VICTORIAN CONSTRUCTION MATERIALS LABORATORIES ASSOCIATION, INC

NEWSLETTER

PO Box 310, Kilsyth Victoria 3137
vcmla@nickfm.com.au

Vol 1 No 1 May 2006

WELCOME FROM THE CHAIRMAN

In August 2006, over 20 interested people met at NATA offices to discuss the need to form a group in Victoria to represent the interests of laboratories involved in Construction Materials Testing.

The name Victorian Construction Materials Laboratories Association was agreed upon.

As a result of this meeting a steering committee was elected to progress the formation of the Association.

The committee consists of:

- Ernie Gmehling - Chairman
- Con Rovira - Deputy Chairman
- Malcolm Talbot - Treasurer
- Dom Meadley - Secretary
- Peter Fry - Committee member
- Geoff Hughes - Committee Member
- Bill Brown - Committee Member
- Brian Angus - Committee member (resigned April 2006)
- Kim Beglehole - Committee Member

Based on agreement at the initial meeting, a constitution was drafted and the Association was incorporated

NATA approached the newly formed Association to organise the Australian Conference of Construction Materials Testing in Melbourne in May 2006. The Association enthusiastically grabbed the opportunity to host the Conference and this newsletter is issued on the occasion of the opening of the conference

The committee has met almost monthly to develop the base for the Association. The financial needs were discussed firstly and it was resolved that we would set the fees to enable individuals to actively participate as well as to encourage companies to become members.

The benefits of membership and a Code of Ethics, based on the AGTA, Inc. Code was developed and have been adopted.

Activities planned for the future include technical workshops, representation on Standards Committees, General Meetings, Social Events and a regular newsletter.

All staff involved in testing in soils, aggregates, concrete, asphalt, cement, bitumen testing in Victoria and Tasmania have been invited through their laboratories to participate in the Association and become members.

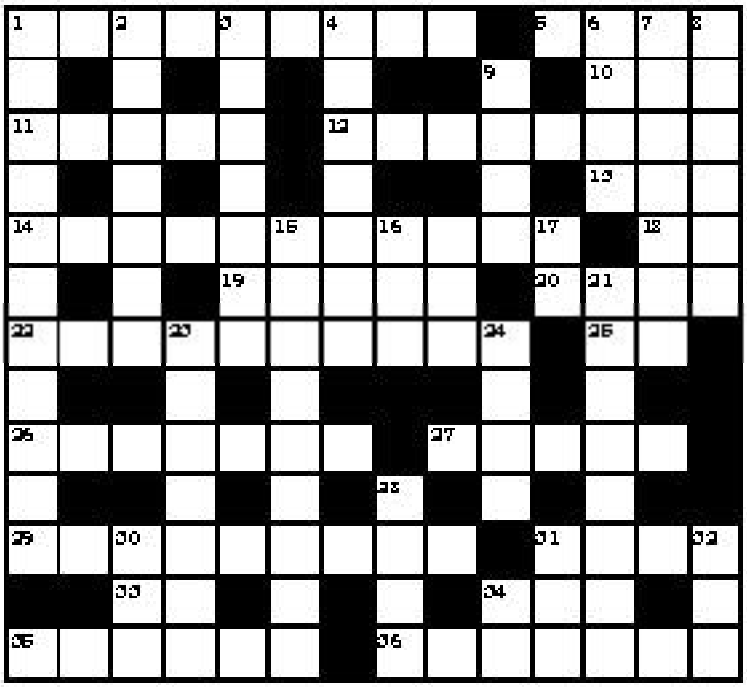
Those who are not currently members are welcome to join.

It gives me great pleasure to introduce our members to this our first edition of the VCMLA's newsletter. We hope that this will become a valuable document for keeping everyone in touch with what we as a committee and organisation are achieving for our members. Like all organisations this is all achieved by the selfless devotion of time and effort from members that care enough to make that effort. I would like to take this opportunity to thank those that have shared in the passion to obtain recognition of our profession and skills by forming this association.

