



930-2015 ADDENDUM 3

WILKES RESERVOIR NORTH CELL REHABILITATION

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE BID
OPPORTUNITY**

ISSUED: December 16, 2015
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID OPPORTUNITY AND SHALL
FORM A PART OF THE CONTRACT
DOCUMENTS**

Template Version: A20131129

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid may render your Bid non-responsive.

PART A – BID SUBMISSION

Replace: 930-2015 Bid Submission with 930-2015 Addendum 3 – Bid Submission. The following is a summary of the changes incorporated in the replacement Bid Submission:

Form B(R2) Added Item A.7vi) Wash Down Piping Works.

Added Item A.12 Removal and Reinstallation of Existing Grid Line Marker Plates.

Added Item B.7vi) Wash Down Piping Works.

Added Item B.13 Removal and Reinstallation of Existing Grid Line Marker Plates.

Item numbers may be changed as a result.

PART B – BIDDING PROCEDURES

Revise: B2.1 to read: The Submission Deadline is 12:00 noon Winnipeg time, December 22, 2015.

PART E – SPECIFICATIONS

Revise: E14.2.1(e) to read: Installation of new lifting hooks on equipment access hatch covers.

Add: E14.2.1(f) to read: Removal and replacement of existing concrete slab on grade for access to entrance building.

Add: E14.6.7 to read: Equipment Access Hatch Panel Lifting Hooks

- (a) New equipment access hatch panel lifting hooks shall be hot-dip galvanized and sized to match the existing threaded inserts on the access hatch concrete covers. Lifting hooks shall be rated for a minimum of 1000 kg each.

Add: E14.7.7 to read: Concrete Slab on Grade for Access to Entrance Building

- (a) Remove existing concrete slab on grade for access to entrance building for installation of the metal wall panels (see 930-2015_Addendum_3-Picture_Entrance-Building-Slab-R0). The Contractor shall replace the existing slab with a new 2.0 m x 4.0 m x 0.150 m thick reinforced concrete slab (reinforced with 15M at 300 mm each way).
- (b) The slab shall be constructed on well compacted, 150 mm thick 50 mm down limestone material.
- (c) The Contractor is advised that temporary access for City of Winnipeg personnel to the entrance building shall be provided at all times throughout construction.
- (d) Removal and replacement of the concrete slab will be considered incidental to the Contract Lump Sum Price for "Removal and Replacement of Building Envelope" and no additional measurement of payment will be made for this work.

Revise: E18.4.1(i) to read: The Contractor shall only jack up the roof structure as much as required for the bearing rehabilitation works. The Contractor is advised that any **major cracking and structural** damage to the structure, including but not limited to, the supporting columns, the beams being jacked, and the hollowcore slabs and joints in the vicinity of the jacking location, shall be repaired at the Contractor's expense to the satisfaction of the Contract Administrator. No additional payment or compensation will be made for any repair to damage caused during the jacking operation.

Add: E18.4.1(ii) to read: Minor cracking in the hollowcore slab grouted joint directly over the column will be tolerated within a length of 2.0 m perpendicular to each side of the beam centreline. All cracking in the joint beyond these limits shall be repaired at the Contractor's expense to the satisfaction of the Contract Administrator.

Add: E18.9.4 to read: Wash Down Piping Works

- (a) The temporary removal and reinstallation of the suspended wash down pipes as per E18.7.3 will not be measured and will be paid for at the Contract Lump Sum Price for "Wash Down Piping Works", which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification and accepted by the Contract Administrator.

Add: E25 to read: Removal and Reinstallation of Existing Grid Line Marker Plates

E25.1 Description

E25.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of the removal and reinstallation of the existing grid line marker plates.

E25.2 Scope of Work

E25.2.1 The Work under this Specification shall include but not be limited to:

- (a) Removal of the existing grid line marker plates bolted to the concrete pavers on the Reservoir roof.
- (b) Reinstallation of the salvaged grid line marker plates on the concrete pile caps inside the Cells.

E25.3 Materials

E25.3.1 Fasteners

- (a) Grid line marker plates shall be fastened to the top of each concrete pile cap using mechanical expansion anchors. Anchors shall be stainless steel and sized to match existing holes in marker plates.
- (b) Each marker plate requires two (2) expansion anchors.

