

**Office of the Auditor General**  
Performance Audit Report

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**Negotiation of Consultant Contracts**  
Michigan Department of Transportation

March 2022

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The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.

The auditor general may make investigations pertinent to the conduct of audits.

*Article IV, Section 53 of the Michigan Constitution*

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# OAG

Office of the Auditor General

## Report Summary

### *Performance Audit*

### *Negotiation of Consultant Contracts*

### *Michigan Department of Transportation (MDOT)*

**Report Number:**  
**591-0211-20**

**Released:**  
**March 2022**

MDOT uses a qualifications-based selection (QBS) process for procuring consultants for services such as engineering and architectural design. Using QBS, MDOT selects a consultant after a comprehensive evaluation of qualifications, such as knowledge, skill, experience, and other project-specific factors, rather than focusing on cost. After selecting the most qualified consultant, MDOT negotiates a fair and reasonable cost for the agreed-upon scope of services based on its independent cost estimates. MDOT negotiated 2,047 consultant contracts totaling \$1.35 billion between October 1, 2017 and May 15, 2020.

Audit Objective		Conclusion	
Objective: To assess the sufficiency of MDOT's negotiation efforts when procuring consultant contracts.		Sufficient, with exceptions	
Findings Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
Consultants' final priced proposals and contract awards exceeded MDOT's estimated hours and/or costs by 10% or more in 42% of our sampled consultant contracts. Variances between consultants' proposals and contract awards and MDOT's estimated hours and costs indicated MDOT's estimates were not always reliable and did not serve as the basis for negotiation. In addition, MDOT's estimates did not include sufficient information to demonstrate MDOT had conformed with federal regulations by considering all required cost components ( <a href="#">Finding 1</a> ).		X	Agrees

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# OAG

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**Doug A. Ringler, CPA, CIA**  
Auditor General

March 30, 2022

Mr. Todd Wyett, Chair  
State Transportation Commission  
and  
Paul C. Ajegba, PE, Director  
Michigan Department of Transportation  
Murray D. Van Wagoner Building  
Lansing, Michigan

Dear Mr. Wyett and Mr. Ajegba:

This is our performance audit report on the Negotiation of Consultant Contracts, Michigan Department of Transportation.

Your agency provided the preliminary response to the recommendation at the end of our fieldwork. The *Michigan Compiled Laws* and administrative procedures require an audited agency to develop a plan to comply with the recommendations and to submit it to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

A handwritten signature in black ink that reads "Doug Ringler". The signature is written in a cursive, slightly slanted style.

Doug Ringler  
Auditor General



## TABLE OF CONTENTS

### NEGOTIATION OF CONSULTANT CONTRACTS

	<u>Page</u>
Report Summary	1
Report Letter	3
Audit Objectives, Conclusions, Findings, and Observations	
Negotiation Efforts When Procuring Consultant Contracts	8
Findings:	
1. Improvement needed to establish independent cost estimates and negotiate consultant contracts.	9
Supplemental Information	
Contract Administration Process	12
Description	13
Audit Scope, Methodology, and Other Information	14
Glossary of Abbreviations and Terms	17





# AUDIT OBJECTIVES, CONCLUSIONS, FINDINGS, AND OBSERVATIONS

## NEGOTIATION EFFORTS WHEN PROCURING CONSULTANT CONTRACTS

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**AUDIT OBJECTIVE**

To assess the sufficiency of the Michigan Department of Transportation's (MDOT's) negotiation efforts when procuring consultant contracts.

**CONCLUSION**

Sufficient, with exceptions.

**FACTORS  
IMPACTING  
CONCLUSION**

- MDOT was implementing a Community of Learning process to help centralize department policies, procedures, trainings, and documents used within the consultant contract negotiations.
- MDOT prepared an independent cost estimate\* for 100% of the consultant contracts we reviewed, and the total labor hours and costs summed correctly within those estimates.
- Reportable condition\* related to MDOT's independent cost estimates and negotiation efforts (Finding 1).

\* See glossary at end of report for definition.

## FINDING 1

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**Improvement is needed to establish independent cost estimates and negotiate consultant contracts.**

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MDOT needs to continue to improve its efforts to establish independent cost estimates (estimates) and negotiate consultant contracts. Improved estimates will help MDOT ensure it has a suitable basis to negotiate a fair and reasonable level of effort with selected consultants and ensure compliance with federal regulations.