We will endeavor to improve the format of this newsletter but I'm sure it's going to take a few attempts to reach the ideal. We will need our members to provide articles of interest and topic suggestions to ensure it is a good read. So, feel free to send in anything of interest. We would welcome technical items, cartoons, story's of projects performed in far away places, great characters and recognition of members for life long dedication to our profession. Send articles to: VCMLA newsletter PO Box 310, Kilsyth Vic 3137.

Ernie Gmehling
Chairman

CROSSWORD



Across

1	Isotope of this element is used in moisture determination
5	Records
10	Latin prefix meaning three
11 & 28 Down	Stack used for particle size distribution
12	In three directions
13	Roman numeral 106
14	This man gave us a cup, but he is not the tea lady
18	Roman numeral 99
19	Did anyone hear a horse ?
20	Laboratories' auditing body
22	In the year of our lord (Latin)
25	Type of law
26	First
27	Hand tool, generally intended for soil, not for concrete
29	Jacket popular in the past
31	Pioneering Australian company
33	Chemical symbol for Gold
34	Byway of
35	Aviation asphalt
36	Density gauge manufacturer

Down

1	An organised body of persons with a common goal
2	This man gave us crumbs, but he is not a baker
3	Country that perhaps does the least soil testing in the world
4	In the mean time
6	Of the ears
7	Exerts a force of 9.8 Newtons per sq. metre
8	Common earth compound
9	> 0.075 mm , < 2.36 mm
15	Filter medium
16	Concrete mixer abbreviation
17	Unit of width in printing, narrower than an Em
21	Unexpected
23	Moisture at maximum density
24	25.4 mm
28	See 11 Across
30	Serbian enamel
31	Minimum number of test sites required to establish an assigned value
32	This US State gave us a soaking test, but it is not rain
34	Hairspray minus S

A HISTORY OF TESTS FOR VICTORIAN ROADS

by
Dom Meadley

The Country Roads Board (CRB) was formed in 1915 and its first annual report provides a wonderful insight into naturally occurring road making materials by the then Chairman, Calder.

The earliest testing equipment used by the CRB was a brass ring 2 inches internal diameter which was used to test the size of macadam particles. If they passed through the ring they were too small. (This was better than testing if a stone could fit into one's mouth.)

The CRB had all its testing performed at the University of Melbourne until 1929 when it appointed its first testing officer, a graduate engineer named Alf Gawith. Alf continued in the newly formed materials testing section until he retired in 1970.

In 1938, the tests used by Victoria included Liquid Limit, Plastic Limit, Specific Gravity and Field Moisture Equivalent and Mechanical Analysis to ASTM standards. Tests for LA were performed to ASTM methods but the Aggregate Crushing test was to BSS methods.

In 1946, he reported the use of the Proctor and CBR tests to ASTM methods.

The CRB Laboratory Manual of 1951 included typed versions of the ASTM tests.

In 1957, the first aggregate test methods for Australia were published as appendices in AS A77 and in 1966, the first Australian Soils Testing methods were published in AS A89. Victoria adopted most of these methods and they were specified in its Standard Specifications.

In 1965, in a roller trial experiment during the construction of the Tullamarine Freeway, the CRB commenced using the sand replacement method using an IPCAD device. This trial was also used to test out a Siemen's nuclear gauge.

The 1970s saw a rapid expansion of roadworks in Victoria. More testing was required and the number of staff in materials testing increased from about 50 in the 1960s to over 250 in 1988. This required a comprehensive training package to ensure consistent testing. In 1976, the CRB released a two-volume Laboratory Manual which included Soils, Aggregate, Bitumen and Chemical tests. The tests were quite detailed in many cases and the manuals were a good training tool. The detail is similar to that included in the current Test Method RC 301.01. This was superseded very shortly by a three part Manual of Testing Procedures – Chemistry, Asphalt, and Soils and Aggregates and a Manual of Calibrations. Shortly afterwards a Manual of Codes of Practice was introduced.

In the early 1980s additional tests were introduced including assigned values, microwave oven moisture content, one-point compaction tests, KVD sand replacement tests and vibratory compaction tests. Only the assigned values for MDD and OMC and microwave oven test remain after considerable litigation issues and problems with variable equipment.

