

TAB 10

Air Quality
April 7, 2008-4:00pm Commission Meeting

POINT PAPER

Problem: The results of the City Hall air quality study have been completed and recommendations have been made to improve the air quality. Staff seeks authorization to proceed with the recommendations.

Background:

The city contracted with JEA (subcontracted to Greenfield Environmental) to perform the air quality study on City Hall. As a result of the study, the City completed some of the repairs in house (i.e., Sharon Jones' office). Staff provided an update memo several weeks ago and indicated we would bring the item back to Commission once further estimates were obtained for the recommendations related to the HVAC work. West Coast Air Conditioning was contacted to perform a complete HVAC evaluation of City Hall per the recommendation of the JEA air quality study. The results of the HVAC study and related quote are included for your review. In summary, they recommend replacing one HVAC unit in the break room, cleaning all ducts throughout City Hall, and replacing various float switches and drain pans as identify in the report. The total cost for HVAC work is \$7,157 plus \$200 for overtime work associated with cleaning the ducts on a non-work day(i.e., Saturday). The work related to replacing ceiling tiles will be done in-house and is estimated to cost \$500. Total cost should not exceed \$7,857.

Alternatives:

1. Motion to approve and authorize the Mayor to execute the contract with West Coast Air Conditioning in an amount not to exceed \$7,357 and authorize City staff to purchase and install ceiling tiles at a cost not to exceed \$500.
2. Do not approve the HVAC and ceiling tile work.

Recommendation:

Alternative #1

Budget Impact:

This item was not part of the FY 2008 budget. However, Finance has identified \$9,352 of CIP budget associated with the PW break room addition. Finance recommends transferring the \$9,352 from the PW break room CIP account to the City Hall CIP account to fund the air quality repairs. Resolution 08-12 (item 11 on agenda) will move the necessary funds as described above,

WEST COAST AIR CONDITIONING & HEATING, INC.

5347 Gulf Drive #4
Holmes Beach, FL 34217-1779
State License #: CAC044365

Telephone: (941) 778-9622
Fax: (941) 778-4950
westcoastac1@yahoo.com

www.WESTCOASTAC.COM

February 20, 2008

Geoff Seger
City of Palmetto
516-8th Avenue W.
Palmetto, FL 34221

Dear Geoff:

Upon receiving your request for an inspection of the a/c systems at City Hall, we familiarized ourselves with the Jones Edmunds report and began by addressing their problem items. All systems were opened and visually inspected for dirt and contaminants. The ductwork in certain areas were checked for damage. Ductwork was properly transitioned for the air flow, insulated, and sealed properly. Also all water damaged areas were checked, specifically: Mrs. Jones's office, the Mayor's office, and Jim Freeman's office. We found several instances of broken ceiling tiles. These broken tiles cause infiltration of the attic air, which in turn causes high humidity and drastic temperature changes. We also found several missing air diffusers. Diffusers are very important for the correct disbursement of heat in the problem areas. This report gives a detailed breakdown per unit of problem areas and solutions for same.

On completion of recommended work, we recommend that at least a semiannual maintenance be done on all systems. This will keep your systems operating at peak performance. This may also provide advance notice of any potential problems.

We did note in all of the offices facing 8th Avenue, grill inserts have been removed. Existing grills are incorrect and also may need to be repositioned for adequate air distribution.

All of the condensing units should be installed onto hurricane padding and strapped down to current codes.

We appreciate the opportunity to be of service.

Sincerely,



Michael L. Silbaugh, President
West Coast Air Conditioning & Heating, Inc.

Enclosures

Michael L. Silbaugh, President - Florida Certified A/C Contractor #CAC044365
Michael D. Silbaugh, Residential & Light Commercial Air Balancing and Diagnostic Technician
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Equipment Age and Type

#1	<u>AIR HANDLER</u>	<u>CONDENSING UNIT</u>
MODEL #	TRANE BWV736P00D2	RUUD UPGC-036JAS
SERIAL #	Y03333613	442M10929309

AREA CONDITIONED BY THIS SYSTEM: Mrs. Jones's office

SUMMARY:

This is a 3 ton mismatched heat pump system. The air handler has a manufacturer's date of 01/85. The condensing unit has a manufacturer's date of 03/92.

