TOMACOR, INC.

PROPERTY INSPECTION PROFESSIONALS

July 31, 2010

Reverend Smith
United Church of Christ
309 ABC Street
Chicago, Illinois 60505

RE: United Church of Christ, 309 ABC Street, Chicago Illinois 60505

Dear Reverend Smith:

On Saturday, July 31, 2010, Tomacor completed a Capital Reserve Study of the above referenced building. Present during portions or all of the inspection included Reverend Smith, and members of the congregation. It was Tomacor's intention to evaluate the building for construction deficiencies. In order to reach this goal Tomacor has included a photographic reference section at the back of the report along with a detailed, maintenance budget spreadsheet which should help clarify the number and severity of the deficiencies noted.

Purpose of Inspection: The intent of the Capital Reserve Study (CRS) is to visually screen for "exposed to view" readily accessible systems of the common area of the church which may need major repair and or are "significantly deficient" or life safety problems. We will provide data on life expectancy of materials and remaining useful life in all these areas and develop budget or repair-replacement figures over a 10-year period.

Introduction

The Capital Reserve Study was completed on July 31, 2010. The study represented a visual inspection of the common areas of the church. It is the intention of this study to help the parishioners set aside appropriate funds for common area repairs or replacements over a ten year period. These repairs will be expensive.

Tomacor's budget figures come from many sources including general contractors, engineers, published texts in the field such as R.S. Means and our own experience. Whenever possible, we

have chosen to emphasize the professional quality work and costs associated with the needed repairs rather than assume that the association can put the labor and skills together for a cheap rate. This is a mistake. In some cases, the budgets allotted for the work will be significantly higher than bids received by the church and in other cases, the budget figures will be considerably lower than those received by the church.

Certain specific assumptions are made about the quality of labor and the needed construction detailing. Having said that, understand that congregation members who speak multiple languages such as Polish or Spanish may actually help the church obtain reasonable rates at a much reduced rate compared to those included by Tomacor. Should union labor be demanded, Tomacor's budget figures could double or even triple. Always look for quality and flexibility.

During the course of the inspection many deficiencies were noted which will be outlined with budgets for repairs in the paragraphs that follow.

General Conditions

1. The complex is made up of several buildings which have been joined. The original structure dates from the 1880's and the west side addition was built in the 1950's. The blending of the two buildings has gone well with some signs of old and new masonry work or technology which could illustrate the 70 plus year difference.

   The west side building is clearly a masonry veneer structure whereas the main building appears to be solid masonry or a combination of solid masonry and interior load bearing wood frame components. An original wooden beam consistent with post-and-beam style construction (popular in the 1880's) can be viewed in the basement and crawl space of the original church building. Work is needed here now.

   Multiple gaps requiring tuckpointing and repair are visible throughout the crawl space and specific areas of the foundation beneath the original building. These gaps can be seen in the photographs included and should be closed up in year 3 of this study. Budget $20,000 to clean and prep the open stone work then to fill it with an approved lime based mortar consistent with its original detailing. Complete the repairs for all exposed stonework below the structures. This repair will help keep rodents out of the structure and keep the basement dry. See photo section.

2. The crawl space areas for both the north and south crawl spaces include large mounds of piled dirt which should be leveled then covered with a plastic vapor barrier. In addition, the ceiling joists in the crawl space should be insulated with non faced batt insulation as soon as possible. Finally, the sheet metal supply ducting in the crawl space must be tape sealed at all joints using an approved metal tape, and then insulated. Tomacor recommends a budget of $25,000 in year 1 to fully insulate the crawl space and install the necessary vapor barrier. This addition will significantly cut your heating bills (anticipate a 20% savings) over the short term. See photo section.

3. The church structures are covered with brick which needs to be tuckpointed approximately every 25 years. Budget $100,000 to grind out the existing mortar joints and fill them with an approved mortar, probably lime based, in year 8 of this study. Please note: inflation is not taken into account as these numbers are set. Prorate them for inflation.

   The west wall of the addition is bowing and will need to be rebuilt over the short term. Budget $10,000 in year 2 to tear the west wall out and replace it in the area by the double hung windows. When the bricks are removed, the same bricks can be reused and reinstalled in a plumb fashion. Finally, some south side masonry will need to be removed in year 8 at the bulge by the windows along with the other west side masonry repair work. Budget an additional $5,000 for this repair work. Review the attached photos where you can note the masonry wall pulling away from the wood frame behind it.

