I. CALL TO ORDER – On Monday, April 1, 2013 at 7:05 p.m. a Council Meeting was held in the City Hall Auditorium.

II. ROLL CALL OF MEMBERS – Mayor Johnston conducted a roll call of the members and determined that the Councilors present constituted a quorum. Councilors present: David Tripp, Leslie Smith Jr., Marie Doucette, Philip Blood, Arthur Tardif, Eric Cote and Marston Lovell. City Administrator Rick Michaud was also present.

III. PLEDGE OF ALLEGIANCE

IV. GENERAL

PROCLAMATION – MAYOR’S DAY OF RECOGNITION FOR NATIONAL SERVICE

WHEREAS, Service to others in a hallmark of the American character, and central to how we meet our challenges; and

WHEREAS, the nation's mayors are increasingly turning to national service and volunteerism as a cost-effective strategy to meet city needs; and,

WHEREAS, AmeriCorps and Senior Corps address the most pressing challenges facing our cities and nation, from educating students for the jobs of the 21st century and supporting veterans and military families to persevering the environment and helping communities recover from natural disasters; and

WHEREAS, national service expands economic opportunity by creating more sustainable, resilient communities and providing education, career skills, and leadership abilities for those who serve; and

WHEREAS, national service participants serve in more than 70,000 locations across the country, bolstering the civic, neighborhood, and faith-based organizations that are so vital to our economic and social well-being; and

WHEREAS, national service participants increase the impact of the organizations they serve with, both through their direct service and by recruiting and managing millions of additional volunteers; and,

WHEREAS, national service represents a unique public-private partnership that invests in community solutions and leverages non-federal resources to strengthen community impact and increase the return on taxpayer dollars; and,

WHEREAS, AmeriCorps members and Senior Corps volunteers demonstrate commitment, dedication, and patriotism by making an intensive commitment to service, a commitment that remains with them in their future endeavors; and

WHEREAS, the Corporation for National and Community Service shares a priorit with mayors nationwide to engage citizens, improve lives, and strengthen communities; and is joining with mayors across the county to support the Mayors Day of Recognition for National Service on April 9, 2013.

THEREFORE, BE IT RESOLVED that I, Mark D. Johnston, Mayor of the City of Saco, do hereby proclaim April 9, 2013, as National Service Recognition Day, and encourage residents to recognize the positive impact national service in our city, to thank those who serve; and to find ways to give back to their communities.

\Saco-nas\council_minutes\2013\cm_2013_04_01.doc  04/05/2013  Page 1 of 19
Mayor Johnston also recognized the following volunteers:

- Armand and Rachel Poissant – Joined our 1st and 2nd grade classes 4 days a week, 20 hours a week. They help children to read, write, practice math facts and correct and correlate papers. More importantly, they offer much needed social and emotional support to students by helping maintain appropriate behavior and giving hugs, smiles, praise and encouragement and standing in a consistent and loving grand-parents to many students who may not otherwise have this type of presence in their lives.

- Claire Lauzier – Gives 20 hours a week at Young School. She is also the coordinator for the Grand-parents and Senior Companions. These organizations have helped many people in the community. There are volunteers in Burns, Fairfield, Saco Middle and Young Schools; Dyer Library; Home Health; Saco Museum; Truslow Adult Care; Sweetser; Inn at Atlantic Heights; Wardwell Retirement Facility; York County Head Start;

- Cecile Clair

**25 YEAR RECOGNITION FOR DEPUTY CHIEF ROBERT MARTIN III**

For the past 25-years, Robert Martin has proudly served the citizens of Saco with competence, courage and compassion.

From his first day on the job, April 3, 1988, Rob demonstrated his passion for the Fire Service and his desire to ‘do the right thing’ and to ‘do it the right way’. Rob’s ethical standard and professional leadership skill has helped him to emerge as an exceptional Fire Officer and Leader in our Fire Department today.

Rob’s hard work and dedication as a Firefighter/EMT early on led to a Promotion to Captain on January 1, 2000, and then to his appointment to Deputy Fire Chief in July 2010. His current responsibilities include Fire Department Operations and Training; two of the most important department areas that ensure an adequate trained response from our Fire Department.

As Chair of the Safety and Wellness Committee, Rob demonstrated his willingness to contribute to the greater city organization and lead citywide efforts for organizational improvement.

Mayor Johnston presented Rob with a plaque and congratulated him on behalf of the council and himself and thanked him for his many years of dedicated service to the city.

**TRAIN STATION VOLUNTEERS NEEDED**

The Train Station is currently looking for volunteers to greet, direct, and help visitors. Evening hours are available at this time. Anyone interested should contact Councilor Eric Cote.

V. **AGENDA**

   A. **STACKPOLE CREEK BRIDGE BOND – (PUBLIC HEARING)**

On March 19, 2012, the City Council voted to create an Ad Hoc Committee to consider the future of the Stackpole Creek Bridge. The 15 member Committee included Saco and Buxton residents, elected representatives, and City staff. The Committee met on April 10 and November 8, 2012 to review data and hear neighbors’ concerns. The Committee also requested and received a new report on the bridge’s condition from a firm with experience in historic structures that includes recommendations for reconstruction or rehabilitation.

The Stackpole Creek Bridge Ad Hoc Committee presented its recommendations to Council on November 19, 2012:
unanimous endorsement of a plan for the restoration and stabilization of the bridge based on the October 22, 2012 report done by Structures North. This plan is estimated to cost $1.7 million, which includes design and construction, and would result in both the preservation of the historic bridge and a new, full capacity roadway.

The Council discussed this item at Workshop on March 4, 2013; the First Reading was March 18, 2013.

Councilor Tripp moved, Councilor Smith seconded to open the Public Hearing for the Stackpole Creek Bridge Improvement Bond. The motion passed with unanimous consent.

