

Lobbying Certificate

The Undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person 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 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, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than 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 in connection with THIS Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit *Standard Form – LLL, “Disclosure Form to Report Lobbying,”* in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature: _____

Date: _____

Name: _____

Title: _____

NOTE: CONTRACTORS ARE REQUIRED, PURSUANT TO FEDERAL LAW, TO INCLUDE THE ABOVE LANGUAGE IN SUBCONTRACTS OVER \$100,000 AND TO OBTAIN THIS LOBBYING CERTIFICATE FROM EACH SUBCONTRACTOR BEING PAID \$100,000 OR MORE UNDER THIS CONTRACT.

Certification Regarding Debarment and Suspension

U.S. Department of Housing
and Urban Development

Certification A: Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief that its principals;

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal debarment or agency;

b. Have not within a three-year period preceding this proposal, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification (A)

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms **covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded**, as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of these regulations.

6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines this eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph (6) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

Certification B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification (B)

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms **covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded**, as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of these regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a lower covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies including suspension and/or debarment.

Applicant		Date
Signature of Authorized Certifying Official		Title

Instructions to Offerors Non-Construction

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



- 03291 -

1. Preparation of Offers

(a) Offerors are expected to examine the statement of work, the proposed contract terms and conditions, and all instructions. Failure to do so will be at the offeror's risk.

(b) Each offeror shall furnish the information required by the solicitation. The offeror shall sign the offer and print or type its name on the cover sheet and each continuation sheet on which it makes an entry. Erasures or other changes must be initialed by the person signing the offer. Offers signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the HA.

(c) Offers for services other than those specified will not be considered.

2. Submission of Offers

(a) Offers and modifications thereof shall be submitted in sealed envelopes or packages (1) addressed to the office specified in the solicitation, and (2) showing the time specified for receipt, the solicitation number, and the name and address of the offeror.

(b) Telegraphic offers will not be considered unless authorized by the solicitation; however, offers may be modified by written or telegraphic notice.

(c) Facsimile offers, modifications or withdrawals will not be considered unless authorized by the solicitation.

3. Amendments to Solicitations

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

(b) Offerors shall acknowledge receipt of any amendments to this solicitation by

- (1) signing and returning the amendment;
- (2) identifying the amendment number and date in the space provided for this purpose on the form for submitting an offer,
- (3) letter or telegram, or
- (4) facsimile, if facsimile offers are authorized in the solicitation. The HA/HUD must receive the acknowledgment by the time specified for receipt of offers.

4. Explanation to Prospective Offerors

Any prospective offeror desiring an explanation or interpretation of the solicitation, statement of work, etc., must request it in writing soon enough to allow a reply to reach all prospective offerors before the submission of their offers. Oral explanations or instructions given before the award of the contract will not be binding. Any information given to a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an amendment of the solicitation, if that information is necessary in submitting offers or if the lack of it would be prejudicial to any other prospective offerors.

5. Responsibility of Prospective Contractor

(a) The HA shall award a contract only to a responsible prospective contractor who is able to perform successfully under the terms and conditions of the proposed contract. To be determined responsible, a prospective contractor must -

- (1) Have adequate financial resources to perform the contract, or the ability to obtain them;

- (2) Have a satisfactory performance record;
- (3) Have a satisfactory record of integrity and business ethics;
- (4) Have a satisfactory record of compliance with public policy (e.g., Equal Employment Opportunity); and
- (5) Not have been suspended, debarred, or otherwise determined to be ineligible for award of contracts by the Department of Housing and Urban Development or any other agency of the U.S. Government. Current lists of ineligible contractors are available for inspection at the HA/HUD.

(b) Before an offer is considered for award, the offeror may be requested by the HA to submit a statement or other documentation regarding any of the foregoing requirements. Failure by the offeror to provide such additional information may render the offer or ineligible for award.

6. Late Submissions, Modifications, and Withdrawal of Offers

(a) Any offer 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 HA/ HUD that the late receipt was due solely to mishandling by the HA/ HUD after receipt at the HA;
- (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 U.S. Federal holidays; or
- (4) Is the only offer received.

(b) Any modification of an offer, except a modification resulting from the HA's request for "best and final" offer (if this solicitation is a request for proposals), is subject to the same conditions as in subparagraphs (a)(1), (2), and (3) of this provision.

(c) A modification resulting from the HA's request for "best and final" offer received after the time and date specified in the request will not be considered unless received before award and the late receipt is due solely to mishandling by the HA after receipt at the HA.

(d) The only acceptable evidence to establish the date of mailing of a late offer, 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 or the offer, 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, offerors should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(e) The only acceptable evidence to establish the time of receipt at the HA is the time/date stamp of HA on the offer wrapper or other documentary evidence of receipt maintained by the HA.

(f) The only acceptable evidence to establish the date of mailing of a late offer, 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, offerors should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and the envelope or wrapper.

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

(h) If this solicitation is a request for proposals, proposals 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 award. Proposals may be withdrawn in person by a offeror or its authorized representative if the identity of the person requesting withdrawal is established and the person signs a receipt for the offer before award. If this solicitation is an invitation for bids, bids may be withdrawn at any time prior to bid opening.

7. Contract Award

(a) The HA will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the HA, cost or price and other factors, specified elsewhere in this solicitation, considered.

(b) The HA may

- (1) reject any or all offers if such action is in the HA's interest,
- (2) accept other than the lowest offer,
- (3) waive informalities and minor irregularities in offers received, and (4) award more than one contract for all or part of the requirements stated.

(c) If this solicitation is a request for proposals, the HA may award a contract on the basis of initial offers received, without discussions. Therefore, each initial offer should contain the offeror's best terms from a cost or price and technical standpoint.

(d) A written award or acceptance of offer mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer shall result in a binding contract without further action by either party. If this solicitation is a request for proposals, before the offer's specified expiration time, the HA may accept an offer, whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award. Negotiations conducted after receipt of an offer do not constitute a rejection or counteroffer by the HA.

(e) Neither financial data submitted with an offer, nor representations concerning facilities or financing, will form a part of the resulting contract.

8. Service of Protest

Any protest against the award of a contract pursuant to this solicitation shall be served on the HA by obtaining written and dated acknowledgment of receipt from the HA at the address shown on the cover of this solicitation. The determination of the HA with regard to such protest or to proceed to award notwithstanding such protest shall be final unless appealed by the protestor.

9. Offer Submission

Offers shall be submitted as follows and shall be enclosed in a sealed envelope and addressed to the office specified in the solicitation. The proposal shall show the hour and date specified in the solicitation for receipt, the solicitation number, and the name and address of the offeror, on the face of the envelope.

It is very important that the offer be properly identified on the face of the envelope as set forth above in order to insure that the date and time of receipt is stamped on the face of the offer envelope. Receiving procedures are: date and time stamp those envelopes identified as proposals and deliver them immediately to the appropriate contracting official, and only date stamp those envelopes which do not contain identification of the contents and deliver them to the appropriate procuring activity only through the routine mail delivery procedure.

[Describe bid or proposal preparation instructions here:]

Certifications and Representations of Offerors

Non-Construction Contract

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

Public reporting burden for this collection of information is estimated to average 5 minutes 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 form includes clauses required by OMB's common rule on bidding/offering procedures, implemented by HUD in 24 CFR 85.36, and those requirements set forth in Executive Order 11625 for small, minority, women-owned businesses, and certifications for independent price determination, and conflict of interest. The form is required for nonconstruction contracts awarded by Housing Agencies (HAs). The form is used by bidders/offerors to certify to the HA's Contracting Officer for contract compliance. If the form were not used, HAs would be unable to enforce their contracts. 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.

1. Contingent Fee Representation and Agreement

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

- (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.

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

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

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

The bidder/offeror 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 small business concern. "Women-owned," as used in this provision, means a small 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 enterprise which, pursuant to Executive Order 11625, is defined as a business which is at least 51 percent owned 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 |

3. Certificate of Independent Price Determination

(a) The bidder/offeror certifies that—

- (1) The prices in this bid/offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder/offeror or competitor relating to (i) those prices, (ii) the intention to submit a bid/offer, or (iii) the methods or factors used to calculate the prices offered;
- (2) The prices in this bid/offer have not been and will not be knowingly disclosed by the bidder/offeror, directly or indirectly, to any other bidder/offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
- (3) No attempt has been made or will be made by the bidder/offeror to induce any other concern to submit or not to submit a bid/offer for the purpose of restricting competition.

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

- (1) Is the person in the bidder/offeror'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/offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder/offeror'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/offeror deletes or modifies subparagraph (a)2 above, the bidder/offeror must furnish with its bid/offer a signed statement setting forth in detail the circumstances of the disclosure.

4. Organizational Conflicts of Interest Certification

- (a) The Contractor warrants that to the best of its knowledge and belief and except as otherwise disclosed, it does not have any organizational conflict of interest which is defined as a situation in which the nature of work under a proposed contract and a prospective contractor's organizational, financial, contractual or other interest are such that:
 - (i) Award of the contract may result in an unfair competitive advantage;
 - (ii) The Contractor's objectivity in performing the contract work may be impaired; or
 - (iii) That the Contractor has disclosed all relevant information and requested the HA to make a determination with respect to this Contract.
- (b) The Contractor agrees that if after award he or she discovers an organizational conflict of interest with respect to this contract, he or she shall make an immediate and full disclosure in writing to the HA which shall include a description of the action which the Contractor has taken or intends to eliminate or neutralize the conflict. The HA may, however, terminate the Contract for the convenience of HA if it would be in the best interest of HA.
- (c) In the event the Contractor was aware of an organizational conflict of interest before the award of this Contract and intentionally did not disclose the conflict to the HA, the HA may terminate the Contract for default.
- (d) The Contractor shall require a disclosure or representation from subcontractors and consultants who may be in a position to influence the advice or assistance rendered to the HA and shall include any necessary provisions to eliminate or neutralize conflicts of interest in consultant agreements or subcontracts involving performance or work under this Contract.

5. Authorized Negotiators (RFPs only)

The offeror represents that the following persons are authorized to negotiate on its behalf with the PHA in connection with this request for proposals: (list names, titles, and telephone numbers of the authorized negotiators):

6. Conflict of Interest

In the absence of any actual or apparent conflict, the offeror, by submission of a proposal, hereby warrants that to the best of its knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement, as described in the clause in this solicitation titled "Organizational Conflict of Interest."

7. Offeror's Signature

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

Signature & Date:

Typed or Printed Name:

Title:

General Conditions for Non-Construction Contracts

Section I – (With or without Maintenance Work)

U.S. Department of Housing and Urban Development

Office of Public and Indian Housing

Office of Labor Relations

OMB Approval No. 2577-0157 (exp. 1/31/2017)

Exhibit E

Public Reporting Burden for this collection of information is estimated to average 0.08 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. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Reports Management Officer, Office of Information Policies and Systems, U.S. Department of Housing and Urban Development, Washington, D.C. 20410-3600; and to the Office of Management and Budget, Paperwork Reduction Project (2577-0157), Washington, D.C. 20503. Do not send this completed form to either of these addressees.

Applicability. This form HUD-5370-C has 2 Sections. These Sections must be inserted into non-construction contracts as described below:

- 1) **Non-construction contracts** (*without* maintenance) **greater than \$100,000 - use Section I;**
- 2) **Maintenance contracts** (including nonroutine maintenance as defined at 24 CFR 968.105) **greater than \$2,000 but not more than \$100,000 - use Section II;** and
- 3) **Maintenance contracts** (including nonroutine maintenance), **greater than \$100,000 – use Sections I and II.**

Section I - Clauses for All Non-Construction Contracts greater than \$100,000

1. Definitions

The following definitions are applicable to this contract:

- (a) "Authority or Housing Authority (HA)" means the Housing Authority.
- (b) "Contract" means the contract entered into between the Authority and the Contractor. It includes the contract form, the Certifications and Representations, these contract clauses, and the scope of work. It includes all formal changes to any of those documents by addendum, Change Order, or other modification.
- (c) "Contractor" means the person or other entity entering into the contract with the Authority to perform all of the work required under the contract.
- (d) "Day" means calendar days, unless otherwise stated.
- (e) "HUD" means the Secretary of Housing and Urban development, his delegates, successors, and assigns, and the officers and employees of the United States Department of Housing and Urban Development acting for and on behalf of the Secretary.

2. Changes

- (a) The HA may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in the services to be performed or supplies to be delivered.
- (b) If any such change causes an increase or decrease in the hourly rate, the not-to-exceed amount of the contract, or the time required for performance of any part of the work under this contract, whether or not changed by the order, or otherwise affects the conditions of this contract, the HA shall make an equitable adjustment in the not-to-exceed amount, the hourly rate, the delivery schedule, or other affected terms, and shall modify the contract accordingly.
- (c) The Contractor must assert its right to an equitable adjustment under this clause within 30 days from the date of receipt of the written order. However, if the HA decides that the facts justify it, the HA may receive and act upon a

- proposal submitted before final payment of the contract.
- (d) Failure to agree to any adjustment shall be a dispute under clause Disputes, herein. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.
- (e) No services for which an additional cost or fee will be charged by the Contractor shall be furnished without the prior written consent of the HA.

3. Termination for Convenience and Default

- (a) The HA may terminate this contract in whole, or from time to time in part, for the HA's convenience or the failure of the Contractor to fulfill the contract obligations (default). The HA shall terminate by delivering to the Contractor a written Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall: (i) immediately discontinue all services affected (unless the notice directs otherwise); and (ii) deliver to the HA all information, reports, papers, and other materials accumulated or generated in performing this contract, whether completed or in process.
- (b) If the termination is for the convenience of the HA, the HA shall be liable only for payment for services rendered before the effective date of the termination.
- (c) If the termination is due to the failure of the Contractor to fulfill its obligations under the contract (default), the HA may (i) require the Contractor to deliver to it, in the manner and to the extent directed by the HA, any work as described in subparagraph (a)(ii) above, and compensation be determined in accordance with the Changes clause, paragraph 2, above; (ii) take over the work and prosecute the same to completion by contract or otherwise, and the Contractor shall be liable for any additional cost incurred by the HA; (iii) withhold any payments to the Contractor, for the purpose of off-set or partial payment, as the case may be, of amounts owed to the HA by the Contractor.
- (d) If, after termination for failure to fulfill contract obligations (default), it is determined that the Contractor had not failed, the termination shall be deemed to have been effected for the convenience of the HA, and the Contractor shall be entitled to payment as described in paragraph (b) above.
- (e) Any disputes with regard to this clause are expressly made subject to the terms of clause titled Disputes herein.

4. Examination and Retention of Contractor's Records

- (a) The HA, 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:
 - (i) appeals under the clause titled Disputes;
 - (ii) litigation or settlement of claims arising from the performance of this contract; or,
 - (iii) costs and expenses of this contract to which the HA, 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.

5. Rights in Data (Ownership and Proprietary Interest)

The HA shall have exclusive ownership of, all proprietary interest in, and the right to full and exclusive possession of all information, materials and documents discovered or produced by Contractor pursuant to the terms of this Contract, including but not limited to reports, memoranda or letters concerning the research and reporting tasks of this Contract.

6. Energy Efficiency

The contractor shall comply with all 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 this contract is performed.

7. Disputes

- (a) All disputes arising under or relating to this contract, *except for disputes arising under clauses contained in Section III, Labor Standards Provisions*, including any claims for damages for the alleged breach there of which are not disposed of by agreement, shall be resolved under this clause.
- (b) All claims by the Contractor shall be made in writing and submitted to the HA. A claim by the HA against the Contractor shall be subject to a written decision by the HA.
- (c) The HA shall, with reasonable promptness, but in no event in no more than 60 days, render a decision concerning any claim hereunder. Unless the Contractor, within 30 days after receipt of the HA's decision, shall notify the HA in writing that it takes exception to such decision, the decision shall be final and conclusive.
- (d) Provided the Contractor has (i) given the notice within the time stated in paragraph (c) above, and (ii) excepted its claim relating to such decision from the final release, and (iii) brought suit against the HA not later than one year after receipt of final payment, or if final payment has not been made, not later than one year after the Contractor has had a reasonable time to respond to a written request by the HA that it submit a final voucher and release, whichever is earlier, then the HA's decision shall not be final or conclusive, but the dispute shall be determined on the merits by a court of competent jurisdiction.
- (e) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the HA.

8. Contract Termination; Debarment

A breach of these Contract clauses may be grounds for termination of the Contract and for debarment or denial of participation in HUD programs as a Contractor and a subcontractor as provided in 24 CFR Part 24.

9. 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 HA under the contract may be assigned to a bank, trust company, or other financial institution. If the Contractor is a partnership, this contract shall inure to the benefit of the surviving or remaining member(s) of such partnership approved by the HA.

10. Certificate and Release

Prior to final payment under this contract, or prior to settlement upon termination of this contract, and as a condition precedent thereto, the Contractor shall execute and deliver to the HA a certificate and release, in a form acceptable to the HA, of all claims against the HA by the Contractor under and by virtue of this contract, other than such claims, if any, as may be specifically excepted by the Contractor in stated amounts set forth therein.

11. Organizational Conflicts of Interest

- (a) The Contractor warrants that to the best of its knowledge and belief and except as otherwise disclosed, it does not have any organizational conflict of interest which is defined as a situation in which the nature of work under this contract and a contractor's organizational, financial, contractual or other interests are such that:
 - (i) Award of the contract may result in an unfair competitive advantage; or
 - (ii) The Contractor's objectivity in performing the contract work may be impaired.
- (b) The Contractor agrees that if after award it discovers an organizational conflict of interest with respect to this contract or any task/delivery order under the contract, he or she shall make an immediate and full disclosure in writing to the Contracting Officer which shall include a description of the action which the Contractor has taken or intends to take to eliminate or neutralize the conflict. The HA may, however, terminate the contract or task/delivery order for the convenience of the HA if it would be in the best interest of the HA.
- (c) In the event the Contractor was aware of an organizational conflict of interest before the award of this contract and intentionally did not disclose the conflict to the Contracting Officer, the HA may terminate the contract for default.
- (d) The terms of this clause shall be included in all subcontracts and consulting agreements wherein the work to be performed is similar to the service provided by the prime Contractor. The Contractor shall include in such subcontracts and consulting agreements any necessary provisions to eliminate or neutralize conflicts of interest.

12. Inspection and Acceptance

- (a) The HA has the right to review, require correction, if necessary, and accept the work products produced by the Contractor. Such review(s) shall be carried out within 30 days so as to not impede the work of the Contractor. Any

product of work shall be deemed accepted as submitted if the HA does not issue written comments and/or required corrections within 30 days from the date of receipt of such product from the Contractor.

- (b) The Contractor shall make any required corrections promptly at no additional charge and return a revised copy of the product to the HA within 7 days of notification or a later date if extended by the HA.
- (c) Failure by the Contractor to proceed with reasonable promptness to make necessary corrections shall be a default. If the Contractor's submission of corrected work remains unacceptable, the HA may terminate this contract (or the task order involved) or reduce the contract price or cost to reflect the reduced value of services received.

13. Interest of Members of Congress

No member of or delegate to the Congress of the United States of America or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit to arise there from, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

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

No member, officer, or employee of the HA, no member of the governing body of the locality in which the project is situated, no member of the governing body in which the HA 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.

15. Limitation on Payments to Influence Certain Federal Transactions

(a) Definitions. As used in this clause:

"Agency", as defined in 5 U.S.C. 552(f), includes Federal executive departments and agencies as well as independent regulatory commissions and Government corporations, as defined in 31 U.S.C. 9101(1).

"Covered Federal Action" means any of the following Federal actions:

- (i) The awarding of any Federal contract;
- (ii) The making of any Federal grant;
- (iii) The making of any Federal loan;
- (iv) The entering into of any cooperative agreement; and,
- (v) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

Covered Federal action does not include receiving from an agency a commitment providing for the United States to insure or guarantee a loan.

"Indian tribe" and "tribal organization" have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B). Alaskan Natives are included under the definitions of Indian tribes in that Act.

"Influencing or attempting to influence" means making, with the intent to influence, any communication to or appearance before 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 any covered Federal action.

"Local government" means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency" includes the following individuals who are employed by an agency:

- (i) An individual who is appointed to a position in the Government under title 5, U.S.C., including a position under a temporary appointment;
- (ii) A member of the uniformed services as defined in section 202, title 18, U.S.C.;
- (iii) A special Government employee as defined in section 202, title 18, U.S.C.; and,
- (iv) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, appendix 2.

"Person" means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Recipient" includes all contractors, subcontractors at any tier, and subgrantees at any tier of the recipient of funds received in connection with a Federal contract, grant, loan, or cooperative agreement. The term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed means, with respect to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract, grant, loan, or cooperative agreement. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State" means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibition.

