

Ontario Construction Secretariat

**MARKET REALITIES:
BUILDING ONTARIO'S WATER &
WASTEWATER INFRASTRUCTURE**

APRIL 2013



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Introduction and Objectives

Ontario's unionized ICI construction contractors (those contractors who are signatory to one or more ICI collective agreements) appear to be winning significantly less than their historical share of tenders for the construction of municipal water and wastewater treatment plants. The OCS has been exploring this trend over the past several years with the goal of identify opportunities to improve union market share in this important market segment.

An earlier OCS report, prepared by PRISM ECONOMICS AND ANALYSIS, provided an overview of contract awards, trends and issues related to the perceived decline of unionized market share. A review of over 300 projects, representing \$2 billion of investment, revealed the following:

- There was a noticeable shift in the size of the projects with a concentration of the work in large urban centres in the GTA, Central and Southwestern Ontario.
- A majority of the work was being done by a small group of predominantly non-union contractors.

A number of market challenges were identified including: contractor expertise in the water/wastewater market, availability of skilled workers and supervisors, and the competitiveness of union contractors in bidding this work.

This current report follows-up on the recommendations of the PRISM study and further explores who bids this type of work. An analysis of bid data in several key regions presents a clearer picture of the role of union and non-union general contractors as well as union trade contractors bidding in this market. Based on this analysis, several strategies to increase union share are presented.

A coordinated approach by the four key trades (carpenters, labourers, electricians and plumber/pipefitters) is required to successfully boost union market share in the construction and maintenance of municipal water and wastewater facilities. To this end, the key stakeholders have developed and agreed to implement the terms and conditions identified in the **Actionable Conditions and Terms (ACT) Template** as a means of increasing the role of unionized contractors in this important market sector. The ACT Template is attached as Appendix 1 of this report.



Executive Summary

The construction and retrofit of municipally owned water and wastewater treatment plants as well as related infrastructure (WWTP), across the Province of Ontario, has shown dramatic growth in value over the last several years and projections for the near future show continued high levels of investment. While the WWTP 'pie' may be growing, the share of such construction work being awarded to either union general contractors or union trade contractors has diminished and remains low in all regions except for the cities of Toronto and Hamilton.

One of the principle reasons behind the diminished share of such work is that there are fewer union contractors bidding on such work. For example, in York Region more than 90% of the work went to tender without a single bid by a union general contractor. Simple logic indicates that you can't win if you are not playing the game.

There is little doubt that the falling number of bids from union general contractors is related to a perception that union general contractors can no longer successfully compete with non-union contractors such as Kenaidan Contracting and North America Construction (NAC). While these two firms represent formidable competition in the WWTP sector, there are still avenues and opportunities available to union general contractors to make their bids more competitive.

The following six strategies are recommended to help the unionized sector gain a competitive edge. These strategies have also been incorporated into the ***Actionable Conditions and Terms (ACT) Template***.

- Encourage municipal owners to prescreen or **pre-qualify prospective contractors** who are eligible to bid on such work on the basis of safety records, experience and training of workers and contributions to the local economy in terms of apprenticeship opportunities.
- Maintain and/or increase **investment in training** so that workers, supervisors and foremen are equipped with the most efficient technologies required to work the WWTP sector.
- Explore opportunities to **harmonize work hours and overtime provisions** among the four key trades.
- **Streamline procedures for material handling** work.
- Explore **project agreements** as a viable mechanism for achieving harmonized hours, rates and streamlined procedures for unloading and handling. Projects agreements have been successful in the industrial sector and may work for municipally owned WWTP construction work.
- **Utilize stabilization** as a means of gaining a foothold in the market. Although, not a long-term solution stabilization can generate short-term results.

The Construction Sector

The ICI Construction Sector

Section 126 of the *Ontario Labour Relations Act* has established seven separate sectors within the construction industry by work characteristics. The seven sectors are:

- i) industrial, commercial and institutional sector,
- ii) residential sector,
- iii) sewers and watermains sector,
- iv) roads sector,
- v) heavy engineering sector,
- vi) pipeline sector and
- vii) electrical power systems sector.

The industrial, commercial and institutional sector covers construction projects such as hospitals, schools, universities, court houses, government offices and centres, commercial office towers, stadiums, shopping plazas, airports, rail stations, water and wastewater treatment plants, warehouses, factories, refineries and smelters.

There are 25 construction trade unions working in Ontario's ICI sector. A unionized contractor, for the purposes of this report, is signatory with at least one of the 25 ICI construction trade unions. A comprehensive list of the trades can be found at the Ontario Construction Secretariat's website.¹

The Ontario Construction Secretariat

The Ontario Construction Secretariat (OCS) was established by Ontario Regulation 187/93², pursuant to the Labour Relations Act, in June 1993 for the primary purpose of the advancement of the unionized construction industry in Ontario.

The Secretariat, a not for profit corporation, represents the twenty-five organized building trade unions as well as their contractor partners in the Industrial, Commercial and Institutional (ICI) construction sectors in Ontario. The Secretariat is industry funded by contributions from designated employer bargaining agencies as well as designated employee bargaining agencies.

Together with representatives from the Provincial Government, the Secretariat is a tripartite organization intended to enhance the well being of organized ICI construction in Ontario.

The OCS is a facilitator promoting relationships and interactions among its component business partners to identify, research and inform regarding issues of common concern, including data to assess current and future construction market trends. Research projects include annual contractor surveys, reports on the underground economy, apprenticeship and skills training in the ICI construction sector and as well as safety trends and related information. This report on the competition and allocation of work for the construction of municipal water and wastewater treatment plants is well within the OCS mandate.

¹ www.iciconstruction.com

² http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_930187_e.htm

The OCS seeks to facilitate an improved competitive position for our partners through upgraded knowledge, direct relations with buyers and owners, an enlightened fact-based public awareness and by encouraging our youth to become respected members of the unionized craft building trades.

Non-Union Contractors

By the late 1980's and early 1990's, the opening of Ontario and Canadian borders and deregulation of certain industries and activities were both catalysts that increased the competition levels among construction contractors bidding for ICI work.

