



COLD WEATHER PAVING STANDARD

Asphalt paving shall conform to the Nibley City Engineering Standards. The City's Engineering Standards defers to the current APWA Manual of Standard Specifications in regard to the requirements for temperature when paving.

Section 32 12 16.13.1.6 titled Weather, states,

"1. April 15 to October 15: Place pavement when air temperature in the shade and the roadway surface temperature are above 50 degrees Fahrenheit. The Engineer determines may provide written approval if is acceptable to place outside of this temperature limit.

2. Before April 15 and after October 15: Provide a Cold Weather Paving Plan.

Engineer must accept the plan before proceeding. Include the following details:

- a. Haul Details
- b. Placement Details
- c. Compaction aids used in production
- d. Coordination procedure for acceptance testing

3. Moisture: Do not place on frozen base, during adverse climatic conditions such as precipitation, or when roadway surface is wet or icy."

While the City Engineer will evaluate all proposals rendered, the following is offered as an approvable Cold Weather Paving Criteria:

1. City Requirements
 - a. All standard subgrade/subbase compaction and proof rolling is completed per City specifications.
 - b. Cold weather paving shall not start without a City Inspector on site confirming that all conditions of the City Engineer approved Cold Weather Paving Plan has been and is being followed (especially in regards to the ambient temperature) and provides in writing (email acceptable) to the Contractor an approval to commence.
 - c. Ambient temperatures shall be determined based on real time data from the USU Environmental Observatory Website at <https://caas.usu.edu/weather/>. The City Inspector may elect to use an alternate temperature measurement method if the temperature at the USU site does not appear to accurately reflect current conditions at the jobsite.
2. Haul Details:
 - a. The Asphalt Plant shall be located no farther than 8 miles from the Jobsite.
 - b. Minimum Asphalt Temperature @ jobsite – 280 degrees F @ 3" of Asphalt; 265 degrees F @ 4" and above. *Pavement less than 3" is not approved for cold weather paving.*
 - c. Maximum Asphalt Temperature @ jobsite – 425 degrees F
 - d. Trucks not meeting temperature requirements shall be rejected
3. Placement Details
 - a. Placement shall not commence until the ambient temperature is 40 degrees F and rising and ground temperature is 40 degrees.
 - b. Placement shall conclude once the ambient temperature falls below 40 degrees F.
 - c. Asphalt shall be placed in continuous succession with truck delays being no greater than 5 minutes. A maximum of 2 delays over 5 minutes but less than 10 minutes shall be allowed. Any single delay over 10 minutes or a 3rd delay over 5 minutes shall require paving to be concluded for the day.

4. Compaction aids used in production
 - a. A certified materials testing company representative paid for by the contractor shall be present onsite at all times during asphalt paving operations.
 - b. A rolling pattern shall be established with the first few trucks of asphalt to achieve the highest densities possible.
 - c. The Contractor shall provide a minimum of two or more (as determined by the City Engineer) asphalt compaction rollers and operators that shall be manned and operated at all times during asphalt paving operations. Failure to provide this shall be reason to not allow asphalt to be paved or to conclude paving operations.
5. Coordination procedure for acceptance testing
 - a. Collect at least one (1) random sample per each sub lot (500 tons). Field samples will be compacted in the laboratory and tested in accordance with APWA 2012 section 32 12 05. Random samples will be collected at the following locations:
 - Behind paver before compaction
 - Where subplot exhibits non-uniform appearance
 - b. Four compaction tests shall be taken per 1000 sq yds of asphalt placed.
 - c. Compaction tests shall be calibrated with laboratory results of random samples collected in accordance with item 5a above.
 - d. Any filed density test that is less than 92% relative density shall result in the conclusion of asphalt paving for the day. Additionally, all asphalt placed after the location of the low test shall be sawcut to back to the nearest passing test location, removed, and replaced prior to starting additional asphalt paving.
 - e. Projects that are shut down twice for asphalt truck delays and / or insufficient compaction results shall not be allowed to restart until normal weather conditions are present (generally in the spring).
 - f. In place density shall be calibrated through laboratory results of random and core samples in accordance with 5a above and 2017 APWA 32 12 16.13.
 - g. Deficiencies identified through results of compaction testing after calibration to laboratory testing, laboratory testing, and/ or core samples shall be resolved by pay adjustment factors paid to Nibley City in accordance with Table 1 and Table 2 of 2017 APWA 32 12 16.13 as applicable. Applicable pay factor shall be applied to the cost of materials, equipment, and labor to install deficient/reject asphalt. The City reserves the right to reject asphalt in accordance with APWA 32 12 16.13.
 - h. All observation, sampling, testing, laboratory testing, etc. shall be performed at the expense of the contractor/owner by a third party that is pre-approved by Nibley City.

By signing below, the Asphalt Contractor, Project Owner, and Nibley City agree to the conditions stated above as the Cold Weather Paving Plan.

Asphalt Contractor

Owner/Authorized Agent

Date

Project Owner

Owner/Authorized Agent

Date

Nibley City Engineer

Date