- (i) Section 1352 of title 31, U.S.C. provides in part that no appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay 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 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, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- (ii) The prohibition does not apply as follows:

(1) Agency and legislative liaison by Own Employees.

(a) The prohibition on the use of appropriated funds, in paragraph (i) of this section, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement, if the payment is for agency and legislative activities not directly related to a covered Federal action.

(b) For purposes of paragraph (b)(i)(1)(a) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(c) The following agency and legislative liaison activities are permitted at any time only where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities; and,

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(d) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action:

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95-507 and other subsequent amendments.

(e) Only those activities expressly authorized by subdivision (b)(ii)(1)(a) of this clause are permitted under this clause.

(2) Professional and technical services.

(a) The prohibition on the use of appropriated funds, in subparagraph (b)(i) of this clause, does not apply in the case of-

(i) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(ii) Any reasonable payment to a person, other than an officer or employee of a

person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(b) For purposes of subdivision (b)(ii)(2)(a) of clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline.

(c) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(d) Only those services expressly authorized by subdivisions (b)(ii)(2)(a)(i) and (ii) of this section are permitted under this clause.

(iii) Selling activities by independent sales representatives.

(c) The prohibition on the use of appropriated funds, in subparagraph (b)(i) of this clause, does not apply to the following selling activities before an agency by independent sales representatives, provided such activities are prior to formal solicitation by an agency and are specifically limited to the merits of the matter:

(i) Discussing with an agency (including individual demonstration) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities; and

(ii) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(d) Agreement. In accepting any contract, grant, cooperative agreement, or loan resulting from this solicitation, the person submitting the offer agrees not to make any payment prohibited by this clause.

(e) Penalties. Any person who makes an expenditure prohibited under paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(f) Cost Allowability. Nothing in this clause is to be interpreted to make allowable or reasonable any costs which would be unallowable or unreasonable in accordance with Part 31 of the Federal Acquisition Regulation (FAR), or OMB Circulars dealing with cost allowability for recipients of assistance agreements. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions of FAR Part 31 or the relevant OMB Circulars.

16. 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, or national origin.
- (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, or national origin. 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.
- (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, or national origin.
- (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 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 subcontractor 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.

17. Dissemination or Disclosure of Information

No information or material shall be disseminated or disclosed to the general public, the news media, or any person or organization without prior express written approval by the HA.

18. Contractor's Status

It is understood that the Contractor is an independent contractor and is not to be considered an employee of the HA, or assume any right, privilege or duties of an employee, and shall save harmless the HA and its employees from claims suits, actions and costs of every description resulting from the Contractor's activities on behalf of the HA in connection with this Agreement.

19. Other Contractors

HA may undertake or award other contracts for additional work at or near the site(s) of the work under this contract. The contractor shall fully cooperate with the other contractors and with HA and HUD 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 HA employee.

20. Liens

The Contractor is prohibited from placing a lien on HA's property. This prohibition shall apply to all subcontractors.

21. Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 135)

- (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.

22. 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.

PROFESSIONAL SERVICES CONTRACT

FOR

INSERT NAME HERE

BOARD OF COMMISSIONERS OF THE HOUSING AUTHORITY OF
CLACKAMAS COUNTY

Jim Bernard, Chair

Sonya Fischer, Commissioner

Ken Humberston, Commissioner

Martha Schraeder, Commissioner

Paul Savas, Commissioner

Paul Reynolds, Resident Commissioner

PROFESSIONAL SERVICES CONTRACT FOR **INSERT SERVICE HERE**

This contract for professional services is entered into by and between the Housing Authority of Clackamas County, hereinafter referred to as HACC, and **Insert Name**, hereinafter called the CONTRACTOR. HACC and CONTRACTOR, in consideration of the mutual promises, terms and conditions provided herein, agree to the following:

I. SCOPE OF WORK and TERM OF CONTRACT:

This agreement covers the services as described in Attachment “A” which by this reference is hereby incorporated into and made a part of this contract. Work shall be performed in accordance with a schedule approved by the HACC. The term of the contract shall commence **upon contract execution** and continue through **insert date here**. Passage of the contract expiration date shall not extinguish or prejudice HACC’s right to enforce this contract with respect to any default or defect in performance that has not been cured.

II. COMPENSATION:

A. HACC agrees to compensate the CONTRACTOR on a fee-for- services basis as provided for in **Attachment “B”** which by this reference is hereby incorporated into and made a part of this contract. Invoices submitted for payment in connection with this contract shall be properly documented and shall indicate pertinent HACC contract and/or purchase order numbers. All charges shall be billed monthly and will be paid net 30 days from receipt of invoice. The maximum compensation authorized under this contract shall be **\$XXXXXXXXXXXX**. CONTRACTOR bears the risk of non-payment for services in excess of the amount stated above without prior HACC approval; but HACC reserves the right to ratify and pay for such services in its sole discretion.

B. The CONTRACTOR is engaged hereby as an independent contractor and will be so deemed for purposes of the following:

- 1.** The CONTRACTOR will be solely responsible for payment of any Federal or State taxes required as a result of this agreement.
- 2.** This contract is not intended to entitle the CONTRACTOR to any benefits generally granted to HACC employees. Without limitation, but by way of illustration, the benefits which are not intended to be extended by this contract to the CONTRACTOR are vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers’ Compensation, unemployment compensation, or retirement benefits (except insofar as benefits are otherwise required by law if the CONTRACTOR is presently a member of the Public Employees Retirement System).
- 3.** If the CONTRACTOR has the assistance of other persons in the performance of this contract, and the CONTRACTOR is a subject employer, the CONTRACTOR shall qualify and remain qualified for the term of this contract as an insured employer under ORS 656.

4. CONTRACTOR represents and warrants that CONTRACTOR is not an employee of HACC or of the Federal Government, meets the independent contractor standards of ORS 670.600, and is not an “officer”, “employee”, or “agent” of HACC, as those terms are used in ORS 30.260 et. seq.

III. CONSTRAINTS

The CONTRACTOR agrees:

A. CONTRACTOR shall not delegate the responsibility for providing services under this contract to any other individual or agency without the express written permission of HACC.

B. Pursuant to the requirements of ORS 279B.020 and ORS279B.220 through 279B.235, the following terms and conditions are made a part of this agreement:

1. CONTRACTOR shall:

a. Make payments promptly, as due, to all persons supplying to the CONTRACTOR labor or materials for the prosecution of the work provided for in this agreement.

b. Pay all contributions or amounts due the Industrial Accident Fund from such CONTRACTOR or subcontractor incurred in the performance of this agreement.

c. Not permit any lien or claim to be filed or prosecuted against the HACC on account of any labor or material furnished.

2. If the CONTRACTOR fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the CONTRACTOR or a subcontractor by any person in connection with this agreement as such claim becomes due, the proper officer representing HACC may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due the CONTRACTOR by reason of this agreement.

3. Tax Laws

a. The CONTRACTOR represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Agreement, has faithfully complied with:

- i. All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318;
- ii. Any tax provisions imposed by a political subdivision of this state that applied to CONTRACTOR, to CONTRACTOR's property, operations, receipts, or income, or to CONTRACTOR's performance of or compensation for any work performed by CONTRACTOR;

Exhibit F

- iii. Any tax provisions imposed by a political subdivision of this state that applied to CONTRACTOR, or to goods, services, or property, whether tangible or intangible, provided by CONTRACTOR; and
- iv. Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

4. CONTRACTOR must, throughout the duration of this Agreement and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this Agreement. Further, any violation of the CONTRACTOR's warranty in this Agreement that CONTRACTOR has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Agreement. Any violation shall entitle HACC to terminate this Agreement, to pursue and recover any and all damages that arise from the breach and the termination of this Agreement, and to pursue any or all remedies available under this Agreement, at law, or in equity, including but not limited to:

- a.** Termination of this Agreement, in whole or in part;
- b.** Exercise of the right of setoff, and withholding of amounts otherwise due and owing to CONTRACTOR, in an amount equal to HACC's setoff right, without penalty; and
- c.** Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. HACC shall be entitled to recover any and all damages suffered as the result of CONTRACTOR's breach of this Agreement, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance.
- d.** These remedies are cumulative to the extent that remedies are not inconsistent, and HACC may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

5. The CONTRACTOR shall pay employees for work in accordance with ORS 279B.020 and ORS 279B.235, which are incorporated herein by this reference.

All subject employers working under the contract are either employers that will comply with ORS 656.017 or employers that are exempt under ORS 656.126.

6. The CONTRACTOR shall promptly, as due, make payment to any person or partnership, association or corporation furnishing medical, surgical and hospital care or other needed care and attention incident to sickness and injury to the employees of the CONTRACTOR, of all sums which the CONTRACTOR agrees to pay for such services and all moneys and sums which the CONTRACTOR collected or deducted from the wages of the CONTRACTOR'S employees pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

7. The CONTRACTOR shall comply with all federal, state and local laws,

regulations, executive orders and ordinances applicable to the work under this contract.

8. The CONTRACTOR shall indemnify, save harmless and defend the HACC, its officers, commissioners and employees from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, arising out of or based upon damage or injuries to persons or property caused by the negligent acts, errors, omissions, or fault of the CONTRACTOR or the CONTRACTOR'S employees.

9. Services performed by CONTRACTOR shall be performed in a comparable manner and with the same degree of care, skill, diligence, competency, and knowledge which is ordinarily exhibited and possessed by other professionals in good standing in the same or similar field in the same community as CONTRACTOR.

IV. INSURANCE REQUIREMENTS

CONTRACTOR shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the CONTRACTOR, its agents, representatives, employees, or sub-contractors.

A. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage (*occurrence form CG 0 01 10 01*).
2. Insurance Services Office Additional Insured form (*CG 20 37 or CG 20 26*).
3. Insurance Services Office form number CA 00 01 06 92 covering Automobile Liability, Code 1 (*any auto*) [*require if scope of work includes driving on HACC property*].
4. Workers' Compensation insurance as required by state law and Employer's Liability Insurance.
5. Professional Errors and Omissions Liability insurance appropriate to the CONTRACTOR's profession.

B. MINIMUM LIMITS OF INSURANCE

CONTRACTOR shall maintain limits no less than:

1. General Liability: \$1,000,000 per occurrence for Bodily Injury, Personal Injury, and Property Damage. (*including coverages for discrimination, ADA violations, and sexual molestation*). If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this contract or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: \$1,000,000 per accident for Bodily Injury and Property Damage.
3. Workers' Compensation (*statutory*) and Employer's Liability: \$1,000,000 per accident for Bodily Injury or Disease.
4. Professional Errors and Omissions Liability insurance: \$1,000,000 per occurrence.

NOTE: These limits can be attained by individual policies or by combining primary and umbrella policies.

C. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and approved by HACC.

At the option of HACC, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects HACC, its officers, officials, employees, and volunteers; or the CONTRACTOR shall provide a financial guarantee satisfactory to HACC guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

D. OTHER INSURANCE PROVISIONS

The General Liability and Automobile Liability policies are to contain, or endorsed to contain, the following provisions:

1. HACC, its officers, officials, employees, and volunteers are to be covered as additional insured with respect to liability arising out of work or operations performed by or on behalf of the CONTRACTOR; or automobiles owned, leased, hired, or borrowed by the CONTRACTOR.
2. The CONTRACTOR's insurance coverage shall be primary insurance as respects HACC, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by HACC, its officers, officials, employees, or volunteers shall be excess of the CONTRACTOR's insurance.
3. Each insurance policy required by these specifications shall be endorsed to state that coverage shall not be cancelled or materially changed, except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to HACC.
4. Maintenance of the proper insurance for the duration of the contract is a material element of the contract. Material changes in the required coverage or cancellation of the coverage shall constitute a material breach of the contract by the CONTRACTOR.

E. ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than B+: CONTRACTOR must provide written verification of their insurer's rating.

F. VERIFICATION OF COVERAGE

CONTRACTOR shall furnish HACC with original certificates and amendatory endorsements effecting coverage required by these specifications. The endorsements should conform fully to the requirements. All certificates and endorsements are to be received and approved by HACC in sufficient time before the agreement commences to permit CONTRACTOR to remedy any deficiencies. HACC reserves the right to require complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these specifications at any time.

G. SUB-CONTRACTORS' INSURANCE

CONTRACTOR shall include all sub-contractors as insured's under its policies or shall furnish separate insurance certificates and endorsements for each sub-contractor in a manner and in such time as to permit HACC to approve them before sub-contractors' work begins. All insurance coverages for sub-contractors shall be subject to all of the requirements stated above.

Notwithstanding this provision, CONTRACTOR shall indemnify HACC for any claims resulting from the performance or non-performance of the CONTRACTOR's sub-contractors and/or their failure to be properly insured.

V. SUBCONTRACTORS:

Use of sub-contractors must be pre-approved in writing by HACC. The CONTRACTOR shall be responsible to HACC for the actions of persons and firms performing subcontract work.

The CONTRACTOR certifies that the CONTRACTOR has not discriminated and will not discriminate against any minority, women or emerging small business enterprise in obtaining any subcontract.

VI. OTHER TERMS:

A. Termination. This contract may be terminated by either party upon at least ten (10) days written notice to the other.

B. Amendments. This contract and any amendments to this contract will not be effective until approved in writing by an authorized representative of HACC.

C. Governing Law/Venue. This contract shall be governed by the laws of the State of Oregon. Any action or suit commenced in connection with this contract shall be commenced in the Circuit Court of Clackamas County or the Federal District Court for Oregon.

D. Third Party Beneficiaries. HACC and CONTRACTOR are the only parties to this contract and are the only parties entitled to enforce its terms. Nothing in this contract gives, or is intended to give, any right or benefit to any third persons unless such third persons are identified individually by name herein and expressly identified as intended beneficiaries of this contract.

E. Force Majeure. Neither HACC nor CONTRACTOR shall be held responsible for delay or default caused by fire, riot, strikes, acts of god, or war, where such cause was beyond their reasonable control. The parties shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon cessation of the cause, diligently pursue performance of their obligations under this contract.

F. Survival. The terms, conditions, representations, and all warranties contained in this contract shall survive the termination or expiration of this contract.

G. Records. CONTRACTOR shall maintain all fiscal records relating to this contract in accordance with generally accepted accounting principles. In addition, CONTRACTOR shall maintain any other records pertinent to this contract in such a manner as to clearly document CONTRACTOR'S performance hereunder. Contractor shall maintain any such records for a minimum of three years following final payment and termination of this contract, and CONTRACTOR shall allow HACC and its duly authorized representative's access to such records during that time or until the conclusion of any audit, controversy or litigation arising out of or related to this contract, whichever date is later. All subcontracts shall also comply with these provisions.

H. Ownership and Use of Documents. All work products of CONTRACTOR which result from this contract (the "work products"), except material previously and mutually identified as confidential, shall be provided to HACC upon request and shall be considered exclusive property of HACC. In addition, if any of the work products contain intellectual property of CONTRACTOR that is or could be protected by federal copyright, patent, or trademark laws, or state trade secret laws, CONTRACTOR hereby grants HACC a perpetual, royalty-free, fully paid-up, nonexclusive and irrevocable license to copy, reproduce, perform, dispose of, use and re-use, in whole or in part, and to authorize others to do so for HACC purposes, all such work products, including but not limited to any information, designs, plans or works provided or delivered to HACC or produced by CONTRACTOR under this contract.

Exhibit F

I. Whole Contract. This contract constitutes the complete and exclusive statement of the contract between the parties relevant to the purpose described herein and supersedes and cancels any prior contracts or proposals, oral or written, and all other communication between the parties relating to the subject matter of this contract. No waiver, consent, modification or change of terms of this contract will be binding on either party except as a written addendum signed by authorized agents of both parties.

By their signatures below, the parties to this contract agree to the terms, conditions, and content expressed herein.

Authorized Signature

Name / Title Printed

Date

Telephone / Fax Number

Federal Tax ID Number

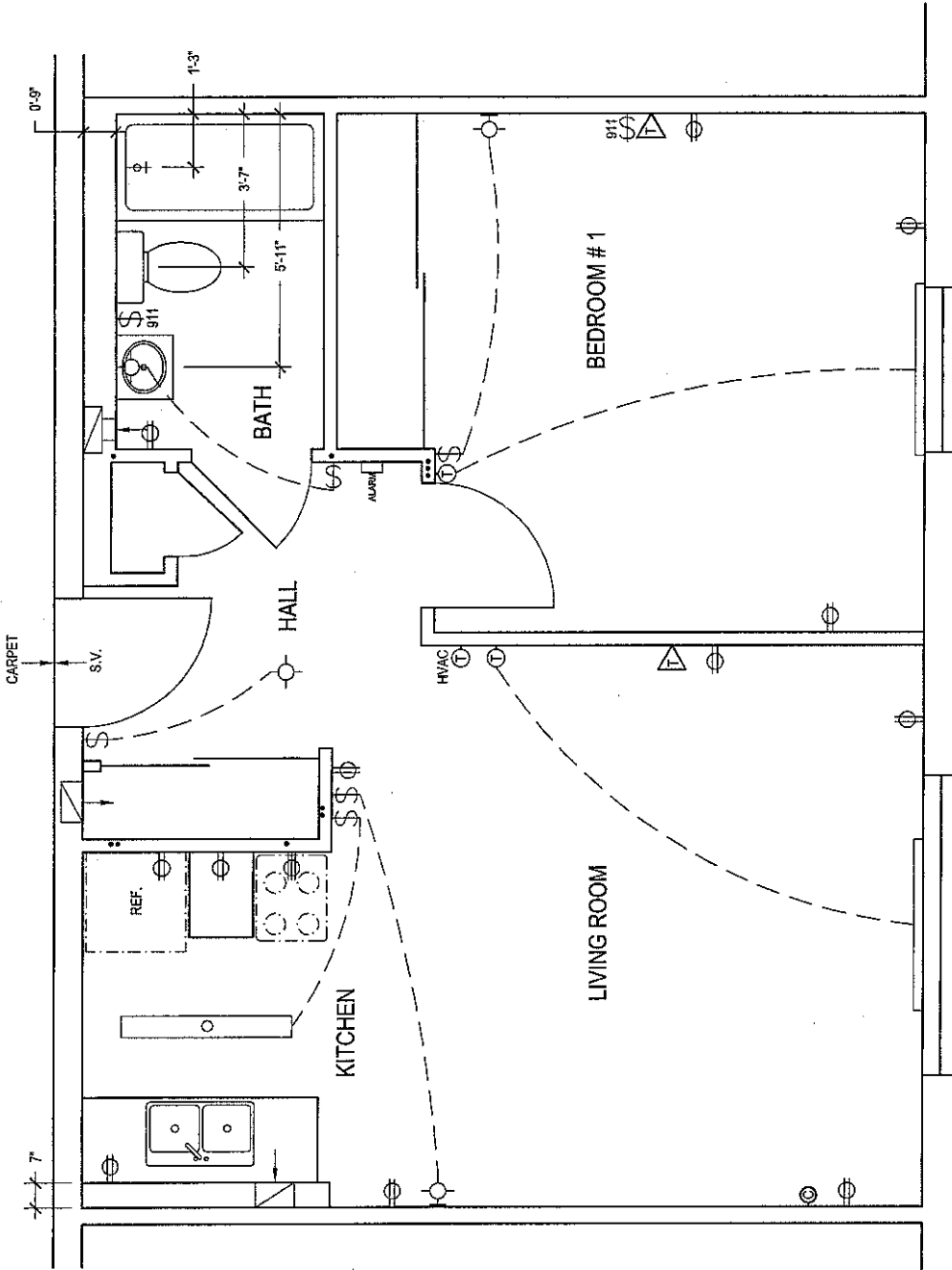
HOUSING AUTHORITY OF CLACKAMAS COUNTY

Commissioner Jim Bernard, Chair
Commissioner Sonya Fischer
Commissioner Ken Humberston
Commissioner Paul Savas
Commissioner Martha Schrader
Resident Commissioner Paul Reynolds

DATED this _____ day of (month), 2017 BOARD OF COUNTY COMMISSIONERS

Chair

Recording Secretary



AREA	NET SQ. FT.
BATH	38.5 SQ. FT.
HALL	62.5 SQ. FT.
KITCHEN	48.5 SQ. FT.
LIVING	178 SQ. FT.
BEDROOM # 1	158 SQ. FT.
TOTAL NET SQ. FT.	485.5 SQ. FT.
TOTAL GROSS SQ. FT.	498 SQ. FT.

