

PC-WARRANTS

Warrant Analysis Software for Traffic Signals and Stop Signs



**Should your intersection be controlled by a traffic signal, multiway stop sign, or one way stop sign?
PC-Warrants helps you decide.**

Combination of Warrants

Description: Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are met to 80% of their stated values.

Site Data Required by Warrant

85% Speed > 40 MPH

Built-up community < 10,000

Number of Major Lanes = 1 2 or more

Number of Minor Lanes = 1 2 or more

Current Volume Data

Major Road	Minor Road	Met?	Major Road
NB	SB	Total	York Road (Rt. 263)
120M-1	0 + 0 = 0	0 WB	No
12	0 + 0 = 0	0 WB	No
23	0 + 0 = 0	0 WB	No
34	0 + 0 = 0	0 WB	No
45	0 + 0 = 0	0 WB	No
56	0 + 0 = 0	0 WB	No
67	0 + 0 = 0	0 WB	No
78	134 + 283 = 417	217 WB	No
89	102 + 261 = 363	257 WB	No
90	94 + 265 = 359	217 WB	No
10-11	96 + 271 = 367	250 WB	No
11-12	84 + 283 = 367	334 WB	No

Summary of MUTCD 2000 Signal Warrant study: Demo2

Volume Data

Site Data

Warrant Status

Warrant 1A - Minimum Vehicular Volume: **Met**

Warrant 1B - Interruption of Continuous Traffic: **Not Met**

Warrant 1 - Combination of Warrants: **Not Met**

Warrant 2 - Four-Hour Vehicular Volume: **Met**

Warrant 3 - Peak Hour Volume: **Met**

Warrant 3 - Peak Hour Delay: **Met**

Warrant 4 - Pedestrian Volume: **Met**

Warrant 5 - School Crossing: **Met**

Warrant 6 - Coordinated Signal System: **Not Met**

Warrant 7 - Crash Experience: **Met**

Warrant 8 - Roadway Network: **Met**

Intersection Analysis: York Road (Rt. 263)

Daily Volume = 3,524

Major Approach is N/S

Major Approach is E/W

Street Road

of Lanes = 1 2+

85% Speed = 45

Closest Signal = 1,001

Daily Volume = 3,681

Daily Volume = 1,129

York Road (Rt. 263)

of Lanes = 1 2+

85% Speed = 41

Closest Signal = 1,001

Check All That Apply

Built-up community < 10,000

Adjacent coordinated signals

Pedestrian Warrant

Ped speed < 35 ft/sec

Existing median?

School Crossing Warrant

07:00 AM Start time children begin using school crossing

09:00 AM Stop time children stop using school crossing

Accident Warrant

6 Number of correctable accidents in last 12 months

Systems Warrant

Major route? NB EB

SB WB

- ◆ Signalized Intersection Warrant Analysis
- ◆ Multiway Stop Sign Warrant Analysis
- ◆ Supports 2000 and 2003 MUTCD Standards
- ◆ Traffic Volume Wizard for Importing Data

For more information:

www.pc-warrants.com

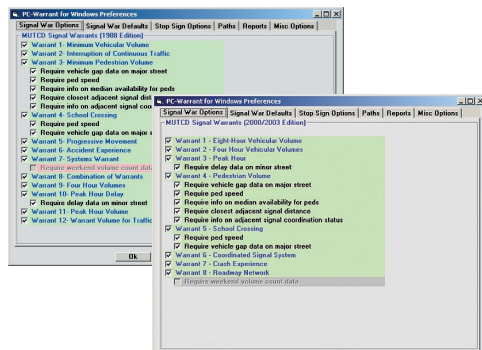
or call

877-603-5844

PC-WARRANTS

PC-Warrants is the most comprehensive warrant analysis software program on the market today. It supports the standards for both the 2000 and 2003 Manual on Uniform Traffic Control Devices, and will do analysis for both signal lights and multiway stop signs. The program's Volume Data Wizard eliminates the need for manual data entry, allowing you to directly import data from Jamar's PETRAPro and TRAXPro programs, or formats used by Peek, ITC, Mitron, Numetrics and TimeMark.

Select MUTCD Mode



The Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration, defines the standards that should be applied when considering the installation of a traffic signal or multi-way stop signs. PC-Warrants allows you to use the standards of either the 1988, 2000 or 2003 edition.

