COUNCIL

OF

TRAMWAY MUSEUMS

OF

AUSTRALASIA

1976 CONFERENCE
30th APRIL-3rd MAY

SYDNEY

Proceedings of

COUNCIL
OF
TRAMWAY MUSEUMS
OF
AUSTRALASIA
1976 CONFERENCE

GENERAL INDEX

CONVENOR'S NOTE

The delays of one kind or another which plagued the Conference and caused many alterations to the programme, did not, however, dampen the enthusiasm of the delegates. In fact the spirit of friendship and willingness to share knowlege which began at Ballarat the previous year, was strengthened considerably.

As mentioned previously in the report on the Conference in the June, '76 issue of 'Trolley Wire', the first speaker had been unable to attend and Mr. McKern combined two papers and thereby solving the problem. This meant he did not have a formal presentation for these proceedings, but fortuneately Tony Griffin took sufficient notes of his talk to enable a resume to be printed.

A situation, common with the previous conference was the lack of time in several workshop sessions to enable successfull conclusions to be reached. This situation no doubt contributed to th e desire of all present to hold the Conferences annually for the time being at least, in an endeavour to catch up on the backlog of topics that need discussion.

A great deal has been achieved by COTMA since its formation last year, and if the enthusiasm shown at this conference is any guide, it will continue to grow and strengthen in the coming years.

David Rawlings

DELEGATES

AETM	Adelaide	Dr. JOHN RADCLIFFE	President
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		CHRIS STEELE	Secretary
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		LAURIE GORDON	Publishing Chairman
		NORM CHINN	Publishing - Sales
		BILL DENHAM	'Trolley Wire'
		DAVID COOKE	Overhauls - Body
		TONY GRIFFIN	Technical Advisor
		BOB MERCHANT	Publishing

THE CONFERENCE

Programme

Friday 30th April

1.30 pm Reception and Luncheon
3.00 pm Official Opening
3.15 pm Speaker: Mr. H.H.G. Mc KERN
'Analysis of a Report - Museums in Australia, 1975'
'How Volunteers can learn from Professional Museums'
4.45 pm Free and Tea
7.00 pm Activities/progress - report from each Museum

Saturday 1st May

9.30 am Speaker: DAVID HINMAN, THS
'Planning and Constructing a Tramway'
10.15 am Workshops A
11.15 am Morning Tea
11.30 am Policy Objectives
12.30 pm Graeme Breydon: Bibliography of Australasian Tramway Publications
1.00 pm Workshops B
1.45 pm Lunch
2.15 pm Speaker: CHRIS STEELE, AETM
'Track Construction'
3.00 pm Workshops C
4.00 pm Afternoon Tea
4.30 pm Inspection of Loftus Depot
5.30 pm Free and Tram Rides
6.00 pm Bar-B-Que at Loftus. Night Tram rides

Sunday 2nd May

9.30 am Speaker: Dr. JOHN RADCLIFFE, AETM
'Museum Motivations'
10.15 am Morning Tea
10.30 am Report of Expert Panel - Spare Parts
11.30 am Workshops D
1.00 pm Lunch
2.00 pm Depart for Parramatta
3.00 pm Inspection of Steam Tram Museum - rides available
5.00 pm Depart for Sutherland
6.00 pm Free and Tea

Monday 3rd May

9.00 am Speaker: Mr. B. SARGENT
'What an Educationist looks for from a Museum - Primary Age'
10.00 am Workshops E
11.00 am Morning Tea
11.30 am ANNUAL GENERAL MEETING
1.30 pm Concluding Luncheon

WORKSHOPS

A. 1. Members and Membership

2. Planning - Historic construction v. Local Government Regulations

3. Track and Overhead - Engineering and Standards

4. Comparison of Administrative Structures

B. 1. Historical Accuracy in Restoration and associated Standards

2. 'Trolley Wire' - Scope and plans

3. Joint Publicity - Publicity and Community Relations

4. Site Security

C. 1. Women and their role in Tramway Museums

2. Gift shop, book store and merchandising

3. Reciprocal Visits

4. Problems of continued operation - Historic cars v. 'hack' vehicles

D. 1. Publications - production, co-operation and cost sharing

2. Attitude of Management to Members

3. Rationalisation of W3/W4 truck distribution

E 1. Museums v. Tourist Tramways

2. Museums and Private Companies

3. Future Manpower - requirements and availability

4. Overhauls - Facilities required

SESSION CHAIRMEN

Friday afternoon:-	Dr. John Radcliffe, AETM
Friday evening:-	Peter Kahn, SPER
Saturday morning:-	Keith Kings, TMSV
Saturday afternoon:-	Bill Kingsley, BTPS
Sunday morning:-	Bill Daniells, BTMS
Monday morning:-	Tony Cooke, TMSV

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

1976 CONFERENCE

A. PAPERS

INDEX - PART A

PAPERS

ANALYSIS OF A REPORT - MUSEUMS IN AUSTRALIA, 1975.

Mr. H.H.G. McKern

Deputy Director

Museum of Applied Arts and Sciences

I thank you for the opportunity to speak to you on the Report of the Committee of Inquiry on Museums and National Collections, but I do not feel it appropriate to examine the Report in detail.

In discussing the Report, I believe the Committee did its homework and visited a fair cross-section of museums of all types, about 70 in all. The definitions of museums used in the report are based on the I.C.O.M. definitions, but I do not necessarily agree with these rigid classifications.

Tramway Museums probably fall into the 'Associated Museum' grouping, with some perhaps into the 'Local Museum' Grouping. Although not defined in the Report there are a large number of 'private museums' whose intentions are not always apparent, but usually are for profit and to support the owner, ie., tourist rip-off types. In contrast to this the nominally privately owned Tramway Museums are volunteer, non-profit making organizations, carrying out their tasks as a true labour of love.

Your museums are usally involved in research, expansion of knowledge of the subject and as such are probably ahead of most museums in Australia in the conservation and restoration of relics. In fact, you probably know more about your subject than other museums know about their own. However, you are possibly lacking in areas of organic material preservation and restoration, ie., books, films, textiles,etc.

The Report itself is alright in basic content and about 99% of museum people agree with its outline, although there is disagreement in the detail.

The implementation of the Report, either in part or in full, depends entirely on public opinion and pressure. As individuals or organisations I urge you to write in order to express your opinion of the Report and its recommendations. The Minister responsible for the Report is Senator R.G. Withers, Minister of Administrative Services, Parliament House, Canberra, 2601.

HOW VOLUNTEERS CAN LEARN FROM PROFESSIONAL MUSEUMS

Mr. H.H.G. McKern
Deputy Director,
Museum of Applied Arts and Sciences

How can volunteers learn from professionals? Perhaps the answer is that we both learn from each other.

Most help for non government museums is from the State Governments, principally W.A. and N.S.W., except for art galleries in Victoria.

Under the W.A. Museums Act, assistance is via the W.A. Museum in Perth. For example, Municipal Museums can be set up as "branches" of the W.A. Museum proper, provided they meet various conditions; qualified curator and adequate buildings.

There are a number of services available to these Municipal museums in that they can receive help in conservation and restoration and loan of relevant exhibits. The W.A.Museum is the "guardian angel" for all local museums outside the W.A. Museum proper. This scheme could be useful in prodding your own State government into similar action.

In N.S.W. the museums are currently under the direction of the Minister of Culture, Sport and Recreation. Mr. J. Willis, of MAAS, is currently chairman of the investigation committee. Seminars on management of small museums are held. These usually last for two days and generally have 40 to 50 participants. In 1975 the State made $100,000 available in grants to non government museums. It would be a good idea to bring non government people into government museums for experience in all areas (for nominated periods). The government museums are not concerned with the lack of formal qualifications, only with the quality of results.

DISCUSSION

MR. KINGSLEY — Any hurdle to overcome because of "FAN", "BUFF" associations etc. before recognition of status of museums? Are we getting to top levels of professional museums?

REPLY — Assessment is not related to size. There is an accreditation process e.g., standards of records, research, storage etc. A small museum with high quality could get a very high rating.

MR. GIBBS — Trams were objects of ridicule. How can we overcome any obstacle in this area? Evaluation tends to start.

REPLY — No need to convince me. Decisions on aid etc, are made by museum people who recommend to the Minister. Crackpots will be weeded out.

DR. RADCLIFFE — The money that has been allocated so far for tourism, R.E.D. etc.

REPLY — Different museums get money from different sources.

MR. JESSUP — What about the upsurge in the interest in Folk Museums?

REPLY — This is an expression of Australians' long awareness of environment and history.

MR. JESSUP — What about single theme museums assistance by Victorian Government?

REPLY — Not competant to judge.

MR. BREYDON — Transport in the report was more of a State responsibility, to preserve the typical before the unique.

REPLY — The Whitlam era of preservation probably on an ad hoc basis.

MR. MCAULEY — Is it better to limit funds and spread in smaller quantities for rescue operations until more money for proper preservation is available?

REPLY — Yes I agree. A museum is a preserver and conservor. The last N.S.W. handout had to be done quickly so as money would be spent before the end of June 1976. It was not for capital works, although rules were bent, e.g. lifting machinery onto concrete slabs. Suggest first things first.

MR. DENHAM — In reference to the N.S.W. seminar scheme and the W.A. scheme. The Melbourne seminar August 1973, Unesco, tended to be for post graduate students. There appears to be no scope for formal training for amateurs.

REPLY — The outcome of the siminar is:- Training must be at different levels for different purposes.
1. Post graduate course updated.
2. A committee for training of other levels has proposed a course at Prahran College of Advanced Education. It is to be open to anyone capable of satisfactorily using the course. This level generally a state matter. The W.A. Museum has a course for local government museums. Seminar course for N.S.W.

DR. RADCLIFFE — Regional grouping of museums could provide uncomfortable bed fellows. Any possibility of technical grouping instead of regional?

REPLY — This is a common problem. It could work both ways.

PLANNING AND CONSTRUCTING A TRAMWAY MUSEUM

David Hinman

President T.H.S. Christchurch N.Z.

Introduction

This is obviously a very broad topic, and various aspects could on their own warrant major discussion. The intention is to consider this question under a number of headings and endeavour to put across a number of ideas - some of which you may not necessarily agree with - in the hope that these will be taken up and perhaps given treatment in some depth during the subsequent discussion. I make no apologies for appearing idealistic in some aspects. Do not expect an exact blueprint that each of you can copy from. All of us are some way along the road of development and some of my remarks may be more applicable if we were only beginning to think about setting up a tramway. However, I hope I can give you a few ideas to think about, and we should all be able to gain something from the discussion session that will follow.

Objectives

I do not wish to overlap into John Radcliffe's paper, but this is perhaps the most important determinant of how we plan and construct a tramway. Unless we have a clear idea what we are aiming for and why, it is unlikely that development would be able to proceed in any sort of orderly or logical fashion. If clear decisions can be made in the first instance as to what we are aiming to achieve, then details, planning and construction will normally follow relatively easily. Over time of course, it may be that a new object will emerge and this will mean alterations and additions to the plan, but perhaps this is inevitable.

As a simple example of how objectives and planning are related, we could take the case of a museum set up, with the basic objective of collecting a few trams which would be statically displayed within a building, perhaps as part of an illustration of the history of public transport. The planning and construction which follows is relatively simple - the acquisition of space, building cover, obtaining vehicles, "restoring" and displaying.

I suspect however, that most of us at this gathering have rather more ambitious aims and objectives, and perhaps the following would cover what most of us are proposing - whether clearly stated or perhaps until now only at the back of our minds.

1. The collection, preservation and restoration (if possible to operating condition) of a representative sample of tramcars types and/or other vintage transport, from one or more transport systems.

2. Either the preservation of resurrection and restoration of an existing or former line or transport system on which to demonstrate these vehicles, and offer rides to the general public as well as to members and enthusiasts.

OR

the construction and operation of a new line to demonstrate as per 2. above.

3. The integration of such museum line into an overall technological museum project or as a public transport system linking important public facilities or places of interest, rather than a small line offering a "there and back" joyride. (i.e., a purpose for the line.)

4. The preservation and/or construction of period atmosphere such as line side accessories, old time streets, etc.

5. The illustration of tramway and other technological history by means of display, working models, cut away sections etc.

If aims and objectives can clearly be decided upon at an early date, planning the project has some immediate guidelines to follow. For practical reasons, e.g. site and vehicle availability, some objectives may have to be compromised or altered but that possibility should not deter us from aiming high in the first place.

Site Characteristics

The suitability of any particular site depends on what objectives are of the museum group. For this discussion let us assume that the above objectives apply, and so it is apparent that the site would need to include the following characteristics.

a. Physical Factors

1. An area sufficiently large to accomodate the necessary buildings for the storage, maintenance and restoration of the tramcar fleet. Assuming a fleet of 20 tramcars, we would be talking about an area of say 7,000 sq. feet just for storage, and preferably another 3,000 sq. feet would be needed for maintenance and restoration members facilities etc. So let us say about 10,000 sq. feet, or a little under 1,000 sq. metres. To this must be added sufficient areas for landscaping, members car park and separation distance from boundaries to meet local council requirements, where applicable. Obviously a site will need to be relatively flat, or capable of being made so, and the ground conditions should also be suitable i.e. a rubbish tip may not be suitable.

2. An area in which to operate the fleet. Where the objective is the preservation of an existing line the choice is obviously rather limited. In other cases there is some freedom of choice, but there is a basic criterion that there must be sufficient length to be able to demonstrate and operate satisfactorily. Where passenger running is envisaged it would seem to be that a length of somewhere between 1 and 3 miles is most appropriate and practical. Much less and the ability to demonstrate the vehicles and give a sense of 'riding somewhere' is impaired; and much more, difficulties of building and maintaining track etc., especially by volunteer labour, are likely to arise. As some museum groups have found, a former railway reservation may be ideal, as it will comprise sufficient length and also not too much width from a property maintenance point of view, as well as usually being in a single ownership, and able to be acquired or leased, hopefully without undue difficulties or costs from a Government Agency. The line need not be

flat, any railway gradient, and curves for that matter, can easily be negotiated by an electric or steam tram (horse trams may need something a little more gentle), and some variations in topography may add interest. Nothing could be less exciting than being able to see the destination from the beginning of the line.

3. Sufficient area for off street parking for the public and areas for static display, and perhaps an old time street, other related activities, e.g. other museum groups preserving vintage buses, fire engines, etc.

b. Other location factors.

1. Proximity to a major urban area with ready access from or off a major highway. If it has sufficient usage in the area concerned, then public transport accessibility may also be important. Without being too parochial, I hope, I think it would be fair to say the Ferrymead Tramway's relative success when annual passenger totals are compared with say Wellington Tramway Museum at Queen Elizabeth park, and T.M.S.V. at Bylands, must be to a considerable extent due to the closeness of Ferrymead to Christchurch. Christchurch has a population of just under 300,000 and the museum is just 4.5 miles from Cathedral Square, the heart of the Central Business District. If possible one part of the line should be able to be sufficiently accessible to provide for tapping public patronage. Accessibility for bringing trams and other heavy equipment in is also another obvious location factor which should not be overlooked. e.g. problems from sub-standard bridges sharp corners, etc.

2. Town Planning Zoning . I will consider this in more depth shortly, but at this stage would comment that from a cost and availability point of view, rural land will generally be easier to obtain than urban (whether residential or commercial/industrial, with an urban park being the possible exception) and that were there a choice between high quality agricultural land and poor quality land you are more likely to be successful in obtaining poor land. I have just mentioned that accessibility to an urban area is very important, however too close a proximity to present or future residential zone, may cause some difficulties, e.g. complaints from noise, unsightliness etc., to quote Ferrymead example. Where you are fortunate enough to be adjacent to a built up area, a buffer zone such as a park or playing field, or an industrial estate would be preferable to having houses immediately adjacent.

3. Focal Points. As suggested in Objective 3, much more sense of purpose, and hopefully higher patronage will result if the line actually goes somewhere instead of just there and back joyride. Suggested focal points may include:

i. Tramway storage and workshop buildings
ii. Old time street or township through which the line will run.
iii. Museum Display buildings.
iv. Public car park.
v. "Public" facilities such as Zoo, Art Galleries Picnic Areas etc. (Ferrymead and MOTAT being good examples.)

Summing up this topic of site characteristics a diagramatic view of an ideal museum site could be something

like this:

with 1 and 2 being focal points.

Public access should preferably be restricted to one end or perhaps a point along the route of the system to ensure that the tramway is used. i.e. It is not much use having a major car-park at both ends and good road access as this does not encourage people to use the tramway.

Town Planning and Other Local Considerations.

Although I am a town planner it's those times when I'm not a "museum developer", I have found this aspect a little difficult to come to grips with because of the legislative differences between N.Z. situation and each Australian State. I am only familiar with the N.Z. situation and will therefore have to speak in a fairly general way. Some points may not necessarily be applicable to your State.

In building a tramway museum there are a number of legal and quasi-legal aspects that have to be faced. Legal authority to operate a tramway under Tramway's Acts and Light Railway's Acts etc, is perhaps obvious, and I do not propose to cover this aspect in detail. It will vary from State to State and presumably each museum has by now sorted out its own problems. I would like to spend a little time considering other regulations, viz Town Planning and Building By-Laws.

