Stormwater Plangineer

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Megan J. Moir, CPESC, CPSWQ

DRAFT Memo

Date: June 16, 2011

To: Board of Finance and Burlington City Council

From: Megan Moir, Burlington Stormwater Program

Subject: Request for approval to execute contract related to Stormwater and Water Infrastructure Mapping

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Background:

Project Need:

Many communities are working to convert their infrastructure maps to Geographic Information System (GIS) database maps. These "smart" maps show the exact location of infrastructure on the ground (see attachment 1), encode the connectivity of a system (pipe 1 drains to pipe 2), and also have the ability to maintain service records for individual elements of an infrastructure system (the results of storm drain # 150 inspection and cleaning effort for 2012 vs. 2013). Such upgrades have generated efficiencies in tracking metrics and in proactively planning maintenance activities (e.g. if storm drain #150 is always full of sediment, then it probably needs to be cleaned more often).

While the 1984 paper maps of the sewer (storm drains, manholes, storm lines, outfalls) we digitized (transferred by tracing) in into a GIS in the early 1990s, the current database lacks:

- Accurate geo-referencing (points in the layer are not where the point exists on the ground)
- Ability to easily record inspection/maintenance activities and does not contain information necessary for hydraulic/hydrologic modeling
- Systematic updates when changes have been made on the ground to the system (sewer separation in late 80s and various installations and removals of infrastructure)

The Water infrastructure (water valves, hydrants, lines) maps have not yet been digitized and exist only as scanned paper maps.

Project and grant funding history:

The City was awarded and accepted a grant by VTRANS (SW0052) for the study and establishment of a stormwater utility/program for $80,000 in May 2009. As it turned out, it was more expeditious to launch the program with our own staff time and the City was able to convince VTRANS that a well-functioning GIS system was also critical to the success of the stormwater program. Therefore we were able to amend the original scope of work to include work specific to updating the City's stormwater maps.

Additionally, in late 2010 the City was awarded and accepted grant funding from HUD for the Downtown/Waterfront Development Planning Study led by the Planning & Zoning Department. This grant contains a task specifically related to existing infrastructure analysis, and $8200 of that grant was budgeted to contribute towards the mapping effort within the downtown/waterfront zone.

Procurement history:

A request for qualifications (RFQ) was released February 11, 2011, with 14 respondents by the March 9, 2011 deadline. Through a qualifications based selection process, Weston & Sampson (of Waterbury, Vermont) was selected as the most qualified consultant and contract negotiations were initiated in late March.

While water infrastructure mapping was not included as part of the original scope for the RFQ, the contractor indicated that data for a water infrastructure mapping effort could be efficiently collected simultaneously with the stormwater infrastructure data (and requires the same qualifications sought in the RFQ), and was thus added as a separate phase under the contract to be paid out of the Water Distribution Capital Funds.

The proposed total contract cost for the base scope of services proposed is $130,000. A supplemental scope of services has been included to be addressed based on the availability of funding.

The specific tasks and funding sources are proposed below. The contract is currently under review with City Attorney Gene Bergman. The main body of the contract and scope of work is included as Attachment 2 for your information.

Expenses/Source of Funds:

Expenses	Cost	
Stormwater System Mapping for City (except Downtown):	$	105,910.00
Stormwater System Mapping for Downtown Area	$	8,200.00
Water System Mapping:	$	15,890.00
Total Expenses	$	130,000.00

Source of Funds (Pending Approval of FY12 Budgets)	Amount	
Stormwater Special Revenue	$	25,910.00
VTRANS Grant SW0052 (through Stormwater)	$	80,000.00
HUD Downtown/Waterfront Planning Grant	$	8,200.00
Water Distribution Capital Fund	$	15,890.00
Total	$	130,000.00

The contract is written such that additional elements (in the supplemental scope of services) may be completed under the contract either 1) within the original contract price or 2) if additional City Funds become available, with both situations to be addressed through amendment.

Obligations:
The City local match obligation 20% ($20,000) for the total VTRANS grant project cost ($100,000) to which the 80% ($80,000) VTRANS grant will be applied. These obligations and obligations above the $100,000 are detailed above. In order to see the project through, the City will also be contributing staff time for coordination and field work. This time will be covered by the Stormwater Special Revenue Funds in the Stormwater to Engineering (72086) line item.

Action Needed:
We respectfully request authorization for Steven Goodkind to sign the contract pending review and approval by the City Attorney's office and the approval of the FY12 Budgets by City Council. Furthermore, we request the authorization for Mr. Goodkind to sign any amendments which do not result in an increase in the total contract cost (i.e. amendments related to adding elements from the supplemental scope). Any amendments involving additional funds above the $130,000 will be submitted to the Board of Finance and City Council for approval.

If you have any questions or concerns, please contact Megan Moir at mmoir@ci.burlington.vt.us or 863-9094

DRAFT

Resolution Relating to: Sponsor: Finance Bd.

