## CITY OF PRAIRIE VILLAGE

June 17, 2013

# Council Committee Meeting 6:00 pm City Council Meeting 7:30 pm



#### COUNCIL COMMITTEE OF THE WHOLE Council Chambers June 17, 2013 6:00 PM

#### **AGENDA**

#### DALE WARMAN, COUNCIL PRESIDENT

#### **AGENDA ITEMS FOR DISCUSSION**

Update on Geothermal HVAC System Dennis Enslinger

\*COU2013-22 Consider 2014-2018 County Assistance Roads System (CARS)

Application

Keith Bredehoeft

Presentation of the 2014 Recommended Capital Infrastructure Program

Keith Bredehoeft

#### **ADMINISTRATION**



Council Committee Meeting Date: June 17, 2013

#### **Update on Geothermal HVAC System**

**INTRODUCTION:** In July of 2011, the City Council Approved an Energy Performance Contract Agreement with Energy Solutions Professionals, LLC (ESP) for the sum of \$1,290,924 for the installation of geothermal system at the Municipal Complex and the installation of other energy conservation improvements in City Buildings. Bonds funds (\$510,000) were issued to fund a portion of the project with the anticipated energy savings targeted to making the annual bond payment related to these improvements .

#### **BACKGROUND:**

Under the contract Energy Solutions Professionals, LLC, acted as the general contractor for the project. The Geothermal System Project for Municipal Complex provided for the replacement of the existing HVAC systems in the Municipal Complex (Police Building, City Hall and the Community Center). Energy measures including lighting retrofits, water efficiency improvements, vending machine controls, building infiltration improvements, and energy management system improvements were installed at the Municipal Complex and at the Public Works facility.

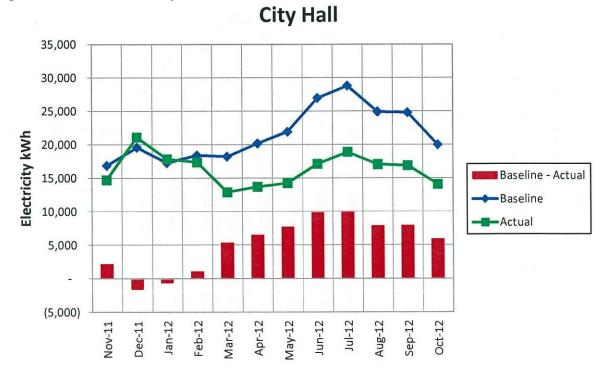
One other unique provisions of the Energy Performance Contract Agreement, was that ESP guaranteed energy savings as a result of the installation of the Energy Measures and Geothermal system. Schedule C of the agreement ESP is guaranteed an annual energy savings and operations and maintenance of at least \$39,876 for the first year.

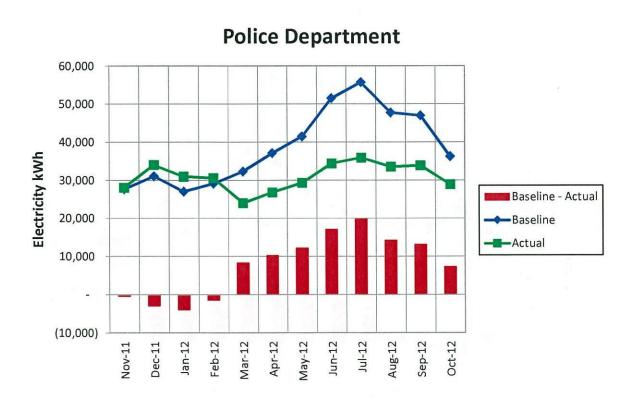
Per the original agreement, ESP has completed a Measurement & Verification Report which has been attached. The Measurement and Verification Plan can be found on pages 7-12 with a summary of the analysis shown in Table 8 (page 13). Based upon the model analysis plan the Geothermal and the energy conservation measures saved \$43,932 over the first year. Please note that because several of the items being measured do not have individual meters modeling was necessary to calculate the energy savings under the Measurement and Verification Plan.

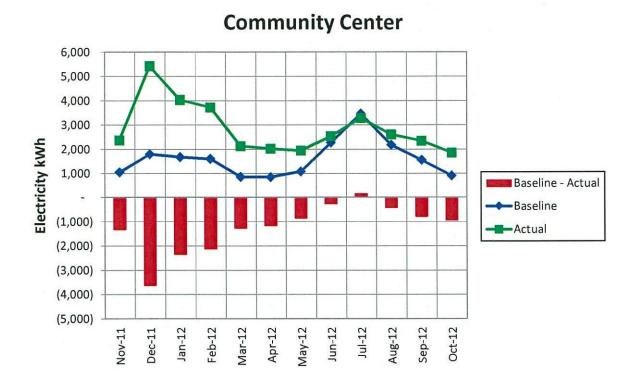
Based on the modeling analysis, the annual energy savings were 235,561 kWh of electricity, 2,479 MCF of natural gas, and 226 kgals of water.

Staff also requested that ESP provide an analysis of the actual kWh hours used in the three facilities using the new geothermal system compared to the base year usage. The following graphs represent actual electrical bill data for the 12 month immediately prior to the implementation of the project and the 1<sup>st</sup> year performance period November 2011 through October 2012. The baseline data has been weather normalized so that a true comparison for each building's consumption could be shown. The red bars on each graph illustrate the monthly energy savings or additional consumption. Since the

geothermal system does not use natural gas, the winter electric usage is expected to be higher than the baseline year.







With the exception of the Community Center Building, the actual kWh usage has decreased with the installation of the new geothermal system. The actual kWh usage for the Community Center Building has increased because the previous system did not require outside air exchange within the building structure.

Because the previous discussion of cost savings focused on models and included weather normalization, staff also conducted a comparison of actual electrical costs between the years of 2011 and 2012. The table below shows the comparison.

Facility	Electrical Costs 2011	Electrical Costs 2012*	Difference
Police/City Hall	\$60,916.75	\$44,716.30	\$16,200.45
Community	\$3,151.84	\$7,655	\$4,503.16
Center			

<sup>\*</sup> There was a rate increase in 2012.

With the installation of the geothermal system the use of natural gas was also reduced because the previous HVAC system used natural gas in the winter. However, because KGS had billing errors in 2010 which resulted in overpayments, staff was not able to conduct an exact dollar comparison between 2011 and 2012. However, staff was able

to compare the actual usage of Mcf billed for the facilities. Between the two years there was a 90% reduction in the gas usage. The table below shows the comparison.

Facility	Gas used 2011	Gas used 2012	Reduction in Mcf Used
Police/City Hall	1,874.9 Mcf	187.3 Mcf	1,687.6
Community	153.6 Mcf	6.801 Mcf	146.799
Center			

To estimate of the cost savings on natural gas, staff has used a 2011 rate of Mcf of \$5.5111 plus the associated fees and taxes and a 2012 rate of Mcf of \$5.0340 plus associated fees and taxes. Based on this assumption, the estimated cost savings between 2011 and 2012 is \$16,088.44

It was also anticipated that the City would also save on the operations and maintenance expenses related with the installation of a new geothermal system. The following chart shows the operation and maintenance costs for contract services used to maintain and repair the previous HVAC system in 2011 and the maintenance costs in 2012 for the new geothermal system.

Facility	O&M 2011	O&M in 2012	Difference
Police/City Hall	\$21,277.21	\$3,790.46	\$17,486.75
Community	\$979.04	\$338.54	\$640.50
Center			

Based on the above calculations the total estimated savings related to the installation of the geothermal systems is \$45,912.98.

#### ATTACHMENT:

Measurement & Verification Report, dated March 8, 2013

#### PREPARED BY:

Dennis Enslinger Assistant City Administrator Date: June 13, 2013

#### **Measurement & Verification Report**

prepared for

## City of Prairie Village, KS

March 8, 2013



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### Introduction

Energy Solutions Professionals is pleased to present this Measurement & Verification Report for the City of Prairie Village. This report summarizes the findings from applying the measurement and verification plan agreed to when the project was developed. Information contained herein includes: results of the measurements taken, the savings achieved, and recommendations for ongoing activities and maintenance you can perform that will optimize efficiencies and ensure that the City of Prairie Village continues to meet and exceed projected savings levels moving forward. The performance period analyzed to determine the savings results represents the first 12 months succeeding completion of the Energy Project: November 2011 through October 2012

We are pleased to inform you that the results of the measurements taken indicate that you are exceeding the energy and water savings amounts guaranteed for this project for the first year of the project's operation, and that you will continue to exceed savings in future years (see Table 1).

Table 1 | Annual Savings: Guaranteed vs. Achieved

Guaranteed Annual Savings	Achieved Annual Savings	Difference
\$39,876	\$43,932	+\$4,056 (10.2%)

While a major goal of this project was to reduce existing utility expenses and divert these dollars for investment into city buildings, the benefits achieved go well beyond the energy savings, and include the following:

#### Improved environment - within facility and globally

The primary objective of the Energy Performance Contract project was to reduce utility costs; however, the measures implemented also enhance the lighting, heating, cooling and plumbing systems, which greatly benefits occupant comfort for years to come. Additionally, the significant energy savings will lead directly to a significant reduction in the carbon footprint of the City of Prairie Village, which has a positive impact on the global environment.

#### **New standardized equipment**

Newer equipment has fewer maintenance problems, allowing your staff to focus on upkeep and preventative maintenance that will increase the overall life of your new equipment. Standardized equipment also allows for stocking smaller quantities of parts and makes replacements and repairs much easier. We estimate that your operational and maintenance savings will be \$8,300 per year as a result of this project.

#### Local economic boost

Implementing this project using dollars that were formerly being spent on utility bills creates a local economic boost by generating jobs, purchases, and projects that would have otherwise not existed. According to the National Association of Energy Services Companies, "for every \$1 invested in an energy efficiency retrofit, 40¢ is returned to the local community in payment for labor and other direct costs purchased locally."

#### Patron and community pride

The facilities you manage are part of the local community. Well maintained buildings and facilities demonstrate a commitment to the community and your residents, as does being good stewards of the taxpayer dollars that are entrusted to you.

#### **Positive environmental impact**

By implementing the energy-saving measures that were part of this program, you are saving energy annually in the amounts of 235,561 kWh of electricity, 2,479 MCF of natural gas, and 226 kgals of water. That has an overall positive impact on the environment, and is equivalent to:

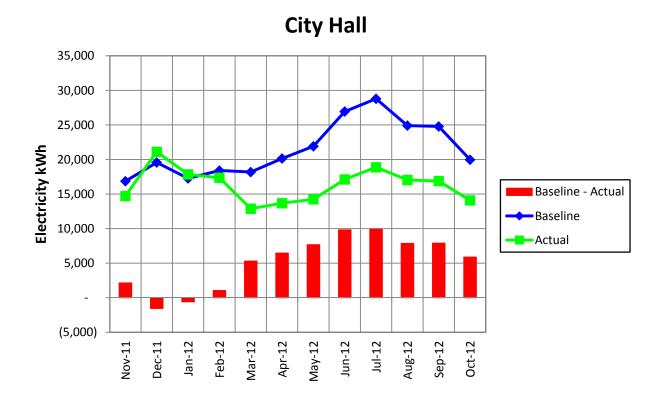
- Saving 33,770 gallons of gasoline per year, or
- Removing 135 cars from the road, or
- Saving 279 acres of pine forests.

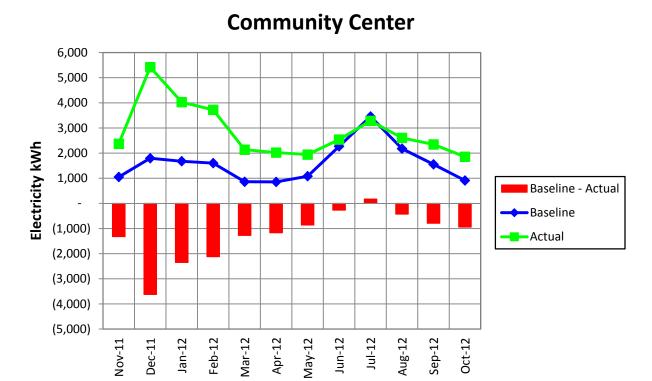
Additionally, you have reduced your Carbon Footprint by 1,443,172 pounds of CO<sub>2</sub> per year.

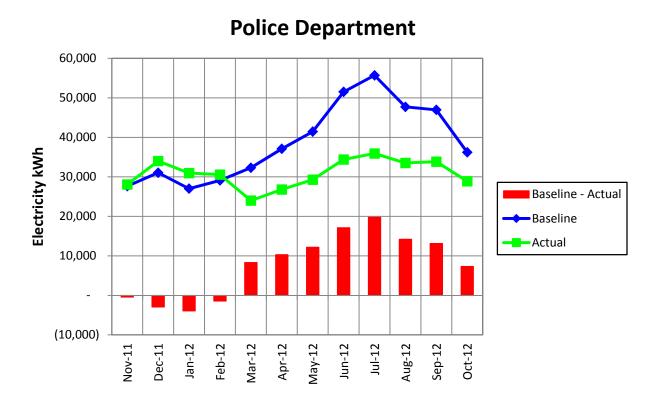
#### **Geothermal Savings Charts**

Since the majority of the energy conservation projects were performed at the City Hall, Police Department, and the Community Center Buildings, the following charts are included to provide supporting documentation of the energy savings results along with individual prescriptive measurements contained within this report. The following charts are created utilizing actual electric data for each building for the 12 months immediately prior to the implementation of the energy conservation project and the 1<sup>st</sup> year performance period of November 2011 through October 2012. The baseline data has been weather normalized so that we can obtain a true analysis of how much energy each building would have consumed if the energy conservation project was not performed. The red bars on each graph illustrate the monthly energy savings which is the difference of the baseline data minus the performance period actual data.

Note that these are electric utility charts only; each of these buildings were converted from natural gas heat to electric heat therefore the winter electric usage is expected to go up slightly, yet the natural gas heating costs have been completely eliminated.







## Measurement and Verification Plan

Before we began installation of any energy saving measures, we mutually agreed to a plan of what upgrades would be measured, how they would be measured, and what savings goals we needed to achieve. All measurements taken to verify savings were witnessed by city personnel. This approach verifies results while minimizing cost for measurement and verification, which allows more facility improvements to be obtained with the savings generated.

**Table 2** identifies the measurement and verification plan that was agreed to for this project.

Table 2 | Measurement & Verification Plan

ECM Description	M&V Methodology	Measured Parameters	Length of Measurement	Quantity of Devices Measured
Lighting Improvements				
Lamp & Ballast Retrofits				
Fixture Replacements	Measured	Fixture Watts	one time	
LED & Fluorescent Lamps				
Water Efficiency Improvements				
Toilets		gallons/flush		
Urinals	Measured	gallons/flush	one time	
Faucet Aerators		gpm		
Building Infiltration Improvements				
Caulking/Sealing	Calculated			
Geothermal System				
Heat Pumps	Measured	kW/ton	one time	
Energy Management System				
HVAC Systems	Measured	Parameters	one time	
Vending Machine Controls				
Vendingmizers	Calculated			

## Results of Measurements Taken

#### Lighting

Energy Solutions Professionals installed energy-saving lamps and ballasts throughout city buildings. Lighting savings were verified by directly measuring the actual wattage consumption for a representative cross-sectional percentage of the retrofits. These measured values were then compared to the values that were used for calculating the savings. The savings are determined to be achieved when the average measured wattage value (for each representative fixture type measured) is found to be less than the value used for savings calculations.

**Table 3** below shows the fixtures measured, the goal wattage, and the actual measured wattage. All but two of the fixtures are performing better than estimated, and overall the lighting improvements are exceeding the guaranteed levels by 10.6%.

Table 3 | Lighting Efficiency Measurements

#### LIGHTING EFFICIENCY MEASUREMENT & VERIFICATION FORM

	Building	Location	Fixture Description	Goal (watts)	Measured (watts)	Notes	% above/(below) goal
1	Police Department	squad room	Retrofit kit - White Reflector, low wattage EB & (2L) 28W	50.0	48.1	quantity 2	3.9%
2	Police Department	squad room	Retrofit kit - White Reflector, low wattage EB & (2L) 28W	50.0	48.1	quantity 2	3.9%
3	Police Department	squad room	Retrofit kit - White Reflector, low wattage EB & (2L) 28W	50.0	48.1	quantity 2	3.9%
4	Police Department	squad room	Retrofit kit - White Reflector, low wattage EB & (2L) 28W	50.0	42.1	quantity 2	15.9%
5	Police Department	sally port	Conversion kit - EB & 28W lamps (2L)	97.8	80.4	quantity 6	17.7%
6	City Hall	multipurpose room	Low Wattage EB& 28W lamps (4L)	97.8	87.3	quantity 3	10.7%
7	City Hall	multipurpose room	Low Wattage EB& 28W lamps (4L)	97.8	95.3	quantity 3	2.6%
8	City Hall	multipurpose room	Low Wattage EB& 28W lamps (4L)	97.8	77.4	quantity 2	20.8%
9	City Hall	display LEDs	Replace lamp - Sylvania LED6MR16/DIM/830/FL40	8.4	9.4	quantity 9; (7) @8W & (2) @ 6W	-12.5%
10	City Hall	council kitchenette	Retrofit kit - White Reflector, low wattage EB & (2L) 28W	50.0	45.5	quantity 4	9.1%
11	Public Works	main office	Low Wattage EB& 28W lamps (3L)	97.8	63.7	quantity 5	34.9%
12	Public Works	mechanics office	Low Wattage EB& 28W lamps (3L)	97.8	88.7	quantity 6	9.3%
13	Public Works	equipment bay	New 6-lamp T8 - Williams AL series - 28W lamps	213.3	199.3	quantity 3	6.6%
14	Public Works	vehicle bays	Low Wattage EB& 28W lamps (2L)	50.0	57.3	quantity 12	-14.5%
				1108.4	990.5		10.6%

#### **Water Conservation**

Energy Solutions Professionals installed a variety of water conservation measures in city buildings that included new toilets, flush valves, and faucet aerators.

The basic premise for establishing the water savings is to demonstrate that the flow-rate is reduced (faucet aerators) or that the gallons-per-flush (toilets) has been reduced. The savings calculations have been based on achieving certain levels of flow-rate or gallons-per-flush for all of the domestic water devices we replaced. The savings was quantified by measuring a representative number of the key retrofit types to verify that target flow-rates or gallons-per-flush were actually achieved.

**Table 4** shows the results of our measurements. Our tests indicate that this measure is exceeding the guaranteed savings by 15.4%. Only one faucet aerator was shown to not meet the expected savings due to it being misidentified during the audit as a 2.2 gpm faucet, when in fact it was found to be a 1.5 gpm faucet after on-site measurements. Regardless, the installed aerator is functioning as intended and delivering a 0.5 gpm flow.

Table 4 | Water Efficiency Measurements

	WATER EFFICIENCY MEASUREMENT & VERIFICATION FORM												
	Building	Room ID	Fixture Description	Units	Existing Use	Retrofit Use	Goal Savings	Pre- Measure	Post- Measure	Measured Savings	% Above/(Below) Goal		
1	City Hall	Public MRR off Lobby	Lavatory Sink Faucet	gpm	2.2	1.5	0.7	3.00	1.50	1.50	114.3%		
2	City Hall	Public MRR off Lobby	Lavatory Sink Faucet	gpm	2.2	1.5	0.7	2.50	1.50	1.00	42.9%		
3	City Hall	Public WRR off Lobby	Lavatory Sink Faucet	gpm	2.2	1.5	0.7	2.00	1.25	0.75	7.1%		
4	City Hall	Public WRR off Lobby	Lavatory Sink Faucet	gpm	2.2	1.5	0.7	2.20	1.25	0.95	35.7%		
5	City Hall	Public WRR off Lobby	Toilet	gpf	3.5	1.6	1.9	3.93	1.43	2.50	31.6%		
6	Public Safety	Mens Locker Room	Toilet	gpf	3.5	1.6	1.9	3.50	1.60	1.90	0.0%		
7	Public Safety	Detention RR	Toilet	gpf	3.5	1.6	1.9	3.50	1.33	2.17	14.0%		
8	Public Safety	Detention RR	Lavatory Sink Faucet	gpm	2.2	0.5	1.70	1.50	0.50	1.00	-41.2%		
	·		Totals		21.5	11.3	10.20	22.13	10.37	11.77	15.4%		

#### **Building Infiltration Improvements**

Energy Solutions Professionals sealed and weather stripped and sealed interior and exterior doors; sealed roof/wall joints roof/level changes, and roof vents; sealed the interior walls from the repair bays at Public Works A, and caulked windows.

The basic premise for building infiltration improvements is to reduce the amount of conditioned air being lost to the outside, or reducing the amount of outside air penetrating the building envelope. The savings calculations have been based on reducing the square feet of total leakage and have been agreed to by ESP and the City of Prairie Village.

Based on our on-site review of the infiltration work completed, we expect savings for this measure to meet or exceed the quaranteed amount.

#### **Geothermal Heat Pumps**

Energy Solutions Professionals installed a geothermal heating and cooling system to service City Hall, the Public Safety building, and the Community Center. Geothermal heat pump savings are based upon achieving a certain level of efficiency in heating and cooling modes. We measured the efficiency of a select number of heat pumps in both heating and cooling modes, and compared those results to the targeted efficiencies for those units.

**Table 5** shows that the geothermal heat pumps are operating more efficiently than expected in both heating and cooling modes. In cooling mode the heat pumps are exceeding the savings goal by 1.4%, while in heating mode, the heat pumps are exceeding the savings goal by 22.2%.

Table 5 | Geothermal Heat Pump Efficiency Measurements

#### **HEAT PUMP MEASUREMENT & VERIFICATION FORM**

	Building	Room # - Equip ID	HP Model #	GPM	Entering Air Temp. (deg F)	Entering Water Temp (deg F)	Leaving Water Temp (deg F)	MODE (H or C)	Measured Watts	HEATING GOAL (COP)*	COOLING GOAL (EER)*	ACTUAL COP**	ACTUAL EER***	% Above / (Below) Goal
1		CH-12	EC120	25	71.4	60	48	Н	9500	3.3		4.8		45.1%
2	City Hall	CH-10	ECO36	7.5	77	73	86	С	2365		13.2		21.3	61.6%
3	ony man	CH-9	EC120	25	77	67	75	С	8900		14.2		11.6	-18.1%
4		CH-8	ECO36	7.5	77	70	78	С	2360		13.7		13.2	-4.0%
5		PS-4	ECO36	7.5	70	77	64	Н	2290	4.2		6.5		53.7%
6		PS-3	ECO36	7.5	71	71	77	С	2220		12.2		10.5	-14.0%
7	Law Enforcement Center	PS-2	ECO24	5	82	67	56	Н	1920	3.3		4.3		31.6%
8		PS-17	ECO30	6	73	70	65	Н	2130	3.7		2.1		-42.3%
9		PS-19	ECO24	5	75	66	77	С	1545		15.9		18.4	15.9%
10	Community Center	CCENTER-1	ECO60	12.5	69	69	74	С	4300		12.2		7.5	-38.3%
			•	•	•	•				14.5		17.7		22.2%
											81.4		82.6	1.4%

#### **Energy Management System**

Energy Solutions Professionals installed a number of new control points and capabilities to the city's energy management system. Energy management system savings are verified by reviewing the current temperature set points and operating schedules programmed into the energy management system, and comparing them to the settings that were used to determine the energy savings.

Tables 6 and 7 show that at the time we reviewed the settings, the energy management system was programmed very closely to the values that we had mutually agreed to. Keeping a close watch on scheduling and set points will maximize the amount of savings that you will achieve from this measure. We understand and expect that from time to time you need to make adjustments to your energy management system to accommodate events and activities that are not part of the daily operating parameters. Adjusting your schedules for these activities will not have a significant impact on your savings as long as the schedules are returned to the optimal settings after the event is complete.

Table 6 | Scheduling Set Points

1 2 3 4	Building	Area Type CH1 - Basement exercise room		GC	MOM			00	CUPIED S	SCHEDUI	LE					
1 2 3 4	Building			GC	MOM											
1 2 3 4	Building			GC					TUES - W	ED - FRI				UN-HOL		
1 2 3 4	Building			7			TUAL	GC		ACTI		GC		ACT		
1 2 3 4	Building			BEGIN	END	BEGIN	S S	BEGIN	S S	BEGIN	S S	BEGIN	END	BEGIN	END	
3		CH1 - Basement exercise room	Equipment Description	B		<u> </u>	-	B		<u>m</u>				<u>a</u>		Note
3			Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC				No weekend activity
3		CH2 - Basement electronics room	Heat pump	7am	6pm	12am	11:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
4		CH3 - Basement briefing area	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
		CH4 - West lounge, work room, storage	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
5		CH5 - Large conference room	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
6		CH6 - Conference room, office	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
7	City Hall	CH7 - Codes, City Administrator	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
8		CH8 - Court Offices	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
9		CH9 - Codes (interior) & hallways	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
10		CH10 - Southeast exterior offices (Finance Director)	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
11		CH11 - Restrooms, vending	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
12		CH12 - Council Chambers	Heat pump	3pm	10pm	7am	5:30pm	7am	8pm			UNOCC	UNOCC			No weekend activity
13		CH13 - Northeast interior offices	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
14		CH14 - Northeast exterior offices (Mayor)	Heat pump	7am	6pm	7am	5:30pm	7am	6pm			UNOCC	UNOCC			No weekend activity
15	Community Center	CB1 - Community Center	Heat pump	9am	4pm	7:30am	10:30pm	9am	4pm			UNOCC	UNOCC	7:30am	10:30pm	
16	Community Center	CB2 - Community Center	Heat pump	9am	4pm	7:30am	10:30pm	9am	4pm			UNOCC	UNOCC	7:30am	10:30pm	
17		PS8 - Corridor	Heat pump	7am	6pm	12am	12am	7am	6pm			UNOCC	UNOCC	осс	осс	7 days/week
18		PS9 - Interview rooms	Heat pump	7am	6pm	7am	8:30pm	7am	6pm			UNOCC	UNOCC			
19		PS11 - Copy room, computer room, restrooms	Heat pump	7am	6pm	12am	12am	7am	6pm			UNOCC	UNOCC			
20		PS12 - West detective offices	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC	UNOCC			
21		PS13 - Southwest offices	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC	UNOCC			
22 L	Law Enforcement Center	PS14 - Southeast offices	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC	UNOCC			
23		PS15 - Conference room	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC	UNOCC			
24		PS16 - Police chief	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC				
25		PS17 - Office manager, stairwell	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC				
26		PS18 - Records room	Heat pump	7am	6pm	7am	6:00pm	7am	6pm			UNOCC				
27		PS19 - Lobby, vestibule	Heat pump	7am	6pm	7am	6:00pm	7am	6pm				UNOCC	осс	occ	7 days/week
28		Building A - AC-1	Split unit	6am	5pm	7am	5pm	6am	5pm			UNOCC				No weekend activity
29		Building A - AC-2	Split unit	6am	5pm	7am	5pm	6am	5pm				UNOCC			No weekend activity
30	Public Works	Building A - AC-3	Split unit	6am	5pm	7am	5pm	6am	5pm			UNOCC				No weekend activity
31		Building B - AC-1	Split unit	6am	5pm	4am	5pm	6am	5pm			UNOCC				No weekend activity

Table 7 | Temperature Set Points

			PIED TEMPS (de				PANCY		
Building	Location	HEA Goal	TING Actual	COO Goal	LING Actual	COMP READ O/U/S	FIELD VERIFY O/U/S	Notes	
					Actual		0/0/5		
1 City Hall	CH1 - Basement exercise room	60	60	85		0		Heat to 66	
2 City Hall	CH2 - Basement electronics room	60	60	85		0			
3 City Hall	CH3 - Basement briefing area	60	60	85		0			
4 City Hall	CH4 - West lounge, work room, storage	60	60	85		0		Heat to 68	
5 City Hall	CH5 - Large conference room	60	60	85		0			
6 City Hall	CH6 - Conference room, office	60	60	85		0			
7 City Hall	CH7 - Codes, City Administrator	60	60	85		0			
8 City Hall	CH8 - Court Offices	60	60	85		0			
9 City Hall	CH9 - Codes (interior) & hallways	60	60	85		0			
10 City Hall	CH10 - Southeast exterior offices (Finance Director)	60	65	85		О		65 / reset to 71 heat	
11 City Hall	CH11 - Restrooms, vending	60	60	85		О			
12 City Hall	CH12 - Council Chambers	60	60	85		О			
13 City Hall	CH13 - Northeast interior offices	60	60	85		О			
14 City Hall	CH14 - Northeast exterior offices (Mayor)	60	60	85		О			
15 Community Center	CB1 - Community Center	60	60	85		0			
16 Community Center	CB2 - Community Center	60	60	85		О			
17	PS8 - Corridor	60		85		0			
18	PS9 - Interview rooms	60		85		О			
19	PS11 - Copy room, computer room, restrooms	60	60	85		0		71 reset	
20	PS12 - West detective offices	60		85		О			
21	PS13 - Southwest offices	60	60	85		О		72 reset	
22 Law Enforcement Center	PS14 - Southeast offices	60		85		0			
23	PS15 - Conference room	60		85		0			
24	PS16 - Police chief	60		85		0			
25	PS17 - Office manager, stairwell	60		85		0			
26	PS18 - Records room	60		85		0			
27	PS19 - Lobby, vestibule	60		85		0			
41 Public Works	Building A - AC-1	60		84		0			
42 Public Works	Building A - AC-2	60		84		0			
43 Public Works	Building A - AC-3	60		84		0			
45 Public Works	Building B - AC-1	60		84		0			

#### **Vending Machine Controls**

Energy Solutions Professionals installed control devices on the vending machines. Savings are achieved by the device turning off lights on the machine and allowing the compressor to run less frequently when no customers are present. The savings have been agreed to by ESP and the City of Prairie Village.

## Savings Achieved

We are pleased to report that the energy saving improvements that you selected as part of your performance contracting project are generating savings in excess of our guarantee. Each of the energy saving improvements that were measured and verified as part of your project are exceeding expectations. Table 8 shows the amount by which each energy-saving measure is exceeding the guarantee.

Table 8 | Performance vs. Guarantee by Energy Saving Measure

		Guarante	s								
Energy Saving Measure	kW	kWh	MCF	kgals	Dollars	kW	kWh	MCF	kgals	Dollars	Above/Below Guarantee
Lighting Improvements	243	60,201			\$3,327	269	66,582			\$3,680	\$353
Water Conservation Improvements			5	196	\$992			6	226	\$1,145	\$153
Building Infiltration Improvements		8,987	565		\$5,852		8,987	565		\$5,852	\$0
Energy Management System		165,993	58		\$6,881		165,993	58		\$6,881	\$0
Geothermal System		-8,963	1,514		\$14,416		-8,839	1,850		\$17,967	\$3,551
Geothermal Rate Change Savings					\$8,299					\$8,299	\$0
Vending Machine Controls		2,838			\$109		2,838			\$109	\$0
	243	229,056	2,142	196	\$39,876	269	235,561	2,479	226	\$43,932	\$4,056

In addition to the achieved savings shown above, we estimate that you will achieve an additional \$8,300 in operation and maintenance savings due the improvements made as part of this project.

## Ongoing Activities to Maintain Savings

The most important thing that your staff can do to continue to achieve energy savings is to maintain the systems installed per the manufacturers' recommendations. The specific preventative maintenance plans and procedures can be found in the Operations & Maintenance manuals we delivered to you at the end of construction.

**Table 9** highlights some of the best practices and suggestions for maintenance and settings that will maximize the savings you are able to achieve in the future.

Table 9 | Preventative Maintenance Suggestions to Maximize Savings

Measure	Preventative Maintenance Recommendations
Lighting	Only replace lamps and ballasts with the types installed. Turn off lights when not in use.
Water Savings	Follow manufacturer's recommended maintenance. Keep water turned off when not in use and promptly address any leaks or needed repairs.
Building Infiltration	$Check \ the \ integrity \ of seals \ and \ we ather-stripping \ and \ repair \ or \ replace \ if \ damaged.$
Energy Management System	Check schedules regularly to ensure that schedules and set points are programmed appropriately based on occupied hours and season. Setback temperatures during unoccupied hours. Return any schedule changes back to optimal settings after events or activities are completed.
Geothermal Heat Pumps	Perform recommended maintenance per manufacturer's guidelines.
Vending Machine Controls	Periodically test to ensure that controls are turning machine off and that objects are not blocking the sensor.

## **Future Services**

This measurement and verification report concludes our current obligation for verifying your savings; however, we look forward to continuing to assist you with warranty issues during the first year following construction and hope that we may have the opportunity to work with you again down the road.

ESP also believes that you can benefit from implementing an energy-saving behavioral training program. We have experts on staff who have helped numerous clients in the area change their energy consuming habits. When maintained, these programs can create an entire paradigm shift that can have a dramatic impact on lowering your utility bills.

Should you desire to have us conduct any additional measurements of your energy savings in the future, or if you have any other needs, please don't hesitate to contact us. We have truly enjoyed the opportunity to assist the City of Prairie Village with your energy and infrastructure needs, and hope you felt that we were able to deliver energy efficiency | simply.

