1975

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed construction of

ROAD SAFETY AND STANDARDS AUTHORITY FACILITIES

at

Albury/Wodonga

(FIFTH REPORT OF 1975)

CONTENTS

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

FACILITIES FOR ROAD SAFETY AND STANDARDS AUTHORITY, ALBURY/WODONGA

REPORT

By resolution on 6 March 1975, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament the proposal to construct facilities for the Road Safety and Standards Authority at Albury/Wodonga.

The Committee have the honour to report as follows:

THE REFERENCE

1. The proposal referred to the Committee is for the construction of a complex for the Road Safety and Standards Authority which has as its objectives:-

- the promotion of road safety;
- control and reduction of vehicles emissions;
- consumer protection in relation to motor vehicles.

2. The complex will include an administrative building to accommodate 200 people and facilities for outdoor and indoor testing of motor vehicles, including a test circuit, skid pan, emissions laboratory and a tyre testing building.

3. The estimated cost of the project when referred to the Committee was $9 million.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions and drawings from the Australian Departments of Transport and Housing and Construction and took evidence from their representatives at a public hearing in Wodonga on 29 April 1975. The Committee also received submissions and took evidence from representatives of the Albury/Wodonga Development Corporation, the Shire of Chiltern, Australian Automobile Association, and from a number of private citizens and organizations in the area.

5. Prior to the public hearing, the Committee inspected the site for the proposed work.

6. The Committee's proceedings will be printed as Minutes of Evidence.

THE NEED

7. The Select Committee on Road Safety of the House of Representatives recommended the creation of a National Authority on Road Safety and Standards in its First Report tabled on 25 September 1973. This followed an earlier recommendation in September 1972 by the Expert Group on Road Safety in its National Review of the Road Accident Situation in Australia that a national office of road safety be created to support and co-ordinate State and Territory efforts.

8. The Australian Government proposes to provide office accommodation and test facilities for the Authority in proximity to the Albury/Wodonga Growth Centre.

9. In 1974, 3,571 Australians lost their lives in road accidents. In the ten years up to and including 1973, some 34,000 people had been

killed and 850,000 injured on Australian roads. The road toll reached a peak of 3,798 people killed and 91,554 injured in 1970. The upward trend was reversed during 1971 and 1972 but further increases occurred in 1973, when 3,679 people were killed and 95,204 injured.

10. These figures denote a serious loss of human life and much human suffering. Road accidents rank fourth among the major causes of death in Australia. They are responsible for half of all accidental deaths and are the major cause of death for males under the age of 25 years. Even when viewed solely in economic terms, the cost of road accidents to the community is substantial. Estimates have put the annual cost as high as $1,000 million.

11. Despite the dimensions of the road accident problem in the aggregate, the task of reducing the road toll is by no means an easy one. Accidents resulting in casualties occur on average only once for every one and a quarter million kilometres travelled on Australian roads. Moreover, road accidents are rarely caused by a single factor. They represent failures in the operation of the interacting components of a large and complicated transport system involving the vehicle, the road environment, the road user and his social environment.

12. Consequently, a substantial and sustained improvement in road safety can be attained only by raising the efficiency of this complex transport system to a much higher level - a task which will demand objective analysis of the problems involved and a high degree of co-operation between the contributing authorities.

13. Despite the improvement in recent years there is still much to be done to bring the road toll under greater control with a particular need to concentrate on the most vulnerable groups of road user.

14. The Australian Government does not presently have the facilities for independent scientific assessment or development of motor vehicle safety features, road system improvements, traffic management techniques or the analysis of the driving task.

15. Two vehicle manufacturers have comprehensive laboratory and test track facilities. Other vehicle and component manufacturers also have test facilities of a more limited nature. These facilities are, however, virtually fully utilised by these manufacturers for their own "in house" testing for development and proving purposes. The Department of Transport has been able to negotiate access to the use of some facilities on occasions in the past for specific tasks but this has proved restrictive on the Department and inconvenient to the manufacturer.