John Tarbox, 137 Simpson Road – What is the cost for a new bridge to be built in the place of the existing bridge? What is the finance fee going to be on this loan? Mr. Tarbox has lived on the Simpson Road for 24 years. This is a nice road and we need a really good bridge down there. There are allot of older people up in that area, and if anything ever happened and the bridge was closed and the Fire Dept. needed to go down through Joy Valley, someone could die. He felt that this is allot of money in these economic times. Since 2008, people have learned that they don’t spend what they do not have. A bond is just a nice name for a loan. You still have to pay it back. If there is a savings to putting a brand new bridge in rather than try to work with restoring the old bridge, I’m for that. If people want to try to restore the old bridge, then maybe they should do some fund raisers, rather than having the taxpayers absorb that. Last year our taxes went up 18%, and were talking another 2 or 3% more this year. There is Young School which is in temporary units out there and we will probably need to build a new school. We have a new Fire Dept. and that was probably 6 million to finance. It just goes on and on. There is allot of upkeep in these schools and all of that. This bridge ought to be looked at long and hard. If it is cheaper to build new, build new. If people want to raise extra money to refurbish it and not cost the taxpayer any money, then I’m in favor of that too.

Elizabeth DeSimone, 220 Ferry Road – Ms. DeSimone was here this evening to advocate for the preservation of this historic stone structure. The craftsmanship is something that we can all take pride in and we are fortunate to have it within the city. It contributes to the rural character and the diversity of the city which makes it a great place to live. As an antique dealer, she appreciates fine craftsmanship, value and durability, and this is what this beautiful structure represents. Believes that it is cost effective to approve this bond because stabilizing the Stackpole Bridge will give it a longer life than the new one that it proposed by the State. Even if the bridge were not in Saco, I think it is a valuable structure, it is affordable and it should be saved.

Catherine Glynn, 10 Locke St. – Ms. Glynn thanked the ad hoc committee who did allot of work over a long time and did allot of research into the issue of fixing the Stackpole Bridge. Access in rural Saco is not much of an issue to me, but money is. I understand that it would only cost 7% more to have a hybrid alternative to just demolishing the bridge and replacing it with something concrete. For just 7% more in cost of doing the Structure North alternative, that we could have a bridge that would last roughly twice as long and still preserve the historic nature of the dry stone construction. Which I believe is the oldest dry stone construction bridge in Maine. So dollars and cents aside, it just makes sense to me. On another note, in the paper just this week I was noticing the trend toward preserving our heritage and preserving quality and preserving our sense of place, especially in Maine where we are so lucky to have some history still intact. For example I have “Building saved only by the concerted efforts of historians in the old Hollis high School and Bar Mills School are saved from demolition”, and they are going to be repurposed. Another article read “New historic preservation measures applauded the Biddeford Historic Preservation Commission” because they are looking to increase their activity and reach as downtown Biddeford gets prepared to revitalize. There was also news about this bond issue that we are talking about. Also, news on “Mills Secret Spaces and Haunted Places”. Who would have thought! My ancestors who worked in the mill would never have dreamed that people would pay to go on a tour to see the inner workings of the mills, and I really think that we don’t know what is going to be of particular interest to the people who come after us. I think having a dry stone bridge in place is of interest now, but may be of incredible interest to my grandchildren. Si I vote to put this issue out to bond to use the hybrid solution that Structure North and the ad hoc committee are presenting.
Inga Brown, 161 Simpson Rd – Ms Brown compiled for the council’s pleasure “Ten Top Reasons Why We Should Vote for Putting this Bridge Project out to Bond” as follows:

1) After 165 years of virtually no maintenance, Stackpole Bridge is still a very strong bridge with its structural integrity still intact. The shifting and cracking that the bridge is currently showing is normal and is to be expected, and I was thinking that if all of us last to be 80-90 years old, we will have our own shifting and cracking and we can identify with that perhaps.

2) This is a win-win proposition. The bridge offers excellent form, function, cost effectiveness and with new safety our 30 ton fire trucks can certainly cross and a two lane option again would be most welcome especially by motorist navigating that bridge in the winter time.

3) It’s a civil engineering landmark in Maine. It is perhaps the oldest dry stone bridge on a public way in Maine. This fact should be celebrated and promoted. The Friends of Stackpole Bridge would like to help with that process.

4) This project is important to the city of Saco as a whole. Simpson Road is a key connecting road Saco and Buxton. Since Simpson Road is along the Saco River that road is a key access point for residents to access Pleasant Point Park are other points of access along the road.

5) Simpson Road neighborhood is a thriving and tightly knit neighborhood. This neighborhood has existed for approximately 250 years and our community on that road still has a very strong tradition of neighbors helping neighbors. If Stackpole Bridge is closed, you are basically amputating our community and splitting us in half. A closed bridge is not apposite outcome for our neighborhood on Simpson Road.

6) If rehabilitated, it will last a long, long time. Perhaps outlasting a modern concrete bridge, 2 times or 3 times over. I have just verified this week that in Scotland under preservation law, if a stone bridge in Scotland is rehabilitated, the minimum life span of that newly rehabilitated bridge is 120 years. There are examples of bridges last 200-300 years and even 500 years. Over time Stackpole Bridge would save the city money.

7) The hybrid model that the ad hoc committee unanimously agreed upon is really a wonderful marriage of modern engineering standards with a preservation approach. It is really a phenomenal plan. I think it is a great forward step, and the fact that it was unanimously agreed upon speaks to the quality of that plan.

8) Rehabilitating Stackpole Bridge is not just a North Saco issue. This is a project that all of Saco can be proud of and I can personally say that if Stackpole Bridge were located on the Ferry Road or on Pleasant Street or down at Camp Ellis, I would still be standing before you in this attempt to try to rehabilitate this bridge. It really is one of a kind.

9) Financial costs – The bond rates Bonds rates are very favorable at this time. Putting money into infrastructure is putting money into something that will last and last is a smart decision.

10) We all know that this project has been lingering since the 1990’s when the former Public Works Director Larry Nadeau began researching, “what are we doing to do about Stackpole Bridge”. Allot of time, research and committees have done work on this and we have reached this great moment when we can finally move forward.

Lastly, I would just like to thank all the Councilors and Mayor for your patience and good humor.

Angela Blanchette, City Engineer – Gave a brief overview of the project (see page #9). The ad hoc committee walked through many scenarios the CDL Consulting firm has presented and with the cost associated with each, which all have pros and cons. The historic nature of the bridge was one key element. The replacement into a concrete arch was a lesser cost however, the con to that was giving up the historic nature of the bridge. This meets the utility of the bridge in order to get emergency vehicles across, two way access and improve the flows through the bridge. This happened to be the one that we all came together on as seeing the advantages and compromise. Ms. Blanchette stated that she was comfortable with the committee’s choice.