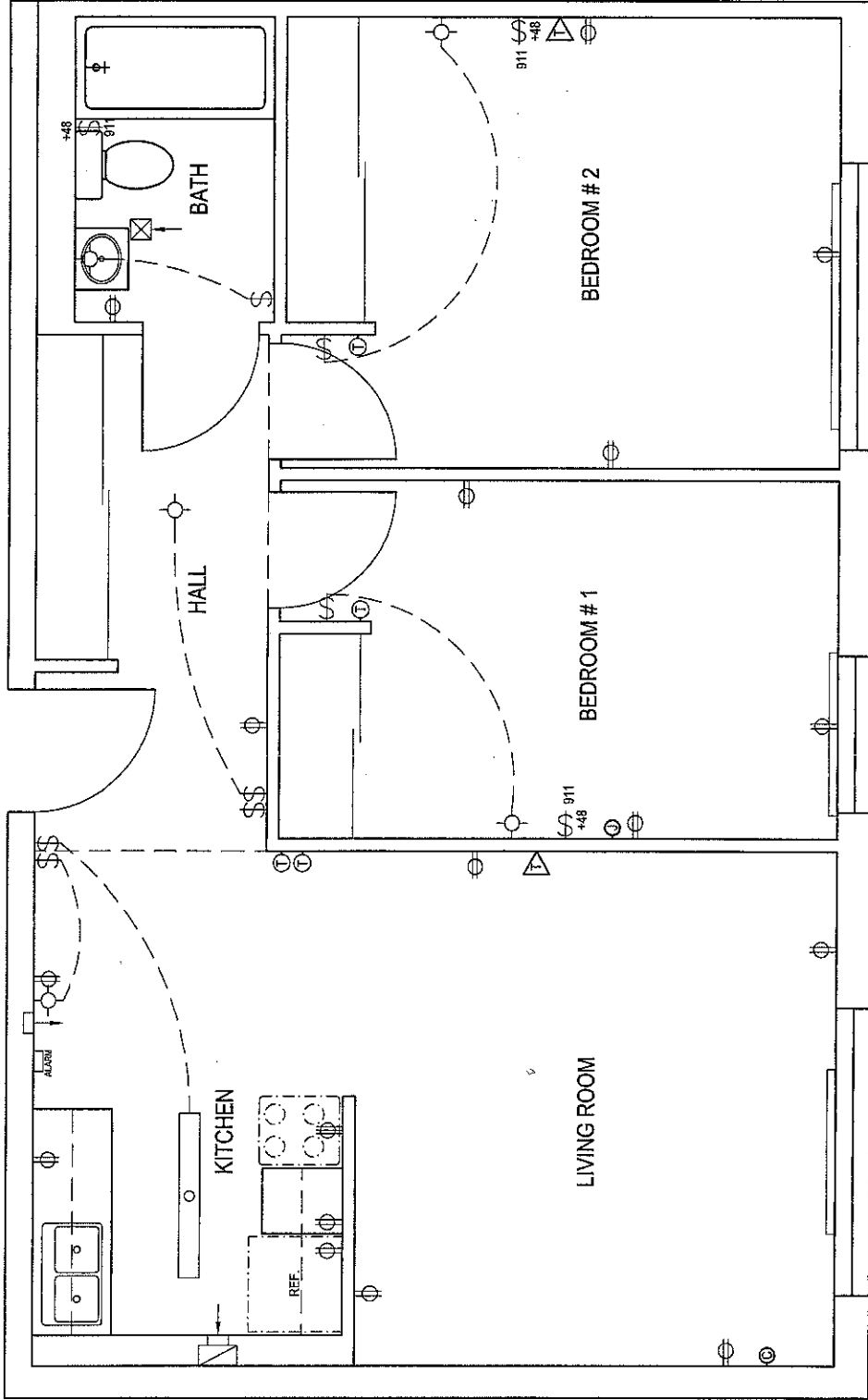
TYPICAL ONE BEDROOM UNIT @ HILLSIDE MANOR

SCALE: NTS

Address: HILLSIDE MANOR MILWAUKIE, OR	
Job#	Date: 05/10/04
Drawn by: JT	Checked by: AA
Sheet#	of



HOUSING AUTHORITY OF CLACKAMAS COUNTY



AREA	NET SQ. FT.
BATH	37 SQ. FT.
HALL	73 SQ. FT.
KITCHEN	92 SQ. FT.
LIVING	150 SQ. FT.
BEDROOM # 1	120 SQ. FT.
BEDROOM # 2	150 SQ. FT.
TOTAL NET SQ. FT.	622 SQ. FT.
TOTAL GROSS SQ. FT.	727 SQ. FT.

TYPICAL TWO BEDROOM UNIT @ HILLSIDE MANOR

SCALE: NTS

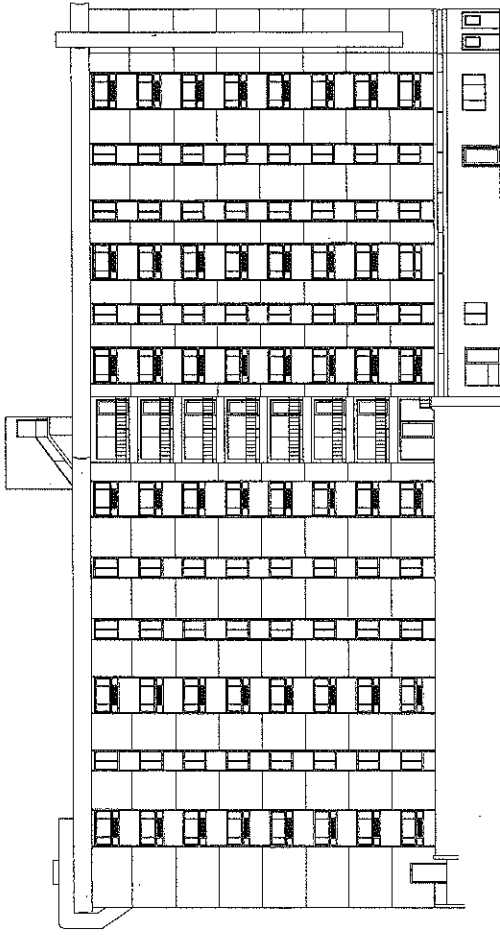


Address: HILLSIDE MANOR MILWAUKIE, OR	
Job#	Date: 05/10/04
Drawn by: JT	Checked by: AA
Sheet#	of

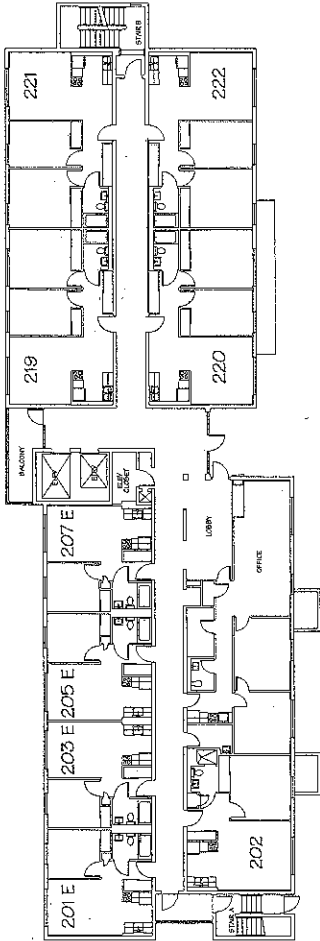


HOUSING AUTHORITY OF CLACKAMAS COUNTY

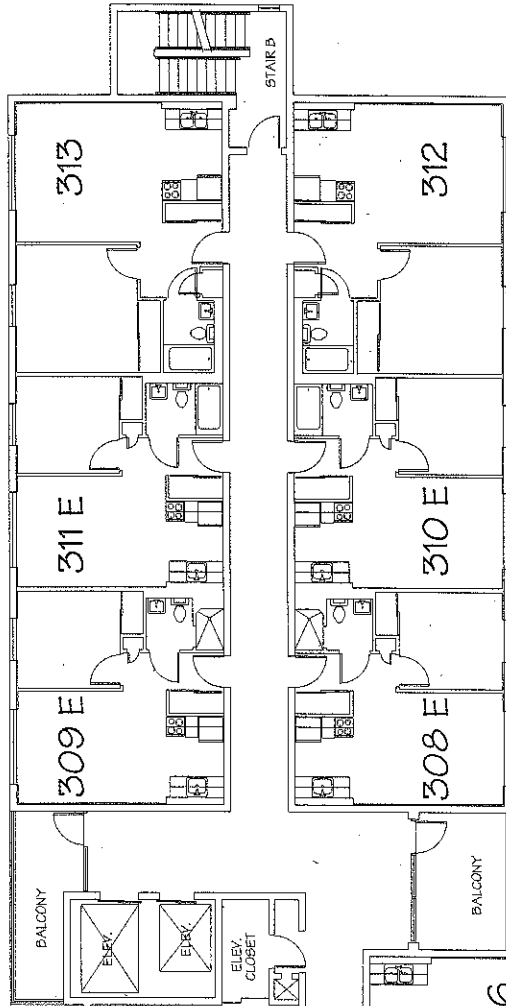
P.O. BOX 1510-13900 SOUTH GAIN STREET-OREGON CITY, OR 97045 TELEPHONE: (503) 650-3143 FAX: (503) 650-3538



○ SOUTH SIDE ELEVATION (FRONT)
SCALE: NTS



○ SECOND LEVEL - FLOOR PLAN
SCALE: NTS



○ THIRD THRU NINTH LEVEL - FLOOR PLAN
SCALE: NTS

100 TOTAL UNITS

- (60) 1 BEDROOM EFFICIENCY UNITS (400sq. ft.)
- (36) 1 BEDROOM UNITS (506sq. ft.)
- (4) 2 BEDROOM UNITS #219, 220, 221, 222 (648sq. ft)
- (6) ADA UNITS 220, 221, 222, 312, 313, 402

PHYSICAL NEEDS ASSESSMENT AND ENERGY AUDIT

prepared for

Clackamas County Housing Authority
13900 South Gain, PO Box 1510
Oregon City, Oregon 97045
Rich Malloy



PHYSICAL NEEDS ASSESSMENT AND ENERGY AUDIT
OF
HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON, 97222

PREPARED BY:

EMG

10461 Mill Run Circle, Suite 1100
Owings Mills, Maryland 21117
800.733.0660

www.EMGcorp.com

EMG CONTACT:

Matt Anderson
Program Manager
800.733.0660 x7613
manderson@emgcorp.com

EMG PROJECT #:

115800.15R000-004.308

DATE OF REPORT:

December 28, 2015

ON SITE DATE:

October 7, 2015



engineering | environmental | capital planning | project management

8.2	374950	E2012 Kitchen Counter, Plastic Laminate, Postformed, Replace	10	6	4	700	LF	\$43.90	\$46.10	\$32,267															\$32,267												\$64,533		
8.2	374949	E2012 Kitchen Cabinet, Base and Wall Section, Wood, Replace	20	3	17	300	LF	\$467.63	\$491.01	\$147,303																											\$147,303	\$147,303	
8.2	374948	E2012 Kitchen Cabinet, Base and Wall Section, Wood, Replace	20	11	9	700	LF	\$467.63	\$491.01	\$343,708																												\$343,708	\$343,708
8.2	374951	E2012 Kitchen Counter, Plastic Laminate, Postformed, Replace	10	3	7	300	LF	\$43.90	\$46.10	\$13,829																										\$13,829	\$13,829	\$27,657	
8.3	374956	D3051 Baseboard Heater, Electric, 6', 1500 Watts, Replace	25	16	9	52	EA	\$239.58	\$251.56	\$13,081																											\$13,081	\$13,081	
8.3	374953	D3051 Packaged Terminal Air Conditioner (PTAC), 12,001 to 15,000 BTUH, Replace	10	2	8	50	EA	\$2,756.97	\$2,894.82	\$144,741																										\$144,741	\$144,741	\$289,482	
8.3	374954	D3051 Baseboard Heater, Electric, 6', 1500 Watts, Replace	25	21	4	52	EA	\$239.58	\$251.56	\$13,081																										\$13,081	\$13,081		
8.3	374952	D3051 Packaged Terminal Air Conditioner (PTAC), 12,001 to 15,000 BTUH, Replace	10	6	4	50	EA	\$2,756.97	\$2,894.82	\$144,741																										\$144,741	\$144,741	\$289,482	
8.4	374960	D2014 Sink, Vitreous China, Replace	20	6	14	50	EA	\$861.51	\$904.59	\$45,229																											\$45,229	\$45,229	
8.4	374959	D2014 Sink, Vitreous China, Replace	20	11	9	50	EA	\$861.51	\$904.59	\$45,229																											\$45,229	\$45,229	
8.4	374957	D2015 Bathtub & Shower Enclosure, Fiberglass, Replace	20	15	5	60	EA	\$1,785.27	\$1,874.53	\$112,472																											\$112,472	\$112,472	
8.4	374958	D2015 Bathtub & Shower Enclosure, Fiberglass, Replace	20	9	11	40	EA	\$1,785.27	\$1,874.53	\$74,981																											\$74,981	\$74,981	

Totals, Unescalated											\$42,965	\$285,416	\$202,635	\$40,108	\$942,121	\$124,679	\$181,456	\$145,481	\$144,741	\$2,275,643	\$59,688	\$473,080	\$257,859	\$59,215	\$649,268	\$20,077	\$26,172	\$161,132	\$204,429	\$312,568	\$6,608,732
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Totals, Escalated (3.0% inflation, compounded annually)											\$42,965	\$293,979	\$214,975	\$43,827	\$1,060,365	\$144,537	\$216,668	\$178,923	\$183,353	\$2,969,198	\$80,215	\$654,854	\$367,645	\$86,959	\$982,076	\$31,279	\$41,998	\$266,327	\$348,026	\$548,089	\$8,756,260
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* Markup/LocationFactor (1.05) has been included in unit costs.

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GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

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GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

CERTIFICATION

EMG has completed a Physical Needs Assessment (PNA) and an Energy Audit of the subject property, Hillside Manor, located at 2889 Southeast Hillside Street in Milwaukie, Oregon, 97222. The PNA and Energy Audit were performed on October 7, 2015.

The PNA and Energy Audit were performed at the Housing Authority's request using methods and procedures consistent with good commercial and customary practice conforming to ASTM E2018-08, Standard Guide for Property *Condition Assessments: Baseline Property Condition Assessment Process*. Within this Physical Needs Assessment Report, EMG's follows the ASTM guide's definition of User, that is, the party that retains EMG for the preparation of a baseline PNA of the subject property. A User may include, without limitation, a purchaser, potential tenant, owner, existing or potential mortgagee, lender, or property manager of the subject property.

This report has been prepared for and is exclusively for the use and benefit of the Client identified on the cover page of this report. The purpose for which this report shall be used shall be limited to the use as stated in the contract between the client and EMG.

This report, or any of the information contained therein, is not for the use or benefit of, nor may it be relied upon by any other person or entity, for any purpose without the advance written consent of EMG. Any reuse or distribution without such consent shall be at the client's or recipient's sole risk, without liability to EMG.

The opinions EMG expresses in this report were formed utilizing the degree of skill and care ordinarily exercised by any prudent architect or engineer in the same community under similar circumstances. EMG assumes no responsibility or liability for the accuracy of information contained in this report which has been obtained from the Client or the Client's representatives, from other interested parties, or from the public domain. The conclusions presented represent EMG's professional judgment based on information obtained during the course of this assignment. EMG's evaluations, analyses and opinions are not representations regarding the building design or actual value of the property. Factual information regarding operations, conditions and test data provided by the Client or their representative has been assumed to be correct and complete. The conclusions presented are based on the data provided, observations made, and conditions that existed specifically on the date of the assessment.

EMG certifies that EMG has no undisclosed interest in the subject property, EMG's relationship with the Client is at arm's-length, and that EMG's employment and compensation are not contingent upon the findings or estimated costs to remedy any deficiencies due to deferred maintenance and any noted component or system replacements.

EMG's PNA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a subject property's building systems. Preparation of a PNA in accordance with Public Housing Modernization Standards Handbooks 7485.2 is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or system failure and to reduce the potential that such component or system may not be initially observed. This PNA was prepared recognizing the inherent subjective nature of EMG's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of any given component or system. It should be understood that EMG's suggested remedy may be determined under time constraints, formed without the aid of engineering calculations, testing, exploratory probing, the removal of materials, or design. Furthermore, there may be other alternate or more appropriate schemes or methods to remedy the physical deficiency. EMG's opinions are generally formed without detailed knowledge from individuals familiar with the component's or system's performance.

Any questions regarding this report should be directed to Matthew Anderson at manderson@emgcorp.com or at 800.733.0660, x7613.

Prepared by: Valentin Tinajero,
Field Observer

Reviewed by:



Matthew Anderson
Program Manager

1 EXECUTIVE SUMMARY

1.1 SUMMARY OF FINDINGS

The Clackamas County Housing Authority contracted with EMG to conduct a Physical Needs Assessment (PNA) and Energy Audit of the subject property, Hillside Manor, located at 2889 Southeast Hillside Street in Milwaukie, Oregon, 97222. The PNA was performed on October 7, 2015.

BUILDING NO.	STRUCTURES ASSESSED:	BUILDING TYPE	NO. OF STORIES	APT. UNITS	UNITS ASSESSED	DATE OF CONST.	SIZE (SF):
1	Hillside Manor	Multi-Family	9	100	11	1970	78,500

The site area is approximately 4.9 acres.

Summary of Physical Needs Assessment:

On site amenities include a community garden, an exercise room, and one laundry room.

Generally, the property appears to have been constructed within industry standards in force at the time of construction, to have been well maintained during recent years, and is in fair overall condition.

According to property management personnel, the property has had a limited capital improvement expenditure program over the past three years.

There are a number of repair costs that have been identified during the evaluation period. These needs are identified in the various sections of this report and are summarized in the attached Replacement Reserves Report.

Summary of Energy Audit:

EMG has conducted an Energy Audit on the Hillside Manor. The study included a review of the building's construction features, historical energy and water consumption and costs, review of the building envelope, HVAC equipment, heat distribution systems, lighting, and the building's operational and maintenance practices.

EMG has evaluated 4 Energy Conservation Measures (ECMs) for this property. The savings for each measure are calculated using standard engineering methods followed in the industry, and detailed calculations for ECM are provided in Appendix H for reference. A 10% discount in energy savings was applied to account for the interactive effects amongst the ECMs. In addition to the consideration of the interactive effects, EMG has applied a 15% contingency to the implementation costs to account for potential cost overruns during the implementation of the ECMs

Summary of Financial Information for Recommended Energy Conservation Measures

ITEM	ESTIMATE
Total Projected Initial ECM Investment	\$ 30,844 <i>(In Current Dollars)</i>
Estimated Annual Cost Savings Related to ECMs	\$11,111 <i>(In Current Dollars)</i>
Net Effective ECM Payback	2.77 years

1.2 FOLLOW UP RECOMMENDATIONS

No additional evaluation is necessary.

1.3 OPINIONS OF PROBABLE COST

This section provides estimates for the repair and capital reserves items noted within this Physical Needs Assessment (PNA).



These estimates are based on invoice or bid documents provided either by the Owner/facility and construction costs developed from construction resources such as *R.S. Means* and *Marshall & Swift*, EMG's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

1.4 METHODOLOGY

Physical Needs Assessment:

Based upon site observations, research, and judgment, along with referencing Expected Useful Life (EUL) tables from various industry sources, EMG opines as to when a system or component will most probably necessitate replacement. Accurate historical replacement records, if provided, are typically the best source of information. Exposure to the elements, initial quality and installation, extent of use, the quality and amount of preventive maintenance exercised, etc., are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual chronological age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its effective age. Projections of Remaining Useful Life (RUL) are based on continued use of the Property similar to the reported past use. Significant changes in tenants and/or usage may affect the service life of some systems or components.

The evaluation period identified in this report is defined as 20 years.

The physical condition of building component to be repaired is typically defined as being in one of five categories: Priority One through Five. For the purposes of this report, the following definitions are used:

Priority One – These items are to be addressed as Immediate. Items in this category require immediate action and include corrective measures to:

1. Correct life safety and/or code hazards
2. Repair item permitting water leaks into the building or structure
3. Repair mold or mildew conditions
4. Down unit repairs
5. Further study investigations

Priority Two – These items are to be addressed within the next 1 year. Items in this category require corrective measures to:

1. Return a system to normal operation
2. Stop deterioration to other systems
3. Stop accelerated deterioration
4. Replace items that have reached or exceeded their useful service life
5. ADA/UFAS deficiencies

Priority Three – These items are to be addressed within the next 2-3 years. Items in this category, if not corrected expeditiously, will become critical in the next several years. Items in this category include corrective measures to:

1. Stop intermittent interruptions
2. Correct rapid deterioration
3. Replace items that will reach or exceed their useful service life
4. Correct functionality and/or aesthetic issues that are not critical

Priority Four – These items are to be addressed within the next 3-5 years. Items in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

Priority Five – These items are to be addressed within 6-20 years. Items in this category represent a sensible improvement to the existing conditions. These are not required for the most basic function of the facility; however, Priority 5 projects will improve overall usability and/or reduce long-term maintenance costs.

