

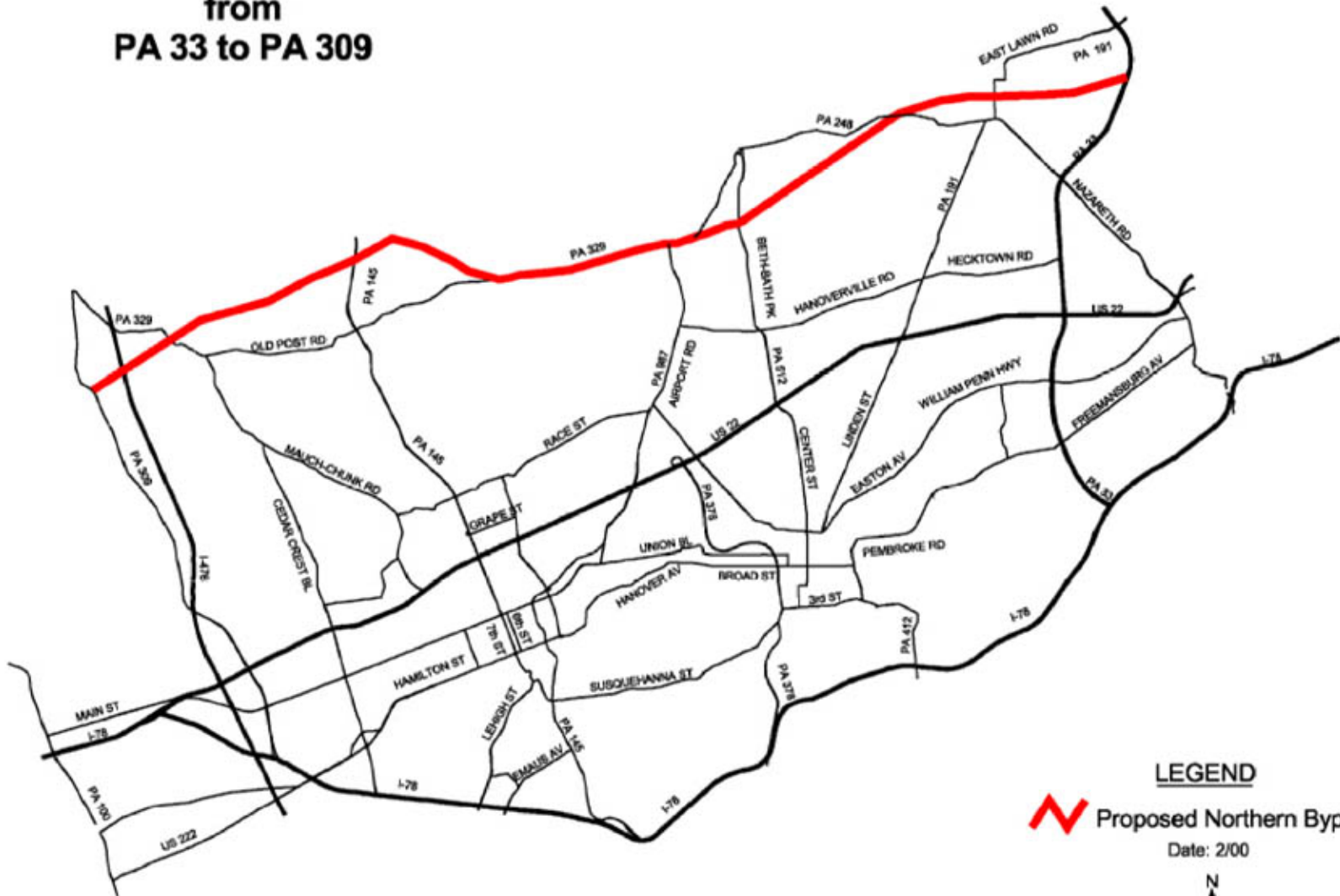
SCENARIO B01 NORTHERN BYPASS

This scenario studies the effects of introducing a new four lane divided arterial approximately 5 miles north of the existing U.S. Route 22 Corridor.

This bypass stretches from Route 309 in the western portion of Lehigh County to Route 33 in Northampton County. The new facility is a limited access corridor which is in the vicinity of the Boroughs of Northampton and Bath. This location was chosen in an attempt to minimize impacts to the existing communities north of U.S. Route 22.

The purpose of this scenario is to reduce travel on U.S. Route 22 by shifting travel patterns away from U.S. Route 22 to the new corridor.

