



CITY OF DULUTH
411 W. 1st Street
Duluth, Minnesota 55802

RE: RFQ/RFP
Energy Audits
City Wide – All Structures - Duluth, MN.

The City of Duluth is requesting qualifications and proposals from interested engineering & energy audit teams for professional services related to performing citywide energy audits to all city structures in Duluth, Minnesota with financial assistance from an ARRA Grant. A project scope, inclusive of audit requirements and possible formatted workbook is attached.

It is the intention of the City to review your submitted qualifications & proposals in order to short-list interested teams for further consideration. The short-listed teams will be interviewed by a City of Duluth selection committee at a later, to be announced, date. It is our goal to send a final contract for services to the City Council for approval in April of this year. All work associated with this energy audit shall be completed in 2010.

Selection criteria will include, but will not be limited to, a strong demonstrated emphasis and past experience in performing comprehensive energy audits for public buildings, public safety facilities, fire stations, recreation centers, pump houses and civic structures. We are interested in reviewing your experience relating to sustainability, functionality, building operational alternatives, energy conservation and your team qualifications. Your team's proposed fee structure and a brief statement of your team's ability to comply with the owner's project and estimated time schedule.

Should your firm and/or team be interested in being considered for this project, please submit seven (7) copies of the following information, in the order indicated below:

Request for Qualifications
Comprehensive Energy Audits – City of Duluth, Minnesota

All responses are due by 2pm, April 6, 2010

I. Background:

The City of Duluth is seeking professional assistance in conducting comprehensive, commercial energy audits in all of its facilities within the City of Duluth, Minnesota. The

City of Duluth has received a American Recovery & Reinvestment Grant (ARRA) from the United States government.

The City of Duluth is performing energy audits on 96 of its occupied structures. Current facility information is attached for your review and convenience. It is anticipated the selected consultant will review all sites to create baseline information as required to perform the task indicated. Basic infrastructure characteristics, current energy consumptions, existing building foot print, photographs and all pertinent information required to conduct energy audits on these structures will need to be generated by this contract.

II. Project Description

The City of Duluth is requesting qualifications from firms for the preparation of comprehensive energy audits for all of its current structures. In an effort to capitalize on current energy efficiencies and current technologies, we hope to create a plan of action in which significant energy and operational cost savings may be realized immediately, with a long range goal of creating a sustainable facility operation, reducing fossil fuel dependency and reducing our green house gas emissions.

The audit, its recommendations and reports must be completed by December 31, 2010.

For technical questions regarding this RFQ, please contact Terry Groshong at 218-730-5730 or Eric Schlacks at 218-730-4060.

III. Anticipated Schedule

March 13, 2010	Issuance of Request for Qualifications/Proposals
April 6, 2010	Qualifications due by 2:00 P.M.
April 13, 2010	Review of Qualifications complete
April 20, 2010	Interviews by Selection Committee
April 26, 2010	Selection & Award of Contract by City Council
May 7, 2010	Audits Commence
December 31, 2010	Audits & Reports Submitted & Complete

IV. Proposal Content (included with and in the above listed content)

Your submission must include the following:

1. Provide the following information about your company:
 - Name of firm;
 - Address of firm;
 - Telephone & fax numbers; and
 - Primary telephone and correspondence.

2. Brief history of the firm:

- Size of firm/staff;
- Years in business;
- Organizational chart of firm; and
- Distance from Duluth.

3. Provide a schedule of professional fee rates and overall total project cost estimate.

4. Design team background:

- Energy Survey/Architectural team– principal in charge, project manager, engineer, energy auditors, project architect, interior design, functional programming, space programming;
- Resumes of team members – name, office location, phone number, years of service with firm, education, professional experience, pertinent experience;
- Consultants – structural engineer, mechanical/electrical engineer, security consultant, interior design, civil engineer, technology; and
- Experience with designing buildings to U.S.G.B.C. LEED standards.
- Experience with local utility energy conservation programs.

5. Project approach:

- Describe your firm's philosophical approach to energy audits of this scope and type.. Please include your approach and the benefit each step has for the owner.
- Please describe any unique aspects your firm may employ in the design of the project.

6. Representative projects – list a minimum of five projects completed by your firm that best represents a similar scope, budget, program, and complexity. For each project, please include:

- Completion date;
- Name and location;
- Budget;
- Cost of firm's services as a total amount and percentage of total project cost;
- Graphic description;

7. Project experience – list the last five new construction projects for which bids have been received or recently completed. Please include:

- Completion date;
- Name & location;
- Budget;
- Graphic description;
- Photographs;

8. Current workload:

- Describe your design workload in terms of project size, percent complete, and completion dates.
- Indicate the percent of time devoted to this project by each staff member assigned;
- Respond to proposed schedule - include a statement of whether your firm will be able to meet the proposed schedule.

9. Licensure & Certifications:

- List any licensure or certifications held by assigned principals?
- List any licensure or certifications held by assigned staff or team members?

10. Legal proceedings – Identify any on-going legal proceeding or pending legal proceeding (arbitration, complaint, or court action) filed by an owner or contractor against your firm for any project in the past five years.

11. References – please provide a minimum of five references to contact.

12. Unique qualifications – please state why your firm should be selected by the owner.

V. Selection Criteria

All submittals meeting the established criteria will be evaluated by the ARRA Project Team. Each submittal will be evaluated using the criteria below. The three top-ranking firms will be invited to Duluth for interviews and to present preliminary project design plans.

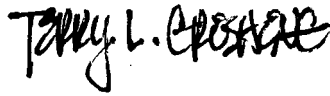
1. Composition and qualifications of staff (10 points)
2. Relevant past experience (10 points)
3. Resumes of key individuals (10 points)
4. Firm's project approach (30 points)
5. Report structure (10 points)
6. References (5 points)
7. Proposal completeness (20 points)
8. Relevant ARRA Experience (10 points)
9. Local Utility CIP Incentive Experience (10 points)
10. Cost (20 points)

Please do not submit more than seven (7) pages of transcript, and more than twelve (12) pages of graphic material (worksheets, photos, plans, drawings, etc.) as evidence of your qualifications for this work. Any graphic material should be clearly identified and labeled. It should be the work in which personnel listed have had significant participation, and their roles/firms must be described. Your total package submittal should consist of no more than 20 pages, including a cover letter. Please submit one hard copy and a CD or flash drive that contains your submission that can be downloaded and sent to members of the selection committee for review and scoring. Incomplete submissions will not be reviewed and will be disqualified for the commission.

Submittals should be sent directly to Purchasing; City Hall Suite 100, 411 West Street, Duluth, MN 55802-1192. One copy of the material shall be retained by the City; the additional copies will be returned when the City has completed the selection process, if requested.

The City of Duluth looks forward to your submittal. UPS will not cross a picket line so proposals should be delivered by Fed Ex, US Mail or other means. This is an important project for the City of Duluth and we look forward to working with you in the event of your successful submittal. Should you have any questions regarding this Request for Qualifications and Proposal, please feel free to contact me at 218-730-5730.

Very truly yours,

A handwritten signature in black ink, reading "Terry L. Groshong". The signature is stylized with a large, bold "T" and "G".