Energy Audit:

As per the proposed 24 CFR 905 Subpart- C regulations by HUD, the property is evaluated for all applicable ECMs as specified in the guideline. All the applicable ECM's are evaluated and further classified into three major categories:

- **Payback ≤ 12 Yrs:** All ECM's that are evaluated for the property and that have simple payback period of less than or equal to 12 years
- **12 > Payback ≤ 20 Yrs:** All ECM's that are evaluated for the property and that have simple payback period greater than 12 years but less than or equal to 20 years
- **Payback > 20 Yrs:** All ECM's that are evaluated for the property and that have simple payback period of greater than 20 years

Financially methodology used to determine the payback period is as follows:

1. Simple Payback Period –The number of years required for the cumulative value of energy or water cost savings less future non-fuel or non-water costs to equal the investment costs of the building energy or water system, without consideration of discount rates. ECMs with a payback period greater than the Expected Useful Life (EUL) of the project are not typically recommended, as the cost of the project will not be recovered during the lifespan of the equipment. These ECMs are recommended for implementation during future system replacement. At that time, replacement may be evaluated based on the premium cost of installing energy efficient equipment.

$$\text{Simple Payback} = \frac{\text{Initial Cost}}{\text{Annual Savings}}$$

EMG screens and categorizes all the ECM's as per the 24 CFR 905 regulation requirements based on their payback, but only those ECM's are recommended for implementation that have a Savings to Investment Ratio ≥1.0.

Financially methodology used to determine the Savings to Investment Ratio is as follows:

2. Savings-to-Investment Ratio (SIR) – The savings-to-investment ratio is the ratio of the present value savings to the present value costs of an energy or water conservation measure. The numerator of the ratio is the present value over the estimated useful life (EUL) of net savings in energy or water and non-fuel or non-water operation and maintenance costs attributable to the proposed energy or water conservation measure. The denominator of the ratio is the present value of the net increase in investment and replacement costs less salvage value attributable to the proposed energy or water conservation measure. It is recommended that energy efficiency recommendations should be based on a calculated SIR, with larger SIRs receiving a higher priority. A project is typically only recommended if SIR is greater than or equal to 1.0, unless other factors outweigh the financial benefit.

$$\text{SIR} = \frac{\text{Present Value (Annual Savings, } i\%, \text{ EUL)}}{\text{Initial Cost}}$$

2 PHYSICAL NEEDS ASSESSEMENT - PURPOSE AND SCOPE

2.1 PURPOSE

The purpose of this Physical Needs Assessment (PNA) is to assist the Client in evaluating the physical aspects of this property and how its condition may affect the soundness of the Client's financial decisions over time. For this PNA, representative samples of the major independent building components were observed and their physical conditions were evaluated. This included site and building exteriors, representative interior common areas, and a representative sample of the apartment units. Apartment unit observations include a minimum of 50 percent of the vacant units and all of the down units.

The property management staff and code enforcement agencies were interviewed for specific information relating to the physical property, code compliance, available maintenance procedures, available drawings, and other documentation. The property's systems and components were observed and evaluated for their present condition. EMG completed the *Systems and Conditions Table*, which lists the current physical condition and estimated remaining useful life of each system and component present on the property, as observed on the day of the site visit. The estimated costs for repairs and/or capital reserves are included in the enclosed cost tables. All findings relating to these opinions of probable costs are included in the narrative sections of this report.

The physical condition of building systems and related components are typically defined as being in one of five conditions: Excellent, Good, Fair, Poor, Missing/Failed, or a combination thereof. For the purposes of this report, the following definitions are used:

Excellent	=	New or very close to new; component or system typically has been installed within the past year, sound and performing its function. Eventual repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
Good	=	Satisfactory as-is. Component or system is sound and performing its function, typically within the first third of its lifecycle. However, it may show minor signs of normal wear and tear. Repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
Fair	=	Showing signs of wear and use but still satisfactory as-is, typically near the median of its estimated useful life. Component or system is performing adequately at this time but may exhibit some signs of wear, deferred maintenance, or evidence of previous repairs. Repair or replacement will be required due to the component or system's condition and/or its estimated remaining useful life.
Poor	=	Component or system is significantly aged, flawed, functioning intermittently or unreliably; displays obvious signs of deferred maintenance; shows evidence of previous repair or workmanship not in compliance with commonly accepted standards; has become obsolete; or exhibits an inherent deficiency. The present condition could contribute to or cause the deterioration of contiguous elements or systems. Either full component replacement is needed or repairs are required to restore to good condition, prevent premature failure, and/or prolong useful life.
Missing/Failed	=	Component or system has either failed or is missing where it should be present. Replacement, repair, or addition of component(s) or system(s) is recommended or required.

Throughout sections 5 through 9 of this report, each report section will typically contain three subsections organized in the following sequence:

- A descriptive table (and/or narrative), which identifies the components assessed, their condition, and other key data points.
- A simple bulleted list of Anticipated Lifecycle Replacements, which lists components and assets typically in Excellent, Good, or Fair condition at the time of the assessment but that will require replacement or some other attention once aged past their estimated useful life. These listed components are typically included in the associated inventory database with costs identified and budgeted beyond the first several years.
- A bulleted cluster of Actions/Comments, which include more detailed narratives describing deficiencies, recommended repairs, and short term replacements. The assets and components associated with these bullets are/were typically problematic and in Poor or Missing/Failed condition at the time of the assessment, with corresponding costs included within the first few years.

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2.2 DEVIATIONS FROM THE ASTM E2018-08 GUIDE

ASTM E2018-08, *Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process* requires that any deviations from the Guide be so stated within the report. EMG's probable cost threshold limitation is reduced from the Guide's \$3,000 to \$2,000, thus allowing for a more comprehensive assessment on smaller scale properties. Therefore, EMG's opinions of probable costs that are individually less than a threshold amount of \$2,000 are omitted from this PNA. However, comments and estimated costs regarding identified deficiencies relating to life/safety or accessibility items are included regardless of this cost threshold.

In lieu of providing written record of communication forms, personnel interviewed from the facility and government agencies are identified in Section 2.5. Relevant information based on these interviews is included in Sections 2.5, 3.1, and other applicable report sections.

2.3 ADDITIONAL SCOPE CONSIDERATIONS

Items required by ASTM E2018-08 and Fannie Mae's *Exhibit III Specific Guidance to the Property Evaluator* are included within the Physical Needs Assessment (PNA). Additional "non-scope" considerations were addressed at the recommendation of EMG and subsequent contract with the Client. These additional items are identified as follows:

- Property disclosure information was obtained from the EMG's Pre-Survey Questionnaire
- An assessment of accessibility utilizing EMG's Accessibility Checklist
- A limited visual assessment and review of the property for mold growth, conditions conducive to mold growth, and evidence of moisture in accessible areas of the property
- Provide a statement on the property's Remaining Useful Life
- Provide cross reference indexing between cost tables and report text
- Determination of FEMA Flood Plain Zone for single address properties

2.4 PROPERTY'S REMAINING USEFUL LIFE ESTIMATE

Subject to the qualifications stated in this paragraph and elsewhere in this report, the Remaining Useful Life (RUL) of the property is estimated to be not less than 35 years. The Remaining Useful Life estimate is an expression of a professional opinion and is not a guarantee or warranty, expressed or implied. This estimate is based upon the observed physical condition of the property at the time of EMG's visit and is subject to the possible effect of concealed conditions or the occurrence of extraordinary events such as natural disasters or other "acts of God" that may occur subsequent to the date of EMG's site visit.

The Remaining Useful Life for the property is further based on the assumption that: (a) the immediate repairs, short term repairs, and future repairs for which replacement reserve funds are recommended are completed in a timely and workman-like manner, and (b) a comprehensive program of preventive and remedial property maintenance is continuously implemented using an acceptable standard of care. The Remaining Useful Life estimate is made only with regard to the expected physical or structural integrity of the improvements on the property, and no opinion regarding economic or market conditions, the present or future appraised value of the property, or its present or future economic utility, is expressed by EMG.

2.5 PERSONNEL INTERVIEWED

The following personnel from the facility and government agencies were interviewed in the process of conducting the PNA:

NAME AND TITLE	ORGANIZATION	PHONE NUMBER
Richard Malloy Asset Manager	Housing Authority of Clackamas County	503.650.3128

The PNA was performed with the assistance of Richard Malloy, Asset Manager, Housing Authority of the City of Milwaukie, the on site Point of Contact (POC), who was cooperative and provided information that appeared to be accurate based upon subsequent site observations. The on site contact is knowledgeable about the subject property and answered most questions posed during the interview process. The POC's management involvement at the property has been for the past 2 years.

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2.6 DOCUMENTATION REVIEWED

Prior to the PNA, relevant documentation was requested that could aid in the knowledge of the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. The review of submitted documents does not include comment on the accuracy of such documents or their preparation, methodology, or protocol. The following documents were provided for review while performing the PNA:

- Utility Bills

No other documents were available for review. The Documentation Request Form is provided in Appendix E.

2.7 PRE-SURVEY QUESTIONNAIRE

A Pre-Survey Questionnaire was sent to the POC prior to the site visit. The questionnaire was not completed. A blank copy of the questionnaire is included in Appendix E.

2.8 WEATHER CONDITIONS

Weather conditions at the time of the site visit included light rain, with temperatures in the high 50s (°F) and light winds.

3 CODE INFORMATION, ACCESSIBILITY, AND MOLD

3.1 CODE INFORMATION AND FLOOD ZONE

According to the Milwaukie Building Department, there are no outstanding building code violations on file. The Building Department does not have an annual inspection program. They only inspect new construction, work that requires a building permit, and citizen complaints. A copy \ Copies of the original Certificates of Occupancy were requested but were not available. OR A copy \ Copies of the original Certificates of Occupancy are included in Appendix C.

According to fd poc n of the Milwaukie Fire Department, there are no outstanding fire code violations on file. The most recent inspection was conducted by the Fire Department on DATE, XXXX. The Fire Department inspects the property on an annual basis. OR The Fire Department does not have an annual inspection program. They only inspect new construction, work that requires a building permit, and citizen complaints.

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated June 17, 2008, the property is located in Zone X, defined as an area outside the 500-year flood plain with less than 0.2% annual probability of flooding. Annual Probability of Flooding of Less than one percent.

3.2 ADA ACCESSIBILITY

Section 504 of the Rehabilitation Act of 1973 is a Federal accessibility law that was enacted on June 2, 1988. Section 504 applies to multi-family properties that have 15 or more units. The property must have a minimum of five percent mobility accessible units and two percent of the units for visual / audio hearing impairments. Exceptions can be considered due to undue financial burdens or structural restrictions. However, the exceptions do not relieve the recipients from compliance utilizing other units/buildings or other methods to achieve reasonable accommodations.

Reasonable Accommodations as described in 24 CFR 8.4(b)(i), 8.24 and 8.33 are described as follows: When a family member requires an accessible feature(s) or policy modification to accommodate a disability, property owners must provide such feature(s) or policy modification unless doing so would result in a fundamental alteration in the nature of its program or result in a financial and administrative burden.

The Uniform Federal Accessibility Standard (UFAS) 24 CFR part 40 was adopted by HUD and made effective October 4, 1984. The UFAS applies only to new construction or to alterations to the existing buildings. Alterations are defined as work that costs 50 percent or more of the building's value when the work performed occurs within a twelve month period. Apartments modified for mobility impaired residents are to comply with UFAS.

Generally, Title III of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of "areas of public accommodations" on the basis of disability. Generally the rental office and access from the site to the rental office must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Buildings completed and occupied after January 26, 1992 are required to comply fully with ADAAG. Existing facilities constructed prior to this date are held to the lesser standard of complying to the extent allowed by structural feasibility and the financial resources available; otherwise a reasonable accommodation must be made.

During the PNA, observations and sample measurements for accessibility were conducted. The scope of the observations is set forth in the EMG Accessibility Checklist provided in Appendix D. It is understood by the Client that the observations described herein does not comprise an Accessibility Compliance Survey of every unit and only those units where access was provided by the client were reviewed. Only a representative sample of areas were observed and, other than as shown on the accessibility checklist, actual measurements were not taken to verify compliance.

The accessibility standards that apply to the Property are Section 504 and the ADA for access to the rental office. However, as the property is not new construction, or completing substantial rehabilitation or other rehabilitation, the property is only required to complete reasonable accommodations. Property management stated that Section 504 requests are completed on an individual case-by-case basis. Based on EMG's observations and interview of the Property Manager, the property is generally compliant with Section 504. Presently, 5 percent of the units are defined as accessible for individuals with mobility impairments according to property management. There are 6 units at present which have visual / audio modifications, thus exceeding the two percent accessible requirements of Section 504.

Based on EMG's observations, the facility generally appeared to be accessible as stated within the defined priorities of Section 504 and the ADA.

Although defined as accessible, a non-compliant component was observed at the designated accessible route in the parking area. The non-compliant component is the following:

Parking

Access aisles crossing hazardous vehicle areas, from parking area to the building sidewalks and entrances are not provided. Striping this accessible route is recommended.

Corrections of these conditions should be addressed from a liability standpoint, but are not necessarily code violations. The UFAS and Americans with Disabilities Act Accessibility Guidelines concern civil rights issues as they pertain to the disabled and are not a construction code, although many local jurisdictions have adopted the Guidelines as such. The cost to address the achievable item noted above is detailed in the Replacement Reserves Report. The accessible improvements are defined as short term improvements.

3.3 MOLD

As part of the PNA, EMG completed a limited, visual assessment for the presence of visible mold growth, conditions conducive to mold growth, or evidence of moisture in readily accessible areas of the property. EMG interviewed property personnel concerning any known or suspected mold contamination, water infiltration, or mildew-like odor problems.

This assessment does not constitute a comprehensive mold survey of the property. The reported observations and conclusions are based solely on interviews with property personnel and conditions observed in readily accessible areas of the property at the time of the assessment. Sampling was not conducted as part of the assessment.

EMG did not note any visual indications of the presence of visible mold growth, conditions conducive to mold growth, or evidence of moisture in any readily accessible areas of the property. No further action or investigation is recommended regarding mold at the property.

4 EXISTING BUILDING EVALUATION

4.1 APARTMENT UNIT TYPES AND UNIT MIX

The appendices contain floor plan illustrations, which graphically represent the various unit types. The gross area measurements in the chart below are an approximation, are based on information provided by on site personnel, and are not based on actual measurements. Due to the varying methods that could be utilized by others to derive square footage, the area calculations in the chart below do not warrant, represent, or guarantee the accuracy of the measurements.

APARTMENT UNIT TYPES AND MIX		
QUANTITY	TYPE	FLOOR AREA
96	1 Bedroom/ 1 Bathroom	400-506 SF
5	2 Bedroom/ 1 Bathroom	648 SF
There are currently 0 vacant units.		
There are currently 0 down units.		
101	TOTAL	

4.2 APARTMENT UNITS OBSERVED

Over ten percent of the apartment units were observed in order to establish a representative sample and to gain a clear understanding of the property's overall condition. Other areas accessed included the exterior of the property, the roofs, and the interior common areas. The following apartments were observed.

APARTMENT UNITS OBSERVED				
UNIT #	FLOOR	TYPE	COMMENTS	GAS LEAK DETECTED
220	2 nd	2 Bedroom/ 1 Bathroom	Occupied. Good condition.	No
221	2 nd	2 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No
222	2 nd	2 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No
309	3 rd	1 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No
313	3 rd	1 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No
402	4 th	1 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No
512	5 th	1 Bedroom/ 1 Bathroom	Occupied. Good condition.	No
612	6 th	1 Bedroom/ 1 Bathroom	Occupied. Good condition.	No
713	7 th	1 Bedroom/ 1 Bathroom	Occupied. Good condition.	No
810	8 th	1 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No
902	9 th	1 Bedroom/ 1 Bathroom	Occupied. Fair condition.	No

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All areas of the property were available for observation during the site visit.

A “down unit” is a term used to describe a non-rentable apartment unit due to poor conditions such as fire damage, water damage, missing appliances, damaged floor, wall or ceiling surfaces, or other significant deficiencies. According to the POC, there are no down units.

5 SITE IMPROVEMENTS

5.1 UTILITIES

The following table identifies the utility suppliers and the condition and adequacy of the services.

SITE UTILITIES		
UTILITY	SUPPLIER	CONDITION AND ADEQUACY
Sanitary sewer	City of Milwaukie	Good
Storm sewer	City of Milwaukie	Good
Domestic water	City of Milwaukie	Good
Electric service	Portland General Electric	Good
Natural gas service	NW Natural Gas	Good

Actions/Comments:

- According to the POC, the utilities provided are adequate for the property. There are no unique, on site utility systems such as septic systems, water or waste water treatment plants, or propane gas tanks.

5.2 PARKING, PAVING, AND SIDEWALKS

ITEM	DESCRIPTION
Main Ingress and Egress	Southeast Hillside Manor
Access from	South
Additional Entrances	N/A

PAVING AND FLATWORK			
ITEM	MATERIAL	LAST WORK DONE	CONDITION
Entrance Driveway Apron	Asphalt	10<Years	Fair
Parking Lot	Asphalt	10<Years	Fair
Drive Aisles	Asphalt	10<Years	Fair
Service Aisles	Asphalt	10<Years	Fair
Sidewalks	Cast In Place Concrete	10<Years	Fair
Curbs	Cast in Place Concrete	10<Years	Fair
Pedestrian Ramps	None	--	--

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PARKING COUNT				
OPEN LOT	CARPORT	PRIVATE GARAGE	SUBTERRANEAN GARAGE	FREESTANDING PARKING STRUCTURE
53	-	-	-	-
Number of ADA Compliant Spaces			7	
Number of ADA Compliant Spaces for Vans			2	
Total Parking Spaces			53	
Parking Ratio (Spaces/Apartments)			0.52	
Method of obtaining parking count			Physical count	

EXTERIOR STAIRS			
LOCATION	MATERIAL	HANDRAILS	CONDITION
Southeast End of Building	Concrete stairs	Metal	Fair

Anticipated Lifecycle Replacements:

- Asphalt seal coating
- Sidewalks
- Curbs

Actions/Comments:

- The asphalt pavement exhibits isolated areas of failure and deterioration, such as alligator cracking, transverse cracking, extensive raveling, and localized depressions at the upper and lower parking lots. The most severely damaged areas of paving must be cut and patched in order to maintain the integrity of the overall pavement system.

5.3 DRAINAGE SYSTEMS AND EROSION CONTROL

DRAINAGE SYSTEM AND EROSION CONTROL		
SYSTEM	EXISTS AT SITE	CONDITION
Surface Flow	Yes	Fair
Inlets	Yes	Fair
Swales	No	--
Detention pond	No	--
Ponds	No	--
Underground Piping	Yes	Fair
Pits	No	--
Municipal System	Yes	Fair
Dry Well	No	--

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Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- There is no evidence of storm water runoff from adjacent properties. The storm water system appears to provide adequate runoff capacity. There is no evidence of major ponding or erosion.

5.4 TOPOGRAPHY AND LANDSCAPING

ITEM	DESCRIPTION						
Site Topography	Slopes gently down from the south side of the property to the north property line.						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	X	X	X	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Irrigation	Automatic Underground		Drip		Hand Watering	None	
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	X	

RETAINING WALLS		
TYPE	LOCATION	CONDITION
Reinforced Concrete	South of Building	Good

Surrounding properties include residential and commercial developments. Painted metal railings are mounted on top of the retaining wall.

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The topography and adjacent uses do not appear to present conditions detrimental to the property. There are no significant areas of erosion.

5.5 GENERAL SITE IMPROVEMENTS

PROPERTY SIGNAGE	
Property Signage	Post Mounted Wood Sign
Street Address Displayed?	Yes

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SITE AND BUILDING LIGHTING					
Site Lighting	None	Pole-mounted	Bollard Lights	Ground Mounted	Parking Lot Pole Type
	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building Lighting	None		Wall-mounted	Recessed Soffit	
	<input type="checkbox"/>		X	<input type="checkbox"/>	

SITE FENCING		
TYPE	LOCATION	CONDITION
Chain link with metal posts	North and West Property Lines	Fair

REFUSE DISPOSAL				
Refuse Disposal	Garbage Chute With Trash Compactor/s			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
1 st Floor	Concrete Pad	CMU fence	Yes	Fair

OTHER SITE AMENITIES			
	DESCRIPTION	LOCATION	CONDITION
Playground Equipment	None	NA	NA
Tennis Courts	None	NA	NA
Basketball Court	None	NA	NA
Swimming Pool	None	NA	NA

Anticipated Lifecycle Replacements:

- Exterior lighting
- Site fencing

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.