Firstly an explanation of the difference between the two. Town Planning aims to regulate the use of land usually by zoning, e.g. Rural, residential etc., and deciding which uses are allowed in any particular zone and perhaps where and on what conditions on particular sites. Where it becomes of interest to us, is of course that you do not find a tramway museum as a use specifically permitted in any zone. By-laws on the other hand, are more concerned with the details of construction of buildings and other structures that relate to any permitted use. They may for example determine the type of material to be used and are generally devised to ensure safety of occupants using the building or in the locality of the building, or to make sure that the building won't blow down in a strong wind. Building by-laws have been with us for many years, but the standards have tended to change and stiffen. What may have been acceptable 50 years ago, or even 20 years ago may not be so to-day. This obviously has repurcussions when we are endeavouring to recreate history with old time buildings etc. (e.g. N.Z. wooden shingle roofs have been prohibited as a new form of construction since 1920.) Brick and stone buildings must now be reinforced against earthquake damage, and no doubt Cyclone Tracy (Darwin 1974) has had repurcussions throughout Australia as far as building regulations go. Town Planning on the other hand is a relatively new phenomenon. Government control has often existed for years but in some areas it is only now coming into effect (e.g. N.Z. 1953 Act), and while some of us may have been able to establish without town planning problems this is not to say we won't be caught up in the future.

How are we affected by Town Planning and what can we do about it?

As has been said, Town Planning usually prescribes what uses shall be permitted for any particular area. For any use that is not normally permitted, there is usually provision for making special application to the town planning authority, which

may in some cases be the local council, in some others a sort of regional council, and there is usually a right of appeal to a judicial body such as a Town Planning Appeal Board or similar. Such applications usually involve public hearings and there are rights of objection by other parties such as neighbouring land-owners, organisations etc. Unless there is provision in your own area's plan for your use, and you may find there is under such obscure listings as 'educational or cultural facilities' or if you have an old railway reservation, the land may still be zoned or gazetted for railway purposes. You may be faced with such an application if you wish either to establish or undergo substantial expansion. It obviously pays to keep a good relationship with your neighbours and with your local council and other authorities, or you may find strenuous opposition to your plans.

Another significant point about Town Planning schemes is that the scheme itself, when first introduced, is usually open for public inspection, comment and objection and that from time to time it may be altered or reviewed and this also allows for public participation in deciding the issue. If your scheme is not satisfactory you may be able to get it altered for the next time it comes up for reassessment. (give Ferrymead as an example - show the submission given by the Trust.) Finally, just as others have the right to object to your development if it is not normally permitted use, so too will you usually have similar rights if others in the district make application for special use. This is a fact of which you should be aware. If granting someone elses application is likely to have a detrimental affect on you, then you should object to it, e.g. a proposal for a housing estate next door, or a private museum etc.

DETAILED LAYOUT CONSIDERATIONS

Earlier in this discussion general comments were made about ideal site layouts etc., and some ideas on how such a site may be laid out are now tossed in for discussion. The main activities on a site and some comments about where they should be and how they relate are as follows:-

1. Location of buildings. Bearing in mind local regulations as regards distances from boundaries and distances between buildings, the sort of things to think about are;

   i. Accessability by public, members, vehicles etc. - this will vary according to the building - e.g. storage buildings - if you don't want the public there, site them away from public areas or fence them off. Museum displaying - good public access essential - preferably by tram as suggested earlier. Emergency access important.

   ii. Rail (tramway access) - if major right of way fixed by say old railway reservation, site building, to enable space for depot fan and for future expansion - even if right now you don't think that you'll need it. You can build fairly tight curves - say 50 - 60' radius, but these can cause more wear than more gradual curves. A traverser is another possibility - saves space and special work - some disadvantages though.

   iii. Public car park - further earlier comments - site it close enough to some part of the complex to encourage people to use it - if a 1/4 mile walk is involved you'll probably frighten many off - everybody is lazy! How big should the car park be? Depends on exits and projected patronage. I doubt whether many of us (except perhaps on

special occasions) will have more than 100 or so cars at any one time - do surveys - if plenty of room build a permanent car park for say this number of cars and have a paddock available for special occasions. How much land required? As a rule of thumb every car will need 25m^2 i.e. 1 hectare will hold 400 cars, or in imperial units a little under 40 cars per 10,000 sq. feet or 160 per acre. Don't forget about landscaping - particularly if readily seen from highway.

iv. Siting of public facilities - souvenir and sweet shops, toilets etc., from revenue point of view - siting quite important - try to establish a clear route along which all or most will walk - may be a good idea to have at entrance/exit e.g. Sovereign Hillm Motat - you are also supervising people leaving making sure they are not smuggling a tram motor with them. If complex is big enough - more than one selling point may pay dividends - people may spend more in little bits spread over a period of time than all at once. Toilets must be obviously accessible but availability of service - sewer may be a deciding factor - costs of extension etc.

v. Other services such as power, telephone etc., may also influence location e.g. if using mains power, power station cheapest, though not necessarily most convenient closest to source. Public safety aspects; if buildings sited along tram route tramway overhead poles can be used to carry other services.

vi. Relativity to other land uses outside museum e.g. don't site workshop close to a residential section if you can avoid it - bear in mind the nuisance aspects of some museum activities e.g. night operations, workshop noise, unsightly poles and wires, rail squeal, large numbers of general public, unfinished appearance, gongs and whistles may be music to our ears, but not necessarily to our neighbours.

PLANNING A DEVELOPMENT PROGRAMME

A question of priorities - again work it from your objectives. Usual trend has been for museums to throw down a piece of track and start operating - to bring in revenue - but should this really be the first priority? Assuming we are starting from scratch a development programme might go something like this.

1. In the light of what is or is likely to be available decide basic objectives - acquisition policy etc., and determine how project will be initially financial - if possible.

2. Look for other suitable sites.

3. Commence acquisition of equipment and planning for buildings to house trams etc. Location of buildings can be decided with reference to total scheme - preferably don't take delivery of vehicles until cover has been arranged (unless climatic conditions are such that cover is not necessary).

4. Depending on man power and financial resources commence site works, location buildings track laying etc., and also renovation/restoration of rolling stock so that vehicles will be presentable by the time the museum opens.

5. If intense public interest and accessability is good, probably not much worry with opening a small section

of line at a time - this may be necessary if public money is being used over a period of years - other approach Adelaide - complete the line before opening - some debate on pros. and cons would be useful.

6. Endeavour to plan ahead for the future expansion, future acquisitions etc., and co-ordinate with associated activities.

7. Assess progress to date, direction you are going etc., and perhaps consider ways of injecting more finance/labour to allow more rapid progress.

TRACK CONSTRUCTION

by C.J.M.Steele

SECRETARY,AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA),INCORPORATED

As a survey draftsman and engineering surveyor, my work has been guided by the maxim of the survey profession of "working from the whole to the part". Taken out of its cryptic phraseology, this means seeing the survey as a whole in the first instance, determining the baselines within which the task is to be confined, and then setting out the parts or details of measurement by which the survey is judged complete.

Such a policy can be related to the construction of a tramway track, and indeed the application of an engineering survey to a project of this kind will mark the distinction between an amateur or professional standard in the finished article.

This is the result I endeavoured to achieve in my supervision of the track construction for the Australian Electric Transport Museum (South Australia) Incorporated at St. Kilda, South Australia in 1973. I believe that, allowing for the vagaries in the materials used and the type of labour employed, the criteria was met.

Following on the successful conclusion of that project, I feel honoured to be asked to present this paper to the second conference of the Council of Tramway Museums of Australasia conference knowing that several of the organisations represented in this body are either building or contemplating the laying of an operating tramway track.

In approaching the subject of track construction I would like to mention what I regard as an ideal layout for the tramway depot and yard. Naturally, this will only be possible for a completely new development and even then limited in its scope by topographical or cadastral (boundaries) features. The ideal is one or more dispersed two or three lane sheds capable of holding up to th ree bogie cars on each track. Carefully placed on site, several important conditions are fulfilled.

1. A number of small sheds, whether "jerry-built" or of an approved industrial design, will confine fire loss. (A shed of industrial design is no guarantee against loss if the fire is of internal origin.)

2. For the purpose of shunting, tracks three cars long is the optimum if there is a desire to facilitate the regular usage of a considerable variety of units.

3. A convenient yard layout using "off-the-shelf" railway turnouts of selected angles. These have components of specific dimensions facilitating unskilled assembly. For example: a South Australian Railways standard gauge 1 in 8 turnout with a 15 foot switch has an overall length of 87 feet 9 inches.

In assessing the requirements for the main line certain desirable factors should be taken into consideration. Again, this is more easily achieved in a new development than one already underway where the shortcomings are obvious.

I believe it is important that a museum tramway should "go somewhere". This is important, not only to encourage the

public to ride, but also to set a target at which to aim by the museum members building the line. This single conception wants to be quite clear and acceptable to the membership, adjacent land-holders, planning and conservation bodies, municipalities and governments. Track-laying, especially by volunteers, is a labour intensive, arduous and time-consuming occupation. The morale of museum members will quickly decline if, through lack of planning, the track has to be altered significantly after the commencement of the project.

With some idea of "where to go", and therefore a notion of likely public demand for rides, the number of cars needed to meet the traffic should be a guide as to whether the line requires an intermediate loop or loops, or terminal sidings. These features should be logically located, taking into account a suitable site for placement, sight distances, timetabling etc.

The next step is to estimate the amount of material wanted to construct the track. This is where "surveying" of some kind must come into the picture - both engineering and quantity surveying.

If nothing like a naturally flat road bed or disused railway right-of-way already exists at the museum site, a rough reconnaissance survey using a measuring tape, hammer and pickets should first be undertaken. Place the pickets, preferably with a piece of white rag attached for visibility, at the apexes or intersections of the proposed curves, making allowances for the intervening topography (grades), legal boundaries and fences (not always coincident!), and any other physical obstructions such as buildings and trees. "Juggle" these pickets until the optimum available solution is realised. (Main line railway operation requires certain parameters to be observed in the engineering surveys for any particular track construction, for example: maximum grades, minimum radius curves etc. These can be dispensed with in tramway practice so long as commonsense prevails.)

Next, intermediate pickets are arranged on the straights or tangents to enable the line of route to be measured more easily. If it is unlikely that an accurate engineering survey for the track alignment will be done, the magnetic compass bearings of the tangents as observed from the curve intersection pickets, will enable relevant information for the track on the curves to be determined, Keep a proper record of the recce survey as shown on the sketch.

The"legs" can be measured either independently, or as a "running chainage". The main thing to know at this stage is the approximate total length of the proposed track. In the example it is 3,745 feet.

Consequently, there will be a need of no less than 3,745x2 = 7,490 feet of rail. 60 pound per yard rail which is a satisfactory size for tramway museum purposes and can be man-handled without too much difficulty, usually comes in 40 foot lengths. Therefore, at least 188 rails or 94 pairs will be required. On the basis of a 2 feet 6 inches centering of sleepers, the minimum number is 1,498. Both these quantities must be modified if the loop is to be added: at least some of the standard size sleepers should be displaced by longer timbers to maintain the integrity of the turnouts. Purchases of dog spikes should be seen in the vicinity of 6,000. Pairs of fishplates and fishbolts will amount to about 190 and a minimum of 760, respectively. Quite a lot of material, I think you will agree?

I am working in imperial units, not only to be readily understood colloquially, but museums will be buying second-hand or scrap materials for their use into the foreseeable future and these are of inherent imperial size even if sold by an adjusted metric standard.

Now that the basic permanent way material quantities have been ascertained, it is important to have the right tools with which to fabricate the track. These days, mainline railway construction and maintenance, though still fairly labour intensive is highly mechanised, with much sophisticated equipment. Volunteer tracklayers, however, will be limited to using the more traditional items such as, picks, shovels and bars, hammers, tongs, spanners and jacks with the concession, hopefully, of a heavy duty motor-generator for powering an electric drill. A track gauge, preferably two or three, should also be acquired or made.

I suspect all the above tools can be bought, loaned or hired from the local railway authority. Bearing in mind the obsolescence of these tools, they could be given away if your museum's credentials are good. Don't forget they will be needed again for maintenance after the line is operating.

With the "shopping list" compiled, it's time to have it priced. No doubt some prior contact has been made with the local railway authority and it is known to whom this enquiry should be directed. Some of the materials may not be available in the quantities required, but as the tracklaying project will probably be done in sections over a period of time, this should not be a cause for undue concern.

A cost will be arrived at for the materials and tools available, at which stage budgeting for the project will assume precedence. This aspect does not come within the scope of this address, but I make the point that all the foregoing remarks on the object of the museum, the liaison planning, and the material needed for the tramway track are of crucial importance to establish, if, external sources of labour and finance suddenly become available. For example, a Regional Employment Development (R.E.D.) scheme. At the A.E.T.M. we were fortunate to be able to take advantage of such funding.

Earlier I mentioned briefly the different approaches which, of necessity, have to be adopted in response to the nature of the roadbed offering for the track. I will now deal with the matter concerning the need of preparing a roadbed on other than a flat surface. Fundamentally, this is earth-moving. Like many things, the cost is proportional to the amount to be done, and a clear idea of what is involved is essential.

If an engineering surveyor exists within the museum membership, he should be encouraged to perform a ground profile or levelling survey over the route of the line. Otherwise it will be necessary to contract one. Short cuts in surveying are a false economy when earth-moving machinery has to be engaged.

The anticipated design grades and the quantity of earth to be moved has to be co-related and budgeted. As much of the route as possible should be prepared at any one time and the exact requirements for the plant operators to work to known. I emphasize these two aspects as the commercial hiring rates for bulldozers, graders, backhoes and tip trucks are high. (Graders were $40 an hour in South Australia at last count.) Hire services charge travelling time to and from the job-site, a cost component which rises sharply if less than a normal eight hour

shift is done. Any on-site delays due to confusion and misunderstandings are also at the client's expense. Weekly rates are cheaper than at weekends, and provided the job-site is intelligently picketted for both alignment and levels, an average plant operator can perform his duties without further supervision.

Some of the requirements for a ground profile survey using the former model are shown.

Most fill needs compacting, but this expense can be avoided. Usually the continuous passage of the earthmoving equipment over the spoil is sufficient to pack it for the purpose of a tramway track. The natural elements of sun and rain will complete the process in reasonable time. Compacting is counter-productive if the spoil has been dumped on swampy ground. Under these circumstances it is better to leave it as long as possible to compact as well as it can, or ignore it and be reconciled to a prolonged period of slumping with the attendant need to continually level the permanent way. The latter situation prevails on the causeway section of the A.E.T.M.'s St. Kilda tramway.

There are two alternatives I can suggest to reduce or even eliminate earthmoving costs! This industry is still very competitive, with many entrepreneurs trying to break-in on the market. A local, "middle-rank" firm may welcome the opportunity to sign-post its existence at an explicitly public-oriented venue such as a tramway museum in exchange for reduced "off-peak" hiring rates. Their work could then be seen and judged by potential business clients amongst the visitors.

Royal Australian Engineer Units of either the Citizen Military Forces or regular army may exist in your neighbourhood. They undertake certain community projects free of charge where they feel there is no conflict with the commercial sector of the industry. The Tramway Museum Society of Victoria has had experience with them in this field. Generally, the R.A.E. have a long waiting list for jobs (presently two years in South Australia) and prefer to tackle all aspects of the projects (including the surveying) as a training exercise.

It is a common illusion amongst volunteers that the roadbed should be "level" prior to tracklaying. This is not necessary, and pursuing it is a waste of time and energy. The immediate requirement on a completed roadbed is a thin (3-4 in.) run of stone or quarry rubble from a tip truck. This provides a minimum bedding for the sleepers consistent with drainage, and in wet weather gives a comfortable working surface for the tracklayers.

Now it is time to consider doing the final engineering survey for the track alignment. As I said earlier it is not vital, but desirable. At the very least the curve intersection pickets should be re-established and intermediate pickets lined up along the tangents. The exact distance to the required point of curvature (tangent points) should also be measured along the tangents from the curve intersection point, This is probably as much as the layman can do, but anyone with a reasonable flair for maths. can go a step further and substitute the known values in the appropriate formulae for curve ranging and so estimate the position of the secant point for a particular curve. Provided the curve is not too long, the track can be laid to look reasonable and act appropriately. Diagram "A"

It is possible where no topographical or physical obstruction exists between the centre, tangent and secant points of a

curve, to "swing-off" the radius and mark the arc of the curve with pickets in the process. However, there are limiting conditions. The"swing-off" material can rarely be handled over distances longer than 300 feet, and the precise centre of the curve must be known for this method to be effective.

There is no need for me to elaborate on the instrumental curve ranging procedures as these will be known to any engineering surveyor.

The job of physically laying the track is at hand. It should already have been decided who is the officer-in-charge of the project. Preferably he should be a "stayer" if it is a long term programme, otherwise there is a risk of it lapsing into chaos if he quits. Continuity in control will ensure ease of material stocktaking and the productive use of labour. An inspired leader will maintain the morale of the personnel engaged on the track construction when the novelty of lifting hundredweight sleepers, and the lugging of tons of rails into position begins to wear off as it will assuredly do so over a distance of a mile! The team should have at least two other people made familiar with the requirements of the project and who are capable of elementary supervision. This will relieve the burden of the work on the leader.

Assuming that the laying of the tracks in the sheds has been completed during the initial development of the museum, the requirements of the yard must now be considered. The centre line projection of the numerous tracks beyond the shed entrances should be picketted, and the linear and angular measurements of their respective intersections with each other noted. A plan of these should be plotted to scale and similar scale templates of the turnout assemblies superimposed on this plan to see where they best fit. Fouling distances to curves adjacent to shed entrances and other impediments should be noted. The optimum solution in respect of the permanent way material to be used and the ease with which it can be assembled is then ready to be translated back onto the picketed lines in the yard.

The drafting may seem frivolous, but the whole procedure can be accomplished in 24 hours and the geometry of the track clearly defined on the ground. The little extra effort here will be rewarded, for the permanent way materials can then be dumped where they will be used. There is no fun in moving awkward and heavy stores around more than once.