16. The Committee recognises the need to improve road safety and are satisfied that if improvements are to be made the Australian Government must have the capacity to carry out research and testing as required for the development of road safety standards relating to vehicles, roads and their usage. It is also necessary to have the capacity to monitor developments by vehicle and equipment manufacturers.

17. Committee's Conclusion There is a need for the facilities proposed for the Road Safety and Standards Authority.

THE ROLE OF THE ROAD SAFETY AND STANDARDS AUTHORITY

18. The Australian Government has accepted the basic recommendation of the Expert Group on Road Safety that it should involve itself more

directly in road safety and in other ways promote a more vigorous, co-ordinated and multi-disciplinary approach at the national level. The Road Safety and Standards Authority, which will be responsible to the Minister for Transport, is intended as the main means of implementing this decision.

19. The Authority is intended to be the focal point of a second generation of efforts at the national level to reduce the tragic toll on Australian roads. Working closely with the Department of Transport the Authority will seek to do this through improvement programs, formulation of national standards and traffic codes, the certification of vehicles and components, research into all relevant factors, education and publicity campaigns and a comprehensive information service.

20. The Authority will be required to consult with appropriate Authorities of Australia, the States and Territories, local governing bodies and other interested bodies. It is intended not as a substitute for what others are already doing in this field but as an addition to a better co-ordinated total effort. In particular it is intended that the Authority should assist the work of the Australian Transport Advisory Council through the provision of technical support and participation in its Standing Committee of Advisers and relevant advisory committees.

21. The staff of the Authority will be employed under the Public Service Act. It is intended that the Authority should bring together people from the various disciplines relevant to its functions. They will include engineers, economists, mathematicians, statisticians and behavioural scientists. Technical and administrative support staff will also be needed.

22. It is envisaged that the activities of the Authority will be organized into functional groups using specialised skills and techniques. These functional groups would include:

- development of vehicle safety design standards and standards for consumer protection in relation to motor vehicles
- test analysis of vehicles and components to establish compliance with Australian Design Rules and other relevant standards
- performance of vehicle emission testing and measurement
- human factors research into the interaction between the vehicle, the road user and his environment
- research into road and traffic management systems
- provision of a central information service and development of programs of road safety education and publicity.

THE PROPOSAL

23. The Australian Government has decided that the Authority should be located near the Albury/Wodonga Growth Centre. Establishment of the

Authority in this area will represent a significant contribution to the early development of the Growth Centre.

24. The facilities required by the Authority to discharge its functions effectively fall into three main categories:

- administration - office accommodation for personnel other than those directly involved in testing;
- indoor testing - mechanical testing laboratories, photographic facilities, light industrial workshops and ancilliary provisions;
- outdoor testing - test track, brake skid pan impact testing barrier, experimental road system and other similar facilities.

25. Site Selection The facility which was the major factor influencing the selection of a specific site at Albury/Wodonga was the proposed test track. This will occupy by far the greatest area of land. It requires a flat level land area of about 470 hectares. Overall site requirements include suitable topography, good transport access, isolation from residential areas and ability to restrict general public access.

26. Fourteen possible sites were identified in the Albury/Wodonga area. Each site was evaluated in terms of the specific factors mentioned above, general suitability for the facilities, current land usage and other environmental aspects. Consideration was also given by the Department of Transport to the possible interactions resulting from alternative sites for an aerodrome to serve the area and for other Transport Portfolio establishments, including the proposed Transport Accident Investigation Authority.

27. The result of these studies was a preference for a site within the Barnawartha district. The particular site nominated of approximately 470 hectares borders the Murray Valley Highway 16 km west of Wodonga. This site satisfies fully the physical parameters for construction purposes. Given the present alignment of property boundaries it also provides a most compact land package on which to accommodate the proposed facilities in this district.

28. The area is typical river plains and characteristic of country in the region has been cleared of indigenous vegetation and sown to improved pasture to graze sheep and cattle. Some trees remain in isolated stands and in plantations along the road reserves. The elevation of the site is approximately 160m and the land slopes gently to the north towards the Murray River. There are no defined creeks but depressions carry drainage to the Murray River and its associated swamplands and lagoons.

