



**CITY OF NOVI CITY COUNCIL
SEPTEMBER 30, 2024**

SUBJECT: Consideration of an award to SysTemp Corporation for the Civic Center and Department of Public Works HVAC automation project in the amount of \$256,698.

SUBMITTING DEPARTMENT: Integrated Solutions, Facilities Management Division

KEY HIGHLIGHTS:

- Fully automates HVAC controls at the Civic Center and DPW.
- Replaces the 1980s pneumatic system on the Community Center side of the Civic Center.
- Adds remote monitoring for better control of HVAC in both locations.
- Install a new digital HVAC system at DPW and create more zones.
- Decreases technician visit costs and creates energy savings.

FINANCIAL IMPACT

	FY 24/25	Total
EXPENDITURE REQUIRED	\$256,697.59	\$256,697.59
BUDGET		
General Fund		
1. HVAC Auto Controls Community Center (101-265.00-976.127)	\$ 80,190	\$ 80,190
2. HVAC Auto Controls DPW (101-265.00-976.130)	\$ 200,000	\$ 200,000
APPROPRIATION REQUIRED	\$ 0	\$ 0
FUND BALANCE IMPACT	\$ 0	\$ 0
<ul style="list-style-type: none"> • Cost-benefit of \$23,492.41 from original estimates by combining into one project. • No proprietary contracts or annual fees associated with this purchase. • This item is \$23,493 under budget 		

BACKGROUND INFORMATION:

In 2020, the City Hall side of the Civic Center's HVAC system was updated from 1980's pneumatic controls to a computerized digital system. This upgrade allowed technicians to monitor the HVAC system remotely and adjust as needed. Additional benefits included less technician after-hour costs and more control over energy savings. Currently, the Community Center side of the Civic Center is still on the old pneumatic system as it was not part of the conversion in 2020. Parts and repairs to this side of the Civic Center have become more costly and complex due to the limited availability of replacement parts. Under this scope, the remaining HVAC units on the northwest side of the Civic Center will be added to the existing digital system on the City Hall side. Additionally, there is a cost-benefit to combining these two 2024-2025 budgeted projects into one scope.

The City of Novi DPW was rebuilt in 2018, and new HVAC components were added as part of this project. As a result, there is limited control over the HVAC systems in this building because they are on two separate systems. Large areas share the same thermostat as smaller offices, and airflow cannot be regulated separately. There is no way to adjust temperatures in smaller offices or troubleshoot issues remotely. As part of this project, all HVAC-related items at the DPW will be connected to a new front-end control system with additional thermostats and remote capabilities. Fan boxes will be added throughout the office spaces, and more ductwork will be run. This will create new zones for better control over offices and open spaces.

These proposed systems will provide direct digital control and help Facilities Maintenance staff pinpoint problems and maximize energy efficiency in these buildings. The controls and equipment are available through local distributors and available to multiple vendors. There are no proprietary contracts or annual fees associated with this purchase. SysTemp Corporation is our current contracted HVAC company and is familiar with the project scope and our equipment. Once completed, the Civic Center and DPW will join the existing digital system at PD for complete HVAC energy control in Novi's three most prominent facilities.

RECOMMENDED ACTION: Consideration of approval to award SysTemp Corporation the Civic Center and Department of Public Works (DPW) HVAC automation project in the amount of \$256,698.



3355 Bald Mountain Rd, Suite 10, Auburn Hills, MI, 48326

Attn: Matt Turco	Date: Aug 16, 2024
Email: mturco@cityofnovi.org	Re: Entire Building Controls
Company: CITY OF NOVI	Upgrade REV1
Address: CITY OF NOVI FINANCE	File Number: 1797
DEPARTMENT, 45175 10 MILE ROAD, NOVI,	Property: DPW FACILITY
MI, 48375	Address: 26300 LEE BEGOLE DR.,
	NOVI, MI, 48375

Thank you for allowing Systemp Corporation the opportunity to furnish our proposal for your review. Our quote will include all labor, materials, equipment, and subcontractors to complete the above project according to industry standards and practices.