   Further examination of the masonry where the original church wall (sanctuary) abuts the addition revealed multiple areas of spalled brick, open masonry joints, and deteriorating mortar. It is Tomacor's recommendation that the masonry chimney be torn down to below the roof line and rebuilt. In addition, a flue liner should be added during the rebuilding process along with the required limestone cap. Finally, some exterior tuck pointing will need to take place at the lower levels of this chimney and at the original brick wall which abuts the chimney. Budget $30,000 for this masonry repair and $10,000 for the flue liner in year 1 of the study. See photo section.

   It is important that during this rebuilding that all flashing and counter flashing be examined and caulk-sealed where the joints remain open at the masonry wall. Counter-flash as necessary. See photo section.

   Tomacor recommends a structural engineer of your choosing evaluate the south side foundation wall. During the inspection it is critical that he or she evaluate the joining of the old and new buildings at the south elevation, exterior, and in the basement space below. Shifting has taken place in the foundation to the immediate west of the stairs used to exit the basement area. Tomacor recommends the extension of the downspouts on the south elevation below the ground and out to the earth along the east side of the property where the water can drain harmlessly without affecting the foundation in any way. See photo section. Additional engineering may well be required here.

4. The original church steeple and bell tower sits at the north side of the property above the greeting area and Narthex. This steeple tower is of wood frame design covered in an attractive face brick. A series of four arched windows, recently covered up, sit on top of the masonry and wood frame base of the tower then the wood shingle steeple caps the roof area above the four arched windows terminating in a metal cross.

   Tomacor anticipates some preliminary brick work at the base of the steeple due to the cracks in the masonry walls and aged, threaded structural tie rods extended through the masonry walls and holding the base of the steeple together. Four new windows should be installed and the entire wood frame area adjacent to the windows should be stripped of

the aged and damaged aluminum siding and coil stock. The aluminum coil stock should also be stripped from the decorative four sided window cornices above the windows.

The existing steeple is clad in wood shingles which have begun to fall away from the structure which will lead to leaking in the steeple and bell tower. This steeple roof covering material should be replaced along with the full rebuilding of the steeple and bell tower in year 3 of this study.

Budget $20,000 in year 1 to complete the necessary tuckpointing of the brick veneer at the base of the tower and to repair the poorly installed Narthex roof flashing from the church roof below. Reglet flashing should be used over this "architectural shingle" roof. "Baby tins", available in the industry, should be used throughout the roof at specific flashing points and covered by the reglet counter flashing as possible.

All of the aluminum should be stripped from the building and replaced with new aluminum coil stock once any rotten, wooden, brick mold, or trim work has been removed. The entire section of wood frame and cladding below the steeple yet above the masonry should also be replaced in year 3 of the study. Budget $50,000 for this repair. In addition, Tomacor recommends an $80,000 budget in year 3 to fabricate and install new stained or cut glass windows for the steeple.

At the same time that the stain glass windows are being installed, the upper roof or steeple should be completely rebuilt and new shingles installed. As mentioned earlier, this steeple is covered in wooden shingles which probably do not meet village fire code and they are failing at all elevations. Budget $110,000 in year 2 of this study to remove the existing shingles and to replace them with a slate shingle and copper ridge flashing. Replace the finial at the top of the steeple taking care to use copper. Complete these repairs in year 3 of the study as possible. Due to the poor condition of the steeple, it appears that emergency repairs will be needed in the next year to prevent water leakage. Budget $15,000 in year 1 for remedial repairs to the steeple and bell tower. See photo section.

5. Tomacor has not included a landscaping budget in this report. It is considered to be a line item included in each year's budget.

6. The inspection revealed that the storm windows in place were from the early 1960's or earlier. They should be replaced due to their age and lack of screening. Budget $15,000 in year 8 of this study to remove and replace all of the storm windows throughout both buildings.

   During the process of replacing the windows it is anticipated that some lumber and trim will need to be replaced. Tomacor recommends an additional budget of $10,000 to patch the wood trim as needed and to cover it with coil stock before the storm windows are replaced. If done properly, this should give you 25 years of maintenance free storm windows.

