

OREGON DEPARTMENT OF TRANSPORTATION 2019 DBE DISPARITY STUDY UPDATE



Final Report
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EXECUTIVE SUMMARY.

2019 DBE Disparity Study Update

Keen Independent Research LLC

The Oregon Department of Transportation operates the Federal Disadvantaged Business Enterprise (DBE) Program to assist disadvantaged business enterprises on contracts that use U.S. Department of Transportation (USDOT) funds. ODOT must set overall goals for participation of DBEs in those contracts, including a goal for contracts using Federal Highway Administration (FHWA) funds. An overall DBE goal expresses the percentage of contract dollars ODOT might expect to go to DBEs if there were a level playing field for those companies when competing for that work.

In federal fiscal years 2017, 2018 and 2019, ODOT had an overall DBE goal of 11.60 percent for FHWA-funded contracts. ODOT's new three-year overall DBE goal for FHWA-funded contracts will go into effect on October 1, 2019. This Disparity Study Update provides ODOT information to set this new overall DBE goal.

Keen Independent Research (Keen Independent) performed the 2019 Disparity Study Update as well as the 2016 Disparity Study for ODOT. Keen Independent worked with ODOT staff throughout the study. ODOT also formed an External Stakeholder Group, which was involved in meetings with Keen Independent during the project. The four chapters and supporting appendices in the full report document Keen Independent's data collection and analysis.

Development of the Overall DBE Goal for FFY 2020 through FFY 2022

Regulations in 49 CFR Part 26 and other USDOT guidance direct how an agency sets its overall DBE goal.¹ The process includes two steps: (1) developing a "base figure," and (2) considering "step 2" adjustments.

The availability analysis calculates the percentage of dollars in FHWA-funded contracts that might be expected to go to DBEs if there were a level playing field for firms to obtain these prime contracts and subcontracts. To project future DBE participation, Keen Independent examined DBE availability for FHWA-funded prime contracts and subcontracts in recent years.

Data collection and analysis. Keen Independent's approach to examining DBE availability in the 2019 Availability Disparity Study Update followed the same approach as the 2016 Disparity Study:

- The study team collected data on ODOT's past FHWA-funded contracts, including subcontracts. The 2019 Study examined awarded from October 2014 through September 2017.

¹ Most firms certified as DBEs are minority- or women-owned firms. White male-owned firms and other ethnicities not listed above can also meet the federal certification requirements and be certified as DBEs if they demonstrate they are both socially and economically disadvantaged, as described in 49 CFR Part 26.67 (d).

- Keen Independent determined that the state of Oregon as well as two counties in Southwest Washington (Clark and Skamania counties) was the relevant geographic market area for ODOT transportation contracts (consistent with the 2016 Study).
- The study team identified 36 specific types of work performed on ODOT transportation contracts that accounted for more than 90 percent of ODOT's prime contract and subcontract dollars (consistent with the 2016 Study).
- In late 2018, Keen Independent surveyed thousands of companies in Oregon and Southwest Washington to identify businesses available for different types, sizes and locations of ODOT prime contracts and subcontracts. About 27 percent of available businesses were minority- or women-owned (consistent with the 2016 Study).

Combined, current and potential DBEs accounted for 22 percent of firms in the availability database. (MBE/WBEs that have graduated from the Program, had certification applications denied, or are too large to be certified were not counted as potential DBEs.)

- Based on data on available firms, Keen Independent calculated the total number of firms and the total number of DBEs available for each prime contract and subcontract from October 2014 through September 2017.
- Keen Independent then dollar-weighted results of each of the availability analyses for individual contracts to determine overall DBE availability for FHWA-funded contracts.

Calculation of the dollars of DBE participation expected for October 2014 through September 2017 contracts assuming a level playing field. For each prime contract and subcontract, Keen Independent calculated:

- (a) Number of DBEs available for that type, size and location of work;
- (b) Total number of firms available for that work; and
- (c) Percentage DBE availability for that prime contract or subcontract, calculated by dividing (a) by (b).

From this contract-by-contract analysis, the study team had availability estimates for more than 4,100 prime contracts and subcontracts for October 2014 through September 2017. Keen Independent then dollar-weighted the percentage DBE availability results for each prime contract and subcontract to develop the overall availability figure.

This analysis produced estimates of the percentage of ODOT contract dollars that might be expected to go to DBEs if there had been a level playing field for firms available for ODOT contracts.

Availability results. Establishing a “base figure” is the first step in calculating an overall goal for DBE participation. The above research and analysis produced a base figure of 15.37 percent DBE availability for FHWA-funded contracts. This figure includes current and potential DBEs.

Potential step 2 adjustments. Per the Federal DBE Program, ODOT must consider potential step 2 adjustments to its base figures when it determines its overall annual DBE goal for FHWA-funded contracts. The factors are:

1. Current capacity of DBEs to perform work, as measured by the volume of work DBEs have performed in recent years;
2. Information related to employment, self-employment, education, training and unions;
3. Any disparities in the ability of DBEs to get financing, bonding and insurance; and
4. Other relevant factors.²

ODOT should review the information presented in the full reports for the 2016 Disparity Study and the 2019 Disparity Study Update when considering whether to make an upward or downward adjustment. Some possibilities are provided below.

Potential downward step 2 adjustment. USDOT’s “Tips for Goal-Setting” states that agencies should examine data on past DBE participation on their USDOT-funded contracts in recent years (i.e., the percentage of contract dollars going to DBEs). USDOT suggests that such data indicate current capacity of DBEs to perform work.

The median DBE participation ODOT reported to FHWA for fiscal years 2016, 2017 and 2018 was 9.39 percent (the participation in FFY 2017). USDOT “Tips for Goal-Setting” suggests taking one-half of the difference between the base figure and the measure of current capacity to calculate the step 2 adjustment for that factor. One-half of difference between the 15.37 percent base figure and the 10.44 percent median past participation is 2.99 percentage points.³ Subtracting that amount from 15.37 percent produces a proposed goal of 12.38 percent.⁴

Potential upward step 2 adjustment. Keen Independent’s analyses in the 2016 Disparity Study indicate that, but for discrimination, availability of minority- and women-owned firms would be higher in the Oregon construction and engineering industries.

Keen Independent was able to quantify the effects of barriers in business ownership on DBE availability, as explained in Chapter 4 of the Disparity Study Update. If minorities and women owned businesses at the same rate as non-minorities and white men, Keen Independent estimated that DBE availability might be 4.55 percentage points higher than the base figure, or 19.92 percent.⁵

Portion of the Overall DBE Goals to be Met through Neutral Measures

When developing an overall DBE goal, agencies such as ODOT must also project the portion of that goal they expect to meet through (a) race- and gender-neutral means, and (b) race- and gender-conscious programs (if any).

² 49 CFR Section 26.45.

³ $15.37\% - 9.39\% = 5.98\%$ and $5.98\% \div 2 = 2.99\%$ rounded.

⁴ $15.37\% - 2.99\% = 12.38\%$.

⁵ $15.37\% + 4.55\% = 19.92\%$.

Race- and gender-neutral measures are initiatives that encourage the participation of all businesses, or all small businesses, and are not specifically limited to minority- or women-owned firms or DBEs. Agencies must determine whether they can meet their overall DBE goal solely through neutral means or whether race- and gender-conscious measures — such as DBE contract goals — are also needed.

Summary of Results

Figure ES-1 on the following page provides information to ODOT as it considers (1) its overall DBE goal for FHWA-funded contracts and (2) its projection of the portion of its overall DBE goal to be achieved through neutral means.

1. Selection of overall DBE goal for FFY 2020 through FFY 2022. Figure ES-1 displays three options for overall DBE goals for ODOT's FHWA-funded contracts for the next three fiscal years. For example, if ODOT decided to use a DBE goal after making a downward step 2 adjustment, it would have an overall goal of 12.38 percent, slightly above its current overall goal of 11.60 percent.

2a. Should ODOT project that it can meet all of its overall DBE goal through neutral means?

ODOT must consider whether it can achieve 100 percent of its overall DBE goal through neutral means or whether race-conscious programs are needed. Such a determination depends in part on the level of the overall DBE goal. If ODOT's overall DBE goal for FHWA-funded contracts is 12.38 percent or higher, information in the 2016 Disparity Study and the 2019 Disparity Study Update indicates that ODOT might not meet its DBE goal solely through neutral means.

ODOT should consider all the information in the Disparity Study Update, the 2016 Disparity Study and other sources when reaching its decision on any future use of race- and gender-conscious programs (such as DBE contract goals).

2b. If ODOT uses a combination of neutral means and DBE contract goals, how much of the overall DBE goal can ODOT project to be met through neutral means? The race-neutral portion of ODOT's annual DBE participation for FHWA-funded contracts varied from 2.86 percent to 5.41 percent for FFY 2016 through FFY 2018. The median-year neutral participation for these three years was 4.73 percent (from ODOT's Uniform Report for FFY 2017). A projection of neutral participation in this range is supported by other information in the 2019 Disparity Study Update and the 2016 Disparity Study.

- If ODOT projected 4.73 percent race-neutral participation on FHWA-funded contracts for FFY 2020 through FFY 2022, it would need to achieve 7.65 percentage points of a 12.38 percent overall DBE goal through race- and possibly gender-conscious means ($12.38\% - 4.73\% = 7.65\%$).
- If the overall DBE goal were higher than 12.38 percent, ODOT might need to project a larger portion of the goal to be met through race- and gender-conscious means, as demonstrated in Figure ES-1.

For purposes of comparison, the left-hand column of Figure ES-1 shows ODOT’s overall DBE goal and neutral projection for FFY 2017 through FFY 2019. The three columns to the right in Figure ES-1 present neutral and race-conscious projections for three examples of the different levels of overall DBE goals that ODOT might select for FFY 2020 through FFY 2022. In each column, the neutral projection (row 2) is subtracted from the overall DBE goal (row 1) to derive the race-conscious projection (row 3).

Figure ES-1.

Current and potential new ODOT overall DBE goal and projections of race-neutral for FHWA-funded contracts FFY 2020 – FFY 2022

Component of overall DBE goal	FFY 2017- FFY 2019	FFY 2020 - FFY 2022		
		Downward adjustment	Base figure	Upward adjustment
Overall goal	11.60 %	12.38 %	15.37 %	19.92 %
Neutral projection	- 5.08	- 4.73	- 4.73	- 4.73
Race-conscious projection	6.52 %	7.65 %	10.64 %	15.19 %

Source: Keen Independent Research.

CHAPTER 1.

Introduction

The federal government requires state and local governments to operate the Federal Disadvantaged Business Enterprise (DBE) Program if they receive U.S. Department of Transportation (USDOT) funds for transportation projects. The Oregon Department of Transportation (ODOT) has operated some version of the Federal DBE Program for many years.

ODOT must set a separate overall goal for participation of DBEs for Federal Highway Administration (FHWA) every three years. At the time of this report, ODOT's FHWA DBE overall goal was 11.60 percent, with 5.08 percentage points of that goal projected to be achieved through neutral efforts. ODOT established this overall goal, in part, from the 2016 Disparity Study that Keen Independent Research (Keen Independent) conducted for ODOT.¹

DBE participation was more than 12 percent in FFY 2017, which exceeded ODOT's overall goal. Almost 5 percentage points of the DBE participation in that year was achieved through neutral efforts. DBE participation fell short of ODOT's overall DBE goal in FFY 2016 and FFY 2018.

A new three-year goal for ODOT's FHWA-funded contracts must be in place starting October 1, 2019. ODOT retained Keen Independent to analyze the availability of current and potential DBEs to perform work related to ODOT's FHWA-funded contracts. This study compiled and analyzed:

- Information about firms available to perform transportation-related work that Keen Independent collected in late 2018; and
- Prime contracts and subcontracts involved ODOT's FHWA-funded contracts from October 2014 through September 2017. These contracts are representative of the FHWA-funded contracts ODOT might award during FFY 2020 through FFY 2022.

ODOT can use information from the 2019 Disparity Study Update to set its future overall DBE goals for FHWA-funded contracts.

The balance of Chapter 1:

- A. Introduces the study team;
- B. Provides background on the Federal DBE Program; and
- C. Outlines the analyses and describes where results appear in the report.

A. Study Team

David Keen, Principal of Keen Independent, directed this study as well as the 2016 Disparity Study. He has conducted similar studies for more than 100 public agencies throughout the country,

¹ The website <https://www.oregon.gov/ODOT/Business/OCR/Pages/Disadvantaged-Business-Enterprise.aspx> provides ODOT's overall DBE goals.

including 12 state transportation departments. As a subconsultant to Keen Independent, Customer Research International (CRI) performed telephone and online surveys with businesses potentially available for ODOT contracts.

Keen Independent worked with ODOT staff throughout the study. ODOT also formed an External Stakeholder Group, which was involved in three meetings with Keen Independent over the project.

B. Federal DBE Program

ODOT has operated some version of a Federal DBE Program since the 1980s. After enactment of the Transportation Equity Act for the 21st Century (TEA-21) in 1998, USDOT established a new Federal DBE Program to be operated by state and local agencies receiving USDOT funds.

Federal regulations in 49 CFR Part 26 direct how state and local governments must operate the Federal DBE Program.² If necessary, under the federal regulations, the Program allows state and local agencies to use DBE contract goals, which ODOT currently sets on certain FHWA-funded contracts. When awarding those contracts, ODOT considers whether or not a bidder or proposer meets the DBE goal set for the contract or shows good faith efforts to do so.

The Federal DBE Program also applies to cities, towns, counties, transportation authorities, tribal governments and other jurisdictions that receive USDOT funds as a subrecipient of ODOT. When agencies such as TriMet and the Port of Portland directly receive USDOT funds, they are responsible for determining overall DBE goals and how they will implement the Federal DBE Program.

The 2019 Disparity Study Update is limited to ODOT's overall DBE goal for FHWA-funded contracts. It did not consider contracts using other USDOT funds.

Key Program elements. Components of the Federal DBE Program include the following.

Setting an overall goal for DBE participation. ODOT must develop an overall annual goal for DBE participation in its USDOT-funded contracts every three years. The Federal DBE Program sets forth the steps an agency must follow in establishing its goal, including development of a “base figure” and consideration of possible “step 2” adjustments to the goal.³

ODOT's overall goal for DBE participation is aspirational. Failure to meet an annual DBE goal does not automatically cause any USDOT penalties unless an agency fails to administer the DBE Program in good faith. However, if ODOT does not meet its overall DBE goal, federal regulations require it to analyze the reasons for any shortfall and develop a corrective action plan to meet the goal in the next fiscal year.⁴

Establishing the portion of the overall DBE goal to be met through neutral means. Regulations governing operation of the Federal DBE Program allow for state and local governments to operate the program without the use or with limited use of race- or gender-based measures such as DBE contract goals. According to program regulations 49 CFR Section 26.51, a state or local agency must

² 49 CFR Part 26 http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title49/49cfr26_main_02.tpl.

³ 49 CFR Section 26.45.

⁴ 49 CFR Section 26.47.

meet the maximum feasible portion of its overall goal for DBE participation through “race-neutral means.” Race-neutral program measures include removing barriers to participation of firms in general or promoting use of small or emerging businesses (see 49 CFR Section 26.51(b) for more examples of race-neutral program measures). If an agency can meet its goal solely through race-neutral means, it must not use race-conscious program elements. For example, a state DOT operating a 100 percent race- and gender-neutral program would not apply DBE contract goals.

The Federal DBE Program requires that an agency project the portion of its overall DBE goal that it will meet through neutral measures and the portion, if any, to be met through race-conscious measures such as DBE contract goals. USDOT has outlined a number of factors for an agency to consider when making that determination.⁵

Many state DOTs project that they will meet their overall DBE goal through a combination of race-neutral and race-conscious measures. Some state DOTs have operated the Program solely through neutral measures and without use of DBE contract goals. These agencies project that 100 percent of their overall DBE goal will be met through neutral means.

The 2019 Disparity Study Update provides ODOT information to consider when making these projections for its FHWA-funded contracts.

Determining whether all racial/ethnic/gender groups will be eligible for race- or gender-conscious elements of the Federal DBE Program. To be certified as a DBE, the firm’s owner must be both socially and economically disadvantaged. Under the Federal DBE Program, the following racial, ethnic and gender groups can be presumed to be socially disadvantaged:

- Black Americans (or “African Americans” in this study);
- Hispanic Americans;
- Native Americans;
- Asian-Pacific Americans;
- Subcontinent Asian Americans; and
- Women of any race or ethnicity.

To be economically disadvantaged, a company must be below an overall revenue limit and an industry-specific limit, and its firm owner(s) must be below personal net worth limits.⁶ White male-owned firms and other ethnicities not listed above can also meet the federal certification requirements and be certified as DBEs if they demonstrate that they are both socially and economically disadvantaged, as described in 49 CFR Part 26.67(d).

⁵ See Chapter 4 of this report for an in-depth discussion of these factors.

⁶ 49 CFR 26 Subpart D provides certification requirements. There is a gross receipts limit (currently not more than a \$23.98 million annual three-year average revenue, and lower limits for certain lines of business) and a personal net worth limit (currently \$1.32 million excluding equity in the business and primary personal residence) that firms and firm owners must fall below to be able to be certified as a DBE. Under 49 CFR Section 26.67(b), a certifying agency may consider other factors to determine if an individual is able to accumulate substantial wealth, in which certification is denied (annual gross income of the owner and whether the fair market value of the owner’s assets exceed \$6 million are two such factors that may be considered).

C. Analyses Performed in the 2019 Disparity Study Report and Location of Results

Figure 1-1 below outlines the chapters in the 2019 Disparity Study Update report.

Figure 1-1. Chapters in 2019 Disparity Study Update report

Chapter	Description of 2019 Disparity Study Update report chapters
ES. Executive Summary	Brief summary of study results
1. Introduction	Study purpose, study team and overview of analyses
2. ODOT Transportation Contracts	How the study team collected ODOT contract data and defined the geographic area and transportation contracting industry
3. Availability Analysis	Methodology and results regarding availability of minority- and women-owned firms and other businesses for ODOT contracts and subcontracts
4. Overall Annual DBE Goal	Information to review when setting a three-year overall DBE goal, including consideration of a “step 2 adjustment”

Definition of terms. Appendix A provides explanations of acronyms and definitions of key terms used in the study.

Collection of prime contract and subcontract information for past USDOT- and state-funded contracts. The study team collected information about FHWA-funded contracts awarded by ODOT or by local public agencies from October 1, 2014 through September 30, 2017. Chapter 2 outlines the data collection process and describes these contracts. Appendix B provides further documentation.

