



BRIGHAM YOUNG UNIVERSITY  
AUVSI CAPSTONE TEAM (TEAM 45)

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## 1 Introduction

This document describes the purpose of the Unmanned Ground Vehicle concept selection.

## 2 Description

In the 2019 AUVSI SUAS competition, points are awarded for successfully delivering an “unmanned ground vehicle” (UGV) to a target location; additional points are awarded if the vehicle drives to another target location. The UGV must be capable of carrying an 8oz water bottle, and the impact must subjectively be “soft.” During the delivery the airframe cannot drop below 100ft ASL, so a system or mechanism for landing the UGV without damage is required. Because this payload drop problem is the most challenging part of the UGV design, determining how to accomplish the payload drop is the subject of this concept development. The UGV is assumed to be a “black box” capable of driving to its target once it is on the ground.