29. The proposed site is the only site suitable for the Road Safety and Standards Authority facilities which adjoins a preferred aerodrome site. It would remainthe most suitable site for the Road Safety and Standards Authority facilities if a site other than Barnawartha was selected for any new aerodrome.

30. Concern was expressed during the public hearing that if the Road Safety and Standards Authority facilities are established at Barnawartha that this would pre-empt a decision on a site for a new aerodrome for Albury/ Wodonga.

31. After considering the evidence submitted by the Department of Transport on this issue the Committee are satisfied that any decision on the aerodrome site will be considered in isolation from the Road Safety and Standards Authority facilities.

32. The Committee were assured that the public will be given every reasonable opportunity to put forward its views and that these will be taken into consideration before any final decision is made on a new airport site.

33. Committee's Conclusion The site selected is suitable and should not prejudge the site for any proposed aerodrome to serve the Albury-Wodonga area.

34. Environmental Impact The Committee agrees with the conclusions contained in the Environmental Impact Statement prepared jointly by the Departments of Transport and Housing and Construction. These conclusions are:

(a) the Barnawartha site was the most suitable of the alternatives examined;

(b) the existing physical environment could well be improved due to the extensive landscaping proposed;

(c) no significant adverse effects on the environment resulting from the proposed development had been identified;

(d) the proposed facility was a significant contribution towards the development of the Albury/Wodonga Growth Centre.

GENERAL PLANNING

35. The facilities have been developed to satisfy the requirements of the Road Safety and Standards Authority for a minimum of five years after the completion of construction and are planned to provide ready expansion or alteration to satisfy changing needs.

36. The requirement to provide for the maximum flexibility and possible future expansion has been the major influence on the overall planning concept and has largely determined the grouping of facilities and the design of the individual units within the complex.

37. Consideration has been given to the need for the complex to fit within the surrounding rural activity and environment, to assist in this regard it is proposed to provide extensive tree plantations around the perimeter of the whole site. When these plantations are established the site will give the appearance of natural forestland, these plantations should further reduce the possibility of the low level noise produced by the test activities affecting the surrounding areas.

38. The complex will be located in an area where there are no plans to develop urban centres and it is therefore expected that the present land use of the surrounding area will prevail. The nearest urban centre will be the small township of Barnawartha 5 kilometres south of the site. None of the proposed buildings will be of such a size or character as to create a feature more dominant than, for example, the wineries of which there are several in the area.

39. Proposed Buildings and Facilities The administration building should fulfil the Authority's need for office accommodation for at least five years. The following facilities will be included:

- large library;
- large conference room for 40 people with projection facilities;
- two smaller conference rooms;
- interview rooms for road user behaviour research;
- canteen;

- staff amenities in accordance with the Code 'Standard of Staff Amenities of Commonwealth Offices'.

40. The General Testing Laboratory will be a comprehensive testing building and will house equipment for the conduct of the tests associated with 22 of the 32 current Australian Design Rules.

Major facilities to be included comprise:

- a controlled environment area for durability testing of components;
- a dark room for signal lamp intensity measurement;
- an area for rigs to undertake strength and deformation tests on the vehicle body shell and interior fittings, for example, door and roof crush, seat belt anchorages and seats;
- an area with screens for determination of the forward and rearward field of view, including obstruction;
- a drop tower for testing laminated windscreens and fuel tanks;
- vehicle inspection bays.

41. The emissions laboratory will house facilities for the measurement of exhaust and evaporative emissions from passenger cars and exhaust gas capacity of diesel engined trucks.

42. Accurate measurements of emissions cannot be made on the road but must be undertaken under controlled laboratory conditions, particularly with regard to power, temperatures and engine speed according to a specified time cycle.

43. The Tyre Testing Laboratory will house equipment for testing tyres to prescribed safety standards and for the development of important tyre performance characteristics not presently covered by these standards.

44. The Impact Simulating Laboratory will house equipment for the dynamic testing of seat anchorages, seat belts and head restraints. It will also be used in the development of improved occupant protection systems.