Availability analysis, including base figure for overall DBE goal. Keen Independent’s availability analysis in Chapter 3 provides information related to the “base figure” for ODOT’s overall DBE goal for FHWA-funded contracts.

Potential adjustments to the overall DBE goal and projections of how much can be met through neutral means. Chapter 4 analyzes potential adjustments that ODOT should consider before establishing an overall goal for DBE participation in its FHWA-funded contracts for FFY 2020 through FFY 2022.

CHAPTER 2.

ODOT Transportation Contracts

The 2019 Disparity Study Update uses ODOT's FHWA-funded prime contracts and subcontracts awarded from October 2014 through September 2017 as building blocks for the availability analysis.

- When designing the availability research, for example, it is important to understand the geographic area from which ODOT draws contractors and consultants and the types of work involved in ODOT and local agency transportation contracts.
- In addition, Keen Independent analyzed overall DBE availability by comparing the number of DBEs to all businesses available for individual ODOT prime contracts and subcontracts and then dollar-weighting the results. Because the FHWA-funded contracts for the three-year study period are representative of ODOT's future FHWA-funded contracts, the study team used them for the contract-by-contract availability analysis.

Chapter 2 describes the contract data collection process and summarizes the types of locations of these contracts:

- A. Overview of FHWA-funded transportation contracts and data collection methods;
- B. Types of work involved in ODOT contracts; and
- C. Location of businesses performing ODOT work.

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

A. ODOT's FHWA-funded Transportation Contracts and Data Collection Methods

ODOT uses FHWA funds to build and maintain transportation projects. The 2019 Disparity Study Update also includes contracts awarded by cities, counties, other local agencies and tribal entities using FHWA funds passed through ODOT.

- Construction projects include building new highway segments and interchanges, widening and resurfacing roads, and building and improving bridges.
- Engineering-related work includes design and management of projects, planning and environmental studies, surveying and other transportation-related consulting services.

The 2019 Disparity Study Update focuses on highway-related contracts using FHWA monies and does not include contracts using funds from the Federal Transit Administration (FTA), Federal Aviation Administration (FAA) or National Highway Transportation Safety Administration (NHTSA). It also does not examine state-funded contracts. In total, the study team examined about \$1.3 billion in highway-related contract dollars over the study period.

A single ODOT project can involve many types of businesses, as described below.

Prime contracts, subcontracts, trucking and materials supply. A typical construction project includes a prime contractor and multiple subcontractors. Trucking companies and materials suppliers are often involved in construction projects as well. Some subcontractors on ODOT construction projects further contract out work to what is known as a “second-tier” or “lower-tier” subcontractor. Keen Independent examined ODOT contract information for each level of subcontractor. Many ODOT projects have an engineering phase prior to construction that requires work performed by engineering companies and related firms. Keen Independent included engineering contracts in this analysis.

For both construction and engineering contracts, Keen Independent separated the contract dollars going to subcontractors (and truckers and suppliers) from the dollars retained by the prime contractor. Keen Independent calculated the total dollars going to 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 Disparity Study Update.

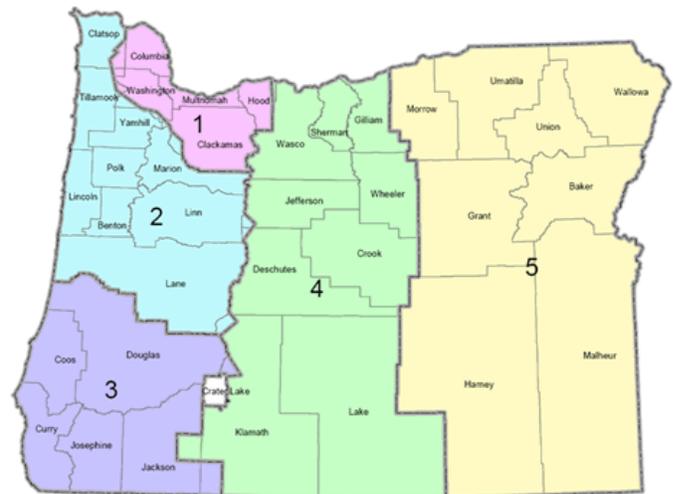
ODOT and local agency contracts. The 2019 Disparity Study Update includes ODOT contracts and those for local agencies that use ODOT-administered funds. Through ODOT’s Statewide Programs Unit and the local agency Certification Program, FHWA funds for transportation projects go to cities, counties, regional transportation commissions, other local agencies and tribal entities.

Transportation-related contracts. The study focused on transportation construction and engineering contracts. The study team excluded any contracts to not-for-profit entities or government agencies.

Regions. Keen Independent examined geographic location of contracts based on the five ODOT regions shown in Figure 2-1. The region for a contract corresponds to the physical location of the project, not the address of the contractor.

Keen Independent coded statewide assignments and work done in multiple locations as “statewide.” The study team first used these regions for the availability analysis in the 2016 Disparity Study based on ODOT and industry input.

Figure 2-1.
Study regions



B. Collection and Analysis of ODOT Contract Data

As shown in Figure 2-2, Keen Independent collected data on ODOT's FHWA-funded construction and engineering contracts. Data for engineering-related contracts came from ODOT's Purchasing and Contract Management System (PCMS). Certain data on firms receiving ODOT work were also collected from the ODOT Office of Civil Rights databases. Contracts for local agencies awarded with funds administered through the Certification Program Office, Statewide Program Unit were included in ODOT's construction contract database.

ODOT contract records provided information about award date, dollars, location (region), general description of the work, whether or not the contract was FHWA- or state-funded, and whether DBE contract goals applied.

Study period. Keen Independent examined contracts awarded from October 1, 2014 through September 30, 2017.

- **Study period start date.** Because the 2016 Disparity Study examined contracts through September 30, 2014, the study period for the 2019 Disparity Study Update began with contracts awarded in October 2014.
- **Study period end date.** Since Keen Independent began compiling contract data in 2018, it was appropriate to choose the close of the previous federal fiscal year (September 30, 2017) as the study period end date.

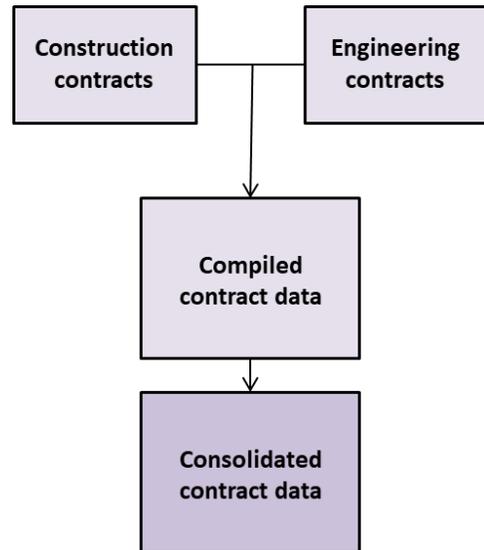
Awarded amount versus payment amounts. In most cases, Keen Independent collected and analyzed data on awarded amounts for each contract. In the 2016 Disparity Study, the study team compared contract award amounts to payment amounts on contracts completed during the study period. The overall difference between awarded and paid amounts was minimal.

Definition of FHWA-funded contracts. When there was any amount of FHWA-funding expected for a contract, ODOT treated that contract as FHWA-funded.

Data sources for local agency contracts. ODOT maintains information about certified local agency projects funded through the ODOT Certified Program Office, Statewide Program Unit.

Limitations concerning contract data. As discussed in Appendix B, ODOT consistently collects data for contracts and subcontracts. However, prime contractors do not always use subcontracts to procure certain services such as trucking or to acquire supplies. For these types of work, much of the information in the ODOT data is for DBEs used to meet a contract goal. Keen Independent treated these trucking and supplier procurements by the prime contractor as "subcontracts" in the utilization analyses.

Figure 2-2.
Collection of ODOT contract data



C. Types of Work Involved in ODOT Contracts

Keen Independent included 830 FHWA-funded transportation-related contracts totaling \$1.3 billion over the October 2014 through September 2017 study period. There were 3,295 subcontracts identified for these contracts.

Figure 2-3 presents the number and dollar value of contracts in FHWA-funded contracts.

Figure 2-3.
Number and dollars of ODOT and local agency FHWA-funded transportation contracts and subcontracts, October 2014–September 2017

	ODOT	Local agency	Total
Number of contracts			
Prime contracts	744	86	830
Subcontracts	2,418	877	3,295
Total	3,162	963	4,125
Dollars (millions)			
Prime contracts	\$ 707	\$ 181	\$ 888
Subcontracts	291	138	428
Total	\$ 998	\$ 318	\$ 1,317

Note: Numbers may not add due to rounding.

Source: Keen Independent from ODOT contract data.

The study team coded types of work involved in each prime contract and subcontract based upon data in ODOT 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 work type descriptions used by ODOT as well as Dun & Bradstreet, the leading commercial provider of business information in the United States.

Contract dollars by type of work for FHWA- and state-funded contracts. Figure 2-4 on the following page presents information about contract dollars for 36 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.

When prime contracts and subcontracts pertained 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 contract or subcontract. Similarly, 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 or bridge and elevated highway construction, as appropriate.

Figure 2-4.
 ODOT and local agency FHWA-funded transportation prime contract and subcontract dollars
 by type of work, October 2014–September 2017

Type of work	Dollars (1,000s)	Percent
General road construction and widening	\$ 250,470	19.0 %
Architecture and engineering	169,612	12.9
Bridge and elevated highway construction	163,272	12.4
Transportation planning	90,446	6.9
Excavation, site prep, grading and drainage	62,378	4.7
Pavement surface treatment (such as sealing)	52,753	4.0
Asphalt, concrete or other paving	43,600	3.3
Installation of guardrails, fencing or signs	43,579	3.3
Electrical work including lighting and signals	38,295	2.9
Painting for road or bridge projects	32,244	2.4
Temporary traffic control	30,105	2.3
Concrete flatwork (including sidewalk, curb and gutter)	27,188	2.1
Inspection and testing	26,455	2.0
Asphalt, concrete and other paving materials	21,245	1.6
Construction management	20,784	1.6
Striping or pavement marking	20,071	1.5
Trucking and hauling	15,719	1.2
Drilling and foundations	15,650	1.2
Landscaping and related work including erosion control	14,940	1.1
Construction remediation and clean-up	13,950	1.1
Other concrete work	13,859	1.1
Environmental consulting	12,096	0.9
Pavement milling	11,057	0.8
Surveying and mapping	10,281	0.8
Structural steel work	6,685	0.5
Underground utilities	4,864	0.4
Aggregate materials supply	4,287	0.3
Fence or guardrail materials	2,383	0.2
Concrete cutting	2,100	0.2
Concrete pumping	1,323	0.1
Petroleum and petroleum products	973	0.1
Steel	785	0.1
Wrecking and demolition	727	0.1
Other construction related work	37,322	2.8
Other professional services	49,717	3.8
Other goods	5,437	0.4
Total	\$ 1,316,655	100.0 %

Source: Keen Independent from ODOT contract data.

As shown in Figure 2-4, the top four general types of work account for 50 percent of ODOT FHWA-funded transportation contract dollars.

- Prime contracts and subcontracts for general road construction and widening accounted for about \$250 million of the FHWA-funded contract dollars examined. This type of work accounted for 19 percent of the contract dollars examined.
- Architecture and engineering accounted for almost \$170 million or 13 percent of FHWA-funded contracts and subcontracts.
- Bridge and elevated highway construction accounted for \$163 million of FHWA-funded prime contracts and subcontracts, or about 12 percent of the total.
- Transportation planning accounted for the fourth largest dollar volume of FHWA-funded work (\$90 million or 7 percent of the total).

Types of work that did not fit into the specific categories listed in Figure 2-4 were included in “other construction,” “other professional services,” or “other goods” as appropriate. Together, these “other” categories comprised 7 percent of FHWA-funded contract dollars, as shown in Figure 2-4.

Results shown in Figure 2-4 are consistent with the analysis of types of work involved in FHWA-funded contracts in the 2016 Disparity Study.

D. Location of Businesses Performing ODOT 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 ODOT 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 Oregon or two counties in southwest Washington that are part of the Portland Metropolitan Area (Clark and Skamania counties) based upon ODOT vendor records and additional research.
- Keen Independent then added the dollars for firms with Oregon and the two Washington county locations and compared the total to that for companies with no establishments within Oregon or southwest Washington.

Based upon analysis of combined ODOT and local agency contract dollars from October 2014 through September 2017, firms with locations in Oregon and the two Washington counties obtained 90 percent of FHWA-funded transportation contract dollars. Figure 2-5 on the following page presents these results.

Figure 2-5.
Dollars of ODOT and local agency transportation
FHWA-funded prime contracts and subcontracts by
location of firm, October 2014–September 2017

	Dollars (millions)	Percent
Oregon plus WA parts of Portland MSA	\$ 1,188	90.3 %
Other	<u>128</u>	<u>9.7</u>
Total	\$ 1,317	100.0 %

Note: Numbers may not add due to rounding.

Source: Keen Independent from ODOT contract data.

Based on this information, Keen Independent determined that Oregon and two counties in Washington (Clark and Skamania) should be selected as the relevant geographic market area for ODOT transportation contracting. Therefore, Keen Independent’s availability analysis focused on firms with locations in Oregon and Clark and Skamania counties in Washington.

The relevant geographic market area for the 2019 Disparity Study Update is identical to the market area for the 2016 Disparity Study.

CHAPTER 3.

Availability Analysis

Keen Independent analyzed the availability of minority- and women-owned business enterprises (MBE/WBEs) that are ready, willing and able to perform ODOT and local agency prime contracts and subcontracts. Chapter 3 describes the study team’s availability analysis in eight parts:

- A. Purpose of the availability analysis;
- B. Definitions of MBEs, WBEs, certified DBEs, potential DBEs and majority-owned businesses;
- C. Information collected about potentially available businesses;
- D. Businesses included in the availability database;
- E. Businesses in the availability database counted as DBEs or potential DBEs;
- F. MBE/WBE availability calculations on a contract-by-contract basis;
- G. Availability results; and
- H. Base figure for ODOT’s overall DBE goal for FHWA-funded contracts.

Appendix C provides supporting information.

A. Purpose of the Availability Analysis

Keen Independent examined the availability of MBE/WBEs for transportation contracts to develop the base figure for ODOT’s overall DBE goal for FHWA-funded contracts. The availability analysis determines the percentage of ODOT contract dollars that might go to DBEs and potential DBEs based on their availability for specific types, sizes and locations of ODOT’s FHWA-funded prime contracts and subcontracts.

When examining availability for FHWA-funded contracts, the Disparity Study Update includes current DBEs and those minority- and women-owned firms that appear that they would be eligible for DBE certification (“potential DBEs”). Therefore, businesses that have been denied certification, have been decertified, have graduated from the DBE Program, or otherwise indicated that they would not qualify for or were not interested in DBE certification are not counted as potential DBEs in the availability analysis for FHWA-funded contracts.

This process follows guidance in the Final Rule effective November 3, 2014 and the United States Department of Transportation’s (USDOT’s) “Tips for Goal-Setting” that explains that minority- and women-owned firms that are not currently certified as DBEs but that could be DBE-certified should be counted as DBEs in the base figure calculation.

The balance of Chapter 3 explains each step in determining the base figure for ODOT’s overall DBE goal, beginning with definitions of terms.

B. Definitions of MBEs, WBEs, Certified DBEs, Potential DBEs and Majority-owned Businesses

The following definitions of terms based on ownership and certification status are useful background to the availability analysis.

MBE/WBEs. The availability benchmark and the base figure analyses use the same definitions of minority- and women-owned firms (MBE/WBEs) as do other components of the 2016 Disparity Study.

Race, ethnic and gender groups. As specified in 49 Code of Federal Regulations (CFR) Part 26, the study team separately examined utilization, availability and disparity results for businesses owned by:

- African Americans;
- Asian-Pacific Americans;
- Subcontinent Asian Americans;
- Hispanic Americans;
- Native Americans; and
- Non-Hispanic white women.

Note that “majority-owned businesses” refer to businesses that are not minority- or women-owned.

Certified DBEs. Certified DBEs are businesses that are certified as such through Oregon’s Certification Office for Business Inclusion and Diversity (COBID), meaning they are businesses that:

- Are owned and controlled by one or more individuals who are presumed to be both socially and economically disadvantaged according to 49 CFR Part 26;¹ and
- Have met the gross revenue and personal net worth requirements described in 49 CFR Part 26.

Potential DBEs. Potential DBEs are MBE/WBEs that appear that they could be DBE-certified based on revenue requirements described in 49 CFR Section 26.65. Potential DBEs do not include businesses that have been decertified or have graduated from the DBE Program. The study team examined the availability of potential DBEs as part of helping ODOT calculate the base figure of its overall DBE goal for FHWA-funded contracts.

¹ The Federal DBE Program specifies that African Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, women of any race or ethnicity, and any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration are presumed to be disadvantaged.

Figure 3-1 further explains Keen Independent’s definition of potential DBEs.

Keen Independent obtained information from ODOT’s Office of Civil Rights to identify firms that, in recent years, had graduated from the DBE Program or had been denied DBE certification (and had not been recertified).

Majority-owned businesses. Majority-owned businesses are businesses that are not owned by minorities or women (i.e., businesses owned by non-Hispanic white males).

C. Information Collected about Potentially Available Businesses

Keen Independent’s availability analysis focused on firms with locations in Oregon and two counties in Washington State (Clark and Skamania counties) that work in subindustries related to ODOT transportation-related construction and engineering contracts.

Based on review of ODOT prime contracts and subcontracts during the study period, the study team identified specific subindustries for inclusion in the availability analysis. Keen Independent contacted businesses within those subindustries via online and telephone surveys to collect information about their availability for specific types, sizes and locations of ODOT and local agency prime contracts and subcontracts.

Keen Independent’s method of examining availability is sometimes referred to as a “custom census” and has been accepted in federal court. Figure 3-2 on the following page summarizes characteristics of Keen Independent’s approach to examining availability.

Figure 3-1. Definition of potential DBEs

Keen Independent did not include the following types of MBE/WBEs in its definition of potential DBEs:

- MBE/WBEs that had graduated from the DBE Program and not been recertified, or were de-certified;
- MBE/WBEs that are not currently DBE-certified that had applied for certification and had been denied; and
- MBE/WBEs not currently DBE-certified that appear to have exceeded the three-year average annual revenue limits for DBE certification.

At the time of this study, the overall revenue limit for DBE certification was \$23,980,000 (three-year average of annual gross receipts). Lower revenue limits applied for subindustries according to the U.S. Small Business Administration small business standards. Some MBE/WBEs exceeded either the \$23,980,000 or the subindustry revenue limits based on information that they provided in the availability surveys.

