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UNFAVOURABLE IMPLEMENTATION OF PROCUREMENT OF ROAD REHABILITATION IN UTE, OSE LOCAL GOVERNMENT

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Abstract

This paper provides actionable insights into the role of the Quantity Surveyor, an expert responsible for total cost and procurement management, in the contractual procurement of civil engineering works, using a case study of road rehabilitation in Ute Township. There is a need for more attention to be paid to total cost appraisal and for stakeholders to obtain good value for money. Tendering involves the principles, processes, and procedures followed by a contractor on one hand in bidding for a project and by the client on the other hand in selecting a contractor; this was not applicable to the case of road rehabilitation in Ute Township. The construction work includes: general and preliminaries; site clearing and earthworks; culverts and drains; pavement and surfacing; and miscellaneous road works. Purposive convenience sampling was adopted; a lack of generality is a major limitation of a case study. The qualitative interview was personally conducted because it requires intensive investigation of the project. Content qualitative analysis was used through the qualitative software called Nvivo II. Most items of work in civil engineering construction are priced as provisional sums. There is a need for financial probity and value for money in the conceptualization, planning, and execution of road rehabilitation in Ute Township.

Keywords: Procurement Management; Earthwork; Pavement; Provisional Sum; and Value for money.

Background of the Study

The economic cost of rehabilitation of selected road in Ute Township in Ose Local Government in Ondo State was considered on analyzing the cost-benefit; the project was curative in nature. It makes transportation of foods, fruits and crops easier, faster and accessible. It is major road that lead to the urban centers. Ondo state government was the facilitator and the Rembam Nig Ltd was the executor. The objective of this paper is to provide economically viable solution by ensuring adequate procurements of the civil engineering projects with adequate consideration for value for money. Ogunsemi (2015) noted that the problems of inefficiency and poor productivity are much greater in the construction industry than other industry due to the complex nature of the industry and the unique characteristics of its end product.

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According to Chitkara(2004), the industry is faced with challenges of improvement in terms of product and service delivery necessitated by constant criticism by the industry's customers. They are dissatisfied in terms of value addition.

According to the Good Practice Guide for Public Sector Procurement guidance for public entries in 2008, value for money involves using resources effectively, economically, and without waste, with due regard for the total costs and benefits of an arrangement, and its contribution to the outcomes the entity it is trying to achieve. Procurement encompasses everything from the conceptualization to the actualization. These according to Hatush and Skitmore (1997), procurement includes project packaging, invitation, prequalification, shortlisting and bid evaluation. Ogunsemi (2015) posited that the scientific and transparent way of shortlisting selected contractors is referred to as prequalification or technical bidding. Ogunsemi, Aje, Awodele and Abiola-Falemu (2006) investigated the prequalification criteria applied in the shortlisting of contractors in Nigeria. The results showed that general information about the contractor's past performance; technical competence; managerial capabilities and financial stability in descending order were the most critical criteria for prequalification of contractors.

Jagboro (2013) noted that wrong tendering practice is a major contributor to the inefficiency in Nigeria construction industry. Once a wrong contractor is chosen, the possibility of the client obtaining value for money is jeopardized. The tender evaluation is needed for the achievement of project's goals. According to Ogunsina and Ogunsemi (2012), there are eight categories of project actors in public sector construction procurement, with four distinct principal-supervisor-agent relationships. These actors included the citizenry, executive politicians, legislative politicians, ministries, departments and agencies, independent consultants/procurement advisors, regulatory professional bodies, contractors and subcontractors/suppliers. The ultimate client for a public sector construction project is the end-using citizens of the built assests. Confidence that is critical in procurement of civil engineering projects because of nature of work which are provisional is gradually fading away and thereby rework occurred in different activities. Our governments are the major facilitator and should be encouraged to invest in preliminary reconnaissance of civil engineering projects. Ute's project was over one billion naira; and contract duration extends from 18months to 36 months because of weather condition. Investing in preliminary survey maximize contractor profit in this recent era of profitless prosperity.

