

1968

VICTORIA

REPORT

FROM THE

COMMITTEE OF PUBLIC ACCOUNTS

UPON

THE PUBLIC WORKS DEPARTMENT

TOGETHER WITH

AN APPENDIX

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EXTRACTED FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

TUESDAY, 10TH SEPTEMBER, 1968.

9. PUBLIC ACCOUNTS COMMITTEE.—Motion made, by leave, and question—That Mr. Cochrane, Mr. McDonald (Rodney), Mr. McLaren, Mr. Stoneham, Mr. Taylor, Mr. Trezise, and Mr. Wheeler be members of the Committee of Public Accounts ; and that the Committee have power to send for persons, papers and records, to move from place to place, and to sit on days on which the House does not meet ; three to be the quorum (*Sir Arthur Rylah*)—put and agreed to.

REPORT

THE COMMITTEE OF PUBLIC ACCOUNTS have the honour to report as follows :—

1.1. Pursuant to a decision of a previous Committee of Public Accounts to conduct an examination from time to time of the accounts, functions, organization and efficiency of selected Government departments and instrumentalities, your Committee have conducted an examination of the Public Works Department.

1.2. The Public Works Department can be described as the construction and maintenance authority for the State Government. It undertakes the responsibility for construction and maintenance works and furnishings of Government departments and their branches and agencies. For the financial years 1966–67 and 1967–68 Public Works Department's loan expenditure amounted to \$40,015,126 and \$41,183,900 respectively. The establishment of the Department is broken into five divisions :—Administration, Finance, Works Administration, Building and Engineering.

The following is the breakdown of the divisions into branches :—

Administration—

Assistant Secretary (Administration)
General Administration
Personnel

Finance—

Chief Finance Officer's Office
Accounts.

Works Administration—

Assistant Secretary (Works)
Stores
Property
Works Administration.

Building—

Architectural
Mechanical and Electrical Engineering.

Engineering—

Civil Engineering
Ports and Harbours.

Figures produced by the Public Works Department showed that as at 18th August, 1967, the Department employed a permanent staff of 1,083, as against an establishment of 1,241, and a day labour staff of 947.

1.3. In the early part of the inquiry your Committee took evidence from senior officers of the Public Works Department, Public Service Board and Treasury and it soon became apparent that there is a need for better co-ordination and co-operation between the three organizations on matters relating to staffing and finance.

In addition, we visited the Public Works Department offices and observed the functioning of several of the branches. From the evidence taken and also our observations it was evident that there was a need for a detailed review of the organization and methods of the Department.

1.4. The present Secretary of the Public Works Department, who was appointed on 16th February, 1967, is aware of many of the problems and shortcomings of his Department and is taking steps to improve the situation. He realizes, however, that some of the more radical changes necessary require time and co-operation not only from his own staff but also from the Treasury and Public Service Board. As a first step he had, with the support of the Minister of Public Works, proposed that the Department be surveyed by a firm of management consultants. Your Committee examined the format for this proposed investigation which covered two phases.

Phase I. was to cover a detailed study of the entire Department and the preparation of a revised overall organization structure, and Phase II. the design of improved procedures required to support the new organization, the implementation of the proposals and the training and development of staff. We were of the opinion that an experienced management consultant firm could best attempt such a detailed survey, which we considered vital to the efficient running of the Department, and we therefore strongly supported the Department's proposal for engagement of management consultants. The Public Service Board and Treasury agreed to the Public Works Department's proposal and approved the engagement of consultants for Phase I. with the understanding that the investigation be co-ordinated and controlled by the Public Service Board and that the matter be reviewed before approving Phase II.

A firm of management consultants commenced Phase I. on 20th March, 1968. Your Committee consider that, if the Department is to achieve maximum benefit from a consultant's investigation, Phase II. should follow without any delay.

1.5. When undertaking an inquiry into a department or instrumentality your Committee normally examine the organizations, methods and functions. In view of the spheres being covered by the management consultants your Committee decided to focus attention on the contracting and tendering methods of the Department, covering such aspects as the Planning of the Public Works Loan Works Program, Preparation of Plans, Specifications and Bills of Quantities, Contract Documents, Systems of Tendering, Sub-Contracts, Notification of Acceptance of Tenders, Occupancy of Site, Contract Variations, Critical Path Planning, Progress and Final Payments to Contractors and/or Sub-Contractors, and the use of the Department's Day Labour organization. At the same time your Committee propose to examine the progress reports of the management consultants.

PRE-PLANNING OF THE PUBLIC WORKS LOAN PROGRAM.

2.1. The annual Loan Works Program, proposed by the Treasury and approved by Parliament, establishes the amount of loan money available during the financial year for continuing projects from the previous year or years, together with new projects required by Client Departments to be commenced or constructed under the supervision and control of the Public Works Department. Minor projects (estimated to cost less than \$4,000 or less than \$10,000 in the case of the Mental Hygiene Authority) are financed by a general allocation whilst major jobs are listed as specific projects and are given separate financial allocations.

The procedure for compiling the program has been as follows :—

- (a) Client Departments forward to Treasury a list of projects that they require for the next financial year. These lists usually reach Treasury in March ;
- (b) The Treasury pass these on to the Public Works Department and the Chief Finance Officer of Public Works then has meetings with Treasury and the Client Departments to discuss and formulate the program. Financial allocations are based on Public Works Department's estimates for each project and the estimated expenditure for the next financial year ;
- (c) Departments are then notified by Treasury of financial allocations for approved works.

2.2. Your Committee are of the opinion that this type of program is inadequate for the efficient running of a large construction authority such as the Public Works Department. There is insufficient time for pre-planning and adequate estimating and we observed occasions when the Department, in an attempt to meet the requirements of the Client Department, planned, designed and commenced a project in the one financial year. This, more often than not, resulted in poor planning, necessitating frequent subsequent alterations in design during both the drawing and construction stages. The alterations often led to numerous variations, added costs to the planned works, delays in completion of the construction, and undue delay in the final settlement of claims, all of which hindered the efficient running of the Department and did nothing to improve the relationship between the Public Works Department, Client Departments and contractors. The problems of inadequate planning, contract delays, variations and payments of claims are referred to in more detail in paragraphs 3.1-3.17, 10.1-10.9, 11.1-11.7 of this Report.

2.3. Your Committee have been informed that the Treasury has altered the format for the Financial Year 1968-69 by allowing Client Departments to include projects that may be designed and planned in that financial year and form the basis of the program for the following financial year.

Whilst your Committee agree that the inclusion of future projects is an improvement to the planning of the program, we consider that there is still insufficient time for adequate designing and planning by the Client Department and the Public Works Department. Major projects such as the new hospital block at the Heatherton Sanatorium and the erection of two male wards at the Warrnambool Mental Hospital, estimated to cost \$400,000 and \$470,000 respectively, require to be planned and financed over a number of years.

2.4. During the course of this inquiry your Committee examined the British Ministry of Public Building and Works' Report on The Placing and Management of Contracts for Building and Civil Engineering Works (referred to as The Banwell Report) and the report by the Economic Development Committee for Building on The Action on the Banwell Report (HMSO 67-205/1964 and 70-955/1967 respectively). In addition, the reports of several senior professional officers of the Public Works Department on their official overseas tours were perused by your Committee.

We were interested in the fact that the British Ministry of Works and the London County Council both operate on a six-year forward look program for their Client Departments. This forward look program allows these organizations three years for the development of a project

including annual reviews, rough estimates and finally a definite planning program. The Works expenditure is then programmed over a three-year period. Your Committee are of the opinion that this type of program allows ample time for Client Departments to plan for their requirements and for the construction authority to prepare plans and contract documents that need the minimum of alterations during the course of construction. It is our opinion that the adoption of a similar type program by the Public Works Department would help overcome many of the planning and programming problems now confronting the Department.

2.5. We are concerned by the many alterations to priorities and designs of projects that are occurring within the program. This is resulting in numerous adjustments to the Treasury Allocations. We are of the opinion that this is brought about by a lack of proper consideration and pre-planning by the Client Departments and the absence of a clear-cut and defined basis of liaison between these Departments and Public Works, not only in the planning stage but also during the construction period.

It was noted that during 1966-67, following requests from Client Departments and the Public Works Department, the Treasury authorized financial variations to the Loan Works Program which resulted in the Accounting Records and Reports Section of the Public Works Department recording 793 adjustments to Loan Program allocations for that year.

