



COLORADO
Department of
Transportation

Triennial DBE Goal Methodology for Highway Design and Construction

Federal Fiscal Years 2019 - 2021
Civil Rights & Business Resource Center

Submitted: August 1, 2018
Revised: December 12, 2018

Table of Contents

EXECUTIVE SUMMARY	3
DBE GOAL SETTING METHODOLOGY	4
Market Area Determination	4
Availability Data	5
Relevant Types of Work	5
Construction	6
Professional Services	7
STEP 1: BASE FIGURE CALCULATION	8
Construction Base Figure	8
Innovative Contracting Impact on Construction	9
Professional Services Base Figure	10
Professional Services Prequalification List	11
Innovative Contracting Impact on Professional Services	11
Combined Base Figure	13
STEP 2: ADJUSTMENTS TO THE BASE FIGURE	14
Other Disparity Studies	15
Future Contracting Opportunities	15
Impact of RAMP	15
Capacity Concerns Related to Industry Growth	17
BREAKOUT OF RACE NEUTRAL / RACE CONSCIOUS PARTICIPATION	19
Race-Neutral and Race-Conscious DBE Goals	21
Race-Neutral Methods	22
Marketing and Outreach	22
Emerging Small Business Program	23
DBE Supportive Services: Connect2DOT	24
PUBLIC PARTICIPATION & FEEDBACK	25
CONCLUSION	26

EXECUTIVE SUMMARY

This document explains the methodology used by the Colorado Department of Transportation (CDOT) to establish its three-year (FFY 2019-2021) overall Disadvantaged Business Enterprise (DBE) goal for contracts that contain funding assistance from the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA). Determination of the goal includes identifying a base figure for the relative availability of DBEs based on demonstrable evidence of the availability of ready, willing, and able DBEs as compared to the availability of all businesses participating on federally-funded DOT-assisted contracts.

In accordance with 49 CFR 26.45, CDOT's goal methodology consists of two steps:

1. Establishing the base figure for the relative availability of DBEs.
2. Adjusting to the base figure as a result of available data.

To establish the base figure and determine the relative availability of DBEs to perform work on CDOT projects, CDOT evaluated:

- Relevant market area for contractor participation;
- Potential contracting opportunities in construction, professional services, and design-build;
- Availability and capacity of DBE certified firms to participate on those potential contracts;
- Anecdotal evidence gathered through online surveys, association meetings, and a public comment period.

This analysis resulted in a base figure of 11.55% of DBE participation annually over the next three federal fiscal years. CDOT then considered all available evidence to determine whether adjustments should be made to the base figure calculation. Based upon an evaluation of historical participation, other disparity studies, funding impacts, and concurrent major projects in the Denver metro area, it was determined that no further adjustments were necessary and the **overall DBE goal was set at 11.55%**.

CDOT also considered what percentage of the goal can be obtained through race-neutral means. CDOT's Emerging Small Business Program includes elements designed specifically to assist CDOT in increasing race-neutral participation on its contracts. By taking into consideration these efforts along with an analysis of historical race-neutral participation, CDOT is proposing a split of **4.19% race-neutral and 7.36% race-conscious participation**.

CDOT is committed to monitoring DBE participation for federal-aid highway design and construction projects to ensure the overall goal is being met. DBE achievements will be evaluated annually to determine whether market conditions warrant adjustments to the overall DBE goal, or individual race-conscious and race-neutral components.

DBE GOAL SETTING METHODOLOGY

The methodology described in 49 CFR 26.45(c) (1) was used to determine the base figure for the relative availability of DBEs based on demonstrable evidence of the availability of ready, willing and able DBEs as compared to the availability of all businesses in the relevant market area to participate on federally-funded DOT-assisted contracts.

Market Area Determination

The first step in establishing the DBE goal is to determine the relevant market area for the analysis, or the geographic area where the majority of CDOT contractors are located and where a majority of contracting dollars are spent.

Historical contracting data for the past three fiscal years (FFY 2015-2017) shows that a total of 1,191 prime and subcontractors worked on CDOT contracts. Of those, 1,041 (87%) were located in Colorado and 150 (13%) were located out-of-state. It should be noted that 56 (5%) of the out-of-state firms also have a permanent office in Colorado, for a total of 1,097 (92%) with a local Colorado presence.

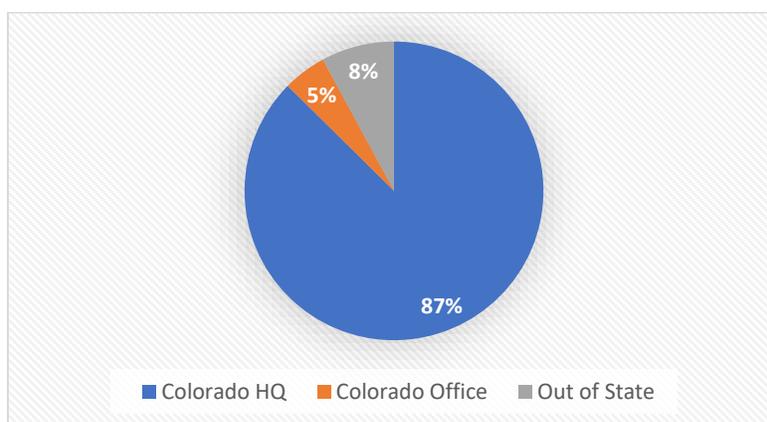


Figure 1: Location of CDOT Contractors

Table 1 below shows that the majority of CDOT dollars and contracts in the past three fiscal years were awarded to firms headquartered in the state of Colorado. Of the \$1,609,055,637 contract dollars awarded to prime contractors, \$1,321,410,618 (82.12%) went to Colorado firms. An even higher percent (92.12%) of subcontracting dollars went to Colorado firms. Considering the percent of firms with a Colorado presence and the percent of contract dollars awarded to Colorado-based firms, CDOT determined the state of Colorado as the market area for the goal setting methodology.

Table 1: Contracts Awarded to Colorado Firms FFY 2015-2017, Excluding Design-Build

Prime Contracts	Colorado Firms	Subcontracts	Colorado Firms
Total Dollars	\$1,321,410,618.47	Total Dollars	\$812,010,209.81
Percent of All Dollars	82.12%	Percent of All Dollars	92.12%
Percent of All Contracts	86.25%	Percent of All Subcontracts	91.43%
Percent of All Firms Utilized	82.35%	Percent of All Firms Utilized	89.11%

Availability Data

After determining the relevant market area, CDOT analyzed the relative availability of DBEs in Colorado using the process suggested in *49 CFR 26.45(c)(1), Use of DBE Directories and Census Bureau data*. CDOT used data from the U.S. Census Bureau 2015 County Business Patterns (CPB) as of January 10, 2018 to identify the total number of Colorado-based firms available in relevant industries. CPB is an annual data series that provides subnational economic data by industry and contains the most complete, current, and consistent data for business establishments.