Cheryl Fournier, Finance Director – The interest cost is approximately $1 million, and the payments will be approximately $100,000 a year. The added cost to the mill rate over 30 years would be .05 cents. Borrowing $1.7 million and doing it all at one time rather than 30 years would be just under $1 added to the mill rate which would be about $235 for an average house in Saco. The next bonds will be expiring in 2016. This new bond will be put
on the market in the fall and the first payment of this bond would be an interest payment in 2014. A 3.5% rate was used based on Biddeford’s last bonding just a few months ago. The rate could go up or down a little.

Marguerite Gardner, Non-Resident - Ms. Gardner is not a resident, but grew up in Saco. She is a member of Saco Historical Society, Buxton-Hollis Historical Society and an organization called CHARM – Community Heritage Alliance of Rural Maine that has a particular interest in preserving older buildings. I also worked very hard on the school situation in Buxton-Hollis that was just noted by one of your citizens here. We actually saved 3 old schools and two of them have already been repurposed. The third one will be going on the market and I expect that to be repurposed. So I think I have probably heard all the arguments, and it is always a difficult decision of should we save it and repurpose it or not. So you really have to look at the historical value of place and think about the quality of place. On a more practical note, my understanding is that this bridge is eligible for nomination to the National Register of Historical Places. Maybe your committees have already looked at some of these things, but there is quite allot of preservation grant money available. That includes federal preservation projects for properties such as this. Since the city doesn’t pay taxes I was thinking of tax credits. That money comes back to the town or non-profit as a credit. There may also be some private foundations which may also be interested in this project. I don’t know if any of these have been explored, but they can certainly add some relief to the financial aspect of this.

John Tarbox, 137 Simpson Road - What is the cost for a new bridge to be built in the place of the existing bridge?

Angela Blanchette, City Engineer – When we did the comparison, what I had was from Structure North’s and updating from there. They had certain numbers that we talked about at the previous meeting that did not include certain things like; Engineering; construction admin cost; so we added 20% to that. So what I ended up with for a difference similarly, I had $1.2 million is the cost of a precast concrete arch full replacement as opposed to the $1.7 million. The lifespan of the new bridge would be 50 years versus the existing one, which is unknown. With the dry stacked stone bridge and now we are trying a hybrid analysis, so that with the pylons going down through, really the structure is not taking the weight anymore, so that would probably stand the test of time. You still have the failure eventually of deck, of the concrete which is basically the floating slab. So with that the engineers aren’t going for the 40 years that the bond would cover. It’s basically of unknown. They are talking a hybrid scheme which would mean pylons would be driven down through the interior of the structure so the bridge would stay the way it looks now. The road way surface would have a concrete deck, and the pylons would take that support from the road way and the traveling of larger vehicles over it. The other issue that we needed to address was the flow characteristics through the bridge/under the bridge so also incorporated into that was some wing walls to basically channel the flow better through there, because the opening is only 8’ wide and flooding was a concern and erosion at the edges of the bridge. Some of these things are incorporated into the design to enhance that.

City Administrator Rick Michaud asked Ms. Blanchette to describe the protocol that is in place today that the city follows after a high water event. Ms Blanchette noted that if there is greater than 1” of rain fall or the flow line goes above 5’, we close the bridge down. We have a communication through dispatch for our city as well as Buxton. There is an e-mail list that goes out as well as a hotline that people can call in to check if the bridge is open or closed. So when the rain finally stops or subsides the elevation in the river, I go out with DPW staff and we check the crack gages that are lined from the upper arch underneath the bridge for movement. Recently this Spring we have seen some movement and we have scheduled CLD who is our engineering consultant to come in and do their annual inspection. They do it every year for us. With the Spring, obviously there is more movement and it is of concern enough to have them come in and take a look. Once I do that final inspection, looking for the amount of movement, take pictures and look for any changes under there, such as loss of mortar which is always noted as well as any stone movement and if there isn’t much of a significant change we re-open the bridge and notification goes out.

Councilor Tripp moved, Councilor Smith seconded to close the Public Hearing and “Be it ordered that the City Council approve the Order Authorizing City of Saco to Borrow an Amount not to Exceed $1,700,000.00 for
Improvements to the Stackpole Bridge.” Further move to approve the Order. The motion passed with six (6) yeas and one (1) nay – Councilor Tardif.

Order Authorizing the City of Saco
to Borrow an Amount Not to Exceed $1,700,000 for Improvements to the Stackpole Bridge

BE IT ORDERED BY THE CITY COUNCIL OF THE CITY OF SACO, MAINE IN CITY COUNCIL ASSEMBLED:

1. Bonds Authorized. Pursuant to Maine law, including 30-A M.R.S.A. 5772 and Section 6.15 of the Charter of the City of Saco and all other authority thereto enabling, there is hereby authorized and approved the issuance of general obligation bonds (the “Bonds”) of the City, and temporary notes in anticipation thereof (the “Notes”), in an aggregate principal amount not to exceed $1,700,000. The Bonds shall be designated “City of Saco, Maine, General Obligation Bonds” and any notes in anticipation thereof shall be designated “City of Saco General Obligation Bond Anticipation Notes.” The proceeds of the Bonds and any Notes shall used to finance the costs of engineering and design and rehabilitating and improving the Stackpole Bridge on Simpson Road in the City of Saco (the “Project”), and reasonably related costs, costs of issuance of the Bonds and any Notes, and capitalized interest prior to and during construction. The City Council shall make all determinations regarding said Project.

2. Period of Utility. The estimated period of utility of the Project is forty (40) years.

3. Tax Levy. Pursuant to Section 6.15 of the Charter of the City of Saco, an amount necessary to meet the annual payments of principal and interest on the Bonds (and any Notes not paid from the proceeds of Bonds issued hereunder) shall be included in the tax levy of the City each year until the debt represented by said Bonds and Notes is extinguished.