Mrs. Jones's office has water damage to the common wall between the office and the air handler itself. It also has signs of water damage to the carpeting at this same area. The interior of the air handler is very dirty. We also observed a 16x20 electrostatic filter directly under the air handler. While this filter is made specifically to collect more of the dust and dirt particulates, it also has the ability to restrict the air flow dramatically. As such, it is not recommended that this type of filter be installed at the air handler. The ductwork above the air handler is in the same condition as the air handler. The ductwork is very dirty.

Also noted no fresh air makeup is present on this system.

This condensing unit has obvious signs of being partially underwater. This equipment should be raised on a hurricane pad and strapped down per current code.

RECOMMENDATION:

Due to the age and condition of this equipment, a cleaning and disinfecting is not a viable solution. We recommend a complete equipment system replacement. Also the addition of a duct cleaning would be needed with the installation. A secondary drain pan with float switch, or at least an in-line float switch, should be installed at the air handler to alleviate water damage and contamination of the area in the future.

Regular maintenance is recommended in six month increments.

The ceiling tile in this area needs to be replaced. Ceiling diffusers are also required for proper air distribution. Some of the diffusers throughout the building need to be repositioned for better distribution.

Jones Edmunds IAQ report does not indicate the need to add fresh air makeup to this area.

Michael L. Silbaugh, President - Florida Certified A/C Contractor #CAC044365
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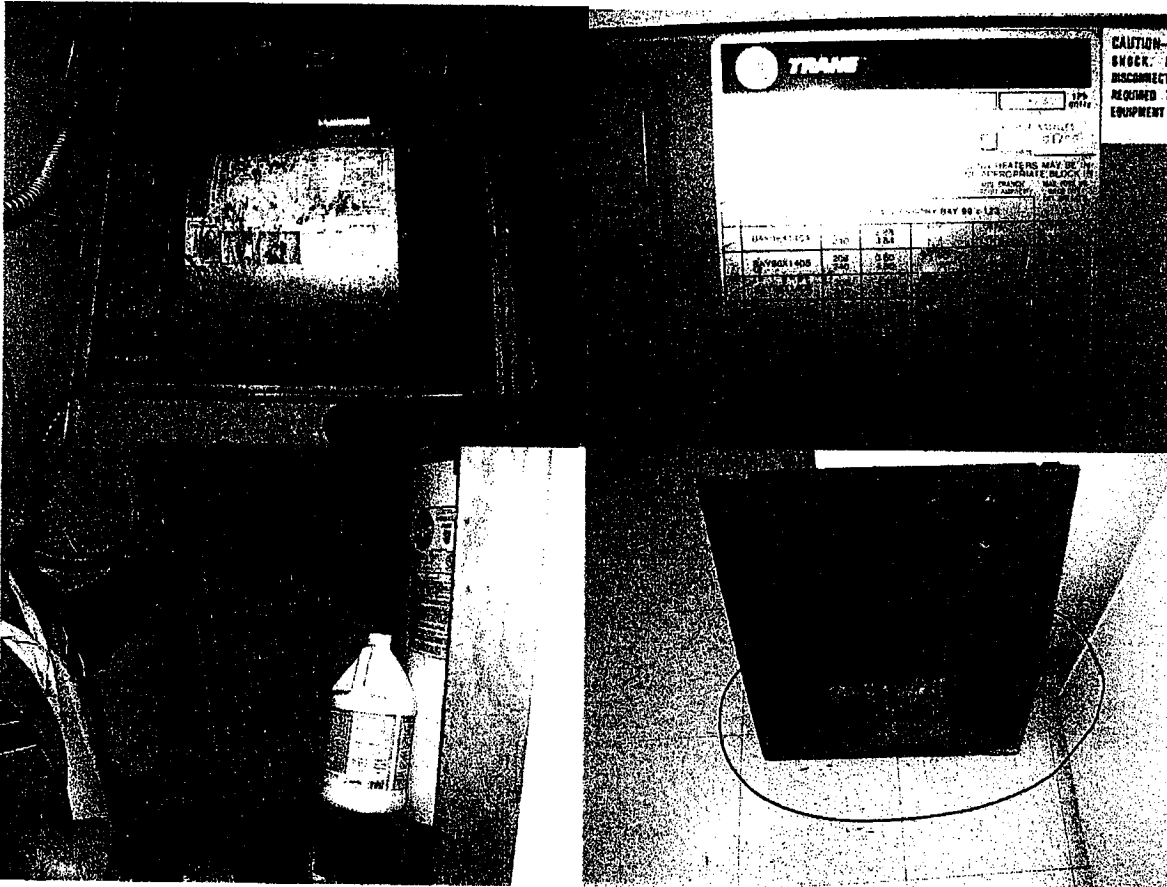
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#1 system (Mrs. Jones's office)



