



## 429-2011 ADDENDUM 6

### DESIGN AND CONSTRUCTION OF THE PUBLIC WORKS EAST YARD COMPLEX AT THE FORMER ELMWOOD NAIRN LANDFILL SITE

#### **URGENT**

**PLEASE FORWARD THIS DOCUMENT TO  
WHOEVER IS IN POSSESSION OF THE  
REQUEST FOR PROPOSAL**

ISSUED: July 6, 2011  
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TELEPHONE NO. (204) 794-4401

**THIS ADDENDUM SHALL BE INCORPORATED  
INTO THE REQUEST FOR PROPOSAL AND  
SHALL FORM A PART OF THE CONTRACT  
DOCUMENTS**

Template Version: Ar20070420

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Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Request for Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 9 of Form A: Proposal may render your Proposal non-responsive.

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The following have been added to the ftp site. The City is providing this additional information for the convenience of Bidders and makes no representation as to its accuracy. Please note .pdf drawings are not to scale.

#### CAD Drawing Files

01-C-1003\_Rev-C  
01-C-1004\_Rev-C  
01-C-1005\_Rev-C  
BuildingSchematicPlans(R1)

#### CAD Plot Style File (1)

BuildingSchematicPlans(R1) 24x36

#### PDF Files

01-C-1003\_Rev-C\_11x17  
01-C-1004\_Rev-C\_11x17  
01-C-1005\_Rev-C\_11x17  
Figure\_A-1(R1)\_MainOfficeSchematicFloorPlans  
Section 31 60 01\_Building Foundations(R1)\_July6-2011  
FM 01 - SHOP & OFFICE\_(R2)  
Section 08 44 15 - Envelope - Offices - Glazed Aluminum Curtain Wall(R1)  
75000 lbs heavy hoist concrete specs

#### Microsoft Word Document

Section 31 60 01\_Building Foundations(R1)\_July6-2011  
Section 08 44 15 - Envelope - Offices - Glazed Aluminum Curtain Wall(R1)

#### Excel

FM 01 - SHOP & OFFICE\_(R2)

## **APPENDIX B – PROGRAMMING AND DESIGN DOCUMENTS**

Revise Appendix B1 *Basic Program of Requirements*

Revise: Section 3.5 (3.5 Structural)

Structural systems shall be designed and constructed in accordance with the requirements of the *National Building Code of Canada (NBCC), 2010*, as amended by the *Manitoba Building Code Regulation 31/2011*, and applicable codes and standards referenced therein and in the Outline Specifications.

Structural systems for all structures shall be designed and constructed in accordance with the NBCC, Part 4, Post-Disaster Importance Category. The design of structural systems shall incorporate the durability requirements in accordance with Outline Specification, Section 01 47 13 – LEED® Requirements.

Due to varying site conditions at the Thomas Avenue Site, shallow foundations on fill material will not be acceptable.

The main office, garage, shops and storage building superstructures shall be supported on structural pile foundations. The main building Administrative and Staff Component shall have structural concrete floor slabs.

Unheated building superstructures, and concrete floor slabs for both heated and unheated garage, shop and storage buildings, shall be designed to meet the standards and tolerances referenced in the *National Building Code of Canada 2010*, Division B, Part 4, as well as the accompanying *User's Guide – NBC 2005 Structural Commentaries (Part 4 of Division B)*; in particular as per, "Commentary K: Foundations", "Total and Differential Settlements" on pages K-16 and K-17.

1. The intent is to forestall an ultimate or serviceability limit state, such as unacceptable cracking of the concrete floor slab, or jamming of doors in the support structure.
  - a. This requires the attention and interaction between the geotechnical and the structural engineers on the Design Build Team.
2. Serviceability design in the case of the Public Works East Yards Heated and Unheated Garage, Shop and Storage Components, in particular, shall also address the limits imposed by multiple large overhead doors and the movements of heavy vehicles into and from structures. The weather seal all around the overhead doors shall not be compromised due to any structure movements.

