

System Administration

The Traffic Information System's design makes administration straightforward:

- *Configuration.* TIS is configurable for both network and standalone use. It can be easily integrated with existing traffic collection systems.
- *Modular design.* TIS is set up as a group of separate applications that work together. Individual users work with only the parts they need.
- *Flexible data storage and retrieval options.* TIS can import data from any source, in a variety of formats. It can also be quickly modified to work with new formats.

For more information contact:
 Dennis Williams
 Bureau of Planning & Research
 Pennsylvania Department of Transportation
 Keystone Building
 400 North Street
 Harrisburg, PA 17120
 Phone: (717) 787-1840 E-mail: william@dot.state.pa.us



TIS Site Maintenance Report - Microsoft Internet Explorer provided by PENNDOT

File Edit View Favorites Tools Help

Pennsylvania Department of Transportation Bureau of Planning & Research

TIS Site Maintenance Report

Summary

Site	1	2	3
ATR 000001			
ATR 000002			
ATR 000002			
ATR 000003			
ATR 000004			
ATR 000005			
ATR 000008			
ATR 000015			
ATR 000018			
ATR 000019			
ATR 000020			
ATR 000024			
ATR 000027			
ATR 000029			
ATR 000040			
ATR 000048			
ATR 000051			
ATR 000205			

Done

Monthly Summary Report for March 2002 - Microsoft Internet Explorer provided by PENNDOT

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Pennsylvania Department of Transportation Bureau of Planning & Research

Monthly Summary Report for March 2002

Class: Volume

000001:..4 MI E OF PA/OHIO STATE LINE(WEST SPRINGFIELD)

Eastbound									Westbound								
Week of	Sun	Mon	Tue	Wed	Thu	Fri	Sat	TOT	Week of	Sun	Mon	Tue	Wed	Thu	Fri	Sat	TOT
03/01						1996	1747	3743	03/01						2001	1769	3770
03/03	1464	1488	1370	1728	1772	1874	1789	11485	03/03	1534	1578	1423	1773	1793	1836	1842	11779
03/10	1308	1720	1703	1962	1837	1690	1382	11602	03/10	1317	1772	1784	2023	1881	1687	1473	11937
03/17	1597	1798	1853	1930	1898	2099	1754	12929	03/17	1628	1837	1888	2010	1999	2137	1755	13254
03/24	1615	1522	1721	1966	1895	2088	1889	12696	03/24	1628	1561	1782	2027	1931	2085	1882	12896
03/31	1413							1413	03/31	1515							1515
TOTAL								53868	TOTAL								55151
AVERAGE	1479	1632	1662	1897	1851	1949	1712	1738	AVERAGE	1524	1687	1719	1958	1901	1949	1744	1779

49% 51%

000002: 7 MI W OF PA 408 (NEW RICHMOND)