The municipal water and wastewater treatment plant work was one of the areas where non-union contractors have had significant success. The perception that many of the non-unionized construction contractors are smaller businesses that compete primarily by denying competitive wages and benefits to their front line workers is simply not true. In reality, many of the principal non-union contractors competing for water and wastewater treatment plant work in Ontario are large multi-trade organizations offering competitive wages to their workers.

A 2009 report, commissioned by the Ontario Construction Secretariat, explored the competitive environment that exists in the water/wastewater marketplace. The report generated a significant quantity of useful data about the contracts awarded by municipalities over the last decade and identified which contractors were successfully bidding the work. The majority of work was being completed by a small group of non-union contractors. Key players include: North America Construction; Kenaidan Contracting; and Maple Reinders. These contractors continue to play a significant role in bidding and building Ontario's water infrastructure.



Municipal Water and Wastewater Infrastructure

For the purposes of this report, 'water treatment plants and related works' include water filtration and treatment plants, water reservoirs, pumping stations, water towers, control centres as well as administrative, maintenance and storage buildings. Wastewater treatment plants and related works include treatment plants, sewage pumping stations and combined sewer overflow storage tanks.

Historical Background

During the 'baby boom' years of the 50's 60's and 70's the Province invested heavily in water and wastewater treatment infrastructure to match rapid population growth and development. The life expectancy of these plants and works, given the materials and technology used, was in the range of 40 to 60 years before major replacements of components or entire plants would be required. Consequently many of the plants constructed during these baby boom years are now at or nearing their life expectancy.

Accompanying the aging infrastructure issue is the recent trend to increase the number and capacity of water and wastewater treatment plants. There has been continued expansion of residential developments around the GTA, the national capital region as well as in the Kitchener/Waterloo/Guelph/Cambridge area. A number of less densely populated areas such as Niagara Region are concluding that they can't handle any more density for septic beds and more residents have growing concerns about the quality of their drinking water.

One final factor expediting the construction and/or retrofit of water and wastewater treatment plants are increasing quality requirements from federal and provincial regulations.

Pressures on Municipal WWTP Budgets

In November 2007 the Federation of Canadian Municipalities ("FCM") identified a national infrastructure deficit of \$123 billion, being the shortfall in expenditures that are needed immediately to bring the network of municipal infrastructure across the country into a good and sustainable state of repair. Of the \$123 billion infrastructure, \$31 billion was attributed to water and wastewater systems across all Canadian Provinces. That number is low if you accept more recent data from Ontario's Ministry of Infrastructure which pegged Ontario's water and wastewater infrastructure deficit as \$40 billion in 2010³.

The federal government's share for infrastructure investments has declined over 4 decades from about 30% of overall infrastructure investment in the early 1960's, to just under 5% by 2007. Provincial spending also decreased, by about 10% over the same period, to a level just above 40%. During this same period, municipal spending increased from less than 30 per cent in 1960 to more than 55 per cent in 2007.

The financial pressures have clearly shifted onto municipalities whose primary resources for funding water and wastewater infrastructure are water bill revenues and property taxes. For many municipalities, local revenue sources have not increased sufficiently to fund these added expenditures. The result is inadequate funding for municipal water infrastructure maintenance and an accelerated deterioration of public assets.

³ Ontario Ministry of Infrastructure backgrounder document posted on the internet in relation to Bill 72, the Water Opportunities and Water Conservation Act <http://www.moi.gov.on.ca/en/infrastructure/sectors/oswap.asp>

Arguably the Places to Grow Act⁴ has altered and perhaps increased the capital costs of water and wastewater infrastructure by prohibiting commercial and residential development over large tracts of territory in and around the Greater Toronto Area, possibly reducing opportunities for new developments to simply tap onto the outer edge of existing municipal systems.

During the period 2007 through to 2010 both the federal and provincial governments made significant efforts to increase infrastructure investments with a series of one time investments. Those efforts, while both positive and welcome, were not sufficient to compensate for the decades of neglect and underfunding for this sector since the 1970's. In order to make a lasting dent in the water infrastructure deficits, recent investment levels must continue to increase, but the senior levels of government are backing off their level of funding for municipal infrastructure as they work to reduce deficits and restore balanced budgets.

As to the ability of municipalities to increase capital budgets in this sector, the Association of Municipalities of Ontario (AMO) has been pressuring the Province for fiscal relief from continuing reliance on the property tax base for municipal funding. A joint report produced by AMO, the Province of Ontario and the City of Toronto in the fall of 2008⁵ called for a transfer of certain municipal obligations that were downloaded onto municipalities during the past two decades, back onto provincial shoulders. The result was a growing series of annual benefits peaking to a net annual benefit of \$1.5 billion by 2018. The report said that property tax dollars currently used to pay for these services will become available for important municipal priorities, including infrastructure, however it is extremely unlikely that most of this incremental revenue would be allocated to water and wastewater infrastructure. The experience over the last few years is that water and wastewater infrastructure gets between 20 and 40% of provincial grants or subsidies towards municipal capital budgets.

In those circumstances where a cash strapped provincial government decides to provide additional funding to municipalities, the Ontario government has indicated that it will pursue a "Blue Strings" approach⁶. A "Blue Strings" approach requires municipalities to demonstrate how they are taking advantage of new technologies and conservation practices in order to receive water infrastructure funding from the Province.

Clearly with increasing needs and aging water and wastewater infrastructure across the Province, many Ontario municipalities are under increasing pressure to stretch their limited capital resources as far as possible.

Many, if not most, Ontario municipalities believe that wide open tendering to both unionized and non-unionized contractors provides both transparency as well as lowest overall cost.

Traditional Construction Procurement Practices

The procurement/purchasing policies of most, if not all, Ontario municipalities requires that projects with dollar values ranging from \$25,000 to \$100,000 undergo a public tender⁷. The traditional low price competitive bidding process provides transparency and openness, but does not always result in the best value at the end of a project. Many municipalities do not utilize prequalification protocols as a means of screening out unqualified contractors which may result in 'rogue' bids.