Terry L. Groshong, A.I.A.
City Architect

TLG:tlg



City of Duluth Energy Program: Energy Audit Requirements/Workbook

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Energy Audit Instructions

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II. ADDITIONAL INFORMATION

City of Duluth – B3 Information.....	Un-numbered
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Please Print or Type
1. Building Information

Name of Institution		Address				
Owner, if other than Institution		Address				
Name of Building		Building #				
Address (Street or P.O. Box)		City, State, Zip				
Date of Audit	Type of Institution Public ___ Private Non-Profit ___ Other ___					
Building Manager (administrator responsible for bldg.)			Bldg. Mgr.'s Phone			
Energy Management Coordinator (EMC) or Monitor			EMC's Phone			
Person Completing this Audit (include Cert. #)			Phone			
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> Building Type and Category School Hospital Government ___ Element. ___ General ___ Federal ___ Second. ___ Psychiatric ___ State ___ Comm.Coll. ___ Other, Specify ___ City/County ___ Coll./Univ. ___ Special Dist. ___ Voc. Tech. ___ Indian Tribe Ctr. ___ Other, Specify _____ </td> <td style="width: 33%; vertical-align: top;"> Public ___ Rec Center ___ Fire Hall ___ Police ___ Tool House ___ Pump House ___ Community ___ Other, Specify _____ </td> <td style="width: 33%; vertical-align: top;"> Building Use ___ Office ___ Storage ___ Library ___ Services ___ Police Station ___ Fire Station ___ Dormitory ___ Prisoner Detention ___ Other, Specify _____ </td> </tr> </table>			Building Type and Category School Hospital Government ___ Element. ___ General ___ Federal ___ Second. ___ Psychiatric ___ State ___ Comm.Coll. ___ Other, Specify ___ City/County ___ Coll./Univ. ___ Special Dist. ___ Voc. Tech. ___ Indian Tribe Ctr. ___ Other, Specify _____	Public ___ Rec Center ___ Fire Hall ___ Police ___ Tool House ___ Pump House ___ Community ___ Other, Specify _____	Building Use ___ Office ___ Storage ___ Library ___ Services ___ Police Station ___ Fire Station ___ Dormitory ___ Prisoner Detention ___ Other, Specify _____	
Building Type and Category School Hospital Government ___ Element. ___ General ___ Federal ___ Second. ___ Psychiatric ___ State ___ Comm.Coll. ___ Other, Specify ___ City/County ___ Coll./Univ. ___ Special Dist. ___ Voc. Tech. ___ Indian Tribe Ctr. ___ Other, Specify _____	Public ___ Rec Center ___ Fire Hall ___ Police ___ Tool House ___ Pump House ___ Community ___ Other, Specify _____	Building Use ___ Office ___ Storage ___ Library ___ Services ___ Police Station ___ Fire Station ___ Dormitory ___ Prisoner Detention ___ Other, Specify _____				
Date of construction, If known						
Original Architects (if known)		Original Engineers (if known)				
Building Modifications or Changes In Use Anticipated in the next 15 yrs:			Remaining Useful life of the building: Years			
Does the Institution Have an ongoing energy management program? ___Yes ___No						
Previous Energy Audits Completed? (if yes, give dates) ___Yes ___No Dates						
Previous Architectural/Engineering Studies Undertaken? (if Yes, Specify) ___Yes ___No						
Name of Electric Utility		Is this building on the National Historic Preservation Register? ___Yes ___No				

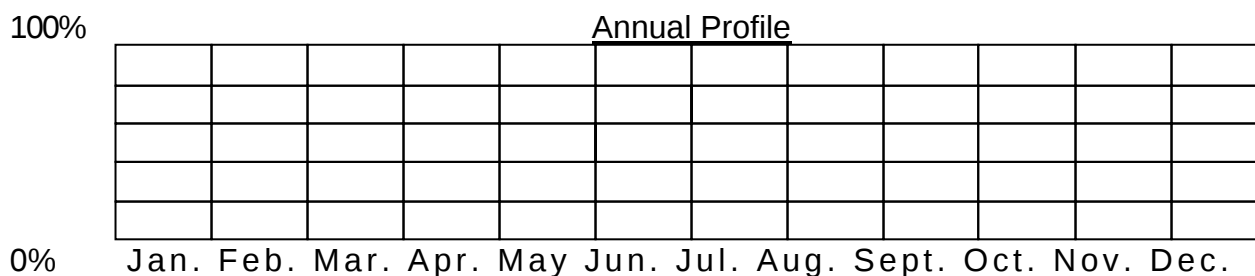
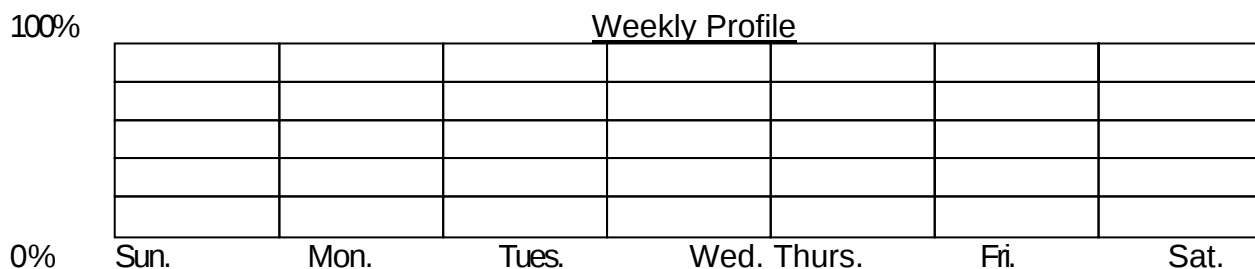
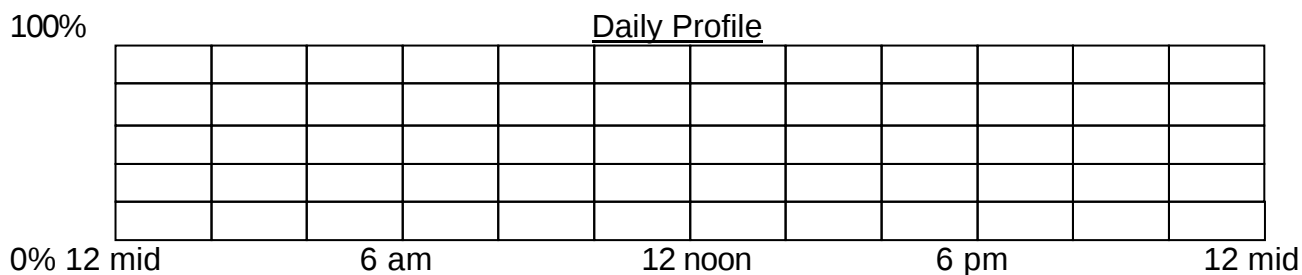
1. Building Information

Energy Saving Operation and Maintenance Procedures Implemented or Under Consideration Prior to this Audit (specify which). Please include an estimate of implementation cost and energy savings in kWh/yr and Btu/yr.

Conservation Measures (retrofit) Already Implemented or Under Consideration Prior to this Audit (specify which). Please Include Estimate of Cost and Savings if Available.

