RAMP METERS

Signaling New Travel on I-476

RAMP METERS — SIGNALING NEW TRAVEL ON I-476

Ramp meters signal the start of a new transportation era on Interstate 476 in suburban Philadelphia. These traffic signals, minus the amber caution light, will operate at certain entrance ramps to improve travel on I-476 between Interstate 95 in Delaware County and the Pennsylvania Turnpike in Montgomery County.

Ramp meters are at 15 entrance ramps to I-476 -- 9 southbound and 6 northbound -- to control the rate at which cars and trucks enter the flow of traffic. By pacing the entry of vehicles onto the expressway, merging vehicles are less likely to slow down mainline traffic, thereby improving travel times and reducing the potential for crashes at entrance areas.

Initially, ramp meters will operate at selected ramps when traffic conditions warrant, typically weekday mornings and late afternoons when traffic volumes are heaviest.

The $1.8 million ramp metering system is part of the Pennsylvania Department of Transportation's $6.8 million program to install a Traffic and Incident Management System (TIMS) on the 21.5-mile long expressway.

Since ramp meters were first installed in the Chicago and Detroit areas in the early 1960s, they have proven to be a cost effective and efficient way to manage traffic flow. Their effectiveness is evident in major cities throughout the United States where travel times have improved since ramp meters were installed. Ramp meters are used on highways throughout the country, including the Long Island Expressway in New York, Interstate 5 in Portland, Ore., Interstate 5 in Seattle, Wash. and Interstate 25 in Denver, Colo.

HOW DOES A RAMP METER WORK?

A ramp meter works much like a traffic signal. When the light is red, you stop. When the light turns green, you go. It's that simple. But unlike traffic signals, only one car per lane is allowed to enter I-476 on a green light.
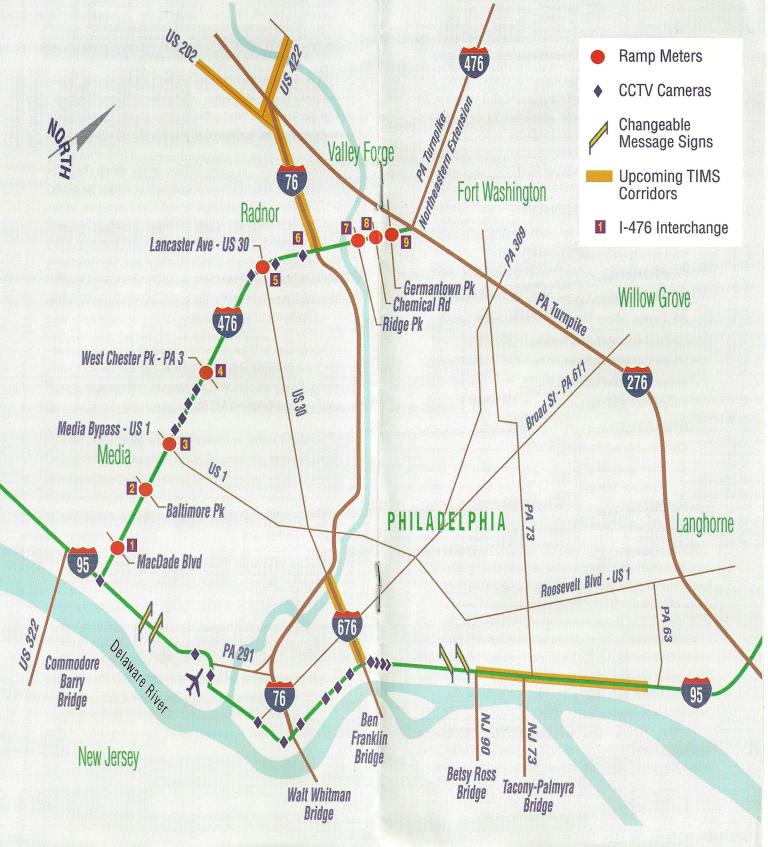
For instance, on a single-lane ramp, when the light turns green, it will allow one driver at a time to enter I-476 before reverting back to red. On a two-lane ramp, a signal is provided for each lane and each driver will move when his or her respective light turns green. After the light turns green, you still must use the same care when merging. Disregarding a ramp meter *is* a punishable offense and carries the same penalties as running a red light at an intersection.