SPECIFIC INCLUSIONS

Sheet metal

- Rework ductwork and add 5 zones to RTU 2
- Insulate duct
- Air balance

Controls

- Install a Front end controller "JACE 8000, 50 device license, 1 year SMA"
- install 5 new Distech VAV controllers, duct sensors and space sensors
- Run power and communication wire to equipment
- Integrate all equipment to new front end "MAUs, RTUs, and VAVs"
- Add BACnet thermostats along with temperature sensors and relays to Equipment that is currently standalone "4 RTUs and 3 MAUs"
- Bring on all heaters in the garage area for local or bms control
- Bring on existing gas detection system to BMS
- Bring on all exhaust fans to BMS to view fan status
- Bring on all Hot water heaters to view temperatures and status
- Add space sensors to areas with mini splits for temperature monitoring and alarms
- Add BACnet Thermostats and bring on two existing Furnaces to BMS
- Set up Alarms, Trends, and Schedules
- Make graphics for end user to view all equipment
- Work with IT department for internal access to the system
- Commission controls
- Training

QUALIFICATIONS

1. Our offer is firm for 30 thirty days from the date listed above.
2. Our offer is predicated upon a clear and accessible area that will be made available by others, where our work is to be performed.

3. Unless noted in the specific inclusions, our work will be performed during our normal working hours and workweek.

Total Proposal as Outlined Above.....	\$151,600.59
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Sincerely,

Matt Walls

ACCEPTANCE OF PROPOSAL

This proposal represents the entire agreement between the parties. There are no representations, promises or other understandings unless expressly included herein.



3355 Bald Mountain Rd, Suite 10, Auburn Hills, MI, 48326

Attn: Matt Turco	Date: Feb 10, 2024
Email:	Re: Building Controls Upgrade
Company: CITY OF NOVI	File Number: 1542
Address: CITY OF NOVI, CITY OF NOVI	Property: CIVIC CENTER
FINANCE DEPARTMEN, 45175 10 MILE ROAD,	Address: 45175 TEN MILE RD.,
NOVI, MI, 48375	NOVI, MI, 48375

Thank you for allowing Systemp Corporation the opportunity to furnish our proposal for your review. Our quote will include all labor, materials, equipment, and subcontractors to complete the above project according to industry standards and practices.

SPECIFIC INCLUSIONS

Controls upgrade will include the following:

1. Upgrading the Jace license to handle the additional devices.
2. Communication and power supply wiring to terminal units, along with installing the required power supply transformers.
3. AHU 1 - Programming, graphics, alarming, trending, and interfacing to the existing control system. Installation of the following power supplies, panel, controller, sensors, electric-to-pneumatic transducers, and programming and interfacing to the existing control system, leaving all valves and actuators pneumatic and using E/Ps.
4. AHU 3 - Programming, graphics, alarming, trending, and interfacing to the existing control system. Installation of the following power supplies, panel, controller, sensors, electric-to-pneumatic transducers, and programming and interfacing to the existing control system, leaving all valves and actuators pneumatic and using E/Ps.
5. 12 VAVs - Programming, graphics, alarming, trending, and interfacing to the existing control system. Installation of the following controller, digital space sensor, DDC reheat valve/actuator, discharge sensor.
6. 10 CAVs - Programming, graphics, alarming, trending, and interfacing to the existing control system. Installation of the following controller, digital space sensor, DDC reheat valve/actuator, discharge sensor.
7. 9 FPBs - Programming, graphics, alarming, trending, and interfacing to the existing control system. Installation of the following controller, digital space sensor, DDC reheat valve/actuator, discharge sensor, fan relay.
8. East Misc Controller - EF 2, 3, 4, and 5, boiler plant, chilled water temperatures. Programming, graphics, alarming, trending, and interfacing to the existing control system.
9. West Misc Controller - Domestic hot water temperature monitoring, exhaust fan 1, air compressor pressure monitoring. Programming, graphics, alarming, trending, and interfacing to the existing control system.
10. Hot water heating system boiler Modbus integration, graphics, alarming, trending, and interfacing to the existing control system.

QUALIFICATIONS

1. Our offer is firm for 30 thirty days from the date listed above.
2. Our offer is predicated upon a clear and accessible area that will be made available by others, where our work is to be performed.

3. Unless noted in the specific inclusions, our work will be performed during our normal working hours and workweek.

Total Proposal as Outlined Above.....	\$105,097.00
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Sincerely,

Drew Soper

ACCEPTANCE OF PROPOSAL

This proposal represents the entire agreement between the parties. There are no representations, promises or other understandings unless expressly included herein.