1. BUILDING INFORMATION

Building Occupancy Profile



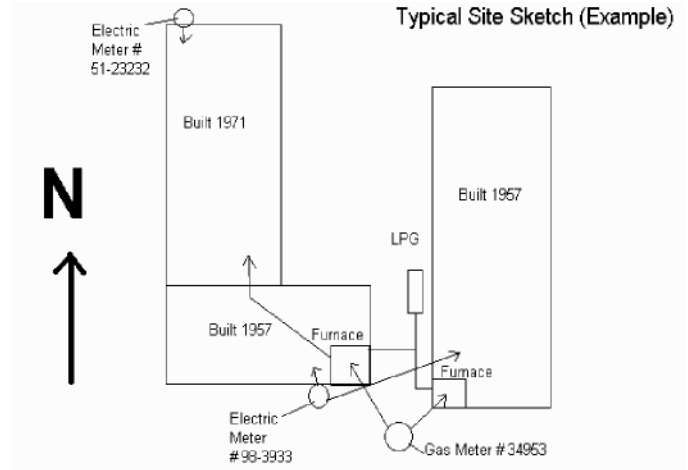
Building Occupancy Schedule

[illegible]

BUILDING INFORMATION

On the following page, prepare a site sketch of your building or building complex which shows the following information:

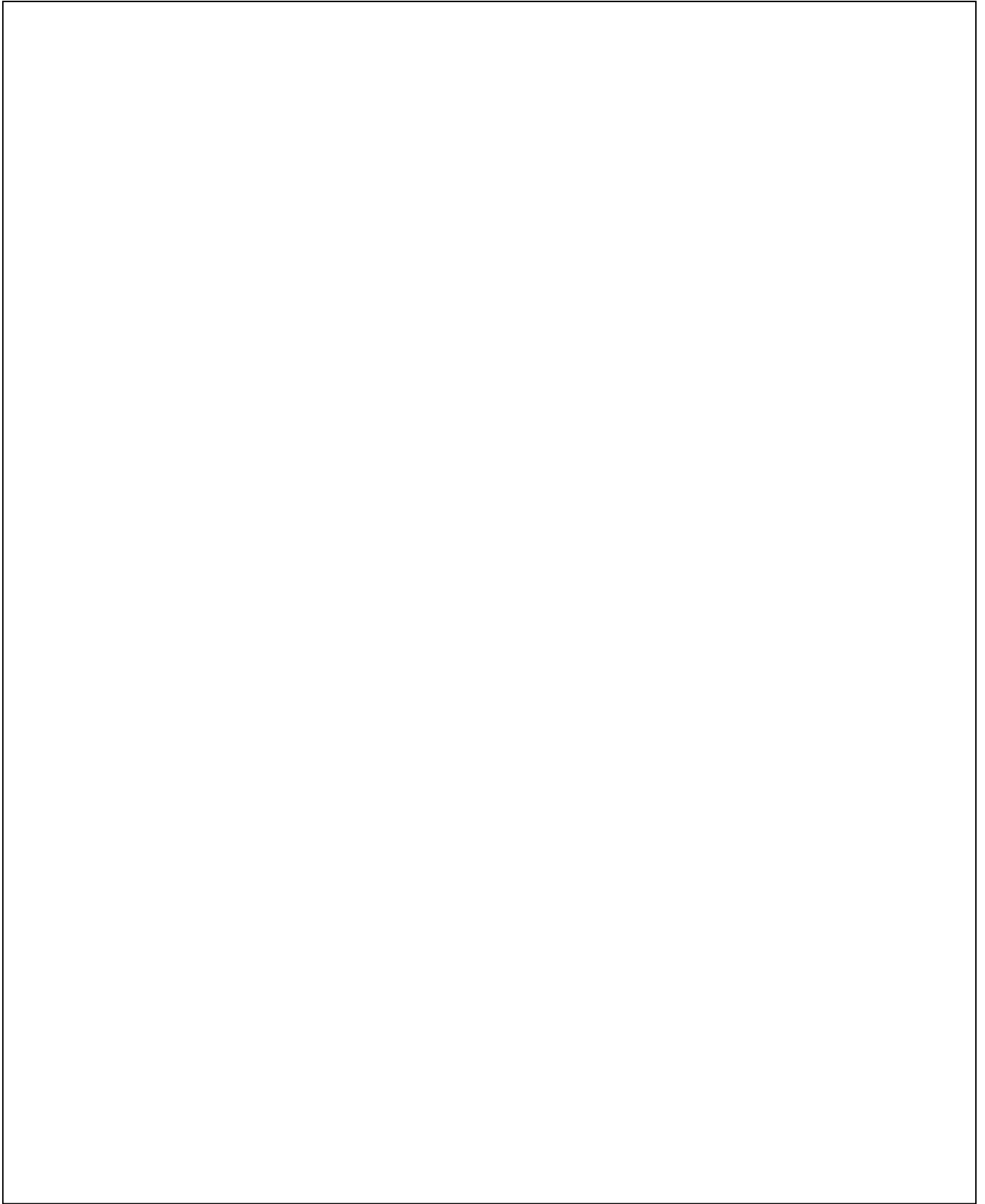
1. Relative location and outline of the building(s).
2. Building Age
3. Building Number (Assign numbers if buildings are not already numbered.)
4. Building Size
5. Fuel Type
6. Location of heating and cooling units
7. Heating plants
8. Central cooling system, etc.
9. North orientation arrow



2. BUILDING CHARACTERISTICS

- a. **Gross Floor Area:** _____ Gross Sq.Ft. x Ceiling Height _____ Ft. = Volume _____ Cu.Ft.
- b. **Conditioned Floor Area:** _____ (if different than gross floor area)
- c. **Total Door Area:** _____ Sq.Ft. Glass Doors _____ Sq.Ft. Wood Doors _____ Sq.Ft.
 Metal Doors _____ Sq.Ft. Garage Doors _____ Sq.Ft.
- d. **Total Exterior Glass Area:** _____ Sq.Ft. Single Panes _____ Sq.Ft. Double Panes _____ Sq.Ft.
- | | North | South | East | West |
|-------------|--------------|--------------|--------------|--------------|
| Total Area | _____ Sq.Ft. | _____ Sq.Ft. | _____ Sq.Ft. | _____ Sq.Ft. |
| Single Pane | _____ Sq.Ft. | _____ Sq.Ft. | _____ Sq.Ft. | _____ Sq.Ft. |
| Double Pane | _____ Sq.Ft. | _____ Sq.Ft. | _____ Sq.Ft. | _____ Sq.Ft. |
- e. **Total Exterior Wall Area:** _____ Sq.Ft. **Material:** ☐ Masonry ☐ Wood
 ☐ Concrete ☐ Stucco ☐ Other
- f. **Total Roof Area:** _____ Sq.Ft. **Condition:** ☐ Good ☐ Fair ☐ Poor
- g. **Insulation Type:** _____ Roof _____ Wall _____ Floor
- h. **Insulation Thickness:** _____ Roof _____ Wall _____ Floor
- i. **Metering:** Is this building individually metered for electricity? ☐ Yes ☐ No
 Is this building individually metered for natural gas? ☐ Yes ☐ No
 Is this building on a control boiler system with other buildings? ☐ Yes ☐ No
- j. **Describe general building condition:**

SITE SKETCH



Indicate compass direction with a north arrow.

