

## **Appendix D.**

### **General Approach to Availability Analysis**

Keen Independent analyzed the availability of minority- and women-owned business enterprises (MBE/WBEs) that are ready, willing and able to perform City of Madison prime contracts and subcontracts. The City of Madison can use availability results and other information from the study as it makes decisions about its future operation of its programs.

Appendix D describes the study team's availability analysis in eight parts:

- A. Purpose of the availability analysis;
- B. Definitions of MBEs, WBEs and majority-owned businesses;
- C. General approach to collecting availability information;
- D. Development of the interview instruments;
- E. Businesses included in the availability database;
- F. MBE/WBE availability calculations on a contract-by-contract basis;
- G. Dollar-weighted availability results; and
- H. Additional considerations related to measuring availability.

#### **A. Purpose of the Availability Analysis**

Keen Independent examined the availability of MBE/WBEs for public works contracts to develop a benchmark used in the disparity analysis. The disparity study compares the City of Madison's utilization of MBE/WBEs against an availability benchmark.

#### **B. Definitions of MBEs, WBEs and Majority-owned Businesses**

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

**MBE/WBEs.** The availability benchmark uses the same definitions of minority- and women-owned firms (MBE/WBEs), as do other components of the 2015 Public Works Disparity Study.

**Race, ethnic and gender groups.** 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.

**Firms owned by minority women.** Businesses owned by minority women are included with the results for each minority group. “WBEs” in this report refers to non-Hispanic white women-owned businesses. This definition of WBEs gives the City of Madison information to answer questions that may arise pertaining to the utilization of non-Hispanic white women-owned businesses, such as whether the work that goes to MBE/WBEs disproportionately goes to businesses owned by non-Hispanic white women. Keen Independent’s approach is consistent with court decisions that have considered this issue.

**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). In the utilization and availability analyses, the study team coded each business as minority-, women-, or majority-owned.

### C. General Approach to Collecting Availability Information

Keen Independent’s availability analysis focused on firms with Dane County locations that work in subindustries related to City of Madison public works contracts.

Based on review of City of Madison 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 by telephone to collect information about their availability for specific types, sizes and locations of City of Madison 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 D-1 summarizes characteristics of Keen Independent’s custom census approach to examining availability.

**Overview of availability interviews.** The study team conducted telephone interviews with business owners and managers to identify businesses that are potentially available for City of Madison public works prime contracts and subcontracts.<sup>1</sup> Figure D-2 summarizes the process for identifying businesses, contacting them and completing the interviews.

#### Figure D-1. Summary of the strengths of Keen Independent’s “custom census” approach

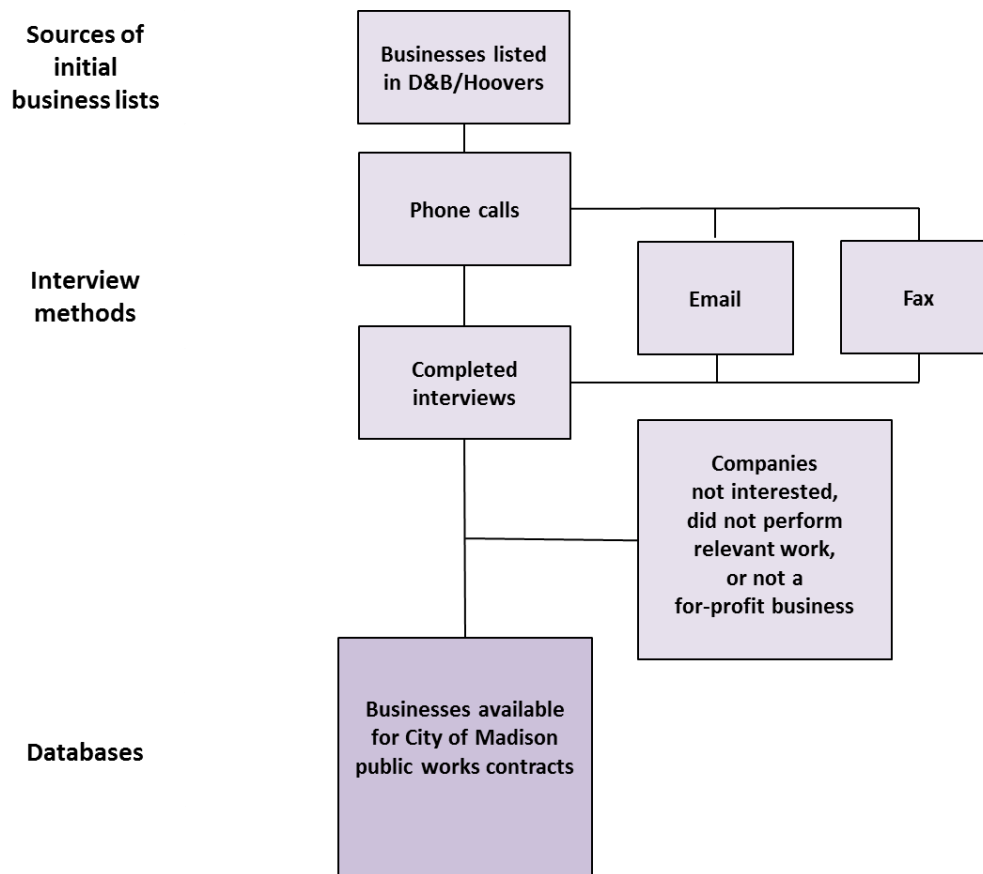
Federal courts have reviewed and upheld “custom census” approaches to examining availability. Compared with some other previous court-reviewed custom census approaches, Keen Independent added several layers of screening to determine which businesses are potentially available for public works contracting contracts in Dane County.