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Equipment Age and Type

#2	<u>AIR HANDLER</u>	<u>CONDENSING UNIT</u>
MODEL #	RUUD, UNABLE TO READ	CARRIER CKC024330
SERIAL #	Pre-1990 air handler	4399E11452

AREA CONDITIONED BY THIS SYSTEM: The Mayor's Office

SUMMARY:

This is a pre-1990 air handler. The condensing unit is date coded at 10-11/1999.

The Mayor's office air handler has some dirt. There is evidence of water damage in the air handler closet. This was caused by the system sharing a condensate pump with system #3. The drain line on this particular system is not properly installed. The drain line has been found to run uphill, no trap and no vent T are included. The system is currently drawing air around the air handler panels. This is causing the system to recirculate unconditioned and unfiltered air.

We also observed an electrostatic filter directly under the air handler. While this filter is made specifically to collect more of the dust and dirt particulates, it also has the ability to restrict the air flow dramatically. As such, it is not recommended that this type of filter be installed at the air handler.

RECOMMENDATIONS:

The air handler needs to be sealed properly. This will provide better air filtration, and therefore air quality, to the cooling/heating zone. Because of the limited amount of dirt, this system can be cleaned and sanitized. Also a duct cleaning is highly recommended at the same time. Due to the age of the air handler, replacing the air handler is a preferable remedy. A secondary drain pan with float switch, or at least an in-line float switch, will be needed in addition to the trap and vent T, redirecting the drain line and separation from #3 air handler and condensate pump is also recommended. Replacement of the broken ceiling tiles as well as new registers are also required for proper air distribution. Ceiling registers here may need to be relocated for better air distribution.

Regular maintenance is recommended in six month increments.

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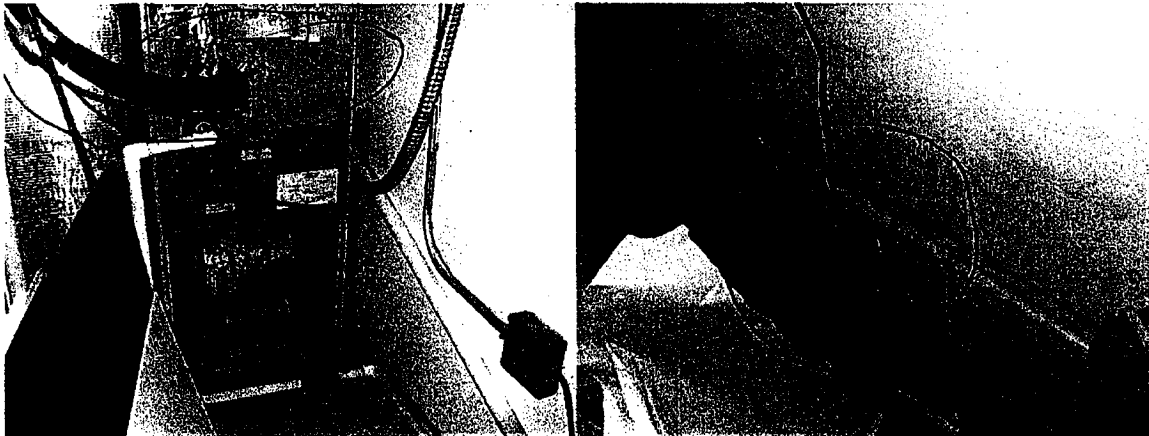
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#2 system: The Mayor's office