Business owners must also meet USDOT personal net worth limits for their businesses to qualify for DBE certification. Personal net worth was only a factor in the base figure calculations when a firm had graduated or been denied certification based on personal net worth that exceeded certification limits.

Overview of availability surveys. The study team conducted telephone surveys with business owners and managers to identify businesses that are potentially available for ODOT and local agency transportation prime contracts and subcontracts.² Figure 3-3 on the following page summarizes the process for identifying businesses, contacting them and completing the surveys.

Keen Independent began by compiling lists of business establishments that: (a) previously identified themselves to ODOT as interested in learning about future work (such as by listing themselves on ORPIN or eBIDs, previously submitting prime or sub bids or proposals, becoming planholders or requesting information updates from ODOT’s Office of Civil Rights); or (b) Dun & Bradstreet/Hoovers identified in certain transportation contracting-related subindustries in Oregon or Southwest Washington.³

Telephone surveys. Figure 3-3 outlines the process Keen Independent used to complete surveys with businesses possibly available for ODOT and local agency transportation-related work.

- The study team contacted firms by telephone to ask them to participate in the surveys (identifying ODOT as the organization requesting the information). Firms indicating over the phone that they were not interested or not involved in transportation contracting work were not asked to complete the other survey questions. Surveys for the 2019 Disparity Study began in November and were completed in December 2018.
- Some firms completed surveys when first contacted. For firms not immediately responding, the study team executed intensive follow-up efforts over many weeks.
- Businesses could also learn about the availability surveys or complete the surveys via other methods such as: fax or email and the online survey posted on the ODOT Office of Civil Rights website.

Figure 3-2.
Summary of the strengths of Keen Independent’s “custom census” approach

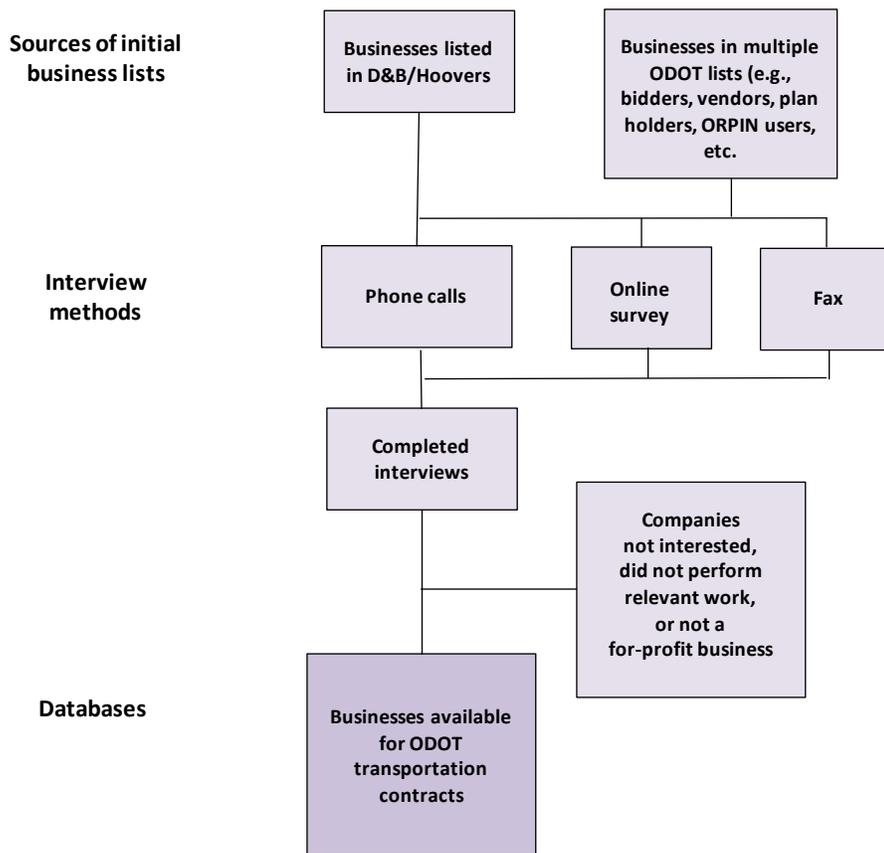
Federal courts have reviewed and upheld “custom census” approaches to examining availability. Compared with some other previous court-reviewed custom census approaches, Keen Independent added several layers of screening to determine which businesses are potentially available for work in the Oregon transportation contracting industry.

For example, the Keen Independent analysis included discussions with businesses about interest in ODOT and local government work, contract role and geographic locations of their work — items not included in some of the previous court-reviewed custom census approaches. Keen Independent also analyzed the sizes of contracts and subcontracts that businesses have bid on or performed in the past (referred to as “bid capacity” in this analysis).

² The study team offered business representatives the option of completing surveys online or via fax or email if they preferred not to complete surveys via telephone.

³ D&B’s Hoover’s database is accepted as the most comprehensive and complete source of business listings in the nation. Keen Independent collected information about all business establishments listed under 8-digit work specialization codes (as developed by D&B) that were most related to the transportation contracts that ODOT awarded during the study period.

Figure 3-3.
Availability survey process



Information collected in availability surveys. Survey questions covered many topics about each organization, including:

- Types of transportation contract work performed, from asphalt paving to surveying (Figure C-1 in Appendix C provides a list of work categories included in the surveys);
- Qualifications and interest in performing transportation-related work for ODOT and local agencies in Oregon;
- Qualifications and interest in performing transportation-related work as a prime contractor or as a subcontractor (or trucking company or materials supplier);
- Past work in Oregon as a prime contractor or as a subcontractor, trucker or supplier;
- Ability to work in specific geographic regions (Portland/Hood River region, Willamette Valley and Northwest Oregon region, Southwestern Oregon, Central Oregon and Eastern Oregon);
- Largest prime contract or subcontract bid on or performed in Oregon in the previous three years;
- Year of establishment; and
- Race/ethnicity and gender of ownership (Appendix C provides a survey instrument).

Screening of firms for the availability database. Keen Independent considered businesses to be potentially available for ODOT transportation prime contracts or subcontracts if they reported possessing all of the following characteristics:

- a. Being a private business (as opposed to a public agency or not-for-profit organization);
- b. Performing work relevant to transportation contracting; and
- c. Reporting qualifications for and interest in work for ODOT and/or for local governments.

D. Businesses Included in the Availability Database

Data from the availability surveys allowed Keen Independent to develop a representative depiction of businesses that are qualified and interested in the highest dollar volume areas of ODOT and local agency transportation-related work, but it should not be considered an exhaustive list of every business that could potentially participate in ODOT and local agency contracts (see Appendix C).

After completing surveys with 4,194 Oregon businesses, the study team reviewed responses to develop a database of information about businesses that are potentially available for ODOT transportation contracting work. The study team’s research identified 1,138 businesses reporting that they were available for specific types of transportation contracts that ODOT and local agencies awarded during the study period. Of those businesses, 313 (27.5%) were minority- or women-owned.

Figure 3-4 presents the number of businesses included in the availability database for each racial/ethnic and gender group. Results for the 2018 survey are similar to the 2016 Disparity Study.

Figure 3-4.
Number of businesses included in the availability database

Note:
 Numbers rounded to nearest tenth of 1 percent. Percentages may not add to totals due to rounding.

Source:
 Keen Independent availability analysis.

Race/ethnicity and gender	2019 Study		2016 Study
	Number of firms	Percent of firms	Percent of firms
African American-owned	19	1.7 %	2.3 %
Asian-Pacific American-owned	22	1.9	1.6
Subcontinent Asian American-owned	10	0.9	0.9
Hispanic American-owned	43	3.8	3.5
Native American-owned	27	2.4	2.1
Total MBE	121	10.6 %	10.5 %
WBE (white women-owned)	192	16.9	16.7
Total MBE/WBE	313	27.5 %	27.2 %
Total majority-owned firms	825	72.5	72.8
Total firms	1,138	100.0 %	100.0 %

Because the results in Figure 3-4 are based on a simple count of firms with no analysis of availability for specific ODOT contracts, they only reflect the first step in the availability analysis.

E. Businesses in the Availability Database Counted as DBEs or Potential DBEs

Keen Independent counted two groups of firms as DBEs or potential DBEs in the base figure analysis.

Current DBEs. When performing the base figure analysis for the overall DBE goal, Keen Independent counted firms in the availability database that were certified as DBEs in Oregon as of December 2018. Keen Independent obtained information on currently-certified DBEs directly from ODOT.

Potential DBEs that are not currently certified. Keen Independent also included potential DBEs in the availability calculations for FHWA-funded contracts. All minority- and women-owned firms that were not DBE-certified were counted as potential DBEs except for the following three groups:

- Firms that in recent years graduated from the DBE Program or had applied for DBE certification in Oregon and had been denied (based on information supplied by ODOT);
- Businesses in the availability interviews that reported average annual revenue over three years exceeding the revenue limits for DBE certification for their subindustry; and
- Firms ineligible to bid in fall 2018 because they were on the BOLI list at the time of this study (there were none).

Figure 3-5.
Number of businesses included in the availability database that are current or potential DBEs

Note:
Numbers rounded to nearest tenth of 1 percent. Percentages may not add to totals due to rounding.

Source:
Keen Independent availability analysis.

Race/ethnicity and gender	Number of firms	Percent of firms
Current or potential DBE		
African American-owned	15	1.3 %
Asian-Pacific American-owned	19	1.7
Subcontinent Asian American-owned	8	0.7
Hispanic American-owned	35	3.1
Native American-owned	23	2.0
WBE (white women-owned)	160	14.1
Majority-owned firms	<u>0</u>	<u>0.0</u>
Total current or potential DBE	260	22.8 %
Non-DBE		
African American-owned	4	0.4 %
Asian-Pacific American-owned	3	0.3
Subcontinent Asian American-owned	2	0.2
Hispanic American-owned	8	0.7
Native American-owned	4	0.4
WBE (white women-owned)	32	2.8
Majority-owned firms	<u>825</u>	<u>72.5</u>
Total non-DBE	878	77.2 %

F. Availability Calculations on a Contract-by-Contract Basis

Keen Independent analyzed information from the availability database and data from three years of FHWA-funded contracts to develop dollar-weighted availability estimates.

- Dollar-weighted availability estimates represent the percentage of ODOT transportation contracting dollars that MBE/WBEs might be expected to receive based on their availability for specific types and sizes of ODOT transportation-related construction and engineering prime contracts and subcontracts.
- Keen Independent’s approach to calculating availability is a bottom up, contract-by-contract process of “matching” available firms to specific prime contracts and subcontracts.
- The study team then adjusted the dollar-weighted availability estimates to reflect current or potential DBEs.

Steps to calculating availability. Only a portion of the businesses in the availability database were considered potentially available for any given ODOT construction or engineering prime contract or subcontract (referred to collectively as “contract elements”). The study team first examined the characteristics of each specific contract element, including type of work, location of work, contract size and contract date. The study team then identified businesses in the availability database that perform work of that type, in that location, of that size, in that role (i.e., prime contractor or subcontractor), and that were in business in the year that the contract element was awarded.

Steps to the availability calculations. The study team identified the specific characteristics of each of the 4,125 FHWA-funded ODOT and local agency prime contracts and subcontracts from October 2014 through September 2017 and then took the following steps to calculate availability for each contract element:

1. For each contract element, the study team identified businesses in the availability database that reported in the telephone or online survey that they:
 - Are qualified and interested in performing transportation-related work in that particular role, for that specific type of work, for that particular type of agency (ODOT or local agencies) or had actually performed work in that role based on contract data for the study period;
 - Had performed work in the particular role (prime or sub) in Oregon within the past three years;
 - Are able to do work in that geographic location;
 - Had bid on or performed work of that size in Oregon in the past three years; and
 - Were in business in the year that the contract or task order was awarded.

2. For the specific contract element, the study team then counted the number of MBEs (by race/ethnicity), WBEs and majority-owned businesses among all businesses in the availability database that met the criteria specified in step 1 above.
3. The study team translated the numeric availability of businesses for the contract element into percentage availability (as described in Figure 3-6).

The study team repeated those steps for each contract element examined in study. The study team multiplied the percentage availability for each contract element by the dollars associated with the contract element, added results across all contract elements, and divided by the total dollars for all contract elements. The result was a dollar-weighted estimate of overall availability of MBE/WBEs and estimates of availability for each MBE/WBE group. Figure 3-6 provides an example of how the study team calculated availability for a specific subcontract in the study.

Special considerations for supply contracts.

When calculating availability for a particular type of materials supply, Keen Independent counted as available all firms supplying those materials that reported qualifications and interest in that work for ODOT (or for local agencies when it was a local agency contract) and indicated that they could provide supplies in the pertinent region of the state. Bid capacity was not considered in these calculations.

Improvements on a simple “head count” of businesses. Keen Independent used a dollar-weighted approach to calculate MBE/WBE availability for ODOT and local agency work rather than using a simple “head count” of MBE/WBEs (i.e., simply calculating the percentage of all Oregon transportation contracting businesses that are minority- or women-owned). Using a dollar-weighted approach typically results in lower availability estimates for MBEs and WBEs compared to a headcount approach. This is due in large part to Keen Independent’s consideration of type and size of work performed when measuring availability, and because dollar-weighted availability results are calculated for each contract element (a large prime contract has a greater weight in calculating overall availability than a small subcontract). The types and sizes of contracts for which MBE/WBEs are available in Oregon tend to be smaller than those of other businesses. Therefore, MBE/WBEs are less likely to be identified as available for the largest prime contracts and subcontracts.

There are several important ways in which Keen Independent’s dollar-weighted approach to measuring availability is more precise than completing a simple head count approach.

Figure 3-6.

Example of an availability calculation

One of the subcontracts examined was for concrete flatwork (\$44,580) on a 2016 FHWA-funded contract for a local agency in Northwest Oregon. To determine the number of MBE/WBEs and majority-owned firms available for that subcontract, the study team identified businesses in the availability database that:

- a. Were in business in 2016;
- b. Indicated that they performed concrete flatwork on transportation-related projects;
- c. Reported working or bidding on subcontracts in Oregon in the past three years;
- d. Reported bidding on work of similar or greater size in the past three years;
- e. Reported ability to perform work in Northwest Oregon; and
- f. Reported qualifications and interest in working as a subcontractor on local government transportation projects.

There were 52 businesses in the availability database that met those criteria. Of those businesses, 16 were MBEs or WBEs. Therefore, MBE/WBE availability for the subcontract was 31 percent (i.e., $16/52 = 31\%$).

The weight applied to this contract was $\$44,580 \div \$1.3 \text{ billion} = 0.003\%$ (equal to its share of total FHWA-funded contract dollars). Keen Independent made this calculation for each prime contract and subcontract.

Keen Independent’s approach accounts for type of work. USDOT suggests calculating availability based on businesses’ abilities to perform specific types of work. USDOT gives the following example in Part II F of “Tips for Goal-Setting in the Disadvantaged Business Enterprise (DBE) Program”:

For instance, if 90 percent of your contract dollars will be spent on heavy construction and 10 percent on trucking, you should weight your calculation of the relative availability of firms by the same percentages.⁴

The study team took type of work into account by examining 36 different subindustries related to transportation construction, engineering and related purchases as part of estimating availability for ODOT and local agency work.

Keen Independent’s approach accounts for qualifications and interest in transportation-related prime contract and subcontract work. The study team collected information on whether businesses are qualified and interested in working as prime contractors, subcontractors, or both on ODOT and local agency transportation work, in addition to considering several other factors related to prime contracts and subcontracts (e.g., contract types, sizes and locations):

- Only businesses that reported being qualified for and interested in working as prime contractors were counted as available for prime contracts (or included because contract data for ODOT or local agencies indicated that they had prime contracts in the past three years).
- Only businesses that reported being qualified for and interested in working as subcontractors were counted as available for subcontracts (or included because contract data for ODOT or local agencies indicated that they had subcontracts in the past three years).
- Businesses that reported being qualified for and interested in working as both prime contractors and subcontractors were counted as available for both prime contracts and subcontracts.

Keen Independent’s approach accounts for the size of prime contracts and subcontracts. The study team considered the size — in terms of dollar value — of the prime contracts and subcontracts that a business bid on or received in the previous three years (i.e., bid capacity) when determining whether to count that business as available for a particular contract element.

Keen Independent’s approach is consistent with many recent, key court decisions that have found relative capacity measures to be important to measuring availability (e.g., *Associated General Contractors of America, San Diego Chapter, Inc. v. California Department of Transportation, et al.*; *Western States Paving Company v. Washington State DOT*; *Rothe Development Corp. v. U.S. Department of Defense*;⁵ and *Engineering Contractors Association of S. Fla. Inc. vs. Metro Dade County*).⁶

⁴ Tips for Goal-Setting in the Federal Disadvantaged Enterprise (DBE) Program. (2013, June 25). Available at <http://www.dot.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>

⁵ *Rothe Development Corp. v. U.S. Department of Defense*, 545 F.3d 1023 (Fed. Cir. 2008).

⁶ *Engineering Contractors Association of S. Fla. Inc. vs. Metro Dade County*, 943 F. Supp. 1546 (S.D. Fla. 1996).

Keen Independent’s approach accounts for the geographic location of the work. The study team determined the location where work was performed for ODOT and local agency contracts: Portland/Hood River (Region 1), Willamette Valley and Northwest Oregon (Region 2), Southwestern Oregon (Region 3), Central Oregon (Region 4) and Eastern Oregon (Region 5).

Keen Independent’s approach generates dollar-weighted results. Keen Independent examined availability on a contract-by-contract basis and then dollar-weighted the results for different sets of contract elements. Thus, the results of relatively large contract elements contributed more to overall availability estimates than those of relatively small contract elements. This approach is consistent with USDOT’s “Tips for Goal-Setting in the Disadvantaged Business Enterprise (DBE) Program,” which suggests a dollar-weighted approach to calculating availability.

G. Availability Results

Figure 3-7 presents overall dollar-weighted availability estimates by MBE/WBE group for those contracts. Overall, MBE/WBE availability for FHWA-funded contracts is 19.58 percent. This result is lower than the percentage of availability firms that are MBE/WBE (27.5%) in Figure 3-4.

Figure 3-7.

Overall dollar-weighted availability estimates for MBE/WBEs for ODOT FHWA-funded contracts, October 2014–September 2017

Race/ethnicity and gender	FHWA
African American-owned	2.11 %
Asian-Pacific American-owned	3.86
Subcontinent Asian American-owned	0.14
Hispanic American-owned	1.68
Native American-owned	<u>2.56</u>
Total MBE	10.35 %
WBE (white women-owned)	<u>9.23</u>
Total MBE/WBE	19.58 %

Note: Numbers may not add to totals due to rounding.