So what are the problems with this traditional procurement approach? Allowing projects to be awarded solely on the criterion of price has inherent flaws. Criteria such as safety, time and quality must also be part of the evaluation process when awarding projects. Although awards based on price alone have a high degree of

⁴ *Places to Grow Act, 2005* - S.O. 2005, CHAPTER 13

⁵ See the published report 'Provincial-Municipal Fiscal Service Delivery Review : Facing the Future Together' dated October 2008 and accessible at the following internet address: <http://www.mah.gov.on.ca/AssetFactory.aspx?did=6050>

⁶ Premier's speech at Water Summit Conference, Mississauga, June 17, 2010

⁷ See for example the policies of the City of Kingston at http://www.cityofkingston.ca/pdf/bylaws/bl_2000-134.pdf

transparency for public accountability purposes, they may indirectly encourage costly disputes that have a direct impact on a municipality's bottom line.

It is believed that some bidders will deliberately under price their bids and proposals to get to the front of the line and afterwards rely on tender contract uncertainties or design defects to manufacture claims for extras that are above and beyond the lump sum price that was tendered. Looked upon from a different perspective, the contractor with the lowest bid is the one required to complete a construction project at a price which no-one else was willing to do. That price may be the lowest because it is provided by the most financially desperate contractor or by a contractor who has made a major costing error and/or does not have the experience or knowledge to anticipate the true cost or difficulty of carrying out specific construction.

Quantity of WWTP Construction Work

Table 1 provides an estimate of the annual value of tender competitions for WWTP construction work in Ontario over the period 2009 — 2012. The 2009 and 2010 values are based on available tender results data. The values for 2011 and 2012 are based on published capital budget data.

Table 1 – Estimated Value of WWTP across Ontario 2009-2012				
Year	2009	2010	2011	2012
Estimated Value	\$1.145 billion	\$1.352 billion	\$1.173 billion	\$0.886 billion

The relatively low numbers in 2012 do not represent a lack of work to be done, but rather is an indication of budgetary pressures and fiscal restraint by municipal councils. For instance, the City of Toronto has scaled back some of its capital projects based on anticipated revenue shortfalls for the upcoming fiscal years. Additionally, there has been considerable outcry and resistance to the recent escalation of development charges⁸. Development charges are levied by municipalities on builders and developers as a surcharge at the building permit stage and represent one of the principal sources of revenue for new and expanded municipal WWTP facilities⁹.

Table 2 is a snapshot of the province-wide construction tender completion for WWTP during the two year period Jan 1 2009 to Dec 31 2010. Only 40 of the 234 tenders were won by unionized contractors, with many of those successes being in Toronto. While there was a relatively low value of WWTP work won by unionized general contractors outside of the City of Toronto, there was considerably more success in union firms getting subcontract work for various trades, primarily electrical and plumbing.



8 See article published in Daily Commercial News at <http://www.rccao.com/news/files/Mar31TheDailyCommercialNews.pdf> and the Ontario Municipal Board decision of September 3, 2010 DC090049 which was launched against the Town of Orangeville by the Orangeville District Home Builders Association

9 See outline of development charges levied by Niagara Region at <http://www.niagararegion.ca/business/property/default.aspx>

Table 2 – Ontario Wide WWTP Construction Tender Results for 2009 and 2010¹⁰

	Tenders won by Unionized General Contractors	Tenders won by Non-unionized Contractors	Total
Estimated number of tendered projects	43	179	222
Percentage of tendered projects	19%	81%	100%

While municipalities and other public purchasing authorities will frequently publish the bid results of construction tenders and awards to general contractors, the identity and value of work subcontracted to other companies is much more restricted and generally unavailable. Both union and non-union general contractors are reluctant to provide specific information on subcontracted work. So little is known about the subcontractors or the value of work. This makes it difficult to estimate union/non-union market share at the sub-trade level. Table 3 below shows the value of work won by unionized general contractors as well as estimates of the value of work subbed to unionized subcontractors.

Table 3 – Ontario Wide WWTP Construction Tender Results for 2009/2010

	Won by Unionized General Contractors	Work subbed by Non-unionized Generals to Unionized subcontractors	Work performed by Non-unionized contractors	Total
Value of Tendered Projects	\$416 million	\$628 million	\$1,044 million	\$2,497 million
Percentage of Value	17%	25%	58%	100%

Key Region Results

Table 4 shows that outside of Toronto and Hamilton, unionized contractors were winning, at best, about 10% of the WWTP construction tender competitions. Given that union density in Ontario's construction workforce is 25%, a 3% to 6% capture rate is far below expectations. Work won by non-unionized generals and subbed in part to unionized ICI trades increases the quantity of work for the unionized sector but the benefits are not shared equally by all trades. As most of the non-unionized generals self-perform carpentry and forming work, there is no opportunity for union forming companies to bid this work. This in turn impacts unionized workers in the civil trades who do not get as much exposure to this type of work and are therefore unable to build their skills in the water/wastewater sector. This ultimately reduces the pool of workers that will possess significant recent experience and up-to-date skills for unionized generals to call upon if they were to successfully bid a project in this sector.

¹⁰ Province wide numbers are extrapolated (on a regional population basis) from comprehensive data for the following regions: Simcoe and Grey Counties; Kingston/Ottawa and Eastern Ontario; Toronto; York Region; Peel Region; Halton Region; Northern Ontario, the City of Hamilton and Waterloo Region.