The Structural Consultant shall consider maximum loaded vehicle weights in the design of building aprons, grade beams and garage and shop floors.

All concrete aprons in front of overhead doors shall be designed as transition slabs.

Replace: **Original Site Drawing name:** 01-C-1003 Conceptual Site Plan – Program Elements with Site Drawing **01-C-1003\_Rev-C Conceptual Site Plan – Program Elements**  
**Revision:** Change in the required length of concrete aprons as per Addendum 5 PA44.

Replace: **Original Site Drawing name:** 01-C-1004 Conceptual Site Plan and Details – Surface Materials with Site Drawing **01-C-1004\_Rev-C Conceptual Site Plan – Surface Materials**  
**Revision:** Change in the required length of concrete aprons as per Addendum 5 PA44.

- Replace: **Original Site Drawing name:** 01-C-1005 Conceptual Site Services Plan and Details with Site Drawing **01-C-1005\_Rev-C Conceptual Site Services Plan and Details**  
**Revision:** Change in the required length of concrete aprons as per Addendum 5 PA44.
- Replace: **Original Building Drawing name:** RFP-429-2011\_BuildingSchematicPlans with Building Drawing **RFP-429-2011\_BuildingSchematicPlans(R1)**  
**Revision:** Changes include revising drawing A-1 to indicate the location of four 10x10 overhead doors at the BO-02 Bridge Operations Work Area; and revising the text reading 'access corridor' to 'pedestrian access corridor'
- Add: **CAD Plot Style File: RFP-429-2011\_BuildingSchematicPlans (R1) -colour- 24x36**  
**Note:** Plot style files store plot settings such as color, line-weight, line-type and screening and manage your printing device as to which plot setting to apply to a drawn object.
- Replace: **Original Building Drawing name:** Figure\_A-1\_MainOfficeSchematicFloorPlans with **Figure\_A-1\_MainOfficeSchematicFloorPlans (1)**  
**Note:** this pdf. drawing is added for proponent convenience
- Replace: **Original Room Data Sheet name:** FM 01 - SHOP & OFFICE with Room Data Sheet **FM 01 - SHOP & OFFICE\_(R2)**  
**Revision:** revise Additional Comments to read "Shell only. Each bay to accommodate largest Public Works vehicles (dimensions and weights). Overhead bridge crane for 5 ton capacity. Heat curtains at doors. Provide for one light duty hoist for passenger vehicles and one heavy duty hoist for heavy equipment. Provide water connection for pressure wash wand in each bay."

## **APPENDIX C – SPECIFICATIONS**

- Revise Appendix C1 Outline Specifications
- Add: 08 44 15 - 1.4.10 (Design & Performance Requirements p2)  
All glazing shall provide a thermal performance index equal to, or better than, U 1.6.
- Add: 31 60 01 - 1.2.1.2 (Section 1.2.1 References National Research Council Canada pg 1)  
User's Guide – NBC 2005 Structural Commentaries (Part 4 of Division B)
- Revise: 31 60 01 - 1.7.5 (31 60 01.1.7 Design Requirements p2)  
The Main office, garage, shops and storage building superstructures shall be supported on structural pile foundations. The main building Administrative and Staff Component shall have structural concrete floor slabs
- Revise: 31 60 01 - 1.7.6 (31 60 01.1.7 Design Requirements p2)  
Shallow foundations bearing on the existing fill material on this site will not be acceptable. Shallow foundations, if used, must bear on engineered fill placed on competent material.
- Revise: 31 60 01 - 1.7.7 (31 60 01.1.7 Design Requirements p2)  
Unheated building superstructures, and concrete floor slabs for both heated and unheated garage, shop and storage buildings, shall be designed to meet the standards and tolerances referenced in the National Building Code of Canada 2010, Division B, Part 4, as well as the accompanying User's Guide – NBC 2005 Structural Commentaries (Part 4 of Division B); in particular as per, "Commentary K: Foundations", "Total and Differential Settlements" on pages K-16 and K-17.  
.1 The intent is to forestall an ultimate or serviceability limit state, such as unacceptable cracking of the concrete floor slab, or jamming of doors in the support structure.

