CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT
Capital Planning & Implementation Division

and

HAMILTON EMERGENCY SERVICES DEPARTMENT

Report to: Mayor and Members Committee of the Whole
Submitted by: Gerry Davis, CMA
General Manager
Public Works Department
Jim Kay
General Manager/Chief
Hamilton Emergency Services

Date: September 10, 2009  Prepared by: Gary Moore
                       Extension 2382
                       Dave Cunliffe
                       Extension 3340

SUBJECT: Multi-Agency Training Complex - Construction Procurement Procedures (PW09084/HES09006)

RECOMMENDATION:
That staff be authorized and directed to issue a Request for Proposal for Construction Management services to deliver the Multi-Agency Training Complex / Emergency Operations Centre project, approved through the Infrastructure Stimulus Funding program.

Gerry Davis, CMA
General Manager
Public Works Department

Jim Kay
General Manager / Fire Chief
Hamilton Emergency Services

EXECUTIVE SUMMARY:
Funding for the $25 million Multi Agency Training Complex / Emergency Operations Centre was obtained through the Infrastructure Stimulus Fund (ISF) program on June 5,
2009. Part of the approval criteria was the ability to reach substantial completion of the project by March 31, 2011 and to be shovel ready, commencing construction within 60 to 75 days of funding notification.

To meet both of these criteria, an alternative construction delivery methodology needs to be implemented, as the more traditional design-bid-build approach used by the City will not meet the completion dates set out in the ISF program.

Employing a construction management approach will allow construction to start prior to completion of the design drawings, thus providing adequate time to attain substantial completion by the March 31, 2011 deadline. The risk of grant claw backs that may occur under the ISF program guidelines would also be reduced by implementing a construction management approach that can meet the ISF program timelines.

**BACKGROUND:**

On June 5, 2009 the federal and provincial governments announced that they were jointly providing funding for the $25 million Multi Agency Training Complex / Emergency Operations Centre, through the Infrastructure Stimulus Fund (ISF) program.

Through a single source contract approved by Council on June 24, 2009, Cohos Evamy Integrated Design has been retained to complete the design and contract documents for the new multi-agency training complex. Functional programming and spatial requirements for the project have been completed. Design development started in August 2009 and is expected to be completed by spring 2010.

The multi agency training complex will provide training & training support facilities for City of Hamilton Fire Services, Police Services, and Emergency Medical Services.

The project scope includes construction of:

(a) A two (2) bay, single storey fire station;
(b) A three (3) storey, steel frame training support building for classrooms, offices, Emergency Operations Centre and Fire Services Dispatch;
(c) A two (2) storey, steel framed training facility, primarily for Police and Fire Services including classrooms, an indoor firing range and active training areas that can be utilized year round;
(d) Replacement of the existing multi-storey smoke/burn training tower on the same site of the former tower;
(e) Site work, including resurfacing the existing road network, underground services, additional parking, site grading, surface storm water management and landscaping.

Due to the complexity of the project and the tight timelines imposed by the ISF program, the project cannot be completed by the March 31, 2011 deadline utilizing a traditional design-bid-build approach typically used by the City.

Through discussions with the Design and Project Management consultants, it was established that the project could be delivered within the given timelines by implementing a Construction Management approach.
ANALYSIS/RATIONALE:

In order to meet the aggressive timelines associated with the Infrastructure Stimulus Fund (ISF) program, construction of the Multi Agency Training Complex needs to commence by the end of October 2009. This schedule cannot be achieved using a traditional design-bid-build approach as the design documents will not be complete until the spring of 2010. An alternative contracting method needs to be implemented in order to meet the March 31, 2011 deadline for substantial completion. Construction Management is an ideal contracting approach for this project since it will allow construction to commence before all the design and drawings are complete.

Utilizing a Construction Management approach, the project can be completed within the designated timelines as the design and construction processes overlap, thereby reducing the overall project duration. Construction Management is a well established contracting method that has successfully been implemented within municipal, provincial and federal levels of government. Taking on a team approach to the construction process, the Owner, Consultant and Construction Manager will work toward a common objective of delivering the project with an emphasis on schedule, budget and constructability. A comprehensive list of services to be performed by the Construction Manager is detailed in Appendix A of this report.