Authorization to award a contract for the Stormwater System and Water Distribution System Mapping Update

CITY OF BURLINGTON

In the year Two Thousand Eleven……...
Resolved by the City Council of the City of Burlington, as follows:

That WHEREAS, the City Council authorized the execution of VTAOT Stormwater Mitigation Grant #SW0052 in which the City was awarded a $80,000 grant for 'Utility Set Up" in the year 2009

WHEREAS the scope of SW0052 was amended in 2010 to update the scope of the work under the grant to include updating maps of the separate stormwater and combined sanitary/stormwater sewer infrastructure as part of the "Utility Set Up"

WHEREAS the City Council also authorized the execution of the HUD grant secured by the Department of Planning & Zoning and of which $8200 of the budget for the existing infrastructure analysis is to be used for mapping of the separate stormwater and combined sanitary/stormwater sewer infrastructure in the downtown/waterfront area,

WHEREAS there are efficiencies to be gained by mapping other city infrastructure (namely water valves and hydrants within the water distribution system) while pursuing this project,

WHEREAS Public Works issued a Request for Qualifications for a consultant to undertake an update to the existing separate stormwater and combined sewer GIS database and enhance the database to include asset management components critical to the tracking of maintenance activities, the planning for capital improvements and the development of hydraulic/hydrologic models of the system.

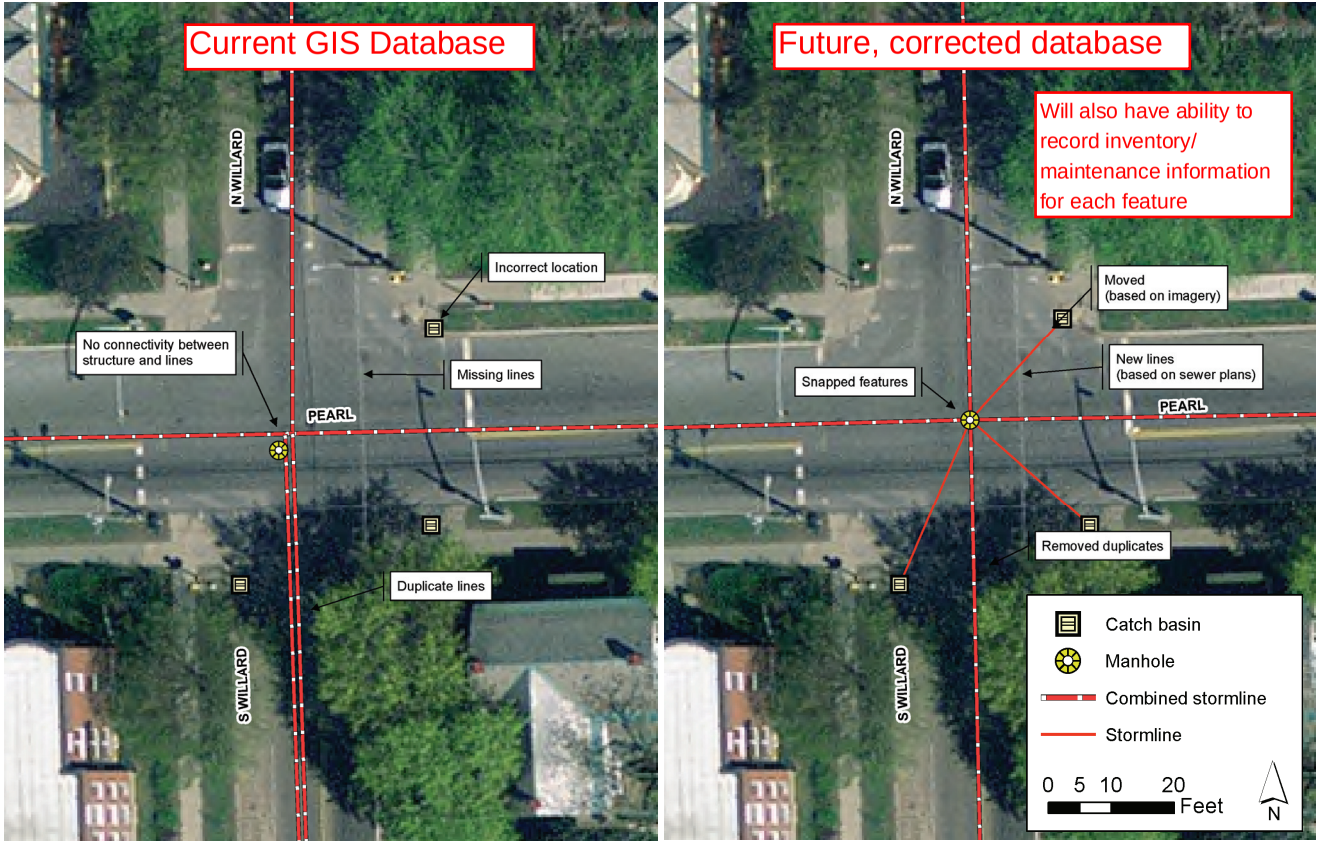
WHEREAS Weston & Sampson was selected as the top ranked consultant and with which Public Works has negotiated a contract for base services under the contract amount listed below with a supplemental scope included to allow for the completion of additional tasks pending the availability of funds, whether those funds are made available by the completion of the base scope under budget or funds are made available from the Stormwater Special Revenue fund during the term of the contract. DPW has recommended and the Finance Board has approved awarding the contract to Weston & Sampson in the amount of $130,000, with the following allocation of cost to various funding sources:

Stormwater Special Revenue	$	25,910.00
VTRANS Grant SW0052 (through Stormwater)	$	80,000.00
HUD Downtown/Waterfront Planning Grant	$	8,200.00
Water Distribution Capital Fund	$	15,890.00
Total	$	130,000.00

NOW, THEREFORE, BE IT RESOLVED that the City Council, as governing body of the City of Burlington, hereby authorizes Steven Goodkind, DPW Director/City Engineer to enter into the current contract for the stormwater system and water distribution system mapping update and to enter into any contract amendments that do not involve an increase to the contract cost, by and between the City of Burlington and:

- Weston & Sampson, of Waterbury, Vermont, in the amount of $130,000 for consultant services,

subject to the prior review and approval by the Chief Administrative Officer and the City Attorney and to the approval of the FY12 budgets by the City Council.