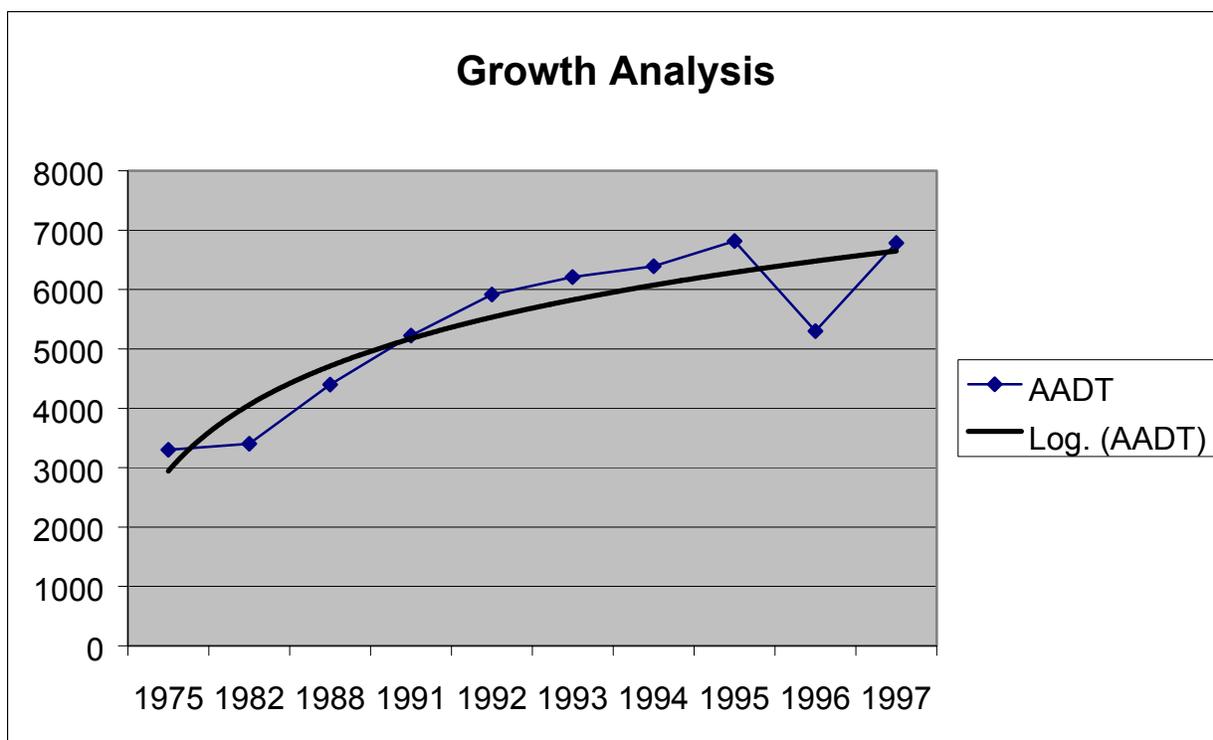
Management Information

The Traffic Information System's Management Information features, currently under development, will include:

- *Standard and Custom Reports.* TIS will generate standard traffic data reports on demand, and will also support ad-hoc queries against the traffic data warehouse.
- *Traffic "FAQs".* TIS will provide a single source for answers to Frequently Asked Questions about traffic trends and figures.
- *Workflow and Document Management.* The system will track progress towards meeting departmental reporting and data submittal obligations.

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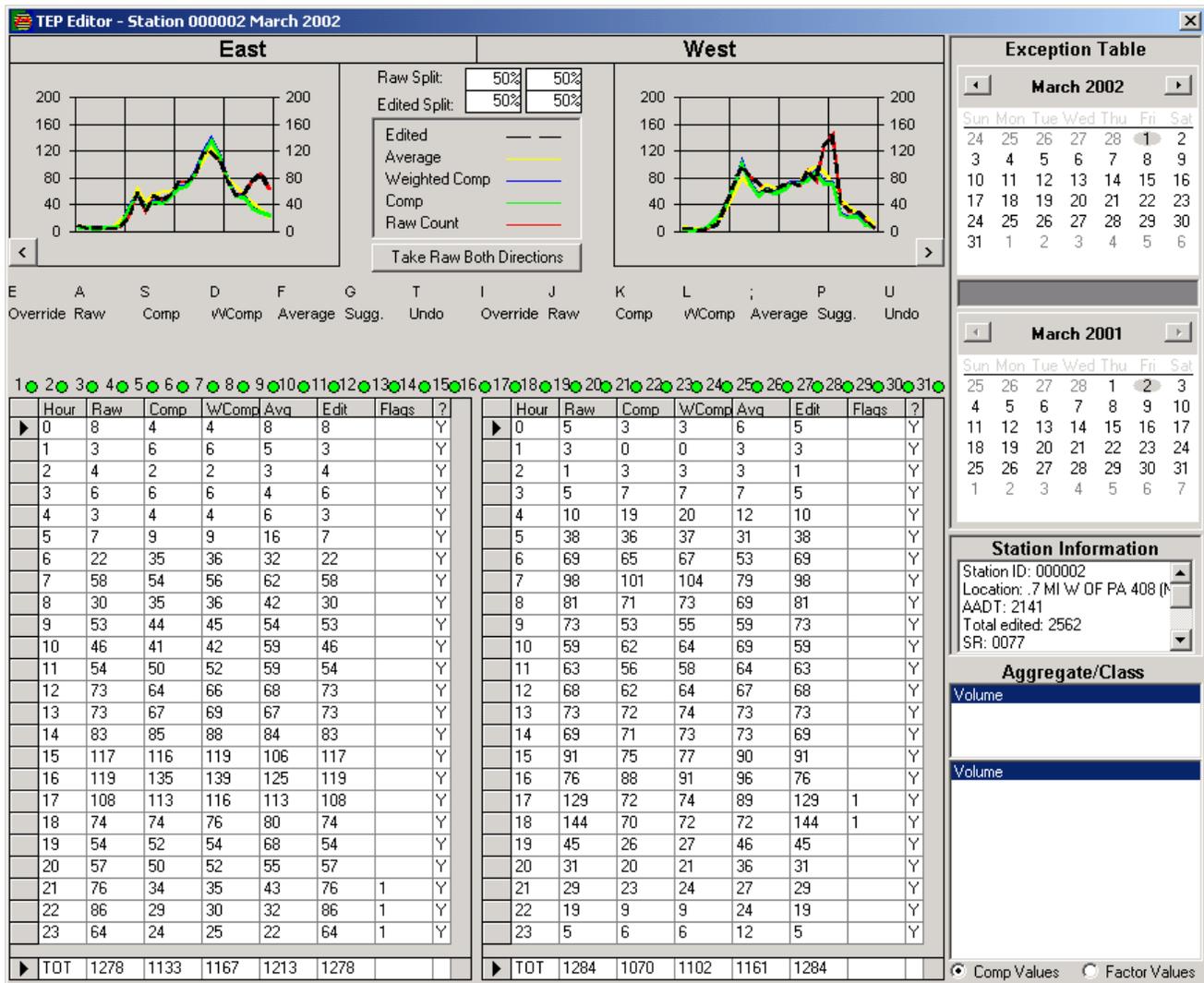
Statistical Analysis