6 BUILDING ARCHITECTURAL AND STRUCTURAL SYSTEMS

6.1 FOUNDATIONS

BUILDING FOUNDATION		
ITEM	DESCRIPTION	CONDITION
Floor	Concrete Slab on grade	Fair
Footings	Pad Footing	Fair
Basement and Crawl Space	None	--

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The superstructure is exposed in some locations, which allows for limited observation. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement.

6.2 SUPERSTRUCTURE

BUILDING SUPERSTRUCTURE		
ITEM	DESCRIPTION	CONDITION
Framing	Concrete Frame	Fair
Upper Floors	Light weight cast-in place concrete	Fair
Roof Structure	Steel Beams	Fair
Roof Sheathing	Roof Decks Topped with Concrete	Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The superstructure is exposed in some locations, which allows for limited observation. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement.

6.3 ROOFING

PRIMARY ROOF			
Type	Flat	Finish	Built-up membrane
Maintenance	In-house Staff	Roof Age	
Flashing	Sheet metal	Warranties	

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PRIMARY ROOF			
Parapet and Copings	Parapet with sheet metal coping	Roof Drains	Internal drains
Fascia	Metal Panel	Insulation	Rigid Board
Soffits	None	Skylights	No
Attics		Ponding	No
Ventilation Source-1		Leaks Observed	No
Ventilation Source-2		Roof Condition	

Anticipated Lifecycle Replacements:

- Modified bitumen built-up roof membrane
- Roof flashings (included as part of overall membrane replacement)
- Parapet wall copings (included as part of overall membrane replacement)

Actions/Comments:

- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the property management's routine maintenance and operations program.
- The roof finishes appear to be more than 5 years old. Information regarding roof warranties or bonds was not available. The roofs are maintained by the in-house maintenance staff.
- According to the POC, there are no active roof leaks. There is no evidence of active roof leaks.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work

6.4 EXTERIOR WALLS

BUILDING EXTERIOR WALLS					
TYPE	LOCATION	GOOD	FAIR	POOR	
Primary Finish	Painted Concrete	<input type="checkbox"/>	X	<input type="checkbox"/>	
Accented With	Painted Concrete	<input type="checkbox"/>	X	<input type="checkbox"/>	
Soffits	Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Building sealants (caulking) are located between dissimilar materials, at joints, and around window and door openings.

Anticipated Lifecycle Replacements:

- Exterior paint

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance, including patching repairs, graffiti removal, and recaulking, is recommended.

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6.5 EXTERIOR AND INTERIOR STAIRS

BUILDING EXTERIOR AND INTERIOR STAIRS					
TYPE	DESCRIPTION	RISER	HANDRAIL	BALUSTERS	CONDITION
Building Exterior Stairs	None	NA	NA	NA	NA
Building Interior Stairs	Concrete stairs	Close	Metal	Metal	Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.

6.6 WINDOWS AND DOORS

BUILDING WINDOWS				
WINDOW FRAMING	GLAZING	LOCATION	WINDOW SCREEN	CONDITION
Vinyl Framed Single Hung	Double Pane	Throughout Building	X	Good

BUILDING DOORS						
Apartment Doors	Door Type					
	Hollow Wood					
	Cylindrical Lockset	Handle	Security Chain	Deadbolts	Spy-Eyes	Door Knockers
	Yes	Lever	No	Keyed	Yes	No
Apartment Screen Doors	Door Type					
	N/A					
Apartment Patio Door	N/A					
Service Door	Hollow Metal					
Main building Entrance Door	Store front					
	None					
	N/A					

Anticipated Lifecycle Replacements:

- Windows
- Storefront glazing
- Roll-up door

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.

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6.7 PATIO, TERRACE, AND BALCONY

BUILDING PATIO, TERRACE AND BALCONY			
TYPE	DESCRIPTION	ENCLOSURE	CONDITION
Ground Floor Patio	Concrete	None	Fair
Upper Level Balcony	Located between the exterior bearing walls	Painted metal-guardrails	Fair
Balcony Decks	Concrete topping	Painted metal-guardrails	Fair
Exterior Stairs	None	None	NA

Anticipated Lifecycle Replacements:

- Balcony guard rails
- Patio slabs

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.

6.8 COMMON AREAS, ENTRANCES, AND CORRIDORS

The interior common areas include the rental office, a fellowship room, exercise room, common area restrooms, laundry room, and a common area kitchen.

Common area furnishings include sofas, chairs, tables, a television, and wall decorations. The common area kitchen is equipped with residential-style appliances, including a refrigerator and range.

Apartment unit entrances are accessed from corridors beyond the lobby and from corridors on each floor.

Two common area restrooms are located on the first floor, and two more restrooms are located on the second floor.

BUILDING COMMON AREA LAUNDRY	
	LAUNDRY ROOM-1
Laundry Room Location	1 st Floor
Property owned / leased	Leased
No. of Top Load Washers	3
No. of Front Load Washers	1
Total Washers	4
Washer Manufacturer	Speed Queen
Clothes Dryer Type	Gas
No. of Dryers	4
Dryer Input Heat Capacity	Unknown
Dryer Manufacturer	Speed Queen

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The following table identifies the interior common areas and generally describes the finishes in each common area.

COMMON AREA	FLOORS	WALLS	CEILINGS
Lobby	Carpet	Painted Drywall	Suspended T-bar (Acoustic)
Fellowship Room	Vinyl Tile	Painted Drywall	Suspended T-bar (Acoustic)
Exercise Room	Vinyl Tile	Painted Drywall	Suspended T-bar (Acoustic)
Corridor	Carpet	Painted Drywall	Suspended T-bar (Acoustic)
Laundry Room	Polished Granite	Painted Drywall	Painted Concrete Tiles
Common Area Kitchen	Vinyl Tile	Painted Drywall	Suspended T-bar (Acoustic)
Common Area Restroom	Ceramic Tile	Painted Drywall	Painted drywall

Anticipated Lifecycle Replacements:

- Carpet
- Vinyl tile
- Ceramic tile
- Interior paint
- Suspended acoustic ceiling tile

Actions/Comments:

- It appears that the interior common area finishes have not been renovated within the last 10 years.
- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.

7 BUILDING MECHANICAL AND ELECTRICAL SYSTEMS

7.1 BUILDING HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

BUILDING COMMON AREA HEATING AND COOLING SYSTEM	
Primary Heating System Type	Package Units
Quantity	Two
Heating Fuel	Natural Gas
Heating System Input Capacity (btuh)	800,000
Manufactured Rated Efficiency	Unknown
Refrigerant	R-410A
Cooling System Capacity (Tons)	25
Cooling Tower Size	None
Manufactured Rated Efficiency	Unknown
Location of Equipment	Roof
Space Served by System	Makeup-Air for Entire Building
Age	5
Condition	Fair

DISTRIBUTION SYSTEM	
Air Distribution System	Constant
Air Handling Unit Location	None
Common Area Temperature Control	Non-Programmable
Building Ventilation	Roof Top Exhaust Fans
Distribution System Condition	Fair

Air distribution is provided to supply air registers by ducts concealed above the ceilings. The heating and cooling system are controlled by local thermostats.

The stair wells, bathrooms, and other areas are ventilated by mechanical exhaust fans. Large capacity ventilation fans are mounted on the roof and are connected by concealed ducts to each ventilated space.

The central HVAC system distributes heated and/or cooled air through ducts to the common areas. The heating and cooling system are controlled by local thermostats.

The maintenance shop is heated by a gas-fired space heater, which is suspended from the ceiling. The unit is controlled by an integral thermostat.

A 3-ton split AC unit serves the elevator equipment room.

Anticipated Lifecycle Replacements:

- Package units
- Gas space heater
- Rooftop exhaust fans
- Split AC System

Actions/Comments:

- The HVAC systems are maintained by the in-house maintenance staff. Records of the installation, maintenance, upgrades, and replacement of the HVAC equipment at the property have not been maintained since the property was first occupied.
- The HVAC equipment varies in age. HVAC equipment is replaced on an "as needed" basis.

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- The HVAC equipment appears to be functioning adequately overall. The maintenance staff were interviewed about the historical and recent performance of the equipment and systems. No chronic problems were reported and an overall sense of satisfaction with the systems was conveyed. However, due to the inevitable failure of parts and components over time, some of the equipment will require replacement.

7.2 BUILDING PLUMBING

BUILDING PLUMBING SYSTEM				
TYPE	DESCRIPTION	GOOD	FAIR	POOR
Water Supply Piping	Galvanized	<input type="checkbox"/>	<input type="checkbox"/>	X
Waste/Sewer Piping	Cast Iron Pipe	<input type="checkbox"/>	<input type="checkbox"/>	X
Vent Piping	Cast Iron Pipe	<input type="checkbox"/>	<input type="checkbox"/>	X
Water Meter Location	Public Street			

DOMESTIC WATER HEATER	
Fuel	Natural Gas
Water Heater Volume	None
Input Capacity	600,000 Btuh
Supplementary Storage Tanks?	Yes
Storage Tank Volume	200 gal
Quantity of Storage Tanks	1
Water Heater Condition:	Fair
Domestic Hot Water Circulation Pump/s (HP)	0.5hp
Pressure and Flow of Hot Water	Adequate
Domestic Water Booster Pumps (hp)	N/A
Pressure and Flow of City Water	Adequate

COMMON AREA PLUMBING FIXTURES	
Water Closets	Commercial
Water Closets Rating	1.6 GPF
Common Area Faucet, GPM	2.2 GPM

Anticipated Lifecycle Replacements:

- Supply distribution piping
- Waste/sanitary distribution piping
- Circulation pump
- Water heater
- Toilets
- Urinals
- Sinks

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Actions/Comments:

- The plumbing systems appear to be well maintained and functioning adequately. The water pressure appears to be sufficient. No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.
- The property has had a history of plumbing leaks, and some piping replacements have been necessary. Based on this history and the age of the piping, replacement of the plumbing is anticipated during the next 10 years.

7.3 BUILDING GAS DISTRIBUTION

Gas service is supplied from the gas main on the adjacent public street. The gas meters and regulators are located along the exterior walls of the building. The gas distribution piping within the building is malleable steel (black iron).

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The pressure and quantity of gas appear to be adequate.
- The gas meter and regulator appear to be functioning adequately and will require routine maintenance.
- Only limited observation of the gas distribution piping can be made due to hidden conditions.

7.4 BUILDING ELECTRICAL

BUILDING ELECTRICAL SYSTEMS			
Electrical lines run	Underground	Transformer	Pad-mounted
Service size (Amps)	2,000 Amps	Volts	120/208 Volt, three-phase
Meter & panel location	Electrical Room	Branch wiring	Copper
Conduit	Metallic	Circuit Breaker Panel	Located throughout the building
Number of Buildings	Single	Building Intercom System	No

BUILDING EMERGENCY SYSTEM			
Size (kVA)	125	Fuel	Diesel
Generator Serves	347 Amps	Tank location	Integrated
Testing frequency	Weekly	Tank type	Integral, above ground tank

Anticipated Lifecycle Replacements:

- Interior light fixtures
- Emergency generator

Actions/Comments:

- The on site electrical systems up to the meters are owned and maintained by the respective utility company.
- The electrical service and capacity appear to be adequate for the property's demands.

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7.5 BUILDING ELEVATORS AND CONVEYING SYSTEMS

	ELEVATOR-1	ELEVATOR-2
Building Name	Hillside Manor	Hillside Manor
Elevator Category	Passenger	Passenger
Elevator Type	Traction	Traction
Elevator Capacity	3,500 Lbs	2,000 Lbs
Elevator Manufacturer	Otis	Otis
Equipment Location	Roof Penthouse	Roof Penthouse
Elevator Safety Stop	Electronic	Electronic
Elevator Emergency Communication	Yes	Yes
Elevator Cab Floor	vinyl	vinyl
Elevator Cab Wall	plastic-laminated wood	plastic-laminated wood
Elevator Cabin Lighting	F42T8	F42T8

Anticipated Lifecycle Replacements:

- Overhead traction machinery

Actions/Comments:

- The elevators appear to provide adequate service. The elevators are serviced by Otis on a routine basis. The elevator machinery are the originally installed system, and the controls appear to have been upgraded within the last 10 years.
- The elevators will require continued periodic maintenance.
- The elevators are inspected on an annual basis by the municipality, and a certificate of inspection is displayed in each elevator cab.
- The emergency communication equipment in the elevator cabs appears to be functional. Equipment testing is not within the scope of the work.
- The finishes in the elevator cabs will require replacement. The cost to replace the finishes is relatively insignificant and the work can be performed as part of the property management's operations program.

7.6 FIRE PROTECTION SYSTEMS

ITEM	DESCRIPTION					
Type	Wet					
Fire Alarm System	None	<input type="checkbox"/>	Battery Operated Smoke Detectors	<input type="checkbox"/>	Strobe Light Alarms	X
	Central Alarm Panel	X	Hard-wired Smoke Detectors	X	Illuminated EXIT Signs	X
	Battery backup Light Fixtures	X	Hard-wired Smoke Detectors/ with battery Backup	<input type="checkbox"/>	Annunciator Panels	<input type="checkbox"/>
Sprinkler	None	<input type="checkbox"/>	Standpipes	X	Flow Switches	X

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ITEM	DESCRIPTION					
Type	Wet					
System	Pull Station	X	Fire Pumps	<input type="checkbox"/>	Siamese Connections	X
	Alarm horns	<input type="checkbox"/>	Backflow Preventer	<input type="checkbox"/>	Hose Cabinets	X
Central Alarm Panel System	Location of Alarm Panel			Age of Alarm panel		
	Electrical Room			5<Years		
Fire Extinguishers	Last Service Date			Estimated Quantity		
	April 2015			22		
Hydrant Location	Front Sidewalk					
Siamese Location	Rear Entrance					
Special Systems	Kitchen Suppression System		<input type="checkbox"/>	Computer Rm. Suppression System		<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Central alarm panel

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.



8 DWELLING UNITS

8.1 INTERIOR FINISHES

The following table generally describes the interior finishes in the apartment units:

TYPICAL APARTMENT FINISHES			
ROOM	FLOOR	WALLS	CEILING
Living room	Vinyl Tile	Painted Drywall	Painted drywall
Kitchen	Vinyl Tile	Painted Drywall	Painted drywall
Bedroom	Vinyl Tile	Painted Drywall	Painted drywall
Bathroom	Vinyl tile	Painted drywall	Painted drywall
Stairwell	Concrete Floor	Painted Drywall	Painted drywall
Hallways	Carpet	Painted Drywall	Painted drywall

APARTMENT INTERNAL DOORS				
ITEM	TYPE	GOOD	FAIR	POOR
Internal Doors	Hollow Core	<input type="checkbox"/>	X	<input type="checkbox"/>
Door Framing	Metal	<input type="checkbox"/>	X	<input type="checkbox"/>
Closet Doors-Type1	Painted Hollow Core	<input type="checkbox"/>	X	<input type="checkbox"/>
Closet Doors-Type2	Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Carpet
- Vinyl tile
- Interior paint

Actions/Comments:

- The interior finishes in the apartment units vary in age and condition and will require regular lifecycle replacements per the above list, typically performed upon unit turnover.
- The apartment unit carpet is worn and in poor condition in several units. Carpet replacement during the next year is recommended in the worst cases.

8.2 DWELLING APPLIANCES

Each apartment unit kitchen typically includes the following appliances:

APARTMENT KITCHEN APPLIANCES						
ITEM	TYPE			GOOD	FAIR	POOR
Refrigerator	Frost-free	Non-Energy Star	14 Cu.ft.	<input type="checkbox"/>	X	<input type="checkbox"/>

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ITEM	TYPE	GOOD	FAIR	POOR
Cooking Range	Electric	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Range Hood	Ducted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dishwasher	Not provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food Disposer	Not Provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kitchen Cabinet	Stained Wood	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Kitchen Countertop	Plastic laminated wood	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Apartment Laundry	None			

Anticipated Lifecycle Replacements:

- Refrigerators
- Ranges
- Range hoods
- Kitchen cabinets
- Kitchen countertops

Actions/Comments:

- Kitchen appliances vary in age. Apartment appliances are replaced on an "as needed" basis.
- No significant repair actions or short term replacement costs are required beyond the anticipated lifecycle replacements listed above. Routine and periodic maintenance is recommended.

8.3 HVAC

APARTMENT HEATING SYSTEM		
Primary Heating System Type	Electric baseboard Heating	
Heating Fuel	Electric	
Heating System Types	1-Bed	2-Bed
Input Capacity	1,500 Watts	1,500 Watts
Manufactured Rated Efficiency	100%	100%
Age	15<	15<
Heating Plant Condition	Fair	Fair

APARTMENT COOLING SYSTEM		
Primary Cooling System Type	Package Terminal Heat Pump Systems	
Cooling System Types	1-Bed	2-Bed
Cooling Capacity	1.5Ton	1.5Ton
Manufactured Rated Efficiency	10EER	10EER
Refrigerant	R-134A	R-134A
Age	5 Years	5 Years

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APARTMENT COOLING SYSTEM		
Cooling Plant Condition	Good	Good

DISTRIBUTION SYSTEM	
Fan Coil System	No
Location of Fan Coil System	N/A
Ductwork	No
Common Area Temperature Control:	Non-Programmable
Bathroom Exhaust Fan	Yes

Natural ventilation is provided by operable windows. Mechanical ventilation is provided in the bathrooms by ceiling exhaust fans.

Anticipated Lifecycle Replacements:

- PTAC's
- Baseboard heaters

Actions/Comments:

- The HVAC equipment appears to be functioning adequately overall. The maintenance staff were interviewed about the historical and recent performance of the equipment and systems. No chronic problems were reported and an overall sense of satisfaction with the systems was conveyed. However, due to the inevitable failure of parts and components over time, some of the equipment will require replacement.

8.4 PLUMBING

APARTMENT PLUMBING FIXTURES				
ITEM	TYPE	GOOD	FAIR	POOR
Bath Tub	Enameled Cast iron	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tub/Shower Surround	Ceramic Tile	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Closet (GPF)	1.6 GPF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bathroom Faucet (GPM)	2.2 GPM	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shower head (GPM)	2.5 GPM	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Kitchen Faucet (GPM)	2.2 GPM	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bathroom Vanity Cabinet	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Domestic hot water is supplied by the central system described in Section 7.2

Anticipated Lifecycle Replacements:

- Tubs and shower surrounds
- Wall-hung sinks

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Actions/Comments:

- The pressure and quantity of hot water appear to be adequate, and the water pressure appears to be sufficient in the apartment units. No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.

8.5 ELECTRICAL

The electrical service to each apartment unit is 100 amps. A circuit breaker panel inside each unit supplies the HVAC system, appliances, receptacles and light fixtures.

APARTMENT ELECTRICAL SERVICE	
Electric Service Rating to Each Apt.	100 Amps
Circuit Breaker Panel in Each Apt.	X
GFCI Plug in Kitchen	<input type="checkbox"/>
GFCI Plug in Bathrooms	<input type="checkbox"/>

The apartment units have incandescent and fluorescent light fixtures. Each apartment unit has at least one cable television outlet and telephone jack. The table below provides the typical light fixtures observed in the apartments.

APARTMENT LIGHTING FIXTURES		
Location	Typical Lamp Type	ECM
Living Room	Compact Fluorescent Lamps (Cfls)	<input type="checkbox"/>
Kitchen	T8 - Linear Fluorescent	<input type="checkbox"/>
Bedrooms	Compact Fluorescent Lamps (Cfls)	<input type="checkbox"/>
Hallways	Compact Fluorescent Lamps (Cfls)	<input type="checkbox"/>
Bathrooms	Compact Fluorescent Lamps (Cfls)	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended.

8.6 FURNITURE, FIXTURES AND EQUIPMENT (FF&E)

Not applicable. There are no furnished apartments.

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9 OTHER STRUCTURES

Not applicable. There are no major accessory structures.

10 ENERGY AUDIT - PURPOSE AND SCOPE

The purpose of this Energy Audit is to provide Hillside Manor with a baseline of energy usage, the relative energy efficiency of the facility, and specific recommendations for Energy Conservation Measures. Information obtained from these analyses may be used to support a future application to an Energy Conservation Program, Federal and Utility grants towards energy conservation, as well as support performance contracting, justify a municipal bond-funded improvement program, or as a basis for replacement of equipment or systems

The energy audit consisted of an on site visual assessment to determine current conditions, itemize the energy consuming equipment (i.e. Boilers, Make-Up Air Units, DWH equipment); review lighting systems both exterior and interior; and review efficiency of all such equipment. The study also included interviews and consultation with operational and maintenance personnel. The following is a summary of the tasks and reporting that make up the Energy Audit portion of the report.

