

**EMERGENCY SPECIAL CALLED
CITY COUNCIL MEETING AGENDA
1705 MAIN STREET, DAPHNE, AL
APRIL 25, 2014
BUSINESS MEETING
3:30 P.M.**

1. CALL TO ORDER

2. ROLL CALL/INVOCATION / PLEDGE OF ALLEGIANCE

3. DISCUSS:

A. Ordinance 2014-18: Civic Center HVAC Chiller Emergency Replacement
Appropriation

Attachments

- Ordinance 2014-18 (*proposed*)1
- Ordinance 2014-17 (*approved 04.21.2014*).....2
- Quote Summary.....3
- JLS Quote4
- Johnson Controls Quote16
- T&M Quote36

B. Resolution 2014-18: Resolution to authorize the Mayor & the Director of
Public Works to apply for the State of Alabama's Fiscal Year 2014
Transportation Alternative Program (TAP)

Attachments

- Resolution 2014-18 (*proposed*).....45
- TAP Grant Working Packet46

4. ADJOURN

ORDINANCE 2014
Civic Center HVAC Chiller Emergency Replacement Appropriation

WHEREAS, Ordinance 2013-50 approved and adopted the Fiscal Year 2014 Budget on September 23, 2013; and

WHEREAS, subsequent to the adoption of the Fiscal Year 2014 budget, the City Council has determined that certain appropriations are required and should be approved and made a part of the Fiscal Year 2014 budget; and

WHEREAS, due to lightning damage to the Civic Center HVAC Chiller an emergency replacement is needed to get the HVAC system back to fully functional capacity; and

WHEREAS, several events have been booked over the next weeks and months at the Civic Center and HVAC is required for these events.

WHEREAS, quotes have been obtained for repairs verses replacement cost for the chiller

WHEREAS, the quote for repair was estimated to be \$56,000 and the purchase of a new chiller's total cost from JLS International is estimated to be \$165,170 (\$124,769-Chiller + \$10,401-Maintenance + \$30,000-rental chiller); and

WHEREAS, HVAC companies have advised that purchasing a new more efficient chiller unit will create an estimated \$12,000-15,000/year energy savings that will offset the cost of the new unit; and

WHEREAS, the adoption of Ordinance 2014-17-C appropriated \$15,000 for the first month's cost for a rental chiller leaving a **balance of \$150,170** needed to be appropriated for the purchase and installation cost of a new chiller; and

WHEREAS, the City's insurance policy is estimated to reimburse \$51,000 (*repair cost \$56,000 less the \$5,000 deductible*); and

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Daphne, Alabama, that

1. Additional funds **not to exceed \$150,170** from the General Fund are hereby appropriated and made a part of the Fiscal Year 2014 budget to purchase a replacement Civic Center chiller from JLS International (*including rental chiller cost*).
2. Insurance reimbursement (*estimated \$51,000*) to be recorded in the budget as an insurance settlement; and

APPROVED AND ADOPTED by the Mayor and City Council of the City of Daphne, Alabama, this _____ day of _____, 2014.

Dane Haygood. , Mayor

ATTEST:

Rebecca A. Hayes, City Clerk

ORDINANCE 2014-17
Option C
Civic Center HVAC Chiller Emergency Replacement Appropriation

WHEREAS, Ordinance 2013-50 approved and adopted the Fiscal Year 2014 Budget on September 23, 2013; and

WHEREAS, subsequent to the adoption of the Fiscal Year 2014 budget, the City Council has determined that certain appropriations are required and should be approved and made a part of the Fiscal Year 2014 budget; and

WHEREAS, due to lightning damage to the Civic Center HVAC Chiller an emergency replacement is needed to get the HVAC system back to fully functional capacity; and

WHEREAS, several events have been booked over the next weeks and months at the Civic Center and HVAC is required for these events and for which the Council believes that the lack of HVAC constitutes a public health and safety emergency; and

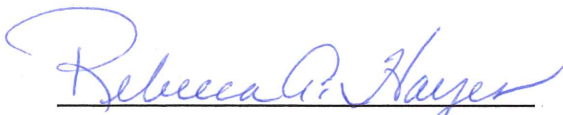
WHEREAS, the quote for a rental chiller is estimated to cost \$12,000 for delivery, installation, and the first month's rent; and

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Daphne, Alabama, that funds not to exceed \$15,000 from the General Fund are hereby appropriated and made a part of the Fiscal Year 2014 budget for the delivery, installation, and rental of a chiller for the Civic Center for the period of one month.

APPROVED AND ADOPTED by the Mayor and City Council of the City of Daphne, Alabama, this 21st day of April, 2014.


Dane Haygood, Mayor

ATTEST:


Rebecca A. Hayes, City Clerk

Civic Center Chiller Quote Summary

Vendor		JLS International Jeff Brown P.O. Box 928 Robertsdale, AL 36567	Johnson Controls C. Nelson 764 Lakeside Drive Mobile, AL 36609	T&M Heating & AC, Inc. H. Wilson P.O. Box 1582 Bay Minette, AL 36507
Chiller	Repair Only	No Quote	\$56,759.89	\$55,643.00
	Brand	York	York	Trane
	Model	YVAA0233BEF	YVAA0263BGV46BA	RTAC250
	Refrigerant	R-134a	R-134a	R-134a
	Cost (Turn Key)	\$124,769.00	\$248,846.39	\$117,233.00
Warranty	Years	5 (60 months)	5 (60 months)	5 (60 months)
	Cost	\$10,401.00	\$0.00	\$12,168.00
Delivery & Install	Delivery (Weeks)	8	8	7 to 8
	Install Time (Weeks)	1 Week Max - 2 days quoted	1 Week	1 Week Max - 4 days quoted
Rental Chiller	1st Month	\$10,000.00	\$12,000.00	\$18,930.00
	2nd Month	\$10,000.00	\$9,750.00	\$15,250.00
	3rd Month	\$10,000.00	\$9,750.00	\$15,250.00
	Days to Deliver	2 to 7*	7**	7
Total Cost (New/Rental Chiller)		\$165,170.00	\$280,346.39	\$178,831.00

*Next Day if required

** \$5,000-\$7,000 connection cost included in new chiller price

JLS INTERNATIONAL INC.

P. O. BOX 928
ROBERTSDALE, AL. 36567

TELEPHONE 251-947-5688
FAX 251-947-5689

04-21-2014

Attn: Mr. Frank Barnett
26435 Public Works Road
P.O. Box 400
Daphne, Al. 36526

Ref: Daphne Civic Center Air Cooled Chiller Replacement

Mr. Barnett,
Please see the following proposal.

- Remove existing Trane RTTA240 Air Cooled Chiller
- Demo existing piping and valves for new valves and piping installation
- Install new York YVAA0233BEF Air Cooled Chiller complete and operational
- Including factory start up
- Tie in existing electrical, piping, controls
- New pipe insulation with heat tape
- New flex connectors and strainer
- One year parts and labor warranty

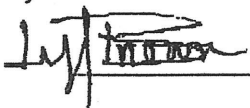
Filter w/BALL VALVES -

Total- Tax Included

\$ 124,769.00

Thank you,

Jeff Brown



JLS INTERNATIONAL INC.

P. O. BOX 928
ROBERTSDALE, AL 36567

TELEPHONE 251-947-5688

FAX 251-947-5689

4-22-2014

Attn: Mr. Frank Barnett
26435 Public Works Road
P.O. Box 400
Daphne, Al. 36526

Ref: - Add (5) Five Years Parts and Labor for New Chiller at Daphne Civic Center:
- Provide a 150 ton temporary chiller and install:

Mr. Barnett,

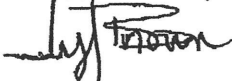
- The added cost to provide a (5) year complete parts and labor factory warranty:

\$ 10,401.00

- The added cost to provide a Temporary Chiller and install:
- **Delivered, set up, wired 150 ton Chiller**
- **\$ 10,000.00 monthly**

- Delivery will take approximately (8) eight weeks in production and to ship for new chiller.

Thank You,



Jeff Brown
Vice President



BY JOHNSON CONTROLS



***Model YVAA Air-Cooled Screw Compressor Liquid Chillers
with Variable Speed Drive
Style A***

150-500 Tons
525-1750 kW
2 Compressor
50 and 60 Hz
HFC-134a

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NOMENCLATURE

YVAA 021 3AXX 46 AA

1 2 3 4 BASE PRODUCT TYPE

1 Y : York
2 V : Variable Speed Screw
3 A : Air cooled
4 A : Design Series

5 6 7 FRAME SIZE

5 #
6 #
7 #

8 9 10 11 CONFIGURATION

8 # : Condenser code
9 # : Evaporator code
10 # : Compressor code
11 # : Condenser fan & sound kit code

12 13 VOLTAGE

1 7 : 200 / 3 / 60
2 8 : 230 / 3 / 60
4 0 : 380 / 3 / 60
4 2 : 400 / 3 / 60
4 6 : 460 / 3 / 60
5 0 : 380-415 / 3 / 50
5 8 : 575 / 3 / 60

14 15 LEVEL / REFRIGERANT

14 # : Development Level
15 A : Refrigerant R134a



Products are produced at a facility whose quality-management systems are ISO9001 certified.



ASHRAE 90.1 Compliant



JOHNSON CONTROLS

Introduction



For over 135 years, Johnson Controls has raised the bar of chiller design and customer expectations. We are raising the bar again with a leap forward in air-cooled chiller technology. Continuing the history of innovation in both compressor design and Variable Speed Drive (VSD) technology, Johnson Controls proudly introduces the YORK® YVAA.

In the past, the choice to use an air-cooled chiller came with the expectation of compromise, where simplicity of design and maintenance were traded for performance and efficiency. The new YVAA provides a better balance by combining the best of both - a high performance design that minimizes the total cost of ownership.

YORK YVAA model air-cooled chillers provide superior performance. Higher efficiency heat exchangers coupled with variable speed operation and smart controls elevate the system efficiency to a whole new level. The resulting benefit from YVAA chillers is much greater than the sum of its parts.

Efficiency: Reduce your consumption

YVAA chillers are Johnson Controls' most efficient air-cooled chillers. The design offers a lighter, smaller and quieter package that minimizes the installed cost and maximizes usable building space. YVAA chillers are simpler in design with easy access to service components for reliable operation and efficient maintenance. With up to a 40% improvement in real world efficiency versus current products, YVAA sets the new standards for lowering energy use.

Sustainability: Improve your environmental footprint

YVAA lowers both direct and indirect impact on the environment. It uses R134a refrigerant which has zero ozone
JOHNSON CONTROLS

depletion potential (ODP). The design minimizes the quantity of refrigerant used in the system. Every YVAA model helps LEED projects earn the Energy and Atmosphere Credit 4. The highest portion of green house gases is carbon dioxide generated from electric power plants. HVAC systems are one of the largest consumers of electricity in commercial buildings. YVAA chillers reduce the electricity usage, thereby contributing to reducing greenhouse gases and helping keep the planet cool.

Low Sound: Quiet operation makes you a good neighbor

The variable speed technology on YVAA allows unparalleled low sound levels at off peak design conditions. This makes YVAA a great solution for sound sensitive zones. Several acoustic attenuation options such as smart controls (SilentNight™), aerodynamic fans, and effective sound enclosures allow the chiller to meet even the most stringent sound level requirements.

Confidence: Proven performance provides peace of mind

YVAA design is proven by years of success with the previous generation of YORK VSD air-cooled screw chillers with thousands of machines operating in more than one hundred countries.

YVAA is configurable to be the perfect fit for your unique needs. YVAA offers an array of options that can be tailored and tuned to match the capacity, efficiency, sound and footprint for your specific application. Several variations of condenser fans, evaporator arrangements, sound kits, protection enclosures, and controls schemes are available to meet specific requirements for your site.

Ratings



Rated in accordance with the latest issuance of AHRI Standard 550/590.

AHRI CERTIFICATION PROGRAM

The performance of the YORK YVAA chiller has been certified to the Air Conditioning, Heating, and Refrigeration Institute (AHRI) as complying with the certification sections of the latest issue of AHRI Standard 550/590. Under this Certification Program, chillers are regularly tested in strict compliance with this Standard. This provides an independent, third-party verification of chiller performance.

COMPUTERIZED PERFORMANCE RATINGS

Each chiller is custom-matched to meet the individual building load and energy requirements. A variety of standard heat exchangers and pass arrangements are available to provide the best possible match.

It is not practical to provide tabulated performance for each combination, as the energy requirements at both full and part load vary significantly with each heat exchanger and

pass arrangement. Computerized ratings are available through each Johnson Controls sales office. Each rating can be tailored to specific job requirements, and is part of the AHRI Certification Program.

OFF-DESIGN PERFORMANCE

Since the vast majority of its operating hours are spent at off-design conditions, a chiller should be chosen not only to meet the full load design, but also for its ability to perform efficiently at lower loads. It is not uncommon for chillers with the same full load efficiency to have an operating cost difference of over 10% due to differences in off-design (part-load) efficiencies.

Part load information can be easily and accurately generated by use of the computer. And because it is so important to an owner's operating budget, this information has now been standardized within the AHRI Certification Program in the form of an Integrated Part Load Value (IPLV), and Non-Standard Part Load Value (NPLV).

The current IPLV/NPLV rating from AHRI Standard 550/590 much more closely tracks actual chiller operation, and provides a more accurate indication of chiller performance than the previous IPLV/APLV rating. A more detailed analysis must take into account actual building load profiles, and local weather data. Part load performance data should be obtained for each job using its own design criteria.

Unit Overview

SEMI-HERMETIC YORK TWIN SCREW COMPRESSORS

The direct-drive, semi-hermetic rotary twin-screw compressors incorporate advanced technology in a rugged design. The continuous function, microprocessor controlled VSD provides smooth capacity control from 100% down to 10% of chiller capacity. State-of-the-art technology, obtained from decades of screw compressor design and manufacturing by FRICK®, ensures optimal efficiencies at all chiller load points. With no unloading steps or slide valves in the compressors, the YVAA variable speed driven compressors have 50% fewer moving parts than fixed speed compressors with slide valves. The YVAA compressor is one of the most efficient and reliable screw compressors in the industry.

EVAPORATOR

The evaporator is a shell and tube, hybrid falling film type heat exchanger. It contains a balance of flooded and falling film technology to optimize efficiency, minimize refrigerant charge, and maintain reliable control. A specifically designed distribution system provides uniform refrigerant flow for optimum performance.

CONDENSER

The YVAA introduces the microchannel coil to the YORK screw compressor chiller line. Microchannel coils are made of a single material to avoid galvanic corrosion due to dissimilar metals. Coils and headers are brazed as one piece, minimizing leaks. The inherently rugged coil construction, which includes non-overhanging fins, eliminates the possibility of fin damage. The microchannel maximizes condenser heat transfer, resulting in a smaller footprint, and reduces refrigerant charge by as much as 50%.

The condenser fans are composed of corrosion resistant aluminum hub and glass-fiber-reinforced polypropylene composite blades molded into a low-noise airfoil section. All blades are statically and dynamically balanced for vibration-free operation. Fan motors are Totally Enclosed Air-Over (TEAO), squirrel-cage type and current protected. The direct drive motors feature double-sealed and permanently lubricated ball bearings, cutting down on maintenance cost over the life of the unit.

REFRIGERANT CIRCUIT

The YVAA has one independent refrigerant circuit per compressor. Each circuit uses copper refrigerant pipe formed on computer-controlled bending machines. By using computer-aided technology, over 60% of system

pipework brazed joints have been eliminated (as compared to designs that use fittings), resulting in a highly reliable and leak-resistant system.

COMPLETE FACTORY PACKAGE

Each unit is shipped as a complete factory package, completely assembled with all interconnecting refrigerant piping and internal wiring and ready for field installation. Prior to shipment, each individual chiller undergoes an extensive testing procedure, ensuring workmanship is the highest quality and that the initial start-up is trouble-free. Before leaving the factory, each refrigerant circuit is factory pressure tested, evacuated and then fully charged with R134a refrigerant and oil. An operational test is performed with water flowing through the evaporator to ensure each circuit functions correctly.

ELECTRICAL

All controls and motor starting equipment necessary for unit operation are factory wired and function tested. There are no surprises when you go to start-up; you can have confidence that the unit will start up right the first time and every time.

The chillers come with a single point power connection and are supplied with a factory mounted and wired control transformer that powers all unit controls from the main unit power supply. The transformer utilizes scheduled line voltage on the primary side and provides 115V/1Ø on secondary. The standard unit is equipped with terminal block electrical connections. All exposed power wiring is routed through liquid-tight, UV-stabilized, non-metallic conduit.

VSD Power/Control Panel includes main power connection(s), VSD and fan motor contactors, current overloads, and factory wiring. All display and control features can be accessed through the keypad and control display access door, eliminating the need to open the main cabinet doors.

BUILDING AUTOMATION SYSTEM CAPABILITIES

The E-Link Gateway provides an economical and versatile connection between Johnson Controls equipment and open/standard protocols. It efficiently manages the communication protocols currently used by Johnson Controls equipment, exposing the data in a consistent, organized, and defined fashion. A simple switch selection allows configuration of the required equipment profile and output protocol, which reduces equipment connectivity startup time.

MicroComputer Control Center

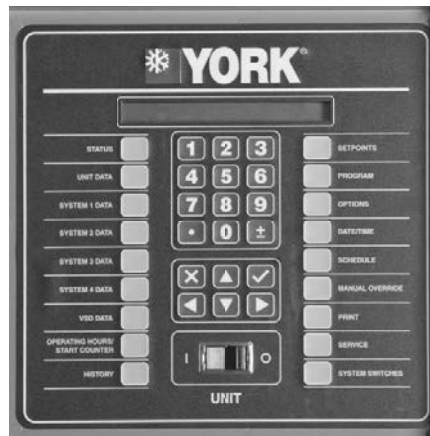


FIG.1 – VIEW OF YORK CONTROL CENTER KEYPAD AND DISPLAY

MICROCOMPUTER CONTROL CENTER

The microcomputer control center (see Figure 1) provides automatic control of chiller operation including compressor start/ stop and load/unload anti-recycle timers, condenser fans, chilled liquid pump, evaporator heater, unit alarm contacts and run signal contacts. The microcomputer control center comes online as soon as the main power switch on the unit is switched on; immediately, the micro-computer control center will begin to continuously monitor all variables.