The turnouts should be laid first, fully bolted, spiked and aligned. I will enlarge on these activities presently. Next the yard curves should be constructed. These will almost certainly be fairly sharp, so curvature will have to be imparted to the rails by means of a Jim Crow or similar device. The approximate radii of the curve rails can be scaled from the plan, and "swung-off" on a flat piece of ground on or near the proposed curve. Wooden pegs or steel pins should be hammered-in flush with the ground at yard intervals along the line of curve for the maximum length of the rails to be curved. The rail is then moved to within proximity of this pegged curve, the Jim Crow attached to one end, and curving begun a foot or so at a time.

A word of warning here! It is certain that tramway museums will have recourse only to second-hand rail. The running surface must be checked for its wear profile. If the running surface is flat, the rail can be turned to present the unworn gauge face. If however, the running surface is sloped,

the existing gauge face must be maintained. Rail too worn should not be used as it will ruin the tramcar tyres as well as reducing essential adhesion qualities.
Diagram "B"

Preferably a rail join should not fall at a tangent point (assuming transition curves are not used) due to the thrust forces imposed there by the changing direction of a moving tramcar. So it is possible that curvature may commence at any distance along the rail.

I presume most museum members have had some experience in using a Jim Crow? After the first few applications of the clamp, the pressure which needs to be exerted to curve the rail can be estimated. There is a tendency to "over-bend" the first 6 to 10 feet of the rail for it takes that length to detect any noticable deviation in alignment. It is better to decide on curving the rail twice than subject it to varying, corrective curvature. This is a source of derailments on sharp curves. Rails for long curves should not be Jim Crow"-ed" by volunteers. Within reason, it is wiser to "spring" them.

When the rails for the curve have been Jim Crow"-ed", they can be manhandled into position, fishplated together and roughly gauged. The alignment can then be imposed, if necessary, by "springing" the rails with thick, long steel pickets driven into the ground beside them. In this position the curve should be carefully dog-spiked. On completion of this step, straight rails should be measured and cut to fit between the curves and turnouts. These rails should be fishplated and dog-spiked before the steel pickets are removed from a "sprung" curve otherwise problems will result in bridging the intervening distance.

It is likely, for reasons of safety, that yard trackage will be ballasted or sealed to rail head. This poses problems of stormwater drainage, especially since all the tracks are likely to be at a common level for the purpose of union. It would be wise to consider localised water collector traps and underground pipes at an early stage of planning.

The principles applying to the laying of yard trackage should be followed also in the construction of the main line, particularly the prior laying of turnouts. Assuming an engineering survey of some description has already been done, the measuring tape should not be used to peg the distances of successive pairs of rails. A pair of 40 feet long rails will require 16 intermediate sleepers to rest on, leaving about 15 inches of rails overhanging at each end. Sleepers should not be placed any closer to joins as most fishplates are designed to be dog-spiked to the configuration outlined.

You will notice I have consistently referred to pairs of rails. The join in the rails is the "weak link" in the track. This fact lies behind the policy of using continuous length, welded rail as much as possible in mainline railway practice to-day. Over the years, all sorts of ploys have been adopted by railway engineers to minimise this failing. My own experience and one that I'd recommend has been with matching pairs of rails on the tangents and a 50% stagger on curves. The theory behind this method doesn't concern us, but practically it facilitates the positioning of sleepers, and notably so on curves where the "creep" of the inner rail (the distance of the curve along the inner rail is shorter than along the outer rail) can be countered most easily.

The pegs denoting the ends of pairs of rail lengths, should be substantially planted in the ground, and in a straight line on tangent track. Sleepers should now be brought forward from the store by trucks,etc., and 16 dumped for each pair of rails (matching or staggered.) If the sleepers are second-hand, a certain amount of culling will be desirable to eliminate those with badly split ends, or too many dog-spike holes. Experience is the only judge for selection. It will probably be preferable to now lay them upside-down. Many sleepers are notched and this could provide an uneven bearing surface for the rails the "second-time-around". Each sleeper should have its centreline marked with paint or waterproof crayon and then roughly spaced and aligned.

A 50 feet length of 1 inch rope, knotted every 2 feet 6 inches each way from the centre to lie evenly between the "0" and "40" feet marks, should then be stretched taut between each successive group of rail pair pegs and the spacing and alignment carefully performed against the knots and painted lines,respectively.
Diagram "C"

Only just sufficient sleepers should be positioned as can readily receive their pairs of rails. Despite their weight, sleepers are in keen demand and quite frequently stolen! The rails should be placed close to, if not on, the sleepers in one move from the store, and bar-ed into the chosen alignment and gauged on the sleepers. If the fishplating and bolting is to be done in cold weather, 1/4 inch wide steel shims must be temporarily placed within each rail join during this process to allow for heat expansion in summer. It is not necessary to use shims if the temperature is above 30° C. On a six hole fishplate, the second and fifth bolt can be omitted, but all bolts must be placed on the four hole fishplate. Oil should be used copiously on fishbolts to allow them to be continually tightened after the track is commissioned.

Before commencing the drilling of holes in the sleepers for dog-spikes, the centre bar of the track gauges should be marked at the 2 feet 4½ inch (depending on the gauge!) point and kept constantly in line with the centre-line painted on the sleepers. This will maintain the alignment of the rails as dog-spiking proceeds. The left hand side rail should be selected as the "guideway". A two-speed electric drill will enable a choice to be made in using either high-speed alloy-tipped bits, or low-speed auger bits. The former are more easily re-sharpened and tempered. In both cases, the diameter should be slightly smaller than that of the dog-spike, and no less than half a dozen should be on hand to allow for bluntness or breakages.

The bit should be placed hard up against the foot of the rail and the hole drilled vertically. The dog-spikes are then hammered part-way home. The "guideway" side of the sleeper should be done first so that the gauge can be checked to see if it fits snugly before drilling for the other rail. "Gauge widening" is necessary only on sharp curves. The dog-spikes for the other rail are then fully driven home together with those on the "guideway" side, before proceeding to the next sleeper. There is a technique to driving dog-spikes which can only be acquired with practice. A dogging hammer is made to drive each spike across the rail and this should be borne in mind when trying to learn the art! There will be plenty of opportunities to do so as the work proceeds.
Diagram "D"

The final process of the track construction will be its levelling or grading. This can be carried out in conjunction with the use of survey instruments called a level and a staff, or alternatively, with a group of three "T"-shaped bars called boning rods. The combined use of both means is recommended. A level and staff are not difficult to use, but undetectable mistakes are easily made so they could produce a travesty in the hands of novices. A diagram showing the use of boning rods is appended.
Diagram "G"

If a level and staff is not a practical facility, the following course should be adopted for grading the track. It will not produce as good a result, but will still look quite professional in appearance and be functional.

Look along the left hand side rail at eye level from the point of commencement of tracklaying. Take note of the next highest and lowest points on the head of the rail, and have them marked with paint. Move to the next highest point and continue observing and painting all the high and low points to the end of the line. Continuous design grades must now be determined. These should be as long as possible, consistent with the economic provision of ballast. A lift of one foot in the track should be regarded as a maximum. The high and/or low points fulfilling these two conditions should be selected as the design changes in grade. A stout, flat-topped peg should be placed against the rail opposite these selected points and driven into the ground to conform in height with the head of the rail.

The target boning rod should be placed to stand vertically on the peg away from the sun or glare, and the sighter rod similarly positioned on the peg at the other end of the selected design grade. It takes four men to bone, one observer, one to hold each of the target and sighter rods, and one to move the traveller rod. The travellor rod operates between the other two, and sights should be taken on the running surface or head of the left hand side rail every 10 feet or so. It is axiomatic that all of these intermediate sights will be taken of a point of rail which is too low and therefore has to be raised. This should be done with the track jacks as the traveller is moved along, and a small amount of ballast to hold and maintain the correct height, beaten under the nearest sleeper with a pick. A straight-edge and spirit level lying between the rails will enable the right hand side rail to be adjusted for correct height simultaneously.

If a curve is involved, the boning should be performed on the inner rail, regardless of previous instructions. A cant board (a straight edge with an underside "laddered" in 1/4 inch steps) should be employed to introduce the calculated cant or super-elevation to the outer rail. Cant is the product of a number of linear and kinetic factors which can be mathematically reduced to tangible ordinates capable of being applied to the track during construction. Cant assists a moving tramcar to negotiate a curve and also prevents gauge and alignment distortion to the track. The calculations <u>should</u> take into consideration the introduction of transition curves both before and after the main, circular curve, but for tramway purposes the required cant can be obtained by substituting known values in the following simple formula.
Diagram "E", Diagram "F".

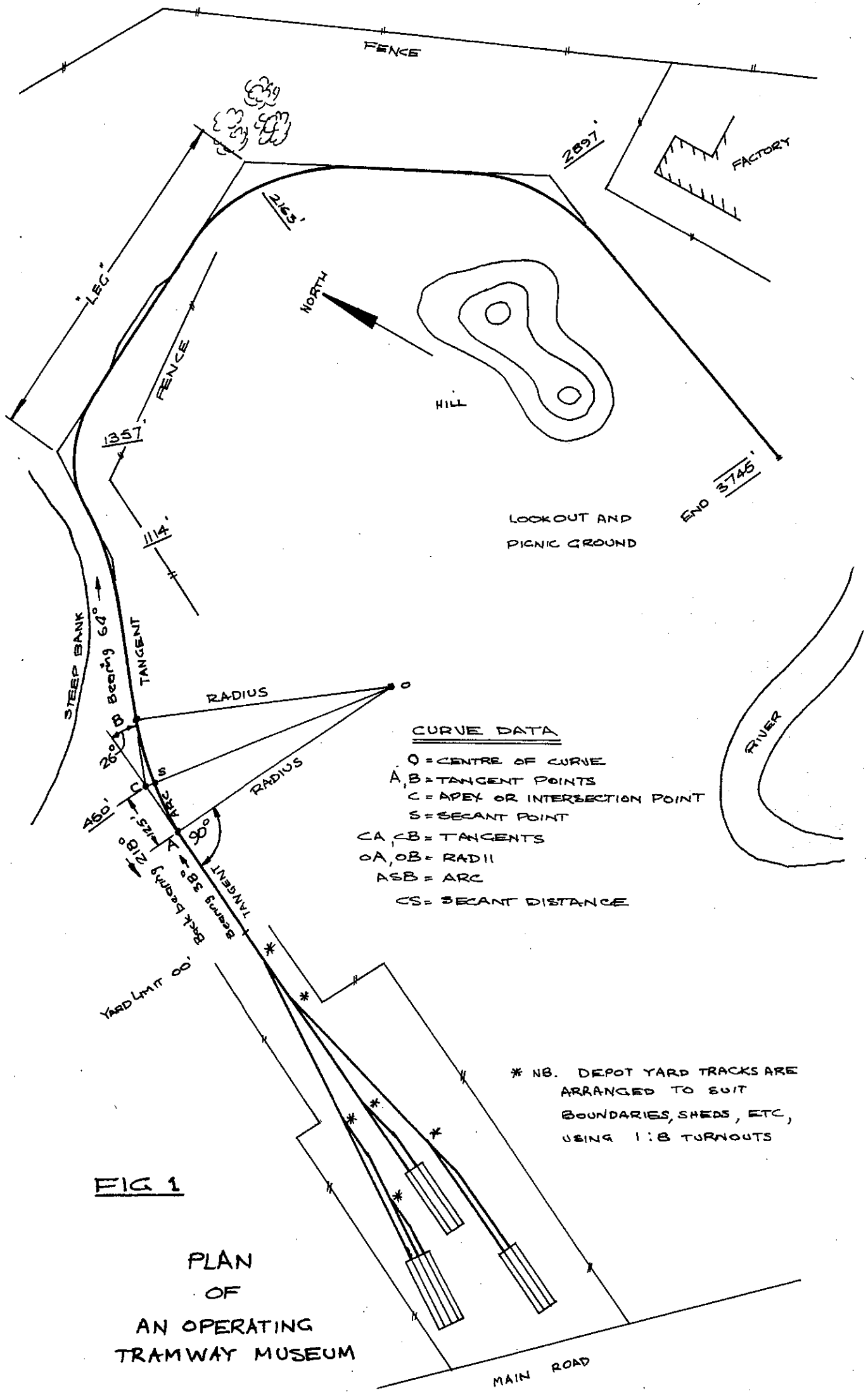
I should also mention that tramway practice does not

require level or horizontal sections of track between an up and a down grade, and vertical curves can be ignored provided the change of grade is not excessive. Volunteers will find that the track will take up a satisfactory vertical profile of its own when lifted and packed.

When the track between two outer boning rods has been graded by observation, it is then necessary to pack all the sleepers on that section properly. This may require the addition of substantial quantities of ballast, and only then should it be ordered for delivery by tip truck. If the track is accessible to road vehicles, the ballast can be poured onto the track directly without any harm being done. Failing this, a front end loader or wheel barrows will have to be used for conveying it from a strategically placed pile. The aim should be to reduce the amount of manual labour.

Ballast should be hard-packed beneath the sleeper for at least one foot either side of the rails, moderately packed at the ends, and lightly packed in the centre. This prevents sleeper "bowing" as the track "beds-in" under load. A final check on the evenness of the grade in the section of track just packed should be made with the boning rods before moving on. The level pegs can be reclaimed for use on the next section.

If, on completion of the lifting and packing, the grade profile appears good, it may prove worthwhile to set permanent steel level pins to assist in preserving it. These pins must be installed before any load is placed on the track. They should be concreted into the subgrade beyond the bearing surface of the track, and the top of the pin must be a constant depth (15 inches is suggested) square below the level of the "guideway" or inner rail on curves. The accompanying diagram indicates how they can be used for maintenance purposes.
Diagram "H"



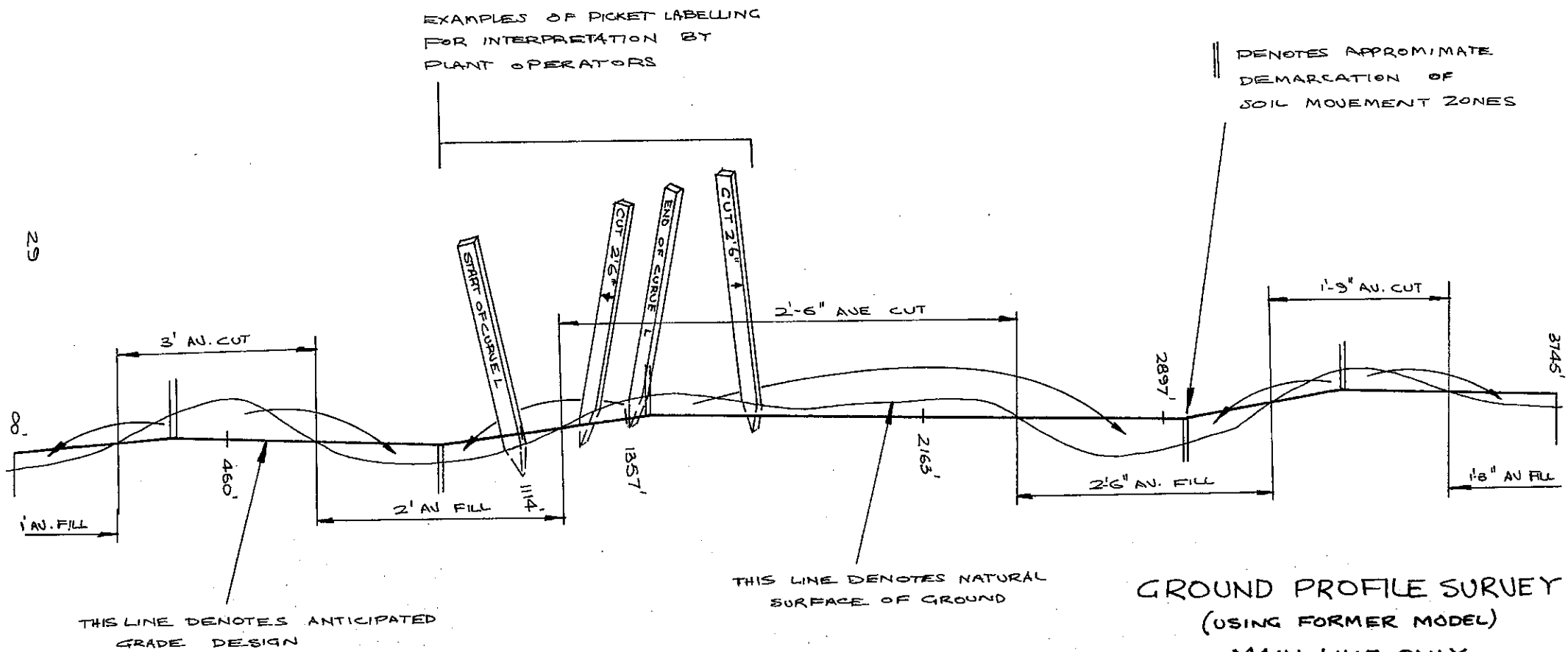
CURVE DATA

O = CENTRE OF CURVE
A, B = TANGENT POINTS
C = APEX OR INTERSECTION POINT
S = SECANT POINT
CA, CB = TANGENTS
OA, OB = RADII
ASB = ARC
CS = SECANT DISTANCE

* NB. DEPOT YARD TRACKS ARE ARRANGED TO SUIT BOUNDARIES, SHEDS, ETC, USING 1:8 TURNOUTS

FIG 1

PLAN OF AN OPERATING TRAMWAY MUSEUM



GROUND PROFILE SURVEY
(USING FORMER MODEL)
MAIN LINE ONLY

FIG 2

$$OC = \frac{\text{TANGENT}}{\text{SIN } \frac{1}{2} \text{ INTERSECTION ANGLE}}$$

$$\text{RADIUS} = \frac{\text{TANGENT x SIN } \frac{1}{2} \text{ SUPPLEMENT INTERSECTION ANGLE}}{\text{SIN } \frac{1}{2} \text{ INTERSECTION ANGLE}}$$

