

CHAPTER 3.

MDT Transportation Contracts

Many components of the 2016 Disparity Study require MDT contract and subcontract data as building blocks for the analysis. When designing the availability research, for example, it is important to understand the geographic area from which MDT draws contractors and consultants and the types of work involved in MDT transportation contracts. Also, the utilization and disparity analyses in the 2016 Disparity Study are based on information from MDT prime contracts and subcontracts.

Before conducting other analyses, Keen Independent collected information for MDT and local agency transportation contracts for the October 2009 through September 2014 study period. Chapter 3 describes the study team’s process for compiling and merging these data. Chapter 3 consists of four parts:

- A. Overview of MDT transportation contracts;
- B. Collection and analysis of MDT contract data;
- C. Types of work involved in MDT contracts; and
- D. Location of businesses performing MDT work.

Appendix C provides additional detail concerning collection and analysis of contract data.

A. Overview of MDT Transportation Contracts

MDT uses FHWA and state funds to build and maintain highway transportation projects. The Disparity Study also includes highway-related contracts awarded by cities, counties, other local agencies and tribal entities using money passed through MDT.

- Construction projects include building new highway segments and interchanges, widening and resurfacing roads, and improving bridges. The largest construction contract in the study period was the \$24 million Two Medicine River Bridge project.
- Engineering-related work includes design and management of projects, planning and environmental studies, surveying and other transportation-related consulting services.

The 2016 Disparity Study focused on highway-related contracts using FHWA or state monies and did not include contracts using funds from the Federal Transit Administration (FTA) or Federal Aviation Administration (FAA). In total, the study team examined about \$2 billion in highway-related contract dollars over the study period.

Prime contracts, subcontracts, trucking and materials supply. A typical construction project includes a prime contractor and a number of subcontractors. Some subcontractors on MDT construction projects further contract out work to what is known as a “second-tier” or “lower-tier” subcontractor. Keen Independent examined MDT contract information for each level of subcontractor.

Trucking companies and materials suppliers are often involved in construction projects as well. MDT does not require its prime contractors to procure trucking services or materials supplies through subcontracts. As a result, MDT's data concerning subcontracts include only some of the trucking and materials supply companies involved in MDT contracts.

Many MDT projects have an engineering phase prior to construction that requires work performed by engineering companies and related firms. The engineering prime consultant retains the specialized subconsultants needed to complete these contracts. Keen Independent included engineering-related prime contracts and subcontracts in the study.

MDT sometimes contracts with engineering companies through on-call agreements. When specific work is needed, MDT issues task orders to those firms. Keen Independent included engineering task orders in this analysis.

For both construction and engineering contracts, Keen Independent separated the contract dollars going to subcontractors (and any identified trucking companies and suppliers) from the dollars retained by the prime contractor. Keen Independent calculated the total dollars retained by the prime contractor by subtracting subcontractor, trucker and supplier dollars from the total contract value. This step was important for both the availability analyses and the utilization analyses performed in the 2016 Disparity Study.

MDT contracts and Local Public Agency Program contracts. The 2016 Disparity Study includes MDT contracts and those for local agencies using funds MDT administered. Through MDT's Community Transportation Enhancement Program (CTEP), FHWA funds for transportation projects go to cities, counties, regional transportation commissions, other local agencies and tribal entities.

Contracts related to transportation construction and engineering. The study focused on transportation construction and engineering contracts and does not include acquisition of real property. The study team also excluded any contracts to not-for-profit entities or government agencies.

Regions. Based on MDT and industry input, Keen Independent divided the Montana contracting market into five regions corresponding to the five MDT districts (see Figure 3-1). The region for a contract corresponds to the physical location of the project, not the address of the contractor.

Keen Independent coded statewide assignments as "statewide." The study team also coded work without a physical location as "statewide."

Figure 3-1.
MDT districts



B. Collection and Analysis of Contract Data

As shown in Figure 3-2, Keen Independent collected contract data from multiple sources. Data for most MDT construction contracts came from MDT’s Site Manager system. The Purchasing Services Section provided data for maintenance-related construction projects. The Engineering Projects Section provided data for maintenance-related construction projects. Data for Engineering projects came from the Consultant Design CIS System. The Community Transportation Enhancement Program (CTEP) Oracle database contained data for local agency contracts. Data for DBE tracking came from DBE Suite, CRLMS (Civil Rights and Labor Management System) and Site Manager.