Source: Keen Independent availability analysis.

H. Base Figure for ODOT's Overall DBE Goal for FHWA-funded Contracts

Establishing a base figure is the first step in calculating an overall goal for DBE participation in ODOT's FHWA-funded contracts. For the base figure for FHWA-funded contracts, calculations focus on current and potential DBEs.

Keen Independent's approach to calculating ODOT's base figure is consistent with:

- Court-reviewed methodologies in several states, including Washington, California, Illinois and Minnesota;
- Instructions in The Final Rule effective February 28, 2011 that outline revisions to the Federal DBE Program; and
- USDOT's "Tips for Goal-Setting in the Disadvantaged Business Enterprise (DBE) Program."

Base figure for FHWA-funded contracts. As discussed above, Keen Independent's availability analysis indicates that the dollar-weighted availability of minority- and women-owned firms for ODOT's FHWA-funded transportation contracts is 19.58 percent based on current availability information and analysis of FHWA-funded ODOT and local agency contracts awarded from October 2014 through September 2017.

Calculations to convert MBE/WBE availability to current and potential DBEs for the base figure.

Figure 3-8 provides the calculations to derive current/potential DBE availability when starting from the 19.58 percent MBE/WBE availability figure.

For FHWA-funded contracts, there were three groups of MBE/WBEs that Keen Independent did not count as potential DBEs when calculating the base figure:

- **Graduated or been denied DBE certification.** Keen Independent did not include MBE/WBEs that in recent years graduated from the DBE Program or had applied for DBE certification in Oregon and had been denied (based on information supplied by ODOT's Office of Civil Rights). This was 27 firms.
- **Revenue exceeding DBE limits.** The study team did not count MBE/WBEs in the availability surveys reported having average annual revenue over the most recent three years (at the time of the 2015 survey) that exceeded the revenue limits for DBE certification for their subindustry (as of 2015). This was 26 firms.
- **BOLI list.** Also excluded were MBE/WBEs in the availability surveys that were prohibited for work for any portion of the FFY 2020 through FFY 2023 time period based on their inclusion on the Oregon Bureau of Labor and Industries (BOLI) List of Contractors Ineligible to Receive Public Works Contracts (as of July 1, 2018). No firms included.

Adjusting for these three categories of MBE/WBEs reduces the base figure for FHWA-funded contracts by 4.21 percentage points (see Figure 3-8). The base figure for ODOT's overall DBE goal is 15.37 percent. It represents the level of current/potential DBE participation anticipated based on analysis of FHWA-funded contracts from October 2014 through September 2017.

Figure 3-8.

Overall dollar-weighted availability estimates for current and potential DBEs for FHWA-funded contracts, October 2014–September 2017

Calculation of base figure	FHWA
Total MBE/WBE	19.58 %
Less firms that graduated from the DBE Program or denied DBE certification in recent years or exceed revenue thresholds or on BOLI list	<u>4.21</u>
Subtotal	15.37 %
Plus white male-owned DBEs	<u>--</u>
Current and potential DBEs	15.37 %

Note: Numbers may not add to totals due to rounding.

Source: Keen Independent availability analysis.

ODOT staff indicated the mix of FHWA-funded projects for the three years beginning October 2019 is expected to be similar to projects from October 2014 through September 2017. If the types, sizes and locations of work were to substantially change for the FFY 2020 through FFY 2022 period, the overall base figure might be higher or lower.

Dollar-weighted availability of current DBEs. Keen Independent also calculated the base figure if it only counted current DBEs. “Potential DBEs” are included in the analysis, but counted as non-DBEs. The base figure would be 11.51 percent if limited to currently-certified DBEs.

Additional steps before ODOT determines its overall DBE goals for FHWA-funded contracts.

As discussed in Chapter 4, ODOT must consider whether to make a step 2 adjustment to the base figure as part of determining its overall DBE goal for FHWA-funded contracts. Step 2 adjustments can be upward or downward, but there is no requirement for ODOT to make a step 2 adjustment given that the agency can explain the factors considered and why no adjustment was warranted.

Chapter 4 discusses factors that ODOT might consider in deciding whether to make a step 2 adjustment to the base figures for FHWA-funded contracts.

CHAPTER 4.

Overall Annual DBE Goal and Projection for FHWA-funded Contracts

Chapter 4 is organized in three parts based on the process that 49 CFR Part 26.45 outlines for agencies to set their overall DBE goals and project the portion to be met through neutral means:

- A. Establishing a base figure;
- B. Consideration of a step 2 adjustment; and
- C. Projection of the portion of the goal to be met through neutral means.

A. Establishing a Base Figure

Establishing a base figure is the first step in calculating an overall annual goal for DBE participation in ODOT's FHWA-funded transportation contracts. As presented in detail in Chapter 3, dollar-weighted DBE availability is 15.37 percent for ODOT FHWA-funded transportation contracts. Keen Independent used current and potential DBEs in the calculation. Chapter 3 explains this base figure calculation in considerable detail.

As point of reference, Keen Independent also calculated the base figure only counting currently certified DBEs. The base figure including only current DBEs is 11.51 percent.

B. Consideration of a Step 2 Adjustment

Per the Federal DBE Program, ODOT must consider potential step 2 adjustments to the base figure as part of determining its overall annual DBE goal for FHWA-funded contracts. ODOT is not required to make any step 2 adjustments as long as it considers appropriate factors and explains its decision in its Goal and Methodology document.

The Federal DBE Program outlines factors that an agency must consider when assessing whether to make any step 2 adjustments to its base figure:

- 1. Current capacity of DBEs to perform work, as measured by the volume of work DBEs have performed in recent years;
- 2. Information related to employment, self-employment, education, training and unions;
- 3. Any disparities in the ability of DBEs to get financing, bonding and insurance; and
- 4. Other relevant factors.¹

¹ 49 CFR Section 26.45.

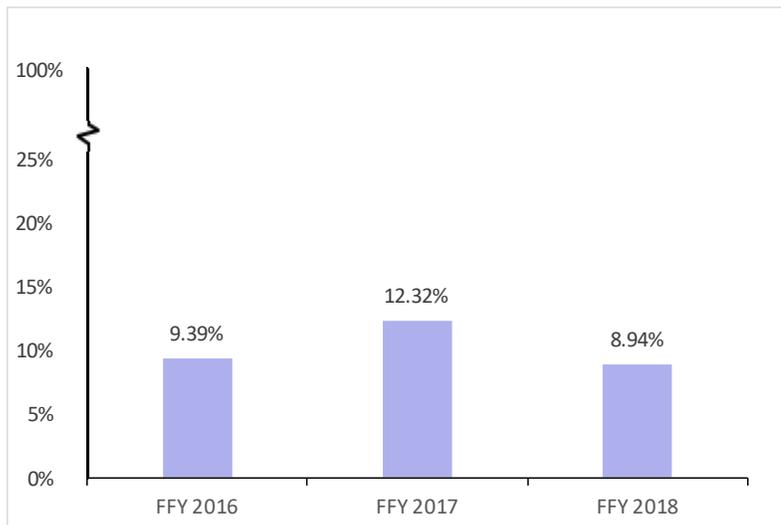
Keen Independent completed an analysis of each of the above step 2 factors and was able to quantify the effect of certain factors on the base figure. Other information examined was not as easily quantifiable but is still relevant to ODOT as it determines whether to make any step 2 adjustments.

1. Current capacity of DBEs to perform work, as measured by the volume of work DBEs have performed in recent years. USDOT’s “Tips for Goal-Setting” suggests that agencies should examine data on past DBE participation on their USDOT-funded contracts in recent years (i.e., the percentage of contract dollars going to DBEs).

DBE participation based on ODOT Uniform Reports to FHWA. USDOT suggests that agencies should choose the median level of annual DBE participation for relevant years as the measure of past participation: “Your goal setting process will be more accurate if you use the median (instead of the average or mean) of your past participation to make your adjustment because the process of determining the median excludes all outlier (abnormally high or abnormally low) past participation percentages.”²

Figure 4-1 presents information about past DBE participation based on commitments/awards data from ODOT Uniform Reports of DBE Awards or Commitments and Payments reported to the FHWA. DBE participation is shown for FFYs 2016, 2017 and 2018. Participation in FFY 2016 (9.39%) represented the median annual participation based on these data. (This provides a more recent year of DBE utilization information than included in the ODOT contract data collected by Keen Independent, which ended with FFY 2017.)

Figure 4-1.
ODOT reported past DBE participation on FHWA-funded contracts based on awards, federal fiscal years 2016, 2017 and 2018



Source: ODOT Uniform Reports of DBE Awards/Commitments and Payments.

² Section III (A)(5)(c), see Tips for Goal-Setting in the Federal Disadvantaged Enterprise (DBE) Program. (June 25, 2013) Available at <http://www.dot.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>

The median DBE participation for FHWA-funded contracts indicates that ODOT might make a downward step 2 adjustment based on this factor, as explained later in this chapter.

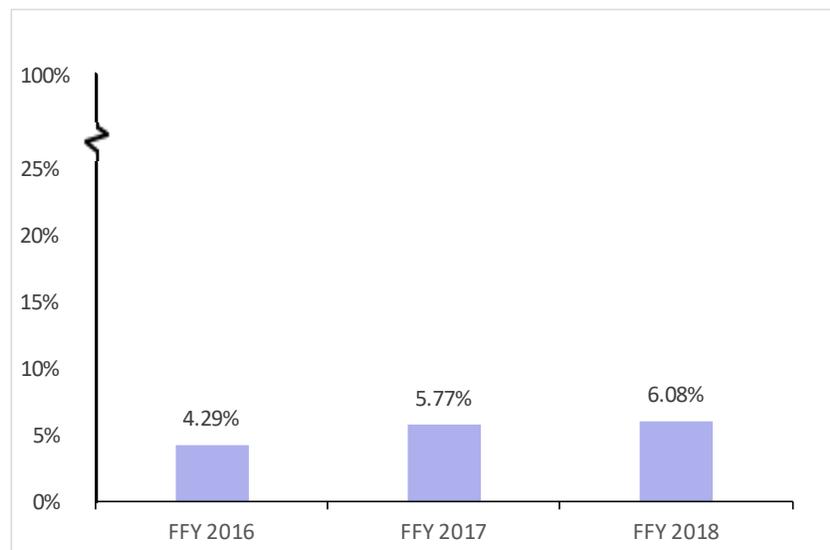
DBE participation based on Keen Independent utilization analysis for FHWA-funded contracts.

Keen Independent’s analysis identified 10.4 percent participation of DBEs on FHWA-funded contracts from October 2014 through September 2017. This level of participation is consistent with what is shown in Figure 4-1 from the Uniform Reports.

Other DBE utilization data. Figure 4-2 presents information about past DBE participation based on payments from ODOT Uniform Reports of DBE Awards or Commitments and Payments reported to the FHWA. Participation is shown for FFYs 2016, 2017 and 2018, the three most recent complete federal fiscal years at the time of the Availability Study. Median-year DBE participation was 5.77 percent.

Figure 4-2.
ODOT reported past DBE participation on FHWA-funded contracts based on payments, federal fiscal years 2016, 2017 and 2018

Source: ODOT Uniform Reports of DBE Awards/Commitments and Payments. Payments for FFY 2016–FFY 2018 are from ongoing projects.



2. Information related to employment, self-employment, education, training and unions.

The 2016 ODOT Disparity Study summarized information about conditions in the Oregon transportation contracting industry for minorities, women and MBE/WBEs. Detailed quantitative analyses of marketplace conditions in Oregon are presented in Appendices E through H. Keen Independent’s analyses indicate that there were barriers that certain minority groups and women face related to entry and advancement in the Oregon construction and engineering industries. Such barriers may affect the availability of MBE/WBEs to obtain and perform ODOT and local agency transportation contracts. There are also barriers to business ownership for those working in these industries.

It may not be possible to quantify all the cumulative effects that barriers may have had in depressing the availability of minority- and women-owned firms in the Oregon transportation contracting industry, however, the effects of barriers in business ownership can be quantified, as explained below.

Analysis of disparities in the rates of business ownership. The study team used regression analyses to investigate whether race, ethnicity and gender affected rates of business ownership among workers in the Oregon construction and engineering industries.

- The regression analyses allowed the study team to examine those effects while statistically controlling for various personal characteristics including education and age (Appendix F of the 2016 Disparity Study provides detailed results of the business ownership regression analyses).³ Those analyses revealed that Hispanic Americans, Native Americans and white women working in construction were less likely than non-minorities and white men to own construction businesses, even after accounting for various race- and gender-neutral personal characteristics. Each of these disparities was statistically significant.
- In addition, women working in the Oregon engineering industry were less likely than men to own engineering companies after accounting for various gender-neutral personal characteristics. This disparity was statistically significant. There were disparities for certain minority groups as well, but the results were such that the study team could not quantify the impact on availability.

Keen Independent analyzed the impact that barriers in business ownership would have on the base figure if Hispanic Americans, Native Americans and white women owned businesses at the same rate as similarly-situated non-minorities and white men. This type of inquiry is sometimes referred to as a “but for” analysis because it estimates the availability of MBE/WBEs *but for* the effects of race- and gender-based discrimination.⁴

Estimated effect on current MBE/WBE availability. Figure 4-3 calculates the impact on overall MBE/WBE availability, resulting in possible upward adjustment of the base figure. The analysis included the same contracts that the study team analyzed to determine the base figure (i.e., FHWA-funded construction and engineering prime contracts and subcontracts that ODOT and local agencies awarded from October 2014 through September 2017). Calculations are explained beginning on the next page.

³ The study team examined U.S. Census data on business ownership rates using methods similar to analyses examined in court cases involving state departments of transportation in California, Illinois and Minnesota.

⁴ 49 CFR Section 26.45(d)(3).

Figure 4-3.

Potential step 2 adjustment considering disparities in the rates of business ownership

Current and potential DBEs	a. Current availability	b. Disparity index for business ownership	c. Availability after initial adjustment*	d. Availability after scaling to 100%	e. Components of overall DBEs availability**
Construction					
Hispanic Americans	0.36 %	53	0.68 %	0.64 %	
Native Americans	3.57	61	5.85	5.55	
Other minorities	2.29	n/a	2.29	2.17	
White women	<u>5.68</u>	67	<u>8.48</u>	<u>8.04</u>	
Minorities and women	11.90 %	n/a	17.30 %	16.41 %	11.80 %
All other businesses	<u>88.10</u>	n/a	<u>88.10</u>	<u>83.59</u>	
Total firms	100.00 %	n/a	105.40 %	100.00 %	
Engineering and other subindustries					
Minorities	8.94 %	n/a	8.94 %	8.39 %	
White women	<u>15.30</u>	70	<u>21.86</u>	<u>20.51</u>	
Minorities and women	24.24 %	n/a	30.80 %	28.90 %	8.12 %
White men/majority	<u>75.76</u>	n/a	<u>75.76</u>	<u>71.10</u>	
Total firms	100.00 %	n/a	106.56 %	100.00 %	
Total for current and potential DBEs	15.37 %	n/a	n/a		19.92 %
Difference from base figure					4.55 %

Note: Numbers may not add to 100.00% due to rounding.

* Initial adjustment is calculated as current availability divided by the disparity index for business ownership.

** Components of the base figure were calculated as the value after adjustment and scaling to 100 percent, multiplied by the percentage of total FHWA-funded contract dollars in each industry (construction = 88.8%, engineering = 11.2%).

Source: Keen Independent based on FHWA-funded contracts for October 2014 through September 2017 and Keen Independent Research 2016 Oregon Department of Transportation Disparity Study.

The study team completed these “but for” analyses separately for construction and engineering contracts and then weighted the results based on the proportion of FHWA-funded contract dollars that ODOT awarded for construction and engineering for October 2014-September 2017 (71.9% weight for construction and 28.1% weight for engineering). The rows and columns of Figure 4-3 present the following information from Keen Independent’s “but for” analyses:

- a. **Current availability.** Column (a) presents the current availability of MBE/WBEs by group for construction and for engineering and other subindustries among firms included in the base figure analysis (i.e., excludes graduated DBEs, firms with revenue too high to be a DBE and firms on BOLI list). Each row presents the percentage availability for MBEs and WBEs. The current combined availability of MBE/WBEs for ODOT FHWA-funded transportation contracts for October 2014-September 2017 is 15.37 percent, as shown in bottom row of column (a).

- b. **Disparity indices for business ownership.** As presented in Appendix F of the 2016 ODOT Disparity Study, Hispanic Americans, Native Americans and white women working in the Oregon construction industry were significantly less likely to own construction firms than similarly-situated non-minorities and white men. Keen Independent projected business ownership rates for those groups if they were to own businesses at the same rate as non-minorities and white males with similar personal characteristics (i.e., business ownership rate for those firms given a level playing field). The study team then calculated a business ownership disparity index for each group by dividing the actual business ownership rate by the business ownership rate projected given a level playing field, and then multiplying the result by 100.

Column (b) of Figure 4-3 presents disparity indices related to business ownership for the different racial/ethnic and gender groups. For example, as shown in column (b), Hispanic Americans owned construction businesses at 53 percent of the rate that would be expected based on the projection if business ownership rates were in line with white males who had similar personal characteristics. Appendix F of the 2016 ODOT Disparity Study explains how the study team calculated the disparity indices.

- c. **Availability after initial adjustment.** Column (c) presents availability estimates for MBEs and WBEs by industry after initially adjusting for statistically significant disparities in business ownership rates. The study team calculated those estimates by dividing the current availability in column (a) by the disparity index for business ownership in column (b) and then multiplying by 100. For example, for Hispanic American-owned firms, current availability (0.36%) was divided by the disparity index of 53, with 0.68 percent as the result after this initial adjustment.
- d. **Availability after scaling to 100%.** Column (d) shows adjusted availability estimates that were re-scaled so that the sum of the availability estimates equals 100 percent for each industry. The study team re-scaled the adjusted availability estimates by taking each group's adjusted availability estimate in column (c) and dividing it by the sum of availability estimates shown under "Total firms" in column (c) — and multiplying by 100. For example, the re-scaled availability estimate for Hispanic Americans shown for construction was calculated in the following way: $(0.36\% \div 105.40\%) \times 100 = 0.64\%$.
- e. **Components of overall DBE goal with upward adjustment.** Column (e) of Figure 4-3 shows the component of the total base figure attributed to the adjusted MBE and WBE availability for construction versus engineering and other subindustries. The study team calculated each component by taking the total availability estimate shown in column (d) for construction and for engineering/other — and multiplying it by the proportion of total FHWA-funded contract dollars in each industry (i.e., 71.9% for construction and 28.1% for engineering). For example, the study team used the 16.41 percent figure shown for MBE/WBE availability for construction firms in column (d) and multiplied it by 71.9 percent for a result of 11.80 percent. A similar weighting of MBE/WBE availability for engineering/other produced a value of 8.12 percent.