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According to Love and Edwards (2020), the determinants of rework includes: client-related factors, design-related factors and contractor-related factors; and noted that client initiated changes and ineffective use of information technology by the design team were identified as being significant variables contributing to rework occurrence in civil engineering projects. Fayek *et al* (2022) in their study on measuring and classifying construction field rework identify five major causes of rework, these include: human resource capability; leadership and communications; engineering and reviews; construction planning and scheduling, and material and equipment supply. In another view, Love and Li (2022) suggested that the major cause of rework is uncertainty, which is mostly generated by poor information; which is often missing, unreliable, inaccurate and conflicting.

Nature and extent of excavation; available work area; disposal of soil; and existing services and structures are factors which affects the practical planning and cost of earthwork operations in selected road in Ute Township. It was extended sites which involved cut and fill operations; drainage was constructed in the area of fill. Movement of plant and materials was efficiently planned; and disposal of soil was achieved by immediate use as backfilling elsewhere on the site. General items and preliminaries are provisional; which are well defined with total bill 24,950,000.00.

Content analysis report on interview conducted on rehabilitation of selected road in Ute Township.

From the background information provided by the respondents. The project involved the facilitator (Ondo State Government) and executor (Remban Nig. Ltd), the Project Manager, the Demrol Ray Engineering Consultant, Consultant (in-house from Ministry of work), and the Engineers. The qualitative interview was conducted in line with the objective to optimize economy by ensuring adequate procurement of civil engineering project without wastage of time, materials, manpower and finance.

Case description of Rehabilitation/construction Ute Township Road

The total length of construction/rehabilitation of selected roads in Ute Township was 9,450m; with average with 10.3m. General and preliminaries was provisional with 24,950,000.00; which was 2.44% of the total estimated cost. It includes: allowances for compensation in respect of crops; relocation of existing services (electricity, water, telecommunication etc), and installation of additional water pipes; running and maintenance of project vehicles; allow for capacity for capacity building. Site clearing and

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earthwork includes cutting down of large trees exceeding 1.5metres girth; excavate in any material except rock to formation levels in cutting and side drain and for widening of cuttings as may be directed by the Engineer's representative, haul excavated material any distance, deposit and spread in 150mm thick layers and compact to 100% BS compaction as filling to embankment of margin. Shape sub-grade and trim slope to required cross section. All measured as completed work in final situ etc 82,725, 073.75 which is 8.1% of the total estimated cost. Culverts and drains works includes clear out silts and debris in existing serviceable open drains, culverts and covered drains; mechanical desiltation of waterway/stream using amphibious grab machine called "AMPHIBUGY"; Excavate in any materials except rock for culverts and drains to any depth and cart away surplus as directed; level and compact bottom of excavation, provide and place concrete grade 15 as blinding (50mm thick); provide and lay precast reinforced concrete pipe(single 600mm diameter) as new culvert 49,831.91 or extension to existing culverts, complete with apron, head walls and end walls (grade 25). Rate includes: precast pipe, concrete, reinforcements, shuttering, blinding, hunching, excavation, backfilling and removal of surplus materials. Barrel (all inclusive rates). We have (750, 900, 1200) mm diameter single barrel only (77,724.66; 86,954.36; 113, 732.61) and for double (barrel only) 94,919.88; 120,694.60; 142,054.60; 189,431.59. Covered drain with different sizes internal were constructed (600x600x150mm thick; 600x750x150; 600x900x150, cost for covered drain 20,845,870.98. open drain inclusive 157, 984,002.88; which was 15.5% of the total estimated cost. Pavement and surfacing which include provide, spread, shape and compact to 100%W.A. compaction, naturally-occurring material as sub-base course, compacted to 150mm thickness on carriageway and shoulders. Rate to include haulage; provide and spray bitumen MCO at the of 1.1litre per square meter to finished surface as prime coat, rate to include blinding with sand or quarry dust. Provide, mix, lay and compact asphaltic concrete wearing course with a bitumen content of 6.5% by weight of dry aggregates to a compacted thickness of 50mm on the carriageway as binder course, we have 40mm, 30mm, 25mm thick asphalt concrete. Provide and spray tack coat emulsion at the rate of 0.5 liter per square meter as directed by the Engineer 602, 128, 300.65; which was 58.9% of the total estimated cost miscellaneous road works which includes straight and curved kerbs grade 25 costs 6, 234,637.50 which was 0.06% of total estimated cost 1,021,425,827.57.

