

## City's Engineering Projects Provide Benefits

by Bend Weekly News Sources

8th Street Signal Provides More Efficient Signal Timing and 27th Street Improvements Provide Safe Access Sometimes, the benefits to the community from the City of Bend's Engineering Division may seem invisible to the average citizen. However, two recently completed projects are providing visible benefits to Bend residents: NEW SIGNAL PHASING ON NE 8TH & OLNEY LEFT TURN LANES On August 16th, the City of Bend added left turn lanes on Olney Avenue at 8th Street. Previously left turns shared a travel lane with through-moving vehicles. As well, the City implemented more efficient signal timing and phasing plan that utilizes Protected/Permitted left turn phases at all approaches to the signal. The new application is part of a pilot test project that implements the permitted left turn with a flashing yellow left turn arrow. The flashing yellow arrow was incorporated into the existing signal head that is shared for lefts and through vehicles. The City's Engineering Division will continue to monitor and document the safety and efficiency of the new application. City of Bend Project Manager, Ken Gould was tasked with implementing the redesign of the existing signal configuration in order to improve capacity at the signal. The signal was not operating efficiently before the retrofit - because only separate east/west movements could be allowed due to the lack of left turn pockets. Recent developments in signal configuration allowances provided Mr. Gould with the opportunity to install the new protected/permitted phasing in the existing signal heads rather than having to install new ones along with a new pole and mast arm. This type of installation saved the City approximately \$140,000 with the retrofit costing less than \$60,000. City of Bend Traffic Engineer, Robin Lewis said, "We're pleased with the new signal operations so far. The ability to handle left turns in a protected/permitted manner is reducing the overall approach delays and traffic is moving more efficiently. Before the retrofit, left turning drivers were accustomed to protected only operations. Under protected only operations, left turns were allowed only during the green arrow phase of the signal. This type of signal operations can cause unnecessary delays by requiring left turners to wait until the next signal cycle and next green arrow phase, even though adequate gaps may exist to turn before that time. At this intersection, this was especially critical because the left turn demand can be quite high, but the storage space available to accommodate the left turners is very short. The retrofitted protected/permitted signal is a different type of signal. This type of signal adds a flashing yellow arrow phase. During the flashing yellow arrow phase, left turns are permitted to be made after yielding to opposing traffic and pedestrians. It is important to note that during the flashing yellow arrow phase the oncoming traffic has a green light, so left turners must determine if there is an adequate gap before turning. The steady yellow arrow and steady red arrow work the way they always have. The City plans to use protected/permitted signals wherever possible as signals are modernized and new signals are installed. The NE 8th & Olney signal is part of a pilot test project and is part of the City's Transportation-Five Year Capital Improvement program. 27TH STREET IMPROVEMENT PROJECT The City of Bend is continuing to invest in its future transportation/roadway system. The NE 27th Street Improvement Project reflects the City's commitment to building safe and efficient transportation systems for drivers, pedestrians and cyclists. The recently installed sidewalk system along 27th Street includes curb ramps on both sides of the street. The sidewalks provide a new and efficient north-south walkway for numerous pedestrians, providing them with the ability to move more safely and efficiently along 27th Street. Ken Gould, City of Bend Engineering Project Manager said, "We're noticing there are more people walking along 27th Street. The new sidewalks have improved the ability for people to get around, especially for people using wheelchairs, the elderly, or people pushing a baby stroller. As soon as the traffic signals are activated on 27th and Medical Center Drive on August 29th, pedestrians should have an easier time crossing the street. This new signal and the signal on Medical Center Drive and Mary Rose Place are equipped with audible/vibrating pedestrian activation for maximum accessibility. The signals will also include protected/permitted -" flashing yellow -" left turn arrows.