Attachment 1

Attachment 2

DRAFT FOR REVIEW BY CITY ATTORNEY & VTRANS

AGREEMENT FOR ENGINEERING SERVICES
BY AND BETWEEN THE
CITY OF BURLINGTON, VERMONT
AND
WESTON & SAMPSON ENGINEERS, INC.

THIS AGREEMENT is made this _____ day of _____, 20_, by and between the CITY OF BURLINGTON, VERMONT, acting herein by and through its representative Megan Moir, hereinafter called the OWNER and WESTON & SAMPSON ENGINEERS, INC., with offices at 98 South Main Street, Waterbury, Vermont, hereinafter called the ENGINEER.

WITNESSETH, for the consideration hereinafter set forth, the parties hereto agree as follows:

ARTICLE 1 - ENGAGEMENT OF THE ENGINEER

1.1 THE OWNER hereby engages the ENGINEER, and the ENGINEER hereby accepts the engagement to perform certain professional engineering services hereinafter described

as the base scope of services will include a GIS-based assessment of the OWNER's stormwater infrastructure; including asset inventory/management assessment; GIS model update/verification; long-term asset management system development/procedures; stormwater feature detailed inventory for Englesby watershed; stormwater system hydraulic /hydrologic modeling options for Englesby watershed; and private stormwater GIS for Englesby watershed; the base scope will include GIS-based data collection of the water and depending on the availability of funding, address elements in supplemental scope of services that expands upon the previous task for a larger geographic area.

hereinafter called the PROJECT.

1.2 The ENGINEER's services shall be performed in a manner consistent with that degree of skill and care ordinarily exercised by practicing design professionals performing similar services in the same locality, at the same site and under the same or similar circumstances and conditions. The ENGINEER makes no other representations or warranties, whether expressed or implied, with respect to the services rendered hereunder.

ARTICLE 2 - SCOPE OF SERVICES

** REFER TO ATTACHMENT A – BASE SCOPE OF SERVICES **
** REFER TO ATTACHMENT B – SUPPLEMENTAL SCOPE OF SERVICES**

ARTICLE 3 - RESPONSIBILITIES OF THE OWNER

The OWNER, without cost to the ENGINEER, shall do the following in a timely manner so as not to delay the services of the ENGINEER:

3.1 Designate in writing a person to act as the OWNER 's representative with respect to work to be performed under this AGREEMENT, such person to have complete authority to transmit instructions, receive information, interpret and define the OWNER'S policies and decisions with respect to materials, equipment elements and systems pertinent to the work covered by this AGREEMENT.

3.2 Through its officials and other employees who have knowledge of pertinent conditions, confer with the ENGINEER regarding both general and special considerations relating to the PROJECT.

3.3 Assist the ENGINEER by placing at the disposal of the ENGINEER, all available information pertinent to the PROJECT including previous reports and any other data relative to design or construction of the PROJECT.

3.4 Pay all application and permit fees associated with approvals and permits from all governmental authorities having jurisdiction over the PROJECT and such approvals and consents from others as may be necessary for completion of the PROJECT.

3.5 Arrange for access to and make all provisions for the ENGINEER to enter upon public and private lands as required for the ENGINEER to perform its work under this AGREEMENT.

3.6 Furnish the ENGINEER all available property, boundary and right-of-way maps.

3.7 Cooperate with and assist the ENGINEER in all additional work that is mutually agreed upon.

3.8 Pay the ENGINEER for work performed in accordance with the terms specified herein.

ARTICLE 4 - TIME OF PROJECT

4.1 The ENGINEER will initiate work under this AGREEMENT following formal acceptance of this AGREEMENT by the OWNER. The ENGINEER agrees to provide services described as in Article 2-BASE SCOPE OF SERVICES for the estimated duration of work, starting within 7 days of signing this AGREEMENT and concluding within 150 days. However, services described as in Article 2-SUPPLEMENTAL SCOPE OF SERVICES may be completed prior to the expiration of this AGREEMENT on December 31, 2012.

ARTICLE 5 - PAYMENTS TO THE ENGINEER

5.1 For services performed under this AGREEMENT, the OWNER agrees to pay the ENGINEER monthly as charges accrue on a cost plus fixed fee basis as referenced to the scope presented on **Table 1**. Monthly charges will include costs incurred during the billing period based on the amount and value of the work and services performed plus a 10% fixed fee based on the proportionate value of costs incurred to date. The cost ceiling (which does not include the fixed fee), which the ENGINEER will not exceed without the AGREEMENT being formally amended, and the fixed fee which will not be increased except for an AGREEMENT amendment increasing the scope of work, are as follows:

Cost ceiling:	$ 118,807
Fixed fee:	$ 11,193
Total Contract	$ 130,000

As requested by OWNER, ENGINEER will track costs associated with this work under separate phases as follows:

Phase A. Stormwater Mapping for City (except Downtown):	$ 98,439
Phase B. Stormwater Mapping for Downtown Area :	$ 8,200
Phase C. Contingency for Stormwater Mapping:	$ 7,471
Phase D. Water System Mapping:	$ 14,850
Phase E. Contingency for Water System Mapping:	$ 1040
Total Contract:	$130,000

5.2 It is agreed that the total cost plus fixed fee amounts represent estimated costs for Engineering Services outlined in ARTICLE 2 - BASE SCOPE OF SERVICES. At a minimum, the BASE SCOPE OF SERVICES will be completed within the Total Contract amount shown above.