The values in column (e) were then summed to equal the overall base figure adjusted for barriers in business ownership, which is 19.92 percent as shown in the bottom of column (e).

Finally, Keen Independent calculated the difference between the “but for” MBE/WBE availability (19.92%) and the base figure calculated from current availability (15.37%) to determine the potential upward adjustment. This difference, and potential upward adjustment, is 4.55 percentage points (19.92% – 15.37% = 4.55%).

3. Any disparities in the ability of DBEs to get financing, bonding and insurance. Analysis of access to financing and bonding revealed quantitative and qualitative evidence of disadvantages for minorities, women and MBE/WBEs.

- Any barriers to obtaining financing and bonding might affect opportunities for minorities and women to successfully form and operate construction and engineering businesses in the Oregon marketplace.
- Any barriers that MBE/WBEs face in obtaining financing and bonding would also place those businesses at a disadvantage in obtaining ODOT and local agency construction and engineering prime contracts and subcontracts.

Note that financing and bonding are closely linked, as discussed in Chapter 5, Appendix G and Appendix J of the 2016 Disparity Study.

There is also evidence that some firms cannot bid on certain public sector projects because they cannot afford the levels of insurance required by the agency. This barrier appears to affect a relatively large number of minority- and women-owned firms compared with majority-owned firms based on survey results (see Appendix G of the 2016 Disparity Study).

The information about financing, bonding and insurance supports an upward step 2 adjustment in ODOT’s overall annual goal for DBE participation in FHWA-funded contracts, but there is not a clear way to quantify the impact of such barriers on the current availability of MBE/WBEs.

4. Other factors. The Federal DBE Program suggests that federal aid recipients also examine “other factors” when determining whether to make any step 2 adjustments to their base figure.⁵

Among the “other factors” examined in this study was the success of MBE/WBEs relative to majority-owned businesses in the Oregon marketplace. There is quantitative evidence that certain groups of MBE/WBEs are less successful than majority-owned firms, and face greater barriers in the marketplace, even after considering neutral factors. Chapter 5 of the 2016 Disparity Study summarizes that evidence and Appendix H of the 2016 Disparity Study presents supporting quantitative analyses.

⁵ 49 CFR Section 26.45.

There is also qualitative evidence of barriers to the success of minority- and women-owned businesses, as summarized in Chapter 5 of the 2016 Disparity Study. Some of this qualitative information suggests that discrimination on the basis of race, ethnicity and gender affects minority- and women-owned firms in the Oregon transportation contracting industry.

There is not a straightforward way to project the number of MBE/WBEs available for ODOT work but for the effects of these other factors.

Quantification of any step 2 adjustment. Quantification of potential downward or upward step 2 adjustments is summarized below.

Current capacity of DBEs to perform work, as measured by the volume of work DBEs have performed in recent years. Analysis of this factor might indicate a downward step 2 adjustment if ODOT based past DBE participation based on commitments/awards data from ODOT Uniform Reports of DBE Awards or Commitments and Payments reported to the FHWA. DBEs obtained a median of 9.39 percent of FHWA-funded construction and engineering-related contracts contract dollars during this time period.

USDOT “Tips for Goal-Setting” suggests taking one-half of the difference between the base figure and evidence of current capacity as one approach to calculate the step 2 adjustment for that factor.

The difference between the 15.37 percent base figure and 9.39 percent DBE participation is 5.98 percentage points. One-half of this difference is a downward adjustment of 2.99 percentage points. The goal would then be calculated as $15.37\% - 2.99\% = 12.38\%$ (see Figure 4-4 on page 10).

2. Information related to employment, self-employment, education, training and unions. The study team was not able to quantify all of the information regarding barriers to entry for MBE/WBEs. Quantification of the business ownership factor indicates an upward step 2 adjustment of 4.55 percentage points to reflect the “but-for” analyses of business ownership rates presented in Figure 4-3. If ODOT made this adjustment, the overall DBE goal for FHWA-funded contracts would be 19.92 percent ($15.37\% + 4.55\% = 19.92\%$). Figure 4-4 also shows these calculations.

3. Any disparities in the ability of DBEs to get financing, bonding and insurance. Analysis of financing, bonding and insurance indicates that an upward adjustment is appropriate. However, as explained, the impact of these factors on availability could not be quantified.

4. Other factors. The impact of the many barriers to success of MBE/WBEs in Oregon could not be specifically quantified. However, the evidence supports an upward adjustment.

Figure 4-4.
Potential step 2 adjustments for ODOT’s overall DBE goal for FHWA-funded contracts, FFY 2020-FFY 2022

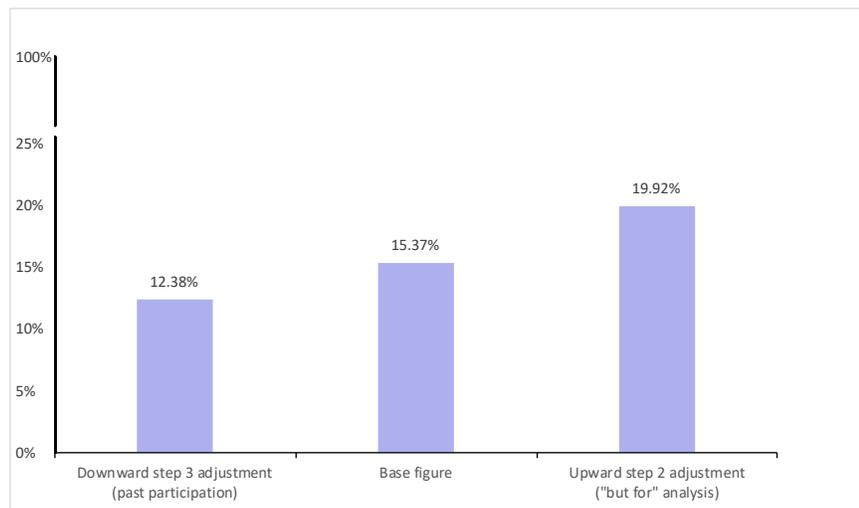
Step 2 adjustment component	Value	Explanation
Overall DBE goal with no adjustment		
Base figure	15.37 %	From base figure analysis
No adjustment	+ 0.00	
Overall DBE goal	15.37 %	DBE goal with no adjustment
Lower range of overall DBE goal		
Base figure	15.37 %	From base figure analysis
Evidence of current capacity	- 9.39	Past DBE participation
Difference	5.98 %	
	÷ 2	Reduce by one-half
Adjustment	2.99 %	Downward adjustment for current capacity
Base figure	15.37 %	From base figure analysis
Adjustment for current capacity	- 2.99	Downward step 2 adjustment
Overall DBE goal	12.38 %	Lower range of DBE goal
Upper range of overall DBE goal		
Base figure	15.37 %	From base figure analysis
Adjustment for "but for" factors	+ 4.55	"But for" step 2 adjustment for business ownership
Overall DBE goal	19.92 %	Upper range of DBE goal

Source: Keen Independent analysis.

Summary. ODOT will need to consider whether to make a downward, upward or no step 2 adjustment when determining its overall DBE goal. Figure 4-5 summarizes the potential adjustments described in this chapter.

Figure 4-5.
Potential step 2 adjustments to ODOT overall DBE goal for FHWA-funded contracts, FFY 2020–FFY 2022

Source: Keen Independent analysis.



C. Portion of DBE Goal for FHWA-funded Contracts to be Met through Neutral Means

The Federal DBE Program requires agencies to meet the maximum feasible portion of their overall DBE goals using race- and gender-neutral measures.⁶ Race- and gender-neutral measures are initiatives that encourage the participation of all businesses, or all small businesses, and are not specifically limited to MBE/WBEs or DBEs. Agencies must determine whether they can meet their overall DBE goals solely through neutral means or whether race- and gender-conscious measures — such as DBE contract goals — are also needed.

As part of doing so, agencies must project the portion of their overall DBE goals that they expect to meet (a) through race- and gender-neutral means, and (b) through race- and gender-conscious programs (if any). If an agency determines that it can meet its overall DBE goal solely through race- and gender-neutral means, then it would propose using only neutral measures as part of its program. The agency would project that 100 percent of its overall DBE goal would be met through neutral means. If an agency determines that a combination of race- and gender-neutral and race- and gender-conscious measures are needed to meet its overall DBE goal, then the agency would project that some percent of its overall DBE goal would be met through neutral means and that the remainder would be met through race- and gender-conscious means.

USDOT offers guidance on how agencies should make these projections, including the following:

- USDOT Questions and Answers about 49 CFR Part 26 addresses factors for federal aid recipients to consider when projecting the portion of their overall DBE goals that they will meet through race- and gender-neutral means.⁷
- USDOT “Tips for Goal-Setting” also suggests factors for federal aid recipients to consider when making such projections.⁸

Figure 4-6.

Excerpt from Explanation of Approval of [State] DBE Goal Setting Process for FY [Year]

You must also explain the basis for the State’s race-neutral/race-conscious division and why it is the State’s best estimate of the maximum amount of participation that can be achieved through race-neutral means. There are a variety of types of information that can be relied upon when determining a recipient’s race-neutral/race-conscious division. Appropriate information should give a sound analysis of the recipient’s market, the race-neutral measures it employs and information on contracting in the recipient’s contracting area. Information that could be relied on includes: the extent of participation of DBEs in the recipient’s contracts that do not have contract goals; past prime contractors’ achievements; excess DBE achievements over past goals; how many DBE primes have participated in the state’s programs in the past; or information about state, local or private contracting in similar areas that do not use contracting goals and how many minority and women’s businesses participate in programs without goals.

Source: FHWA, Explanation for Approval of [State] DBE Program Goal Setting Process for FY [Year]. http://www.fhwa.dot.gov/civilrights/dbe_memo_a4.htm.

⁶ 49 CFR Section 26.51.

⁷ See <http://www.dotcr.ost.dot.gov/Documents/Dbc/49CFRPART26.doc>.

⁸ <http://www.osdbu.dot.gov/DBEProgram/tips.cfm>.

- An FHWA template for how it considers approving DBE goal and methodology submissions includes a section on projecting the percentage of overall DBE goals to be met through neutral and conscious means. An excerpt from that template is provided in Figure 4-6.

Based on 49 CFR Part 26 and the resources above, general areas of questions that transportation agencies might ask related to making any projections include:

1. Is there evidence of discrimination within the local transportation contracting marketplace for any racial, ethnic or gender groups?
2. What has been the agency's past experience in meeting its overall DBE goal?
3. What has DBE participation been when the agency did not use race- or gender-conscious measures?⁹
4. What is the extent and effectiveness of race- and gender-neutral measures that the agency could have in place for the next fiscal year?

The balance of Chapter 4 is organized around each of those questions.

1. Is there evidence of discrimination within the local transportation contracting marketplace for any racial, ethnic or gender groups? The 2016 Disparity Study considered conditions in the local marketplace to address this question. Quantitative and qualitative information is summarized below.

Marketplace conditions. The 2016 Disparity Study examined conditions in the Oregon marketplace, including:

- Entry and advancement;
- Business ownership;
- Access to capital, bonding and insurance; and
- Success of businesses.

There was quantitative evidence of disparities in outcomes for minority- and women-owned firms in general and for certain MBE/WBE groups concerning the above issues. Disparities for women and women-owned firms include:

- Low rates of entry into construction and engineering jobs;
- Lower construction business formation rates (regression analysis controlling for neutral factors);
- Lower business loan approval rates;
- Higher rates of not applying for business loans due to fear of loan denial (regression analysis controlling for neutral factors);

⁹ USDOT guidance suggests evaluating (a) certain DBE participation as prime contractors if the DBE contract goals did not affect utilization, (b) DBE participation as prime contractors and subcontractors for agency contracts without DBE goals, and (c) overall utilization for other state, local or private contracting where contract goals are not used.

- Lower mean loan values;
- Higher interest rates;
- More likely to report difficulty in obtaining lines of credit or loans;
- More likely to report difficulty obtaining bonding;
- More likely to report insurance requirements as a barrier;
- Relatively few firms awarded contracts or subcontracts of \$1 million or more (after controlling for subindustry); and
- Lower business earnings (regression analysis after controlling for neutral factors).

Qualitative information indicated some evidence that discrimination may have been a factor in these outcomes. (It is important to note that some minority and female business owners interviewed did not think they had been affected by race or gender discrimination.)

ODOT should review the information about marketplace conditions presented in the 2016 Disparity Study, as well as other information it may have, when considering the extent to which it can meet its overall DBE goal through neutral measures.

Disparity analysis. The 2016 Disparity Study found that utilization of white women-, African American-, Asian-Pacific American and Native American-owned firms on ODOT FHWA- and state-funded contracts was substantially below what might be expected from the availability analysis. Based on further statistical analysis, Keen Independent could reject chance in the contracting process as an explanation for the disparities for MBEs.

For Hispanic American- and Subcontinent Asian American- owned firms, some of the analyses indicated disparities and some did not. The 2016 Disparity Study explores all of these results.

Summary. The combined information from the marketplace and the disparity analyses in the 2016 Disparity Study indicated evidence of discrimination against minorities and women, and minority- and women-owned firms, relevant to the Oregon transportation contracting industry.

2. What has been the agency's past experience in meeting its overall DBE goal? ODOT's reported certified DBE participation for FFY 2016 through FFY 2018 is summarized in Figure 4-7. As shown, DBE participation based on DBE commitments/awards on FHWA-funded contracts has been slightly above ODOT's overall DBE goal for FFY 2017 and below ODOT's overall DBE goals for FFY 2016 and FFY 2018.

ODOT also reported participation based on payments to DBEs. These data show participation of almost 9 percent in FFY 2016, almost 6 percent in FFY 2017 and about 6 percent in FFY 2018.

Figure 4-7.

ODOT overall DBE goal and reported DBE participation on FHWA-funded contracts, FFY 2016 through FFY 2018

Federal fiscal year	DBE goal	DBE commitments/awards	DBE payments	Difference from DBE goal	
				Awards	Payments
2016	13.10 %	9.39 %	4.29 %	-3.71 %	-8.81 %
2017	11.60	12.32	5.77	0.72	-5.83
2018	11.60	8.94	6.08	-2.66	-5.52

Source: ODOT Uniform Reports of DBE Awards/Commitments and Payments. Payments for FFY 2015 - FFY 2018 are from ongoing projects.

3. What has DBE participation been when ODOT has not applied DBE contract goals (or other race-conscious remedies)? Keen Independent examined multiple sources of information to assess race-neutral DBE participation:

- ODOT-reported race-neutral DBE participation on FHWA-funded contracts for the most recent years (FFY 2016 through FFY 2018);
- Keen Independent estimates of DBE participation on FHWA- and state-funded contracts for which no DBE contract goals applied (from the 2016 Disparity Study); and
- Information concerning DBE participation as prime contractors (for FFY 2016 through FFY 2018).

The discussion in the following two pages examines these three sets of participation figures.

Race-neutral DBE participation in recent ODOT Uniform Reports. Per USDOT instructions, ODOT counts as “neutral” participation any prime contracts going to DBEs not used to meet DBE contract goals set for a project or that were otherwise awarded in a race-neutral manner.

ODOT’s Uniform Reports of DBE Awards/Commitments and Payments submitted to FHWA for the three most recent federal fiscal years indicate race-neutral participation of:

- 5.41 percent in FFY 2016;
- 4.73 percent in FFY 2017; and
- 2.86 percent in FFY 2018.

Figure 4-8 presents these results.

Figure 4-8.

ODOT-reported race-neutral and race-conscious DBE participation on FHWA-funded contracts for FFY 2016, FFY 2017 and FFY 2018

Federal fiscal year	DBE commitments/awards		
	Total	Race-neutral	Race-conscious
2016	9.39 %	5.41 %	3.98 %
2017	12.32	4.73	7.59
2018	8.94	2.86	6.08

Source: ODOT Uniform Reports of DBE Awards/Commitments and Payments.

Figure 4-9 presents these analyses based on completed projects. ODOT reported race-neutral participation of almost 1 percent in FFY 2016, 5 percent in FFY 2017 and about 0.4 percent in FFY 2018.

Figure 4-9.

ODOT-reported race-neutral and race-conscious DBE payments for completed FHWA-funded projects for FFY 2016 and FFY 2018

Federal fiscal year	DBE payments on completed projects		
	Total	Race-neutral	Race-conscious
2016	4.43 %	0.70 %	3.73 %
2017	8.82	5.10	3.72
2018	8.65	0.40	8.25

Source: ODOT Uniform Reports of DBE Awards/Commitments and Payments.

DBE participation on contracts without DBE contract goals for October 2010 through September 2014. In the 2016 Disparity Study, Keen Independent also analyzed DBE participation on ODOT's FHWA- and state-funded contracts without DBE contract goals. ODOT achieved 5.1 percent DBE participation on these contracts from October 2010 through September 2014.

The right-hand bar in Figure 4-10 illustrates these results for non-goals contracts. As shown, 5.1 percentage points of the 9.4 percent total MBE/WBE participation on these contracts was utilization of DBE certified firms. All of the 5.1 percent DBE participation on these contracts was achieved through neutral means (this figure appeared as Figure 8-1 in the 2016 Disparity Study.)

Figure 4-10.
MBE/WBE and DBE share of dollars for
contracts with and without DBE contract
goals, October 2010-September 2014

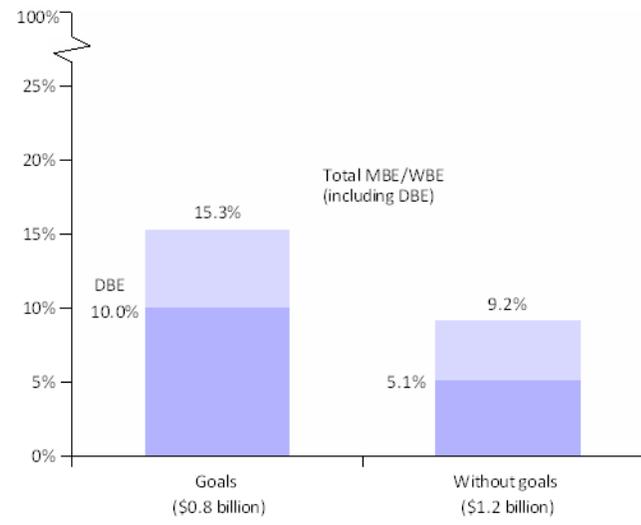
Note:

Dark portion of bar is certified DBE utilization.