.2 Serviceability design in the case of the Public Works East Yards Heated and Unheated Garage, Shop and Storage Components, in particular, shall also address the limits imposed by multiple large overhead doors and the movements of heavy vehicles into and from structures. The weather seal all around the overhead doors shall not be compromised due to any structure movements

- Revise: 31 60 01 - 1.7.8 (31 60 01.1.7 Design Requirements p2)  
Design foundations of all heated and unheated garage/shop/storage spaces to accommodate heaviest vehicle and equipment loading.
- Revise: 31 60 01 - 1.7.9 (31 60 01.1.7 Design Requirements p2)  
The Structural Consultant shall consider maximum loaded vehicle weights in the design of building aprons, grade beams and garage and shop floors
- Revise: 31 60 01 - 1.7.10 (31 60 01.1.7 Design Requirements p3)  
All concrete aprons in front of overhead doors shall be designed as transition slabs
- Add: 31 60 01 - 1.7.11 (31 60 01.1.7 Design Requirements p3)  
Where deep foundations are used, no shaft resistance from the existing fill should be accounted for in pile capacity calculations
- Add: 31 60 01 - 1.7.12 (31 60 01.1.7 Design Requirements p3)  
Where deep foundations are used, it is the responsibility of the Design Build Team to determine the length of deep foundation units.
- Add: 31 60 01 - 1.7.13 (31 60 01.1.7 Design Requirements p3)  
Minimum safety factors for foundation design shall be as follows:  
.1 Shallow foundations: minimum safety factor of 3.0 for bearing capacity with maximum 25 mm settlement.  
.2 Deep foundation units: minimum safety factor of 2.25 for load capacity
- Add: 31 60 01 - 1.7.14 (31 60 01.1.7 Design Requirements p3)  
Design for quality and durability in accordance with Section 01 47 13, LEED Requirements.

## QUESTIONS AND ANSWERS

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Responses to Questions not yet answered will be included in further Addenda as the responses are developed.

Clause and Page numbering may be changed as a result of Addendum. Please read the revised clauses carefully.

### GENERAL PROPONENT QUESTIONS

PQ 16 Ceiling heights are provided for spaces BO-02 and BO-03 only and are minimum 4900. Section drawings indicate inside clear height of 6100m for majority of the building. Advise clear height requirements for remainder of heated and unheated garage/storage spaces and shops for SM, CS, EA, SA program spaces

PA 16 This referred to a minimum clearance of 16 ft. for the Bridge Crane truck.  
Single-floor ceiling heights in Administrative and Office areas to be 10' (3.05 m).

SA-09 - Lunch/Multi-purpose Room has a two-storey height of 23' (7 m).

~~Minimum height to underside of beam trusses to be 18' (5.5 m) in heated garage/shop areas unless otherwise noted.~~

Minimum heights in heated garage/shop areas are to be (unless otherwise noted) 18' (5.5 m) to underside of beam trusses and 20' (6.1 m) to the underside of ceiling.

#### **Further clarifications**

**FM-01 to have a minimum of 25' (7.6 m) clearance to the underside of ceiling and a clearance of 20' (6.1m) from the floor to the base of the overhead beam crane. Also see Question 56 below.**

PQ17 Article 3.3.3.2 states overhead doors for heated garage and storage areas to be fully glazed above 4'-0" whereas specification Section 08 11 01, 2.3. and the Detailed Description of Functional Spaces state overhead doors for heated garage and storage areas to be fully insulated metal type. Advise which doors type is required for specific areas.

PA17 Both insulation and thermal glazing are required for all of the overhead doors in the Heated Garage, Shop and Storage Component.

Glazing would typically comprise one horizontal panel on each overhead door.