MDOT's Selection Guidelines for Service Contracts require project managers\* to provide a completed, signed, and dated independent estimate indicating estimated hours and dollar amounts (costs) for the project. Also, federal regulations require that, prior to receipt and review of the most highly qualified consultant's cost proposal during a qualifications-based selection\* (QBS) procurement process, MDOT shall prepare a detailed estimate which includes an appropriate breakdown of:

- Anticipated work or labor hours.
- Types or classifications of labor anticipated.
- Other direct costs.
- The consultant's fixed fee\*.

MDOT prepares estimates before selecting a vendor, and overhead costs and fixed rates vary by vendor. MDOT stated its initial estimate helps to place the projects into the correct pricing tier\*.

After selecting a consultant and before receiving any price information or the priced proposal\*, MDOT may discuss the project with the selected consultant to verify a mutual understanding of the scope of services\* and refine its estimate as necessary. MDOT documents any changes to the scope of services and internal approvals. The selected consultants then submit their priced proposal and MDOT could initiate its negotiation process using its final estimate as the baseline. MDOT required an additional, documented approval when the variance between its estimated cost and the consultant's priced proposal exceeded 10%. In October 2019, MDOT expanded this additional approval process to include when its estimated hours were not within 10% of the consultant's proposed hours.

We reviewed the MDOT estimates, the consultants' initial and final priced proposals if applicable, and contract award amounts for 48 consulting contracts MDOT procured between November 2017 and May 2020, totaling \$36.0 million. Consultants submitted 13 priced proposals with estimated hours and/or costs which were below MDOT's estimates. For the remaining 35 priced proposals, we compared MDOT's final estimated hours and costs with the consultants' priced proposals and noted several instances in which MDOT's estimates differed significantly from the consultants' priced proposals and, ultimately,

\* See glossary at end of report for definition.

the contract awards. In addition, it appeared only minimal or no negotiation occurred in several instances related to the consultant's proposed hours and costs.

Based on documentation provided by MDOT for these 35 sample items, we identified 20 instances in which the hours and/or cost variances between the MDOT estimates and the consultants' final priced proposals and contract awards exceeded 10%. The variances sometimes indicated MDOT's estimates were not always reliable and did not serve as the basis for negotiation. For these 20, we noted:

- a. 14 instances in which MDOT did not require the consultants to revise their initial priced proposal hours or costs and accepted them as the terms of the final contract. The hours and costs for these priced proposals exceeded MDOT's estimates by an average of 35% and 9%, respectively.
- b. 4 instances in which consultants submitted revised priced proposals with lower hours and costs than their initial proposals, on average reducing their proposed hours by 5% and costs by 8%. However, the final priced proposal hours and costs still exceeded MDOT's estimates by an average of 61% and 53%, respectively.
- c. 2 instances in which consultants submitted revised priced proposals by increasing the hours 9% and costs 12% above their initial proposals, on average, while exceeding MDOT's estimates by an average of 63% and 36% for hours and costs, respectively.

MDOT had not documented the requisite approvals for the cost and hour variances that exceeded 10% in 5 (42%) of 12 applicable instances.

We also noted one consultant who submitted a proposal identifying hours and costs matching MDOT's estimates. Given the number of hours (over 7,500) and dollars (nearly \$1 million) for this contract, it appears MDOT either disclosed its estimates in advance of the consultant's priced proposal or prepared its estimate after receiving the consultant's priced proposal.

In addition, MDOT had not prescribed a particular format to ensure a consistent approach in preparing and documenting its estimates. MDOT documented the estimates in our sample in a variety of ways, including Microsoft Excel spreadsheets and Word documents, e-mails, and PDF documents.

Most of MDOT's estimates contained only minimal information and, as depicted in the following table, did not include sufficient information to demonstrate MDOT had conformed with federal regulations by considering all the required components:

Estimate Requirements	Number of MDOT Estimates That Did Not Include Requirement
Breakdown of work or labor hours	15 (31%)
Types or classifications of labor required	10 (21%)
Breakdown of other direct costs	31 (65%)
Consultant's fixed fee (profit)	28* (58%)

\* Includes one estimate with incorrect fixed fee rate.