CDOT also used the statewide UCP DBE Directory to identify DBE certified firms in highway construction and construction-related professional services (i.e. engineering, architecture, survey, etc.). CDOT did consider whether the DBE Directory accurately represents the availability of ready, willing, and able DBE firms in Colorado. As the only directory of DBE certified firms in the state, it was determined to be the most accurate source of information available. CDOT's bidders list data collection process recently changed and the information currently available does not contain a robust listing of DBEs, so the statewide UCP DBE Directory is Colorado's best resource for evaluating DBE availability.

As of January 1, 2018, there were 1,286 firms listed on the state DBE directory. The DBE Directory includes Colorado-based firms, as well as out-of-state firms that are certified as a DBE in Colorado. As suggested by Section E of the *Tips for Goal Setting*, to ensure an "apples to apples" comparison with Census data, only DBE firms with their principal place of business in the state of Colorado were included in the calculation.

In order to compare DBE firms against Census data which is compiled by North American Industry Classification System (NAICS), CDOT also conducted an analysis of the primary type of work performed by Colorado-based DBEs. When making a certification determination, Colorado UCP members grant certification in specific work codes which are comprised of a NAICS code plus a description. They do not identify the primary NAICS of the firm. For the availability analysis, CDOT assigned a primary NAICS to each firm using the following information:

- Work codes assigned to the firm
- Knowledge of the firm's products/services
- Knowledge of the firm's ability and willingness to perform on CDOT contracts
- Supplemental information derived from the firm's website or other online information
- Primary NAICS assigned to the firm in 2015, if the firm was certified at that time

Relevant Types of Work

To begin the base figure calculation, CDOT first sought to determine potential contracting opportunities for the next three federal fiscal years. Based upon an evaluation of the CDOT FY 2019-2022 Statewide Transportation Improvement Program (STIP) draft report, CDOT anticipates the type of work over the next three years will be similar in nature to the past three years. CDOT evaluated the awarded bid items for past construction contracts, as well as Project Specific (PS) professional services contracts and task orders against Non-Project Specific (NPS) contracts.

The total amount of construction dollars awarded during FFY 2015-2017 was \$1,609,055,637 which equates to 79% of total awarded dollars. Professional services contracts for the same period totaled \$435,290,147 or 21% of the total. This percentage split is similar to historic spending between design and construction and CDOT predicts it will remain the same during the next three fiscal years. Therefore, a weighted percentage of 79-21 was used to determine the dollar values attributed to each contracting category in the base figure calculation.



Figure 2: CDOT Contract Awards FFY 2015-2017

Construction

For construction contracts, individual bid items were assigned to a NAICS code. This was done so the types of work contracted by CDOT could be correlated to the primary services provided by firms in the market area. It was also done so bid items could be grouped and weighted based upon how much was contracted in those NAICS as compared to the total contracted amount. Table 2 shows the primary NAICS that were utilized on CDOT construction contracts over the past three years.

Table 2: NAICS Codes with Contracting Opportunities on Construction Contracts

NAICS	NAICS Description
212321	Construction Sand and Gravel Mining
236220	Commercial and Institutional Building Construction
237110	Water and Sewer Line and Related Structures Construction
237310	Highway, Street, and Bridge Construction
237990	Other Heavy and Civil Engineering Construction
238110	Poured Concrete Foundation and Structure Contractors
238120	Structural Steel and Precast Concrete Contractors
238140	Masonry Contractors
238210	Electrical Contractors and Other Wiring Installation Contractors
238320	Painting and Wall Covering Contractors

NAICS	NAICS Description
238390	Other Building Finishing Contractors
238910	Site Preparation Contractors
238990	All Other Specialty Trade Contractors (e.g., Fencing)
324121	Asphalt Paving Mixture and Block Manufacturing
327320	Ready-Mix Concrete Manufacturing
339950	Signs and Signboards Manufacturing
484220	Specialized Freight (except Used Goods) Trucking, Local
488490	Other Support Activities for Road Transportation (e.g., Sweeping)
541370	Surveying and Mapping (except Geophysical) Services
541380	Testing Laboratories
541620	Environmental Consulting Services
541690	Other Scientific and Technical Consulting Services (e.g., Energy Consulting)
541910	Marketing Research and Public Opinion Polling (e.g., Public Information)
561730	Landscaping Services
561990	All Other Support Services (e.g., Traffic Control)
562991	Septic Tank and Related Services

Professional Services

CDOT does not have the ability to track spending at the same level of detail for professional services contracts that it does for construction. Therefore, CDOT reviewed award information and project descriptions for professional services contracts and task orders over the past three years to identify the types of work that are most often utilized. Table 3 shows this breakdown.

Table 3: NAICS Code with Contracting Opportunities on Professional Services Contracts

NAICS	NAICS Description
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services
541370	Surveying and Mapping (except Geophysical) Services
541380	Testing Laboratories
541620	Environmental Consulting Services
541910	Marketing Research and Public Opinion Polling (e.g., Public Information)

STEP 1: BASE FIGURE CALCULATION

In accordance with Section F of the *USDOT Tips for Goal Setting*, CDOT conducted a weighted calculation of the opportunities in construction and professional services. The following formula was used to determine the relative availability of DBE firms and the base figure for DBE participation.

$$\text{DBE Firms} \div \text{All Available Firms} = \text{Relative Availability}$$

$$\text{Relative Availability} \times \text{Weight} = \text{Base Figure}$$

Figure 3: Base Figure Formula

Construction Base Figure

Using data from the Census, UCP DBE Directory, and construction bid item totals on design-bid-build (DBB) projects for the past three years, CDOT calculated the relative availability of DBE firms to perform work in NAICS relevant to construction contracts. Table 4 shows the base figure weighted by the percent of contracting dollars spent in relevant NAICS.