The following are examples of projects adjusted during 1966-67 :—

Financial Allocation as at 1.7.66	Financial Adjustments		Financial Allocation as at 30.6.67
\$	\$		\$
<i>Public Offices—Project 51 : Agriculture Department—Replacement of Electric Cable.</i>			
5,000 ..	1,000	Transferred to Public Offices Project 55 on 30.5.67	
	2,000	Transferred to Public Offices Project 2 on 31.5.67	
	1,700	Transferred to Public Offices Project 2 on 7.6.67 ..	300
 <i>Public Offices—Project 55 : Agriculture Department—Head Office Renovations.</i>			
11,000 ..	1,000	Credit adjustment to Preliminary Loan Program 31.8.66	
	3,600	Transferred from Public Offices Project 34 on 8.3.67	
	1,000	Transferred from Public Offices Project 51 on 30.5.67	14,600
 <i>Mental Health—Project 6 : Janefield, Erection of 3 Wards.</i>			
70,000 ..	5,000	Debit adjustment to Preliminary Loan Program 2.11.66	
	3,000	Transferred from various Mental Health Projects on 22.6.67	
	1,313	Transferred from Mental Health Project MH 9 on 22.6.67	79,313
 <i>Mental Health—Project 34 : Bendigo Early Treatment Centre.</i>			
350,000 ..	150,000	Transferred to Mental Health Projects 2, 9, 45 and 53 on 28.2.67	
	51,000	Transferred to Mental Health Projects 2 and 90A on 6.6.67	
	10,000	Transferred to Mental Health Project 2 on 9.6.67	
	9,000	Transferred to Mental Health Project 124 on 14.6.67	
	20,250	Transferred from various Mental Health Projects on 20.6.67	150,250

2.6. We consider that, if sufficient time and planned effort had been employed on the initial stages of formulating the Loan Program, the time unduly wasted by officers of the Treasury and the Public Works Department on these adjustments could have been effectively spent on more productive duties. It is apparent to your Committee that there was not enough time and forethought spent by the Public Works Department or Client Departments on making clear the requirements necessary to achieve their objective. All parties involved in construction work must realize that time spent on designing and planning should, or will, result in works most suited to their needs being constructed at a more economic cost.

In addition, it is our opinion that the practice of transferring staff from incomplete work to cover changes in planning by Client Departments is weakening the efficiency and adding to the administrative costs of the Public Works Department.

PREPARATION OF PLANS, SPECIFICATIONS AND BILLS OF QUANTITIES.

Plans

3.1. Following a preliminary investigation by the Public Works Department of the proposed building scheme, discussions take place with the Client Departments to study in greater detail the requirement for the design and planning of the project. When the Client is satisfied and the scheme developed, the Public Works Department then prepares working drawings. The detail shown on working drawings includes, building details, elevations, sections and plans of drainage schemes. It is on the information contained in these drawings, together with the specifications, that the contractor submits his tender. Accuracy and completeness of detail in the documents is essential if the contractors are to submit a proper quote.

3.2. An atmosphere of indifference was noticeable to your Committee in both the Administrative and Professional Divisions but particularly in the latter. In this division we consider that this attitude is caused by a lack of professional pride stemming from the burden of excessive administrative duties and the Department's practice of letting the design and planning of prestige projects to outside consultants. We feel that the absence of enthusiasm and the apparent low morale, coupled with an insufficient allocation of time for planning, is resulting in the preparation of plans and specifications which are either incomplete, inadequate, or not in accord with current building practices.

3.3. An important factor in the preparation of plans and specifications is the allocation of a sufficient period of time so as to ensure that all the details necessary for the satisfactory completion of a job are included. We consider that too often Client Departments, having made a decision to proceed with a project, press for the work to be started on the site at the earliest possible date, and give little thought to the Public Works Department's problems of planning.

At the present time the Public Works Department carries out construction works for 24 Departments and Branches, each of which has been allocated priorities. The resultant effect is that the Public Works Department, in an attempt to meet all of the pressures from each Department, is not being given the time for proper preparation.

3.4. We are also of the opinion that the Public Works Department is content to accept any number of alterations to designs and plans from Client Departments. Requests for alterations are apparently accepted with little consideration to the resultant delays and possible increased costs. It is our view that, if the Client Departments and Public Works Department spend sufficient time in pre-planning and preparation, the project should proceed with little or no alterations and interruptions. It may even be necessary for the Public Works Department to "freeze" the project with the object of preventing costly delays and unnecessary disruption of the building program.

3.5. Whilst studying the problems of poor planning and inadequate plans, your Committee examined the records relating to the remodelling of the Park Wards at the Mental Health institution at Royal Park, and we consider that the problems that arose during the course of this construction highlight indecision, insufficient planning and inadequate drawings or sketches. The project was commenced in the latter part of 1963. As final drawings were not available for the calling of tenders the Department decided that tenders should not be called and the work be carried out by their own day labour organization at an estimated cost of \$172,870. The work was to cover the remodelling of the male and female wards, remodelling of kitchen and cafeteria and erection of a new wing.

During the following two years numerous alterations and additions to the original plans were requested by the Client Department. The alterations and additions included the erection of an additional wing, remodelling of the administrative block, and repairs and renovations to the therapy wing.

The following is an extract from the Assistant Chief Architect's report of 8th July, 1965 relating to the Royal Park project :—

“The original scheme has since been amended by the Mental Hygiene Authority to a more expensive proposal. It is requested that an up-to-date consolidated estimate be provided for the present Mental Health requirements including mechanical, electrical equipment, furniture, and site works and submitted to the Authority for financial approval.”

The revised estimate was \$478,680. Further amendments occurred and the current estimate for the project, which is expected to be completed this year, is \$559,100. This is \$386,230 above the estimate for the original proposal.

Your Committee are of the opinion that, if the Client Department had pre-planned for its requirements and the Public Works Department produced detailed working plans, the costly man-hours spent by officers of both Departments on alterations would have been reduced. Client Departments should make every effort to conform to their original requests and avoid alterations that result in delays, frustration of effort and in particular, increased costs. It is important that complete control of public expenditure is maintained at all times.

3.6. We understand that it became necessary for the Public Works Department to use private consultant firms to design and plan major projects because of the increasing demands of Client Departments and the shortage within the Department of senior and experienced professional officers. It does not have sufficient numbers to design, plan and prepare detailed drawings for all clientele requirements. Over the past few years major projects including the Civil and Criminal Court, Ararat Gaol, Gilbert Chandler Institute of Dairy Technology, and the more modern schools have been designed by private consultants.

The expenditure by the Department on outside consultants' fees for the past seven financial years has been as follows :—

	\$
1961-62	53,076
1962-63	155,504
1963-64	431,722
1964-65	509,596
1965-66	714,174
1966-67	777,945
1967-68	1,132,610
	<hr/> 3,774,627 <hr/>

Included in each year is a percentage of fees due on proposed large projects which are only in the planning stage. Fees charged range from approximately 3 per cent. to 16 per cent. of the total cost of a project, depending on the extent of services rendered and the complexity of the work involved. This charge covers consultant fees for architects, engineers and quantity surveyors.

3.7. Your Committee view with concern the Department's practice of letting the design and planning of prestige works to outside consultants.

As a result of the work requiring the highest degree of professional skill leaving the Department, we consider that the majority of staff of the Professional Division have not the incentive to improve or use their own initiative. They appear to have little or no job satisfaction which is resulting in a breaking down of staff interest in daily work.

3.8. In an attempt to prevent the undermining of staff morale the New South Wales' Public Works Department has adopted a system which we consider could well be examined by its Victorian counterpart.

All major projects are designed by the Department and on the occasions where private consultants are employed to prepare the working drawings, the Department and consultant maintain joint control with the Department holding the right of senior partner. As a result the staff have the opportunity to work on projects that induce the motivation to display their ability, professional pride and spirit of competition. We also believe that the prestige of a department would be enhanced if it were responsible for the designing of major projects.

3.9. From your Committee's observations it is quite evident that the Department must critically review the situation in the Professional Division. Every effort should be made to encourage the staff to use their initiative and professional ability, and to allow them the opportunities to broaden their knowledge of the Department's building activities. Better co-ordination and co-operation must exist between the Public Works Department and Client Departments if any improved system of preparation and planning is to be achieved.

Specifications.

3.10. In addition to working drawings it is necessary for the Department to produce specifications. Working drawings are necessary to outline the building details but the detailed description of materials required for the construction is given in the specifications. Contractors rely upon specifications for details on which to base their estimate.