## Copies of Measurement Reports

#### EMS CONTROL MEASUREMENT AND VERIFICATION FORM - TEMPERATURE SETPOINTS

			PIED TEMPS (d				PANCY	
1			TING		LING	COMP READ O/U/S	FIELD VERIFY O/U/S	Notes
Building	Location	Goal	Actual	Goal	Actual	2	0/0/3	Notes  Notes
1 Gity Hall	CH1 - Basement exercise room	60	60	85		O		Mat to be
2 City Hall	CH2 - Basement electronics room	80	60	85				
3 City Hall	CH3 - Basement briefing area	60	60	85		Q		
4 City Hall	CH4 - West lounge, work room, storage	60	60	85		0		Heart to 68
5 City Hall	CH5 - Large conference room	80	60	85		O		
6 City Hall	CH8 - Conference room, office	80	60	85		0		
7 City Hell	CH7 - Codes, City Administrator	60	60	85		0		
8 City Hall	CH8 - Court Offices	60	60	85		0		
9 City Hall	CH9 - Codes (Interior) & hallways	60	60	85		0		
10 City Hall	CH10 - Southeast exterior offices (Finance Director)	60	45	85		0		65 /Rebut to 71 Heats
11 City Hall	CH11 - Restrooms, vending	60	60	85		0		
12 City Hall	CH12 - Council Chambers	60	60	85		0		
13 City Hell	CH13 - Northeast interior offices	60	60	85		O		
14 City Hall	CH14 - Northeast exterior offices (Mayor)	60	60	85		0		
16 Community Center	CB1 - Community Center	60	60	85		0		
16 Community Center	CB2 - Community Center	60	60	85		0		
17	PS8 - Corridor	60		85		0		
18	PS9 - Interview rooms	60		85		0	4	
19	PS11 - Copy room, computer room, restrooms	60	90	85		6		71° reset
20	PS12 - West detective offices	60		85		0		
21	PS13 - Southwest offices	60	ga	85		٥		72 reset
22 Law Enforcement Center	PS14 - Southeast offices	60		85		0		
23	PS15 - Conference room	60		85		0		
24	PS16 - Police chief	80		85		0		
26	PS17 - Office manager, stairwell	80		85		0		
26	PS18 - Records room	60		85		U		
27	PS19 - Lobby, vestibule	80		85		0		
41 Public Works	Building A - AC-1	60		84		0		
42 Public Works	Building A - AC-2	60		84		0		
43 Public Works	Building A - AC-3	60		84		0		
45 Public Works	Building B - AC-1	60		84		Ö		

David McAuliff	_
TITLE Bilding Inspectory	
SIGNATURE	

NAME (PRINT)

TITLE

SIGNATURE

#### EMS CONTROLS MEASUREMENT AND VERIFICATION FORM - SCHEDULING SETPOINTS

			T					0	CCUPIED							
				GC		V - FRI	TUAL		TUES - V		TUAL	GC	SAT-SL		TUAL	
- 1							7	_	1			- 100		-	T	
	Building	Area Type	Equipment Description	BEGIN	GN	BEGIN	END	BEGIN	S S	BEGIN	END D	BEGIN	SN S	BEGIN	EN C	Note
1		CH1 - Basement exercise room	Heat pump	7am	6pm	74	5300	7am	6pm			UNOCC	UNOCC			No weekind Act.
2		CH2 - Basement electronics room	Heat pump	7am	6pm	124	117.25	7am	6pm			UNOCC	UNOCC			
3		CH3 - Basement briefing area	Heat pump	7am	6pm	7A	530P	7am	6pm			UNOCC	UNOCC			
4		CH4 - West lounge, work room, storage	Heat pump	7am	6pm	JA	570	7am	6pm			UNOCC	UNOCC			\
5		CH5 - Large conference room	Heat pump	7am	6pm	1		7am	6pm			UNOCC	UNOCC			
6		CH6 - Conference room, office	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC			
7	City Hall	CH7 - Codes, City Administrator	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC			
8	Ony trus	CH8 - Court Offices	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC			
9		CH9 - Codes (interior) & hallways	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC			
10		CH10 - Southeast exterior offices (Finance Director)	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC		-	
-11		CH11 - Restrooms, vending	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC			
12		CH12 - Council Chambers	Heat pump	3pm	10pm		$\perp$	7am	8pm			UNOCC	UNOCC			
13		CH13 - Northeast interior offices	Heat pump	7am	6pm			7am	6pm			UNOCC	UNOCC			1,
14		CH14 - Northeast exterior offices (Mayor)	Heat pump	7am	6pm	,	1	7am	6pm			_	UNOCC			4
15	Community Center	CB1 - Community Center	Heat pump	9am	4pm	7:3	1030	9am	4pm				UNOCC		10:30	\$
16		CB2 - Community Center	Heat pump	9am	4pm	7:30	7030	9am	4pm		<u> </u>	UNOCC	UNOCC	730	1030	7
17		PS8 - Corridor	Heat pump	7am	6pm	12A	12A	7am	6pm		_	UNOCC	UNOCC			7 Days/week
18		PS9 - Interview rooms	Heat pump	7am	6pm	7A	8:30	7am	6pm			UNOCC	NOCC			1 3
19		PS11 - Copy room, computer room, restrooms	Heat pump	7am	6pm	12A	12 A	7am	6pm		_	UNOCC	UNOCC			<u> </u>
20		PS12 - West detective offices	Heat pump	7em	6pm	7A	64	7am	6pm		_	UNDCC	UNOCC		-	5
21		PS13 - Southwest offices	Heat pump	7am	6pm	7 A	6,40	7em	6pm			UNOCC	UNOCC			5
22	Law Enforcement Center	PS14 - Southeast offices	Heat pump	7am	6pm	7 A	68	7am	6pm			UNOCC	UNOCC			<b>4</b>
23		PS15 - Conference room	Heat pump	7am	6pm	74	66	7am	6pm		-	UNOCC	UNOCC			
24		PS16 - Police chief	Heat pump	7em	6pm	TA	60	7am	6pm		_	UNOCC	UNOCC			
25		PS17 - Office manager, stairwell	Heat pump	7am	6pm	74	6	7am	6pm			UNOCC	UNOCC			
26		PS18 - Records room	Heat pump	7am	6pm	78	90	7am	6pm		-	UNOCC	UNOCC			1
27		PS19 - Lobby, vestibule	Heat pump	7am	6pm	7A	60,	7am	6pm		_	UNOCC	UNOCC	_		2
28		Building A - AC-1	Split unit	6am	5pm	7 A	30	6am	5pm			UNOCC	UNOCC	_		No Weskings
29	Public Works	Building A - AC-2	Split unit	6am	5pm	7A	26	6am	5pm		-	UNOCC	UNOCC	_		1 \
30		Bullding A - AC-3	Split unit	6am	5pm	779	50	6am	5pm			UNOCC	UNOCC			1
- 31		Building B - AC-1	Split unit	6am	5pm	4A	58	6am	5pm			UNOCC	UNOCC			V

NAME (PRINT)	ESCO NAME (PRINT)	NAME (PMINT) Read
Building Inspector	TITLE	TITLE COAST MGC
SIGNATURE	SIGNATURE	SIGNATURE

#### **HEAT PUMP MEASUREMENT & VERIFICATION FORM**

	Building	Room # - Equip ID	HP Model #	GPM	Entering Air Temp. (deg F)	Entering Water Temp (deg F)	Leaving Water Temp (deg F)	MODE (H or C)	Measured Watts	HEATING GOAL (COP)*	COOLING GOAL (EER)*	ACTUAL COP**	ACTUAL EER***	Note
		CH-12	EC120	25	71.4	60	48	H	9500	3.3	-NA	4.8	NA	
2	ĺ	CH-10	EC036	7.5	77.0	73	86	C	2365	NA	13.2	NA	21.3	
3	City Hall	CH-9*	EC120	25	77.0	67	75	C	8900	NA	14.2	NA	11.6	2
4		CH-8#	EC036	7.5	77.0	70	78	C	2360	NA	13.7	NA	13.1	
5		D5-4	ECOSE	7,5	70	77	64	H	2290	4.2	NA	6.5	NA	
6		PS-3*	EC036	7.5	71	71	77	C	2220	NA	12.2	NA	1.0.5	
7	Law Enforcement Center	P5-2	ELOay	5.0	82	56	67	H	1920	3.3	NA	4.3	NA	
8		n4 \7 #	E (030	5	73	70	65	1	2130	3.7	NA	2.1	NA	
9		PS-19	EC024	5	15	66	77	C	1545	NA	149	NA	184	
10	Community Center	CLENTER-13	E(060	12.5	69	69	74	C	4300	NA	12.2	NIA	7.5	

<sup>\*</sup> GOAL from attached charts

CLIENT

David McAulitte

TITLE

SIGNATURE

ROBERT P. MILLER JR

VICE PRESIDENT OF OPERATION

SIGNATURE

\* ACTUAL FLOWS (GPM) NEEDS TO BE MEASURED. RESULTS CAN VARY BASED ON ACTUAL WATER FLOW.

<sup>\*\*</sup> Actual COP = [1,035 x 500 x GPM x (Entering water temp - Leaving water temp)] / [Measured watts x 3,413]

<sup>\*\*\*</sup> Actual EER = [1.035 x 500 x GPM x (Leaving water temp - Entering water temp)]/ Measured watts

										GOAL	COP (E	CO12)						_		_	_
Entering Water Temp										Entering	Air tem	perature									
(deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3,1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2.
41	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3,1	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2
42	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3
43	3,5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3,1	3.1	3.1	3.0	3.0	3
44	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3
45	3,6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3
46	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3
47	3.7	3.6	3.6	3.6	3.5	3,5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3
48	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3
49	3.8	3.7	3.7	3.7	3.6	3,6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3
50	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3
51	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3
52	3.9	3.8	3.8	3,8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3
53	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3,7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3
54	4.0	3.9	3.9	3,9	3.8	3.8	3.8	3.7	3.7	3.7	3,6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3
55	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3
56	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3
57	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3
58	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3
59	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3,7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3
60	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	- 3
61	4.2	4.2	4.2	4,1	4.1	4.0	4.0	4.0	3.9	3.9	3,8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	
62	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3
63	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	
64	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	1 3
65	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3
66	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3
67	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3,9	3.8	3.8	3.7	2
68	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3
69	4.5	4.4	4.4	4.4	4.3	4,3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3,9	3.9	3.8	3.8	100
70	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	- 3
71	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4,3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	1
72	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3
73	4.6	4.6	4.5	4.5	4,5	4,4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	- 2
74	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3
75	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3
76	4.7	4.5	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	1.2
77	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	- 3
78	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	- 4
79	4.8	4.7	4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	- 4
80	4.8	4.8	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	1

r	_	_			_			_	_	GOAL	COP (E	CO18)	_								
Entering Water											Air tem	CHAMIN									
Temp (deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3,4	34	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	31	31	3.0	3.0	2.9
41	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.0	2.9
42	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0
43	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.0
44	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0
45	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1
46	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1
47	3.7	3.7	3.6	3.6	3.6	3.5	3,5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1
48	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1
49	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2
50	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2
51 52	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.2
53	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3
54	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3
55	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3,3
56	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3
57	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.3
58	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4
59	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4
60	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.4
61	4,1	4.1	4.0	4,0	4.0	3.9	3.9	3.8	3.8	3.8	3,8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.4
62	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5
63	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5
64	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5
65	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6
66	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6
68	4.2	4.2	4.2	4.1	4.1	41	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6
69	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.7
70	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.7
71	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.7
72	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7
73	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7
74	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3,7
75	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.8
76	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.8
77	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8
78	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8
79	4.6	4.5	4.5	4.5	44	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3,8
80	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8

#### HEAT PUMP - HEATING COP

										GOAL	COP (E	CO24)									
Entering Water										Entering	Air tem	perature									
Temp. (deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3.4	3.4	3.4	33	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	31	3.1	3.0	3.0	3.0	2.9	2.1
41	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.
42	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.
43	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3,3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.
44	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.
45	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.
46	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.
47	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3,1	3.
48	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.
49	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.
50	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.
51	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3,5	3.5	3.5	3.4	3.4	3,4	3.4	3.3	3.3	3.3	3.
52	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.
53	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.
54	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.
55	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3,
56	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.
57	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.
58	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.
59	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.
60	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.
61	4,1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.
62	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3,
63	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.
64	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.
65	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.
66	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.
67	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.
68	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.
69	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.
70	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.
71	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.
72	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.
73	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3,9	3.8	3.8	3.
74	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.
75	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.
76	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.
77	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.
78	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.
79	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.
80	4.6	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.

Entering Water																					
Temp											Air temp		70	20. 1	74	75 T	76	77 1	78 I	79	80
(deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73		3.0	2.9	29	2.9	2.8	2.1
40	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	29	2.9	2.8	2
41	3,3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1		3.0	3.0	3.0	3.0	2.9	2.9	2
42	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0		3.0	3.0	2.9	3
43	3.4	3.4	3.4	3,4	3.3	3.3	3.3	3.3	3,2	3.2	3,2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3
44	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2		3.1	3.1	3.1	3.0	3.0	3.0	3.
45	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1		3.1	3.0	3.0	3.0	3
46	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	31	3.1	3.0	3
47	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3		3.2	3.2	3.2	3.1	31	3.1	3.1	3
48	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3		3.2	3.2	3.2	3.1	3.1	3.
49	3.7	3.6	3.6	3.6	3.5	3.5	3,5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3
50	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	33	3.3	33	3.2	3.2	3.2	3.2	3
51	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3,4	3.4	3.4	3.3			3.2	3.2	3.2	3.2	
52	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	35	3.4	3.4	3.4	3.4	33	3.3		3.2	3.2	3.2	3
53	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3		-	-	3
54	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3
55	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3				
56	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	33	3.3	3.3	3
57	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3,5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3
58	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.
59	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3,4	3.4	3.3	3.3	
60	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3
61	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3
62	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3
63	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3
64	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.
65	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3
66	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3
67	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3
68	4.1	4.1	41	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3
69	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3
70	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3
71	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3
72	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3
73	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3
74	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3
75	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3,5	3
76	4.3	4.2	4.2	4.2	4.1	4.1	4.1	41	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3
77	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3
78	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3
79	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3
80	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	1

#### **HEAT PUMP - HEATING COP**

										GOAL	COP (E	CO36)									
Entering Water										Enterino	Air tem	nerature									
Temp. (deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2.9
41	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2.9
42	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0
43	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.
44	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3,3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	31	3.0	3.
45	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.
46	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.
47	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3,3	3.3	3.2	3.2	3.2	3.2	3.1	3.
48	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3,
49	3,8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3,5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.3
50	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.
51	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.
52	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.
53	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3,6	3.6	3.5	3,5	3.5	3.4	3.4	3.4	3.4	3.3	3.
54	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.
55	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.
56	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.
57	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.
58	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.
59	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.
60	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.
61	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.
62	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.
63	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3,5	3.5	3,
64	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.
65	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.
66	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.
67	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4,0	3.9	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.
68	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.
69	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.5	3.4	3.
70	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.
71	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3.5	3.4	3.
72	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.6	3.5	3.
73	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.
74	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.
75	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.
76	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.
77	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.
78	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.
79	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4,1	4.0	4.0	3.9	3.9	3,
80	4.6	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4,3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3,

_										GOAL	COP (E	CO48)									
Entering Water Temp										Entering	Air tem	nerature									
(deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	81
40	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3,3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	- 2
41	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	- 2
42	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3,4	3.4	3.3	3.3	3.3	3.3	32	3.2	3.2	3.2	- 1
43	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	- 3
44	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	- 2
45	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3
46	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3
47	3.9	3.9	3.8	3.8	3.8	3.7	3,7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3,4	3.3	- 2
48	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3,6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3
49	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3
50	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3,7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3
51	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3
52	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3
53	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3
55	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	1
56	4.2	4.1	41	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.9	38	3.8	3.8	3.7	3.7	3.7	3.6	3.6	- 3
57	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3
58	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	- 3
59	4,3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3
60	4.3	4.3	42	4.2	4.2	42	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	38	3.8	3.7	- 2
61	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	- 3
62	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	41	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	- 3
63	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	- 3
64	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	:
65	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	- 3
66	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.8	3.7	3.6	3
67	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	- 3
68	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.6	3
69	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4,3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.6	3
70	4.6	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3
71	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.6	- 3
72	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.7	- 1
73	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4,1	4.0	3.9	3.8	3.8	- 4
74	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.8	4
75	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9	- 4
76	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.3	43	4.2	41	41	4.0	4.0	-
77	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.1	4.0	
78	4.8	4.8	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.6	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.1	4
80	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.6	4.6	4.5	4.4	4.4	4.4	4.4	4.3	4.2	42	- 4

#### HEAT PUMP - HEATING COP

										GOAL	COP (E	CO60)									_
Entering Water Temp									- 1	Enterina	Air tem	oerature									
(deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3,4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2
41	3,4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3,1	3.0	3.0	3.0	3.0	3.0	2
42	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3
43	3.5	3.5	3.5	3.4	3,4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3
44	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3
45	3.6	3.6	3.5	3.5	3.5	3,5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3
46	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3
47	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3,2	3.1	- 2
48	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3
49	3,8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3
50	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	- 2
51	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	- 1
52	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	
53	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	
54	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3,6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	
55	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	- 3
56	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	- 5
57	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	
58	4.0	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	
59	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3,5	3.5	3.5	3.4	- 3
60	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	
61	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3,5	
62	4.1	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	- 6
63	4.1	4.1	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	
64	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	
65	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3,5	
66	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	
67	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4,0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	
68	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	
69	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	
70 +	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4,0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	
71	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	
72	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	
73	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	
74	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	
75	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	
76	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	
77	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	
78	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	
79	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	1
80	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	

					_					OUNE	COP (E	, , ,									_
Entering Water									3	Entering	Air temo	erature									
Temp. (deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.3	3.3	- 2
41	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	- 3
42	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3,6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	- 8
43	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3,5	3.5	3.5	3.4	3.4	
44	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	- 2
45	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	- 3
46	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	- 8
47	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	
48	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	2
49	4.2	41	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	
50	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	- 8
51	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3,9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	
52	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	- 8
53	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	
54	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.0	4.0	4.0	3,9	3.9	3.9	3.8	3.8	3.7	3.7	_ 0
55	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	
56	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	- 3
57	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4,1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	
58	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	Š
59	4.6	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.2	4.1	41	4.1	4.0	4.0	3.9	3.9	3.9	3.8	
60	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.4	44	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	
61	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.4	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	
62	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.4	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	- 3
63	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3,9	
64	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	
65	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	
66	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.3	4.3	4.3	4.2	4.2	4.1	41	4.1	4.0	
67	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4,4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	
68	4.8	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	1
69	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4,5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	
70	4.8	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	
71	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	
72	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	44	4.4	4.3	4.3	4.2	4.2	
73	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	5
74	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	
75	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	
76	5.0	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	
77	5.0	5.0	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	
78	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	
79	5.1	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.8	4.6	4.5	4.5	4.5	4.4	
80	5.1	5.1	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	46	4.6	4.6	4.5	4.5	4.4	

										GOAL	COP (E	CO72)									
ritering Water									3	Enterina	Air temp	perature									
Temp (deg F)	60	61	62	63	64	65	66	67	68	69	70	7.1	72	73	74	75	76	77	78	79	80
40	3.4	3.4	3.4	3.3	3.3	33	3.3	3.3	3.2	3.2	3.2	3,2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.9	2.9
41	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.
42	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.
43	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.
44	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	31	3.
45	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.
46	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.
47	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3,3	3.3	3.3	3.2	3.2	3.1	3.
48	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3,
49	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3,4	3.3	3.3	3.2	3.2	3.
50	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.4	33	3.3	3.2	3,
51	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.
52	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.
53	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.
54	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	36	3.5	3.5	3.
55	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3,
56	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.7	37	3.6	3.6	3.
57	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.9	3,8	3.8	3.7	3.7	3.6	3.
58	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.8	3.7	3.7	3.
59	4.5	4.5	4.5	4.5	4,4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.
60	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3,
61	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3,
62	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.
63	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.
64	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.
65	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.
66	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.
67	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.
68	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.
69	4,5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.
70	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3
71	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3
72	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3
73	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.
74	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	41	4.1	4.0	4.0	4.0	3.9	3
75	4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3
76	4.7	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	42	41	4.1	4.0	4.0	4.0	3
77	4.8	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3
78	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.
79	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4
80	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.0	4

ľ	_								- 9	GOAL	COP (EC	(0120)									
Entering Water										Entenna	Air temp	aratura									
Temp. (deg F)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.8	2.9
41	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	33	3.1	3.1	3.1	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9
42	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.9	2.9	3.0
43	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3,3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	2.9	3.0
44	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	3.0
45	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3,1
46	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	32	3.1	3.1	3.1	3.0	3.1
47	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3,3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	3.1
48 -	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.2
49	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.2
50	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.2
51	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.2
52	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.3
53 54	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.3
55	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.3
56	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.3
57	4.0	3.9	3.9	3.9	38	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.4
58	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.4
59	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.2	3.4
60	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.5
61	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5
62	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5
63	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.5	3.6
64	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.6	3.6	3.6	3.6
65	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6
66	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6
67	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7
69	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7
70	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7
71	4.4	4.4	4.4	4.3	4.3	4.3	42	4.2	4.2	4.1	4.1	41	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7
72	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8	3.7
73	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.8	3.8
74	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8	3.8
75	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4,2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3,8
76	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.8
77	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3,8
78	4.6	4.6	4.5	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	3.9
79	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.2	4.3	4.2	42	4.2	4.1	4.1	4.0	4.0	4.0	3.9	3.9
80	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.3	42	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9

					GOAL	EER (ECO	12)				
Entering Water					Entering	Air temper	alure				
Temp, (deg F)	75	76	77	78	79	80	81	82	83	84	85
50	18.5	18.8	19.1	19.5	19.8	20.1	20.4	20.8	21.1	21.5	21.8
51	18.2	18.6	18.9	19.2	19.5	19.8	20.2	20.5	20,8	21.2	21.5
52	18,0	18,3	18.6	18.9	19.2	19.5	19.9	20,2	20.5	20.9	21.2
53	17.7	18.0	18.3	18.6	19.0	19.3	19.6	19.9	20.2	20.5	20.9
54	17.5	17.8	18.1	18,4	18.7	19.0	19.3	19.6	19.9	20.2	20.6
55	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.3	19.6	19.9	20.3
56	16.9	17.2	17.5	17.8	18.1	18.4	18,7	19.0	19.3	19.6	19.9
57	16.7	17.0	17.3	17.6	17.8	18.1	18.4	18.7	19.0	19,3	19.6
58	16.4	16.7	17.0	17,3	17.6	17.9	18.2	18.4	18.7	19.0	19.3
59	16.2	16.4	16.7	17.0	17.3	17.6	17.9	18.2	18.4	18.7	19.0
60	15.9	16.2	16.5	16.7	17.0	17.3	17.6	17.9	18.1	18,4	18.7
61	15.7	16.0	16.2	16.5	16.8	17.1	17.3	17.6	17.9	18.2	18.5
62	15.5	15.8	16.0	16.3	16.6	16.8	17.1	17.4	17.7	17,9	18.2
63	15.3	15.5	15.8	16.1	16.3	16.6	16.9	17.1	17.4	17.7	18.0
64	15.1	15,3	15.6	15.9	16.1	16.4	16,6	16.9	17.2	17.4	17.7
65	14.9	15.1	15.4	15.6	15.9	16.2	16.4	16.7	16.9	17,2	17.5
66	14.6	14.9	15.2	15,4	15.7	15.9	16.2	16.4	16.7	16.9	17.2
67	14.4	14.7	14.9	15.2	15.4	15.7	15.9	16.2	16.4	16.7	17.0
68	14.2	14.5	14.7	15.0	15.2	15.5	15.7	16.0	16.2	16.5	16.7
69	14.0	14.3	14.5	14.7	15.0	15.2	15.5	15.7	16.0	16.2	16.5
70	13.8	14.0	14.3	14.5	14.8	15.0	15.2	15.5	15.7	16.0	16.2
71	13.6	13.9	14.1	14.3	14.8	14.8	15.1	15.3	15.5	15.8	16.0
72	13.5	13.7	13.9	14.2	14.4	14.6	14.9	15.1	15,3	15.6	15.8
73	13.3	13.5	13.8	14.0	14.2	14.5	14.7	14.9	15.1	15.4	15.6
74	13.1	13.3	13.6	13.8	14.0	14.3	14.5	14.7	15.0	15,2	15.4
75	12.9	13.2	13.4	13.6	13.9	14.1	14.3	14.5	14.8	15.0	15.2
76	12.8	13.0	13.2	13.5	13.7	13.9	14,1	14.4	14.6	14.8	15.0
77	12.6	12.8	13.1	13.3	13.5	13.7	14.0	14.2	14.4	14.6	14.8
78	12,4	12.6	12.9	13.1	13.3	13.6	13.8	14.0	14.2	14.4	14.6
79	12.2	12.5	12.7	12.9	13.2	13.4	13.6	13.8	14.0	14.2	14.4
80	12.1	12.3	12.5	12.7	13.0	13.2	13.4	13.6	13.8	14.0	14.2
81	11.9	12.1	12.3	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0
82	11.7	12.0	12.2	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.8
83	11.6	11.8	12.0	12.2	12.4	12.7	12.8	13.0	13.2	13.4	13.6
84	11.4	11.6	11.8	12.0	12.3	12.5	12.7	12.8	13.0	13.2	13.4
85	11.2	11.4	11.6	11.9	12.1	12.3	12.5	12.7	12.8	13.0	13.2
86	11.1	11.3	11.5	11.7	11.9	12.2	12.3	12.5	12.7	12.9	13.0
87	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.5	12.7	12.9
88	10.8	11,0	11.2	11.4	11.7	11.9	12.0	12.2	12.4	12.6	12.7
89	10.7	10.9	11.1	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12,6
90	10.6	10.8	11.0	11.2	11.4	11.6	11.7	11.9	12.1	12.3	12.4
91	10.4	10.8	10.8	11.0	11.2	11.4	11.6	11.8	11.9	12.1	12.3
92	10.3	10.5	10.7	10.9	11.1	11.3	11.4	11.6	11.8	12.0	12.1
93	10.2	10.4	10,6	10.8	10.9	11.1	11.3	11.5	11.6	11.8	12.0
94	10.1	10.2	10.4	10.6	10,8	11.0	11.1	11.3	11.5	11.7	11.8
95	9.9	10.1	10.3	10.5	10.7	10.8	11.0	11.2	11.3	11.5	11.7
96	9.8	10.0	10.2	10.3	10.5	10.7	10.9	11.0	11.2	11.3	11.5
97	9.7	9.9	10.0	10.2	10.4	10.5	10.7	10.9	11.0	11.2	11.4
98	9.6	9.7	9.9	10.1	10.2	10.4	10.6	10.7	10.9	11.0	11.2
99	9.4	9.6	9.8	9.9	10.1	10.2	10.4	10.6	10.7	10.9	11.1
100	9.3	9.5	9.6	9.8	9.9	10.1	10.3	10.4	10.6	10.7	10.9

					GOAL	EER (ECO	18)				
Entering Water Temp						Air temper					
(deg F)	75	76	77	78	79	80	81	82	83	84	85
50	18.1	18.4	18.7	19.1	19,4	19.7	20.0	20.4	20.7	21,1	21.3
51	17.9	18,2	18.5	18.8	19.1	19.4	19.8	20.1	20.4	20.8	21.0
52	17.6	17.9	18.2	18.5	18.8	19.2	19.5	19.8	20.1	20.5	20,7
53	17.4	17.7	18.0	18,3	18.6	18.9	19.2	19.5	19.9	20.2	20.4
54	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.3	19.6	19.9	20.1
55	16.9	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.3	19.6	19.8
56	16.6	16.9	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.3	19.5
57	16.4	16.6	18.9	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.2
58	16.1	16.4	16.7	17.0	17.3	17.5	17.8	18.1	18.4	18,7	18,9
59	15.9	16.1	16.4	16,7	17.0	17.3	17.6	17.8	18,1	18,4	18.6
60	15.6	15.9	16.2	16.4	16.7	17.0	17,3	17,6	17.8	18.1	18.3
61	15,4	15.7	15.9	16.2	16.5	16.7	17.0	17.3	17.5	17.8	18.1
62	15.2	15.5	15.7	16.0	16.3	16.4	16.7	16,9	17.2	17.5	17.8
63	15.0	15.2	15.5	15.8	16.0	16.1	16.4	16.6	16.9	17.2	17.6
64	14.8	15.0	15.3	15.6	15.8	15,8	16.1	16.3	16.6	16.9	17.3
65	14.6	14.8	15.1	15.3	15.6	15.5	15.8	16.0	16.3	16.5	17.1
66	14.3	14.6	14.9	15.1	15.4	15.2	15.5	15.7	16.0	16.2	16.9
87	14.1	14.4	14.6	14.9	15.1	14.9	15.2	15.4	15.7	15.9	16.6
68	13.9	14.2	14.4	14.7	14.9	14.6	14.8	15.1	15.3	15.6	16.4
69	13.7	14.0	14.2	14.4	14.7	14.3	14.5	14.8	15.0	15.3	16.1
70	13.5	13.7	14.0	14.2	14.5	14.0	14.2	14.5	14.7	15.0	15,9
71	13.3	13.6	13.8	14.0	14,3	13.9	14.1	14.3	14.6	14.8	15.7
72	13.2	13.4	13.6	13.9	14.1	13.7	14.0	14.2	14.4	14.7	15.5
73	13.0	13.2	13.5	13.7	13.9	13.6	13.8	14.1	14.3	14.5	15.3
74	12.8	13.1	13.3	13.5	13.8	13.5	13.7	13.9	14.1	14,4	15.1
75	12.7	12.9	13.1	13.4	13.6	13.3	13.6	13.8	14.0	14.2	14.9
76	12.5	12.7	13.0	13.2	13.4	13.2	13.4	13.6	13.8	14.1	14.7
77	12.3	12.6	12.8	13.0	13.3	13.1	13.3	13.5	13.7	13.9	14.
78	12.2	12.4	12.6	12.9	13.1	12.9	13.1	13.3	13.6	13.8	14.4
79	12.0	12.2	12.5	12.7	12.9	12.8	13.0	13.2	13.4	13.6	14.2
80	11.8	12.1	12.3	12.5	12.7	12.7	12.9	13.1	13.3	13.5	14.0
81	11.7	11.9	12.1	12.3	12.6	12.5	12.7	12.9	13.1	13.3	13.8
82	11.5	11.7	11.9	12.2	12.4	12,4	12.6	12.8	13.0	13.2	13.6
83	11.3	11.6	11.8	12.0	12.2	12.3	12.5	12.6	12.8	13.0	13.4
84	11.2	11.4	11.6	11.8	12.0	12.1	12.3	12.5	12.7	12.9	13.2
85	11.0	11.2	11.4	11.7	11.9	12.0	12.2	12.4	12.5	12.7	13.0
86	10.9	11.1	11.3	11.5	11.7	11.9	12.0	12.2	12.4	12.6	12.8
87	10.7	10.9	11.2	11.4	11.6	11.7	11.9	12.1	12.3	12.4	12.
88	10.6	10.8	11.0	11.2	11.4	11.6	11.8	11.9	12.1	12.3	12.
89	10.5	10.7	10.9	11.1	11.3	11.4	11.6	11.8	12.0	12.1	12.4
	10.3	10.5	10.7	10.9	11.1	11.3	11.5	11.6	11.8	12.0	12.
90	10.3	10.4	10.6	10.8	11.0	11.2	11.3	11.5	11.7	11.8	12.0
92	10.2	10.4	10.4	10.6	10.8	11.0	11.2	11.4	11.5	11.7	11.5
92	9.9	10.1	10.4	10.5	10.7	10.9	11.0	11.2	11.4	11.6	11.
93	9.9	10.1	10.3	10.3	10.7	10.7	10.9	11.1	11.2	11.4	11.
94	9.7	9.8	10.0	10.2	10.4	10.6	10.8	10.9	11.1	11.3	11,
95	9.7	9.0	9.9	10.1	10.2	10.5	10.6	10.8	11.0	11.1	11.
	9.5	9.6	9.7	9.9	10.1	10.3	10.5	10.6	10.8	11.0	11.
97		9.6	9.7	9.9	9.9	10.3	10.3	10.5	10.7	10.8	10.
98	9.3	9.4	9.5	9.6	9.8	10.2	10.3	10.5	10.5	10.7	10.
99			9.5	9.5	9.8	9.9	10.1	10.4	10.4	10.5	10.0
100	9.0	9.2	9.3	9.5	9.0	3,3	10.1	10.2	10.4	10.5	10.