The microprocessor controls the unit's capacity by matching the actual leaving chilled liquid temperature (LCHLT) to the user-defined setpoint. Factors that may cause the system's actual LCHLT to fluctuate are changes in ambient temperature, load, and chilled liquid loop flow rate and volume. The controls system reacts to such changes by adjusting the number of compressors that are on and the loading of each compressor in order to keep the LCHLT at the setpoint.

The controls system logic monitors the rate at which the LCWT is approaching the setpoint to ramp up or down compressor capacity as required. The variable frequency drive allows the compressor capacity to match the load.

Display Data

- Leaving Chilled Liquid Temperature
- Returning Liquid Temperature
- Ambient Temperature
- Lead System
- Compressor Capacity (% of Full Load Amps)
- VSD Output Frequency / Compressor Speed
- Compressor Run Hours
- Compressor Number of Starts
- Oil Pressure and Temperature (per Compressor)
- Chilled Liquid Pump Status

- Evaporator Heater Status
- History Data for Last Twenty Normal Shutdowns
- History Data for Last Ten Shutdown Faults

Programmable Setpoints

- Chiller on/Off
- Chilled Liquid (Water or Glycol)
- Local or Remote Control
- Units of Measure (Imperial or SI)
- System Lead/Lag
- Remote Temperature Reset
- Remote Current Limit
- Leaving Chilled Liquid Temperature Setpoint and Range

Johnson Controls' systems or another vendor's systems can incorporate these setpoints and data outputs to give the customer a complete understanding of how the system is running through a Building Automation System.

Extreme Conditions - During extreme or unusual conditions (i.e. blocked condenser coils, ambient above scheduled maximum, etc.) the chiller control system will avoid shutdown by varying capacity. By monitoring motor current and suction and discharge pressures, the chiller can maintain maximum available cooling output without shutting down.

Unit Safeties are provided for the chiller to perform auto-reset shut down for the following conditions:

- Ambient temperature above or below allowable range
- Out of range leaving chilled liquid temperature
- Under voltage
- Flow switch operation

Accessories and Options

All options factory mounted unless otherwise noted.

SOUND ATTENUATION

LOW NOISE KITS – The standard chiller configuration is equipped with low sound fans and acoustic treatments on the refrigerant lines and compressors. There are several sound attenuation options available to further reduce sound at its source thereby meeting local sound level regulations.

SilentNight - Due to time-of-day based sound regulations in some locations, it may be desirable to force the chiller to a lower sound level on demand. The SilentNight control option provides a control input to limit sound output of the chiller based on time of day. This feature is programmable at the chiller panel or can be controlled remotely via a signal (4-20mA or 0-10 VDC) from a BAS system.

ULTRA QUIET FANS – The chiller is equipped with specially designed fans and motors to provide lower sound levels yet retain appropriate airflow. The result is reduced fan generated sound with minimal effect on the chiller capacity or efficiency at standard AHRI conditions. The fans are three-bladed for 60Hz and five-bladed for 50Hz.

FAN OPTIONS

HIGH STATIC FANS - (380V/60 Hz, 460V/60 Hz, 400V/50 Hz) The chiller is equipped with condenser fans with higher power motors suitable for high external static pressure, up to 100Pa (0.4 in. water), across condenser coils. This option should be selected if additional airflow resistance may be present due to flow restrictions such as field installed ducts, filters, sound enclosures etc. Please contact your local Johnson Controls representative for more information.

HIGH AIRFLOW FANS - (380V/60 Hz, 460V/60 Hz, and 400V/50 Hz) The chiller is equipped with condenser fans with airfoil-type blades and high power motors providing extra airflow across coils. In some chiller configurations, this option can provide an increase in chiller capacity at high ambient. Please contact your local Johnson Controls representative for more information.

CONDENSER

COILS – Fin and tube condenser coils of seamless, internally-enhanced, high-condensing-coefficient, corrosion resistant copper tubes are arranged in staggered rows. The tubes are mechanically expanded into aluminum fins. Integral subcooling is included. The design working pressure of the coils is 350 PSIG (24 barg).

CONDENSER COIL PROTECTION

The aluminum alloys used in the YVAA microchannel condenser have been carefully selected and tested for high corrosion resistance. However, all metals can corrode in harsh conditions. Consider protecting coils from corrosive environments such as coastal, marine, urban and industrial.

POST-COATED EPOXY DIPPED CONDENSER – Micro-channel condenser coils applied with electro-deposited and baked flexible epoxy coating that is finished with a polyurethane UV resistant top-coat suitable for highly corrosive applications.

PROTECTIVE CHILLER PANELS

WIRE PANELS – UV stabilized black polyvinyl chloride coated, heavy gauge, welded wire mesh guards mounted on the exterior of the full unit. Protects condenser coil faces and prevents unauthorized access to refrigerant components (compressors, pipes, evaporator, etc.), yet provides free air flow. This can cut installation cost by eliminating the need for separate, expensive fencing. See Figure 2.

LOUVERED PANELS – Louvered panels, painted the same color as the unit, enclose the unit to visually screen and protect the coils as well as prevent unauthorized access to internal components. Also available as a condenser-only option. See Figures 3 and 4.

LOUVERED/WIRE PANELS COMBINATION - Louvered panels, painted the same color as the unit, are mounted on external condenser coil faces. Heavy gauge, welded wire-mesh panels, coated to resist corrosion, are mounted around base of machine to restrict unauthorized access. See Figure 5.

END HAIL GUARD – Louvered panels, painted the same color as the unit, are installed on the rear of the unit (opposite end of the control panel) to protect the exposed condenser from flying debris or hail. See Figure 6.

V-GUARD PANELS – Solid panels, painted the same color as the unit, are installed along the sides of the units to cover exposed piping within the condenser section without impacting airflow. These guard panels can be combined with End Hail Guard option for additional protection from debris. See Figure 7.

Accessories and Options - continued

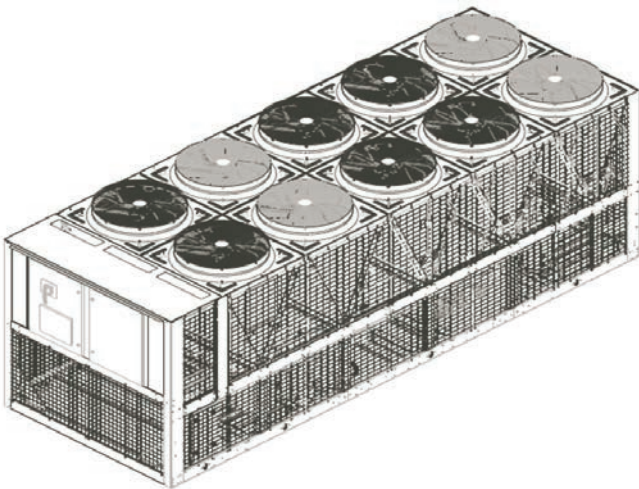


FIG. 2 – FULL UNIT WIRE PANELS

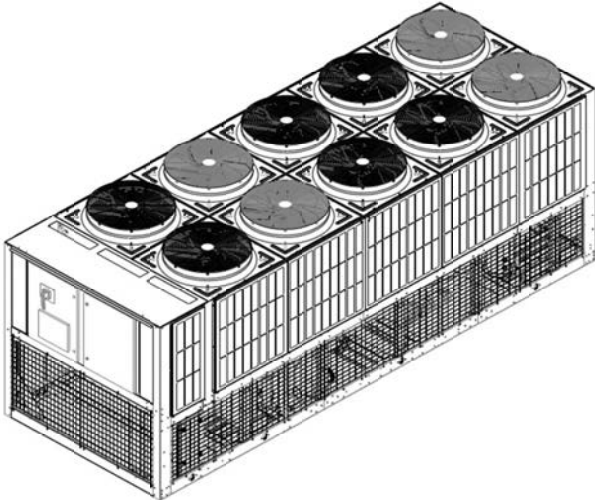


FIG. 5 – LOUVERED/WIRE PANELS COMBINATION

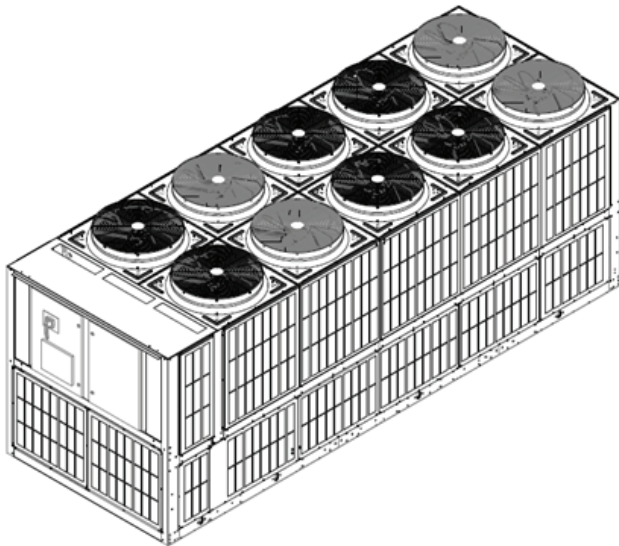


FIG. 3 – FULL UNIT LOUVERED PANELS

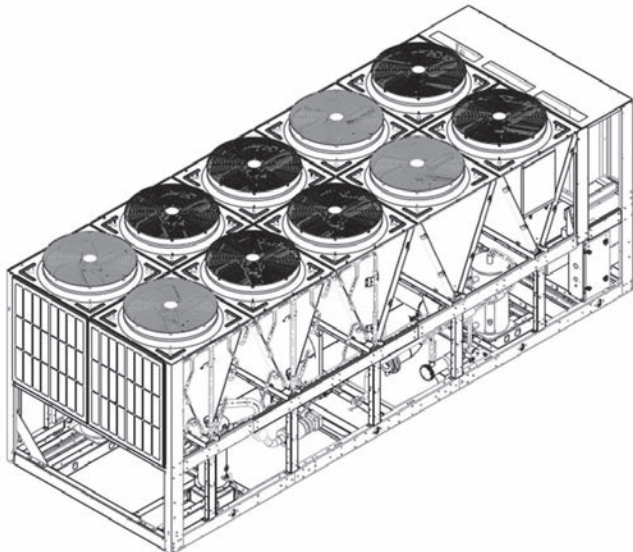


FIG. 6 – END HAIL GUARD

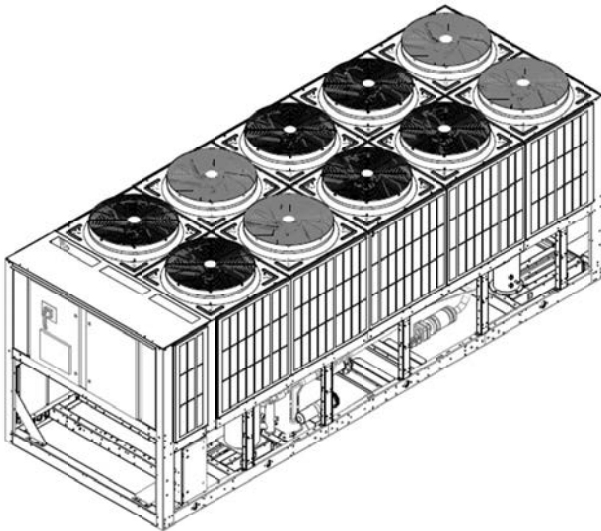


FIG. 4 – CONDENSERS-ONLY LOUVERED PANELS

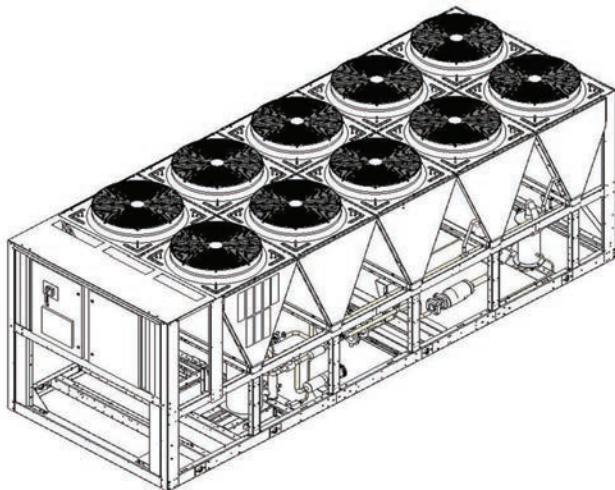


FIG. 7 – V-GUARD OPTION

EVAPORATOR OPTIONS

1-1/2" INSULATION – Double thickness insulation provided.

FLANGE KIT – Provides contractor with the couplings best suited to tie into the chilled liquid piping. All flanges are ANSI 150 psig (10.3 barg). **Field mounted.** Options include:

- **ANSI/AWWA C-606 flanges** - 2 flanges, for applications where field piping has existing flanges.
- **ANSI/AWWA C-606 flanges** - 4 flanges, for applications where customer wants flanged connections which do not exist on the field piping.
- **Weld flanges** - 2 flanges, for customer to weld to evaporator to mate to existing flanges on field piping.
- **Weld flanges** - 4 flanges, for customer to weld to evaporator and customer wants flanged connections which do not exist on the field piping

CONNECTION LOCATION - The standard unit configuration is available with liquid inlet connections at rear (opposite control panel end) of unit. Option available for front fluid inlet on select configurations.

THREE-PASS – The standard evaporator is constructed with two chilled water passes through the evaporator. The three-pass option is recommended for use in brine applications or where a greater water temperature difference is required but efficiency cannot be sacrificed.

WATER BOX HEATER - The standard unit comes with freeze protection on the evaporator down to 0°F (-17.8°C). The waterbox heater option provides additional freeze protection down to -20°F (-28°C).

CONTROLS OPTIONS

HIGH AMBIENT OPERATION – (400V/50Hz and 380V/60Hz only) This provides special control logic coupled with high airflow fans to permit high ambient (up to 125°F (52°C)) operation. This option may also allow for increased machine capacity, allowing the selection of a smaller chassis to meet specific capacity requirements.

BUILDING AUTOMATION SYSTEM INTERFACE (TEMPERATURE) - Factory installed option to accept a 4 to 20 mA or a 0 to 10 VDC input to allow remote reset of the Leaving Chilled Liquid Temperature Setpoint. The setpoint can be positively offset upwards up to 40°F (22.2°C). This option is useful for ice storage or process applications or for periods where higher chilled liquid temperatures are adequate for low loads. Available alone or in combination with BAS Load Limit.

BUILDING AUTOMATION SYSTEM INTERFACE (LOAD LIMIT) - Factory installed option to accept a 4 to 20 mA or a 0 to 10 VDC input to allow remote reset of the Load Limit Setpoint. The setpoint can limit system demand from 30-100%. Available alone or in combination with BAS Temperature Reset.

E-Link – The E-Link gateway provides full communication to Building Automation Systems, including BACnet (MS/TP), Modbus, LON and N2.

THERMAL STORAGE – Provides special control logic and modifications to produce leaving chilled brine temperatures below 40°F (4.4°C) primarily at times of low ambient temperatures (night time). Option can be used to produce ice to supplement cooling and significantly decrease energy costs. The capability of the chiller is enhanced by using both ice and chilled liquid simultaneously during times of peak cooling needs.

GENERAL OPTIONS

FLOW SWITCH ACCESSORY - Vapor proof SPDT, NEMA 3R switch, 150 psig (10.3 barg) DWP, -20°F to 250°F (-29°C to 121°C) with 1" NPT (IPS) connection for upright mounting in horizontal pipe (This flow switch or equivalent must be furnished with each unit). **Field mounted.**

DIFFERENTIAL PRESSURE SWITCH – This 3-45 psig (0.2-3 barg) range switch, with 1/4" NPTE pressure connections, is an alternative to the paddle-type flow switch. **Field mounted.**

SERVICE ISOLATION VALVE – Service suction isolation valve added to unit for each refrigerant circuit.

CHICAGO CODE RELIEF VALVE - Special relief valves per Chicago code.

DUAL PRESSURE RELIEF VALVE – Two safety relief valves are mounted in parallel; one is always operational to assist in valve replacement during maintenance.

PRESSURE VESSEL OPTIONS – The evaporator can be provided with either ASME or PED pressure vessel codes certification.

CIRCUIT BREAKER – A unit-mounted circuit breaker with external lockable handle will be supplied to isolate the single point power voltage for servicing. The circuit breaker is sized to provide motor branch circuit protection, short circuit protection and ground fault protection for the motor branch-circuit conductors, the motor control apparatus and the motors.

Accessories and Options - continued

NON-FUSED DISCONNECT SWITCH – Unit-mounted disconnect switch(es) with external lockable handle can be supplied to isolate the unit power voltage for servicing. Separate external fusing must be supplied by the power wiring, which must comply with local codes.

SPECIAL REQUIREMENT DOCUMENTS – There are two options to select from:

- Special Requirement Document Package (SRDP) includes Pressure Vessel Report, Unit Run Test Report, Production System Check Sheet and Final Unit Inspection Check Sheet.
- Materials Package includes steel mill material reports for vessels in addition to the SRDP.

VIBRATION ISOLATION

ELASTOMERIC ISOLATION – This option is recommended for normal installations. It provides very good performance in most applications for the least cost. **Field mounted.**

1" SPRING ISOLATORS – Spring and cage type isolators for mounting under the unit base rails are available to support unit. They are level adjustable. 1" nominal deflection may vary slightly by application. **Field mounted.**

2" RESTRAINED SPRING ISOLATORS – Restrained Spring-Flex Mounting isolators incorporate a rugged welded steel housing with vertical and horizontal limit stops. Housings designed to withstand a minimum 1.0g accelerated force in all directions up to 2" (51mm). The deflection may vary slightly by application. They are level adjustable. **Field mounted.**

Fast Track Base Proposal

Gulf Coast Service Branch
Lakeside Drive
Mobile, AL 36609
Phone: 251-643-1974
Clifton.e.nelson@jci.com

TO: City of Daphne

Date: April 14, 2014
Project: City of Daphne - Civic Center
Proposal Ref: Daphne - Civic Ctr

We propose to furnish the materials and/or perform the work described below for the net price of:
\$251,932.09

TWO HUNDRED FIFTY-ONE THOUSAND, NINE HUNDRED THIRTY-TWO AND 9/100 DOLLARS

For the above price this proposal includes:

Chiller Retrofit:

Johnson Controls will provide the following scope of services:

Site Assessment: Johnson Controls has

- Assessed site and solution is developed based on our experience as an OEM Chiller Manufacturer and Service Provider.
- A professional engineer has been consulted concerning this installation and his guidance has been utilized in this development.
 - A professional engineer will provide shop drawings and as built drawings of final installation, stamped .