The Traffic Information System's Statistical Analysis package, currently under development, will provide users with an easy-to-use, integrated system for analyzing historical and geographic trends in traffic statistics. Its features will include:

- *Growth Factor Estimation.* The system will use a least-squares approach for determining average traffic growth factors for various functional/geographic groups of sites.
- *Seasonal Variation Factors.* The system will help users maintain a system-wide set of seasonal variation factors, based on continuous counts, for use in processing short-term counts.
- *Speed Data Analysis.* The system will process data from PennDOT's system of continuous speed sites to meet reporting requirements.
- *"Data Mining".* The system will include other statistical functions to support ad-hoc queries and analyses.

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Continuous Count Editing – the Traffic Editing Program

PennDOT uses the Traffic Editing Program to process continuous volume and class data from over 70 Automatic Traffic Recorder (ATR) and Continuous Automatic Vehicle Classification (CAVC) sites. TEP's features include:

- *Import.* TEP reads volume and class data in Federal standard formats.
- *Exception Table.* TEP automatically aligns current data with previous years' edited data for accuracy checking.
- *Conditions.* Using TEP's automatic editing conditions, users can quickly spot problems in data for further review. TEP supports 20 different comparison types. Each of these types can be customized with different tolerance levels and restrictions.
- *Editing.* TEP's editing window shows the user current and comparison data in table and graph form. When editing class data, TEP can switch between four different aggregate displays at the touch of a button.
- *Reports.* TEP can generate over twenty different reports, including AADT, Monthly Summary and Seasonal Variation reports.
- *Export.* TEP exports volume and class data into Federal standard record formats for submittal.

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Bureau of Planning & Research

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The screenshot shows the 'Field Operations Manager' application window. The title bar reads 'Field Operations Manager' and the menu bar includes 'File', 'Edit', 'View', 'Tools', and 'Help'. On the left is a green sidebar with navigation options: 'Field Operations', 'Maintenance Tickets', 'Task Orders', 'Sites', 'Equipment Inventory', 'Supply Inventory', 'Personnel', and 'Reports'. The main window title is 'Maintenance Tickets'. Below the title is a header: 'Use this page to request work, check the status of requests, or to assign work.' A 'Show:' dropdown is set to 'All open tickets'. Below this are buttons for 'Add a new ticket', 'Edit this ticket', 'Assign a task', 'Close out this ticket', and 'Make a report'. A table lists tickets with columns: Ticket, Priority, Type, Owner, Site, Date Entered, and Description. Ticket #1683 is highlighted. Below the table is a legend: a red circle for 'Ticket has no active task orders', a yellow circle for 'Ticket has active task orders', and a green circle for 'Ticket is closed'. The bottom section is titled 'Repair Ticket #1683' and contains form fields for Owner (reindo), Priority (Medium), Date entered (3/5/2002 4:3...), Date closed, Site (STIP 31249), County (Blair), SR (0764), Seg (0080), and Off (1500). The Distribution field contains 'fbarell, basile, reindo, peellis'. The Description field contains 'Complete connection of loops to terminal strip. Materials needed will be a minimum four connector terminal strip and spade lug connections. Tech should have all other necessary materials. See notes for location.' The Problem(s) field contains 'Other'. The Task Orders table has columns: T..., Status, Entered By, Assigned To, Site, Plann..., Planned..., Actu..., and Description. The first row shows ticket 1683 as CLOSED, entered by peellis, assigned to peellis, at site STIP 31249, with a planned date of 3/21/2002 and description 'Complete connection of l...'