The Construction Manager would be retained through a RFP process on an invitational basis as permitted through Council approval of the Purchasing Policy Exemptions for Infrastructure Stimulus Fund and Recreational Infrastructure Canada Projects (Corporate Services report FCS09052(a)).

Construction will be tendered by the Construction Manager in progressive work packages as the design progresses. The packages will be tendered in a fair and transparent manner with City approval being required before the Construction Manager can enter into a contract with any trade contractor. The tendering process will require the Construction Manager to incorporate fair wage policy requirements, have all carpentry related work comply with the City's union trade agreements and will be awarded to the lowest compliant bidder.

The rationale for having the Construction Manager tender the work packages and hold the contracts with the trade contractors is that they will be acting as Constructor on the project. This role requires them to oversee all health and safety requirements for site as well as all trade contractors, be responsible for maintaining the schedule and managing the work and performance of all trade contractors on the project.

ALTERNATIVES FOR CONSIDERATION:

An alternative to Construction Management would be to proceed with a conventional design-bid-build approach for delivering the project. This alternative would extend the project past the March 31, 2011 deadline and have financial implications for the City. Any expenditure accrued after March 31, 2011 would not be eligible under the ISF program and would need to be funded 100% by the City.
SUBJECT: Multi-Agency Training Complex - Construction Procurement Procedures (PW09084/HES09006) - (City Wide) - Page 4 of 5

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:

Financial Implications

A total budget of $25 million has been approved for this project, of which two thirds is federal and provincial funding through the ISF program. Funding from the provincial and federal governments is contingent on work being completed by March 31, 2011. If the project is not delivered by the stated completion date, a portion of the funding may be lost and the City will be required to fund the short fall.

Staffing Implications

There are no staffing implications by proceeding with the recommendations set out in this report.

Legal Implications

The City does not have its own form of contract for construction management services. Industry standard construction contracts are available and can be modified to incorporate the City's purchasing, legal, risk and union trade obligations. The form of contract being proposed for this project is the Canadian Construction Association Document No. 5 1988. The CCA5 contract has been reviewed by legal and risk management services and found to be acceptable subject to the inclusion of supplementary conditions to protect the City's interests and deal with existing policies and union obligations.

POLICIES AFFECTING PROPOSAL:

Purchasing Policy, Section 4.5.4 - Policy for Request for Tenders ($100,000 or greater) requires that the Request for Tenders process be implemented through the centralized purchasing section of the City. This report is recommending an alternate provider of this service, namely the Construction Manager.

The Construction Manager and all trade contractors will be required to abide by the Fair Wage Policy and Fair Wage Schedule as required for all City Construction projects greater than $100,000.

Purchasing Policy, Section 4.7 - Policy for Construction Contracts requires that a contract, in a form satisfactory to the City Solicitor, be executed. Since all the construction contracts will be between the Construction Manager and the successful bidders of each tender, the City will not be executing any of these contracts.

RELEVANT CONSULTATION:

Public Works - Capital Planning and Implementation

Finance and Corporate Services - Purchasing Section

The Council approved Purchasing Policy does not lend itself to the methodology recommended for this project, as the tendering of all the construction work would be completed by the Construction Manager, rather than the City of Hamilton. Provided that the contract with the Construction Manager provides clear guidelines and requirements for the tendering of this construction work that would closely resemble the City's Purchasing Policy, this construction management approach should ensure that sufficient competition is sought during the tendering process.
Corporate Services - Legal Services
Corporate Services - Risk Management

CITY STRATEGIC COMMITMENT:

By evaluating the "Triple Bottom Line", (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. ☑ Yes ☐ No
Hamilton Emergency Services and Police Services will have access to a year round training facility that was not available to them before.

Environmental Well-Being is enhanced. ☑ Yes ☐ No
The environment will be enhanced by replacing aging facilities with new energy efficient ones.

