Project Status Report: CEEn-2018CPST-013 **Report Date: Feb 11, 2019**

Team Members: Craig Staples, Alec Escamilla, Paul Andersen

Project Title: Springville Performance Evaluation & Pavement Design for Minor Collectors

1) Summary of technical/non-technical challenges encountered

This week we were able to put additional work towards completing the traffic count survey of the streets in question. Our technical challenge is to estimate equivalent single-axle loads (ESAL) for the identified minor collectors. Our traffic count survey will help us to make these estimations.

Another technical problem we are trying to solve is the susceptibility of these roadways to frost heaving.

A non-technical problem encountered this week was coordinating with our schedules and the weather in order to place the frost heave survey equipment. The weather needed to be consistently (3 consecutive days) below freezing.

2) Team approaches & resolutions to overcome challenges

Our approach to these problem was the following:

1. We are making good estimations for axle loads and building an ESAL calculator for the traffic count survey we conducted
2. We visited two of the sites, placed survey equipment, and measured the elevations of these streets during freezing temperatures. These measurements will help us evaluate the frost susceptibility in these areas
3. The weather coordinated well with us and we experienced cold weather all week, allowing us to perform the survey

3) Status of challenge resolutions & potential project impact

This week we were able to make good headway on our data collection by beginning the frost heave survey and by continuing the traffic count and ESAL estimation. This qualitative and quantitative data will help us determine what the cause of failure in these streets may be.

The next phases will be to use these data in order to make recommendations and prescriptions for the road construction specifications. Dr. Guthrie has introduced one of our team members to a pavement design software that our team will use to make these prescriptions.

4) Project status & summary

Data collection is moving along and our path to completion is clear. Our team will need to complete the data collection, and ESAL calculations this week so that we can begin the design portion of the project.

Please enter # of hours spent on project this last week for each team member in the order listed above

Craig Staples: 7 **Alec Escamilla:** 4 **Paul Andersen:** 9.5