Table 4. Construction Weighted Availability Calculation

NAICS	Description (abbreviated)	All CO Firms	CO DBE Firms	Relative Availability	FFY 2015 - 2017 Total	Weight	Base
212321	Sand and Gravel Mining	46	2	4.35%	\$4,237,123	0.26%	0.00011
236220	Building Construction	782	37	4.73%	\$2,516,757	0.16%	0.00007
237110	Water and Sewer	293	9	3.07%	\$72,444,238	4.50%	0.00138
237310	Highway/Bridge Construction	219	36	16.44%	\$677,103,698	42.08%	0.06917
237990	Other Civil Eng. Construction	68	5	7.35%	\$51,233,622	3.18%	0.00234
238110	Concrete and Structures	506	13	2.57%	\$1,455,419	0.09%	0.00002
238120	Steel and Precast Concrete	89	24	26.97%	\$81,969,470	5.09%	0.01374
238140	Masonry Contractors	435	10	2.30%	\$3,397,876	0.21%	0.00005
238210	Electrical Contractors	1819	42	2.31%	\$81,643,845	5.07%	0.00117
238320	Painting and Wall Covering	914	14	1.53%	\$907,921	0.06%	0.00001
238390	Other Building Finishing	147	4	2.72%	\$4,932,031	0.31%	0.00008
238910	Site Preparation Contractors	865	28	3.24%	\$203,259,209	12.63%	0.00409
238990	Asphalt, Concrete, Fencing	728	49	6.73%	\$27,820,213	1.73%	0.00116
324121	Asphalt Manufacturing	8	0	0.00%	\$718,462	0.04%	0.00000
327320	Concrete Manufacturing	79	0	0.00%	\$9,827,219	0.61%	0.00000
339950	Signs Manufacturing	140	5	3.57%	\$73,807	0.00%	0.00000
484220	Trucking	666	110	16.52%	\$18,537,392	1.15%	0.00190
488490	Sweeping	48	3	6.25%	\$514,472	0.03%	0.00002
541370	Surveying	248	20	8.06%	\$17,681,616	1.10%	0.00089
541380	Testing Laboratories	172	13	7.56%	\$4,240,272	0.26%	0.00020

NAICS	Description (abbreviated)	All CO Firms	CO DBE Firms	Relative Availability	FFY 2015 - 2017 Total	Weight	Base
541620	Environmental Consulting	462	36	7.79%	\$1,479,466	0.09%	0.00007
541690	Other Consulting Services	878	13	1.48%	\$716,056	0.04%	0.00001
541910	Public Information	115	72	62.61%	\$7,365,211	0.46%	0.00287
561730	Landscaping Services	2044	26	1.27%	\$59,668,436	3.71%	0.00047
561990	Traffic Control and Flagging	275	31	11.27%	\$120,538,717	7.49%	0.00844
562991	Septic Tank Services	75	1	1.33%	\$1,055,205	0.07%	0.00001
Misc.	Miscellaneous	n/a	n/a	n/a	\$153,717,885	9.55%	0.00000
Total		12121	603		\$1,609,055,637	100.00%	10.82%

Innovative Contracting Impact on Construction

In addition to traditional design-bid-build (DBB) construction contracts, CDOT uses innovative contracting selection methods such as Design-Build (DB) and Public Private Partnerships (P3). One such P3 is the \$1.17B Central 70 project, which was awarded in fall 2017. An independent DBE availability analysis was conducted for Central 70 and DBE goals were set accordingly. Therefore, Central 70 DBE participation will not be counted toward CDOT’s overall annual DBE goal. Other future P3 projects are anticipated to be handled similarly and have been excluded from this analysis.

However, to ensure that the final weighting of the base figure accurately represents the full breadth of construction contracting opportunities with the agency, CDOT wanted to include the construction portion of DB projects into the construction base figure calculation. The available data on DB contracts presented two challenges. First, there is not a forecast of innovative projects for FFY 2019-2021 because project delivery selection is not determined until project goals are set. Second, because bid items and subcontractor data are not available on DB contracts, NAICS codes could not be assigned for weighting purposes and these amounts could not be incorporated into the weighted availability calculation using data from DBB construction projects.

In order to account for these innovative contracting opportunities in the construction base figure calculation, CDOT considered the budgets for DB projects awarded over the past three years and the typical cost allocations for construction on these types of contracts. While future forecasts were unavailable, CDOT’s Program Management Office (PMO) believes that the quantity and scope of future innovative contracts will be consistent with work from the past three years. Thus, it was determined that the available data from DB projects awarded over the past three years would be a good indicator of upcoming construction opportunities on future DB projects.

According to available data, CDOT’s budget for DB projects awarded over the last three years totaled \$895,409,510. CDOT generally allocates 22% of a DB project budget to construction engineering (CE) and indirect costs, which are not considered available contracting opportunities. Excluding these amounts, the total contracting opportunities (in dollars) for CDOT DB projects in the last three years—and thereby anticipated for the next three years—is \$698,419,418. This calculation is summarized as follows:

CDOT Total DB Budget (Excluding Central 70 and other P3 Projects)	\$895,409,510
Remove CDOT CE & Indirect Costs (22% of Total DB Budget)	<u>(\$196,990,092)</u>
Total DB Contracting Opportunities (in dollars)	\$698,419,418

Figure 4: Total DB Contracting Opportunities Calculation

Based upon historical data, CDOT anticipates that 90% of DB contracting opportunities in the next three years will go toward construction. Using this projected cost allocation, the total expected construction opportunities on CDOT DB projects for the next three years (in dollars) is \$628,577,476.

<u>DB Construction Contracting Opportunities (in dollars)</u>				
\$698,419,418	x	90%	=	\$628,577,476

Figure 5: DB *Construction* Contracting Opportunities Calculation

By combining the anticipated contracting opportunities (in dollars) for DB projects and the anticipated contracting opportunities (in dollars) for DBB projects from Table 4, CDOT anticipates the total construction contracting opportunities (in dollars) for the next three years will be \$2,237,633,113.

<u>Construction Opportunities</u>	
DBB Opportunities (Table 4)	\$1,609,055,637
DB Opportunities	<u>\$628,577,476</u>
Total Construction Contracting Opportunities (in dollars)	\$2,237,633,113

Figure 6: Total *Construction* Contracting Opportunities (DBB + DB) Calculation

Meanwhile, multiplying the total construction contracting opportunities (in dollars) by the base figure for construction projects as calculated in Table 4, results in the total amount of DBE construction contracting opportunities (in dollars):

<u>DBE Construction Contracting Opportunities (in dollars)</u>				
\$2,237,633,113	x	10.82%	=	\$242,111,903

Figure 7: Total DBE *Construction* Contracting Opportunities Calculation

Professional Services Base Figure

Table 5 below shows relative availability of DBE firms within the NAICS for professional services contracts. Because CDOT does not have the ability to track line item detail for professional services on DBB contracts, there is not a method to weight the level of participation by the amount expended for specific types of work. As a result, CDOT decided to treat the weights equally and use the overall number of DBE firms to calculate the relative availability of DBE firms ($261 \div 3,627 = 7.20\%$).

Table 5: Professional Services Availability Calculation

NAICS	Description (abbreviated)	All CO Firms	CO DBE Firms	Relative Availability	FFY 2015 - 2017 Total
541320	Landscape Architecture	231	32	13.85%	N/A
541330	Engineering Services	2320	84	3.62%	N/A
541340	Drafting Services	79	4	5.06%	N/A
541370	Surveying	248	20	8.06%	N/A
541380	Testing Laboratories	172	13	7.56%	N/A
541620	Environmental Consulting	462	36	7.79%	N/A
541910	Public Information	115	72	62.61%	N/A
Total		3627	261	7.20%	\$435,290,147

Professional Services Prequalification List

In 2014, CDOT implemented a policy that requires all consulting firms seeking work on CDOT professional services contracts to be prequalified by CDOT. This is a more accurate representation of potential bidders than the Census and UCP Directory and is effectively a complete bidders list of professional services consultants.