Economic Well-Being is enhanced. ☑ Yes ☐ No
The City will have a $25 million complex at a cost of only $8.33 million

Does the option you are recommending create value across all three bottom lines? ☑ Yes ☐ No

Do the options you are recommending make Hamilton a City of choice for high performance public servants? ☑ Yes ☐ No
Appendix A: Role and Responsibilities of the CM

1.1. General

The Construction Manager (CM) will:

1. be retained by the City of Hamilton (COH) and report directly to the Project Manager;
2. assume the role of “Constructor” as defined in the Ontario Occupational Health and Safety Act and Regulations;
3. be required to coordinate all services with the Prime Consultant and Sub-Consultants;
4. develop a detailed implementation plan to achieve the Project’s objectives within the prescribed quality, value, scope, cost and time constraints;
5. tender, award, contract and administer all construction components associated with the project as holder of trade contracts after COH approval;
6. provide construction management services through all phases of the project; and

In its delivery of service to the Project, the CM shall:

1. conduct all services in a professional manner;
2. employ best practices to the services provided;
3. implement a continuous risk identification and management process;
4. employ effective methodologies to ensure construction safety practices by the trade contractors;
5. maintain claims avoidance; and
6. develop and maintain a continuous and comprehensive documentation system.

1.2. Services Overview

1.2.1. Pre-Construction Stage

Construction management services in the pre-construction stage of the project will include, but not be limited to:

1. Project Planning: assist in the development of the overall concept of the project;
2. Regulatory Approvals: provide liaison and coordination among government authorities, utility companies, and other groups to develop a basic program for the project;
3. Labour Agreements: fully acquaint the Integrated Project Team with any labour arrangements applicable for the duration of the project;
4. Quality Management: document and implement a comprehensive quality management program that includes quality assurance and quality control measures for all construction management services;
5. Contracting Methodology: provide assessment and recommendations regarding the manner in which the work is to be contracted (i.e. number and contents of trade packages, packages to be advanced early);
6. Constructability Analysis: review design documents on a continuing basis as the design progresses to identify constructability concerns and to evaluate possible alternatives, providing expert advice regarding the potential resolution of these concerns or selection amongst alternatives;

7. Value Analysis:
   - undertake formal review of the design documents to identify, assess and recommend alternatives which may satisfy the design intent at a lower capital cost, lower operating cost, or on a shorter schedule
   - attend and participate in a formal Value Analysis workshop;

8. Cost-in-Use Analysis:
   - undertake formal review of the design documents to assess the cost-in-use (operating cost) of proposed building components and systems, and make recommendations for alternatives which may satisfy the design intent at a lower total cost-in-use, and
   - provide input with respect to achieving available funding programs to target at the lowest achievable capital cost;

9. Bid Document Review: review individual trade bid documents prior to tender to ensure coordination of drawings and specifications, with the product of each such review being a formal report from the CM of actions to be taken by the Consultant to eliminate errors and omissions that may give rise to claims for changes or delay;

10. As-Built Documentation Requirements: provide recommendations regarding collection of as-built information needed for trade contractors performing work or required by contractors to assess and foresee constructability concerns;

11. Background Document Requirements: review environmental study reports, geotechnical reports, and other supporting documentation to identify missing information or constructability concerns;

12. Safety and Services: input/drawings re site hoarding, contractor’s access, contractor’s facilities, construction power, street closures, utility and service relocations;

13. Contract Conditions: provide input to general conditions and supplementary general conditions for trade contracts;

14. Construction Project Schedule: prepare and regularly update a construction project schedule following detailed studies with all parties concerned, incorporating the task definition, duration estimates, and inter-dependencies for all defined project tasks including but not limited to basic program decisions, design time, documentation, tender calls, bid evaluations and contract awards, as well as on-site construction activities;

15. Cost Estimates: provide complete and comprehensive cost estimates, with a view to ensuring the delivery of work for not more than the agreed pre-tender cost estimate;

16. Cost Control: review and validate the final budget for the overall project, based on the latest working drawings, present it to COH for approval, upon approval establish a cost breakdown system for control purposes, cost-coding system if required, and prepare a cash flow for the project;

17. Trade Package Review: review individual trade packages to ensure accuracy and completeness of drawings and specifications, including the depiction of starting conditions and conditions at trade contract completion;

18. Insurance and Bonding Requirements: ensure the provision of bonds by trade contractors, and review and comment on COH bonding and insurance requirements;

19. Regulatory Approvals: ensure that all necessary construction approvals, permits and licenses are obtained, assist in complying with applicable statutory requirements;

20. Public Safety: prepare and implement a plan for protecting public and building occupants as applicable;

21. Lead-Order Items: identify and pre-order critical lead order materials where necessitated by schedule requirements; and
22. Trade Contractor Management: tendering, awarding, contracting and administering all construction components associated with the project as holder of the trades contracts after approval by COH.