Table 4 – 2009-2010 Tender Results, Key Regions

Region	Won by Unionized General Contractors	Work by Unionized subs for Non-Unionized Generals	Work performed by Non-unionized contractors	Total
NORTHERN ONTARIO				
Value of Tendered Projects	\$2 million	\$10 million	\$58 million	\$70 million
Percentage of Value	3%	14%	83%	100%
EASTERN ONTARIO				
Value of Tendered Projects	\$11 million	\$66 million	\$123 million	\$200 million
Percentage of Value	6%	33%	61%	100%
PEEL REGION				
Value of Tendered Projects	\$2 million	\$10 million	\$58 million	\$70 million
Percentage of Value	3%	14%	83%	100%
YORK REGION				
Value of Tendered Projects	\$11 million	\$66 million	\$123 million	\$200 million
Percentage of Value	6%	33%	61%	100%
HALTON REGION				
Value of Tendered Projects	\$9 million	\$18 million	\$72 million	\$99 million
Percentage of Value	9%	18%	73%	100%
SIMCOE & GREY COUNTIES				
Value of Tendered Projects	\$2 million	\$2 million	\$12 million	\$16 million
Percentage of Value	12%	12%	76%	100%
TORONTO				
Value of Tendered Projects	\$136 million	\$57 million	\$39 million	\$232 million
Percentage of Value	59%	26%	15%	100%
WATERLOO REGION				
Value of Tendered Projects	\$4 million	\$70 million	\$129 million	\$203 million
Percentage of Value	2%	34%	64%	100%
HAMILTON				
Value of Tendered Projects	\$119 million	\$4 million	\$1 million	\$124 million
Percentage of Value	96%	3%	1%	100%

City of Toronto - Signatory Construction Employer and Fair Wage Policy Impact

The City of Toronto has a relatively high value of work that is won by unionized general contractors as well as union subcontracted work by non-unionized firms that were low bidders on City of Toronto WWTP construction projects.

The higher win rate by union contractors is often attributed to the fact that the City of Toronto is contractually bound to several of the building trades including Carpenters, IBEW and the Pipe Trades. In addition, the City also has a long standing fair wage policy and enforcement office. Many industry stakeholders conclude that non-unionized contractors raise their bid prices to accommodate higher wage rates mandated by the City of Toronto's signatory status and their Fair Wage Policy. This report suggests that this may not in fact be the case and that some non-union contractors use the same wage rates for both the City of Toronto bids as well as other bids in the GTA where fair wages and contractual obligations do not exist.

Kenaidan, a non-union contractor, was the lowest bidder on the City of Toronto's Ashbridges Bay project valued at just over \$87 million. Bennett, a union general contractor, did not bid that project. However, both Bennett and Kenaidan bid on two other City of Toronto competitions. Bennett had the lowest tender price on both of those projects with Kenaidan having the second lowest bid. This analysis reveals that Bennett, a union signatory general contractor, could successfully bid against a strong non-union general and win. The only contract that Kenaidan won in Toronto was one in which Bennett chose not to bid.

Contrast that experience with several competitions in Peel Region. If the Fair Wage Policy or signatory status of the City of Toronto played a role in Bennett winning projects within the City of Toronto, we would expect that in Peel region, Kenaidan would have the more competitive bid. Kenaidan was the successful bidder for one of Peel's contracts at the Lakeview Water Treatment Plant. However, Bennett did not bid that project. Looking at projects where both Bennett and Kenaidan were bidders, we see that neither company won those competitions, but Bennett had a lower price than Kenaidan. The relative ranking of the value of bids submitted by Bennett and Kenaidan infer that Kenaidan used the same wage rates in both the City of Toronto and Peel Region's bids.

In Halton Region, there was only one project, the Oakville Southwest Wastewater Treatment Plant in which both Kenaidan and Bennett submitted bids. While Kenaidan had the lower price the winning margin was less than 2%.

The relative value of bids submitted by Kenaidan and Bennett in Toronto, Peel and Halton suggest that the two companies are very competitive with each other. When Kenaidan competed against Bennett, Bennett generally had similar or lower bid prices. While there may be non-union general contractors who alter their wage scale for bids in the City of Toronto, it would appear, based on head to head results between Kenaidan and Bennett, that Kenaidan does not adjust its wages for Toronto bids only, but instead uses the same rates for all of its bids in the GTA.

City of Hamilton - Collective Agreement Impact

The City of Hamilton has by far the largest percentage of WWTP construction tender projects awarded to union contractors of any jurisdiction in the Province, including the City of Toronto. Since 2005, the City of Hamilton has been bound to the United Brotherhood of Carpenters and Joiners, Local 18 for all ICI construction work that the city undertakes. Consequently any contractor submitting a bid for WWTP construction tenders for the City of Hamilton must be signatory to the Carpenters Union.

The impact of this collective agreement between the City of Hamilton and the Carpenters Union appears to have the most dramatic impact on the share of work awarded to union contractors than any other area of the Province. For the period of 2011 through to 2015 it is estimated that the City of Hamilton will be awarding a further \$700 million or more in construction contracts for various water and wastewater projects.

Union Contractors Cannot Win Tender Competitions Unless They Submit Bids

It should not be assumed that there has been a unionized contractor bidding on each and every one of the approximately 230 WWTP construction project tenders during this period of time. Even in the union-friendly environment of the City of Toronto, there were several WWTP projects without a unionized general contractor submitting a bid. In places such as York Region and Northern Ontario, more than 90% of the WWTP projects had no unionized general contractors submitting a bid. Small wonder that the awards of contracts to unionized bidders has dropped so low across the Province.

Based on information gathered from discussions with several contractors it would appear that where a non-union general contractor is low bidder, the work subcontracted rarely includes concrete forming and other forms of labour. Subcontracted work from successful non-union generals seems to be most concentrated among the electrical, mechanical and plumbing trades, leaving other trades less represented in WWTP construction work.

There were no trends or indications in the results for various bid competitions that the share of work bid or won by union contractors were in any way dependent on the size of the project or whether the project was water or waste water.