5.3 In the event that the BASE SCOPE OF SERVICES is completed for less than the cost ceiling, it is agreed that items from Article 2 – SUPPLEMENTAL SCOPE OF SERVICES will be completed until the cost ceiling amount shown above is reached.

5.4 In the event that additional funds become available within the overall term of this AGREEMENT, it is agreed that this AGREEMENT may be amended to authorize a revised Total Contract amount to complete additional tasks from Article 2 – SUPPLEMENTAL SCOPE OF SERVICES.

5.3 Costs as used herein, are defined as direct labor, indirect costs, and other direct costs.

5.3.1 Direct labor costs are salaries and wages paid to personnel for work directly charged to the PROJECT by the ENGINEER'S employees.

5.3.2 Indirect costs are allocation of overhead and general and administrative costs that are incurred by the ENGINEER.

5.3.3 Other direct costs are identifiable expenses which include transportation, printing and reproduction of plans and reports, telephone charges, postage, computer time,

subconsultant charges such as specialty engineering, soils, surveying, and testing of materials and other identifiable expenses.

5.4 The Cost Summary, presented in Attachment B, which is a part of this AGREEMENT, presents the ENGINEER'S estimate of labor rates, overhead and general administration and other direct costs. Changes in these costs may occur during the course of this PROJECT in certain of these items.

5.5 If the OWNER fails to make any payment due the ENGINEER for services and expenses within thirty (30) days after receipt of the ENGINEER'S statement therefore, the ENGINEER may, after giving seven (7) days' written notice to OWNER, suspend services under this AGREEMENT. Unless the ENGINEER receives payment within seven (7) days of the date of the notice, the suspension shall take effect without further notice. In the event of a suspension of services, the ENGINEER shall have no liability to the OWNER for delay or damage caused the OWNER because of such suspension of services.

ARTICLE 6 - INSURANCE

6.1 General Liability Insurance

The ENGINEER shall secure and maintain, for the duration of this PROJECT, the following General Liability Insurance policy or policies at no cost to the OWNER. With respect to the operations the ENGINEER performs, the ENGINEER shall carry Commercial General Liability Insurance providing for a combined single limit of One Million Dollars ($1,000,000) for bodily injury, death, and property damage.

6.2 Automobile Liability Insurance

The ENGINEER shall secure and maintain, for the duration of this PROJECT, Automobile Liability Insurance covering the operation of all motor vehicles, including those hired or borrowed, used by the ENGINEER in connection with this AGREEMENT, in the following amount:

6.2.1 Not less than Five Hundred Thousand Dollars ($500,000) for all damages arising out of bodily injuries to or death of one person and subject to that limit for each person, a total limit of Five Hundred Thousand Dollars ($500,000) for all damages arising out of bodily injuries to or death of two or more persons in any one accident or occurrence, and

6.2.2 Not less than One Hundred Thousand Dollars ($100,000) for all damages arising out of injury to or destruction of property in any one accident or occurrence.

6.3 Umbrella Liability Insurance

In addition to the above-mentioned coverage, the ENGINEER shall carry a minimum of One Million Dollar ($1,000,000) umbrella liability policy for the duration of the PROJECT.

6.4 Professional Services Liability Insurance

The ENGINEER shall secure, at its own expense, a Professional Services Liability Insurance policy with a limit of Three Million Dollars ($3,000,000) per claim and in the aggregate, and maintain such policy for the duration of the PROJECT.

6.5 Workers Compensation Coverage

6.5.1 The ENGINEER shall maintain statutory Worker's Compensation insurance coverage for all of its employees at the PROJECT as required by the State of Vermont.

6.5.2 The OWNER shall maintain statutory Worker's Compensation insurance coverage for all of its employees at the PROJECT as required by the State of Vermont.

ARTICLE 7 - LIMITATION OF LIABILITY AND INDEMNIFICATION

7.1 To the fullest extent permitted by law, the total liability in the aggregate, of ENGINEER and its officers, directors, employees, agents, and independent professional associates, and any of them, to the OWNER and any one claiming by, through or under OWNER, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to ENGINEER'S services, the project, or this AGREEMENT, from any cause or causes whatsoever, including but not limited to, the negligence, errors, omissions, strict liability, breach of contract, misrepresentation, or breach of warranty of ENGINEER or its officers, directors, employees, agents or independent professional associates, or any of them, shall not exceed the total amount recoverable from the available limits of the insurance identified in Article 6. ENGINEER shall have no upfront duty to defend the OWNER but shall reimburse defense costs of the OWNER to the same extent of its indemnity obligation herein.

7.2 To the fullest extent permitted by law, and subject to the limitation of liability set forth in 7.1, the ENGINEER agrees to indemnify and hold harmless the OWNER and its officers, directors, employees, agents, and independent professional associates, and any of them, from any claims, losses, damages or expense (including reasonable attorneys' fees) arising out of the death of, injuries, or damages to any person, or damage or destruction of any property, in connection with the ENGINEER'S services under this AGREEMENT to the extent caused by the negligent acts, errors, or omissions of the ENGINEER or its officers, directors, employees, agents or independent professional associates, or any of them.