The following is a summary of the tasks and reporting that make up the Energy Audit portion of the report.

Energy and Water Using Equipment

- EMG has surveyed the tenant spaces, common areas, offices, maintenance facilities and mechanical rooms to document utility-related equipment, including heating systems, cooling systems, air handling systems and lighting systems.

Building Envelope

- EMG has reviewed the characteristics and conditions of the building envelope, checking insulation values and conditions. This review also includes an inspection of the condition of walls, windows, doors, roof areas, insulation and special use areas.

Recommendations for Energy Savings Opportunities

- Based on the information gathered during the on site assessment, the utility rates, as well as recent consumption data and engineering analysis, EMG has identified opportunities to save energy and provide probable construction costs, projected energy/utility savings and provide a simple payback analysis.

Analysis of Energy Consumption

- Based on the information gathered during the on site assessment and a minimum of one year of utility billing history, EMG has conducted an analysis of the energy usage of all equipment, and identified which equipment is using the most energy and what equipment upgrades may be necessary. As a result, equipment upgrades or replacements are identified that may provide a reasonable return on the investment and improve maintenance reliability.

Energy Audit Process

- Interviewing staff and review plans and past upgrades
- Performing an energy audit for each use type
- Performing a preliminary evaluation of the utility system
- Analyzing findings, utilizing ECM cost-benefit worksheets
- Making preliminary recommendations for system energy improvements and measures
- Estimating initial cost and changes in operating and maintenance costs based on implementation of energy efficiency measures
- Ranking recommended cost measures, based on the criticality of the project and the largest payback

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11 ENERGY CONSERVATION MEASURES

EMG has identified three Energy Conservation Measure (ECM) for this property.

Priority	Brief description of ECM	Initial Investment	Annual Savings	Payback Period (yrs)	Component EUL (yrs)
3	Replace Older Refrigerators with Energy Star Rated Refrigerators	\$12,580	\$1,407	8.9	15
NA	Replace Older Inefficient Air Conditioners- 3 ton units	\$3,575	\$71	50.1	15
NA	Replace Newer PTAC Units with PTHP Units	\$219,170	\$11,368	19.3	15
2	Replace Central Water Heater -600000 Btu/hr	\$9,881	\$2,562	3.9	15
1	Replace Older Plumbing Fixtures with Low Flow Devices	\$8,383	\$7,142	1.2	20

12 UTILITY ANALYSIS

Establishing the energy baseline begins with an analysis of the utility cost and consumption of the building. Utilizing the historical energy data and local weather information, we evaluate the existing utility consumption and assign it to the various end-uses throughout the buildings. The Historical Data Analysis breaks down utilities by consumption, cost and annual profile.

This data is analyzed, using standard engineering assumptions and practices. The analysis serves the following functions:

- Allows our engineers to benchmark the energy and water consumption of the facilities against consumption of efficient buildings of similar construction, use and occupancy.
- Generates the historical and current unit costs for energy and water
- Provides an indication of how well changes in energy consumption correlate to changes in weather.
- Reveals potential opportunities for energy consumption and/or cost reduction. For example, the analysis may indicate that there is excessive, simultaneous heating and cooling, which may mean that there is an opportunity to improve the control of the heating and cooling systems.

By performing this analysis and leveraging our experience, our engineers prioritize buildings and pinpoint systems for additional investigation during the site visit, thereby maximizing the benefit of their time spent on site and minimizing time and effort by the customer's personnel.

Utility Rates used for Cost Analysis

ELECTRICITY	NATURAL GAS	WATER / SEWER
\$0.08/kWh	\$1.17/therm	\$ 14.46/kGal

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12.1 ELECTRICITY

Portland General Electric satisfies the electricity requirements of the facility. The property is master metered. The electric meter is located in the main electrical room.

The electricity is paid for by the housing authority. The consumption pattern for the period under consideration varies seasonally. The seasonal variation in the consumption is attributed to the heating loads, while the base load primarily consists of lighting, appliances, and cooking.

Based on the 2014-2015 electric usage & costs, the average price paid during the year was \$0.08 per kWh. The total annual electricity consumption for the 12-month period analyzed is 846,982 kWh for a total cost of \$70,918.70.

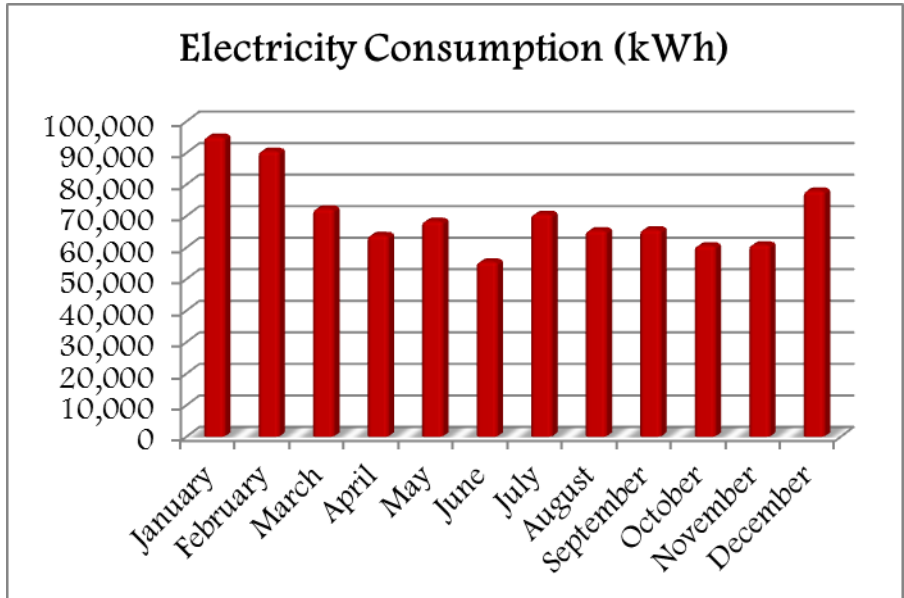
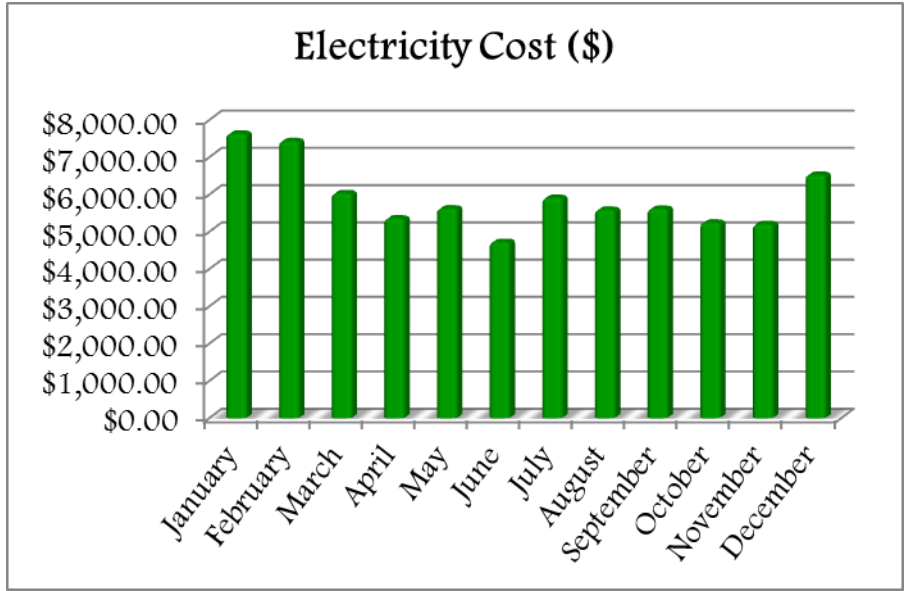
Electricity Consumption and Cost Data

BILLING MONTH	CONSUMPTION (KWH)	UNIT COST/KWH	TOTAL COST
January	95,100	\$0.08	\$7,635.09
February	90,600	\$0.08	\$7,433.57
March	72,300	\$0.08	\$6,034.64
April	63,900	\$0.08	\$5,358.57
May	68,400	\$0.08	\$5,625.75
June	55,500	\$0.09	\$4,727.91
July	70,582	\$0.08	\$5,909.89
August	65,400	\$0.09	\$5,591.65
September	65,700	\$0.09	\$5,617.69
October	60,600	\$0.09	\$5,246.09
November	60,900	\$0.09	\$5,207.00
December	78,000	\$0.08	\$6,530.85
Total/Average	846,982	\$0.08	\$70,918.70

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12.2 NATURAL GAS

NW Natural satisfies the natural gas requirements of the facility. The gas to the property is master metered. The gas meter is located outside the property.

The primary use of natural gas is for space heating and domestic water heating. The consumption pattern for the period under consideration varies seasonally.

Based on the 2014-2015 natural gas usage & costs, the average price paid during the year was \$1.17 per therm. The total annual natural gas consumption for the 12-month period analyzed is 28,336 therms for a total cost of \$33,209.06.

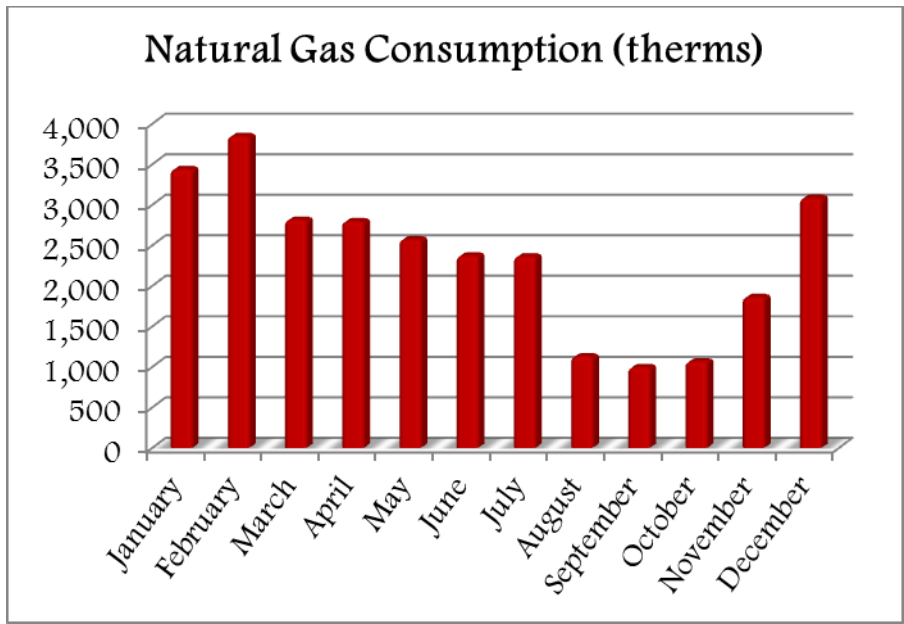
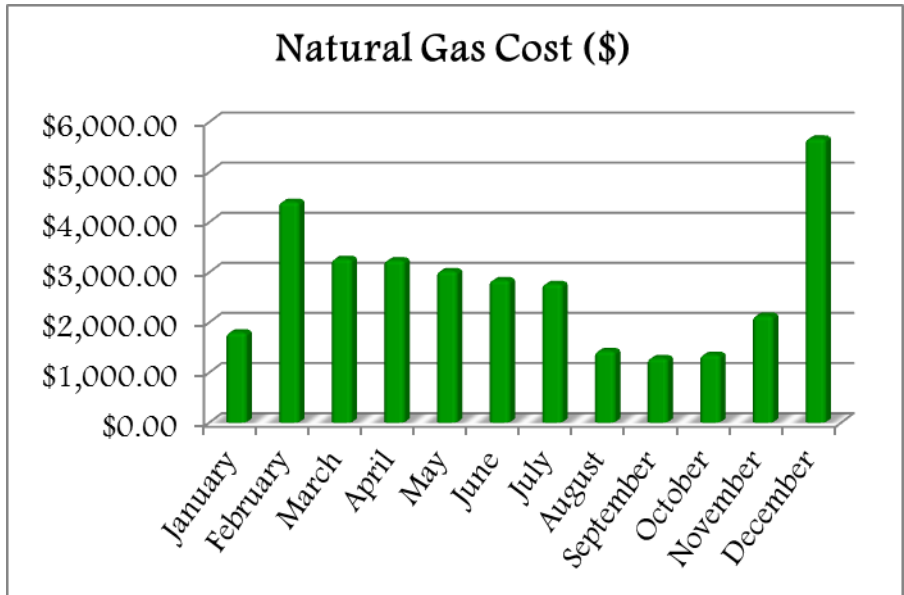
Natural Gas Consumption and Cost Data

BILLING MONTH	CONSUMPTION (THERMS)	UNIT COST/THERM	TOTAL COST
JANUARY	3,439	\$0.52	\$1,798.76
FEBRUARY	3,848	\$1.14	\$4,405.91
MARCH	2,814	\$1.16	\$3,266.74
APRIL	2,796	\$1.16	\$3,238.93
MAY	2,573	\$1.18	\$3,023.52
JUNE	2,372	\$1.20	\$2,843.50
JULY	2,361	\$1.17	\$2,767.42
AUGUST	1,128	\$1.26	\$1,426.69
SEPTEMBER	994	\$1.29	\$1,284.81
OCTOBER	1,066	\$1.27	\$1,352.28
NOVEMBER	1,861	\$1.15	\$2,132.15
DECEMBER	3,084	\$1.84	\$5,668.35
TOTAL	28,336	\$1.17	\$33,209.06

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12.3 WATER AND SEWER

The City of Milwaukie satisfies the Water and Sewer requirements of the facility.

There is one water meter at the site. The billing for the water and sewer is monthly. The water and sewer charges are paid by the housing authority.

The water consumption pattern remains more or less flat over the 12 month period.

Based on the 2014-2015 water and sewer usage & costs, the average price paid during the year was \$14.46 per-gallon. The total annual water and sewer consumption for the 12-month period analyzed is 5,244 kGal for a total cost of \$75,816.52.

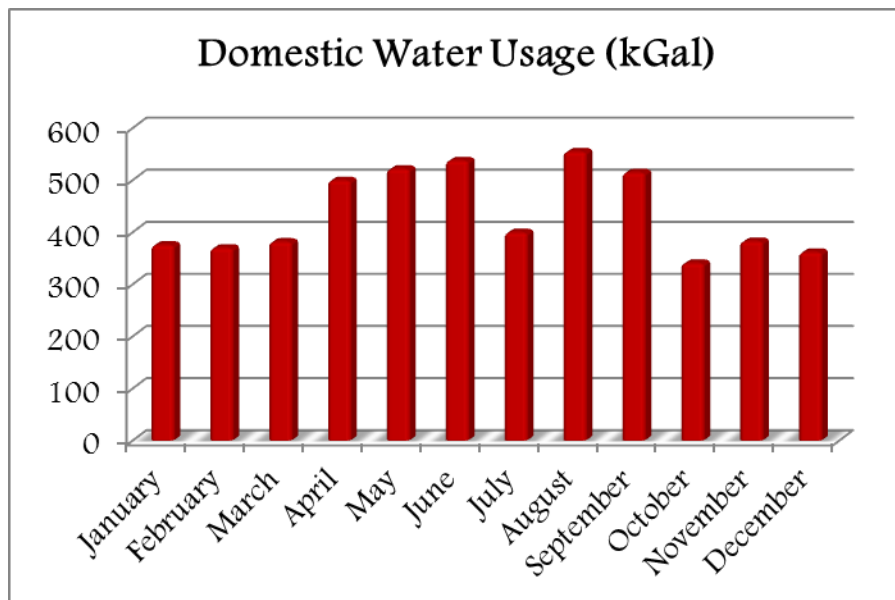
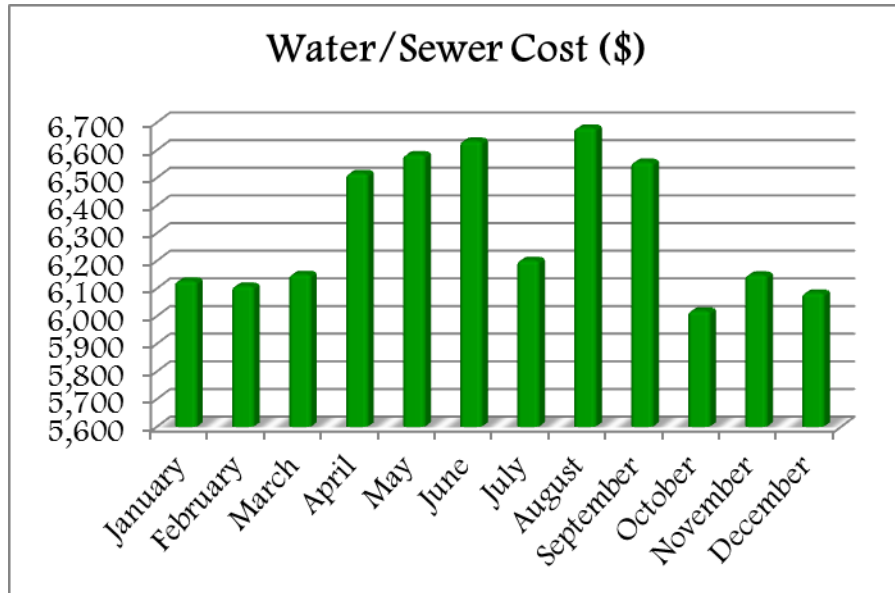
Water and Sewer Consumption and Cost Data

BILLING MONTH	CONSUMPTION (GALLONS)	UNIT COST/GALLON	TOTAL COST
January	376	\$16.30	6,128
February	370	\$16.51	6,109
March	382	\$16.10	6,152
April	500	\$13.03	6,516
May	522	\$12.61	6,584
June	538	\$12.33	6,634
July	400	\$15.50	6,202
August	555	\$12.04	6,681
September	515	\$12.73	6,557
October	341	\$17.65	6,020
November	383	\$16.06	6,149
December	362	\$16.81	6,085
Total	5,244	\$14.46	\$75,816.52

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13 HUD BENCHMARKING

The HUD Benchmarking tools provide a comparison of the energy and water consumption at multi-family properties against HUD's portfolio. The benchmarking tools take into account the property location, size, and configuration to rank the subject property amongst similar building. The result is a percentile score which indicates the percentage of properties that the building is performing better than. A score of 50 indicates average performance, while a score of 75 would indicate that the property is performing better than 75% of peer buildings.

The results from the utility analysis and the HUD Energy Benchmarking Tool indicate that the subject property is significantly below average for energy consumption with a 37 out of 100 as scored against peers.

HUD Residential Energy Use Benchmarking Tool

For single-family, semi-detached, row/townhouse, multi-family walk-up, and elevator buildings.

The HUD Residential Energy Use Benchmarking Tool quantifies the performance of a user-defined building relative to the family of HUD residential buildings. A score of 75 denotes performance at the top 25th percentile of HUD residential buildings. A score of 50 denotes performance at the 50th percentile (in the middle) of HUD residential buildings.

Building Description

Building Name: Hillside Manor

(optional entry)

5-digit Zip Code: 97222

Not Sure?

Heating Degree Days: 4522

Cooling Degree Days: 371

Is This a Multifamily Building with Central Laundry? (Y/N)
Is this a Multi-Family Walkup Building? (Y/N)

Building Description:	Gross Floor Area (ft ²)	Total Number of Units	Is This a Multifamily Building with Central Laundry? (Y/N)	Is this a Multi-Family Walkup Building? (Y/N)	Heated Floor Area (ft ²)	Year Built
	78,500	100	Y	n	78,500	1970

Annual Consumption

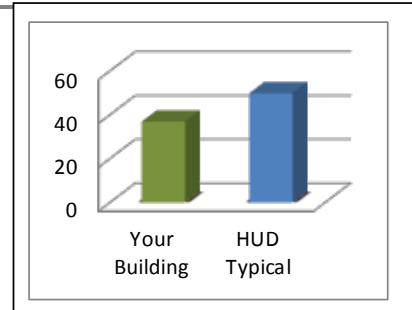
Select Units: Electricity (kWh), Gas (Therm), #2 Fuel Oil (Gal), #4 Fuel Oil (Gal), District Steam (kLbs), District Hot Water (MMBtu), Propane (Gal)

Energy	846,982	28,336					
Cost (\$)	70,919	33,209					

Calculated unit cost: Electricity (\$0.08/kWh), Gas (\$1.17/therm), #2 Fuel Oil (\$/gallon), #4 Fuel Oil (\$/gallon), District Steam (\$/kLbs), District Hot Water (\$/kBtu), Propane (\$/gallon)

Results

	Your Building	HUD Typical
Score Against Peers	37	50
Building Site Energy Use (kBtu/year)	5,723,503	4,850,882
Site Energy Use Intensity (kBtu/ft²-year)	72.9	61.8
Energy Cost Intensity (\$/ft²-year)	1.33	1.12
Total Annual Energy Cost (\$/year)	104,128	88,252



GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

The results from the utility analysis and the HUD Water Benchmarking Tool indicate that the subject property is significantly below the average benchmark for water consumption with a 28 out of 100 as scored against peers.