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Equipment Age and Type

#3	<u>AIR HANDLER</u>	<u>CONDENSING UNIT</u>
MODEL #	COLEMAN/EVCON AH12J10NA	COLEMAN/EVCON FRCS0361BB
SERIAL #	960824497	940951266

AREA CONDITIONED BY THIS SYSTEM: Hallway

SUMMARY:

This is a 3 ton straight cool split system.

This system is similar to #2. It shares the same closet. The condition of the air handler is the best of all of the equipment. A very light accumulation of dirt was noted. This air handler is sealed well and is not drawing unfiltered air. This system does, however, share the condensate removal pump with #2. Drain line is improperly installed. No vent T and drain line runs uphill.

RECOMMENDATIONS:

The condition of the air handler is very good. It requires a light sanitizing. A duct cleaning is recommended at the same time. A secondary drain pan with float switch, or at minimum an in-line float switch, will also be required along with a trap, vent T, and redirecting the drain line. Separation from the common condensate pump is also required.

Replacement of broken ceiling tiles and registers are also necessary for proper air distribution. Ceiling registers here may need to be relocated for better air distribution.

Regular maintenance is recommended in six month increments.

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Equipment Age and Type

#4	<u>AIR HANDLER</u>	<u>CONDENSING UNIT</u>
MODEL #	RHEEM RHQA-2010BBV	CARRIER 38YCC060320
SERIAL #	M2192-2609	1B02E02801

AREA CONDITIONED BY THIS SYSTEM: COUNCIL CHAMBERS

SUMMARY:

This is a 5 ton mismatched heat pump system.

This system is in good condition and the air handler is fairly clean for it's age (1992 model). There are no signs of water damage in the mechanical closet.

RECOMMENDATIONS:

The air handler portion of the system requires a light sanitizing. A secondary pan and float switch, or in-line float, are required to avoid water damage in the future. Duct work should be cleaned at the same time as the sanitizing. Broken ceiling tiles and replacement of registers should also be performed to allow for better air distribution. Some of the registers may require relocation to allow for better air distribution as well.

Regular maintenance is recommended in six month increments.

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#4 system: Council Chambers



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Equipment Age and Type

#5 HEAT PUMP PACKAGE UNIT
MODEL # CARRIER 50HJQ008
SERIAL # 4305G30858

AREA CONDITIONED BY THIS SYSTEM: MAIN OFFICE AREA

SUMMARY:

This is a 7.5 ton heat pump package unit.

The system is in good condition and fairly clean. The system has no screen on the fresh air makeup on the package unit. Also observed that the belt for this system is very worn.

RECOMMENDATIONS:

This system required a light sanitizing. Duct work cleaning should be performed at the same time as the sanitizing. A screen needs to be installed on the fresh air make-up. The evaporator blower belt needs to be changed. Replacement of broken ceiling tiles and registers are required for proper air distribution.