7. Tomacor recommends that several holes be drilled through the original masonry wall and through the veneer wall to confirm its construction detailing. It is possible that the church was built in 3 sections rather than 2 and that the upper level portions of the masonry are simply one course of brick thick rather than two courses. The original masonry building would not have been set on top of a perimeter beam that we noticed in the basement. Should the masonry walls turn out to be 2 layers thick at the transition between stone to brick and simply one layer thick at the highest point of the building this would make sense. Under these circumstances, it remains entirely possible that the church was simply one floor in the 1880's and the expansive ceiling added later followed by the social hall at the rear. This building remains the oldest building that Tomacor has ever seen using brick veneer technology.

8. Tomacor noted the presence of Powder Post Beetles in the building during the inspection. These are referred to as Anobiid Beetles in the literature. Their presence confirms the presence of Wood Destroying Organisms in the building. Complete yearly inspections for Wood Destroying Organisms and treat as necessary. See photo section. Budget $200 yearly for this work.

9. One of the church elders, Mr. Anderson, noted that the masonry for the building had been sandblasted. This treatment of the exterior masonry increases the amount of maintenance that the brick needs. Tomacor recommends that the church create a standing committee and a check list to fill out in order to evaluate aged and deteriorating masonry and other structured building components. This evaluation should take place in April, before the summer, and in late September before the winter months. Simply photograph and note the condition of critical areas twice yearly.

10. After evaluating the water heater and galvanized supply piping, Tomacor recommends that the remaining deteriorated galvanized pipes be replaced in year 10 of this study. Under these conditions, all of the galvanized piping supplying kitchens, bathrooms, lavatories, and slop sinks will need to be replaced. The inspection revealed that much of this work has already been completed. Budget $10,000 in year 10 for both hot and cold water pipes.

Exterior

1. The inspection brought the team to the southwest corner of the property where it was first examined at the outside of the building then further examined at the building's interior. Multiple and significant structural repairs have been made to this section of the building addition due to significant horizontal and vertical cracking. An examination of these cracks has revealed that they have not moved since the epoxy repair of the horizontal cracking. This area should be evaluated by a structural engineer to further help diagnose the problems.

   An engineer who we recommend is Mr. David Jacobson whose number is (847) 923-4900, should help confirm Tomacor's opinion that the concrete wall remains stable.

Under these conditions, it should be considered critical that the exterior downspout be removed from the southwest corner of the property and extended. In addition, Tomacor recommends that the exterior wall be excavated in its entirety at the southwest corner and that a rubber sheet or similar water proofing material be installed against the foundation wall and the earth replaced in one foot lifts. Each lift should be compacted into place. Install a perimeter drain tile at the base of this foundation wall to help carry water away from the church. These designs and ideas should be confirmed with your structural engineer who maintains the final say on this wall and the building's structure.

Tomacor recommends that the interior wall of the foundation at the southwest corner of the building be excavated and checked for a footing. If a footing is absent, one will need to be installed. When complete, the church owners may consider installing an 8 inch grouted concrete structural block wall at the basement side of the excavated area. Tomacor recommends that drain tiles should be installed at the building's exterior as possible when excavating and repairing.

The exterior portion of the wall should be excavated, drain tiles and a water proof membrane installed as per the engineer's choice. See photo section. Check with Mr. Jacobson.

2. During the inspection of the south side of the social hall it was noted that the brick veneer was beginning to pull loose from the wood frame behind it. Remove and replace this damaged section, less than 100 square feet, of masonry from the wall in year 10. Concentrate on the point where the wall bulges away from the window frame. Budget $2,000 in year 10 for this repair. See photo section.

3. The basement area can be exited from the south side of the building. The inspection revealed that the limestone wall, parging, and prefabricated concrete stairs are failing and need to be replaced. Under these conditions the stairs should be removed and replaced and then the limestone wall should be tuckpointed and parged over. Budget $10,000 in year 6 to replace the concrete stairs. Budget $5,000 also in year 6 to repair the limestone walls and parge them over. With poured in place concrete stairs there will be no need to create a 6 or 8 inch thick parging wall or cavity for the foundation wall.

   Tomacor recommends that the existing hole in the parged wall be filled immediately using wire lath and exterior stucco. This will preserve the wall until year 6. See photo section.