45. The main facility will be a platform (sled) on which a complete vehicle body can be mounted for full scale simulation of crash induced forces. The sled will be accelerated by compressed air and travel over a distance of about 40 metres. Instrumentation will permit high speed photography of the motion of dummies in a simulated crash and the measurement of forces on various components.

46. The Crash Barrier Facility will make possible testing of steering column intrusion into occupant space in the event of a collision and evaluation of controlled vehicle deformation and other energy absorbing systems. The facility is designed to guide a car along a track at 50 km/h to impact a large concrete barrier or such objects as poles or other cars. There is provision for increasing the impact speed in the future.

47. The major component of the Test Track Facility will be a continuous road circuit of 6.8 km comprising two 1,900m straights joined by curves banked to provide a 'neutral' speed of up to 100 km/h. It will be used for testing safety rims, brakes for passenger cars and motor cycles. It will also be used for research in the development of further standards and in investigation of other aspects of vehicle performance, including those relevant to consumer protection.

48. Other components of the facility are:

- a skid pan for vehicle stability research, brake system development, vehicle noise tests and complex traffic management studies;
- a small road network including various basic types of intersection for studies of road user behaviour and traffic management, and provision for evaluation of various road surfaces and for the conduct of controlled crashes into roadside furniture;
- test slopes for evaluating vehicle parking brakes.

49. The design characteristics of the road circuit are dictated largely by the tests prescribed in the Australian Design Rules. The maximum speed of a vehicle is defined as the speed reached from a standing start in 1.6 km on a level road. The track layout will enable the maximum vehicle speed up to 200 km/h to be determined and then allow sufficient distance for the vehicle to slow down before reaching the banked curves.

50. The proposed vehicle and component testing facilities will permit testing for compliance with all Australian Design Rules and the development of new or upgraded requirements. They will also enable development of means to control the effects on safety and emissions of deterioration, replacement parts, repairs and modifications.

51. The road and traffic management facilities will enable testing of such safety innovations as "breakaway" roadside furniture and permit controlled simulation of intersection manoeuvres which cannot be done on a normal public road system.

52. These facilities could be made available, on a cost recovery basis, to vehicle and component manufacturers and importers, many of whom do not have access to similar facilities in Australia.

CONSTRUCTION

53. Building Systems Structural systems and surfacing materials have been selected to provide economy, ease of extension or internal rearrangement to meet changing requirements. Wherever possible, locally produced or available materials will be adopted.

54. The buildings in the test complex will be steel framed construction with perimeter brick walls punctuated with piers to reflect the structural module. The deep fascias proposed will emphasise the horizontal character of the building and will be clad with pre-coloured steel decking.

55. The administration building which has been planned around a central landscaped courtyard to provide the maximum of natural light to all office areas will be of reinforced concrete construction with the external spandrels, fascia and columns expressed to form a series of shaded galleries to the external elevations.

56. The steel roof framing will span the full width of the building at first floor level providing column free office space for maximum flexibility. External walls of the service cores will be faced with brickwork to form a unifying element with the test buildings. Windows throughout the complex will be metal framed.

57. Roofing to all buildings will be clad with galvanised steel decking.

58. Suspended ceilings in the administration building will be surfaced with mineral fibre acoustic tiles, suspended ceilings in the

test building will be limited to office areas and special test spaces and will be painted plasterboard sheeting. Executive areas of the administration buildings will have special finishes. Areas having other special requirements will have glazed or brickwork partitions as dictated by functional requirements. Toilet areas will have impervious finishes.

59. Floors to the administration building will be carpeted, offices and laboratory type space in the testing buildings will have vinyl tile finish, workshop and plant room areas will have a sealed granolithic finish.

60. Structure Ground floor areas of all buildings will have reinforced concrete slabs poured onto a compacted fill and designed to be independent of the framing structure.

61. Columns will be supported on spread concrete footings while perimeter and internal 200mm brick walls will be supported on independent concrete strip footings.

62. The first floor of the administration building will be of reinforced concrete flat plate construction supported on reinforced concrete columns with spans of 6m in both directions. External columns to the building will extend to roof level supporting a light steel-framed roof truss system.