In addition, standard specifications ensure that all contractors are quoting for the same work. It is normally a joint effort of the various branches involved in the planning of the work to prepare the specification. Co-ordination rests with the Senior Design Architect.

3.11. Evidence produced during this inquiry shows that the Public Works Department is including items in its specifications that are either impracticable or out-dated. The following are two such examples :

(a) *Moisture barriers for external concreting.*

A moisture barrier is a layer of bituminous metal, polythene and sand laid under the concrete to prevent moisture seepage. The barrier is normally laid under internal concrete bases and floors. The Department's specifications for the project concerned, detailed that the moisture barrier be included on external paving. We consider that, as well as increasing the costs, the barrier serves no real purpose as the external concrete would be subject to rain.

(b) *Erection of partitions.*

In this case the Department's specifications were impracticable due to an error in design. The Department called for the erection of partitions and specified that they be of 1 $\frac{7}{8}$ " thickness, and of heights to 16'. It was discovered that partitions of such height and thickness would have insufficient support and would be liable to collapse. It became necessary for the Public Works Department to revise its thinking, alter the design, and substitute a stud wall in lieu of partitions.

3.12. Your Committee consider that errors are occurring in specifications because—

- (a) many officers who prepare specifications are inexperienced ; and
- (b) professional officers are overburdened with administrative duties and are being denied the time necessary to study and keep abreast of modern building techniques and materials.

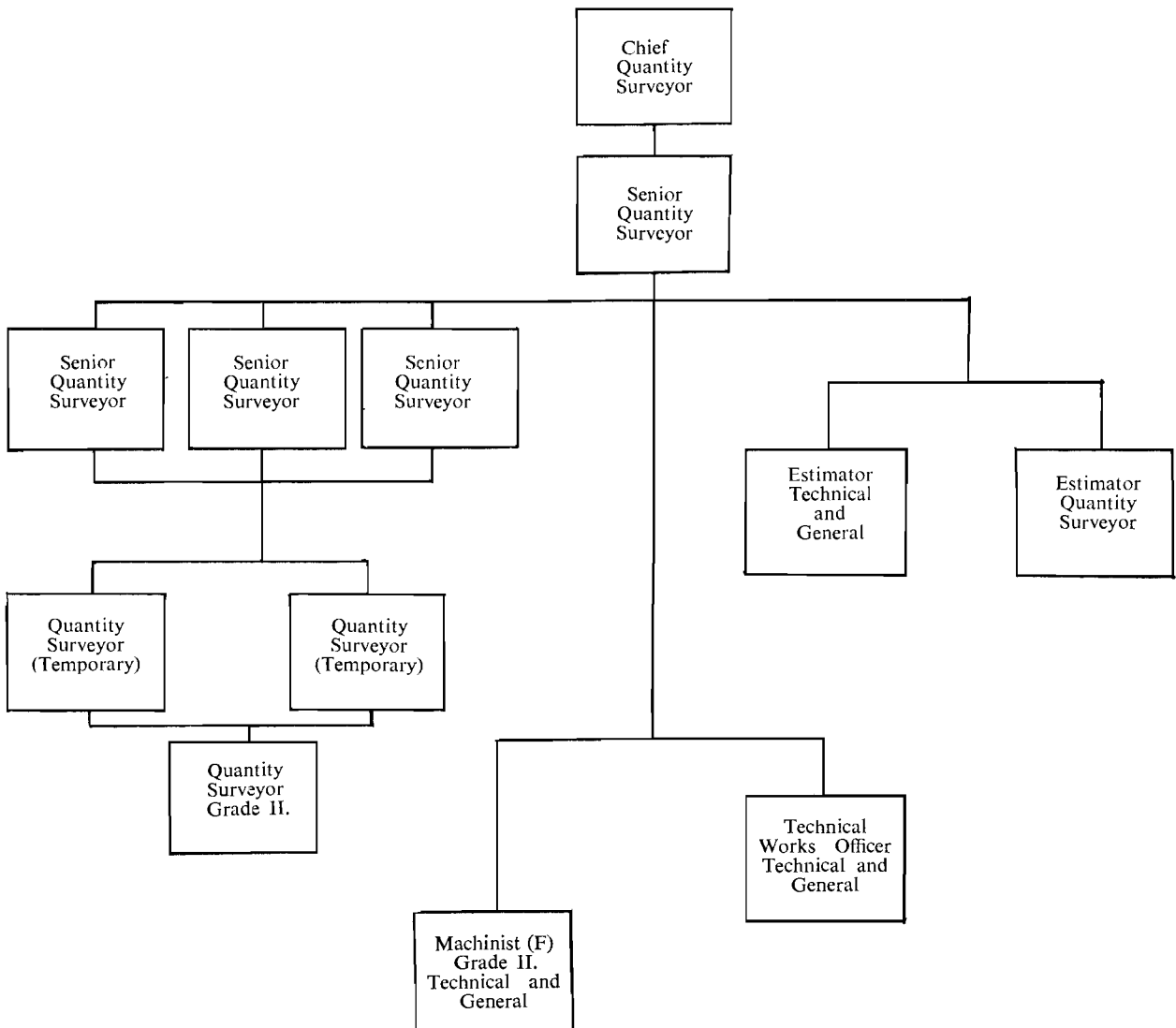
3.13. We examined a case involving a dispute over a contractor's claim for an additional settlement for fittings which he considered were not included in the specifications. To settle the dispute it became necessary for the Department to call for a Crown Solicitor's opinion and advice. The decision was in favour of the Department. Your Committee are greatly concerned that such an involved dispute can occur between the Department and a reputable contractor over a misunderstanding or misinterpretation of specifications. It is the opinion of your Committee that errors and omissions in specifications are responsible for disputes between the contractor and Department, disruption to the works schedule and inconvenience to Client Departments by delaying their works' programs.

Bills of Quantities.

3.14. For a major project of a complex nature the Department may supply or call for a specified Bill of Quantities, the estimation of which follows trade procedures and covers specific detail as to sizes and quantities of materials set out in the specifications. With this information at his disposal the tenderer can detail and itemize his costs and then be allowed the opportunity of producing a realistic price. It is also an advantage to the Department to know that likely tenderers are quoting for specified works and the prices received should be competitive.

3.15. A Bill of Quantities is prepared by Quantity Surveyors. At the present time the Quantity Survey Section of the Public Works Department is virtually non-existent and cannot meet the demands for the preparation of Bills of Quantities.

The following is the organization chart of the Quantity Survey Section :—



On several occasions the Department has advertised vacancies for qualified Quantity Surveyors but received no applications. In the latter part of 1967 there existed five vacancies for qualified officers in the Quantity Survey Section. As a result the Department is employing private Quantity Surveyors to prepare quantities. The appointment of the surveyors by the Chief Architect is on a roster basis to firms approved by the Department. We were interested to note that included in amounts paid to outside consultants as mentioned in paragraph 3.6. of this Report were the following fees to Consultant Quantity Surveyors :—

Financial Year	Amount \$
1965-66	181,878
1966-67	148,139
1967-68	154,726
	484,743

3.16. Although the Department is not in the position to prepare Bills of Quantities your Committee are of the opinion that it should make greater use of the information supplied on bills. The detailed information on precise costing could be extracted and recorded for the purpose of preparing future estimates. The analysis of costs relating to building works could be used for the costing and settlement of variations to contract works.

3.17. It concerns your Committee that the Public Works Department is not attracting qualified Quantity Surveyors. Whilst inspecting and examining the procedures of the New South Wales Department we noted that the Government Architect's Branch employed a Quantity Section with a working establishment of ten Quantity Surveyors and ten assistants. It would seem that Quantity Surveyors are not interested in seeking employment in the Victorian department because of a lack of prestige and a poor public image.

CONTRACT DOCUMENT—CONDITIONS OF CONTRACT.

4.1. When entering into contracts both the Department and the contractor are bound by the General Conditions of Contract, supplemented by the Special Conditions, which defines—

- (a) the conditions under which contracts are to be undertaken ;
- (b) the powers of the constructing authority ; and
- (c) the rights of the contractor.

The Conditions of Contract govern the rules and regulations to be followed in all contracts. It outlines and defines in a number of clauses such items as Nature of Contract, Extensions of Time, Workers' Compensation Insurance, Supervision of Works, Powers of the Authority on Breach and Rights of Contractor on Breach. The conditions include specific details on the date of completion, retention money, rates for liquidated damages, maintenance periods and other items requiring a clear definition or statement of fact. As the conditions of contract are initially the binding factor between authority and contractor, it is therefore necessary that the document be clear, concise and practicable.