**Scenario B01
Northern Bypass
from
PA 33 to PA 309**



LEGEND

 Proposed Northern Bypass

Date: 2/00



Prepared by: Lehigh Valley Planning Commission

SCENARIO B01: MEASURES OF EFFECTIVENESS RELATING TO PROJECT NEEDS

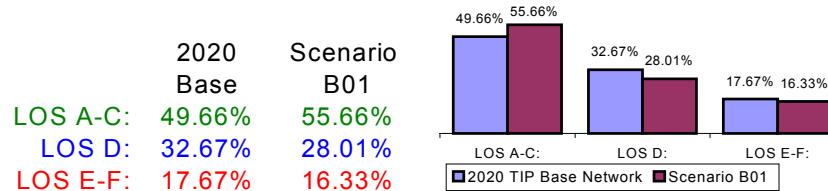
Improve Safety

The premise of this scenario is that by building a new bypass, significant shifts in travel will occur from the heavily traveled U.S. Route 22 corridor to the new bypass. This will give the motorists remaining on U.S. Route 22 more freedom to navigate their vehicles to safety in case of a crash or incident ahead. However, the results of the travel demand model run show that there is an insignificant reduction in the amount of travel demand for the U.S. Route 22 corridor. Furthermore, the interchanges will not be upgraded in the U.S. Route 22 corridor, indicating geometric deficiencies will still exist. Therefore, no relief is expected in alleviating crashes. Safety would still be an issue due to travel demand even with the new Northern Bypass.

IMPACT: Neutral

Reduce Congestion on U.S. Route 22

**Percent of Vehicle Miles of Travel (VMT) by Level Of Service (LOS)
Route 22- PM Peak Hour**

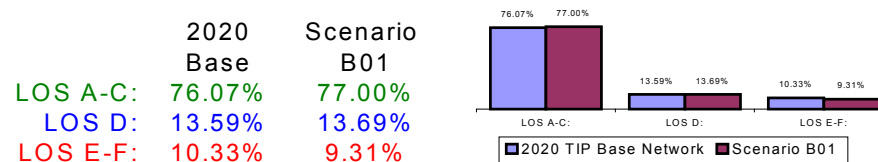


- Comparing the 2020 TIP base year with the Northern Bypass, the level of travel occurring under desirable traffic conditions of LOS A through C in the afternoon peak hour has improved by 6 percent and a very slight reduction of 1 percent is achieved in the breakdown traffic conditions of LOS E and F on U.S. Route 22.

IMPACT: Marginal

Recommended improvements must not increase congestion on regional road network

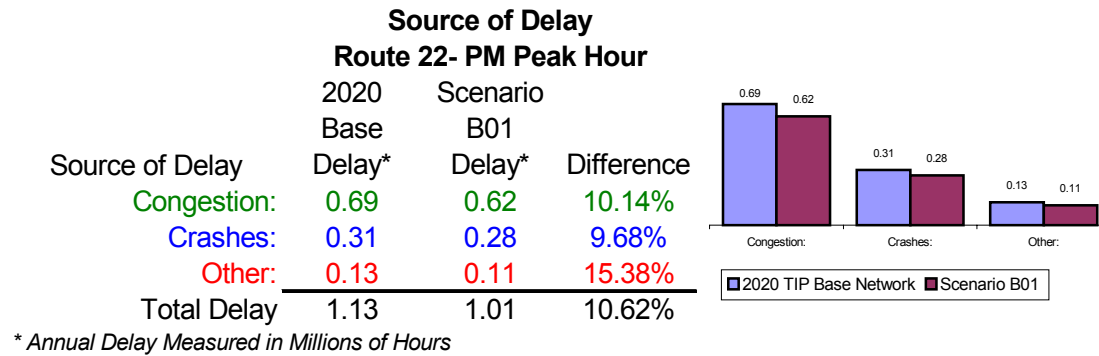
**Percent of Vehicle Miles of Travel (VMT) by Level Of Service (LOS)
All Lehigh Valley Region Roads - PM Peak Hour**



- The level of travel occurring under desirable traffic conditions of LOS A through C in the afternoon peak hour shows marginal improvement of less than 1 percent and a reduction also of about 1 percent is achieved in the breakdown traffic conditions of LOS E and F in the Lehigh Valley region. There is virtually no change in the overall network operating conditions with the new Bypass.

IMPACT: Positive

Reduce Impacts of incidents on U.S. Route 22 traffic flow



- The source of delay due to various types of incidents is used to gauge the progression of traffic on U.S. Route 22 and is measured in millions of hours per year for this scenario. Annual delay due to congestion has decreased by 10 percent on U.S. Route 22, delay caused by crashes has also decreased by approximately 10 percent, and delay due to breakdowns decreased by 15 percent on U.S. Route 22.
- Total delay due to all incidents on U.S. Route 22 has been reduced by approximately 11 percent from the “no-build” condition.

IMPACT: Positive

Support Land Use and Redevelopment Goals of Regional Comprehensive Plan

This scenario does not support the land use and redevelopment goals of the regional comprehensive plan because more access is provided to areas recommended for farmland preservation and low density rural development. Facilitating a major arterial at this location will hasten the continued residential, retail, and employment development in suburban and rural areas. In this situation, trip destinations are spread over wider areas, resulting in longer automobile trips and densities too low to support transit.

IMPACT: Negative

FINDINGS/CONCLUSIONS

This scenario does not assist in eliminating major congestion areas or in reducing delay on U.S. Route 22 or in the Lehigh Valley region. Furthermore, the introduction of a new highway in an area recommended mainly for rural development and farmland preservation does not parallel the Lehigh Valley Regional Comprehensive Plan. This scenario does not adequately meet all needs of this project.