After highly–publicised distress in a major freeway, the CRB/Road Construction Authority conducted a large amount of research into the quality of stone resulting in the publication of test methods for Soundness and Visual Assessment of Stone Quality which have now been included in AS 1141.

Concrete testing was performed to Australian Standards and generally asphalt testing followed the methods detailed in AS 2150 Appendices. Binders were tested in accordance with the methods included in AS 2341.

In the mid-1980s nuclear gauges were introduced and after considerable research, a four-point stone block calibration method was adopted after unsuccessfully using the correlation between sand replacement tests and nuclear gauge measurements.

In 1985, the Principal Technical Committee of NAASRA decided that State Road Authorities should adopt Standards Australia methods whenever possible. A major investigation by NAASRA of Compaction Assessment was published in the NAASRA NTR-08 document in 1989. This report recommended a large number of changes to AS 1289 methods related to compaction control. The earthworks industry was also concerned about AS 1289 and variations in interpretation of which tests to use and when to apply them. This resulted in the publication of AS 3798.

VicRoads (formerly the CRB) committed considerable resources to assist in the revision of the soils, aggregate, binders, concrete and asphalt test methods. A number of the Australian Standard soils test methods were revised as a result of the NAASRA investigation and were released in 1992 and subsequent years. The asphalt test methods were published as a complete series, AS 2891, and the concrete tests methods included rubber capping

and smaller cylinders which was an initiative taken by CRB/VicRoads some years earlier. VicRoads took the leap and adopted the Australian Standards *in tota* whenever possible. When Austroads test methods were released, VicRoads tended to adopt these as soon as they were published and, after a 6 months of running parallel methods, removed their methods from the Manual of Testing There is still a number of VicRoads test methods which cover specific areas of testing which, in general, are not covered by Standards Australia methods. However some of these methods are being included in new Austroads methods and it is most likely that they will no longer be published by VicRoads after that time.

In Victoria, we are fortunate that VicRoads has adopted the acceptance of national standards whenever possible. It is hoped that this practice will continue and that even more of the VicRoads methods will fade into the past.

It is unfortunate that sufficient research in Victoria is not been undertaken in the civil engineering testing arena as there are still many improvements to be made, particularly in this time of technological change, skills shortages and risk management issues.

References:

Compaction Assessment, NAASRA Technical Report NTR-08, 1989.

Gawith A.H., Coulter T.M., Some Phases of Road Research in Australia, *The Journal of the Institute of Engineeers,* Jan-Feb 1957

Gawith A.H. Review of Road Research Overseas, *The Commonwealth Engineer* April 1950.

Gawith A.H. Soil Compaction, Moisture and Bearing Value, *The Journal of the Institution of Engineers,* Vol 18, 1946.

Gawith A.H, Garland D.J., Patterson, K.E., Examination of the Sub-Soil of Roads, VIIIth Congress PIARC The Hague, 1938.

CORPORATE MEMBERS OF THE ASSOCIATION

Anacon Laboratory Services 2 Hall St PORT MELBOURNE VIC 3207 (03) 96465520.
e-mail anacon.lab@barro.com.au

AS James Pty Ltd 16 Libbett Ave CLAYTON SOUTH VIC 3169 (03) 9547 4811
e-mail: timh@asjames.com.au www.asjames.com.au

Chadwick Geotechnical Factory 1, 28 Vesper Drive NARRE WARREN VIC 3805 (03) 9705 1333 e-mail: billb@chadwickgeotechnical.com.au www.chadwickgeotechnical.com.au

Geotest Civil Services Pty Ltd 78 Mornington Street NORTH GEELONG VIC 3218 (03) 5277 1900
e-mail: geotestcivil@optusnet.com.au

Global Geotechnical 9 Hanrahan Street THOMASTOWN VIC 3074 (03) 9464 0100
e-mail:global.geo@bigpond.com

Ground Science Pty Ltd Factory 11, 8-20 Brock Street THOMASTOWN VIC 3074 (03) 9464 4617
e-mail: groundscience@optusnet.com.au www.groundscience.com.au

NickFM Pty Ltd PO Box 310 KILSYTH Vic 3137 e-mail: mdomm@nickfm.com.au www.nickfm.com.au