As of March 15, 2018, there were 259 prequalified consultants. Of those, 58 (22.39%) were DBE certified. Given the significant disparity between the base figure derived from the Census and UCP Directory for this type of work (7.20%) and the base figure derived from the prequalified consultant listing (22.39%), CDOT determined that the two data sets should be treated as equal weights in the calculation and averaged to determine the base figure for availability in professional services.

<p>Professional Services: $22.39\% + 7.20\% = 29.59\%$</p> <p>Average: $29.59\% \div 2 = 14.80\%$</p>

Figure 8: Professional Services Weighted Availability Calculation

Innovative Contracting Impact on Professional Services

As previously discussed, CDOT uses innovative contracting selection methods such as Design-Build (DB) and Public Private Partnerships (P3) in addition to traditional DBB contracts.

Similar to the calculation of DBE opportunities for construction contracts, CDOT also included the professional services portion of DB projects into the professional services base figure calculation in order to capture the full scope of professional services contracting opportunities with the agency. CDOT considered the budgets for past DB projects and historical cost allocation on these types of contracts to forecast professional services contracting opportunities on CDOT DB projects. It is important to reiterate that the unavailability of bid items and subcontractor data on innovative contracts prevented CDOT from designating NAICS codes for weighting purposes in making its calculation.

Historical data indicates that 10% of DB contracting opportunities will go toward professional services. Therefore, the total anticipated DB professional services contracting opportunities (in dollars) is \$69,841,942.

<u>DB Professional Services Contracting Opportunities (in dollars)</u>			
\$698,419,418	x	10%	= \$69,841,942

Figure 9: DB Professional Services Contracting Opportunities Calculation

By combining the anticipated contracting opportunities (in dollars) for DB projects and the anticipated contracting opportunities (in dollars) for DBB projects from Table 5, CDOT anticipates the total professional services contracting opportunities (in dollars) for the next three years will be \$505,132,089.

<u>Professional Services Opportunities</u>	
DBB Opportunities (Table 5)	\$435,290,147
DB Opportunities	<u>\$69,841,942</u>
Total Professional Services Contracting Opportunities (in dollars)	\$505,132,089

Figure 10: Total Professional Services Contracting Opportunities (DBB + DB) Calculation

Meanwhile, multiplying the total professional services contracting opportunities (in dollars) by the base figure for professional services projects as calculated in Table 5, results in the total amount of DBE professional services contracting opportunities (in dollars):

<u>DBE Professional Services Contracting Opportunities (in dollars)</u>				
\$505,132,089	x	14.80%	=	\$74,759,549

Figure 11: Total Professional Services Contracting Opportunities (DBB + DB) Calculation

Combined Base Figure

The above calculated base figures are separated into types of work (construction and professional services) because they represent two separate data sets. However, the overall DBE goal is not separated according to the types of work but rather a calculation of all available DBEs compared to all available firms weighted by the amount of opportunities in each type of work.

In order to arrive at the combined base figure, it was first necessary to calculate the total amount of DBE contracting opportunities (in dollars) by adding the weighted DBE contracting opportunities (in dollars) in both construction and professional services.

DBE Construction Contracting Opportunities (in dollars)	\$242,111,903
DBE Professional Services Contracting Opportunities (in dollars)	<u>\$74,759,549</u>
Total DBE Contracting Opportunities (in dollars)	\$316,871,452

Figure 12: Total DBE Contracting Opportunities Calculation

Then, the total contracting opportunities for CDOT (in dollars) was calculated by adding total construction contracting opportunities (in dollars) and total professional services contracting opportunities (in dollars).

Total Construction Contracting Opportunities (in dollars)	\$2,237,633,113
Total Professional Services Contracting Opportunities (in dollars)	<u>\$505,132</u>
Total Contracting Opportunities for CDOT (in dollars)	\$2,742,765,202

Figure 13: Total Contracting Opportunities Calculation

The combined base figure is calculated by dividing the total DBE contracting opportunities (in dollars) by the total contracting opportunities for CDOT (in dollars).

<u>Total DBE Contracting Opportunities</u>		<u>Total Contracting Opportunities</u>		<u>Combined Base Figure</u>
\$316,871,452	÷	\$2,742,765,202	=	11.55%

Figure 14: Base Figure Calculation

STEP 2: ADJUSTMENTS TO THE BASE FIGURE

49 CFR Section 26.45 (d) identifies numerous examples of the various types of data that can be examined in order to adjust the Step 1 base figure to narrowly tailor the goals to the local market. Step 2 of the goal setting methodology is intended to adjust the base figure from Step 1 to reflect, as accurately as possible, the DBE participation CDOT would expect in the absence of discrimination. CDOT considered the following factors in order to determine whether an adjustment to the Step 2 base figure is appropriate for the CDOT FY 2019-2021 goal.

Historical Construction DBE Participation

The *USDOT Tips for Goal-Setting* suggests evaluating past DBE participation as a factor for Step 2 adjustment. Table 6 represents DBE participation on CDOT construction contracts over the past five years compared to the DBE goal set for each year. The historical median over those years is 11.70%.

The *Tips* also state “if your records suggest levels of past participation very similar to the number you calculated in Step 1, then it is not necessary to make any adjustment for past participation.” The Step 2 adjusted goal of 11.55% and the historical median of 11.70% are similar enough to not constitute another Step 2 adjustment.

Table 6: Construction Past Participation

FFY	Annual DBE Goal	Actual DBE Achievement (Federal-Assisted Projects Only)
2013	10.25%	12.6%
2014	10.25%	11.70%
2015	10.25%	10.44%
2016	12.15%	13.20%
2017	12.15%	11.10%
Historical Median		11.70%

Other Disparity Studies

The City and County of Denver (CCD) is currently conducting a disparity study of local agency and airport contracts awarded between 2012 -2016 to guide future implementation of their minority and woman-owned business programs¹. Unfortunately, data from that study will not be available until later this year. The only comparable data source is CCD's previous 2013 study. Because the 2013 study evaluated contracting activity between 2005-2011, CDOT determined the data is not recent enough to reflect current or future contracting trends.

