



Stony Brook University Parking Problem

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Problem



Scarcity

Limited parking for
commuter students -
only 3 commuter lots on
campus



Proximity

Commuter parking lots
are far away from
campus buildings



Unavailability

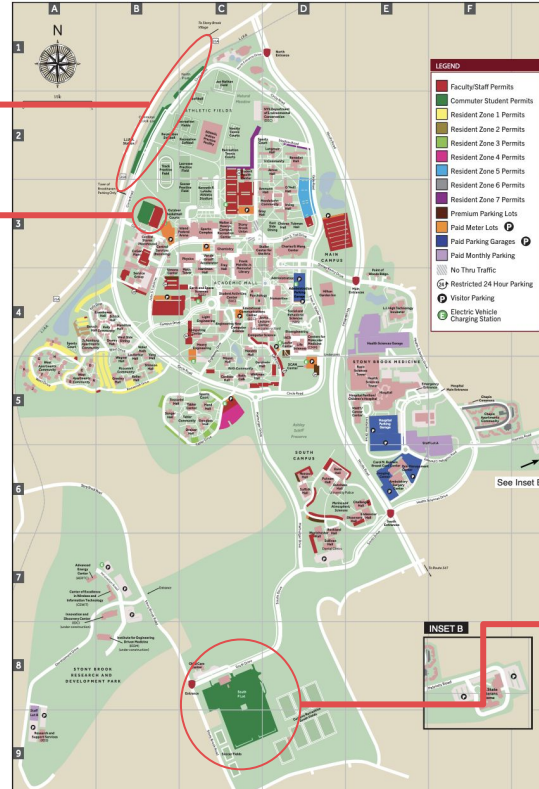
Parking spaces closer to
campus buildings are
not usually available

Commuter Lots

Railroad

Commuter L.I.R.R. Lot
North P Lot

Gym Road



South P

Commuter South P Lot

Who Is Affected?

- Commuter students on campus.
- Around 50% of the student population on campus are commuters.



Who is the Audience?

- We would primarily show our presentation to Erik Anderson, the director of Parking Services
- We'd also present it to the Commuter Student Services

Survey Questions

Are you a commuter?

How much time do you spend looking for a parking spot each day?

What parking lots do you look in?

What hours are you parked on campus?

Have you ever been late to class because of unavailable parking spots?

SBU Parking Survey (Student)

Are you a commuter? *

☐ Yes

☐ No

How much time do you spend looking for a parking spot each day? *

Choose ▾

What parking lots do you look in? (choose parking spaces that are eligible to you) *

☐ North P

☐ South P (bless your soul...)

☐ LIRR Parking lot

☐ Parking next to Gym road

☐ Admin parking garage

☐ Residential lots

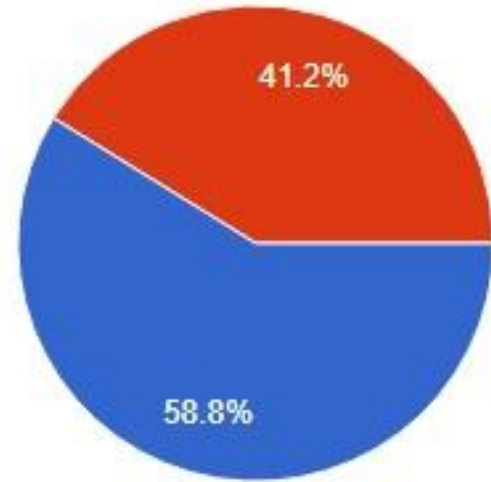
☐ Hospital parking garage

☐ Metered lot next to Federal Island Arena

☐ Other: _____

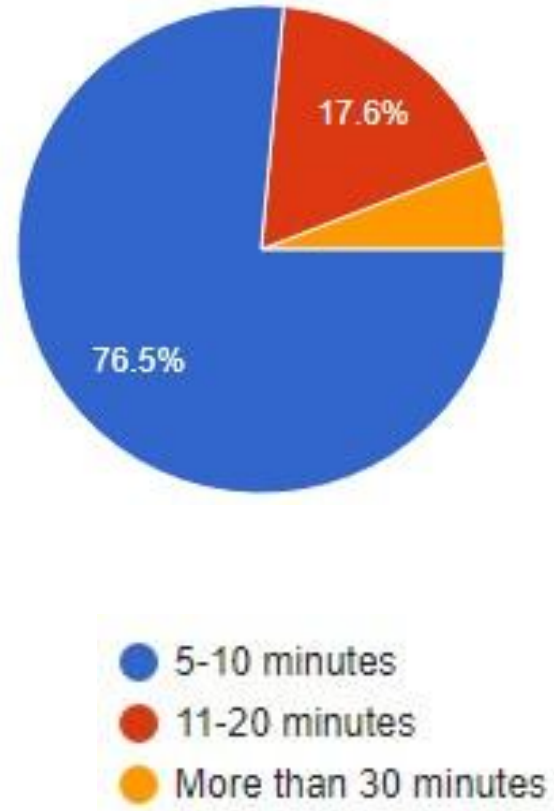
Are You a Commuter?