The Federal Highway Administration could issue sanctions or disallowances related to MDOT's noncompliance. We also noted 45 (94%) of the estimates did not include a signature or date and, therefore, MDOT could not sufficiently demonstrate when it prepared them. We identified two of our sampled items where the Office of Commission Audits\* (OCA) previously could not conduct its own separate, independent analysis of the consultants' priced proposals because MDOT did not provide its estimates to OCA. However, MDOT provided the sampled estimates to the OAG during our review. Without a date on the estimates, it was unclear when MDOT completed them or why they were not available at the time of OCA's review.

In November 2019, OCA suspended both its reliance upon MDOT's estimates and its efforts to conclude on overall cost reasonableness of consultant priced proposals while MDOT transitioned to a new estimate methodology. In January 2020, MDOT management formally communicated to project managers emphasizing the importance of the estimates for the negotiation process and specified several procedural improvements that the project managers had not fully implemented at the time of our review.

**RECOMMENDATION**

We recommend that MDOT continue to improve its efforts for establishing estimates and negotiating consultant contracts.

**AGENCY PRELIMINARY RESPONSE**

MDOT provided us with the following response:

*MDOT agrees with this recommendation and has been working with the Federal Highway Administration to develop an improved independent estimating process with the appropriate breakdown of work or labor hours, types of classification of labor, direct costs, and consultant's fixed fee, to serve as a basis for negotiations with the most highly qualified consultant.*

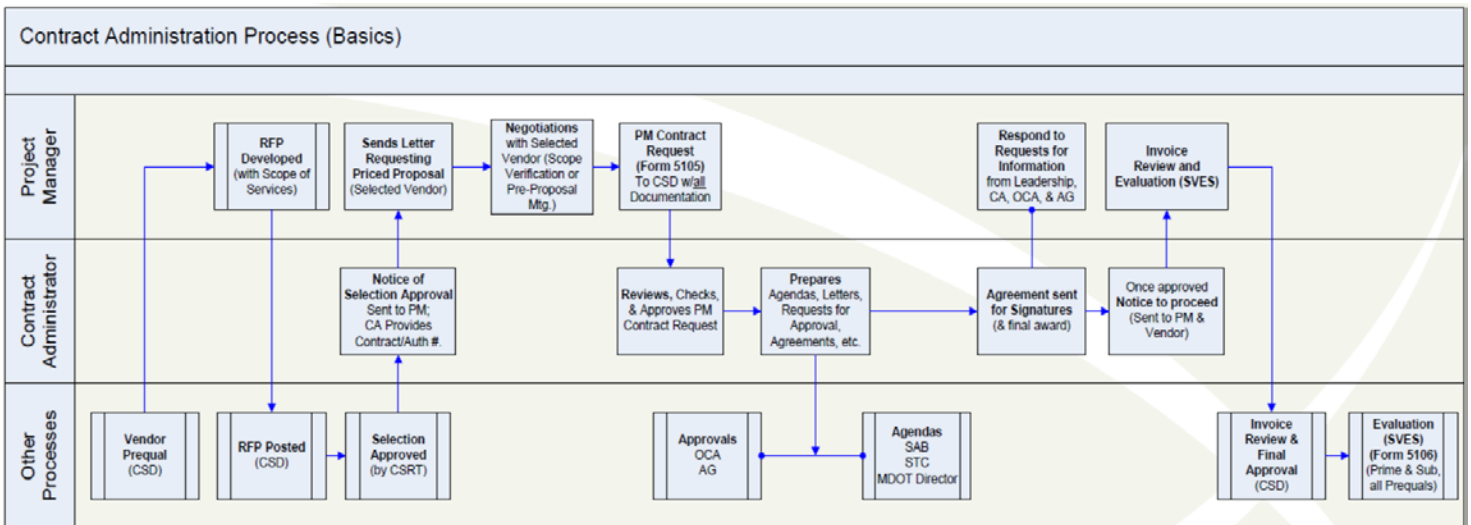
\* See glossary at end of report for definition.

