4.0 Existing Conditions Analysis

This chapter discusses existing parking supply, demand and management practices of TUFL. Traffic flow characteristics and pedestrian and bicycle facilities around TUFL are also discussed.

4.1 Parking Facilities

TUFL main parking lot off of Green Street has 42 metered spaces and 2 handicapped spaces. An additional 8 metered spaces are available along the alley west of the library. TUFL staff park on the west side of Cedar Street. Figure 10 shows the location of off street parking spaces available for library patrons and staff.

Figure 10: TUFL Off-Street Parking Lots
4.2 Issues with Existing Parking Facilities

The existing main parking lot off of Green Street has all parking spaces at a 90 degree orientation. As shown in Figure 11, only head in parking is allowed. Parking spaces are approximately 9 feet wide, and the two-way driving aisle width is approximately 22 feet.

Figure 11: Sign Showing Head-In Parking Instruction at TUFL Entrance

Bigger and wider automobiles (e.g. SUV, minivan) find it difficult to complete parking maneuvers in this space. A few parking spaces are designated for compact cars only. However, field observations found vehicles of other sizes were frequently parked in these parking spaces.

The main parking lot has 42 metered spaces, and an additional 8 metered spaces are available on the west side of the library. As shown in Figure 12, signs showing information on additional parking are located at the back of the main parking lot on the book return drop box. Also, the additional parking information sign is not placed at drivers’ eye level.
As shown in Figure 12, book drop off boxes are located at the back of the main parking lot, and patrons who visit the library only for dropping off books/materials have to go to the end of the parking lot to access the drop off boxes. The space between book drop off boxes and TUFL’s entrance is not wide enough to accommodate the passage of two vehicles. As a result, as shown in Figure 13, a vehicle stopped at TUFL entrance for dropping off passengers could block access to the book drop off boxes and/or additional parking spaces for other vehicles.
4.3 Vehicular Flow at the Main Parking Lot

Vehicular traffic flow data was collected at the main parking lot entrance off Green Street on a typical weekday (Tuesday, April 2nd, 2013) and on a weekend day (Saturday, May 4th, 2013). Figure 14 shows hourly inflow and outflow at the main parking lot entrance off Green Street on a typical weekday.

Figure 14: Weekday Main Parking Lot Entrance Hourly Inflow and Outflow
As can be seen in Figure 14, the highest number of vehicular traffic (95 vehicles) accessing the library parking lot was between 5PM and 6PM, which is the typical peak hour for evening traffic flow.

Figure 15 shows hourly inflow and outflow at the main parking lot entrance off Green Street on a weekend day (Saturday). The highest number of vehicles (80) accessed TUFL between 2PM and 3PM.

**Figure 15: Weekend Main Parking Lot Entrance Hourly Inflow and Outflow**

As can be seen in Figures 14 and 15, the total entering traffic at the main parking lot was consistently higher than exiting traffic until 7PM. This trend was primarily due to the following reasons:

- Vehicles access the parking lot only to drop off books/materials and leave through Cedar Street.
- Vehicles access the parking lot to drop off/pick up patrons and leave through Cedar Street.
- Vehicles access additional parking spaces on the west side of the library.

### 4.4 Parking Demand

TUFL currently has a Gross Floor Area (GFA) of 50,000 square feet. Based on the Parking Generation Manual (3rd Edition)\(^1\) published by the Institute of Transportation Engineers, peak period parking demand for a sub-urban library with 50,000 ft\(^2\) GFA should be 101 parking spaces. Details of the calculations are shown in Appendix B. Although TUFL is located in Downtown Urbana, travel characteristics for TUFL patrons were similar to typical suburban regions with the majority of patrons (72%) using automobiles for accessing the library. Table 10 shows a summary of parking demand and supply for TUFL.
Table 10: Parking Demand and Supply Summary for TUFL

<table>
<thead>
<tr>
<th>Parking Demand</th>
<th>Parking Supply</th>
<th>Need/Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>52</td>
<td>49</td>
</tr>
</tbody>
</table>

4.5 Traffic Circulation around TUFL

TUFL is in Downtown Urbana. Figure 16 shows roadways around TUFL with vehicular travel directions and the posted speed limit for each roadway. As can be seen in Figure 16, all the roadways around TUFL are two way urban roadway sections with 30 mph posted speed limit. All the intersections within close proximity of TUFL are unsignalized intersections. Stop signs in Figure 16 represent all-way stops unless otherwise specified. The average daily traffic volumes on two major roadway segments near TUFL are shown in Table 11.

Table 11: Average Daily Traffic on Major Roadways near TUFL

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Average Daily Traffic</th>
<th>Collection Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race Street South of Green Street</td>
<td>5,400</td>
<td>2011</td>
</tr>
<tr>
<td>Green Street West of Race Street</td>
<td>3,600</td>
<td>2011</td>
</tr>
</tbody>
</table>
Figure 16: Types of Roadways and Intersections around TUFL