4. The north side exterior roof and canopy is deteriorating and should be scheduled for replacement in year 5 of this study. During the inspection it was noted that the canopy is not flashed into the masonry wall behind it and that the structural supports are pulling away from other horizontal structural members. Remove the canopy and replace it with a more appropriate roof or canopy which could be used to let in light through the stained glass window. The new canopy may need to be made of glass or a similar transparent product. Budget $10,000 in year 5 to complete this repair.

5. The existing handicap access ramps for the building's exterior are made of wood yet they are not Fire Retardant Treated as would be expected in an area so close to the buildings lot line. Budget $15,000 to replace the north side wooden ramp in year 7 of this study. Budget $15,000 to replace the ramp at the west side of the building in year 5 of this study. Ramps can be made of concrete or steel. The steel should be primed and two-coat painted if it is used.

6. The inspection of the north side stoop revealed that it is rotating down and away from the building. Tomacor recommends that this stoop be replaced in year 5 of this study. Budget $5,000 to remove and replace this concrete stoop in year 5. Install the appropriate hand and guard rails for these areas. See photo section.

7. The building includes 2 west side windows (Social Hall) which sit below grade level. The windows should be removed and the openings in-filled with two layers or Wythe of masonry. When complete, the exterior wall in this area should be covered with a layer of a water proof membrane below grade which will prohibit water migration back into the building. See photo section. Complete this work in year 1 of this study. Budget $2,500 for the repair.

8. During the evaluation of the west side masonry it was noted that the brick veneer is pulling away from the wood frame at the double hung windows. See photo section. The lintel is compromised. Budget $2,500 to open and repair the wall and replace the steel lintel above the windows. During the lintel replacement process the wall will be opened and sections of masonry removed and replaced in order to properly anchor the wall against the wood frame behind it. Complete this masonry repair and rebuilding in year 3 of this study with the tuckpointing work in the crawl space. See photo section.

9. The inspection revealed multiple exposed wooden areas behind gutters or at gable ends, such as the north side gable end of the room addition. These need to be prepped and painted in year 2 of this study. Budget $10,000 to complete the scraping, priming, caulking, and two-coat painting of all the exposed trim and wooden paint-able surfaces.

10. Tomacor has reviewed the Structural Engineer's report prepared by Structural Engineer, PE. Tomacor agrees with Ms. Engineer that the structural lintel outside of the south side basement window should be replaced. Her observations are detailed and very informative. She also recommends a structural engineer to complete an analysis of the building. This opinion is consistent with that of Tomacor. Budget $5,000 to complete the structural repair of this south side wall as proposed by Contour Construction Incorporated in their letter dated April 9, 2010.

Interior

1. During the inspection of the attic areas above the Sanctuary, Narthex, Social Hall, and other areas, it was noted that multiple lengths of non-metallic electrical cable were used. This material should be removed and replaced. Budget $15,000 in year 1 to remove and

replace these odd sections of cable and remnants of knob and tube wiring, some of which is still visible in the insulation below the floor and trusses in the Sanctuary attic. The knob and tube wiring is hazardous and must be replaced now. It is buried in the insulation and is a fire hazard. See photo section.

2. Repair the basement joists where they have been cut. This is a non-reserve study item. See photo section.

3. During the inspection of the 200 Amp main panel box, it was noted that stranded aluminum feeder wire had been used to connect the main panel with a sub panel. The connection is made without antioxidant paste. It will come loose and spark. This is hazardous. Replace this aluminum feeder wire with copper wiring in year 2 of this study. Budget $2,000 for this repair.

   In addition to the repairs to the main panel, Tomacor recommends that the electrical service to the building be upgraded to 400 Amps in year 5 of this study. Budget $5,000 for this upgrade. Tomacor understands that one of the congregation members is an electrician. We encourage and recommend that the board obtain an estimate for electrical upgrades throughout all of the building areas from local, licensed electrical contractors who have been shown this report. Could your board members work to oversee their work?

4. The foundation evaluation in the basement noted a vertical corner crack in the southwest corner of the building which is sending water into the property. As noted earlier, this crack should be repaired. This would help to remove water pressure in the area should an underground drain tile be installed and collect ground water and roof water run off. With this pressure removed and a rubber membrane in place along the wall it is anticipated that the basement will stay dry. See photo section.

5. The building is equipped with two heating systems. One is a hydronic system (hot water), utilizing Monoflo "T's". The second system is gas forced air which includes an air conditioning component. The older technology of the Monoflo system makes it harder to maintain.