3. ANNUAL ELECTRIC USE AND COST									
Include Electrical Demand, if applicable									
Building			Address					Year of Record From / To	
Account Number			Meter Number			Utility			
Maximum kW Demand W/O charge				Minimum Power Factor W/O charge				Building size (sqft)	
1	2	3	4	5	6	7	8	9	10
Meter Read Date From To		KWh* Used	KWh/gross sq.ft. **	Annual (EUI) BTU/sqft (000)	Energy Cost	KW-KVA Demand	Fixed Service Cost	P.F. * and Demand Cost***	Total Cost
TOTAL									

Comments:

Conversion: 3413 BTU/kWh

*KW – Kilowatts, KVA – Kilo-Volt-ampere, KWH – Kilowatt hour, P.F. – Power Factor

**Total annual kWh divided by the building’s gross sq. ft.

***If demand and/or power factor are metered and billed, energy cost here.

3. ANNUAL NON-ELECTRIC ENERGY USE AND COST						
Photo copy this form for additional fuel types						
Building		Address		Year of Record From To		
Account Number		Meter Number		Utility		
Building Size (sq ft)		Fuel Type		Specify Units		
Billing Period From To		Fuel consumption	Conversion Factor	MMBTU	Annual (EUI) Btu/sq .ft.	Cost \$
TOTAL						

*Conversion Factors	
Natural Gas	100,000 Btu/therm
Natural Gas	1,030 Btu/cubic feet
Liquified Petroleum	(LP bottled gas)
	95475 Btu/gallon
Kerosene	134,000 Btu/gallon
Distillate Fuel Oil	138,690 Btu/gallon
Residual Fuel Oil	149,690 Btu/gallon
Coal	24.5 million Btu per
	Standard short ton
Wood	8,680 Btu/pound
Steam	970 Btu/pound
Other	Consult standard
	Engineering
	Reference Manual

Comments:

4. HEATING PLANT

	PRIMARY	SECONDARY1	SECONDARY2
(A) System Type Code			
How many each type?			
Rated Input Consumption			
Rated Output Capacity			
(B) Energy Source Code			
(C) Maintenance Code			
(D) Control Code			

(A)System Type Code	(B)Energy Source	(C)Maintenance Code	(D)Control Code
1. Fire tube-Steam	1. Natural Gas	1. Good	1. Manual
2. Water tube-steam	2. LP Gas	2. Average	2. Somewhat automated
3. Fire tube-hot water	3. #2 Fuel Oil	3. Fair	3. Highly automated
4. Water tube-hot water	4. #4 Fuel Oil	4. Poor	
	5. #6 Fuel Oil		
5. Electric Resistance	6. Electricity		
6. Heat pump with aux. Elec.heat	7. Coal		
7. Purchased steam	8. Wood		
	9. Solar		
8. Other (explain)	10. Purchased Steam		

Operation Profile:

_____ hrs/weekday _____ h rs/Sat. _____ h rs/Su n. _____ wks/yr

Estimated annual hours of operation _____

From (month) _____ through (month) _____

Thermostat set points:

Day: _____

Night/weekends: _____

Heating Degree Days: _____ (see table on page 15)

5. HVAC DISTRIBUTION SYSTEM

Area Served (sq.ft.)	Location of Unit(s)		
	PRIMARY	SECONDARY1	SECONDARY2
A. System Type Code			
B. Maintenance Code			
C. Control Code			

(A) System Type Code 1. Single Zone 2. Multi Zone 3. Dual duct 4. Variable air volume 5. Single duct reheat 6. 2-pipe water 7. 4-pipe water 8. Window unit 9. Unit ventilator 10. Fan Coil 11. Unit heater 12. Other (define)	(B) Maintenance Code 1. Good 2. Average 3. Fair 4. Poor	(C) Control Code 1. Space thermostat 2. Outside temperature sensors 3. Time clocks 4. Energy management system 5. Auto supply temp reset 6. Economy cycle 7. Heat recovery 8. Other (define)
--	--	---

6. COOLING PLANT (continued on next page)

Is building mechanically cooled? ☐ Yes ☐ No

(A) System Type Code _____	(D) Control Code _____
(B) Energy Source _____	(E) Voltage Code _____
(C) Maintenance Code _____	

<u>(A) System Type Code</u>	<u>(B) Energy Source</u>	<u>(C) Maintenance Code</u>	<u>(D) Control Code</u>	<u>(E) Voltage Code</u>
1. Reciprocating chiller	1. Electric Motor	1. Good	1. Manual	1. 120/single phase
2. Centrifugal chiller	2. Combustion engine	2. Average	2. Somewhat Automated	2. 208-220/single phase
3. Absorption chiller	3. Steam turbine	3. Fair	3. Highly Automated	3. 208-220/3-phase
4. Solar assisted-absorption chiller	4. Steam boiler	4. Poor		4. 440-480/3-phase
5. Evaporative chiller	5. Purchased steam			
6. Heat pump				
7. DX system				
8. Screw compressor				
9. Window or thruwall unit				
10. Other (define)				

6. COOLING PLANT (continued)

Operation Profile:

_____ hrs/weekday _____ hrs/Sat _____ hrs/Sun _____ wks/yr

Estimated Annual hours of Operation _____

From (month) _____ through (month) _____

Cooling Degree days _____ (see table on page 15)

Comments:

7. DOMESTIC HOT WATER

Domestic Hot Water Heated by:

☐ Electricity ☐ Natural Gas ☐ Oil ☐ Steam ☐ Heat pump ☐ Other, specify _____

Number of Units	General Location(s) of Unit(s)	Is there a re-circulation loop?
Daily Usage (if known) _____ gal/day	Hot Water Temp. At point of Use _____ At heater _____	
Temp. of city water	Is tank wrapped? ☐ Y ☐ N	Do obstructions prevent wrapping? ☐ Y ☐ N
Distance from Heater to Point of use Nearest _____ Farthest _____	Hot Water Uses for Other than Lavatories	

8. FOOD PREPARATION AND STORAGE AREA EQUIPMENT

Item	Exists	Total load (if known) KW	Item	Exists	Total load (if known) KW
Ranges	Yes No	_____	Ovens	Yes No	_____
Steam Tables	Yes No	_____	Frying Tables	Yes No	_____
Freezers	Yes No	_____	Refrigerators	Yes No	_____
Walk-in Refer	Yes No	_____	Walk-in Freezer	Yes No	_____
Infra-red warmer	Yes No	_____	Dishwashers	Yes No	_____
Microwaves	Yes No	_____	Hoods w/Exhaust fans	Yes No	_____
Mixers	Yes No	_____	Other, Define	Yes No	_____

9. LIGHTING

Building Area*	Type Code of Fixture	Approximate Number of Fixtures	Average Watts per Fixture	Operating Hours/Day	Average Foot Candles**

Lighting Type Codes

- A. Incandescent
- B. Fluorescent
- C. Mercury Vapor
- D. High Pressure Sodium
- E. Low Pressure Sodium
- F. Metal Halide

*Include indoor and outdoor areas.

** Optional

Comments: (e.g., specially installed energy saving fixtures, bulbs, controls such as wall switchers, time clocks, dimmers, etc.)

10. SOLAR AND RENEWABLE RESOURCE POTENTIAL

Location ☐ Urban ☐ Suburban ☐ Rural													
Building Characteristics # of Stories General shape* ☐ Roof Unshaded ☐ Southern Wall Unshaded													
Roof Indicate orientation on pg. 6** ☐ Flat ☐ Pitched							Roof's primary structural material**			Type of Roofing**			
Composition of Southern Facing Wall							Southern Facing Wall Glass Area ☐ Less than 25% ☐ 25-75% ☐ Over 75%						
Mean Insulation (Btus/sq.ft.) ***							Mean Wind Speed (miles/hr)***						
Jan			Jul				Jan			Jul			
Feb			Aug				Feb			Aug			
Mar			Sep				Mar			Sep			
Apr			Oct				Apr			Oct			
May			Nov				May			Nov			
Jun			Dec				Jun			Dec			
Does the building have adjoining open space along the southern wall? ☐ Yes ☐ No													
Monthly Mean Daily Insolation on A Horizontal Surface (Btu/ft2)													Remarks****
City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Duluth,MN													
Tacoma	277	513	978	1487	1856	1886	2089	1668	1196	694	384	236	
Spokane	439	753	1185	1749	2078	2199	2454	2052	1491	830	483	277	
Monthly Mean Wind Speed (miles/hr)													
City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Seattle	8	8	9	8	8	8	7	7	7	7	7	8	
Spokane	8	9	9	9	8	8	8	8	8	8	8	8	
Olympia	7	7	8	7	6	6	6	6	5	6	6	8	
Source: Climatic Atlas of the United States													

10. Other (define)

*Note building characteristics, indicating shape as square, rectangular, E-shaped, H-shaped, L-shaped.