4. Details of Bonds. To the extent not inconsistent with this Order and the Charter of the City, the discretion to fix the date(s), maturity(ies) of the Bonds and/or Notes, denomination(s), interest rate(s), place(s) of payment, form(s) and other details of said Bonds and Notes, and to provide for the sale thereof, including execution of said Bonds and Notes on behalf of the City of Saco and delivery against payment therefore, is hereby delegated to the Treasurer and Mayor of the City of Saco. The Bonds shall be payable within a fixed term of years to be determined by the Mayor and Treasurer, not to exceed twenty (20) years, and Notes in anticipation of Bonds shall not exceed three (3) years from the date of the initial issuance of any Notes. Bonds shall be made payable as pertains to interest semiannually and as pertains to principal in equal, annual serial installments, except that: (1) each year's installments may be adjusted to the nearest multiple of $5,000; and (2) the amount of each year's installment may vary provided that it is equal to or greater than the installment due and payable in any succeeding year. The Bonds and any Notes shall contain such terms and provisions, not inconsistent herewith, as the Treasurer and Mayor may hereafter determine. All determinations by the Mayor and Treasurer shall be conclusively evidenced by their execution of the Bonds or Notes. The Treasurer and Mayor are authorized to provide that any of the Bonds and Notes be made callable, with or without premium, prior to their maturity. Each Bond or Note issued hereunder shall be signed by the Treasurer and countersigned by the Mayor. The Mayor and Treasurer are authorized to select a financial advisor and/or an underwriter for the Bonds and Notes, and the Mayor and Treasurer are authorized and empowered to execute and deliver such contracts or agreements as may be necessary or appropriate in connection therewith.

5. Sale of Bonds. The Treasurer is authorized to prepare, or cause to be prepared, a Notice of Sale and/or a Preliminary Official Statement and an Official Statement for use in the offering and sale of the Bonds and/or Notes, such Notice of Sale, Preliminary Official Statement and Official Statement to be in such form and contain such information as may be approved by the Treasurer. Distribution of the Notice of Sale and/or Preliminary Official Statement and the Official Statement in the name of and on behalf of the City in connection with offering the Bonds
and/or Notes is hereby authorized and approved. The Treasurer is authorized to covenant, certify and agree, on behalf of the City, for the benefit of the holders of the Notes or Bonds, that the City will file any required reports, make any annual financial or material event disclosure, and take any other action that may be necessary to insure that the disclosure requirements imposed by Rule 15c2-12 of the Securities and Exchange Commission, if applicable, are met.

6. Alternate Method of Sale. In lieu or as an alternative to the method of offering of the Bonds described in section 5 above, the Treasurer is authorized to file an application for sale of the Bonds to the Maine Municipal Bond Bank (the “Bank”), and the Treasurer and Mayor are hereby authorized and empowered in the name and on behalf of the City to borrow up to $1,700,000 from the Bank pursuant to a Loan Agreement between the City and the Bank providing for a loan from the Bank in the principal amount not in excess of $1,700,000, and the Treasurer is authorized and empowered, in the name and on behalf of the City, to execute and deliver, under the seal of the City, attested by its Clerk, a Loan Agreement to be in the usual and ordinary form utilized by the Bank, which is hereby approved, and to contain such other terms and provisions, not contrary to the general tenor hereof, as the Treasurer may approve, with her approval to be conclusively evidenced by her execution thereof; the Treasurer and Mayor are further authorized to issue, sell and deliver to the Bank as evidence of the aforesaid loan of up to $1,700,000 and against payment therefor, Bonds in a principal amount not to exceed $1,700,000, such Bonds to mature and be payable on such dates and in such amounts as approved by the Treasurer and Mayor; to bear interest at the rates specified by the Bank, which rates shall be subject to approval by the Treasurer and Mayor, such approval to be conclusively evidenced by their execution and delivery of such Bonds, payable semi-annually; to be issued as a single, fully registered Bond in the an amount not to exceed $1,700,000 maturing and payable in installments as aforesaid; to be signed by the Treasurer and countersigned by the Mayor, and sealed with the seal of the City, attested to by its Clerk; and the Treasurer, Mayor and other proper officials of the City be, and hereby are, authorized and empowered in its name and on its behalf, to do or cause to be done all such acts and things as may be deemed necessary or desirable in order to effect the borrowing from said Bank of up to $1,700,000 and the issue and delivery to said Bank as evidence thereof of a corresponding principal amount of the Bonds of the City as authorized in this Order.

7. Tax Exempt Bonds. The Treasurer is authorized to covenant and certify on behalf of the City that: (a) no part of the proceeds of the issue and sale of the Notes or the Bonds authorized to be issued hereunder shall be used directly or indirectly to acquire any securities or obligations, the acquisition of which would cause such Notes or Bonds to be “arbitrage bonds” within the meaning of Section 148 of the Internal Revenue Code of 1986, as amended (the “Code”), (b) no part of the proceeds of the issue and sale of such Notes or Bonds (including any notes and bonds in renewal thereof) shall be used, directly or indirectly, in such manner which would cause the Notes or Bonds to be "private activity bonds" within the meaning of Section 141 of the Code, (c) all required information reports shall be filed and any rebate due to the United States in connection with the issuance of said Bonds and Notes shall be paid, and (d) the City shall take all other lawful actions necessary to insure the interest on the Bonds and Notes will be excluded from the gross income of the owners thereof for purposes of federal income taxation and to refrain from taking any action which would cause interest on the Bonds or Notes to become includable in the gross income of the owners thereof. The Treasurer is also authorized and empowered to designate the Bonds and/or Notes as qualified tax-exempt obligations for purposes of Section 265(b) of the Code, to the extent the election may be available and advisable as determined by the Treasurer.

8. Documents and Certificates. The Mayor, Treasurer, City Clerk and other appropriate officials of the City of Saco are authorized to execute and deliver on behalf of the City such other documents and certificates as may be required in connection with such Bonds and Notes, and to do or cause to be done all acts and things, not inconsistent herewith, as may be necessary or appropriate in order to effect the issuance, execution, sale and delivery of the Bonds and any Notes, and to carry out the provisions of this Order in connection with the Project.

