



Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT 05403
Tel: (802) 864-0223
Fax: (802) 864-0165

February 20, 2014
File: 195310844

Attention: Dean Bloch
Town of Charlotte
P.O. Box 119
Charlotte, VT 05445

Dear Dean,

Reference: Charlotte – Bridge repairs and approach alignment study

As requested, Stantec is pleased to submit this scope and fee estimate and project schedule to complete an alignment study for westerly approach to the Carpenter Road Bridge (Bridge #30) as well as to develop Plans and specifications for repairs to Bridge #30 and Bridge #14. The following describes our approach, fee and project schedule.

CARPENTER ROAD BRIDGE #30 WESTERLY APPROACH ALIGNMENT STUDY

A. Base Plan/Field Review

Stantec will conduct a field review of the project area and prepare a base map representing existing conditions. It is assumed that aerial photography and LIDAR data will form the basis for the base mapping. Stantec will perform the following tasks and add relevant information to the base map:

- Gather LIDAR data and orthophotos from the Vermont Center for Geographic Information (VCGI)
- Create an existing base map showing the current alignment of the westerly approach to Bridge #30

B. Develop Conceptual Alignment Alternatives

Stantec will analyze two alternatives for ROW impacts, utility impacts, resource impacts, permits required, and order of magnitude cost and will summarize this analysis in a memo. The following tasks will be incorporated into the memo:

- Create proposed horizontal and vertical alignments
- Develop profile (if LIDAR is available) and critical cross sections
- Develop conceptual plan showing proposed alignment(s), estimated construction limits and ROW impacts
- Create engineer's opinion of probable cost



Reference: Charlotte – Bridge repairs and approach alignment study

C. Final Memo

Stantec will meet with the Town to discuss the alternatives that were considered to create the memo. Based on the comments received from the Town at this meeting, the recommendations will be finalized and the final memo updated. A conceptual plan and cost estimate of the recommended improvements will be included. Once the final memo is submitted, the project will be considered complete.

D. Bridge Deck Widening Investigation

In addition to the approach re-alignment study, Stantec will investigate widening or flaring the existing bridge deck to allow trucks to make the corner onto the bridge without hitting the guard rail. Once we determine how much wider the deck would have to be, we will determine if this is feasible given the existing girder locations and abutment widths. This task only includes minor widening of the existing deck on the existing steel beams. Stantec will meet with the Town to discuss the results of the investigation.

CARPENTER ROAD BRIDGE #30 REPAIRS

A. Plan Development

Stantec will develop plans for the following:

- Replace the existing deck
- Repair the bearing pedestals at the West Abutment
- Replace the bearings at the West abutment with elastomeric bearings
- Replace the bridge and approach rail
- Replace the expansion joint with Asphaltic Plug joint

Based on conversations with the Town and VTrans we have not included any time or effort for applying for permits. We have also assumed the Traffic Control plans will be developed by the contractor and the Town will assemble the bid package (Front-end documents) and handle bidding the project.

We have included a separate task breakdown for engineering services during construction for reviewing contractor submittals, attending pre-construction meeting, and part time monitoring of the project.

SPEAR STREET BRIDGE #14 REPAIRS

A. Plan Development

Stantec will develop plans for the following:



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Reference: Charlotte – Bridge repairs and approach alignment study

- Remove and replace the existing pavement and membrane on the deck
- Replace the existing bridge curbs
- Replace existing bridge and approach rail

Based on conversations with the Town and VTrans, we have not included any time or effort for applying for permits. We have also assumed the Traffic Control plans will be developed by the contractor and the Town will assemble the bid package (Front-end documents) and handle bidding the project.

We have included a separate task breakdown for engineering services during construction for reviewing contractor submittals, attending pre-construction meeting and part time monitoring of the project.

Schedule: We anticipate completing the Alignment study within 6 weeks of a signed contract. We will complete the bridge repair plans within 10 weeks of a signed contract.

Enclosed is a Change order to our existing contract to cover these new tasks. If this is acceptable, please sign and return it to me. I will return a fully executed version for your records.