RoadLab Testing Services Pty Ltd 3 Anchor Drive BALLARAT VIC 3350 (03) 5339 9235
e-mail:roadlabb@netconnect.com.au

Roadways Pty Ltd Ormsby Street, Wivenhoe BURNIE TAS 7320 Mr L C Van Rossum (03) 6431 5077
e-mail:len.vanrossum@roadways.com.au www.roadways.com.au

Terra Firma Laboratories Factory 3 20-26 Enterprise Ave BERWICK VIC 3806 (03) 9769 5799
e-mail: tflabs@bigpond.com

STATE ROAD AUTHORITY TEST METHODS

The use of multiple test methods for the same test often creates problems in regard to:

- Selection of the right method
- Use of the incorrect method
- Staff not understanding the differences
- Issue of non-conformances due to the above by NATA
- Duplication of forms, reports, etc.
- Keeping up-to-date with methods
- Costs in changes to software
- Confusion when testing interstate

Despite the claim by the State Road Authorities and others that Standards Australia is too slow to change its methods, the evidence in most State Road Authority Manuals, as shown by the date of issue/ revision, contradicts this strongly.

Page 179 of the NAASRA Technical Report NTR-08 *Compaction Assessment,* stated:

> Only two of the State Road Authorities surveyed by the working party report that they exclusively use SAA test methods: the remainder use their own methods for the determination of laboratory and field density values.
>
> At the 69th NAASRA PTC meeting in September 1986, a policy decision was taken that the NAASRA (now Austroads) members use SAA methods whenever appropriate….
>
> In fairness to the SAA test methods it should be mentioned at the outset that the SAA policy on the content of test methods is that a method should cover only the essential requirements of a test and should avoid the inclusion of items which are more properly matters of technician training and laboratory practice. However, it is because of the omissions of items of this nature that many NAASRA members use their own methods in preference to the SAA methods. While omission of items of this nature presents a problem which is important and relevant one, the working party believes that the NAASRA members ensure the SAA methods are of suitable technical quality and then adopt them….
>
> It is the belief of the working party that uniform adoption of SAA methods will minimise the contractual disputes that are currently occurring based on deficiencies in the test methods...

As a result of this report, considerable effort was placed on revising AS 1289 in 1992 and subsequent years. A working group which included 5 members of the state road authorities was established and the resultant re-issue of the old A, B and E –series in 1992-1994 was agreed upon by both the working group and the main CE/9 committee and the altered methods were published as the AS 1289 1, 2, 5 series.

Only Northern Territory, Victoria and South Australia have adopted these methods, although South Australia has included a few variations in its methods.

The questions we need to ask are:

- What are the differences in the methods?
- Do they make significant difference?
- Can Australian Standards be modified further to take these differences into account?
- Will the publication of the *Soils Handbook* and the emphasis placed on technician training as discussed in the training session at the conference make sufficient difference?

Unless the Associations in each state tackle these problems and discuss them with the relevant State Road Authority, there is little likelihood of adoption of uniform test methods across Australia.

The challenge is not just for the State Road Authorities, although, it is hoped that they will take it up in earnest. Individual laboratories need to combine in their efforts to reduce the duplication and sometimes triplication of test methods and often cross-border issues. Equally, the Standards Australia committees need to request, rather than to seek by public comment, information from the State Road Authorities that would lead to their adoption of the Standards Australia test methods.

Another challenge to all of us is the issue of Austroads test methods. These methods have been developed by committees which consist of members of the State Road Authorities and then voted and agreed upon by senior representatives of each Authority prior to their publication. Let us hope that each of these will not have six or seven methods associated with it.

Although we in Victoria have been well cared for by VicRoads in this respect as the use Codes of Practice to guide us in one direction when small variations are permitted in the method or the selection of the method, those of us who test interstate need to keep a close eye of what is happening.

If you have any issues with State Road Authority test methods, please let the Association know..

WHAT IS HAPPENING WITH STANDARDS AUSTRALIA TEST METHODS?

It is hoped that this will be a regular feature of our newsletter to keep you informed on any proposed changes to and programs for review of Standards Australia test methods to enable you to make a contribution to methods you use.

