



ODOT Region 2 Traffic Section
455 Airport Rd. S. E. Bldg. A
Salem, OR 97301
Fax: (503) 986-2873
Phone: (503) 986-2990

May 2009

Tillamook: US 101 @ OR 6 Downtown Tillamook Traffic Signal System

The traffic signals in downtown Tillamook have been in operation, on the most part, for at least forty years. This signal system currently includes six traffic signals along U.S. Highway 101, Pacific Avenue (northbound) and Main Avenue (southbound). Traffic signals are located at 1st Street, 3rd Street and 4th Street. OR Highway 6 is routed on 1st and 3rd streets. Each signal is either still part of the original installation or has been rebuilt.

PHYSICAL ASPECTS

All of the signals have common elements such as signal poles, controller cabinets, vehicle and pedestrian signal displays. In 2008, the traffic signals in the southbound direction of Highway 101 were reconstructed. Several new features were incorporated such as poles with mast arms for easier maintenance, signal count loops and communication lines.

Detector count loops were added in the approaching travel lanes so that ODOT signal staff can record traffic counts up to 24 hours per day, 7 days a week. The signal controller memory can hold up to about 3 weeks worth of hourly count data. The traffic counts will help us document the varying traffic demands throughout the day and week. The count cannot be used for vehicle detection that alters the way the traffic signals operate. All six traffic signals are physically connected together with wires for communication purposes so they can be synchronized with each other.

The project also installed a phone line to one of the traffic signals so that ODOT signal staff can remotely connect to and communicate with the signal system to collect information such as detector counts, status of the current signal timing, and perform some initial trouble shooting if a problem is reported.

OPERATIONAL ASPECTS

The traffic signals are currently set to bring up the "Walk" symbol every phase sequence because there are no pedestrian push buttons. The "Walk" phase is set to provide at least 16 seconds to begin crossing the side streets and 12 seconds to start crossing Highway 101. The flashing "Don't Walk" times range from 8 to 11 seconds for crossing both Highway 101 and side streets.

Based on our files, the signals have been set to a 65 second cycle length for many years. A cycle length includes a complete sequence of signal indications for the whole intersection (highway and the side street). The signals were originally set to allow a motorist driving approximately 25

mph on Highway 101 to pass through downtown Tillamook without stopping at a red light. This assumes that the motorist is not slowed by activities such as parking and pedestrian crossings.

The signals are primarily set to progress northbound and southbound traffic on Highway 101 as efficiently as possible. Northbound traffic is currently able to progress through town then westbound across Main Avenue without stopping. Timing for 3rd Street is currently set to mainly progress eastbound 3rd Street traffic from the west to the east.

The downtown signals operate from 6:00 AM to 11:00 PM seven days a week. At night, from 11:00 PM to 6:00 AM, they are in a flash mode. Highway 101 flashes yellow and the side streets flash red.

With the newly added features to the traffic signals, ODOT can refine the timing to better reflect the conditions experienced such as between winter and summer. When traffic demand is greater than the travel lanes available to serve it, such as during the peak summer months, longer lines will occur. However, ODOT will be evaluating the downtown signal system to determine if and when it can be made more efficient for motorists. If the City of Tillamook would like ODOT to consider certain signal timing strategies or options, we are open to input.

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