If you have any questions or require additional information regarding the scope, fee or schedule, please don't hesitate to contact me. We look forward to working with the Town to complete these tasks.

Regards,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in black ink, appearing to read "George Bogue".

George Bogue, PE
Associate
Phone: (802) 497-6325
george.bogue@stantec.com

Attachments: Task & Labor Hour Schedule, Direct Expenses, Cost Schedule and Project Schedule

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Stantec

PROFESSIONAL SERVICES AGREEMENT CHANGE ORDER

		Date	20 February 2014
Consultant:	STANTEC CONSULTING SERVICES INC. 55 Green Mountain Drive South Burlington, VT 05403 Ph: (802) 864-0223 Fx: (802) 864-0165 email: lfisher12140713@yahoo.com	Stantec Project # Stantec Opportunity Pipeline #	195310844
Client:	Town of Charlotte 159 Ferry Road Charlotte, VT 05445 Ph: (802) 425-3533 Fx: (802) 425-4241 email: dean@townofcharlotte.com	Client Project # Change Order #	Client Proj. No. Change Order No. 3
Project Name and Location:		Rehabilitation / Reconstruction of Bridge #31	

In accordance with the original Professional Services Agreement dated 18 December 2012 and Change Orders thereto, the Agreement changes as detailed below are hereby authorized.

Additional services due to Threatened and Endangered Species Permitting.

Total fees this Change Order		\$	36,989.00
Original agreement amount		\$	16,919.00
Change Order Number	<u>1</u>	\$	9,666.00
Change Order Number	<u>2</u>	\$	13,396.00
Change Order Number	<u> </u>	\$	-
Change Order Number	<u> </u>	\$	-
Total Agreement		\$	<u>76,970.00</u>

Effect on Schedule:

Payments shall be made in accordance with the original agreement terms. All other items and conditions of the original Agreement shall remain in full force and effect.

STANTEC CONSULTING SERVICES INC.

TOWN OF CHARLOTTE

Per: _____
Name: Gregory A. Edwards, PE
Title: Principal
Date Signed: _____

Per: _____
Name: Charles Russell
Title: Selectboard Chair, Town of Charlotte
Date Signed: _____

Task	Project Manager	Staff Engineer	Technician	Total	Notes / Assumptions
Carpenter Road bridge approach Realignment Study and bridge deck widening study					
Scope of work: Investigate possibility of increasing radius of approach roadway curve.					
Site Visit	2	2		4	
Gather LIDAR data and ortho photos		2		2	
Create existing horizontal and vertical alignments		2		2	
Create proposed horizontal and vertical alignment alternatives	1	8		9	
Create profile and cross sections	1	4		5	
Develop conceptual plan showing proposed alignment(s) and limits	1	6		7	
Create engineer's opinion of probable cost	1	6		7	
Prepare memo summarizing findings	1	4		5	
Meet with town to discuss recommendations	2	2		4	
Prepare final memo based on Town comments	1	4		5	
Investigate bridge deck widening to accommodate truck traffic	4	12	6	22	
Discuss bridge deck widening investigation results with Town	2			2	
Total Hours	16	52	6	74	
Roadway Realignment Study Estimate					\$ 7,041

Phase 2 - Plan Development
Bridge #14 (Spear Street)

Assumed Scope of Construction: Remove and Replace Bridge Pavement and Membrane. Replace existing Bridge Curbing. Replace Existing Bridge and Approach Rail. Abandon Existing Scupper.