The VCMLA will be seeking representation on a number of Standards Australia committees including:

BD-042	Methods for Testing Concrete
CE-006	Asphalt
CE-009	Soils for Engineering Purposes
CE-012	Aggregates

Committee CE-027

AS 3798 is currently being reviewed. The proposed revised edition was issued for public comment last year and a few changes were made on the basis of the small amount of comment received. This revised document is still to be finally balloted before its re-issue.

Committee CE-012

A number of the aggregates test methods are to be re-issued as there ten-year cycle has passed and they have been reviewed by the committee. These include AS 1141 14, 16, 33, 34 and 35.

AS 1141 11, 12, 18 are under review at the moment.

The committee is also looking at revisions of AS 2758 1 – Aggregates for Concrete

Committee CE-009

AS 1289 3.8.1, 3.8.2 and 3.8.3 are due to be re-issued soon with a few minor changes

Revisions of AS 1289 5.4.1, 5.4.2 and 5.7.1 have been balloted but there is no date for their release as yet.

Public comment for AS 1289 5.8.1 has been reviewed and a new draft document has been prepared for ballot.

After the public comment for AS 1289 6.8.1 Resilient Modulus, it has been referred back to Austroads for further action.

AS 4133 2.1.1, 3.1, 3.2 and 3.3 were published in December 2005.

AS 4133 4.1, 4.2 and 4.3 are currently under review and public comment for these documents will be sought soon. The committee is also looking at strength tests for soft rocks.

Stabilisation test methods

The committees of CE-009 and CE-012 have agreed that the stabilisation methods in AS 1141 be included in a new stabilisation series of test methods. This will be done when AS 1141 51, 52, 70 and 72 become due for revision under the ten-year rule.

As part of an agreement between Austroads and Standards Australia, new stabilisation methods will initially be issued by Austroads unless they are methods not used by the State Road Authorities. A number of the current State Road Authority methods will be included in this group of tests.

CE-006 Asphalt

This committee has not met for a considerable time. Drafts of the Sampling method, AS 2891 1, have been prepared but not issued for public comment as yet.

A draft for the Ignition Oven method is also under consideration.

The gyratory compaction, resilient modulus and creep tests need further consideration by Austroads which may lead to publication of these methods by Austroads rather than by Standards Australia.

VCMLA will list methods for public comment as soon as they are known on its web site. It is hoped tha members with an e-mail address registered with the Association will be notified of these documents.

IS ACCREDITATION ALL IT IS CRACKED UP TO BE?

by Seymour Butt

Warning: This article is classified as **O** – Offensive to those without a sense of humour or with an inability to place one's tongue in one's cheek. It may also be considered offensive to bigots, zealots, raging feminists and those who do not understand it.

A recent article in the *Herald Sun* provided the mathematical formula for the ideal shape of female posteriors which was considered to equal 80 for the ideal posterior.:

$$B_s = \frac{(S + C)\,x\,(B + F)}{T - V}$$

where

B_s = ideal posterior shape
S = shape of or droopiness of the bottom
C = sphericity of the buttocks
F = firmness
B = muscular wobble
V = hip to waist ratio
T = skin texture and level of cellulite

Imagine if a laboratory requested that it be accredited to perform tests to measure this value.

Firstly, there would be considerable discussion amongst the fields to decide who would accredit the facility:

Biological – the cellulite is ours
Acoustics and Vibration – the wobble is ours
Physical and Dimensional Metrology – the hip to waist ratio and sphericity is ours
Inspection – the skin texture is ours (could the laboratory afford the WorkCare and Professional Indemnity Insurance Cover from being sued for defamation and responses by unsatisfied customers?)
Medical – they will need us if it is to be claimed against Medicare
Construction Materials – all structures are ours
The vote would probably eventually go to Non-Destructive Testing due to the sensitivity of the sample.

Now it would be up to the advisory committee or technical assessor to decide what are the essentials for the tests.