Field Operations Management

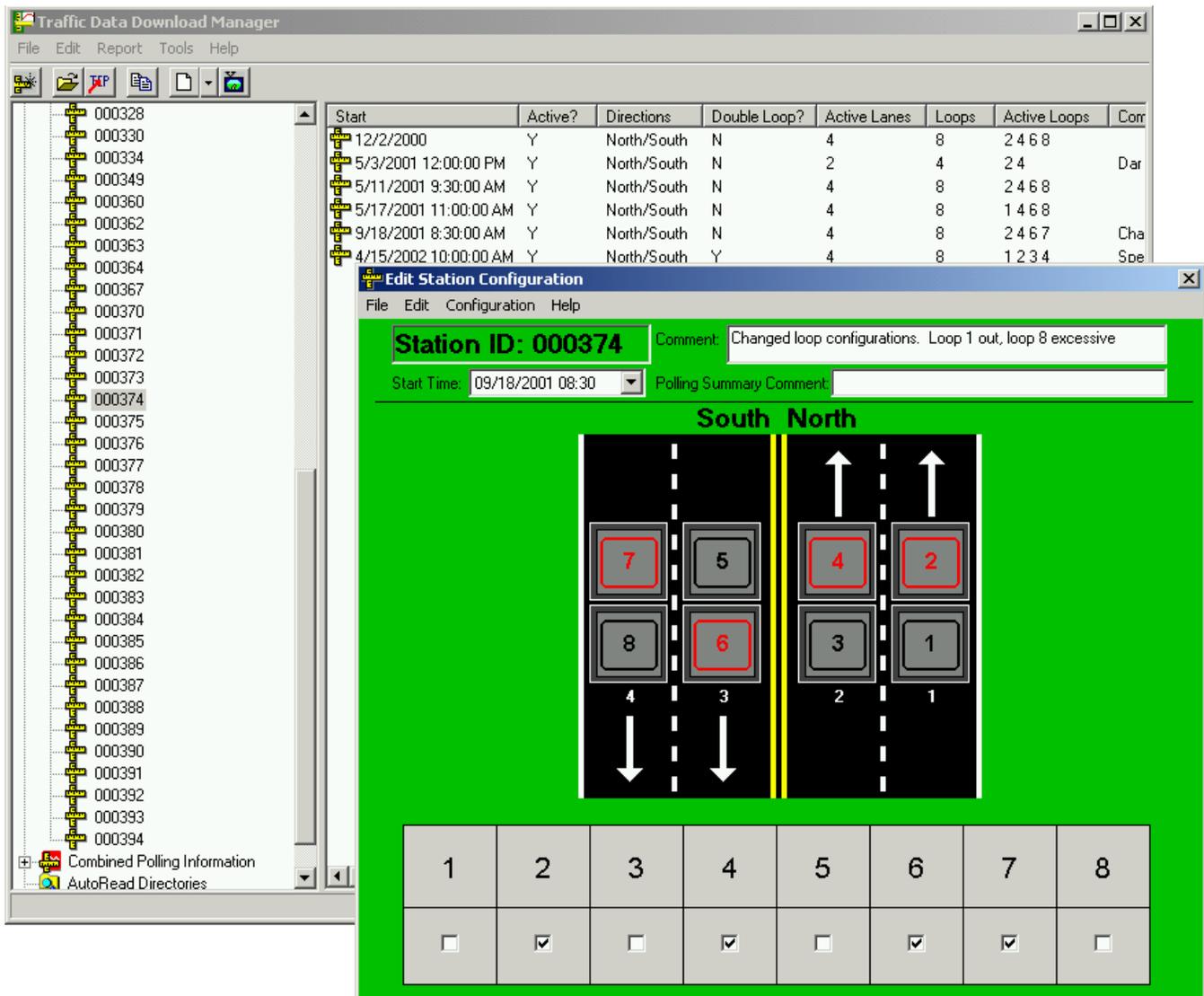
The Traffic Information System includes a fully functional asset management system to support maintenance of over 300 Pennsylvania permanent count sites. Field Operations Manager (FOM) features include:

- *Maintenance Tickets.* FOM tracks requests for site repairs and new site integration using “trouble tickets” that track the work done by the field operations staff. All users have access to tracking information for an up-to-date picture of the status of requests.
- *Task Orders.* FOM keeps track of work assignments using task orders, which allow field technicians to enter detailed information on site problems, and helps managers keep track of current operations.
- *Site Information.* FOM keeps a detailed record of each site’s maintenance and inspection history.
- *Equipment Inventory.* This module tracks the location and condition of PennDOT’s inventory of counters.
- *Supply Inventory.* Users can track levels of various expendable supplies using this feature.
- *Personnel.* FOM’s personnel list makes it easy to get a list of tasks performed by each technician.
- *Reports.* Reports available include site maintenance history, problem and resolution analysis, and personnel productivity.

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Data Acquisition

The Traffic Information System reads count data directly from import files produced by PennDOT's Automatic Traffic Recorder (ATR) equipment, as well as importing data in Federal standard volume and class formats. Enhancements currently under development will add features for short-term counts. Other data acquisition features include:

- *Automated Processing.* After counts are downloaded via telemetry each night, TIS's Traffic Data Download Manager (TDDM) reads the counts automatically into its relational database for analysis and forwarding.
- *Station Configurations.* TIS stores current configuration data for PennDOT permanent sites, so that data from loops, piezo strips and other sensors can be automatically aggregated by lane, direction and then site.
- *Reporting and Initial Analysis.* TIS reviews imported count data "on-the-fly" for missing or inconsistent counts, and for possible problems indicated by the data's directional split.

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