					GOAL	EER (ECO	24)				
Entering Water					Entering	Air temper	rature				
Temp.	75	76	77	78	79	80	81	82	83	84	85
(deg F)	20.5	20.9	21.2	21.6	21.9	22.3	22,6	23.0	23.3	23.7	24.0
51	20.2	20.5	20.9	21.3	21.6	22.0	22.3	22.6	23.0	23.3	23.6
52	19.9	20.2	20.6	20.9	21.3	21.6	22,0	22.3	22.6	22.9	23.3
53	19.6	19.9	20.3	20.6	20.9	21.3	21.6	21.9	22.3	22.6	22.9
54	19.3	19.6	19.9	20.3	20.6	20.9	21.3	21.6	21.9	22.2	22.6
55	19.0	19.3	19.6	19.9	20.3	20.6	20.9	21.2	21.6	21.9	22.2
56	18.6	19.0	19.3	19.6	19.9	20.3	20.6	20.9	21.2	21.5	21.8
57	18.3	18.6	19.0	19.3	19.6	19.9	20.2	20.5	20.9	21.2	21.5
58	18.0	18.3	18.6	19.0	19.3	19.6	19.9	20.2	20.5	20.8	21.1
59	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20.2	20.5	20.8
60	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20.1	20.4
61	17.2	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19,5	19.8	20.1
62	16.9	17.2	17.5	17.8	18.1	18.4	18,7	18.9	19.2	19.5	19.8
63	16.7	16.9	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.2	19.5
64	16.4	16.7	17.0	17.3	17.5	17.8	18,1	18.4	18.7	19.0	19.2
65	16.2	16.4	16.7	17.0	17.3	17.6	17.8	18.1	18.4	18.7	19.0
66	15.9	16.2	16.5	16.7	17.0	17.3	17.6	17.8	18.1	18.4	18.7
67	15.7	15.9	16.2	16.5	16.7	17.0	17.3	17.6	17.8	18.1	18.4
68	15.4	15.7	15.9	16.2	16.5	16.7	17.0	17.3	17.5	17.8	18.1
69	15.2	15.4	15.7	15.9	16.2	16.5	16.7	17.0	17.3	17.5	17.8
70	14.9	15.2	15.4	15.7	15.9	16.2	16.5	16.7	17.0	17.2	17.5
71	14.7	15.0	15.2	15.5	15.7	16.0	16.3	16.5	16.8	17.0	17.3
72	14.5	14.8	15.0	15.3	15.5	15.8	16.0	16.3	16.6	16.8	17.1
73	14.3	14.6	14.8	15.1	15.3	15.6	15.8	16.1	16.3	16.6	16.8
74	14.2	14.4	14.6	14.9	15.1	15.4	15.6	15.9	16.1	16.4	16.6
75	14.0	14.2	14.4	14.7	14.9	15.2	15.4	15.7	15.9	16.2	16.4
76	13.8	14.0	14.3	14.5	14.7	15.0	15,2	15.4	15.7	15.9	16.2
77	13.6	13.8	14.1	14.3	14.5	14.8	15.0	15.2	15.5	15.7	16.0
78	13,4	13.6	13.9	14.1	14.3	14.5	14.8	15,0	15.3	15.5	15.7
79	13.2	13.4	13.7	13.9	14.1	14,3	14.6	14.8	15.0	15.3	15.5
80	13.0	13.3	13.5	13.7	13.9	14.1	14.4	14.6	14.8	15.1	15.3
81	12.8	13.1	13.3	13.5	13.7	13.9	14.2	14.4	14.6	14.8	15.1
82	12.7	12.9	13.1	13.3	13,5	13.7	13.9	14.2	14.4	14.6	14.9
83	12.5	12.7	12.9	13.1	13.3	13.5	13.7	14.0	14.2	14.4	14.6
84	12.3	12.5	12.7	12.9	13.1	13.3	13.5	13.8	14.0	14.2	14.4
85	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.5	13.8	14.0	14.2
86	12.0	12.2	12.3	12.5	12.7	12.9	13.2	13.4	13.6	13.8	14.0
87	11.8	12.0	12.2	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.9
88	11.7	11.9	12.0	12.2	12.4	12.6	12.8	13.0	13,3	13.5	13.7
89	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.5
90	11.4	11.6	11.7	11.9	12.1	12,3	12.5	12.7	12.9	13.1	13.3
91	11.2	11.4	11.6	11.8	12.0	12.1	12.3	12.5	12.8	13.0	13.2
92	11.1	11.3	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0
93	10,9	11.1	11.3	11.5	11.6	11.8	12.0	12.2	12.4	12.6	12.8
94	10.8	11.0	11,1	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12.6
95	10.6	10.8	11.0	11.2	11.3	11.5	11.7	11.9	12.1	12.3	12.5
96	10.5	10.7	10.8	11.0	11,2	11.3	11.5	11.7	11.9	12.1	12.3
97	10.3	10.5	10.7	10.8	11.0	11.2	11.4	11.6	11.7	11.9	12.1
98	10.2	10.4	10.5	10.7	10.9	11.0	11.2	11.4	11.6	11.8	11.9
99	10.0	10.2	10.4	10.5	10.7	10.9	11.0	11.2	11.4	11.6	11.8
100	9.9	10.1	10.2	10.4	10.5	10.7	10.9	11.1	11.2	11.4	11.6

Г					GOAL	EER (ECO	30)				
Entering Water Temp					Entering	Air temper	ature				
(deg F)	75	76	77	78	79	80	81	82	83	84	85
50	16.9	17.3	17.6	18.0	18.3	18.4	18.7	19.1	19.4	19.8	20.0
51	16.7	17.0	17.4	17.7	18.1	18.2	18.5	18.8	19.2	19.5	19.7
52	16.5	16.8	17.2	17.5	17.9	17.9	18.3	18.6	18.9	19.3	19.5
53	16.2	16.6	16.9	17.3	17.6	17.7	18.0	18.4	18.7	19.0	19.2
54	16.0	16.4	16.7	17.0	17.4	17.5	17.8	18.1	18.5	18.8	19.0
55	15.8	16.1	16.5	16.8	17.1	17.3	17.6	17.9	18.2	18.5	18.7
56	15.6	15.9	16.2	16.6	16.9	17.0	17.3	17.7	18.0	18.3	18.4
57	15,4	15.7	16.0	16.3	16.6	16.8	17.1	17.4	17.7	18.0	18.2
58	15.1	15.5	15.8	16.1	16.4	16.6	16.9	17.2	17.5	17.8	17.9
59	14.9	15.2	15.5	15.8	16.1	16.3	16.6	16.9	17.2	17.5	17.7
60	14.7	15.0	15.3	15.6	15.9	16.1	16.4	16.7	17.0	17.3	17.4
61	14.5	14.8	15.1	15.4	15.7	15.9	16.2	16.5	16.8	17.1	17.2
62	14.3	14.6	14.9	15.2	15.5	15.7	16.0	16.3	16.6	16.9	17.0
63	14.2	14.4	14.7	15.0	15.3	15.5	15.8	16.1	16.4	16.7	16.8
64	14.0	14.3	14.5	14.8	15.1	15.3	15.6	15.9	16.2	16.5	16.6
65	13.8	14.1	14.4	14.6	14.9	15.2	15.4	15.7	16.0	16.3	16.4
66	13.6	13.9	14.2	14.4	14.7	15.0	15.2	15.5	15.8	16.1	16.1
67	13.4	13.7	14.0	14.3	14.5	14.8	15.0	15.3	15.6	15.9	15.9
68	13.3	13.5	13.8	14.1	14.3	14.6	14.8	15.1	15.4	15.7	15.7
69	13.1	13.3	13.6	13.9	14.1	14.4	14.7	14.9	15.2	15.4	15.5
70	12.9	13.2	13.4	13.7	13.9	14.2	14.5	14.7	15.0	15.2	15.3
71	12.8	13.0	13.3	13,5	13.8	14.0	14.3	14.5	14.8	15.1	15.1
72	12.6	12.9	13.1	13.4	13.6	13.9	14.1	14.4	14.6	14.9	15.0
73	12.5	12.7	13.0	13.2	13.5	13.7	14.0	14.2	14.5	14.7	14.8
74	12.3	12.6	12.8	13.0	13.3	13.5	13.8	14.0	14.3	14.5	14.6
75	12.2	12.4	12.6	12.9	13.1	13.4	13.6	13.9	14.1	14.4	14.4
76	12.0	12.3	12.5	12.7	13.0	13.2	13.4	13.7	13.9	14.2	14.3
77	11.9	12.1	12.3	12.6	12.8	13.0	13.3	13.5	13.8	14.0	14.1
78	11.7	12.0	12.2	12.4	12.6	12.9	13.1	13.3	13.6	13.8	13.9
79	11.6	11.8	12.0	12.3	12.5	12.7	12.9	13.2	13.4	13.6	13.7
80	11.4	11.7	11.9	12.1	12.3	12.5	12.8	13.0	13.2	13.5	13.6
81	11.3	11.5	11.7	11.9	12.2	12.4	12.6	12.8	13.1	13.3	13.4
82	11.1	11.4	11.6	11.8	12.0	12.2	12.4	12.7	12.9	13.1	13.2
83	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.5	12.7	12.9	13.0
84	10.8	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.8	12.9
85	10.7	10.9	11.1	11.3	11.5	11.7	11.9	12.1	12.4	12.6	12.7
86	10.6	10.8	11.0	11.2	11.4	11,6	11.8	12.0	12.2	12.4	12.6
87	10.5	10.7	10.9	11.1	11.3	11.4	11.7	11.9	12.1	12.3	12.4
88	10.4	10.6	10.7	10.9	11.1	11.3	11.5	11.7	12.0	12.2	12.3
89	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.1
90	10.1	10.3	10.5	10.7	10.9	11.1	11.3	11.5	11.7	11.9	12.0
91	10.0	10.2	10.4	10.6	10.8	10.9	11.1	11.3	11.6	11.8	11.9
92	9.9	10.1	10.3	10.5	10.6	10.8	11.0	11.2	11.4	11.6	11.7
93	9.8	10.0	10.2	10.3	10.5	10.7	10.9	11.1	11.3	11.5	11.6
94	9.7	9.9	10.0	10.2	10.4	10.6	10.8	11.0	11.1	11.3	11.4
95	9.6	9.7	9.9	10.1	10.3	10.4	10.6	10.8	11.0	11.2	11.3
96	9.5	9.6	9.8	10.0	10.1	10.3	10.5	10.7	10.9	11.1	11.2
97	9.3	9.5	9.7	9.8	10.0	10.2	10.4	10.6	10.7	10.9	11.0
98	9.2	9.4	9.6	9.7	9.9	10.1	10.2	10.4	10.6	10.8	10.9
99	9.1	9.3	9.4	9.6	9.8	9.9	10.1	10.3	10.5	10.7	10.7
100	9.0	9.2	9.3	9.5	9.6	9.8	10.0	10.2	10.3	10.5	10.6

Г					GOAL	EER (ECO	36)				
Entering Water					Entering	Air temper	ature				
Temp (deg F)	75	76	77	78	79	80	81	82	83	84	85
50	17.0	17.3	17.6	17.9	18.2	18.5	18,8	19.1	19.4	19.7	20.0
51	16.8	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19.4	19.7
52	16.6	16.9	17.2	17.5	17.8	18.1	18,3	18,6	18.9	19.2	19.5
53	16.4	16.7	17.0	17.3	17.6	17.8	18.1	18.4	18.7	18.9	19.2
54	16.2	16.5	16.8	17.1	17,3	17.6	17.9	18,2	18.4	18.7	19.0
55	16.0	16.3	16.6	16.8	17.1	17.4	17.7	17.9	18.2	18.4	18.7
56	15.8	16.1	16.4	16.6	16.9	17.2	17,4	17.7	17.9	18.2	18,4
57	15.6	15.9	16.1	16.4	18,7	17.0	17.2	17.4	17.7	17.9	18.2
58	15.4	15.7	15.9	16,2	16.5	16.7	17.0	17.2	17.4	17.7	17.9
59	15.2	15.5	15.7	16.0	16.3	16.5	16.7	17.0	17.2	17.4	17.7
60	15.0	15.3	15.5	15.8	16.0	16,3	16.5	16.7	17.0	17.2	17.4
61	14.8	15.1	15.3	15.6	15.9	16.1	16.3	18.6	16.8	17.0	17.2
62	14.6	14.9	15.2	15.4	15.7	15.9	16.1	16.4	16.6	16.8	17.0
63	14.5	14.7	15.0	15.2	15.5	15.7	16.0	16.2	16.4	16.6	16.9
64	14.3	14.5	14.8	15.0	15.3	15.5	15,8	16.0	16.2	16.5	16.7
65	14.1	14.4	14.6	14.9	15.1	15.4	15.6	15.8	16.0	16.3	16.5
66	13.9	14.2	14.4	14.7	14.9	15.2	15,4	15.6	15.9	16.1	16.3
67	13.7	14.0	14.2	14.5	14.7	15.0	15.2	15.4	15.7	15.9	16.1
68	13.6	13.8	14.0	14.3	14.5	14.8	15.0	15.3	15,5	15,7	16.0
69	13.4	13.6	13.9	14.1	14.3	14.6	14.8	15.1	15.3	15.5	15.8
70-	13.2	13.4	13.7	13.9	14.2	14.4	14,6	14.9	15.1	15.4	15.6
171)	13.1	13.3	13.5	13.8	14.0	14.2	14.5	14.7	15.0	15.2	15.4
72	12.9	13.2	13.4	13.6	13.9	14.1	14.3	14.6	14.8	15.0	15.3
73	12.8	13.0	13.2	13.5	13.7	13.9	14.2	14.4	14.6	14.9	15.1
74	12.6	12.9	13.1	13.3	13.6	13.8	14.0	14.2	14.5	14.7	14.9
75	12.5	12.7	13.0	13.2	13.4	13.6	13.9	14.1	14.3	14.5	14.8
76	12.4	12.6	12.8	13.0	13.3	13.5	13.7	13.9	14.2	14.4	14,6
77	12.2	12.4	12.7	12.9	13.1	13.3	13.5	13.8	14.0	14.2	14.4
78	12.1	12.3	12.5	12.7	13.0	13.2	13.4	13.6	13.8	14.0	14.3
79	11.9	12.2	12.4	12.6	12.8	13.0	13.2	13.5	13.7	13.9	14.1
80	11.8	12.0	12.2	12.4	12.7	12.9	13.1	13.3	13.5	13.7	13.9
81	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.6	13.8
82	11.5	11.7	11.9	12.1	12.4	12.6	12.8	13.0	13.2	13.4	13.6
83	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0	13.2	13.4
84	11.2	11.4	11.6	11.8	12.1	12.3	12.5	12.7	12.9	13.1	13.3
85	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.1
86	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0
87	10.9	11.1	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12.6	12.8
88	10.8	11.0	11.2	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.7
89	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6
90	10.5	10.7	10.9	11.1	11.3	11.5	11.7	11.9	12.1	12.2	12.4
91	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.7	11.9	12.1	12.3
92	10.3	10.5	10.7	10.9	11.1	11.3	11.4	11.6	11.8	12.0	12.2
93	10.2	10.4	10.6	10.8	11.0	11.1	11.3	11.5	11.7	11.9	12.0
94	10.1	10.3	10.5	10.6	10.8	11.0	11.2	11.4	11.5	11.7	11.9
95	10.0	10.2	10.3	10.5	10,7	10.9	11.1	11.2	11.4	11.6	11.8
96	9.9	10.0	10.2	10.4	10.6	10.8	11.0	11.1	11.3	11.5	11.6
97	9.7	9.9	10.1	10.3	10.5	10.7	10.8	11.0	11.2	11.3	11.5
98	9.6	9.8	10.0	10.2	10.4	10.5	10.7	10.9	11.0	11.2	11.4
99	9.5	9.7	9.9	10.1	10.2	10.4	10.6	10.7	10.9	11.1	11.2
100	9.4	9.6	9.8	9.9	10.1	10.3	10.5	10.6	10.8	10.9	11.1

					GOAL	EER (ECO	48)				
Entering											
Water Temp.					Entering	Air temper	ature				-
(deg F)	75	76	77	78	79	80	81	82	83	84	85
50	18.1	18.4	18,7	19,0	19.3	19.7	20.0	20,3	20,6	20.9	21.3
51	17.9	18.2	18.5	18.7	19.0	19.4	19.7	20.0	20.3	20.6	21.0
52	17,6	17.9	18.2	18,5	18.8	19,2	19.5	19,7	20.0	20,3	20.7
53	17.4	17.7	18,0	18,2	18.5	18.9	19.2	19.5	19.7	20.0	20.5
54	17.1	17.4	17,7	18.0	18.3	18.7	18.9	19.2	19.5	19.7	20,2
55	16.9	17.2	17.5	17.7	18.0	18.4	18.7	18.9	19.2	19.4	19.9
56	16.7	16.9	17.2	17.5	17.8	18.1	18.4	18.6	18.9	19.1	19.6
57	16,4	16.7	17.0	17.2	17.5	17.9	18.1	18.4	18.6	18.9	19.3
58	16,2	16.4	16.7	17.0	17.3	17.6	17.9	18.1	18.3	18.6	19.1
59	15.9	16.2	16.5	16.7	17.0	17.4	17.6	17.8	18.0	18.3	18.8
60	15.7	16.0	16.2	16.5	16.7	17.1	17,3	17.5	17.8	18.0	18.5
61	15.5	15.8	16.0	16.3	16.5	16.9	17,1	17.3	17.5	17.8	18.3
62	15.3	15.6	15.8	16,1	16.3	16.7	16.9	17.1	17.3	17.6	18.0
63	15.1	15.4	15.6	15.9	16.1	16.4	16.7	16.9	17.1	17.3	17.8
64	14.9	15.2	15.4	15.7	15,9	16.2	16.4	16.7	16.9	17,1	17.6
65	14.7	15.0	15.2	15.5	15.7	16.0	16.2	16.5	16.7	16.9	17.4
66	14.5	14.7	15.0	15.2	15.5	15,8	16.0	16.2	16.5	16.7	17.1
67	14.3	14.5	14.8	15.0	15.3	15.6	15.8	16.0	16.3	16.5	16.9
68	14.1	14.3	14.6	14.8	15.1	15.3	15.6	15.8	16.0	16.3	16.7
69	13.9	14.1	14.4	14.6	14.9	15.1	15.4	15.6	15.8	16.1	16.4
70	13.7	13.9	14.2	14.4	14.7	14.9	15.1	15.4	15.6	15.9	16.2
71	13.5	13.8	14.0	14.2	14.5	14.7	15.0	15.2	15.4	15.7	16.0
72	13.4	13.6	13.8	14.1	14.3	14,5	14.8	15.0	15.2	15.5	15,8
73	13.2	13.4	13.6	13.9	14.1	14.4	14.6	14.8	15,1	15.3	15.6
74	13.0	13.2	13.5	13.7	13.9	14.2	14.4	14.6	14.9	15.1	15.4
75	12.8	13.1	13.3	13.5	13.7	14.0	14.2	14.5	14.7	14.9	15.2
76	12.7	12.9	13.1	13.3	13.6	13.8	14.0	14.3	14.5	14.7	15.0
77	12.5	12.7	12.9	13.2	13.4	13.6	13.9	14.1	14.3	14.5	14.8
78	12.3	12.5	12.8	13.0	13.2	13.5	13.7	13.9	14.1	14.3	14.5
79	12.1	12.4	12.8	12.8	13.0	13.3	13.5	13.7	13.9	14.1	14.3
80	12.0	12.2	12.4	12.6	12.8	13.1	13.3	13.5	13.7	14.0	14.1
81	11.8	12.0	12.2	12.4	12.6	12.9	13.1	13.3	13.6	13.8	13.9
82	11.6	11.8	12.0	12.2	12.5	12.7	12.9	13.2	13.4	13.6	13.7
83	11.4	11.7	11.9	12.1	12.3	12.6	12.8	13.0	13.2	13.4	13.5
84	11.3	11.5	11.7	11.9	12.1	12.4	12.6	12.8	13.0	13.2	13.3
85	11.1	11.3	11.5	11.7	11.9	12.2	12.4	12.6	12.8	13.0	13,1
86	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	12.9
87	10.8	11.0	11.2	11.4	11.6	11.9	12.1	12.3	12.5	12.7	12.8
88	10.7	10.9	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.6
89	10.5	10.7	10.9	11.1	11.3	11.6	11.7	11.9	12.1	12.3	12.4
90	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.1	12.3
91	10.3	10.5	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.1
92	10.1	10.3	10.5	10.7	10.9	11.1	11.3	11.4	11.6	11.8	11.9
93	10.0	10.2	10.4	10.5	10.7	10.9	11.1	11.3	11.5	11.6	11.8
94	9.8	10.0	10.2	10.4	10.6	10.8	10.9	11.1	11.3	11.5	11.6
95	9.7	9.9	10.1	10.3	10.4	10.6	10.8	10.9	11.1	11.3	11.4
96	9.6	9.7	9.9	10.1	10.3	10.4	10.6	10.8	11_0	11.1	11.3
97	9.4	9.6	9.8	10.0	10.2	10.3	10.4	10.8	10.8	11.0	11.1
98	9.3	9.5	9.6	9.8	10.0	10.1	10.3	10.5	10.6	10.8	10.9
99	9.1	9.3	9.5	9.7	9.9	10.0	10.1	10.3	10.4	10.6	10.8
100	9.0	9.2	9.4	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6

					GOAL	EER (ECO	60)				
Entering Water Temp		31,			Entering	Air temper	ature			1000-001	
(deg F)	75	76	77	78	79	80	81	82	83	84	85
50	17.1	17.4	17.7	18.0	18,3	18.6	18.9	19.2	19.5	19.8	20.1
51	16.9	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.3	19.6	19.9
52	16.7	17.0	17.3	17.6	17.9	18.2	18.5	18.7	19.0	19.3	19.6
53	16.5	16.8	17.1	17.4	17.6	17.9	18.2	18.5	18.8	19.1	19.4
54	16.3	16.6	16,8	17.1	17,4	17.7	18.0	18.3	18.6	18.9	19.1
55	16.1	16.3	16.6	16.9	17.2	17.5	17.8	18.1	18.3	18.6	18.9
56	15.8	16.1	16.4	16.7	17.0	17.3	17.6	17.8	18.1	18.4	18.7
57	15.6	15.9	16.2	16.5	16.8	17.1	17.3	17.6	17.9	18.1	18.4
58	15.4	15.7	16.0	16.3	16.6	16.8	17.1	17.4	17.6	17.9	18.2
59	15.2	15.5	15.8	16.1	16.3	16.6	16.9	17.1	17.4	17.7	17.5
60	15.0	15.3	15.6	15.8	16.1	16.4	16.7	16.9	17.2	17.4	17.3
61	14.8	15.1	15.4	15.7	15.9	16.2	16.5	16.7	17.0	17.2	17.5
62	14.7	14.9	15.2	15.5	15.7	16.0	16.3	16.5	16.8	17.0	17.3
63	14.5	14.8	15.0	15.3	15.6	15.8	16.1	16.3	16.6	16.8	17.
64	14.3	14.6	14.8	15.1	15.4	15.6	15,9	16.1	16.4	16,6	16.5
65	14.2	14.4	14.7	14.9	15.2	15.5	15.7	16.0	16.2	18,5	16.
66	14.0	14.2	14.5	14.7	15.0	15.3	15.5	15,8	16.0	16.3	16.5
67	13.8	14.1	14.3	14.6	14.8	15.1	15.3	15.6	15.8	16.1	16.3
68	13.6	13.9	14.1	14.4	14.6	14.9	15.1	15.4	15.6	15.9	16.
69	13.5	13.7	14.0	14.2	14.4	14.7	14.9	15.2	15.4	15.7	15.1
70	13.3	13.5	13.8	14.0	14.3	14,5	14.7	15.0	15.2	15.5	15.
71	13.2	13.4	13.6	13.9	14.1	14.4	14.6	14.8	15.1	15.3	15.
72	13.0	13.3	13.5	13.7	14.0	14.2	14.4	14.7	14.9	15.1	15.
73	12.9	13.1	13.4	13.8	13.8	14.1	14.3	14.5	14.7	15.0	15.
74	12.7	13.0	13.2	13.4	13.7	13.9	14.1	14.4	14.6	14.8	15.
75	12.6	12.8	13.1	13.3	13.5	13.8	14.0	14.2	14.4	14.6	14.
76	12.5	12.7	12.9	13.2	13.4	13.6	13.8	14.1	14.3	14.5	14.
77	12.3	12.6	12.8	13.0	13.2	13.5	13.7	13.9	14.1	14.3	14.
78	12.2	12.4	12.6	12.9	13.1	13.3	13.5	13.7	14.0	14.2	14.
79	12.0	12.3	12.5	12.7	13.0	13.2	13.4	13.6	13.8	14.0	14.
80	11.9	12.1	12.4	12.6	12.8	13.0	13.2	13,4	13.6	13.8	14.
81	11.8	12.0	12.2	12.4	12.7	12.9	13.1	13.3	13.5	-13.7	13.
82	11.6	11.8	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.5	13.
83	11.5	11.7	11.9	12.1	12.4	12.6	12.8	13.0	13.2	13.3	13.
84	11.3	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0	13.2	13.
85	11.2	11,4	11.6	11.9	12.1	12.3	12.5	12.7	12.8	13.0	13.
86	11.1	11.3	11.5	11.7	12.0	12.2	12.4	12.5	12.7	12.9	13.
87	11.0	11.2	11.4	11.6	11.8	12.1	12.2	12.4	12.6	12.8	12.
88	10.9	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.6	12.
89	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.3	12.5	12.
90	10.7	10.9	11.1	11.3	11.5	11.7	11.9	12.0	12.2	12.4	12.
91	10.6	10.8	11.0	11.2	11.4	11.6	11.8	11.9	12.1	12.3	12.
92	10.5	10.7	10.9	11.1	11.3	11.5	11.6	11.8	12.0	12.1	12.
93	10.3	10.5	10.7	10.9	11.1	11.3	11.5	11.7	11.8	12.0	12.
94	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.7	11.9	12.
95	10.1	10.3	10.5	10.7	10.9	11.1	11.3	11.4	11.6	11.8	11.
96	10.0	10.2	10.4	10.6	10.8	11.0	11.1	11.3	11.5	11.6	11.
97	9.9	10.1	10.3	10.5	10.7	10.9	11.0	11.2	11.4	11.5	11.
98	9.8	10.0	10.2	10.4	10.6	10.7	10.9	11.1	11.2	11.4	11.
99	9.7	9.9	10.1	10.3	10.4	10.6	10.8	10.9	11.1	11.3	11.
100	9.6	9.8	10.0	10,1	10.3	10.5	10.7	10.8	11,0	11.1	11.

					GOAL	EER (ECO	96)				
Entering Water					Entering	Air temper	ature				
Temp.	75	76	77	78	79	80	81	82	83	84	85
(deg F)	19.7	20.0	20.3	20.6	20.9	21.5	21.8	22.1	22.4	22.7	23.2
50	19.7	19.7	20.0	20.3	20.6	21.2	21.5	21.8	22.1	22.4	22.9
51		19.5	19.8	20.0	20.3	20.9	21.2	21.5	21.8	22.1	22.6
	19.2			19.8	20.1	20.6	20.9	21.2	21.5	21.8	22.2
53	18.9	19.2	19.5	19.5	19.8	20.3	20.6	20.9	21.2	21.4	21.9
54	18.6	18.9	19.2	19.5	19.5	20.0	20.3	20.6	20.8	21.1	21.6
55	18,4	18.6	18.9			19.7	20.0	20.3	20.5	20.8	21.3
56	18.1	18.4	18.7	18.9	19.2	19.4	19.7	19.9	20.2	20.5	21.0
57	17.8	18.1	18.4	18.7	19.0		19.7	19.6	19.9	20.2	20.6
58	17.5	17_8	18.1	18.4	18.7	19.1		19.3	19.6	19.9	20.3
59	17.3	17.6	17.8	18.1	18.4	18.8	19,1	19.0	19.3	19.5	20.0
60	17.0	17.3	17.6	17.8	18.1	18.5	18.8			19.3	19.7
61	16.8	17.1	17.3	17.6	17.9	18.3	18,5	18.8	19.0	19.0	19.5
62	16.6	16.8	17.1	17.4	17.6	18.0	18.3	18.5			19.5
63	16.3	16.6	16.9	17.1	17.4	17.8	18.0	18.3	18.5	18.8	
64	16.1	16.4	16.6	16.9	17,2	17.5	17.8	18.0	18.3	18.5	19.0
65	15.9	16.2	16.4	16.7	16.9	17.3	17.6	17.8	18.1	18.3	18.7
66	15.7	15.9	16.2	16.4	16.7	17.1	17.3	17.6	17.8	18.1	18.4
67	15.5	15.7	16.0	16.2	16.5	16.8	17.1	17.3	17.6	17.8	18.2
68	15.2	15.5	15.7	16.0	16.2	16.6	16.8	17.1	17.3	17.6	17.9
69	15.0	15.3	15.5	15.8	16.0	16.3	16.6	16.8	17.1	17.3	17.7
70	14.8	15.0	15.3	15.5	15.8	16.1	16.3	16.6	16.8	17.1	17.4
71	14.6	14.9	15.1	15.3	15.6	15,9	16.1	16.4	16.6	16.8	17.2
72	14.4	14.7	14.9	15.1	15.4	15.7	15.9	16.2	16.4	16.6	17.0
73	14.2	14.5	14.7	14.9	15.2	15.5	15.7	15.9	16,2	16.4	16.7
74	14.1	14.3	14.5	14.8	15.0	15.3	15.5	15.7	15.9	16.2	16.5
75	13.9	14.1	14.3	14.6	14.8	15.1	15.3	15.5	15.7	15.9	16.3
76	13.7	13.9	14.1	14.4	14.6	14.9	15.1	15.3	15.5	15,7	16.1
77	13.5	13.7	14.0	14.2	14.4	14.7	14.9	15.1	15.3	15.5	15.9
78	13.3	13.5	13.8	14.0	14.2	14.4	14.7	14.9	15.1	15.3	15.6
79	13.1	13.3	13.6	13.8	14.0	14.2	14.4	14.6	14.9	15.1	15.4
80	12.9	13.2	13,4	13.6	13.8	14.0	14.2	14.4	14.6	14.8	15.2
81	12.7	13.0	13.2	13.4	13.6	13.8	14.0	14.2	14.4	14.6	15.0
82	12.6	12.8	13.0	13,2	13,5	13.6	13.8	14.0	14.2	14.4	14.8
83	12.4	12.6	12.8	13.0	13,3	13,4	13.6	13.8	14.0	14.2	14.5
84	12.2	12.4	12.6	12.9	13.1	13.2	13.4	13.6	13.8	13.9	14.3
85	12.0	12.2	12.4	12.7	12.9	13.0	13.2	13.4	13.5	13.7	14.1
86	11.8	12.1	12.3	12.5	12.7	12.8	13.0	13.2	13.4	13.5	13.9
87	11.7	11.9	12.1	12.3	12.5	12.7	12.8	13.0	13.2	13.4	13.7
88	11.5	11.7	11.9	12.2	12.4	12.5	12.7	12.9	13.0	13.2	13,5
89	11.4	11.6	11.8	12.0	12.2	12.3	12.5	12.7	12.9	13.0	13.4
90	11.2	11.4	11.6	11.8	12.0	12.2	12.3	12.5	12.7	12.9	13.2
91	11.0	11.2	11.4	11.7	11.9	12.0	12.2	12.3	12.5	12.7	13.0
92	10.9	11.1	11.3	11.5	11.7	11.8	12.0	12.2	12.3	12.5	12.8
93	10.7	10.9	11.1	11.3	11.5	11.7	11.8	12.0	12.2	12.3	12.6
94	10.6	10.8	11.0	11.1	11.3	11.5	11.7	11.8	12.0	12.2	12.4
95	10.4	10.6	10.8	11.0	11.2	11,3	11.5	11.7	11.8	12.0	12.2
96	10.2	10.4	10.6	10.8	11.0	11.2	11.3	11.5	11.7	11.8	12.0
97	10.1	10.3	10.5	10.6	10.8	11.0	11.2	11.3	11.5	11.7	11.9
98	9.9	10.1	10.3	10.5	10.7	10.8	11.0	11.2	11.3	11.5	11.7
99	9.8	9.9	10.1	10.3	10.5	10.7	10.8	11.0	11.2	11.3	11.5
100	9.6	9.8	10.0	10.1	10.3	10.5	10.7	10.8	11.0	11.1	11.3

	GOAL EER (EC042)													
Entering Water Temp (deg F)	Entering Air temperature													
	75	76	77	78	79	80	81	82	83	84	85			
50 S	18.1	18.4	18.7	19.1	19.4	19.7	20.0	20,3	20.7	21.0	21.3			
51	17.9	18.2	18.5	18.8	19.1	19.4	19.7	20.0	20.4	20.7	21.0			
52	17.6	17.9	18.2	18.5	18.8	19.1	19.4	19.8	20.1	20,4	20.7			
	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19,5	19.8	20.1	20.4			
53		17.4	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20,1			
54	17.1			17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8			
55	16.9	17.1	17.4		17.7	18.0	18.3	18.6	18.9	19.2	19.4			
56	16.6	16.9		17,5	17.5	17.7	18.0	18.3	18.6	18.9	19.1			
57	16.4	16.6	16.9	17.2	17.2	17.5	17.7	18.0	18.3	18.5	18.8			
58	16.1	16.4	16.6	16.9			17.4	17.7	18.0	18.2	18.5			
59	15.9	16.1	16,4	16.6	16.9	17.2			17.7	17.9	18.2			
60	15.6	15.9	16.1	16.4	16.6	16.9	17.2	17.4	17.5		18.0			
61	15.4	15.7	15.9	16.2	16.4	16.7	16.9	17.2		17.7	17.8			
62	15.2	15.5	15.7	16.0	16.2	16.5	16.7	17.0	17.2					
63	15.0	15.2	15.5	15.7	16.0	16.2	16.5	16.8	17.0	17.3	17.5			
64	14.8	15.0	15.3	15,5	15.8	16.0	16.3	16.5	16.8	17.1				
65	14.6	14.8	15,1	15.3	15.6	15.8	16.1	16,3	16.6	16.8	17.1			
66	14.4	14.6	14.9	15,1	15.3	15.6	15.8	16.1	16.4	16.6	16.9			
67	14.2	14.4	14.7	14.9	15.1	15.4	15.6	15.9	16.1	16.4	16.7			
68	14.0	14.2	14.5	14.7	14.9	15.1	15.4	15.7	15.9	16.2	16.4			
69	13.8	14.0	14.2	14.5	14.7	14.9	15.2	15.4	15.7	16.0	16.2			
70	13.6	13.8	14.0	14.3	14.5	14.7	15.0	15.2	15.5	15.7	16.0			
71	13.4	13.7	13.9	14.1	14.3	14.5	14.8	15.1	15.3	15.6	15.8			
72	13.3	13.5	13.7	14.0	14.2	14.4	14.6	14.9	15.1	15.4	15.6			
73	13.1	13,4	13.6	13.8	14.0	14.2	14.5	14.7	15.0	15.2	15.5			
74	13.0	13.2	13,4	13.6	13.9	14.1	14.3	14.6	14.8	15.0	15.3			
75	12.8	13.1	13.3	13.5	13.7	13.9	14.2	14.4	14.6	14.9	15.1			
76	12.7	12.9	13.1	13.3	13.6	13.8	14.0	14.2	14.5	14.7	14.9			
77	12.5	12.7	13.0	13.2	13.4	13.6	13.8	14.1	14.3	14.5	14.7			
78	12.4	12.6	12.8	13.0	13.3	13.5	13.7	13.9	14.1	14.3	14.6			
79	12.2	12.4	12.7	12.9	13.1	13.3	13.5	13.7	14.0	14.2	14.4			
80	12.1	12.3	12.5	12.7	12.9	13.2	13.4	13.6	13.8	14.0	14.2			
81	11.9	12.1	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0			
82	11.8	12.0	12.2	12.4	12.6	12.9	13.1	13.3	13.4	13.6	13.8			
83	11.6	11.8	12.0	12.3	12.5	12.7	12.9	13.1	13.3	13.5	13.7			
84	11.5	11.7	11.9	12.1	12.3	12.6	12.7	12.9	13.1	13.3	13.5			
85	11.3	11.5	11.7	12.0	12.2	12.4	12.6	12.8	12.9	13.1	13.3			
86	11.2	11.4	11.6	11.8	12.1	12.3	12.5	12.6	12.8	13.0	13.2			
87	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.0			
			11.4	11.6	11.8	12.0	12.2	12.4	12.5	12.7	12.9			
88	11.0	11.2	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12.6	12.8			
		11.1		11.4	11.6	11.8	11.9	12.1	12.3	12.5	12.6			
90	10.7	10.9	11.1	11.2	11.4	11.6	11.8	12.0	12.2	12.3	12.5			
91	10.6	10.8				11.5	11.7	11.9	12.0	12.2	12.4			
92	10.5	10.7	10.9	11.1	11.3		11.6	11.7	11.9	12.1	12.2			
93	10.4	10.6	10.8	11.0	11.2	11.4	11.4	11.6	11.8	11.9	12.1			
94	10.3	10.5	10.7	10.9	11.1	11.3			11.6	11.8	12.0			
95	10.2	10.4	10.6	10.7	10.9	11.1	11.3	11.5	11.5	11.7	11.8			
96	10.1	10.2	10.4	10.6	10.8	11.0	11.2							
97	9.9	10.1	10.3	10.5	10.7	10.9	11.0	11.2	11.4	11.5	11.7			
98	9.8	10.0	10.2	10.4	10.6	10,8	10.9	11.1	11.2	11.4	11.6			
99	9.7	9.9	10.1	10.3	10.4	10.6	10.8	10.9	11.1	11.3	11.4			
100	9.6	9.8	10.0	10.1	10.3	10.5	10.7	10.8	11.0	11.1	11.3			