63. The test buildingswill have rigid steel frame structures of welded construction, generally portal frames will be adopted except in the Main Test Building and the Diesel Chassis Dynamometer where the wider spans and applied loadings will require a steel truss system.

64. In some specialized areas of the test buildingsallowances will be made in the structural design to accommodate gantry cranes, heavy vibrating equipment, floor ducts, pits and special foundations.

65. Mechanical Services A central mechanical plant building is proposed to accommodate hot water boilers, compressed air plant and a central air conditioning condenser water cooling system including an adjacent cooling tower. These services will be supplied as required to the buildings through an underground reticulation system.

66. Refrigeration and/or air circulation plant will be located in each building containing areas to be air-conditioned or mechanically ventilated.

67. Air conditioning to comfort conditions will be provided to all office areas while a number of technical areas in the test buildings require air-conditioning to control atmospheric conditions for test purposes.

68. All other areas will be heated and ventilated and in addition special exhaust ventilation will be provided to areas such as bottled gas stores and welding bays.

69. Electrical Services Power will be supplied to the site at medium voltage to a sub-station located in the central mechanical plant building. The sub-station will accommodate the transformer and main switchboard.

70. Power will be supplied to the buildings for internal lighting, operation of mechanical equipment, general power outlets, thermal fire detection system, clocks and communication equipment.

71. Provision has been made for the external flood lighting of the administration building and for some external security lighting on other buildings.

72. A P.A.B.X. telephone system will be located in the administration building and reticulated throughout the complex.

73. Fire Protection Generally testing and workshop areas will be protected by a sprinkler system, all office areas and some other technical areas where sprinklers are impractical will be protected by a thermal fire alarm system connected to a master alarm indicator board in the administration building.

74. A number of highly specialized equipment areas will require gaseous flooding fire protection systems.

75. The Committee expressed concern at the fire risk posed by such a large area of land in the summer months. However, information given at the public hearing and in subsequent correspondence from the Department of Transport has satisfied the Committee that careful attention has been given to this problem. Measures to be taken to prevent and combat grass fires will include:

- a fire-fighting trailer with appropriate fire-fighting equipment. This will be used in conjunction with a road tanker to be included in test equipment and surface-water storage tanks to be constructed around the site.
- a 500,000 litre storage tank will be provided for fire-fighting purposes at the main water storage site near the building complex.
- hydrant facilities around the building site will facilitate ground fire-fighting and will enable filling of the tanker for the transport of water to other parts of the site.

- The Test Track and internal road system will provide means of rapid access to most areas of the site, and together with approximately 30 metres of cleared and maintained areas on each side of the tracks, will provide some fire-break capability.
- Selection of trees and shrubs for plantation areas will take into account fire retarding properties of some suitable types.
- A direct line fire-alarm will be arranged with the Country Fire Authority depot at Wodonga.
- Ploughed and graded 10 metre wide fire breaks will be constructed around the perimeter of the site and at strategic locations, to provide defence lines for fire fighting, and access tracks.
- Basic fire fighting equipment, such as beaters, will be permanently located at strategic points in the dry seasons.

76. It is proposed that the Authority will train fire-fighting teams within its staff, and that nominated officers will have fire precaution responsibilities. Local residents are expected to be recruited to the staff, including grounds maintenance sections. They will provide an input of local knowledge on these matters and incentives to maintain high standards. A watchman will be on duty at all times outside the Authority's working hours.

77. Burning off in strategic areas and ground clearing under trees and shrubs in plantation areas is proposed, to supplement other measures.

78. It is also proposed that approximately 350 hectares of the total site area of 470 hectares will be available for grazing and agriculture purposes and will further reduce the fire hazard.

79. Water Supply Water will be pumped from the Murray River and piped some 3km along a road reserve to six water storage tanks of varying capacities on the site. The total capacity of the water storage will be sufficient to provide 2 to 3 days requirements in the event of an interruption to supply.

80. Some of the domestic water supply will be treated by means of a package treatment plant.

81. Cross connections between the various storage tanks will ensure a sufficient capacity always being available to meet demands. However, 50% of the fire-fighting water storage will be excluded from this cross connection to maintain an adequate supply for fire-fighting purposes.