SECANT DISTANCE = OC - RADIUS

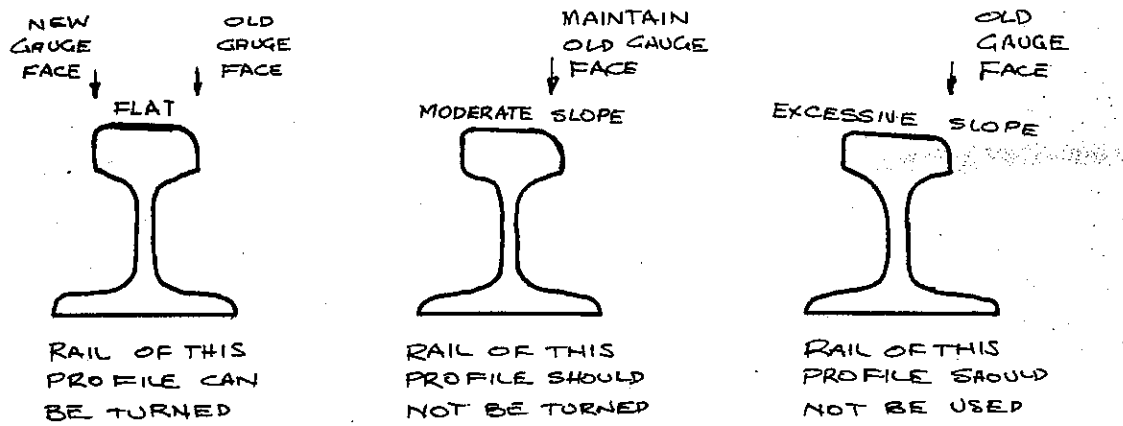
Example: From diagram 1

$$OC = \frac{125}{\text{SIN } 13^\circ} = \frac{125}{.22495} = 555.67$$

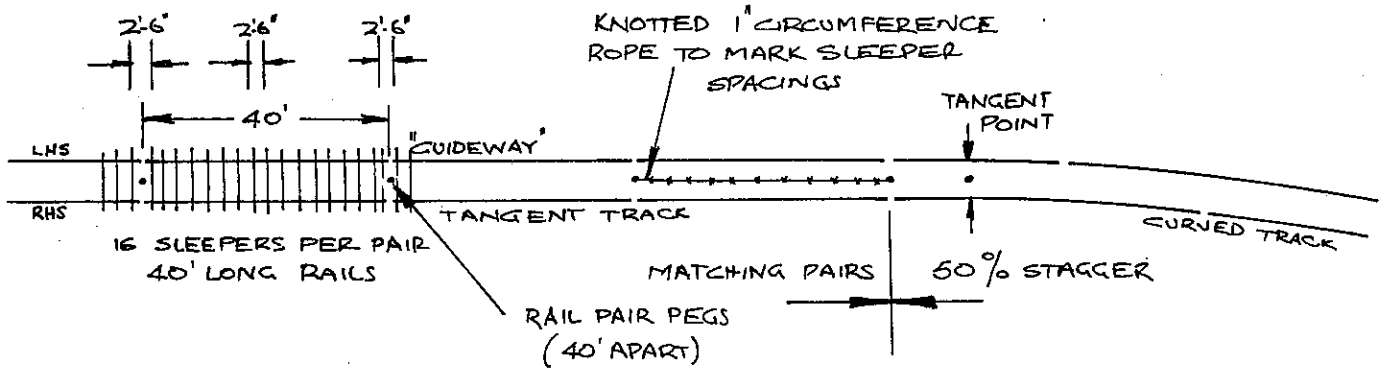
$$\text{RADIUS} = \frac{125 \times \text{Sin } 77^\circ}{\text{SIN } 13^\circ} = \frac{125 \times .97437}{.22495} = 541.43$$

SECANT DISTANCE = 555.67 - 541.43 = 14.24'

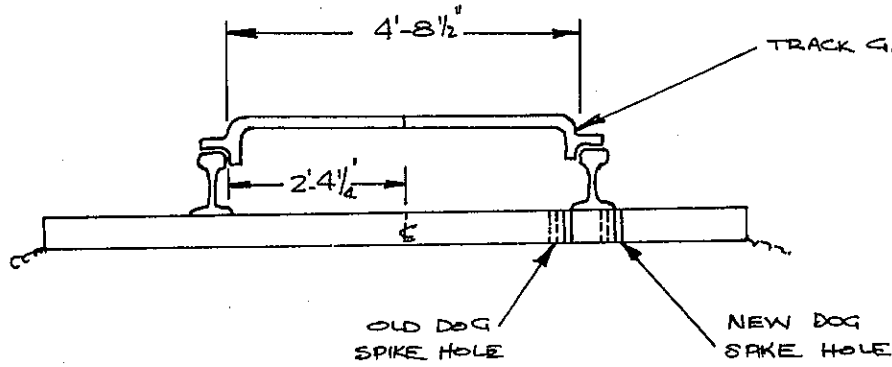
A



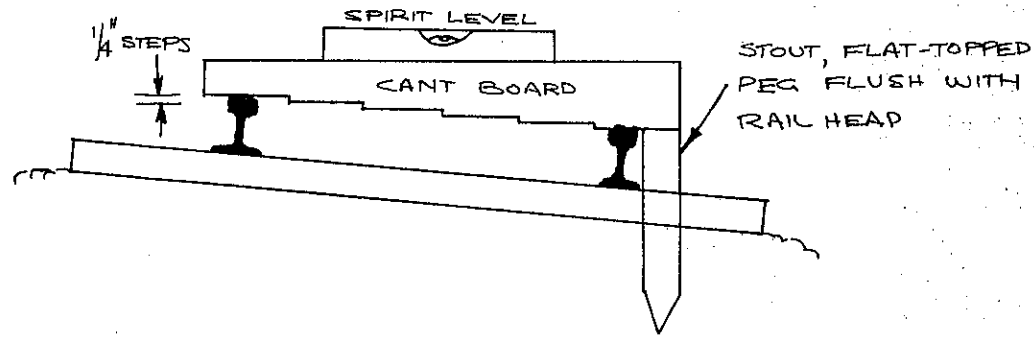
B



C



D



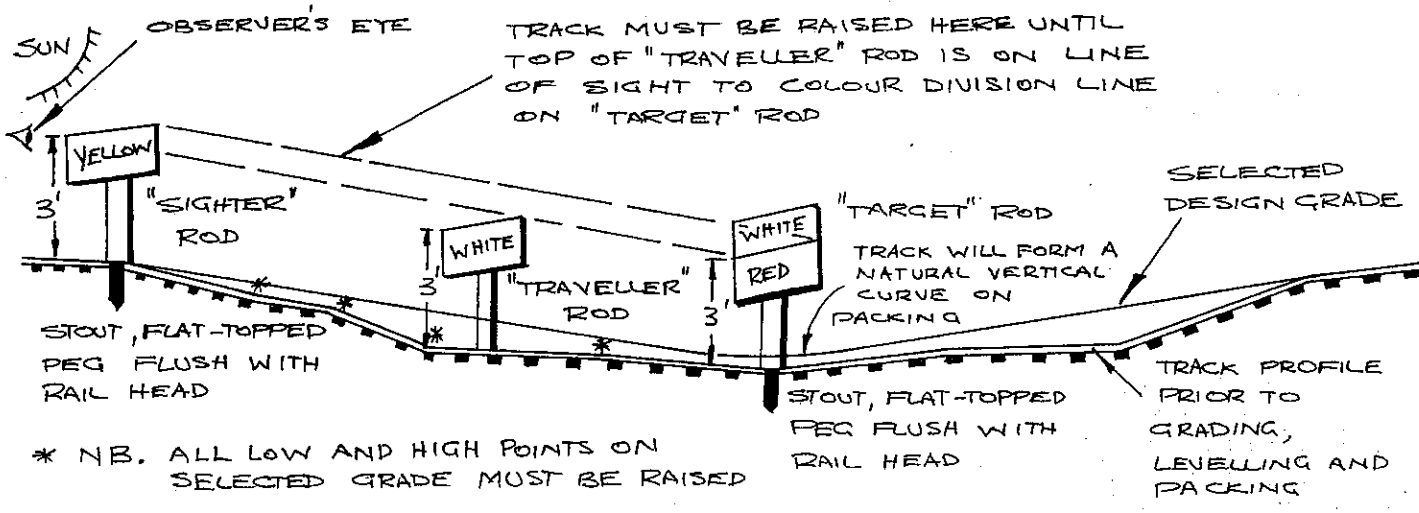
E

V= AVERAGE SPEED FOR CURVE IN M.P.H.

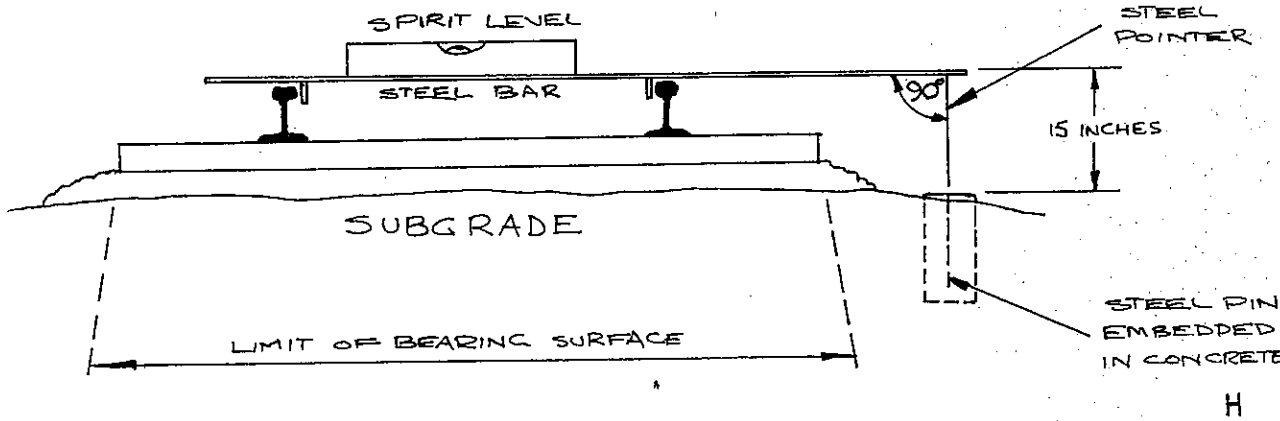
R= RADIUS OF CURVE IN FEET

CANT IN INCHES $= \frac{V}{R} \times 3.77$ (4' $8\frac{1}{2}$" GAUGE ONLY)

F



G



H

MUSEUM MOTIVATIONS AND OBJECTIVES

By Dr. John C. Radcliffe

Chairman, Council of Tramway Museums of Australasia
President, Australian Electric Transport Museum (SA) Incorporated

Museums, like any organisation, are made up of three components, the technical component, the administrative component and the social component. Unless we strive to achieve maximum efficiency in each of these areas, it is evident that we will not have an effective museum.

Furthermore, in the operation of our museums, we must have clear organisational objectives. In other words, we must have an answer to the question "What are we really trying to do?" At the same time, we must recognise the social aims and aspirations of museum members. Unless through the method of operation of the museum, members can achieve their own personal aims, the museum will fail. Members' motives can be diverse, and may not always be understood by the members themselves. Some will be involved because they recognise the historical significance of the vehicles they are preserving, others because they enjoy the challenges of tackling difficult creative tasks. Another group seek acceptance by a group of like-minded people, while yet others may derive satisfaction from providing enjoyment to the public. A few appear to derive some satisfaction from an outlet for their agressions. Needless to say, with a wide variety of motives, there are opportunities for dissention, Occasionally, individuals "take their dolls and go home". However, conflict can also lead to a dissident group setting up a new organisation, resulting in further division of the total resources available for tramway museum development in Australasia. Worse still, it leads to an exacerbation of the administrative difficulties of the public transport authorities on whose goodwill we all depend.

That being said, however, it must be accepted that in a free society where energy and entrepreneurship are recognised, individuals must have the right to set up new enterprises if they wish.

The fact remains, however, that we must have clear objectives. These must be set down before the task is started. It is not satisfactory to do something on the spur of the moment and then later try to incorporate it into one's stated objectives.

The most important area where this applies is in the objectives of the collection. Too often, as has been pointed out by White (1973), museums acquire exhibits on the basis that "it is free: it is available: we ought to have one". The question is not "can we afford not to miss it?", but rather "can we afford to manage it if we get it?". Members' emotions can be harnessed to pay for new acquisitions much more readily than to maintain them. First and foremost, we are "transport preservationists". not "transport acquirers". This must be the primary object of a museum, and how well we do it will be the basis on which we will be judged. This was quite evident to the Committee of Inquiry on Museums and National Collections (Piggott et al.1975) who observed that the weakness of the voluntary railway museums is their inability to preserve the vehicles which it is their proclaimed aim to preserve. Having saved the exhibits from destruction, are we now allowing corrosion, weathering and passenger use to achieve the same result?

Selection of exhibits is important. We must be careful not

to ignore the commonplace, which is in fact more historically significant, in favour of the unusual. Cars of the "W-2" and "O" classes have played a much more significant role in the history of Australia than have Birney cars. Before acquiring an unusual object, its worth should be evaluated and consideration should be given as to whether its acquisition will jeopardise the preservation of cars of greater historical merit.

Too often, the first goal is "how soon can we run it?" There is no shortage of people who live for the moment rather than plan for the future, as witnessed by the success of the tram excursions of the late 1950s and more recently, the success of steam train tours. Immediate operation has short term appeal that may not be in the long term interests of preservation. Preservation must be the first priority.

Once preservation status has been achieved, and this simply means secure housing and adequate maintenance facilities, consideration can be given to restoration and operation. White in his paper makes a plea for care in restoration. Restoration must involve scholarship as well as technical skill. I think it inevitable that a few technical compromises become necessary to successfully operate a museum tramway, but these should not be introduced unnecessarily. In the longer term, it will be the historical responsibility rather than the mechanical ingenuity we have used that will be respected. Most museum groups will have some members whose interests lean towards the pursuit of history. Such individuals may not always be technically skilled in tramcar restoration, but they are invaluable in laying the groundwork for a good restoration job. Museum managers will recognise the need to harness all skills which are at their disposal.

This then brings us to a consideration of what is to be operated. We need to minimise the operation of elderly historic vehicles which are hard to maintain and for which few parts are available. However, if we are a museum rather than a fun park, we must operate vehicles which are seen by the public to appear to be of historical significance. The public, at least in the first generation life of a museum, will expect to ride on vehicles with which it is familiar. At St. Kilda, we get frequent requests for the operation of the Adelaide cars which may not be in traffic on that particular day. Rarely do we get similar requests for the non-Adelaide vehicles. Several museums are considering the acquisition of vehicles whose primary function is to maintain the museum service, thereby reducing the use of truly historic cars. Nevertheless, the public expects to ride in cars which it recognises as its own. For this reason, it may be better for museums to concentrate on providing a service with duplicate cars from their local city, even though they have had major compromises made in their mechanical reconstruction, rather than to use "foreign" cars of no recognisable local significance. At least two Australian museums are already considering this approach.

This then brings us to the conflict between acquisition of complete cars of no direct historical relevance by individual museums compared with the need of other museums for parts, often from the same cars, for correct historical restoration work. In my own mind, despite the fact that none of us wish to see the unnecessary destruction of cars, the parts should go to those museums requiring them rather than to museums which can use any sort of vehicle to run a routine service.

It is therefore important that we rationalise our demands

for parts and equipment and our demands for cars. These are decisions we are better to reach among ourselves, rather than to have them arbitarily made by a transport authority which cannot be expected to know the historical merits of the individual applications before it. Such rationalisation will of course mean some loss of autonomy by individual museums, but could be well worth considering in the national interest. Maintenance of the support and co-operation of transport authorities is crucial to the long-term future of transport museums.

Ultimately, it will be as much the national outlook of the museums as a whole, rather than the actions of individual museums that will determine our public acceptance and recognition. When we started, we were considered at best an odd band of individuals with the peculiar idea of preserving equipment which everyone knew was best destined to the scrapheap as soon as possible. To-day, the preservation of historical artifacts is recognised as a useful activity in the creation of a better society. However preservation of the work of the transportation engineer is not yet accorded the honour which is given to those who preserve the arts and crafts. We need to take a national approach to achieving our own corporate objectives. We have to harness the individual aspirations of our members to achieve these goals. We cannot afford the luxury of these members being spread over too many projects, for few projects will then be completed. It is only through communication, co-operation and consideration that we will all achieve our aims.

Furthermore, it is essential that we plan for the future. The coming generation must be encouraged to accept and adopt our enthusiasm for tramway museum operations. Provisions for posterity can be started, but certainly not completed within one generation. We must always keep in mind the necessity to pass on our heritage to the future by encouraging our newer younger members to accept more and more responsibility for our operations.

This in turn requires an acknowledgement of the three components required in the operation of a museum - technical skills, administrative skills and social skills. These must be used in welding together a group of individuals to achieve the successful operation of a museum.

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WHAT AN EDUCATIONIST LOOKS FOR FROM A MUSEUM - PRIMARY AGE

Mr. B. Sargent

Professional Assistant to the Director of Education,
St. George District of Sydney.

The question that must initially be asked is - Where do you start?

One is placed in the position of a new teacher at the beginning of the school year when they have to ask themselves - "What do they know", or more cynically, "What don't they know."

The dilemma that faces the teacher is to organise a learning programme for the class. Pupils have different backgrounds, different learning rates, different environments. The good teacher must cater for children with different abilities and expectations. (These comments are personal, could be contraversial, but none the less are probably valid.) Some aims listed by the teacher may be difficult to achieve, but the aim should be high.