4.2. From evidence taken from both contractors and officers of the Department your Committee have formed the opinion that the Public Works Department is not adhering to the General Conditions of Contract. The following are examples :—

Clause 10 of this document provides that—

“(1) If the Contractor fails to complete the whole of the work on or before the date for completion and the Superintendent certifies that in his opinion the work ought reasonably to have been so completed the Contractor shall pay to the Authority by way of liquidated damages a sum calculated at the rate specified in paragraph 6 of the First Schedule hereto for the period after the date for completion until completion of the whole of the work.

(2) If the whole of the work has not been completed on or before the date for completion but the Contractor has been or is entitled to be issued with a certificate of practical completion of a section of the work the sum payable under sub-clause (1) of this clause shall be reduced by an amount which the Superintendent determines by written notice to the Authority and the Contractor as representing the proportion of the sum so payable which is attributable to that section of the work.”

Evidence shows that, although a large percentage of the Department's contracts are not being completed on the specified date, the Department is not enforcing this clause. We consider that, because the Public Works Department is not meeting its own obligations, such as prompt payments, it will not enforce liquidated damages. The resultant effect is a lessening of control over the contract.

4.3. Clause 38 (6) of this document provides that—

“(6) If the Authority fails to pay any amount due under the contract to the Contractor at the time it became payable the Contractor shall (save as to payments or moneys which under the provisions hereof have been properly withheld suspended or deducted) be entitled to interest on the amount due and unpaid calculated at the bank overdraft interest rate ruling at the date on which the unpaid amount became due PROVIDED that interest under this sub-clause shall not be payable unless a written claim therefor is delivered to the Authority within 28 days after the unpaid amount became due.”

Your Committee have been informed by a senior officer of the Department that claims for payments of interest under Clause 38 (6) are not being met as it is considered that there has been no justification for such claims.

It appears to your Committee that, if the Department has no intention of recognizing the rights of a contractor for interest payments, the above clause should be deleted from the conditions and a clause similar to Clause 31 (5) of General Conditions of Contract for the New South Wales' Department of Public Works could be substituted.

The Clause reads as follows :—

“No claim by the contractor by way of interest or otherwise for an account of any sums of money which the Minister has retained under the authority of this clause shall be recognized, allowed or certified to under any circumstances whatever.”

4.4. It is apparent that the Department realizes the need to revise contract conditions for it is presently reviewing the clauses with the aim of re-printing the documents in 18 months time. The Department is also participating in meetings of the National Public Works Conference, where representatives of State Public Works Departments, the National Capital Development Commission and the Commonwealth Department of Works meet to discuss, among other subjects, the desirability and practicability of more uniform conditions of contract, particularly for building works.

4.5. In view of the fact that the last general review of contract conditions was in 1954 your Committee consider that there is an urgent need for a complete revision of the Department's contract documents. We hopefully anticipate that the Department will achieve the desired objective through its own efforts and its participation in the work of the National Public Works Conference.

SYSTEMS OF TENDERING.

5.1. In studying the systems of tendering, your Committee concentrated on the two systems currently operating in various Government instrumentalities ; the first being public tendering, which is the system adopted by the Victorian Public Works Department and, secondly, selective tendering.

Public Tendering.

5.2. Under the Public Works Department's system of public tendering a list of works is advertised in the *Victoria Government Gazette*, a metropolitan newspaper and, if necessary, in an appropriate country newspaper. Any contractor who considers himself capable can submit a tender for any works so advertised. The advantage of the public tendering system is that up and coming contractors are given the opportunity to tender and obtain Government contracts. However, the Department is faced with the problem of sometimes having to select a contractor without any prior knowledge of his ability. The onus is then on the Department to carry out an investigation on the technical ability and financial stability of the tenderer. If the Department has doubts about a tenderer, a senior officer of the Accounts Branch calls for and examines the records of the firm. In addition, information is sought on the contractor's credit ratings. Based on this information a decision is reached as to whether the tenderer is sufficiently capable of carrying out the contract in question.

5.3. Your Committee are not altogether satisfied that the Department's investigation of tenderers is sufficiently thorough. Having examined the records of the Department it is apparent that full use is not being made of information supplied for the investigation, nor is adequate inquiry made through credit associations. Your Committee consider that this is resulting in contracts being let to firms who are exceeding their technical and financial capabilities.

5.4. Although the Department is not bound to accept the lowest tender, its reasons for non-acceptance must be sound. In the majority of cases, the Departmental practice is to allot the work to the *lowest suitable tenderer*. Evidence shows that there are occasions where the lowest tenderer finds that, during the course of construction, his price is unrealistic and cannot complete the contract thus resulting in the Department terminating the contract.

The unfortunate effect of contract failures is that sub-contractors and suppliers do not receive payment for completed works and, as a result, a general air of apprehension exists as to the reliability of some of the Department's recommended contractors.

Evidence taken during the inquiry shows that the majority of the building associations and organizations are opposed to public tendering, as they consider it is not conducive to fair competition, nor is there sufficient protection against the failure of the prime contractor.

5.5. Your Committee are concerned that many of the well known and reliable construction firms are not submitting tenders for Public Works Department contracts because they are unwilling and, often at time, unable to compete against "fly by night" contractors who are submitting quotes which are considered to be impractical. In addition, they can see no value in outlaying money for tendering costs if there is little or no hope of receiving a contract.

Selective Tendering.

5.6. Selective tendering was introduced by various contracting authorities in an effort to overcome many of the problems associated with public tendering and as a way of limiting tenders to contractors who are recognized as competent and have the financial resources to complete satisfactorily their contracts.

The system of selective tendering is presently successfully operating in a number of Australian and overseas Government instrumentalities, including the Commonwealth Department of Works, Public Works Department New South Wales, London County Council and the British Ministry of Works. Under this system contractors desirous of obtaining contracts must register for pre-selection. They are then graded by the construction authority according to their technical ability and financial capacity. When a project is listed for construction the authority selects from the appropriate grade a number of contractors, usually about five in number, and invites them to submit a tender.

5.7. The Simon Report on the Placing and Management of Building Contracts (HMSO 70-458) of 1944 and the Banwell Report of 1964 strongly recommended that tendering be limited to firms carefully selected according to ability. Your Committee believe that it is unreal to rely on price without considering experience and standard of competence of a contractor. It is also realistic to look at quality and finish of materials and the ability of a contractor to comply with the terms of a contract. It is important that the Department should consider these factors as it is vital that the State receives reasonable value for the money expended.

5.8 Your Committee noted with interest a Departmental letter of 19th April, 1968 (detailed in full below) signed by the Secretary seeking, through the Minister of Public Works, Cabinet approval for an investigation into the possibility of introducing selective tendering into the Public Works Department—

“TENDERING METHODS

(1) The failure of four building contractors over recent months indicates a need to consider the tendering methods of the Department.

(2) Investigations have been made in New South Wales Public Works Department where a system of prequalification and selected tendering has now been in operation for twelve months.

(3) The system provides for an assessment and grading of both financial and constructional ability, followed by selection from the panel of contractors to determined.

(4) It is claimed that there is greater confidence between main contractor and sub-contractors and better performance on the part of all contractors ; also, it has had the effect of re-introducing into the Department business from contractors who had ceased tendering under the public contract system because they were unable to compete with ‘borderline’ contractors.

(5) At its last meeting, the National Public Works Conference confirmed the principle of selective tendering and recommended its adoption in the larger States.

(6) The Master Builders’ Association and other trade organizations are pressing for the introduction of this system.

(7) The Building Industry Congress Council has also reported favourably on this system.

(8) To implement this new procedure, it will be necessary to amend regulations under the Audit Act.

(9) The National Public Works Conference also recommended that ministerial delegation for the acceptance of tenders should be adopted as a principle. In this regard, Victoria is the only State which does not provide for such delegation.

(10) If the above proposals are approved by Cabinet, it is suggested that a committee, consisting of an officer of the Public Works Department, Treasury and the Auditor General’s Office, be set up to examine the proposals in detail and submit recommendations to the Premier and Treasurer for approval and implementation.”

5.9. Your Committee awaits the recommendations of the investigating Committee as we consider that there is a definite need for the introduction of a system of selective tendering for major building, electrical, mechanical and civil engineering works. Selective tendering, in our opinion, will overcome the problem of indiscriminate tendering, and will induce a more reliable type of tenderer to seek government contracts.