82. Drainage Stormwater will be collected through a system of underground pipes and discharged into open unlined drains leading to the natural drainage system.

83. Triple interceptor traps and oil/fuel separators will be installed to catch spillages of oil, petrol or industrial wastes and prevent their discharge into the natural drainage system and eventually to the Murray River system.

84. Sewerage Sewerage will be reticulated to a package treatment plant sized to treat waste from a population of 350 persons per day and discharging chlorinated effluent to the standards required by the Victorian State Rivers and Water Supply Commission. The effluent will be discharged into the stormwater drainage system previously mentioned. A separate domestic type septic tank will serve the amenities building in the test circuit area.

85. Roads Roads serving the complex will generally be two lane sealed pavements. Concrete kerbs and channels will be provided generally only in the building area.

86. Car Parks Provision has been made for 130 open car parking spaces adjacent to the administration building, a further 45 open car parking spaces within the test building compound and a covered parking area for 15 vehicles also within the compound.

87. It is proposed to screen the bitumen sealed car parking areas with extensive landscaping to reduce their effect on the surrounding environment.

88. Fencing The perimeter of the site is now generally enclosed with stock proof fencing and it is proposed to complete the enclosure and repair or replace any unserviceable sections of the existing fencing.

89. The test building compound will be enclosed with a 2.4m high chain-wire security fence provided with gates for normal or fire-fighting access.

90. Committee's Recommendation The Committee recommend the construction of the work in this reference.

ESTIMATE OF COST

91. The estimated cost of the work when referred to the Committee was $9 million made up as follows:

Building Complex	$	$
Building works	3,160,000	
Mechanical works	1,060,000	
Electrical works	500,000	
Special Services	340,000	
Site works	940,000	
		6,000,000
Test Track		
Test circuit, skid pan and ramps	2,280,000	
Test and access roads	340,000	
Site works	300,000	
Building, electrical and other services	80,000	
		3,000,000
		9,000,000

PROGRAM

92. The planning, design and construction has been planned into a time scaled activity network in order to achieve the desired completion date in an efficient and orderly manner. After approval to proceed is given, documentation will take a period of approximately 30 weeks.

93. Construction is expected to require 104 weeks after acceptance of a tender. Construction will be staged to give occupancy by mid-1977 with total completion by the end of 1977.

OTHER OBSERVATIONS

94. Land Use The Committee noted that the land to be acquired for the proposed facilities is regarded in the district as being prime

agricultural land. Whilst understanding the attachment of the present landowners to their land, the Committee believe it inevitable that this conflict of land use must occur because of development planned for the Albury/Wodonga growth centre and because flat agricultural land is also very suitable for development.

95. The Committee were informed by the Town and Country Planning Board of Victoria, which is the planning authority for the area within the radius of 55 km from the Union Bridge, that it has no objections to the establishment of the proposed facilities.

96. Subsequent to the public hearing the Committee were informed by the Department of Transport that approximately 350 hectares of the total site area of 470 hectares would be available for grazing and agriculture for at least the initial few years of the Authority's operation. Most areas will be suitable for grass-hay production and at least two of the larger areas, those inside the high speed circuit to the west of the road network and between the access road and the high speed circuit extending to the west, would be suitable for crops. Adequate fencing would need to be provided to enable open areas to be used for grazing. However, the total area available for these purposes would be reduced, if major additional facilities are constructed. For example, a durability test circuit would occupy approximately 160 hectares.

97. The terms of lease to local farmers as well as which areas will be used for agriculture or grazing would be determined by the Authority when it occupies the property.

98. Consultations with Chiltern Shire and Affected Landowners The Committee are critical of the manner in which consultations

with the Shire of Chiltern were carried out and also with what it considers to be the undue haste with which land acquisition proceedings were commenced with affected landowners. The Committee believe that much more attention should be given by Australian Government Departments to the need for adequate and timely consultations with State and local government authorities.

99. The Committee also believe that in this particular case little consideration was given to the justifiable resentment felt by the affected landowners to what they believed to be the "indecent" haste with which land acquisition proceedings were commenced.