Demolition: Johnson Controls will

- Remove Refrigerant from existing chiller and tagged for removal.
- Remove chiller from site using suitable crane.
- Dispose of chiller.

Install: Johnson Controls will

- Provide and install new chiller w/ vsd on existing concrete pad.
- Add Rental Chiller Connection.
- Provide and install new electrical service disconnect in location of existing service disconnect.
- Provide factory start-up and 5 Year Warranty as noted in Equipment Specification above.

Service:

- Johnson Controls will provide 5 Years of Chiller MD Monitoring and Diagnostics at no additional charge as part of this scope of work. This includes:
- 24/7 Energy and Operational Monitoring by Johnson Controls Operations Center
- Quarterly Energy Consumption Reports

Equipment Specification

- Base Unit/Access. - YVAA0263BGV46BA (3904)
- High Efficiency Air Cooled VSD Screw Chiller
- R-134a Refrigerant (Fully Charged)
- Voltage Code - (460/3/60)
- SP Supply Terminal Block
- Control Transformer
- BAS/EMS Temperature Reset/Offset
- N American Safety Code (cUL/cETL)
- Service Isolation Valve (Suction)
- Water Box Heaters
- One Flow Switch per Chiller (150 psig Evaporator)
- ASME Pressure Vessel & Associated Codes
- Evaporator Inlet Connection at Rear (opposite control panel end)
- Epoxy Post-coated Dipped Microchannel Coils NOTE: Possible Additional Lead Time
- Wire (Full Unit) Enclosure Panels
- Low Sound Fans with Variable Speed Control
- Shipped on Truck From Monterrey to Customer - W/Bag
- Warranty - 66 Months Parts & Labor (5 year) (entire unit)
- 66 Months Parts & Labor (5 year) (entire unit)

Alternates included in the proposal are:**Alternate I: Install Two (2) 150 Ton Air Cooled Chillers of the same spec as above including:**

- Tear Down Existing Wall
- Extend Concrete Pad as required
- Controls for Chiller Staging (May be Metasys if Siemens System Cannot Support two chillers)
- Upgrade Pump and Piping Header in Plant to provide for additional flow for future expansion.
- Reuse Existing Electrical Circuits, update service disconnects.
- Add rental chiller piping connection

Additive I Adder: Add Cost to Base Bid of : \$107,750.00

Alternate II: Install One (1) 3000 Ton Air Cooled Chillers of the same spec as above including:

- Tear Down Existing Wall
- Extend Concrete Pad as required
- Controls for Chiller Control – Use Existing Controls or Upgrade to Metasys
- Upgrade Pump and add Header Piping for additional flow in Central Plant and Near Chiller.
- Update Electrical Connection in Equipment room for single service for 300 Ton Chiller.
- Add Rental Piping Connection

Additive Cost to Base Bid of : \$137,750.00 (Either or decision for Alternate I or II.)

Alternate III: Provide and Install Rental Chiller rated at 240 Nominal Tons including

- Chiller / Hose / Cable / Set Up - \$12,000 for first month. Including round trip freight.
- If required for a second month, 28 Day (Rental Month) will be billed at \$9,750.00

This proposal DOES NOT include:

- Removal of Asbestos
- Overtime, or Double Time Charges
- Expedited manufacturing or delivery charges.

Note: Proposal does not include updating control system or Air Handling Units for Rec Center. We will install a branch connection, and blind flange with Lug Butterfly on Supply and Return for future Rec Center project. This piping will end in existing equipment room. No additional work is included for Civic Center or Rec Center.

Payment Terms:

1. Upon acceptance of this proposal, an invoice for payment in the amount of 25 percent of the contract price will be issued for job mobilization.
2. When engineering is complete and the material is shipped, you will receive an invoice for payment in the amount of 55 percent of the contract price.
3. When the installation is substantially complete you will receive an invoice for payment in the amount of 15 percent of the contract price.
4. When the commissioning is complete and the system is functioning, you will receive a final invoice for payment in the amount of 5 percent of the contract price.

This proposal and alternates listed below are hereby accepted and Johnson Controls is authorized to proceed with work; subject, however to credit approval by Johnson Controls, Inc., Milwaukee, Wisconsin.

This proposal is valid until: May. 07, 2014

Johnson Controls, Inc.

Name: _____

Title: _____

Date: _____

PO: _____

Name: _____

Title: _____

Date: _____

TERMS AND CONDITIONS

By accepting this proposal, Purchaser agrees to be bound by the following terms and conditions:

1. **SCOPE OF WORK.** This proposal is based upon the use of straight time labor only. Plastering, patching and painting are excluded. "In-line" duct and piping devices, including, but not limited to, valves, dampers, humidifiers, wells, taps, flow meters, orifices, etc., if required hereunder to be furnished by Johnson Controls, Inc. (hereinafter referred to as JCI), shall be distributed and installed by others under JCI's supervision but at no additional cost to JCI. Purchaser agrees to provide JCI with required field utilities (electricity, toilets, drinking water, project hoist, elevator service, etc.) without charge. JCI agrees to keep the job site clean of debris arising out of its own operations. Purchaser shall not back charge JCI for any costs or expenses without JCI's written consent unless specifically noted in the statement of the scope of work or services undertaken by JCI under this agreement, JCI's obligations under this agreement expressly exclude any work or service of any nature associated or connected with the identification, abatement, clean up, control, removal, or disposal of environment Hazards or dangerous substances, to include but not be limited to asbestos or PCSs, discovered in or on the premises. Any language or provision of the agreement elsewhere contained which may authorize or empower the Purchaser to change, modify, or alter the scope of work or services to be performed by JCI shall not operate to compel JCI to perform any work relating to Hazards without JCI's express written consent.
2. **INVOICING & PAYMENTS.** JCI may invoice Purchaser monthly for all materials delivered to the job site or to an off-site storage facility and for all work performed on-site and off-site. Ten percent (10%) of the contract price is for engineering, drafting and other mobilization costs incurred prior to installation. This 10% shall be included in JCI's initial invoice. Purchaser agrees to pay JCI the amount invoiced upon receipt of the invoice. Waivers of lien will be furnished upon request as the work progresses to the extent payments are received. If JCI's invoice is not paid within 30 days of its issuance, it is delinquent.
3. **MATERIALS.** If the materials or equipment included in this proposal become temporarily or permanently unavailable for reasons beyond the control and without the fault of JCI, then in the case of such temporary unavailability, the time for performance of the work shall be extended to the extent thereof, and in the case of permanent unavailability, JCI shall (a) be excused from furnishing said materials or equipment, and (b) be reimbursed for the difference between the cost of the materials or equipment permanently unavailable and the cost of a reasonably available substitute therefore.
4. **WARRANTY.** JCI warrants that the equipment manufactured by it shall be free from defects in material and workmanship arising from normal usage for a period of one (1) year from delivery of said equipment, or if installed by JCI, for a period of one (1) year from installation. JCI warrants that for equipment furnished and/or installed but not manufactured by JCI, JCI will extend the same warranty terms and conditions which JCI receives from the manufacturer of said equipment. For equipment installed by JCI, if Purchaser provides written notice to JCI of any such defect within thirty (30) days after the appearance or discovery of such defect, JCI shall, at its option, repair or replace the defective equipment. For equipment not installed by JCI, if Purchaser returns the defective equipment to JCI within thirty (30) days after appearance or discovery of such defect, JCI shall, at its option, repair or replace the defective equipment and return said equipment to Purchaser. All transportation charges incurred in connection with the warranty for equipment not installed by JCI shall be borne by Purchaser. These warranties do not extend to any equipment which has been repaired by others, abused, altered or misused, or which has not been properly and reasonably maintained. THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THOSE OF MERCHANTABILITY AND FITNESS FOR A SPECIFIC PURPOSE
5. **LIABILITY.** JCI shall not be liable for any special, indirect or consequential damages arising in any manner from the equipment or material furnished or the work performed pursuant to this agreement.
6. **TAXES.** The price of this proposal does not include duties, sales, use, excise, or other similar taxes, unless required by federal, state or local law. In addition to the stated price, purchaser shall pay all taxes not legally required to be paid by JCI or, alternatively, shall provide JCI with acceptable tax exemption certificates. JCI shall provide Purchaser with any tax payment certificate upon request and after completion and acceptance of the work.
7. **DELAYS.** JCI shall not be liable for any delay in the performance of the work resulting from or attributed to acts or circumstances beyond JCI's control, including, but not limited to, acts of God, fire, riots, labor disputes, conditions of the premises, acts or omissions of the Purchaser, Owner or other Contractors or delays caused by suppliers or subcontractors of JCI, etc.
8. **COMPLIANCE WITH LAWS.** JCI shall comply with all applicable federal, state and local laws and regulations and shall obtain all temporary licenses and permits required for the prosecution of the work. Licenses and permits of a permanent nature shall be procured and paid for by the Purchaser.
9. **DISPUTES.** All disputes involving more than \$15,000 shall be resolved by arbitration in accordance with the rules of the American Arbitration Association. The prevailing party shall recover all legal costs and attorney's fees incurred as a result. Nothing here shall limit any rights under construction lien laws.
10. **INSURANCE.** Insurance coverage in excess of JCI's standard limits will be furnished when requested and required. No credit will be given or premium paid by JCI for insurance afforded by others.
11. **INDEMNITY.** The Parties hereto agree to indemnify each other from any and all liabilities, claims, expenses, losses or damages, including attorneys' fees, which may arise in connection with the execution of the work herein specified and which are caused, in whole or in part, by the negligent act or omission of the Indemnifying Party.

12. OCCUPATIONAL SAFETY AND HEALTH. The Parties hereto agree to notify each other immediately upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act relating in any way to the project or project site.
13. LEGAL FEES. Purchaser agrees to pay and reimburse JCI for any and all reasonable legal fees which are incurred by JCI in the collection of amounts due and payable under this Agreement.
14. ENTIRE AGREEMENT. This proposal, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings.
15. CHANGES. No change or modification of any of the terms and conditions stated herein shall be binding upon Johnson unless accepted by Johnson in writing.

City of Daphne
Scope Break Out with Pricing
Equipment and Systems

Item	Description	Units	Unit Price	Extended
1.00	York Chiller (See attached specifications w/ 66 month warranty)	1.00	\$ 119,622.56	\$ 119,622.56
Installation and Engineering				
1.00	Johnson Controls Mechanical Installation (Including Rental Connection)	112.00	\$ 82.60	\$ 9,251.20
2.00	Johnson Controls Electrical Installation	84.00	\$ 82.60	\$ 6,938.40
3.00	Johnson Controls Clean Up Existing Pad, Removal of Wall.	32.00	\$ 82.60	\$ 2,643.20
4.00	Engineering Evaluation, Stamped As-Built Drawings	1.00	\$ 15,000.00	\$ 15,000.00
5.00	Mechanical Materials: Pipe, Valves, Fittings, Insulation	1.00	\$ 3,625.00	\$ 3,625.00
6.00	Electrical Materials: Wire, Conduit, Breakers, Etc.	2.00	\$ 937.50	\$ 1,875.00
7.00	Masonry : Finishing , "Roll Off" and Escavator	1.00	\$ 1,750.00	\$ 1,750.00
8.00	Removal and Reconnect of Existing Start/Stop Controls	16.00	\$ 165.00	\$ 2,640.00
9.00	Chiller MD Package (Flow Meters, Controls, Commissioning)	1.00	\$ 12,650.00	\$ 12,650.00
Service and Continuos Commissioning				
\$ 1.00	Chiller MD Continous Performance Monitoring (5 Years)	5.00	\$ 4,000.00	\$ 20,000.00
Total				\$ 195,995.36
Management, Overhead and Profit				
	Project Management (3%)			\$ 5,879.86
	Contingency (3%)			\$ 5,879.86
	Overhead (7%)			\$ 13,719.68
	Profit (5%)			\$ 15,679.63
	Total Cost to City of Daphne			\$ 237,154.39
	State of Alabama - Contractor Use Tax Estimate			\$ 11,692.00
	Total Contract Amount			\$ 248,846.39



Air Cooled Screw Chiller PRICING FORM

Project Name: DAPHNE CIVIC CENTER	Contract Number:	
Location:	Date:	Rev Date:

Unit Tag ch-1	Capacity(Tons) 235.0	EER / COP 10.5 / 3.1	IPLV 17.1 / 5.0	Refrigerant R134a	Total Discounted Unit Price \$119,622.56
-------------------------	--------------------------------	--------------------------------	---------------------------	-----------------------------	--

Line #	Equipment Details	Qty.	MLP
01	Base Unit/Access. - YVAA0263BGV46BA (3904)		
	High Efficiency Air Cooled VSD Screw Chiller	1	396158
	R-134a Refrigerant (Fully Charged)	1	STD
	Voltage Code - (460/3/60)	1	STD
	SP Supply Terminal Block	1	STD
	Control Transformer	1	STD
	BAS/EMS Temperature Reset/Offset	1	STD
	N American Safety Code (cUL/cETL)	1	STD
	Service Isolation Valve (Suction)	1	3468
	Water Box Heaters	1	3484
	One Flow Switch per Chiller (150 psig Evaporator)	1	430
	ASME Pressure Vessel & Associated Codes	1	STD
	Evaporator Inlet Connection at Rear (opposite control panel end)	1	STD
	Epoxy Post-coated Dipped Microchannel Coils NOTE: Possible Additional Lead Time	1	14130
	Wire (Full Unit) Enclosure Panels	1	10335
	Low Sound Fans with Variable Speed Control	1	9571
	Shipped on Truck From Monterrey to Customer - W/Bag	1	STD
Extended MLP Subtotal			437576.00



Air Cooled Screw Chiller PRICING FORM

Project Name: DAPHNE CIVIC CENTER	Contract Number:	
Location:	Date:	Rev Date:

Line #	Equipment Details	Qty.	MLP
02	Warranty - 66 Months Parts & Labor (5 year) (entire unit)		
	66 Months Parts & Labor (5 year) (entire unit)	1	9673
	Extended MLP Subtotal		9673.00
03	Warranty - 66 Months Refrigerant Add (R134a)		
	66 Months Refrigerant Add (R134a)	1	1548
	Extended MLP Subtotal		1548.00
04	Start up/PCAT - Region: South-East (AK, MS, LA, TN) in 2015		
	Startup [2 day(s)] to occur during 2015 in Region: South-East (AK, MS, LA, TN)	1	2262
	Extended MLP Subtotal		2262.00



Proposal

Gulf Coast Service - 0218
764B LAKESIDE DR
MOBILE AL 366935114
PH: (866) 867 - 3608
FAX: (866) 607 - 6878

TO: CITY OF DAPHNE
ATTN ANN CORCORAN
DAPHNE AL
USA 36526

Date: 04/07/2014
Quote Ref: 1-4JQKPNR
Project Name: Daphne Civic Center Circuit 1 Chiller Repa
Site: DAPHNE CIVIC CENTER
2607 US HIGHWAY 98
DAPHNE AL 36526

ATTN: Frank Barnett

We propose to furnish the materials and/or perform the work below for the net price of: \$56,759.89

For the above price this proposal includes:

Isolate the #1 circuit, LOTO and remove the burnt refrigerant and oil. Disconnect the electrical and refrigerant lines from the compressors and remove them and install new compressors. Connect the electrical and piping. Replace the oil and drier cores and pressure test and evacuate the circuit. Check the evacuation. Recharge the circuit with new refrigerant. Unlock the circuit and run the chiller and check the operation. Clean the area and put the unit back in service.

This proposal DOES NOT include:

1. Labor or material not specifically described above is excluded from this proposal.
2. Unless otherwise stated, any and all overtime labor is excluded from this proposal.
3. Applicable taxes or special freight charges are excluded from this proposal.

Important: This proposal incorporates by reference the Terms and Conditions attached

This proposal is hereby accepted and
Johnson Controls is authorized to proceed
with the work, subject to credit approval by
Johnson Controls, Inc. Milwaukee, WI.

This proposal is valid through: 05/04/2014

CITY OF DAPHNE

Johnson Controls Inc.

Signature: _____

Signature: Scott Jacobs

Name: _____

Name: SCOTT JACOBS

Title: _____

Title: SERVICE TTL

Date: _____

Date: 4-7-14

PO: _____



BY JOHNSON CONTROLS



***Model YVAA Air-Cooled Screw Compressor Liquid Chillers
with Variable Speed Drive
Style A***

150-500 Tons
525-1750 kW
2 Compressor
50 and 60 Hz
HFC-134a

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NOMENCLATURE

YVAA 021 3AXX 46 AA															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
BASE PRODUCT TYPE				FRAME SIZE			CONFIGURATION				VOLTAGE		LEVEL / REFRIGERANT		
Y	V	A	A	#	#	#	#	#	#	#	1	7	#	A	
: York							: Condenser code				: 200 / 3 / 60		: Development Level		
: Variable Speed Screw							: Evaporator code				: 230 / 3 / 60		: Refrigerant R134a		
: Air cooled							: Compressor code				: 380 / 3 / 60				
: Design Series							: Condenser fan & sound kit code				: 400 / 3 / 60				
											: 460 / 3 / 60				
											: 380-415 / 3 / 50				
											: 575 / 3 / 60				



Products are produced at a facility whose quality-management systems are ISO9001 certified.



ASHRAE 90.1 Compliant



JOHNSON CONTROLS

Introduction



For over 135 years, Johnson Controls has raised the bar of chiller design and customer expectations. We are raising the bar again with a leap forward in air-cooled chiller technology. Continuing the history of innovation in both compressor design and Variable Speed Drive (VSD) technology, Johnson Controls proudly introduces the YORK® YVAA.

In the past, the choice to use an air-cooled chiller came with the expectation of compromise, where simplicity of design and maintenance were traded for performance and efficiency. The new YVAA provides a better balance by combining the best of both - a high performance design that minimizes the total cost of ownership.

YORK YVAA model air-cooled chillers provide superior performance. Higher efficiency heat exchangers coupled with variable speed operation and smart controls elevate the system efficiency to a whole new level. The resulting benefit from YVAA chillers is much greater than the sum of its parts.

Efficiency: Reduce your consumption

YVAA chillers are Johnson Controls' most efficient air-cooled chillers. The design offers a lighter, smaller and quieter package that minimizes the installed cost and maximizes usable building space. YVAA chillers are simpler in design with easy access to service components for reliable operation and efficient maintenance. With up to a 40% improvement in real world efficiency versus current products, YVAA sets the new standards for lowering energy use.