**Note roof design. For the orientation of a pitched roof, indicate the compass direction of a line perpendicular to the ridgeline in the direction of the down slope. Note presence of roof obstructions such as chimneys, space conditioning equipment, water towers, mechanical rooms and stairwells. Identify the principal structural material of the roof, e.g., steel concrete, or wood structural components. Also identify the type of roofing such as shingle, slate, or built-up.

***Using information from the National Weather Service, the WSU Energy Program, or from charts provided above, enter monthly mean wind speeds and monthly mean daily insulation on a horizontal surface.

****Note any special conditions or characteristics related to potential for solar or other renewable resource application.

Comments:

11. ENERGY SAVINGS

INSTRUCTIONS: This section is to be completed by the auditor after the walk-through portions of the audit. First, check the boxes which state the range of the percent of energy consumption which would be saved by implementing the operation and maintenance items recommended in section 2 of this book. Second, calculate the range of energy and cost savings by multiplying the estimated percentages by the annual electrical and fuel consumption data on this audit report.

Check two boxes in each category:

Range of Electrical Savings []0% []5% []10% []15% []20% []25% []Other_____

Range of Fuel Savings []0% []5% []10% []15% []20% []25% []Other_____

Calculate ranges of energy and cost savings:

Range of Electrical Savings

	% Range		Annual Electrical consumption kWh	=	Range of % Electrical savings kWh		Annual Electrical dollars spent	=	Range of Electrical Dollar savings
Lower Bound	_____	X	_____	=	_____	\$	_____	=	\$ _____
Upper bound	_____	X	_____	=	_____	\$	_____	=	\$ _____

Range of Fuel Savings

	% Range		Annual fuel consumption Btu	=	Range of % fuel savings Btu		Annual Fuel dollars spent	=	Range of Fuel Dollar savings
Lower Bound	_____	X	_____	=	_____	\$	_____	=	\$ _____
Upper bound	_____	X	_____	=	_____	\$	_____	=	\$ _____

The auditor is not responsible if actual savings resulting from the implementation of the energy conservation opportunities listed in this section do not fall between the roughly estimated ranges which are specified.

Total Range of operation and maintenance energy savings (total all fuels):

From _____ Btu to _____ Btu.
(lower bound) (upper bound)

**12. ANNUAL HEATING DEGREE DAY (HDD) AND COOLING DEGREE DAY (CDD)
NORMALS FOR STATE BY COUNTY (19__ -)**

[illegible]

Note: For each site, heating degree day normals are reported in the left column, cooling degree day normals in the right. “Station” refers to the NOAA climatological measuring site from which data are taken to represent the City of Duluth as a whole. Stations are chosen to be representative of the city according to the location relative to isotherms. Temperature base for heating and cooling degree day is 65° F. You can find these for your region by contacting local weather service stations or the National Oceanic and Atmospheric Administration.

Additional Comments:

13. Energy Conservation & Efficiency Measure Potential

In all structures, consultant is asked to generate and develop a list of potential areas, devices, equipment, techniques and operation which will conserve measureable energy consumption during future building operations. It is assumed that both function and occupancy will remain the same at all existing structures/facilities.

Consultant to demonstrate and/or develop their own metric to visually support potentials while delivering the final report(s) to the City of Duluth.

All recommendations in this category shall be able to be included in the ComfortSystems and Minnesota Power conservation programs.



ADDITIONAL INFORMATION

City of Duluth B3 Bench Mark Site Profiles

The following information containing recent benchmarking information is included for consultant information and convenience only. This information can be used in conjunction with and to support data being required and requested with this Energy Audit request.

This information cannot be shared without prior written permission from the City of Duluth.

Date: May, 2009



B3 Benchmark Site Profile

Building Name:
Lafayette Square

Building Address:
3026 Minnesota Ave

Building Size:
4840 ft²



Gas Data

Meter#: 54519126, 8341951	Account #: 40925	Annual therms (2008): 3339
------------------------------	---------------------	-------------------------------

Electric Data

Meter #: 82321	Premise ID: 191119400	Annual kWh (2008): 9675
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2008 Energy Use Summary

Total Energy Usage: 75.81kBtu/ft ²	Total Electric Usage: 6.822kBtu/ft ²	Total Gas Usage: 68.988kBtu/ft ²
--	--	--

General Building Notes:

- Brick foundation walls
- Wood exterior
- Outside high intensity lamp on during day
- Older double pane windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Harrison Community Club

Building Address:
3002 W 3rd St

Building Size:
4800ft²



Gas Data

Meter#: 54604831	Account #: 49215	Annual therms (2008): 2587
---------------------	---------------------	-------------------------------

Electric Data

Meter #: 351625	Premise ID: 101129181	Annual kWh (2008): 17130
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2008 Energy Use Summary

Total Energy Usage: 66.076kBtu/ft ²	Total Electric Usage: 12.180kBtu/ft ²	Total Gas Usage: 53.896kBtu/ft ²
---	---	--

General Building Notes:
-Stucco and brick exterior
-New windows

B3 Benchmark Site Profile

Building Name:
Lester Golf- Clubhouse

Building Address:
1860 Lester River Rd

Building Size:
4720ft²



Gas Data

Meter#: Fuel Oil	Account #:	Annual therms (2008):
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Electric Data

Meter #: 214545	Premise ID: 71176560	Annual kWh (2008): 80921
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2008 Energy Use Summery

Total Energy Usage: 132.49(including fuel oil)kBtu/ft ²	Total Electric Usage: 58.513kBtu/ft ²	Total Gas Usage: kBtu/ft ²
--	---	--

General Building Notes:

- CMU foundation
- Aluminium siding
- Double and single pane windows with storms
- T8 interior lighting
- Gas fireplace
- Old Fuel Oil Boiler- used 2494gal in 2008
- Outside high intensity lamps
- Year round occupance

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Water Treatment Building

Building Address:
2025 Water St

Building Size:
4464ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 349868	Premise ID: 31105183	Annual kWh (2008): 3801
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2008 Energy Use Summery

Total Energy Usage: 2.91 kBtu/ft ²	Total Electric Usage: 2.906kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Metal siding
- Flat roof
- All windows covered with shutters
- Looks to be no longer in use

B3 Benchmark Site Profile

Building Name:
Zoo- Austrailian Building

Building Address:
72nd Ave W & Grand Ave

Building Size:
4410ft²



Gas Data

Meter#: 6685931	Account #: 57578	Annual therms (2008): 3406
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Electric Data

Meter #: 328439	Premise ID: 131128824	Annual kWh (2008): 56904
--------------------	--------------------------	-----------------------------

2008 Energy Use Summery

Total Energy Usage: 121.27kBtu/ft ²	Total Electric Usage: 44.039kBtu/ft ²	Total Gas Usage: 77.23kBtu/ft ²
---	---	---

General Building Notes:

- Metal siding
- Metal roof
- No Windows

B3 Benchmark Site Profile

Building Name:
Irving Community Club

Building Address:
20 S 57th Ave W

Building Size:
4352ft²



Gas Data

Meter#: 56180437	Account #: 31858, 61295	Annual therms (2008): 3727, 1657
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Electric Data