- All of our survey responses were filled out by students.
- 58.8% of the students surveyed are commuter students.
- Commuter students either drive, take a bus or a train as opposed to living on campus.



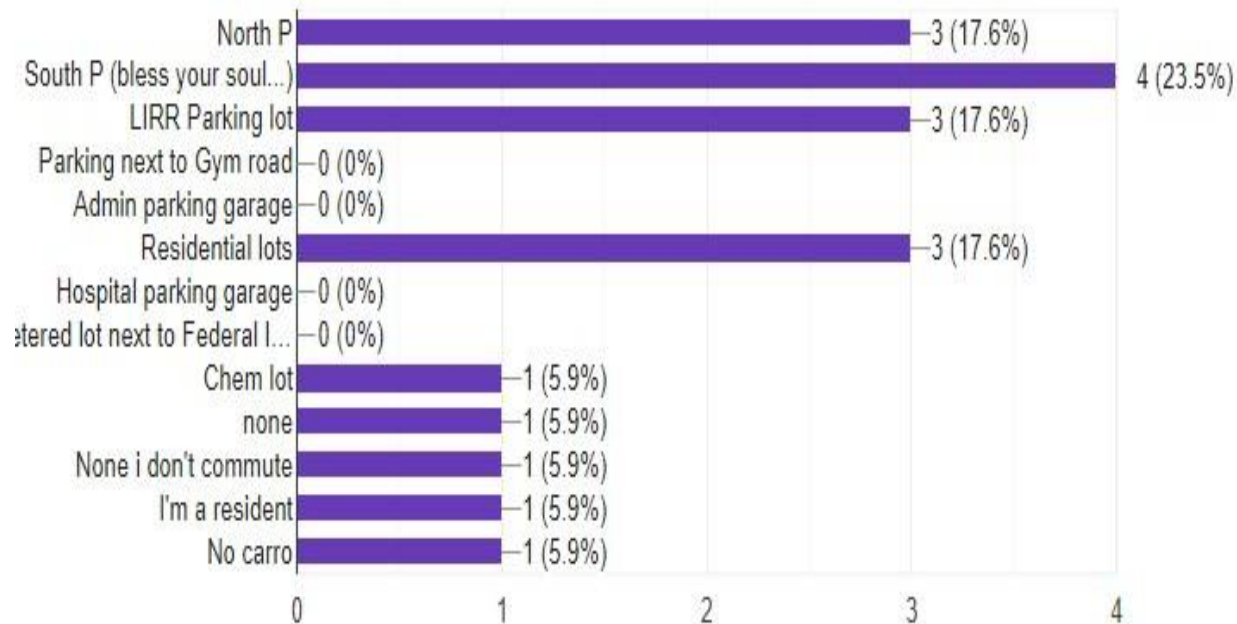
Time to Park/Hours Parked

- The majority of students take less than 10 minutes to park.
- The majority of students also arrive on campus no later than 10am.
- A few students mentioned arrivals later than 10am.
- Arrivals later than 10 am could account for students taking longer than 10 minutes to find a spot.



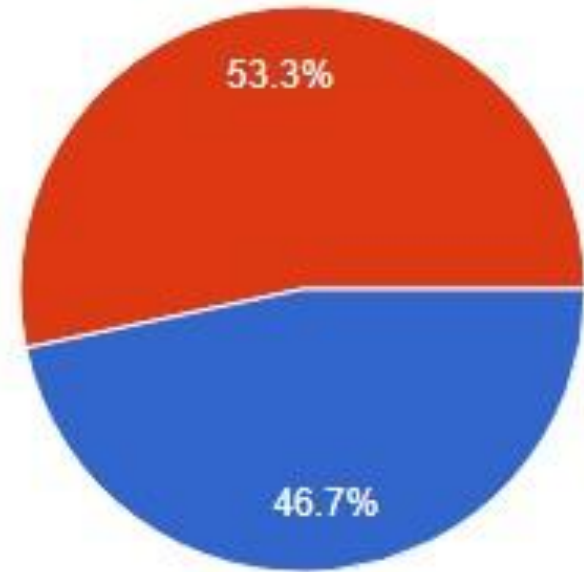
Where do you park?

- The majority park in North P, South P, or the LIRR Parking lots, all of which aren't as close to the main campus.
- Commuter lots such as North P, South P and LIRR are used by 55% of students surveyed.



Late To Class Due To Parking?