Sustainability: Improve your environmental footprint

YVAA lowers both direct and indirect impact on the environment. It uses R134a refrigerant which has zero ozone
JOHNSON CONTROLS

depletion potential (ODP). The design minimizes the quantity of refrigerant used in the system. Every YVAA model helps LEED projects earn the Energy and Atmosphere Credit 4. The highest portion of green house gases is carbon dioxide generated from electric power plants. HVAC systems are one of the largest consumers of electricity in commercial buildings. YVAA chillers reduce the electricity usage, thereby contributing to reducing greenhouse gases and helping keep the planet cool.

Low Sound: Quiet operation makes you a good neighbor

The variable speed technology on YVAA allows unparalleled low sound levels at off peak design conditions. This makes YVAA a great solution for sound sensitive zones. Several acoustic attenuation options such as smart controls (SilentNight™), aerodynamic fans, and effective sound enclosures allow the chiller to meet even the most stringent sound level requirements.

Confidence: Proven performance provides peace of mind

YVAA design is proven by years of success with the previous generation of YORK VSD air-cooled screw chillers with thousands of machines operating in more than one hundred countries.

YVAA is configurable to be the perfect fit for your unique needs. YVAA offers an array of options that can be tailored and tuned to match the capacity, efficiency, sound and footprint for your specific application. Several variations of condenser fans, evaporator arrangements, sound kits, protection enclosures, and controls schemes are available to meet specific requirements for your site.

Ratings



Rated in accordance with the latest issuance of AHRI Standard 550/590.

AHRI CERTIFICATION PROGRAM

The performance of the YORK YVAA chiller has been certified to the Air Conditioning, Heating, and Refrigeration Institute (AHRI) as complying with the certification sections of the latest issue of AHRI Standard 550/590. Under this Certification Program, chillers are regularly tested in strict compliance with this Standard. This provides an independent, third-party verification of chiller performance.

COMPUTERIZED PERFORMANCE RATINGS

Each chiller is custom-matched to meet the individual building load and energy requirements. A variety of standard heat exchangers and pass arrangements are available to provide the best possible match.

It is not practical to provide tabulated performance for each combination, as the energy requirements at both full and part load vary significantly with each heat exchanger and

pass arrangement. Computerized ratings are available through each Johnson Controls sales office. Each rating can be tailored to specific job requirements, and is part of the AHRI Certification Program.

OFF-DESIGN PERFORMANCE

Since the vast majority of its operating hours are spent at off-design conditions, a chiller should be chosen not only to meet the full load design, but also for its ability to perform efficiently at lower loads. It is not uncommon for chillers with the same full load efficiency to have an operating cost difference of over 10% due to differences in off-design (part-load) efficiencies.

Part load information can be easily and accurately generated by use of the computer. And because it is so important to an owner's operating budget, this information has now been standardized within the AHRI Certification Program in the form of an Integrated Part Load Value (IPLV), and Non-Standard Part Load Value (NPLV).

The current IPLV/NPLV rating from AHRI Standard 550/590 much more closely tracks actual chiller operation, and provides a more accurate indication of chiller performance than the previous IPLV/APLV rating. A more detailed analysis must take into account actual building load profiles, and local weather data. Part load performance data should be obtained for each job using its own design criteria.

Unit Overview

SEMI-HERMETIC YORK TWIN SCREW COMPRESSORS

The direct-drive, semi-hermetic rotary twin-screw compressors incorporate advanced technology in a rugged design. The continuous function, microprocessor controlled VSD provides smooth capacity control from 100% down to 10% of chiller capacity. State-of-the-art technology, obtained from decades of screw compressor design and manufacturing by FRICK®, ensures optimal efficiencies at all chiller load points. With no unloading steps or slide valves in the compressors, the YVAA variable speed driven compressors have 50% fewer moving parts than fixed speed compressors with slide valves. The YVAA compressor is one of the most efficient and reliable screw compressors in the industry.

EVAPORATOR

The evaporator is a shell and tube, hybrid falling film type heat exchanger. It contains a balance of flooded and falling film technology to optimize efficiency, minimize refrigerant charge, and maintain reliable control. A specifically designed distribution system provides uniform refrigerant flow for optimum performance.

CONDENSER

The YVAA introduces the microchannel coil to the YORK screw compressor chiller line. Microchannel coils are made of a single material to avoid galvanic corrosion due to dissimilar metals. Coils and headers are brazed as one piece, minimizing leaks. The inherently rugged coil construction, which includes non-overhanging fins, eliminates the possibility of fin damage. The microchannel maximizes condenser heat transfer, resulting in a smaller footprint, and reduces refrigerant charge by as much as 50%.

The condenser fans are composed of corrosion resistant aluminum hub and glass-fiber-reinforced polypropylene composite blades molded into a low-noise airfoil section. All blades are statically and dynamically balanced for vibration-free operation. Fan motors are Totally Enclosed Air-Over (TEAO), squirrel-cage type and current protected. The direct drive motors feature double-sealed and permanently lubricated ball bearings, cutting down on maintenance cost over the life of the unit.

REFRIGERANT CIRCUIT

The YVAA has one independent refrigerant circuit per compressor. Each circuit uses copper refrigerant pipe formed on computer-controlled bending machines. By using computer-aided technology, over 60% of system

pipework brazed joints have been eliminated (as compared to designs that use fittings), resulting in a highly reliable and leak-resistant system.

COMPLETE FACTORY PACKAGE

Each unit is shipped as a complete factory package, completely assembled with all interconnecting refrigerant piping and internal wiring and ready for field installation. Prior to shipment, each individual chiller undergoes an extensive testing procedure, ensuring workmanship is the highest quality and that the initial start-up is trouble-free. Before leaving the factory, each refrigerant circuit is factory pressure tested, evacuated and then fully charged with R134a refrigerant and oil. An operational test is performed with water flowing through the evaporator to ensure each circuit functions correctly.

ELECTRICAL

All controls and motor starting equipment necessary for unit operation are factory wired and function tested. There are no surprises when you go to start-up; you can have confidence that the unit will start up right the first time and every time.

The chillers come with a single point power connection and are supplied with a factory mounted and wired control transformer that powers all unit controls from the main unit power supply. The transformer utilizes scheduled line voltage on the primary side and provides 115V/1Ø on secondary. The standard unit is equipped with terminal block electrical connections. All exposed power wiring is routed through liquid-tight, UV-stabilized, non-metallic conduit.

VSD Power/Control Panel includes main power connection(s), VSD and fan motor contactors, current overloads, and factory wiring. All display and control features can be accessed through the keypad and control display access door, eliminating the need to open the main cabinet doors.

BUILDING AUTOMATION SYSTEM CAPABILITIES

The E-Link Gateway provides an economical and versatile connection between Johnson Controls equipment and open/standard protocols. It efficiently manages the communication protocols currently used by Johnson Controls equipment, exposing the data in a consistent, organized, and defined fashion. A simple switch selection allows configuration of the required equipment profile and output protocol, which reduces equipment connectivity startup time.

MicroComputer Control Center

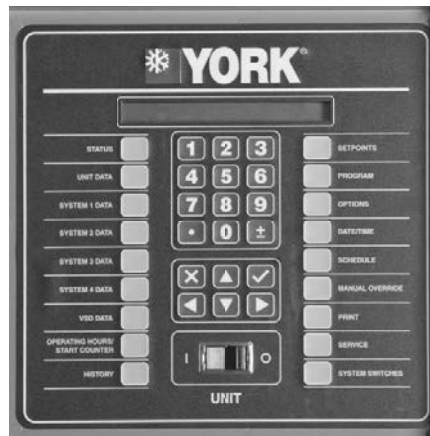


FIG.1 – VIEW OF YORK CONTROL CENTER KEYPAD AND DISPLAY

MICROCOMPUTER CONTROL CENTER

The microcomputer control center (see Figure 1) provides automatic control of chiller operation including compressor start/ stop and load/unload anti-recycle timers, condenser fans, chilled liquid pump, evaporator heater, unit alarm contacts and run signal contacts. The microcomputer control center comes online as soon as the main power switch on the unit is switched on; immediately, the micro-computer control center will begin to continuously monitor all variables.

The microprocessor controls the unit's capacity by matching the actual leaving chilled liquid temperature (LCHLT) to the user-defined setpoint. Factors that may cause the system's actual LCHLT to fluctuate are changes in ambient temperature, load, and chilled liquid loop flow rate and volume. The controls system reacts to such changes by adjusting the number of compressors that are on and the loading of each compressor in order to keep the LCHLT at the setpoint.

The controls system logic monitors the rate at which the LCWT is approaching the setpoint to ramp up or down compressor capacity as required. The variable frequency drive allows the compressor capacity to match the load.

Display Data

- Leaving Chilled Liquid Temperature
- Returning Liquid Temperature
- Ambient Temperature
- Lead System
- Compressor Capacity (% of Full Load Amps)
- VSD Output Frequency / Compressor Speed
- Compressor Run Hours
- Compressor Number of Starts
- Oil Pressure and Temperature (per Compressor)
- Chilled Liquid Pump Status

- Evaporator Heater Status
- History Data for Last Twenty Normal Shutdowns
- History Data for Last Ten Shutdown Faults

Programmable Setpoints

- Chiller on/Off
- Chilled Liquid (Water or Glycol)
- Local or Remote Control
- Units of Measure (Imperial or SI)
- System Lead/Lag
- Remote Temperature Reset
- Remote Current Limit
- Leaving Chilled Liquid Temperature Setpoint and Range

Johnson Controls' systems or another vendor's systems can incorporate these setpoints and data outputs to give the customer a complete understanding of how the system is running through a Building Automation System.

Extreme Conditions - During extreme or unusual conditions (i.e. blocked condenser coils, ambient above scheduled maximum, etc.) the chiller control system will avoid shutdown by varying capacity. By monitoring motor current and suction and discharge pressures, the chiller can maintain maximum available cooling output without shutting down.

Unit Safeties are provided for the chiller to perform auto-reset shut down for the following conditions:

- Ambient temperature above or below allowable range
- Out of range leaving chilled liquid temperature
- Under voltage
- Flow switch operation

Accessories and Options

All options factory mounted unless otherwise noted.

SOUND ATTENUATION

LOW NOISE KITS – The standard chiller configuration is equipped with low sound fans and acoustic treatments on the refrigerant lines and compressors. There are several sound attenuation options available to further reduce sound at its source thereby meeting local sound level regulations.

SilentNight - Due to time-of-day based sound regulations in some locations, it may be desirable to force the chiller to a lower sound level on demand. The SilentNight control option provides a control input to limit sound output of the chiller based on time of day. This feature is programmable at the chiller panel or can be controlled remotely via a signal (4-20mA or 0-10 VDC) from a BAS system.

ULTRA QUIET FANS – The chiller is equipped with specially designed fans and motors to provide lower sound levels yet retain appropriate airflow. The result is reduced fan generated sound with minimal effect on the chiller capacity or efficiency at standard AHRI conditions. The fans are three-bladed for 60Hz and five-bladed for 50Hz.

FAN OPTIONS

HIGH STATIC FANS - (380V/60 Hz, 460V/60 Hz, 400V/50 Hz) The chiller is equipped with condenser fans with higher power motors suitable for high external static pressure, up to 100Pa (0.4 in. water), across condenser coils. This option should be selected if additional airflow resistance may be present due to flow restrictions such as field installed ducts, filters, sound enclosures etc. Please contact your local Johnson Controls representative for more information.

HIGH AIRFLOW FANS - (380V/60 Hz, 460V/60 Hz, and 400V/50 Hz) The chiller is equipped with condenser fans with airfoil-type blades and high power motors providing extra airflow across coils. In some chiller configurations, this option can provide an increase in chiller capacity at high ambient. Please contact your local Johnson Controls representative for more information.

CONDENSER

COILS – Fin and tube condenser coils of seamless, internally-enhanced, high-condensing-coefficient, corrosion resistant copper tubes are arranged in staggered rows. The tubes are mechanically expanded into aluminum fins. Integral subcooling is included. The design working pressure of the coils is 350 PSIG (24 barg).

CONDENSER COIL PROTECTION

The aluminum alloys used in the YVAA microchannel condenser have been carefully selected and tested for high corrosion resistance. However, all metals can corrode in harsh conditions. Consider protecting coils from corrosive environments such as coastal, marine, urban and industrial.

POST-COATED EPOXY DIPPED CONDENSER – Micro-channel condenser coils applied with electro-deposited and baked flexible epoxy coating that is finished with a polyurethane UV resistant top-coat suitable for highly corrosive applications.

PROTECTIVE CHILLER PANELS

WIRE PANELS – UV stabilized black polyvinyl chloride coated, heavy gauge, welded wire mesh guards mounted on the exterior of the full unit. Protects condenser coil faces and prevents unauthorized access to refrigerant components (compressors, pipes, evaporator, etc.), yet provides free air flow. This can cut installation cost by eliminating the need for separate, expensive fencing. See Figure 2.

LOUVERED PANELS – Louvered panels, painted the same color as the unit, enclose the unit to visually screen and protect the coils as well as prevent unauthorized access to internal components. Also available as a condenser-only option. See Figures 3 and 4.

LOUVERED/WIRE PANELS COMBINATION - Louvered panels, painted the same color as the unit, are mounted on external condenser coil faces. Heavy gauge, welded wire-mesh panels, coated to resist corrosion, are mounted around base of machine to restrict unauthorized access. See Figure 5.

END HAIL GUARD – Louvered panels, painted the same color as the unit, are installed on the rear of the unit (opposite end of the control panel) to protect the exposed condenser from flying debris or hail. See Figure 6.

V-GUARD PANELS – Solid panels, painted the same color as the unit, are installed along the sides of the units to cover exposed piping within the condenser section without impacting airflow. These guard panels can be combined with End Hail Guard option for additional protection from debris. See Figure 7.

Accessories and Options - continued

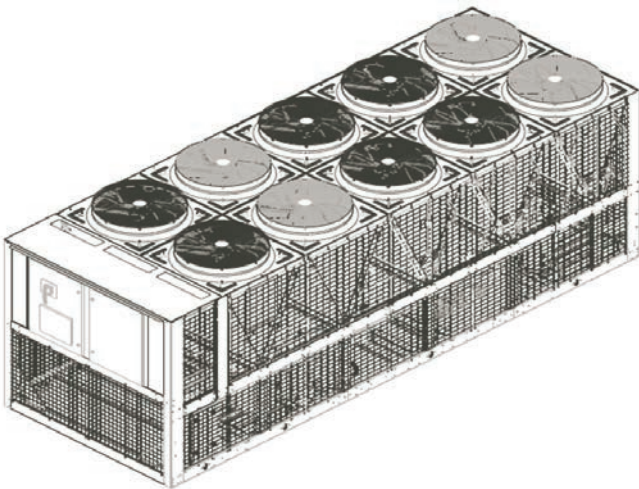


FIG. 2 – FULL UNIT WIRE PANELS

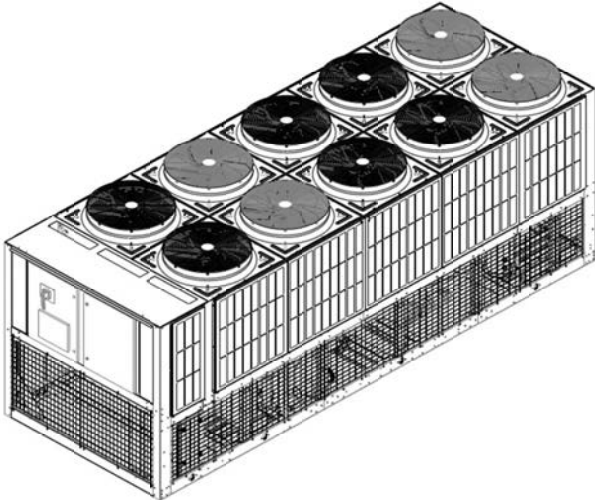


FIG.5 – LOUVERED/WIRE PANELS COMBINATION

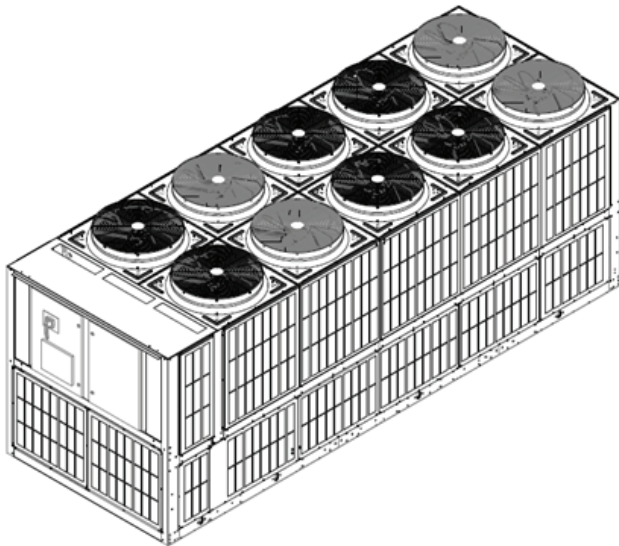


FIG. 3 – FULL UNIT LOUVERED PANELS

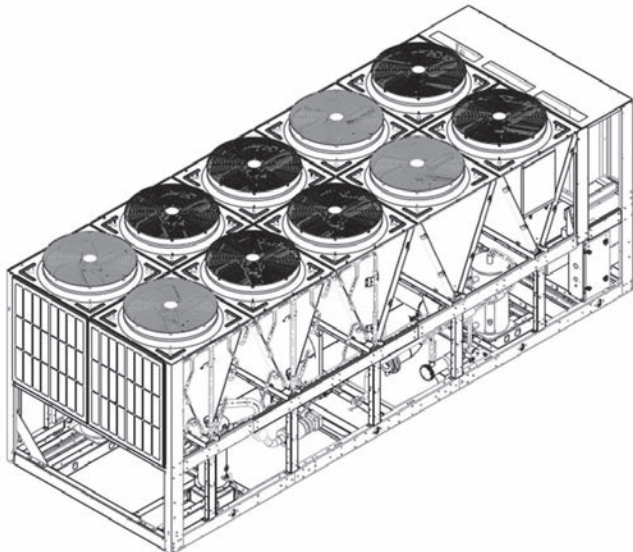


FIG. 6 – END HAIL GUARD

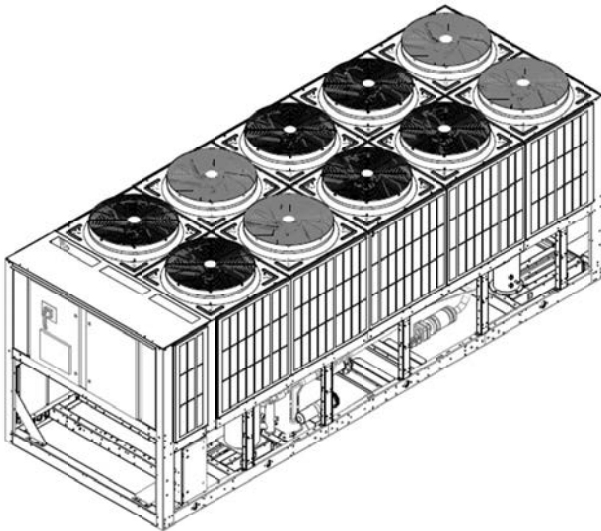


FIG. 4 – CONDENSERS-ONLY LOUVERED PANELS

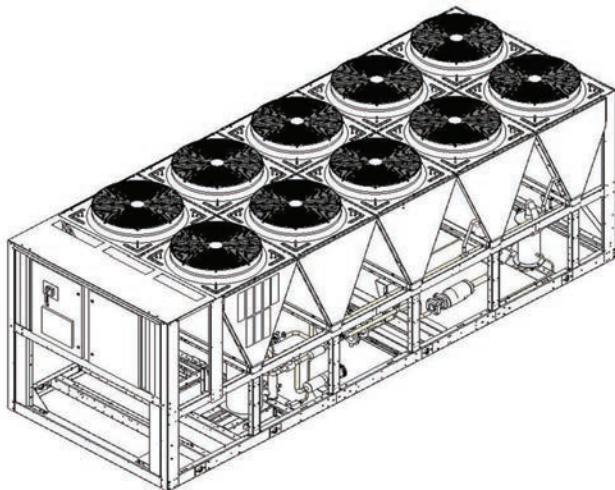


FIG. 7 – V-GUARD OPTION

EVAPORATOR OPTIONS

1-1/2" INSULATION – Double thickness insulation provided.

