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# TecNote 6201 - Field Installation Tips for a Naztec Temperature Probe

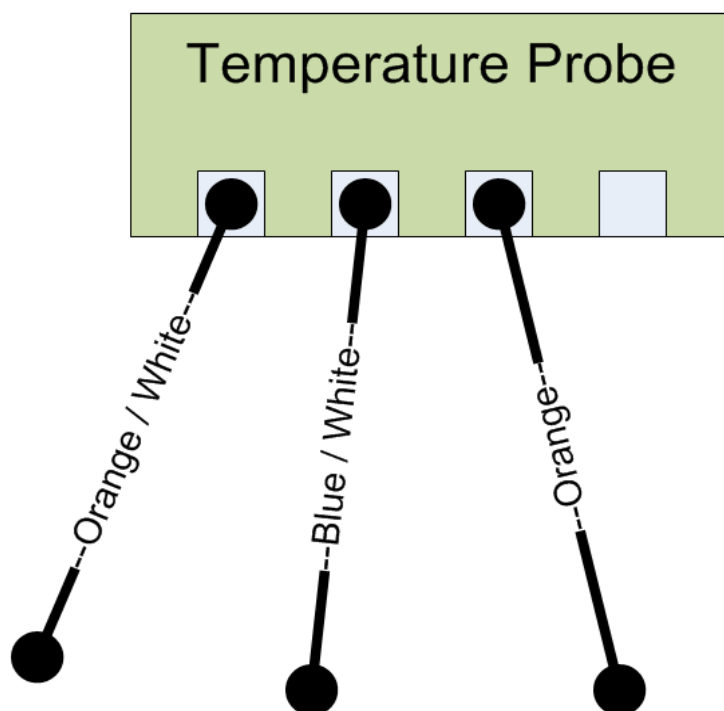
The purpose of this TecNote is to help the user install a Naztec Temperature probe in the field..



Naztec would like to thank the staff of Prince Georges County Maryland, for their assistance with this TecNote.

## Temp Probe wiring

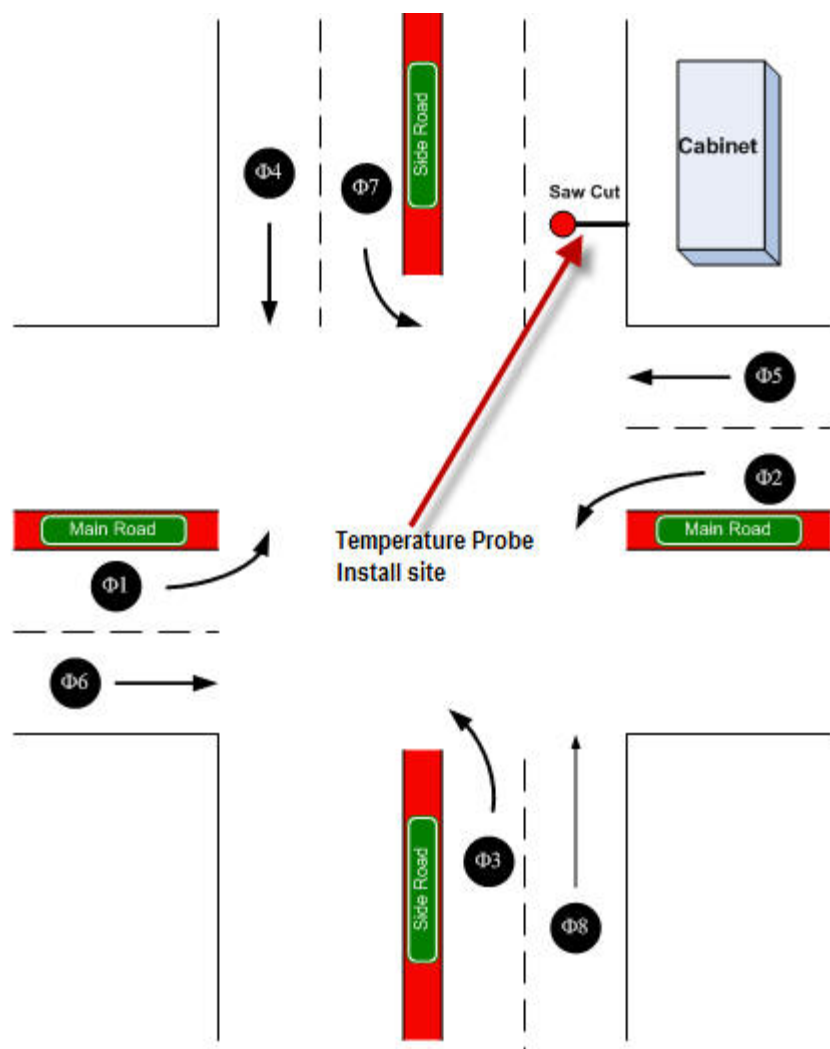
The following is a wiring diagram for either Temp Probe 1 or temp Probe 2 as shown above.