HUD Residential Water Use Benchmarking Tool

For single-family, semi-detached, row/townhouse, multi-family walk-up and elevator buildings.

The HUD Residential Water Use Benchmarking Tool quantifies the performance of a user-defined building relative to the family of HUD residential buildings. A score of 75 denotes performance at the top 25th percentile of HUD residential buildings. A score of 50 denotes performance at the 50th percentile (in the middle) of HUD residential buildings.

Building Description

Building Name: (optional entry)

5-digit Zip Code:

Mapping Location: **Portland, OR**

Building(s) is Single-Family Detached or Semi- Detached? (Y/N)	Is Residents Water Use Paid Directly by the PHA? (Y/N)	Number of Units in Building(s)	Number of Units in Building(s) with In-Unit Laundry Hookups or Central Laundry Access?	How Many Buildings share this Water Meter?			
Gross Floor Area of Building(s) (ft2)	Building Description:	78,500	N	Y	100	100	1

Annual Consumption

Building Annual Water Use: (gallons/year)

Building Annual Water Use Cost: (\$/year)

Average Annual Water Cost: **\$1.4** (\$/100 gallons)

Results

	Your Building	HUD Typical
Score Against Peers	28	50
Annual Water Use (gal/year)	5,244,000	3,819,768
Annual Water Use Intensity (gal/ft2-year)	66.8	48.7
Annual Water Cost Intensity (\$/ft2-year)	0.97	0.70
Total Annual Water Cost (\$/year)	75,817	55,226



14 RECOMMENDED OPERATIONS AND MAINTENANCE PLAN

The quality of the maintenance and the operation of the facility's energy systems have a direct effect on its overall energy efficiency. Energy-efficiency needs to be a consideration when implementing facility modifications, equipment replacements, and general corrective actions. The following is a list of activities that should be performed as part of the routine maintenance program for the property. These actions will ensure that the energy conservation measures identified in this report will remain effective. The following general recommendations should be continued or implemented.

Building Envelope

1. Ensure that the building envelope has proper caulking and weather stripping.
2. Patch holes in the building envelope with foam insulation and fire rated caulk around combustion vents
3. Inspect building vents semiannually for bird infestation
4. Inspect windows monthly for damaged panes and failed thermal seals

Heating and Cooling

1. Ensure the duct work in unconditioned space is un-compromised and well insulated
2. Duct cleaning is recommended every 10 years. This should include sealing of ducts using products similar to 'aero-seal'
3. Ensure that the air dampers are operating correctly
4. Temperature settings reduced in unoccupied areas and set points seasonally adjusted.
5. Evaporator coils and condenser coils should be regularly cleaned to improve heat transfer
6. Refrigerant pipes should be insulated with a minimum of ¾" thick Elastometric Rubber Pipe Insulation
7. Ensure refrigerant pressure is maintained in the condensers
8. Change air filters on return vents seasonally. Use only filters with 'Minimum Efficiency Rating Value'(MERV) of 8

Central Domestic Hot Water

1. Never place gas-fired water heaters adjacent to return vents so as to prevent flame roll outs
2. Ensure the circulation system is on timer to reduce the losses through re-circulation
3. Ensure all hot water pipes are insulated with fiberglass insulation at all times
4. Replacement water heater should have Energy Factor (EF)>0.9

Tenant Space- Domestic Hot Water

1. Domestic hot water heater temperature set to the minimum temperature required (122F)

Lighting

1. Utilize bi-level lighting controls in stairwells and hallways.
2. Use energy efficient replacement lamps (28W T-8 and CFLs)
3. Clean lighting fixture reflective surfaces and translucent covers.
4. Ensure that timers and/or photocells are operating correctly on exterior lighting
5. Use occupancy sensors for offices and other rooms with infrequent occupancy

Existing Equipment and Replacements

1. Ensure that refrigerator and freezer doors close and seal correctly
2. Ensure kitchen and bathroom exhaust outside the building and the internal damper operates properly
3. Ensure that bathroom vents exhaust out
4. Office/ computer equipment either in the "sleep" or "off" mode when not used

15 APPENDICES

APPENDIX A: PHOTOGRAPHIC RECORD

APPENDIX B: SITE PLAN

APPENDIX C: SUPPORTING DOCUMENTATION

APPENDIX D: EMG ACCESSIBILITY CHECKLIST

APPENDIX E: PRE-SURVEY QUESTIONNAIRE

APPENDIX F: ACRONYMS

APPENDIX G: GLOSSARY OF TERMS - ENERGY AUDITS

APPENDIX H: ENERGY CONSERVATION MEASURES

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

APPENDIX A:
PHOTOGRAPHIC RECORD

EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #1:	Property sign
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Photo #2:	North elevation
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Photo #3:	South elevation
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Photo #4:	West elevation
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Photo #5:	South elevation
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Photo #6:	Typical balconies
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EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #7:	North elevation
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Photo #8:	East elevation
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Photo #9:	Roof
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Photo #10:	Roof
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Photo #11:	Roof finishes
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Photo #12:	Roof finishes
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EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #13: Typical corridor



Photo #14: Fellowship room



Photo #15: Common area kitchen equipment



Photo #16: Office lobby



Photo #17: Office area



Photo #18: Laundry room

EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #19: Typical kitchen finishes



Photo #20: Typical accessible kitchen cabinets



Photo #21: Typical kitchen cabinets



Photo #22: Typical kitchen finishes



Photo #23: Typical bedroom



Photo #24: Typical living room

EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #25: Typical apartment finishes



Photo #26: Typical apartment finishes



Photo #27: Typical bathroom

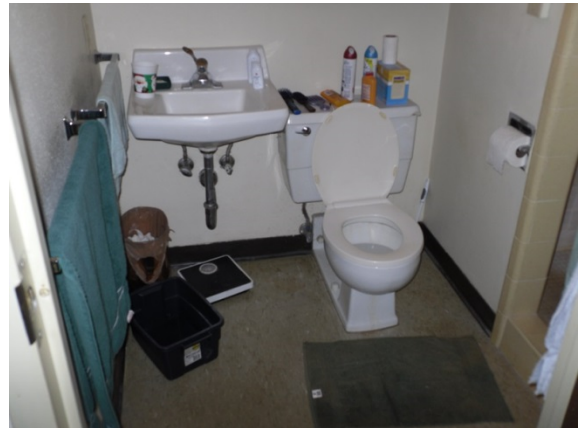


Photo #28: Typical bathroom



Photo #29: Typical bathtub



Photo #30: Typical accessible shower

EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #31: Electrical meter



Photo #32: Gas meter



Photo #33: Water heaters



Photo #34: Water heater control panel



Photo #35: Main transformer



Photo #36: Typical PTAC at apartment unit

EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #37:	Generator
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Photo #38:	Generator
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Photo #39:	Exhaust fan
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Photo #40:	Fire alarm
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Photo #41:	Package unit
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Photo #42:	Space heater
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EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #43: Elevator equipment

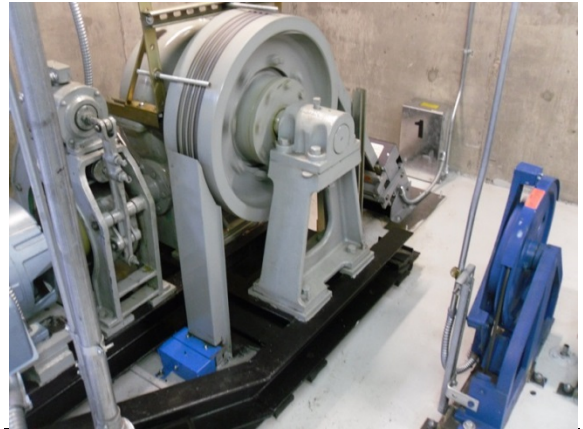


Photo #44: Elevator equipment



Photo #45: Split Air Conditioner unit



Photo #46: Split Air Conditioner unit

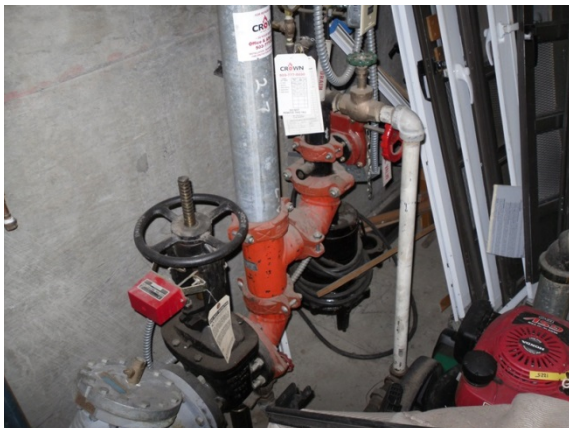


Photo #47: Typical piping



Photo #48: Fire protection equipment

EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #49:	Maintenance parking lot
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Photo #50:	Upper parking lot
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Photo #51:	Accessible sidewalk
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Photo #52:	Asphalt paving
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Photo #53:	Typical sidewalk
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Photo #54:	Lower parking lot
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EMG PHOTOGRAPHIC RECORD

Project No.: 115800.15R000-004.308

Project Name: Hillside Manor



Photo #55:	Community garden
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Photo #56:	Typical landscaping
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Photo #57:	Typical landscaping
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Photo #58:	North lawn
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Photo #59:	Community garden
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Photo #60:	Patio
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GREEN PHYSICAL NEEDS ASSESSMENT

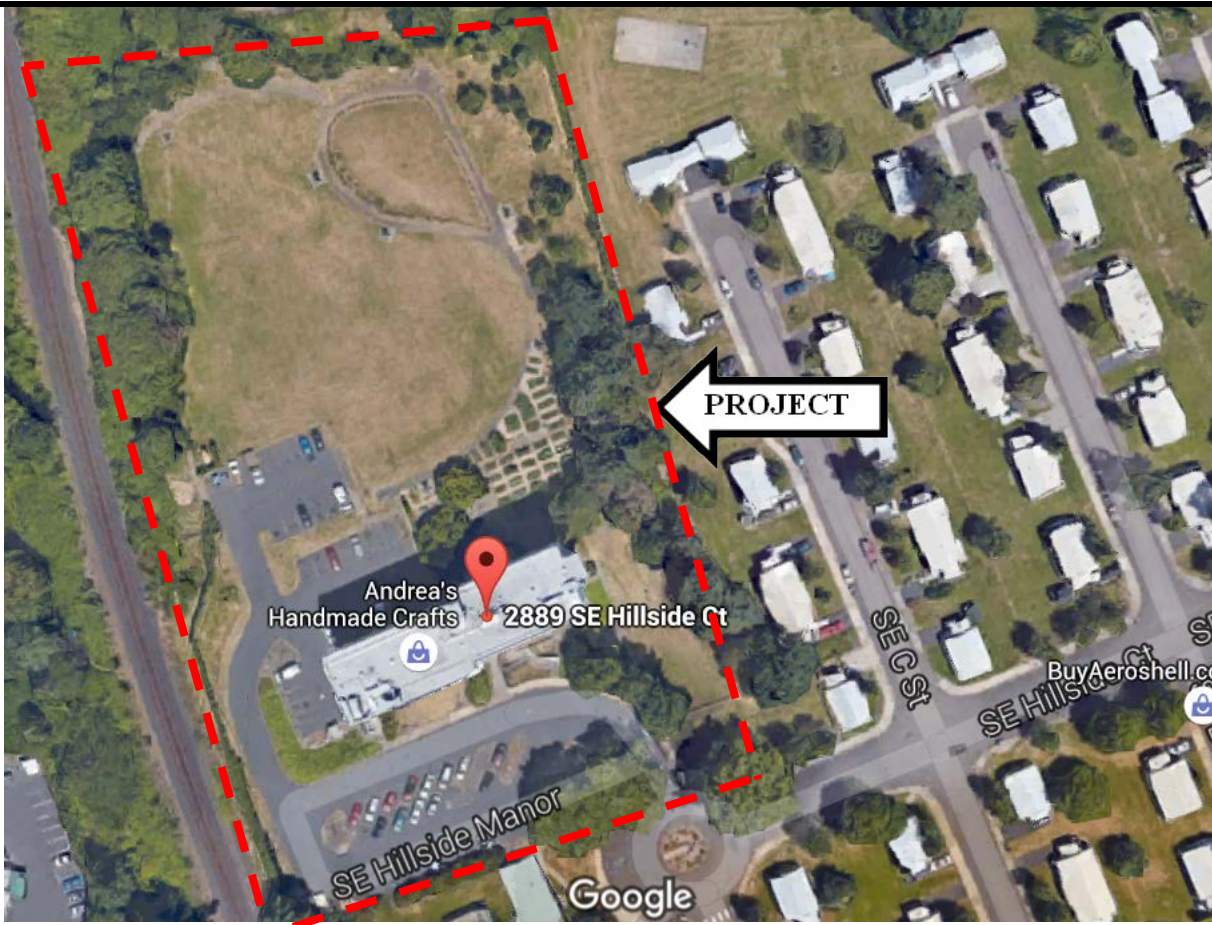
HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222


EMG PROJECT NO: 115800.15R000-004.308

APPENDIX B:
SITE PLAN



Site Plan



	<p><u>Source:</u></p> <p>Google Maps</p>	<p><u>Project Number:</u></p> <p>115800.15R000-004.308</p>
	<p>The north arrow indicator is an approximation of 0° North.</p>	<p><u>Project Name:</u></p> <p>Hillside Manor</p> <p><u>On-Site Date:</u></p> <p>October 7, 2015</p>

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

APPENDIX C:
SUPPORTING DOCUMENTATION

DOE Cool Roof Calculator

Estimates Cooling and Heating Savings for Flat Roofs with Non-Black Surfaces

- Developed by the U.S. Department of Energy's Oak Ridge National Laboratory (Version 1.2)
- This version of the calculator is for small and medium-sized facilities that purchase electricity without a demand charge based on peak monthly load. If you have a large facility that purchases electricity with a demand charge, run the [CoolCalcPeak](#) version in order to include the savings in peak demand charges from using solar radiation control.
- What you get out of this calculator is only as good as what you put in. If you [CLICK HERE](#), you'll find help in figuring out the best input values. Some things, such as the weathering of the solar radiation control properties and the effects of a plenum, are especially important. You'll also find help in figuring out your heating and cooling system efficiencies and proper fuel prices.
- To compare two non-black roofs, print out results of separate estimates for each vs. a black roof. Manually compute the difference in savings to compare the two non-black roofs.
- If your energy costs are determined by on-peak and off-peak rates, print out results of separate estimates with on-peak and off-peak rates for the same roof. Judge what fraction of the savings with on-peak rates is appropriate.

My State

Oregon ▼

My City

Portland ▼

Click to see [Data for All 243 Locations](#)

My Proposed Roof:

R-value (HIGH=20; AVG=10; LOW=5) [h·ft²·°F/Btu]

20

Solar reflectance, SR (HIGH=80; AVG=50; LOW=10) [%]

80

Infrared emittance, IE (HIGH=90; AVG=60; LOW=10) [%]

90

My Energy Costs and Equipment Efficiencies

Summertime cost of electricity (HIGH=0.20; AVG=0.10; LOW=0.05) [\$/KWh]

.08

Air conditioner efficiency (Coefficient of Performance) (HIGH=2.5; AVG=2.0; LOW=1.5)

2

Energy source for heating (choose one)

Electricity Fuel

If electricity, wintertime cost (HIGH=0.20; AVG=0.10; LOW=0.05) [\$/KWh]

.08

If fuel, cost (Natural gas: HIGH=1.00; AVG=0.70; LOW=0.50) [\$/Therm]

(Fuel oil: 2002 East coast=0.85; 2002 Midwest=0.70) [\$/Therm]

Heating system efficiency (Furnace or boiler: HIGH=0.8; AVG=0.7; LOW=0.5)

(Electric heat pump: HIGH=2.0; AVG=1.5) (Electric resistance: 1.0)

Net Savings [\$/ft² per year]Cooling savings [\$/ft² per year]Heating savings (heating penalty if negative) [\$/ft² per year]**Insulation in Black Roof to Yield Same Annual Energy Savings:**Upgrade from R- to R- [h·ft²·°F/Btu]**Details of Comparison:**

Heating degree days for location chosen [Annual °F-day]

Cooling degree days for location chosen [Annual °F-day]

Solar load for location chosen [Annual Average Btu/ft² per day]Cooling load for black roof (SR=5%;IE=90%) [Btu/ft² per year]Heating load for black roof (SR=5%;IE=90%) [Btu/ft² per year]Cooling load for proposed roof [Btu/ft² per year]Heating load for proposed roof [Btu/ft² per year]

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

APPENDIX D:
EMG ACCESSIBILITY CHECKLIST

EMG ACCESSIBILITY CHECKLIST

Property Name: Hillside Manor

Date: October 7, 2015

Project Number: 115800.15R000-004.308

EMG Accessibility Checklist						
UFAS/ADA Accessibility						
	Building History	Yes	No	N/A	Unk	Comments
1.	Has the management previously completed an accessibility review?		√			
2.	Does an accessibility compliance plan exist for the property?		√			
3.	Has the plan been reviewed/approved by outside agencies (engineering firms, building department, other agencies)?			√		
4.	Have any accessibility related complaints been received in the past?		√			
5.	Is the property Section 504 compliant?	√				
	Building Access	Yes	No	N/A	Comments	
1.	Are there an appropriate number (per regulation) of wheelchair accessible parking spaces available at the rental office (96" wide/ 60" aisle)	√				
2.	Is there at least one wheelchair accessible van parking space (96" wide/ 96" aisle) for every 8 standard accessible spaces?	√				
3.	Are accessible parking spaces located on the shortest accessible route of travel from an accessible building entrance?	√				
4.	Does signage exist directing you to wheelchair accessible parking and an accessible building entrance?	√				
5.	Is there a ramp from the parking to an accessible building entrance (1:12 slope or less)			√		
6.	If the main entrance is inaccessible, are there alternate accessible entrances?			√		
7.	Is the accessible entrance doorway at least 32" wide?	√				
8.	Is the door handle easy to open? (lever/push type knob, no twisting required, no higher than 48" above floor)	√				

EMG Accessibility Checklist

EMG Accessibility Checklist					
Building Access		Yes	No	N/A	Comments
9.	Are entry doors other than revolving doors available?	√			
Rental office		Yes	No	N/A	Comments
1.	Is the entry door to the rental office 3' wide with no step or threshold over ½" tall?	√			
2.	Is there a counter or table at 30" high for wheelchair access to fill out a rental application?	√			
3.	Is there clearance behind the counter for an employee in a wheelchair?	√			
Building Corridors and Elevators		Yes	No	N/A	Comments
1.	Is the path of travel free of obstructions and wide enough for a wheelchair (at least 60" wide)?	√			
2.	Are floor surfaces firm, stable and slip resistant (carpets wheelchair friendly)?	√			
3.	Do obstacles (phones, fountains, etc.) protrude no more than 4" into walkways or corridor?		√		
4.	Are elevators controls low enough to be reached from a wheelchair (48" front approach/54" side approach)?	√			
5.	Are there raised elevator markings in Braille and standard alphabet for the blind?	√			
6.	Are there audible signals inside cars indicating floor changes?	√			
7.	Do elevator lobbies have visual and audible indicators of the cars arrival?	√			
8.	Does the elevator interior provide sufficient wheelchair turning area (51" x 68" minimum)?	√			
9.	Is at least one wheelchair accessible public phone available?			√	No public phones
10	Are wheelchair accessible facilities (restrooms, exits, etc.) identified with signage?	√			
Common Area Restrooms		Yes	No	N/A	Comments
1.	Are common area public restrooms located on an accessible route?	√			
2.	Are pull handles push/pull or lever type?	√			
3.	Are access doors wheelchair accessible (at least 32" wide)?	√			