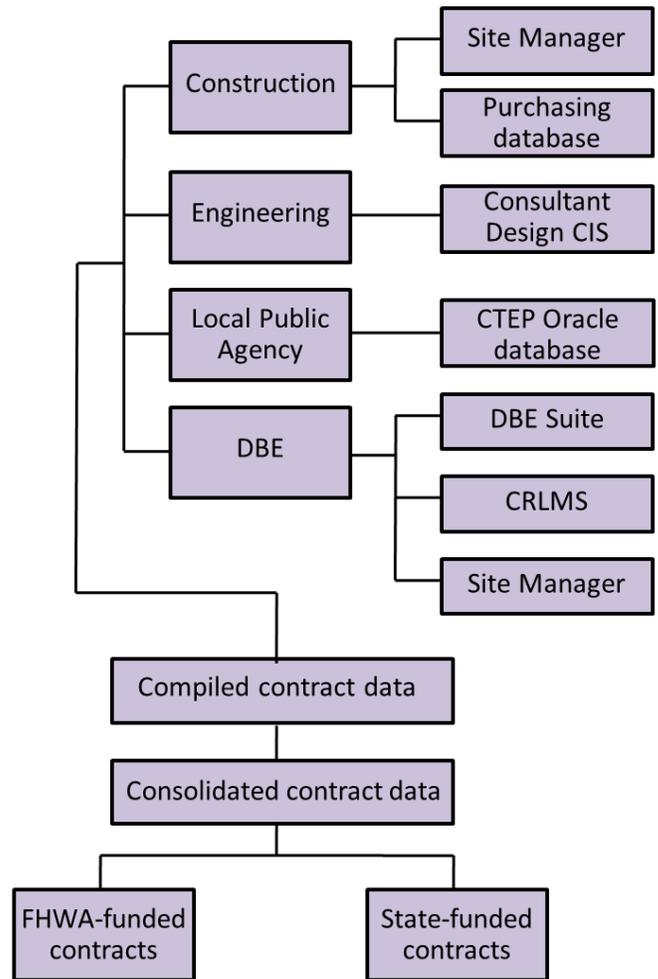
MDT contract records provided information about award date, dollars, location (district), general description of the work, whether or not the contract was FHWA- or state-funded, and whether DBE contract goals applied. Keen Independent used consistent methods to collect information on FHWA- and state-funded contracts.

Keen Independent merged contracts from different sources into one database, which the study team reviewed for duplicate records and then separated by funding source.

Study period. Keen Independent examined contracts awarded from October 2009 through September 2014. The end date of the study period corresponded to the most recently completed federal fiscal year at the time when the study team began collecting contract data. The study team also collected data for task orders executed from October 2009 through September 2014 on engineering-related contracts awarded before 2009.

Contact totals based on actual or expected payments. Keen Independent obtained dollar values for prime contracts, subcontracts, trucking services and materials suppliers from MDT records. To the extent possible, the dollar amounts used correspond to the total dollars paid or expected to be paid to the firm for services on that contract or subcontract.¹

Figure 3-2.
Collection of contract data



¹ For example, Keen Independent examined the *total* value of the contract and related subcontracts for a May 2012 contract, not what was paid on that contract before the September 2014 study period end date. For certain completed contracts and task orders, the study team used payment amounts to determine contract value.

When there was any amount of FHWA-funding expected for a contract, MDT typically treated that contract as FHWA-funded. “State-funded” contracts are those with no FHWA funding. CTEP projects receive funding from multiple sources, including federal, state and local sources. CTEP contracts are considered federally-funded in this analysis.

Data sources for local agency contracts. MDT maintains some information about local agency projects funded through CTEP, but does not obtain complete data about the subcontractors working on those projects. Keen Independent is following up with certain local agencies concerning the largest of these contracts to determine if additional subcontract data can be collected.

Limitations concerning contract data. As discussed in Appendix C, MDT contracting rules do not require prime contractors to formally subcontract for supplies and trucking; therefore, subcontracting data for supplies and trucking is limited. Also, the information for CTEP contracts included in this Disparity Study was not as comprehensive as for MDT contracts.

At this time, these data limitations do not appear to have a meaningful effect on overall study results because they relate to a relatively small portion of overall state DOT contracting dollars.