	GOAL EER (EC051)												
Entering Water Temp	Entering Air temperature												
(deg F)	75	76	77	78	79	80	81	82	83	84	85		
50	17.4	17.7	18.0	18.4	18.7	19.0	19.3	19.6	20.0	20,3	20,5		
51	17.2	17.5	17.8	18.1	18.5	18.8	19.1	19.4	19.7	20.0	20.3		
52	17.0	17.3	17.6	17.9	18.2	18.5	18,8	19.2	19.5	19.8	20,0		
53	16.8	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8		
54	16.6	16.9	17.2	17,5	17.8	18.1	18.4	18.7	19,0	19.3	19.5		
55	16.4	16.7	17.0	17.3	17.6	17.9	18.1	18.4	18.7	19.0	19.3		
56	16.2	16.5	16.8	17.1	17.3	17.6	17.9	18.2	18.5	18_8	19.1		
57	16.0	16.3	16.6	16.8	17.1	17.4	17.7	17,9	18.2	18.5	18.8		
58	15.8	16.1	16.3	16.6	16.9	17.2	17.4	17.7	18.0	18.2	18.6		
59	15.6	15.9	16.1	16.4	16.7	16.9	17.2	17.5	17.7	18.0	18.3		
60	15.4	15.7	15.9	16.2	16.4	16.7	17.0	17.2	17,5	17.7	18.1		
61	15.2	15.5	15.7	16.0	16.3	16.5	16,8	17.0	17.3	17.6	17.9		
62	15.1	15.3	15.6	15.8	16.1	16.3	16.6	16.8	17.1	17.4	17.7		
63	14.9	15.1	15.4	15.6	15.9	16.1	16.4	16,7	16.9	17.2	17.5		
64	14.7	15.0	15.2	15.5	15.7	15.9	16,2	16.5	16.7	17.0	17.3		
65	14.6	14.8	15.0	15.3	15.5	15.8	16.0	16.3	16.5	16.8	17.1		
66	14.4	14.6	14.9	15.1	15.3	15.6	15_8	16.1	16.3	16.6	16.9		
67	14.2	14.4	14.7	14.9	15.1	15.4	15.6	15.9	16.2	16.4	16.7		
68	14.0	14.3	14.5	14.7	15.0	15.2	15.4	15.7	16.0	16.2	16.5		
69	13.9	14.1	14.3	14.5	14.8	15.0	15,3	15.5	15.8	16.0	16.3		
70	13.7	13.9	14.1	14.4	14.6	14.8	15.1	15.3	15.6	15.8	16.1		
71	13.6	13.8	14.0	14.2	14.4	14.6	14.9	15.2	15.4	15.7	15.9		
72	13.4	13.6	13.8	14.1	14.3	14.5	14.7	15.0	15.2	15.5	15.8		
73	13.3	13.5	13.7	13.9	14.1	14.3	14.6	14.8	15.1	15.3	15.6		
74	13.1	13.3	13.6	13.8	14.0	14.2	14.4	14.7	14,9	15.1	15.4		
75	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.5	14.7	15.0	15.2		
76	12.8	13.0	13.3	13.5	13.7	13.9	14.1	14.3	14.6	14.8	15.1		
77	12.7	12.9	13.1	13.3	13.6	13.7	13.9	14.2	14.4	14.6	14.9		
78	12.5	12,7	13.0	13.2	13.4	13.6	13.8	14.0	14.2	14.4	14.7		
79	12.4	12.6	12.8	13.0	13.3	13.4	13.6	13.8	14.1	14.3	14.5		
80	12.2	12.5	12.7	12.9	13.1	13.3	13.5	13.7	13.9	14.1	14.4		
81	12.1	12.3	12.5	12.7	13.0	13.1	13.3	13.5	13.7	13.9	14.2		
82	11.9	12.2	12.4	12.6	12.8	13.0	13.2	13.4	13.5	13.7	14.0		
83	11.8	12.0	12.2	12.5	12.7	12.8	13.0	13.2	13.4	13.6	13,8		
84	11.6	11.9	12.1	12.3	12.5	12.7	12.8	13.0	13.2	13.4	13.7		
85	11.5	11.7	11.9	12.2	12.4	12.5	12.7	12.9	13.0	13.2	13.5		
86	11.4	11.6	11.8	12.0	12.2	12.4	12.5	12.7	12.9	13.1	13.4		
87	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12.6	12.8	12.9	13.2		
88	11.1	11.4	11.6	11.8	12.0	12.1	12.3	12.5	12.6	12.8	13.1		
89	11.0	11.2	11.4	11.6	11.9	12.0	12.1	12.3	12.5	12.7	12.9		
90	10.9	11.1	11.3	11.5	11.7	11.8	12.0	12.2	12.4	12.5	12.8		
91	10.8	11.0	11.2	11.4	11.6	11.7	11.9	12.0	12.2	12.4	12.5		
92	10.7	10.9	11.1	11.3	11.5	11.6	11.7	11.9	12.1	12.1	12.4		
93	10.5	10.7	10.9	11.1	11.3	11.4				12.0	12.5		
94	10.4	10.6	10.8	11.0	11.2	11.3	11.5	11.6	11.8	11.8	12.1		
95	10.3	10.5	10.7	10.9	11.1	11.2	11.3	11.5	11.5	11.7	12.0		
96	10.2	10.4	10.6	10.8	10.9	11.0	11.1	11.2	11.4	11.6	11.8		
97	10.1	10.2	10.4	10.6	10.8	10.9	10.9	11.1	11.4	11.6	11.7		
98	9.9	10.1	10.3	10.5	10.7	10.6	10.9	11.0	11.1	11.3	11.5		
99	9.8	10.0	10.2	10.4	10.6	10.5	10.8	10.8	11.0	11.1	11.4		
100	9.7	9.9	10.1	10.2	10.4	10.5	10.7	10.0	11:0	S131.245	1.1.4		

	GOAL EER (EC072)													
Entering Water Temp (deg F)	Entering Air temperature													
	75	76	77	78	79	80	81	82	83	84	85			
50	17.6	17.9	18.2	18,6	18.9	19.2	19.5	19.8	20.1	20.4	20.7			
51	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20.1	20.4			
52	17.1	17.4	17.8	18.1	18,4	18,7	19.0	19.3	19.6	19.9	20.2			
53	16.9	17.2	17.5	17.8	18.1	18.4	18.7	19.0	19.3	19.6	19.9			
54	16.7	17.0	17.3	17.6	17.9	18.2	18.5	18.7	19.0	19.3	19.6			
55	16.5	16.7	17.0	17.3	17.6	17.9	18.2	18.5	18.8	19.1	19.4			
56	16.2	16.5	16.8	17.1	17.4	17.6	17.9	18.2	18.5	18.8	19.1			
57	16.0	16.3	16.5	16.8	17.1	17.4	17.7	18.0	18.2	18.5	18.8			
58	15.8	16.0	16.3	16.6	16.8	17.1	17.4	17.7	18.0	18.3	18,5			
59	15.5	15.8	16.1	16.3	16.6	16.9	17.1	17.4	17.7	18.0	18.3			
60	15.3	15.6	15.8	16.1	16.3	16.6	16.9	17.2	17.4	17.7	18.0			
		15.4	15.6	15.9	18.1	16.4	16.7	16.9	17.2	17.5	17.8			
61	15.1			15.7	15.9	16.2	16.5	16.7	17.0	17.3	17.5			
62	14.9	15.2	15.4	15.7	15.7	16.0	16.2	16.5	16.8	17.0	17.3			
63	14.7	15.0	15.2		15.5	15.8	16.0	16.3	16.6	16.8	17.1			
64	14.5	14.8	15.0	15.3				18.1	16.3	16.6	16.9			
65	14.3	14.6	14.8	15.1	15.3	15.6	15.8			16.4	16.6			
66	14.1	14.3	14.6	14,8	15.1	15.3	15.6	15.9	16.1	16.1	16.4			
67	13.9	14.1	14.4	14.6	14.9	15.1	15.4	15.6	15.9					
68	13.7	13.9	14.2	14.4	14.7	14.9	15.2	15.4	15.7	15.9	16.2			
69	13.5	13.7	14.0	14.2	14.5	14.7	15.0	15.2	15.4	15.7	15,9			
70	13.3	13.5	13.8	14.0	14.3	14.5	14.7	15.0	15.2	15.5	15.7			
71	13.1	13.4	13.6	13.9	14.1	14.3	14.6	14.8	15.0	15.3	15.5			
72	13.0	13.2	13.5	13.7	13.9	14.2	14.4	14.6	14.9	15.1	15.3			
73	12.8	13.1	13.3	13.5	13.8	14.0	14.2	14.5	14.7	14.9	15.2			
74	12.7	12.9	13.1	13.4	13.6	13.8	14.1	14.3	14.5	14.8	15.0			
75	12.5	12.8	13.0	13.2	13.4	13.7	13.9	14.1	14.3	14.6	14.8			
76	12.4	12.6	12.8	13.1	13.3	13.5	13.7	13.9	14.2	14.4	14.6			
77	12.2	12.4	12.7	12.9	13.1	13.3	13.6	13.8	14.0	14.2	14.4			
78	12.1	12.3	12.5	12.7	12.9	13.2	13.4	13.6	13.8	14.0	14.3			
79	11.9	12.1	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.9	14.1			
80	11.8	12.0	12.2	12.4	12.6	12.8	13.0	13.3	13.5	13.7	13.9			
81	11.6	11.8	12.0	12.2	12.5	12.7	12.9	13.1	13.3	13.5	13.7			
82	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.5			
83	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.2	13.4			
84	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0	13.2			
85	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0			
86	10.9	11.1	11.3	11,5	11.7	11.9	12.1	12.3	12.5	12.7	12.9			
87	10.8	11.0	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.			
88	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6			
89	10.5	10.7	10.9	11.1	11.3	11.5	11.7	11.8	12.0	12.2	12.4			
90	10.4	10.6	10.8	11.0	11.1	11.3	11.5	11.7	11.9	12.1	12.			
91	10.3	10.5	10.6	10.8	11.0	11.2	11.4	11.6	11.8	11.9	12.			
92	10.2	10.3	10.5	10.7	10.9	11.1	11.2	11.4	11.6	11.8	12.0			
93	10.0	10.2	10.4	10.6	10.8	10.9	11.1	11.3	11.5	11.6	11.			
94	9.9	10.1	10.3	10.4	10.6	10.8	11.0	11.2	11.3	11.5	11.7			
95	9.8	10.0	10.1	10.4	10.5	10.7	10.8	11.0	11.2	11.4	11.			
96	9.7	9.9	10.0	10.2	10.4	10.5	10.7	10.9	11.0	11.2	11.			
				10.2	10.4	10.5	10.6	10.7	10.9	11.1	11.3			
97	9.6	9.7	9.9			10.4	10.6	10.7	10.9	10.9	11.			
98	9.4	9.6	9.8	9.9	10.1		10.4	10.5	10.6	10.8	10.1			
99 100	9.3	9.5	9.6	9.8	9.8	10.1	10.3	10.5	10.5	10.6	10.1			

	GOAL EER (EC0120)												
Entering Water Temp (deg F)	Entering Air temperature												
	75	76	77	78	79	80	81	82	83	84	85		
50	17.0	17.3	17.6	18.0	18,3	18.5	18.8	19.1	19.4	19.7	20.0		
51	16.8	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.2	19.5	19.8		
52	16.6	16.9	17.2	17.5	17.8	18.0	18.3	18.6	18.9	19.2	19.5		
53	16.4	16.7	17.0	17.3	17.6	17.8	18.1	18.4	18.7	19.0	19.3		
54	16.2	16.5	16.8	17.0	17.3	17.6	17.9	18.2	18.5	18.7	19.0		
55	16.0	16.2	16.5	16.8	17.1	17.4	17.6	17.9	18.2	18.5	18.8		
56	15.7	16.0	16.3	16.6	16.9	17.1	17.4	17.7	18.0	18.3	18.6		
57	15.5	15.8	16.1	16.4	16.6	16.9	17.2	17.5	17.7	18.0	18.3		
58	15.3	15.6	15.9	16.1	16.4	16.7	16,9	17.2	17.5	17.8	18.1		
59	15.1	15.4	15.6	15.9	16.2	16.4	16.7	17.0	17.3	17.6	17.8		
60	14.9	15.2	15.4	15.7	15.9	16.2	16.5	16.8	17.0	17.3	17,6		
61	14.7	15.0	15.2	15.5	15.8	16.0	16.3	16.6	16.8	17.1	17.4		
62	14.6	14.8	15.1	15.3	15.6	15.8	16.1	16.4	16.7	16.9	17.2		
63	14.6	14.6	14.9	15.2	15.4	15.7	15.9	18.2	16.5	16.7	17.0		
64	14.2	14.5	14.7	15.0	15.2	15.5	15.7	16.0	16.3	16.5	16.8		
65	14.1	14.3	14.6	14.8	15.1	15.3	15.6	15.8	18.1	16.3	16.6		
66	13.9	14.1	14.4	14.6	14.9	15.1	15.4	15.6	15.9	16.1	16.4		
67	13.7	14.0	14.2	14.4	14.7	14.9	15.2	15.4	15.7	15.9	16.2		
68	13.5	13.8	14.0	14.3	14.5	14.8	15.0	15.3	15.5	15.8	16,0		
69	13.4	13.6	13.9	14.1	14.3	14.6	14.8	15.1	15.3	15.6	15.8		
			13.7	13.9-	14.2	14.4	14.6	14.9	15.1	15.4	15.6		
70	13.2	13.4	13.5	13.8	14.0	14.3	14.5	14.7	15.0	15.2	15.4		
71	13.1		13.4	13.6	13.9	14.1	14.3	14.6	14.8	15.0	15.3		
72	12.9	13.2	13.3	13.5	13.7	14.0	14.2	14.4	14.7	14.9	15.1		
73	12.8	13.0			13.6	13.8	14.0	14.3	14.5	14.7	14.9		
74	12.7	12.9	13.1	13.4		13.7	13.9	14.1	14.3	14.6	14.8		
75	12.5	12.8	13.0	13.2	13.4	13.5	13.7	14.0	14.2	14.4	14.6		
76	12.4	12.6	12.8	13,1		13.4	13.6	13.8	14.0	14.3	14.4		
77	12.3	12.5	12.7	12.9	13.2	13.4	13.4	13.7	13.9	14.1	14.3		
78	12.1	12.4	12.6			13.1	13.3	13.5	13.7	13.9	14.1		
79	12.0	12.2	12.4	12.6	12.9	12.9	13.1	13.4	13.6	13.8	13,9		
80	11.9	12.1	12.3	12.5				13.4	13.4	13.6	13.8		
81	11.7	11.9	12.2	12.4	12.6	12.8	13.0		13.3	13.5	13.6		
82	11.6	11.8	12.0	12.2	12.4	12.6		13.1			13.4		
83	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.4		
84	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.8	12.8	13.0	13.1		
85	11.2	11.4	11.8	11.8	12.0	12.2	12.4	12.6		12.9	13,1		
86	11.1	11.3	11.5	11.7	11.9	12.1	12.3	12.5	12.7	12.7	12.8		
87	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.3			12.7		
88	10.9	11.1	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.7		
89	10.7	10.9	11.1	11,3	11.5	11.7	11.9	12.1	12.3	12.5			
90	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.3	12.5		
91	10.5	10.7	10.9	11.1	11.3	11.5	11.7	11.8	12.0	12.2	12.3		
92	10.4	10.6	10.8	11.0	11,1	11.4	11.5	11.7	11.9	12.1	12.2		
93	10.3	10.5	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.1		
94	10.2	10.4	10.5	10.7	10.9	11.1	11.3	11.5	11.6	11.8	12.0		
95	10.1	10.2	10.4	10.6	10.8	11.0	11.2	11.3	11.5	11.7	11.8		
96	10.0	10.1	10.3	10.5	10.6	10.9	11.1	11.2	11.4	11.6	11.7		
97	9.8	10.0	10.2	10.3	10.5	10.8	10.9	11.1	11.3	11.4	11.6		
98	9.7	9.9	10.1	10.2	10.4	10.6	10.8	11.0	11.1	11.3	11.5		
99	9.6	9.8	9.9	10.1	10.3	10.5	10.7	10.8	11.0	11.2	11.3		
100	9.5	9.7	9.8	10.0	10.1	10.4	10.6	10.7	10.9	11,0	11.2		

# PUBLIC WORKS DEPARTMENT

Council Committee Meeting Date: June 17, 2013 Council Meeting Date: June 17, 2013

### \*COU2013-22: CONSIDER 2014-2018 CARS APPLICATION

#### RECOMMENDATION

Staff recommends the City Council approve the 2014-2018 County Assistance Roads System(CARS) program.

# **BACKGROUND**

In order to receive CARS funds, the City must annually submit an application containing a list of streets and the estimated costs. The following streets are recommended for the five-year CARS program, 2014-2018. The Public Works Department compiled the list based on the pavement condition. The work will include where necessary full depth pavement repair, curb and gutter replacement, sidewalk repair, new sidewalk and milling/overlaying the pavement.

Program Year	Street Segment	From	То	CARS Eligible Costs	County CARS Funds
2014 *	Somerset Dr	Stateline Rd	Belinder Ave	\$938,000	\$469,000
2015	Roe Avenue	75th Street	83rd Street	\$1,166,000	\$583,000
	7	0001	0001	<b>V</b> .,,	<del>- + + + + + + + + + + + + + + + + + + +</del>
	Das	CO4	C745		
2016	Roe Avenue	63rd Street	67th Street	\$882,000	\$441,000
	Roe	67 <sup>th</sup>	71 <sup>St</sup>		
2017	Avenue	Street	Street	\$888,000	\$444,000
2018	Roe Avenue	71 Street	75 <sup>th</sup> Street	\$664,000	\$332,000

Joint project with the City of Leawood

It should be noted that the City submits an application annually and can revise future year requests. The costs include construction and construction administration. Design costs are not included, as the CARS program does not fund design.

#### **FUNDING SOURCE**

Funding is planned for the 2014 Project on Somerset Drive and is included in the CIP. Future year's projects will be funded with each year's budget.

#### **RELATION TO VILLAGE VISION**

- CC1. Attractive Environment
  - CC1a. Make streetscape improvements to enhance pedestrian safety and attractiveness of the public realm.
- CFS3. Streets and Sidewalks
  - CFS3a. Ensure streets and sidewalks are in good condition by conducting maintenance and repairs as needed.
- TR1. Bike and Pedestrian Friendly
  - TR1a. Provide sidewalks in new and existing areas to allow for continuous pedestrian movement around Prairie Village.
  - TR1b. Ensure that infrastructure improvements meet the needs of all transportation users.

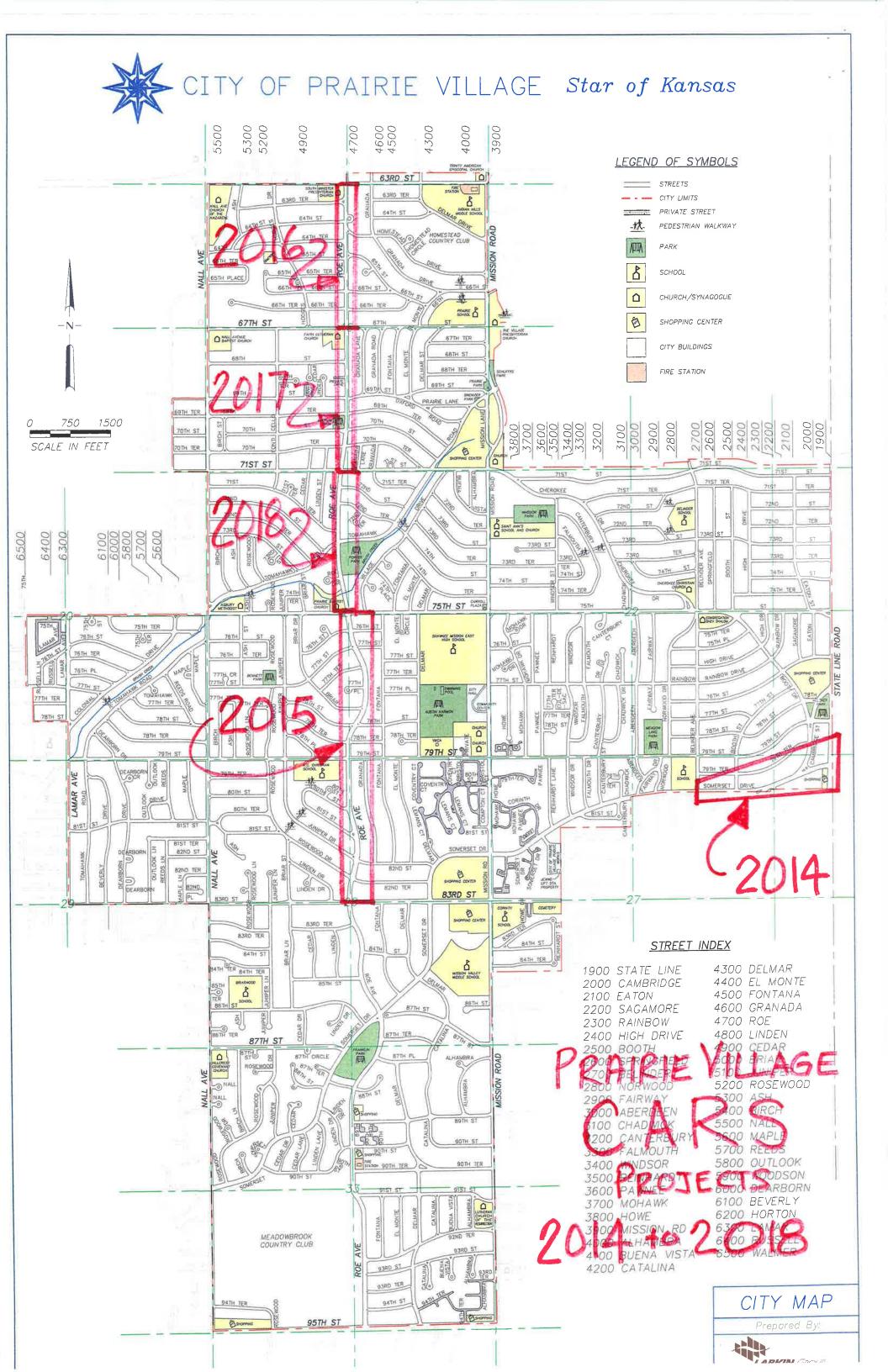
#### **ATTACHMENTS**

Map of Project Locations

#### PREPARED BY

Keith Bredehoeft, Project Manager

June 12, 2013



				TOTAL PROJECT						
PROJECT #	PROJECT DESCRIPTION	SPENT TO DATE	AMOUNT IN RESERVE	ALLOCATED TO DATE	2013 EXPENDITURES	2014 EXPENDITURES	2015 EXPENDITURES	2016 EXPENDITURES	2017 EXPENDITURES	PROJECT TOTAL
PARK	Unallocated	SPENT TO DATE	ANIOONT IN RESERVE	\$ -	\$ 50,000.00		2013 EXPERIDITORES	2010 EXPERDITORES	2017 EXPENDITORES	\$ 50,000.00
POOLRESV		\$ 97,732.57	\$ 349,267.43	\$ 447,000.00			\$ 120,000.00	\$ 120,000.00	\$ 120,000.00	
POOLPLNx	Aquatic Center Assessment Plan	γ στητοΞιστ	ψ σ.ισ,Ξεντ.ισ	\$ -	\$ 50,000.00	_	Ψ 120/000:00	Ψ 120,000.00	Ψ 220,000.00	\$ 50,000.00
BG250001	Franklin Park	\$ 980,061.65		\$ 980,061.65	30,000.00	_				\$ 980,061.65
BG320001	Harmon Park Tennis Courts	7 300,002.00		\$ -	\$ 67,000.00	\$ 550,000.00				\$ 617,000.00
BG400001	McCrum Park			\$ -	7,	\$ 181,000.00				\$ 181,000.00
BG650001	Prairie Park			\$ -		\$ 8,000.00				\$ 8,000.00
BG450001	Taliaferro Park			\$ -		\$ 35,000.00	\$ 61,000.00	\$ 75,000.00		\$ 171,000.00
BG300001	Harmon Park			\$ -		\$ 26,000.00	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			\$ 26,000.00
BG050001	Bennett Park			\$ -			\$ 164,000.00			\$ 164,000.00
BG600001	Porter Park			\$ -		_	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$ 150,000.00		\$ 150,000.00
BG900001	Windsor Park			\$ -		_		\$ 150,000.00		\$ 150,000.00
	Park Improvements			\$ -		_			\$ 135,000.00	
	, , , , , , , , , , , , , , , , , , ,					_				
	PARK TOTAL PER YEAR	\$ 1,077,794.22	\$ 349,267.43	\$ 1,427,061.65	\$ 262,000.00	\$ 920,000.00	\$ 345,000.00	\$ 495,000.00	\$ 255,000.00	\$ 3,704,061.65
DRAINAGE	Unallocated			\$ -						\$ -
WDPRRESV	Water Discharge Program	\$ 71,525.51	\$ 23,884.87	\$ 95,410.38			\$ 10,000.00		\$ 10,000.00	\$ 115,410.38
MIRD0003	Mission Road Culvert Replacement	\$ 270,600.00		\$ 270,600.00						\$ 270,600.00
DELN0001	8	\$ 2,699.72		\$ 2,699.72	\$ 47,300.28	\$ 440,000.00	\$ 580,000.00			\$ 1,070,000.00
DRAIN13x	Drainage Repair Program	\$ 234,143.69		\$ 234,143.69	\$ 394,515.00	\$ 150,000.00	\$ 150,000.00	\$ 740,000.00	\$ 730,000.00	\$ 2,398,658.69
DRAINPLN	Drainage Master Plan Projects			\$ -	\$ 555,000.00					\$ 555,000.00
	DRAINAGE TOTAL PER YEAR	\$ 578,968.92	\$ 23,884.87	\$ 602,853.79	\$ 996,815.28	\$ 590,000.00	\$ 740,000.00	\$ 740,000.00	\$ 740,000.00	\$ 4,409,669.07
STREETS	Unallocated			Ċ _						\$ -
75ST0001		\$ 391,960.51		\$ 391,960.51	\$ 50,000.00	\$ 2,525,900.49				\$ 2,967,861.00
TRAFRESV	Traffic Calming Program	\$ 61,616.33	\$ 65,383.67		<u> </u>	\$ 25,000.00		\$ 25,000.00		\$ 2,307,801.00
PAVP2013		·	٠ (١٥٥٥.٥٦	\$ 1,458,147.72			¢ 1.442.000.00		¢ 1,671,000,00	·
	Paving Program  Somercat Dr. Polinder to Poinbardt (CARS)	\$ 1,458,147.72 \$ 18,000.00					\$ 1,442,000.00	\$ 1,334,000.00	\$ 1,671,000.00	
SODR0003		<u> </u>		\$ 18,000.00 \$ 3,423,641.05		-				\$ 679,000.00
BOND0002		\$ 3,423,641.05		\$ 3,423,041.05	<u>'</u>	<del>-</del>				· , ,
SODR0004	Somerset Dr - State Line to Belinder (CARS)			<del>-</del> -	\$ 75,000.00	\$ 1,023,000.00 \$ 75,000.00				\$ 1,098,000.00
ROAV0003	Roe Ave - 75th St to 83rd St (CARS)  CDBG			\$ -	\$ -	\$ 75,000.00		\$ 225,000.00		\$ 1,241,000.00 \$ 450,000.00
ROAV0004	Roe Ave - 63rd St to 67th St (CARS)			\$ -	- -	223,000.00	\$ 75,000.00			\$ 957,000.00
ROAV0004	Roe Ave - 67th St to 67th St (CARS)			\$ -			75,000.00	\$ 75,000.00		
ROAV0005	Roe Ave - 71st St to 75th St (CARS)			\$ -				7 73,000.00	\$ 75,000.00	
NOAVOOO	NOC AVE - 7130 St to 73011 St (CANS)			<u>,                                     </u>		_			7 73,000.00	7 73,000.00
	STREET TOTAL PER YEAR	\$ 5,353,365.61	\$ 65,383.67	\$ 5,418,749.28	\$ 3,260,474.95	\$ 4,595,594.49	\$ 2,683,000.00	\$ 2,541,000.00	\$ 2,634,000.00	\$ 21,132,818.72
					·		<u> </u>	<u> </u>		

						тот	AL PROJECT									
						ALLC	CATED TO									
PROJECT #	PROJECT DESCRIPTION	SPE	NT TO DATE	AMOU	INT IN RESERVE	DATI	E	2013 EXPENDIT	JRES	201	4 EXPENDITURES	2015	EXPENDITURES	2016 EXPENDITURES	2017 EXPENDITURES	PROJECT TOTAL
BUILDING	Unallocated					\$	-									\$ -
BLDGResv	Building Reserve					\$	-	\$	-			\$	50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 150,000.00
SIGN0002	Building Entrace Signs					\$	-	\$ 20	00.00							\$ 20,000.00
BG510001	City Hall Roof Repairs and Siding					\$	-			\$	76,500.00					\$ 76,500.00
						\$	-									
	BUILDING TOTAL PER YEAR	\$	-	\$	-	\$	-	\$ 20	00.00	\$	76,500.00	\$	50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 246,500.00
OTHER	Unallocated															\$ -
ADARESVx	ADA Compliance Program	\$	167,198.95	\$	72,216.75	\$	239,415.70	\$ 25	00.00	\$	25,000.00	\$	25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 364,415.70
CONC2013	Concrete Repair Program	\$	1,408,406.17			\$	1,408,406.17	\$ 730	00.00	\$	700,000.00	\$	700,000.00	\$ 700,000.00	\$ 700,000.00	\$ 4,938,406.17
	SIDEWALK & CURB TOTAL PER YEAR	\$	1,575,605.12	\$	72,216.75	\$	1,647,821.87	\$ 755	00.00	\$	725,000.00	\$	725,000.00	\$ 725,000.00	\$ 725,000.00	\$ 5,302,821.87
								_								_
	CIP TOTAL	. \$	8,585,733.87	\$	510,752.72	\$	9,096,486.59	\$ 5,294	290.23	\$	6,907,094.49	\$	4,543,000.00	\$ 4,551,000.00	\$ 4,404,000.00	\$ 34,795,871.31

# COUNCIL MEETING AGENDA CITY OF PRAIRIE VILLAGE Council Chambers June 17, 2013 7:30 PM

- I. CALL TO ORDER
- II. ROLL CALL
- III. PLEDGE OF ALLEGIANCE
- IV. PUBLIC PARTICIPATION
- V. CONSENT AGENDA

All items listed below are considered to be routine by the Governing Body and will be enacted by one motion (Roll Call Vote). There will be no separate discussion of these items unless a Council member so requests, in which event the item will be removed from the Consent Agenda and considered in its normal sequence on the regular agenda.

#### By Staff

- 1. Approve Regular Council Meeting Minutes June 3, 2013
- 2. Approve Claims Ordinance 2906
- Approve VillageFest Contract with Fun Services of KC and Lance Cully
- 4. Approve performance contracts for the 2013 Jazz Festival with the following performers: Andy McGhie Quintet; Parallax; Everett DeVan Chris Hazelton Quartet; Marilyn Maye and Bobby at a cost \$25,200.
- 5. Ratify the Mayor's Appointment of Kurt Ellenberger to the Board of Code Appeals
- 6. Approve the Interlocal Agreement with OverlandPark for street maintenance overlays on Nall Avenue from 67th Street to 75th Street and authorize the transfer of \$116,500 from Contingency to Project P5000
- 7. Approve the Interlocal Agreement with Overland Park for street maintenance overlays on Lamar Avenue from 75th Street to 83rd Street and on 83rd Street from Nall Avenue to Lamar Avenue and authorize the transfer of \$43,110 from Contingency to Project P5000
- 8. Approve a contract with ADP for a term of thirty-six months expiring June 30, 2016 for HRIS, payroll, timekeeping, and other related services
- VI. MAYOR'S REPORT
- VII. COMMITTEE REPORTS

# Council Committee of the Whole

COU2013-22 Consider 2014-2018 County Assistance Roads System (CARS)
Application

# **Parks and Recreation Committee**

Consider objection to the Kansas Historical Society nomination of the Santa Fe Trail remnant to the National Register

Consider Addendum to Prairie Park Lease with Johnson County Parks & Recreation District

VIII. STAFF REPORTS

IX. OLD BUSINESS

X. **NEW BUSINESS** 

XI. ANNOUNCEMENTS

XII. ADJOURNMENT

If any individual requires special accommodations - for example, qualified interpreter, large print, reader, hearing assistance - in order to attend the meeting, please notify the City Clerk at 385-4616, no later than 48 hours prior to the beginning of the meeting.

If you are unable to attend this meeting, comments may be received by e-mail at cityclerk@pvkansas.com

# **CONSENT AGENDA**

# CITY OF PRAIRIE VILLAGE, KS

June 17, 2013

#### CITY COUNCIL

# CITY OF PRAIRIE VILLAGE June 3, 2013

The City Council of Prairie Village, Kansas, met in regular session on Monday, June 3, 2013, at 7:30 p.m. in the Council Chambers of the Municipal Building.

#### ROLL CALL

Mayor Ron Shaffer called the meeting to order and roll call was taken with the following Council members present: Ashley Weaver, Ruth Hopkins, Steve Noll, Laura Wassmer, Brooke Morehead, Charles Clark, David Morrison, Ted Odell and David Belz.

Also present were: Wes Jordan, Chief of Police; Keith Bredehoeft, Interim Public Works Director; Katie Logan, City Attorney; Quinn Bennion, City Administrator; Dennis Enslinger, Assistant City Administrator; Lisa Santa Maria, Finance Director, Danielle Dulin, Assistant to the City Administrator and Joyce Hagen Mundy, City Clerk.

Mayor Shaffer led all those present in the Pledge of Allegiance.

Councilmember Steve Noll thanked all of the Council and staff for their sympathies and condolences during the past week on the death of their son. He expressed his appreciation to the police officers for their compassion and professionalism in a very difficult situation.

# **PUBLIC PARTICIPATION**

Chuck Dehner, 4201 West 68<sup>th</sup> Terrace, expressed his anger against government and its attempts to limit his free speech. He continued to speak against the CIDs issued for the Prairie Village and Corinth Shopping Centers which are giving taxpayer money for the benefit of the elite. He questioned reimbursements and cautioned that the city may be paying for half of the Hen House expansion and Standees. His greater fear is that in addition to the lost sales

tax, the City could also be forced to issue bonds for the benefit of the Community Improvement Districts, giving away more of residents' money. Mr. Dehner questioned the constitutionality and legality of the CID. He stated the CID is an \$80 million monster and a ridiculous waste of tax payers' money.

With no one else to address the Council Public Participation was closed at 7:40 p.m.

# **CONSENT AGENDA**

Charles Clark moved the approval of the Consent Agenda for June 2, 2013:

- 1. Approve the Regular Council Meeting Minutes May 20, 2013
- 2. Approve School Resource Officer Agreement with the Shawnee Mission School District for the 2013-2014 school year.
- 3. Approve the agreement with the Kansas City Crime Commission for the TIPS Hotline Crime Stoppers Program
- Approve the following contracts for VillageFest 2013: Debbie Jackson Productions, DJ Services (\$800); Ararat Shrine Clown, 3 Clowns (\$600); J Todd Music Agency, Valentine & the Knights (\$1000); Action Inflatables Mega Events, Inflatables (\$1375); Giggles-n-Jiggles LLC, Human Hamster Balls (\$650)
- 5. Authorize the Mayor to execute the Final Plat for "Meadowbrook Executive Building" Replat for its acceptance of rights-of-way and easements subject to the conditions required by the Planning Commission.

A roll call vote was taken with the following members voting "aye": Weaver, Hopkins, Noll, Wassmer, Morehead, Morrison, Clark, Odell and Belz.

# **MAYOR'S REPORT**

Mayor Shaffer reported he attended the following events on behalf of the City: Johnson County College Foundation Annual Lunch where outgoing President Terry Calaway was recognized; a retirement reception for outgoing Shawnee Mission School Superintendent Dr. Gene Johnson and a farewell reception for outgoing DeSoto Mayor Anderson. He attended the KCADC Breakfast, MARC Symposium, MARC Executive committee meeting, the Special

Olympics Torch Run and Sister City picnic for a visiting Ukraine citizen where he was presented with a photograph.