   Much of the hydronic heating equipment has been manufactured by Bell & Gossett. This company is located in Park Ridge, Illinois. Although sometimes difficult to find, their equipment is reliable. The heating and cooling gas forced air system is manufactured by Lennox and is 7 years old. Budget $5,000 to replace it in year 5 of the study. In addition, budget $5,000 to replace the condenser and evaporator coil (A/C) in year 5 of this study.

   All of the existing crawl space (dirt basement) exposed duct work should be mechanically joined, tape-sealed and insulated as discussed earlier. A small section of asbestos insulation material should be removed. In addition to the other repairs, both crawl spaces must be ventilated to the exterior or fully dehumidified. Finally, all of the duct work should be cleaned and foreign material including dirt removed. Budget $750 to clean the duct work in year 1 of this study. See photo section.

6. The existing hydronic boiler is rated at 264,000 b.t.u and was manufactured in October of 2001. This boiler should not need to be replaced with regular yearly maintenance during the life of this study. In addition, the boiler was not turned on because we could not find the thermostat or aquastat to "call for heat".

   Tomacor noted the remnants of an oil feed line in the basement floor. It is important to complete a Phase 1 Environmental Risk Assessment for the property in order to confirm any environmental hazards in year one of this study. Budget $2,000 for this study.

   Tomacor recommends that the hydronic heating piping be insulated in order to maintain control of the heat in the building. Budget $5,000.00 to insulate all exposed hot water pipes in the building. See photo section.

   Tomacor recommends that the Social Hall and added areas of the building be air conditioned during the life of this study. In order to complete this task, would be expected that 2 additional air conditioning systems should be installed. They should be electrically operated and refrigerant based. Water cooling systems are not recommended. Budget $40,000 in year 2 of this study to air condition the social hall and added rooms created during the room addition in the 1950's. Duct work should be insulated and tape sealed before completion.

7. The current water heater is leaking at the temperature, pressure, relief valve. Replace the valve. Replace the water heater for $800 in year 4 of this study.

8. The inspection revealed that the building is supplied with a three quarter inch water main. Tomacor's analysis is that the water main is too small based upon the distance from the water main in the street and the approximate number of "fixture units" in the building. Budget $20,000 to replace the cold water main in year 5 of this report. See photo section.

9. Sections of the north and south side crawl space appeared to be wet during the inspection. It is important to keep the gutters clean and the grade sending water away from the building. See photo section.

10. The kitchen area needs to be rewired and professionally equipped with an approved fire suppression system. Tomacor recommends a call to the City in order to confirm what kind of suppression system is needed for the kitchen. The state of the art system is known as Anso IV. Anticipate a $15,000 expense or more to install this type of equipment. Because the building is a church, and not a restaurant, the City may be less demanding for fire protection. Anticipate a lesser fee than the Anso IV budget. Note the photograph of the kitchen exhaust in the photo section. Also, at least three electrical circuits need to be added for kitchen appliances and countertops.

11. Paint and decorate the entire sanctuary in year 5 of this study. Budget $25,000 for the painting. In addition, replace the carpet in year 8 of this study. Budget $15,000 for the new carpet and pad. Notes have been included in other areas of this report regarding the electrical work needed here.

Tomacor recommends that you create a decorating budget of $20,000 to clean and decorate the Social Hall and the interior of the buildings. Complete this decorating in year 5 of the study.

12. There is a large exhaust fan assembly above the sanctuary organ room and choir loft. It appears as if this equipment is used to exhaust hot and stale air from the sanctuary. Tomacor could not confirm the operation (we could not find the switch) of this equipment and it did not appear to support the organ bellows in any way. Complete the needed repairs then check the operation of this equipment. It may in fact be able to draw hot air from the sanctuary which could cool down the room and reduce your air conditioning bills.

13. During the inspection of the sanctuary and steeple the inspector discovered some material (Vermiculite) that appears to be asbestos containing in the floor joist cavities immediately below the bell tower. This material could impact or shut down any desired renovation, such as electrical, in the area. Obtain an asbestos inspector and have them take a sample to be checked for Asbestos Containing Material. There is a small fee associated with this service. Tomacor is not including this fee in this study. See photo section.