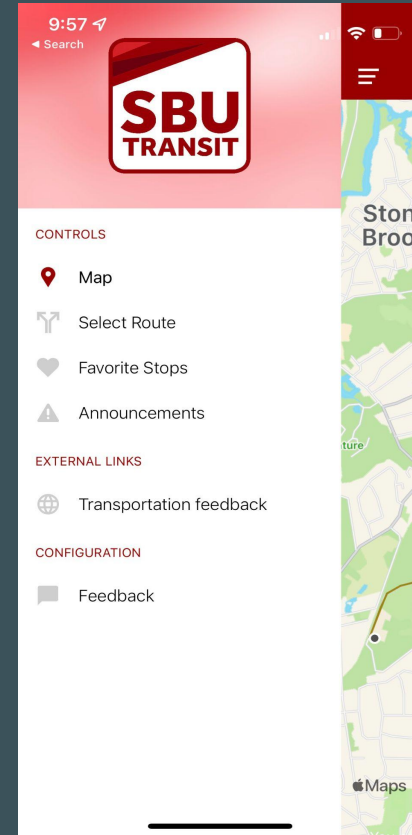
- 46.7% of surveyed students say they were late to class due to looking for a parking spot.
- This is significant because 55% of surveyed students park in commuter lots.
- Commuter lots are further away from buildings and most likely account for most of the lateness reported.



● Yes
● No

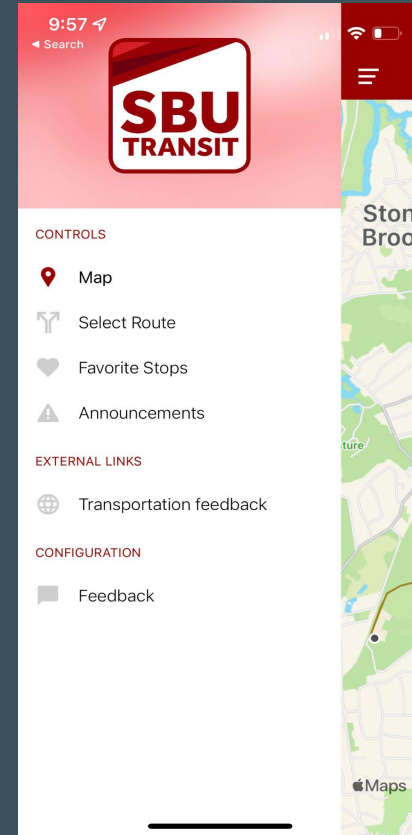
Solution

- Real-time parking space monitoring
- Two sensors, one at entrance one at exit
 - Designated exit and entrance modifications to the current parking lots (around \$15,000 - \$20,000)
 - One sensor keeps track of vehicles entering and the other exiting
- Each sensor costs \$300-500 to install (DOT)
 - 3 parking lots costs \$1800-30000
- Parking information can be incorporated in the SBU transit app



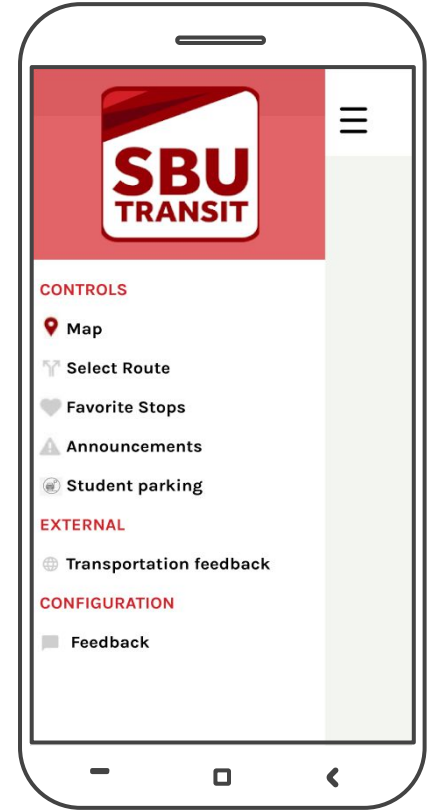
Solution

- The information is incorporated into the SBU transit app
 - An app that most people already have
 - Creating a new app costs \$10,000 - \$40,000
- Existing cloud and real time tracking services on the app cost less if not none
 - The sensor updates car traffic in real time and send it to the server
- Additional tab for student parking
- Shows percentage as well as number of spots left in each parking lot