# **COMMITTEE REPORT**

## Council Committee of the Whole

COU2013-21 Consider approval letter to Attorney General regarding HB 2052 and concealed carry in public buildings.

City Attorney Katie Logan briefly reviewed the House Bill 2052 regarding concealed carry in public buildings that goes into effect July 1<sup>st</sup>. She has prepared a letter requesting a delay in the effective date of the bill to January 1, 2014 while the City prepares the required security plan for its facilities.

On behalf of the Council Committee of the Whole, Charles Clark moved the City Council authorize the Mayor to execute a letter notifying the Attorney General of the Governing Body's election to exempt itself from the provisions of House Bill 2052 until January 1, 2014 for identified city buildings. The motion was seconded by David Morrison and passed unanimously.

# **Planning Commission**

PC2013-04 Consider Renewal of Special Use Permit for Monarch Montessori School at 7501 Belinder

Dennis Enslinger reported that Monarch Montessori Preschool has requested approval of renewal and expansion of their Special Use Permit for the operation of a private school at REACH Church's facility at 7501 Belinder. The Montessori Preschool offers education for children from age 2.5 to school age Monday through Friday from late August until late May between the hours of 8:30 a.m. and 5:30 p.m. A summer program will be offered in June and

July three mornings per week from 9 a.m. to 12 noon. The requested permit is for a maximum of 102 students.

The existing preschool is located on the garden level of the facility and has access from the south and west. The school will continue to use this space and will expand the preschool to a portion of the main floor immediately above the existing space. The only outside physical change will be the removal of a shed on the east side of the building and the construction of a 12' x 24' deck with a stairway to the playground.

A public hearing was held before the Planning Commission on May 7<sup>th</sup> with one resident raising concerns regarding drop-off traffic on 75<sup>th</sup> Terrace. The Planning Commission recommends approval of the Special Use Permit subject to seven conditions reflected in their minutes of May 7, 2013.

Charles Clark moved the Governing Body adopt Ordinance 2273 granting a Special Use Permit for the operation of a private preschool at 7501 Belinder Avenue subject to the findings of fact as adopted by the Planning Commission and the seven conditions recommended by the Planning Commission. The motion was seconded by Ruth Hopkins.

A roll call vote was taken with the following members voting "aye": Weaver, Hopkins, Noll, Wassmer, Morehead, Morrison, Clark, Odell and Belz.

#### STAFF REPORTS

## Public Safety & Public Works

Staff reports given during the committee meeting.

#### Administration

- Dennis Enslinger reported that Standees opened this past weekend.
- The Prairie Village Art Fair was very well attended this past weekend.
- The Legislative Session has wrapped up. Their primary focus was on the adoption of the budget which reduced slightly the sales tax rate. He noted he would provide Council a complete update via e-mail.

 The Planning Commission will continue the public hearing on the Mission Chateau proposal for 8500 Mission Road at its meeting tomorrow evening. He does not expect the Commission to take action on the application at that meeting. Additional meeting dates are being researched at the Village Church.

Charles Clark asked what to do with e-mail received regarding this project after the closure of the public hearing. Mr. Enslinger stated he does not expect the public hearing to be closed and advised Council to continue to forward any e-mails received to the City Clerk for distribution to the Planning Commission.

Brooke Morehead asked if the Planning Commission served as a quasi-judicial board and was under the same restrictions as the Council. Ms Logan replied that as they are only a recommending body, they are not considered to have a quasi-judicial role; however, they are accountable for the same level of openness, remain objective and cannot have private discussions on an application all information received must be disclosed to the entire Commission.

- Danielle Dulin reported it has been a slow week at the pool due to the unseasonable weather.
- Quinn Bennion reported several ads have been placed for the city's Public Works Director Position with applications being due on July 6<sup>th</sup>.

## **OLD BUSINESS**

Charles Clark reported on the impact of the recent rainfalls on the 83<sup>rd</sup> & Delmar low water crossing and area properties. During the second rainfall event the water went over the banks into residents' yards, but fortunately, no flooding in the homes. The low water crossing was filled with water, but no vehicle rescues were required.

# **NEW BUSINESS**

Brooke Morehead invited Council members to a reception on July 9<sup>th</sup> at the Prairiebrooke Gallery for the new Shawnee Mission School Superintendent. She also reported that UMB is the presenting sponsor for the 2013 Prairie Village Jazz Festival. The talent lineup is expected to be announced this month.

#### ANNOUNCEMENTS

Planning Commission (6641 Mission Road)

06/04/2013

7:00 p.m.

Tree Board	06/05/2013	6:00 p.m.	
JazzFest Committee (3304 W. 71st Street)	06/06/2013	7:00 p.m.	
Sister City Committee	06/10/2013	7:00 p.m.	
Council Committee of the Whole	06/17/2013	6:00 p.m.	
City Council	06/17/2013	7:30 p.m.	

The Prairie Village Arts Council is pleased to announce an oil painting exhibit by Susan Tower in the R.G. Endres Gallery for the month of June. The reception will be held on Friday, June 14th from 6:30 to 7:30 p.m.

Recreation memberships are on sale in the City Clerk's Office. The pool opened on Saturday, May 25<sup>th</sup>. The first Moonlight Swim will be Friday, June 14<sup>th</sup> with the pool remaining open until 10 p.m.

Mayor Shaffer announced the upcoming "Smart Design Workshop" sponsored by MARC on July 26<sup>th</sup> from 1:00 p.m. to 3:00 p.m. at the Sylvester Powell Community Center in Mission.

VillageFest is Thursday, July 4th.

The City offices will be closed on Thursday, July 4th in observance of the July 4th Holiday. Deffenbaugh also observes this holiday so trash pick-up will be delayed one day.

# **ADJOURNMENT**

With no further business to come before the City Council, the meeting was adjourned at 8:00 p.m.

Joyce Hagen Mundy City Clerk

#### CITY TREASURER'S WARRANT REGISTER

DATE WARRANTS ISSUED:		Warrant Register Page No. 1
June 14, 2013	Copy of Ordinance	Ordinance Page No

An Ordinance Making Appropriate for the Payment of Certain Claims.

Be it ordained by the governing body of the City of Prairie Village, Kansas.

Section 1. That in order to pay the claims hereinafter stated which have been properly audited and approved, there is hereby appropriated out of funds in the City treasury the sum required for each claim.

NAME	WARRANT NUMBER	AMOUNT	TOTAL
EXPENDITURES: Accounts Payable 4811-4819 4820 4821-4923 4924-5013 5014	5/3/2013 5/7/2013 5/10/2013 5/24/2013 5/30/2013	88,230.47 260,557.66 570,846.88 482,692.07 9,256.87	
Payroll Expenditures 5/3/2013 5/17/2013 5/31/2013		232,359.96 239,379.75 248,151.15	
Electronic Payments     Electronic Pmnts     Electronic Pmnts	5/6/2013 5/8/2013 5/9/2013 5/10/2013 5/14/2013 5/15/2013 5/20/2013 5/22/2013 5/23/2013 5/26/2013 5/30/2013	8,112.08 363.08 1,535.88 4,207.58 14.00 389.78 1,262.98 1,161.62 4,207.58 12,490.67 912.52	
TOTAL EXPENDITURES:	0,00,2010	7,2.52	2,166,132.58
Voided Checks			
Athco	# 4929	(3,149.00)	
TOTAL VOIDED CHECKS:			(3,149.00)
GRAND TOTAL CLAIMS ORDINANCE			2,162,983.58

Section 2. That this ordinance shall take effect and be in force from and after its passage. Passed this 17th day of June 2013.

Signed or Approved this 17th day of June 2013.

(SEAL) ATTEST:		
	City Treasurer	Mayor



# **VILLAGEFEST COMMITTEE**

Council Meeting Date: June 17, 2013

CONSENT AGENDA: Consider Approval of VillageFest Contracts

### RECOMMENDATION

Staff recommends the City Council approve the following contracts for VillageFest 2013 in the amount of \$6,185.

Fun Services Lance Cully Rock Wall, Trackless Train, Mobile Zip Line

**Native American Dancers** 

FUNDING SOURCE

01-06-41-6014-005 - VillageFest

**ATTACHMENTS** 

1. Contracts

PREPARED BY

Jeanne Koontz, Deputy City Clerk June 14, 2013

# ENTERTAINMENT/ VENDOR AGREEMENT 2013

THIS ENTERTAINMENT/VENDOR AGREEMENT, (hereinafter "Agreement") is made and entered into this 13 day of 500 , 2013, by and between the City of Prairie Village, Kansas (hereinafter "the City") and Lance Cully, (hereinafter "Vendor").

WHEREAS, the City is sponsoring an event, entitled VillageFest, for the general public which is to be held on July 4, 2013; and

In consideration of the mutual promises and covenants contained herein, Vendor and City agree as follows:

- 1. Type of Space Provided: the Vendor shall specify the square footage required including facility foot print and clearance space outside the facility foot print: Harmon Park Pavilion
- 2. <u>Type of Service Provided</u>: the Vendor agrees to provide the following services: Native Amercian Dance
- 3. Hours of Operation: The Vendor shall provide services to the general public at 8:30 a.m., 9:30 a.m. and 10:45 a.m. on July 4, 2013.

# 4. Access to Facilities:

- a. Vendor shall have access to Vendor's location for set-up on July 4, 2013 prior to 8:30 a.m. and for breakdown after 11:00 a.m.
- b. Vendor shall furnish City a list of each equipment/facility showing the required electrical power in AC volts and AC amp, required water from a garden hose, required fencing, and required set V up/breakdown assistance specifying skills required, and any other special requirements as part of this Agreement. Any amendments to Exhibit A must be approved by the City in writing.
- 5. <u>Compensation</u>: In consideration for the entertainment provided, the City shall pay to the Vendor the amount of \$500.00 to be paid on or before July 4, 2013.
- 6. <u>Cancellation of the Event</u>: The City has full authority to cancel the event for any reason. In the event that the City cancels VillageFest, the City shall notify Vendor of the cancellation in a timely manner, and this Agreement shall be terminated.

7. Clean-Up: Vendor shall maintain its Vendor's Booth and/or operating areas in a neat, clean, sanitary condition and in good order and repair, free and clean of all litter, debris and rubbish at all times. Vendor shall be responsible for the clean up of its areas on an ongoing basis during the VillageFest and at the conclusion of business and conclusion of the VillageFest. Vendor's clean up responsibilities shall also include, but not be limited to, bagging and depositing Vendor's trash in the designated containers. City reserves the right to terminate all of Vendor's rights under this Agreement, including the right to operate if Vendor has failed to maintain clean and sanitary conditions in and around Vendor's location.

# 8. Indemnity:

- a. Vendor shall indemnify and hold harmless the City and its agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting there from and (ii) is caused in whole or in part by any negligent act or omission of the Vendor, or any sub-contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph.
- b. The Vendor is responsible for all items left on the VillageFest premises, including, but not limited to, those items left in and around Vendor's location before, during and after the hours of operation of the VillageFest. Vendor shall be solely responsible for its own security at all times. Risk of loss of equipment, cash and other items belonging to or in the possession of Vendor is on Vendor. City shall not be responsible for loss of or damage to Vendor's property or inventory whether attributable to theft, vandalism spoilage, weather or any other cause.
- c. Vendor is responsible for and agrees to reimburse City for any damage caused by Vendor to City's property or to property being used by the City.

9. <u>Notification</u>: Notification and any other notices under this Agreement shall be made as follows:

City Clerk 7700 Mission Road Prairie Village, KS 66208 (913) 381-6464

# 10. Staff:

- a. Vendor shall provide managers and sufficient staff to keep Vendor's Booth operational during the hours of operation of the VillageFest.
- b. Vendor's volunteers, employees, representatives and staff shall be prohibited by Vendor from consuming alcoholic beverages, be in possession of controlled substances, acting in a manner prohibited by state law or city ordinance, or conducting themselves in a manner detrimental to the event and the public attending when on duty at or in Vendor Booth.
- c. Vendor and its employees are independent contractors and are not employees, servants or agents of VillageFest or of the City. Vendor has the sole responsibility of providing workers' compensation coverage for its employees.
- 11. <u>Cancellation</u>: The City shall retain the right to cancel this Agreement at any time without penalty.
- 12. <u>Entire Agreement</u>: This Agreement evidences the entire agreement between the parties hereto and supersedes all prior agreements and understandings pertaining to VillageFest.
- 13. <u>Effective Date</u>: This Agreement is effective upon City's acceptance as evidence by the execution of this Agreement by City's authorized representatives in the space provided below.

CITY OF PRAIRIE VILLAGE	VENDOR
By:	By Lance Cully
(signed)	(signed)
Ronald L. Shaffer	LANCE CULLY
	(typed name)
Mayor	PERFORMER
	(typed title) Singens
City of Prairie Village	(typed title) RED BUFFALO and Dancers
	(typed company name)
7700 Mission Road	2507 NE Shady Lane DR. #18
	(typed address)
Prairie Village, Kansas, 66208	Glad StONE, MO 64118
	(typed city, state, zip)
913-381-6464	(typed city, state, zip) $816 - 803 - 944$
	(typed telephone number)
(date of execution)	(date of execution)
ATTEST:	APPROVED BY:
City Clerk, Joyce Hagen-Mundy	City Attorney, Catherine P. Logan

# ENTERTAINMENT/ VENDOR AGREEMENT 2013

THIS ENTERTAINMENT/VENDOR AGREEMENT, (hereinafter "Agreement") is made and entered into this day of JUNE, 2013, by and between the City of Prairie Village, Kansas (hereinafter "the City") and Fun Services of KC, LLC, (hereinafter "Vendor").

WHEREAS, the City is sponsoring an event, entitled VillageFest, for the general public which is to be held on July 4, 2013; and

In consideration of the mutual promises and covenants contained herein, Vendor and City agree as follows:

- 1. <u>Type of Space Provided</u>: the Vendor shall specify the square footage required including facility foot print and clearance space outside the facility foot print:
- 2. <u>Type of Service Provided</u>: the Vendor agrees to provide the following services:

Rock Wall Trackless Train Labor – 2 Mobile Zip Line from Ohio Labor - 3

3. <u>Hours of Operation</u>: The Vendor shall provide services to the general public from 8:30 a.m. to 1:00 p.m. on July 4, 2013.

#### 4. Access to Facilities:

- a. Vendor shall have access to Vendor's location for set-up on July 4, 2013 from 6:30 a.m. to 8:30 a.m. and for breakdown after 1:00 pm. Vendor's vehicle(s) must be removed from the VillageFest grounds within one hour after the end of this time period or the vehicle(s) will be subject to tow.
- b. Vendor shall furnish City a list of each equipment/facility showing the required electrical power in AC volts and AC amp, required water from a garden hose, required fencing, and required set V up/breakdown assistance specifying skills required, and any other special requirements as part of this Agreement. Any amendments to Exhibit A must be approved by the City in writing.
- 5. <u>Compensation</u>: In consideration for the entertainment provided, the City shall pay to the Vendor the amount of \$5,685.00, to be paid on or before July 4, 2013

- unless the event is canceled as provided in Section 6 of this agreement. A nonrefundable deposit of \$2,842.50 shall be made as provided in the attached Customer Agreement.
- 6. <u>Cancellation of the Event</u>: The City has full authority to cancel the event for any reason. In the event that the City cancels VillageFest, the City shall notify Vendor of the cancellation in a timely manner, and this Agreement shall be terminated.
- 7. Clean-Up: Vendor shall maintain its Vendor's Booth and/or operating areas in a neat, clean, sanitary condition and in good order and repair, free and clean of all litter, debris and rubbish at all times. Vendor shall be responsible for the clean up of its areas on an ongoing basis during the VillageFest and at the conclusion of business and conclusion of the VillageFest. Vendor's clean up responsibilities shall also include, but not be limited to, bagging and depositing Vendor's trash in the designated containers. City reserves the right to terminate all of Vendor's rights under this Agreement, including the right to operate if Vendor has failed to maintain clean and sanitary conditions in and around Vendor's location.

# 8. Indemnity:

- a. Vendor shall indemnify and hold harmless the City and its agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting there from and (ii) is caused in whole or in part by any negligent act or omission of the Vendor, or any sub-contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph.
- b. The Vendor is responsible for all items left on the VillageFest premises, including, but not limited to, those items left in and around Vendor's location before, during and after the hours of operation of the VillageFest. Vendor shall be solely responsible for its own security at all times. Risk of loss of equipment, cash and other items belonging to or in the possession of Vendor is on Vendor. City shall not be responsible for loss of or damage to Vendor's property or inventory whether attributable to theft, vandalism spoilage, weather or any other cause.

- c. Vendor is responsible for and agrees to reimburse City for any damage caused by Vendor to City's property or to property being used by the City.
- d. Vendor shall furnish City with a valid certificate of broad form general liability insurance, completed operations and products insurance coverage for personal injuries and property damage with combines single limits of coverage of not less than \$1,000,000.00 per occurrence, with the City named as additional insured on such policies. Copies of said certificate shall be provided to City on or before June 21, 2013.
- 9. <u>Notification</u>: Notification and any other notices under this Agreement shall be made as follows:

City Clerk 7700 Mission Road Prairie Village, KS 66208 (913) 381-6464

## 10. Staff:

- a. Vendor shall provide managers and sufficient staff to keep Vendor's Booth operational during the hours of operation of the VillageFest.
- b. Vendor's volunteers, employees, representatives and staff shall be prohibited by Vendor from consuming alcoholic beverages, be in possession of controlled substances, acting in a manner prohibited by state law or city ordinance, or conducting themselves in a manner detrimental to the event and the public attending when on duty at or in Vendor Booth.
- c. Vendor and its employees are independent contractors and are not employees, servants or agents of VillageFest or of the City. Vendor has the sole responsibility of providing workers' compensation coverage for its employees.
- 11. <u>Cancellation</u>: Subject to Section 5 hereof, the City shall retain the right to cancel this Agreement at any time without penalty.
- 12. Entire Agreement: This Agreement, the attached Customer Agreement, evidences the entire agreement between the parties hereto and supersedes all prior agreements and understandings pertaining to VillageFest. If there are any inconsistencies between this Agreement and the attached Customer Agreement, the provision of this Agreement shall govern.
- 13. <u>Effective Date</u>: This Agreement is effective upon City's acceptance as evidence by the execution of this Agreement by City's authorized representatives in the space provided below.

CITY OF PRAIRIE VILLAGE	VENDOR
By:	By Milly
(signed)	(signed)
Ronald L. Shaffer	ADAM BROWN
	(typed name)
Mayor	MARKETING DIRECTOR
	(typed title)
City of Prairie Village	FUN SERVICES OF K.C
	(typed company name)
7700 Mission Road	7803 MEADOW VIEW PRIVE
	(typed address)
Prairie Village, Kansas, 66208	SHAWNEE, KS 66227
•	(typed city, state, zip)
913-381-6464	913-441-9200
	(typed telephone number)
	06/07/13
(date of execution)	(date of execution)
ATTEST:	APPROVED BY:
City Clerk, Joyce Hagen-Mundy	City Attorney, Catherine P. Logan



# JAZZFEST COMMITTEE

Council Meeting Date: June 12, 2013 Consent Agenda

# **Consider Jazzfest Performance Contracts**

#### RECOMMENDED MOTION

Move the City Council approve performance contracts for the 2013 Jazz Festival with the following performers: Andy McGhie Quintet; Parallax; Everett DeVan - Chris Hazelton Quartet; Marilyn Maye and Bobby 25,200.

#### **BACKGROUND**

The Fourth Annual Prairie Village Jazz Festival will be held on Saturday, September 7<sup>th</sup> beginning at 3 p.m. The Committee is pleased to have secured the following line-up:

•	
3:00 - 3:50	Andy McGhie Quintet
4:10 - 5:00	Parallax
5:20 - 6:10	Currently open
6:30 - 7:20	Everett DeVan - Chris Hazelton Quartet
7:40 - 8:40	Marilyn Maye Quartet
9:00 - 10:30	Bobby Watson All-Star Big Band w/Special Guest Jon Faddis.
	3:00 - 3:50 4:10 - 5:00 5:20 - 6:10 6:30 - 7:20 7:40 - 8:40 9:00 - 10:30

The contracts are currently under review by the City Attorney and will be 25,200. Funding is currently available in the Municipal Foundation account for JazzFest with a balance of \$28,315.69.

#### ATTACHMENTS

Artist Information

PREPARED BY
Joyce Hagen Mundy
City Clerk

June 12, 2013

# Proposed 2013 Prairie Village Jazz Festival Schedule

# 3:00 - 3:50 Andy McGhie Quintet

Andy McGhie, saxophone, Hermon Mehari, trumpet; Peter Schlamb, vibraphone, Karl McComas-Reichl, bass and Ryan Lee, drums.

This is both a group of young musicians and unknowns KC should know. The interplay between Andy and Hermon, Andy and Peter and Hermon and Peter is fantastic.

## 4:10 - 5:00 Parallax

Stan Kessler, trumpet; Roger Wilder, piano; Bill McKemy, bass, Ryan Lee and Brian Steever, drums.

Stan is popular in KC. The interaction between 2 drums is fun and will play exceptionally well on our outdoor stage.

# 5:20 - 6:10 Currently open - probably a female vocalist

### 6:30 - 7:20 Everett DeVan - Chris Hazelton Quartet

Everett DeVan and Chris Hazelton, Hammon B3 Organs, Matt Hopper, guitar, Danny Rojas, drums
This group swings hard and 2 Hammon B3 organs will play extremely well on our stage.

# 7:40 - 8:40 Marilyn Maye Quartet

At 84 years old, a KC legend who people will turn out to see, and who KC has had little chance to see since Jardine's closed. She still puts on an outstanding show.

9:00 - 10:30 **Bobby Watson All-Star Big Band with Special Guest Jon Faddis**Bobby Watson with a big band of KC's top jazz musicians - this band was first put together to perform with the KC Symphony.

Jon Faddis is an internationally renowned jazz trumpet star.



Council Meeting Date: June 17, 2013

CONSENT AGENDA: CONSIDER APPOINTMENT TO THE BOARD OF

**CODE APPEALS** 

#### RECOMMENDATION

Ratify the Mayor's appointment of Kurt Ellenberger to the Board of Code Appeals with his term expiring in April 2016.

#### **BACKGROUND**

Mayor Shaffer is pleased to place before you the appointment of Kurt Ellenberger to the Board of Code Appeals. His volunteer application is attached.

# **ATTACHMENTS**

1. Volunteer Application

# PREPARED BY

Jeanne Koontz, Deputy City Clerk June 12, 2013



# City of Prairie Village

# APPLICATION TO VOLUNTEER

Please complete this form and return it to the City Clerk's Office, 7700 Mission Road, Prairie VIIIage, Kansas 66208. If you have any questions, please contact the City Clerk's Office at 913-381-6464 or send an e-mail to <a href="mailto:cityclerk@pvkansas.com">cityclerk@pvkansas.com</a>.

Name KURT ELLEN	12.60(1)=17	Spouse's Name Julie	
		Zip <u>46208</u> Ward	
Address 7908 GizzeH 6			İ
Telephone: Home	Work	Fax	1
E-mail	Other I	Number(s):	
Business Affiliation RESIDE	HTIAL BUILDIH	14 CONTRACTOR	
D. James Addrage SAME			
What Committee(s) interests )	BOARD C	OF CODE APPEALS	
What Committee(s) Interesis	/00 :		
PORM AND TRAISED  PIVI AS A RESIDEN  DUINED AND DREED  FOR 28/E425	IN PERIZE VI	PERF	
COLLEGE DEGREE BUILDING INSPECTE	ESS. COUSTR	EXTION MANAGEMENT SITYOF KOMO, LENEXA, KG	
Thank you for your interest	in serving our comm	nunity.	

# PUBLIC WORKS DEPARTMENT

Council Meeting Date: June 17, 2013

CONSENT AGENDA: CONSIDER INTERLOCAL AGREEMENTS WITH THE CITY OF OVERLAND PARK FOR STREET MAINTENANCE OVERLAYS ON STREETS SHARED WITH PRAIRIE VILLAGE

#### **RECOMMENDATIONS**

Move to approve the interlocal agreement with Overland Park for street maintenance overlays on Nall Avenue from 67<sup>th</sup> Street to 75<sup>th</sup> Street and to transfer \$116,550 from City Contingency to Project P5000.

Move to approve the interlocal agreement with Overland Park for street maintenance overlays on Lamar Avenue from 75<sup>th</sup> Street to 83<sup>rd</sup> Street and on 83<sup>rd</sup> Street from Nall Avenue to Lamar Avenue and to transfer \$43,110 from City Contingency to Project P5000.

#### **BACKGROUND**

This issue was brought to Council on January 7, 2013 and the maintenance work with Overland Park was approved along with the usage of City Contingency for this work. Overland Park changed their maintenance strategy on Nall Avenue to use a better product called UBAS instead of MicroSurfacing. Public Works is excited to use this product as it will last longer and be a good maintenance solution for Nall Avenue. Given that this product does cost more, the MicroSurface on 95<sup>th</sup> Street between Mission Road and Nall Avenue will be delayed to the future.

#### **FUNDING SOURCE**

The fund transfers from City Contingency to P5000.

#### **RELATION TO VILLAGE VISION**

TR1a. Ensure that infrastructure improvements meet the needs of all transportation users.

#### **ATTACHMENTS**

1. Interlocal Agreements with the Overland Park.

#### PREPARED BY

Keith Bredehoeft June 12, 2013

AGREEMENT BETWEEN THE CITY OF OVERLAND PARK, KANSAS, AND THE CITY OF PRAIRIE VILLAGE, KANSAS, FOR THE PUBLIC IMPROVEMENT OF NALL AVENUE FROM  $67^{\rm TH}$  STREET TO  $75^{\rm TH}$  STREET.

#### WITNESSETH:

WHEREAS, the Parties hereto have determined it is in their best interest to make the public improvement to Nall Avenue from 67<sup>th</sup> Street to 75<sup>th</sup> Street as such improvement is hereinafter described; and

WHEREAS, K.S.A. 12-2908 and K.S.A. 68-169 authorizes the Parties hereto to cooperate in making the public improvement; and

WHEREAS, the Governing Bodies of each of the Parties hereto have determined to enter into this Agreement for the aforesaid public improvement, as authorized and provided by K.S.A. 12-2908 and K.S.A. 68-169; and

NOW, THEREFORE, in consideration of the above recitals, the mutual covenants and agreements herein contained, and for other good and valuable considerations, the Parties hereto agree as follows:

1. <u>PURPOSE OF AGREEMENT</u>. The Parties hereto enter into this Agreement for the purpose of constructing the public improvement on Nall Avenue from 67<sup>th</sup> Street to 75<sup>th</sup> Street as heretofore described by performing the following work:

The street improvement of Nall Avenue from 67<sup>th</sup> Street to 75<sup>th</sup> Street including the repair of the asphalt pavement by applying ultrathin bonded asphalt surface to the existing streets, pavement markings, and other items incidental to the street reconstruction (hereinafter "Improvement").

### 2. ESTIMATED COST OF PROJECT.

- A. The estimated cost of construction for the Improvement covered by this Agreement, is One Hundred Eighty-five Thousand and 00/100 DOLLARS (\$185,000.00).
- B. The cost of making the Improvement shall include:
  - (1) Labor and material used in making the Improvement; and

- (2) Such other expenses which are necessary in making the Improvement, exclusive of the cost of acquiring real property and any improvement thereon for the location of the Improvement. These expenses include but are not limited to design, project administration, construction inspection, material testing and utility relocations.
- C. The local share of the cost for construction of said Improvement shall be distributed between the Parties as follows:
  - (1) PRAIRIE VILLAGE shall pay an estimated amount of One Hundred Sixteen Thousand Five Hundred Fifty and 00/100 Dollars (\$116,550.00) of the local share of said Improvement.
  - (2) OVERLAND PARK shall pay an estimated amount of Sixty-eight Thousand Four Hundred Fifty and 00/100 Dollars (\$68,450) of the local share of said Improvement.
  - (3) Each Party shall acquire and pay all costs associated with the right-of-way or easement acquisition for that portion of the project located within its respective boundary. Additionally, each Party shall pay the cost of financing and/or bonding its share of the project cost.
- 3. <u>FINANCING</u>. OVERLAND PARK and PRAIRIE VILLAGE shall each pay their portion of the cost with monies budgeted and appropriated funds.
- 4. OVERLAND PARK ADMINISTRATION OF PROJECT. It is acknowledged and understood between the Parties that since there are two separate entities included within the proposed Improvement, one of the entities should be designated as being "in charge" of the project to provide for its orderly design and construction. However, both entities shall have the right of review and comment on project decisions at any time throughout duration of this Agreement, and any subsequent agreements hereto. The Improvement shall be constructed and the job administered by OVERLAND PARK acting by and through the OVERLAND PARK Director of Public Works (hereinafter the "PW Director"), who shall be the principal public official designated to administer the Improvement; provided, that the PW Director shall, among his several duties and responsibilities, assume and perform the following:
  - A. Make all contracts for the Improvement, including the responsibility to solicit bids by publication in the official newspaper of OVERLAND PARK. In the solicitation of bids, the most favorable bid shall be determined by OVERLAND PARK administering the project and the Governing Body of OVERLAND PARK approving the lowest responsible bidder for the project, except that the Governing Body of PRAIRIE VILLAGE reserves the right to reject the successful bidder in the event that the bid price exceeds the engineer's estimate. If all bids exceed the estimated cost of the Improvement, then either OVERLAND PARK or PRAIRIE VILLAGE shall have the right to reject the bid. In such case, the project shall

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- rebid at a later date.
- B. Submit to PRAIRIE VILLAGE on or before the 10th day of each month, or as received, estimates of accrued costs of constructing the Improvement for the month immediately preceding the month the statement of costs is received; provided that PRAIRIE VILLAGE shall within thirty (30) days after receipt of a statement of costs as aforesaid, remit their portion of the accrued costs to OVERLAND PARK as herein agreed.
- C. Upon completion of the Improvement, the PW Director shall submit to PRAIRIE VILLAGE a final accounting of all costs incurred in making the Improvement for the purpose of apportioning the same among the Parties as provided herein.
- D. PRAIRIE VILLAGE shall be named as additional insured on all applicable certificates of insurance issued by the contractor (the "Contractor(s)") for this project.
- E. OVERLAND PARK shall require performance and completion bonds for the Improvement from all Contractors and require that all Contractors discharge and satisfy any mechanics or materialman's liens that may be filed.
- F. OVERLAND PARK shall require that any Contractor provide a two-year performance and maintenance bond for the Improvement. As Administrator, OVERLAND PARK will, upon request of PRAIRIE VILLAGE, make any claim upon the maintenance bond or performance bond and require that the Contractor fully perform all obligations under the performance and maintenance bonds, and this obligation shall survive the termination of this Agreement and shall be in force and effect for the full term of the performance and maintenance bond.
- G. OVERLAND PARK shall include in contracts for construction a requirement that the Contractor defend, indemnify and save OVERLAND PARK and PRAIRIE VILLAGE harmless from and against all liability for damages, costs, and expenses arising out of any claim, suit or action for injuries or damages sustained to persons or property by reason of the acts or omissions of the Contractor and the performance of his or her contract.
- 5. <u>DURATION AND TERMINATION OF AGREEMENT</u>. The Parties hereto agree that except for the obligations of OVERLAND PARK which may arise after completion of the Improvement as set forth in Paragraph 4 F, above, this Agreement shall exist until the completion of the aforesaid Improvement, which shall be deemed completed upon certification to each of the Parties hereto by the PW Director advising that the Improvement has been accepted by him as constructed; provided that upon the occurrence of such certification by the PW Director, this Agreement shall be deemed terminated and of no further force or effect.
- 6. <u>PLACING AGREEMENT IN FORCE</u>. The administering body described in Paragraph 4 hereof shall cause this Agreement to be executed in triplicate. Each Party hereto shall receive a duly executed copy of this Agreement for their official records.

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- 7. <u>AMENDMENTS.</u> This Agreement cannot be modified or changed by any verbal statement, promise or agreement, and no modification, change nor amendment shall be binding on the Parties unless it shall have been agreed to in writing and signed by both Parties.
- 8. <u>JURISDICTION.</u> This Agreement shall be construed according to the laws of the State of Kansas and may be enforced in any court of competent jurisdiction.

IN WITNESS WHEREOF, the above and foregoing Agreement has been executed in triplicate by each of the Parties hereto on the day and year first above written.

	CITY OF OVERLAND PARK, KANSAS
ATTEST:	ByCARL GERLACH, MAYOR
MARIAN COOK, CITY CLERK	
APPROVED AS TO FORM:	
TAMMY M. OWENS DEPUTY CITY ATTORNEY	CITY OF PRAIRIE VILLAGE, KANSAS
	By
ATTEST:	RON SHAFFER, MAYOR
JOYCE HAGEN MUNDY, CITY CLERK	
APPROVED AS TO FORM:	
CATHERINE P LOGAN CITY ATTORNEY	

# PUBLIC WORKS DEPARTMENT

Council Meeting Date: June 17, 2013

CONSENT AGENDA: CONSIDER INTERLOCAL AGREEMENTS WITH THE CITY OF OVERLAND PARK FOR STREET MAINTENANCE OVERLAYS ON STREETS SHARED WITH PRAIRIE VILLAGE

#### **RECOMMENDATIONS**

Move to approve the interlocal agreement with Overland Park for street maintenance overlays on Nall Avenue from 67<sup>th</sup> Street to 75<sup>th</sup> Street and to transfer \$116,550 from City Contingency to Project P5000.

Move to approve the interlocal agreement with Overland Park for street maintenance overlays on Lamar Avenue from 75<sup>th</sup> Street to 83<sup>rd</sup> Street and on 83<sup>rd</sup> Street from Nall Avenue to Lamar Avenue and to transfer \$43,110 from City Contingency to Project P5000.

#### **BACKGROUND**

This issue was brought to Council on January 7, 2013 and the maintenance work with Overland Park was approved along with the usage of City Contingency for this work. Overland Park changed their maintenance strategy on Nall Avenue to use a better product called UBAS instead of MicroSurfacing. Public Works is excited to use this product as it will last longer and be a good maintenance solution for Nall Avenue. Given that this product does cost more, the MicroSurface on 95<sup>th</sup> Street between Mission Road and Nall Avenue will be delayed to the future.

#### **FUNDING SOURCE**

The fund transfers from City Contingency to P5000.

#### **RELATION TO VILLAGE VISION**

TR1a. Ensure that infrastructure improvements meet the needs of all transportation users.

#### **ATTACHMENTS**

1. Interlocal Agreements with the Overland Park.

#### PREPARED BY

Keith Bredehoeft June 12, 2013

AGREEMENT BETWEEN THE CITY OF OVERLAND PARK, KANSAS, AND THE CITY OF PRAIRIE VILLAGE, KANSAS, FOR THE PUBLIC IMPROVEMENTS OF LAMAR AVENUE FROM  $75^{\rm TH}$  STREET TO  $83^{\rm RD}$  STREET AND  $83^{\rm RD}$  STREET FROM LAMAR AVENUE TO NALL AVENUE.