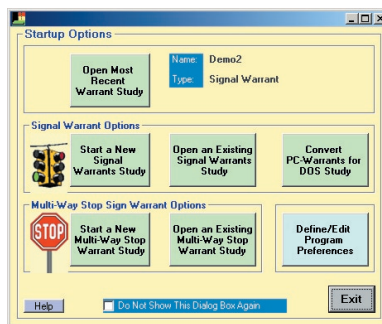
Choose Default Values

MUTCD 2000		Warrant 1-A		Warrant 1-B	
# Lanes	# Lanes	Major	Minor	Major	Minor
Major	Minor	Total	Higher	Total	Higher
1 Lane	1 Lane	500	150	750	75
2 or More	1 Lane	600	150	900	75
2 or More	2 or More	600	200	900	100
1 Lane	2 or More	500	200	750	100

Rural vs Urban Parameters:			
Volume Factor	0.7	Speed Threshold	40
Population Threshold	10,000		
Warrant 1 - Combination Warrant Factor	0.8		
Warrant 3 - Minor St. Delay - 1 Lane	4.0	2 Lanes	5.0
Warrant 3 - Minor St Volume - 1 Lane	100	2 Lanes	150
Warrant 4 (Pedestrian Warrant):			
Speed Threshold (ft/sec)	3.5	4 Hour Threshold	100
Volume Factor for low ped spd	0.5	1 Hour Threshold	190
Warrant 5 - Closest signal distance (ft)	1,000		
Warrant 7 - Number of accidents in last 12 months	5		
Warrant 8 - Peak Hour Volume Threshold	1,000		

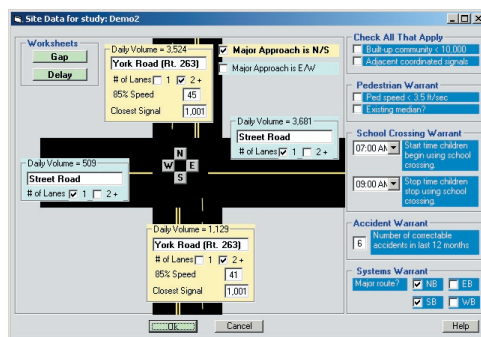
The built-in flexibility of the program allows you to use your own default values for the evaluation of specific warrants. You can choose to use the standards directly from the MUTCD, or modify them as you see fit.

Quick Start Wizard



The program's graphical Startup Options allow you to easily select some of the program's most common functions. You can quickly reopen the last file you were working with, change your preferences, convert a study from an earlier version, or open an existing study.

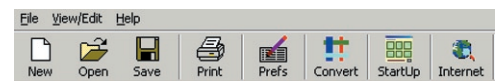
Graphical Site Data Interface



The Site Data screen provides an easy way for you to input data that will be used in evaluating warrants. The graphical depiction of the intersection allows you to be sure the data you are entering is going in the right place.

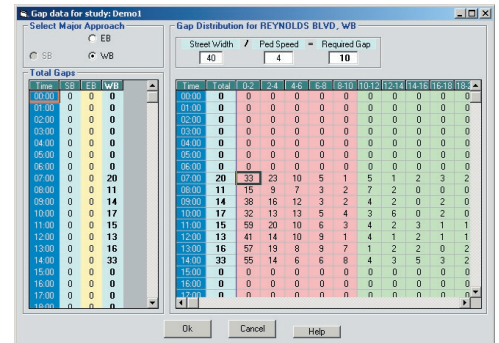
How the traffic at an intersection should be controlled is one of the most important decisions made by a traffic engineer. PC-Warrants helps to make this decision easier by performing some of the standard calculations needed for traffic signal or multiway stop sign warrant studies.

Easy to Use



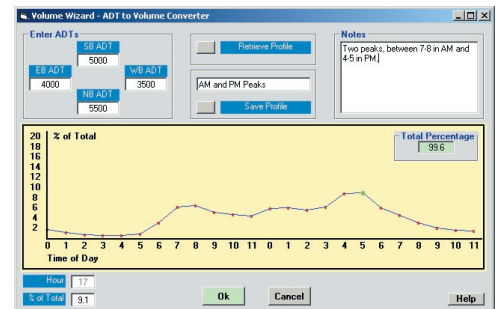
Drop down menus and toolbar icons make PC-Warrants easy to use. One click of the mouse gives you easy access to the program's most used features.

Gap and Delay Worksheets



Separate worksheets for Gap information and for Delay information make adding this data to the program easy. The Required Gap is calculated by the program from the Street Width and Pedestrian Speed you enter, and is used to determine the usable gaps for warrant analysis.