EMG Accessibility Checklist

EMG Accessibility Checklist					
Common Area Restrooms		Yes	No	N/A	Comments
4.	Are public restrooms large enough for wheelchair turnaround (60" turning diameter)?	√			
5.	Are stall doors wheelchair accessible (at least 32" wide)?	√			
6.	If stalls are too narrow can the toilet room be converted to a single occupant toilet room?			√	
7.	Are grab bars provided in toilet stalls (33"-36" above floor)?	√			
8.	Do sinks provide clearance for a wheelchair to roll under (29" clearance)?	√			
9.	Are sink handles operable with one hand without grasping, pinching or twisting?	√			
10.	Are exposed pipes under sink sufficiently insulated against contact?	√			
11.	Are soap dispensers, towel, etc. reachable (48" from floor for frontal approach, 54" for side approach)?	√			
12.	Is the base of the mirror no more than 40" off floor?	√			
Common Area Kitchen		Yes	No	N/A	Comments
1.	In a "U"-shaped kitchen is there 60" clear floor space width?	√			
2.	In a "U"-shaped kitchen with base cabinet removed from beneath sink, is there a minimum of 40" width?	√			
3.	In a "L"-shaped kitchen, is there a 40" width minimum maintained?			√	
4.	Are countertops a maximum of 24" deep and 36" high?	√			
5.	Knee space beneath cabinetry is 30" wide and 27" high.	√			
6.	Is insulation installed below sinks on piping?	√			
7.	Are adaptable units equipped with removable or retractable cabinetry fronts beneath sink or stove?		√		
Common Area Laundry rooms		Yes	No	N/A	Comments
1.	Are the laundry rooms located on an accessible route?	√			
2.	Are the door handles push/pull or lever type?	√			

EMG Accessibility Checklist

Common Area Laundry rooms					
		Yes	No	N/A	Comments
3.	Are the access doors wheelchair accessible (at least 32" clear width)?	√			
4.	Are laundry rooms large enough for wheelchair turnaround (60" turning diameter)?	√			
5.	Is there a front load washing machine	√			
6.	If clothes folding tables are provided is one section at 32" high with a clear area below the table?	√			
Fair Housing Accessibility / Section 504					
Access to Unit					
		Yes	No	N/A	Comments
1.	Property management reports that the number of units currently accessible and those adaptable meet FHA requirements of all ground floor units or 100% for a high rise.	√			
2.	Are 5% of the units fully accessible to those individuals with mobility impairments and 2% of units accessible to those individuals with audio / visual impairments?	√			
3.	Are there any barriers or structural restrictions preventing access to the building?		√		
4.	Are the accessible units on an accessible route?	√			
5.	Is the apartment entry corridor 36" wide, door 32" wide (frame to frame), threshold height less than 1/2", and appropriate door hardware present?	√			
Unit Living Space					
		Yes	No	N/A	Comments
1.	Is there access throughout unit?	√			
2.	Are electrical outlets 15" minimum above floor minimum?	√			
3.	Are environmental controls and switches 48" maximum above floor or lower?	√			
Unit Bathroom					
		Yes	No	N/A	Comments
1.	Is entry door at least 32" wide frame-to-frame?	√			
2.	Are switches & outlets in accessible locations?	√			
3.	Are bathroom walls around the toilet and tub/shower reinforced?	√			

EMG Accessibility Checklist

EMG Accessibility Checklist					
	Unit Bathroom	Yes	No	N/A	Comments
4.	Is there a 30" x 48" clear floor space outside of door swing area?	√			
5.	Is there a 56" x 48" clear floor space in front of toilet (48" out from wall toilet is hung against)?	√			
6.	Is there a 30" x 48" clear floor space in front of lavatories (30" deep from front of counter)?	√			
7.	Is there a 30" x 48" clear floor space in front of tub/shower (30" out from tub/shower)?	√			
8.	Is vanity a maximum of 24" deep and 36" high?	√			
9.	Knee space beneath sink is 30" wide and 27" high.	√			
10.	Is shower stall 36"x 42" minimum with small lip?	√			
11.	Is insulation installed below sinks on piping?	√			
	Unit Kitchen	Yes	No	N/A	Comments
1.	In a "U"-shaped kitchen is there 60" clear floor space width?	√			
2.	In a "U"-shaped kitchen with base cabinet removed from beneath sink, is there a minimum of 40" width?	√			
3.	In a "L"-shaped kitchen, is there a 40" width minimum maintained?			√	
4.	Are countertops a maximum of 24" deep and 36" high?	√			
5.	Knee space beneath cabinetry is 30" wide and 27" high.	√			
6.	Is insulation installed below sinks on piping?	√			Required in adaptable unit regardless of occupancy.
7.	Are adaptable units equipped with removable or retractable cabinetry fronts beneath sink or stove?			√	

It is understood by the Client that the limited observation described herein does not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of EMG's Physical Condition Assessment. Only a representative sample of areas was observed and, other than as shown on the accessibility checklist, actual measurements were not taken to verify compliance.

ADAAG CRITERIA

Total Parking in Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
1001 and over	20 plus 1 for each 100 over 1000

For further information or a copy of the Americans with Disabilities Act Accessibility Guidelines contact 1-800-949-4ADA

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

APPENDIX E:
PRE-SURVEY QUESTIONNAIRE

PROPERTY CONDITION ASSESSMENT : PRE-SURVEY QUESTIONNAIRE

Name of Person Completing Questionnaire:	N/A - Not returned to EMG
Association with Property:	
Length of Association with Property:	
Date Completed:	
Phone Number:	
Property Name:	
EMG Project Number:	

Inspections		Date Last Inspected	List any Outstanding Repairs Required
1	Elevators		
2	HVAC, Mechanical, Electric, Plumbing		
3	Life-Safety/Fire		
4	Roofs		

Question	Response
5 List any major capital improvement within the last three years.	
6 List any major capital expenditures planned for the next year.	
7 What is the age of the roof(s)?	
8 What building systems (HVAC, roof, interior/exterior finishes, paving, etc.) are the responsibilities of the tenant to maintain and replace?	

Question	Yes	No	Unk	N/A	Comments
9 Are there any unresolved building, fire, or zoning code issues?					
10 Are there any "down" or unusable units?					
11 Are there any problems with erosion, stormwater drainage or areas of paving that do not drain?					
12 Is the property served by a private water well?					
13 Is the property served by a private septic system or other waste treatment systems?					
14 Are there any problems with foundations or structures?					
15 Is there any water infiltration in basements or crawl spaces?					
16 Are there any wall, or window leaks?					
17 Are there any roof leaks?					
18 Is the roofing covered by a warranty or bond?					
19 Are there any poorly insulated areas?					
20 Is Fire Retardant Treated (FRT) plywood used?					

PROPERTY CONDITION ASSESSMENT : PRE-SURVEY QUESTIONNAIRE

Question		Yes	No	Unk	N/A	Comments
21	Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?					
22	Are there any problems with the utilities, such as inadequate capacities?					
23	Are there any problems with the landscape irrigation systems?					
24	Has a termite/wood boring insect inspection been performed within the last year?					
25	Do any of the HVAC systems use R-11, 12, or 22 refrigerants?					
26	Has any part of the property ever contained visible suspect mold growth?					
27	Is there a mold Operations and Maintenance Plan?					
28	Have there been indoor air quality or mold related complaints from tenants?					
29	Is polybutylene piping used?					
30	Are there any plumbing leaks or water pressure problems?					
31	Are there any leaks or pressure problems with natural gas service?					
32	Does any part of the electrical system use aluminum wiring?					
33	Do Residential units have a less than 60-Amp service?					
34	Do Commercial units have less than 200-Amp service?					
35	Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?					
36	Is there any pending litigation concerning the property?					
37	Has the management previously completed an ADA review?					
38	Have any ADA improvements been made to the property?					
39	Does a Barrier Removal Plan exist for the property?					
40	Has the Barrier Removal Plan been approved by an arms-length third party?					
41	Has building ownership or management received any ADA related complaints?					
42	Does elevator equipment require upgrades to meet ADA standards?					
43	Are there any problems with exterior lighting?					
44	Are there any other significant issues/hazards with the property?					

PROPERTY CONDITION ASSESSMENT : PRE-SURVEY QUESTIONNAIRE

Question		Yes	No	Unk	N/A	Comments
45	Are there any unresolved construction defects at the property?					

Comments

--

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

On the day of the site visit, provide EMG's Field Observer access to all of the available documents listed below. Provide copies if possible.

INFORMATION REQUIRED

1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.
2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.
3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s).
4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet.
5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.
6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents.
7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.
8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors.
9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements.
10. Records of system & material ages (roof, MEP, paving, finishes, furnishings).
11. Any brochures or marketing information.
12. Appraisal, either current or previously prepared.
13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).
14. Previous reports pertaining to the physical condition of property.
15. ADA survey and status of improvements implemented.
16. Current / pending litigation related to property condition.

Your timely compliance with this request is greatly appreciated.

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

APPENDIX F: ACRONYMS

ASTM E2018-08 Acronyms

ADA - The Americans with Disabilities Act

ASTM - American Society for Testing and Materials

BOMA - Building Owners & Managers Association

BUR - Built-up Roofing

DWV – Drainage, Waste, Ventilation

EIFS - Exterior Insulation and Finish System

EMF – Electro Magnetic Fields

EMS - Energy Management System

EUL - Expected Useful Life

FEMA - Federal Emergency Management Agency

FFHA - Federal Fair Housing Act

FIRMS - Flood Insurance Rate Maps

FRT- Fire Retardant Treated

FOIA - U.S. Freedom of Information Act (5 USC 552 et seq.) and similar state statutes.

FOIL - Freedom of Information Letter

FM - Factory Mutual

HVAC - Heating, Ventilating and Air-conditioning

IAQ - Indoor Air Quality

MEP – Mechanical, Electrical & Plumbing

NFPA - National Fire Protection Association

PNA – Capital Needs Assessment

PCR - Property Condition Report

PML - Probable Maximum Loss

RTU - Rooftop Unit

RUL - Remaining Useful Life

STC – Sound Transmission Class

UBC – Uniform Building Code

GREEN PHYSICAL NEEDS ASSESSMENT

HILLSIDE MANOR
2889 SOUTHEAST HILLSIDE STREET
MILWAUKIE, OREGON 97222

EMG PROJECT NO: 115800.15R000-004.308

APPENDIX G:
GLOSSARY OF TERMS - ENERGY AUDITS

Glossary of Terms and Acronyms - Energy Audits

ECM – Energy Conservation Measures are projects recommended to reduce energy consumption. These can be No/Low cost items implemented as part of routine maintenance or Capital Cost items to be implemented as a capital improvement project.

Initial Investment – The estimated cost of implementing an ECM project. Estimates typically are based on R.S. Means Construction cost data and Industry Standards.

Annual Energy Savings – The reduction in energy consumption attributable to the implementation of a particular ECM. These savings values do not include the interactive effects of other ECMs.

Cost Savings – The expected reduction in utility or energy costs achieved through the corresponding reduction in energy consumption by implementation of an ECM.

Simple Payback Period – The number of years required for the cumulative value of energy or water cost savings less future non-fuel or non-water costs to equal the investment costs of the building energy or water system, without consideration of discount rates.

EUL – Expected Useful Life is the estimated lifespan of a typical piece of equipment based on industry accepted standards.

RUL – Remaining Useful Life is the EUL minus the effective age of the equipment and reflects the estimated number of operating years remaining for the item.

SIR – The savings-to-investment ratio is the ratio of the present value savings to the present value costs of an energy or water conservation measure. The numerator of the ratio is the present value of net savings in energy or water and non-fuel or non-water operation and maintenance costs attributable to the proposed energy or water conservation measure. The denominator of the ratio is the present value of the net increase in investment and replacement costs less salvage value attributable to the proposed energy or water conservation measure. It is recommended that energy-efficiency recommendations be based on a calculated SIR, with larger SIRs receiving a higher priority. A project typically is recommended only if the SIR is greater than or equal to 1.0, unless other factors outweigh the financial benefit.

Life Cycle Cost – The sum of the present values of (a) Investment costs, less salvage values at the end of the study period; (b) Non-fuel operation and maintenance costs; (c) Replacement costs less salvage costs of replaced building systems; and (d) Energy and/or water costs.

Life Cycle Savings – The sum of the estimated annual cost savings over the EUL of the recommended ECM, expressed in present value dollars.

Building Site Energy Use Intensity – The sum of the total site energy use in thousand of Btu per unit of gross building area. Site energy accounts for all energy consumed at the building location only not the energy consumed during generation and transmission of the energy to the site.

Building Source Energy Use Intensity – The sum of the total source energy use in thousand of Btu per unit of gross building area. Source energy is the energy consumed during generation and transmission in supplying the energy to your site.

Building Cost Intensity – This metric is the sum of all energy use costs in dollars per unit of gross building area.

Greenhouse Gas Emissions – Although there are numerous gases that are classified as contributors to the total for Greenhouse Emissions, the scope of this energy audit focuses on carbon dioxide (CO₂). Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement).

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APPENDIX H:
ENERGY CONSERVATION MEASURES

Replace Older Refrigerators with Energy Star Rated Refrigerators

Step 1a Obtain total cost of replacing the older refrigerators with Energy Star rated refrigerators:

20	Units	x	\$629	each =	\$12,580	(Green Cost)
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Step 1b Obtain total cost of replacing the older refrigerators with traditional refrigerators:

20	Units	x	\$729	each =	\$14,580	(Traditional Cost)
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Step 2 Refrigerator and Utility Information:

a	Total number of refrigerators to be replaced	20	
b	Useful Life refrigerators:	15	years
c	Average age of existing refrigerators:	15	years
d	Remaining Life of existing refrigerators:	0	years
e	Cost of electricity:	0.084	\$/kWh

Step 3 Existing Refrigerator Model:
Approximate annual energy use of each existing refrigerator:

1,195.00	kWh/yr
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Step 4 Traditional Refrigerator Model:
Approximate annual energy use of each traditional refrigerator replacement:

443.00	kWh/yr
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Step 5 Green Refrigerator Model:
Approximate annual energy use of each old green refrigerator replacement:

355.00	kWh/yr
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Step 6 Calculate Annual Savings vs. Existing Refrigerators:

Energy Savings per Unit:	1195	-	355	=	840	kWh/yr
Total Energy Savings	20	x	840	=	16,800	kWh/yr
Total Cost Savings:	16800	x	0.08	=	\$1,406.68	\$/yr

Step 7 Calculate Annual Savings vs. Traditional Refrigerators:

Energy Savings per Unit:	443	-	355	=	88	kWh/yr
Total Energy Savings	20	x	88	=	1,760	kWh/yr
Total Cost Savings:	1760	x	0.08	=	\$147.37	\$/yr

Simple Payback Period $\frac{\$12,580}{\$1,407} = 8.9$ years

Energy Conservation Measure
Replace Older Inefficient Air Conditioners - 3 ton units

Step 1	Obtain total cost of replacing existing air conditioners with efficient units:				
		1	Air Conditioners x	3,575	per unit
				3,575	\$
Step 2	Transfer the following information from the Survey:				
4-55	a SEER rating of existing AC units:			8	SEER
4-56	b Cooling capacity of existing AC units:			3	Tons
4-54	c Number of existing AC units:			1	
5-9	d Cost of electricity:			0.084	\$/kWh
Step 3					
Table 1	Annual cooling hours			379	
Step 4	Existing seasonal energy efficiency ratio (SEER):				
				8	
Step 5	Calculate existing energy use per air conditioner:				
		Cooling Hrs	x	(kBtu)	/
		379		36.00	SEER
					8
					=
					1705.5
					kWh/yr
Step 6	Calculate new energy use per air conditioner:				
		Cooling Hrs	x	(kBtu)	/
		379		36.00	SEER
					16
					=
					852.75
					kWh/yr
Step 7	Estimate annual energy savings:				
		5	-	6	2c
		1706		852.75	1.00
					=
					852.75
					kWh/yr
Step 8	Calculate annual cost savings:				
		7	x	2d	
		853		0.08	=
					71.40
					\$/yr
Step 9	Calculate payback period:				
		1	/	8	
		3575.00		71.40	=
					50.07
					yrs

Energy Conservation Measure
Replace Newer PTAC Units with PTHP Units

Step 1 Obtain total cost of replacing existing air conditioners with efficient units:

101	PTAC Units	x	\$2,170	per unit	=	\$219,170	\$
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Step 2 Transfer the following information from the Survey:

EER rating of existing PTAC units:	10.0	EER
Cooling capacity of existing PTAC units:	15000	Btu/hr
Heating capacity of existing PTAC units:	4	kW
Number of existing AC units:	101	
Cost of electricity:	0.084	\$/kWh

Step 3

Annual cooling hours	379	hours
Annual heating equipment hours	1341	hours
Heat Pump Heating Season Time (%)	33%	

Step 4

Existing energy efficiency ratio:	10.0	EER
Replacement unit energy efficiency ratio:	11.7	EER
Replacement unit Coefficient of Performance:	3.4	COP

Heat Pump Input Power $\frac{4 \text{ kW}}{3.4 \text{ COP}} = 1.18 \text{ kW}$

Step 5 Calculate existing energy use per PTAC:

Cooling (DX)	Hours	kBtu	EER	=	kWh
	379	15.00	10.0	=	569
Heating (Resistance)	Hours	kW	=	kWh	
	1341	4.00	=	5362	
Total					5931

Step 6 Calculate energy use per replacement PTHP:

Cooling (Heat Pump)	Hours	kBtu	EER	=	kWh
	379	15.00	11.7	=	486
Heating (Heat Pump)	Hours	%	kW	=	kWh
	1341	0.33	1.2	=	526
Heating (Resistance)	Hours	%	kW	=	kWh
	1341	0.67	4.0	=	3575
Total					4586

Step 7 Estimate annual energy savings:

	5	-	6	x	2c	=	kWh/yr
	5931	-	4586	x	101.00	=	135769

Step 8 Calculate annual cost savings:

	7	x	2d	=	\$/yr
	135769	x	0.08	=	11368

Step 9 Calculate payback period:

	1	/	8	=	19.28	yrs
	219170.00	/	11368.10	=	19.28	yrs

Energy Conservation Measure
Replace Central Water Heater - 600000 Btu/hr
Maintenance Shop

Step 1 Obtain total cost of replacing the water heaters, including equipment, labor, structural alterations, etc.

	\$9,881	\$
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Step 2 Transfer the following information from the Survey:

a Estimated Annual operating hours:	1,095	hours
b Input Capacity of Existing DWH	600,000	Btu/hr
c Number of DWH	2	
d Combustion efficiency of existing DWHs	80	%
e Cost of heating fuel: Natural Gas:	\$1.17	\$/therm

Step 3 Estimate annual energy consumption of Existing DWH:

Existing DWH Input Rate:	600000.00	/	100000.00	=	6.00	therms/hr
Annual Operating Hours:					1,095	hours
Standard DWH Consumption:					6570	therms
Existing DWH Ratio to Standard:	80	/	80	=	1.00	
Existing DWH Consumption:	1.00	x	6570.00	=	6570	therms

Step 4 Estimate annual energy consumption of Energy Star DWH:

Existing DWH Output:	6570	x	0.80	=	5256	therms
New DWH Efficiency:					96	%
New DWH Input:	5256	/	0.96	=	5475	therms

Step 5 Calculate annual energy and cost savings:

Energy Saved per DWH:	6570	-	5475	=	1095	therms
Total Energy Saved:	1095	x	2.00	=	2190	therms
Cost Savings:	2190	x	1.17	=	\$2,562	\$/yr

Step 6 Calculate payback period:

	\$9,881	/	\$2,562	=	3.86	yrs
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Energy Conservation Measure

Replace Older Plumbing Fixtures with Low Flow Devices

Input Data:

Step 1	Number of residents	101			
	Total annual use days	365			
		Water closet	Sinks	Shower	
	Existing water controls in gallons per use	0	2.2	2.5	
	low -flow water controls in gallons per use	1.6	1.5	2	
	Low-flow replacement cost	\$420.00	\$4.00	\$75.00	
Step 2		Quantity	Daily Usage Assumption		
	Total number of old water closets	0	3.9	flushes	
	Total number of sinks to be upgraded	202	6.0	minutes	
	Total number of shower heads to be upgraded	101	10.0	minutes	
	Total Water Rate	\$ 0.0145 /gal			
Step 3		Calculations:			
	Water conservation method	Total to be replaced	Cost of replacement	Total cost	
	Replace existing with low flow water closets	0	\$420	\$0.00	
	Install aerators on existing faucet controls	202	\$4	\$808.00	
	Replace existing shower heads	101	\$75	\$7,575.00	
			Total	\$8,383.00	
	Results				
	Annual Savings	Annual time used	Gallons saved	Annual cost savings	Payback
	Annual water closet flushes (flushes)	0	0	\$0.00	#DIV/0!
	Annual sink use (minutes)	442,380	309,666	\$4,477.08	0.180474843
	Annual shower use (minutes)	368,650	184,325	\$2,664.93	2.842478781
		Total	493,991	\$7,142.01	
	Simple Payback		1.17	years	