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

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<sup>1</sup> The study team offered business representatives the option of completing interviews via fax or email if they preferred not to complete interviews via telephone.

Figure D-2.  
Availability interview process



Keen Independent began by compiling lists of business establishments that Dun & Bradstreet/Hoovers identified in certain public works contracting-related subindustries in Dane County.<sup>2</sup>

**Dun & Bradstreet Hoover's database.** Dun & Bradstreet's Hoover's affiliate maintains the largest commercially-available database of businesses in the United States.

Keen Independent determined the types of work involved in City of Madison 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.<sup>3</sup> Figure D-3 on the following page identifies the work specialization codes the study team determined were the most related to the study contract dollars.

<sup>2</sup> 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 public works contracts that the City of Madison awarded during the study period.

<sup>3</sup> 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.

Keen Independent obtained a list of firms from the D&B Hoover's database within relevant work codes that had locations within Dane County. D&B provided phone numbers for these businesses. Keen Independent obtained more than 2,000 business listings from this source (this count includes duplicate records). Keen Independent did not draw a sample of those firms for the availability analysis; rather, the study team attempted to contact each business identified through telephone interviews and other methods described below.

**Telephone interviews.** Keen Independent retained Customer Research International (CRI) to conduct telephone interviews with listed businesses. Interviews began in August 2014 and were completed in September 2014.

After receiving the list described above, CRI used the following steps to complete telephone interviews with business establishments:

- Firms were contacted by telephone. For firms not immediately responding, the study team executed intensive follow-up over many weeks. 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 City of Madison for purposes of expanding its list of companies interested in performing City of Madison public works-related work.
- 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 interview.
- Some firms indicated in the phone calls that they did not work in the public works contracting industry or had no interest in City of Madison work, so no further interview was necessary. (Such interviews were treated as complete at that point.)

CRI provided Keen Independent with weekly data reports.

Figure D-3.  
D&B 8-digit codes for availability list source

Code	Description	Code	Description
07820000	Lawn and garden services	17990000	Special trade contractors
07830001	Ornamental shrub and tree services	24210000	Sawmills and planing mills, general
15210000	Single-family housing construction	24260000	Hardwood dimension and flooring mills
15220000	Residential construction	24310000	Millwork
15310000	Operative builders	24390000	Structural wood members
15410000	Industrial buildings and warehouses	24930000	Reconstituted wood products
15420000	Nonresidential construction	29510000	Asphalt paving mixtures and blocks
16110000	Highway and street construction	32710000	Concrete block and brick
16220000	Bridge, tunnel, and elevated hwy construction	32720000	Concrete products, nec
16230000	Water, sewer and utility lines	32730000	Ready-mixed concrete
16290000	Heavy construction	33120000	Blast furnaces and steel mills
17110000	Plumbing, heating, air conditioning	34410000	Fabricated structural metal
17210000	Painting and paper hanging	34420000	Metal doors, sash and trim
17310000	Electrical work	34460000	Architectural metal work
17410000	Masonry and other stonework	34490000	Miscellaneous metalwork
17420000	Plastering, drywall and insulation	42120000	Local trucking, without storage
17430000	Terrazzo, tile, marble and mosaic work	50230400	Floor coverings
17510000	Carpentry work	50310000	Lumber, plywood and millwork
17520000	Floor laying and floor work	50320000	Brick, stone and related material
17610000	Roofing, siding and sheetmetal work	50330000	Roofing, siding and insulation
17710000	Concrete work	50390000	Construction materials
17810000	Water well drilling	50510000	Metals service centers and offices
17910000	Structural steel erection	50630000	Electrical apparatus and equipment
17930000	Glass and glazing work	50740000	Plumbing and hydronic heating supplies
17940000	Excavation work	50750000	Warm air heating and air conditioning
17950000	Wrecking and demolition work	73899921	Flagging service (traffic control)
17960000	Installing building equipment	73899937	Pilot car escort service

**Other avenues to complete an interview.** Even if a company was not directly contacted by the study team, business owners could ask to complete an availability interview for their public works contracting-related companies.