9. Appropriation. The sum of $1,700,000 is hereby appropriated to finance the Project costs, such amount to be raised by the issuance of the Bonds and/or Notes of the City. In addition, the investment earnings on the
proceeds of the Bonds and Notes, if any, and the excess proceeds of the Bonds and Notes, if any, are hereby appropriated for the following purposes, such proceeds to be held and applied in the following order of priority: (a) to any Project costs in excess of the principal amount of the Bonds or Notes; and (b) in accordance with applicable terms and provisions of the Arbitrage and the Use of Proceeds Certificate delivered in connection with the sale of the Bonds or Notes.

10. Reimbursement. This Bond Order shall constitute the City's declaration of official intent within the meaning of Treasury Regulation 1.150-2 to pay, on an interim basis, costs of the Project in an amount up to the principal amount of the Bonds to be issued, which costs the City reasonably expects to reimburse with proceeds of the Bonds or Notes.

11. Referendum Vote. Pursuant to Section 6.15 of the Charter of the City, the following question shall be submitted to the voters of the City of Saco for ratification or rejection at a referendum vote to be held on June 11, 2013: Shall the Order of the City Council of the City of Saco entitled “Order Authorizing the City of Saco to Borrow an Amount Not to Exceed $1,700,000 for Improvements to the Stackpole Bridge” be ratified and approved?

12. City Clerk. A copy of this order shall be filed with the City Clerk.

Question # ___

Shall the Order of the City Council of the City of Saco entitled “Order Authorizing the City of Saco to Borrow an Amount Not to Exceed $1,700,000 for Improvements to the Stackpole Bridge” be ratified and approved?

Yes ____________
No ____________

Financial Statement

The issuance of bonds and notes by the City of Saco (the “City”) is one of the ways in which the City borrows money for certain purposes. The following is a summary of the bonded indebtedness of the City as of the referendum date. The total amount of bonds of the City of Saco outstanding and unpaid is $20,423,365, of which $15,044,962 is principal and $5,378,403 is interest. The City has $1,700,000 in bonds authorized and unissued. The total amount of bonds of the City to be issued if the question authorizing this borrowing is ratified by the voters is $1,700,000. The total debt service costs of the bonds will vary depending on the prevailing interest rates at the time the bonds are issued. The total estimated principal and interest payments on the bonds is $2,622,250, of which $1,700,000 is principal, and estimated interest at fixed rates ranging from 2.5% to 4.0% (depending on the years to maturity) over 30 years is $922,250.

When money is borrowed by issuing bonds, the City must repay not only the principal amount of the bonds but also interest on the bonds. The amount of interest to be paid will vary depending upon the rate of interest and the years to maturity at the time of issue. The validity of the bonds and of the voters’ ratification of the bonds may not be affected by any errors in the estimates made of the costs involved, including varying interest rates, the estimated cost of interest on the bond amount to be issued and the total cost of principal and interest to be paid at maturity.

s/ Cheryl Fournier
Cheryl Fournier, Treasurer, City of Saco

End of Financial Statement
22 October 2012

City of Saco, ME 300 Main Street
Saco, ME 04072

Attention: Angela Blanchette

Reference: Stackpole Creek Bridge, Saco

Dear Angela:

On 25 July, 13 August, and 8 September 2012 I visited the Stackpole Creek Bridge in Saco to make visual observations regarding its deteriorated structural condition. This included exterior visual inspection, a limited amount of probing, and rough measurements to ascertain the overall geometry of the bridge and aspects of its present physical state.

We have also reviewed conditions reports produced by DeGrunchy Masonry of Quakertown, PA and CLD Associates of York, ME. These reports offered conclusions as to the causes of the deterioration and proposals for its rehabilitation or replacement.

The following is a summary of our thoughts and opinions regarding the conditions reports and associated recommendations, conditions we have noted in the field, and our own recommendations for repair.

General Description and Historical Construction

The Stackpole Creek Bridge was constructed in 1848 to provide a new crossing over the Stackpole Creek on Simpson Road in northern Saco. The creek flows into the Saco River from the north, crossing under Simpson Road, which we will consider to run east-west. This crossing takes place where the riverbed consists of a steep-sided ravine that is subject to significant seasonal variations in flow.

Historical Construction

The Simpson Road crossing consists primarily of a dry-laid stone sided earthen embankment with a small, arched tunnel-like portal through which the creek flows. The entire structure is approximately 110-feet long by 26-feet wide at the top by a maximum of about 24-feet high. There is one 7-foot wide by 18-foot tall arch span in the center.
Based upon our visual observations, test pits, and probes, we determined that the structure consists of entirely dry-laid stone masonry with mortar pointing on the exterior, which retains an earthen and rubble core of unknown volume and geometry. This was probably constructed in the following way:

- Solid, square-edged broken stone granite footings were laid directly on the bedrock that lines the bottom of the riverbed. Then, a combination of square-edged and angular broken granite blocks were laid in an interwoven, but uncoursed, manner over them, creating the vertical walls that form the waterway and the slightly battered sides of the approaches. By viewing into open joints and cavities within the structure, it appears that the interwoven wall construction is at least 8-feet thick (the farthest one can see) at the base and thinner toward the top. The angular and interwoven nature of these stones give the walls stability and strength, as the heavy rough-cut stones bear solidly on each other at wide parallel planes and the roughness of their bearing surfaces give them good resistance to shear.

- Once the walls had risen to sufficient height, random field stone cobbles were laid into the enclosed space to act as free-draining fill and to support the eventual roadway above. Based upon our observations, the stones that make-up this internal fill are mostly rounded in nature, and have very little resistance to shear as their combined mass is analogous to a box of marbles — stable and strong if the box is closed, unstable if the box is opened.

- As the structure reached a height of about 15-feet above the riverbed, arched wooden forms were constructed between the abutment walls to support the construction of the single wythe rough-cut stone arch that spans 7-feet over the riverbed. The walls and arches were chinked, the sidewalls extended up over them, and then the fieldstone cobble fill was placed over the arches and between the sidewalls to create the sub-base for the roadway.

- Various gradings of earth would have been placed over the cobble fill, perhaps starting with rough stoney gravel that would span the voids between the cobbles and then finer and finer gradations until a silt-resistant road surface was created. Alternatively, a clay layer may have been inserted to prevent sifting of the road fill.

