

NSW Department of Commerce

RIVERINA/WESTERN REGION – WAGGA WAGGA OFFICE

EXTENT OF WORK

1.1 PROJECT DETAILS

Location: James Fallon High School

Description of the Works: Air-Cooling.

1.2 TRADE QUALIFICATIONS

The Contract must only use qualified tradespersons who hold a current trade licence for any trade works carried out under this Contract.

The Principals Representative must approve any exception to this requirement.

1.3 CONTRACT DOCUMENTS

The Contractor must notify the Contact Officer before the tender closing date and time if any discrepancy, error or omission is found in the documents.

1.4 CLEAN UP SITE

The Contractor must keep the site clean and tidy and dispose of all rubbish and surplus materials promptly.

1.5 PROJECT DESCRIPTION

1.6 Multi Purpose Hall

Install to the roof area over the Hall 2 x side discharge evaporative coolers and to the Stage area 1 x side discharge evaporative cooler mounted on "Duragal" support stands complete with acoustic bends to penetrate the roof.

Extend the insulated duct from each unit to a 4 way blow plenum mounted with the bottom of the plenum finishing 4 M above floor level

Install electrical & water supply to each unit with drain pipe to adjacent gutter.

All water supply pipes to be insulated where exposed to reduce freezing in winter.

All internal, exposed ductwork, hangers & brackets to be painted in a colour to match existing adjacent surfaces (ductwork to roof area will not require painting).

Install to the 8 existing window sections, weatherproof relief air grills as per the details on the drawings.

Install an approved ladder support bracket and roof anchor points to allow for safe access to the roof and between coolers, for installation and future servicing.

NSW DEPARTMENT OF COMMERCE

JAMES FALLON HIGH SCHOOL

FALLON STREET ALBURY NSW 2640

AIR CONDITIONING UPGRADE

MECHANICAL SERVICES BRIEF

Document: 2900-J-B01
"TENDER ISSUE"

Dated: 9th January 2009

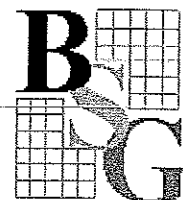
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01 - SCOPE OF WORK - MECHANICAL SERVICES GENERALLY

This section of the brief covers the installation, testing, commissioning and maintenance of Mechanical Services proposed for the air conditioning upgrade of the Hall/Assembly Area within "James Fallon High School" located in Fallon Street, North Albury NSW 2640.

SCOPE OF WORK "SUMMARY".

The works associated within this project are located at Building H.

Building H consists of two areas with reference numbers *HR005* & *HR004*. These areas are the Assembly Area and Stage area respectively.

They shall be served via Evaporative Coolers "EC-01, 02" serving the Assembly Area and "EC-03" serving the Stage Area.

Evaporative Cooler EC-01 & 02 shall be mounted on the roof over the area being served. Supply air duct shall penetrate the roof and terminate at a four way blow plenum diffuser. The mechanical contractor shall note that all existing infrastructure shall remain unchanged.

Evaporative Cooler EC-03 shall be roof mounted. The supply air ductwork shall penetrate the roof and serve the room via a four way blow plenum diffuser.

Where possible roof mounted coolers should be installed no closer than 3 metres from the edge of the roof.

02 - EXTENT OF WORK - MECHANICAL SERVICES GENERALLY

REQUIREMENT:

New Equipment & Systems.

- Supply & Installation of Two (2) off Side Discharge Evaporative Coolers "EC-01 & 02" serving Assembly Area "HR005", as shown on the tender drawing.
- Supply & Installation of One (1) off Side Discharge Evaporative Cooler "EC-03" serving Stage Area "HR004", as shown on the tender drawing.

Associated Miscellaneous Items.

- Air diffusion equipment (Diffusers) and ductwork as shown on the tender drawing.
- Supply & Installation of relief dampers as required.
- Supply & Installation of volume control dampers for balancing as required.

02 - EXTENT OF WORK (Cont'd)

- Support bracing & hangers for ductwork, straddle purlins where applicable.
- Supply & Installation of Support Stands "Dura gal" for all plant, as shown on the tender drawing.
- Supply, Installation & Connection of water supply from suitable points adjacent each evaporative cooler complete with isolating valves. Contractor to visit site to determine suitable connection locations. All cold water pipes shall be insulated where exposed to weather.
- Supply & Installation of hose cocks adjacent evaporative coolers for servicing as required.
- Supply of overflow drains from Three (3) off Evaporative Coolers to down pipes or suitable drainage points adjacent each unit.
- Supply & Installation of Electrical Supply from EDB within the buildings being served, complete with isolators for each unit as shown on the tender drawings. The contractor shall confirm appropriate electrical supply is available from within the board prior to commencement of any contractual works.
- Supply & installation of control wiring between all equipment and their associated control panels as required. IE: All control & instrumentation. Locations shown on tender drawing are approximate only the contractor shall liaise with end user for final suitable locations.
- Provide all over flashings to all major roof & wall penetrations. Also provide deck-tights for minor pipe work penetrations.
- The contractor must allow for all associated works that "MAKE GOOD" the installation, including any other associated works, such as plumbing, electrical, structural & cosmetic works etc... completing the installation.
- Provide Painting to both interior & exterior ductwork, colours to be confirmed by the client prior to application. The contractor shall ensure that all ductwork is adequately cleaned via washing down with "sugar soap", applying one coat of Galvanised Iron Primer, then two coats of Exterior Acrylic equal to "Dulux Weather Shield".
- Supply & Installation Ladder hitching brackets & harness hitching points as nominated on tender drawings.
- Supply & Installation of volume control dampers for shut off purposes complete with exterior and internal grilles as shown on the tender drawing.
- No shop drawings shall be required BUT the design drawings are general, the contractor shall allow to visit the site and adjust the design to suit the practical needs gathered during the site investigation.