- Firm owners could also request that questionnaires be faxed or emailed to them. Fifty-six firms returned completed questionnaires via fax/email and four firms returned them.
- The City of Madison posted information about the interviews on the [www.cityofmadison.com/madisoncontractingstudy/](http://www.cityofmadison.com/madisoncontractingstudy/) website maintained throughout the project. Interested companies could request to have a member of the study team contact them for an interview.

**Information collected in availability interviews.** Interview questions covered many topics about each organization, including:

- Status as a private business (as opposed to a public agency or not-for-profit organization);
- Status as a subsidiary or branch of another company;
- Types of public work performed, from asphalt paving to temporary traffic control for construction work (see Appendix C);
- Qualifications and interest in performing public works-related contracts for the City of Madison;
- Qualifications and interest in performing public works-related contracts as a prime contractor or as a subcontractor (or trucking company or materials supplier);
- Past work as a prime contractor or as a subcontractor, trucker or supplier (note that “prime consultant” and “subconsultant” were the terms used in the interviews of professional services companies);
- Largest prime contract or subcontract bid on or performed in the local marketplace in the previous seven years;
- Year of establishment; and
- Race/ethnicity and gender of ownership.

The availability interview instrument can be found at the end of this appendix.

**Screening of firms for the availability database.** The study team asked business owners and managers several questions concerning the types of work that their companies performed; their past bidding history; and their qualifications and interest in working on contracts for the City of Madison, among other topics. Keen Independent considered businesses to be potentially available for City of Madison public works 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 public works contracting; and
- c. Reporting qualifications for and interest in work for the City of Madison.<sup>4</sup>

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<sup>4</sup> For City of Madison work, separate interview questions were asked about prime contract work and subcontract work.

## D. Development of the Interview Instrument

Keen Independent developed the interview instrument through the following steps:

- Keen Independent drafted an availability interview instrument; and
- City of Madison staff reviewed the draft interview instrument.

The final telephone interview instrument is presented at the end of this appendix.

**Interview structure.** The availability interview included eight sections. 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 interview.

Areas of interview questions included:

- **Identification of purpose.** The interviews began by identifying the City of Madison as the interview sponsor and describing the purpose of the study (i.e., “compiling a list of companies interested in working on a wide range of City public works construction contracts”).
- **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 interview.
- **Verification of work related to public works-related projects.** The interviewer asked whether the organization does work or provides materials related to public works construction-related projects (Question 1). Interviewers continued the interview with businesses that responded “yes” to that question.
- **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 (Question 2). Interviewers continued the interview 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 public work.** The interviewer asked about businesses' qualifications and interest in future work with the City of Madison and other government agencies in connection with both prime contracts and subcontracts.
- **Largest contracts.** The study team asked businesses to identify the value of the largest public works-related contract or subcontract on which they had bid or had been awarded during the past seven 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 they were 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.
- **Potential barriers in the marketplace.** Establishments were asked a series of questions concerning general insights about the marketplace and City of Madison contracting practices including obtaining loans, bonding and insurance. The interview also included an open-ended question asking for any additional barriers or general thoughts about contracting in the City of Madison. In addition, the interview included a question asking whether interviewees would be willing to participate in a follow-up interview about marketplace conditions.

**Establishments that the study team successfully contacted.** Figure D-4 presents the disposition of the businesses the study team attempted to contact for availability interviews.

Note that the following analysis is based on business counts after Keen Independent removed duplicate listings (beginning list of 1,537 unique businesses).



Figure D-4.  
Disposition of  
attempts to  
interview  
business  
establishments

Note:

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

Source:

Keen Independent from  
2014 availability  
Interviews.

	Number of firms	Percent of business listings
<b>Beginning list (unique businesses)</b>	<b>1,537</b>	
Less non-working phone numbers	153	
Less wrong number	3	
<b>Firms with working phone numbers</b>	<b>1,381</b>	<b>100.0 %</b>
Less no answer	595	43.1
Less could not reach appropriate staff member	38	2.8
Less unreturned fax/email	52	3.8
<b>Firms successfully contacted</b>	<b>696</b>	<b>50.4 %</b>

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

- Non-working phone numbers (153); or
- Wrong numbers for the desired businesses (3).

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.

**Working phone numbers.** As shown in Figure D-4, there were 1,381 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 (595) establishments.
- **Could not reach responsible staff member.** For a small number of businesses (38), a responsible staff person could not be reached after repeated attempts.
- **Unreturned fax/email.** The study team sent faxes or emailed the availability questionnaires upon request. There were 52 businesses that requested such surveys but did not return them.