RECOMMENDATIONS AND CONCLUSIONS

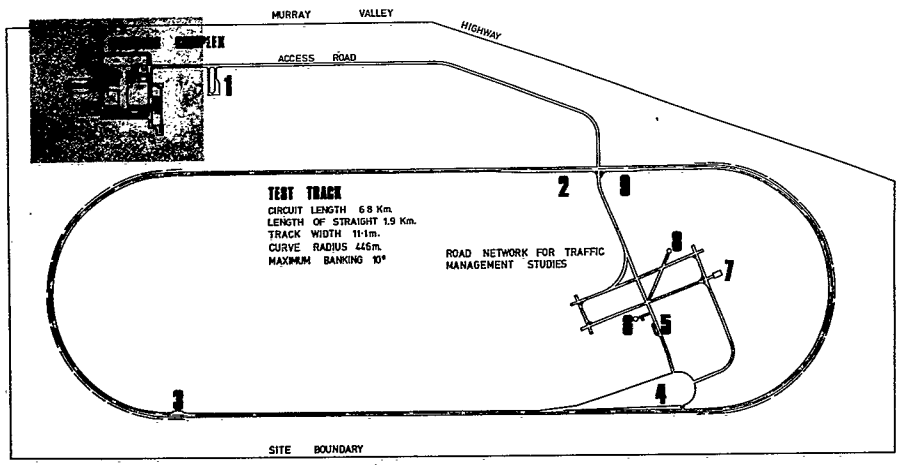
100. The summary of recommendations and conclusions of the Committee is set out below. Alongside each is shown the paragraph in the report to which it refers.

		Paragraph
1.	THERE IS A NEED FOR THE FACILITIES PROPOSED FOR THE ROAD SAFETY AND STANDARDS AUTHORITY	17
2.	THE SITE SELECTED IS SUITABLE AND SHOULD NOT PREJUDGE THE SITE FOR ANY PROPOSED AERODROME TO SERVE THE ALBURY/WODONGA AREA	33
3.	THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	90
4.	THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS $9 MILLION	91

L. K. Johnson

(L.K. Johnson)
Chairman

Parliamentary Standing Committee on Public Works,
Parliament House,
CANBERRA, A.C.T.
22 May 1975.



R.S.S.A.

ALBURY-WODONGA

LEGEND:

1 TEST SLOPES
2 ACCELERATION LANE
3 LAY BY
4 SKID PAN
5 WATER TROUGH
6 DRIVERS' AMENITES
7 GRAVEL BED
8 ROADSIDE FURNITURE RESEARCH
9 BRAKING LANE

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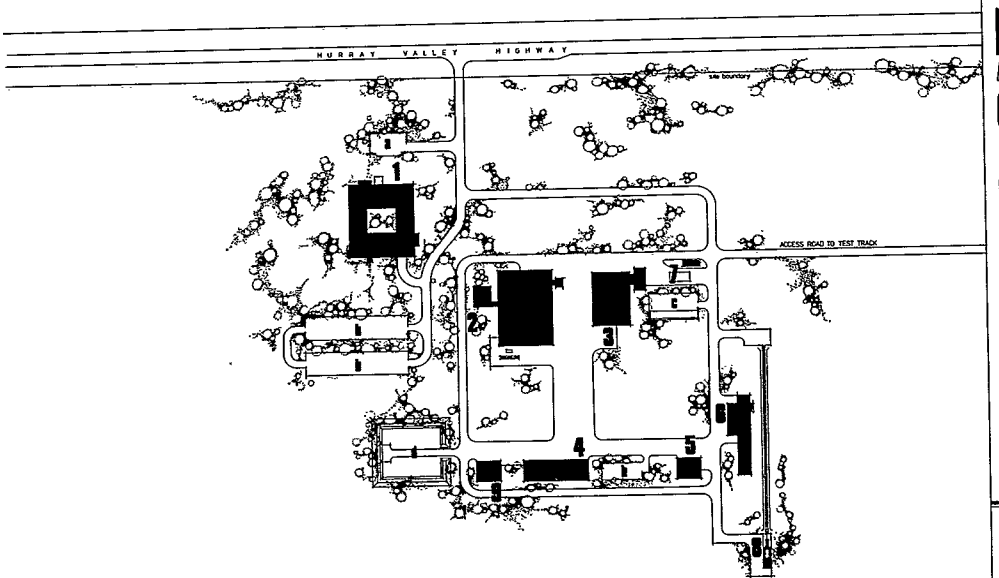
SITE PLAN