1.2.2. Construction and Post Construction Stages

Construction management services in the construction and post-construction stages of the Project will include, but not be limited to:

23. Quality Management: document and implement a comprehensive quality management program that includes quality assurance and quality control measures;
24. Budgets and Cash Flows: provide regular cash flow updates for all construction work and contracts;
25. Construction Site Signage management;
26. Construction Site Servicing management;
27. Construction Safety: initiate and maintain all safety precautions and procedures for the project and assume the role of “Constructor” as defined in the Ontario Health and Safety Act and Regulations;
28. Superintendence: assume responsibility for overall site superintendence and the coordination of all construction trades;
29. Coordination of COH suppliers for the installation of FF&E and IT systems;
30. Commissioning Management: organize and implement the plan for commissioning of all building systems; and
31. Full time construction supervision.

1.3. Trade Contracting

1.3.1. Trade Contractor Pre-qualification

In consultation with the Prime Consultant and the Project Manager, the CM shall provide advice and assistance, and recommend on the need to pre-qualify trades. The CM shall, in consultation with the Project Manager, develop pre-qualification criteria for identifying trade contracts which, for reasons of quality assurance, risk management or security, are to be tendered to a pre-qualified group of contractors.

1.3.2. Tendering and Contracting

All Work Packages will be tendered by the CM and upon review and approval by the Project Manager the CM shall enter into contracts with the individual trade contractors.

COH reserves the right to issue Purchase Orders and enter directly into contracts with trade contractors, vendors and suppliers. Furthermore, COH reserves the right to assign established contracts, purchase orders or agreements to the CM for management, coordination, administration and payment of the contracted services or goods procured. The assignment of contracts is primarily intended for the onset of the project to cover work packages including, but not limited to Environmental Remediation or Abatement, Bulk Excavation, etc.

The CM shall provide the following services to support the tender and contracting process:

- review the tender schedule and the various tender packages required for the Work, and shall provide comments and advice to the Project Manager;
• review the final tender documents for completeness and for bidability prior to tendering and provide written recommendations to the Project Manager as to acceptability, and risk to the timely delivery of the project;

• in consultation with the prime consultant and Project Manager, assist in the preparation of required site conditions, general conditions, site security, access control, dewatering, traffic control, snow removal and other site protocols, WHMIS requirements, waste management protocol and ensure that these are properly included in the specifications in order to avoid duplication or omission of such requirements;

• verify and ensure that the temporary and job site facilities and utilities are identified in the specifications, are supplied and maintained;

• schedule, manage and chair bidders' briefing meeting(s);

• assist prime consultant in the preparation of addenda based on questions arising in such meetings, or throughout the solicitation periods, for issue by the CM;

• if client decides to re-tender any construction package, provide advice and assistance to the Project Manager; and

• provide advice and assistance to Prime Consultant to revise and amend tender documents to bring the cost of the Work within the construction cost limit.

The CM shall review the various options for construction delivery and provide recommendations on how to modify these construction packages to best meet the needs of COH. The CM's coordination and participation during the design phase of project will be required for constructability review and advise, review of cost estimates, preparation of independent cost estimates, construction scheduling services, coordination of commissioning activities, and to provide recommendations for construction delivery strategy.

The CM shall provide the services described in this Project Brief. The CM Proponent shall not be permitted to bid on the identified work package, portions of work package or for the supply of the identified goods, services and equipment to the project.

1.3.3. Trade Contractor Contract Documentation

The CM shall be responsible for maintaining up-to-date records of the progress and status of each Project Contract in a format acceptable to the Project Manager including:

• overall scheduling of the Work, the planned and actual: tender date, tender period, award, execution and warranty period, updated monthly;

• forecast of changes (notices of change, issues being discussed);

• percentage completion by activity and by change order;

• progress claims;

• approved payments with holdbacks (identify holdbacks under lien legislation vs. those for Work incomplete); and

• in cooperation with the prime consultant, make recommendations for payment to the Project Manager.