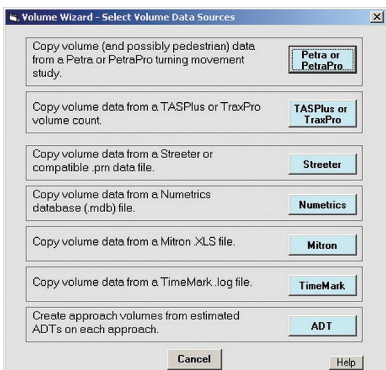
Create Volumes for Planned Intersections



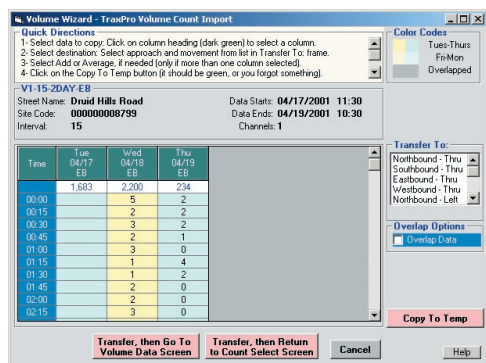
How do you do a warrant study for an intersection that doesn't yet exist? PC-Warrants answers this by allowing you to generate traffic volumes from estimated Average Daily Traffic (ADT). You can easily create a volume profile that takes into account the fluctuation of traffic flows throughout the day.

PC-Warrants' graphical data interface & familiar Windows-style design makes it easy to work with, even for the casual user.

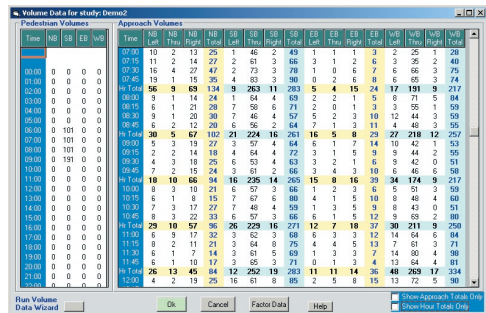
Volume Data Wizard



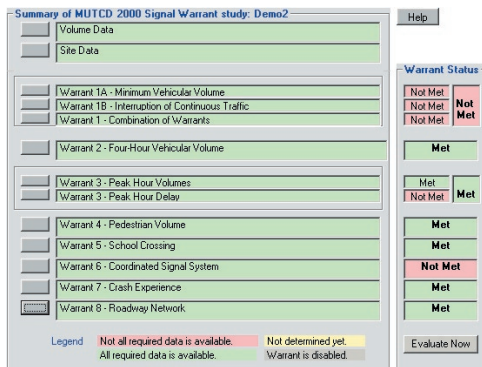
One of the most important parts of any warrant analysis is dealing with traffic volumes. Data can be manually entered, but this is often tedious and time consuming. PC-Warrants addresses this issue with the Volume Data Wizard.



The Volume Data Wizard is the most efficient way to get traffic volumes into your study. It allows you to directly import data from other sources, like Jamar's PETRAPro and TRAXPro programs. Data can also be imported from formats used by Peek, ITC, Mitron, Numerics and TimeMark.

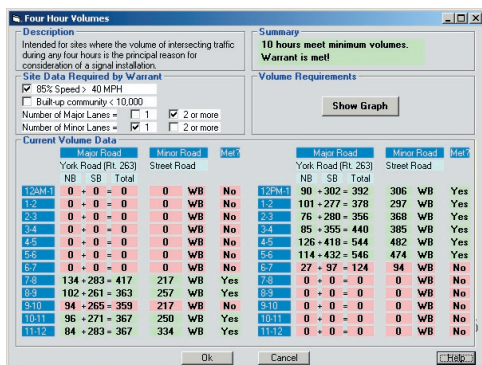


Detailed Summary Analysis

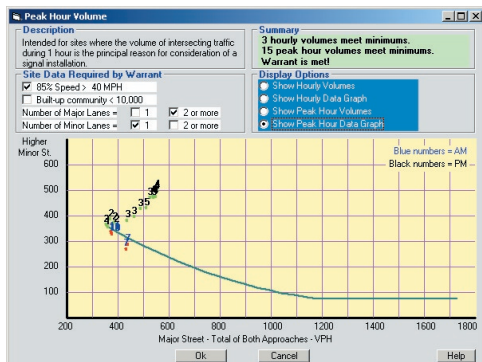


The Warrant Summary screen provides you with an easy to understand summary of the details of your study. Color-coding makes it easy to see which warrants are being evaluated, whether additional data is needed for particular warrants and whether a warrant is met or not.

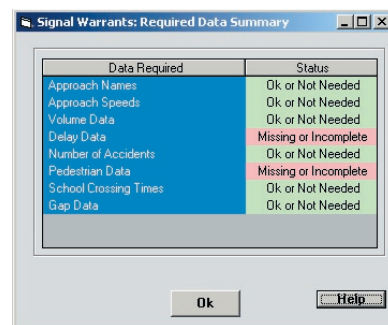
Individual Warrant Details



From the Warrant Summary screen you can select to look at the data and calculations for each warrant on an individual basis. This detailed information lets you know exactly why a warrant was met, or not met.