Imagine the wonderful discussion –

- surely there will be problems with the undue influence since the customers will want to achieve a perfect score (80)
- other undue influences would be due to testing one's partner – a cuff over the ears, a few nights on the couch or long-term silent treatment
- what competency and training is required for the testers – how many samples should they have tested before being considered competent?
- what would the client feedback prove? – on the basis of the final result, and general experience, there would be many unsatisfied customers – are these legitimate complaints requiring corrective action by the laboratory (possibly by the client)
- what environmental conditions need to be set and recorded – a cold butt may change shape
- what equipment is needed to measure shape, wobble, and what are the uncertainties of that equipment
- should measurements be made with or without clothing?
- how does one determine texture – calibration of the texture measurer using the touch method might involve multiple measurements to determine competency. (Remember that more than 30 repeats are relatively fruitless in enhancing accuracy)
- handling of samples – very carefully, we would hope

The method would also require validation. There is probably no study other than the one reported by the *Herald Sun*. However, the laboratory need not give up hope. For many years, the **Ogle** factor O_g has been used by males to measure the suitability of female body shape.

This was formerly measured by the intensity of the wolf-whistle from construction sites (hence CMT's plunge for the test). This has now fallen into disrepute thanks to Equal Opportunity Acts, etc. There are still other measures of the ogle factor, such as the number of men walking into immovable objects such as trees, poles and parking meters during summer, the number of head-to-tail car impacts in slow traffic during lunch breaks in the main city thoroughfares and the number of burnt tongues due to rapid drawing in of breath whilst sipping coffee at a footpath restaurant.

Having sorted out the method validation, we then need to further advance to the uncertainty of measurement. Here we open a can of worms to such an extent that it almost mandatory to report the MU.

The uncertainty U_{Bums} at the 95% confidence level of B_s can be expressed in the form shown below:

Consider the uncertainty components of

S – shape (droopiness) –
- the measurement of deviation from a straight line of the droop
- temperature at time of measurement
- age of the specimen
- length of droop

C – sphericity - as for the droop
- droop effect on sphericity

B – wobble –
- frequency of the wobble
- amplitude of the wobble
- exciting frequency of the test

F – firmness
- the force measurement
- depth of penetration into the buttock
- the financial attitude of the specimen (free spending or tight-a—sed)
- age of the specimen
- pre-treatment – e.g. exercise beforehand or not

V – hip:waist
- location of each measurement
- the stiffness of the measuring device

T – texture/cellulite

This measurement has two components – texture and cellulite which may be dependent or independent.

It is considered that multiple measurements need to be made to make a Type A estimate of this property. However too many measurements may change the capability of the measuring device – i.e. the tester.

Other concerns may be a slap on the face or expressions of pleasure which could change the test accuracy.

Taking all these uncertainties into account, it is estimated that the result could have an uncertainty of ± 10. Wow! Could the results be misrepresented to keep face (or bottom)?

Reports would need to include a disclaimer – The results of this test may cause extreme disappointment, depression or over elation. This test should not be revealed to persons under 25 due to possible influence on anorexia or to persons liable to strike the bearer of the news contained in this report.

CONCLUSION

Before accreditation of this test it would be important to carry out a series of interlaboratory tests and preferable to look at the repeatability and reproducibility (not reproductibility of the participants) of the test to validate it further. It is considered that there would be any number of laboratories interested in these studies.

However, after all this effort to analyse the method, uncertainty and influences, it is most likely that the accreditation body would reject the application for accreditation for this test due the high probability of frequent litigation, protests (by both those tested and feminist groups) and bringing both the laboratory and the accreditation body into disrepute.

It may also cause concerns in regards to the Equal Opportunity Act. It is now up to the females of the species to provide their assessments of the “buns” so much talked about to give another test and formula so that the whole picture is provided.

All correspondence may be entered into at:

butt@derriereshape.ars.up

$$UBums = 2\,x\,\sqrt{(u_S\,x(\frac{dUB_{bs}}{dS}))^2 + (u_C\,x(\frac{dUB_{bs}}{dC}))^2 + (u_B x(\frac{dUB_{bs}}{dB}))^2 + (u_F\,x(\frac{dUB_{bs}}{dF}))^2 + (u_T\ x(\frac{dUB_{bs}}{dT}))^2 + (u_V\ x(\frac{dUB_{bs}}{dV}))^2}$$

ADVERTISING

The Association is seeking advertisers to support the issue of this newsletter.

Advertising Rate:$50 per quarter page.