Each part of the analysis indicated that civil engineering works are capital intensive. Hence, the content qualitative analysis is employed through the use of qualitative software called NVivo 11 to code,

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categorize and examine critically and systematically the interviewees' responses in order to address these issues. Therefore, there is the need for an evaluation of investment in preliminary reconnaissance to maximize the limited resources, cost, time and quality performances of civil engineering projects.

Discussion of Finding

General enquiries and preliminary work should be made before embarking on engineering projects. In an extended site, like Ute Township, aerial photography is a valuable means of obtaining topographical maps. It can save a great deal of time and money in the planning and development stages of a contract, as well as essential background to positive soil investigation. The cost of general and preliminaries for Ute's township road was 2.44%. Site clearing and earthworks was 8.1% due to the nature of work on the extended site in Ute; the availability of suitable plant; the availability of suitable fill material; and the time of the year. Culverts and drains was 15.5%, it includes open drain, covered drain of the different sizes; with the same thickness of 150mm. The pavement and surfacing (flexible) had the highest percentage of 58.9% because of work involved from subgrade (foundation); sub-base; road base; base course and wearing course; the materials to be used and plants item involved. Miscellaneous road works was 0.06% includes construction of kerbs, footpaths, verges etc. The total percentage was approximately 85 of the total estimated cost (868,211,953.43). The remaining cost covered for 5% for contingencies; 6% for consultancy; and 5% for value added tax. Figure 1: Survey Profile, which measures the elevations and scopes, to ensure correct gradient and allow effective flow of water. While Figure 2: Road cross section which indicates drainage features, pavement structure, position, number of lanes and side walks, along with their cross slope. Figure 3: Horizontal / vertical Alignment, it indicates how straight/flatness of the roadway to enhance coordination.

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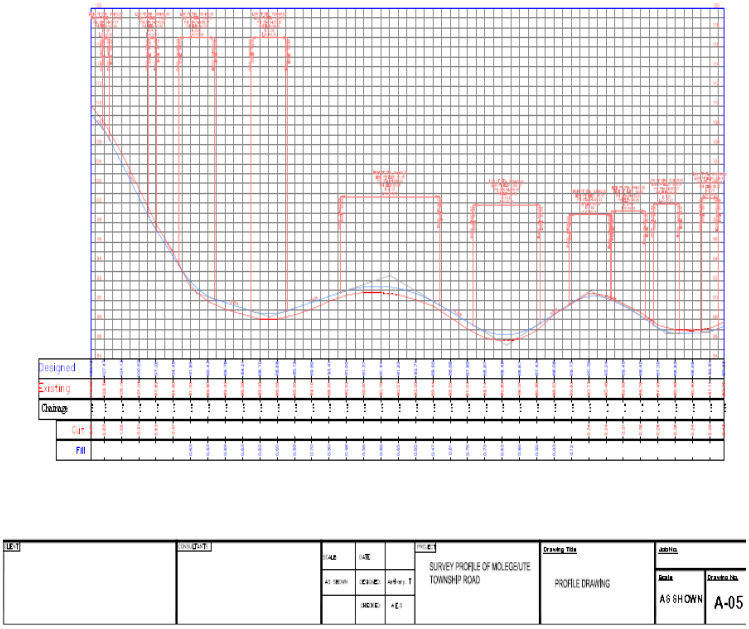