E25.4 Construction Methods

- E25.4.1 Leave existing grid line marker plates in place on Reservoir roof as long as required to identify grid line locations during the Works.
- E25.4.1 Remove grid line marker plates from concrete pavers and store them in a secure location. Any plates damaged during removal shall be replaced at the Contractor's expense to the satisfaction of the Contract Administrator.
- E25.4.2 Reinstall salvaged grid line marker plates on concrete pile caps inside the Cells. The Contract Administrator will direct the Contractor where to install the marker plate at each particular pile cap.
- E25.5 Measurement and Payment
 - E25.5.1 Removal and replacement of grid line markers will not be measured and will be paid for at the Contract Lump Sum Price for "Removal and Reinstallation of Existing Grid Line Marker Plates", which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

NMS SPECIFICATIONS

Section 07 27 00 Air Barriers

Add: 2.1.1.2 to read: Acceptable material: Soprema Sopraseal Stick VP.

Section 07 41 13 Metal Roof Panels

Revise 2.1 to read: Manufacturer

1. **KingZip Roof Panel**, 100 mm (4") thick, complete with **50 mm (2")** standing seam lateral seal by Kingspan Insulated Panels (**North America**) Inc.; or,
2. Eco-ficient Insulated Battenlok Panels by MBCI Metal Roof and Wall Systems.

Section 07 42 13 Metal Wall Panels

Revise: 2.1 to read: Manufacturer

1. Kingspan KS42 MICRO-RIB Insulated Wall Panels by Kingspan Insulated Panels (.; or,
2. Eco-ficient Royal Panels by MBCI Metal Roof and Wall Systems.

Delete: 2.2.1.5

Revise: 2.2.1.8.1 to read: Insulating foam core shall have the following properties:

	Property	Results	Test Method
a.	Closed Cell	95%	ASTM D2856
b.	Density	2.2 – 2.8 pcf (35.3 – 44.9 kg/m ³)	ASTM D1622
c.	Compressive Stress (Parallel to Rise)	42 psi (289.5 kPa)	ASTM D1621
	Compressive Stress (Perpendicular to Rise)	24 psi (165.4 kPa)	
d.	Shear Stress	17.5 psi (120.6 kPa)	ASTM C273
e.	Tensile Stress	40 psi (275.7 kPa)	ASTM D1623
f.	Oven Aging at 200°F (93°C) for 1 Day	+1% vol. change	ASTM D2126
	Oven Aging at 200°F (93°C) for 7 Days	+3% vol. change	
g.	Low Temperature Aging at -20°F (-29°C) for 1 Day	0% vol. change	ASTM D2126
	Low Temperature Aging at -20°F (-29°C) for 7 Days	0% vol. change	

Delete: 2.2.1.8.2-2.2.1.8.8

Revise: 2.2.2.2 to read: **Panel width: 42 inches.**

Section 07 53 23 Ethylene Propylene Diene Monomer (EPDM) Roofing

Delete: 2.2.2

PICTURES

Add: 930-2015_Addendum_3-Picture_Equipment-Access-Hatches-R0

Add: 930-2015_Addendum_3-Picture_Access-Building-Slab-R0

DRAWINGS

Replace: 930-2015_Drawing_1-0650R-S0005-002_Sh13R2 with 930-2015_Addendum_3-Drawing_1-0650R-S0005-002_Sh13-R3

Replace: 930-2015_Drawing_1-0650R-S0019-001_Sh29R2 with 930-2015_Addendum_3-Drawing_1-0650R-S0019-001_Sh29-R3

Replace: 930-2015_Addendum_2_Reference Drawing_SK-1-R0 with 930-2015_Addendum_3-Reference Drawing_SK-1-R1

Add: 930-2015_Addendum_3_Reference Drawing_WIL-44-R4

QUESTIONS AND ANSWERS

The following questions were asked at the Site Investigation and through emails.

1.0 General Exterior Work Questions

See Addendum No. 2 for Questions Q1.1-Q1.14

Q1.15 Reference: Detail 3 on Sheet 44. Is foam required only at the HSS sleeper anchor locations or the full length of the sleepers?

A1.15 Foam is only required at the HSS sleeper anchor locations.

Q1.16 Reference: Note 1 on Sheet 42. Note 1 states that it is essential that the reservoir roof structure be protected from moisture infiltration during the entire construction period. It goes on to say that the existing membrane will be left in place and all penetrations patched and maintained until the new membrane is installed. Finally it states that due care must be taken when work activities are conducted on the old and new membrane. How do we put a price in for the repair of the existing membrane when we don't know the condition of that membrane?

A1.16 The existing EPDM membrane is expected to be in good condition and should require minimal repair as long as work is conducted with due care.

Q1.17 Further to Q1.16, what is the extent of protection required for the existing roof membrane for the entire construction period.