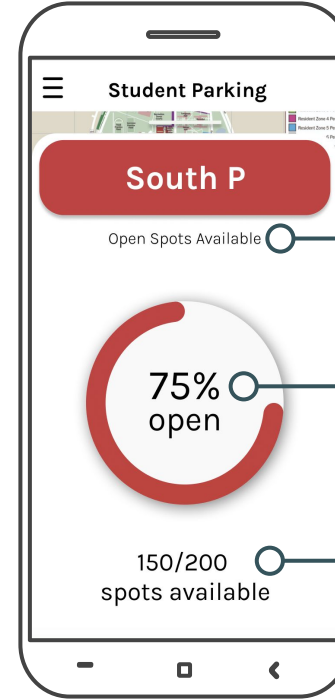
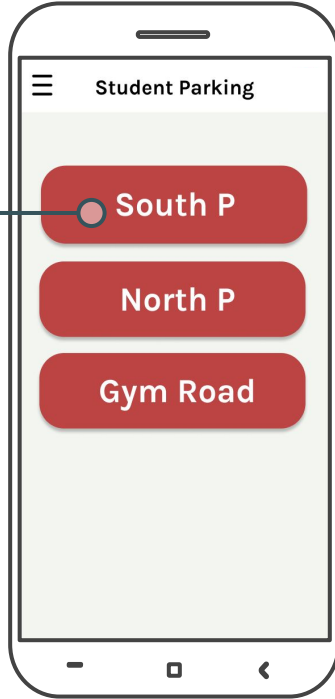


Student Parking Feature

A new feature on the SBU Transit app to track available parking spaces.



Available parking
lots are represented
with a red button

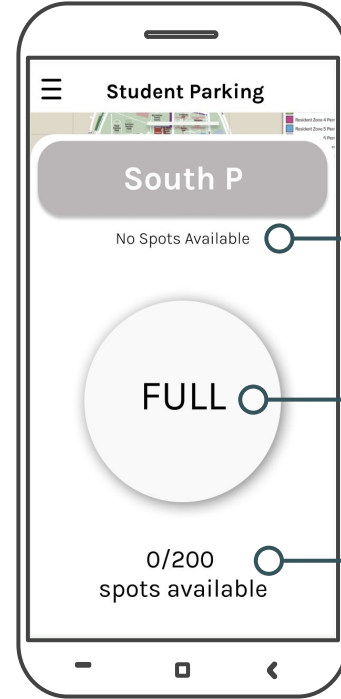
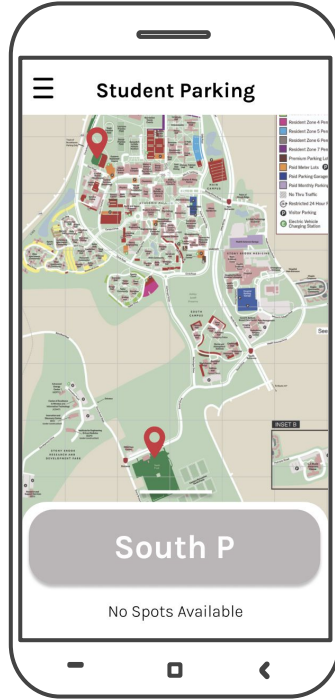
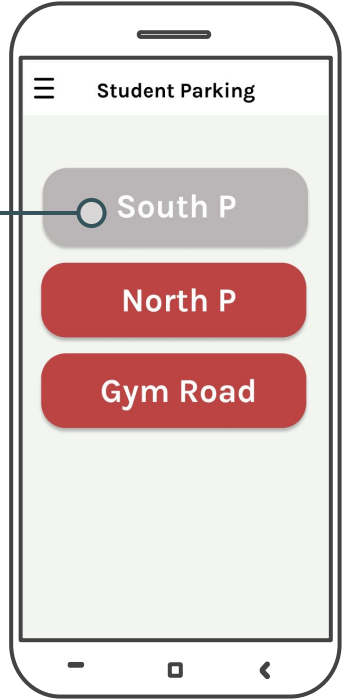


Indicate open spots
are available

Display percentage
of available spots in
parking lot

Display number of
available spots in
parking lot

Unavailable parking lots are represented with a gray button



Indicate no spots are available

Indicate parking lot is full

Display number of available spots in parking lot

Conclusion

- A similar app has already been implemented at UC San Diego
- Companies such as NWAWE also provide parking system solutions specifically for university campuses
- There is a large variety of parking apps that are growing in convenience
 - ParkingPanda: finding a parking spot near a sports event
 - SpotHero: booking and paying for a parking spot



Sources

- Images
 - https://www.stonybrook.edu/commcms/transportation-and-parking/_pdf/Stony%20Brook%20University%20Parking%20Map.pdf
 - https://pngtree.com/freepng/parking-special-gray-icon_4553720.html
- SB Commuter Student Services
 - <https://www.stonybrook.edu/commcms/studentaffairs/css/Community/transportation>
- Parking Cost
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- UCSD Parking App
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- NWAVE
 - <https://www.nwave.io/solutions/universities/>