Meter #: 214222	Premise ID: 121179039	Annual kWh (2008): 26024
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2008 Energy Use Summary

Total Energy Usage: 144.122kBtu/ft ²	Total Electric Usage: 20.409kBtu/ft ²	Total Gas Usage: 123.713kBtu/ft ²
--	---	---

General Building Notes:

- Brick exterior
- Single and double pane windows
- T8 lighting inside
- Full time caretaker on site

B3 Benchmark Site Profile

Building Name:
Piedmont Community Club

Building Address:
23 W 23rd St

Building Size:
4160ft²



Gas Data

Meter#: 1868878	Account #: 126982	Annual therms (2008): 1924
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Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: 46.250kBtu/ft ²
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General Building Notes:

- CMU/poored construction
- 2in. foam around slab
- Some stucco exterior
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Water & Gas- Office

Building Size:
3825ft²

Building Address:
414 W 1st St

Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 215100	Premise ID: 20414	Annual kWh (2008): 258624
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: 230.767kBtu/ft ²	Total Gas Usage: kBtu/ft ²
---	--	--

General Building Notes:

- Comfot Systems moved to Garfeld Ave
- Not sure of exact location of building
- No indications of address or meters

B3 Benchmark Site Profile

Building Name:
Lester Park Library

Building Address:
5403 Tioga/ 106 N 54 Ave E

Building Size:
3560ft²



Gas Data

Meter#: t3569867	Account #: 139054	Annual therms (2008): 2880
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Electric Data

Meter #: 88416	Premise ID: 81126410	Annual kWh (2008): 8119
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2008 Energy Use Summary

Total Energy Usage: 88.683kBtu/ft ²	Total Electric Usage: 7.784kBtu/ft ²	Total Gas Usage: 80.899kBtu/ft ²
---	--	--

General Building Notes:

- Brick exterior
- Poored foundation
- Single pane windows
- Not part of city Parks & Rec. since 1998
- On historical register

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Animal Shelter

Building Address:
2627 Courtland St

Building Size:
3360ft²



Gas Data

Meter#: 1134722	Account #: 49169	Annual therms (2008): 6111
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Electric Data

Meter #: 215545	Premise ID: 81176261	Annual kWh (2008): 9086
--------------------	-------------------------	----------------------------

2008 Energy Use Summery

Total Energy Usage: 191.104kBtu/ft ²	Total Electric Usage: 9.229kBtu/ft ²	Total Gas Usage: 181.875kBtu/ft ²
--	--	---

General Building Notes:

- Poored construction
- Flat roof
- Older double pane windows
- Garage connected to building

B3 Benchmark Site Profile

Building Name:
Lakeview Chalet

Building Address:
2940 Seven Bridges Rd

Building Size:
3280ft²



Gas Data

Meter#: propane	Account #:	Annual therms (2008):
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Electric Data

Meter #: 206281	Premise ID: 81105232	Annual kWh (2008): 15936
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: 16.582kBtu/ft ²	Total Gas Usage: kBtu/ft ²
---	---	--

General Building Notes:

- CMU and brick exterior
- Flat roof
- Single pane windows
- Well on site
- Chimny
- Septic
- Seasonal occupancy

B3 Benchmark Site Profile

Building Name:
Toolhouse- West Duluth- Large Garage

Building Address:
105 N 40th Ave W

Building Size:
3000ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: meter info is attached to "New Garage"	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summary

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: kBtu/ft ²
---	---	--

General Building Notes:

- Metal roof and siding
- No windows

B3 Benchmark Site Profile

Building Name:
Lester Golf- Toolhouse

Building Address:
1860 Lester River Rd

Building Size:
2960ft²



Gas Data

Meter#: Fuel Oil tank in use	Account #:	Annual therms (2008):
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Electric Data

Meter #: 343769	Premise ID: 71176550	Annual kWh (2008): 25905
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: 29.870kBtu/ft ²	Total Gas Usage: kBtu/ft ²
---	---	--

General Building Notes:

- Metal roof and siding
- Seasonal occupancy

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Firehall #5

Building Address:
2138 Minnesota Ave

Building Size:
2818ft²



Gas Data

Meter#: 54514006/ t3684276	Account #: 40772	Annual therms (2008): 4199
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Electric Data

Meter #: 198569	Premise ID: 191116510	Annual kWh (2008): 8754
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2008 Energy Use Summery

Total Energy Usage: 159.608kBtu/ft ²	Total Electric Usage: 10.602kBtu/ft ²	Total Gas Usage: 149.006kBtu/ft ²
--	---	---

General Building Notes:

- Old wood exterior
- Single pane windows with storms

B3 Benchmark Site Profile

Building Name:
Firehall #11

Building Address:
3501 Woodland Ave

Building Size:
2800ft²



Gas Data

Meter#: 54555289, 2883875	Account #: 17667	Annual therms (2008): 3873
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Electric Data

Meter #: 343770	Premise ID: 41125003	Annual kWh(2008): 13611
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2008 Energy Use Summary

Total Energy Usage: 154.912kBtu/ft ²	Total Electric Usage: 16.591kBtu/ft ²	Total Gas Usage: 138.321kBtu/ft ²
--	---	---

General Building Notes:

- Brick exterior
- Glass block and double pane windows

B3 Benchmark Site Profile

Building Name:
Endion Depot

Building Address:
100 Lake Place Drive (Utilities payed by renter)

Building Size:
2544ft²



Gas Data

Meter#: 54524542, 1518715	Account #: 164590	Annual therms (2008): 2716, 4576
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Electric Data

Meter #: 368851	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: 286.635kBtu/ft ²
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General Building Notes:

- Stone and brick exterior
- Double pane windows
- City rents building
- Renters pay bills

B3 Benchmark Site Profile

Building Name:
Grant Community Club

Building Address:
901 E 11th St

Building Size:
2425ft²



Gas Data

Meter#: s1305717	Account #: 45271	Annual therms (2008): 3463
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Electric Data

Meter #:	Premise ID: 181108605	Annual kWh (2008): 10640
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2008 Energy Use Summary

Total Energy Usage: 157.785kBtu/ft ²	Total Electric Usage: 14.981kBtu/ft ²	Total Gas Usage: 142.804kBtu/ft ²
--	---	---

General Building Notes:

- CMU construction
- New double pane windows
- 2in. foam around steel foundation

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Gary Recreation Center

Building Address:
801/817 101st Ave W

Building Size:
2400ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
	56666	2282

Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
214201	141156110	18400

2008 Energy Use Summery

Total Energy Usage: 121.249kBtu/ft ²	Total Electric Usage: 26.166kBtu/ft ²	Total Gas Usage: 95.083kBtu/ft ²
--	---	--

General Building Notes:

- Metal roof and siding
- Single pane windows
- Seasonal occupancy

B3 Benchmark Site Profile

Building Name:
Lincoln Park- Pavillion

Building Address:
25th Ave W & 4th St (Lincoln Park Dr & 4th St)

Building Size:
2250ft²



Gas Data

Meter#:	Account #: 47311	Annual therms (2008): 1804
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Electric Data

Meter #: 215463	Premise ID: 101108740	Annual kWh (2008): 6180
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2008 Energy Use Summery

Total Energy Usage: 89.552kBtu/ft ²	Total Electric Usage: 9.374kBtu/ft ²	Total Gas Usage: 80.178kBtu/ft ²
---	--	--

General Building Notes:

- Stone construction
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Fairmont Park Pavillion

Building Address:
6715 Redruth St (Behind Zoo parking lot)