We noted that contracts are being let to firms who are not strong in financial structure, and therefore rely on their various suppliers to give them credit support through the course of the contract.

5.10. One of the problems that your Committee consider can arise from the adoption of a system of selective tendering is the possible monopolization of major works by a few contractors. Selective tendering should not be so restrictive as to prevent reliable up and coming contractors the chance of pre-selection. Such contractors can only improve the system as they induce greater competition.

5.11. Your Committee consider that public tendering for the Public Works Department is a somewhat hazardous practice. It has been particularly highlighted over the past eighteen months by the failure of a number of building contractors. It is your Committee’s view that, for the sake of the State’s finances, the Department’s prestige and for the building industry in general the Department urgently resolve the problems of selection and recommendation of tenders.

SUB-CONTRACTS.

6.1. When letting contracts for the bulk of the construction works, the Department operates on a main contractor and sub-contractor basis.

In examining the procedure and practice of letting sub-contracts, it was necessary for your Committee to look at the three accepted types of contracts currently being used in the building industry, namely, all-in contracts, separate contracts and nominated sub-contractors.

All-in Contracts.

6.2. The advantage of this type of contract is that only one contractor is responsible for construction of the project, as the constructing authority lets a contract to the prime contractor for the construction of the total project. The contractor accepts the responsibility for control of the project and the calling for the letting of sub-contracts. Payments are made direct to the main contractor who, in turn, pays his sub-contractors.

Electrical and mechanical sub-contractors are opposed to being controlled by builders as they consider themselves specialists and, therefore, should only be controlled by persons with a specialized knowledge. The result is an apparent lack of liaison and confidence between builders and sub-contractors. In addition, sub-contractors are not satisfied with receiving payments through the main contractor. The position has arisen where sub-contractors doubt the reliability of some of the contractors and are unhappy because the form of all-in contracts gives them no protection against non-payment of accounts.

6.3. In certain areas of the United States of America, legislation was passed prohibiting the use of all-in contracts when it was found that builders were "hawking" sub-contract prices in an effort to obtain lower costs. Builders were in effect seeking the lowest price without consideration to the standard of workmanship.

6.4. The Public Works Department introduced the system of all-in contracts a few years ago as an experiment, but it failed on larger projects. Mechanical and electrical sub-contractors boycotted the jobs and, as a result, contractors were unable to obtain quotes from them. At present the Department has the view that it should retain control of the specialist services associated with electrical and mechanical works, and therefore does not favour the system of all-in contracts.

Separate Contracts.

6.5. The bulk of the Department's contracts are let under this system. The constructing authority lets separate contracts for various sections of the project. These include the building, electrical, mechanical and civil engineering works.

The responsibility for co-ordination and control lies with the Department through the District Architects and Engineers, as there is no contractual relationship between sub-contractors and the principal contractor. Each contractor is paid directly by the Department.

6.6. Under this system the Department is having difficulties enforcing liquidated damages. With the separation of responsibility each contractor or sub-contractor conveniently blames the other for delays and, as a result, the Department has the problem of trying to prove that any one contractor is at fault.

6.7. The advantages of separate contracts appear to be—

- (a) better control by the constructing authority over contractor and particularly sub-contractors ;
- (b) there is no profit by the builder on sub-contracts ; and
- (c) sub-contractors have more assurance of receiving payments.

6.8. In our opinion the basic problem of the system of separate contracts is the lack of control on site. Many of the contract disputes arising during the construction have to be resolved by the Department. This often results in a loss of time, which leads to a failure to complete the project by the specified date.

Nominated Sub-Contractors.

6.9. Nominated sub-contractors can be called a compromise between the all-in contracts and separate contract systems. The constructing authority chooses those specialists whom it considers capable of executing the sub-contract work, whilst the builder maintains sole control and co-ordination for all works.

Contracts are let by the authority to the sub-contractors usually before selecting the main contractor. After the main contractor has been chosen, he is informed of his sub-contractors. He then enters into a contractual agreement with each of them. Payments are made direct to the principal contractor as is the case for all-in contracts. The authority has the advantage of dealing with one contractor and therefore has a better opportunity of enforcing contract conditions.

6.10. Over the last two years the Public Works Department has been swinging to the system of nominated sub-contractors. Presently, due to the recent failure of a few building firms, sub-contracting organizations are boycotting the system. They will not tender for any contracts of a nominated nature unless the Department is prepared to guarantee payments. The Department is unable to meet this demand as it is bound to pay the prime contractor for all works. The Secretary of the Department, Mr. G. Serpell, was questioned on the problems of the relationship between contractors and sub-contractors and payments (Transcript P. 481-482)—

“MR. SERPELL : This is the point about the nominated sub-contractor ; we have only one main contractor on the job, that is the builder, all the sub-contractors are responsible to the builder and not to the Department. This means that the builder has the responsibility of co-ordinating all works ; he has to accept the responsibility. If something goes wrong on the job we have one man to deal with, and if there is a question of liquidated damages, we have a much better chance of success in dealing with one contractor.

MR. McDONALD : If any of the sub-contractors had it in for him, they could hold him to ransom, virtually?

MR. SERPELL : The builder has his rights, he has a contractual relationship.

MR. MCLAREN : Is that the only thing that is necessary in putting up a building? Should there not be a good personal relationship in which they are all integrated?

MR. SERPELL : There usually is in the case of nominated sub-contracts but I must say that we have only been using the nominated sub-contracts in the more recent years, the last two years perhaps. At the present time, because of the failure of some building firms, the nominated sub-contractors have, or the Contractors' Association—Mechanical and Electrical—are now boycotting tendering in the Department ; any contracts of the nominated nature they will not tender at the present time until the Department is prepared to guarantee payment and this is something we cannot do.

THE CHAIRMAN (MR. TAYLOR) : In the meantime, who is responsible for paying nominated sub-contractors?

MR. SERPELL : The builder pays.

MR. McDONALD : The co-ordination of the whole scheme is what is worrying me.

MR. SERPELL : Under the nominated system, it is the builder's job to co-ordinate them.

THE CHAIRMAN : Your real problem does apply to the sub-contracts—

MR. SERPELL : We were speaking about this, this morning in the Department. Our view in the Department at the present time is that we have had so many headaches with this nominated sub-contract system. We recognise its virtues, but we have had so many headaches we are rather sorry we started it at that point of time.

MR. MCLAREN : Is it your intention to eliminate it ?

MR. SERPELL : No, I think we have the task of improving the conditions of payment between the main contractor and the nominated sub-contractor, and the only reason why the Sub-contractor Associations are opposed to the nominated system is the matter of payment and if we can solve this one then I am sure the nominated sub-contract system will be accepted by the whole of the industry and I am sure it will work."

6.11. The Commonwealth Department of Works and the New South Wales Public Works Department have introduced systems to minimize the chances of sub-contractors not receiving payments for completed works under the nominated system.

The Commonwealth Department of Works pays the builder direct. Included with the payment is a detailed list of the amounts due to sub-contractors. At the same time, the sub-contractors are notified that a cheque has been forwarded to the builder and of the amounts due to them. Under Clause 7, Section 7, of the Commonwealth Department of Works General Conditions of Contract the builder must pay his sub-contractors the amounts due, less retention money agreed to in the contract, within seven days. In addition, Section 8 of the above clause provides that, if the contractor is unable to produce sufficient proof of having paid all amounts previously due to his sub-contractors, the Department may withhold any further payments.

Under the New South Wales system of nominated contractors, payments are made direct to the sub-contractors. The main contractor has the right to object to a payment to a sub-contractor. The dispute must then be resolved by the Department.

6.12. Your Committee anticipate that the introduction of selective tendering would improve the relationship between contractors and sub-contractors and promote the necessary confidence in the reliability of contractors. In addition, the Department must examine its systems of contracts. Evidence shows that there is no preference for any one system as there are advantages and disadvantages in all.

Your Committee are convinced that control of the contract and supervision of the work must be maintained at all times ; the works must be properly co-ordinated ; and all contractors must have some assurance of receiving payment for completed works.

NOTIFICATION OF ACCEPTANCE OF TENDERS.

7.1. It is important for contractors to receive prompt notification of whether or not they are to receive a contract. If they have been successful they must plan and allocate workmen and equipment for the project. The unsuccessful tenderers need the opportunity to submit tenders for other works.