FLANGE KIT – Provides contractor with the couplings best suited to tie into the chilled liquid piping. All flanges are ANSI 150 psig (10.3 barg). **Field mounted.** Options include:

- **ANSI/AWWA C-606 flanges** - 2 flanges, for applications where field piping has existing flanges.
- **ANSI/AWWA C-606 flanges** - 4 flanges, for applications where customer wants flanged connections which do not exist on the field piping.
- **Weld flanges** - 2 flanges, for customer to weld to evaporator to mate to existing flanges on field piping.
- **Weld flanges** - 4 flanges, for customer to weld to evaporator and customer wants flanged connections which do not exist on the field piping

CONNECTION LOCATION - The standard unit configuration is available with liquid inlet connections at rear (opposite control panel end) of unit. Option available for front fluid inlet on select configurations.

THREE-PASS – The standard evaporator is constructed with two chilled water passes through the evaporator. The three-pass option is recommended for use in brine applications or where a greater water temperature difference is required but efficiency cannot be sacrificed.

WATER BOX HEATER - The standard unit comes with freeze protection on the evaporator down to 0°F (-17.8°C). The waterbox heater option provides additional freeze protection down to -20°F (-28°C).

CONTROLS OPTIONS

HIGH AMBIENT OPERATION – (400V/50Hz and 380V/60Hz only) This provides special control logic coupled with high airflow fans to permit high ambient (up to 125°F (52°C)) operation. This option may also allow for increased machine capacity, allowing the selection of a smaller chassis to meet specific capacity requirements.

BUILDING AUTOMATION SYSTEM INTERFACE (TEMPERATURE) - Factory installed option to accept a 4 to 20 mA or a 0 to 10 VDC input to allow remote reset of the Leaving Chilled Liquid Temperature Setpoint. The setpoint can be positively offset upwards up to 40°F (22.2°C). This option is useful for ice storage or process applications or for periods where higher chilled liquid temperatures are adequate for low loads. Available alone or in combination with BAS Load Limit.

BUILDING AUTOMATION SYSTEM INTERFACE (LOAD LIMIT) - Factory installed option to accept a 4 to 20 mA or a 0 to 10 VDC input to allow remote reset of the Load Limit Setpoint. The setpoint can limit system demand from 30-100%. Available alone or in combination with BAS Temperature Reset.

E-Link – The E-Link gateway provides full communication to Building Automation Systems, including BACnet (MS/TP), Modbus, LON and N2.

THERMAL STORAGE – Provides special control logic and modifications to produce leaving chilled brine temperatures below 40°F (4.4°C) primarily at times of low ambient temperatures (night time). Option can be used to produce ice to supplement cooling and significantly decrease energy costs. The capability of the chiller is enhanced by using both ice and chilled liquid simultaneously during times of peak cooling needs.

GENERAL OPTIONS

FLOW SWITCH ACCESSORY - Vapor proof SPDT, NEMA 3R switch, 150 psig (10.3 barg) DWP, -20°F to 250°F (-29°C to 121°C) with 1" NPT (IPS) connection for upright mounting in horizontal pipe (This flow switch or equivalent must be furnished with each unit). **Field mounted.**

DIFFERENTIAL PRESSURE SWITCH – This 3-45 psig (0.2-3 barg) range switch, with 1/4" NPTE pressure connections, is an alternative to the paddle-type flow switch. **Field mounted.**

SERVICE ISOLATION VALVE – Service suction isolation valve added to unit for each refrigerant circuit.

CHICAGO CODE RELIEF VALVE - Special relief valves per Chicago code.

DUAL PRESSURE RELIEF VALVE – Two safety relief valves are mounted in parallel; one is always operational to assist in valve replacement during maintenance.

PRESSURE VESSEL OPTIONS – The evaporator can be provided with either ASME or PED pressure vessel codes certification.

CIRCUIT BREAKER – A unit-mounted circuit breaker with external lockable handle will be supplied to isolate the single point power voltage for servicing. The circuit breaker is sized to provide motor branch circuit protection, short circuit protection and ground fault protection for the motor branch-circuit conductors, the motor control apparatus and the motors.

Accessories and Options - continued

NON-FUSED DISCONNECT SWITCH – Unit-mounted disconnect switch(es) with external lockable handle can be supplied to isolate the unit power voltage for servicing. Separate external fusing must be supplied by the power wiring, which must comply with local codes.

SPECIAL REQUIREMENT DOCUMENTS – There are two options to select from:

- Special Requirement Document Package (SRDP) includes Pressure Vessel Report, Unit Run Test Report, Production System Check Sheet and Final Unit Inspection Check Sheet.
- Materials Package includes steel mill material reports for vessels in addition to the SRDP.

VIBRATION ISOLATION

ELASTOMERIC ISOLATION – This option is recommended for normal installations. It provides very good performance in most applications for the least cost. **Field mounted.**

1" SPRING ISOLATORS – Spring and cage type isolators for mounting under the unit base rails are available to support unit. They are level adjustable. 1" nominal deflection may vary slightly by application. **Field mounted.**

2" RESTRAINED SPRING ISOLATORS – Restrained Spring-Flex Mounting isolators incorporate a rugged welded steel housing with vertical and horizontal limit stops. Housings designed to withstand a minimum 1.0g accelerated force in all directions up to 2" (51mm). The deflection may vary slightly by application. They are level adjustable. **Field mounted.**

T & M HEATING & AIR CONDITIONING, INC.

P.O. BOX 1582

BAY MINETTE, AL 36507

(251) 580-2665

AL CERTIFICATION # 99116

REVISION 4/24/14

Page 1 of 2

City of Daphne
PO Box 400
Daphne, AL 36526

Project: Repair 240 Ton Trane Chiller @ Civic CT
Replace 2 ea. CHHB070TNK0N088A
Compressors and 4 ea. Cond Fans

We are pleased to present for your consideration our proposal to repair or replace your Trane RTAA2404XR01A0D0B chiller SN U99B05924. Per your request our price will include replacing the two 70 ton compressors on circuit # 1 and 4 each condenser fan motors. Price will include pump down and disposal of existing R-22 refrigerant. Installation of a filter core shell with 4 each disposal filter cores suitable for high acid removal. As a part of this install we will install 2 each refrigerant ball valve so the filter shell can be isolated and the refrigerant filter cores replaced. Replacement compressors will be Trane OEM Compressors for this MN and SN unit. We will include crane and labor required to facilitate installation of the components. Replacement refrigerant (Approximately 276#) to be provided by the city.

NOTE: Price is to replace the components listed and does not include any other items IE: Electronic Boards or DDC interfaces etc. which could be faulty upon start up.

Price \$ 55,643.00

OPTION:

Replace existing 15 year old chiller with new Trane RTAC250 Helical Rotary Screw Chiller. Price includes removal of refrigerant and disposal of same. Crane to lift old chiller out and set new in place. Re pipe existing chill water lines and reconnect to existing electrical. Reinsulate as required.

Price \$ 115,501.00

Permit \$ 1,732.00

Total Cost \$ 117,233.00

Standard Warranty 1st year Parts only

Optional Warranties

1 st year Labor warranty	\$ 2,314.00
2-5 th Year Labor Warranty	\$ 6,746.00
2-5 th Year Compressor Replacement	\$ 1,876.00
5 Year Whole Unit Parts Warranty	\$ 3,108.00

5 YEAR (LABOR & PARTS) \$ 12,168.00

OPTION : Furnish Rental Chiller

Provide one 250 ton Trane Air Cooled Screw Chiller for Temporary Cooling while new chiller is on order. Price includes one Chiller, 48 foot flat bed trailer for unit to work off of. Connect Chiller to existing electrical and connect chiller to existing 6 inch water lines. Price is based on a two month rental.

Note Billing is done in weekly increments. If we go 1 week and 1 day or 1 month and 1 day a full week will be charged. Price includes freight in and out plus fuel surcharges.

Pricing is as follows

Monthly Rate	15,250.00 x2 months = 30,500.00
Weekly Rate	5,876.00

Electrical Hookup & Disconnect	2,400.00
Chill Water Hook Up & Disconnect	800.00
TOTAL CONNECTION FEE	3,200.00
Freight	480.00

#3680.00 ADD TO 1ST MONTH

Rental includes the following equipment

- 1 each 250 ton Air Cooled Chiller
- 200 feet 6 inch hose with flanged connections
- 4 each 100 foot sections of 4/0 Cable and Box
- 48 foot flatbed trailer
- 1 each 40 HP pump which will not be used but is unit mounted to chiller.

Difference between new chiller and repair is \$ 61,590.00

Assuming 80 hours per week operation and 8 months of operation per year, \$4.73 for demand and .0654 cents per kilowatt the pay back for purchasing a new chiller verses repairing the old will look as follows.

Old Chiller RTAA240 Utility Cost	\$71,051.00
----------------------------------	-------------

Expected Annual Maintenance and Repairs	7,200.00
Total Operating Costs per Year	\$78,251.00
New Chiller RTAC 250 Utility Cost	\$ 58,599.00
Expected Annual Maintenance and Repairs	2,400.00
Total Operating Costs per Year	\$ 60,999.00
Expected Annual Operational Savings with a new Chiller	\$ 17,252.00
ROI for purchasing a new chiller verses repairing the old machine.	
$61,590.00 / 17,252.00 = 3.57 \text{ Years}$	

Hugh (Buddy) Wilson
Commercial Manager
T&M Heating and Air

City of Daphne

**TRANE®**

Proposal

(Valid for 30 days from Proposal date)

PROPRIETARY AND CONFIDENTIAL PROPERTY OF Trane U.S. Inc. dba Trane

DISTRIBUTION TO OTHER THAN THE NAMED RECIPIENT IS PROHIBITED

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Prepared For:

Buddy Wilson

Date: April 16, 2014**Proposal Number:** J5-55005-4**Job Name:**Daphne Civic Center Chiller
Performance data for RTAC250 & RTAE250**Engineer:****Delivery Terms:**

Freight Allowed and Prepaid - F.O.B. Factory

Payment Terms:

Net 30 Days

Trane U.S. Inc. dba Trane is pleased to provide the following proposal for your review and approval.

Tag Data - Air-Cooled Helical Rotary Water Chillers (Qty: 1)

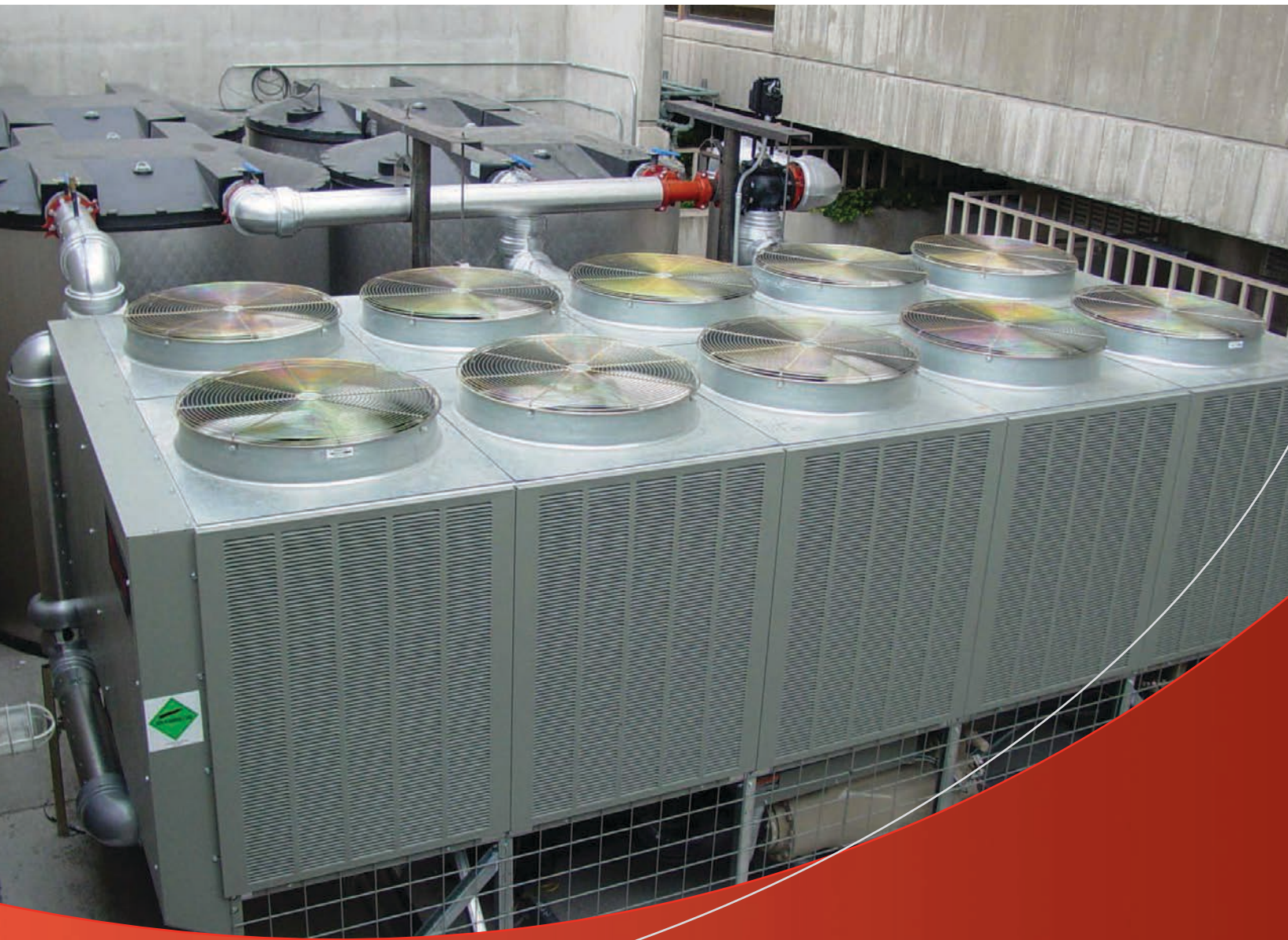
Item	Tag(s)	Qty	Description	Model Number
A1	RTAC-1	1	Air-Cooled Series R(TM) (RTAC)	RTAC250

Product Data - Air-Cooled Helical Rotary Water Chillers**Item: A1 Qty: 1 Tag(s): RTAC-1**

Air cooled Series R(TM) model RTAC
 Startup Included - Trane Service must start equipment for warranty to be honored
 250 nominal tons
 460v/60 hz/3 ph
 Standard configuration
 C/UL listing
 ASHRAE 90.1 all versions compliant
 AHRI certified
 ASME
 Standard 40-60F leaving, with evaporator heaters
 2 pass arrangement, 0.75" insulation
 Fluid type = water
 Standard ambient temperature range
 Aluminum slit fins
 Condenser fans with TEAO motors
 Across the line starter
 Dual point power connection
 Terminals only
 BACnet interface
 10,000 amp SCWR
 Factory installed flow switch - for use when evap fluid type = water
 Refrigerant isolation valves
 Elastomeric isolators (Fld)
 2-5th Year Replacement Compressor Warranty
 1st Year Labor Warranty Whole Unit
 1st Year Refrigerant Warranty
 United States
 Factory/ABU assigned
 Dyna-View operator interface

Performance Data - Air-Cooled Helical Rotary Water Chillers

Tags	RTAC-1
Capacity (tons)	240.10
Compressor power (kW)	275.20
Unit power (kW)	296.10
Efficiency (EER)	9.7
IPLV (EER)	13.7
NPLV (EER)	13.7
Evap entering temp (F)	54.00
Evap flow rate (gpm)	573.90
Evap leaving temp (F)	44.00
Evap pressure drop (ft H ₂ O)	18.10
Evap fouling factor (hr-sq ft-deg F/Btu)	0.00010
Evap fluid concentration (%)	0.00
Evap fluid freeze point (F)	32.00
Min evap flow rate (gpm)	241.00
Press drop min evap flow (ft H ₂ O)	3.70
Max evap flow rate (gpm)	883.00
Press drop max evap flow (ft H ₂ O)	39.70
Saturated evap temp - ckt 1 (F)	40.00
Saturated evap temp - ckt 2 (F)	40.80
Ambient air temp (F)	95.00
Saturated cond temp - ckt 1 (F)	135.60
Saturated cond temp - ckt 2 (F)	136.20
Elevation (ft)	0.00
RLA - compressor A (A)	200.00
LRA - compressor A (A)	1065.00
RLA - compressor B (A)	200.00
LRA - compressor B (A)	1065.00
Number of condenser fans (Each)	14.00
Number of cond fans-NFN1 - ckt 1 (Each)	7.00
Number of cond fans-NFN2 - ckt 2 (Each)	7.00
RLA - condenser fan (each) (A)	2.70
Dual point power MCA - ckt 1 (A)	274.00
Dual point power MCA - ckt 2 (A)	272.00
Dual point power MOP - ckt 1 (A)	450.00
Dual point power MOP - ckt 2 (A)	450.00
Short circuit current rating (A)	10000.00
Fan motor power (kW)	20.20
A-weighted sound pressure (dBA)	75
A-weighted sound power (dBA)	103
Refrig (HFC-134a) - ckt 1 (lb)	225.0
Refrig (HFC-134a) - ckt 2 (lb)	225.0
Oil charge - ckt 1 (gal)	1.90
Oil charge - ckt 2 (gal)	1.90
Shipping weight (lb)	14916.0
Operating weight (lb)	15191.0
Length (in)	268.000
Width (in)	89.000
Height (in)	93.000
Rated capacity (AHRI) (tons)	240.10
Rated efficiency (AHRI) (EER)	9.7
TOPSS version number ()	162
AHRI certified selection	AHRI certified selection
COP (COP)	2.85



Series R™ Helical Rotary Chiller model RTAC

A Reliable Source of Chilled Water from Trane

World-class testing sets Trane chillers apart from the competition.