These discussions refer to 5 to 12 year olds. Tramway museums probably cover "material history of man" category. Where do people fit into the picture? The interaction between people and trams, geography, economics, sociology. Why did they stop? Why aren't they running now?

We must create the era of the trams to allow children to get the "feel", new concepts, new words, children talking about the age of tramways. A real working tram makes the difference - a static exhibit is meaningless. Their horizon must be enlarged, with films, sound recordings, posters and photos. The children for their part might want to write about, model or draw the trams.

We should aim to stimulate research - the impact of trams on the environment, the energy crisis, competitive modes, interviews with former employees. Subjects are inter-related - there is no black and white distinctions.

TEACHER'S ROLE

The teacher having a practical session at the museum would make it a unit of 1900 - 76 period, i.e., the children's grandparents and parents period.

The specific objectives of the individual schools are matched to the local area. The teacher is responsible for the development of the responsible, autonomous, flexible children capable of thinking and with positive feeling. They have to understand why things happen.

What does the local transport museum have to offer?

A printed list of the material sets out items for the teacher to use for teaching. A bibliography with index of books suitable for different grades of readers is also a handy item. The quality of presentation will be adapted to the level required. It is important to list material for the teacher with a summary of each item.

People must be able to answer questions in children's language and must not have any worries about being taped. The Lachlan Vintage Village has done these things and consequently

aided the lazy teacher.

Children must develop values and this may be interpreted differently for different schools, classes etc.

Children can partake in various activities over a number of visits to aid in the development of skills in recording, interviewing, reading (research or pleasure), writing, (imaginative explanatory), thinking,(processing information, classification), form judgments, generalisations, hypotheses, develop concepts, an understanding.

The good teacher will also help to stimulate the child by setting specific tasks to do before the visit actually takes place.

CONCLUSION

The museum is the source of information, a place for people. Education is people business. People can extract information on how previous generations travelled to work, to sport, to the beach, to pleasure by participating in the museum. Children's education can be enhanced by good teachers, a willingness of the museum members to answer questions and the provision of source material.

DR. RADCLIFFE — We have to temper ideals to expediency. To what extent can we present source material. Is there any assistance in presentation or cost to teacher or children. Is it legitimate to charge extra for special material.

REPLY — Most places incorporate material in overall cost. An all inclusive rate of $2.00 to $3.00 per child is not unusual or unreasonable. The Australian Assistance Programme may give help - also local bodies such as Rotary.

MR. HINMAN — At Ferrymead we find that they got their parents to come along at the weekend. Teacher preparation is all important. A free pass is available for one future visit. A bus is available to help transport groups.

REPLY — I have sponsored after hours teacher courses for the Lachlan Village as a resource. Apply to local education department for assistance that you may need in this.

MR. WHITE — Are articles for Teacher's Journal (S.A.) and Teacher's Federation Journal acceptable?

REPLY — Yes. Good quality articles probably acceptable.

MR. STEELE — (1) Excursions:- varying age groups - one class probably maximum at one time. What minimum age approximate for visit?

REPLY — One class at a time is probably ideal for the teacher as well. The teacher will use the museum as he sees it as a resource.

MR. STEELE — (2) Therefore, when is the best time to have visits?

REPLY — Visits should be made during term time. Weekends are not unreasonable.

MR. DANIELS — Museums and teachers could get together to try and get visits, programmes, etc., sorted out.

REPLY — Go out and sell your museum - First try the schools in the immediate area for a sample run and see what their reaction is. Expand from this.

DR. RADCLIFFE — Do you see any role in Secondary schooling?

REPLY — Probably not with teenagers as an educational experience.

COUNCIL OF
TRAMWAY MUSEUMS
OF AUSTRALASIA

1976 CONFERENCE

B. WORKSHOPS

INDEX - PART B

WORKSHOP A1

MEMBERS AND MEMBERSHIP

Delegates present advised that their respective societies had the following classes of membership:-

AETM — simple membership; minimum age is 15.

SPER — must be a shareholder in the registered society to be an ordinary museum member; there are junior members; a concession is offered by negotiation in special circumstances. A member must hold at least 5 shares to be elected to the Board of Management.

TTMS — Membership subscription is $6.00 p.a.; monthly meetings are held; many nominal members.

BTMS — A guarantee company, with a $20.00 guarantee for member. No junior members. Wives and families admitted by subtracting the cost of "TW" from subseqaant subscriptions. Life members limited to 3%.

TMSV — Has ordinary members, associate members (under 18 and in country or interstate at decreased subscription rate) and honorary members (maximum of 12).

It was commented that Life membership is usually "bought" for a relatively large initial sum, but there are problems in servicing such members over the years (life expectancy and inflation.) Honorary membership is usually conferred in recognition of a member giving large and valuable service to the society, or similarly from a non-member.

Rights and responsibilities of members

SPER — members have voting rights and the priviledge of working for the Society and operating the trams.

BTMS — all members have voting rights and it is their responsibility to carry out work as directed by the Board.

TTMS — has a complex set up for their variety of interests. Parramatta - everyone has to prove himself before being admitted as a member; meanwhile, an Associate membership is conferred. This may have to be amended if the society is to adequately provide for its perpetuation.

Tours and Meetings

SPER — No longer run local tours. Hold bi-monthly social meetings (4 general meetings, 1 AGM, and one members day). The members day includes the annual dinner.

TMSV — Bi-monthly meeting. They were good for the Sales department but this has dropped recently, as has the attendances. Propose holding only three meetings a year - AGM, dinner with guest speaker, and social meeting with a member as speaker. Your patronage has dropped lately and it is proposed that tram tours be restricted to special events. Any other tour will accent the social sphere and possibly include a visit to another historical project.

BTMS — Bus trips for members (which families and friends are welcomed) They now have a mailing list for bustrips. Monthly meetings feature such items as an auction, films and donations are sought.

TTMS — Monthly meetings are held and are well attended (probably due to wide range of interests covered by the Society). Purely social functions contain an element of doubt.

HISTORIC REPRESENTATION IN CONSTRUCTION v LOCAL GOVERNMENT REGULATIONS and AESTHETIC PRESENTATION

This discussion outlined the various restrictions that the museums had to overcome, how they overcame them, and what ordinances had to be observed.

1. When S.P.E.R. erected its first building, the depot was in National Park, and most outside observers expected the venture to fail within a short time. Hence building codes were not enforced. However, in any new buildings that are constructed, all building regulations will have to be adhered to.

2. Where construction has taken place on a Government Instrumentality's property, the various by-laws that operate have to be observed. This is accepted by the local government bodies in the areas where museums are situated, i.e. TMSV follows VR practice, BTPS follows SEC.

3. Where the trams are not owned by the museum, (BTMS), but are owned by a local body, this can be used as a lever by the museum for the Council to 'ease' restrictions and make construction a little bit easier. However, Town Planning Acts and other State Ordinances still have to be adhered to.

4. Whilst authenticity is required, i.e. wooden post and galvanised iron shed for steam trams etc., local bodies must observe the laws and by-laws in relation to fire hazards, etc., and buildings have to be built accordingly. An historical facade can be added, but this is expensive.

5. Co-operation with local government is required especially if further developments are to take place.

6. The Demolition, transporting and re-erection of a building from one site to another is a possible way of creating 'authentic' buildings, but again local government has strict rules about the use of second hand materials, and also the aesthetics of buildings especially large ones like tram depots.

ENGINEERING STANDARDS: TRACK AND OVERHEAD DESIRABILITY AND PRACTICABILITY

TRACK

On the subject of track laying standards, reference was made to the publication "Maintenance and improvement of Cane Tramways", published by the Sugar Research Institute of Mackay in matters of roadbed construction.

The application of uniform standards among museums does not appear practicable due to varying circumstances, and each museum should set its own standards keeping in mind the frequency with which track will be used and the weight of rail available with safety the main consideration.

It was felt that the foundation under the track is more important than the weight of rail used. Grooved rail should be available from Ballarat, as Drummond St. Nth. is being lifted. When welding is to be done, a sample of the steel may be supplied to the manufacturers of the rods; No. 8 stainless steel rod is one type that may be used. It was suggested that base plates be placed under joints to prevent sinking and that these should be welded in order to be effective. "Thermit" welding of rail joints was mentioned favourably, but a different mould is necessary for each size of rail. Cresote was recommended to prevent termite damage where necessary, and track drainage was discussed.

OVERHEAD

Standards of overhead construction with reference to pole erection should be drawn up with regard to local supply authority regulations.

Galvanised steel trolley wire may be used if a feeder cable is run in parallel with it. It is desirable to place aluminium cable above copper where these are brought into contact.

It is desirable to site the substation half way along the right of way if practicable to minimise voltage drop. However, a number of delegates felt that voltage drop did not present any great difficulty from an operating point of view if feeder cable proved to be an expensive proposition.

To sum up, it was agreed that track and electrical standards should be drawn up by each museum individually according to its own operating conditions but that if standards were not applied the lack of them would be painfully obvious.

COMPARISON OF ADMINISTRATIVE STRUCTURES

The structure of groups represented (AETM, TMSV, BTPS, BTMS, SPER, NHVA, WTM) were ascertained and it was agreed to gather similar details about other groups not present - (see appendix).

The differing functions of managers were noted as follows:-

(a) AETM, is responsible for maintenance and restoration of vehicles, buildings and facilities.

(b) BTPS, co-ordinated the traffic and engineering functions.

(c) BTMS, co-ordinates branch heads and controls day to day supervision and member discipline.

(d) SPER, controls day to day activities as distinct from Chairman who chairs meetings and acts as public spokesman.

BTMS, AETM and WTM have budgets and BTPS are about to introduce one.

Groups with long term plan or planning committees were: AETM, BTPS (about to establish a committee), BTMS, TMSV (a museum development plan and an acquisitions plan) and SPER (museum site characteristics document).

Time did not permit further discussion of the structures, which were displayed on a blackboard as they were gathered.

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (S.A.) INC.

Incorporated: Association Incorporation Act - South Australia.

Budget in operation: Yes.

Longterm plan or planning committee: Yes.

Executive Structure
No. on committee: 7. elected by annual meeting, vis.,

President	General Manager
Vice-President	Assistant General Manager.
Secretary	Operations Manager
Treasurer	

Delegated Officers: Appointed by executive committee, not being members of committee by virtue of these appointments other than proxy treasurer who may attend executive meetings in the absence of the treasurer, vis.,

Rosters and Publicity Officer	Internal Auditor
Publications Officer	Proxy Treasurer

Remarks: There are three trustees who are ex-office members of the executive if not otherwise elected to it. They retire in rotation one every five years (commencing 1965) but are eligible for re-election.

BALLARAT TRAMWAY PRESERVATION SOCIETY LTD.

Incorporated: Companies Act 1961 - Victoria (Co.Ltd. by guarantee)

Budget in operation: commencing July 1976.

Longterm plan or planning committee: Yes

Executive Structure:
No. on committee: 11, elected by annual meeting, viz.,

President	Secretary
Vice-President, Ballarat	Treasurer
Vice-President, Melbourne	Six committee members

The positions of General Manager, Traffic Manager and Engineering Manager are allocated within the committee by mutual convenience.
Delegated Officers: Appointed by branch leaders, vis.,

Publicity, Sales, Archives, Uniforms, Overhead, Membership, Works, Rosters, Electrical.

SOUTH PACIFIC ELECTRIC RAILWAY CO-OPERATIVE SOCIETY LTD.

Incorporated: Co-operation Act - N.S.W. (community advancement society).

Budget in operation: No

Longterm plan or planning committee: Yes

Executive Structure

No. on committee: 7, elected by annual meeting, allocation of positions within committee is by mutual convenience, vis.,

Chairman	Minutes Secretary
Secretary	General Manager
Financial Director	Works Manager
Assistant Secretary	

Delegated Officers: Electrical, Publications and others as required.

Remarks: Trades as Sydney Tramway Museum.

WELLINGTON TRAMWAY MUSEUM INC.

Incorporated: Incorporated Societies Act - N.Z.

Budget in operation: Yes.

Longterm plan or planning committee: Yes (5 years ahead)

Executive Structure

No. on committee: 12, elected at annual meeting, vis.,

President	Treasurer
Vice-President	8 Committee members
Secretary	

Delegated Officers:

General Manager	Restoration
Civil Engineering	Librarian
Electrical	Membership Secretary
Overhead	"Tramway Topics" Editor.
Mechanical	

WESTERN AUSTRALIAN TRANSPORT MUSEUM INC.

Incorporated: Associations Incorporation Act 1895-1969 - W.A. (Section 3 (3)).

Budget in operation: Yes.

Long term plan or planning committee: No.

Executive Structure

No. on committee: 9, elected to council by annual meeting, vis.,

President	Treasurer
Secretary	Six Councillors
Delegated Officers:	Bus sub-committee, tram sub-committee.

The Chairman of each must be council members, others need not be on the council.

TRAMWAY HISTORICAL SOCIETY INCORPORATED

Incorporated: The Incorporated Societies Act - N.Z.

Budget in operation: No.

Long term plan or planning committee: Yes, in association with Ferrymead trust.

Executive Structure

No. on committee: 10, elected at annual meeting, vis.,

President	Tram restoration and maintenance#
Vice President	Motor vehicle restoration and maintenance#
Treasurer	Electrical#
Secretart	Track and siteworks#
Sales & Publications#	Operations#

is section representatives.

Delegated Officers: Vary from time to time and include members-in-charge of various projects (e.g. steam tram engineer, librarian, motorman training, etc.)

Remarks: Operates in conjunction with Ferrymead Trust to which a representative (Trustee) is appointed.

THE TRAMWAY MUSEUM SOCIETY OF VICTORIA LTD.

Incorporated: Companies Act 1961 - Victoria (Co.Ltd. by guarantee)

Budget in operation: No.

Long term plan or planning committee: Yes.

Executive Structure

No. on committee: 9, elected to museum board by annual meeting. Chairman elected by museum board.

Delegated Officers: (a) Appointed by museum board and entitled to attend museum board meetings, if not otherwise elected as directors;
Secretary, Treasurer.

(b) Appointed by museum board and attend on an as required basis:- Assistant Secretary, Sales officer, and others as required.

(c) Appointec by officers; membership secretary, assistant sales officer (refreshments) and others as required.

Remarks:

Works are supervised by a committee of the museum board which appoints supervisors (e.g. electrical, per-way etc.) and members in charge of specific projects (e.g. restoration of 256, painting 180 as required. Works committee organises an Officer-in-charge to be present at museum each society working day.

BRISBANE TRAMWAY MUSEUM SOCIETY LTD.

Incorporated: Companies Act 1961 - Queensland (Co. Ltd. by guarantee)

Executive Structure:

No. on committee: 7, elected to council by annual meeting, vis.,

President	Secretary
Vice-President (2)	Treasurer
Committeemen (2)	

Delegated Officers: (a) Each council member holds a functional responsibility; Manager, Assistant-Manager, Electrical, Works, Workshop, Traffic, Services.

(b) Appointed by officers: Archives, Publications etc.

NEWCASTLE HISTORIC VEHICLES ASSOCIATION

Unincorporated body

Executive Structure

President	Treasurer
Vice-President	Supervisor - Tramcar Reconstruction
Secretary	Supervisor - Non-rail vehicles

Delegated Officers: None.

WORKSHOP B1

HISTORICAL ACCURACY IN TRAMCAR RESTORATION

In a large number of cases it is necessary for museums who wish to run tramcars for the public to do large-scale repainting or other modifications to their cars. This may be as a result of a decision to refit the tram in the livery of a previous era, or as a result of wear and tear received in passenger service. It is quite often impossible to replace damaged parts with the original type of fitting because these fittings are no longer available or prohibitely expensive. (e.g. birdseye maple veneers for ceilings are not now available.)

The members of the workshop were however, aware of the criticisms in the report of the committee of enquiry on Museums and National collections which were levelled at museums which restored exhibits with modern day techniques and materials, and which held their methods and exhibits to have been authentic to an earlier period.

It was therefore suggested that members should follow the following guidelines, where it was inevitable that modern methods and materials would have to be used.

(A) Wherever possible it should be made clear what has been done so that no erroneous impressions are created.

(B) That an adequate record of what has been done, and what has been replaced, is kept.

(C) That adequate control is maintained on the restoration project so that the work actually done on a vehicle gives a result which is as close as possible to being correct.

WORKSHOP B3

PUBLICITY AND COMMUNITY RELATIONS

INDIVIDUAL MUSEUMS AND COTMA

SPER — Major items of equipment that have had to be moved have received press and T.V. coverage. This type of coverage has allowed the public to become more aware of SPER activities.

BTMS — The public have not been encouraged to visit the site during the developmental stages because of the poor image that might have been created. Limited guided tours are available however, for passers by who do call in. The offer for publicity in B.C.C. buses has been refused at this stage for the above reasons. Lack of facilities for visitors and that visitors also disturb work parties are additional reasons for not encouraging them.

TMSV — A similar problem exists at Bylands where the large crowds cannot be adequately handled when the horse tram is operating.

AETM — A mutual assistance programme in which AETM and other organisations such as Theatre Organ Society, conduct a combined programme.

BTMS — When the society operates a tour, public participation is advertised in BCC buses.

AETM
BTPS
TMSV SPER — Regular weekly newspaper advertisements, flyers in tourist agencies etc., are also used to advertise activities.

AETM — Ron White said that at a course on community relations he undertook, advertising must be continued, despite any initial poor response.

AETM — Open days where bands, merry-go-rounds and other entrepreneurs could display and make money also were good for maintaining community relations.