14. Tomacor was unable to access the bell tower room due to the configuration of the pull rope blocking the access door.

15. Tomacor has included a photograph of the inner workings of the pipe organ which was not inspected.

16. All bathrooms, kitchens, exterior areas, and other wet locations need to be fitted with Ground Fault Circuit Interrupters for the safe operation of the electrical systems. Tomacor also recommends an Arc-fault circuit breaker for the pipe organ and overhead sanctuary. This lighting installation is critical. These repairs are included in earlier budgets.

17. Confirm that all bathrooms or powder rooms are equipped with exhaust fans or ventilating windows. See especially the one next to the Pastor's office.

18. It is important that all remodeling work be completed to a professional level of the Code understanding in your municipality. This would include installing electrical receptacles 12 feet on center and 12 inches above the ground in all rooms scheduled for remodeling or rooms where remodeling has been recently completed. Tomacor also recommends metal exit lights and back up power systems that would illuminate anyone's exit path during a fire event. Upgrading the lighting and exit signage requirements would add an additional $10,000 to the overall budget for this emergency equipment.

19. Seal up the toilet waste arm or hole in the floor at its hub in the tool room basement area.

20. Tomacor notes that you will take water in the tool room due to its low level of concrete floor juxtaposed to the exterior limestone wall.

21. Tomacor recommends that an appropriately sized furnace be installed in the crawl spaces below the sanctuary to be used during cold periods when the sanctuary floors are cold. Heat rises during its use which leaves the floors cold and uncomfortable. Additional heat is needed in the crawl spaces. Simply stated, one furnace should be installed to service both sides of the crawl space, maintaining the temperature in the crawl at 55-60º F. These ducts should not be insulated and it is assumed the equipment will only be used in very cold temperatures. Budget $10,000 in year 1 to install this equipment and insulate the ductwork.

22. The inspection of the Social Hall revealed that the floors have been badly damaged during a recent floor sanding. Budget $4,000 in year 2 to professionally sand and 3-coat seal these floors. The sealing process requires one layer of a sanding sealer followed by two layers of an approved urethane.

23. During the inspection of the attic area above the sanctuary, Tomacor noted a strong squirrel odor and discovered a point where the squirrels are getting into the roof at the east side of the building, roof and gutter line. The squirrels should be removed and the hole closed up as soon as possible. It appears as if the squirrels may be eating the wiring insulation, emphasizing the need for Arc-Fault Circuit Interrupters in the attic and organ area. Their presence is a fire hazard.

24. Several pieces of stain glass appear to be falling out of their frames in the building requiring an appropriate repair by a stained glass window repair person. One area where this is evident is at the “Holy Spirit” window at the north end of the building. Budget $10,000 to complete initial repairs of the stain glass windows in the sanctuary area. Please note this figure could increase by a factor of 10 or more depending on the condition of the stained glass. Complete the repairs in year two of the study.

Conclusion

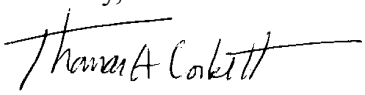
Tomacor has inspected several churches, synagogues, and Mosques over the years. This building is solid overall yet specific components of maintenance have been neglected while other components are just ready for replacement. Completed regular maintenance will prevent other building deficiencies from developing such as rot, plaster cracking, and overall general deterioration of the building. It is Tomacor's intention to encourage the board of directors and any hired help to complete their repairs to a high quality, professional standard which reduces the probability of fire and raises the life expectancy of the building.

Structural problems have been noted at the building's southwest corner yet it appears that they may have stabilized for now. Repair the cast in place concrete beam over the basement window and make other repairs specified by the structural engineer. Electrical problems are consistent with buildings of this age as are plumbing, heating, and kitchen and bath problems. The property is solid but must be maintained and regularly tuckpointed to hold the “brick veneer” in its place

without movement. Finally, bell tower and steeple repairs are the most focused and expensive items on Tomacor's list. Repair costs will be all over the financial map.

Costs of repair are affected by many things including contractors who get the work cheap but double their prices during the “this problem wasn’t shown to me before” stage. Other variables that affect the price include fluency in foreign languages, and familiarity with local tradesmen, and quite simply the weather or availability of materials. This report is designed as a broad based instrument which should help you in your Capital fundraising effort while anticipating some of the unknowns or variables.

Sincerely,



Thomas A. Corbett
President, Tomacor Inc.