Trane offers units and compressors that have been extensively tested to verify that their operation is robust and that a smooth start-up is ensured.

Reliability

You need performance that is dependable and reliability you can count on. We are committed to the highest level of design and manufacturing accuracy to make sure your chiller performs as expected.

Over 50,000 Pueblo-built RTAC chillers are installed around the world and attest to our unequaled reliability. There are more than 250,000 helical rotary compressors (including both air and water cooled chillers) operating with our proven direct-drive, low speed, semi-hermetic compressor design. These facts, along with over 25 years of helical-rotary chiller manufacturing know-how and a continued drive to improve our processes, are the ingredients for our sustained reliability.

Our rigorous design verification helps ensure reliable operation over a wide range of operating conditions. Testing involves:

- Extreme testing, including cold ambient starts, hot water starts and high ambient operation
- Compressor-accelerated lifecycle testing, including high-pressure ratio, high load test, flooded starts/stops, start/stop testing and phase reversal
- FEA analysis to confirm the unit structure can withstand shipping, rigging and operational activity
- Electrical testing with destructive testing for short-circuit withstand rating
- Performance modeling and verification, both during design and for the life of the chiller

World-class testing facilities

Trane's world-class testing facilities set us apart from the competition. We look at environmental performance, operating longevity, and overall operating efficiency in order to provide you with the most reliable product for the long term.

On-site factory performance testing confirms that the actual chiller performance matches predicted performance, and test results serve as a benchmark during the commissioning process.

On-going testing is conducted to continually confirm that performance expectations are being met and quality product is being produced. After the chiller goes into production, we keep looking for ways to make it better, quieter, more reliable, and more efficient.

Responsible energy savings

Businesses around the world are being challenged to improve energy efficiency. The HVAC systems that keep building environments comfortable and healthy are responsible for 45% to 65% of building energy use. The slightest inefficiencies in cooling and heating equipment create a huge energy drain that can have a significant financial impact.

The advanced controls, versatility and durability of the RTAC make it a good choice for a variety of chilled water system types including variable primary flow and series applications.

EarthWise™ systems

EarthWise systems use Trane RTAC chillers, building controls, and innovative system applications strategies to provide documented sustainability of high efficiency and low emissions over the entire lifetime of a building. Compared to conventional designs, Trane EarthWise systems help reduce total cost of ownership and reduce ongoing operating costs.

To help provide more system reliability and flexibility, a flow switch is factory installed as standard, reducing jobsite installation requirements and ensuring reliable operation.

Ice-making

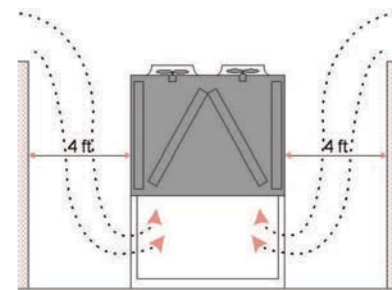
The RTAC supports an energy-efficient thermal storage system by making ice at night, when utility companies charge less for electricity. The stored ice supplements, or even replaces, mechanical cooling during the day when utility rates are at their peak. In addition, the RTAC can often make ice at the same efficiency (or better) than producing 44°F water during the day. This is because of reduced ambient temperatures at night when ice is made.

Contributing to building certifications

Because of its energy efficiency and refrigerant selection and usage, a Trane Series R Helical Rotary Chiller model RTAC can move you forward on your path to LEED®, Energy STAR, and ASHRAE 189 building certification. Both full- and part-load performance of the RTAC chiller exceeds the ASHRAE 90.1 standard. In addition, the falling film evaporator design minimizes refrigerant charges, helping the chiller to attain the LEED Energy and Atmosphere Credit 4 for Enhanced Refrigerant Management.

Energy analysis

Whether you are calculating energy efficiency to determine eligibility for LEED credits, earn tax deductions, or select the HVAC system with the lowest operating costs, Trane's System Analyzer™ software can help. The software estimates building loads and performs preliminary energy and economic analyses of virtually any combination of air distribution system and cooling/heating equipment for a specified building type and climate.



The RTAC has the tightest recommended side clearance in the industry: 4 ft for maximum performance. Where space is further limited and airflow is restricted, the RTAC will stay on-line.

Increased ease and efficiency through advanced control



In the event of a power outage, Trane really shines through. The RTAC chiller can restart a compressor in as little as 60 seconds.

Intelligent controls

RTAC chiller controls support BACnet™ and LonTalk® open protocols without the need of gateways, reducing the complexity and cost of integration with other building control systems. The underlying intelligence is Trane's Adaptive Control™ algorithms, which have patented strategies for responding to variable conditions while maintaining tight water control and effective chiller plant operation.

Powerful, flexible chiller management

The Tracer™ SC system controller includes a Chiller Plant Control (CPC) software application, which allows configuration of a chiller plant for optimal efficiency and reliability. The CPC application provides a flexible, cost-effective management solution for monitoring and controlling daily operation, including lighting and energy consumption. Its simplified, Web-based management tools help improve efficiencies, increase tenant comfort and reduce energy costs.

The powerful CPC application

- Controls the leaving-water temperature by adding chillers as the building cooling load increases and by calculating the chilled water setpoint for each chiller
- Matches chillers to the building load and equalizes runtime and wear on each chiller by using different rotation schemes

- Offers pre-programmed chilled water systems for easy use with series applications, variable primary flow, and many other system types

Trane Intelligent Services

Your building's HVAC system operates around the clock, even when no one is there to keep watch. Trane Active Monitoring provides continuous (24/7/365) off-site monitoring of the critical alarm points that you define and specify. Using the advanced technology of our Intelligent Services Center, Trane Technical Specialists work behind the scenes and around the clock to detect and diagnose failures early. Events can be mitigated, often remotely, without even involving a field service technician.

Every minute of every day, your Tracer™ building control system generates a steady stream of data: such as temperature, pressure, humidity and energy consumption. The Building Performance Package contains exclusive analytical programs that automatically translate all that raw data into informational reports that Trane Optimization Engineers use to identify performance trends and deviations that even the best technicians can't detect. Your local Trane sales and service professionals make actionable recommendations to align the performance and efficiency of your HVAC system with your business objectives.



Ingersoll Rand (NYSE:IR) is a world leader in creating and sustaining safe, comfortable and efficient environments in commercial, residential and industrial markets. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Schlage®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings, transport and protect food and perishables, secure homes and commercial properties, and increase industrial productivity and efficiency. We are a \$14 billion global business committed to sustainable business practices within our company and for our customers. For more information, visit www.ingersollrand.com.



RESOLUTION 2014-18

**RESOLUTION TO AUTHORIZE THE MAYOR & THE DIRECTOR OF PUBLIC WORKS TO
APPLY FOR THE STATE OF ALABAMA'S FISCAL YEAR 2014
TRANSPORTATION ALTERNATIVE PROGRAM (TAP)**

WHERE AS, the Alabama Department of Transportation (ALDOT) is soliciting applications for the Fiscal Year 2014 Transportation Alternatives Program (TAP) provided by the Federal Highway Administration through the Moving Ahead for Progress in the 21st Century (MAP 21); and

WHERE AS, Transportation Alternatives Program (TAP) funds may be used for: Construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation to achieve compliance with the Americans with Disabilities Act of 1990; Construction of infrastructure-related projects and systems that will provide safe routes for non-drivers; Construction of turnouts, overlooks, and viewing areas; Community improvement activities; and any environmental mitigation activities; and

WHEREAS, TAP funds are capped at a maximum of \$400,000.00 and are awarded and distributed according to the cost sharing methodology of **80% Federal / 20% City for construction cost and construction engineering and testing (CE&I) and 100% City funding for all related engineering design costs, utility relocations, and R.O.W. acquisitions;** and

WHEREAS, the Mayor and Director of Public Works are working to identify qualifying infrastructure projects within the City of Daphne; and

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Daphne that:

- 1.) The Mayor and the Director of Public Works are hereby authorized to apply for the Transportation Alternatives Program for FY2014(TAP); and
- 2.) If approved and awarded TAP funding, the City will appropriate funds for the project equal to 20% of the construction cost and CE&I in addition to 100% of all related engineering, utility relocations, and Right of Way acquisition costs.

**APPROVED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF DAPHNE,
ALABAMA, THIS _____ DAY OF _____, 2014.**

DANE HAYGOOD, MAYOR

ATTEST:

Rebecca A. Hayes, City Clerk

Dane Haygood
Mayor



Richard D. Johnson, PE
Public Works Director

To: Mr. Robert J. Jilla
Bureau of Transportation Planning & Modal Programs
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Cc: Honorable Dane Haygood, Mayor; File

From: Richard D. Johnson, P.E.
Public Works Director

Date: April 30, 2014

Re: FY2014 Transportation Alternatives Program (TAP) Project Application - Sidewalk and Streetscapes Improvements in Old Towne Daphne to achieve compliance with ADA guidelines

Dear Mr. Jilla:

Please find enclosed four copies of the FY2014 TAP Application for the above referenced project.

The City of Daphne is committed to quality pedestrian infrastructure that promotes accessibility, safety, economic development, quality education, and overall community and regional enhancement. The City is committed to the full required sponsor match if selected.

If you have any questions, or require additional information, do not hesitate to contact me at 251-621-3182 or rjohnson@daphneal.com.

Yours,

RDJ

City of Daphne

The Alabama Department of Transportation



FY 2014

TRANSPORTATION
ALTERNATIVES
PROGRAM



PROJECT APPLICATION

May 2, 2014

GENERAL INFORMATION

1. Project Title Sidewalk and Streetscapes Improvements in Old Towne Daphne
2. Sponsor City of Daphne, Alabama Population 22,500
3. Mayor, Commission Chair, etc..
Name Honorable Dane Haygood
Title Mayor
Address P.O. Box 400
Daphne, Alabama 36526
Phone (251) 621-9000 Ext.# 1 Fax (251) 621-8624
4. Contact Person Richard D. Johnson, P.E.
Title Director of Public Works
Phone (251) 621-3182
5. Application Prepared by Richard D. Johnson, P.E.
Company/Agency City of Daphne Phone: (251) 621-3182
6. Location of the Project Area Old Town Daphne: Main Street (between College & Randall); side streets: CR64, College, Belrose, Gaurisco, Mancini, & Trione
 - a. County Baldwin City Daphne ALDOT Div. SW Reg.
 - b. M.P.O. (Area) Eastern Shore MPO (ESMPO)
 - c. State, U.S. or Interstate Route Parallel and Adjacent to US Hwy 98
 - d. Senatorial District Number 32
 - e. House District Number 96
7. Legislators
 - a. State Senator(s) Honorable, Lee "Trip" Pittman
 - b. State Representative(s) Honorable, Randy Davis
8. Total Project Cost \$ 374,009.00 Federal Share \$ 299,207.00
Sponsor Share \$ 74,802.00

PROJECT DESCRIPTION

2014 Transportation Alternatives Program (TAP)

Sidewalk and Streetscapes Improvements in Old Towne Daphne to achieve compliance with ADA guidelines: Executive Summary:

This project will involve Sidewalk and Streetscape Improvements in Old Towne Daphne, consisting of installation of pedestrian crosswalks with detectable warning surfaces, pedestrian lighting, landscaping, and new sidewalks to complete pedestrian links. In addition, Daphne Avenue (a.k.a. County Road 64) will be modified into a divided boulevard with curbed median islands. All proposed work is to bring deficient sidewalk infrastructure up to full compliance with ADA Guidelines, improve traffic safety/access and streetscape aesthetics.

1. **Transportation Alternatives Eligibility** - Qualifying Eligible activities under TAP (from application page 2) are as follows:
 - a. Eligibility Item #1: *Construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian lighting, downtown streetscape (combination of sidewalks, pedestrian lighting and landscaping), and other transportation projects to achieve compliance with the Americans with Disabilities Act of 1990.* The proposed project is wholly contained in the heart of Old Towne Daphne (The City's Historic Downtown District) and entails additional (new) sidewalks, retrofitting existing sidewalks to meet ADA Compliance, pedestrian lighting, streetscapes and landscaping.
 - b. Eligibility Item #2: *Construction of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.* A key part of this project is the construction of new sidewalks to complete links to provide pedestrian access to people of all abilities. The project proposes construction of 3900 linear feet of new ADA Compliant sidewalk.

This proposed project fully meets 2 of the 6 TA Eligibility Activities listed. It should be selected based on eligibility alone.

2. **History** – Records indicate April 9, 1874 as the actual establishment of the town to be called Daphne with the designation of a Postmaster and official Post Office for the Community and Daphne was incorporated on July 8, 1927 with a population of only 500. The entire project area is centered around Old Towne Daphne – the site of the City's origin. Bringing these sidewalks into ADA compliance, completing missing sidewalk links and improving streetscapes will provide access and enjoyment to these historic areas to pedestrians of all abilities.

3. **Scenic Significance** - The Project is located along and adjacent to Main Street (also known as Scenic Highway 98) in the heart of Old Towne Daphne. Main Street (aka Scenic 98) in Daphne is an important link of the National and State Scenic Byway called Alabama's Coastal Connection. Enhancing this portion of the National/State Scenic Byway will have a significance impact on the transportation system by encouraging travelers to leave the heavily traveled four-lane US Highway 98 and choose a more relaxed scenic route. The structural improvements proposed will provide access for people of all abilities and the streetscape/landscape improvements will further enhance the scenic byway.
4. **Impact** – The City of Daphne hosts over 20 major events and festivities each year in Old Towne Daphne. These Civic Events, Parades, Runs, and Holiday Celebrations are a core part of the community life of Daphne. The improvements to the pedestrian transportation system throughout the historic district of Daphne will increase the ability of people of all abilities to participate. This additional participation will have a significant tourism and economic impact.

In addition, the proposed improvements will enhance adjacent property values and encourage commercial growth in the downtown district. Land disturbance will be minimal and there are no anticipated environmental impacts. All work will be confined to the public rights-of-way and the project will not increase stormwater runoff due to no net gain in impervious surfaces. There will be minor traffic interruptions during the work converting Daphne Avenue (CR64) to a divided boulevard.

5. **Proposed Construction – Scope of Work** - Streetscapes Improvements in Old Towne Daphne to achieve compliance with ADA guidelines.

Roadways/Sidewalks subject to proposed improvements:

- Daphne Avenue (US Hwy 98 to Main Street)
- Main Street (Randall to College)
- College Street (Main to 6th St)
- Belrose Avenue (Main to 6th St)
- Gaurisco, Mancini, and Trione Streets

Improvements to Include:

- a. Installation of Detectable Warning Surfaces per ADA R304 – at all street intersections and commercial driveways
- b. ADA compliant crosswalks per R305 – 6' wide thermoplastic at all street intersections and commercial driveways

- c. Completion of missing sidewalk links with ADA compliant new concrete sidewalks – 3900 linear feet – 0.74 miles
 - d. New pedestrian lighting – to match existing Old Towne Fixtures – infill in areas requiring sidewalk lighting
 - e. Conversion of Daphne Avenue to a divided boulevard by installing curbed raised median islands. Median islands will employ Type M-10 curbing, stained stamped concrete nose points, full landscaping with irrigation
 - f. New streetscape landscaping including planting of street trees
6. **Ownership** - The project will take place north of College Avenue, south of Randall Avenue, east of Sixth Street and west of U.S. Highway 98. All improvements will take place within the public Rights-of-Way of these streets and these Rights-of-Ways are owned and maintained by the City of Daphne.
7. **Intended Use** - Public Use: Passive Recreation (walking), Alternative Commuting (walking to Work), Tourism, Full Access for People of all Abilities for special events hosted by the City of Daphne throughout the year. Furthermore, these proposed improvements will provide full and unfettered access the City's main municipal complex, large sports park, multiple churches, kids parks, a school, retail and dining establishments throughout the Old Towne District.
8. **Life Expectancy** - The detectable warning surfaces (truncated dome tops): 15-20 years, thermoplastic crosswalks: 5-7 years, new sidewalk links and median curbing: 25-30 years, and the pedestrian lighting 25-30 years. The City will budget accordingly for the periodic replacement of the thermoplastic crosswalks on a 5 – 7 year basis.
9. **Maintenance Plan** - The sidewalk, detectable warning surfaces, median curbing and the crosswalks will be maintained as needed by the Street Department of Public Works for the City of Daphne. The pedestrian lighting will be maintained by the City's Electric Public Utility. The City's Grounds and Mowing Departments maintain all street landscaping. All these maintenance cost will be part of the annual Public Works operating budget.