#### WITNESSETH:

WHEREAS, the Parties hereto have determined it is in their best interest to make the public improvements to Lamar Avenue from 75<sup>th</sup> Street to 83<sup>rd</sup> Street and 83<sup>rd</sup> Street from Lamar Avenue to Nall Avenue as such improvement is hereinafter described; and

WHEREAS, K.S.A. 12-2908 and K.S.A. 68-169 authorizes the Parties hereto to cooperate in making the public improvement; and

WHEREAS, the Governing Bodies of each of the Parties hereto have determined to enter into this Agreement for the aforesaid public improvement, as authorized and provided by K.S.A. 12-2908 and K.S.A. 68-169; and

WHEREAS, the Governing Body of OVERLAND PARK did approve and authorize its mayor to execute this Agreement by official vote of the Body on the \_\_\_\_\_ day of \_\_\_\_\_\_\_, 2013.

NOW, THEREFORE, in consideration of the above recitals, the mutual covenants and agreements herein contained, and for other good and valuable considerations, the Parties hereto agree as follows:

1. <u>PURPOSE OF AGREEMENT</u>. The Parties hereto enter into this Agreement for the purpose of constructing the public improvements on Lamar Avenue from 75<sup>th</sup> Street to 83<sup>rd</sup> Street and 83<sup>rd</sup> Street from Lamar Avenue to Nall Avenue as heretofore described by performing the following work:

The street improvements of Lamar Avenue from 75<sup>th</sup> Street to 83<sup>rd</sup> Street and 83<sup>rd</sup> Street from Lamar Avenue to Nall Avenue include chip sealing the existing streets and repair of asphalt pavement, pavement markings, and other items incidental to the street reconstruction (hereinafter "Improvement").

#### 2. ESTIMATED COST OF PROJECT.

- A. The estimated cost of construction for the Improvement covered by this Agreement, is Sixty-eight Thousand Three Hundred and 00/100 DOLLARS (\$68,300.00).
- B. The cost of making the Improvement shall include:
  - (1) Labor and material used in making the Improvement; and

- (2) Such other expenses which are necessary in making the Improvement, exclusive of the cost of acquiring real property and any improvement thereon for the location of the Improvement. These expenses include but are not limited to design, project administration, construction inspection, material testing and utility relocations.
- C. The local share of the cost for construction of said Improvement shall be distributed between the Parties as follows:
  - (1) PRAIRIE VILLAGE shall pay an estimated amount of Forty-three Thousand One Hundred Ten and 00/100 Dollars (\$43,110.00) of the local share of said Improvement.
  - (2) OVERLAND PARK shall pay an estimated amount of Twenty-five Thousand One Hundred Ninety and 00/100 Dollars (\$25,190.00) of the local share of said Improvement.
  - (3) Each Party shall acquire and pay all costs associated with the right-of-way or easement acquisition for that portion of the project located within its respective boundary. Additionally, each Party shall pay the cost of financing and/or bonding its share of the project cost.
- 3. <u>FINANCING</u>. OVERLAND PARK and PRAIRIE VILLAGE shall each pay their portion of the cost with monies budgeted and appropriated funds.
- 4. OVERLAND PARK ADMINISTRATION OF PROJECT. It is acknowledged and understood between the Parties that since there are two separate entities included within the proposed Improvement, one of the entities should be designated as being "in charge" of the project to provide for its orderly design and construction. However, both entities shall have the right of review and comment on project decisions at any time throughout duration of this Agreement, and any subsequent agreements hereto. The Improvement shall be constructed and the job administered by OVERLAND PARK acting by and through the OVERLAND PARK Director of Public Works (hereinafter the "PW Director"), who shall be the principal public official designated to administer the Improvement; provided, that the PW Director shall, among his several duties and responsibilities, assume and perform the following:
  - A. Make all contracts for the Improvement, including the responsibility to solicit bids by publication in the official newspaper of OVERLAND PARK. In the solicitation of bids, the most favorable bid shall be determined by OVERLAND PARK administering the project and the Governing Body of OVERLAND PARK approving the lowest responsible bidder for the project, except that the Governing Body of PRAIRIE VILLAGE reserves the right to reject the successful bidder in the event that the bid price exceeds the engineer's estimate. If all bids exceed the estimated cost of the Improvement, then either OVERLAND PARK or

- PRAIRIE VILLAGE shall have the right to reject the bid. In such case, the project shall rebid at a later date.
- B. Submit to PRAIRIE VILLAGE on or before the 10th day of each month, or as received, estimates of accrued costs of constructing the Improvement for the month immediately preceding the month the statement of costs is received; provided that PRAIRIE VILLAGE shall within thirty (30) days after receipt of a statement of costs as aforesaid, remit their portion of the accrued costs to OVERLAND PARK as herein agreed.
- C. Upon completion of the Improvement, the PW Director shall submit to PRAIRIE VILLAGE a final accounting of all costs incurred in making the Improvement for the purpose of apportioning the same among the Parties as provided herein.
- D. PRAIRIE VILLAGE shall be named as additional insured on all applicable certificates of insurance issued by the contractor (the "Contractor(s)") for this project.
- E. OVERLAND PARK shall require performance and completion bonds for the Improvement from all Contractors and require that all Contractors discharge and satisfy any mechanics or materialman's liens that may be filed.
- F. OVERLAND PARK shall require that any Contractor provide a two-year performance and maintenance bond for the Improvement. As Administrator, OVERLAND PARK will, upon request of PRAIRIE VILLAGE, make any claim upon the maintenance bond or performance bond and require that the Contractor fully perform all obligations under the performance and maintenance bonds, and this obligation shall survive the termination of this Agreement and shall be in force and effect for the full term of the performance and maintenance bond.
- G. OVERLAND PARK shall include in contracts for construction a requirement that the Contractor defend, indemnify and save OVERLAND PARK and PRAIRIE VILLAGE harmless from and against all liability for damages, costs, and expenses arising out of any claim, suit or action for injuries or damages sustained to persons or property by reason of the acts or omissions of the Contractor and the performance of his or her contract.
- 5. <u>DURATION AND TERMINATION OF AGREEMENT</u>. The Parties hereto agree that except for the obligations of OVERLAND PARK which may arise after completion of the Improvement as set forth in Paragraph 4 F, above, this Agreement shall exist until the completion of the aforesaid Improvement, which shall be deemed completed upon certification to each of the Parties hereto by the PW Director advising that the Improvement has been accepted by him as constructed; provided that upon the occurrence of such certification by the PW Director, this Agreement shall be deemed terminated and of no further force or effect.
- 6. <u>PLACING AGREEMENT IN FORCE</u>. The administering body described in Paragraph 4 hereof shall cause this Agreement to be executed in triplicate. Each Party hereto shall receive a duly

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- executed copy of this Agreement for their official records.
- 7. <u>AMENDMENTS.</u> This Agreement cannot be modified or changed by any verbal statement, promise or agreement, and no modification, change nor amendment shall be binding on the Parties unless it shall have been agreed to in writing and signed by both Parties.
- 8. <u>JURISDICTION</u>. This Agreement shall be construed according to the laws of the State of Kansas and may be enforced in any court of competent jurisdiction.

IN WITNESS WHEREOF, the above and foregoing Agreement has been executed in triplicate by each of the Parties hereto on the day and year first above written.

CITY OF OVERLAND PARK, KANSAS

CARL GERLACH, MAYOR ATTEST: MARIAN COOK, CITY CLERK APPROVED AS TO FORM: TAMMY M. OWENS **DEPUTY CITY ATTORNEY** CITY OF PRAIRIE VILLAGE, KANSAS RON SHAFFER, MAYOR ATTEST: JOYCE HAGEN MUNDY, CITY CLERK APPROVED AS TO FORM: CATHERINE P. LOGAN, CITY ATTORNEY

#### **ADMINISTRATION**



Council Meeting Date: June 17, 2013

Consent Agenda: Consider Renewal of Agreement with Automatic Data Processing, Inc. (ADP) for payroll, timekeeping, and HRIS services.

### SUGGESTED MOTION

Move that the Governing Body approve a contract with ADP for a term of thirty-six months expiring June 30, 2016 for HRIS, payroll, timekeeping, and other related services.

#### **BACKGROUND**

The City has used ADP for payroll, timekeeping, and HRIS services since 2007. The renewal is for a thirty-six month term and guarantees that the cost for services increases only 2% every twelve months. This agreement does not change the contractual agreement between the City and ADP entered into in 2007.

#### **FUNDING SOURCE**

General Fund - 2012 Expenses: \$34,100

### **ATTACHMENTS**

ADP Major Account Services Guaranteed Contract

#### **PUBLIC NOTICE**

Not applicable.

Prepared By:

Nicholas Sanders, PHR, IPMA-CP Human Resources Manager

Date: June 14, 2013



Date

# AUTOMATIC DATA PROCESSING, INC. MAJOR ACCOUNT SERVICES GUARANTEED THIRTY-SIX MONTH PRICE AGREEMENT

Client Informati	ion:						Co	ise Number:	247547	'32	
Client Name:		City of Prairi	ie Village KS			E	ffective Date:	6/30	0/2013		
Service Center		0069									
Parent Company	Code:	10 E9P				Exp	iration Date:	6/30	0/2016		
	Code.	Erinn Kilcul	len RS			LAP	nation Date.	0/30	7/2010		
Requested By:		Ellin Kilcul	ien KS								
Related Compan	y Codes:	8G E9P									
		8Y E9P									
Contact Informa	ation:										
Comuci Injormi											
Contact:				Phone:	-		Address:		7700 Missi	on Road	
City:	Prairie V	Village	State:	KS	Zip:	66208	•				
ADP, Inc. ("ADF	") is pleased to pro	ovide	City of Prair	ie Village I	("Client") wi	th a guaranteed	price agreeme	nt covering th	e Client's ADP se	rvices for	
the next	thirty-six	months, subject t	to the terms and o	conditions set	forth in this agreen	ent. This agree	ment encomp	asses all listed	codes and any fu	ture codes	
that may be adde	ed under the above	listed parent code	e. In consideration	on of the mutu	al agreeements set	orth below, AD	P and client a	gree as follow	rs:		
	1). Price Increase		For the next	thirty-six	month period com	mencing with th	ne effective da	te of	6/30/2013	, ADP will i	ncrease
nrices ner the sch	hedule below on Pa							-		,	
prices per ine ser	icanic below on 1	uy 1011, 12111, unu 1	in processing se	orrices provide	a to enem ( pervie	co ).					
			Increase Date		Increase %						
		-	6/30/2013	•	2.00						
			6/30/2014		2.00						
			6/30/2015		2.00						
	y excluded from the										
a renewal agreem	ent is signed by be	oth parties.									
	2). Guaranteed To	erm:	As consider	ation for the	thirty-six	month guarante	ed price perio	d, Client agre	es to purchase the	services for a	ı
minimum guaran	teed term of	thirty-six	months commend	cing with the e	ffective date, and the	nereafter. Client's	agreement to	purchase the	services shall rem	ain in effect	
	y Client or ADP w							•			
	3). Early Termina	ation Fee:	If client termi	nates this agre	ement to purchase	services prior to	the end of th	e minimum gu	aranteed term of n	o less than	
thirty-six	months, Client ag				three months				on an average		
of the last	three months								riod, standard tern	ination	
	ased on initial tem	-									
	enses incurred, inc										
	fee will be waived i										
service breach A	DP shall be notified	d in writing as to	the specific servi	ce issue and sh	all be granted sixt	y days to resolv	e all issues to	the client's sa	atisfaction.		
THE ADP SERV	ICES COVERED E	RY THIS AGREEN	MENT ARE PRO	VIDED IN ACC	CORDANCE WITE	THE TERMS A	ND CONDIT	IONS SET FO	RTH IN		
	NT(S) BETWEEN O										
SUPERCEDE A	NY OF THOSE TER	RMS AND COND	ITIONS. THIS A	GREEMENT I	IS NOT VALID U	NLESS SIGNED	BY BOTH F	ARTIES.			
	4.00	D D					City	CDi-i- Vill	VC		
	ADI	P Representative					Cuy a	f Prairie Villa	ige AJ		
Signature:						Signature:					
				•		-				•	
Name:	Stephanie Garcia			•		Name:					
Title:	Manager-Client Re	elationship				Title:					
		1				-					

Date:



# AUTOMATIC DATA PROCESSING, INC. MAJOR ACCOUNT SERVICES GUARANTEED W2 ADDENDUM PRICE AGREEMENT

Client Information:					C	ase Number:	2	4754732	
Client Name:	City of F	rairie Village K	S	E	Effective Date:	6/30	/2013		
Service Center	0069			-				,	
Parent Company Code:	10 E9	P		Exp	piration Date:	6/30	/2016		
Related Company Codes:	N/A	8G E9P							
		8Y E9P							

	Mininum	Each	_	Fiscal Year
	\$75.00	\$6.55	Rates for Year End	2014
	\$75.00	\$6.55	Rates for Year End	2015
	\$75.00	\$6.55	Rates for Year End	2016
ı			Rates for Year End	
ı			Rates for Year End	

	ADP Representative		City of Prairie Village KS			
Signature:		Signature:				
Name:	Stephanie Garcia	Name:				
Title:	Manager-Client Relationship	Title:				
Date		Date:				

# PUBLIC WORKS DEPARTMENT

Council Committee Meeting Date: June 17, 2013 Council Meeting Date: June 17, 2013

### \*COU2013-22: CONSIDER 2014-2018 CARS APPLICATION

#### RECOMMENDATION

Staff recommends the City Council approve the 2014-2018 County Assistance Roads System(CARS) program.

### **BACKGROUND**

In order to receive CARS funds, the City must annually submit an application containing a list of streets and the estimated costs. The following streets are recommended for the five-year CARS program, 2014-2018. The Public Works Department compiled the list based on the pavement condition. The work will include where necessary full depth pavement repair, curb and gutter replacement, sidewalk repair, new sidewalk and milling/overlaying the pavement.

Program Year	Street Segment	From	То	CARS Eligible Costs	County CARS Funds
2014 *	Somerset Dr	Stateline Rd	Belinder Ave	\$938,000	\$469,000
2015	Roe Avenue	75th Street	83rd Street	\$1,166,000	\$583,000
2010	7101140	Otroot	Olicot	Ψ1,100,000	Ψ000,000
	_	00.1	07.1		
2016	Roe Avenue	63rd Street	67th Street	\$882,000	\$441,000
	Roe	67 <sup>th</sup>	71 <sup>St</sup>		
2017	Avenue	Street	Street	\$888,000	\$444,000
2018	Roe Avenue	71 Street	75 <sup>th</sup> Street	\$664,000	\$332,000

Joint project with the City of Leawood

It should be noted that the City submits an application annually and can revise future year requests. The costs include construction and construction administration. Design costs are not included, as the CARS program does not fund design.

#### **FUNDING SOURCE**

Funding is planned for the 2014 Project on Somerset Drive and is included in the CIP. Future year's projects will be funded with each year's budget.

#### **RELATION TO VILLAGE VISION**

- CC1. Attractive Environment
  - CC1a. Make streetscape improvements to enhance pedestrian safety and attractiveness of the public realm.
- CFS3. Streets and Sidewalks
  - CFS3a. Ensure streets and sidewalks are in good condition by conducting maintenance and repairs as needed.
- TR1. Bike and Pedestrian Friendly
  - TR1a. Provide sidewalks in new and existing areas to allow for continuous pedestrian movement around Prairie Village.
  - TR1b. Ensure that infrastructure improvements meet the needs of all transportation users.

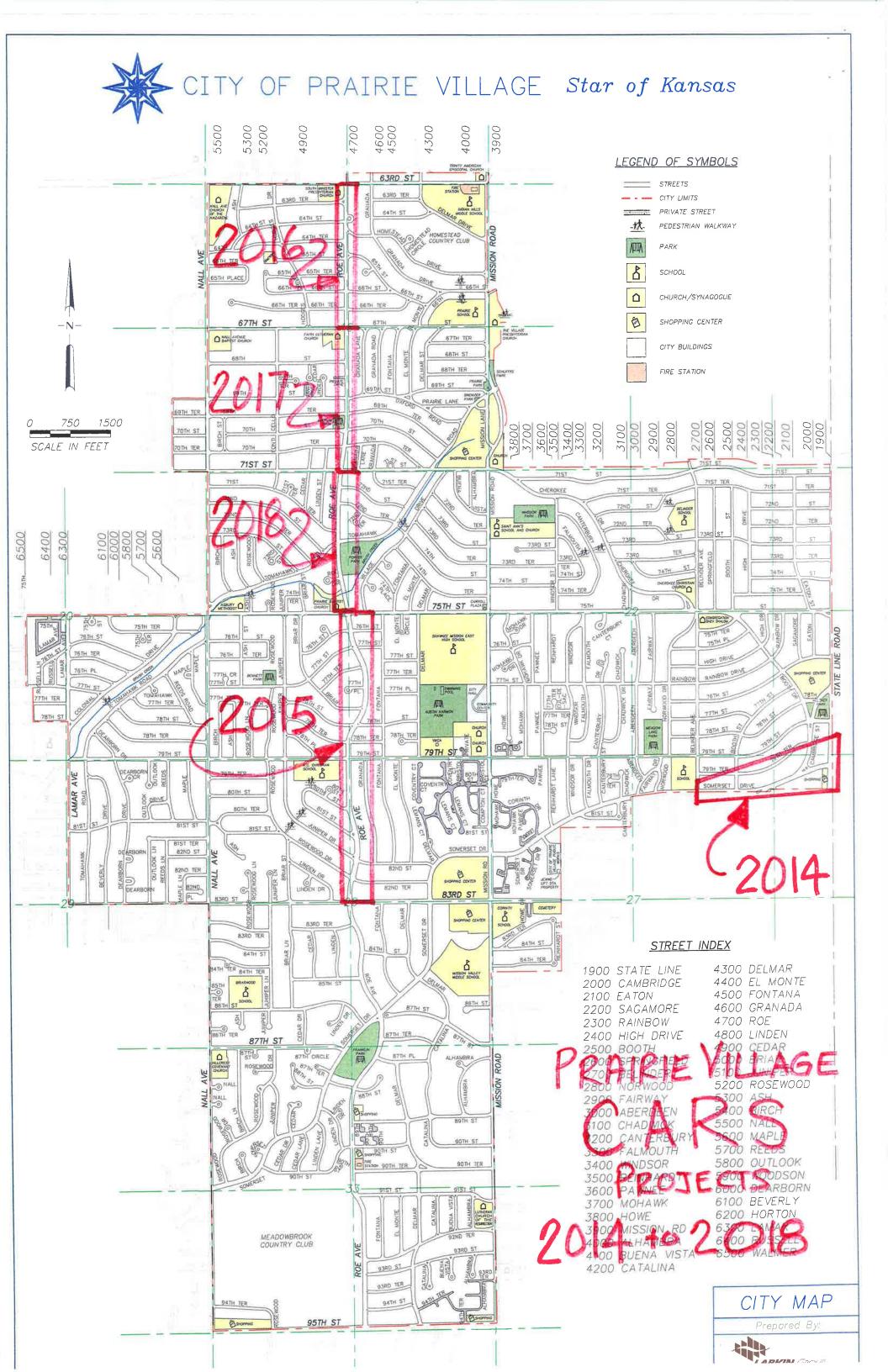
#### **ATTACHMENTS**

Map of Project Locations

#### PREPARED BY

Keith Bredehoeft, Project Manager

June 12, 2013





### ADMINISTRATION DEPARTMENT

City Council Meeting Date: June 17, 2013

## Committee Report: Nomination of Santa Fe Trail remnant to National Register

#### RECOMMENDATION

The Parks & Recreation Committee recommends that the City Council object to the Kansas Historical Society nomination of the Santa Fe Trail Remnant in Santa Fe Trail Park for the Register of Historic Kansas Places and the National Register of Historic Places.

#### **BACKGROUND**

The City received a letter from the Kansas Historical Society (KSHS) stating that they believe the Santa Fe Trail remnant in Santa Fe Trail Park is eligible to be one of the 15 sites nominated to be listed on the National Register. KSHS needs written consent to nominate the property; nomination will not be pursued if the property owner objects. KSHS has requested a response by **August 27, 2013**.

At the time of the May 8, 2013 Parks and Recreation Committee meeting, the Kansas Preservation Act required any project within 500' of the protected property to be reviewed by the State Historic Preservation Officer (SHPO) to determine if the project would have an impact on the environs of the property. This would include Harmon and Santa Fe Trail Parks, the Pool Complex, municipal buildings, and other property owners in the area. However, during the most recent legislative session, House Bill 2249, eliminating the environs review component of the state preservation law, was passed and signed. The law goes into effect July 1, 2013.

#### DISCUSSION

Electing not to pursue nomination at this time does not prevent the site from being nominated for the National Register in the future. The Kansas Historic Sites Board of Review will still determine the eligibility of the site. If the site is determined to eligible by the KSHS and the Keeper of the National Register and the City should wish to nominate the site in the future, all that is needed is a written request to the KSHS.

Staff plans to take this back to the Parks & Recreation Committee when they meet again on September 11, 2013 to see if the elimination of the environs component changes their recommendation.

#### PREPARED BY

Danielle Dulin Asst. to the City Administrator 6/12/2013



6425 SW 6<sup>th</sup> Avenue Topeka KS 66615 phone: 785-272-8681 fax: 785-272-8682 survey@kshs.org

Sam Brownback, Governor Jennie Chinn, Executive Director

11 February 2013

Mr. Chris Engel City of Prairie Village 7700 Mission Rd. Prairie Village, KS 66208

RE: Oregon-California-Santa Fe Trail Remnant in Austin Harmon Park

Dear Mr. Engel,

As you may be aware, the Kansas Historical Society (KSHS) is in the process of documenting the remnant of the Oregon-California-Santa Fe trails that is currently in Harmon Park. The KSHS has partnered with the National Trails System of the National Park Service to nominate at least 15 sites related to the Oregon & California trails to the National Register, and we believe this site is eligible for listing as one of these 15 sites.

KSHS staff is currently preparing the written nomination with the guidance of the National Park Service. Before we recommend this property for nomination to the National Register, we need written consent.

### What is the National Register?

The National Register of Historic Places is the federal government's official list of historic properties worthy of preservation. Listing in the National Register provides recognition and assists in preserving our nation's heritage. Listing in the National Register does not mean that limitations will be placed on the property by the federal government. Public visitation rights are not required of owners. The federal government will not attach restrictive covenants to the property or seek to acquire them. Properties approved for nomination to the National Register by the Kansas Historic Sites Board of Review are automatically listed in the Register of Historic Kansas Places.

Listing of this property provides recognition of the community's historic importance and assures protective review of federal projects that might adversely affect the character of the historic property. This property will also be protected under the Kansas Historic Preservation Act (K.S.A. 75-2715 through 75-2725). For more information on state and federal protection, please visit our website, kshs.org/shpo.

### The Next Steps

If the city **does not object** to the nomination of this property, please read, fill-in, sign the form provided, and return it to me for our files by **August 27, 2013**, if possible. KSHS staff will present

the nomination to the Kansas Historic Sites Board of Review for consideration. This board, which meets quarterly, is appointed by the Governor to make recommendations on the nomination of properties to the registers.

If the Board and the State Historic Preservation Officer (Jennie Chinn) approve the nomination, the property will be listed in the Register of Historic Kansas Places following the meeting.

The nomination then will be forwarded to the staff of the National Register of Historic Places for their consideration. You will receive notification from the KSHS when your property is officially entered in the National Register.

We presented nominations of two Trail sites (Scott Spring & Alcove Spring, boundary expansion) to the Board at their February 9, 2013 meeting, and both were approved. We have also successfully presented 17 nominations related to the Santa Fe Trail in recent months.

If the city **does object** to the nomination of this property, please mark the appropriate box on the enclosed form, sign, date, and return the <u>notarized objection</u> to me. KSHS will present the nomination to the Kansas Historic Sites Board of Review for consideration of eligibility only.

If the Board and the State Historic Preservation Officer determine the property is eligible for listing in the National Register, KSHS staff will submit their determination to the Keeper of the National Register for their concurrence. Should the city or a subsequent owner of the property wish to nominate the site to the register in the future, a written request to our office is all that will be needed.

I have enclosed a brochure about the trails project (also available on-line at kshs.org/trails), in case you need more information about the project.

Please call me with any question or concerns,

Amanda Loughlin Trails Project Coordinator Survey Coordinator encl: 2

cc: Duane Iles, Oregon-California Trails Association President Joanne VanCoevern, Santa Fe Trail Association Manager



6425 SW 6<sup>th</sup> Avenue Topeka KS 66615 phone: 785-272-8681 fax: 785-272-8682 survey@kshs.org

	Sam Brownback, Governor Jennie Chinn, Executive Director
Date:	_
Owner(s):	PLEASE PRINT
Owner(s) Address:	STREET ADDRESS, CITY, STATE, ZIP CODE
As the owner(s) of	NAME OF PROPERTY, CITY (VICINITY), COUNTY
<ul> <li>the proposed boundaring Sites Board of Review</li> <li>I (we) have the right to including the address/of</li> <li>No provision of the Kathe agricultural use of</li> <li>I (we) am (are) not required.</li> <li>I (we) retain full owner</li> </ul>	oportunity to review and comment on the written nomination and es of the nominated property before it is presented to the Historic; or restrict from public view any documentation about this property,
	not object or b) do object* to my (our) property being Historic Kansas Places and the National Register of Historic Places anta Fe Trail.
	OWNER SIGNATURE(S)
I (we) request the documentat	ion of my (our) property to be restricted from public view:
* If objecting, please have this	s form notarized.



# ADMINISTRATION DEPARTMENT

City Council Meeting: June 17, 2013

Committee Report: Prairie Park lease addendum

#### **RECOMMENDATION**

The Parks & Recreation Committee recommends that City Council approved the proposed Prairie Park lease addendum with Johnson County Parks and Recreation District (JCPRD).

#### **BACKGROUND**

JCPRD has contacted the City about an addendum to the current Prairie Park lease agreement to include language that states JCPRD will deed the Prairie Park property to the City of Prairie Village for one dollar (\$1) once they are finished paying off the debt they incurred to purchase the property in 2028. The City could only use the property for park and recreational purposes or else the property would revert back to JCPRD ownership.

#### DISCUSSION

Under the current lease agreement, the City already assumes all obligations, financial and otherwise, in regards to the Prairie Park property; therefore, there is no impact on the operating budget associated with acquiring the land.

#### **ATTACHMENTS**

Proposed Prairie Park lease addendum

### PREPARED BY

Danielle Dulin Asst. to the City Administrator 6/13/2013

# ADDENDUM TO THE JOHNSON COUNTY PARK AND RECREATION DISTRICT PARK LEASE AGREEMENT WITH THE CITY OF PRAIRIE VILLAGE

THIS AGREEMENT ADDENDUM is made and executed on this \_\_\_\_ day of \_\_\_\_\_, 2013, by and between the JOHNSON COUNTY PARK AND RECREATION DISTRICT (hereinafter "JCPRD") and the CITY OF PRAIRIE VILLAGE, KANSAS (hereinafter "City"), a municipal corporation.

**WHEREAS**, the parties entered into a Park Lease Agreement on February 9, 2004, a copy of said Lease Agreement being attached hereto and fully incorporated herein as Exhibit A; and

**WHEREAS**, a Subordination Agreement was entered into between the parties dated April 21, 2004; and

WHEREAS, the Lease Agreement provides that JCPRD agreed to let, lease and rent to the City certain real estate as described in said Lease Agreement for the term of twenty-five (25) years to commence on or about the 1<sup>st</sup> day of January, 2006. The Lease Agreement further provides that it was the general intent of the parties that at the end of the initial twenty-five (25) year term, JCPRD and the City may renew or extend the Lease Agreement; and

WHEREAS, JCPRD, pursuant K.S.A. 19-2868(i), is authorized through proper conveyance, to exchange, transfer, sell or lease real estate to a political subdivision of the State of Kansas so long as said property can properly be maintained and operated as a park, playground, or recreational facilities by said governmental agency, or that said property may be utilized in whole or in part in a contract with said governmental agency in, on, or around other property of the City of Prairie Village; and

**WHEREAS**, the City acknowledges and confirms that said property would be used in perpetuity for purposes of a public park and City shall place a sign on the property signifying the property was acquired by the JCPRD; and

WHEREAS, JCPRD and the City both acknowledge that the subject real estate is presently collateralized as security for obligations that JCPRD entered into as formalized with a Ground Lease dated December 1, 2003, with Security Bank of Kansas City in its capacity as trustee for the purchasers of certain certificates of participation and a Lease/Purchase Agreement dated December 1, 2003, also with Security Bank of Kansas City; and

WHEREAS, for the sum of One Dollar (\$1.00) and other valuable considerations, JCPRD and the City agree that upon payment in full of the certificates of participation and release of the Ground Lease dated December 1, 2003, and the Lease/Purchase Agreement dated December 1, 2003, that the property as reflected in Exhibit A of the Lease Agreement shall be transferred and conveyed to the City, conditional that said property shall be used only for park and recreational purposes or else title shall revert to JCPRD.

**NOW, THEREFORE**, the original Lease Agreement shall remain in full force and effect subject only to this modification and addendum and all other remaining portions of the Lease Agreement shall remain in full force and effect.

**IN WITNESS WHEREOF**, JCPRD and the City by majority vote of the governing bodies of each have directed the parties authorized to sign and execute this Lease Addendum.

# BOARD OF COMMISSIONERS JOHNSON COUNTY PARK AND RECREATION DISTRICT

	By:Board Chair
	Board Chair
ATTEST:	
Secretary	
APPROVED AS TO FORM:	
Ernest C. Ballweg, Attorney for District	
	CITY OF PRAIRIE VILLAGE, KANSAS
	By:
ATTEST:	
City Clerk	
APPROVED AS TO FORM:	
City Attorney	
City Attorney City of Prairie Village, Kansas	

# MAYOR'S ANNOUNCEMENTS

June 17, 2013

# Committee meetings scheduled for the next two weeks include:

Board of Code Appeals	06/18/2013	6:00 p.m.
Prairie Village Arts Council	06/19/2013	7:00 p.m.
Environmental/Recycle Committee	06/26/2013	7:00 p.m.
VillageFest Committee	06/27/2013	7:00 p.m.
Council Committee of the Whole	07/01/2013	6:00 p.m.
City Council	07/01/2013	7:30 p.m.

\_\_\_\_\_

The Prairie Village Arts Council is pleased to announce an oil painting exhibit by Susan Tower in the R.G. Endres Gallery for the month of June.

Recreation memberships are on sale in the City Clerk's Office. The next Moonlight Swim will be Friday, July 5, with the pool complex remaining open until 10 p.m.

VillageFest is Thursday, July 4. All Prairie Village residents swim free at the Prairie Village pool from 12:00 - 6:00 p.m.

The City offices will be closed on Thursday, July 4, in observance of Independence Day. Deffenbaugh also observes this holiday so trash pick-up will be delayed one day.

# **INFORMATIONAL ITEMS** June 17, 2013

- 1. Planning Commission Minutes May 7, 2013
- JazzFest Committee Minutes May 8, 2013
   Council Committee of the Whole Minutes June 3, 2013
- 4. Tree Board June 5, 2013
- 5. Mark Your Calendars

# PLANNING COMMISSION MINUTES May 7, 2013

#### **ROLL CALL**

The Planning Commission of the City of Prairie Village met in regular session on Tuesday, May 7, 2013, in the fellowship hall of The Village Presbyterian Church at 6641 Mission Road. Chairman Ken Vaughn called the meeting to order at 7:00 p.m. with the following members present: Bob Lindeblad, Randy Kronblad, Dirk Schafer, Nancy Wallerstein, Gregory Wolf and Nancy Vennard.

The following persons were present in their advisory capacity to the Planning Commission: Ron Williamson, City Planning Consultant; Dennis Enslinger, Assistant City Administrator; Jim Brown, Building Official, Keith Bredehoeft, Interim Public Works Director, Andrew Wang, Council Liaison and Joyce Hagen Mundy, City Clerk/Planning Commission Secretary.

#### **APPROVAL OF MINUTES**

Nancy Vennard noted on pages 2 & 5 the reference to review of **site** plan criteria was incorrectly typed as "sign". Gregory Wolf moved the minutes of the April 2, 2013 be approved as corrected. The motion was seconded by Randy Kronblad and passed unanimously.

# NON-PUBLIC HEARINGS PC2013-112 Site Plan Approval - Building Height Elevation 9109 Fontana

Dan Quigley, 11106 West 146<sup>th</sup> Terrace, stated he originally requested a three foot building elevation increase but has made modifications to his plans and is currently requesting a 2-foot increase in elevation. He acknowledged the concerns expressed by neighbors to this change noting there has only been one new home constructed in the neighborhood in the past 20 years. He showed pictures of the homes in the neighborhood, noting the varied heights and styles of the homes. Mr. Quigley grew up in this area and would now like to move his family to the neighborhood. He is an experienced home builder the other homes he has constructed.

The City code allows new residential structures or additions to raise the first floor elevations six inches for every additional five feet over the minimum side yard setback that the building sets back from both side property lines. This allows him an increase of 6".

Mr. Quigley showed pictures indicating the foundation issues of the existing home relative to the curb. The current home has a 7 foot deep basement; whereas the common basement depth today is 9 feet. Mr. Quigley reviewed the side yard setbacks and elevations of the adjacent properties. He will be building at a higher elevation to get drainage away from the house. He wants to maintain a walkout and

to do so will be constructing a small retaining wall and keep the existing side entrance orientation for the garage.

Nancy Vennard noted the roofline of the existing house appears to be considerably lower than the others and how the new roofline would compare. Mr. Quigley responded it would be 7 to 10 feet above the adjacent property.

Gregory Wolf asked if the applicant accepts the staff recommendation. Mr. Quigley responded he desires a net increase of two feet.

Dennis Enslinger reviewed the following staff report:

The applicant is requesting a first floor elevation change of 2 feet and has submitted a site plan that shows how the change would be accommodated. The existing house was built in 1963 and has the typical low basement ceilings that were built at that time. The applicant would like to increase the ceiling height in the basement, provide a walk-out basement and provide a more positive slope to the street.

The existing house (965.0) is slightly lower than the street (965.7) and the first floor elevation is 5 feet lower than the house to the north (970.3) and 4 feet higher than the house to the south (961.1). The ground slopes from north to the south and west to east.

The applicant held a neighborhood meeting with ten area residents in attendance. A number of concerns were discussed including the height of the new first floor. The property owner to the immediate south is still concerned with the requested elevation change. The property owner to the south has provided written comment of his concerns. The applicant has secured approval from the Kenilworth Homes Association to construct the dwelling as proposed. However, Mr. Enslinger noted the deed restrictions address the width and lot coverage of the structure, not the building elevation.

