

## Staff Report: State St Ped Counter

### SHORT STAFF REPORT FOR STATE ST COUNTER

Many decades ago City Staff were provided the resources necessary to allow us to manually collect pedestrian volume data on State St. This practice was terminated due to lack of resources prior to 1996.

With improving technology the CTE considered reinitiating some of this data collection capacity and in May 2015 Staff installed two overhead pedestrian counters on the 100 block of State St. (one on each side of the street, to test this new technology. The counters are sited overhead--over the sidewalk and looking down.) The system uses infrared cameras to detect pedestrians and record passage data. Data is uploaded daily via cell data connection to Eco-Counter's data servers. Anyone can view this data on the web, see link below.

Equipment Cost--approx. \$13,000 for the two counters. This does not including installation, engineering, or annual data fee. A recent article in the Isthmus expressed an interest in what these devices were and how they worked. See article attached.

The counters were installed overhead so as to have a better field of vision and to limit interference from other street hardware. See figure 1 for typical installation. The device uses infra-red detection. There is no recording of people walking along the sidewalks.

The data is sent to computer servers and disseminated using the Eco-Counter's website. The data can be reviewed by the public here: <http://www.eco-public.com/ParcPublic/?id=4336>. Sites 1 and 2 on the map are the pedestrian counters on the 100 block of State Street.

From this information business owners can track pedestrian usage by side of street , as well as day, week and month. Some of the key statistics include:

Average weekday pedestrian traffic on the north side of State Street since the counters were installed is 4,731.. On the South side this is 3,621.

The maximum number of pedestrians counted in one day on the north side was 20,892 on Saturday April 16, 2016. On the south side this was 21,419 on Saturday September 3, 2016

City Staff are provided access to a more detailed, secured website where data can be downloaded and analyzed at 15 minute increments, compared with weather conditions etc.

We believe this data will be useful to both the City and business community.

David C. Dryer, P.E. CAPP  
City Traffic Engineer and Parking Utility Manager  
City of Madison, WI





English US



### SS-22 State St. North Side

From May 29, 2015 to September 21, 2016

**2,805,040** Counts

Yesterday

**2,932** Counts

#### Period

##### Begin

05/29/2015

##### End

09/20/2016

- Day
- Week
- Month
- Key Numbers

#### Average Traffic

|         |                |
|---------|----------------|
| Weekday | 4,731 Counts   |
| Weekly  | 40,072 Counts  |
| Monthly | 165,002 Counts |

#### Maximum Traffic

|                        |                |
|------------------------|----------------|
| Saturday 16 April 2016 | 20,892 Counts  |
| Week of 11 Apr 2016    | 59,521 Counts  |
| July 2016              | 221,404 Counts |



English US



### SS-23 State St. South Side

From May 29, 2015 to September 21, 2016

**2,237,801** Counts

Yesterday

**2,653** Counts

#### Period

##### Begin

05/29/2015

##### End

09/20/2016

- Day
- Week
- Month
- Key Numbers

#### Average Traffic

|         |                |
|---------|----------------|
| Weekday | 3,621 Counts   |
| Weekly  | 31,969 Counts  |
| Monthly | 131,635 Counts |

#### Maximum Traffic

|                            |                |
|----------------------------|----------------|
| Saturday 03 September 2016 | 21,419 Counts  |
| Week of 29 Aug 2016        | 63,167 Counts  |
| October 2015               | 184,581 Counts |

# Somebody's counting me

City tracks State Street pedestrians with high-tech cameras

by Dylan Brogan

September 1, 2016

<http://isthmus.com/news/news/city-tracks-state-street-pedestrians-with-high-tech-cameras/>



A passive infrared camera hanging over the 100 block of State Street counts pedestrians by detecting their body heat.

Photo by Carolyn Fath

403,489. That's how many people strolled down State Street in July. City officials can pinpoint foot traffic on Madison's most iconic street thanks to two pedestrian counters installed in May 2015. The passive infrared cameras hang 10 feet above the sidewalk on each side of the 100 block of State Street.

"The technology for counting pedestrians automatically hasn't really existed until recently," says Arthur Ross, the city's pedestrian-bicycle coordinator. "In the past, anytime we needed to do pedestrian counts we had to physically send people out. Sit there. And count."

While there are plenty of surveillance cameras on State Street — just ask the mayor — these counting cameras don't record video. They use thermal imaging to calculate when a pedestrian walks by and in what direction. Essentially, heat from the human body is how the cameras are able to precisely count passersby even in dense groups. All the data collected by the counters is updated daily and available online. Several other cities in North America have the same systems in place, including Victoria, Calgary, Halifax and Philadelphia. The city spent \$12,615 to purchase the devices.

Ald. Mike Verveer says the downtown business community was looking this summer at putting up pedestrian counters but was unaware the city already had two in place.

“To the surprise of some of the most active downtown stakeholders, the city had quietly installed some of these counters without really sharing that news or data,” says Verveer.

Tiffany Kenney, executive director of Madison’s Business Improvement District, says the use of pedestrian counters foreshadows possible recommendations in a pending downtown retail analysis. The study is expected to be released later this year and will offer suggestions on how to maintain a vibrant shopping district on State Street.

“One of the best ways to make a determination of a retail location is foot traffic: how many people walk by it,” says Kenney.

Over 4 million pedestrians were spied on State Street in the first year the counters were up. Even on Jan. 18 (the coldest day of 2016), 2,649 pedestrians braved the subzero temperatures. The busiest day for sidewalk traffic was during the first outdoor Dane County Farmers’ Market of the year, when 30,000 pedestrians were counted.

“The 400 block gets different traffic from the 200 block. That’s why — in an ideal world — we would like one on every block, on every side,” says Kenney.

The people counters on State Street are just the latest data collection devices soaking up information on how Madison moves. Networks of systems, mostly invisible to the naked eye, are counting vehicle traffic on major thoroughfares and cyclists on city bike paths. Eco-Counter — the company that manufactures the pedestrian counters — also makes Eco-Totem. These real-time data displays show the number of cyclists that have zipped by on bike trails. Madison has two of these: one on the Southwest Commuter Path at Monroe Street and the other on the Capital City Trail alongside John Nolen Drive near Monona Terrace.

The future of how the city will track pedestrians is up in the air for now. But Verveer is considering a proposal in the upcoming budget that could add 20 more counters downtown.

“It’s my hope that in the 2017 capital budget the city will use TIF funds to purchase a number of pedestrians counters for State Street as well the Capitol Square.”