Public Works Director Estimated Costs

Transportation Alternative Program - Fiscal Year 2014

PROJECT DESCRIPTION					
Sidewalk & Streetscapes Improvements for Old Towne Daphne To Achieve compliance with ADA guidelines					
Street	Main Street (College Ave - Randall Ave) - Sheets 2 & 3				
Item #	Description	Unit	Quantity	Unit Price	Amount
1	5'-0" Wide Concrete Sidewalk (Infill Links)	L.F.	1330	\$25.00	\$33,250.00
2	Detectable Warning Surfaces (New Installation)	Each	5	\$250.00	\$1,250.00
3	Detectable Warning Surfaces (Retrofit Installation)	Each	19	\$750.00	\$14,250.00
4	Pedestrian Lights (Match Existing) Installed	Each	10	\$1,500.00	\$15,000.00
5	Crosswalk - 6'-0" Wide, Thermoplastic	Each	13	\$500.00	\$6,500.00
6	Landscaping	L.F.	200	\$25.00	\$5,000.00
Street	Daphne Avenue - Sheet 4 & 8				
Item #	Description	Unit	Quantity	Unit Price	Amount
1	5'-0" Wide Concrete Sidewalk (Infill Links)	L.F.	660	\$25.00	\$16,500.00
2	Detectable Warning Surfaces (New Installation)	Each	2	\$250.00	\$500.00
3	Detectable Warning Surfaces (Retrofit Installation)	Each	12	\$750.00	\$9,000.00
4	Pedestrian Lights (Match Existing) Installed	Each	3	\$1,500.00	\$4,500.00
5	Crosswalk - 6'-0" Wide, Thermoplastic	Each	8	\$500.00	\$4,000.00
6	Saw Cutting (Asphalt)	L.F.	900	\$6.00	\$5,400.00
7	Unclassified Excavation	C.Y.	100	\$12.50	\$1,250.00
8	Median Concrete Curbing (Type M-10)	L.F.	900	\$25.00	\$22,500.00
9	Stamped Concrete Nose Points (6" reinforced)	S.Y.	128	\$75.00	\$9,600.00
10	Bituminous Concrete Wearing Surface Layer	Ton	5	\$200.00	\$1,000.00
11	Traffic Marking, Striping and RPM's	L.S.	1	\$7,500.00	\$7,500.00
12	Topsoil, 4" Compacted Thickness	C.Y.	80	\$20.00	\$1,600.00
13	Street Trees (4" caliper)	Each	12	\$250.00	\$3,000.00
14	Median Landscaping w/irrigation	L.S.	1	\$25,000.00	\$25,000.00
15	Temporary Traffic Control	L.S.	1	\$12,500.00	\$12,500.00
16	Landscaping (property side)	L.F.	200	\$25.00	\$5,000.00
Street	Gaurisco, Manci, and Trione Streets - Sheet 5				
Item #	Description	Unit	Quantity	Unit Price	Amount
1	5'-0" Wide Concrete Sidewalk (Infill Links)	L.F.	1910	\$25.00	\$47,750.00
2	Detectable Warning Surfaces (New Installation)	Each	6	\$250.00	\$1,500.00
3	Detectable Warning Surfaces (Retrofit Installation)	Each	2	\$750.00	\$1,500.00
4	Pedestrian Lights (Match Existing) Installed	Each	8	\$1,500.00	\$12,000.00
5	Landscaping (property side)	L.F.	415	\$25.00	\$10,375.00
Street	College and Belrose Avenues - Sheets 6 & 7				
Item #	Description	Unit	Quantity	Unit Price	Amount
1	5'-0" Wide Concrete Sidewalk (Infill Links)	L.F.	0	\$25.00	\$0.00
2	Detectable Warning Surfaces (New Installation)	Each	0	\$250.00	\$0.00
3	Detectable Warning Surfaces (Retrofit Installation)	Each	4	\$750.00	\$3,000.00
4	Pedestrian Lights (Match Existing) Installed	Each	6	\$1,500.00	\$9,000.00
5	Crosswalk - 6'-0" Wide, Thermoplastic	Each	2	\$500.00	\$1,000.00
6	Landscaping	L.F.	0	\$25.00	\$0.00
Item #	Description	Unit	Quantity	Unit Price	Amount
1	Project Wide Mobilization/Demobilization	L.S.	1	\$35,000.00	\$35,000.00
Estimated Construction Cost					\$325,225.00

Professional Services Calculations					
Item #	Description	Unit	Quantity	Unit Price	Amount
1	Engineering Survey & Design (8.5% of Construction)	Each	1	\$27,644.13	\$27,644.13
2	Material Testing (3.5% of Construction)	Each	1	\$11,382.88	\$11,382.88
3	Engineering - CE&I (11.5% of Construction)	Each	1	\$37,400.88	\$37,400.88
Estimated Professional Service Cost					\$76,427.88

Estimated Total Cost	\$401,652.88
-----------------------------	---------------------

PROJECT COST	\$ 325,225
CE&I (UP TO 15%)	\$ 48,784
TOTAL PROJECT COST	\$ 374,009
	X 80%
FEDERAL SHARE	\$ 299,207
20% LOCAL SHARE	\$ 74,802

Note: Provide an itemized budget that includes construction items, quantities, cost per item and total cost per item and a total project cost.

Please round off all amounts to the nearest dollar.

2014 Transportation Alternatives Program (TAP) Grant

GRANT ATTACHMENTS

- #1 – Letter from the Mayor stating the City's willingness to pursue the project to completion and be responsible for the required expenses
- #2 - Eastern Shore Metropolitan Planning Organization (ESMPO) letter to allow the project to be included in the Transportation Improvement Plan (TIP)
- #3 - Resolution 2014-## from the Daphne City Council stating their approval of the proposed transportation alternatives
- #4 - Current and legible 7.5 minute USGS map indicating exact project location
- #5 - Project Location Map
- #6 - Design Sketch – 8 Sheets – Preliminary
 - a. Cover Sheet
 - b. Main Street – South Section
 - c. Main Street – North Section
 - d. Daphne Avenue (AKA CR64) – Sidewalks, ADA, Markings & Lighting
 - e. Gaurisco, Mancini, & Trione Streets
 - f. College Avenue
 - g. Belrose Avenue
 - h. Daphne Ave (AKA CR64) – Medians/Streetscape
- #7a - Photo Legend – Current Site Conditions
- #7b - Photos 1 – 3
- #7c - Photos 4 – 6

April 30, 2014

Mr. Robert J. Jilla
Bureau of Transportation Planning & Modal Programs
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Re: FY2013 Transportation Alternatives Program (TAP) Project Application - Sidewalk and Streetscapes Improvements in Old Towne Daphne to achieve compliance with ADA Guidelines

Dear Mr. Jilla:

Please find attached the City of Daphne's application for the Transportation Alternatives Program (TAP) funding for the above referenced project.

The City of Daphne is committed to quality pedestrian infrastructure that promotes accessibility, safety, economic development, quality education, and overall community and regional enhancement.

This project embodies the criteria listed in the Moving Ahead for Progress in the 21st Century (MAP-21) Initiative and the City is in a strong financial position to partner with State to bring this project to fruition.

I humbly ask that you give this application thoughtful consideration and weigh it on its merits. If you have any questions, or need additional information, the City's TAP Coordinator is Richard D. Johnson, PE, Public Works Director. He can be contacted at 251-621-3182 or rjohnson@daphneal.com.

I look forward to the City of Daphne and the State partnering in this important project. It is reassuring to know the State able and willing to assist the City in a time of need. If there is ever anything that the City of Daphne can do to assist Transportation Department, please do not hesitate to call on us.

Sincerely,

Dane Hayggod, Mayor

Cc: Richard Johnson – Daphne Public Works Director
File

EASTERN SHORE MPO
BALDWIN COUNTY SATELLITE COURTHOUSE
1100 FAIRHOPE AVENUE
FAIRHOPE, ALABAMA 36532
TELEPHONE: (251) 990-4640
FAX: 251-580-2590
WWW.EASTERNSHOREMPO.ORG

March 26, 2014

VIA U.S. MAIL:
Cecil Colson
Special Programs Section Administrator
Transportation Planning and Modal Programs
Alabama Department of Transportation
1100 John Overton Drive
Montgomery, Alabama 36110

***Re: MPO Letter of Support for TAP Grant Funding for Transportation Improvements in
the City of Daphne, Alabama***

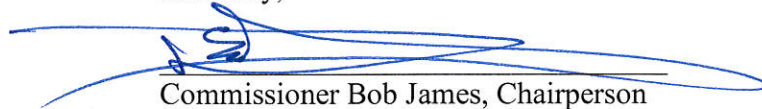
Dear Mr. Colson:

The Eastern Shore MPO Policy Board is pleased to issue this letter supporting and endorsing the City of Daphne's application for grant funding under the Transportation Alternatives Program. The City of Daphne is a popular destination on the Eastern Shore and the proposed improvements will be a benefit to residents throughout the entire MPO planning area.

The Eastern Shore MPO was formed in late 2012, and does not yet have a Transportation Improvement Program (TIP) in place. However, per ALDOT and FHWA's guidance, funds of this nature will be approved by the Policy Board and incorporated directly into the State TIP.

Thank you for your consideration of the City of Daphne's grant application. These funds will greatly benefit the Eastern Shore.

Sincerely,



Commissioner Bob James, Chairperson

cc:
Jim Doolin via email
Cal Markert via email
File

RESOLUTION 2014-##

**RESOLUTION TO AUTHORIZE THE MAYOR & THE DIRECTOR OF PUBLIC WORKS TO
APPLY FOR THE STATE OF ALABAMA'S FISCAL YEAR 2014
TRANSPORTATION ALTERNATIVE PROGRAM (TAP)**

WHERE AS, the Alabama Department of Transportation (ALDOT) is soliciting applications for the Fiscal Year 2014 Transportation Alternatives Program (TAP) provided by the Federal Highway Administration through the Moving Ahead for Progress in the 21st Century (MAP 21); and

WHERE AS, Transportation Alternatives Program (TAP) funds may be used for: Construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation to achieve compliance with the Americans with Disabilities Act of 1990; Construction of infrastructure-related projects and systems that will provide safe routes for non-drivers; Construction of turnouts, overlooks, and viewing areas; Community improvement activities; and any environmental mitigation activities; and

WHEREAS, TAP funds are capped at a maximum of \$400,000.00 and are awarded and distributed according to the cost sharing methodology of **80% Federal / 20% City for construction cost and construction engineering and testing (CE&I) and 100% City funding for all related engineering design costs, utility relocations, and R.O.W. acquisitions; and**

WHEREAS, the Mayor and Director of Public Works are working to identify qualifying infrastructure projects within the City of Daphne; and

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Daphne that:

- 1.) The Mayor and the Director of Public Works are hereby authorized to apply for the Transportation Alternatives Program for FY2014(TAP); and
- 2.) If approved and awarded TAP funding, the City will appropriate funds for the project equal to 20% of the construction cost and CE&I in addition to 100% of all related engineering, utility relocations, and Right of Way acquisition costs.

**APPROVED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF DAPHNE,
ALABAMA, THIS _____ DAY OF _____, 2014.**

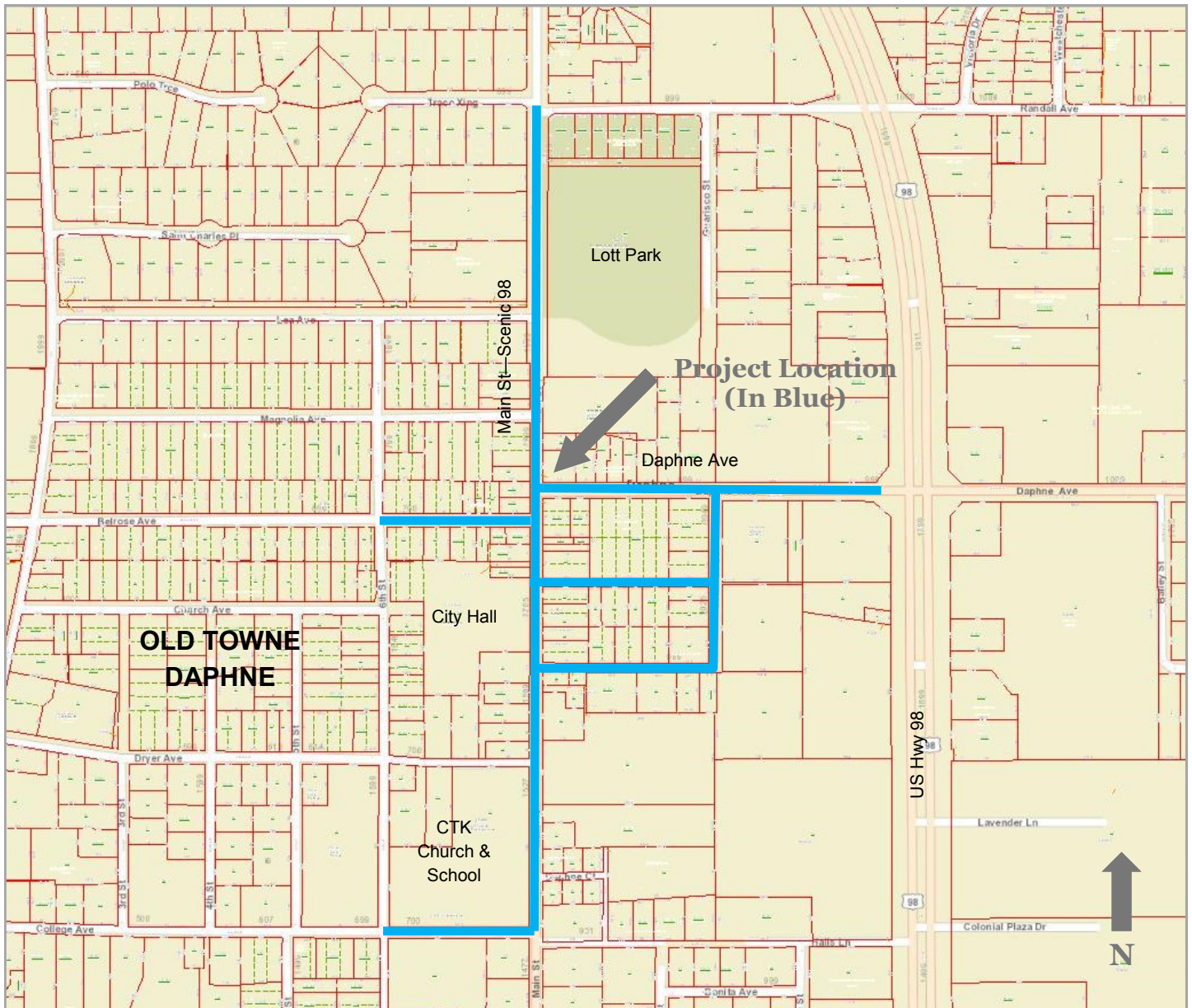
DANE HAYGOOD, MAYOR

ATTEST:

Rebecca A. Hayes, City Clerk



FY2014 TRANSPORTATION ALTERNATIVES (TAP) PROGRAM GRANT CITY OF DAPHNE



Vicinity Map

Scale: 1" = 600'

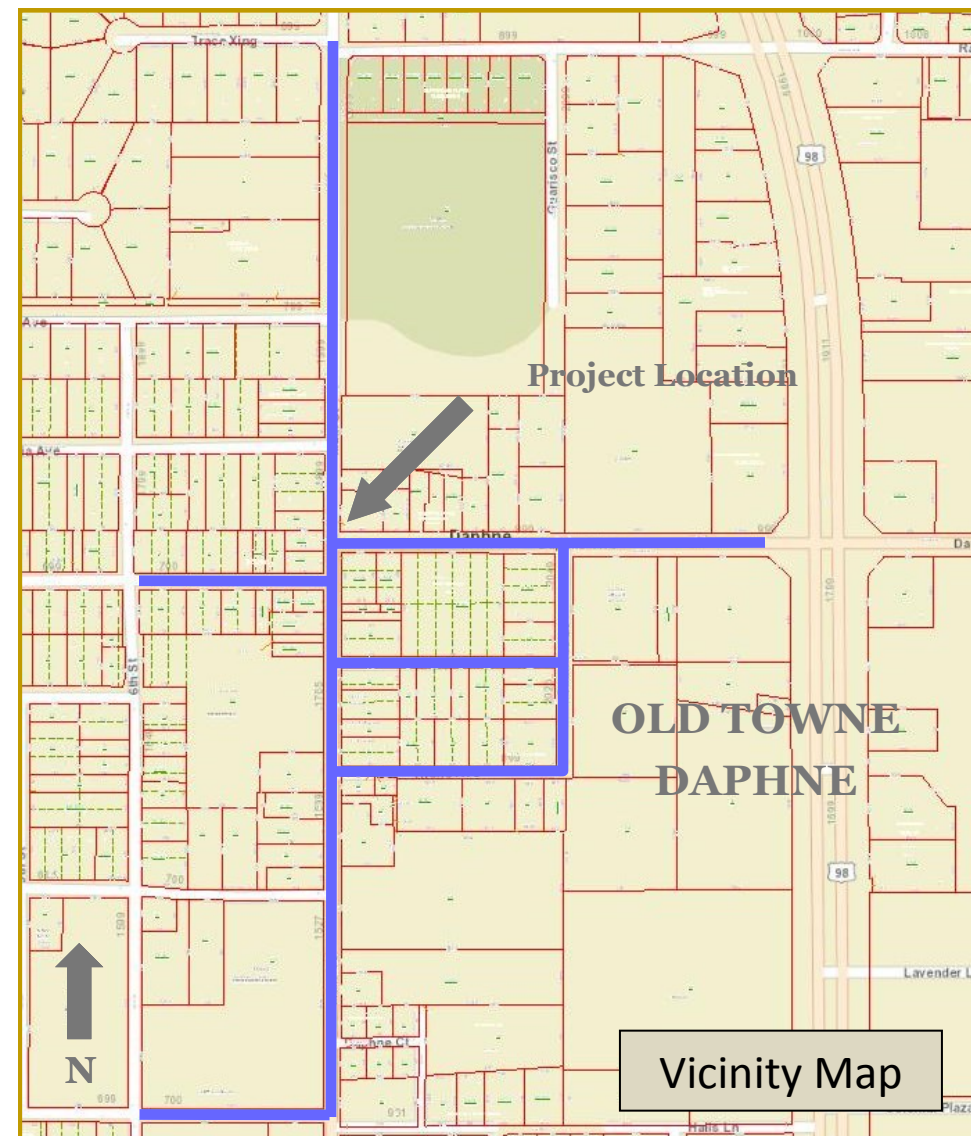
FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP) GRANT CITY OF DAPHNE

Sidewalks and Streetscapes Improvements for Old Towne Daphne
To achieve compliance with ADA guidelines
May 2, 2014