02 - EXTENT OF WORK (Cont'd)

- Air balancing and commissioning of plant.
- Preparation of operating & maintenance manuals.
- Warranty and maintenance during the 12 month defects liability period, commencing at practical completion shall be the responsibility of the contractor.

The yearly "Start Up" and Shut Down" shall be the responsibility of the school maintenance department.

In General any non fault work shall be completed by the school maintenance department.

- If and where relevant all mechanical services components nominated herein shall be installed in accordance with all relevant Authorities having jurisdiction over the site. The contractor shall comply with the Building Codes of Australia "BCA", Australian Standards / guidelines AS-1668 Part II and all other relevant guidelines.

03 - EQUIPMENT DUTY SPECIFICATIONS

ITEM	DUTY	ACCESSORIES
EC-01 & 02 Evaporative Cooler. Side Discharge HR005	Cooling Air Volume – 4,025 L/s System Resistance – 120 Pa. (Estimate) Centrifugal Fan.	Off / Vent / Cool High / Low Fan Speed Draft shut off louvre's
Aira AL18 030 (or similar) 2 off		
EC-03 Evaporative Cooler. Side Discharge HR004	Cooling Air Volume – 2,650 L/s System Resistance – 110 Pa. (Estimate) Centrifugal Fan.	Off / Vent / Cool High / Low Fan Speed Draft shut off louvre's
Aira AL18 011 (or similar).		

IMPORTANT NOTE:

The above Makes & Model numbers have been noted for a guide only, it shall be the responsibility of the successful tenderer to ensure that the makes and models selected, suit the intent of the design. Eg ensure that the resistances and airflow etc. are achievable. If the contractor finds that the Makes & Models do not match that of the duties nominated, the contractor shall have duties clarified or allow the more expensive option.

04 - DUCTWORK

INSULATION (Aluminium foil laminated type), (Mineral Wool & Glasswool).

Physical Properties to SMACNA Fibrous Class Duct Construction Standard.

Standard: To AS 3742

Maximum Thermal conductivity: 0.036 W/m²K at 20deg.C.

SHEET METAL

Material

Zinc-coated steel, coating class G2/Z275

05 - AIR GRILLES

GENERAL: Manufacture: Provide proprietary grilles.

EVAPORATIVE SUPPLY AIR GRILLES:

Relief Air Grilles

- Air Grilles Model RA45 (internal) & OAL-50W (external) (or equivalent).
- Size to suit window mullions .
- Painting Powder Coating. (Colour to be advised prior to ordering).

Supply Air Plenum Diffusers

- Plenum Diffusers "Bonaire Model GP1 & GP2" (or equivalent).
- Size to suit air volume.
- Painting Powder Coating. (Colour to be advised prior to ordering).

Volume Control Dampers

- Air Grilles Model Series V-OL (or equivalent).

Note: Make & Model Numbers for grilles, diffusers etc. have been nominated for a guide only, the Mechanical Services Contractor shall confirm mounting details of all air diffusion equipment prior to final selection & ordering.

06 - EXTENT OF ASSOCIATED WORK BY OTHER TRADES:

REQUIREMENT:

The contractor must be aware that there are no other contractors associated with the works described herein.

The contractor must allow for all associated works that "MAKE GOOD" the installation including any other associated works, such as plumbing, electrical, structural & cosmetic works.

07 – GENERAL

Generally this document is a “Brief” allowing Mechanical Services Contractor to price a “Scope or Works” for this project, NOT TO BE USED FOR CONSTRUCTION PURPOSES”. A further review of both this Brief & the associated tender drawings shall be performed prior to the ordering of plant & or the commencement of shop detail drawings.

08- PERFORMANCE - MECHANICAL SERVICES GENERALLY

EQUIPMENT CONTROL:

1. The primary control of all plant shall be via proprietary type wall mounted Off / Vent / Cool, High / Low fan speed controllers located within each area being served. The mechanical contractor must coordinate the final location of the control points with the end user prior to installation.

09 - WIRING - MECHANICAL SERVICES GENERALLY

ELECTRICAL WIRING:

To AS 3000 and AS 1668.1 Clause 4.10.2

REQUIREMENT:

- Connect power supply & control wiring to Three (3) off Evaporative Coolers from Electrical Distribution Boards located within each building being served.
- All other equipment as described with the tender specification & drawings.
- Power Isolators shall be fitted in close proximity to all Coolers.
- Power supply for each item of plant shall be provided from the distribution board within each area being served. A separate circuit shall supply, all circuit-breakers shall be new and, where fitted to existing distribution boards, be selected to match existing equipment.

Item	240v / 415v	Amps	Quantity
EC-01 & 02	415v	3.0	2
EC-03	240v	1.1	1

Note:

The above electrical loads are approximate only. The successful tender shall verify and confirm electrical loads prior to installation.