



April 13, 2021

Mr. Charlie Howley  
Public Works Director / City Engineer  
City of Chanhassen  
1591 Park Road  
Chanhassen, MN 55317

Re: Cartegraph OMS Pavement Management Work Plan  
City of Chanhassen, MN

Dear Mr. Howley:

I am pleased to submit this work plan on behalf of WSB to continue to implement the City of Chanhassen's pavement management system. WSB staff will continue working closely with the City personnel in completing the pavement inspections.

### **Cost Summary**

It is proposed that this project be billed hourly on a cost not to exceed basis, with total cost (excluding Task 4, Extra Services) not exceeding **\$23,319**. If you agree with the terms as outlined in this proposal, please sign where indicated below and return a copy to our office.

The following tasks will be completed as part of this work plan:

**1. Data Collection**

**Cost: \$2,043**

WSB personnel will make necessary updates to the pavement management database using the Cartegraph OMS software. WSB will deploy data to field iPads for use in detailed field inspections.

**2. Detailed Inspections of City**

**a. Streets**

**Cost: \$9,600**

WSB personnel will work with the City personnel to identify the bituminous pavement segments to be rated in 2021. WSB personnel will rate these pavement segments of approximately 40 miles. The rating process consists of viewing the segment condition on the ground, recording information on the distresses and inputting the distress data into the Cartegraph OMS database. Cartegraph OMS uses the research and distress information developed by the U.S. Army Corps of Engineers standards to determine an Overall Condition Index (OCI) for all segments. WSB will perform Quality Assurance/Quality Control (QA/QC) on the inspection results.

**b. Trails**

**Cost: \$4,500**

WSB staff will work with Chanhassen staff to identify the trail pavement sections to be rated in 2021. WSB staff will walk and rate these 37.5 miles of pavement. Utilizing the GIS base map, trail construction history and maintenance information provided by the City. Once this is complete the GIS data will be integrated into Cartegraph.

**c. Parking Lots**

**Cost: \$5,040**

WSB staff will work with Chanhassen staff to identify the 28 parking lots to be rated in 2021. WSB will assess each of the 28 parking lots by walking and applying a rating in Cartegraph. The rating process consists of performing distress surveys on each parking lot, documenting distress numbers and severity, providing quality control of the data and inputting the data into the pavement database.

**3. Inspection Summary of City Pavement**

**Cost: \$2,136**

WSB personnel will author a memo summarizing the conditions of all the City streets in 2020. City streets that are not inspected in 2021 will have an estimated OCI based on the last inspected OCI and degradation curve. WSB personnel will provide a map showing the conditions of all the City streets. WSB will also provide a spreadsheet which shows the OCI values that have changed by more than 5 points with no explanation (i.e. maintenance performed) since the last inspection cycle. If the City would like a map of these outliers this can be done as an extra service as shown below in "Extra Services"

**Project Timeline**

Data Collection Completed By ..... August 1, 2021  
Detailed Inspection of City Pavement Completed By ..... October 1, 2021  
Inspection Summary of City Pavement Completed By ..... October 15, 2021

The following are extra services that can be provided to the City upon request at additional costs as summarized below.

**4. Extra Services**

**Update Dimensions of City Streets**

**Cost: \$4,480**

- WSB will measure the length and width of each street segment within the 2020 inspection zone, from centerline of the pavement, end of segment to end of segment with criteria established with input from the City. WSB will verify the dimensions in the existing Cartegraph OMS database and revise and update the dimensions based on the field measurements.

**Summarize Conditions of City Streets (Outliers)**

**Cost: \$2,280**

- WSB will provide updates to the City including any neighborhoods that exhibit drastic changes in condition since the last inspection (2018) for that inspection zone. WSB will include a map highlighting those neighborhoods and schedule a meeting to present the findings.

**Perform Budget Analysis**

**Cost: \$5,180**

- WSB will work closely with City personnel to modify the existing maintenance protocol and unit pricing for each maintenance activity in the Cartegraph OMS. WSB will work with City personnel to develop different budget scenarios (3 OCI driven and 3 budget driven) within the Cartegraph OMS system that can most accurately represent the City's pavement management and how modifications can be integrated to optimize the existing system.

**Update Maintenance History of the City Streets**

**Cost: \$2,672**

- WSB will work closely with City personnel to update the maintenance history for the past five years (2016-2020) as well 2021 projects.

**On Call Pavement Management Support**

**Cost: \$120/Hour**

- WSB will provide on call, hourly support for tasks related to this pavement management project that may not be covered in the extra services above. These tasks as requested by the City will be billed hourly and can include things like assisting with Cartegraph, exporting of data, summarizing OCI values, etc.

Thank you for this opportunity to continue to develop the City of Chanhassen's pavement management system. I am confident that the level of service on this project will meet or exceed your expectations. If you should have any questions regarding this proposal, please contact me at 218.341.3614.

Sincerely,

WSB



Matthew Indihar, PE  
Pavement/Materials Specialist

**ACCEPTED BY:**

**City of Chanhassen**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_