# SUPPLEMENTAL INFORMATION

UNAUDITED

## NEGOTIATION OF CONSULTANT CONTRACTS Michigan Department of Transportation

### Contract Administration Process



Source: The OAG obtained this flow chart from MDOT's Intranet.

## DESCRIPTION

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MDOT procures consultants for services such as engineering and architectural design in accordance with federal policy established in the Brooks Act\* (Title 40, sections 1101 – 1104 of the *United States Code*). The procurement for these types of services is based on demonstrated competence and qualification, not price. The Federal Highway Administration implements the Brooks Act requirements through Title 23, Part 172 of the *Code of Federal Regulations (CFR)* and are referred to as QBS. QBS is specified in federal regulation 23 *CFR* 172.7(a)(1) as the primary method of procurement for Federal-Aid Highway Program funded engineering and design-related service contracts associated with a construction project.

After selection of the most qualified consultant, MDOT project managers negotiate a fair and reasonable cost for the agreed-upon scope of services with the consultant based on their independent cost estimates. The negotiation process is one of several components in the overall procurement of consultant contracts. MDOT's Contract Services Division (CSD) oversees the procurement of consultant contracts (see supplemental information). MDOT negotiated 2,047 consultant contracts between October 1, 2017 and May 15, 2020 totaling \$1.35 billion.

\* See glossary at end of report for definition.

## AUDIT SCOPE, METHODOLOGY, AND OTHER INFORMATION

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### AUDIT SCOPE

To examine the records and processes related to MDOT's consultant contract negotiations. We conducted this performance audit\* in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Within the scope of this audit, we reviewed project manager independent cost estimates for consultant contract projects. Because we do not possess expertise in the engineering field, we did not assess or conclude on the appropriateness of the project costs, direct hours planned, and fixed fees for the projects we reviewed. Instead, we evaluated MDOT's processes for ensuring the appropriateness of its cost estimates and the resulting negotiations.

As part of the audit, we considered the five components of internal control\* (control environment, risk assessment, control activities, information and communication, and monitoring activities) relative to the audit objectives and determined all components were significant.

### PERIOD

Our audit procedures, which included a preliminary survey, audit fieldwork, report preparation, analysis of agency responses, and quality assurance, generally covered October 1, 2017 through May 1, 2020.

### METHODOLOGY

We conducted a preliminary survey to gain an understanding of MDOT's consultant contracting processes and formulate a basis for establishing our audit objective, scope, and methodology. During our preliminary survey, we:

- Interviewed MDOT CSD staff regarding their functions and responsibilities relative to MDOT's procurement of consultants.
- Reviewed applicable laws and regulations regarding the procurement of consultant contracts, including the Brooks Act.
- Obtained and reviewed a listing of current and closed consultant contracts.
- Interviewed MDOT project managers to discuss their processes for creating independent cost estimates for consultant contracts.

\* See glossary at end of report for definition.



- Evaluated contract selecting by:
  - Reviewing a sample of consultant contracts and subcontracts MDOT awarded using QBS for necessary documentation and approvals.
  - Gaining an understanding and examining examples of reviews OCA completed on consultant priced proposals.
- Evaluated contract monitoring by:
  - Reviewing MDOT's process for ensuring it properly coded, reviewed, and approved completed contract payments.
  - Reviewing the checklist MDOT used to ensure it properly closed contracts.
  - Reviewing MDOT's process for completing required vendor performance evaluations for closed contracts.

**OBJECTIVE**

To assess the sufficiency of MDOT's negotiation efforts when procuring consultant contracts.

To accomplish this objective, we:

- Selected a random sample of 48 of 2,047 consultant contracts MDOT executed during our audit period. We reviewed MDOT's estimates for hours and costs for these contracts and compared MDOT's estimates with the vendors' final priced proposals and contract award amounts. Specifically, we reviewed each estimate to determine if MDOT:
  - Included required components in its independent cost estimates.
  - Accurately summed estimated labor hours, direct expenses, and fixed costs.
  - Obtained requisite approvals when the vendors' estimates were more than 10% above the MDOT estimates for hours and costs and/or changes occurred with MDOT's estimates.
  - Negotiated final contract terms for hours and costs based on its estimates.