SINGLE HVAC SPLIT SYSTEM SCHEDULE																	
TAG		COOLING TONS	TOTAL COOLING (BTUH)	SEER	REFRIGERANT	TOTAL HEATING	INDOOR UNIT			OUTDOOR UNIT			ELECTRICAL		BASIS OF DESIGN		NOTES
INDOOR	OUTDOOR						CFM	HMM/DLW	LOCATION	FILTER	LOCATION	FAN	VOLTS/PHZ	FLA	INDOOR MODEL	OUTDOOR MODEL	
AC-1	CU-3	2	25,200	17	134c	-	559/475/390	IT ROOM	WASHABLE	ROOF	PROP.	208/1ø/60	16.9	PANASONIC S-26PK1UG	PANASONIC U-26PS1UG	1,2,3,4,5	

NOTES:
 1) LOW AMBIENT CONTROL, MICROPROCESSOR CONTROLS.
 2) PROVIDE THERMOSTAT, (WEATHER BUFF) DISCONNECT SWITCH, REMOTE CONTROLLER.
 3) PROVIDE INDOOR WALL SUPPORT, INSTALL PER MANUFACTURER RECOMMENDATION.
 4) PROVIDE OUTDOOR, SUPPORT SIMILAR TO THYBAR MODEL TMS-3 12" HIGH.
 5) PROVIDE PROPERLY SIZED REFRIGERANT LINE SET, INSTALL PER MANUFACTURER RECOMMENDATION.

KEY HVAC NOTES:

- 1) PROVIDE AND INSTALL NEW ROOF TOP UNIT COMPLETELY WITH ELECTRICAL, CONTROLS, ROOF CURB AND S.A./R.A. DUCTWORK THRU ROOF. EXTEND NEW NG PIPING (BY PLUMBING TRADE) TO SERVE NEW RTU.
- 2) PROVIDE AND INSTALL NEW GAS FIRED UNIT HEATER COMPLETELY WITH ELECTRICAL AND CONTROLS. EXTEND NEW 4" FLUE THRU ROOF WITH A MINIMUM OF 3'-0" AWAY FROM PARAPET WALL. TERMINATE 3'-0" ABOVE ROOF WITH RAIN CAP. EXTEND NEW NG PIPE (BY PLUMBING TRADE) TO SERVE NEW SH-1 AND SH-2.
- 3) PROVIDE AND INSTALL NEW GAS FIRED INTRA-RED HEATER COMPLETELY WITH ELECTRICAL AND CONTROLS. EXTEND NEW 4" FLUE/COMBUSTION AIR THRU ROOF WITH A MINIMUM OF 3'-0" AWAY FROM PARAPET WALL. TERMINATE 3'-0" ABOVE ROOF WITH RAIN CAP. EXTEND NEW NG PIPE (BY PLUMBING TRADE) TO SERVE NEW SH-1 AND SH-2.