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ALBURY-WODONGA

LEGEND :

1 ADMINISTRATION
2 MAIN TEST BUILDING
3 EMISSIONS LABORATORY
4 GENERAL WORKSHOP
5 TYRE TESTING
6 DYNAMIC SLED BUILDING
7 FUEL DEPOT
8 CRASH BARRIER FACILITY
9 CENTRAL PLANT ROOM

a VISITORS PARKING
b STAFF PARKING
c DOMESTIC & TEST VEHICLES
d WATER & SEWERAGE FARM

north

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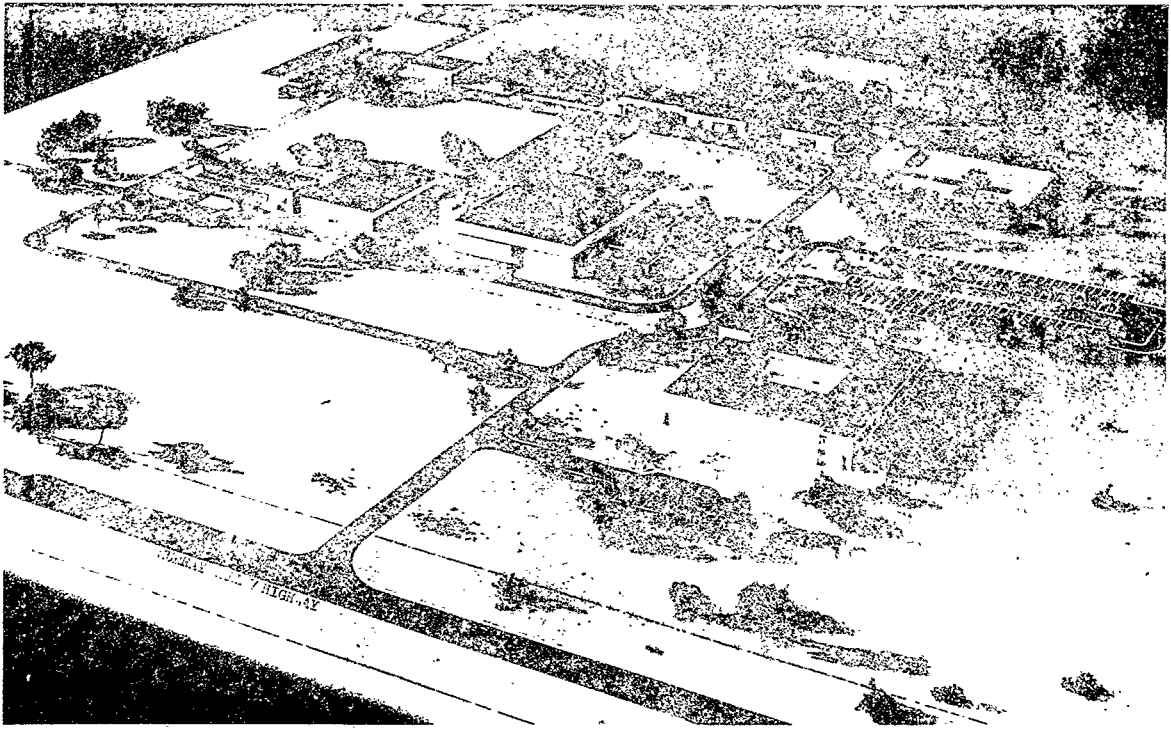
BUILDING COMPLEX LAYOUT PLAN

11.



R.S.S.A. BUILDING COMPLEX MODEL AERIAL VIEW FROM N W CORNER