Motorists will know when ramp meters are operating by a flashing warning light at the entrance to each ramp. Ramp meters will activate in response to actual traffic conditions on I-476.

To avoid traffic spillover onto the local road, pavement sensors are located at the base of each entrance ramp to detect a backup and adjust the metering rate.

When approaching a ramp meter, just remember the following tips:

- Wait your turn in line
- Drive slowly up to the stop line marked on the ramp
- Stop when the signal is red
- Wait for the light to turn green
- Proceed onto I-476 and merge safely into traffic

Legend

- ● Ramp Meters
- ◆ CCTV Cameras
- Changeable Message Signs
- ▬ Upcoming TIMS Corridors
- **1** I-476 Interchange

NORTH

US 202
US 422
Valley Forge
76
Radnor
Fort Washington
PA Turnpike Northeastern Extension

Lancaster Ave - US 30
6
7 **8**
9
5
Germantown Pk
Chemical Rd
Ridge Pk

476

PA 309
Willow Grove

West Chester Pk - PA 3 **4**
US 30
PA Turnpike

276

Broad St - PA 611

Media Bypass - US 1
Media **3**
US 1
PHILADELPHIA
PA 73
Langhorne

2
Baltimore Pk
Roosevelt Blvd - US 1
PA 63

95 **1**
MacDade Blvd

US 322

Commodore Barry Bridge
Delaware River
PA 291
676
95

New Jersey

76
Ben Franklin Bridge
NJ 90
NJ 73
Betsy Ross Bridge
Tacony-Palmyra Bridge

Walt Whitman Bridge

METERED RAMPS ON I-476

Ramp meters are posted at every ramp leading to I-476, except for those at the interchanges with Interstate 76 in Montgomery County and Interstate 95 in Delaware County. The metered ramps include:

MacDade Boulevard to I-476 North

Baltimore Pike to I-476 North

Baltimore Pike to I-476 South

US 1 (Media Bypass) to I-476 North

US 1 (Media Bypass) to I-476 South

PA 3 (West Chester Pike) to I-476 North

PA 3 East (West Chester Pike) to I-476 South

PA 3 West (West Chester Pike) to I-476 South

US 30 (Lancaster Avenue) to I-476 North

US 30 (Lancaster Avenue) to I-476 South

Ridge Pike East to I-476 North

Ridge Pike East to I-476 South

Ridge Pike West to I-476 South

Chemical Road to I-476 South

Germantown Pike to I-476 South

RAMP METERS ARE PART OF TIMS

Ramp meters are one part of PennDOT's Traffic and Incident Management System (TIMS) that works to better manage major expressways and move traffic more efficiently.

In cities and suburban communities throughout the United States, traffic engineers are wrestling with the same problem -- too many vehicles and too little space to build new highways to handle them. In Southeastern Pennsylvania, PennDOT is working to solve this dilemma through new and innovative methods and by implementing a cost-effective system using the latest traffic management technology.

I-476 is one of two major expressways in Southeastern Pennsylvania with TIMS components. The other is Interstate 95 in Philadelphia and Delaware County. In combining new technology with specially trained personnel, PennDOT is:

- Monitoring expressway traffic on a real-time basis;
- Managing traffic congestion by regulating the rate traffic enters the expressway;
- Detecting incidents and improving incident response time of police, fire, ambulance and municipal authorities by giving them accurate, up-to-the-minute information;
- Working with regional traffic information services to give highway users accurate and timely information before they get caught in a traffic jam.

The I-476 TIMS includes an integrated combination of closed circuit television cameras, ramp meters and traffic sensors that are strategically placed to monitor traffic, ease congestion and detect incidents for improved emergency response time. The entire system on I-476 consists of ramp meters; eight closed circuit television cameras; 357 pavement detectors; four crash investigation sites; five emergency crossover areas; 35 fire hose standpipes, and 481 incident management signs (1/10th mile markers, overhead road signs).

In the near future, PennDOT will expand its TIMS Program by installing state-of-the-art traffic management equipment on Interstate 676 in Philadelphia, Interstate 95 between Allegheny Avenue and Academy Road in Philadelphia, and at the interchanges of U.S. Route 202, Interstate 76 and U.S. Route 422 in Montgomery and Chester counties.

Making our expressways work more efficiently not only requires the latest technology, specially trained personnel and funding to operate it, but also the cooperation of highway users -- YOU-- who have the most to gain from an expressway system that functions at maximum efficiency.