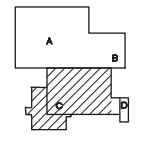
- 4) PROVIDE AND INSTALL NEW SHIP VFD FOR EXISTING MAU-3. INTERLOCK WITH EXISTING EF-4 AND NEW CO/NO2 CONTROL PANEL.
- 5) PROVIDE AND INSTALL NEW EXHAUST FAN (EF-1 AND EF-1A) COMPLETELY WITH ELECTRICAL AND CONTROLS. EXTEND NEW E.A. DUCTWORK AND TERMINATE WITH E.A. GRILLES. BALANCE AS INDICATED. INTERLOCK EF-1 AND EF-1A WITH CO/NO2 SENSORS AND OUTSIDE AIR LOUVERS. MOTORIZED DAMPER, LOCATE EF-1 AND EF-1A ON PLATFORM (BY ARCHITECTURAL TRADE).
- 6) PROVIDE AND INSTALL NEW OUTSIDE AIR LOUVER (OL-1) COMPLETELY WITH MOTORIZED DAMPER. LOCATE AT 18" ABOVE GROUND. INTERLOCK WITH EF-1.
- 7) PROVIDE AND INSTALL NEW EXHAUST AIR LOUVER (RL-1) AT 5' A.F.F. COMPLETELY WITH ELECTRICAL, CONTROLS, FLUE PIPE THRU ROOF, GAS EXTEND NEW CONDENSATE LINE FROM FURNACE AND TERMINATE ABOVE FLOOR DRAIN (BY PLUMBING TRADE).
- 8) PROVIDE AND INSTALL NEW 4" DRYER EXHAUST. EXTEND UP THRU ROOF AND TERMINATE WITH ROOF CAP.
- 9) EXTEND NEW S.A./R.A. DUCTWORK FROM EXISTING RTU-1 AND MAU-1,2. TERMINATE WITH OUTLETS AND GRILLES. BALANCE AS INDICATED.
- 10) PROVIDE AND INSTALL NEW 15 HP VARIABLE FREQUENCY DRIVE (VFD) FOR EXISTING MAU-2'S FAN. INTERLOCK MAU-2'S VFD AND EXISTING EXHAUST FANS EF-1/EF-2 AND WITH CO/NO2 SENSORS.
- 11) VERIFY CONDITION OF EXISTING RTU-3, MAU-1,2,3. CLEAN COILS, CHANGE FILTERS, TIGHTEN PAN'S BELTS, ETC.
- 12) PROVIDE AND INSTALL NEW TLT ROOM EXHAUST FAN COMPLETELY WITH ELECTRICAL, CONTROLS, E.A. DUCTWORK THRU WALL. TERMINATE WITH WALL CAP.
- 13) PROVIDE AND INSTALL STORAGE BUILDING NEW CO/NO2 EXHAUST SYSTEM COMPLETELY WITH EF-5, E.A. DUCTWORK WITH HIGH/LOW E.A. GRILLES, CO/NO2 SENSORS AND CONTROL PANEL.
- 14) PROVIDE AND INSTALL NEW HOSIERS ROOF CAP (MODEL GREENHECK ROC-7 OR EQUAL). EXTEND NEW 6" DIA. DUCT TO SERVE NEW FURNACE. BALANCE AS INDICATED.
- 15) PROVIDE AND INSTALL NEW SHIP SHIP EXHAUST FAN COMPLETELY WITH ELECTRICAL AND CONTROLS. EXTEND NEW 10" E.A. DUCT UP THRU ROOF AND TERMINATE WITH ROOF CAP.
- 16) PROVIDE AND INSTALL NEW DUST COLLECTOR (MODEL CYCLONE 3624 OR EQUAL) COMPLETELY WITH ELECTRICAL AND CONTROLS.
- 17) PROVIDE AND INSTALL NEW CAR WASH EXHAUST FAN (EF-4) WITH VFD COMPLETELY WITH 30" ROOF CURB, ELECTRICAL, CONTROLS, ALUMINUM DUCT THRU ROOF. TERMINATE DUCT WITH E.A. GRILLES. BALANCE AS INDICATED. INTERLOCK EF-4 WITH CO/NO2 SENSORS WITH MANUAL SWITCH/FAN OVERRIDE.
- 18) PROVIDE AND INSTALL NEW CAR WASH INTAKE LOUVER (L-2) COMPLETELY WITH MOTORIZED DAMPER. INTERLOCK DAMPER WITH EF-4. LOCATE AT 18" BELOW ROOF.
- 19) VERIFY CONDITION OF EXISTING EF-1, EF-2, EF-3, EF-4, EF-5, EF-6. TIGHTEN BELTS, ADJUST SHEARS AND PULLERS AS NECESSARY. PROVIDE AND INSTALL NEW 1.5HP VFD FOR EXISTING EF-4 AND SHIP VFD FOR EXISTING EF-4.
- 20) EXTEND NEW EXHAUST AIR DUCTWORK FROM EXISTING EF-4. TERMINATE WITH HIGH/LOW E.A. GRILLES. BALANCE AS INDICATED.
- 21) PROVIDE AND INSTALL NEW ELECTRIC UNIT HEATER COMPLETELY WITH ELECTRICAL AND CONTROLS.
- 22) DISCONNECT AND REMOVE EXISTING SPLIT SYSTEM CONDENSER MAU-AC UNIT COMPLETELY WITH ELECTRICAL AND CONTROLS. RETURN UNITS TO THE OWNER. PROVIDE AND INSTALL NEW SPLIT SYSTEM CONDENSER (CU-3) ON ROOF AND AC UNIT (AC-1) IN IT ROOM COMPLETELY WITH ELECTRICAL AND CONTROLS. EXTEND NEW REFRIGERANT PIPING BETWEEN NEW CU-3 AND AC-1. EXTEND NEW CONDENSATE PIPING FROM AC-1 TO NEAREST FLOOR DRAIN OR MOP SINK (BY PLUMBING TRADE).