VCMLA CODE OF ETHICS

The integrity and serviceability of much of the civil infrastructure throughout our community is greatly influenced by the work practices of members of the association.

In order to maintain respect, recognition and trust from the various authorities and the greater community, members are required to promote honourable, professional practice in application of their duties.

This requires

- loyalty to the community, employer, clients and relevant authorities
- honesty and impartiality in professional practice
- constant endeavour to broaden knowledge and improve skill and expertise.

To these ends all members of the Association are required to give active support to the proper regulation of practice in the industry. They are also required to observe, apply, support, promote and advocate the rules of behaviour set out in the Code of Ethics and support other members in its observance. Members acting in accordance with this Code will have the support of the Association in a manner and to an extent determined by procedures and the committee in each case.

1. Members shall faithfully and diligently carry out their duties in the knowledge that their prime allegiance and duty is to the maintenance and promotion of the highest standards of practice in the geotechnical and construction materials testing industry and with the protection of the consumer being paramount.

2. Members shall continuously improve their knowledge of the industry by keeping informed about changes to relevant procedures, guidelines and associated regulations and shall actively assist and encourage those under their direction to do likewise.

3. Members shall without exception adhere to nominated job specifications and associated referenced test procedures and guidelines and accept any authorised interpretation of these specifications, test procedures and guidelines.

4. Members shall conduct themselves so as to uphold the dignity and reputation of the industry and shall at all times avoid any action or situation which could impair their integrity or bring the Victorian Construction Materials Laboratories Association Inc. into disrepute.

5. Members shall, without fear or favour, perform all duties for which they are accountable with impartiality, honesty and practicality.

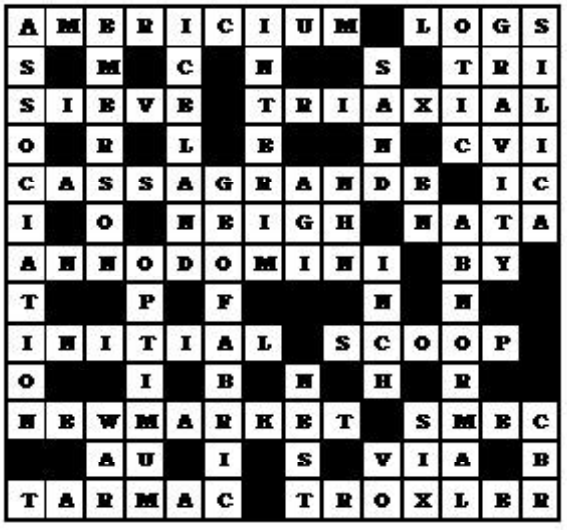
6. Members shall maintain confidentiality with clients in the course of their business dealings and conduct all transactions in a professional and open manner.

7. Members shall not act in any way which would injure the professional reputation of the Association or any member of the Association.

8. Members shall at all times have proper regard for the objects of the Rules of Association of the Victorian Construction Materials Laboratories Association Inc. and shall not take any action which does not comply with the policy of the Association or which conflicts with the Aims of the Association.

9. Members uphold the right to a fair return for services rendered in relation to their clients, for labour and testing services provided as part of the construction materials testing industry.

ANSWERS TO CROSSWORD



AIMS OF THE ASSOCIATION

The aims of the Association are to:

- improve the standard of testing in Victoria through training and other means
- advance the status of testing laboratories to the construction industry
- communicate changes in standards and technology to the laboratory industry
- provide a code of ethics by which members operate
- represent the views of the Victorian testing laboratories to peak bodies such as NATA, Standards Australia, Austroads, etc.
- inform the construction industry of the benefits of good laboratory services
- assist members in the development of suitable proficiency and inter-laboratory testing programs
- conduct activities such as meetings, conferences, technical and social events for the benefit of its members

VICTORIAN CONSTRUCTION MATERIALS LABORATORIES ASSOCIATION, INC.

ABN 5797 277 6033

PO Box 310
KILSYTH VIC

web site: www.nickfm.com.au/vcmla.htm

e-mail: vcmla@nickfm.com.au

ISSN – 1833 – 6795 (print) ISSN – 1833-6809 (web)