In the case of the small contractors, who do not have the resources to carry out a number of contracts at the one time, any delays by the authority in forwarding notification of acceptance or non-acceptance may result in loss of opportunity to seek contracts elsewhere.

7.2. Until recently, contractors tendering with the Public Works Department had no indication of their contract situation until they received notification following the acceptance of the successful tender. In an attempt to give contractors an idea of their position, the Department now publishes a list of the names of tenders, in order from lowest to highest, as at the closing date for tendering. The publication is displayed on a departmental notice board. Although the order is not final, contractors have the opportunity of deciding on whether to await the recommendation of the Department or to submit tenders for other works. The list does not become final until the Department is satisfied that there are no errors in the individual tenders. Official notification is forwarded after acceptance.

7.3. It appears to your Committee that the Department has adopted the attitude that, if the contractor wants to know if he has the chance of being the successful tenderer, he should either call at the Department and examine the published list or make inquiries by telephone. Your Committee are of the opinion that the onus for prompt notification lies with the Department and that the contractor should not have to chase the Department for information.

7.4. The relative section of the recommendation of the United Kingdom Economic Development Committee Report on the notification of results was that—

“Accordingly we recommend that the lowest three firms in the competition should be notified within seven days that they are in the running and that the other firms should be notified just as quickly that they are not”

Your Committee consider that the recommendation is one which should be closely examined by the Public Works Department as a possible means of promptly notifying contractors of their chances of obtaining the contract.

7.5. There is an apparent difference of opinion as to what information, regarding quotes and tenderers names, should be supplied to the unsuccessful contractors after the recommended tenderer has been selected. The Banwell Report recommended that all tenderers be supplied with a list of the firms who tendered and lists of the tender prices whereas the Public Works Department in New South Wales forwards a list of the tender prices without the names of the contractors.

In view of the fact that the Public Works Department only forwards notification of acceptance or non-acceptance, your Committee consider that the Department should consider the recommendations of both United Kingdom reports and introduce a system into its procedures that provides adequate and prompt information to contractors.

POSSESSION OF SITE.

8.1. After the contract has been accepted the Department is required, under the conditions of contract, to give possession of the site to the contractor within 30 days. Should the Department fail to give possession within the period, the contractor is entitled to claim an extension of time on his contract. Your Committee are of the opinion that there should be few reasons why the Department cannot give possession without delay. However, it appears that problems are arising and resulting in subsequent delays of up to three or four months before a contractor can take possession of the site. Your Committee are concerned that early delays may bring about disruptions to the works schedules of contractors and sub-contractors and the failure to meet the completion date.

8.2. One witness made reference to a contract he has with the Department which was estimated to take twelve months to complete. At the time of submitting evidence he stated that the contract was into its third year and was still nowhere near complete. He, as a sub-contractor, had been delayed, firstly, because the builder could not obtain possession of the site and, secondly, because the Client Department could not move the occupants of the building to other premises. The contractors were expected to carry out their contracts while patients were still in the buildings.

8.3. It is our opinion that the Department should ensure at the time of advertising the contract that the site and/or buildings will be ready for the successful tenderer. A building to be remodelled should be vacated to allow a contractor the freedom to carry out his contract with little or no unnecessary interruptions. Any delays similar to that mentioned in paragraph 8.2 can be costly to the State, result in disruption to the work program and are completely unsatisfactory to contractors.

CRITICAL PATH PLANNING.

9.1. During the visit to the Public Works Department in New South Wales, your Committee observed a chart in the Works Office at the Prince of Wales Hospital project. The chart was headed “Critical Path Diagram” and portrayed on paper the relative phasing and co-ordination of every ingredient used in the building.

9.2. The chart indicated that the building would develop a number of critical phases, each of which needed attention prior to the staged planning. In one case the supply, delivery and installation of terra cotta bricks in one section would delay the whole job for two weeks unless installed two weeks earlier than planned. This was done and so a costly delay was avoided.

The preparation of a Critical Path Analysis Diagram can be done by a computer in the case of a large project or by a draftsman in a smaller job.

9.3. Whilst studying the 1964 overseas report of the then Assistant Chief Mechanical and Electrical Engineer, Mr. G. Serpell, it was noted that reference is made to the successful use of Critical Path Planning in the United States of America and England. The general opinion in these countries is that projects being programmed by a Critical Path Plan are being constructed more economically, with less difficulties and construction time.

9.4. Your Committee consider that the Department should examine the system of Critical Path Planning and investigate the possibility of introducing a system into the procedures of the Department.

Illustrations of Critical Path Diagrams for a brick veneer classroom for construction by the New South Wales Public Works Department day labour organization and for the Prince of Wales Hospital, Randwick, New South Wales, are reproduced in Appendix "A" of this Report.

VARIATIONS.

10.1. Any alterations or additions to the original design or plans during the course of construction may result in a variation to the scheduled works.

Variations are accepted by the building trade as inevitable. It may become necessary to alter plans and specifications during the course of construction to incorporate a new building specification or to include a better type material.

Your Committee, in examining the problems of variations, consider that this is one problem that leads to inefficiency in the building industry and that there is a too ready acceptance of the need for variations. It may not be possible to eliminate variations, but your Committee consider that the procedures of the Public Works Department can be improved and so lessen the incidence of many variations which should be incorporated in the basic design.

10.2. In our opinion variations are the cause of many of the contract problems confronting the Public Works Department. They may result in inflation of costs, failure to complete the project by the specified date, delays in the payment of contractors' claims and disputes between the Department, Client Departments and contractors.

10.3. The Department's present system of recording and authorizing variations is by the use of the Architect's Instruction Confirmation Book. The normal procedure is that the inspector of works lists the details in the book and a copy is given to the contractor. At the same time, another copy is attached to the relevant file for departmental records. During this inquiry the majority of the contractors stated that they, more often than not, received verbal instructions for variation works without written confirmation. Your Committee examined a number of departmental files relating to projects on which numerous variations occurred and found only one that contained a full record.

10.4. The resultant problem of insufficient documentation is that disputes arise at the time of payments to contractors for variation works. Several months may elapse from the date of the work until a claim is submitted. As no records exist, the matter of the validity of the claim is then settled from the memory of an officer of the Department.

10.5. The majority of the contractors have adopted the system of claiming for variation works on their final claims. Because of the lack of records and the delay whilst they are being investigated and costed, the payment of final claims is being delayed for periods of six months or more. We consider that payments would not be held for so long if the Department—

(a) stopped issuing verbal instructions and made proper use of the Architect's Instruction Confirmation Book; and

(b) kept suitable records of variations.

In addition, contractors should be instructed to submit a claim for variations within one month of their occurrence.

10.6. As the number of variations increase, the Department is normally faced with the problem of obtaining additional funds to finance such works. The additional funds are obtained by transferring Treasury allocations for other projects (reference paragraph 2.5). The result is a disruption to the loan program and a delay in the works schedule. The following are examples of the costs of variations for major projects :—

Contract Work.	Amount of original contract.	Number of variations.	Value of variations.
	\$		\$
<i>Government Printing Office—</i> Erection of bulk store	356,894	48	25,129
<i>Janefield Mental Hospital—</i> Erection of three new Wards	456,905	111	40,693
<i>Brunswick Police Station—</i> Erection of police station	67,000	29	9,650
<i>Monash High School—</i> Erection of 1st and 2nd sections.	348,724	50	6,584

10.7. There are many reasons why variations occur. Some may result from unforeseen costs arising during the course of the contract, whilst others may take place to incorporate new ideas. However, it is the opinion of your Committee that many are the result of inadequate thought and planning. Thorough pre-planning by both the Client Department and the Public Works Department should result in the inclusion of many of the variation works in the original design. As an example, one variation that occurred during the construction of three new wards at Janefield Mental Hospital was the replacing of vinyl floor tiles with sheet vinyl. The added cost was \$3,174.84.

The reason for altering the floor coverings was to provide impervious surfaces for improved sanitation. Your Committee consider that, if the Client Department had put sufficient forethought into the proposed usage of the intended construction, the Department could have included sheet vinyl in the original specifications.

10.8. Several witnesses informed your Committee of the Department's hesitance in acknowledging letters from contractors seeking information on variations. One contractor produced copies of correspondence showing that on the 19th October, 1964, he wrote to the Department seeking additional costs. The Department replied on the 10th March, 1965, requesting that certain additional information be forwarded to the Department. The contractor complied with this request on the 12th April, 1965. On the 21st June, 1965, it was again necessary for the contractor to write. The following is the opening paragraph of the letter :—

“As I have received no answer to my letter of the 12.4.65, I can only assume you have not received same, so am writing again.”