After taking those unsuccessful attempts into account, the study team was able to successfully contact 696 businesses, or 50 percent of those with working phone numbers.

**Establishments included in the availability database.** Figure D-5 presents the disposition of the 696 businesses the study team successfully contacted and how that number resulted in the 145 businesses the study team included in the availability database.

Figure D-5.  
Disposition of  
successfully  
contacted  
businesses

Source:  
Keen Independent from  
2014 availability  
Interviews.

	Number of firms
<b>Firms successfully contacted</b>	<b>696</b>
Less businesses not interested in discussing availability for Madison work	236
Less language barrier	0
<b>Firms that completed interviews about business characteristics</b>	<b>460</b>
Less no related work	197
Less not a for-profit business	32
Less no longer in business	86
<b>Firms included in availability database</b>	<b>145</b>

**Establishments not interested in discussing availability for City of Madison work.** Of the 696 businesses that the study team successfully contacted, 236 were not interested in discussing their availability for City of Madison work.

**Language barriers.** No language barriers were identified during the availability interviews.

**Businesses included in the availability database.** Many firms completing interviews were excluded from the final availability database because they indicated that they did not perform work related to public works contracting or reported that they were not a for-profit business:

- Keen Independent excluded 197 businesses that indicated that they were not involved in public contracting work.
- Of the completed interviews, 32 indicated that they were not a for-profit business (including non-profits, government agencies or homes). Interviews ended when respondents reported that their establishments were not for-profit businesses.
- Eighty-six of the interviewees indicated that their firm was no longer in business.

After those final screening steps, the interview effort produced a database of 145 businesses potentially available for City of Madison work.

**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.

## **E. Businesses Included in the Availability Database**

After completing interviews with 696 City of Madison businesses, the study team developed a database of information about businesses that are potentially available for City of Madison public works contracting work. The study team used the availability database to produce availability benchmarks to determine whether there were any disparities in City of Madison utilization of MBE/WBEs during the study period.

Data from the availability interviews allowed Keen Independent to develop a representative depiction of businesses that are qualified and interested in the highest dollar volume areas of City of Madison public works-related work, but it should not be considered an exhaustive list of every business that could potentially participate in City of Madison contracts. Part H of this Appendix provides a detailed discussion about why the database should not be considered an exhaustive list of potentially available businesses.

The study team's research identified 145 businesses reporting that they were available for specific public works contracts that the City of Madison awarded during the study period. Of these businesses, one firm was identified as minority-owned and nine firms were identified as woman-owned.

Because results are based on a simple count of firms with no analysis of availability for specific City of Madison contracts, they only reflect the first step in the availability analysis.

## **F. MBE/WBE Availability Calculations on a Contract-by-Contract Basis**

Keen Independent analyzed information from the availability database to develop dollar-weighted availability estimates for use as a benchmark in the disparity analysis.

- Dollar-weighted availability estimates represent the percentage of City of Madison public works contracting dollars that MBE/WBEs might be expected to receive based on their availability for specific types and sizes of City of Madison public works-related prime contracts and subcontracts.
- Keen Independent's approach to calculating availability was a bottom up, contract-by-contract process of "matching" available firms to specific prime contracts and subcontracts.

**Steps to calculating availability.** Only a portion of the businesses in the availability database were considered potentially available for any given City of Madison public works 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 2,901 City of Madison prime contracts and subcontracts included in the utilization analysis and then took the following steps to calculate availability.

1. For each contract element, the study team identified businesses in the availability database that reported that they:
  - Are qualified and interested in performing public works-related work in that particular role, for that specific type of work, for that particular type of agency (City of Madison) or had actually performed work in that role based on contract data for the study period;
  - Had bid on or performed work of that size in the past seven years (or had done so based on contract data for the study period); 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.
3. The study team translated the numeric availability of businesses for the contract element into percentage availability (as described in Figure D-6).

The study team repeated those steps for each contract element examined in the Availability 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 D-6 provides an example of how the study team calculated availability for a specific subcontract in the study period.

**Figure D-6.**  
**Example of an availability calculation**

One of the subcontracts examined was for electrical work (\$59,000) on a City 2012 public works contract. 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 2012;
- b. Indicated that they performed electrical work;
- d. Reported bidding on work of similar or greater size in the past seven years; and
- e. Reported qualifications and interest in working as a subcontractor on City public works projects.

There were 27 businesses in the availability database that met those criteria. Of those businesses, 3 were MBEs or WBEs. Therefore, MBE/WBE availability for the subcontract was 44 percent (i.e.,  $3/27 = 11\%$ ).

**Special considerations for supply contracts.** When calculating availability for a particular type of materials supplies, Keen Independent counted as available all firms supplying those materials that reported qualifications and interest in that work for the City of Madison and indicated that they could provide supplies in the City of Madison. Bid capacity was not considered in these calculations.