Our random sample was selected to eliminate bias and enable us to project the results to the respective population.

- Gained an understanding of MDOT's Community of Learning process, which MDOT created to help educate, cultivate, and lead MDOT project managers to accomplish department goals in the most efficient and innovative ways.

## **CONCLUSIONS**

We base our conclusions on our audit efforts and any resulting material conditions\* or reportable conditions.

When selecting activities or programs for audit, we direct our efforts based on risk and opportunities to improve State government operations. Consequently, we prepare our performance audit reports on an exception basis.

## **AGENCY RESPONSES**

Our audit report contains 1 finding and 1 corresponding recommendation. MDOT's preliminary response indicated it agrees with the recommendation.

The agency preliminary response following the recommendation in our report was taken from the agency's written comments and oral discussion at the end of our fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100) require an audited agency to develop a plan to comply with the recommendations and to submit it to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

## **SUPPLEMENTAL INFORMATION**

Our audit report includes a flow chart of the contract administration process presented as supplemental information. Our audit was not directed toward expressing a conclusion on this information.

\* See glossary at end of report for definition.

## GLOSSARY OF ABBREVIATIONS AND TERMS

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AG	Department of Attorney General.
Brooks Act	The federal policy concerning the selection of firms and individuals to perform architectural, engineering, and related services for the federal government.
CA	Contract Administrator.
CFR	<i>Code of Federal Regulations.</i>
CSD	Contract Services Division.
CSRT	Contract Selection Review Team.
fixed fee	A dollar amount established to cover the consultant's profit and business expenses not allocable to overhead and to compensate any added risk due to scheduling or the complexity of the service. The maximum fixed fee will not exceed 11% of the total cost of labor plus overhead. Facilities cost of capital, other direct expenses, and subconsultant expenses are not included within the calculations.
independent cost estimate	MDOT's estimate indicating the estimated hours and dollar amount for a project.
internal control	The plan, policies, methods, and procedures adopted by management to meet its mission, goals, and objectives. Internal control includes the processes for planning, organizing, directing, and controlling program operations. It also includes the systems for measuring, reporting, and monitoring program performance. Internal control serves as a defense in safeguarding assets and in preventing and detecting errors; fraud; violations of laws, regulations, and provisions of contracts and grant agreements; or abuse.
material condition	A matter that, in the auditor's judgment, is more severe than a reportable condition and could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the judgment of an interested person concerning the effectiveness and efficiency of the program. Our assessment of materiality is in relation to the respective audit objective.

MDOT	Michigan Department of Transportation.
Office of Commission Audits (OCA)	The audit and investigative arm of the State Transportation Commission.
performance audit	An audit that provides findings or conclusions based on an evaluation of sufficient, appropriate evidence against criteria. Performance audits provide objective analysis to assist management and those charged with governance and oversight in using the information to improve program performance and operations, reduce costs, facilitate decision-making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.
priced proposal	The consultant's proposed cost and hours for the services.
project manager (PM)	The person responsible for leading a construction project from its inception to execution. This includes development and management of the project scope of work, overseeing the selection and contracting (as needed), developing and managing the project budget, providing oversight and direction for the execution of the project, managing the project schedule, reviewing and approving vendor invoices (as needed), management of consultant contracts (as needed), and managing and directing staff (including both internal and external) assigned to the completion of the project.
qualifications-based selection (QBS)	A procurement process for the competitive selection of services under which the most competent consultant or vendor is selected based on qualifications, such as knowledge, skill, experience, and other project-specific factors, rather than cost.
reportable condition	A matter that, in the auditor's judgment, is less severe than a material condition and falls within any of the following categories: a deficiency in internal control; noncompliance with provisions of laws, regulations, contracts, or grant agreements; opportunities to improve programs and operations; or fraud.
request for proposal (RFP)	A document intended to solicit proposals for services.
SAB	State Administration Board.
scope of services	All services, work activities, and actions required of the consultant by the obligations of the contract.
STC	State Transportation Commission.

SVES Service Vendor Evaluation System.

tier The type of RFP depending on a project's estimated cost. Tier I is for projects with anticipated costs between \$0 and \$250,000, tier II for projects between \$250,000 and \$1,500,00, and tier III for projects over \$1,500,000.







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