Denver Public Schools (DPS) conducted a disparity study published in 2015 that evaluated construction and construction-related professional services contracts from years 2009-2013 for prime contracts and 2008-2012 for subcontracts². The relevant market area used for the study was the six-county Denver Metropolitan Statistical Area (MSA). In February 2015, the Board of Education adopted M/WBE aspirational goals of 24% for bond-funded construction related projects. Given the high relative availability implied by the disparity study, CDOT sought to evaluate whether the numbers represented ready, willing and able firms to participate. Unfortunately, the disparity study did not detail the NAICS that were used for the analysis. It also was based upon DPS prequalified firms and a "custom census" using Dunn & Bradstreet information which has several noted deficiencies. Therefore, CDOT could not make a direct correlation to the availability of construction and construction-related professional services firms. Additionally, the relevant market area was restricted to Denver metro and did not reflect availability of firms statewide.

In evaluating these disparity studies, CDOT concluded that the data reflects a potential pool of candidates for the DBE program, many of which are not currently certified and may not be eligible for certification. While this creates a good starting point for supportive services, it does not replace or justify modifications to the base figure calculation.

Future Contracting Opportunities

As noted earlier, CDOT anticipates that the work contracted over the next three fiscal years (FFY 2019-2021) will be similar in nature to that contracted over the past three years (FFY 2015-2017). Historical data shows that the types of work contracted by CDOT has remained consistent regardless of the project delivery method. However, the availability of funding and the sources of funding may impact the types of contracting opportunities in the future.

Impact of RAMP

In 2013, CDOT changed how it budgets and expends funds for transportation projects. Multi-year projects are now funded based on year of expenditure, rather than saving for the full amount of a project before construction begins. To accommodate this change, CDOT implemented the Responsible Acceleration of Maintenance and Partnerships (RAMP), a five-year program that increased construction by about \$300 million per year through 2017³.

¹ Denver Office of Economic Development, https://www.denvergov.org/content/denvergov/en/denver-office-of-economic-development/do-business-with-denver/DISPARITY_STUDY.html

² Denver Public Schools, <https://businessdiversity.dpsk12.org/wp-content/uploads/sites/29/DPS-Disparity-Study-Draft-Report-10.17.2014.pdf>

³ CDOT Responsible Acceleration of Maintenance and Partnerships, <https://www.codot.gov/programs/RAMP>

RAMP ended in December 2017 and CDOT returned to a pre-RAMP base level of advertisements beginning in 2018. As a result, the forecasted budget of federal funds for construction in FFY 2019- 2021 is anticipated to be significantly less than in the past three years. CDOT PMO developed the following forecast model based upon calendar year for 2012-2020. The projections shown below include federal funds and potential funding from state sources and bond initiatives which have not yet been secured. The addition of these funds could bring the CDOT contracting program back to the same levels as it was in previous years.

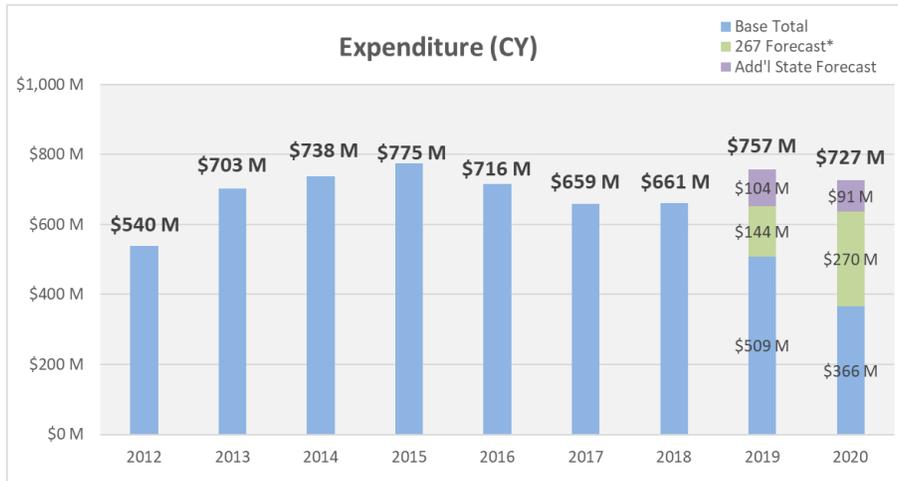


Figure 15: Forecasted Construction Budget

Section H of the *USDOT Tips for Goal Setting* states; “It is never appropriate to adjust your measurements of relative DBE availability, either in Step One or in Step Two, solely because the size of your contracting program will change in the next fiscal year. For example, if you assume that non-DBEs will be able to expand to compete for large influx of new program dollars, you should make the same assumption about DBEs, absent specific evidence to the contrary.”

A review of past DBE participation during the five years of RAMP also showed there is not a correlation to the total amount of contract dollars awarded and the percentage of DBE participation. For example, while FFY 2014 had the lowest amount of total federal dollars, it did not have the lowest DBE participation percentage, it was the historical median.

Table 7: Dollar Value of Past DBE Participation

FFY	CDOT Contract Awards (Federal Dollars Only)	DBE Participation (Federal Dollars Only)	DBE Participation
2013	\$354,470,196	\$44,624,561	12.59%
2014	\$329,015,893	\$24,313,155	11.70%
2015	\$420,356,346	\$43,900,912	10.44%
2016	\$492,941,677	\$64,962,367	13.20%
2017	\$347,835,005	\$38,449,103	11.10%

The impact of “ramping down RAMP” was evaluated as it relates to future potential contracting opportunities identified in the CDOT STIP. The resulting conclusion was that although the overall amount of federal contracting dollars may be reduced, the ratios of the type of work to be performed will remain approximately the same. Additionally, CDOT expects that projects funded primarily through state funding initiatives will include a portion of federal funds and therefore the DBE program will be included. This then makes the total forecasted contracting opportunities similar to levels over the past five years.

Capacity Concerns Related to Industry Growth

Although CDOT has ramped down RAMP, the state of Colorado is experiencing significant growth which is forecasted to continue throughout the next three years. The Denver metro area alone has more than \$4B of construction projects in the pipeline⁴. Other industries such as Residential & Commercial Building and Oil & Gas are rebounding and expected to grow⁵. There are concerns that concurrent major projects may potentially impact the availability of DBE firms that provide cross-over services such as civil engineering, environmental, concrete, building construction, trucking, etc.

CDOT researched the estimated budgets and construction schedules of several major projects with scopes of work similar to CDOT’s anticipated projects and those that have construction schedules within the next three years. Table 8 shows a list of these projects with estimated project budgets used to evaluate potential impacts on the DBE goal.