- Side guards were created by drilling holes in the top stone course of the sidewalls and inserting used or surplus carriage axles, which then supported wooden fence rails and/or the present cables.

- The roadway was later asphalt paved, which has been the wearing surface of choice up through present times.

**Unusual Configuration and Geometry**

If one compares the cross-sectional area of the portal to that of the riverbed, the ratio is less than 20 percent. This means that the crossing creates a significant choke point that
can back up the river’s flow at a time when contemporaneous structures were frequently built with longer and even multiple spans requiring less material to be brought in to construct the approaches. It almost seems as if the intent was to create something that would even out the river flows downstream by damming up the stream.

Historical experience demonstrates this to be the case, as there have been documented occurrences when the creek has been backed up to the point of over-topping the structure.

The question is, then, why would people who lived locally, and had theoretically experienced the flows of Stackpole Creek firsthand, have gone to extra effort to build a structure that was so seemingly inadequate for passing the flows. Could the damming effect have been an intentional effort to reduce the peak flows on the downstream side of the crossing, or it just the collateral effect of the builder’s error in judgment?

Beyond its questionable functioning as a bridge, the bridge also presents a choke point in the Simpson Road, as traffic has been reduced to a single lane in order to accommodate proper guard rails that are embedded in the soil embankment several feet in-board of the stone sidewalks.

**Present-Day Conditions**

Between our first and second visits to the site, we reviewed previous reports and documentation provided to us by the city. These included a 2007 report by DeGrunchy Masonry, of Quakertown, PA and a 2011 report by CLD Associates of York, ME.

**Observations by DeGrunchy**

From our review of DeGrunchy Masonry’s report we found it to have a general bent toward preservation of the structure, as even stated in the text. This report describes the results of DeGrunchy’s site visit, describes their concerns, and makes recommendations for repairs, including hand sketches and a supplemental report by a Structural Engineer in the UK.

DeGrunchy states in their report that:

“...the main threat to the structure is not from road traffic but the possibility of the creek getting dammed up and water levels rising such as to encourage a major erosive flow over the top and past the ends of the masonry structure where the thinner layers of infill would get stripped away first followed by the formation of swirlholes and surges to strip out the soil infills. In theory, the stone structure would begin to tumble as the chink stones and smaller stones become loosened by water and gravity acting on the off-center weights.”

While we disagree that road traffic is not the main threat to the bridge, we concur with DeGrunchy’s concern as to washing away of the structure from erosion. DeGrunchy also states that:
“The complete masonry structure has demonstrated many times that it has an adequate mass and frictional stability to safely resist the very high flood levels which have been recorded.”

This is in keeping with our own impression as well, having completed some preliminary calculations that find the road embankment structure to be laterally stable with water retained for its whole height on the upstream side.

**Observations by CLD**

The following deficiencies were noted in the CLD report dated May 2011:

“Arch – At multiple locations, cracks have gotten longer and mortar loss is evident. Photos have been included to show these areas. Additional photos have been included to illustrate how gaps between stones have increased from 2003-04 to 2011.

Gauge readings indicate that the upstream third of the arch continues to move outwards.

We believe that the primary force that is driving this transverse arch spreading is the dragging effect of the sloughing fill that surrounds, and is also spreading, the walls. We have done an analysis of the embankment as a retained soil structure, and found that the greatest spreading force on the side walls is not the dead weight of the fill or fluid pressure of retained water, which is theoretically drained, but from truck wheel loads. Because of the rounded nature of the fill, approximately 36 percent of any downward force on the roadway is translated as a lateral force in the embankment.

“Roadway – Cracks are clearly visible in the pavement overlay that was placed in September 2009. These cracks generally follow the same pattern that was evident in the previous pavement surface. City personnel noted that two small depressions (starter sinkholes) had developed behind the jersey barriers, just prior to the onset of snow cover. Curbing and drainage appear to be performing as intended.

Having witnessed the same or similar cracks, we suspect these have been caused by the transverse spreading of the structure. Rainwater seeps in through these cracks in the pavement and washes the fine sub-base fill materials down into the voided cobble fill below, creating sink holes.

“Steel Bracing – Surface rust covers all of the steel members, and the whalers (more so than the columns or tube sections) have begun to delaminate with notable section loss. This bracing was installed in December 2001 and at that time was considered to be a temporary stabilization measure anticipated to be in place for two-years.”

The above observations, which coincide with our own, suggest that the steel frame is nearing the end of its life.
Two of Our Own, Additional Observations

- There are several severe bulges in the stonework on the north face of the structure, particularly at the east embankment. Stones have fallen out of the wall near the bottom, most of the way up the slope.

- The south end of bottom stone at the south edge of the east abutment wall overhangs an empty cavity below, possibly having been undermined by scouring river flow.

Proposed Repairs and Associated Costs

DeGrunchy Masonry:

DeGrunchy recommended the following in their report:

1. Foundation underpinning to remove soft materials and filling erosion, sealing the base and void filling.
2. Masonry consolidation rebidding, rebuilding/realigning, stitching face-stones, pointing, grouting down back of stones, wall head protection, and tidying up the ends of the wingwalls, etc.
3. Excavation down to the arch springing level and grouting the joint in the arch.
4. From this level, installing ‘Cintec type’ piled support and anchors to strengthen the breastwalls and the culver general all the traffic carrying capacity to be increased.
5. Flood control overflow system and spillway
6. Re-leveling and redoing road surface and water control and drainage.
7. Safety rails, etc.
8. Footpath upgrade.
9. Vegetation control.

Estimated Cost = $593,000 per DeGrunchy ($721,000 in $/2012)

We estimate that the work described under this scheme would cost $880,000.

The DeGrunchy proposal is rational way of restoring the structure, however the use of hydraulic lime-based products as described in their commentary is not necessarily appropriate here in a repeatedly wet, water-flow environment where the lime can break down (I discussed this with Andy when I saw him at a conference in Charleston, SC, last week).

We agree that some underpinning (1) may be needed to provide a more stable base for the abutment walls, however we do not agree (also 1) that voids should be filled within the internal core. For reasons previously stated, and from our studies, establishing an overflow spillway would be a nice benefit, but would require dismantling of more than a third of the total structure’s length.
The primary element that this scheme lacks is relieving the structure of roadway loads, which we believe is a critical, although costly component to add.