Note: Insulate all overhead doors in Heated Garage and Storage areas. Provide at least one horizontal panel of double thermal pane glazing between 4 ft. and 6 ft. above floor level on each overhead door.

**Further clarification – Glazing for all overhead doors in FM-01 Heated Garage shall be provided for the top 2/3's of the door for maximum day lighting and consist of at least double thermal pane glazing units. Provide maximum insulation to the bottom 1/3 of overhead doors.**

PQ26 Advise if forklifts are to be used inside and outside of the facility. If forklifts are required for the facility operation provide the quantity and manufacturer's specification for forklift type, lifting capacity and if electric or propane powered.

PA26 Yes, Public Works (SM) have one Komatsu 40 propane powered forklift (Model PG40ZT-5 type LP). The lift truck weight is 5,214 kg (11,495 lbs) with a 3,629 kg (8,000 lb) lift capacity.

Forklift will be used by all PW Divisions (in the BO, CS, EA and SM Heated Garage and Storage areas)

**Further clarification – Forklift will also be used in FM Heated Garage and Unheated Storage areas.**

PQ30 Please confirm axle loads of all vehicles that access the interior spaces. Appendix C7 provides “parking” layout of vehicles, but does not indicate axle loads. Also, specifications suggest that slabs should be designed for “loaded vehicle loads”. Please confirm whether the intent is to design all slabs for vehicle axle loads including the maximum weight of any vehicle material / cargo or simply the empty vehicles.

PA30 Accommodate maximum loads as follows:  
BO-03 – use loads for Bridge Crane as shown in Appendix C9 – Bridge Operations Crane Truck – GVW Rating is 31,751 kg (70,000 lb); front: 14,061 kg (31,000 lbs); rear 17,690 kg (39,000 lbs). SM-09-use maximum GVW Rating of 26,308 kg (58,000kbs) for loaded tandem Sander Spreaders; front: 8,165kg (18,000 lbs); rear 18,144 kg (40,000 lbs)-applies for all SM garage areas.

CS-13 and CS-14 and EA-09-use loads for CAT 414E front end loader, fully loaded maximum weight of 10,156 kg (22,386 lb).

Note: BO-02 - lighter vehicles may have loaded trailers.

**Further clarification - FM-01 – use loads for Iron Wolf: Estimate of the bare unit 51,500 lbs (load from Volvo website), cutter head 22,000 lbs, engine on back 12,000 lbs, plus additional amount for the 400 gallon water unit estimated at 4,000 lbs. The total weight is 89,500 lbs.**

PQ33 Advise if there is a requirement to provide vehicle lifts and hoists in the FM-01 Shop and Storage Garage and if so what capacity and types of lifts are to be provided.

PA33 The vehicle lifts and heavy duty hoists will be supplied and installed post-construction by the City. The weight of loaded heavy duty hoists to be accommodated in floor design in order to accommodate the hoist when it is installed at a later time.

All bays shall accommodate the weight of the 75,000lb capacity heavy duty hoist. Refer to the 75000 lbs heavy hoist concrete specs.pdf file for further information.

PQ42 General – Preferred ceiling heights? Locations/rooms and dimensions/widths of overhead doors?

PA42 Ceiling heights in Heated Garage and Storage areas are to be as per Question 16 above.  
Typical dimensions, large doors – 16' x 16'  
Typical dimensions for smaller overhead doors are 10' x 10' (BO-02).

**Further clarification – refer to Question 16 for the ceiling height of FM-01.**

PQ50 FLEET MANAGEMENT AGENCY – How many overhead doors? Widths/heights? Asks for 90' x 100', but also a 40 M crane, which does not fit this space. Please clarify.

PA50 The current 9000 square foot WFMA program has four (4) overhead doors, including two for the single flow-thru bay. Door sizing to be consistent with SM-09.