Table 8: Major Projects in Denver Metro Area

Project	Owner	Construction Timeframe	Estimated Budget
C-470 Tolled Express Lanes	CDOT	2016 – 2019	\$276M
I-25 North Denver Union Station to SH14 (Segment 3 and Segments 7 & 8)	CDOT	2017 – 2020	\$256M
I-25 South Gap from Monument to Castle Rock	CDOT	2018 – 2020	\$350M
Central 70 Viaduct through Denver and Aurora	CDOT	2018 – 2022	\$1.7B
National Western Redevelopment	CCD	2018 – 2024	\$1B
Denver Go Bond – First Issuance Projects	CCD	2018 – 2020	\$193M
DEN Great Hall Renovation	DEN	2018 – 2021	\$650M
DEN Gate Expansion	DEN	2018 – 2023	\$1.5B
Gross Reservoir Expansion	Denver Water	2018 – 2020	\$450M
Windy Gap Firming Project	Municipal Subdistrict	2019 – 2023	\$570M

⁴ Denver Business Journal, August 2, 2017, <https://www.bizjournals.com/denver/news/2017/08/02/denvers-pipeline-of-projects-will-plunge-into.html>

⁵ 2018 Economic Forecast for Metro Denver, Denver Chamber of Commerce, http://www.metrodenver.org/media/851036/2018-Forecast_013018.pdf

All of the projects listed above are located in the Front Range of Colorado. As evidenced by the Colorado UCP DBE Directory, the Denver metro area has the highest DBE population in the state. Many construction projects let by the City and County of Denver (CCD) and Denver International Airport (DEN) have minority and woman-business enterprise (M/WBE) aspirational goals of 15% or higher. In fact, CCD achieved M/WBE participation of 23% for construction and 30% for professional services in 2016⁶. An analysis of the projects listed in Table 8 indicates that socio-economic goals will be set at similar levels.

While this demonstrates the relatively high availability of M/WBE firms in Denver, it does not necessarily reflect of the pool of ready, willing, and able DBE firms that provide the services listed in Tables 2 and 3. CCD's M/WBE program has a completely separate certification standard that covers a much wider scope of services including commodities, goods, and services. CDOT's federally-funded projects have a much narrower scope of services. In fact, more than 26% of contracted out work in CDOT's FY 2018-2019 budget (excluding bridge enterprise and HPTE projects) is for surface treatment⁷. The DBE contracting opportunities for this type of work is extremely limited. For a more "apples to apples" comparison, in 2016 CCD had DBE participation of 9% for construction and 17% for professional services. This more accurately reflects the availability of DBE firms in the Denver Metro on projects that include USDOT FHWA funding. These percentages still do not reflect the availability of DBEs across the state of Colorado, as shown in Tables 4 and 5.

For this analysis, CDOT must consider statewide DBE availability, in addition to increased competition for DBE certified firms on major projects in the Denver metro area. Over the next three years, there may potentially be less diverse opportunities for DBE participation, which may present capacity problems overall. Although DBEs have the potential to grow with an increase in highway construction dollars, there is a prime contractor concern that the DBE community may not be able to immediately absorb the increases in the amount of available work.

CDOT posed this potential issue to the contracting community in online surveys sent to DBE Firms, CDOT Prime Contractors, and Industry Stakeholders (see the following section on *Public Comments*). Of the 225 DBE firms that responded, 67% said they would grow their capacity if presented with additional opportunities over the next three years and another 20% said they would be able to take on additional with current staff resources. Only 4% said they would turn down additional opportunities if presented with more work over the next 3 years. DBE firms also appear to be prepared for additional work as 63% said they expect their overall volume to increase over the next 3 years and 17% expect it to be the same. These are strong indicators that DBE firms will be able to expand to compete for additional project work.

⁶ Denver Office of Economic Development, Division of Small Business Opportunity, 2016 Annual Report, <https://www.denvergov.org/content/dam/denvergov/Portals/690/Reports%20and%20Studies/FINAL%20COMBO%20DSBO%202016%20Annual%20Report%20052217.pdf>

⁷ CDOT, FY 2018-2019 Final Budget Allocation Plan (Pending Gov Signature), <https://www.codot.gov/business/budget/cdot-budget/current-budget-documents/fy-2018-19-final-budget-allocation-plan/view>

However, this sentiment was not shared by prime contractors. Of the 17 respondents, 62.5% felt that the large infrastructure projects in the Denver metro area will result in an overall lack of DBE firms to meet project demands. Only 12.5% believed DBE firms would grow and take on more work. Nearly half of the respondents also indicated that they are receiving less quotes from DBE firms in 2018 as compared to 2015. Of those that knew why DBE firms were less quotes, the primary reason was that they were too busy with other work or they lacked qualified staff for the project. Although the sample size of respondents was relatively low, CDOT still considered these comments and the perceived lack of availability.

As evidenced during RAMP, DBE firms have shown that they can expand to meet additional project demands. Additionally, the number of certified DBE firms in relevant NAICS has increased 16% over the past five years which has increased the overall pool of ready, willing, and able firms. While an adjustment to the goal may be warranted given potential competition for DBE firms in the Denver metro area, there is not empirical evidence to support it. In fact, current DBE participation for the first half of FFY 2018 is 13.6%. If the DBE participation this year stays on the same track, CDOT expects to meet or exceed the current goal of 12.15%. CDOT believes that the proposed goal of 11.55%, which is based upon empirical data, captures the potential concerns about availability naturally through a .6% reduction of the overall annual goal as compared to goal for the past three years.

Therefore, rather than making adjustments to the base figure based upon potential scenarios, CDOT will monitor DBE participation for federal-aid projects annually to determine whether market conditions warrant adjustments to the overall DBE goal, or individual race-conscious and race-neutral components.

BREAKOUT OF RACE NEUTRAL / RACE CONSCIOUS PARTICIPATION

The federal regulations require CDOT to meet the maximum feasible portion of its overall goal by using race and gender-neutral means of facilitating DBE participation (hereafter referred to as race neutral). Race-neutral participation includes:

- DBEs who win prime contracts through customary competitive procurement procedures;
- DBEs who are awarded subcontracts on prime contracts that do not carry a DBE goal (0% assigned DBE goal); and
- DBEs who are awarded subcontracts in excess of the stated DBE project goal.

CDOT examined the race-neutral attainment for the past five complete years to determine the maximum feasible race-neutral participation. The median was used instead of the average to exclude outliers - that is, abnormally high or low numbers. Table 9 shows race-neutral achievement through prime contract awards to DBE firms. Table 10 shows race-neutral achievement through subcontract awards to DBE firms in excess of project goals or on projects without a DBE goal. Table 11 shows that CDOT achieved a median of 4.19% of the goal over the past five years through race-neutral means.