**CLD Consulting Engineers**

We have reviewed various pieces of correspondence from CLD, including monitoring logs, proposals, cost estimates, and photographs, focusing ultimately on their Final Letter Report of 15 March 2011. This report summarized CLD’s conclusions from a relative wealth of material, and presented three recommended options for the bridge along with estimated construction costs.

**CLD Rehabilitation/Alternative**

Description taken from the text of CLD’s 2011 report:

“This alternative involves excavation and replacement of the backfill soils down to the spring line of the arch and the installation of steel reinforcing dowels and rock anchors to stabilize the abutment walls. Anchors would be drilled through the existing wing stones and into the backside of the abutment wall and the opposing wing, pinning the walls together. Reinforcing dowels would be drilled and grouted through the abutment base course stones into the underlying bedrock to provide reinforcement against wall sliding. Additional rehabilitation measures would include the following:

1. Cast a two-way reinforced concrete slab over the backside of the arch stones to prevent further movement and to assist with load distribution in the arch;

2. Install a buried drainage system to collect water from behind the wingwalls;

3. Construct a concrete training wall extending from the northwest corner of the waterway opening to reduce the erosive effect of the swirling water pattern in this area;

4. Fill voids in the bottom 3+/- feet of the abutment walls with grout to stabilize the lower portion of the walls and keep water out when the creek is at its normal level;

5. Fill voids that are higher in the abutment walls with replacement stones, held in place with mortar on their backside where the repair would not be visible; and

6. Repoint/replace mortar in all exposed faces of the wings, abutments and arch barrel.”

Estimated Cost= $1,700,000 per CLD ($1,768,000 in $/2012)

We have estimated the work described would cost $1,130,000, so CLD’s price for this work seems high, in our opinion.
We feel this option would be for the most part a reasonable approach for saving the existing bridge. We agree with the idea (1) of excavating down to expose the top of arch span, pinning it into the bedrock, and adding a reinforced concrete pad above it. We also agree with (3) the addition of training walls to the upstream side of the bridge as a reasonable way to increase the available flow.

We disagree, however with the idea of (4) grouting the lower 3-feet of the abutment walls, as control of the spread and consolidation of the injected grout would be very difficult, and because, according to our calculations, the structure is stable without this measure. Also, the existing structure was clearly intended to be dry-laid, and creation of uncontrolled, potentially randomly distributed grout mass could negate the free-draining advantages of the dry-laid construction.

We agree with what is essentially re-chinking (5) of the upper stonework, with or without mortar on the backsides of the stones. We agree with limited pointing (6) of the exterior surfaces, but only on the upstream, north face of the bridge where it would have the advantage of keeping impounding water from seeping into the structure. Pointing should be removed, and perhaps even removed, from the south, downstream face any water that does seep in is not entrapped. Pointing should be restored in the abutment walls and arch in order to improve stream flow and avoid internal scouring.

We also do not feel that creating a drainage system (2) behind the wingwalls is necessary, since the very nature of the dry-laid cobble fill is its own drain.

**CLD Rehabilitation/Alternative 2**

Description taken from the text of CLD’s 2011 report:

“CLD worked with CINTEC America Inc. to develop a scope and estimate to apply the ARCHTEC treatment to the arch and for stabilizing the retaining wingwalls. The CINTEC anchors are a proprietary soil anchor system with stainless steel rods in fabric socks that are filled with grout. This alternative would entail installation of anchors to stabilize the arch barrel, abutments and wingwalls. Typically, a finite element analysis for the structure is done by Gifford and Partners (U.K.) who work in partnership with CINTEC. The ARCHTEC methodology calls for a detailed survey of both the vertical walls and the arch along with testing, using both non-destructive and physical means for evaluating the geotechnical (fill and foundation).

“Alternative 2 would include the buried drainage, concrete training wall, grouting of voids, wall repointing and the repair and replacement of damaged or missing stones, that were all outlined under Alternative 1.”

Estimated Cost = $1,775,000 per CLD ($1,846,000 in 2012)

We have estimated the work described would cost $1,280,000. Again, CLD’s price for this work seems high.

All of our comments for “Alternative 1” hold true for “Alternative 2”, as CLD’s recommendations are essentially the same, but with the addition of an engineered Cintec/Archtec restraining system for the arch construction.

In our opinion, longitudinal spreading and bending deflection of the arch span, which is what the Archtec system is designed for, is not the primary problem with the bridge, and therefore not something that needs to be solved.
We do concur with the use of Cintec anchors to stabilize the abutment walls, but are concerned about the prospect of using these as “soil” anchors into the cobble fill will be complicated by the extreme difficulty of drilling horizontally into the cobbles, which will shift and spin instead of being bitten into by the drill.

CLD Full Replacement/ Alternative 3:

Description taken from the text of CLD’s 2011 report:

“This option was studied to provide a cost datum to compare with the rehabilitation alternatives. The bridge type considered the most feasible as a replacement structure is a precast concrete arch with mechanically stabilized earth (MSE) wingwalls. A timber structure is also considered a feasible replacement alternative and could be combined with the same MSE walls as the precast option. Hydraulic analysis of the Stackpole Creek and backwater condition from the Saco River found that an approximate 20-ft span x 12-ft rise precast arch will provide adequate area to meet MaineDOT freeboard criteria.”

Estimated Cost (w/o aesthetic treatments) = $860,000 per CLD ($894,000 in $/2012)

We have estimated a cost of $997,000 for the work described, which is higher than CLD’s estimate.

Estimated Cost (w/ aesthetic treatments) = up to $1,160,000 per CLD ($1,206,000 in $/2012).

We have estimated a cost of up to $1,292,000 for the work described with the aesthetic treatments, which is also somewhat higher than CLD’s estimate.

While CLD has done what is in our opinion a thorough presentation of reasonable replacement options and associated costs, the main detractor is the total loss of a significant, regionally contributing and locally appreciated historic structure that could otherwise have been saved. Of the replacement schemes presented, we would from an aesthetic/historic standpoint consider the wood-timber bridge replacement the most appropriate as it does not pretend to mimic an historic structure with a modern era design.