**Improvements on a simple “head count” of businesses.** Keen Independent used a “custom census” approach to calculating MBE/WBE availability for City of Madison work rather than using a simple “head count” of MBE/WBEs (i.e., simply calculating the percentage of all City of Madison public works contracting businesses that are minority- or women-owned). Using a custom census approach typically results in lower availability estimates for MBEs and WBEs than a headcount approach due in large part to Keen Independent’s consideration of “bid capacity” in measuring availability and because of dollar-weighting availability results for each contract element (a large prime contract has a greater weight in calculating overall availability than a small subcontract). The largest contracts that MBE/WBEs have bid on or performed in the City of Madison 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 custom census approach to measuring availability is more precise than completing a simple head count approach.

**Keen Independent’s approach accounts for type of work.** The study team took type of work into account by examining 31 different subindustries related to construction as part of estimating availability for City of Madison work.

**Keen Independent’s approach accounts for qualifications and interest in public works-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 City of Madison public work, in addition to the consideration of 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 the City of Madison indicated that they had prime contracts in the past seven 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 the City of Madison indicated that they had subcontracts in the past seven 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 seven years (i.e., bid capacity) when determining whether to count that business as available for a particular contract element. When counting available businesses for a particular prime contract or subcontract, the study team considered whether businesses had previously bid on or received at least one contract of an equivalent or greater dollar

value in the City of Madison in the previous seven years, based on the most inclusive information from survey results and analysis of past City of Madison prime contracts and subcontracts.

Keen Independent's approach is consistent with many recent, key court decisions that have found relative capacity measures to be important to measuring availability (see Appendix B).

**Keen Independent's approach accounts for the geographic location of the work.** The study team determined the location where work was performed for City of Madison contracts.

**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.

## **G. Dollar-weighted Availability Results**

Keen Independent used the custom census approach described above to estimate the availability of MBE/WBEs and majority-owned businesses for 2,901 public works prime contracts and subcontracts that the City of Madison awarded during the study period.

Overall, dollar-weighted MBE/WBE availability for contracts is 2.6 percent. This result is lower than the percentage of availability firms that are MBE/WBE (9%). MBE dollar-weighted availability was 0.1 percent and WBE dollar-weighted availability was 2.5 percent.

## **H. Additional Considerations Related to Measuring Availability**

The study team made several additional considerations related to its approach to measuring availability.

**Not providing a count of all businesses available for City of Madison work.** The purpose of the availability interviews was to provide precise and representative estimates of the percentage of MBE/WBEs potentially available for City of Madison work. The availability analysis did not provide a comprehensive listing of every business that could be available for City of Madison work and should not be used in that way. Federal courts have approved the custom census approach to measuring availability that Keen Independent used in this study.

**Not using MBE/WBE or DBE directories, prequalification lists or bidders lists.** The methodology applied in this study takes a custom census approach to measuring availability and adds several layers of refinement to a simple head count approach. For example, the interviews provide data on businesses' qualifications, relative bid capacity and interest in City of Madison work, which allowed the study team to take a more refined approach to measuring availability.

Note that 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 interviews. The study team re-contacted companies for clarification in the event of any inconsistencies in race, ethnicity and gender ownership information for the firm.

**Using D&B lists.** Dun & Bradstreet was the source of business listings in Keen Independent's availability analysis. 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 the City of Madison 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 again suggests that MBE/WBEs might be underrepresented in the final availability database.

Keen Independent is not able to quantify how much, if any, underrepresentation of MBE/WBEs exists in the final availability database. However, Keen Independent concludes that any such underrepresentation would be minor and would not have a meaningful effect on the availability and disparity analyses presented in this report.

**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. However, there are limitations when choosing specific D&B work specialization codes to define sets of establishments to be interviewed, which leave some businesses off the contact list.

**Non-response bias.** An analysis of non-response bias considers whether businesses that were not successfully interviewed are systematically different from those that were successfully interviewed 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; and
- Work specializations.

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

**Work specializations.** Businesses in highly mobile fields, such as trucking, may be more difficult to reach for availability interviews than businesses more likely to work out of fixed offices (e.g., professional firms). That assertion suggests that response rates may differ by work specialization. Simply counting all interviewed 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 an interview is less important because the percentage of MBE/WBE availability is calculated within trucking before being combined with information from other work fields in a dollar-weighted fashion. In this example, work specialization would be a greater source of

non-response bias if particular subsets of trucking firms were less likely than other subsets to be easily contacted by telephone.