Table 9: Past DBE Prime Construction Awards

FFY	Total Award Amount (Federal Dollars Only)	DBE Prime Award Amount (Race Neutral)	% of Total Award Amount
2013	\$354,470,196	\$5,014,132	1.41%
2014	\$329,015,893	\$2,388,592	.73%
2015	\$420,356,346	\$869,539	.21%
2016	\$492,941,677	\$4,069,862	.83%
2017	\$347,835,005	\$2,045,779	.59%

Table 10: Past DBE Race Neutral Construction Subcontract Amounts

FFY	Total Award Amount (Federal Dollars Only)	DBE Sub Award Amount (Race Neutral)	% of Total Award Amount
2013	\$354,470,196	\$8,460,840	2.39%
2014	\$329,015,893	\$11,787,438	3.58%
2015	\$420,356,346	\$16,723,412	3.98%
2016	\$492,941,677	\$21,171,784	4.29%
2017	\$347,835,005	\$10,026,279	2.88%

Table 11: Combined Past Race Neutral Participation

FFY	Race Neutral Attainment (Federal Dollars Only)
2013	3.80%
2014	4.31%
2015	4.19%
2016	5.12%
2017	3.47%
Median	4.19%

CDOT also considered the amount by which past goals were exceeded, as well as past history of inability to achieve goals in determining the race-neutral and race-conscious proportion consistent with *USDOT Tips for Goal Setting*. Specifically, USDOT recommends increasing the race-conscious portion of the annual goal to account for the proportion of previous years' goals that was not met or increasing the race-neutral portion to account for exceeding goals.

Table 12 shows that CDOT has consistently exceeded the goal and has a median of 1.05% of participation in excess of the goal. This combined with the race-neutral efforts outlined below make CDOT confident it can meet the race-neutral goal.

Table 12: Combined Past Race Neutral Participation

FFY	Annual DBE Goal	Actual DBE Achievement (Federal-Assisted Projects Only)	Difference
2013	10.25%	12.6%	2.35%
2014	10.25%	11.70%	1.45%
2015	10.25%	10.44%	.19%
2016	12.15%	13.20%	1.05%
2017	12.15%	11.10%	-1.05%
Historical Median		11.70%	1.05%

Race-Neutral and Race-Conscious DBE Goals

CDOT is confident that it will be able to achieve a portion of DBE participation through race-neutral means based upon historical trends and the successful implementation of various race-neutral program elements. Based upon the analysis of past performance, CDOT anticipates meeting the FY 2019-2021 Overall Annual DBE Goal of 11.55% with 4.19% race-neutral participation and 7.36% race-conscious participation.

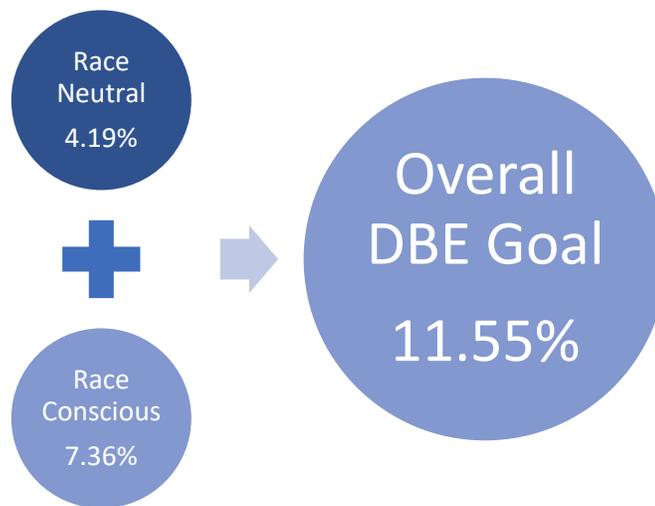


Figure 16: DBE Goal Breakdown

Although the overall DBE goal is slightly less than in the past three years, the percentage allocated to race-neutral participation has been increased. CDOT will monitor and adjust the estimated breakout of race-neutral and race-conscious participation as needed to reflect actual DBE participation. On a quarterly basis, CDOT will:

- Separately track and report race-neutral and race conscious participation.
- Maintain data on DBE achievements in those contracts with and without contract goals, respectively.
- Consolidate data for an annual goal review and adjustment, if necessary.

Race-Neutral Methods

It is the goal of CDOT to meet the maximum feasible portion of its DBE goals by using race-neutral means of facilitating DBE participation. The ongoing initiatives described below seek to reduce discriminatory barriers, increase capacity and level the playing field for the participation of DBEs and other small contractors. They are also designed to assist CDOT in increasing race-neutral participation on its contracts.

Marketing and Outreach

CDOT engages in a number of outreach efforts to small, minority, and woman-owned businesses. These include:

- Participate in statewide conferences, seminars, and community outreach activities for the purpose of informing potential contractors of CDOT contracting procedures, DBE and ESB certifications, and available business opportunities.
- Host major CDOT project outreach events and other “meet-and-greet” events to bring prime contractors together with DBE firms prior to proposals.
- Maintain close partnerships with organizations such as; the Colorado Contractor’s Association, Associated General Contractors of Colorado, American Council of Engineering Companies, HCC - Colorado’s Diversity Leader, Conference of Minority Transportation Officials, the Women’s Transportation Seminar, USDOT’s Small Business Transportation Resource Center, Institute of Transportation Engineers, Rocky Mountain Minority Supplier Diversity Council, Colorado Minority Business Office, Colorado Black Chamber of Commerce, Procurement Technical Assistance Center, and other industry partners to help promote CDOT contracting opportunities and relevant certifications.
- Conduct quarterly Small Business Collaborative Forums in separate tracks for construction and professional services to discuss relevant small business topics and address issues raised by the small business community, industry stakeholders, and prime contractors.
- Participate in the CDOT Transportation Commission DBE Committee.
- Partner with the local U.S. DOT Bonding Education Program.
- Participate in the maintenance of the UCP DBE directory as a source of identifying all DBEs currently certified by the Colorado UCP (www.coloradodbe.org).
- Maintain a current list of certified Emerging Small Businesses (ESB) on a public ESB Directory (www.coloradoesb.org).
- Generate monthly email newsletters that include information about upcoming contracting opportunities, industry events, workshops and training, specification changes, and a list of newly certified DBE and ESB firms.
- E-mail special notices of CDOT training, ESB Restricted projects, and upcoming bid opportunities to registered contractors in the market area.
- Operate a custom Bid Matching System that delivers weekly emails to opt-in subscribers with any newly advertised construction projects that have bid items in their relevant NAICS.

- Ensure participants at pre-solicitation meetings are informed of CDOT's DBE and ESB Programs and requirements.
- Ensure standard form contracts include prompt payment clauses for subcontractors and this information is communicated both internally and externally.
- Provide one-on-one technical assistance to existing DBEs and other small business enterprises, and facilitate introductions to CDOT's contracting, engineering, and construction personnel.

