ELBA	28	5100	W VALE
12	5000	W METZGER	29	5107	W VALE
13	5006	W METZGER	30	5118	W VALE (ALT. 1)
14	5024	W METZGER	31	5118	W VALE (ALT. 1)
15	5030	W METZGER	32	4000	NW 50TH (ALT. 1)
16	5101	W METZGER	33	4006	NW 50TH (ALT. 1)
17	5100	W METZGER	34	4012	NW 50TH (ALT. 1)

MECHANICAL EQUIPMENT SCHEDULE

IDENT.	DESCRIPTION	SERVES	LOCATION	OPERATING CONDITIONS	MINIMUM CAPACITIES	REMARKS
F-1	FURNACE	TYPE C2/C4 SITES	BASEMENT	70° DB EAT	66 MBH INPUT HTG., 64 MBH OUTPUT HTG., GAS FIRED, 120 VOLT, 1/2 HP FAN	95% AFUE, UP-FLOW

ACCEPTABLE MANUFACTURERS:

1. York
2. Trane
3. Carrier
4. Bryant
5. Goodman
6. Amana
7. Lennox
8. Rheem
9. Ruud
10. Ducane

M2

Lincoln Housing Authority

5700 R Street Lincoln, Nebraska 68505 Ph.(402) 434-5558

ARNOLD HEIGHTS FURNACE REPLACEMENT - 2024