Table 5 – Unionized Contractor Bidding Opportunities Taken

	No Unionized Bidders	Only 1 Unionized Bidder	2 Unionized Bidders	3 or more Unionized Bidders
York Region	91%	0%	9%	0%
Peel Region	45%	37%	18%	0%
Halton Region	27%	64%	9%	0%
Northern Ontario	93%	7%	0%	0%
Toronto	10%	50%	25%	15%
Kingston, Ottawa and Belleville Region	67%	29%	4%	0%
Barrie Collingwood Region	71%	29%	0%	14%
Waterloo Region	57%	14%	21%	8%
Hamilton	0%	80%	20%	0%

Competitiveness of Bids by Union General Contractors

The clear consensus from the data presented thus far is that with the exception of Toronto and Hamilton, unionized general contractors are winning a shrinking quantity of WWTP work. One of the next logical questions is whether the competitions are even close. Table 6 presents data on how close the bids submitted by unionized contractors were to the lowest tender price. The gaps, the margins by which the most competitive unionized bid lost, were relatively wide in the Barrie and Collingwood areas as compared to those in Waterloo Region where several bids were very close.

Table 6 – The Gaps between Unionized and Non-Unionized Bidders

	Bids Won by Unionized Bidders	Bids Lost but best unionized bid within 0-5%	Bids Lost but best unionized bid within 5-20%	Bids Lost but best unionized bid beyond 20%
York Region	9%	n/a	n/a	n/a
Peel Region	18%	0%	32%	4%
Halton Region	0%	21%	29%	0%
Northern Ontario	7%	n/a	n/a	n/a
Toronto	70%	5%	5%	10%
Kingston, Ottawa and Belleville Region	18%	4%	4%	n/a
Barrie Collingwood Region	0%	0%	14%	14%
Waterloo Region	7%	21%	7%	n/a
Hamilton	89%	0%	11%	n/a

Data and Emphasis on Union General Contractors vs. Union Subcontractors

The data presented and reviewed in this report has largely focused on the work pursued and won by union general construction contractors. There has been relatively little discussion on the quantity of work pursued and won by union subcontractors.

If a non-union general contractor is successful in a construction tender, they are unlikely to disclose the identity of the chosen subs, except on a need to know basis with the project owner and others close to the project. There are no readily accessible databases that contain information about who put in a price to a specific general contractor. The first opportunity to identify subcontracts is once the contract has been awarded to the GC.

Even if you are able to determine who won a subcontract block, you cannot necessarily determine the value of that contract or how many hours are involved. Consequently most of the data presented is based on award and bid data from the municipal owners.

The union subcontractors for the most part provide services related to a few or just one of the ICI construction trades. Some of the unionized mechanical contractors may be signatory with the UA only and use non-unionized workers for other elements of the work outside of the defined jurisdiction of the signatory union. Clearly some of the narrower focused trades may not get enough hours working only for a general contractor and therefore they need to be employed by a specialty subcontractor.

In the course of discussions with various unionized general and unionized subcontractors, one hears some conflicting perspectives. A number of sub-contractors will express concerns that there are not enough union-friendly general contractors bidding this work. Several general contractors indicated a reluctance to bid WWTP projects as they are concerned about the availability of certain trades for the work and their pricing cannot carry overtime rates. Some of the major unionized general contractors have had costly experiences with WWTP work in the past and are more comfortable bidding and building projects such as schools, hospitals and commercial buildings.

As has been mentioned earlier, the nature of these plants is not unlike building a large machine. Many of these projects are retrofits and will demand more skill sets from supervisors and workers in trying to add and replace elements of a plant while it continues to operate. There is a perception that these skill sets are in short supply. Contractors who might consider aggressively bidding major projects are concerned not only about a potential shortage of workers with the requisite skills, they are also concerned that manpower with the requisite skills may be unwilling to work the hours required for harmonized work weeks and maximum productivity.

In some areas of the Province, unionized subcontractors have had a strong record of success in competing for work let by the non-unionized generals who win the tender competitions. In Waterloo Region, as much as 50% of the value of several \$25 million plus contracts were subcontracted to local unionized contractors. A similar experience seems to be occurring in many parts of eastern Ontario, particularly among contracts in and near the Ottawa area.

In other regions, such as Simcoe and Grey Counties and Durham Region, unionized subcontractors have much weaker results. It is difficult to draw any hard and fast conclusions given the challenges associated with trying to get measurable data for work subcontracted by non-unionized general contractors in these areas.

From the perspective of the broader unionized ICI construction sector, reliance primarily on work procured by subcontractors raises two significant challenges. The first challenge is that the unionized subcontractors may have to compete in pricing with non-unionized subcontractors. If there is a high proportion of skilled trade labour making up the subcontract scope of work, it will be difficult for unionized contractors to compete directly. The other challenge is that not all trades that would normally be part of a WWTP construction project will have opportunities for subcontracted work. Many of the major non-unionized general construction contractors have their own dedicated crews for tasks such as forming work or operating cranes and other heavy equipment.

In order to grow participation for multiple ICI trades in the WWTP construction market, more unionized general contractors will need to make a commitment to submit competitive bids on more projects.

Options for the Unionized ICI Construction Sector

Having determined that unionized contractors are only winning a small percentage of a growing market for the construction of municipally owned water and waste water treatment plants, unionized general and trade contractors first and foremost need to consider bidding on more of the projects for this type of work.

This paper proposes six potential avenues for improving the competitiveness of the unionized construction industry. These strategies are aimed at reducing total costs and improving productivity of unionized contractors, thereby enhancing their competitive position to successfully bid WWTP construction projects. These areas are:

- 1) Contractor Prequalification, emphasis on safety and experience
- 2) Training and Development
- 3) Standardized Work Hours and Overtime
- 4) Loading and Handling through Joint or Dedicated Crews
- 5) Stabilization from Unions, and
- 6) Project Agreements

To help facilitate the implementation of key recommendations, the four key trades have agreed to implement the conditions and terms outlined in the **Actionable Conditions and Terms (ACT) Template**. Individual trades and locals have the opportunity to implement the template as written or to tailor the four measures specific to their own need and circumstance. The template is attached to this report in Appendix 1.

Advocate Construction Contractor Prequalification to Municipal Owners

A growing number of municipalities are considering the 'prequalification of bidders' as a means to reduce substandard work. Prequalification is ordinarily a separate screening process prior to a project going to tender, by which potential bidders are evaluated. A joint University of Toronto and Ontario Construction Secretariat study suggests that in cases where there is no prequalification of contractors, final project costs are significantly higher than comparably sized projects where some form of prequalification is used.

