

# 2017 UDOT RESEARCH PROBLEM STATEMENT

\*\*\* *Problem statement deadline is March 5, 2017. Submit statements to Vincent Liu at [vlui@utah.gov](mailto:vlui@utah.gov). \*\*\**

**Title:** Improving Visibility and Safety of Snowplow Wing Plows

**No. (office use):** 17.02.09

**Submitted By:** Braden Andersen

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**UDOT Champion (suggested):**

**Select ONE Subject Area**  Materials/Pavements  Maintenance  Traffic Mgmt/Safety  Structures/Geotechnical  
 Preconstruction  Planning  Data Analytics  Public Transportation

**1. Describe the problem to be addressed:**

Wing plows that extend from either side of snowplow trucks can increase their width by several feet. During storms or low visibility events they may not be easily visible to the travelling public. By adding a high visibility indicator to the end of the wing plow potential conflicts with the plow and other vehicles can be reduced.

**2. Explain why this research is important:**

There has been an increase in aggressive motorist's interactions with snowplows over the past several years -- this past winter a plow was run off US Highway 6 when a truck passed a plow on the right. The truck clipped the plow's wing and caused it to leave the roadway and tumble down a steep embankment, seriously injuring the driver. While it is strongly discouraged to pass snowplows motorists still do. By having greater visibility of plows the potential for crashes will be reduced.

**3. List the research objective(s):**

1. Find a cost effective and durable design for indicating the end of a plow wing (e.g. lighted stick).
2. Determine the efficacy of adding a lighted stick to the end of plow wings.

**4. List the major tasks:**

1. Design and build a lighted stick.
2. Install on several snowplows.
3. Collect driver response regarding performance.

**5. List the expected results:**

1. Increased space allowed for snowplows.
2. Reduction in crashes resulting from following too close or passing snowplows.

**6. Describe how the research results will be implemented:**

If performance and cost-benefit analyses are positive lighted sticks could be added to additional plows in the fleet.

**7. Requested from UDOT:** \$2,500  
**(or UTA for Public Transportation)**

**Other/Matching Funds:** \$

**Total Cost:** \$2,500

**8. Outline the proposed schedule, including start and major event dates:**

Spring/Summer – Design and build prototypes.  
Fall – Install on plow wings.  
Winter – 1) Put into use and collect feedback from plow operators, 2) make decision on how to proceed.