Task	Senior Engineer	Engineer	Technician	Total	Notes / Assumptions
Phase 2 - Plan Development					
Title Sheet	See Bridge 30			0	Combined with BR. 30
Permitting Coordination					
Compile Resource Documentation & Analysis Sheet	Assume Not Required				
Prepare & Submit CE	Assume Not Required				
Coordinate Sections 4(f) & 106 Act 250 (Part 1)		4			Assume Existing Rail Can be Replaced without Historic Restrictions - Site Visit Not Req'd
Storm water Operational Permit (update expired permit)	Assume Not Required				
General Permit for storm water runoff from construction sites (NPDES)	Assume Not Required				
Stream alteration permit	Assume Not Required				
Conditional Use Determination	Assume Not Required				
Threatened and Endangered Species	Assume Not Required				
Section 404 Permit (Assume 3 meetings, w/ minutes)	Assume Not Required				
Flood Plain	Assume Not Required				
Agricultural Lands (assume signoff)	Assume Not Required				
Site Visit / Field Measurements / Develop Base Plans		4	8	12	Measurements Only, No Survey
Layout Plan / Rail Post Layout	4	8	16	28	
General Notes Membrane/Paving with Approx. Limits	4	2	8	14	
Curb Replacement Details	2	4	8	14	Through Bolt Bridge Railing To Deck, design connection for Post moment
Bridge Railing Details	1	2	4	7	Assume Box Beam
Expansion Joint (Asphalt Plug)		1	1	2	Reference SD
Traffic Control Plans	By Contractor			0	Notes and Schematic - Conceptual Only
Quantities	1	4	2	7	For Estimating Purposes Only - No Quantity Sht.
Estimate		4		4	
Bid Documents	2			2	Technical Specs Only, Town to assemble front end docs.
Coordinate Bid Document Assembly Q/A with Town	See Bridge 30				Technical Specs Only, Town to assemble front end docs.
Total Hours	14	33	47	94	
Phase 2 - Bridge #14 Estimate					\$ 9,144

Task	Senior Engineer	Engineer	Technician	Total	Notes / Assumptions
Bridge #30					
Assumed Scope of construction: Replace Existing Bridge Deck					
Title Sheet	1	2	4	7	
Permitting Coordination	Assume Not Required				
Compile Resource Documentation & Analysis Sheet	Assume Not Required				
Prepare & Submit CE	Assume Not Required				
Coordinate Sections 4(f) & 106		4			Assume Existing Rail Can be Replaced without Historic Restrictions - Site Visit Not Req'd
Act 250 (Part 1)	Assume Not Required				
Storm water Operational Permit (update expired permit app.)	Assume Not Required				
General Permit for storm water runoff from construction sites	Assume Not Required				
Stream alteration permit	Assume Not Required				
Conditional Use Determination	Assume Not Required				
Threatened and Endangered Species	Assume Not Required				
Section 404 Permit (Assume 3 meetings, w/ minutes)	Assume Not Required				
Flood Plain	Assume Not Required				
Agricultural Lands (assume signoff)	Assume Not Required				
Site Visit / Field Measurements / Develop Base Plans	2	6	16	24	Measurements Only, No Survey
Layout Plan / Rail Post Layout	4	4	8	16	
General Notes: Pedestal Repair Bearing Replacement / Deck Replacement		4	4	8	
Bearing Pedestal Repairs (West Abutment)	2	8	16	26	Pedestal only
Replacement Bearings (expansion end)	4	24	16	44	
Deck Replacement Details	2	24	16	42	Assume 1 sheet - Reinf. Schd. By Contractor.
Expansion Joint (Asphalt Plug)		1	1	2	Reference SD Details
Bridge and Approach rail		2	4	6	
Traffic Control Plans				0	By Contractor
Quantities		2	4	6	For Estimating Purposes Only
Estimate		4		4	
Bid Documents					Technical Specs Only, Town to assemble front end docs.
Coordinate Bid Document Assembly Q/A with Town	2			2	
	16			16	
Total Hours	33	85	89	207	
Phase 2 - Bridge #30 Estimate					\$ 20,305
Carpenter Road alignment study					\$ 7,041
Phase 2 Bridge 14					\$ 9,144
Phase 2 Bridge 30					\$ 20,305
Stantec Total					\$ 36,489
Expense allowance (travel, etc.)					\$ 500
Concrete Testing Allowance					\$ Make Contractor Responsible
PROJECT TOTAL					\$ 36,989