ARTICLE 8 - EXTENSION OF SERVICES

8.1 Additional Work

In the event the ENGINEER, as requested by the OWNER, is to make investigations or reports on matters not covered by the BASE SCOPE of this AGREEMENT, or is to perform other services not included herein and the cost ceiling has not yet been met, such services shall be incorporated into written amendments to this AGREEMENT. In the event the ENGINEER, as requested by the OWNER, is to make investigations or reports on matters not covered by the BASE SCOPE of this AGREEMENT, or is to perform other services not included herein and the agreement cost ceiling HAS already been reached, additional compensation shall be paid the ENGINEER as is mutually agreed upon by and between the OWNER and the ENGINEER. Such services shall be incorporated into written amendments to this AGREEMENT, or into a new written AGREEMENT.

8.2 Changes in Work

The OWNER, from time to time, may require changes or extensions in the Scope of Services to be performed hereunder. Such changes or extensions, including any increase or decrease in the amount of compensation, to be mutually agreed upon by and between the OWNER and the ENGINEER, shall be incorporated into written amendments to this AGREEMENT.

ARTICLE 9 - SOFTWARE OWNERSHIP AND WARRANTIES

9.1 Third-Party Software

9.1.1 All third-party software programs which are included or provided with the ENGINEER Software are sublicensed to OWNER subject to the vendor's or ENGINEER'S standard licensing terms and conditions as in effect from time to time. OWNER'S rights and obligations set forth in such license shall be independent of this AGREEMENT.

9.1.2 ENGINEER shall transfer to OWNER any warranties provided to ENGINEER by third-party software vendors and ENGINEERS. ENGINEER itself makes no warranties or representations, either expressed or implied, as to any software provided by third-party vendors of ENGINEERS, including but not limited to warranties of merchantability or fitness for a particular purpose.

9.2 ENGINEER Software Warranties

9.2.1 ENGINEER warrants that, for a period of 365 days from the delivery of any ENGINEER Software, such products will conform to the then current product specifications. ENGINEER'S sole responsibility under this warranty shall be to repair or replace any materially non-conforming ENGINEER Software. ENGINEER'S obligations under this Paragraph shall be conditioned upon ENGINEER'S prompt receipt of nonconformance in writing from OWNER in each instance, specifying the details of the nonconforming ENGINEER Software.

9.3 Limitations of Liability

9.3.1 ENGINEER'S liability to OWNER for damages relating to ENGINEER'S Software, from any cause regardless of the form of action, whether statutory, in contract or tort or otherwise, shall be limited to actual damages up to a maximum of the price paid hereunder for the ENGINEER Software or the nonconforming component thereof.

9.3.2 In no event will ENGINEER at any time be liable under any contract, negligence, strict liability or other legal theory to the OWNER for loss of use, data or profits, the cost of procurement of substitute goods or services, or for consequential, incidental, special or punitive damages of any nature arising out of or in connection with any ENGINEER Software sold or licensed hereunder, even if ENGINEER has been advised of the possibility of such damages, or for any claim against OWNER by any other party.

9.4 Confidentiality and Proprietary Rights

9.4.1 The OWNER shall retain ownership of the documents submitted to the OWNER by the ENGINEER pursuant to this AGREEMENT. However, such documents are not intended or represented to be suitable for reuse by the OWNER or others on extensions of the PROJECT or on any other PROJECT. Any reuse or adaptation by the OWNER without written verification by the ENGINEER shall be at the OWNER'S sole risk and without liability or legal exposure to the ENGINEER or to the ENGINEER'S independent sub-consultants, and the OWNER shall indemnify and hold harmless the ENGINEER and the ENGINEER'S sub-consultants from all claims, damages, losses and expenses, including reasonable attorneys' fees arising out of or resulting therefrom. Any verification or adaptation performed by the ENGINEER shall entitle the ENGINEER to further compensation at rates to be agreed upon by the OWNER and the ENGINEER.

ARTICLE 10 – TERMINATION

10.1 The obligation to provide further services under this AGREEMENT may be terminated by either party upon not less than ten (10) days' written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

10.2 If the PROJECT is suspended in whole or in part for more than three (3) months, the ENGINEER shall be compensated for all services performed prior to receipt of written notice from the OWNER of such suspension, together with other direct costs then due.

10.3 In the event of termination by the OWNER under Article 10.1, the ENGINEER shall be paid for all unpaid services and unpaid other direct costs incurred to the date of receipt of written notice of termination, including sub-consultants, for the services necessary to affect termination, plus a percentage of the fixed fee based on work completed on the PROJECT through the completion of services necessary to affect termination, in accordance with the provisions of Article 5 of this AGREEMENT.

10.4 In the event of termination by the ENGINEER under Article 10.1, or termination by the OWNER for the OWNER'S convenience, the ENGINEER will be paid for all unpaid services and unpaid other direct costs incurred to the date of receipt of written notice of termination, including sub-consultants, for the services necessary to affect termination, plus a percentage of the fixed fee based on work completed on the PROJECT through the completion of services necessary to affect termination, plus termination expenses. Payment for services will be in accordance with the provisions of Article 5 of this AGREEMENT. Termination expenses means additional costs of services and other direct costs directly attributable to termination, which shall be an additional amount computed as the costs the ENGINEER reasonably incurs relating to commitments, which had become firm before the termination.