From a functional standpoint, the replacement satisfies the need for improved stream flow, a two-lane roadway, and good-as-new (in this case new) structure.

Our Own “Hybrid” Rehabilitation Scheme

We have considered existing conditions and dynamics that surround the bridge, as well as clearly expressed local concerns over its preservation. We have reviewed the various options presented both DeGrumuchy and CLD, including each proposal’s good attributes as well as drawbacks. Picking and choosing among the aspects of each scheme, we recommend that a hybrid approach be considered for rehabilitating the bridge that includes the best
components of each of the proposals. We have retained the geotechnical consulting services of GEI Consultants, Winchester, MA at our own expense, to review and vet this scheme, and their input has been very helpful.

Under this plan, the lower masonry would be stabilized and restored, with the south side of the structure left unpointed to drain, most of the cobble fill maintained in its free-flowing porous state, and the upper portions of fill and top stone course removed and replaced with a pile assisted concrete roadway, essentially creating a bridge within a bridge.

This would achieve the following:

- Marginal improvement in water flow by creating funneling walls at the upstream side of the existing arch span.
- Improving roadway width and guardrails to Maine DOT standards.
- Providing full AASHTO HS20 live loading capacity.
- Maintaining the same overtopping flow dynamics as the existing bridge while additionally buttressing the structure to withstand such.
- Restoring and protecting the existing historic bridge in place, removing only the top course of masonry.
- Protecting and stabilizing the structure’s internal structure from wheel loads and water ingress while providing a pathway for entrapped water to drain out.

This would be constructed as follows (please refer to Fig. A and B which graphically represent this scheme):

1. The present asphalt road surface would be removed along with the side rails and top course of stones from the side walls, which would be tagged, numbered, and stored. This lowering creates a plane to receive the concrete slab.

2. The top surface would be excavated an additional 2- to 3-feet down to the top of the cobble fill along the upstream side of the bridge, exposing the back surfaces of the sidewalls, which would be chinked and pointed. Stainless steel pins would be set into the backs of some of the stones. This depression becomes a lowered concrete haunch to help buttress the top of the upstream wall.

3. The bulged sections of the north face would be stabilized by localized injection grouting and pinning, chinking, and removal and re-setting, depending upon the severity and location of the condition. The inter-stone joints on the entire upstream wall surface would then be cut, re-chinked, and pointed.

4. The foundations of the abutment walls would be investigated and stabilized.

5. The tops of the walls would be evened off and re-set to create a uniform top edge that is approximately 10” to 12” below its present height.
6. The cobbled fill would be excavated down to expose the top of the arch span and the fill on each side would be solidified with a low motility grout in order to stabilize it for drilling. A series of 2” to 3” diameter holes would be drilled through the grouted fill and into the stone headwalls, into which would be installed Cintec sock anchors that would extend from the sidewalls in a fan like pattern, up into the excavation.

7. Cone shaped depressions would be made in the cobbled fill at about mid-distance on the embankment structures to each side of the arch span. These would later be filled with concrete to act as flared capitals or pile caps to support the roadway slab.

8. The inverts of the depressions would be gravity fed with a low-motility grout. This would help solidify the cobbled fill to make it easier to drill mini piles.

9. Similar depressions would be created at the end of the span, but to a lower depth.

10. A total of 20 drilled mini piles would be placed within the excavated roadway. These would be of approximately 8” diameter and would pass through the stabilized cobbles and any underlying soil and down to bedrock. Two piles would support each of the abutments, five piles would support each of the intermediate capitals (four vertical, one battered), and three would pass through each of the headwalls below the arch.

11. All of the excavated depressions, along with the buttress at the back of the north wall, would receive reinforcing “cages” and concrete to create effective pile caps on which the concrete road span could be placed. The depression over the arch span would be additionally reinforced to stop its transverse spreading.

12. A 10” to 12” structural reinforced concrete slab and wearing surface would then be placed over the capitals, north side buttress, and the tops of the stone sidewalls and extended out by 4” to 6” to create a proper “drip”. Expansion joints would be incorporated over the intermediate capitals, and drained from below, and the slab surface would be given a gentle crown, for drainage off to the sides.

13. New Maine DOT approved wooden guardrails would be installed at each side.

14. Stone rip-rap would be laid at the base of the downstream wall and training walls, would be added at the front of the arch span.

Estimated Cost for the Hybrid Scheme= $1,390,000. This cost is 7.5% higher than CLD’s replacement scheme, but preserves and protects the original historic structure and provides a new, full capacity roadway.

Thank you for the opportunity to provide this evaluation. Please contact me if you have any questions or would like further information.

Respectfully Yours,

John M. Wathne, PE, President
Structures North Consulting Engineers, Inc.
B. CONFIRM THE MAYOR’S APPOINTMENT TO THE PLANNING BOARD – DEBORAH MCKENNEY

Mayor Johnston would like to nominate for appointment to the Planning Board, Deborah D. McKenney of 39 Village Green Drive.

Councilor Lovell re-emphasized that the Planning Board is the only regulatory commission affecting economic development. I think that it would be wise that we have somebody orientated toward economic development on the board, because it is one of the council goals to promote economic development.

Councilor Lovell moved, Councilor Tripp seconded “Be it Ordered that the City Council confirm the Mayor’s appointment of Deborah McKenney to the Planning Board, for a 3-year term to expire on April 1, 2016”. Further move to approve the Order. The motion passed with seven (7) yeas.

C. CONFIRM THE MAYOR’S APPOINTMENT OF KELLEY ARCHER TO THE HISTORIC PRESERVATION COMMISSION AS AN ASSOCIATE MEMBER

The Mayor is seeking to have Kelley Archer of 185 Bradley Street appointed for a 3 year term.

Councilor Cote moved, Councilor Lovell seconded “Be it Ordered that the City Council confirm the Mayor’s appointment of Kelley Archer to the Historic Preservation Commission as an associate member for a 3 year term ending April 1, 2016.” Further move to approve the Order. The motion passed with seven (7) yeas.

VI. ADJOURN THE MEETING

Mayor Johnston adjourned the meeting with the unanimous consent of the Council at 7:50p.m.

Attest: ________________________________

Michele L. Hughes, City Clerk