Your Committee are in agreement that the Department has an obligation to give prompt acknowledgements and replies to letters dealing with contract matters.

10.9. Because of the prevalence of variations in the majority of the Department's contracts, your Committee are concerned that some contractors may lower their tender to an unrealistic figure, hoping to make a financial gain from the contract through variations. It is hoped that the introduction of selective tendering will prevent the occurrence by eliminating a tenderer whose quote may be considered doubtful.

PAYMENT OF CONTRACTORS' CLAIMS.

11.1. Payments of contractors' claims are usually met in either of two following ways :—

- (i) for minor works, including the supply of materials and maintenance works, contractors normally forward a single claim for payment at the completion of the work,
- (ii) claims for major projects are paid by a number of progress payments, a completion payment and a final payment.

The procedure for submitting the various claims for major work is as follows :—

Progress Payments.

When seeking payment for progress works the contractor forwards a claim to the Accountant of the Department. At the same time he provides the inspector of works with a “break-up”, showing the amounts claimed for each trade or sub-contractor. After assessing the work and the contractor's submission, the inspector prepares a progress certificate. A copy of the certificate is forwarded to the Accounts Branch where it is matched with the claim. The information contained in both the claim and the certificate is checked for correctness and accuracy. If everything is correct and funds are available the claim is then paid by cheque.

As specified in the conditions of the contract, the Department holds a percentage of the progress payments as retention money.

Completion and final payments are processed in a similar manner with the following differences :—

Completion Payment.

The certificate is not prepared until a supervising architect carries out a detailed inspection of the works and is satisfied that the construction is complete. At this stage a percentage of the retention money is paid to the builder.

Final Payment.

Final payments are made after the maintenance period has expired and on the condition that the Department is satisfied all works included on the maintenance list have been completed.

The maintenance period is normally specified in the conditions of contract. During this time the contractor is held responsible for all faults or defects that may appear or occur in the work.

11.2. Contractors who appeared before your Committee stated that prior to 1967, it was common for progress payments to be delayed for periods of up to two months and completion and final payments up to six months. The position has apparently improved with progress payments as contractors are now generally receiving settlement within three weeks. However, due to the inadequacy of the Department's procedures to cost and approve variations included in completion claims, these payments are still being delayed for substantial periods. One of the reasons given by the Department for the delays in paying final claims is that the Department sometimes has difficulties in getting contractors back on the job to rectify maintenance works. This is particularly prevalent on work in country districts. In such cases the Department will withhold payment until the contractor returns and fulfils his contract obligations.

11.3. Your Committee are aware of the Department's practice of giving preference to the payments of claims from the larger and better known contractors. A system is operating whereby these claims are processed on a daily basis and are included on a special schedule for prompt payment. We are not convinced that the practice is ideal. In many instances we believe that, because many of the small contractors have little capital, they depend on prompt payments to pay wages and purchase supplies. Any delays in the payment of their claims may discourage them from submitting further tenders for Public Works Department contracts.

11.4. The Department, as an additional assurance of the satisfactory completion of the contract, subtracts a percentage of the progress payments to be held as retention money. The reduction is normally 10 per cent. of the amount claimed. The retention money is paid to the contractor at the completion of the contract.

Whilst your Committee consider that the Department should take protective measures to cover any possible default during the progress of the contract, we consider that the Department should not "tie up" such a large proportion of a contractor's claim. We were interested to note that the Department introduced in March of this year a new system of security deposits as a means of eliminating the need for retention money on major contracts. Under the new system any contractor who receives a contract in excess of \$30,000 must lodge a security deposit of 6 per cent. of the contract value and in turn receives full progress payments as no retention money is retained. There is also an additional provision that the amount held as deposit may be reduced to 3 per cent. at practical completion, with the remaining 3 per cent. being held during the maintenance period. This system is similar to that operating in the Commonwealth Department of Works.

The Department has also recently altered its specifications to include the acceptance of a bank guarantee in lieu of retention money.

11.5. Toward the end of each financial year the problem of delays of payment appears to be more acute. During the months of May and June, some contractors are unable to receive prompt payments due to the shortage of appropriate funds. At this time of the year some projects have proceeded more smoothly than others, and at a stage where the balance of financial allocations are influenced by the varying degree of progress on the projects. The practice has developed whereby a switching of funds takes place between the projects and thus transfer of funds occurs according to the degree of progress. Unfortunately the works program has not been sufficiently well controlled to ensure that no over-spending occurs. This is resulting in a shortage of funds to pay all contractors for the work executed. Some delay occurs while the Public Works Department seeks Treasury authority to transfer part allocations between appropriate projects.

11.6. Many of the contractors who gave evidence consider that, as they are required to pay suppliers, the Department should make payments for materials on site, that is, those materials not yet included in the construction.

The Department's present policy is that they will not pay for unfixed materials, as there is no guarantee that the materials will be included in the construction. The Secretary of the Department informed your Committee that the National Public Works Conference (paragraph 4.4) is investigating the problem. It recognizes, that with industrialized building becoming more prevalent in Australia and with large sums of money being involved, some provision should be made for such payments.

The problem of payments for materials in off-site factories is covered in the Banwell Report which states as follows :—

"Materials in off-site factories, &c.

9.8. One further point deserves mention in connection with interim payments. The existence of manufactured sections and components for incorporation into buildings is not at present taken into account in assessing monthly payments for materials not yet incorporated into the work unless the materials and components are actually on the site. The construction of building components in off-site factories is an important factor in the industrialisation of the industry, and is to be encouraged. How is the cost of these components to be financed? Are they to be taken into account in interim payments and if so, how, or should the cost be borne by the industries concerned in accordance with normal commercial practice? Government departments have found it possible in special cases to make interim payments for materials not yet on site, and in such cases the contractor provides a certificate of indemnity..."

Your Committee agree with the views of the National Public Works Conference and the Banwell Report, and it is our opinion that some form of payment could be made for special components constructed in off-site factories and required to be on site for some period before inclusion in the construction.

11.7. There appears to be a marked improvement in the system of payments over the past eighteen months. Contractors are generally satisfied with the time lapse for the settlement of progress payments. Your Committee consider that this is the result of the Department realizing that it must improve its efficiency if it is to function effectively. The Secretary of the Department informed us that all accounts for the financial year 1967-68 had been paid. The major problem in the payment of claims appears to be the settlement of variations which is resulting in delays to completion payments.

Whilst examining the problems of payments your Committee investigated claims by two contractors of substantial delays in obtaining payments from the Department. Inquiries showed that the majority of the payments were made within a reasonable time of the contractors submitting their claims. Whilst your Committee agree that there is a need for further improvements to the Department's payment system, we are of the opinion that some of the criticism levelled at the Department by contractors may be unjust. The faults may lie with the contractor's own inadequate records and/or a failure to rectify maintenance works.

DAY LABOUR ORGANIZATION.

12.1. The day labour organization maintained by the Department is comprised of various tradesmen who carry out minor capital and maintenance works including architectural alterations, site works and foreshore works. The force is broken into a number of branches each of which is controlled, through works supervisors, by a senior departmental officer.

The following was the organization as at 30th June, 1968 :—

GROUP AND BRANCH.	NUMBER OF EMPLOYEES.
<i>Architectural</i>	
Works, General	36
Metropolitan District	199
North-Eastern District	55
Western District	13
	303
<i>Engineering</i>	
Civil	313
Ports and Harbours	224
Mechanical and Electrical	21
	558
<i>Stores</i>	44
<i>Furniture and Fittings</i>	5
<i>General Administration</i>	53
<i>Truck Hire</i>	8
	971
Total day labour.. .. .	971

12.2. After Client Departments submit their requests to the Department for the commencement of projects a decision is reached as to whether day labour is to be used. Normally day labour is employed on minor projects of an urgent nature. In the majority of cases no detailed plans or specifications are prepared and the day labour gang works from sketch drawings. As the work progresses, any decisions on detail are apparently made on a day to day basis.

The view of your Committee is that the procedure is unsatisfactory as we consider that the lack of adequate documentation can result in too many errors in the construction and, in addition, allows too much scope for changes of mind by Client Departments. It is hoped that there will be no repetition of the disorganization and costly alterations and additions that occurred during the renovations at the Royal Park Mental Institute due to lack of detailed plans and specifications. Details of the history of the construction are outlined in paragraph 3.5 of this Report.