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

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

- Keen Independent reviewed data from the availability interviews in light of information from other sources such as the City of Madison SBE directory and other vendor information that the study team collected from the City. This included data on the race/ethnicity and gender of the owners of SBE-certified businesses and was compared with interview responses concerning business ownership.
- Keen Independent compared interview responses about the largest contracts that businesses won during the past seven years with actual City of Madison contract data.

**Summary of non-response bias.** Based on the MBE and WBE coding of firms by Dun & Bradstreet, Keen Independent researched whether the telephone interview method and availability screening method led to a lower number of MBEs and WBEs in the final availability database than the initial D&B list. The study team found no evidence of any underrepresentation of MBEs and WBEs in the final availability data.

A copy of the interview instrument follows.



## Madison Availability Interview Instrument

Hello. My name is *[interviewer name]*. We are calling on behalf of the City of Madison. This is not a sales call. The City is compiling a list of companies interested in working on a wide range of City public works construction contracts.

Who can I speak with to get the information we need from your firm?

[After reaching THE OWNER OR an appropriately senior staff member, the interviewer should re-introduce the purpose of the interview and begin with questions]

[IF NEEDED ... We are contacting hundreds of contractors, trucking companies, suppliers and other types of businesses in the Madison area.]

[IF INTERVIEWEE REQUESTS ADDITIONAL INFORMATION ... You can call Norman Davis at the City at 608-267-8759.]

[IF ASKED, THE INFORMATION DEVELOPED IN THESE INTERVIEWS WILL ADD TO THE CITY'S DATA ON COMPANIES INTERESTED IN WORKING ON PUBLIC WORKS CONTRACTS]

X1. I have a few basic questions about your company and the type of work you do. Can you confirm that this is *[firm name]*?

1=RIGHT COMPANY – SKIP TO 1

2=NOT RIGHT COMPANY – SKIP TO Y1

3=REFUSE TO GIVE INFORMATION – [CODE REFUSALS] TERMINATE

Y1. Can you give me any information about *[firm name]*?

1=Yes, same owner doing business under a different name – SKIP TO Y4

2=Yes, can give information about named company – SKIP TO Y2

3=Company bought/sold/changed ownership – SKIP TO Y4

4=No, does not have information – END, INTERVIEW COMPLETE

5=Refused to give information – END, INTERVIEW COMPLETE

Y2. ENTER NEW NAME

1=VERBATIM

Y3. Can you give me the phone number of *[firm name]*?

(ENTER UPDATED PHONE OF NAMED COMPANY)

1=VERBATIM

Y4. And what is the new name of the business that used to be *[firm name]*?

1=VERBATIM (ENTER UPDATED NAME)

Y5. Can you give me the complete address or city for *[firm name]*?

\*NOTE TO INTERVIEWER - RECORD IN THE FOLLOWING FORMAT:

. STREET ADDRESS

. CITY

. STATE

. ZIP

1=VERBATIM

Y6. Can you give me the name of the owner or manager of the new business?

(ENTER UPDATED NAME)

1=VERBATIM

Y7. Do you work for this new company?

1=Yes – CONTINUE

2=No – END ... INTERVIEW COMPLETE

## **A. Confirmation of Business and Commercial or Public Work**

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1. Does your firm do any work related to public works contracts? This includes construction, trucking and materials supply. [Public works contracts include construction and repair of public buildings, streets and bridges, water and sewer facilities, and parks and recreation facilities.]

1=Yes – CONTINUE

2=No – END ... INTERVIEW COMPLETE

98=(DON'T KNOW) END ... INTERVIEW COMPLETE

99=(REFUSED) END ... INTERVIEW COMPLETE

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

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

## **B. Type of Construction Work**

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3. What types of work does your firm perform related to public works contracts? Is your firm involved in .... [READ LIST ONE AT A TIME, MULTIPUNCH]

1=Excavation, demolition and other site prep

2= Trucking and hauling

3= Drilling and foundations

4=Landscaping and related work

5=Fencing and gates

6=Asphalt paving

7= Concrete cutting

8=Concrete flatwork (sidewalk, curb, gutter and paths)

9=Other concrete work

10=Structural steel work

11=Bridge and other structure painting

12=Bridge construction

13=Pavement marking

14=Temporary traffic control

15=General road construction

16=Masonry, stonework, tile setting and plastering

17=Drywall and insulation

18=Windows and doors

19=Carpentry and floor work

20=Roofing, siding and sheet metal work

21=Plumbing and HVAC

22=Electrical work

23=Office furniture and equipment installation

24=General public building construction

25=Culverts, drainage and water retention

26=Water and sewer lines

27=Water and sewer plants

28=Waterways and dams

29=Construction materials supply

88=Other roadway related

89=Other building construction related

96=None of these

4. Please briefly describe the main line of business at your firm. In what industry would you classify the primary line of work at your firm?

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5. Is this the sole location for your business, or do you have offices in other locations?