Building Size:
2240ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #:	Premise ID: 131128793	Annual kWh (2008): 29164
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2008 Energy Use Summery

Total Energy Usage: 44.44kBtu/ft ²	Total Electric Usage: 44.436kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:
stone construction
large lights on vaulted ceiling

B3 Benchmark Site Profile

Building Name:
Norton Park Community Club

Building Address:
431 N 81st Ave W

Building Size:
2236ft²



Gas Data

Meter#: 54552584	Account #: 34277	Annual therms (2008): 2335
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Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: 104.428kBtu/ft ²
---	---	---

General Building Notes:

- Two buildings together
- One has CMU construction
- Other is metal hoop structure with concreat slab
- Old double pane windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Firehall #6

Building Address:
5031 E Superior St/ 103 N 51st Ave E

Building Size:
2184ft²



Gas Data

Meter#: tc5128095	Account #: 132492	Annual therms (2008): 4008
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Electric Data

Meter #: 77176	Premise ID: 71138085	Annual kWh (2008): 38183
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2008 Energy Use Summary

Total Energy Usage: 243.186kBtu/ft ²	Total Electric Usage: 59.670kBtu/ft ²	Total Gas Usage: 183.516kBtu/ft ²
--	---	---

General Building Notes:

- Brick exterior
- New windows and doors
- building was remodeled in 2001

B3 Benchmark Site Profile

Building Name:
Longview Tennis Club

Building Address:
325/ 326 N 25th Ave E (2504 E 4th St)

Building Size:
2160ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 327616	Premise ID: 51135327	Annual kWh (2008): 1978
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2008 Energy Use Summery

Total Energy Usage: 3.13kBtu/ft ²	Total Electric Usage: 3.125kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Wood exterior
- Brick foundation
- Single pane windows
- Does not heat

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Middle System Station

Building Address:
1517 E 6th St

Building Size:
2160ft²



Gas Data

Meter#: 8341933, 54624585	Account #: 11686	Annual therms (2008): 1497
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Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: 69.306kBtu/ft ²
---	---	--

General Building Notes:

- Brick exterior
- Flat roof

B3 Benchmark Site Profile

Building Name:
Lower Cester Community Club

Building Address:
1417 E 5th St

Building Size:
2016ft²



Gas Data

Meter#: 15605019, 56179119	Account #: 11281	Annual therms (2008): 2549
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Electric Data

Meter #: 327603	Premise ID: 21105605	Annual kWh (2008): 16211
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2008 Energy Use Summery

Total Energy Usage: 153.883kBtu/ft ²	Total Electric Usage: 27.445kBtu/ft ²	Total Gas Usage: 126.438kBtu/ft ²
--	---	---

General Building Notes:

- CMU construction
- Single pane windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Riverside Community Club

Building Address:
Manitou St & Cato Ave (55 on building)

Building Size:
1750ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
	34547	2396

Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
21564	131146920	2524

2008 Energy Use Summary

Total Energy Usage:	Total Electric Usage:	Total Gas Usage:
141.837kBtu/ft ²	4.923kBtu/ft ²	136.914kBtu/ft ²

General Building Notes:

- CMU construction
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Fon-du-lac Community Club

Building Address:
13102 W 5th St

Building Size:
1736ft²



Gas Data

Meter#: propane on site	Account #:	Annual therms (2008):
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Electric Data

Meter #: 324904	Premise ID: 151188090	Annual kWh (2008): 3004
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: 5.906kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- CMU construction
- Single pane windows
- Chimny

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Bayfront Park Building

Building Address:
500 W Railroad

Building Size:
1728ft²



Gas Data

Meter#: 8341949	Account #: 142766	Annual therms (2008): 1532
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Electric Data

Meter #: 304334	Premise ID: 171148728	Annual kWh (2008): 18560
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2008 Energy Use Summary

Total Energy Usage: 125.315kBtu/ft ²	Total Electric Usage: 36.658kBtu/ft ²	Total Gas Usage: 88.657kBtu/ft ²
--	---	--

General Building Notes:

- CMU construction
- Metal roof
- Double pane windows
- Gas fireplace inside

B3 Benchmark Site Profile

Building Name:
Water & Gas- East Pump Station

Building Address:
34th Ave E & 4th St/ 3401 E 4th St

Building Size:
1672ft²



Gas Data

Meter#: t3418399/ 54504515	Account #: 24271	Annual therms (2008): 1538
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Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: 91.986kBtu/ft ²
---	---	--

General Building Notes:

- Brick exterior
- Poored foundation
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Observation Community Club

Building Address:
826/914 W 3rd St

Building Size:
1560ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
	37527	1202

Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
82704	161107610	24965

2008 Energy Use Summery

Total Energy Usage: 131.670kBtu/ft ²	Total Electric Usage: 54.619kBtu/ft ²	Total Gas Usage: 77.051kBtu/ft ²
--	---	--

General Building Notes:

- Brick and wood exterior
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Sewer Lift Station #15

Building Address:
2132 Michigan St

Building Size:
1226ft²



Gas Data

Meter#: 54506043	Account #: 46211	Annual therms (2008): 1143
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Electric Data

Meter #: 369591	Premise ID: 81138562	Annual kWh (2008): 5948
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2008 Energy Use Summery

Total Energy Usage: 109.788kBtu/ft ²	Total Electric Usage: 16.558kBtu/ft ²	Total Gas Usage: 93.230kBtu/ft ²
--	---	--

General Building Notes:

- Metal exterior and roof
- No windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Glen Avon- Hockey Building

Building Address:
2401/2405 Woodland Ave

Building Size:
1061ft²



Gas Data

Meter#: 54527755, 352254	Account #: 105586	Annual therms (2008): 720
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Electric Data

Meter #: 222245	Premise ID: 41105611	Annual kWh (2008): 28785
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2008 Energy Use Summary

Total Energy Usage: 160.456kBtu/ft ²	Total Electric Usage: 92.595kBtu/ft ²	Total Gas Usage: 67.861kBtu/ft ²
--	---	--

General Building Notes:

- Wood exterior
- Double pane windows
- Flourecent fixtures inside

B3 Benchmark Site Profile

Building Name:
Chester Bowl- Quanset Hut

Building Address:
1800 Skyline Parkway

Building Size:
1008ft²



Gas Data

Meter#: fuel oil	Account #:	Annual therms (2008):
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Electric Data

Meter #: feeds from main	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: kBtu/ft ²
---	---	--

General Building Notes:

Metal sided
Single pane windows with storms

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Cobb Warming Shack

Building Address:
Woodland Ave & Faribault

Building Size:
960ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 189598, 207036	Premise ID: 41135277	Annual kWh (2008): 855
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2008 Energy Use Summary

Total Energy Usage: 3.04kBtu/ft ²	Total Electric Usage: 3.040kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Wood siding
- Metal roof
- Built on frame floor
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Lincoln Park Community Club

Building Address:
25th Ave W & 4th St/5th St

Building Size:
950ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 327241	Premise ID: 91138190	Annual kWh (2008): 24822
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2008 Energy Use Summary

Total Energy Usage: 89.18kBtu/ft ²	Total Electric Usage: 89.176kBtu/ft ²	Total Gas Usage: kBtu/ft ²
--	---	--

General Building Notes:

- CMU construction
- Single pane windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Orphananage Pump Station

Building Address:
801/ 815 Minneapolis Ave

Building Size:
950ft²



Gas Data

Meter#: 54503180	Account #: 16757	Annual therms (2008): 560
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Electric Data

Meter #: 206716	Premise ID: 41155125	Annual kWh (2008): 89350
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2008 Energy Use Summery