GENERAL — Tramway museums are generally not mentioned in major commercial or government tourist guides. The Secretariat of COTMA should endeavour to make the existence of the tramway museums known in each state. A guide of COTMA museums could be drawn up and distributed to government and other authorities to advertise ourselves. Commercial firms could also be approached to use trams for advertising. This catalogue would also include general information such as location, how to get there, opening times, costs etc., and be circulated to tourist and travel agencies.

WTM
BTMS — Personnel who are acting as guides at the museums, should know their subject, be capable of speaking easily to a gathering and able to create an interesting and good impression of the museum to any visitor. If necessary, conducted tours could be organised for clearly advertised times.

AETM — Many people who visit think that museums are owned by the government or semi-government authorities.
BTPS — This can be a block to public participation especially in membership.

WORKSHOP B4

SITE SECURITY: TYPES OF FENCING, LIVE-IN CARETAKERS

Most groups reported having had security problems in early stages of development. This had occurred because in most cases vehicles and other exhibits were in the open due to incomplete buildings or no buildings at all.

Security problems have been overcome by the following:

(1) Buildings have been completed.
(2) Installation of security fences.
(3) Live-in caretakers.
(4) Installation of burgular alarm systems.
(5) Outside lighting.

SPECIAL NOTES ON SOME OF THE ABOVE.

(1) Security fences are very effective, but some museums (e.g. BTPS) are restricted in this area by council regulations.

(2) BTMS and TMSV both have live-in caretakers and report that this is an ideal security measure.

B.T.M.S., - caretaker is supplied with rent free house in return for his services.

T.M.S.V. - - caretaker pays rent to the society.

BTPS and SPER are restricted in this area by council regulations not allowing persons to live on site.

Good housekeeping can help security:- If tools, equipment, rolls of copper wire, brass fittings etc., are packed away out of sight they will be more secure.

It was suggested that valuable stores can be made more secure by placing heavy bulky objects around or on top of them.

Several delegates related experiences where liason with local residents and police had helped security.

CONCLUSION:

All delegates reported that since implementing the above suggestions very few security problems had occurred.

WORKSHOP C1

WOMEN AND THEIR ROLE IN TRAMWAY MUSEUMS

Each member briefly detailed the position in his society:-

BTMS has seven female members. There are really no positions available to them at present due to the museum being in the construction stage.

SPER has two or three female members. One is active in the maintenance of tramcars.

AETM has three female members, one of whom is a Conductress. It was felt that wives of members could be usefully involved in museum activities such as assisting with day to day running.

BTPS has about 90 female members, of whom five are active. They prefer to engage in work not regarded as traditionally "feminine".

TMSV has about seven female members, but only one or two are occasionally active. The Society believes that they are an untapped source of help.

Generally it was felt that the low membership ratio is due to the disinterest of women in a traditionally male-dominated subject.

A lack of communication to females generally has aggravated, or at least continued this situation. In the past, there was no real encouragement to females to join Societies either when they began or in their early stages of development. This was aggravated by two factors :-

(a) too much to be done of an "every day" or even urgent nature to permit time to be devoted to thinking about other matters; and

(b) the "railroad construction camp" situation which exists (or existed) in the early years of tramway museum construction.

It was agreed that females should be encouraged to involve themselves in activities in tramway museums.

A freedom of choice should be given to them as to the type of work they would like to engage in. They should not automatically be expected to do normally "feminine" tasks; however, they may select thus if they so desire.

It could be useful and/or even desirable for male and female members to undertake tasks normally considered the domain of the other sex in museum activities. This would allow a change from their usual work, and could be on a permanent or occasional basis. A useful and interesting insight into such "other" jobs would be gained! Such should not take place on anything but a very limited basis unless reasonable competence can be assured.

Amenities for females in staff quarters was discussed. The BTPS plan to build an amenities unit consisting of staff room, toilet and shower room. Their active female members have not objected to using the same toilet and shower as the male members, as current architectural design standards would provide totally enclosed cubicles which would ensure full privacy for the occupant.

The BTPS member also commented that the presence of females had "humanised" some of their male members which had resulted in higher standards of language, tidyness and general behaviour. Also, their female members are historically minded and desire to help retain some of the past for posterity.

WORKSHOP C2

GIFT SHOP, BOOKSTORE, MERCHANDISING:

TO WHAT DEGREE; TOO COMMERCIAL?

The session commenced with a brief outline of the Ballarat situation. As it operates within the "goodwill" area of an established park kiosk, the BTPS has no actual shop of its own. Various items such as postcards etc. are supplied wholesale to this kiosk and to other shops in the city, but the Society also conducts a sales facility in a tram at the Depot. In addition, conductors on all cars carry postcards and lapel buttons to sell to the passengers. All products publicise the Museum and feature Ballarat trams. Some members object to the sale of souvenir-type items as they feel that this is not part of the tramway atmosphere being preserved.

SPER has a similar resistance by many members to this form of commercialism. However, the publication of historical books is accepted, but this is, of necessity, limited by finance. The "tourist junk" type of material is always very cheap to produce and provides an excellent return, whereas books require a large outlay and are often slow to show a profit. The example of the second volume of "Century of NSW Tramcars" was quoted - this has only just covered its production costs after 8 years. The only factor inhibiting greater involvement in the sales field is the limited size of the Museum stall and finance for production. Despite all these limitations the bookstall exists to support the trams, and is merely a means to this end.

Considerable discussion ensued on the extent to which it is desirable to enter the field of souvenirs etc. All present agreed that the vast majority of members do not personally favour the items themselves or even involvement with this type of trade BUT nevertheless they welcome the income that is so generated. No clear cut reason could be identified for this attitude but the traditional association of this type of merchandise with gimmicky "tourist traps" is the most probable.

The market for sales of all types can be split into two broad groups, viz enthusiasts and the general public. The enthusiasts want the serious books and productions but will probably buy one of most souvenir type items "for their collections".

The general public can also be split into two groups - adults and children. Children tend to buy anything that is cheap, be it booklets, buttons or whatever; adults cannot be said to be much more discerning but they do buy the more expensive items.

In short there is a market for all types of sales and we are foolish if we ignore any part of it. Some products mentioned which could be classified as tourist gimmicks were the buttons of BTPS (et al) and sleeve patches produced by THS; but these all sell extremely well.

The success of the BTMS in the field of drink sales was mentioned but this was thought to be a result of climate rather than any other factor. Discussion then touched on more elaborate food services such as afternoon teas. There was universal agreement that only prepackaged items should be sold or else the labour content of the sales becomes disproportionate - not because of cost but by diversion of effort away from more important avenues. Like most museum activities it would probably be left to the "faithful few" to provide the service to the detriment of actual operational projects.

A general concensus of the felling of the Workshop was that sales activity was a "necessary evil" and that the end - finance for the objects of the museums - justifies the means.

"RECIPROCAL VISITS"

The workshop began with the T.M.S.V. and the B.T.M.S., both of whom have a set policy regarding visitors to their respective Museums by members of kindred museum associations, outlining that policy. They are as follows:-

B.T.M.S.: Any member of any kindred society is allowed to visit the museum at any time on a weekend or public holiday, unannounced and will be given a tour of the museum by the Council member on duty at that time. Outside of these times, visitors should ring the Secretary of the Society (48-3192) and arrangements will be made to organise a visit to the Society's museum at Ferny Grove. If at all possible, it is also policy to show the visitors the City and points of interest that they may particularly want to see, depending on the availability of members with cars. Visitors are invited to the society's monthly meetings and are encouraged to join in activities at the Museum if they so wish.

T.M.S.V.: The Society encourages intending visitors to communicate with the Secretary and advise him of their arrival. If there is a work party on that date, the visitor is referred to the supervisor for that work party. Visitors can participate in work parties. Transport to Bylands can also be arranged. Visits to Malvern Depot to inspect the Museum's exhibits there can also be seen to through the Secretary.

Sydney Tramway Museum, and A.E.T.M.: No set policy regarding visitors, but they are afforded, of course, all the hospitality normally given to kindred society members.

It was generally agreed that some attempt should be made through C.O.T.M.A. to formulate an itinery of the opening times, and persons to contact for visiting the various museums to assist travellers. This would eliminate persons reluctant to visit the establishments through restrictive times, shyness or whatever, and especially help those visiting during the week, when work is not normally going on. It was appreciated that there would be problems with this directly being outdated a short time after being printed, but it was thought that bi-annually would be a good period for its release.

The desirability of advising of impending arrival was stressed, both to allow arrangements for the visit to be made, and minimize interruption to work parties.

Some discussion was held on production of membership cards. Not all museums have these, and it was finally agreed that this would really be unnecessary as it would be very rarely that a person would try to enter a tramway museum unless he was bone fide interested in what was going on.

Regarding hospitality, it was felt that it was encumbant upon Societies to show at the very least a minimum of hospitality towards visitors, but in turn, visitors should realize that there is work to be done, and that there is not much time to show them every small detail of the museum. There was then discussion on whether special guides were appointed by the society to show visitors around. The respective museums answered as follows:-

S.P.E.R.: No ,they rely on rostered members at the museum.
T.M.S.V.: Yes, these guides are safety officers as well. The sales officer also assist.

A.E.T.M.: No, rely on rostered members.
B.T.M.S.: Yes, special guides attached to the Traffic Branch for this purpose.

Facilities available to visitors:

Trams:

When running special trams for visitors it was felt that the financial considerations, and the time and effort needed should be taken into account by the visitors. Discussion then turned to driving of museum trams by visitors.

The Sydney Tramway Museum allows visitors to drive trams only outside of traffic hours, and this seemed to be the general practise or attitude. The A.E.T.M. policy is similar, but they usually have a run to the terminus at the end of the day for members who have participated in the day's events.
The idea of visitors working as conductors was mentioned, but it was felt that, as permanent rosters are drawn up well in advance it would be hard to do this, and as, well it needs to be taken into consideration that the visitor must first master the system operated by that particular Society.

Final comments included the feeling that bookshop personnel were usually the first people that visitors felt relaxed enough to talk to in depth as they held a unique role in the museum selling publications and information. Attracting new members was possible through good exhibitions and a proper attitude towards the visitor.

The discussion ended with all museums agreeing that if at all possible, visitors should attempt to go the Museums during normal work times to minimize inconvenience to work.

WORKSHOP D1

PUBLICATIONS.

Of the groups assembled only two had had any extensive experience in the Publications field, viz. SPER and THS. The other groups had mainly limited themselves to the publication of small items such as postcards etc.

After much lengthy discussion on the advisability of museums producing their own publications, various guidelines were laid down for the guidance of the various groups.

Briefly summarised, they are:-

1. Museums were to generally concern themselves with their own state or system. When production was undertaken by an interstate group, the interstate group was to inform the home state when the project had reached the 30% completion stage. This was to prevent one group blocking another indefinitely, by saying that they too were producing an article, when no actual intention of production was contemplated for several years.

2. Where two or more museums simultaneously were working on similar projects the following would apply:-

   a. One museum would abandon production entirely and aid the other society as far as possible.

   b. Both museums would co-operate and produce a joint venture.

   c. One would defer production for several years.

It was agreed that the 30% stage would ensure production within a reasonable period.

With items 2a, and 2c the home state would have preference, unless they had not progressed very far.

It was agreed that these guidelines would prevent duplication of work, and the consequent waste of time and possibly money.

Mr. Jessup, BTPS, volunteered to investigate the feasability of producing a 'View Folder' type postcard, with a tram from each Museum being represented. The costs were to be shared equally amongst the participating groups, and was designed to show the unity of COTMA members.

The S.P.E.R.offered its facilities and expertise to any groups that were desirous of bbtaining expert help.

WORKSHOP D2

ATTITUDE OF MANAGEMENT TO MEMBERS

The discussion was opened by Bill Daniells who pointed out the difference between volunteer and paid staff, and the difficulty of tying members sown to attending work parties regularly due to their other committments. The fact that this made forward planning of works projects difficult was also discussed. All delegates generally agreed that there was a problem in this area but no definite solution was arrived at.

Ron White then touched on the subject of whether volunteer workers can be reprimanded and whether or not punishment for non carrying out of requests to do specific jobs was warranted. The general consensus of opinion was that in volunteer organisations this was difficult, but if good management could be obtained and maintained this problem may resolve itself. Barry Ollerenshaw gave details of the situation at Wellington where a '' hard line '' policy had been brought in over a six month period, including "standing down" members for non performance, which was now working quite well although it was admitted that a few members were last in the initial stages.

A lengthy discussion then ensued on ways and means of obtaining workers and it was agreed that provided a definite work plan is formulated in advance (how far in advance depending on local requirements) the best way of recruiting workers is by personal contact about two weeks prior to the event, with a follow up immediately before a special officer who is familiar with the works programme would need to be appointed to attend to the necessary recruiting.

The provision of a forward works programme for six to twelve months with occasional reviews was also discussed but nothing definite was arrived at.

The value of regular members meetings was then discussed and it transpired that the majority of delegates were of the opinion that these meetings were wasted on the members, and that the time, effort and cost could be better utilized in other fields. Some delegates indicated that their members meetings degenerated into little more than gossip and "knocking" sessions. It was however, agreed that social outings such as Barbeques and theatre nights still appeared to be of some value.

The workshop was terminated on this note due to the expiration of time allowed.

WORKSHOP D3

RATIONALISATION OF REQUESTS FOR W3 and W4 BOGIES

Museums represented: AETM, BTPS, HADDAN, TMSV, THS, SPER, WTM.

The reasons for members wishing to obtain W3 and W4 bogies were varied, but were able to be put in the following categories:

1. Those groups needing whole bogies to make present static exhibits mobile.
2. Those groups which needed wheel-axle-motor sets to complete parts of bogies already available to make static exhibits mobile.
3. Those groups which needed wheel-axle sets of 33" nominal wheel diameter to complete parts of bogies already.available.
4. Those groups which needed other miscellaneous parts of these bogies as spares.

These classifications would allow maximum benefit from any distribution of bogies, since a bogie would then be able to be used profitably by more than one museum in cases 1 and 2 and 4 above. It would also allow bogies with roadworthy wheels, axles and motors, but otherwise defective to be used in cases 2 and 3 above.

As it was apparent that more bogies were needed than would be likely to be available, it was decided to draw up a preliminary priority listing of requirements based on members' submissions, taking into account that some of these in category 1 above would need at least two bogies. This preliminary list was then further refined to a final list of nineteen bogies by a restricted randomisation ballot conducted by the Executive Officer and Chairman of COTMA:-

ORDER	MEMBER	CATEGORY
1	WATM	1
2	WTM	1
3	THS	1
4&5	MOTAT	1
6	AETM	1
7&8	SPER	1
9	WATM	1
10	AETM	2
11	WTM	1
12	SPER	2
13&14	MOTAT	1
15	THS	3
16&17	MOTAT	1
18&19	WATM	1

This list was the basis of a recommendation placed before the meeting of COTMA, on Monday, 3rd May, 1976.

Haddon Tramway Workshops sought parts in category 4 and it was agreed that the parts could be provided from those museums seeking trucks in categories 2 and 3. This arrangement was agreed by all those present.

WORKSHOP E1

MUSEUM V TOURIST TRAMWAY

Two different principles upon which the historic tramway could be based were outlined.

1. A museum of tramcars etc. with a xociety built tramway attached.

2. A preserved tramway operated for tourists possibly with a museum attached.

The problems of operating and marketing each type differed.

It was decided by the Workshop to designate these as:-

a. Demonstration Tramway.

b. Authentic Tramway.

The representatives of the various museums identified their operations as follows:-

AETM A museum with demonstration tramway. The Museum Display provides information for research. Visitors can choose whether to inspect the museum or ride the trams; the latter aspect which they regard as a joy ride.

SPER A museum tramway with a depot of operating vehicles and museum of display vehicles. Of the visitors 60% are joy riders and 40% historian. The basis if historical.

THS Achieving both goals. The joyride is still No. 1, and a full tram is much more rewarding than an empty one.

BTPS. An authentic tramway with the side as the museum function. With "HAIL TRAMS" stops, proper S.E.C. uniforms and logos, the operation does get the message across to the visitors.

TMSV. Hope is for a tourist and educational facility. A Display Hall will be combined with two sheds, of which one is a running museum shed and the other a restoration shed.

BTMS. A museum first and a demonstration tramway second. Operated as a mini B.C.C. even to the styles of forms, systems and administration.

From the discussion the following conclusions/comments were noted.

i.) Affiliated atrations do help.

ii.) Most visitors come to the museum for pleasure first, history second.

iii.) Although steam, horse and cable trams are undoubtedly history perhaps electric trams are still too recent an innovation to be real history.

iv.) How can you really equate a period street of historic buildings with a demonstration tramway of vehicles which range in age from 70 to 10 years, from horse tram to current vehicles, and vehicles that come from different parts of Australia.

v.) Since not all people are interested in historical trams or trams on Captain Cook's Landing Place, or trams in Camelia Gardens, we must be basically tourist oriented.

vi.) Uniforms are important to identify with, or distinct from a transport authority.

vii.) The operation should be that of a museum plus an authentic demonstration tramway.

viii.) If the purpose of the tramway is missed, then it is one to accept, to live with, but not to confuse.

WORKSHOP E2

MUSEUMS AND PRIVATE COMPANIES

METHODS OF APPROACH

Mr. Daniels opened the session with a short address regarding financial and material help received by the BTMS from government depts. and private enterprise. The BTMS has a Planning Sub-Committee whose duties include approaches to companies or individuals for assistance in various ways. One of their most important achievements has been with Bergers Paints, who have offered to supply undercoats and primers at no cost and finishing coats at cost price. He suggested that a list be made from the Yellow pages in the phone directory of prospective companies and write to them, maintaining a policy of approaching only one company at a time for the same form of assistance to avoid the possible embarrassment of more than one offer of help.