ARTICLE 11 - GENERAL PROVISIONS

WHERE DO WE REFER TO ATTACHMENTS C-E – Additional City Contract Requirements and VTRANS Pass through contract requirements?

11.1 Precedence

The terms and conditions in this AGREEMENT shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding the ENGINEER'S services.

11.2 Severability

If any of the terms and conditions in this AGREEMENT shall be finally determined to be invalid or unenforceable in whole or part, the remaining provisions hereof shall remain in full force and effect, and be binding upon the parties hereto. The parties agree to reform

this AGREEMENT to replace any such invalid or unenforceable provision with a valid enforceable provision that comes as close as possible to the intention of the stricken provision.

11.3 Mediation

All claims, disputes or controversies arising between the OWNER and the ENGINEER shall be submitted to non-binding mediation prior to and as a condition precedent to the commencement of any litigation between those parties. The American Arbitration Association, or such other person or mediation service shall conduct the non-binding mediation as the parties mutually agree upon. The party seeking to initiate mediation shall do so by submitting a formal written request to the other party to this AGREEMENT and the American Arbitration Association or such other person or mediation service as the parties mutually agree upon. The costs of mediation shall be borne equally by the parties. All statements of any nature made in connection with the non-binding mediation shall be privileged and will be inadmissible in any subsequent court or other proceeding involving or relating to the same claim.

11.4 Subrogation

The OWNER and the ENGINEER waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages, but only to the extent covered by any property or other insurance in effect whether during or after the PROJECT. The OWNER and the ENGINEER shall each require similar waivers from their contractors, consultants and agents.

11.5 Consequential Damages

Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the OWNER nor the ENGINEER, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for incidental, indirect or consequential damages arising out of or connected in any way to the Project or to this Agreement. This mutual waiver of consequential damagers shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation or any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both the OWNER and ENGINEER shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in the Project.

11.6 Sole Remedy

Notwithstanding anything to the contrary contained herein, OWNER and ENGINEER agree that their sole and exclusive claim, demand, suit, judgment or remedy against each other shall be asserted against each other's corporate entity and not against each other's shareholders, A/E's, directors, officers or employees.

11.7 Third Party Obligations

Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the OWNER or the ENGINEER.

11.8 Statute of Limitations

Causes of action between the parties to this Agreement pertaining to acts or failures to act shall be deemed to have accrued and the applicable statutes of limitations shall commence to run not later than either the date of completion of services performed for acts or failures to act occurring prior to the date of completion of services performed or the completion date contained in this AGREEMENT for acts or failures to acts occurring after the date of completion of services performed. In no event shall such statutes of limitations commence to run any later than the date when the ENGINEER's services are substantially completed.

ARTICLE 12 – DISCLOSURE RIGHTS

12.1 OWNER agrees the ENGINEER has the authority to use its name as a client and a general description of the project as a reference for other prospective clients.

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT the day and year first above written.

ACCEPTED FOR

CITY OF BURLINGTON, VERMONT	WESTON & SAMPSON ENGINEERS, INC.
By Its _____	By: Kenneth J. Bisceglio, P.E.
_____	_____
_____	_____ DATE
_____ DATE	

CERTIFICATION OF AVAILABLE FUNDS

Certification is herewith given that funds are available for payments required by the terms of this AGREEMENT.

By:_____ Date: _____
OWNER Accountant

APPROVED AS TO FORM:

By:_____ Date: _____
OWNER Counsel

A TRUE COPY, ATTEST:

By:_____ Date: _____
OWNER Clerk

OWNER'S Sales and Use Tax Certificate Exemption Number_____

Attachment A
Base Scope of Services

Tasks are in rough chronological order and some tasks will occur concurrently.

Task 1. Asset Inventory/Management Assessment

a. Compile existing hard copy and digital data
b. Assess user needs (short term and long term), for example:
    i. User access to data
    ii. Cross-disciplinary data sharing
    iii. Mobile editing

Task 2. GIS Model Update/Verification

a. Develop database management framework to ensure data integrity of stormwater infrastructure dataset, to include the following as necessary:
    i. Feature Classes and Datasets
    ii. Data domains
    iii. Topology
    iv. Improved Attribution
    v. Geometric networks
    vi. Management of feature inventory/inspection/maintenance data (related table vs. within feature attribute table)
b. Verify, update, geo-reference and ensure a unique identifier exists for all stormwater features including manhole, catch basin, and outfall locations for the separate stormwater and combined sewer system (using a combination of orthophotos and GPS). Specifically:
    i. Attempt to verify that all existing located data are correct and geo-referenced using the 2004 half foot orthophotos. (est 25%? Verification)
    ii. Locate structures not verified in task 2.b.i. using sub-foot capable GPS, and capture all "new" catch basins, manholes, sewer lines and outfall locations and connectivity if available on plans. The City will be responsible for GPSing the outfall locations.
    iii. Update GIS database to reflect any changes made to the system that are currently available on plan sheets (1988 storm sewer separation and other documented changes)
    iv. Establish data integrity rules (domains, topology, geometric networks, attribution etc.) that will maintain data integrity during future data collection and edits
    v. Ensure that all data complies with the data integrity rules
    vi. Assign RIM elevation to all points using the DEM from 2004 LIDAR as a separate elevation attribute field for rough QA/QC of other elevation data. This task is automated through geoprocessing tools and can be easily updated after points are GPS located.