1=Sole location

2=Have other locations

98=(DON'T KNOW)

99=(REFUSED)

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

1=Independent – SKIP TO 7

2=Subsidiary or affiliate of another firm

98=(DON'T KNOW)

99=(REFUSED)

- 6a. What is the name of your parent or affiliate company?

1=ENTER NAME

98=(DON'T KNOW)

99=(REFUSED)

## C. Contract Role

---

7. During the past seven years, has your company submitted a bid or price quote for any part of a contract for a government agency?

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

8. **[Answer if 'Yes' to Q7. Otherwise skip to Q9.]** Were those bids or price quotes to work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? SELECT ALL THAT APPLY.
- 1=Prime contractor
  - 2=Subcontractor
  - 3=Trucker/hauler
  - 4=Supplier
  - 8=Other ... specify VERBATIM
  - 98=(DON'T KNOW)
  - 99=(REFUSED)
9. During the past seven years, has your company worked on any part of a contract for a government agency?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(REFUSED)
10. **[Answer if 'Yes' to Q9. Otherwise skip to Q11.]** Did your company work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? Check all that apply.
- 1=Prime contractor
  - 2=Subcontractor
  - 3=Trucker/hauler
  - 4=Supplier
  - 8=Other ... specify VERBATIM
  - 98=(DON'T KNOW)
  - 99=(REFUSED)
11. During the past seven years, has your company submitted a bid or a price quote for any part of a contract for a private sector project?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(REFUSED)

12. **[Answer if 'Yes' to Q11. Otherwise skip to Q13.]** Were those bids or price quotes to work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? Check all that apply.
- |                    |                              |
|--------------------|------------------------------|
| 1=Prime contractor | 8=Other ... specify VERBATIM |
| 2=Subcontractor    | 98=(DON'T KNOW)              |
| 3=Trucker/hauler   | 99=(REFUSED)                 |
| 4=Supplier         |                              |
13. During the past seven years, has your company worked on any part of a contract for a private sector project?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(REFUSED)
14. **[Answer if 'Yes' to Q13. Otherwise skip to Q15.]** Did your company work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? Check all that apply.
- 1=Prime contractor
- 2=Subcontractor
- 3=Trucker/hauler
- 4=Supplier
- 8=Other ... specify VERBATIM
- 98=(DON'T KNOW)
- 99=(REFUSED)
15. Thinking about public works contracts, is your company qualified and interested in working with the City of Madison as a *prime contractor*?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(REFUSED)
16. Is your company qualified and interested in working with the City of Madison as a subcontractor, trucker/hauler, or supplier on public works contracts?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(REFUSED)

## D. Contract History

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17. In rough dollar terms, what was the largest contract or subcontract your company was awarded in during the past seven years? Please include any government or private sector contracts and any contracts not yet completed.

1=\$100,000 or less

2=More than \$100,000 to \$500,000

3=More than \$500,000 to \$1 million

4=More than \$1 million to \$2 million

5=More than \$2 million to \$5 million

6=More than \$5 million to \$10 million

7=More than \$10 million to \$20 million

8=More than \$20 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

18. Was this the largest contract or subcontract that your company bid on or submitted quotes for during the past seven years?

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

19. **[Answer if 'No' in Q18. Otherwise skip to Q20.]** What was the largest contract or subcontract that your company bid on or submitted quotes for during the past seven years?

1=\$100,000 or less

2=More than \$100,000 to \$500,000

3=More than \$500,000 to \$1 million

4=More than \$1 million to \$2 million

5=More than \$2 million to \$5 million

6=More than \$5 million to \$10 million

7=More than \$10 million to \$20 million

8=More than \$20 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

## E. Ownership

---

20. My next questions are about the ownership of the business. 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)

99=(REFUSED)

21. 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 American, Hispanic American or Native American. By this definition, is your firm a minority-owned business?

1=Yes

2=No – SKIP TO 22

3=(OTHER GROUP - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

- 21a. OTHER GROUP - SPECIFY

1=VERBATIM

- 21b. Would you say that the minority group ownership is mostly African American, Asian American, Hispanic American, or Native American?