INDEX TO PLAN SHEETS

SHEET	DESCRIPTION
1	Title
2	Main Street South
3	Main Street North
4	Daphne Avenue (AKA CR64)
5	Gaurisco, Manci, & Trione St
6	College Avenue
7	Belrose Avenue
8	Daphne Ave Medians



MAYOR

Dane Haygood

CITY COUNCIL

Tommie Conaway

District 1

Pat Rudicell

District 2

John L. Lake

District 3

Randy Fry

District 4

Ronald Scott

District 5

Robin Lejeune

District 6

Joe Davis, III

District 7

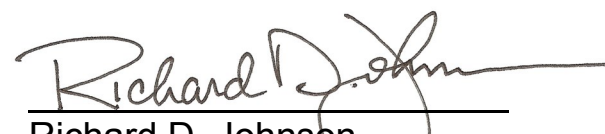
DIRECTOR OF PUBLIC WORKS

Richard D. Johnson, PE

CITY CLERK

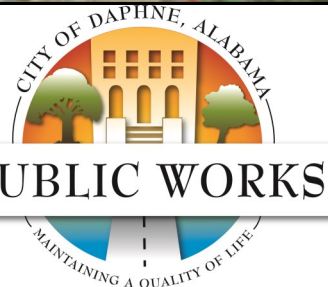
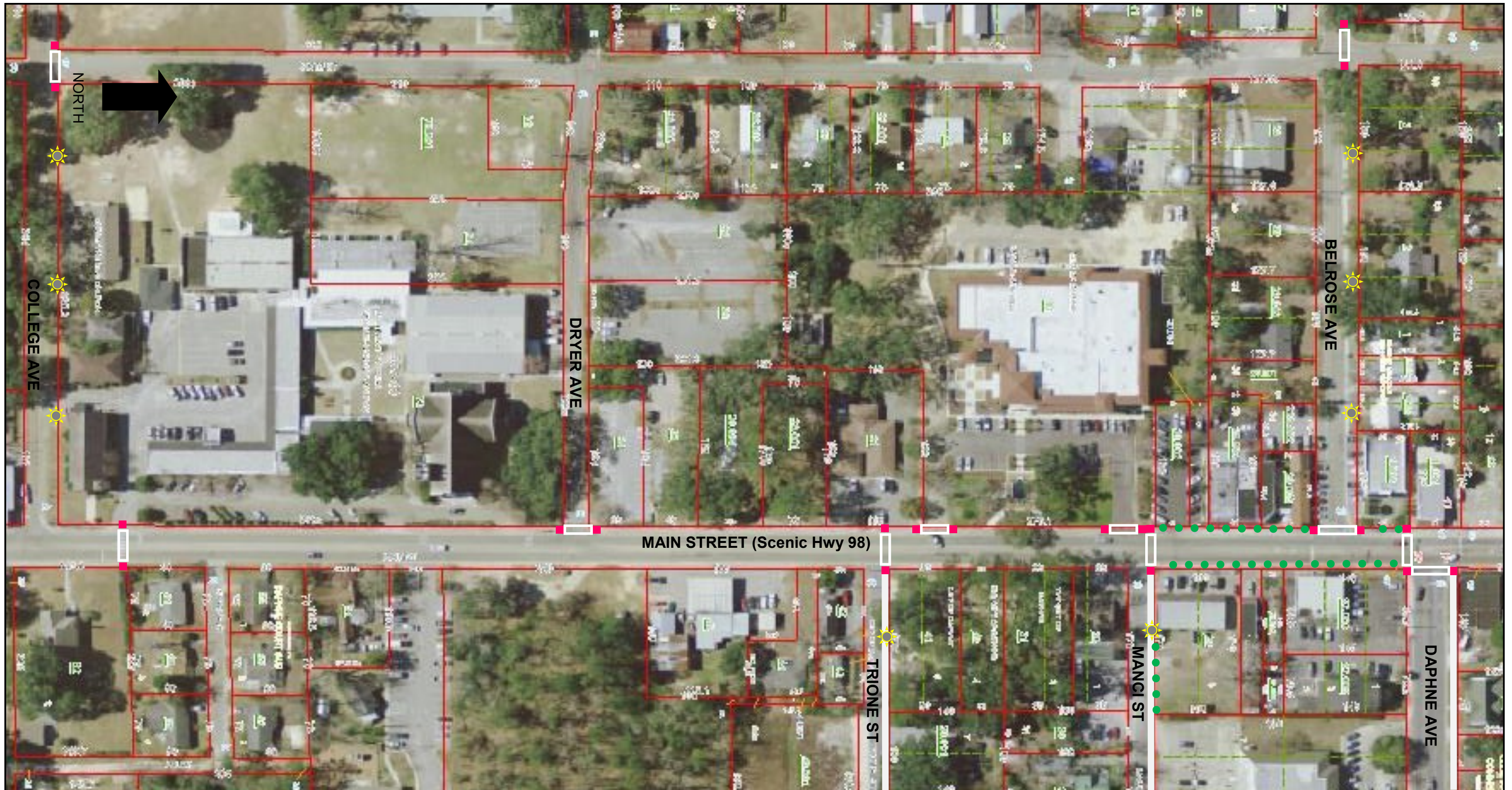
Rebecca Hayes

Project: TAP 2014-1


Richard D. Johnson
AL. REG. NO. 30405

04-01-2014

Date

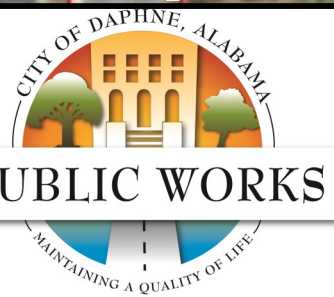


FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP)
CITY OF DAPHNE - Streetscapes Improvements Old Towne
To achieve compliance with ADA guidelines

Sheet Title: Main Street (College to Daphne Ave) Plan View

LEGEND	
	Detectable warning surfaces
	ADA compliant crosswalks
	New pedestrian lighting
	New streetscape landscaping
	New 5'-0" Concrete Sidewalk

Scale:	N.T.S.
Drawn By:	RDJ
Date:	04/01/2014
Sheet No.	2 of 8

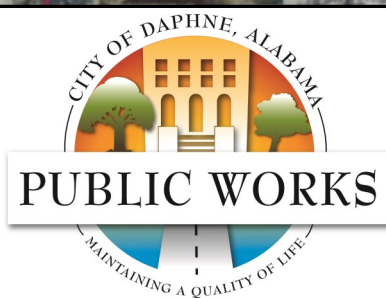


FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP)
CITY OF DAPHNE - Streetscapes Improvements Old Towne
To achieve compliance with ADA guidelines

Sheet Title: Main Street (Daphne Ave to Randall Ave) Plan View

- LEGEND**
- Detectable warning surfaces
 - ADA compliant crosswalks
 - New pedestrian lighting
 - New streetscape landscaping
 - New 5'-0" Concrete Sidewalk

Scale:	N.T.S.
Drawn By:	RDJ
Date:	04/01/2014
Sheet No.	3 of 8



FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP)
CITY OF DAPHNE - Streetscapes Improvements Old Towne
To achieve compliance with ADA guidelines

Sheet Title: Daphne Avenue (AKA County Road 64) Plan View

LEGEND

- Detectable warning surfaces
- ADA compliant crosswalks
- New pedestrian lighting
- New streetscape landscaping

Scale:

N.T.S.

Drawn By:

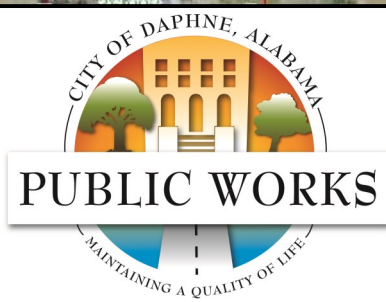
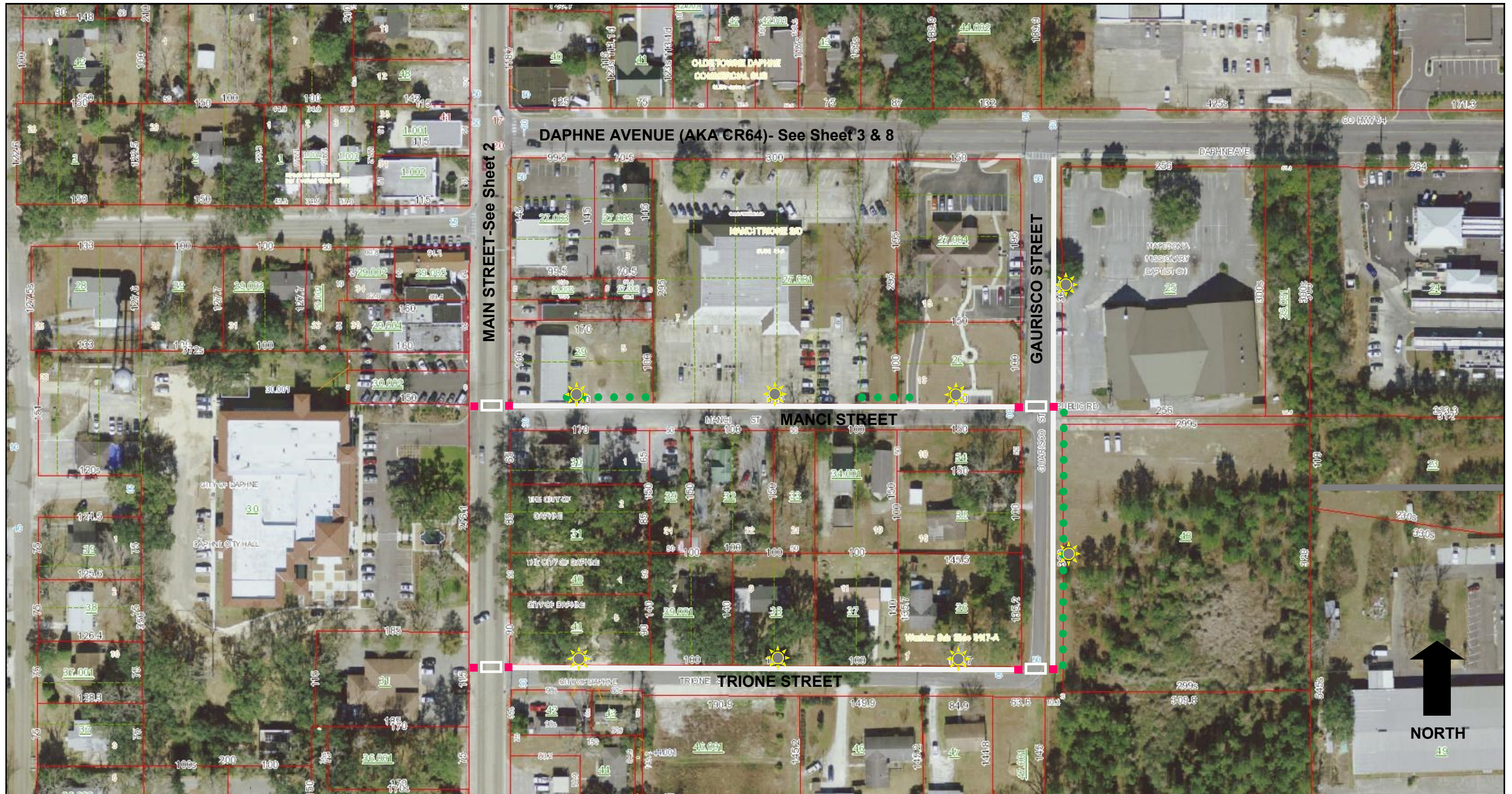
RDJ

Date:

04/01/2014

Sheet No.

4 of 8

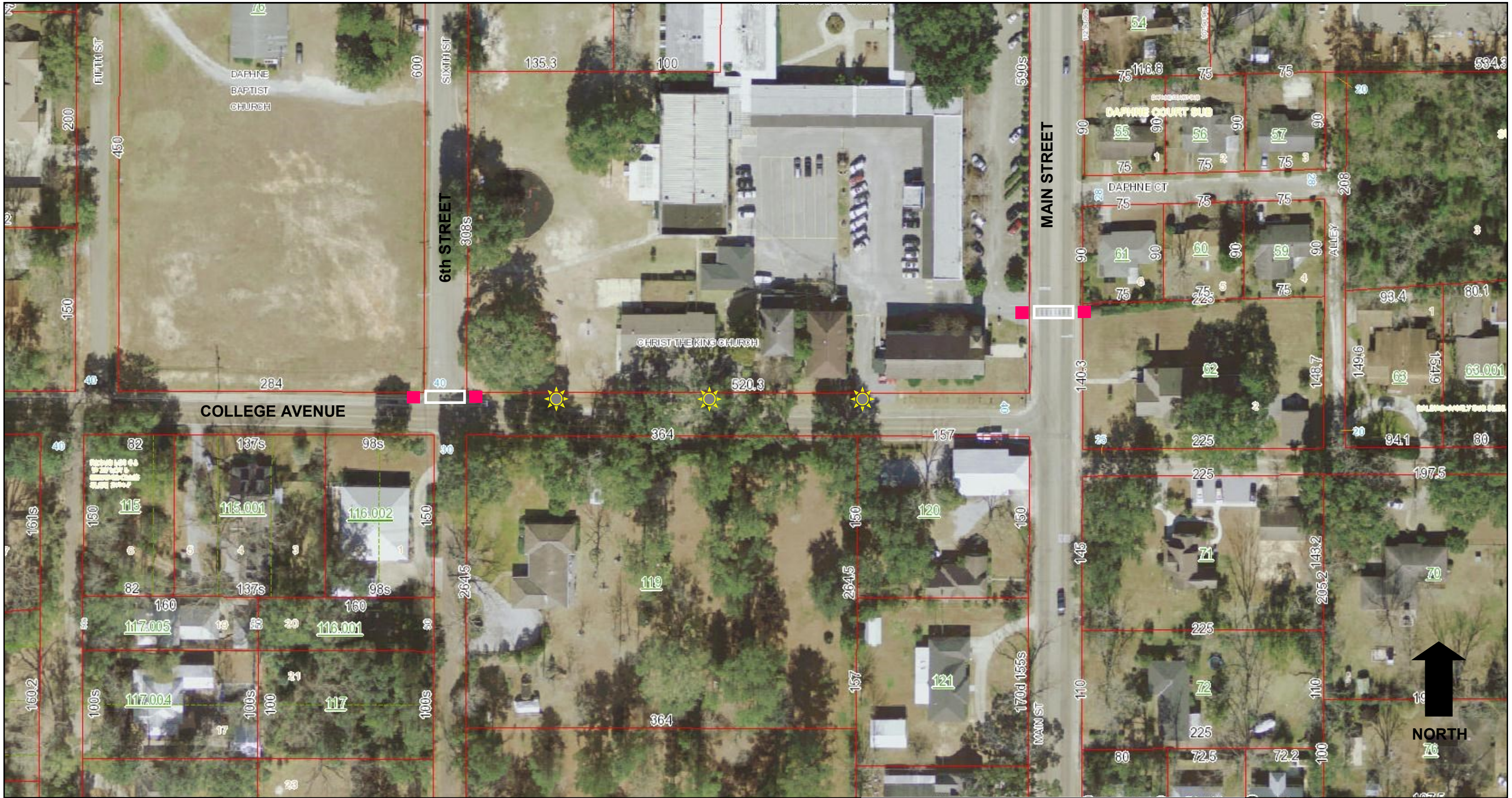


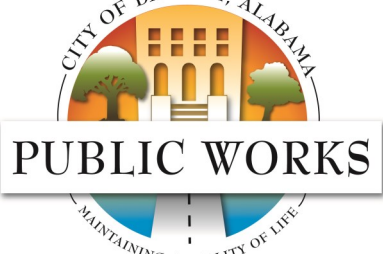
**FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP)
CITY OF DAPHNE - Streetscapes Improvements Old Towne
To achieve compliance with ADA guidelines**

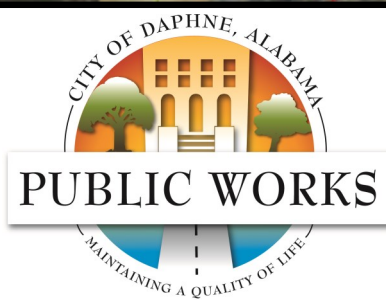
Sheet Title: Gaurisco, Manci, & Trione Streets - Plan View

LEGEND	
	Detectable warning surfaces
	ADA compliant crosswalks
	New pedestrian lighting
	New streetscape landscaping
	New 5'-0" Concrete Sidewalk

Scale:	N.T.S.
Drawn By:	RDJ
Date:	04/01/2014
Sheet No.	5 of 8



	FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP) CITY OF DAPHNE - Streetscapes Improvements Old Towne To achieve compliance with ADA guidelines	LEGEND	Scale:	N.T.S.
			Drawn By:	RDJ
	Sheet Title: College Avenue Plan View	Detectable warning surfaces ADA compliant crosswalks ☀ New pedestrian lighting ●●● New streetscape landscaping	Date:	04/01/2013
			Sheet No.	6 of 8



**FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP)
CITY OF DAPHNE - Streetscapes Improvements Old Towne
To achieve compliance with ADA guidelines**

Sheet Title: Belrose Avenue Plan View

LEGEND

- Detectable warning surfaces
- ADA compliant crosswalks
- New pedestrian lighting
- New streetscape landscaping

Scale:	N.T.S.
Drawn By:	RDJ
Date:	04/01/2014
Sheet No.	7 of 8



FY2014 TRANSPORTATION ALTERNATIVE PROGRAM (TAP)
CITY OF DAPHNE - Streetscapes Improvements Old Towne
To achieve compliance with ADA guidelines

Sheet Title: Daphne Avenue (Median Improvements) Plan View

LEGEND	
	Stamped Concrete Nose Points
	Landscaped Medians
	New Street Trees
	New Curbed Island Medians

Scale:	N.T.S.
Drawn By:	HMR/RDJ
Date:	04/01/2014
Sheet No.	8 of 8

NO.	REVISION	DATE	ENGR.



HUTCHINSON, MOORE & RAUCH, LLC
 2039 MAIN STREET
 DAPHNE, ALABAMA
 36526

ENGINEERS & SURVEYORS
 LAND PLANNERS

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PROPOSED MEDIAN ISLAND LAYOUT DAPHNE AVENUE MEDIAN IMPROVEMENTS				
CITY OF DAPHNE 66				
SCALE 1"=40'	DATE FEBRUARY 2012	DRAWN BY JHR	CHECKED BY	SHEET 1 OF 1