C. Types of Work Involved in MDT Contracts

Keen Independent examined 6,584 transportation-related contracts, task orders and subcontracts totaling about \$2 billion over the October 2009 through September 2014 study period. Figure 3-3 presents the number and dollar value of FHWA- and state-funded contracts.

Figure 3-3.
Number and dollars of MDT and CTEP Program transportation contracts, October 2009 through September 2014

	MDT	CTEP	Total
Number of contracts			
FHWA-funded	4,603	1,540	6,143
State-funded	<u>441</u>	<u>0</u>	<u>441</u>
Total	5,044	1540	6,584
Dollars (millions)			
FHWA-funded	\$ 1,856	\$ 44	\$ 1,900
State-funded	<u>119</u>	<u>0</u>	<u>119</u>
Total	\$ 1,975	\$ 44	\$ 2,019

Note: Numbers may not add due to rounding.
Source: Keen Independent from MDT contract data.

The study team coded types of work involved in each prime contract and subcontract based upon data in MDT contract records and, as a supplement, information about the primary line of business of the firm performing the work. Keen Independent developed the work types based in part on the coding systems used by MDT as well as Dun & Bradstreet's 8-digit classification codes.

Contract dollars by type of work for FHWA- and state-funded contracts. Figure 3-4 presents information about dollars for 35 different types of prime contract and subcontract work. Dollars for prime contracts are based on the contract dollars retained (i.e., not subcontracted out) by the prime contractor or prime consultant.

Figure 3-4.
Dollars of MDT and CTEP Program FHWA- and state-funded prime contracts and subcontracts by type of work, October 2009 through September 2014

Type of work	FHWA-funded		State-funded		Combined	
	Dollars (1000s)	Percent	Dollars (1000s)	Percent	Dollars (1000s)	Percent
General road construction and widening	\$ 645,579	34.0 %	\$ 8,517	7.2 %	\$ 654,096	32.4 %
Asphalt and concrete paving, including overlays	263,371	13.9	2,412	2.0	265,783	13.2
Pavement surface treatment (such as sealing)	80,021	4.2	82,946	69.9	162,967	8.1
Bridge and elevated highway construction	147,104	7.7	4,942	4.2	152,046	7.5
Engineering	138,603	7.3	546	0.5	139,149	6.9
Excavation, site prep, grading and drainage	121,950	6.4	1,596	1.3	123,546	6.1
Temporary traffic control	88,033	4.6	2,654	2.2	90,688	4.5
Other concrete work	69,755	3.7	571	0.5	70,326	3.5
Striping or pavement marking	54,045	2.8	567	0.5	54,612	2.7
Installation of guardrails, fencing or signs	47,005	2.5	6,405	5.4	53,410	2.6
Asphalt, concrete or other paving materials	27,607	1.5	1,674	1.4	29,281	1.5
Building construction related	25,972	1.4	69	0.1	26,041	1.3
Landscaping and related work including erosion control	25,545	1.3	485	0.4	26,030	1.3
Electrical work including lighting and signals	21,837	1.1	939	0.8	22,777	1.1
Transportation planning	15,568	0.8	38	0.0	15,606	0.8
Multi-use paths	13,372	0.7	2,087	1.8	15,460	0.8
Concrete flatwork (including sidewalk, curb and gutter)	14,802	0.8	402	0.3	15,204	0.8
Environmental consulting	14,629	0.8	0	0.0	14,629	0.7
Concrete cutting	11,969	0.6	20	0.0	11,989	0.6
Mapping and surveying	10,391	0.5	25	0.0	10,416	0.5
Aggregate materials supply	9,396	0.5	510	0.4	9,907	0.5
Drilling and foundations	8,924	0.5	7	0.0	8,931	0.4
Inspection and testing	6,482	0.3	6	0.0	6,488	0.3
Geotechnical engineering and consulting	5,585	0.3	9	0.0	5,595	0.3
Structural steel work	5,189	0.3	300	0.3	5,488	0.3
Trucking and hauling	5,031	0.3	104	0.1	5,136	0.3
Pavement milling	3,710	0.2	564	0.5	4,274	0.2
Underground utilities	3,907	0.2	106	0.1	4,013	0.2
Construction management	3,498	0.2	0	0.0	3,498	0.2
Cultural resource consulting	1,826	0.1	0	0.0	1,826	0.1
Wrecking and demolition	1,795	0.1	11	0.0	1,806	0.1
Other professional services and consulting	3,517	0.2	0	0.0	3,517	0.2
Other construction	3,160	0.2	231	0.2	3,391	0.2
Other construction materials	845	0.0	0	0.0	845	0.0
Other services	<u>272</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>	<u>272</u>	<u>0.0</u>
Total	\$1,900,295	100.0 %	\$ 118,745	100.0 %	\$ 2,019,040	100.0 %

Note: Numbers may not add due to rounding.