1=African-American

2=Asian American

4=Hispanic American

5=Native American

8=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

## F. Business Background

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22. About what year was your firm established? \_\_\_\_\_ (RECORD YEAR)

23. About how many employees did you have working out of just your location, on average, over the past three years? \_\_\_\_\_ (RECORD NUMBER OF EMPLOYEES)



24. Roughly, what was the average annual gross revenue of your company, just considering your location, from 2011 through 2013? Would you say . . . [READ LIST]

1= \$100,000 or less	8=\$22.4 million or more
2=\$100,000 to \$499,000	98=(DON'T KNOW)
3=\$500,000 to \$999,999	99=(REFUSED)
4=\$1 million to \$1.9 million	
5=\$2 million to \$4.9 million	
6=\$5 million to \$9.9 million	
7=\$10 million to \$22.3 million	

25. [IF MULTI-LOCATION BUSINESS] Roughly, what was the average annual gross revenue of your company, for all of your locations from 2011 through 2013? [Or for the years your company was in business if started after 2011] Would you say . . . [READ LIST]

1= \$100,000 or less	8=\$22.4 million or more
2=\$100,000 up to \$499,000	98=(DON'T KNOW)
3=\$500,000 up to \$999,000	99=(REFUSED)
4=\$1 million up to \$1.9 million	
5=\$2 million up to \$4.9 million	
6=\$5 million up to \$9.9 million	
7=\$10 million up to \$22.3 million	

## G. Barriers or Difficulties

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Finally, we're interested in whether your company has experienced barriers or difficulties associated with starting or expanding a business in your industry or with obtaining work. Think about your experiences within the past seven years as you answer these questions.

26. Has your company experienced any difficulties in obtaining lines of credit or loans?

1=Yes  
2=No  
98=(DON'T KNOW)  
99=(DOES NOT APPLY)

27. Has your company obtained or tried to obtain a bond for a project?
- 1=Yes
  - 2=No [SKIP TO 29]
  - 98=(DON'T KNOW) [SKIP TO 29]
  - 99=(DOES NOT APPLY) [SKIP TO 29]
28. Has your company had any difficulties obtaining bonds needed for a project?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(DOES NOT APPLY)
29. Do City of Madison prequalification requirements present a barrier to obtaining work with the City?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(DOES NOT APPLY)
30. Have any insurance requirements on projects presented a barrier to bidding?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(DOES NOT APPLY)
31. Has the size of large projects presented a barrier to bidding?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(DOES NOT APPLY)
32. Has your company experienced any difficulties learning about bid opportunities with the City of Madison?
- 1=Yes
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(DOES NOT APPLY)

33. Has your company experienced any difficulties learning about bid opportunities with other public agencies in the Madison area?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(DOES NOT APPLY)
34. Has your company experienced any difficulties with learning about bid opportunities in the private sector in the Madison area?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(DOES NOT APPLY)
35. Has your company experienced any difficulties learning about subcontracting opportunities from Madison area prime contractors?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(DOES NOT APPLY)
36. Has your company experienced any difficulties obtaining final approval on your work from inspectors or prime contractors?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(DOES NOT APPLY)
37. Has your company experienced any difficulties receiving payment in a timely manner?
- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(DOES NOT APPLY)

38. Has your company experienced any difficulties obtaining final approval on your work from inspectors or prime contractors?
- 1=Yes  
2=No  
98=(DON'T KNOW)  
99=(DOES NOT APPLY)
39. When it comes to winning work as a prime or subcontractor with the City of Madison or others, are there any other barriers that come to mind? Do you have any general thoughts or insights on starting and expanding a business in your field?
- 1=VERBATIM (PROBE FOR COMPLETE THOUGHTS)  
97=(NOTHING/NONE/NO COMMENTS)  
98=(DON'T KNOW)  
99=(REFUSED)
40. Would you be willing to participate in a follow-up interview about the local marketplace?
- 1=Yes  
2=No  
98=(DON'T KNOW)  
99=(REFUSED)

## H. Interviewee and other Contact Information

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41. Just a few last questions. What is your name at *[firm name / new firm name]*?  
(RECORD FULL NAME)

1=VERBATIM

42. What is your position?

1=Receptionist

2=Owner

3=Manager

4=CFO

5=CEO

6=Assistant to Owner/CEO

7=Sales manager

8=Office manager

9=President

9=(OTHER - SPECIFY)

99=(REFUSED)

43. For purposes of receiving procurement information from the City, is your mailing address [*firm address*]:
- 1=Yes – SKIP TO 44
  - 2=No
  - 98=(DON'T KNOW)
  - 99=(REFUSED)
- 43a. What mailing address should the City use to get any materials to you?
- 1=VERBATIM
44. What fax number could the City use to fax any materials to you?
- 1=NUMERIC (111-111-1111)
45. What e-mail address could the City use to get any materials to you?
- 1=ENTER E-MAIL
  - 97=(NO EMAIL ADDRESS)
  - 98=(DON'T KNOW)
  - 99=(REFUSED)
- 45a. (RECORD EMAIL ADDRESS) (VERIFY ADDRESS LETTER BY LETTER: EXAMPLE: 'John@CRI-RESEARCH.COM' SHOULD BE VERIFIED AS: J-O-H-N-at-C-R-I-hyphen-R-E-S-E-A-R-C-H-dot-com)
- 1=VERBATIM

**End of survey message:**

**Thank you for your time. This is very helpful for the City.**