**Further clarification – maintain clearance to underside of FM-01 as per the answer to Question 16. Two cranes are to provide coverage of the entire FM-01 Shop footprint. See Question 56 below.**

**See the following picture of the WFMA repair facility at 195 Tecumseh for an example.**



PQ56 If, equipment detailed in items 3 & 4 are within the scope of work, are there any preferred manufacturers?

PA56 The 5 ton overhead beam cranes shall have locally sourced parts and repair service available and will be North American made.

PQ63 Are vehicle lubrication and waste oil facilities to be included?

**PA63 Further clarification – The City does not required these faculties at this time.**

PQ70 The structural requirements indicate that “Building structural slabs shall be designed to meet particular Division and WFMA requirements related to vehicles, equipment, and materials loading.” Will you provide WFMA documents or where can we obtain them from?

PA70 Design WFMA facility to accommodate any of the vehicles listed for other Divisions in the Public Works Facility. ~~The Bridge Crane truck is the largest and heaviest vehicle to be accommodated.~~

**Further clarification – the Iron Wolf as described in Question 30 is largest vehicle from off site to be accommodated in FM-01.**

- PQ72 What are the length and travel of the bridge cranes in the BO and FM areas? We will need to keep these areas clear of columns. Also, do we need to specify the structure of the bridge cranes at all, or just the foundation? If we need to specify the foundations what are the weight and capacities of the bridge cranes? BO-03 Bridge Crane Bay
- PA72 The Bridge Crane referred to in the BO area is a large vehicle, not an overhead crane.  
Design to accommodate largest/heaviest vehicle – Bridge Crane truck.  
Also see Questions #30 & #33  
Refer to Questions #16 and #56 regarding the crane required for FM-01.
- PQ76 What are the classifications for the hazardous water management plan for the site has been reviewed by the City of Winnipeg Water and Waste Department.
- PA76 Hazardous materials are as noted in the Bid Documents, particularly fertilizer and IPM storage facilities that are part of Centralized Park Services (CS) and East Area Parks (EA). The Design Build Team shall be responsible for determining appropriate classifications as per NFPA, NBC 2010 and the Canadian Electrical Code
- PQ77 Are we limited to designing onsite stormwater drainage and connections to City systems specifically as shown in the RFP documents?
- PA77 Yes, onsite stormwater drainage and connections to City land drainage systems shall be as shown on the Drawings and described in the Specifications. Note that the stormwater outlet must be in the location shown in the northwest corner of the Elmwood Nairn Site and must be as specified in order to restrict drainage into, and to provide double isolation from the Combined Sewer System. The conceptual storm
- PQ78 Confirm if staff lockers are in contract or supplied by Public Works
- PA78 Lockers are required by Design Build.
- PQ79 Are there any specific mechanical manufacturers Public Works requires us to specify and if so what manufacturers?
- PA79 Manufacturers are as per the Outline Specifications or as per Design Build Team design.
- PQ 80 Refer to Appendix C Specifications: Section 07 20 01 Envelope: Garages & Offices Exterior Walls and Section 07 10 01 Envelope Garages & Offices Roofing: Please confirm that rain screen principles require to be applied to walls and roofs of all buildings and surface sealed systems are not acceptable
- PA80 Both systems are acceptable.



PQ 81 Outline Specifications, Appendix C1, Section 071001 Envelope: Garages and Offices Roofing, 2.1 Acceptable Products, 2.1.1.2 Standing Seam Prefinished Metal Roofing is listed as an acceptable product. Article 3.3.1 General Architectural Design Considerations states that "The Administrative and Staff, and contiguous Garage, Shop and Storage components shall be flat-roofed structures". As per Article 2.7 Precedence which states Outline Specifications (Appendix C1) shall govern relative to any conflict between the Basic Program of Requirements, Schematic Drawings, Room Data Sheets and Outline Specifications, please confirm that Standing Seam Metal Roofing is acceptable for the Garage, Shop and Storage building components

PA81 Standing Seam Metal Roofing is acceptable. However, all other program requirements remain in force.