Prequalification is just what it sounds like, the screening of prospective bidders for a construction project tender call based on certain attributes defined by the prospective bidder. Prequalification often uses a scoring system for contractors based on requested information such as health and safety record, length of time in business, training, qualifications and experience of work crews and how close similar projects for other owners were completed in terms of completion time and total budget.

Prequalification is most often used for prospective general contractors bidding on construction projects, but many municipalities believe that given the high degree and sophistication of electrical, mechanical and other specialized trades, that the prequalification should be extended to subcontractors for water and wastewater treatment plants.

The Region of Peel requires a Prequalification of Contractors whenever it is deemed that the nature and complexity of the work involved warrants the time and effort required to pre-select the most experienced and qualified Vendors.¹¹ It does not appear that the reduction of overall costs is a criterion that would trigger the decision to require the prequalification of contractors.

¹¹ Peel Region purchasing bylaw at <http://www.peelregion.ca/council/bylaws/2000s/2004/by131-2004.htm#c>

In general, there are few instances where municipal purchasing bylaws expressly require or prohibit the prequalification of construction contractors. Given the subjective interpretations of phrases such as 'where the complexity and nature of the work requires' provide individual decision makers with a very wide discretion on whether or not to impose prequalification for any particular construction contract.

Currently the construction contractor prequalification systems can vary from a simple one page questionnaire that is developed by the administrative manager to a sophisticated region wide protocol and forms that, once completed could exceed 50 pages.¹²

The challenge for unionized contractors is to encourage more municipal owners of water and wastewater systems to not only employ prequalification for their water and waste water treatment plant construction projects, but to persuade those owners to use a prequalification system that recognizes and rewards strengths in worker safety practices and records as well as ongoing training and experience.

Aside from the obvious benefits of reducing the number of bids to be evaluated at the time of tender, prequalification of construction contractors has the potential to deliver tangible bottom line savings to municipal owners in terms of bonding costs. Currently, most municipal water and wastewater facility construction contracts will require performance and/or bid bonds by recognized bonding companies to accompany a bid. It makes little sense to replicate the types of questions and issues that a bonding company would normally require from a contractor. On the other hand, if one has a well developed contractor prequalification system in place, a municipality may want to consider not requiring bonds from the prequalified contractors. Since bonding will ordinarily cost up to 5% of the face value of a construction contract, the contractor will factor that cost into its bid price. If the bonding requirement is deleted, bid prices in a competitive market should drop by the value of the bonding that would otherwise have been purchased.

The Ontario Ministry of Transportation, which has a capital budget of about \$1.4 billion per year for highway construction has been relying upon its performance based contractor prequalification system since the late 1950's to not only evaluate the quality of its crews, but its financial capacity to undertake and fund projects of the magnitude to be bid.

Training and Development

While the previous section endorsed a strategy by the unionized construction sector to persuade municipalities to use construction contractor prequalification, that move may be counterproductive unless the unionized construction contractors actually have the safety records, training and productivity that are at least equal, if not significantly superior to their non-unionized competitors.

Harmonized Work Hours and Overtime

In some respects a multi-trade ICI construction contractor is like an ice hockey team where trades workers such as electricians, plumbers, general labourers and crane operators are counterparts to hockey defencemen, wingers, centres and goalies. However few if any hockey teams would achieve championship levels if the defencemen only played after the first three minutes of a period, centres would not play for the last 2 minutes of any period and wingers would not play in sudden death periods or shoot outs.

Perhaps the analogy is a little extreme but the bottom line message is that a cohesive unit or team must work harmonized hours to achieve maximum effectiveness. There are two choices, get the trades to agree to harmonized work weeks and overtime schedules or pay the overtime rates for the extra hours.

¹² See system used in State of California for public agency purchases of construction services at <http://www.publicconstructionlaw.com/Prequalification.htm>

The standard work week for civil construction (e.g. roadbuilders and sewer and watermain) is 10 hours per day, 5 days a week before overtime. Contrast this to the ICI trades where the typical work week ranges from 36 and 40 hours per week depending on the trade and local. Overtime clauses also vary between the trades. Without standardized work weeks, contractors are forced to pay overtime to some trades to ensure those workers are on the job as dictated by the project construction schedule. This adds to the cost of the project.

If we make a general assumption that labour represents about 30% of the value of a WWTP construction project, and the contractor implements a continued presence by all trades at the job site for a full 5 day work week the incremental number of hours through the use of overtime instead of harmonized hours the contractor may end up paying about an additional 1% of the project value on such overtime premiums. Given the highly competitive WWTP construction market in Ontario, that 1% increment can represent the difference between winning losing a major project.

Deliveries—Unloading and Handling Work

Without the formal structure of collective labour agreements and defined jurisdictions, non-unionized construction contractors can dispatch which ever workers are most convenient for the purpose of accepting, unloading, moving storing and retrieving deliveries of equipment and supplies. Traditionally unionized general contractors cannot use workers from one trade, such as plumbing, to offload a shipment of supplies or equipment to be used by another trade, such as electricians, even if the persons used are apprentices.

At first blush there would appear to be a significant cost savings that can be used by non-union contractors bidding against union contractors. What is the size of this potential advantage? Assuming that non-union contractors pay their electricians, plumbers and pipe fitters wage rates that are comparable unionized electricians, plumbers and pipe fitters, and use general labourers for loading and handling of supplies, equipment and materials, the hourly wage rate gap between the more highly skilled trades and general labourer workers might be in the order of 20 to 25%. It has also been suggested in a variety of studies and estimates for construction that between 30 and 40% of construction project costs go to direct labour. Let us also assume that 10% of the labour on a construction project involves unloading incoming vehicles, placing the unloaded components in a safe storage area, going to the storage area, finding and retrieving those parts, supplies or equipment and moving them to the exact location where needed for construction. A quick calculation based on those rough numbers would translate into approximately a 1.0% advantage in favour of non-union contractors who don't use their trades journeymen for unloading and handling work. Based on the information obtained on contract competitions in 2009 and 2010, there were no more than 20 competitions across Ontario during that period where a unionized contractor was second overall and lost to a non-union contractor. However about half of those competitions were very tight with a winning margin of 1.5% or less. Bottom line is that the potential cost savings to non-union contractors who do not use skilled trades journeymen for unloading and handling work is about 1% of overall project value.

