Construction Engineering Management (CEM) at Clarkson University is focused on the execution of engineering and architectural design projects. CEM graduates manage the design and construction process from the inception of a project all the way through, and including, the operations and maintenance of infrastructure and buildings. Through this program we offer opportunities that prepare students for the Construction Industry through hands-on experiences in their communities.

The Clarkson CEM Program has in-house capability to provide pre-professional consulting in planning, engineering, and construction areas. This enterprise, the Clarkson CEM Consulting Group or C3G, uses students in an experiential learning mode in order to deliver products to clients that would otherwise not be able to conduct using professional consulting services. These efforts help to build community economic opportunities by jumpstarting projects that would otherwise not be able to be done, absent some key preliminary work, data collection, or planning efforts.

SERVICES PROVIDED

The following are just a few of the services that the Clarkson CEM Consulting Group (C3G) can offer clients:

- As-Built Documentation, Assessments
- GIS Services
- Project Scoping and Conceptual Development
- Community, Urban, and Transportation Planning
- Rough Order of Magnitude and Parametric Cost Estimating
- Periodic Maintenance Planning, Building Investigations
- Construction/Facilities Education Services
- Land Use Planning and Sustainable Stewardship

EXAMPLE EFFORTS AND PROJECTS

Since 2015, the Clarkson CEM Program and C3G has been executing a range of projects across the spectrum of its expertise. The following is a partial listing of projects that have been executed through this effort:

- Village of Potsdam Complete Streets Planning and Alternate Transportation Development Guidance
- Potsdam/Canton Route 11 Bypass Geographic Information System (GIS) and Land-Use Study
- City of Ogdensburg Maple City Trail Extension Concept Plan
- City of Ogdensburg Complete Streets GIS Inventory and Plan
- Village of Potsdam Water System Leakage Investigation
- Ogdensburg Bridge and Port Authority Bridge, Building Information Modelling (BIM)
- Clarkson University Buildings Mapping, GIS Implementation and Facility Management Interoperability
- Clarkson University Campus Roadways Design and Preconstruction Package Development
- Facility Management Technology Workshop (Potsdam 2016)
- Unmanned Aerial Vehicle (UAV/Drone) Roof Inspections
- Town of Sherburne, Town of Kirkland, and Town of Halfmoon Culvert and Road Signage GIS Inventories
- City of Watertown GIS Sidewalk Ramps Accessibility Survey
- Village of Massena Complete Streets and Safe Routes to School Inventory and Plan
- Village of Potsdam Sidewalk Inventory and Improvement Plan
- Village of Gouverneur Sidewalk Inventory and Guidance
- Village and Town of Gouverneur Complete Streets Policy
- North Country Active & Healthy Transportation Network Workshop (Potsdam 2019)
- Village and Town of Canton Complete Streets Concept Plan for Judson Street
- City of Watertown Building ADA Compliance Assessment

More projects and example work products can be found at this website: https://webspace.clarkson.edu/~ebackus/C3G.htm
MARKET SEGMENTS SERVED

The following delineates some of the clients/markets that the CEM Program works for/with:

- Communities and Governmental Organizations
- Churches, Synagogues, Mosques, and other Houses of Worship
- Not-for-profit/Non-profit Organizations
- Small Private Owners/Businesses

CONTRACTING/METHODS OF AGREEMENT

Given the dual academic and pre-professional nature of the work involved in these efforts, there are several ways that clients/partners can tap into these services:

1. Grant Provisioning: In some cases it is easiest for the municipality or customer to provide a block grant for deliverables agreed upon through a memorandum of agreement/understanding.
2. Hiring of Interns: In some cases what makes sense for a client is to have well vetted, specifically qualified set of interns come on to the staff temporarily for a summer period or other time-limited period.
3. Student Project Support: By providing support through class room engagement and donations to the CEM program, limited projects can be executed through problem based learning classroom exercises.
4. Fee for Service: A standard service fee arrangement can be drafted with a GMP for a defined scope of services.
5. Flat Fee Menu: Currently under development, but in time the program will have certain standard items that it can provide at a flat fixed fee.

LIMITATIONS AND CLARIFICATIONS

In providing these services, the Clarkson CEM Program, the Clarkson CEM Consulting Group, and those participating must make it clear that the work and services provided are NOT professional services and are student or student-intern work products. As such these may contain errors, omissions or other deleterious aspects that should be reasonably be expected of work products provided by those still learning at the undergraduate level. This caveat aside, clients have repeatedly offered that they see this as a “win-win” for their efforts going forward and an important partnership that they value for the future.

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