World's End Traffic and Circulation Project
Visitation Data Summary Notes

Method

In accordance with the World's End Traffic and Management Plan we collected both vehicle traffic data and counted the number of guests who showed up to our gatehouse.

To collect the traffic data, we used Trafx counters, which used disturbances in the earth magnetic field created by automobiles to count cars that drive by it. The counter was set up about 3 ft off the ground and 2 feet from the edge of the World's End entrance drive. The sensor was calibrated by someone physically observing and recording how many cars entered the property over a period of more than two hours. This observational data was then compared to the data collected by the Trafx device. Any discrepancies between the observational data and the Trafx data were entered into the Trafx sensors software and should have increased the accuracy of the device.

The sensor in the Trafx data collection device is sensitive to about 18ft from its location, so it was able to capture incoming cars as well as outgoing cars. To gain an accurate estimate of the number of vehicles counted by the Trafx sensor we divided the total number of vehicles sensed by the Trafx counter in half. This accounts for vehicles that tripped the Trafx sensor as they entered and exited the property.

To collect the number of guests that visited our gate house our ranger staff used a combination of physical click counters and our Sirius Ware point of sale software. Every time a Trustee's member walked up to the gate house rangers would click the physical counter. All non-Trustees members are charged an entrance fee to enter World's End by the ranger staff. This entrance fee is automatically recorded in our point of sale software. Throughout a ranger's shift they are required to enter the number of Trustees members who walk by the gatehouse into the point of sale software. Thus, the point of sale software can count all Trustees member and non-member guests who interact with our rangers. This however fails to count the number of people who enter World's End via the trail at the back of the second parking lot, because they do not interact with rangers.

Conclusions

- There is a discrepancy between the number of visitors counted by our rangers and the number of visitors counted by the TRAFX counter. On average there were 110% more vehicles counted than people counted by our rangers at the gatehouse during the month of November. This discrepancy can be accounted for by the following factors:
    - Visitors may arrive before or after the ranger has arrived or left
    - Some visitors do not enter the park, they simply drive in the parking lot, turn around and leave
    - Our rangers sometimes get busy and miss people.
    - Rangers may not be counting all children
    - Both our vehicle counters and rangers produce data which is flawed to an unknowable amount. Although a reasonable attempt was made to calibrate our vehicle detectors, any small error would be compounded as the time frame we monitored increased.

- - Reliance on automation alone is a challenge – consistent recalibration and inclusion of a margin in error in overall counts is recommended by Trafx.
- The top vehicle count days correspond well to the top visitor count days. The top five vehicle count days are also the top five people count days.
- When compared to data from 2017, 2018 saw a reduction of about 1400 visitors in the month of November.
- Inflated people count around 3pm may be due to rangers entering data into Sirius Ware at the end of their shift or when it's not quite as busy.
- The hourly data indicates that we are busiest between 10am and 3 pm.

Practical Application

Since completing the parking lot renovations, we have experienced significant traffic difficulties on two days, Sunday, November 4th, and Tuesday, January 1st. While there was no queuing on Martin's Lane, we did see backup within our parking lot, and cases of illegal parking in the lot. (*Please see the Project Summary narrative for more detail regarding the on the ground situation on these days*). After careful observation and post incident analysis we have come up with a plan to avoid future parking lot backups and illegal parking. This plan hinges on preventing the first incidents of illegal parking, which we believe are what cause additional illegal parking resulting in one-way traffic and backups.

To prevent the first incidents of illegal parking we will change the physical location of our staffing during the busiest times on weekends, holidays, and anticipated nice weather busy days. Two of our rangers will be "roving rangers". These roving rangers will patrol the two "problem areas", between the entrance and the first lot, and the second lot. Their main responsibility will be to prevent people from parking in inappropriate locations. They will accomplish this through non-verbal communication whenever possible thereby limiting their interaction with people in cars. These rangers will also wear brightly colored traffic vests to increase their visibility. Additionally, we will install signage in/near these problem areas to further deter people from parking inappropriately.