What can union contractors do to overcome that cost advantage? They might use a higher proportion of apprentices for unloading and handling work or consider a measure for composite crews.

Stabilization of Wages

Stabilization for purposes of this report is the practice by a union to partially subsidize wages of members employed by a unionized contractor to compensate for wage/benefit differences between union workers and their non-union competitors. Discussions with various trades and contractors revealed that market rates ranged from \$6—\$18 lower than existing union wage rates.

Stabilization is, at best, a short-term solution that allows trades to gain a foothold into a particular sector. Some trades have had success in winning WWTP projects through the use of stabilization funds. However, this practice is not sustainable solution. Trades cannot afford to indefinitely subsidize wages. Furthermore, not all trades operate a stabilization fund.

Project Agreements

Section 163.1 of the Labour Relations Act authorizes the use of 'Project Agreements' to modify the terms and conditions of a collective agreement including standardized working hours, thresholds for overtime, wage discounts, travel time and mileage rates, etc. Once approved, the terms of the Project Agreement will apply rather than the terms of the various provincial or other collective agreements that would otherwise apply. The rates, terms and conditions defined in the Project Agreement would also apply to non-unionized contractors and workers.

Establishing a 'Project Agreement' is a two step process that is normally initiated by the owner. The first step is to send out a notice to all potential parties (ICI construction trade unions that have a province wide collective agreement) that the owner wishes to have a project agreement. This notice triggers a 14 day objection period during which any of the trade unions may object within the grounds set out in s.163.1(3)¹³.

Assuming that there is no valid objection, the proponent then negotiates a draft project agreement and obtains agreement from at least 40% of the trade unions as to the form of the draft agreement and to the proponent sending it out for final approval. Note that the criteria is 40% of the unions, not 40% of the potential workers. The second and final notice then goes back out to the unions. The project agreement requires that at least 60 percent of the union responses within 30 days are positive. There is a further challenge opportunity within a 10 day window that can only be exercised by a union that responded to the second notice on a timely basis and then only on specific grounds such as a disproportionate reduction of wages and benefits among the affected unions.

The impact of an approved 'project agreement' is to modify each applicable provincial collective agreement. All employers, including non-union contractors, on the project are required to apply the terms of the project agreement and there can be no strike or lockout during the term of the 'project agreement' even if a strike would otherwise be legal through the expiration of a collective agreement.

Project agreements represent a very versatile tool through which contractors could implement cost saving measures in concert with the construction trade unions on matters of harmonized hours, joint crews and modified wage rates. However most municipalities to date have been unwilling to initiate a 'project agreement' for their water and wastewater treatment infrastructure, nor have they provided sufficient notice and flexibility for pending projects to allow the time periods to run before the tender closing date.

¹³ **Objection to Board**

- 3) A bargaining agent on the list may apply to the Board for an order that a project may not be the subject of a project agreement and the following apply with respect to such an application:
 1. The application must be made within 14 days after receiving the notice that the proponent wishes to have a project agreement.
 2. The parties to the application are the applicant, the proponent and such other persons as may be prescribed under the regulations or as may be specified by the Board in accordance with the regulations.
 3. The Board shall dismiss the application if the project is an industrial project in the industrial, commercial and institutional sector of the construction industry.
 4. The Board shall dismiss the application if the project is designated in the regulations as a project that may be the subject of a project agreement.
 5. If neither paragraph 3 nor 4 apply, the Board shall grant the application and make an order that the project may not be the subject of a project agreement.
 6. An order under paragraph 5 does not affect the preparation of another list and the giving of other notices under subsection (1) even if they relate to the same project.
- 1998, c. 8, s. 21; 2000, c. 38, s. 35 (4, 5).

Conclusions

Municipalities are coming under increasing pressure to enhance their water and wastewater infrastructure as existing systems surpass their life expectancy and governments implement new treatment standards. At the same time, municipalities are under severe financial pressures to cope with rising costs, a “maxed out” property tax base, fewer federal and provincial grants and subsidies and for mature municipalities, declining opportunities for development fees.

While water conservation measures will alleviate some of the demand for water and wastewater treatment facilities, aging infrastructure will still need upgrades and/or replacements. A review of published municipal capital budgets indicates that there will be strong, if not growing demands for this sector for at least the next several years and may extend well into the next decade.

The conclusions and recommendations outlined below are not mutually exclusive. Both labour unions and unionized contractors should give serious consideration to implementing most, if not all of these measures. To help guide union stakeholders, a template of Actionable Conditions and Terms (ACT Template) has been developed and adopted by the four key trades (Carpenters, Labourers, Electricians and Plumber/Pipefitter). *A copy of the template can be found in Appendix 1 of this report.*

More Union General Contractors Must Bid on WWTP Work

When municipal tenders are awarded to non-union general contractors, unionized trade contractors have the opportunity to bid as subcontractors. Many union mechanical and electrical trade contractors are successful in bidding this work with non-union general. However, this subcontracted work rarely includes concrete forming and other ‘civil’ trade work. Subcontracted work from successful non-union generals seems to be mostly concentrated in the mechanical and electrical trades (M & E), leaving other trades such as labourers, carpenters, masons and operating engineers much less represented in WWTP construction work.

Successful bids by unionized general contractors expands work opportunities for the unionized sub-trades to whom the general is bound. However, most of the union generals who currently bid this work are only signatory to the ‘civil’ trades. They are under no contractual obligation to subcontract the mechanical and electrical contracts to union firms. Past practice shows that generals signatory to the civil trades do not tend to award subcontracts to union M & E contractors. To ensure the maximum participation of union trades in the construction of WWTP infrastructure, more bids are needed from union general contractors who are signatory to multiple trades.