Mr. Stock asked who to address correspondence to in the organisations contacted. Mr. Daniells replied "The Manager" generally would be best in most cases but added "The Sales Manager" could be used dependant on the management structure of the company concerned.

Mr. Stock then asked if Museum advertising literature is included in correspondence. Mr. Daniells replied Yes definitely and tendered to the session copies of the BTMS handouts used which contained such information as Brief History of Museum Fleet Details, equipment details, finance details, aims and objectives, membership details including application form, and site details including a site plan of their proposed development. Mr. Daniells then read a copy of the letter sent to Bergers Paints which also stated that any donations or assistance is tax deductible under Section 78(1)(a) of the Income Tax Assessment Act. Mr. Radcliffe enquired how much personal contact would be involved with written requests.

Mr. Daniells replied that the Museum Secretary's phone number is always included in the initial requests and depended on the reply from the company contacted. He also stated that reciprocal advertising subject to negotiation is always offered in these requests. Mr. Radcliffe asked for a figure which indicated the ratio of acceptance and Mr. Daniells replied that to date 80% would be indicative, adding, that in the request for paint, Usher Paint were first contacted but failed to reply.

Mr. Stock stated that STPS had received some assistance in paint supply from Dulux. Discussion then took place regarding sales tax exemption when goods are paid for. Mr. Daniells advised that BTMS have also contacted International Harvester regarding spare parts for their tower wagon and present indications are that success will be achieved from this application. Mr. Radcliffe asked how Museums could raise themselves above the level of "The Flying Doctor" etc. with regard to asking for goods and suggested that maybe somebody more experienced in this field such as a professional fund raiser type might be a solution.

Discussion then took place concerning the other Meseums present and whether they had made any requests for assistance. These requests in most cases were made verbally to either business acquaintances or friends and Mr. McKeever stated that a few requests of this nature and also a few verbal requests to unfamiliar companies had met with a high percentage of success for SPER.

Mr. Daniells stated that requests should not just be for material goods and illustrated this by making mention of the generous assistance offered to them by the Queensland Institute of Technology regarding the survey of their Museum site.

The Chairman then summarised in general the points made and declared the session closed at 12.05 a.m.

FUTURE MANPOWER - REQUIREMENTS AND AVAILABILITY

This workshop posed general questions which the delegates discussed.

What had Museums found in their work operations?
Are work parties well attended?
Do rostered traffic staff turn up when required or do others have to leave other jobs to take their place?
What steps do we take to recruit members to meet future operating needs?

AETM Has reliable operations team, generally members of several years standing. The workers are of even longer standing and generally the workers have not changed greatly since operations commenced.

TTMS It has been recognised that the number of existing vehicles is enough because the active membership is only sufficient to handle the exhibits collected.

Progress on track constructions is slow due to the dispersal of membership throughout the State and the mainland.

There are, of course, "silent members" who pay subscriptions and do nothing else.

AETM "Silent" members are a waste of time pursuing for work parties etc. Greater potential exists in finding newer enthusiastic members through hobbies exhibitions.

BTMS Kindergartens in Queensland charge $20.00 when a child is enrolled as a deposition the parents availability for work parties, generally three per term. If they do not come, the money is forfeited and used to pay a contractor.

BTMS AETM Experience in these two museums has shown that work rostering only is a success where certain specific tasks are undertaken. In Tasmania, the courts have the power to allocate projects for child delinquents to expiate their crimes.

TMSV Mailouts to "silent" members are a waste of time and effort. Once their status as "silent" has been determined it is sufficient to just collect their dues. School children, who are under age but show an interest in the museum's activities should be circularised until they reach eligible age and then they should be encouraged to join.

AETM The executive really only shows interest in potential of new members if they are "strangers" after the first few voluntary appearances . This is probably a bad attitude but it is felt that it is a waste of time to train someone, if, it is unlikely they will keep coming back. Many members are too "individualistic" and

prefer to do the job themselves, rather than show someone else. "Jack of all trades" people should be encouraged.

BTMS — A talent census amongst BTMS members is carried out yearly to find out what the members are interested in. A project day is usually scheduled after a monthly (Friday) meeting. The notice at meetings instills urgency into the members and helps to swell the numbers. Those not suited to heavy jobs are allocated other lighter tasks.

AETM
TMSV — New members, or someone who has re-appeared after a long absense, should be given something useful and possibly stimulating to do as a means of holding interest. They must not be given "Fob-off" jobs otherwise their interest will wane very quickly. Do not give them a job you yourself would not do.

BMTS — Standby jobs are necessary for a sudden influx of voluntary workers on a work day.

AETM — Some visitors think AETM is a government body, and although interested do not realise they can join.

BTMS — The main worry at present is labour for immediate projects, but the longer term problem is to interest younger people to enable the museum to keep functioning.

TMSV — Hobby exhibitions in Victoria solicit many museum inquiries of membership, but how many actually join from these exhibitions is not known. Also advertisements in teacher's journals can interest school visits and children's interest in the museum. These children can be regarded as potential members.

AETM — Had not had any tangible results from visits of this nature.

BTMS — It was suggested that service clubs could be approached for a specific museum project.

TMSV
WTM — The "exclusive" club notion that outsiders had of museums could be dispelled by advertising, in certain publications, for members. This advertising would take the form "combining skills with a volunteer hobby".

AETM — Some tradesmen/professionals want to amuse themselves in a different way when away from their place of employment. Some may be able to give advice without actually working or joining.

BTMS — Private companies could make project contributions and put their "stamp" on it. It would be publicity and advertising for them.

TMSV — The CMF personnel aiding with construction of Bylands did not show sufficient interest to join the museum afterwards.

CONCLUSIONS:

(a) A nucleus is always necessary to keep the museum operating, both physically and philosophically.

(b) General membership must constantly be sought.

(c) Big museum projects (car moves etc.,) with media coverage should immediately be followed up by membership drives.

(d) Private companies, Service clubs etc., should be approached for small status projects.

OVERHAULS: FACILITIES REQUIRED

The Soceities represented at this workshop either were operating vehicles in passenger service, or intended to do so. Thus each recognised that ultimately major overhaul of the vehicles would be necessary.

There are at present several options open:-

1. Buy and house as much equipment as possible to do the required work, working towards almost complete self sufficiency.

2. Let work to outside contractors for operations which are either capital intensive, or which require specialist skills not available to the society.

3. Combination of the above.

It was considered that the option adopted would depend on the circumstances of each individual society, but that the following items would sonstitute a starting point for a society wishing to overhaul vehicles:-

a. body jacks

b. chain block (1-3 tonne)

c. solid floor space to sit disassembled bogies.

It would then be possible from this point to exercise either of the options 1, 2, 3 above.

From the minimum, it is then possible to divide and expand overhaul requirements further as follows:-

Body Restoration)
Maintenance) mechanical saws, planers, handtools

Electrical Running)
and) pit or ramp, isolated road, lathe, pit jacks
Mechanical Overhaul)

It can be seen that a large amount of capital can be tied up in specialised overhaul facilities which may be used only once or twice in ten years under museum traffic conditions. Thus thought is needed before the acquisition and housing of overhaul equipment, as to the comparative economics of operations 2, and 3 above.

COUNCIL OF
TRAMWAY MUSEUMS
OF AUSTRALASIA

1976 CONFERENCE

C. REPORTS

INDEX - PART C

REPORTS

FIRST REPORT OF THE EXPERT PANEL ON TRAMCAR ACQUISITIONS AND SPARE PARTS TO THE CHAIRMAN AND MEMBERS OF THE COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA.

2nd May, 1976.

INTRODUCTION

1. In terms of Section 45 of the Interim Constitution of C.O.T.M.A., the Panel was established by the Secretariat in October 1975.

2. The members: Messrs K.S. Kings (Chairman), G. Breydon, R.H. Prentice and G. Cargeeg, met formally on three occasions and conducted additional work informally and by questionnaires to advise members on the matters set out as the Terms of Reference published in C.O.T.M.A. Memorandum No. 3 of 27th October 1975. In addition, the Panel Chairman and the C.O.T.M.A. Executive Officer met with the Secretary of the M. & M.T.B. on 17th December.

CURRENT EXHIBITS

3. The Panel commenced to compile a listing of the technical specifications of all electric cars currently held for preservation, generally by organisations meeting the criteria for listing in the Australian Museums Directory (ISBN 0 642 001146). This is intended to assist the Panel in its deliberations and in the exchange of information and experience, and to provide an indication of equipment being sought for completion.

4. This project has been severely affected by the lack of reply by a number of member groups. Consequently the Panel is able to present only an interim report at the 1976 Conference, but is willing to continue the project.

5. The Panel are considering the feasibility of having C.O.T.M.A. publish the completed listing (approx. 60 copies).

FUTURE ACQUISITIONS

6. The Panel is unable to make an recommendations on the rationalisation of future acquisitions pending the completion of the listing of current exhibits.

ADVISORY ROLE OF C.O.T.M.A.

7. The Panel considers that it would be difficult for C.O.T.M.A. to assume a general advisory role to authorities as C.O.T.M.A. officers could not be sure that they would be properly reflecting the views of members groups, except on matters covered by resolutions of the Council. It would, however, be practical to provide information to authorise on matters such as whether or not a group's aims are complimentary to those of member groups.

SPARE PARTS POOL

8. A C.O.T.M.A. financed and administered spare parts pool would, in the view of the Panel, not be practical. The listing of preserved vehicles discussed above and the cataloguing of parts held by member groups, discussed below, would strengthen the informal pooling arrangements already operating.

9. The Panel believes that the exchange of parts between member groups should be on the following basis:

(a) A group cannot be expected to relinquish equipment forming part of the stock of restoration materials or operational spare parts for a tram which it controls or can be reasonably certain of acquiring, but in all other cases should try to assist any other C.O.T.M.A. member requiring equipment.

(b) The terms of the transfer should be evidenced in writing with copies held by both parties to avoid later misunderstanding. Whether it is sale, gift, or loan for a fixed term or until required should be agreed before the transfer occurs.

(c) The group receiving the equipment should bear the costs of the transfer and any costs paid by the original group to third parties, including initial acquisition, transport or external storage but should not be expected to pay any premium or profit for the equipment.

INVENTORY

10. While the establishment of an inventory of parts and fittings held by member groups is desirable, the majority of groups are not in a position to compile such a list due to the time required and the difficult conditions under which materials are presently stored by the various groups. The Panel sees such a project as being a long-term one and requiring co-ordination of the method of indexing and describing items (possibly by modifying the M. & M.T.B. stores system for museum use).

FORTHCOMING SURPLUS MELBOURNE EQUIPMENT

11. The M. & M.T.B. advised certain applicants early in April 1976 of W3 and W4 class tramcars and equipment available at a nominal cost. The Panel is not aware of when further tramcars and equipment will become available, nor under what conditions.

12. The Panel recognises that the M. & M.T.B. has the sole right to determine the disposition of its own property. It is consequently concerned that several cases of what could almost be considered demands rather than requests for equipment have occurred and reminds members to be careful in the wording of letters to the Board in this respect.

13. The Panel strongly advises member groups to direct all requests for tramcars and equipment to the operating authority concerned and not to the political arena.

14. The Panel has not yet considered what rationalisation of requests is desirable among members but has developed the following priorities:

(a) Equipment necessary for the continued operation of complete tramcars already preserved by C.O.T.M.A. member groups.

(b) Equipment necessary for the restoration and continued operation of tramcars preserved by C.O.T.M.A. member groups where there would otherwise be a gap in the basis chronological coverage of

exhibits of the principal collection of tramcars from a particular locality.

(c) Equipment necessary for the display or operation by a C.O.T.M.A. member group of a Melbourne tramcar for comparative purposes or to supplement operation of other vehicles, and

(d) Other equipment requirements.

15. It considers that the application of these priorities would result in the most equitable distribution of equipment consistent with the preservation of examples of tramway technology in regional museums throughout Australasia. It should be noted that the Committee of Inquiry on Museums and National Collections by the Australian Government recommended a regional approach for transport museums other than air and sea transport.

STORAGE AND SHIPPING

16. Both the B.T.P.S. and T.M.S.V. are faced with a shortage of storage space for their own equipment and therefore, except in exceptional circumstances, will be unable to provide storage of equipment on behalf of other preservation groups.

17. B.T.P.S., T.M.S.V. and C.O.T.M.A. personnel located in Melbourne have limited time available to arrange and supervise the anticipated large volume of shipping and it will therefore be necessary for groups acquiring equipment to carry out much of the work involved in booking transport, etc. It is expected that the lifting facilities of the M. & M.T.B. Preston Workshops would be made available for loading road transport during normal working hours.

GENERAL

18. The Panel is prepared to continue to advise the Chairman and members of C.O.T.M.A. subject to receiving the co-operation of members in the collection of the information necessary for its work. In particular we seek co-operation as follows:-

(a) Prompt response to requests for information such as the questionnaires mentioned above, and

(b) Provision of copies of correspondence regarding acquisition of tramcars and equipment.

C.O.T.M.A. CONFERENCE 1976

PRESENTATION OF FIRST REPORT OF EXPERT PANEL ON TRAMCAR ACQUISITIONS AND SPARE PARTS

SUNDAY 2nd MAY, 10.30a.m.

Mr. Keith Kings, Chairman of the panel, noted that those present had received copies of the first report of the panel on the previous day (a copy is included in these published proceedings) and invited discussion and questions on each section. These questions were answered by Mr. Kings with the assistance of Mr. Graeme Breydon. In doing so, particular attention was drawn to the recommended basis for the exchange of parts (paragraph 9) and the priorities established for determining rationalisation of requests for surplus Melbourne equipment (paragraph 14).

The attention of those present was also drawn to an error in the data sheets distributed by the panel where wheel diameter had been incorrectly listed instead of the axle diameter. It was suggested by Mr. Malcolm McAuley that axle diameter be measured at the motor suspension and not journal or elsewhere.

It was agreed between the Chairman of C.O.T.M.A. and the two panel members present that:-

(a) the inventory of parts and fittings in the terms of reference should exclude parts awaiting attachment in restoration of tramcar bodies held, and

(b) that the panel would consider what a reasonable level of operational spare parts would be for the purpose of paragraph 9 (a) of the report.

Dr. John Radcliffe moved five advisory motions to the council meeting scheduled for 3rd May, 1976:-

Motion 1 (seconded by Mr. William Jessup): That the first report of the COTMA Expert Panel on Car Acquisitions and Spare Parts be adopted.

Motion 2 (seconded by Mr. Peter Kahn): That all members who wish to incorporate routine service vehicles into the operation of their museums be encouraged to avoid seeking vehicles of types which are small in number and which either complete or in parts are sought by museums for historical preservation or restoration. Furthermore, that members seeking cars from Melbourne for routing service purposes be encouraged to seek W2 type cars in preference to cars of less numerous classes.

Motion 3 (seconded by Mr. John Moore): That COTMA advise the Western Australian Transport Museum, The Newcastle Historic Vehicle Association and the Dunedin Museum of Transport of the terms of the above motion and invite them to consider seeking W2 type cars in place of the W3 and W4 type cars currently on offer.

Motion 4 (seconded by Mr. Peter Kahn): That delegates from each museum present meet together with representatives of the COTMA Expert Panel on Car Acquisitions and Spare Parts to prepare a standardised list for the possible distribution of from W3 and W4 type cars which have not already been offered to Museums in Victoria, the listing to be set down on a priority basis. The list then to be submitted to the M & MTB for its consideration.

Motion 5 (seconded by Mr. Noel Gipps): That COTMA offer to the M&MTB to arrange the co-ordinated removal of minor parts (excluding trucks sought by Museum groups prior to disposal of the bodies, by the Board) the offer being subject to M&MTB and appropriate union consent and to adequate indemnification of the Board against any claim of representatives or third parties for any damage or injuries which might occur in the course of the work.

Each motion was carried on a show of hands by those delegates and observers present, and subsequently submitted to the General Meeting of the Council on May, 3rd, 1976.

MUSEUM	OBJECTIVES	TRAM	TROLLEY	BUS	OTHER
AETM	Preserve and Operate vehicles 1) Exhibits related to S.A. 2) Hack Adelaide bodies interstate equipment.	10	4	(1)	1
MOTAT	National Technical Museum of N.Z. Auckland & Wellington.	16	2	6	?
BTPS	Operational Ballarat trams in Ballarat including hack trams ex-Melbourne.	9	-	-	-
BTMS	Museum of Street Public Transport ex-Brisbane Comparison East coast trams Demonstration and practice.	21	2	2	3
BT		23	-	-	?
TMSV	Trams relics equipment records of Vict. Tramways Horse - 1 Cable - 4	13	-	Preserved privately	10
THS	Tramcar preservation all Christchurch representing Dunedin all NZTB operate trams in Canterbury Participate in Ferrymead Horse - 1 Cable - 2 Steam - 1	5+3	3	3	?
DMT		8	-	?	?
HTW	Static preservation. 30, W3, W4, W2, L, Geelong body? Operation - those which appeal to members	3	-	-	-
TTMS	Tasmanian transport - static and display demonstration operation	(1+3)	2	2	13
NHVA	Rectify lack Newcastle transport history individual interests. Preserve Newcastle vehicles and industrial machinery. Operate a conveyance - tourist tramway	2?	-	3	3
WATM	Bus and tram operation	(2+4)	3	4	-
SPER	Sydney - representative Australian dropcentre tramcars and Government buses. Hack Sydney bodies and interstate equipment. Cable - 1	26	-	3	7
WTM	Operate Wellington cars. No further outside acquisitions	(9+4)	3	-	-

MUSEUM

MUSEUM	OBJECTIVES	TRAM	TROLLEY	BUS	OTHER
M&MTB	Operate transport system	12	-	1?	-
STPRS	Operate steam tram - metropolitan and country (N. S. W. in effect).	1+5	-	-	2
MAAS	To restore exhibits possibly operate (N. S. W.) Cable - 2 Steam - 2	3	1	1	3++
SCIENCE MUSEUM VICTORIA	Cable 2				
OTHER VICTORIA		9			

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

ANNUAL GENERAL MEETING OF COUNCIL

May 3, 1976. Jannali (Sydney).