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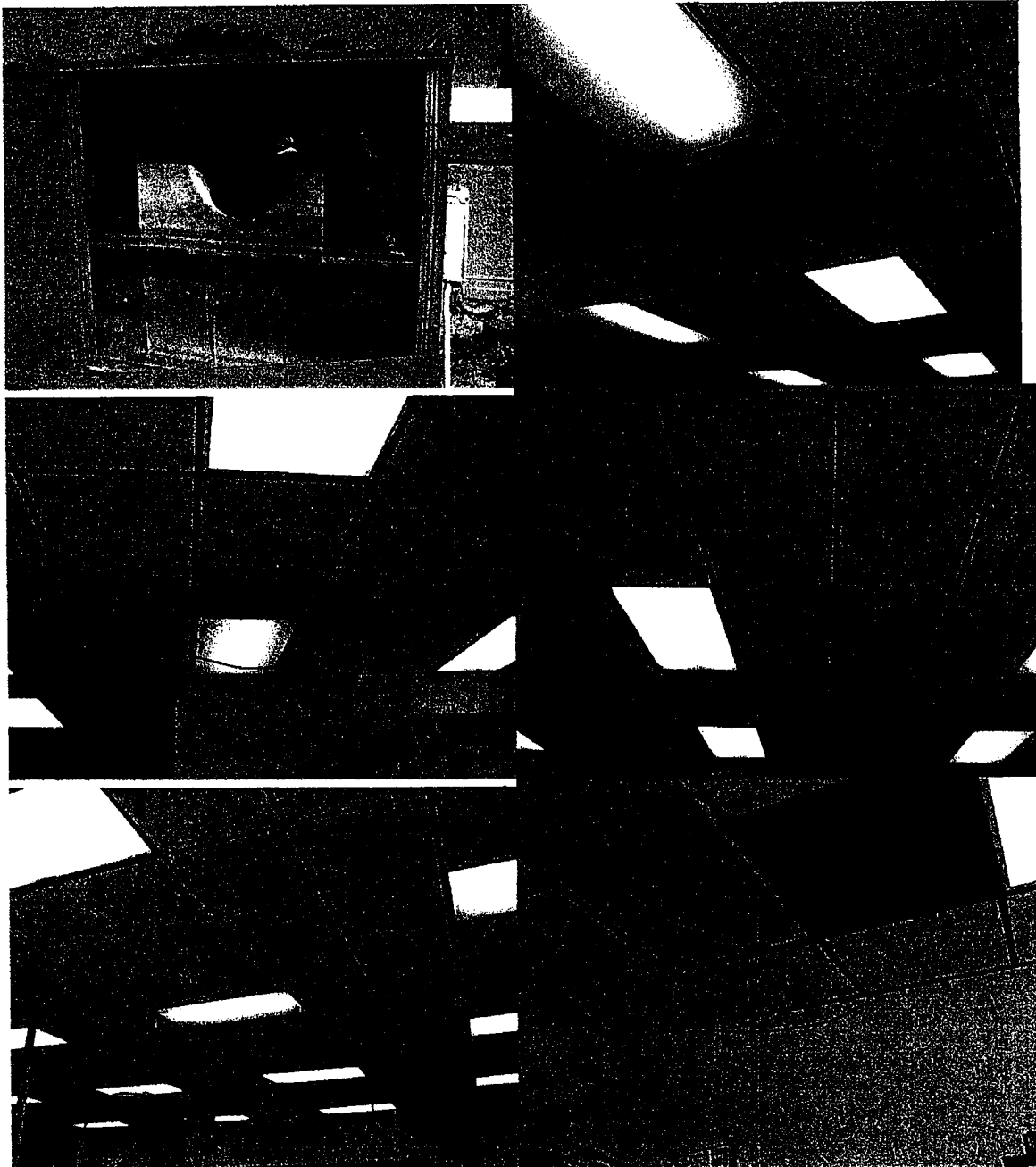
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#5 system: Main Office Area



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Equipment Age and Type

#6	<u>AIR HANDLER</u>	<u>CONDENSING UNIT</u>
MODEL #	mitsubishi MSY-A24NA	mitsubishi MVY-A24NA
SERIAL #	6001279	6001853

AREA CONDITIONED BY THIS SYSTEM: COMPUTER ROOM

SUMMARY:

This is an R-410A, 2 ton system.

This system is in very good condition. This is a ductless system so no evaluation of the ductwork is required. This room is also missing ceiling tiles which will cause infiltration of attic air into the conditioned space.