Emerging Small Business Program

CDOT's Emerging Small Business Program (ESB) is a race-neutral program designed to aid small businesses in obtaining work on CDOT's highway construction and design projects. Many of the small firms participating in the ESB Program are also certified DBEs. The following program elements have been successfully implemented:

- **ESB Restricted Projects** - Under the ESB Program rules, construction projects under \$1,000,000 may be restricted for award to an ESB firm. This limits competition to small businesses and facilitates DBE growth into prime contractor roles. CDOT is currently in the process of formalizing the process for project selection and has developed guidelines for advertising, educating, and letting these types of projects.
- **Incentives for Professional Services Contracts** - In 2015, CDOT revised the bid rules for professional services contracts to provide "point incentives" during proposal evaluation and scoring to encourage prime consultants to utilize ESB firms.
- **Project and Target Participation Goals** - CDOT evaluates innovative contracts and may apply a mandatory ESB goal similar to the DBE goal or set an optional target percentage resulting in a financial reward for meeting or exceeding the project goal.
- **New Tracking & Enforcement Mechanisms** - In 2015, CDOT adopted the B2GNow system which has enabled more effective tracking and enforcement of DBE and ESB commitments, as well as providing prompt payment information and a method to escalate non-payment issues.
- **Mentor-Protégé Program** - Self-selected Mentor-Protégé teams apply annually to participate in this capacity building program that provides ESBs with mentorship opportunities while offering Primes incentives for ESB utilization and industry recognition as a leader interested in developing small business capacity.

CDOT is currently in the process of hiring a new ESB Program Manager with the primary responsibility of increasing race-neutral participation. In addition to the ESB Program elements listed above, the new staff member will evaluate the following initiatives for increasing race-neutral participation:

- **Bond Guarantee Program** - CDOT expects to launch a pilot program in late 2018 or early 2019 that will make it easier for small businesses to obtain bonding for CDOT construction projects. CDOT is working with Lockton Companies, LLC to develop a scoring matrix and process for guarantying bonds for small business bidding as a prime contractor.
- **Bid Preferences for ESB Firms** - A price preference used in low-bid contract evaluation has been successfully used with other government socio-economic programs. CDOT is analyzing the legal allowability of a bid preference for construction contracts.
- **Small Business Professional Service Contract Pool** - CDOT is evaluating whether professional services projects can be included in the ESB Restricted program or made part of a reserved bidding pool while still conforming to the Brooks Act and Colorado Procurement Code.

DBE Supportive Services: Connect2DOT

CDOT uses DBE supportive service funds for the Connect2DOT Program which is a cooperative agreement with the Colorado Small Business Development Center (SBDC) Network. The program offers technical assistance to DBEs in accordance with 23 *CFR 230.204*. There are 14 SBDCs that offer program services across the state and 225 business consultants available throughout the network. A complete description of the program can be found at www.connect2dot.org.

The program has been extremely successful over the past six years. Last fiscal year, Connect2DOT provided one-on-one consulting to 429 small businesses in the construction industry. Consultants directly assisted 46 firms with obtaining DBE certification and 26 firms with ESB certification. During that period, Connect2DOT clients gained access to \$1,491,721 in financing. Many of these businesses also increased capacity by collectively adding 167 jobs. Below is a list of some of the services provided to small businesses through the Connect2DOT program.

- **LEADING EDGE™ for Transportation** - One of the premier offerings provided through Connect2DOT is the LEADING EDGE™ for Transportation program. It is based upon the Colorado SBDC Network's flagship strategic planning series and customized for small businesses in the transportation industry. The program is an intensive 9-week business development course combined with individual consulting designed to develop leadership skills, facilitate key introductions with the business community, generate strategies for growth, and help DBEs perform successfully on CDOT projects. The course covers topics such as government contracting, finance, marketing, management, bidding, workforce, operations, and more. Each student graduates with a viable business plan reviewed by a consultant team and assessed during quarterly check-ups.

- **One-on-One Technical and Resource Assistance** - There are more than 225 business consultants in the SBDC Network and another 20 virtual Connect2DOT consultants that provide personalized consulting on topics such as business planning, accounting, HR, marketing, project take-offs, bidding/estimating, project management, bonding, equipment leasing, financial capacity, certifications, CDOT systems, and more. Small businesses have free, confidential, and unlimited access to the expertise of these consultants statewide.
- **Workshops and Education** - Connect2DOT hosts an average of 40 training classes each year at locations across the state. These workshops are free and provide instruction on a variety of technical topics geared toward construction or professional services contractors. The SBDC Network also hosts approximately 30 training classes every month on general business topics that are low cost and accessible to DBE and ESB firms.
- **Industry Events** - Connect2DOT participates in more than 35 industry events each year targeted to small businesses. These events generally include participation as an exhibitor and sponsor acknowledgement and/or a presentation with information about CDOT programs, certifications, and support services. Last fiscal year, these events had a combined attendance of more than 1,000. These outreach efforts help recruit new firms to fulfill project demands, as well as developing the skills of existing DBE firms.
- **Industry Partnerships** - Connect2DOT partners with industry organizations such as local and minority chambers, contracting associations, surety and insurance agents, small business lenders, workforce development centers, and support programs such as the USDOT West Central Small Business Transportation Resource Center (SBTRC), Procurement Technical Assistance Center (PTAC), and Colorado Minority Business Office (MBO). These partnerships ensure comprehensive support to help DBEs increase competitiveness, build capacity, and perform successfully as prime and subcontractors on CDOT projects.

PUBLIC PARTICIPATION & FEEDBACK

In accordance with 49 CFR 26.45, CDOT reached out to industry stakeholders and minority group representatives to obtain feedback on the methodology and data being used to calculate the overall goal and evaluate barriers for DBEs.

Initial input on the Draft DBE Goal Setting Methodology was collected between April 16 - May 23, 2018 in three separate surveys of the following target audiences:

- DBE Certified Firms
- CDOT Prime Contractors During Past 3 Years
- Industry Stakeholders

Input received via those surveys has been incorporated into this document.

CDOT published the overall goal on its website on June 15, 2018 and directly notified relevant stakeholder groups and DBEs at association meetings and the CDOT Small Business Collaborative Forums. Comments related to the draft document were accepted until July 13, 2018 via email, phone number, postal mail, and in person over the course of this four-week comment period. While the Department received several clarifying questions at in person meetings, no official comments were recorded and as such this methodology has not required modification.

CONCLUSION

In accordance with 49 CFR 26.45, CDOT's goal methodology consisted of two steps:

1. Establishing the base figure for the relative availability of DBEs.
2. Adjusting to the base figure as a result of available data.

The CDOT team developed a base figure of 11.55% of DBE participation annually over the next three federal fiscal years. CDOT also considered what percentage of the goal can be obtained through race-neutral program elements. By taking into consideration these program efforts along with an analysis of historical race-neutral participation, CDOT is targeting a split of **4.19% race-neutral and 7.36% race-conscious participation.**

CDOT will continue to proactively monitor annual DBE participation for federal-aid highway design and construction projects to ensure the overall goal is met. Should market conditions warrant adjustments to the overall DBE goal, or to individual race-conscious and race-neutral components, CDOT will revise this methodology as appropriate to ensure effective stewardship of the DBE Program.