OPENING Dr. John Radcliffe (Interim Chairman), opened the meeting at 11.30 a.m.

PRESENT: Dr. Radcliffe, Messrs. W. Kingsley (Executive Officer), P. Kahn (SPER), M. Skinner (AETM), K. Kings (TMSV), W. Jessup (BTPS), D. Hinman (THS), D. Verrier (TTMS), W. Daniells (BTMS), P. Stock (STRPS). Other conference participants admitted as observers.

APOLOGIES: M. Finn, Executive Officer, N.Z.

MINUTES OF LUNCHEON MEETING, Ballarat, April 27th, 1975.

Confirmed on the motion of Jessup/Kahn.

BUSINESS ARISING: Nil.

CONSTITUTION Moved Daniells/Hinman that, subject to amendments presented, the Interim Constitution be formally adopted. In reply to a question, the Interim Chairman defined a "Council Member" as a museum and a "Council Officer" as a member of the Executive. The motion was carried unanimously.

GUIDELINES Moved Daniells/Kings that, subject to corresponding and minor amendments presented, the Interim Guidelines be formally adopted, Carried unanimously.

INTERNATIONAL ASSOCIATION OF TRANSPORT MUSEUMS. (IATM)

The Executive Officer commented on correspondence with IATM.

Membership of IATM is more relevant to individual museums and/or personal members of COTMA Executive. There was no motion forthcoming for membership of COTMA with IATM.

APPLICATIONS FOR MEMBERSHIP

Haddon Tramway Workshops. Mr. T. Smith, representing HTW, made the following comments:-

1. HTW is not a corporate body. Steps towards incorporation have been taken.
2. It is not interested in profit.
3. It intends to operate for the public and not as a closed facility.
4. There are three financial members.
5. He was unable to say if membership will be completely open.
6. There was no reason for HTW being located close to BTPS. The choice of site was purely personal and irrespective of the proximity to Ballarat.

Mr. Jessup expressed concern by BTPS of:-

1. Proximity of HTW to another COTMA member.
2. The possibility of HTW having a closed membership.
3. The fact that it had some appearances of having "private" status.

Moved Daniells/Skinner, after discussion, that the application be deferred pending incorporation and presentation to Council of a clear set of aims and objectives. Carried unanimously.

THE HISTORIC VEHICLE ASSOCIATION: No representative present. Application of 10.12.75 was read by the Executive Officer. Moved Kahn/Jessup that the application be rejected in that preservation in N.S.W. is well catered for, no representative was present and no answers were available to clarify questions of its display, ownership, policy, whether its collection would be open to the public, and whether it was a non-profit body. Lost 3 votes to 5.

It was then moved Jessup/Kahn that the application be deferred pending provision of more satisfactory, detailed and constitutional information. Carried unanimously.

DIRECTORY OF AUSTRALIAN AND NEW ZEALAND TRAM MUSEUMS.

Following introductory remarks by the Interim Chairman, it was moved Jessup/Kahn that the Executive Officer consult with the Diamond Valley Railway to ascertain what steps have been taken toward a directory and, if these are unsatisfactory, that the Executive Officer take steps to establish a museum guide for railways and tramways in Australia and New Zealand and arrange publication. Carried unanimously.

MINIMUM SAFETY STANDARDS

Following discussions introduced by Mr. Kings, it was moved Kings/Daniells that COTMA set up an Expert Panel to investigate and establish a code of safety for tramway museums. Carried unanimously.

ANNUAL REPORT COTMA

The report had been circulated to delegates earlier. Moved Kahn/Skinner that the Annual Report be adopted. Carried unanimously.

FINANCIAL REPORT COTMA

The Audited Report had been circulated to delegates earlier. Moved Daniells/Stock that the Financial Report be accepted. Carried unanimously.

FEES 1976-7

Following comment by the Executive Officer, it was moved Daniells/Stock that fees remain unchanged at $50.00 entrance fee and an annual membership levy of 40¢ per tramway member, Carried unanimously.

COMBINED RAIL/TRAM CONFERENCE

The Executive Officer explained that an ARHS Federal Conference was held in January, 1976. Their next conference, including RTM, ARE, and Mile End, could be in 1979. At the Conference, 1982, either "railed" or "Total" Transport would be the theme and possibly one day of a 4-day conference could be combined with COTMA. It was moved Kahn/Jessup, that we agree in principal and that the Executive Officer write to ARHS asking that they communicate with the National Federation of Rail Societies of New Zealand and that the date be brought forward. Carried.

NEXT CONFERENCE

THS through Mr. Hinman offered to host in 1978 and made the following comments:--

1. Billetting be used rather than hotel/motel accommodation.
2. The conference not be in July/August as the Kitson would be in overhaul.
3. The Kingston Flier operates December to Easter only.
4. Trolleybuses would be disappearing from Dunedin and Auckland within 5 years.

The Executive Officer, speaking as 1975 Convenor, philosophised that museums are really people, that getting together was an essential part of COTMA. His remarks were supported by Messrs. Skinner and McAuley (SPER Observer). Moved Jessup/Kahn that the next conference be held in 1977. Carried unanimously. Christchurch was not seen to be suitable for 1977:-

1. The hosts may not be ready.
2. It was the same year as the ARE World Tram Tour commencing on May, 7th for 8 weeks. Leading to problems with finance and time.

AETM then offered to host in 1977.
Moved Jessup/Kahn that THS host in 1978. Carried unanimously.
Moved Jessup/Kahn that the 1977 conference be held Anzac weekend. Carried unanimously.
Moved Jessup/Kings that the 1977 conference be held Saturday to Tuesday. Carried.

Due to the AETA Convention also being held in Adelaide, Easter, 1977, it was recommended that the objectives of AETA and COTMA be kept distinct since COTMA is museologist and historic while AETA is community-oriented and modern in outlook. Moved Jessup/ Daniells that the 1978 conference be held on Anzac weekend. Carried with abstentions.

CONFIRMATION OF ADVISORY MOTIONS

The advisory motions carried by the conference on 2.4.76 were then put to the council.

1. Hinman/Daniells that the report of the Espert Panel on Tramcar Acquisition and Spare Parts be adopted. Carried.

2. Hinman/Skinner that all members who wish to incorporate routine service vehicles into the operation of their museums be encouraged to avoid selecting vehicles of a type which is small in number and which,whether complete or in pa. ts, are sought by museums for historical preservation and restoration. Further, that members presently seeking cars from Melbourne for routine service purposes be encouraged to seek WZ types rather than cars of less numerous classes. Carried.

3. Skinner/Daniells that COTMA contact WATM, NHVA, DMOT advising of the terms of the above motion and inviting them to consider seeking WZ types cars in place of W3 and W4 cars currently on offer. Carried.

4. Skinner/Daniells that delegates from each museum present meet together with the Expert Panel representatives to prepare a rationalised list for the distribution of those W3, W4 trucks which have not already been offered to museums in Victoria, these remaining trucks to be distributed among museums on a priority basis, this list then being submitted to the MMTB for consideration.

   An amendment was put Kahn/Kings that any trucks not required by fellow members of COTMA be offered to SPER after distribution as per list determined at workshop session. Amended motion was carried.

5. Jessup/Kings that COTMA offer to the MMTB to assist the removal of parts sought by museum groups subject to the MMTB, appropriate union agreement and adequate indemnification of the MMTB against claims of members or third parties for any damage or injury. Carried.

VIEWFOLDERS

Consequent to Workshop D4, moved Jessup/Verrier that a viewfolder representing all museums with COTMA on the cover be produced. Carried.

EXECUTIVE 1976-7

Moved Kahn/Kings that Dr. John Radcliffe be Chairman of COTMA 1976-7. Elected unopposed.

Moved Skinner/Kahn that Mr. Bill Kingsley be Executive Officer COTMA 1976-7. Elected unopposed.

AUDITOR

Moved Hinman/Kahn that Executive Officer offer to service HTW and NHVA on payment of the standard fee and that service of other-non-members cease after their notification by next Memorandum. Carried.

Mr. Chris Steele offered to assist the Chairman perform the functions of Executive Officer during Mr. Kingsley's overseas trip. Mail sent to Mr. Kingsley's address will be redirected to Dr. Radcliffe in Adelaide during this period.

FURTHER BUSINESS

Nil.

COMPLIMENTS

The Chairman complemented Mr. Rawlings and SPER on the organisation of the conference. This appreciation was received with acclamation.

CONCLUSION

The Chairman closed the meeting at 2.15 p.m.

FIRST ANNUAL REPORT

OF THE

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA.

Presented at: The Conference of Australasian Tramway Museums,

Sydney, New South Wales.

3rd May, 1976.

Council of Tramway Museums of Australasia.

Chairman: Dr. John C. Radcliffe.

Executive Officer (Australia) Mr. W.J. Kingsley

Executive Officer (New Zealand): Mr. M. Flinn

Member organisations as at 28th. April, 1976.

Australian Electric Transport Museum (South Australia) Incorporated (Adelaide).

Ballarat Tramway Preservation Society Limited.

Brisbane Tramway Museum Society.

Museum of Transport and Technology (Incorporated) (Auckland)

South Pacific Electric Railway Co-operative Society Limited (Sydney).

Steam Tramway and Railway Preservation (Co-op) Society Limited (Parramatta Park).

Tramway Historical Society Inc. Christchurch.

Tramway Museum Society of Victoria Ltd. (Melbourne).

Tasmanian Transport Museum Society Inc. (Hobart).

Address: 51 Lenna Street
EAST BURWOOD.
VICTORIA. 3151
AUSTRALIA.

CHAIRMAN'S REPORT.

The Council of Tramway Museums of Australasia (C.O.T.M.A.) was established at The first Conference of Australian Tramway Museums, held in Ballarat from April 25-27, 1975. The initial office bearers have sought to establish links between the Council, Tramway museums and Transport operators.

CONSTITUTION:

An interim constitution was prepared through the good offices of representatives of the Brisbane Tramway Museum Society, and a set of operational guidelines has also been prepared setting out the principles of the Council. These documents will be placed before the second conference in Sydney for ratification. As at April 28, 1976 nine organisations had joined C.O.T.M.A. Furthermore, two additional bodies not involved with the Ballarat conference will be placing applications before the Sydney conference requesting membership.

COMMUNICATIONS:

Initially, The Executive Officer has sought to service all groups who were present or invited to attend the Ballarat conference, though it is recommended that future servicing be provided only to financial members. The principal medium of communications with Museum groups has been through a series of Memoranda issued periodically. Six have been circulated advising of developments in the Museum field and seeking co-operation in C.O.T.M.A. - sponsored activities.

In addition, the Chairman and Executive Officer have sought to visit as many museum groups as possible. The Chairman has visited groups in Auckland (M.O.T.A.T.), Wellington (W.T.M.), Christchurch (T.H.S.), Dunedin (D.M.O.T.), Perth (W.A.T.M.), Adelaide (A.E.T.M.), Melbourne (T.M.S.V.) and Sydney (S.P.E.R.), while the Executive Officer has visited museums in Sydney (S.P.E.R.), Melbourne (T.M.S.V.), Ballarat (B.T.P.S.), Bendigo (B.T.) and Hobart (T.T.M.S.),. In addition, the Chairman had the opportunity of visiting a range of museum groups in North America and Britain in 1975 to discuss the development of C.O.T.M.A. Some observations on these visits have already been published in Trolleywire 17 (1): 3-10, Feb. 1976.

TRAMCAR ACQUISITIONS:

An Expert Panel on Tramcar Acquisition and Spare Parts was set up during the year under the chairmanship of Mr. K.S. Kings. The other members of the Panel, which is Melbourne based, were Messrs. R.H. Prentice, G. Breydon and G. Cargeeg. This Panel has met on a number of occasions and has circulated museum groups seeking information about their needs. Its task would have been made easier if various museums could have improved the effectiveness of their communications, as progress has been unnecessarily delayed by a few tardy replies.

TRANSPORT AUTHORITIES:

Communications have been established between the Council and the majority of urban public transport authorities in Australia and New Zealand. The Executive Officer and Mr. K.S. Kings have held official discussions with Mr. W. Aird, Secretary of the Melbourne and Metropolitan Tramways Board, while the Chairman discussed museum operations with engineering

staff of the Wellington City Council Transport Department. Official recognition has also been received from authorities in Perth, Adelaide, Melbourne (S.E.C.), Brisbane, Christchurch and Dunedin. It is evident that Membership of C.O.T.M.A. is being looked upon by transport authorities and government departments as an indication of the strength and expertise of museum groups, In consequence it is imperative that this confidence be maintained by further building up the standards and skills of members.

Preliminary discussions were held with Mr. David Packer in London about the possibility of importing Brill 21E pattern trucks from Brussels to Australia and New Zealand. Subsequently, five museums expressed interest in securing a total of eleven trucks and more detailed enquiries are procedding.

CO-OPERATION:

It is pleasing to record that there has been a greater interchange of understanding and assistance between the various groups during the year. The A.E.T.M. was instrumental in arranging the acquisition of a Tomlinson coupler by S.P.E.R. and in return received several sought-after overhead fittings. The Bendigo Trust has made available body components to the B.T.P.S. for the repair of Ballarat car 28, while work has also been proceeding in Bendigo on the restoration of Bendigo car 27 (Adelaide 303) for eventual transfer to the A.E.T.M.

A meeting of several New Zealand groups was convened by the C.O.T.M.A. Chairman during the Conference of the Federation of N.Z. Railway Museums, held in Christchurch in June 1975. These discussions resulted in the appointment of Mr. Mike Flinn as interim Executive Officer for New Zealand.

FINANCIAL ASSISTANCE:

Several Australian museums were able to secure approval for financial support under the Regional Employment Development Scheme following discussions at the Ballarat Conference. However, the abrupt termination of this scheme in August, 1975 meant that some of these projects did not ultimately come to fruition. This highlights the need for museums to see that their administration is able to act promptly to make use of opportunities as they arise, as frequently these opportunities can be of a transient nature.

FUTURE DEVELOPMENTS:

The report of the Committee of Enquiry on Museums and National Collections was tabled on November 5, 1975. This report stressed the need for historical accuracy in museum operations and made it clear that museums motivated primarily by tourist industry criteria would have to survive on the basic principle of the tourist industry - making a profit. Such organisations should not be eligible for substantial financial support under any proposed system of grants to museums. The report acknowledged that there are a number of outstanding railway and tramway collections in Australia, and recommends the continuation of the present types of development rather than the creation of a single national transport museum.

However, the Committee of Enquiry noted the weakness of some organisations to effectively preserve the relics which it is their aim to preserve. It seems likely that Australian Government funds will not be available to support museum projects in the immediate future.

Unlike their Australian counterparts, New Zealand museums are succeeding in developing the fields of commercial fund-raising. Such techniques are worthy of further exploration in Australia.

The Council is grateful to Mr. Allan Harnwell for providing a set of accounts for the first year of operation of C.O.T.M.A., details being attached.

Useful co-operation and respect has developed between the groups during the past year. Most of our projects are still at an early stage of development and much remains to be done. Through co-operation between ourselves and by providing a united voice to government, we have the opportunity to hasten the completion of our endeavours. We look forward to the Council being strengthened and increasing in value to member organisations in the years ahead.

John C. Radcliffe.
CHAIRMAN.

W.J. Kingsley
EXECUTIVE OFFICER.
Australia.

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

BALANCE SHEET AS AT 31st MARCH, 1976

COUNCIL FUNDS

Accumulated Fund

Surplus for Period	$574.94
	$574.94

THESE FUNDS ARE REPRESENTED BY:-

Current Assets

Australia & New Zealand Banking Group Ltd.	$265.00	
Members Subscriptions in Arrears.	392.00	657.00

Less Current Liabilities

Creditors	82.06
	$574.94

INCOME & EXPENDITURE STATEMENT FOR PERIOD 27th OCTOBER, 1975 to 31st MARCH, 1976

Income		
Members Subscriptions	876.80	
Interest Received	1.23	878.03
Less Expenses		
Printing & Stationery	260.27	
Postage & Telephone	38.57	
Bank Charges	4.25	303.09
Surplus for Period		$574.94

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALIA

AUDITOR'S REPORT

In my opinion the accompanying Balance Sheet as at the 31st March, 1976, and the Income & Expenditure Statement for the period 27th October, 1975 to the 31st March, 1976 are properly drawn up to give a true and fair view of the affairs of the Council of Tramway Museums of Australasia.

29th April, 1976

R.G. PAROISSIEN, A.A.S.A.,A.C.I.S., F.T.I.A.
Registered Company Auditor.

K.L. PAROISSIEN & ASSOCIATES
14 Wakefield Street, Hawthorn, 3122. (P.O.Box 226)
Telephone 810468

ACKNOWLEGEMENTS

The Conference organisers would like to extend thanks to the Speakers, Session Chairmen,and Workshop Chairmen for their diligence and adaptability throughout the Conference.

Thanks to those members of both Sydney Museums who provided the teas, bar-b-que and operational staff with anspecial thanks to those non-members, wives and friends who also assisted in keeping the spirit of COTMA alive; and well fed. Thanks too, to Bill Denham for the programmes and the mini-bus.

Additional thanks to the Management and Staff of the Sylvania Motel, the Janalli Community Hall, the Astron Lounge, the Black Stump restaurant and the Janalli Bus Service for their attention and service during the Conference.