RECOMMENDATIONS:

The ceiling tiles in this area need to be replaced for proper air distribution.

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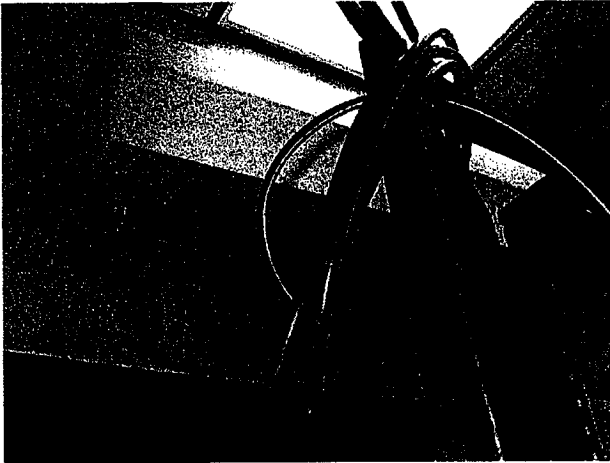
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#6 system: Computer Room



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AMENDED PROPOSAL

TO: CITY OF PALMETTO

PHONE: _____ DATE: 3/7/08
SERVICE ADDRESS: CITY HALL
PROPOSED BY: MIKE D SILBAUGH,
WEST COAST AIR CONDITIONING

We hereby submit specifications and estimates for:

Provide and install a new 3 ton PURON heat pump by CARRIER. The proposed system will consist of condensing unit model #25HPA336A30 and air handler model #FV4BNF002/KFCEH0501N05. The air handler will be equipped with 5kw heater for emergency backup heating. This system will heat and cool Mrs. Jones's office. Installation will include all suction line insulation, condensate plumbing w/ inline float switch, equipment and control wiring, a new digital heat pump thermostat, connection to the existing refrigerant lines and ductwork with modification as required to facilitate a complete installation.

The new system itself is warranted by the manufacturer for one (1) year, all parts and labor. Additional four (4) year warranty covers the functional parts, part only. The compressor itself is warranted through the tenth (10) year, parts only. Installation of warranty parts after the first year are at additional homeowner expense.

Also included in this proposal: all duct runs (supplies and returns) cleaned, replace missing/damaged supply grills, relocating poorly piece supply ducts/grills, relocating two duct runs, separating the two air handlers on the same condensate pump, rebuilding the condensate plumbing for the two systems including two (2) new condensate pumps, and cleaning and sanitizing all other systems except the mini-split.

Saturday sanitizing of three evaporator coils is available at an extra cost of \$200.00 to cover overtime costs.

We proposed hereby to furnish material and labor – complete in accordance with the above specifications, for the sum of:
--Seven Thousand One Hundred Fifty-Seven and no/100-- \$ 7,157.00

PRICE INCLUDES ALL PARTS, INSTALLATION, TAX, AND PERMITS, WHERE APPLICABLE.
PAYMENT IS DUE IMMEDIATELY UPON COMPLETION.
FAILURE TO PAY IN FULL UPON COMPLETION MAY RESULT IN EQUIPMENT REMOVAL. ALL OUTSTANDING ACCOUNTS WILL ACCRUE INTEREST AT THE RATE OF ONE AND ONE-HALF (1-1/2%) PERCENT PER MONTH. IN THE EVENT OF LITIGATION BETWEEN THE PARTIES FOR COLLECTION OF THIS ACCOUNT, THE PREVAILING PARTY SHALL BE ENTITLED TO AN AWARD OF REASONABLE ATTORNEY FEES AND COSTS.

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner, according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents, or delays beyond our control. Owner to carry fire, tomado, and other necessary Insurance. Our works are fully covered by Workmen's Compensation Insurance.



Michael Silbaugh

Note: This proposal may be withdrawn by us if not accepted within **30** days.

ACCEPTANCE OF PROPOSAL

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlines above.

Signature _____

Signature _____

Date of Acceptance _____