c. Sub-watershed/sewershed Delineation for Englsby Brook separate storm tributary.
    i. Delineate/verify sub-watersheds/sewersheds, including separate sewershed delineations for each of the outfall locations within the watersheds

Task 3. Long-term Asset Management System Development/Procurement

a. Assist the City in the development or procurement of an asset management system to match documented needs in Assessment (task 1)
    i. Provide recommendations on at least three (3) "off the shelf" asset management solutions and contrast with a possible "in-house" database management development (possibly to replicate South Burlington's in-house stormwater asset management solution)
    ii. Provide recommendations on mobile editing solutions (software/hardware)
    iii. If appropriate (based on 3.a.i,) set up in-house elements of an asset management database to track infrastructure condition and maintenance activities **[if only to act as a place holder until 3rd party software can be purchased]**
b. Develop/document correct protocol sheets for various workflow tasks, including:
    i. Collecting and editing features with a GPS device
    ii. Integrating GPS data into the GIS
    iii. AutoCad file import/export and interoperability within GIS
    iv. Exporting and emailing subsets of GIS data for use by developers/consultants

Task 4. Stormwater Feature Detailed Inventory (Englesby Brook)

a. Obtain detailed manhole, catch basin, pipe, outfall information for any "new" infrastructure through structure inspection and/or plan review.
    i. Inlet/outlet orientation, elevations of inverts and rims
    ii. Pipe material and diameter
    iii. Other features to be determined by consultant and the City (condition, depth of sump, grate type etc.)
b. GPS all manholes with Real Time Kinematic (RTK) GPS for centimeter accurate RIM elevations.
c. QA/QC existing paper combined sewer manhole inventory data (collected ~ early1980s) and link/add the GIS

Task 5. System Hydraulic/Hydrologic Modeling Options

a. Conduct needs analysis
b. Ensure that dataset attribution reflects features that would be necessary for accurate H/H modeling **(Englesby Brook)**
c. Provide recommendations for three (3) off the shelf H/H modeling solutions that interface with GIS dataset

Task 6. Incorporate a sample of private stormwater infrastructure information into the GIS (Englesby Brook)

a. Up to three representative private stormwater systems will be included so that a database template can be set up and propulated with example data for future use by the City.
b. Include details regarding conveyance, treatment/detention system location/type, and connections to the City infrastructure or outfall locations
c. Incorporate linked State Permit and As-Built Plan information (as available) [The City has much of this information compiled]

Task 7. Sewer/Storm Deliverables

a. Esri ArcGIS 10 File Geodatabase including all feature layers, datasets, attributes, tables, and, metadata developed as part of the scope.
b. One (1) color "wall map" of the stormwater collection system feature dataset displayed at appropriate scale and size with appropriate symbology to distinguish collection system.
c. One (1) 11x17 map book in digital format (PDF) of stormwater collection feature dataset at appropriate scale for field use and with appropriate symbology to distinguish collection system
d. One (1) digital and four (4) color large format (24" x 36") hard copies of stormwater collection feature dataset with the subwatersheds delineations displayed.
e. Workflow "methodology sheets" : Documented step by step procedure for common workflow tasks.
f. Final Report. The Consultant will produce a final report that documents the methodology, accuracy of data, assumptions, data gaps, and identifies future data needs to support further stormwater management planning efforts.
g. GIS Asset Management Development/Procurement Recommendations Report
h. Hydraulic/Hydrologic Modeling Recommendations Report

Task 8. Water System GPS

a. GPS locating of water system features based on 4,000 water structures: 1,000 hydrants, 1,000 hydrant valves and 2,000 system valves, using a sub-foot capable GPS.
b. Create a water system geodatabase based on the Esri water utility data model and customize as needed. Load GPSed features into the geodatabase.
c. Assist with integrating the water system geodatabase into the asset management system.

Attachment B
Supplemental Scope of Services

The supplementary scope identifies tasks that will be completed for subwatersheds outside of the specific areas identified in the base scope (Englesby Brook).

Task 1. GIS Model Update/Verification

a. Sub-watershed/sewershed Delineation
   i. Delineate/verify sub-watersheds/sewersheds for MS4 system not completed in base scope – draining to Lake Champlain, Winooski River, Potash Brook, Centennial Brook and unnamed tributaries, including separate sewershed delineations for each of the outfall locations within these watersheds
   ii. Delineate/verify sub-watersheds/sewersheds for Combined sewer system – draining to each of the 3 WWTPs

Task 2. Stormwater Feature Detailed Inventory

a. Obtain detailed manhole, catch basin, pipe, outfall information for any "new" infrastructure (assume 650 new structures)
   i. Inlet/outlet orientation, elevations of inverts and rims
   ii. Pipe material and diameter
   iii. Other features to be determined by consultant and the City (condition, depth of sump, grate type etc.)
b. QA/QC existing paper combined sewer manhole inventory data (collected ~ early1980s) and link/add the GIS

Task 3. Incorporate private stormwater infrastructure information into the GIS

a. Include details regarding conveyance, treatment/detention system location/type, and connections to the City infrastructure or outfall locations
b. Link State Permit and As-Built Plan information (as available) [The City has much of this information compiled]