12.3. There appears to be a lack of proper supervision and control over day labour by officers at many levels of responsibility. Carpentry, plumbing and electrical gangs are operating as separate identities and the result is a lack of co-ordination on the site.

Your Committee consider that, if the day labour force is to function efficiently, it should be organized into work groups to operate on the same basis as contractors. We envisage a self-contained organization, controlled by a departmental administration section, capable of improved staff control and co-ordination. Work, estimated and costed by the section, would be carried out in accordance with a works and maintenance program and at a cost comparable with outside contractors.

GENERAL REVIEW.

13.1. Weaknesses within the organization and systems of the Public Works Department have caused frequent and increasing comment over recent years. Subsequently, your Committee decided in 1967 that they should conduct an examination of the organization and functions of this Department.

13.2. Your Committee studied the administrative and organizational functions and recognized the need for considerable improvement in this field. As mentioned in paragraphs 1.4 and 1.5 of this Report, we decided to focus our attention on the tender and contracting methods of the Department as well as the relationship with Client Departments and the Building Industry.

13.3. Evidence was taken from representatives of contractors, specialist sub-contractors, professional organizations and trade suppliers, as well as officers of the Public Works Department and Client Departments.

13.4. Because of problems arising in the building industry it has become important for the Department to be more precise in its method of selecting contractors. It seems necessary for the Department to grade contractors according to their ability to finance and administer a contract.

13.5. In examining the problem of control and co-ordination of works, evidence shows that there are both advantages and disadvantages in selecting the builder as the controlling authority. It is agreed that many of the larger firms not only have the know-how but also the strong financial background and sufficient capital equipment to undertake successfully the responsibility of control. However, with the continuous appearance of new and smaller building contractors, there has arisen some doubt as to ability and in particular their financial stability. It is for this reason that sub-contracting associations are presently boycotting any contracts under which the prime contractor retains the right of site control. This has brought about the need for an urgent revision of the Department's contracting systems.

13.6. Evidence leads us to believe that time devoted to preparation prior to commencement of work is essential for effective planning and should result in the saving of valuable time and money. If the Department devoted sufficient time to preparing complete and accurate drawings and specifications, and maintained strict supervision of a project, variations should be restricted to vital technical changes. Client Departments, who insist on variations, must be completely satisfied that the alteration or addition is necessary and that the State will not be burdened with unwarranted and excessive costs.

13.7. Communications between the Public Works Department, Client Departments and contractors could be improved in all phases with great benefit to those concerned. Added co-ordination could result in better control of costs.

13.8. It is unlikely that the Public Works Department systems can be changed overnight, but there is little doubt that greater efficiency and staff interest will result if the changes are brought about by the application of an intelligent plan which will develop smoothly and avoid disruption or confusion in the Department.

SUMMARY OF MAJOR RECOMMENDATIONS.

Your Committee makes the following recommendations :—

Report Section 2/Pre-Planning of the Public Works Loan Program.

That the Treasury investigate the possibility of introducing a forward look program that allows a more realistic period for the development and planning of projects and for the allocation of works expenditure over a number of years.

3/Preparation of Plans, Specifications and Bills of Quantities.

(a) That Client Departments, embarking on construction projects, must give more thought to their needs during the development period and should finalize all their requirements during the planning period. At a critical stage, early in the construction, the Public Works Department impose a "freeze" on alterations and variations, and thus eliminate many of the costly delays now occurring. The system applying in the Public Works Department of New South Wales, with relation to the designing of major projects, should be studied with the object of giving more responsibility and credit to professional officers of the Department.

(b) That the Department must ensure that adequate clerical assistance is allotted to the professional division so that senior officers of that division have sufficient time to study and examine modern building techniques.

4/Contract Documents—Conditions of Contract.

That the Conditions of Contract must be thoroughly examined and where necessary revised. The contract document must ensure that complete adherence by both the Authority and contractor to conditions is maintained at all times.

5/Systems of Tendering.

That the Department review their approach to the assessment of tenderers. A system must be selected that will give stability to projects because of the competence, experience and financial stability of the tenderer. The system now applying in New South Wales is worthy of consideration.

6/Sub-contracts.

That the Department examine the systems of payments to sub-contractors currently operating in the Commonwealth Department of Works and in the New South Wales Public Works Department, with the view to introducing a system whereby there is some assurance of payment to sub-contractors. In addition, it is our opinion that the introduction of a system of selective tendering will promote added confidence between the prime contractor and sub-contractor.

7/Notification of Acceptance of Tenders.

That the Department introduce a system of notification of acceptance of tenders into its procedures that provides adequate and prompt information to contractors.

8/Possession of Site.

That, in planning for the erection of projects or remodelling of existing premises, the Department must ensure the site will be ready for the successful tenderer without any undue delay.

9/Critical Path Planning.

That the Department examine the system of Critical Path Planning and investigate the possibility of introducing a system into the procedures of the Department.

10/Variations.

(a) That the Department adopt a standard procedure to be followed by officers when—

- (i) issuing variation instructions to contractors ; and
- (ii) recording and costing variations.

(b) That contractors be instructed to submit a claim for variations within one month of their occurrence.

11/Payment of Contractors' Claims.

(a) That the Department overcome the delays in the settlement of completion and final payments brought about by the excessive time taken to cost variations ;

(b) that some form of payment could be made for special components constructed in off-site factories and required to be on site for some period before inclusion in the construction.

12/Day-Labour Organization.

That the day labour force be re-organized into functional work groups, suitably controlled and co-ordinated, and capable of carrying out work at costs comparable with outside contractors.

APPRECIATIONS.

Your Committee wish to place on record their appreciation of the services of the former Secretary of the Committee Mr. I. N. McCarron who, during the course of this inquiry, was promoted to the position of Second Clerk Assistant of the Legislative Assembly.

Whilst conducting the inquiry, your Committee journeyed to New South Wales to examine the system of selective tendering operating in the Public Works Department. We are grateful for the valuable and willing assistance received from the senior officers and staff of this Department, particularly from the Deputy Director, Senior Administrative Officer, Administrative Officer, Government Architect and Assistant Government Architects.

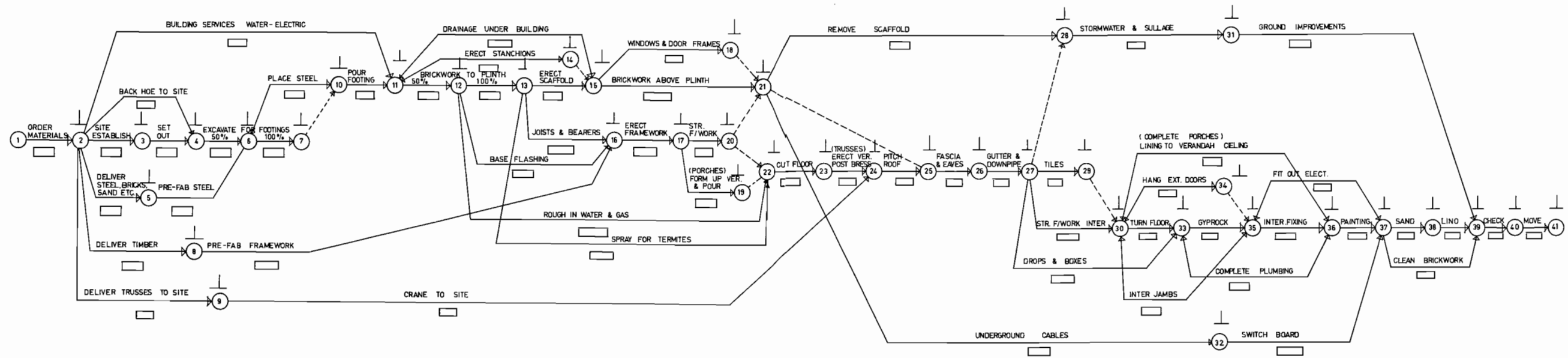
DEATH OF AN EX-MEMBER.

Members of your Committee wish to express their feeling of deep regret at the death of Mr. G. S. Gibbs who served the Parliament and your Committee with great devotion and diligence from July, 1955 until April, 1967.

Committee Room,

19th September, 1968.

APPENDIX A



CRITICAL PATH DIAGRAM
 FOR CONSTRUCTION OF BRICK VENEER
 CLASSROOMS BY P.W.D. DAY LABOUR
 ORGANISATION.