A1.17 During construction, the Contractor will be expected to tape up any seams or cuts as required to protect the existing membrane before the new one is placed.

Q1.18 Further to Q1.16, is the roofing trade responsible to maintain the existing and new membrane from damage of other trades?

A1.18 This issue should be discussed by the Subcontractor with the Contractor.

Q1.19 When we open up the existing EPDM membrane for the hollowcore slab repairs, we are responsible to maintain waterproofing at these areas. When the concrete cures, will it not release moisture under the replaced membrane? As the existing membrane is loose laid, there is a potential for water migration under the existing membrane.

A1.19 This is not expected to be an issue with the SCC repair material.

Q1.20 As there are other trades working over the new membrane, who is responsible for removing the over burden (metal panels, insulation, sleepers) to inspect this membrane if there is a suspected membrane issue?

A1.20 A warranty inspection will be conducted before the expiry of the Warranty period. If any issues are evident at this inspection, the Contractor will be responsible for addressing them under the Warranty requirements of this Contract.

Q1.21 How much time has been allowed for bad weather (wind, rain, etc.) in the critical date for Substantial Performance for the installation of the new roof envelope? This is a very tight schedule (August 22 – October 31) given potential weather delays.

A1.21 The schedule was prepared assuming typical weather conditions in Winnipeg for those months. The Contractor is advised that only unforeseen non-seasonal weather events will be considered to adjust the schedule on a case-by-case basis.

Q1.22 Reference: Sheets 38-41, 44. Sheets 38-41 show the sleepers running parallel and perpendicular to the insulated panel sheets. On Sheet 44, they are running perpendicular only. Please clarify.

A1.22 Sheets 38-41 show sleepers installed along hollowcore joints. The details on Sheets 43 and 44 also show that the sleepers are to be installed along the hollowcore joints (parallel to the hollowcore span). The metal roof panels are installed perpendicular to the sleepers (see Detail 8 on Sheet 44). In no case are there metal roof panels installed parallel to a sleeper.

Q1.23 If the slotted hole in the sleeper allows movement of the sleeper, what is between the sleeper and the EPDM to prevent wear of the membrane?

A1.23 This is not considered a potential issue based on the insulated metal roof design.

Q1.24 Reference: Detail 4 on Page 43. Detail calls for the EPDM membrane to go underneath the ethafoam rod. EPDM is not compatible with asphalt. When we mop the new membrane over the top of this and the ethafoam rod, the EPDM will delaminate and the ethafoam rod will melt. Please advise.

A1.24 The standard industry practice and the manufacturer's instructions should be followed for executing this work.

Q1.25 Further to Q1.6 (Addendum 2) regarding the electrical works at the entrance building, sufficient information was not provided in the response. Please provide further clarification.

A1.25 The intent of the electrical works is to just temporarily support the existing electrical conduits as required during the building envelope works. For additional information, please see 930-2015_Addendum_3_Reference Drawing_WIL-44-R0 for record drawing information regarding the existing electric layout at the entrance building.

2.0 General Interior Work Questions

See Addendum No. 2 for Questions Q2.1-Q2.20

Q1.21 Reference: Sheets 24-27. Some of the column locations have details provided but there does not appear to be a note indicating what detail to use when one has not been indicated. For example, are all Type 1 bearing assemblies to use detail 5/30?

A1.21 Bearing details shown on Sheets 28-31 are typical and show all combinations of pad/plate assemblies. For example, at grid reference E12, a Type 1 bearing assembly consists of two MK B-3 pads and two MK P-3 plates. Please see the Schedule of Bearing Assemblies in the Specifications for the location of each type of bearing assembly listed on Form B, including exactly which pad and plate MK numbers and quantities are to be used at each column location.

Q1.22 The bearing plate installation and assembly construction procedure notes indicate that we are to clean exposed beam ends, sides and bottoms by sandblasting. Can you indicate the extent of this surface prep? The drawings do not indicate how far back this is to be done. Or is this only required where the new bearing plate sits, or where concrete repair is required?

A1.22 Sandblasting of beam ends/sides is only required at beam ends that are to be repaired (concrete spall repairs). These locations shall have all old coatings and surface contaminants removed and shall have the fine aggregate exposed. On average, there is approximately 0.3 m² of area to be sandblasted for each beam end repair location. At locations with no beam end repairs or no existing coatings and surface contaminants, surface preparation/cleaning shall be carried out with a wire brush.

3.0 Questions Regarding Record / Reference Documents

See Addendum No. 2 for Questions Q3.1-Q3.2

No further questions.