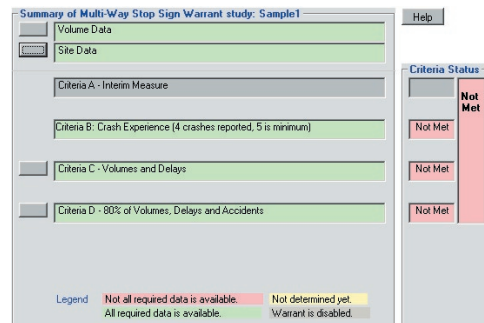


Built-in Diagnostics



Do you think you've got enough data to do analysis, but you're not sure? The built-in error checking of the program allows you to quickly and easily identify when required data is missing, and what specifically is missing.

Multi-Way Stop Sign Analysis



In addition to the standard signal warrant analysis, PC-Warrants allows you to do analysis for Multi-Way stop signs. Analysis can be done with either the 1988, 2000 or 2003 MUTCD criteria. You can also choose to use either 15 minute interval boundaries or 60 minute interval boundaries when sorting traffic volumes.

Minimum Computer Requirements

- Windows 98 or higher
- 64 MB of RAM
- 10 MB free space on hard disk
- CD-ROM (Installation Only)
- Screen Resolution of 800x600 or better

Data Processing Simplified

Create Comprehensive Reports

The reports available from the program provide extensive details of all areas of the data analysis. Each warrant is listed, along with information on whether or not it was evaluated for the study and whether the data met its criteria. Volume curves are also provided, along with complete details on the traffic volumes used for the study. In addition, the program allows you to produce reports in **Adobe Acrobat PDF** format, which can be e-mailed or posted on the Internet.

JAMAR Technologies, Inc.
www.jamartech.com
800-776-0940

Study Name : **Demo2**
Study Date : **02/06/02**
Page No. : **1**

Signal Warrants - Summary

<p>Major Street Approaches</p> <p>Northbound: York Road (Rt. 263) Number of Lanes: 2 Approach Speed: 41 Total Approach Volume: 1,129</p> <p>Southbound: York Road (Rt. 263) Number of Lanes: 2 Approach Speed: 45 Total Approach Volume: 3,524</p>	<p>Minor Street Approaches</p> <p>Eastbound: Street Road Number of Lanes: 1 Total Approach Volume: 509</p> <p>Westbound: Street Road Number of Lanes: 1 Total Approach Volume: 3,681</p>
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Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume	Not Satisfied
Warrant 1B - Interruption of Continuous Traffic	Not Satisfied
Warrant 1 A&B - Combination of Warrants	Not Satisfied
Warrant 2 - Four Hour Volumes	Satisfied
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Volumes	Satisfied
Warrant 3B - Peak Hour Delay	Not Satisfied
Warrant 4 - Pedestrian Volumes	Satisfied
Warrant 5 - School Crossing	Satisfied
Warrant 6 - Coordinated Signal System	Not Satisfied
Warrant 7 - Crash Experience	Satisfied
Warrant 8 - Roadway Network	Satisfied

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Page No. : **2**

Signal Warrants - Summary

Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor Vol	Dir	Major Crit	War-1A Minor Crit	Meets?	Major Crit	War-1B Minor Crit	Meets?	Major Crit	War-1A&B Minor Crit	Meets?
00:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
01:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
02:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
03:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
04:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
05:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
06:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
07:00	417	217	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
08:00	363	257	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
09:00	359	217	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
10:00	367	250	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
11:00	367	334	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
12:00	392	306	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
13:00	378	297	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
14:00	356	368	WB	420-No	105-Yes	Minor	630-No	62-Yes	Minor	504-No	84-Yes	Minor
15:00	440	385	WB	420-Yes	105-Yes	Both	630-No	62-Yes	Minor	504-No	84-Yes	Minor
16:00	544	482	WB	420-Yes	105-Yes	Both	630-No	62-Yes	Minor	504-Yes	84-Yes	Both
17:00	546	474	WB	420-Yes	105-Yes	Both	630-No	62-Yes	Minor	504-Yes	84-Yes	Both
18:00	124	94	WB	420-No	105-No	--	630-No	62-Yes	Minor	504-No	84-Yes	Minor
19:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
20:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
21:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
22:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--
23:00	0	0	EB	420-No	105-No	--	630-No	62-No	--	504-No	84-No	--

Multi-Program Compatibility

PETRAPro
Traffic Data Analysis Software for Windows

Reference Manual

PC-Warrants for Windows imports traffic volumes from Jamar's PETRAPro & TRAXPro programs, as well as several other sources.

TRAXPro
Traffic Data Analysis Software for Windows

Reference Manual

Phone: 1-813-980-6422

North America Toll Free:
1-877-603-5844

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