Number of contracts/subcontracts analyzed is 1,980 with DBE contract goals and 6,047 without contract goals.

Source:

Keen Independent 2016 ODOT Availability and Disparity Study using data on ODOT and LPA FHWA- and state-funded prime contracts and subcontracts, October 2010-September 2014.



DBE participation as prime contractors. Focusing just on participation as prime contractors for FFY 2016 through FFY 2018, DBEs obtained on average about 1 percent of prime contract dollars on FHWA-funded contracts based on ODOT Uniform Reports.

4. What is the extent and effectiveness of race- and gender-neutral measures that the agency could have in place for the next fiscal year? When determining the extent to which it could meet its overall DBE goal through the use of neutral measures, ODOT must review the race- and gender-neutral measures that it and other organizations have in place, and those it has planned or could consider for future implementation.

Keen Independent’s discussion of neutral remedies in the 2016 Disparity Study indicates that ODOT has implemented an extensive set of neutral measures, including a Small Contracting Program (see Chapter 4 of that report).

D. Summary

Chapter 4 provides information to ODOT as it considers (a) its overall DBE goal for FHWA-funded contracts and (b) its projection of the portion of its overall DBE goal to be achieved through neutral means.

a. Selection of overall DBE goal for FFY 2020 through FFY 2022? Figure 4-11 displays three options for overall DBE goals for FHWA-funded contracts for the three fiscal years starting October 1, 2019. If ODOT decided to use a DBE goal after making a downward step 2 adjustment, it would have an overall goal of 12.38 percent, slightly above its current overall DBE goal of 11.60 percent.

b-1. Should ODOT project that it can meet all of its overall DBE goal through neutral means?

ODOT must consider whether it can achieve 100 percent of its overall DBE goal through neutral means or whether race-conscious programs are needed. Such a determination depends in part on the level of the overall DBE goal. If ODOT’s overall DBE goal for FHWA-funded contracts is in the range of 12.38 percent, available information indicates that ODOT might not meet its DBE goal solely through neutral means.

- There is information in the 2016 Disparity Study indicating disparities in outcomes for minorities and women and some qualitative evidence of discrimination within the local transportation contracting marketplace, as summarized in Chapter 7 of the 2016 Study.
- The 2016 Disparity Study estimated 5.0 percent DBE utilization on FHWA- and state-funded contracts without DBE contract goals from October 2010 through September 2014.

ODOT should consider all the information in this report, the 2016 Disparity Study and other sources when reaching its decision on any use of race- and gender-conscious programs (such as DBE contract goals).

b-2. If ODOT uses a combination of neutral means and DBE contract goals, how much of the overall DBE goal can ODOT project to be met through neutral means? For the following reasons, ODOT might consider a race-neutral projection of about 4.73 percentage points for its overall DBE goal for FFY 2020-FFY 2022:

- The race-neutral portion of ODOT’s DBE participation for FHWA-funded contracts was in the range of 2.86 to 5.41 percent based on ODOT’s reports for FFY 2016 through FFY 2018 as examined on page 14 of this chapter. Median-year neutral participation was 4.73 percent.
- ODOT neutral initiatives are already considerable.
- The 2016 Disparity Study’s analysis of DBE participation on ODOT FHWA- and state-funded contracts without DBE contract goals indicated 5.1 percent utilization of DBEs.

If ODOT achieved the same level of race-neutral participation on FHWA-funded contracts in FFY 2020 through FFY 2022 as it did for the median-year race-neutral DBE participation in the last three fiscal years, it would need to achieve 7.65 percentage points of an 12.38 percent overall DBE goal through race- and possibly gender-conscious means ($12.38\% - 4.73\% = 7.65\%$).

If the overall DBE goal were higher than 12.38 percent, ODOT might need to project a larger portion of the goal to be met through race- and gender-conscious means, as demonstrated in Figure 4-11.

- For purposes of comparison, the left-hand column of Figure 4-11 shows ODOT’s overall DBE goal and neutral projection for FFY 2017 through FFY 2019.
- The three columns to the right in Figure 4-11 present neutral and race-conscious projections for three examples of the different levels of overall DBE goals that ODOT might select for FFY 2020 through FFY 2022.
- In each column, the neutral projection (row 2) is subtracted from the overall DBE goal (row 1) to derive the race-conscious projection (row 3).

Figure 4-11.
 Current and potential new ODOT overall DBE goal and projections of race-neutral for
 FHWA-funded contracts

Component of overall DBE goal	FFY 2017- FFY 2019	FFY 2020 - FFY 2022		
		Downward adjustment	Base figure	Upward adjustment
Overall goal	11.60 %	12.38 %	15.37 %	19.92 %
Neutral projection	- <u>5.08</u>	- <u>4.73</u>	- <u>4.73</u>	- <u>4.73</u>
Race-conscious projection	6.52 %	7.65 %	10.64 %	15.19 %

APPENDIX A.

Definition of Terms

Appendix A provides explanations and definitions useful to understanding the 2019 DBE Disparity Study Update. The following definitions are only relevant in the context of this report.

A&E. “A&E” refers to architecture and engineering (i.e., “A&E contracts”).

Availability analysis. The availability analysis examines the number of minority-, women-owned and majority-owned businesses ready, willing, and able to perform transportation-related construction and engineering work for ODOT or local agencies in Oregon.

“Availability” is often expressed as the percentage of contract dollars that might be expected to go to minority- or women-owned firms based on analysis of the specific type, location, size and timing of each ODOT prime contract and subcontract and the relative number of minority- and women-owned firms available for that work.

Business. A business is a for-profit enterprise, including all its establishments (synonymous with “firm” and “company”).

Business establishment. A business establishment (or simply, “establishment”) is a place of business with an address and working phone number. One business can have many business establishments.

Business listing. A business listing is a record in the Dun & Bradstreet (D&B) database (or other database) of business information. A D&B record is a “listing” until the study team determines it to be an actual business establishment with a working phone number.

Certification Office of Business Inclusion and Diversity (COBID). The Certification Office of Business Inclusion and Diversity or “COBID” is the state agency that certifies minority- and women-owned firms, Disadvantaged Business Enterprises, Airport Concessions Disadvantaged Business Enterprises (ACDBEs) and Emerging Small Businesses (ESBs) in Oregon. COBID also administers the Service Disabled Veteran (SDV) certification.

Code of Federal Regulations or CFR. Code of Federal Regulations (“CFR”) is a codification of the federal agency regulations. An electronic version can be found at <http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>.

Contract. A contract is a legally binding agreement between the seller of goods or services and a buyer.

Contract element. A contract element is either a prime contract or subcontract that the study team included in its analyses.

Consultant. A consultant is a business performing professional services contracts.

Contractor. A contractor is a business performing construction contracts.

Controlled. Controlled means exercising management and executive authority for a business.

Disadvantaged Business Enterprise (DBE). A small business that is 51 percent or more owned and controlled by one or more individuals who are both socially and economically disadvantaged according to the guidelines in the Federal DBE Program (49 CFR Part 26). Members of certain racial and ethnic groups identified under “minority-owned business enterprise” in this appendix may meet the presumption of social and economic disadvantage. Women are also presumed to be socially and economically disadvantaged. Examination of economic disadvantage also includes investigating the three-year average gross revenues and the business owner’s personal net worth (at the time of this report, a maximum of \$1.32 million excluding equity in the business and primary personal residence).

Some minority- and women-owned businesses do not qualify as DBEs because of gross revenue or net worth limits.

A business owned by a non-minority male may also be certified as a DBE on a case-by-case basis if the enterprise meets its burden to show it is owned and controlled by one or more socially and economically disadvantaged individuals according to the requirements in 49 CFR Part 26.

Dun & Bradstreet (D&B). D&B is the leading global provider of lists of business establishments and other business information (see www.dnb.com). Hoover’s is the D&B company that provides these lists. Obtaining a DUNS number and being listed by D&B is free to listed companies; it does not require companies to pay to be listed in its database.

eBIDS. Electronic Bidding Information Distribution System, ODOT’s online bidding system for highway construction projects.

Emerging Small Business (ESB). Emerging small businesses (ESBs) are those certified by the State of Oregon as small businesses, with a time limit for participation in the program (hence “emerging”). Certification is limited to for-profit firms, not part of a larger company, with a principal place of business in Oregon. ESB certification includes two tiers, with different eligibility criteria for number of employees and annual gross receipts.

Engineering-related services. For purposes of this study, services such as surveying, transportation planning, environmental consulting, construction management and certain related professional services.

Enterprise. An enterprise is an economic unit that is a for-profit business or business establishment, not-for-profit organization or public sector organization.

ESB. See “Emerging Small Business.”

Establishment. See “business establishment.”

Federal Disadvantaged Business Enterprise (DBE) Program. Federal DBE Program refers to the Disadvantaged Business Enterprise Program established by the United States Department of Transportation after enactment of the Transportation Equity Act for the 21st Century (TEA-21) as amended in 1998. The regulations for the Federal DBE Program are set forth in 49 CFR Part 26.

Federal Highway Administration (FHWA). The FHWA is an agency of the United States Department of Transportation that works with state and local governments to construct, preserve, and improve the National Highway System, other roads eligible for federal aid, and certain roads on federal and tribal lands.

Firm. See “business.”

Federally-funded contract. A federally-funded contract is any contract or project funded in whole or in part (a dollar or more) with United States Department of Transportation financial assistance, including loans. As used in this study, it is synonymous with “USDOT-funded contract.”

Industry. An industry is a broad classification for businesses providing related goods or services.

Local agency. A local agency is any city, county, town, tribal government, regional transportation commission or other local government receiving money through ODOT.

Majority-owned business. A majority-owned business is a for-profit business that is not owned and controlled by minorities or women (see definition of “minorities” below).

MBE. Minority-owned business enterprise. See minority-owned business.

Minorities. Minorities are individuals who belong to one or more of the racial/ethnic groups identified in the federal regulations in 49 CFR Section 26.5:

- Black Americans (or “African Americans” in this study), which include persons having origins in any of the black racial groups of Africa.
- Hispanic Americans, which include persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race.
- Native Americans, which include persons who are American Indians, Eskimos, Aleuts or Native Hawaiians.
- Asian-Pacific Americans, which include persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia or Hong Kong.
- Subcontinent Asian Americans, which include persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.

Minority-owned business (MBE). An MBE is a business that is at least 51 percent owned and controlled by one or more individuals that belong to a minority group. Minority groups in this study are those listed in 49 CFR Section 26.5. For purposes of this study, a business need not be certified as such to be counted as a minority-owned business. Businesses owned by minority women are also counted as MBEs in this study (where that information is available). In this study, “MBE-certified businesses” are those that have been certified by the State of Oregon as a minority-owned company.

MWESB Program. The State of Oregon and several local governments in Oregon operate a Minority, Women and Emerging Small Business (MWESB) program which encourages utilization of minority- and women-owned firms and emerging small businesses in public contracting and procurement.

North American Industry Classification System (NAICS) codes. NAICS codes identify the primary line of business of a business enterprise. See <http://www.census.gov/epcd/www/naics.html>.

Non-DBEs. Non-DBEs are firms that are not certified as DBEs, regardless of the race/ethnicity or gender of the owner.

Non-response bias. Non-response bias occurs when the observed responses to a survey question differ from what would have been obtained if all individuals in a population, including non-respondents, had answered the question.

Oregon Association of Minority Entrepreneurs (OAME). The Oregon Association of Minority Entrepreneurs is a non-profit, tax-exempt organization focused on the promotion and development of entrepreneurship and economic development for ethnic minorities in the State of Oregon and Southwest Washington.

Oregon Bureau of Labor and Industries (BOLI). Oregon Bureau of Labor and Industries (BOLI) is the state agency responsible for enforcement of anti-discrimination laws that apply to workplaces, housing and public accommodations; enforcement of state laws related to wages, hours and terms and conditions of employment; education of employers concerning wage, hour and civil rights laws; and workforce development through apprenticeship programs and other efforts. This agency also maintains the List of Contractors Ineligible to Receive Public Works Contracts.

Oregon Department of Transportation (ODOT). ODOT is the steward of the State of Oregon’s transportation system. ODOT is responsible for building, maintaining, and operating the state highway system. In addition, ODOT works with various partners to maintain and improve local transportation infrastructure. ODOT provides other transportation services related to Oregon’s roads and bridges, railways, public transportation services, transportation safety, driver and vehicle licensing and motor carrier regulation.

Oregon Office of Minority, Women and Emerging Small Business (OMWESB). The Office of Minority, Women and Emerging Small Business is the certification authority for certification of minority- and women-owned firms, Disadvantaged Business Enterprises, Airport Concessions Disadvantaged Business Enterprises (ACDBEs) and Emerging Small Businesses (ESBs) in Oregon. Beginning January 1, 2016, OMWESB became the Certification Office of Business Inclusion and Diversity (COBID). (See Certification Office of Business Inclusion and Diversity (COBID) on page 1 of this appendix.)

Oregon Procurement Information Network (ORPIN). State of Oregon agencies use the ORPIN program to disseminate notices of certain contracting and procurement opportunities to interested companies that are registered in the system. Many local government agencies in Oregon participate in ORPIN as well.

Owned. Owned indicates at least 51 percent ownership of a company. For example, a “minority-owned” business is at least 51 percent owned by one or more minorities.

Potential DBE. A potential DBE is a minority- or woman-owned business that appears that it could be DBE-certified (and not currently DBE certified) based on revenue requirements specified as part of the Federal DBE Program.

Prime consultant. A prime consultant is a professional services firm that performs a prime contract for an end user, such as ODOT.

Prime contract. A prime contract is a contract between a prime contractor or a prime consultant and the project owner, such as ODOT.

Prime contractor. A prime contractor is a construction firm that performs a prime contract for an end user, such as ODOT.

Project. A project refers to an ODOT or local agency transportation construction and/or engineering endeavor. A project could include one or multiple prime contracts and corresponding subcontracts.

Race-and gender-conscious measures. Race- and gender-conscious measures are programs in which businesses owned by some minority groups or women may participate but majority-owned firms typically may not. A DBE contract goal is one example of a race- and gender-conscious measure.

Note that the term is a shortened version of “race-, ethnicity- and gender-conscious measures.” For ease of communication, the study team has truncated the term to “race- and gender-conscious measures.”

Race- and gender-neutral measures. Race- and gender-neutral measures apply to businesses regardless of the race/ethnicity or gender of firm ownership. Race- and gender-neutral measures may include assistance in overcoming bonding and financing obstacles, simplifying bidding procedures, providing technical assistance, establishing programs to assist start-up firms, and other methods open to all businesses or any disadvantaged business regardless of race or gender of ownership. A broader list of examples can be found in 49 CFR Section 26.51(b).

Note that the term is more accurately “race, ethnicity, and gender-neutral” measures. However, for ease of communication, the study team has shortened the term to “race- and gender-neutral measures.”

Relevant geographic market area. The relevant geographic market area is the geographic area in which the businesses receiving most ODOT and local agency contracting dollars are located. The relevant geographic market area is also referred to as the “local marketplace.” Case law related to race- and gender-conscious programs requires disparity analyses to focus on the “relevant geographic market area.”¹

SBA 8(a). SBA 8(a) is a U.S. Small business Administration business assistance program for small disadvantaged businesses owned and controlled by at least 51 percent socially and economically disadvantaged individuals.

Small business. A small business is a business with low revenues or size (based on revenue or number of employees) relative to other businesses in the industry. “Small business” does not necessarily mean that the business is certified as such.

Small Business Enterprise (SBE). A firm certified as a small business according to the size criteria of the certifying agency.

Small Business Administration (SBA). The SBA refers to the United States Small Business Administration, which is an independent agency of the United States government that assists small businesses.

Small Contracting Program. ODOT’s Small Contracting Program (SCP) encourages small business participation as prime contractors in its architectural and engineering (and related services) contracts, construction contracts, and other services contracts.

Subconsultant. A subconsultant is a professional services firm that performs services for a prime consultant as part of the prime consultant’s contract for a customer such as ODOT.

Subcontract. A subcontract is a contract between a prime contractor or prime consultant and another business selling goods or services to the prime contractor or prime consultant as part of the prime contractor’s contract for a customer such as ODOT.

¹ See, e.g., *Crosby*, 448 U.S. at 509; 49 CFR Section 26.35; *Rothe*, 545 F.3d at 1041-1042; *N. Contracting*, 473 F.3d at 718, 722-23; *Western States Paving*, 407 F.3d at 995.

Subcontract goals program. A program in which a public agency sets a percent goal for participation of DBEs, MBE/WBEs, ESBs, small businesses or another group on a contract. These programs typically require that a bidder either meet the percentage goal with members of the group or show good faith efforts to do so as part of its bid or proposal.

Subcontractor. A subcontractor is a construction firm that performs services for a prime contractor as part of a larger project.

Subrecipient. A subrecipient is a local agency receiving financial assistance from the United States Department of Transportation, passed through ODOT.

Supplier. A supplier is a firm that sells supplies to a prime contractor as part of a larger project (or in some cases sells supplies directly to ODOT).

United States Department of Transportation (USDOT). USDOT refers to the United States Department of Transportation, which includes the Federal Highway Administration, the Federal Transit Administration, the Federal Aviation Administration and the Federal Rail Administration. Note that the Federal DBE Program does not apply to contracts solely using funds from the Federal Rail Administration (at the time of this report).

Utilization. Utilization refers to the percentage of total contract dollars going to a specific group of businesses (for example, DBEs).

WBE. Woman-owned business enterprise. See women-owned business.

Women-owned business (WBE). A WBE is a business that is at least 51 percent owned and controlled by one or more individuals that are non-minority women. A business need not be certified as such to be included as a WBE in this study. For this study, businesses owned and controlled by minority women are counted as minority-owned businesses. In this study, a “WBE-certified businesses” is one certified as a woman-owned firm by the State of Oregon.

Women-Owned Small Businesses (WOSB). Under the WOSB Federal Contract Program, “WOSB” designation allows women-owned small businesses to compete on certain federal projects with set-asides in industries where women-owned small businesses are substantially underrepresented. Set-asides are also available on certain federal projects for Economically Disadvantaged Women-Owned Small Businesses (EDWOSBs). This program applies to direct contracts with federal agencies, not on contracts with agencies such as ODOT.

APPENDIX B.