In evaluating an application for an elevation change, the Planning Commission reviews the following criterion:

# That there are special circumstances or conditions affecting the property;

The land in this area is hilly with significant elevation changes. There are a number of types of housing the neighborhood including ranch, split levels, walk-outs and two story structures. The existing residence and the residence to the immediate north are similar in nature and are reverse 1.5 stories with a walk-out in the rear. The house to the immediate south is a ranch. The applicant is proposing to construct a reverse ranch on the site.

A 2-foot elevation change will be noticeable based on the existing conditions. The houses on this side of the block conform to the topography of the street by progressively cascading down with each house. The proposed construction would interrupt this pattern. The new residence would be approximately 1-2 feet higher than the house to the north.

# 2. That the elevation change is necessary for reasonable and acceptable development of the property in question;

In today's market, taller ceilings are highly desirable and they make basement space more livable. When opportunities occur for properties to be rebuilt, a reasonable effort should be made to allow the new building to meet current market demands, provided that it is compatible with the neighborhood. Current zoning code provisions would allow the applicant to raise the finished floor elevation 6 inches based upon the proposed side-yard setbacks. The applicant could also gain additional ceiling height in the basement by either modifying the design to provide additional setback or provide a retaining wall in the rear of the property allow for the walk-out.

Increasing the finish floor elevation by only 6 inches does not allow the applicant to achieve positive water flow to the street. Street grade is at 965.7 and a 6 inches elevation change would only place the finished floor elevation at 965.5. Additional height would be required to address this issue.

# That the granting of the building elevation change will not be detrimental to the public welfare or injurious to, or adversely affect, adjacent property or other property in the vicinity in which the particular property is situated.

The proposed house will maintain the same front yard setback as the existing house. However, the side yard setbacks and rear yard setback will be reduced from the existing conditions. The front yard, side yard, and rear yard setbacks exceed the requirements of the zoning ordinance.

Staff does not recommend granting an increase of 3 feet based on its impacts on the adjacent property and in relationship to the existing streetscape. The terrain is hilly in this area and a more reasonable elevation change with proper foundation landscaping, would not adversely affect the public welfare or be injurious to property in the immediate area.

While staff does not have a specific recommendation on an acceptable waiver, staff believes that a 1-1.5 feet waiver is more acceptable. If the Planning Commission considers approval of the applicants request staff recommends the following conditions:

- 1. Submission for staff approval of a foundation landscaping plan to minimize the visual impact of the elevation change;
- 2. Approval of a Drainage Permit from the Public Works Department;
- 3. The applicant provide a letter from the Kenilworth Homes Association indicating that it has approved the proposed project; and
- 4. The applicant provides a survey document showing the height of the finished floor at (TBD) as part of the building inspection process.

Nancy Vennard noted residents are generally concerned the elevation height relative to the neighboring properties and is concerned with the proposed pitch of the roof. Mr. Quigley responded that he could reduce the pitch of the roof and gain two to three feet from the maximum height

Bob Lindeblad disagreed with Mrs. Vennard regarding the height and stated he views the entry and door height as the driving concern and feels the proposed building will have an adverse affect on the property to the south. The street front is a big picture concern even with the reduced 2 foot increase. Ken Vaughn and Randy Kronblad share Mr. Lindeblad concerns particularly with the grade difference to the south.

Dennis Enslinger noted that if the house was moved to the north, Mr. Quigley could meet the code provisions. Another option for him would be to change the walkout.

Dirk Schafer asked the applicant if he was willing to move the house to the north. Mr. Quigley responded he would be willing to give up the turnaround if he could raise the elevation 2 feet or an elevation increase of 1.5' in the location shown on the second plan submitted.

Mr. Vaughn asked if it creates issues for staff at the 1.5' elevation. Mr. Enslinger stated he would be more comfortable with a one foot elevation, but noted lowering the roofline will help for the properties to the north and south and landscaping can mitigate the foundation.

Gregory Wolf asked how much the roof could be lowered. Mr. Quigley responded two to three feet.

Dirk Schafer moved the Planning Commission approve PC2013-112 granting a building height elevation increase of 1.5' with the house to be located in location shown in the revised plan and subject to the following conditions:

- 1. Submission for staff approval of a foundation landscaping plan to minimize the visual impact of the elevation change;
- 2. Approval of a drainage Permit from the Public Works Department
- 3. The applicant provide a letter from Kenilworth Homes Association indicating that it has approved the proposed project;
- 4. The applicant provide a survey document showing the height of the finished floor at 1.5' as part of the building inspection process and
- 5. That the pitch of the roof be reduced to achieve a three to four foot decrease in total roof height.

The motion was seconded by Nancy Wallerstein and approved by a vote of 6 to 1 with Bob Lindeblad voting in opposition.

Chairman Ken Vaughn asked the public to be respectful of the applicants appearing before the Planning Commission and of the Commission. The Commission has a large agenda to complete this evening and it would be helpful if the public would remain quiet during presentations, not applaud speakers or hold up signs during presentations.

# PC2013-113 Approval of Sign Standards for Prairie Village Shopping Center NW Corner 71<sup>st</sup> & Mission Road

Kylie Stock, with LegaC Properties, LLC at 3955 West 83<sup>rd</sup> Street, stated she has been working with City Planning Staff in the development of the Tenant Sign Criteria for the Prairie Village Shopping Center. She has reviewed the staff comments on the

proposed standards and accepts the staff recommendation and related conditions of approval.

Ron Williamson stated it was anticipated that the sign standards would be more similar in format to what was approved for Corinth Square. Prairie Village Shopping Center is designed differently than Corinth Square and the building facades are not being changed so the standards are an update of the existing standards. There are several anchor tenants. Most of the signage will be within sign bands, however, there are several towers throughout the Center that have signage. Staff has reviewed several situations of the proposed sign standards with the applicant and has resolved most of the items. There are a few items that were not readily available and will be supplied at a later date.

The words "Drive Thru" are shown on the wall sign for Starbucks. That is not a part of their legal name and will need to be removed.

Dirk Schafer asked if the event sign at 71<sup>st</sup> & Mission Road would be permanently removed. Ms Stock responded the tenants want to have the ability to use that for promotion of center events and it will be incorporated into the sign standards.

Gregory Wolf moved the Planning Commission approved PC2013-113 approving the Sign Standards for Prairie Village Shopping Center subject to the following conditions:

- 1) That applicant provides the details for the U.S. Bank signs.
- 2) That the applicant provides the square footage for the proposed Hen House sign.
- 3) Remove the words "Drive Thru" from the wall sign for Starbucks.
- 4) Revise the sign standards (text and graphics) with conditions approved by the Planning Commission and submit to Staff for review and approval.
- 5) Remove the event sign at 71<sup>st</sup> and Mission Road or incorporate it into the Sign Standards.

The motion was seconded by Randy Kronblad and passed unanimously.

# PC2013-115 Approval of Final Plat 5250 West 94<sup>th</sup> Terrace

John Petersen with Polsinelli Shughart at 6201 College Blvd, representing GDG, LLC stated the applicant will own the entire building and manage is as a single unit. The condominium association will be dissolved. The proposed final plat will eliminate the 28 condominium lots and be platted as one lot. The staff comments have been reviewed and are accepted by the applicant.

Ron Williamson noted the office building is currently platted as an office condominium with 28 individual units and 12 owners. The property is zoned CP-1 Planned Restricted Business District, but the plan designates all the parcels on the north side of 94<sup>th</sup> Terrace as offices. This lot is part of Meadowbrook Center which is a large development on the northeast corner of 95<sup>th</sup> Street and Nall Avenue. The building was built in 1982.

The applicant will own the entire building and manage it as a single unit. The condominium association will be dissolved. The proposed final plat will eliminate the 28 condominium lots and be platted as one lot. Since the area is developed and a preliminary plat was submitted when the area was originally platted, a preliminary plat was not required.

A survey and title opinion showing the easements and other encumbrances on the property has been submitted. All parties having a final interest in the development need to sign the plat which includes mortgagors.

All taxes due and payable must be paid and a copy of the tax receipt submitted to the City. The signatures section for the Governing Body needs to delete the word "Approved" and be replaced with "Easements and Rights-of-Way Accepted."

Gregory Wolf moved the Planning Commission approve the final plat of Meadowbrook Executive Building Replat and forward it on to the Governing Body for its acceptance of rights-of-way and easements subject to the following conditions:

- 1. That the applicant submits proof of ownership.
- 2. That the applicant submits the final plat to the Johnson County Surveyor for a review.
- 3. That the applicant submits a certificate showing that all taxes and special assessments due and payable have been paid.
- 4. That the signature section for the Governing Body be changed by deleting the word "Approved" and replacing it with the words "Easements and Rights-of-Way Accepted."
- 5. That the applicant revises the final plat and submit three copies to the City for final review and approval.
- 6. That the applicant dissolves the condominium association prior to filing the final plat with the Register of Deeds.

The motion was seconded by Bob Lindeblad and passed unanimously.

### **PUBLIC HEARINGS**

# PC2013-04 Special Use Permit Renewal & Expansion for Monarch Montessori School at 7501 Belinder Avenue

Lindsay McAnany, Administrator for the Monarch Montessori Preschool stated the school is seeking approval to expand their preschool within its existing REACH Church's building facility at 7501 Belinder Avenue. They plan to increase from two classrooms to four classrooms accommodating approximately 100 students. There is a minor change to hours of operation and the only change to the exterior structure will be the removal of the shed located on the east side of the south wing. It will be replaced with a 12' x 24' deck that opens onto the Monarch playground. Parking will be in the Church's west parking lot off the corner of 75<sup>th</sup> Street & Belinder. A five-year permit is being requested.

Chairman Ken Vaughn opened the public hearing to comments:

Joel Mellgren, 2611 West 75<sup>th</sup> Terrace, expressed concern with the traffic from the dropping off of children. He also noted traffic often backs up Belinder creating difficulties for residents to get out of their driveways now and additional students will bring additional traffic.

Ron Williamson replied that one of the conditions of approval is that the drop off and pickup of students occurs in the west parking lot and not on 75<sup>th</sup> Terrace. Access to the new classrooms, which are on the main floor, is from the west so this should not further aggravate the problem.

With no one else wanting to address the Commission on this application, Chairman Vaughn closed the public hearing at 8:05 p.m.

Ron Williamson noted that Monarch Montessori Preschool received its initial Special Use Permit in December, 2009 subject to seven conditions for a period of three years.

The three year approved period has lapsed and renewal is being requested along with expansion of the use. The number of students has increased and the 24 student maximum is no longer adequate. The applicant is requesting to increase from two rooms to four rooms and the enrollment would increase from 24 to 102 students. Also the age is changed from 3 years to 2.5 to school aged and the hours of operation are to 5:30 instead of 5:00.

The existing Preschool is located on the garden level of the building and has access from the south and west. One of the concerns was ADA access and the applicant has resolved that concern with the City and the State Fire Marshall who must approval all plans for schools. The applicant will continue to use this space and will expand the Preschool to a portion of the main floor immediately above the existing space. The plans for the space will require approval of the Building Official and the State Fire Marshall.

The only outside physical change will be the removal of a shed on the east side of the building and the construction of a 12' x 24' deck. The deck will have a stairway to the playground.

A child care center was approved in 2012 for a maximum of 45 children. This is located in a different part of the building, is accessed from the north and uses the east parking lot.

The applicant held a meeting on April 22, 2013 in accordance with the Planning Commission Citizen Participation Policy and no residents attended the meeting.

Mr. Williamson noted a court decision that Special Use Permits are in reality a change in use and should be considered in the same manner as a zoning change is considered using the "Golden Factors." The Special Use Permit ordinance has factors for consideration similar but not identical to the "Golden Factors" and therefore, both sets of factors will need to be considered.

The Planning Commission made the following review of the factors for consideration for special use permits:

1. The proposed special use complies with all applicable provisions of these regulations including intensity of use regulations, yard regulations and use limitations.

The proposed special use for the Montessori Preschool will be contained within an existing building and fenced playground which is in compliance with the zoning regulations.

2. The proposed special use at the specified location will not adversely affect the welfare or convenience of the public.

The site and building are adequate in area to accommodate the proposed use without affecting other uses in the church. By requiring drop off and pickup in the west parking lot, there should be no inconvenience for the residents on the south side of 75<sup>th</sup> Terrace.

3. The proposed special use will not cause substantial injury to the value of other property in the neighborhood in which it is to be located.

The proposed Montessori Preschool will be within the existing building and the modifications will be on the interior, except for the construction of a deck. The proposed use is not of a size or type that would cause substantial injury to the value of property in the neighborhood.

4. The location and size of the special use, the nature and intensity of the operation involved in or conducted in connection with it, and the location of the site with respect to streets giving access to it, are such that this special use will not dominate the immediate neighborhood so as to hinder development and use of neighboring property in accordance with the applicable zoning district regulations. In determining whether the special use will so dominate the immediate neighborhood, consideration shall be given to: a) the location, size and nature of the height of the building, structures, walls and fences on the site; and b) the nature and extent of landscaping and screening on the site.

The proposed Montessori Preschool will accommodate approximately 102 children in a maximum of four classrooms and will use the classroom facility during normal working hours. This use will not have a dominating effect in the neighborhood because it will be located within an existing building. No expansion of the existing building is proposed.

5. Off-street parking and loading areas will be provided in accordance with standards set forth in these regulations and said areas shall be screened from adjoining residential uses and located so as to protect such residential uses from any injurious affect.

The proposed Montessori Preschool will use the existing 43 space off-street parking lot on the west side that is provided by the church. The operation of the Montessori preschool will not be at the same time as other events at the church. The drop off period in the morning lasts from 8:00 am to 9:15 am. The pickup times also vary from 11:30 a.m. to 5:30 p.m. Therefore, the west parking lot should be adequate to accommodate the traffic.

6. Adequate utility, drainage and other necessary utilities have been or will be provided.

Since this use will be occupying an existing facility, utility services are already provided.

 Adequate access roads or entrance and exit drives will be provided and shall be so designed to prevent hazards and to minimize traffic congestion in public streets and alleys.

Adequate entrance and exit drives currently exist at the facility on Belinder Avenue and this proposed special use will utilize the existing infrastructure that is already in place. The parking lot should be adequate to accommodate the staggered dropping off and picking up of children.

8. Adjoining properties and the general public will be adequately protected from any hazardous or toxic materials, hazardous manufacturing processes, obnoxious odors, or unnecessary intrusive noises.

This particular use does not have any hazardous materials, processes, odors or intrusive noises that accompany it.

 Architectural style and exterior materials are compatible with such styles and materials used in the neighborhood in which the proposed structure is to be built or located.

The proposed special use will not require any changes in the exterior architecture or style of the existing building. A deteriorating outbuilding will be removed and a 12' x 24' deck will be constructed which are minor changes.

The Planning Commission made the following review of the Golden Factors relative to this application:

# 1. The character of the neighborhood;

The neighborhood is predominantly single-family dwellings to the north, south, east and west. The existing property is a church and another church is located on the northwest corner of Belinder Avenue and 75<sup>th</sup> Street. Northeast of the site is a large office building along with other office buildings on the north side of 75<sup>th</sup> Street to State Line Road. The character of the immediate neighborhood is primarily residential with single-family dwellings and churches.

# The zoning and uses of property nearby;

North: R-1B Single Family Residential - Single Family Dwellings

East: R-1B Single Family Residential - Single Family Dwellings

South: R-1B Single Family Residential - Single Family Dwellings

West: R-1A & R-1B Single Family Residential - Single Family Dwellings

# 3. The suitability of the property for the uses to which is has been restricted under its existing zoning;

The property is zoned R-1B Single-Family Residential District which permits single-family dwellings, churches, schools, public building, parks, group homes and other uses that may be permitted either as a conditional use or special use. The property

has a variety of uses available and it can accommodate uses that complement the primary use as a church. A day care center occupies another portion of the building.

## 4. The extent that a change will detrimentally affect neighboring property;

The use has been existence for three years and has not created any detrimental neighborhood issues. The renewal request, however, will increase the school from two to four classrooms and 24 to 102 students which is a significant increase. Traffic is the main concern. The west lot which has 43 parking spaces will be the main drop off and pickup area and should be adequate to accommodate the traffic. Traffic needs to be minimized on 75<sup>th</sup> Terrace so that the houses on the south side of the street are not adversely impacted. The Preschool has monitored this by working with the parents.

# 5. The length of time of any vacancy of the property;

The church was built in 1955 and has changed occupants and ownership several times, but to our knowledge has never been vacant.

# 6. The relative gain to public health, safety and welfare by destruction of value of the applicant's property as compared to the hardship on other individual landowners;

The proposed project is within an existing building that will not have any exterior modifications except for a 12' x 24' deck. The applicant will be able to better utilize the property and no hardship will be created for adjacent property owners.

## 7. City staff recommendations;

The use has been in operation for three years with no complaints; the use will be within an existing building with minimal exterior changes; the use will have minimal impact on the neighborhood; and the use will provide a needed service for preschool children that is in demand in Prairie Village. Since this is an increase of more than four times the size of the existing school, it is recommended that it be approved for five years to be sure that it does not adversely affect the neighborhood.

### 8. Conformance with the Comprehensive Plan.

One of the primary objectives of Village Vision is to encourage reinvestment in the community to maintain the quality of life in Prairie Village. The proposed Montessori Preschool is an amenity that sets Prairie Village apart from other competing communities in the metropolitan area. This application for approval of the Montessori Preschool is consistent with Village Vision in encouraging reinvestment; providing multiple uses in existing buildings and making better use of underutilized facilities.

Randy Kronblad moved the Planning Commission concur with the staff finding for both the Special Use Permit factors and the Golden Factors and recommend the approval of the Montessori Preschool Special Use Permit to the Governing Body subject to the following conditions:

- 1. That the Montessori Preschool be approved for a maximum of four rooms and 102 children between the ages of 2.5 and school-age.
- 2. That the Montessori Preschool be permitted to operate year round from 8:00 a.m. to 6:00 p.m. subject to the requirements of the State of Kansas

- 3. That drop off and pickup of students occur in the west parking lot and not on 75<sup>th</sup> Terrace.
- 4. That the Preschool meet all requirements of the building and fire codes, and the State Fire Marshall.
- 5. That the site comply with ADA requirements.
- 6. If this use is found not to be in compliance with the terms of the approval of the Special Use Permit, it will become null and void within 90 days of notification of noncompliance unless noncompliance is corrected.
- 7. That the Special Use Permit be issued for the Montessori Preschool for a period of five years from the date of Governing Body approval and that if the applicant desires to continue the use, they shall file a new application for reconsideration by the Planning Commission and Governing Body.

The motion was seconded by Nancy Wallerstein and passed unanimously.

Chairman Ken Vaughn led the Commission in the following review of the site plan criteria:

# A. The site is capable of accommodating the buildings, parking areas, and drives with the appropriate open space and landscape.

The proposed Montessori Preschool will be within an existing structure and parking and access will be accommodated within the existing west parking lot.

# B. Utilities are available with adequate capacity to serve the proposed development.

This site is currently served by utilities and they should be adequate to serve the proposed use.

# C. The plan provides for adequate management of stormwater runoff.

No changes in the existing site are proposed and therefore stormwater runoff will not be affected.

# D. The plan provides for safe ingress/egress and internal traffic circulation.

The existing parking area on the west side will provide adequate ingress/egress for the proposed use.

# E. The plan is consistent with good land planning and site engineering design principles.

The site is consistent with good land planning and design. An unattractive shed will be removed and a deck will be constructed which are the only changes that will occur to the site.

# F. An appropriate degree of compatibility will prevail between the architectural quality of the proposed building and the surrounding neighborhood.

It is not proposed to change the external appearance of the building with the exception of removing a shed and adding an 12' x 24' deck.

# G. The plan represents an overall development pattern that is consistent with Village Vision and other adopted planning policies.

One of the primary objectives of Village Vision is to encourage reinvestment in the community to maintain the quality of life in Prairie Village. The proposed Montessori

Preschool is an amenity that sets Prairie Village apart from other competing communities in the metropolitan area. This application for approval of the Montessori Preschool is consistent with Village Vision in encouraging reinvestment; providing multiple uses in existing buildings and making better use of underutilized facilities.

Randy Kronblad moved the Planning Commission approve the proposed site plan include the 12' x 24' deck on the east side of the building, subject to the following conditions:

- That the applicant work with Staff to address ADA requirements regarding access to the Preschool.
- 2. That any outdoor lighting installed shall be in accordance with the lighting ordinance.
- 3. That the applicant meet all requirements of the building and fire codes.

The motion was seconded by Bob Lindeblad and passed unanimously.

Chairman Ken Vaughn stated the Commission would take a ten minute recess to allow for the presentations on the next application to be downloaded on the computer for projection. The meeting was recessed at 8:15 p.m.

Chairman Ken Vaughn reconvened the Planning Commission meeting at 8:25 p.m.

# PC2013-05 Request for Special Use Permit for Adult Senior Dwellings 8500 Mission Road

David Waters, representing the City Attorney, presented the City's response to two legal issues raised regarding the interpretation of the provision of the Prairie Village Zoning Regulations governing the Mission Valley SUP, Section 19.28.070(I).

Mr. Waters stated that based on court findings and interpretations of similar situations that a reasonable interpretation of the Zoning Regulations is that a SUP may be issued under Section 19.28.070(I) for a project in which a separate nursing or health care facility will be built prior to the completion of the primary senior adult dwelling facility if the Governing Body determines that a reasonable likelihood that the primary dwelling facility will be built within a reasonable period of time after completion of the subordinate facility, and if the SUP is conditioned upon the completion of the primary dwelling facility.

Chairman Vaughn called upon the applicant for their presentation.

John Petersen, attorney for the applicant with Polsinelli Shughart 6201 College Blvd, noted that also in attendance for the applicant was Joe Tutera and Randy Bloom with the Tutera Group, representatives of Olson & Associates and Hoefer Wysocki Architecture with the development team for Mission Chateau.

Mr. Petersen noted that a court reporter was present as he believes it is in everyone's best interest to have a solid record of these proceedings which will continue over multiple meetings. Copies of the transcript will be made available to City and will become public record.

Mr. Petersen reviewed the outline for their presentation and noted that all of the presentation will be part of the public record for this application. The presentation will begin with a factual analysis based on the questions raised at the earlier worksession, from neighborhood meetings and the design criteria for the City of Prairie Village. The architect will then review the design of the project followed by comments addressing the Golden Factors and concluded with comments from Joe Tutera on their view and plans for this site.

John Petersen stated this is an 18 acre site with over ten acres of green space. The current finished grade elevations at the property line are from 954' to 951'. The elevation at the school site is 954.5'. The proposed development will hold the elevations from east to west. They will level the site with the elevations of the primary buildings being 951.5'. The finished floor elevations on the villas adjacent to neighboring properties vary between 951' and 952'.

Mr. Petersen noted the varying heights of the buildings in the development, but noted lower heights on those buildings adjacent to neighboring properties. The following chart reflects height to peak:

1 Story Villas	21'-4"
1 Story Memory Care	26'-3"
2 Story Skilled Nursing	33'-6"
2 Story Independent Living	32'-4"
3 Story Independent Living	40'-0"
# Story Assisted Living	40'-0"

The setbacks on Mission Road are 115' with 233' to the main building. A site plan was shown depicting the setbacks between the property line buildings on site and those of the adjacent properties. Mr. Petersen stated the stormwater flow that exists today will be reduced by more than half.

# **Existing Storm Water Runoff**

# Proposed Storm Water Runoff

• 114 cfs to the North

114 cfs to the North 7 cfs to the South

• 37 cfs to the South

73 cfs total

• 151 cfs total

Mr. Petersen noted the traffic study presents a comparison of past traffic flow to projected traffic flow to determine if the traffic is over tasking the roadways. The AM peak hour comparison projects a decrease of 169 vehicles to and from the site and the PM peak comparison projects an increase of 22 vehicles to and from the site. There are currently 395 vehicles travelling on Mission Road during the afternoon peak of 2:30 to 3:30 p.m. Shift change for Mission Chateau staff will increase that number by 102 trips for a total traffic count of 495 trips.

A site plan reflecting color coded on-site parking was reviewed. Staff parking is primarily located as far from the buildings as possible. There are 51 carports available as part of the resident parking for the Independent Living residents and the Villas have 22 enclosed garage spaces. The required parking for the project is 285

spaces with the project providing for 350 on-site parking spaces. These include 135 employee spaces, 13 ADA spaces and 2 van spaces for community transportation.

Mr. Petersen noted the lot coverage requirement for the single family zoning district is no more than 30% of the lot. The Mission Chateau development will have lot coverage of 22.9%. The maximum height for the R1-A zoning district is 35 feet. The height of buildings within the development range from 16 feet to 35 feet. The setbacks required for R1-A are 25 feet. The setbacks for the development range from 35 feet to 240 feet. Concentrated active open space amenities are not required in R1-A; however, this development will provide 5.34 acres of park area including 1.23 miles of walking paths.

John Petersen reviewed the existing character of the Mission Road Corridor reviewing heights and setbacks of major buildings along Mission Road including Macy's, Brighton Gardens, the Colonial Church (71<sup>st</sup> & Mission area); Normandy Court Condominiums, PV Office Center and SME (7221 to 7500 Mission Road); Coleridge Court and Mission Bank Bldg (8101 & 8201 Mission Road); Corinth Place & Corinth Gardens Apartments & the Office Complex (8340 Mission); The Chateau Condominiums, Somerset Apartments (8361 & 8401 Somerset) and Mission Valley Middle School (8500 Mission Road). These sites reflect the vast differences found along the Mission Road corridor. Mr. Petersen presented the landscaping proposed on this project along Mission Road.

Photos of the existing landscaped boundaries of the site were shown both with summer and winter foliage. Also shown were photos of views onto the site from adjacent properties. Photo simulations were presented of the proposed development without landscaping and with superimposed landscaping from multiple levels. Mr. Petersen stated the applicant is willing to work with the adjacent property owners to provide their desired landscaping to buffer their view of the proposed project.

Mitch Hoefer, architect for the project reviewed the architectural features of the development. He noted the design elements are driven by the desire to create a state of the art senior center neighborhood with a hospitality environment based an English country feel that includes many of the design features found in Prairie Village homes.

The Skilled and Memory Care Facility was designed with interior courtyards and a park area that allows for activities for its residents. The gross building area is 91,189 square feet with a building footprint of 58,268 square feet providing for 120 units. The make-up of these include 36 memory care private units, 68 skilled nursing private units and 16 skilled nursing semi-private units (32 beds). Mr. Hoefer reviewed the architectural features of the proposed building including the stone veneer, decorative shutters, stucco finish and asphalt shingles.

The proposed 11 Villas are 2,265 square feet and accommodate two residents per Villa. These are located along the south, southwest residential property lines. Photo simulations and drawings of the proposed villas were presented showing front and backyard views.

The Independent and Assisted Living Facility will have a gross building area of 271,140 square feet with a building footprint of 100,824 square feet providing for 220 units. The make-up of these buildings include 48 one bedroom assisted living units, 12 two bedroom assisted living units, 100 one bedroom independent living units and 60 two bedroom independent living units. Mr. Hoefer reviewed the architectural features of these buildings. He noted the closest single family resident is 223 feet from the proposed two story building and 260 feet from the proposed three story building.

Mitch Hoefer presented a video tour of the proposed development. He noted it has been an evolving project with this being the fourth version with changes made as recently as the past month.

John Petersen stated there is a growing need for this type of facility and now is the time to address that need. He entered into exhibit an independent study done by Jeff Green Partners entitled "The Feasibility of Retail, Residential and Office Uses at the former Mission Valley Middle School site in Prairie Village, Kansas" dated October 7, 2011. The conclusion of that report recommended 84,700 square feet of retail along with a residential (senior living) component made up of 210 Independent and Assisted Living units along with a 45 bed Skilled Nursing facility and up to 55,000 square feet of Class A Office space. Since that study was completed the site has been identified in the Comprehensive Plan for entirely R1-A zoning uses. The report noted that the two mature senior living facilities in Prairie Village are 100% occupied and the newest facility is reported to be at 50% occupancy.

Mr. Petersen quoted the findings of the 2009 Parks Master Plan which made the following finding: "To conclude, unless there is a shift in the market to attract new families with children to Prairie Village, along with a growth in new housing options for elderly citizens to remain in Prairie Village or attract new households, the population of Prairie Village is not expected to see an increase in total population." This is a win/win proposition for the City.

To address concerns with the potential impact of the proposed development on existing property values of neighboring properties, Mr. Petersen presented for exhibit a Real Estate Consulting Report done by Todd Appraisal. This study looked at the property values of homes located in this are near both school facilities (Brookwood Elementary, Indian Woods Middle School and Pioneer Middle School)and near adult senior living facilities (Brighton Gardens, Village Shalom and Santa Marta.

The study found that properties in the Brighton Gardens area sold at a premium. The report states that this is potentially attributable to the efforts at landscaping and the tree line as well as the preference for greenery rather than yards or yards adjacent only to another single family use. Mr. Petersen noted if there is a well designed project people will actually pay more for adjacent properties.

Mr. Petersen stated they are in agreement with the city's attorney's response to the questions raised by John Duggan on behalf of the Mission Valley Neighbors Association, Inc. and will be submitting a 20 to 30 page response to the comments.

John Petersen stated the City has adopted the legal criteria as established by the 1984 Supreme Court ruling on Golden vs. City of Overland Park. He briefly reviewed the criteria and how the proposed development meets these criteria.

- Conformance of the requested change to the adopted or recognized master plan utilized by the City. Mr. Petersen referenced the City Planner's Staff report which stated "it appears that the applicant has addressed the issues and proposed a use that is in conformance with the Comprehensive Plan Amendment, Chapter 8 Potential Redevelopment D. Mission Valley Middle School."
- 2. Recommendations of permanent or professional staff.
- 3. Character of the neighborhood
- 4. Zoning and uses of property nearby
- 5. Suitability of the property for the uses to which it has been restricted
- 6. Length of time the subject property has remained vacant as zoned
- 7. Extent to which removal of the restrictions will detrimentally affect nearby property. The taller buildings will be on the northern portion of the property, closer to the two and three story apartment buildings on Somerset Drive. The buildings adjacent to the south and southwest property lines will be a size, design and height of conventional single-family construction. Mr. Petersen noted the city planner's staff report stated "In summary, property around the proposed project is already developed. The mass of this project will dominate the area but through greater setbacks and landscaping, the use will not dominate the immediate neighborhood so as to hinder development of use of property."
- 8. Relative gain to public health, safety and welfare by the destruction of value of the plaintiff's property as compared to the hardship imposed upon the individual landowner.

The Supreme Court ruling noted it is a comparison of what is gained as compared to the hardship of the property owners. Mr. Petersen referenced Taco Bell vs. City of Mission and stated zoning is not to be based upon a plebiscite of the neighbors, \*892 and although their wishes are to be considered, the final ruling is to be governed by consideration of the benefit or harm involved to the community at large."

The Special Use Permit Staff report prepared by the City Planner states "It does not appear that the proposed project will adversely affect the welfare of the public. It will, however, provide a senior housing community for area residents that are not currently being provided for in Prairie Village. The population is aging in northeast Johnson County and developments such as this provide accommodations for senior citizens to allow them to live near their former neighborhoods. It is anticipated that by providing senior housing, single family dwellings will become available for occupancy by young families. This will help rebuild the community to make a more sustainable area."

Joe Tutera, with the Tutera Group, stated the development of this has been their vision for more than twenty years - to creating a continuing care community where residents can move from one level of care to another without having to leave their home/community. They feel this is the perfect site. Mr. Tutera reviewed their over thirty years of experience in this industry and other facilities that they have

developed. The objective of this project is to provide a home where residents can live through all levels of care required.

Chairman Ken Vaughn opened to the public hearing to comments asking that those individuals wishing to speak in support of this project speak first. He asked all speakers to provide their names and addresses for the record and to limit their comments to allow time for all to be able to speak.

Jim Chaar, 9101 Delmar, noted his experience with the development of the Village Church community building at 98<sup>th</sup> & Mission Road. This project was initially strongly opposed by the neighborhood, but through cooperation between the Church and the neighborhood a better project was developed to serve the needs of the community. Mr. Shaw also noted that, unlike many proposed projects, no tax dollars or special funding is being requested from the City. Also no retail is proposed and new jobs will be created.

Frank Adler, residing in room #725 at the Atriums, 7300 West 107<sup>th</sup> Street, stated he was a resident of Prairie Village for 36 years, but circumstances required him to move from Prairie Village to the Atriums eight years ago. He noted had this facility been available at that time, he would have chosen to remain in Prairie Village. He added The Atriums is well staffed with trained staff that provide residents with every advantage in terms of their care.

Pete Beyer, 7315 Rosewood, stated that seniors are looking to transition from their homes into facilities such as that being proposed. He has looked at several senior facilities and would like to remain in Prairie Village. He stated the current vacant school is an eyesore and the proposed project would be a tremendous improvement for the City.

Myron Wang, 70 LeMans Court, stated he has served on the Board of Directors for Village Shalom. During that time they built two continuing care facilities and faced strong opposition for both. He stated there are a lot of myths about senior care that are not true. There is no excessive traffic created by these facilities. In fact, at Village Shalom it is ghostly quiet unlike the noise created from a school environment with children playing boom boxes. This project is good for the City of Prairie Village any way you look at it - a major development serving the needs of residents and not costing the City or its residents anything.

Milburn Hobson, 5467 West 85th Terrace, stated he was thrilled to learn about the proposed project. He stated there is a three-year wait to get into Claridge Court and noted she has already signed up for a Villa if the project is approved.

Lucille Jewett, 4206 West 73<sup>rd</sup> Street, has lived in Prairie Village for 48 years. In the early 1980's she was looking for a community, but the current communities in Prairie Village only provide assisted living. She is seeking independent living and noted that many of her friends have had to move to neighboring cities for independent living facilities. She wants to stay in Prairie Village and hopes this project will be approved.

Barbara McGrath, 7509 Nall Avenue, stated she has a relative living in a Tutera Senior Living facility. They provide excellent care and she strongly supports the important services they provide. She would like to see this project approved.

Courtney Kounkel, 8424 Fontana, stated she was saddened to learn of the school closing, but respects the school district's difficult decision to consolidate to two middle schools. The school district will not be reopening this school. It is time to move on. One-fifth of the resident in Prairie Village are over 65 years of age. She grew up in this area and was able to spend time with her grandparents who resided in The Forum. She wants that for her children, to be able to benefit from experiences with her grandparents. She strongly supports this project as it will provide the opportunity for Prairie Village families to remain close to one another, for children and grandchildren to easily visit and spend time with their older family members.

Olga Kurg, 7300 West 107<sup>th</sup> Street #424, stated she has been living in the Atrium for four years, she still drives and enjoys an independent lifestyle provided by the Atriums. Olga noted when her husband's health failed, he had to be moved to a different facility making it very difficult for them to spend time together. She hopes this facility which will provide multiple levels of care will be approved. It is needed.

Susan Sadler, 4301 West 87<sup>th</sup> Terrace, spoke in support of the Tutera Group as a family business and in support of the proposed project for the City of Prairie Village.