Unless more unionized general contractors make an effort to aggressively bid on several upcoming WWTP projects, the percentage work available to the unionized ICI sector will likely continue to decline.

Harmonized Work Hours and Overtime

An arrangement whereby all trades on a job are working harmonized hours with agreed to terms for overtime can result in a 1% overall cost saving on WWTP construction projects. While that amount may seem trivial, the winning margin was about 1% or less in about 8 of the 50 projects that were won by a non-union general contractor over a union general contractor for WWTP construction work. Combined with other measures as outline in this report, proceeding with harmonized work hours and overtime could make a significant impact on the amount of work awarded to union general and trade contractors competing for WWTP construction work.

Stabilization / Market Rates

Stabilization on particular projects can certainly enhance the competitive position of many union contractors. It allows some union contractors to get their 'foot in the door' and gain extremely valuable exposure and experience. Unions have previously addressed wage differentials of \$6—\$18 per hour to assist contractors in submitting competitive bids. Those trades without stabilization funds have offered flexibility on overtime and ratios. However, this practice is not a long term solution to enhancing the competitive position of union contractors.

Deliveries - Unloading and Handling Work

An arrangement other than having journeymen for each of the higher cost trades handling all unloading, storage, search, retrieval, movement and delivery of parts, supplies and equipment could save a non-union contractor up to 1.0% or more of the overall costs of a construction project. As indicated above, the winning margin was 1% or less in about 8 of the 50 projects that were won by a non-union general contractor over a union general contractor.

Training and Development

Continuing investment by unions and unionized contractors in the education and training of its workforce must be a companion policy to advocating for prequalification. If one pushes for prequalification and found not to have superior skills, training and safety records significant competitive advantage will have been forfeited to the non-unionized ICI construction sector.

Given the nature of WWTP, that of large machines, workers must have access to updated tools and technologies to carry out the unique and demanding elements associated with WWTP construction work.

Prequalification of WWTP Construction Contractors

Procurement practices by municipalities will have a measurable impact on final costs. Prudent procurement practices, including contractor prequalification systems, can save up to 20% or more of the capital costs of sewer and water treatment plants. With high project values, sometimes exceeding \$100 million, a 10% or 20% savings can go a long way in stretching water and wastewater infrastructure budgets for municipalities.

Advocating municipalities to adopt policies for the prequalification of construction contractors bidding on WWTP work can not only result in tangible bottom line savings for municipal owners of WWTP facilities, such policies could enhance the competitive position of the unionized ICI construction sector competing for this type of work.

Project Agreements

The provisions under the Labour Relations Act that facilitate Project Agreements have been used with significant success in industrial projects in Hamilton, Sarnia, and Northern Ontario. Project Agreements outline measures such as joint or dedicated crews for unloading and handling work, harmonized work hours, overtime and market wage rates. While there have been some efforts to make use of this technique for the construction of municipal WWTP facilities, there does not yet appear to be a precedent model that has gone into operation. Significant union participation and co-operation is a vital requirement to implement a successful project agreement, and thereby expand the competitive abilities of the unionized ICI construction sector for municipally owned WWTP work.

Appendix 1:

Appendix 1:

ACTIONABLE CONDITIONS AND TERMS (“ACT”) TEMPLATE

Related To

The Construction of Municipal Water and Wastewater Treatment Plants

AMONG: The Carpenters’ Employer Bargaining Agency,
The Labourers’ Employer Bargaining Agency,
The Mechanical Contractors Association of Ontario,
The Electrical Trade Bargaining Agency of the Electrical Contractors
Association of Ontario,
LIUNA Provincial District Council,
The Carpenters’ District Council of Ontario,
IBEW Construction Council of Ontario, and
The Ontario Pipe Trades Council (Collectively, the “Parties”)

WHEREAS The above Parties, are concerned about the decreasing share of municipal construction tenders for water and wastewater treatment plants being won by unionized contractors;

AND WHEREAS these four trades (Carpenters, Labourers, Electricians and Plumber/Pipefitters) represent a significant portion of the man-hours associated with the construction of most municipal water and wastewater treatment plants;

AND WHEREAS this Actionable Conditions and Terms template may include appropriate contributions, terms and conditions through which there is an increased likelihood that unionized contractors will be successful in an increasing number of upcoming municipal construction tenders in this market segment across the Province;

NOW THEREFORE the Parties jointly recommend that stakeholders for the four key trades (Carpenters, Labourers, Electricians and Plumber/Pipefitters) actively consider one or more of the following measures to enhance the competitive position of unionized contractors who choose to bid on selected municipal construction tenders for water and wastewater treatment plants:

MEASURE #1 Standardized Work Hours

With collective agreements or letters of understanding varying from 36 to 50 regular hours of work, the Parties will commit to a minimum of forty (40) hours per week straight time and coverage of eight (8) hours a day for five (5) days per week.

MEASURE #2 Overtime

Overtime rate for the Parties will be capped a 1.5 times regular hourly rates, excluding Sundays and statutory holidays.

MEASURE #3 Jurisdictional Disputes

The Parties agree to no jurisdiction claims or disputes on water/wastewater treatment plant projects. Any such issues are to be resolved at the worksite through pre-job conferences and/or mark-ups or other job site measures. Disputes are to be resolved promptly and without job interruptions.

MEASURE #4 Market Recovery and/or Other Financial Incentives That May Be Available Including:

The Parties to examine and implement all market recovery and other financial incentives available to them including, but not limited to:

- Wage stabilization payments
- Flexibility on travel cost reimbursements
- Flexibility in applying apprenticeship ratios and using pre-apprentices.

How ACT Template to Be Used

The Employer and Employee Bargaining Agencies and the Local Business Managers for each of the respective trades will determine if and how to use the elements of the ACT Template for any upcoming water or wastewater treatment plant or related structure construction tenders.



MARKET REALITIES: BUILDING ONTARIO'S WATER & WASTEWATER INFRASTRUCTURE
APRIL 2013



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