Total Energy Usage: 379.949kBtu/ft ²	Total Electric Usage: 321.002kBtu/ft ²	Total Gas Usage: 58.947kBtu/ft ²
--	--	--

General Building Notes:

- Brick exterior
- Single pane windows with storms, other windows covered

B3 Benchmark Site Profile

Building Name:
Hillside Sport Court

Building Address:
408 E 8th St

Building Size:
930ft²



Gas Data

Meter#:	Account #: 44589	Annual therms (2008): 739
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Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: 79.462kBtu/ft ²
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General Building Notes:

- CMU construction
- Single pane windows

B3 Benchmark Site Profile

Building Name:
Wheeler- Concessions

Building Address:
3501 Grand Ave

Building Size:
900ft²



Gas Data

Meter#:	Account #: 29619	Annual therms (2008):
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Electric Data

Meter #:	Premise ID: 101148053	Annual kWh (2008): 54336
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2008 Energy Use Summery

Total Energy Usage: 206.05 kBtu/ft ²	Total Electric Usage: 206.05kBtu/ft ²	Total Gas Usage: kBtu/ft ²
---	---	--

General Building Notes:

- CMU construction
- Single pane windows
- Seasonal occupancy

B3 Benchmark Site Profile

Building Name:
Aerial Bridge

Building Address:
South Lake Bay

Building Size:
898ft²



Gas Data

Meter#: 54506413, 3625903	Account #: 40455	Annual therms (2008): 1362, 692
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Electric Data

Meter #: 206702	Premise ID: 191107410	Annual kWh (2008): 15360
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2008 Energy Use Summery

Total Energy Usage: 287.11kBtu/ft ²	Total Electric Usage: 58.378kBtu/ft ²	Total Gas Usage: 228.73kBtu/ft ²
---	---	--

General Building Notes:

- Metal exterior
- Older windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Enger Tower

Building Address:
14th Ave W & Skyline Blve

Building Size:
745ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 199930	Premise ID: 91177530	Annual kWh (2008): 438
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2008 Energy Use Summery

Total Energy Usage: 2.007kBtu/ft ²	Total Electric Usage: 2.007kBtu/ft ²	Total Gas Usage: kBtu/ft ²
--	--	--

General Building Notes:

-Lighting could be upgraded to CFL's

B3 Benchmark Site Profile

Building Name:
West Duluth Booster Station

Building Address:
4424 Grand Ave

Building Size:
680ft²



Gas Data

Meter#: 54524505	Account #: 30831	Annual therms (2008): 1040
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Electric Data

Meter #: 329503	Premise ID: 111117900	Annual kWh (2008): 600192
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2008 Energy Use Summery

Total Energy Usage: 3165.375kBtu/ft ²	Total Electric Usage: 3012.434kBtu/ft ²	Total Gas Usage: 152.941kBtu/ft ²
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General Building Notes:

- Brick and CMU exterior
- Metal roof
- 2in. foam around slab

B3 Benchmark Site Profile

Building Name:
Bayview Station

Building Address:
63rd Ave W & Oleny (6301 Oleny)

Building Size:
646ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 214550	Premise ID: 121188134	Annual kWh (2008): 226880
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2008 Energy Use Summary

Total Energy Usage: 1198.671kBtu/ft ²	Total Electric Usage: 1198.671kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- CMU exterior
- No windows

B3 Benchmark Site Profile

Building Name:
New Proctor Station

Building Address:
7328 Earl St (Earl St & 73rd Ave W)

Building Size:
646ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 301118	Premise ID: 121188133	Annual kWh (2008): 256640
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2008 Energy Use Summery

Total Energy Usage: 1355.901kBtu/ft ²	Total Electric Usage: 1355.901kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

CMU construction
Flat roof
No windows
AC unit on building

B3 Benchmark Site Profile

Building Name:
Sewer Lift Station #8

Building Address:
729 Lake Ave S

Building Size:
610ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 304877	Premise ID: 191106470	Annual kWh (2008): 58368
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2008 Energy Use Summery

Total Energy Usage: 326.57kBtu/ft ²	Total Electric Usage: 326.574kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Stucco exterior
- No windows

B3 Benchmark Site Profile

Building Name:
Chester Bowl- Garage North

Building Address:
1800 Skyline Parkway

Building Size:
576ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: fees from main	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Wood pannel exterior
- Poored foundation

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Lester Golf- Garage and Range Building

Building Address:
1860 Lester River Rd

Building Size:
576ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: feeds from Club House	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Fiber board exterior
- Double pane windows
- Made of selling room and two garages

B3 Benchmark Site Profile

Building Name:
Wheeler- Garage

Building Address:
3501 Grand Ave

Building Size:
576ft²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 113150	Premise ID: 101148040	Annual kWh (2008): 1285
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2008 Energy Use Summery

Total Energy Usage: 7.614kBtu/ft ²	Total Electric Usage: 7.614kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

-Cement board exterior
-No windows

Date: May, 2009

B3 Benchmark Site Profile

Building Name:
Arlington Pump Station

Building Address:
2nd Ave E & 113th St/ Central Ent. & 13th St

Building Size:
572ft²



Gas Data

Meter#: 1868923	Account #: 48498	Annual therms (2008): 1
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Electric Data

Meter #: 302530	Premise ID: 161158628	Annual kWh (2008): 874880
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2008 Energy Use Summery

Total Energy Usage: 5220.394kBtu/ft ²	Total Electric Usage: 5220.219kBtu/ft ²	Total Gas Usage: .175kBtu/ft ²
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General Building Notes:

- CMU construction
- No windows
- AC on building

B3 Benchmark Site Profile

Building Name:
Lakeview Pump Station

Building Address:
5031 Juanita St

Building Size:
540ft²



Gas Data

Meter#: 08k537867, 54701923	Account #: 21453	Annual therms (2008): 570
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Electric Data

Meter #: 301036	Premise ID: 71157030	Annual kWh (2008): 76320
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2008 Energy Use Summery

Total Energy Usage: 587.926kBtu/ft ²	Total Electric Usage: 482.370kBtu/ft ²	Total Gas Usage: 105.556kBtu/ft ²
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General Building Notes:

- Brick building
- No windows

B3 Benchmark Site Profile

Building Name:
Sewer Lift Station #14

Building Address:
735 Garfield Ave.

Building Size:
522ft²



Gas Data

Meter#: 54537547	Account #:	Annual therms (2008):
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Electric Data

Meter #: 206628	Premise ID: 151157300	Annual kWh (2008): 3709
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2008 Energy Use Summery

Total Energy Usage: 24.251kBtu/ft ²	Total Electric Usage: 24.251kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

- Concreat board exterior
- No windows

B3 Benchmark Site Profile

Building Name:
Highland Pump Station (Location Unknown)

Building Size:
513ft²

Building Address:
Arlington Ave WS

Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #:	Premise ID:	Annual kWh (2008):
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2008 Energy Use Summery

Total Energy Usage: kBtu/ft ²	Total Electric Usage: kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

B3 Benchmark Site Profile

Building Name: Lester Park- Comfort Station
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Building Address: 61st Ave E& Suprior St

Building Size: 500ft ²



Gas Data

Meter#:	Account #:	Annual therms (2008):
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Electric Data

Meter #: 176975	Premise ID: 81138010	Annual kWh (2008): 4105
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2008 Energy Use Summery

Total Energy Usage: 28.021kBtu/ft ²	Total Electric Usage: 28.021kBtu/ft ²	Total Gas Usage: kBtu/ft ²
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General Building Notes:

-Stucco exterior -Boarded windows

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