Project Title: DEPT. OF PUBLIC SERVICES RENOVATION & ADDITION

NOVI, MI

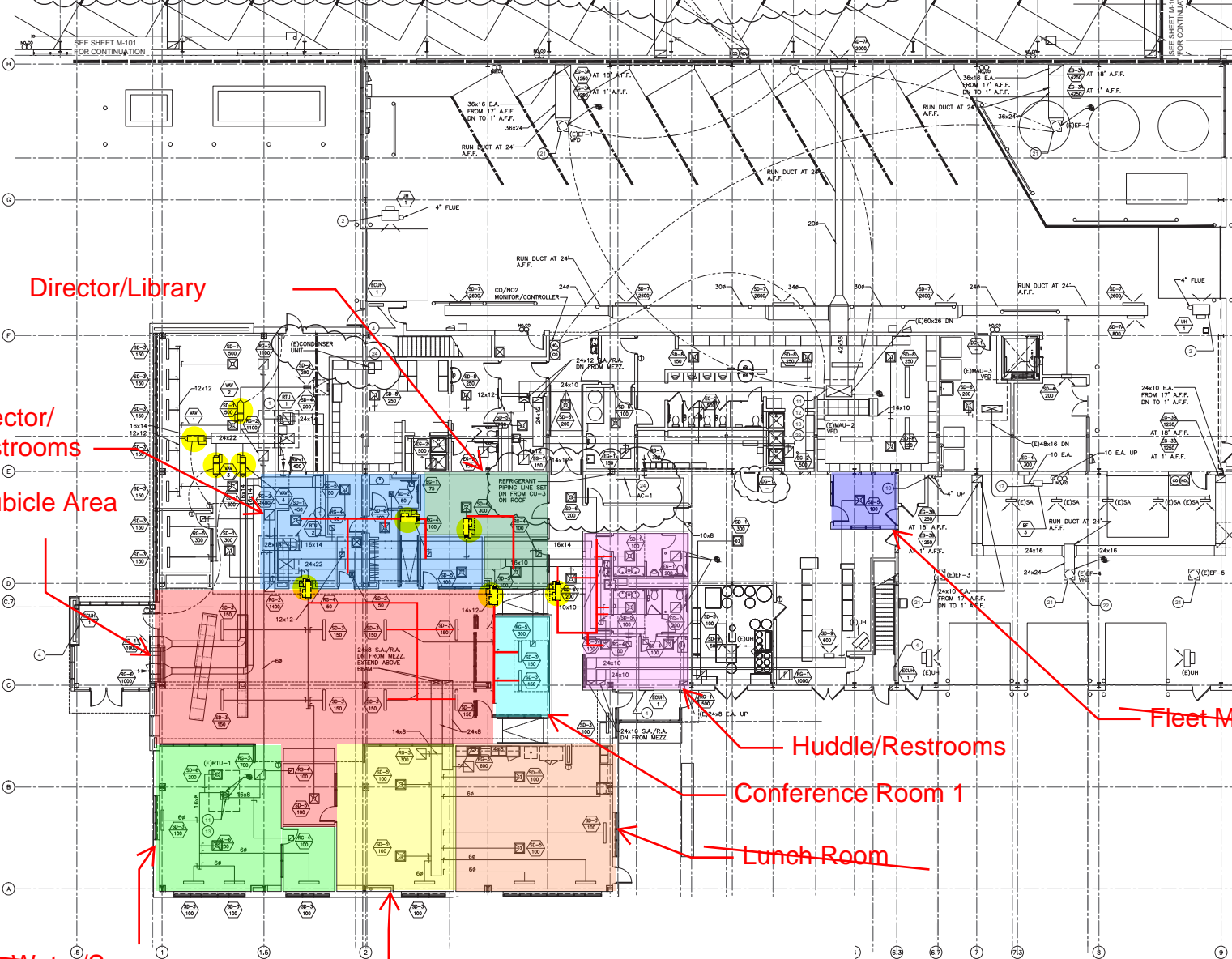
Date:	Issued For:
8-23-2017	DESIGN DEVELOPMENT
9-19-2017	PERMITS
10-25-2017	PERMIT REVISIONS
10-31-2017	PERMIT REVISIONS
11-14-2017	BIDD
05-11-2018	CONSTRUCTION
07-23-2018	BULLETIN NO.3
08-14-2018	BULLETIN NO.4
09-11-2018	BULLETIN NO.5



KEY PLAN

Drawn:	MS	Designed:	MS
Checked:		Approved:	
CAD Drawing File:	M-103.dwg		
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Project Number:	216405.00		

Project Title: HVAC FLOOR PLAN - AREA C



Director/Library

Director/Restrooms

Cubicle Area

Water/Sewage

Field Operation

Huddle/Restrooms

Conference Room 1

Lunch Room

Fleet Manager

1 FIRST FLOOR HVAC PLAN - AREA "C"
 SCALE: 1/8" = 1'-0"