Christopher Smart, 8024 Juniper Drive, as a realtor in Johnson County has listed homes of elderly Prairie Village residents who would prefer to stay in Prairie Village but have had to move out of the city to receive assisted living services provided by facilities in other cities. He currently knows three women between the ages of 55 and 66 that want to remain in Prairie Village, but have to move out of the City for senior care services which are not available locally. Mission Chateau is an excellent opportunity to both provide a place for Prairie Village senior citizen residents and free up existing housing inventory for new young buyers with children rebuilding Prairie Village communities.

Rick Jones, 6517 Granada, stated he has known three generations of the Tutera family both personally and professionally and strongly supports their proposed development for Prairie Village. Based on his experience and knowledge, the staff and services provided will be first class and the site plan and proposed architecture presented for this application is excellent in his professional opinion.

Marcia Jacobs, 4500 West 72<sup>nd</sup> Terrace, spoke in support of this project. She noted that she served on the City Council when Claridge Court was first presented with great opposition. Just as Claridge Court has had a positive impact on the City, she believes the proposed Mission Chateau project will also be a great addition to the City of Prairie Village. She thanked the development team for their many meetings with the neighboring residents and staff in order to address their concerns and present the best plan possible.

John Duggan, of Duggan Shadwick Doeer & Kurlbaum, LLC., representing the Mission Valley Neighbors Association, addressed the Commission. He does not feel

Mr. Petersen is being totally transparent. The staff report prepared by the City's Planning Consultant has been referenced as being in support of the proposed project. The only staff recommendation is that the application be continued to give the applicant the opportunity to prepare and submit perspective drawings that adequately depict the size and mass of the proposed development compared to the existing adjacent developments. The staff report states that staff needs additional information. Statements that the staff recommends approval of this application are not true.

The focus for this project should be on the mass and density of this project which brings an unprecedented massive development to Prairie Village. Some of these buildings are have a greater length then two football fields. The Santa Marta project, which Mr. Petersen stated is the most similar to the proposed project is 293,000 square feet. The main building for this project is 271,000 square feet and would be constructed in stage 2.

Mr. Duggan noted that the Santa Marta development is surrounded by collector streets. The street width indicated on the proposed development site plan appear to be much narrower than standard public streets. He expressed concern with them being able to accommodate emergency vehicles. He also noted the Santa Marta projected is buffered from the neighboring residential properties by parks on three sides. An overhead photograph of the Santa Marta site plan was shown depicting the size of this development.

Mr. Duggan stated the Mission Chateau east elevation scales out to be 530 feet in length. The south elevation scales out at 480 feet. This is a massive structure. The skilled nursing component is 400 feet on the west elevation. The total square footage of all the buildings is 387,244 square feet. This is a massive development. Looking at square feet per acre, Mr. Duggan stated this would be the most dense development in Prairie Village. He stated the Santa Marta development is 100,000 square feet smaller than the proposed Mission Chateau development.

Mr. Duggan stated the criteria for Special Use Permit require that the proposed use be compatible with the surrounding property. The proposed project is three time as big as anything in the area.

Mr. Duggan stated he does not agreed with the interpretation of the City's attorney and contends that there is no logic in stating something could be an accessory use to something that does not exist. He does not believe it can be approved based on the stipulation that the primary use will be built in the near future. There cannot be an accessory use unless there is a actual use.

Regarding the need for the use. Currently there are 68 individuals in Johnson County for every senior house unit a ratio of 68 to 1. In Prairie Village there is a ratio of 30 to 1. The Village will become the center for senior living, although only 33% of the residents of the city's current facilities are Prairie Village residents. What is currently available is adequate.

John Duggan stated that this project in terms of massive scale and density is unprecedented in Prairie Village. It dominates the neighboring properties. Mr. Duggan also noted the only two accessory buildings allowed in R1-A zoning are a 10' x 10' shed or a carport. He questioned that the Commission would approve permitting a shed or carport to be built on a property that did not already have a house constructed on it. Use your common sense. Saturating the city with more retirement facilities is not in the best interest of Prairie Village.

Commissioner Wolf asked what MVHA, Inc. was. Mr. Duggan responded it is a group of neighboring property owners who have formed the association to protect their legal rights as property owners.

Todd Bleakley, 8621 Delmar, presented a comparative analysis of the proposed project to medium density apartments. The RP3 zoning classification allows 12.5 apartment units per acre, which would be the equivalent of 225 apartments. When added to the base apartments attached garages, a clubhouse and maintenance facilities the approximate total square footage would be 220,600 square feet. The proposed Mission Chateau square footage of 384,000 square feet is 42% greater. Increasing that to 14 units per acre with the above stated amenities would have an approximate total square footage of 246,296 square feet. The proposed Mission Chateau square footage of 384,000 square feet is 35% greater.

If single family homes were constructed with 2.5 lots per acre, 47 single family homes would be constructed. Complying to the maximum lot coverage requirements these homes would have a gross building area of cover 164,000 square feet compared to the proposed 384,000 square feet of Mission Chateau. This is not compatible with the neighboring properties and would dominate the adjacent neighborhoods.

Mr. Bleakley stated that is the proposed project was approved, Prairie Village would have two of the three largest senior living facilities in Johnson County with Santa Marta being the largest, Claridge Court second and Mission Chateau third. He does not believe the city wants or needs that concentration of high density building.

Mr. Bleakley noted the city of Olathe has a transition policy, which you can see in the Santa Marta development which is separated from the neighboring residential properties by three adjacent public parks. Mr. Bleakley stated he would like to see the actual dimensions of the villas and main buildings. Based on the site plan, the villas have minimal front yards and there is no transition between the large lots adjacent to this property and the villas. He noted the Claridge Court facility is located on C-2 zoned property and is not surrounded by single family homes. This is a massive density that dominates the surrounding area. The 35' back yard is not adequate.

Mr. Bleakley noted the media presentation by the applicant depicting a drive-thru their development appeared to him as being shown with blinders on. He does not feel it is an accurate depiction and expressed concern with the proposed width of the streets running through the proposed development. He feels this presents a safety issue. Public residential streets are 28 feet in width and collector streets, as found in Santa Marta are 36 feet wide.

Dr. Craig Satterlee, an orthopedic surgeon residing at 8600 Mission Road, presented information on skilled nursing facilities, noting their difference from nursing homes. A skilled nursing facility (SNF) provides hospital acute care - recovery time after surgery or treatment of severe illness or injury. A nursing home provides a permanent residence for people who are too frail or sick to live at home due to physical, emotional or mental problems who usually require daily assistance.

To be certified by Medicare and Medicaid SNF's must meet the following criteria:

- Transfer agreement with hospitals in case a patient requires emergency, restorative or rehab
- Physician on staff who rounds regularly and is available 24hrs/7days on emergency basis
- 24hr/7day a week nursing care (RN) supervised by a physician/medical director
- Staff and equipment to give skilled care
- Cannot violate anti-discrimination laws.

Dr. Satterlee stated the proposed Mission Chateau Skilled Nursing facility to be constructed in Phase 1 would accommodate 100 patients. Dr. Satterlee contends this is too many beds to serve just Mission Chateau or just Prairie Village and is not subordinate to the complex.

Patients referred to Skilled Nursing Facilities are typically patients whose condition is too severe to be treated at home after hospital discharge, without family support, requiring bed rest, requiring extensive rehabilitation - physical, emotional or psychosocial or receiving treatment not covered by their insurance at home or Medicaid department.

Dr. Satterlee reviewed the process for individuals outside a retirement center selecting a skilled nursing facility and what types of conditions generally require skilled nursing services. A skilled nursing facility is a standalone entity. Mission Chateau is a skilled nursing facility - it is not a subordinate accessory use.

Bob Higney, 3303 West 127<sup>th</sup> Street, stated he has worked in senior housing for more than 30 years. He stated Mission Chateau would be the second largest elder care facility in Johnson County. If built, Mission Road would have three major senior developments within a twelve block stretch: Claridge Court at Somerset & Mission, Mission Chateau at 8500 Mission and The Forum at 95<sup>th</sup> & Mission. This would more than double the number of independent living units from 149 to 320; nearly double the number of assisted living units from 77 to 136 and increase the number of skilled nursing/memory care unites 2.5 times from 85 to 222.

Mr. Higney stated the average age of residents moving into senior living facilities is 78 years of age. The 75+ population for Prairie Village is projected to gain only 24 individuals from 2013 to 2018 with the projected percentage of seniors in Prairie Village to remain stagnant at 10% for the next five years. The 65+ population of Prairie Village is projected to grow less than 2% over the next five years. Nationally

less than five percent of individuals ever move into a continuing care facility. Mr. Higney asked where is the need.

Steve Carman, 8521 Delmar, addressed three topics: Traffic, Height and Financial Impact. Mr. Carman stated the traffic study focuses on the impact on the roadway. He presented data focused on the impact of traffic brought into the residential neighborhood. This traffic spikes between 6:45 and 7:15 a.m. and 10:45 and 11:15 p.m. and is inconsistent with traffic in a residential community.

Mr. Carman entered into the record and presented data and photograph depicting the change in elevation as well as the corresponding additional distance comparison for the eight adjacent properties as well as the overall elevation change.

Mr. Carman also entered into the record a real estate appraisal done by Dillion & Witt, Inc. on the potential impact of the Mission Chateau Senior Living Community on his property. The report stated their will be a negative impact on both Mr. Carmen's ability to sell his home and its appraised value. The appraiser stated "that a diminution in property value of at least 10% is a conservative baseline given the information presented". Mr. Carmen noted using that information the City of Prairie Village can anticipate a loss of value of \$175,000,000 and more than \$1.5 million in property taxes from decreased property values of adjacent properties with additional losses from other properties in the neighborhood. The adverse financial impact on his home would be \$50,000 to \$75,000.

This proposed development is too big, too tall and too intense for the neighborhood. It is wrong to expose significant financial harm to neighboring residents by the approval of this project.

Chairman Ken Vaughn noted the hour is late and it obvious that the public hearing cannot be completed this evening.

Randy Kronblad moved the adjourn the meeting of the Planning Commission with the public hearing on PC2013-05 remaining open and continued at the next meeting of the Planning Commission on June 4<sup>th</sup>. The motion was seconded by Gregory Wolf and passed unanimously.

Dennis Enslinger stated that all items presented at this meeting will be available on the city's website on the city's project page for this application by the end of the week.

OTHER BUSINESS PC2012-108 Hen House Site Plan, Corinth Square

#### **ADJOURNMENT**

Chairman Ken Vaughn adjourned the meeting at 11:15 p.m.

Ken Vaughn Chairman

#### JAZZ FEST COMMITTEE May 9, 2013 7:00 p.m.

Present: Jack Shearer, Gloria Shearer, Donelea Hespe, Dan Andersen, Larry Kopitnik, JD Kinney, Kate Fields, Diane Mares, Brooke Morehead and Joyce Hagen Mundy.

#### **Minutes**

The minutes of the April 4, 2013 meeting were approved as submitted.

#### **New Layout**

Dan Andersen presented a new layout for the 2013 Festival. The proposed layout would allow for up to eight tents. The location for the bathrooms has been moved. The check-in tent would be  $20 \times 30$ . The only city tent to be used would be the  $20 \times 20$  tent. He is looking at  $10 - 20 \times 40$  tents for the event. The new layout would feature a food court arrangement. There was discussion of a possible children's area. It was noted the park has a playground which has be used by children during past festivals. Jack will also check with the company doing the children's area at Jazz in the Woods. He also noted he could get the tents set up earlier in the week to accommodate a possible Friday evening performance.

#### Fundraising

Jack Shearer distributed an update on fundraising reporting that approximately \$38,000 has been raised to date. He noted this is significantly higher than what had been raised at this point in time last year. Brenda Pelofsky continues to make contacts and is following up with city vendors. Approximately \$10,000 has come in to date from her contacts with more expected. Brooke Morehead expressed disappointment noting she expected more from a professional fundraiser.

Brooke reported that she met with UMB Bank and has received a commitment for \$10,000. Jack reported that Tutera has committed to a \$5000 sponsorship. He and JD met with Claridge Court who are anxious to participate as a food vendor or purchasing a corporate tent or tables. Jack reviewed Brenda's contacts and noted that she is now being assisted by JoEllen Wurth who will be personally contacting Prairie Village businesses.

JD Kinney clarified how funds will be presented to Heartland Habitat for Humanity if companies want to donate directly. Diane Mares suggested the committee present a check to Heartland Habitat at the event.

Brooke stated that Strouse is also willing to do printing in addition to banners for the festival. Joyce noted that a banner would be desired at the PV Art Fair and received authorization to use the existing banners with a change in date.

#### Talent

Larry Kopitnik reported that his first choice for headliner is Marilyn May with Mike Matheny. However, he has had difficulty getting in touch with Marilyn's agent. He has spoken with Bobby Watson and his agent regarding the possibility of putting together a big band group that had played recently at the Blue Room. They were open to the idea and Larry reviewed the musicians that would probably be involved.

Larry recommended the following groups to fill out the festival line-up: Monique Danielle (recommended by Jack & Peggy); Parallaxel (a group with two drummers, which should play well from an outdoor stage); Everett DeVan - Chris Hazelton Quartet (a group with two Hammond B3 organs) and Andy McGhie Quintet (a new group that he heard at the Jazz Interlude at Johnson County).

Diana Mares clarified that if there was a Friday evening performance its focus would be on student talent and followed by 12<sup>th</sup> Street Jump.

#### Vendors

The committee discussed possible food vendors. Jack will confirm with BRGR their participation. Jack suggested having the Brookside Bristro Program participate as a vendor. Spin Pizza will be providing deserts.

#### PV Art Fair

The Prairie Village Art Fair will be May 31<sup>st</sup>, June 1<sup>st</sup> & June 2<sup>nd</sup>. Additional information will be provided via e-mail regarding the committee's participation. The committee stated they would like to distribute "Save the Date" cards at the event.

#### Web Site/Facebook/Twitter

Chris Huff has run into problems with getting the website revised. The importance of a website was discussed along with options to help Chris out. The role of Facebook and Twitter as advertising sources was also discussed. Jack will talk with Chris.

#### **Next Meeting**

The next meeting will be Thursday, June 6<sup>th</sup> at 7:00 p.m. at Dan's House.

#### Adjournment

The meeting was adjourned at 8:30 p.m.

### COUNCIL COMMITTEE OF THE WHOLE June 3, 2013

The Council Committee of the Whole met on Monday, June 3, 2013 at 6:00 p.m. in the Council Chambers. The meeting was called to order by Acting Council President Charles Clark with the following members present: Mayor Ron Shaffer, Ashley Weaver, Ruth Hopkins, Steve Noll, Laura Wassmer, Brooke Morehead, David Morrison, Charles Clark, Ted Odell and David Belz. Staff Members present: Wes Jordan, Chief of Police; Captain Wes Lovett; Captain Tim Schwartzkopf; Tim Kobe; Keith Bredehoeft, Interim Public Works Director; Katie Logan, City Attorney; Quinn Bennion, City Administrator; Dennis Enslinger, Assistant City Administrator; Lisa Santa Maria, Finance Director; Nic Sanders, Human Resources Specialist; Danielle Dunn, Assistant to the City Administrator and Joyce Hagen Mundy, City Clerk.

#### Presentation of the 2014 Recommended Operating Budget

Quinn Bennion reviewed the budget process which began in March and acknowledged the work of the City Council and Department Heads in the preparation of this budget, particularly Finance Director Lisa Santa Maria. The 2014 budget as presented is balanced and retains the current mill levy rate of 19.478. There is no reduction in city services, with enhancements to the following programs: Park Funding, addressing the Emerald Ash Borer Infestation and enhancing the code enforcement program. The overall budget reflects an increase in the General Fund of 0.91%.

In preparing the 2014 budget the staff focused on 1) strengthening the Equipment Reserve Fund for non-routine equipment purchases; 2) retaining an ending fund balance of 25% of revenues (excluding transfers); and tightening the actual budget ratio by reducing budget (96% estimated) placing more reliance on contingency.

Mr. Bennion noted over the past months the Council has reviewed and discussed significant budget items that were identified by staff providing direction. The total general fund budget is \$18,259,428 with a total city budget of \$34,127,727. Mr. Bennion noted that the proposed budget creates a city tax liability of \$491 for the average Prairie Village home owner.

#### Public Safety

Chief Wes Jordan noted the Public Safety budget reflects both costs for services provided to the City of Prairie Village as well as services to the City of Mission Hills and explained how the two budget interface. Chief Jordan presented a comparison of budgets minus personnel costs for the years 2012, 2013 and 2014. The budget has remained relatively flat with the following total budget amounts: 2014 (\$946,501), 2013 (\$918,449) and 2012 (\$962,351).

Chief Jordan reviewed the significant changes noting that throughout the entire budget there will be a reduction in uniform cleaning due to a three-year agreement negotiated with a local cleaner. After a review of the promotional exams being used by the department it was decided to discontinue the exams for a reduction of \$2,500. A major

increase in the Administration area budget is \$23,500 for police pension administration costs. Charles Clark and Steve Noll explained that some of the administration costs are based on the performance of the fund and this increase reflects the strong performance of the pension fund.

Captain Tim Schwartzkopf presented the changes for the Crime Prevention, Investigations, SIU, DARE and Professional Standards Departments. The significant changes included \$1500 for new vehicle equipment and installation for an investigations vehicle, \$1,500 increase in training costs and \$4,000 increase in range supplies for the Professional Standards area. He noted ammunition costs rose and the availability has decreased across the country.

Captain Wes Lovett presented the changes in the Community Services, Patrol and Traffic. The most significant change is a reduction of \$13,491 in contract services for animal care services with the change in providers from AMC to Great Plains SPCA. The Patrol budget has an increase of \$4,700 for vehicle assembly for three new marked vehicles and \$10,000 for motorcycle replacement. Captain Lovett noted the cycles are replaced approximately every two years, but since the last replacement was late, he is waiting an additional year for replacement.

Tim Kobe, Communications Supervisor, presented the Communications budget which has increased overall \$1,050. The significant changes are an increase in communication costs for phone lines, cell phones, etc., a \$1,000 reduction in the Intergraph contract with Overland Park and a \$2,000 increase for computer equipment that was previously funded through the equipment reserve fund.

#### **Public Works**

Keith Bredehoeft noted the importance of the operating budget as it allows staff to operate and maintain the city's resources, provides the tools and equipment necessary to provide the level of service desired by residents. Mr. Bredehoeft reviewed significant changes in the proposed Public Works Operating Budget under the various department programs.

Quinn Bennion explained a significant change in this budget is the result of a change in the calculation of vehicle fuel that was recommended by the City auditors. This change has yielded over a \$300,000 accounting adjustment.

#### Administration

This year's budget includes \$5,000 for the Bi-Annual Bridge Inspection required by the Kansas Department of Transportation. Charles Clark confirmed that this study is outsourced. Mr. Bredehoeft noted the past few studies have been done by George Butler Associates. The budget also includes an increase of \$2500 for part for the inspector's vehicles. He noted these vehicles are older, but based on the type of use they receive do not merit replacement; however, extra funding is budgeted for repairs and replacement parts that may be needed.

#### Vehicles

This budget reflects an increase of \$2400 for a subscription to a program that would help the mechanics diagnose vehicle problems and solutions. This is a onetime expenditure to test the effectiveness of the program. Brooke Morehead asked if this is something that could be used by multiple cities. Mr. Bredehoeft responded it is more often use in private businesses than by cities. Charles Clark noted the company would probably require a license of each city.

#### Streets

This is the largest program area accounting for 46% of the budget. The major expenditure is the cost of street lights from KCP&L, which is an expenditure that the Council will reconsider at a later meeting. There are three significant increases in this program area. The budget contains \$3200 to send two individuals to the 2014 Snow Conference. The City has done this in the past, although not recently. Mr. Bredehoeft noted this conference addresses new methods for treating roadways as well as focus on equipment. The budget for vehicle maintenance has been increased by \$5,000 to get the maximum life out of city equipment and \$2500 has been budgeted for the replacement of a snow blower.

#### Parks and Grounds

Mr. Bredehoeft noted that this program is the most staff intensive accounting for 50% of the time spent by Public Works Staff. This program is for maintenance and not park improvements which will be addressed in the CIP budget. It includes such items plumbing repair for fountains, Santa Fe Stone Wall repair, play equipment repair and turf maintenance. The budget reflects a decrease for portable toilets based on a new contractor for that service. The two major changes in the proposed budget are an increase of \$12,500 for the replacement of a 61" riding mower and the \$50,000 budgeted for the evaluation/treatment for Emerald Ash Borer. He reported that the tree board wants to do the tree evaluation themselves instead of contracting this service out. Ted Odell asked about chemical free parks. Mr. Bredehoeft responded that Prairie Park is currently being treated chemical free. However, he noted that more material is needed for treatment and the cost of the materials is more expensive. He is not recommending this be done on a larger scale until more information is known.

#### Pool

The 2014 proposed pool operations budget which includes an increase of \$1500 for a new shade structure canopy and \$60,000 for sandblasting and repainting of the adult and lap pool. Ms Wassmer asked about the possible addition and replacement of pool chairs in a large quantity.

#### City Buildings

Keith Bredehoeft noted three increases in the operational budget for buildings. The first is an increase of \$5000 to cover an anticipated utility rate increase for electrical services; the second is an increase of \$3000 for janitorial services. The major increase in this program area is \$32,000 for the rehabilitation of the fuel island. There is a fuel tank that is not operational and it is required to either by rehabilitated or removed. After

researching the problem, staff recommends rehabilitation. Ted Odell asked for the cost of removal.

Quinn Bennion noted that the City is still tracking the results of the geothermal installation on utility costs and will be providing the City Council a report in July.

## COU2013-21 Consider approval of letter to Attorney General regarding HB2055 and concealed carry in public buildings

City Attorney Katie Logan reviewed briefly House Bill 2052 which becomes effective July 1, 2013 and requires cities to provide personnel and equipment to address building security for concealed carry of weapons. The bill contains a provision that allows cities to request a delayed implementation date of January 1, 2014 to allow them time to implement the required security provisions. She has prepared a letter to be sent to the District Attorney from the Mayor requesting exemption from the provisions of House Bill 2052 until January 1, 2014 for identified City Buildings.

Steve Noll made the following motion, which was seconded by Ted Odell and passed unanimously:

MOVE THE GOVERNING BODY AUTHORIZE THE MAYOR TO EXECUTE A LETTER NOTIFYING THE ATTORNEY GENERAL OF THE GOVERNING BODY'S ELECTION TO EXEMPT ITSELF FROM THE PROVISIONS OF HOUSE BILL 2051 UNTIL JANUARY 1, 2014 FOR IDENTIFIED CITY BUILDINGS COUNCIL ACTION TAKEN 06/03/2013

Discussion regarding possible sign-in process at City Hall and Police Department
Brooke Morehead recommended the City that a proactive approach to security in city
facilities, especially addressing admittance to secure areas through the implementation
of a sign-in process.

David Belz asked if this would include people attending committee meetings. Mrs. Morehead responded it would only be in place during normal business hours and would generally be for those people with appointments or business that takes them into secured areas of the building. It would be a simple sign-in of name, time in, time out, purpose of visit.

Ted Odell felt it was a good idea noting his company has a similar procedure. Mrs. Morehead noted it could be as few as three to four individuals per day.

Quinn Bennion noted there are several challenges to implementation. He noted City Hall has three distinct entrances. Last week staff kept track on the number of individuals in City Hall and there were close to 1000 visitors during business hours. He does not see individuals with appointments with staff as a security risk. To address a true potential security risk, all individuals would need to sign in. He added the sign-in

process would be a change in culture and the sign-in sheet would be a public record subject to open records regulations.

Dennis Enslinger stated there are a number of individuals that he or his staff talks with that do not want to be identified. They are making a complaint regarding neighboring property. He generally talks with people at the front counter and does not take them back into his office area. If there is a scheduled meeting with for plan review or with applicants, it is often held in the MPR as office space cannot accommodate all attending. Informal discussions regarding possible development would probably request a meeting outside of City Hall if the procedure were implemented.

Quinn Bennion asked if the sign-in would be at the main entrance to city hall, police department offices and the public works facility.

Charles Clark noted the city will be having more discussion on security measures and felt that would be an appropriate time to discuss this further. Chief Jordan noted this process is currently not part of the security plan that his staff is preparing. Mr. Clark stated that the issue could still be discussed at the same time as they are related issues.

#### STAFF REPORTS

#### Public Safety

 Chief Jordan announced that his department is working on a security plan for city facilities as required by the new legislation.

#### **Public Works**

• Keith Bredehoeft reported the results of the sidewalk surveys for 70<sup>th</sup> Terrace, Fonticello and 68<sup>th</sup> Street noting that all three streets acquired sufficient votes to not have sidewalks installed with the upcoming street project.

Laura Wassmer asked if he had received any feedback on the survey process. She stated she is aware of some who are upset that unreturned surveys are counted as a "yes" vote. Mr. Bredehoeft responded that it is clearly indicated in the letter sent with the survey that unreturned surveys would be considered being in support of sidewalks. He noted it is the city's policy to construct sidewalks. Mrs. Hopkins and Mr. Odell reaffirmed the survey process.

- Mission Road is closed for the joint project with the City of Leawood. There have been some traffic routing issues but he feels they will improve as drivers become more aware of the closure which is anticipated to continue to mid June.
- Mr. Bredehoeft updated the Council on upcoming street work at Mission and 63<sup>rd</sup>
   Street

Laura Wassmer expressed concern with the ponding of water in the 82<sup>nd</sup> and Roe Drainage Channel as a breeding ground for mosquitoes. Mr. Bredehoeft stated he would look into the problem.

Acting Council President Charles Clark recessed the meeting at 7:26 p.m. noting the committee would reconvene after the City Council meeting to continue its discussion of the proposed 2014 Operating Budget.

Acting Council President Charles Clark reconvened the meeting of the Council Committee of the Whole at 8:00 p.m.

#### Administration 2014 Proposed Operating Budget

#### Mayor & Council

Quinn Bennion presented the proposed budget for the Mayor and Council program area which totaled \$188,778 for an increase of \$52,271. He reviewed the items included in this budget and noted that most of the items have been reduced. The increase results primarily from the transfer of election costs (\$68,000) from the City Clerk's budget to this area. In 2014 there are no scheduled County or School District elections, therefore, the election costs will be charged to the City. Funds have been budgeted to cover a possible primary election as well as projected general election costs.

Laura Wassmer noted that in the past more funds were budgeted for conferences than were generally used and asked if this had been reduced for 2014. Quinn responded the budget includes funding for five or six persons to attend both NLC conferences.

David Morrison stated he would like to see this reduced. Ruth Hopkins disagreed noting that Council members change every two years and with a balanced budget she does not see any reason to reduce this. Laura Wassmer stated if staff is trying to get a budget that more closely reflects actual expenditures she felt that \$30,000 would be sufficient funding. Mr. Odell and Mr. Belz agreed with Mrs. Hopkins that until a process is established on how to determine who attends conferences if more people wish to go than there is funding available, the budget should remain as is. A straw vote of 6 to 3 was taken in support of the retaining the budgeted amount.

#### Management & Planning

The primary change in this budget is the result of a redistribution of the Worker's Compensation allocation of \$33,000 creating an increase of \$26,941.

#### Information Technology

This area does not include any staff costs and has a minimal increase for software agreements and increase for Wi-Fi and mobile user costs.

#### Legal Services

Quinn Bennion noted that legal services are provided at an hourly rate and are very difficult to predict with wide variations. He reviewed the 2011, 2012 actual costs demonstrating the wide variations. 2012 costs were more than double those of 2011 due to extensive HR costs related to a challenged termination of an employee; a review and rewrite of the Prairie Village Municipal Foundation By-Laws; costs for legal review of Planning issues and pension plans and costs related to both litigation and the filing of the ethics complaint.

Brooke Morehead asked if all the costs were for the City Attorney's services. Mr. Bennion responded most of the charges were from Lathrop & Gage, but not necessarily

for Ms Logan's services as some of the areas of expertise were outside her area. Mrs. Morehead asked when the City Attorney's contract expired. Mr. Bennion noted the City Attorney position is an appointment of the Mayor. He also added some of the legal fees were for legal representation by our insurance carrier and payment of deductible in legal settlements.

David Belz asked how the budgeted amount, which is \$60,000 less, was determined. Mr. Bennion explained some of the expenses, such as the review of the by-laws, were known to be one-time charges.

#### City Clerk; Municipal Court; Codes Administration

Dennis Enslinger presented these budgets that did not have any significant changes. He noted that some Municipal Court expenses are paid by the City of Mission Hills also. The Codes Administration budget includes increased funding attributable to the additional code enforcement activities desired by the Council.

#### Parks & Recreation

Danielle Dulin noted this program area reflects a slight decrease from 2013 due to the reduction in overtime from more efficient scheduling procedures and more efficient food inventory with less waste from the concessions operation.

#### **Community Programs**

Dennis Enslinger noted a decrease in this area. He noted an accounting procedure change with the handling of art sales and VillageFest revenue which had previously gone through the municipal foundation which now applies the revenue to the City. This budget does include \$16,000 for new Community Center furniture.

#### General Budget Items

Quinn Bennion reviewed the following general budget items:

- Fuel costs are being budgeted at \$3.75 per gallon
- Health Insurance has been budgeted with a 10% increase
- KPERS has a 0.9% employer rate increase, for a total of 9.84% which has been set by the State along with an increase in the percentage paid by employees
- Police Pension contribution is the same as 2013 \$450.000
- Employee Merit Pool of 3%
- No rate increase expected for street lights and traffic signals
- General Fund Contingency Level of \$500,000

Mr. Bennion provided background on previous employee merit pools and an explanation of the indexes used in the compilation of the recommended percentage. He noted that most area cities are anticipating a two to three percent merit pool with the cities of Leawood and Merriam at higher a higher rate. He added the city does not provide a cost of living adjustment (COLA) or automatic step increases. The salary increase received is determined by the employee's annual performance.

Brooke Morehead asked Chief if salary has been an issue with attracting employees for his department. Chief Jordan responded the current issues the department faces are

not salary related, but finding quality candidates with the level of professionalism and commitment desired causing them to run multiple processes.

#### **Economic Development**

Quinn Bennion noted this budget remains the same as 2013 and reviewed the items currently being funded out of this budget.

#### **Equipment Reserve**

Mr. Bennion noted this program addresses the need for replacement of equipment that occurs on an irregular basis by placing funds in reserve in anticipation of these expenditures and eliminating spikes in city expenditures from budget to budget. The funding source is a transfer from General Fund, Stormwater Utility funds and interest on idle funds. The proposed 2014 budget is \$687,600. Mr. Bennion reviewed the items anticipated to be funded through this account.

#### General Fund Transfer to CIP

Quinn Bennion noted the proposed 2014 transfer to CIP is \$2.5M, the same as 2013. The 2014 CIP budget will be presented at the next Council Committee of the Whole meeting.

#### Adjournment

With no further business to come before the Committee, Acting Council President Charles Clark adjourned the meeting at 8:51 p.m.

Charles Clark
Acting Council President

#### **TREE BOARD**

#### City of Prairie Village, Kansas

#### **MINUTES (DRAFT)**

## Wednesday June 5, 2013 Public Works Conference Room 3535 Somerset Drive

Board Members: Jack Lewis, Greg VanBooven, Deborah Nixon, Luci Mitchell, Elizabeth Cavanaugh, Rick Howell

Other Attendees: Suzanne Lownes, Matt Gietzen with Tutera

Jack Lewis called the meeting to order at 6:00 p.m. with a quorum present.

1) Review and Approve Minutes of May 1, 2013- Motion by Jack Lewis, second by Luci Mitchell Approved unanimously.

#### 2) Plan review for Roe 89 Shops

The board reviewed the landscape plan for the Roe 89 Shops. Luci Mitchell moved to approve the plan with the substitution of day lilies for the proposed hostas, seconded by Jack Lewis and approve unanimously.

#### 3) Sub-Committee Report

#### 3.1) EAB

#### a) Update from Sub-Committee Work Session

Suzanne Lownes commented on the notes that were submitted concerning the rating system and that it needed to have a description for the 4 rating criteria. The group discussed the rating factors and Suzanne Lownes said she would type them up for review. The group discussed wanting ID's to have as they were out inventorying the trees so pictures were taken and Suzanne will have ID badges created.

#### 3.2) Fall Seminar

#### a) Continue planning for Fall Event

The event is planned for October 2<sup>nd</sup> at 7:00pm. Suzanne Lownes will check the availability of the Council Chamber at City Hall. Greg VanBooven suggested Kim Bomberger with the State Forestry Service as a potential speaker. Rick Howell suggested that Dennis Patton might be a good option. Elizabeth Cavanaugh and Rick Howell said they would get in contact with Dennis Patton on his availability and interest on doing a presentation on EAB. Jack Lewis also said it would be good to add as a portion of the event an update by Tree Board on the preliminary inventory results.

#### 4) Old Business

There was no Old Business.

#### 5) New Business

There was no New Business.

#### 6) Next Meeting

The next meeting will be August 7, 2013 at 6:00pm at the Public Works Facility unless something arises that needs to be handled by a July meeting.

The meeting adjourned at 7:05 p.m. Minutes prepared by Suzanne Lownes.

# Council Members Mark Your Calendars June 17, 2013

**June 2013** Susan Tower exhibit in the R.G. Endres Gallery

June 17 City Council Meeting

**July 2013** Senior Arts Council exhibit in the R.G. Endres Gallery

July 1 City Council Meeting

July 4 City offices closed in observance of Independence Day

July 4 VillageFest

July 12 Artist reception in the R. G. Endres Gallery 6:30 - 7:30 p.m.

July 15 City Council Meeting

August 2013 Olathe Visual Arts exhibit in the R.G. Endres Gallery

August 5 City Council Meeting

August 9 Artist reception in the R. G. Endres Gallery 6:30 - 7:30 p.m.

August 19 City Council Meeting

September 2013

September 2 City offices closed in observance of Labor Day

September 3 City Council Meeting

September 7 Jazz Festival

September 13 Artist reception in the R. G. Endres Gallery 6:30 - 7:30 p.m.

September 16 City Council Meeting

September 25 Shawnee Mission Education Foundation Fall Breakfast

October 2013 State of the Arts Exhibit in the R. G. Endres Gallery

October 7 City Council Meeting

October 11 Artist reception in the R. G. Endres Gallery 6:00 - 8:00 p.m.

October 21 City Council Meeting

**November 2013** Mid-America Pastel Society exhibit in the R.G. Endres Gallery

November 4 City Council Meeting

November 8 Artist reception in the R. G. Endres Gallery 6:30 - 7:30 p.m.

November 12 - 16 National League of Cities Conference in Seattle, WA

November 18 City Council Meeting

November 28 City offices closed in observance of Thanksgiving November 29 City offices closed in observance of Thanksgiving

December 2013 Greater Kansas City Arts Association exhibit in the R. G. Endres Gallery

December 2 City Council Meeting

December 13 Artist reception in the R. G. Endres Gallery 6:30 - 7:30 p.m.

December 16 City Council Meeting

December 25 City offices closed in observance of Christmas