Contract Data Collection

Keen Independent compiled data about ODOT and local agency transportation contracts and the firms used as prime contractors and subcontractors on those contracts. Keen Independent sought sources of data that consistently included information about prime contractors and subcontractors on FHWA-funded contracts, regardless of firm ownership or DBE status. The study team compiled data on construction, engineering and other transportation-related contracts. Data collection included contracts awarded by local agencies receiving funds through the Local Agency Certification Program.

Appendix B describes the study team's utilization data collection processes in four parts:

- A. ODOT contract and agreement data;
- B. Local agency contract data;
- C. ODOT and External Stakeholder Group review; and
- D. Data limitations.

A. ODOT Contract and Agreement Data

Keen Independent collected data on transportation-related construction and engineering contracts that ODOT awarded during the October 2014 through September 2017 study period. The study team examined 830 FHWA-funded contracts that ODOT awarded that totaled \$1.3 billion.

Keen Independent collected data on prime contracts and associated subcontracts. FHWA-funded contracts were typically for highway and bridge design or construction and related activities.

The primary sources for construction contracts were ODOT Office of Civil Rights databases identifying dollars going to prime contractors and subcontractors for each project. ODOT created these tables from its contract database to provide information such as:

- Project and contract number;
- Description of work;
- Award date;
- Award amount;
- Amendment or change order amounts (when applicable);
- Location of work (i.e., region);
- Whether the contract included FHWA funding;
- Prime contractor name;
- DBE status of the firm at the moment of contract award;
- Whether DBE goals were applied, and if so, level of goal; and
- For subcontractors, firm names, dollar amounts and type of work performed.

Review of in- and out-of-scope contracts. Some of the data received were for contracts that were out-of-scope for reasons including funding type (e.g., FTA-funded) or contract date (outside the study period).

B. Local Agency Contract Data

Under its Stewardship Agreement with FHWA, ODOT administers FHWA funding that goes to local agencies throughout the state. ODOT established the Certified Program Office, Statewide Program Unit to administer these local agency contracts. Sometimes ODOT awards those contracts on behalf of the local agencies. In other instances, cities, counties, regional transportation agencies, other local agencies and tribal entities award transportation contracts and ODOT reimburses the local agencies using federal or state funds.

When federal funds are involved, USDOT requires local agencies to comply with federal requirements including implementation of the Federal DBE Program. In addition to any federal requirements, Oregon state law governs local government public works contracting.

Certification Acceptance agencies. Eleven Certification Acceptance (CA) agencies self-advertise, award and manage their own engineering and construction contracts awarded using local agency money from ODOT. The eleven agencies are five counties (Clackamas, Linn, Lane, Marion and Multnomah) and six cities (Corvallis, Eugene, Gresham, Medford, Portland and Salem). ODOT administers the advertising, awarding and managing of all other local agency construction and engineering contracts.

Data collection. ODOT's contract database included local agency contracts during the October 2014 through September 2017 study period. The study team examined 86 local agency prime contracts and 877 subcontracts totaling \$318 million.

C. ODOT and External Stakeholder Review

Keen Independent met with ODOT External Stakeholder Group at the beginning, middle and end of the study to discuss methodology and present preliminary result. External Stakeholder Group members included FHWA, DBEs, other contractors and trade associations.

D. Data Limitations

ODOT had more comprehensive information about contract and subcontract awards than payments for those contracts and subcontracts. Therefore, for most contracts, Keen Independent collected and analyzed data on awarded amounts.

ODOT showed an improvement in its data collection efforts. The Office of Civil Rights was able to provide most of the FHWA data for this study. Different from the 2016 Disparity Study conducted by Keen Independent, engineering data was in an electronic format.

APPENDIX C.

General Approach to Availability Analysis

The study team compiled data on MBEs, WBEs and majority-owned firms available for ODOT contracts and developed dollar-weighted estimates of MBE/WBE availability based on analysis of individual transportation-related construction and engineering prime contracts and subcontracts. Keen Independent then adjusted the MBE/WBE availability to generate results for current and potential DBEs. Appendix C explains the availability methodology and results in five parts:

- A. General approach to collecting availability information;
- B. Development of the survey instruments;
- C. Execution of surveys;
- D. Additional considerations related to measuring availability; and
- E. The survey instrument.

A. General Approach to Collecting Availability Information

Keen Independent collected information from firms about their availability for ODOT and local government contracts through telephone and online surveys.

Listings. The firms contacted in the availability surveys came from several sources:

- Company representatives who had previously identified themselves to ODOT as interested in learning about future work by registering with the State of Oregon's Oregon Procurement Information Network (ORPIN), through ODOT's electronic Bidding Information Distribution system/database (eBIDS), and by being on bidding lists.
- Businesses that Dun & Bradstreet (D&B) identified in certain transportation contracting-related subindustries in Oregon or Southwest Washington (D&B's Hoover's business establishment database).

The availability analysis focused on companies in Oregon and two counties in Washington (Clark and Skamania counties) performing types of work most relevant to ODOT and local agency transportation construction and engineering contracts (including subcontracts, trucking and supplies for those contracts). As such, Keen Independent did not include all firm listings in the bidder/vendor lists or D&B database in the availability surveys, as described below.

ORPIN and other ODOT bidder, vendor and planholder lists. ODOT provided several lists of bidders, vendors and planholders for construction, professional services and other work. The individuals and businesses on these lists identified that they are interested in bidding on ODOT construction- and engineering-related contracting opportunities. The lists include:

- **ORPIN** — Individuals and businesses interested in bidding on Oregon state agency (including ODOT) and many local government opportunities can register as a vendor on the Oregon Procurement Information Network (ORPIN), an online database of firms that have indicated they are ready, willing and able to perform work on public agency projects in Oregon. Oregon Department of Administrative Services provided a list of more than 84,000 subscribers as of September 2018.

Keen Independent analyzed the list, removed subscribers with addresses outside the relevant geographic market area, deleted duplicate firms, and removed subscribers that did not pertain to transportation contracting.

- **Construction prime bidder** — The construction prime bidder list includes all construction contractors who submitted a prime bid for an ODOT construction project during the study period.
- **Construction planholders** — Prime and subcontractors can sign up for ODOT's electronic Bidding Information Distribution system/database (eBIDS). This enables them to view the plans and specifications for ODOT's advertised projects. Contractors who want to bid as a prime must place themselves on the Holders of Bidding Plans list. Subcontractors and other interested parties (e.g., plan centers) who would like to download the plans and specifications must place themselves on the Holders of Informational Plans list. eBIDS users can view the planholders lists to find that might be interested in receiving sub-quotes and companies from which to request sub-quotes. Businesses that have registered on eBIDS comprise this list.
- **Construction vendors** — This list of firms includes all prime and subcontractors that have bid or been awarded an ODOT project.
- **A&E bid respondents** — this list was comprised of data collected on vendors who responded to A&E requests for proposals.
- **A&E vendors** — A&E vendors list includes all contractors that responded to A&E proposals.

Keen Independent attempted to exclude any listings for government agencies and not-for-profit organizations. (Not all such organizations were successfully excluded from the initial list, but representatives indicated that the organization was not a business when surveyed.)

Dun & Bradstreet Hoover's database. There might be other firms available for ODOT work that do not appear on ODOT lists. Therefore, Keen Independent supplemented the firms on the ODOT lists by acquiring Dun & Bradstreet data for firms in Oregon and Southwest Washington that do business in relevant subindustries.

Dun & Bradstreet's Hoover's affiliate maintains the largest commercially-available database of U.S. businesses. The study team used D&B listings to supplement the companies identified in ODOT's databases of bidders, vendors and planholders.

Keen Independent determined the types of work involved in ODOT contract elements by reviewing prime contract and subcontract dollars that went to different types of businesses during the study period. D&B classifies types of work by 8-digit work specialization codes.¹ Figure C-1 identifies the work specialization codes the study team determined were the most related to the FHWA-funded contracts and subcontracts examined in the study.

Keen Independent obtained a list of firms from the D&B Hoover's database within relevant work codes that had locations within Oregon and the two Washington counties. D&B provided phone numbers for these businesses.

Total listings. Keen Independent attempted to consolidate information when a firm had multiple listings across different data sources. After consolidation, the data sources provided 11,476 unique listings for businesses the availability surveys.

Keen Independent did not draw a sample of those firms for the availability analysis; rather, the study team attempted to contact each business through telephone surveys and other methods. Some courts have referred to similar approaches to gathering availability data as a "custom census."

Online surveys. For firms from the ODOT sources described above that had email addresses, ODOT Office of Civil Rights sent an initial request and a follow up reminder that asked firms to complete the online availability survey.

Telephone surveys. Keen Independent retained Customer Research International (CRI) to conduct telephone surveys with listed businesses. After receiving the list described above, CRI used the following steps to complete telephone surveys with business establishments:

- Firms were contacted by telephone. Up to five phone calls were made at different times of day and different days of the week to attempt to reach each company.
- Interviewers indicated that the calls were made on behalf of the Oregon Department of Transportation for purposes of expanding its list of companies interested in performing ODOT transportation-related work.
- Some firms indicated in the phone calls that they had no interest in ODOT work, so no further survey was necessary. (Such surveys were treated as complete at that point.)

Other avenues to complete a survey. Even if a company was not directly contacted by the study team, business owners could complete a survey for their company online or request a fax or PDF version of the survey.

¹ D&B has developed 8-digit industry codes to provide more precise definitions of firm specializations than the 4-digit SIC codes or the NAICS codes that the federal government has prepared.

Figure C-1. D&B 8-digit codes for availability list source

Code	Description	Code	Description
07820200	Lawn services	17310203	Environmental system control installation
07820202	Fertilizing services, lawn	17310300	Communications specialization
07820203	Lawn care services	17310301	Cable television installation
07820204	Mowing services, lawn	17310302	Fiber optic cable installation
07820206	Seeding services, lawn	17310303	Sound equipment specialization
07820207	Sodding contractor	17310304	Telephone and telephone equipment installation
07820208	Spraying services, lawn	17310305	Voice, data, and video wiring contractor
07820210	Turf installation services, except artificial	17310400	Safety and security specialization
16110000	Highway and street construction	17310401	Access control systems specialization
16110100	Highway signs and guardrails	17310402	Closed circuit television installation
16110101	Guardrail construction, highways	17310403	Fire detection and burglar alarm systems
16110102	Highway and street sign installation	17319901	Banking machine installation and service
16110200	Surfacing and paving	17319902	Computer installation
16110201	Airport runway construction	17319903	General electrical contractor
16110202	Concrete construction: roads, highways, sidewalks,	17319904	Lighting contractor
16110203	Grading	17710200	Curb and sidewalk contractors
16110204	Highway and street paving contractor	17710201	Curb construction
16110205	Resurfacing contractor	17710202	Sidewalk contractor
16110206	Sidewalk construction	17719901	Concrete pumping
16110207	Gravel or dirt road construction	17719902	Concrete repair
16119900	Highway and street construction, nec	17719903	Flooring contractor
16119901	General contractor, highway and street construction	17719904	Foundation and footing contractor
16119902	Highway and street maintenance	17719905	Patio construction, concrete
16119903	Highway reflector installation	17910000	Structural steel erection
16220000	Bridge, tunnel, and elevated highway construction	17919900	Structural steel erection, nec
16229900	Bridge, tunnel, and elevated highway, nec	17919901	Building front installation, metal
16229901	Bridge construction	17919902	Concrete reinforcement, placing of
16229902	Highway construction, elevated	17919903	Elevator front installation, metal
16229903	Tunnel construction	17919904	Exterior wall system installation
16229904	Viaduct construction	17919905	Iron work, structural
16230000	Water, sewer, and utility lines	17919906	Metal lath and furring
16230300	Water and sewer line construction	17919907	Precast concrete struct. frmng or panels, placing
16230301	Aqueduct construction	17919908	Smoke stacks, steel: installation and maintenance
16230302	Sewer line construction	17919909	Storage tanks, metal: erection
16230303	Water main construction	29110505	Road materials, bituminous
16239902	Manhole construction	29110506	Road oils
16239903	Pipe laying construction	29510200	Paving mixtures
16239904	Pipeline construction, nsk	29510202	Coal tar paving materials (not from refineries)
16239905	Pumping station construction	29510204	Concrete, bituminous
16239906	Underground utilities contractor	29510206	Road materials, bituminous (not from ref.)
17210302	Bridge painting	32720710	Pier footings, prefabricated concrete
17210303	Pavement marking contractor	32720711	Piling, prefabricated concrete
17310000	Electrical work	32729903	Paving materials, prefabricated concrete
17310100	Electric power systems contractors	33120400	Structural and rail mill products
17310102	Computer power conditioning	34410201	Bridge sections, prefabricated, highway
17310104	Switchgear and related devices installation	34490100	Fabricated bar joists, concrete reinforcing bars
17310200	Electronic controls installation	42120000	Local trucking, without storage
17310201	Computerized controls installation	42120202	Petroleum haulage, local
17310202	Energy management controls	42120000	Local trucking, without storage
		42120202	Petroleum haulage, local

Figure C-1. D&B 8-digit codes for availability list source (cont.)

Code	Description	Code	Description
42129904	Draying, local: without storage	87130000	Surveying services
42129905	Dump truck haulage	87139900	Surveying services, nec
42129907	Hazardous waste transport	87139901	Photogrammetric engineering
42129908	Heavy machinery transport, local	87139902	Surveying technicians
50320102	Paving mixtures	87340000	Testing laboratories
50320504	Concrete mixtures	87340100	Radiation laboratories
50329901	Aggregate	87340104	X-ray inspection service, industrial
50399914	Metal guardrails	87340300	Pollution testing
50510216	Steel	87349905	Hydrostatic testing laboratory
73899921	Flagging service (traffic control)	87349907	Metallurgical testing laboratory
87110000	Engineering services	87349909	Soil analysis
87110400	Construction and civil engineering	87349911	Water testing laboratory
87110401	Building construction consultant	87419902	Construction management
87110402	Civil engineering	87420410	Transportation consultant
87110404	Structural engineering	87489905	Environmental consultant
87119901	Acoustical engineering	89990700	Earth science services
87119903	Consulting engineer	89990701	Geological consultant
87119909	Professional engineer	89990702	Geophysical consultant

B. Development of the Survey Instruments

Keen Independent developed the survey instruments and ODOT staff reviewed them prior to the start of the survey effort. The final instrument is presented at the end of this appendix.

Survey structure. The availability survey included nine sections. Note that the study team did not know the race, ethnicity or gender of the business owner when calling a business establishment. Obtaining that information was a key component of the survey.

Areas of survey questions included:

- **Identification of purpose.** The surveys began by identifying ODOT as the survey sponsor and describing the purpose of the study (i.e., “compiling a list of companies interested in working on road, highway and bridge projects”).
- **Verification of correct business name.** CRI confirmed that the business reached was in fact the business sought out.
- **Contact information.** CRI then collected complete contact information for the establishment and the individual who completed the survey.
- **Verification of work related to transportation-related projects.** The interviewer asked whether the organization does work or provides materials related to construction, maintenance or design on transportation-related projects. Interviewers continued the survey with businesses regardless of how they responded to this question; however, this response was taken into account when determining whether the firm performs transportation-related work (see Figure C-3 for more information).

- **Verification of for-profit business status.** The survey then asked whether the organization was a for-profit business as opposed to a government or not-for-profit entity. Interviewers continued the survey with businesses that responded “yes” to that question.
- **Identification of main lines of business.** Businesses then chose from a list of work types that their firm performed in categories of construction-related work, engineering-related work and supply activities. In addition to choosing all areas that the firms did work, the study team asked businesses to briefly describe their main line of business as an open-ended question.
- **Sole location or multiple locations.** The interviewer asked business owners or managers if their businesses had other locations and whether their establishments were affiliates or subsidiaries of other firms. (Keen Independent combined responses from multiple locations into a single record for multi-establishment firms.)
- **Past bids or work with government agencies and private sector organizations.** The survey then asked about bids and work on past government and private sector contracts. The questions were asked in connection with both prime contracts and subcontracts.
- **Qualifications and interest in future transportation work.** The interviewer asked about businesses’ qualifications and interest in future work with ODOT and other government agencies in connection with both prime contracts and subcontracts.
- **Geographic areas.** Interviewees were asked whether they could do work in several geographic areas in Oregon: Portland/Hood River region, Willamette Valley and Northwest Oregon region, Southwestern Oregon, Central Oregon and Eastern Oregon.
- **Largest contracts.** The study team asked businesses to identify the value of the largest transportation-related contract or subcontract on which they had bid on or had been awarded in Oregon during the past three years.
- **Ownership.** Businesses were asked if at least 51 percent of the firm was owned and controlled by women and/or minorities. If businesses indicated that they were minority-owned, they were also asked about the race and ethnicity of owners. The study team reviewed reported ownership against other available data sources such as DBE and MBE directories.
- **Business background.** The study team asked businesses to identify the approximate year in which the firm was established. The interviewer asked several questions about the size of businesses in terms of their revenues and number of employees. For businesses with multiple locations, this section also asked about their revenues and number of employees across all locations.

C. Execution of Surveys

Keen Independent held planning and training sessions with CRI as part of the launch of the availability surveys. CRI began conducting full availability surveys in late November of 2018 and completed the surveys in mid-December.

To minimize non-response, CRI made at least five attempts at different times of day and on different days of the week to reach each business establishment. CRI identified and attempted to interview an available company representative such as the owner, manager or other key official who could provide accurate and detailed responses to the questions included in the survey.

Establishments that the study team successfully contacted. Figure C-2 presents the disposition of the businesses the study team attempted to contact for availability surveys. Note that the following analysis is based on business counts after Keen Independent removed duplicate listings (this list included 11,476 unique businesses).

Non-working or wrong phone numbers. Some of the business listings that the study team attempted to contact were:

- Non-working phone numbers (1,807); or
- Wrong numbers for the desired businesses (136).

Some non-working phone and wrong numbers reflected business establishments that closed, were sold or changed their names and phone numbers between the time that a source listed them and the time that the study team attempted to contact them.

Figure C-2.
Disposition of
attempts to survey
business
establishments

Note:
Study team made at
least five attempts to
complete an interview
with each
establishment.

Source:
Keen Independent from
2018 Availability
Surveys.