Source: Keen Independent from MDT contract data.

When prime contracts and subcontracts pertain to multiple types of work, Keen Independent coded the entire work element based on what appeared to be the predominant type of work in the prime contract or subcontract. For example, if a subcontract included fencing and landscaping, and it appeared that the work was predominantly fencing, the entire subcontract was coded as fencing.²

Similarly, an individual prime contract or subcontract was sometimes for a broad range of road construction activities. When a more specialized activity could not be identified as the primary area of work, these contracts were classified as general road construction and widening.

As shown in Figure 3-4, the largest five categories of work account for about two-thirds of total FHWA- and state-funded transportation contract dollars.

- Prime contracts and subcontracts for general road construction and widening accounted for about \$654 million of the FHWA- and state-funded contract dollars examined, including prime contracts and subcontracts. This work area accounted for 32 percent of the contract dollars examined.
- Asphalt and concrete paving accounted for nearly \$266 million of MDT prime contracts and subcontracts. (Note that a prime contract or subcontract coded as general road construction and widening work could include asphalt paving, but was entirely coded as road construction because it appeared to include a broad set of work types, or the description of the work was not specific to asphalt paving.)
- Pavement surface treatment accounted for about \$163 million of prime contracts and subcontracts.
- Bridge and elevated highway construction accounted for about \$152 million of prime contracts and subcontracts.
- Engineering accounted for \$139 million of FHWA- and state-funded prime contracts and subcontracts. (Note that when contracts for design engineering included subcontracts for other types of work, these subcontracts were subtracted from the total for engineering.)

Types of work that did not fit into the specific categories listed in Figure 3-4 were included in “other professional services and consulting,” “other construction,” “other construction materials” or “other services” as appropriate. Together, these four “other” categories comprised less than 0.5 percent of FHWA- and state-funded contract dollars in the MDT contract data, as shown in Figure 3-4.

One additional type of work — building construction — was also unlike other highway-related work areas as it pertained to a broad range of vertical construction such as rest area building construction and scale site rehabilitation. In total, building construction accounted for 1.3 percent of total contract dollars.

² Data concerning subcontract awards or payments were for the entire subcontract, not individual work elements.

One of the reasons to examine types of work involved in MDT highway-related contracts is to establish the proper focus of the availability analysis, including the subindustries of interest and the types of questions to be asked. Adding building construction to the 0.5 percent of dollars in the “other work” categories discussed above, the types of work not included as a focus of the availability analysis represented less than 2 percent of FHWA- and state-funded transportation contract dollars. In other words, the study team’s analysis of availability was based on types of work accounting for 98 percent of transportation contract dollars, a very high share of total dollars.

D. Location of Businesses Performing MDT Work

In this study, analyses of local marketplace conditions and the availability of firms to perform contracts and subcontracts focus on the “relevant geographic market area” for MDT contracting. The relevant geographic market area was determined through the following steps.

For each prime contractor and subcontractor, Keen Independent determined whether the company had a business establishment in Montana based upon MDT vendor records and additional research. Keen Independent then added the dollars for firms with Montana locations and compared the total with that for companies with no establishments within the state.

Firms with locations in Montana obtained 88 percent of total contract dollars during the study period, as shown in Figure 3-5 below. Keen Independent selected Montana as the relevant geographic market area for the study. Therefore, Keen Independent’s availability analysis examined firms with locations in Montana. The quantitative and qualitative analyses of marketplace conditions in Chapter 4 also focus on Montana.

Figure 3-5.
Dollars of MDT and CTEP prime contracts and subcontracts going to firms with and without Montana locations, October 2009 through September 2014

	Montana	Out of state	Total
Dollars (millions)			
FHWA-funded	\$ 1,667	\$ 234	\$ 1,900
State-funded	117	1	119
Total	\$ 1,784	\$ 235	\$ 2,019
Percent			
FHWA-funded	88 %	12 %	100 %
State-funded	99 %	1 %	100 %
Total	88 %	12 %	100 %

Note: Numbers may not add due to rounding.
Source: Keen Independent from MDT contract data.