Figure 1: Survey Profile

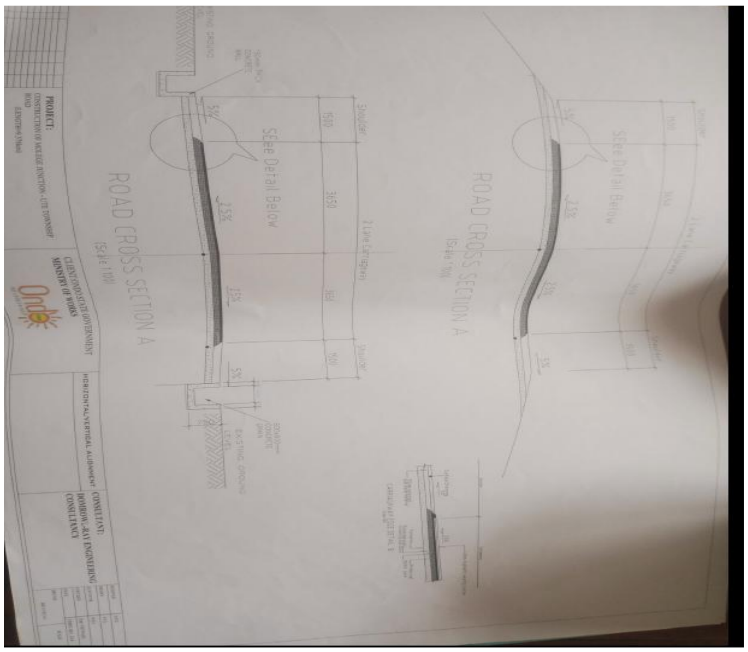

Figure 2: Road Cross Section

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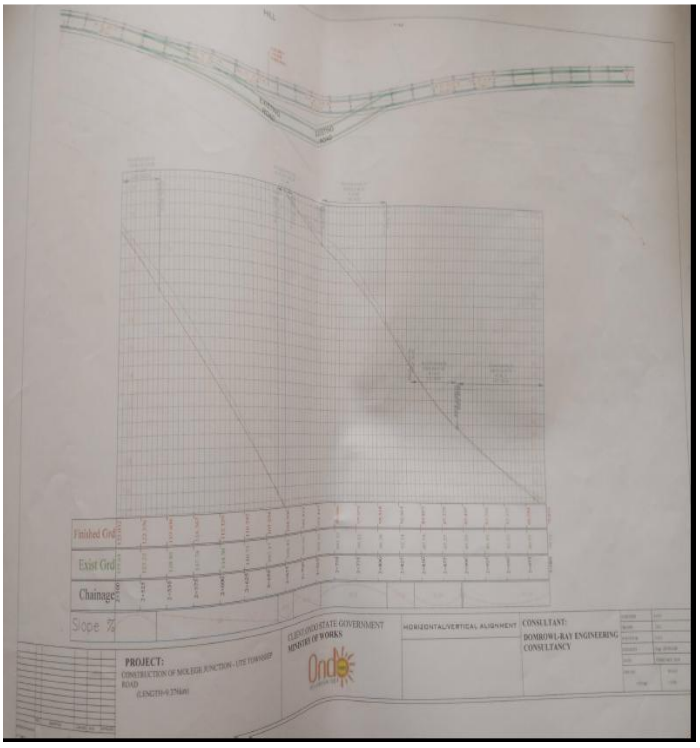

Figure 3: Horizontal / vertical Alignment

CONCLUSION AND RECOMMENDATION

Government should be encouraged to invest in preliminary reconnaissance for effective delivery of civil engineering projects. They are capital intensive; and its procurement encompasses everything including logistics and transport, site investigation, sourcing etc. The facilitators, executive politicians and legislative politicians should desist from seeking their own interest at the expense of the citizenry and rise-up to regain the confidence that is gradually fading away; by saving the contracting organization from profitless hard work.

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