	Number of firms	Percent of business listings
Beginning list	11,476	
Less non-working phone numbers	1,807	
Less wrong number	136	
Firms with working phone numbers	9,533	100.0 %
Less no answer	4,824	
Less could not reach responsible staff member	229	
Less could not continue in English	39	
Less unreturned fax/email	231	
Less said already completed online survey, but hadn't	16	
Firms successfully contacted	4,194	44.0 %

Working phone numbers. As shown in Figure C-2, there were 9,533 businesses with working phone numbers that the study team attempted to contact. For various reasons, the study team was unable to contact some of those businesses:

- **No answer.** Some businesses could not be reached after at least five attempts at different times of the day and on different days of the week (4,824) establishments.
- **Could not reach responsible staff member.** For a small number of businesses (229), after repeated attempts a responsible staff person could not be reached to complete the survey.
- **Could not complete the survey in English or Spanish.** Language barriers presented a difficulty in conducting the survey for 39 companies (mix of languages including Russian, Chinese, etc.).
- **Unreturned fax or email surveys.** The study team sent email invitations to those who requested a link to the online survey or requested to do the survey via fax. There were 231 businesses that requested such surveys but did not return them.
- **Respondent indicated that they had already completed an online or phone survey.** There were 16 respondents who said that they had already completed the online or phone survey that were not found within the online or phone survey responses.

After taking those unsuccessful attempts into account, the study team was able to successfully contact 4,194 businesses, or 44 percent of those with working phone numbers.

Establishments included in the availability database. Figure C-3 presents the disposition of the 4,194 businesses the study team successfully contacted and how that number resulted in the 1,138 businesses the study team included in the availability database.

Figure C-3.
Disposition of
successfully contacted
businesses

Source:
Keen Independent from
2018 Availability Surveys.

	Number of firms
Firms successfully contacted	4,194
Less businesses not interested in discussing availability for ODOT work	1,973
Less no longer in business	455
Firms that completed interviews about business characteristics	1,766
Less no road- and highway-related work	451
Less not a for-profit business	405
Firms included in availability database	910
Plus firms that completed online survey*	228
Total firms included in availability database	1,138

Establishments not interested in discussing availability for ODOT work. Of the 4,194 businesses that the study team successfully contacted, 1,973 were not interested in discussing their availability for ODOT work. In Keen Independent's experience, those types of responses are often firms that do not perform relevant types of work. Another 455 respondents indicated that their companies were no longer in business.

Businesses included in the availability database. Many firms completing availability surveys were not included in the final availability database because they indicated that they did not perform work related to transportation contracting or reported that they were not a for-profit business:

- Keen Independent excluded 451 businesses that indicated that they were not involved in transportation contracting work.
- Of the completed surveys, 405 indicated that they were not a for-profit business (including non-profits, residences or government agencies). Surveys ended when respondents reported that their establishments were not for-profit businesses.

After those final screening steps, the survey effort produced a database of 910 businesses potentially available for ODOT work. An additional 228 businesses completed an online survey indicating their availability for ODOT work, creating a final database of 1,138 potentially available firms. Of the 228 firms completing an online survey, 222 were firms from the ORPIN list that received an email about the survey from ODOT. The other six were businesses that filled out a public online survey.

Coding responses from multi-location businesses. As described above, there were multiple responses from some firms. Responses from different locations of the same business were combined into a single, summary data record after reviewing the multiple responses.

D. Additional Considerations Related to Measuring Availability

The study team made several additional considerations related to its approach to measuring availability, particularly as they related to ODOT's implementation of the Federal DBE program.

Not providing a count of all businesses available for ODOT work. The purpose of the availability surveys was to provide precise, unbiased estimates of the percentage of MBE/WBEs potentially available for ODOT work. The research appropriately focused on firms in highway-related subindustries and the relevant geographic area for ODOT transportation contracting. Subindustries that comprised a very small portion of ODOT highway-related work were not included. Keen Independent did not purchase Dun & Bradstreet data for firms outside Oregon and Southwest Washington. And, not all firms on the list of businesses completed surveys, even after repeated attempts to contact them. Therefore, the availability analysis did not provide a comprehensive listing of *every* business that could be available for all types of ODOT work and should not be used in that way.

Federal courts have approved similar approaches to measuring availability to the methodology used in this study. The United States Department of Transportation's (USDOT's) "Tips for Goals Setting in the Disadvantaged Business Enterprise (DBE) Program" also recommends a similar approach to measuring availability for agencies implementing the Federal DBE Program.²

Not using a "headcount" based solely on ODOT lists. USDOT guidance for determining MBE/WBE availability recommends dividing the number of businesses in an agency's DBE directory by the total number of businesses in the marketplace, as reported in U.S. Census data. As another option, USDOT suggests using a list of prequalified businesses or a bidders list to estimate the availability of MBE/WBEs for an agency's prime contracts and subcontracts.

Keen Independent used ODOT lists that included firms that expressed interest in ODOT work, but also included other firms potentially available for ODOT contracts as well. This helps capture firms that might have been discouraged from pursuing ODOT work and did not appear on ODOT lists.

Keen Independent's approach to measuring availability in this study also incorporates several layers of refinement to a simple head count approach. For example, the surveys provide data on businesses' qualifications, size of contracts they bid on and interest in ODOT work, which allowed the study team to take a more refined approach to measuring availability.

Using D&B lists. Keen Independent supplemented business lists obtained from ODOT with Dun & Bradstreet business listings for Oregon and Southwest Washington. Note that D&B does not require firms to pay a fee to be included in its listings — it is completely free to listed firms. D&B provides the most comprehensive private database of business listings in the United States. Even so, the database does not include all establishments operating in Oregon due to the following reasons:

- There can be a lag between formation of a new business and inclusion in D&B listings, meaning that the newest businesses may be underrepresented in the sample frame.
- Although D&B includes home-based businesses, those businesses are more difficult to identify and are thus somewhat less likely than other businesses to be included in D&B listings. Small, home-based businesses are more likely than large businesses to be minority- or women-owned, which suggests that MBE/WBEs might be underrepresented in the final availability database.
- Some businesses providing transportation construction or engineering-related work might not be classified as such in the D&B data.

Because Keen Independent used several ODOT data sources of business listings for the availability analysis as well as D&B lists, the final survey list captures some firms not included in the D&B data. (The study team estimates that about one-third of the completed surveys were firms not on the list of firms purchased from D&B.)

² Tips for Goal-Setting in the Disadvantaged Business Enterprise (DBE) Program. Retrieved from <http://www.osdbu.dot.gov/dbeprogram/tips.cfm>

Selection of specific subindustries. Keen Independent identified specific subindustries when compiling business listings from Dun & Bradstreet. D&B provides highly specialized, 8-digit codes to assist in selecting firms within specific specializations. There are limitations when choosing specific D&B work specialization codes to define sets of establishments to be surveyed, which leave some businesses off the contact list. However, Keen Independent's use of additional ODOT data (ORPIN, eBids, bidders/proposers lists, planholders lists, etc.) for Oregon mitigates this potential concern.

Large number of companies reporting that they do not perform highway-related work or were not interested in discussing ODOT work. Many firms contacted in the availability surveys indicated that they did not perform related work or were otherwise not interested in ODOT work. The number of responses fitting these categories reflects the fact that Keen Independent was necessarily broad when developing its initial lists.

For example, Dun & Bradstreet does not have a subindustry code that identifies the subset of electrical firms or trucking firms that perform highway-related work. Therefore, Keen Independent acquired a general list of electrical firms (code 17310000) and local trucking firms (code 42120000), and through surveys identified which firms would perform highway or other transportation work. Most did not. Many of the firms indicating that they were not interested in discussing ODOT work were in electrical, trucking, site work and engineering services.

Non-response bias. An analysis of non-response bias considers whether businesses that were not successfully surveyed are systematically different from those that were successfully surveyed and included in the final data set. There are opportunities for non-response bias in any survey effort. The study team considered the potential for non-response bias due to:

- Research sponsorship;
- Differences in success reaching potential interviewees; and
- Language barriers.

Research sponsorship. Interviewers introduced themselves by identifying ODOT as the survey sponsor because businesses may be less likely to answer somewhat sensitive business questions if the interviewer was unable to identify the sponsor.

Differences in success reaching potential interviewees. There might be differences in the success reaching firms in different types of work. However, Keen Independent concludes that any such differences did not lead to lower estimates of MBE/WBE availability than if the study team had been able to successfully reach all firms.

Businesses in highly mobile fields, such as trucking, are more difficult to reach for availability surveys than businesses more likely to work out of fixed offices (e.g., engineering firms). That assertion suggests that response rates may differ by work specialization. Simply counting all surveyed businesses across work specializations to determine overall MBE/WBE availability would lead to estimates that were biased in favor of businesses that could be easily contacted by email or telephone.

However, work specialization as a potential source of non-response bias in the availability analysis is minimized because the availability analysis examines businesses within particular work fields before determining an MBE/WBE availability figure. In other words, the potential for trucking firms to be less likely to complete a survey is less important because the number of MBE/WBE trucking firms is compared with the number of total trucking firms when calculating availability for trucking work.

Keen Independent examined whether minority- and women-owned firms were more difficult to reach in the telephone survey and found no indication that interviewers were less likely to complete telephone surveys with MBE/WBEs than majority-owned firms. The study team examined response rates based on MBE/WBE versus non-MBE/WBE business ownership data in the purchased Dun & Bradstreet list. Comparing MBE/WBE representation on the initial list from Dun & Bradstreet with MBE/WBE representation on the list of firms (from the D&B source) that were successfully contacted, MBE/WBE firms were just slightly more likely to be successfully contacted than majority-owned firms (firms D&B identified as MBE/WBEs were 8.5% of initial list and 9.0% of successfully surveyed firms). There is no indication that there were differences in response rates that materially affected the estimates of MBE/WBE availability in this study.

Potential language barriers. Because of the methods explained previously in this appendix, any language barriers were minimal. Study results do not appear to have been affected by conducting the principal portions of the availability survey in English.

Response reliability. Business owners and managers were asked questions that may be difficult to answer, including questions about revenue and employment.

Keen Independent explored the reliability of survey responses in a number of ways. For example:

- Keen Independent reviewed data from the availability surveys in light of information from other sources such as ORPIN and other vendor information that the study team collected from ODOT. This includes data on the race/ethnicity and gender of the owners of DBE-certified businesses and was compared with survey responses concerning business ownership.
- Keen Independent used DBE directories and other sources of information to confirm information about the race/ethnicity and gender of business ownership that it obtained from availability surveys.

A copy of the survey instrument for construction follows.

E. Availability Survey Instrument

OREGON DEPARTMENT OF TRANSPORTATION FAX/EMAIL SURVEY (CONSTRUCTION VERSION)

The information developed in these interviews will add to ODOT's existing data on companies interested in working with the Department.

If you have any questions, please contact: **Codi Trudell**
Oregon Department of Transportation (ODOT)
DBE Program Manager
503-986-4355

You may also visit <https://www.oregon.gov/ODOT/Business/OCR/Pages/Disadvantaged-Business-Enterprise.aspx> to learn more.

Z5. What is the name of your business?

Z8. Address of business (if multiple offices, choose an Oregon location if possible):

Street Address: _____

City (Required): _____

State (Required): _____

ZIP: _____

A1. Does your firm do any work related to road, highway and bridge projects? This includes any construction, engineering and design, trucking, and materials supply on highways, roads, bridges and related projects.

- 01=Yes
- 02=No
- 98=Don't know

A2. Is your firm a business, as opposed to a non-profit organization, a foundation or a government office?

- 01=Yes
- 02=No
- 98=Don't know

A4. What would you say is the main line of business of your company?

A5. Is the address of your business, as provided earlier, the sole location for your business, or do you have offices in other locations?

- 01=Sole location
- 02=Have other locations
- 98=Don't know

A6. Is your company a subsidiary or affiliate of another firm?

- 01=Independent **[SKIP TO B1]**
- 02=Subsidiary or affiliate of another firm
- 98=Don't know **[SKIP TO B1]**

A7. What is the name of your parent company?

B1. What types of work does your firm perform related to construction? Select all that apply.

- 01=General road construction and widening
- 02=Bridge and elevated highway construction
- 03=Electrical work including lighting and signals
- 04=Structural steel work
- 05=Excavation, site prep, grading and drainage
- 06=Wrecking and demolition
- 07=Landscaping and related work, including erosion control
- 08=Installation of guardrails, fencing or signs (traffic or highway signs)
- 09=Asphalt, concrete or other paving
- 10=Pavement surface treatment (such as sealing)
- 11= Pavement milling
- 12=Painting for road or bridge projects
- 13=Striping or pavement marking
- 14=Concrete flatwork (including sidewalk, curb and gutter)
- 15=Drilling and foundations
- 16= Concrete pumping
- 17=Concrete cutting
- 18=Other concrete work
- 19=Temporary traffic control
- 20=Trucking and hauling
- 21=Underground utilities
- 22=Construction remediation and clean-up
- 31=Inspection and testing
- 32=Construction management
- 88=Other (Please specify): _____
- 98=(Don't know)

C1. During the past three years, has your company submitted a bid on or been awarded work for any part of a contract for a state or local government agency in Oregon?

- 1=Yes
- 2=No **[SKIP TO C3]**
- 98=(Don't know) **[SKIP TO C3]**

C2. For those bids or awards, which of the following describes your role? Please select all that apply.

- 1=Prime contractor
- 2=Subcontractor
- 3=Trucker or hauler
- 4=Supplier or manufacturer
- 98=(Don't know)

C3. Thinking about future transportation-related work, is your company qualified and interested in working with ODOT or local agencies as a prime contractor?

- 1=Yes
- 2=No
- 98=(Don't know)

C4. Thinking about future transportation-related work, is your company qualified and interested in working with ODOT or local agencies as a subcontractor or supplier?

- 1=Yes
- 2=No
- 98=(Don't know)

The next questions pertain to the geographic areas in Oregon where your company can perform work.

D1. Can your company do work in the Portland/Hood River region?

- 1=Yes
- 2=No
- 98=(Don't know)

D2. Can your company do work in the Willamette Valley and Northwest Oregon region, such as Salem, Newport and Eugene?

- 1=Yes
- 2=No
- 98=(Don't know)

D3. Can your company do work in Southwestern Oregon such as Roseburg and Medford?

- 1=Yes
- 2=No
- 98=(Don't know)

D4. Can your company do work in Central Oregon such as Bend and Klamath Falls?

- 1=Yes
- 2=No
- 98=(Don't know)

D5. Can your company do work in Eastern Oregon such as Pendleton, La Grande and Burns?

- 1=Yes
- 2=No
- 98=(Don't know)

E1. In rough dollar terms, in the past three years what was the largest road-, highway-, or bridge-related contract or subcontract your company was awarded, bid on, or submitted quotes for in Oregon?

- | | |
|--|--|
| <input type="radio"/> 1=\$100,000 or less | <input type="radio"/> 7=More than \$10 million up to \$20 million |
| <input type="radio"/> 2=More than \$100,000 up to \$500,000 | <input type="radio"/> 8=More than \$20 million up to \$100 million |
| <input type="radio"/> 3=More than \$500,000 up to \$1 million | <input type="radio"/> 9=More than \$100 million |
| <input type="radio"/> 4=More than \$1 million up to \$2 million | <input type="radio"/> 97=(None) |
| <input type="radio"/> 5=More than \$2 million up to \$5 million | <input type="radio"/> 98=(Don't know) |
| <input type="radio"/> 6=More than \$5 million up to \$10 million | |

The next questions are about the ownership of the business.

F1. A business is defined as woman-owned if more than half—that is, 51 percent or more—of the ownership and control is by women. By this definition, is your firm a woman-owned business?

- 1=Yes
- 2=No
- 98=(Don't know)

F2. A business is defined as minority-owned if more than half—that is, 51 percent or more—of the ownership and control is African American, Asian, Hispanic, Native American or another minority group. By this definition, is your firm a minority-owned business?

- 1=Yes
- 2=No **[SKIP TO G1]**
- 98=(Don't know) **[SKIP TO G1]**

F3. Would you say that the minority group ownership is mostly African American, Asian-Pacific American, Hispanic American, Native American or Subcontinent Asian American?

- 1=African American
- 2=Asian Pacific American

- 3=Hispanic American or Portuguese American
- 4=Native American
- 5=Subcontinent Asian American
- 6=Other group (Please specify) _____
- 98=(Don't know)

The next questions are about the background of the business.

G1. About what year was your firm established?

The next set of questions pertain to annual averages for your company for the past three years (or just years in business if formed after 2015).

G3. About how many employees did you have working out of just your location, on average, over the past three years? (Includes employees who work at that location and those who work from that location.)

G5. Think about the annual gross revenue of your company, considering just your location. Please estimate the annual average for the past three years.

- | | |
|--|--|
| <input type="radio"/> 1=Up to \$0.5 million | <input type="radio"/> 7=\$15.1 million to \$24 million |
| <input type="radio"/> 2=\$0.6 million to \$1 million | <input type="radio"/> 8=\$24.1 million to \$27.5 million |
| <input type="radio"/> 3=\$1.1 million to \$3.5 million | <input type="radio"/> 9=\$27.6 million to \$36.5 million |
| <input type="radio"/> 4=\$3.6 million to \$7.5 million | <input type="radio"/> 10=\$36.6 million or more |
| <input type="radio"/> 5=\$7.6 million to \$11 million | <input type="radio"/> 98=(Don't know) |
| <input type="radio"/> 6=\$11.1 million to \$15 million | |

G6. [SKIP IF YOUR FIRM DOES NOT HAVE OTHER LOCATIONS]

About how many employees did you have, on average, for all of your locations over the past three years?

(Number of employees at all locations should not be fewer than at "just your location.")

G7. [SKIP IF YOUR FIRM DOES NOT HAVE OTHER LOCATIONS]

Think about the annual gross revenue of your company, for all your locations. Please estimate the annual average for the past three years.

(Revenue at all locations should not be less than at "just your location.")

- 1=Up to \$0.5 million
- 2=\$0.6 million to \$1 million
- 3=\$1.1 million to \$3.5 million
- 4=\$3.6 million to \$7.5 million
- 5=\$7.6 million to \$11 million
- 6=\$11.1 million to \$15 million
- 7=\$15.1 million to \$24 million
- 8=\$24.1 million to \$27.5 million
- 9=\$27.6 million to \$36.5 million
- 10=\$36.6 million or more
- 98=(Don't know)

Just a few last questions.

I1. What is your name?

I2. What is your position at the firm?

1=Receptionist

2=Owner

3=Manager

4=CFO

5=CEO

6=Assistant to Owner/CEO

7=Sales manager

8=Office manager

9=President

88=Other (Please specify):

I4. If you would like to receive information from the Oregon Department of Transportation, what mailing address should they use?

Street Address: _____

City: _____

State: _____

ZIP: _____

I5. What fax number should ODOT use to fax any materials to you?

I5P. What phone number should ODOT use to contact you?

I6. What e-mail address could ODOT use to get any materials to you?

Thank you for your time. This is very helpful for ODOT.

If you have any questions, please contact:

Codi Trudell
Oregon Department of Transportation (ODOT)
DBE Program Manager
503-986-4355