Table 1. Level of Effort and Cost Table

Weston & Sampson

Stormwater Infrastructure GPS\GIS\AMS and H/H Modeling
Burlington, VT

DRAFT **- May 27, 2011**

												Costs				
		Person-Hours										***Direct Costs***		***Indirect Labor Costs***	FIXED	TOTAL
TASK NO.	TASK DESCRIPTION	CM	QAQC	PM	SW ENG	GIS	GIS	GIS	SrENG	GPS	TOTAL HOURS	EXPENSES	LABOR OFFICE	OFFICE OVERHEAD	FEE AMOUNTS	BILLING COSTS
1	Asset Inventory/Management Assessment															
a.	Compile existing data			1		8					9		$330.84	$618.37	$94.92	$1,044.13
b.	Assess user needs	2	2	4		40					48	$600.00	$1,767.70	$3,304.01	$507.17	$6,178.88
2	GIS Model Update/Verification															
a.	Database Development	2		2	4	8	24				40		$1,235.60	$2,309.46	$354.51	$3,899.57
b.	Verify and Update GIS															
i.	Verify existing data using 2004 orthophotos			4	4	16	40				64		$1,926.88	$3,601.53	$552.84	$6,081.25
ii.	Locate and GPS all storm/sewer features					18	24	20		144	206	$1,200.00	$5,094.10	$9,521.38	$1,461.55	$17,277.03
iii.	Update GIS based on plans (175 Plans @ 1hr each)			4	4	24	180				212		$5,760.32	$10,766.61	$1,652.69	$18,179.63
iv.	Establish data integrity rules					8	24				32		$894.00	$1,670.98	$256.50	$2,821.47
c.	Sub-watershed/sewershed Delineation															
i.	Delineate for MS4 System				8	1	4				13		$460.29	$860.33	$132.06	$1,452.68
ii.	Delineate for Combined System to 3 WWTPs				8	1	4				13		$460.29	$860.33	$132.06	$1,452.68
3	Long Term Asset Management System Dev./Proc.															
a.	Assist in Dev. and Proc. To match needs assessment	2	2	2	8	40					54		$2,000.90	$3,739.88	$574.08	$6,314.86
i.	Provide recommendations on three ASM solutions					40					40		$1,429.20	$2,671.32	$410.05	$4,510.57
ii.	Provide recommendations on mobile editing					20					20		$714.60	$1,335.66	$205.03	$2,255.28
iii.	Set-up in-house ASM if needed (Assume use of Burlington In-House Programming)					40	12				52		$1,733.28	$3,239.67	$497.30	$5,470.25
b.	Develop Protocols for Workflows															
i.	Collecting and Editing Data with GPS						8				8		$202.72	$378.90	$58.16	$639.79
ii.	AutoCAD file import/export and interop within GIS						8				8		$202.72	$378.90	$58.16	$639.79
iii.	Exporting and subsets of GIS data						8				8		$202.72	$378.90	$58.16	$639.79
iv.	Other Tasks to be defined by Consultant						8				8		$202.72	$378.90	$58.16	$639.79
4	Stormwater Feature Detailed Inventory															
a.	Obtain detailed storm feature data for "new" structures (Assume 50 New in Pilot)					8	8			32	48		$1,256.56	$2,348.64	$360.52	$3,965.72
b.	QA\QC existing combined sewer manhole inventory (Assume 100 Sheets @ 0.5hr each)					10	50				60		$1,624.30	$3,035.98	$466.03	$5,126.31
5	System Hydraulic\Hydrologic Modeling															
a.	Needs Analysis								16		16	$600.00	$653.76	$1,221.94	$187.57	$2,663.27
b.	Dataset attribute QA/QC for modeling					4			8		12		$469.80	$878.10	$134.79	$1,482.69
c.	Recommendations for three modeling software packages								32		32		$1,307.52	$2,443.89	$375.14	$4,126.55
6	Incorporate Private Stormwater in GIS															
a.	Include basic connection data in GIS (Assume 24 Plans in Pilot)					4	24				28		$751.08	$1,403.84	$215.49	$2,370.42
b.	Link state permit and as-built plans					1	8				9		$238.45	$445.69	$68.41	$752.55
7	Sewer/Storm Deliverables	2	2			4	40				48	$2,500.00	$1,315.02	$2,457.90	$377.29	$6,650.22
8	Water System GPS															
a.	GPS Water System Features	2		4		4	16	120			146	$1,200.00	$3,139.16	$5,867.40	$900.66	$11,107.22
b.	Water system geodatabase setup					8	8				16		$488.56	$913.17	$140.17	$1,541.90
c.	Asset management integration					16					16	$400.00	$571.68	$1,068.53	$164.02	$2,204.23
	Contingency										92	$381.62	$2,576.00	$4,814.80	$739.08	$8,511.50
TOTAL HOURS		**10**	**6**	**21**	**36**	**323**	**498**	**140**	**56**	**176**	**1358**	**$6,881.62**	**$39,010.77**	**$72,915.03**	**$11,192.58**	**$130,000.00**
LABOR COST PER STAFF MEMBER		**$1,420**	**$649**	**$2,982**	**$4,590**	**$36,423**	**$39,827**	**$8,545**	**$7,221**	**$13,331**						

General Contract Services	**$98,439**
Downtown Area	**$8,200**
Water System Mapping	**$14,850**
Contingency	**$8,511**
Base Scope of Services - Total Contract Amount	**$130,000**