## Field Installation Guidelines- Roadway

- 1) The temperature probe sensors (temperature probes) are saw-cut into the asphalt using a masonry blade. Saw-

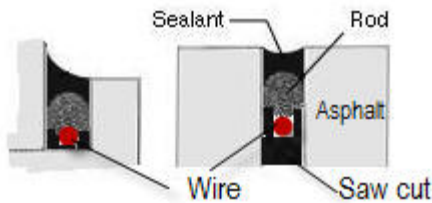
cuts are made wide enough to accommodate the temperature probe's 1/4 inch wiring and 1/2 inch probe head. The saw-cut into the asphalt should be made to the outbound side of the intersection for best results (approximately to the middle of the furthest right lane, closest to the cabinet). This is done because you want the most accurate ambient temperature that is not compromised by factors such as tire heat, standing water, standing traffic, etc. The cut should be made at least 1" and no more than 3" inches deep into the asphalt. **The saw-cut at the end of the probe should be made at a gradual angle (i.e. ramped up on the end) to the surface so that the probe can be installed properly without damage.**



2) From the curb, a 1 inch **flexible** PVC lead-in pipe is installed to pull the temperature probe wire into the hand box. The temperature probe wire is then pulled through the flexible conduit and into the existing conduit in the base of the signal cabinet.



3) Lay the wire in the slot. Pour the epoxy over the wire and then compress Backer Rod (an easy to compress rope-like celled foam) over the epoxy. **The probe end and the sealant should be no more than 1/4 inch to no less than 1/8 inch below the surface of the asphalt so that snow plows won't pick them up.** Do not place backer rod over the tip, however, the tip should be sealed with a slight layer of epoxy.



## Field Installation Guidelines- Air Temperature

1) You can measure air temperature by placing a probe external to the cabinet. The air temperature probe sensors are embedded into the top ventilation plate of the Naztec NEMA cabinet, or in a location that is not exposed to direct sunlight. **Note : Only the tip of the probe end should be exposed.** The temperature probe wire is then wired into a phoenix connector on the temperature probe module. The temperature probe sensor is then sealed with clear epoxy.

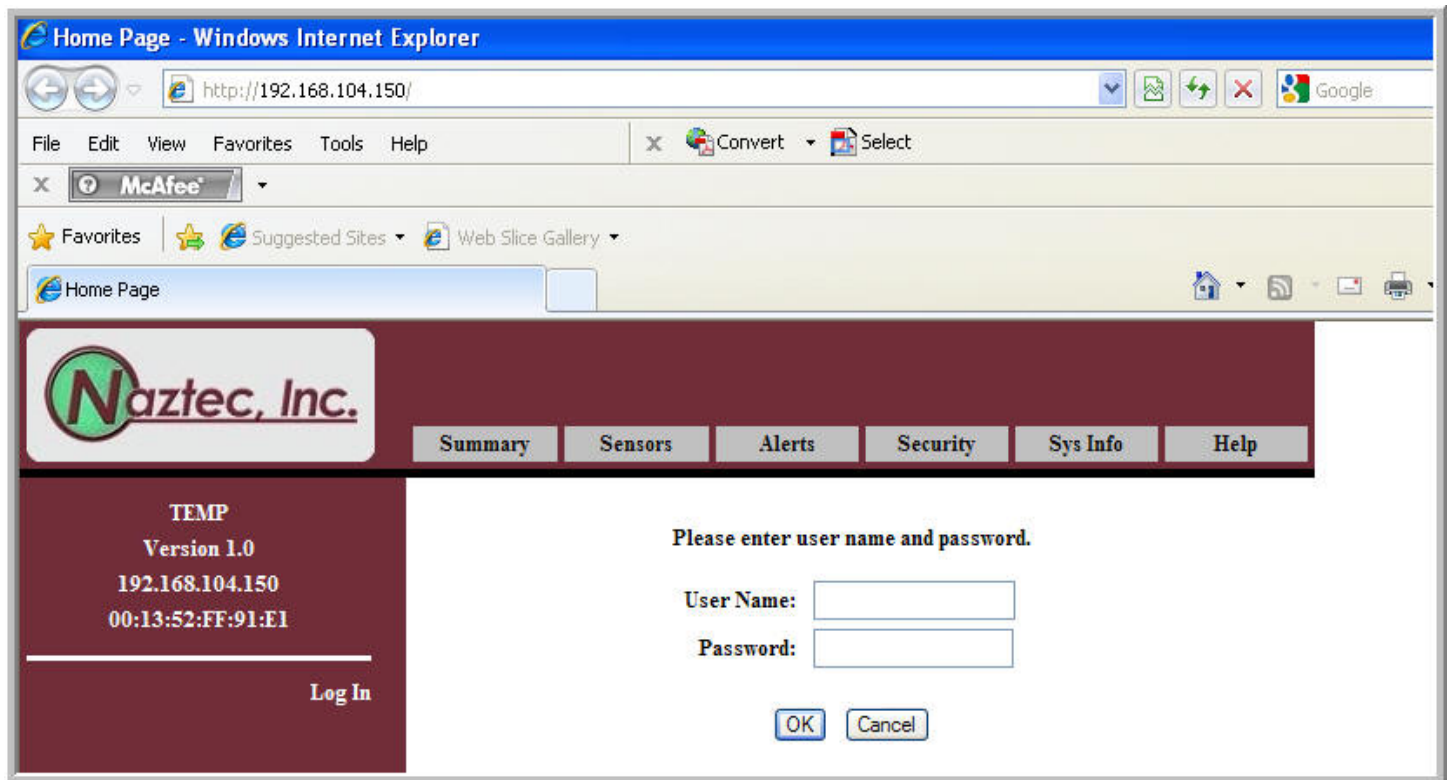
## Cabinet Installation Guidelines

1) Each temperature probe wire is pulled into the signal cabinet and then connected onto a phoenix connector that is located on the temperature probe module.



## Communicating with the temperature probes

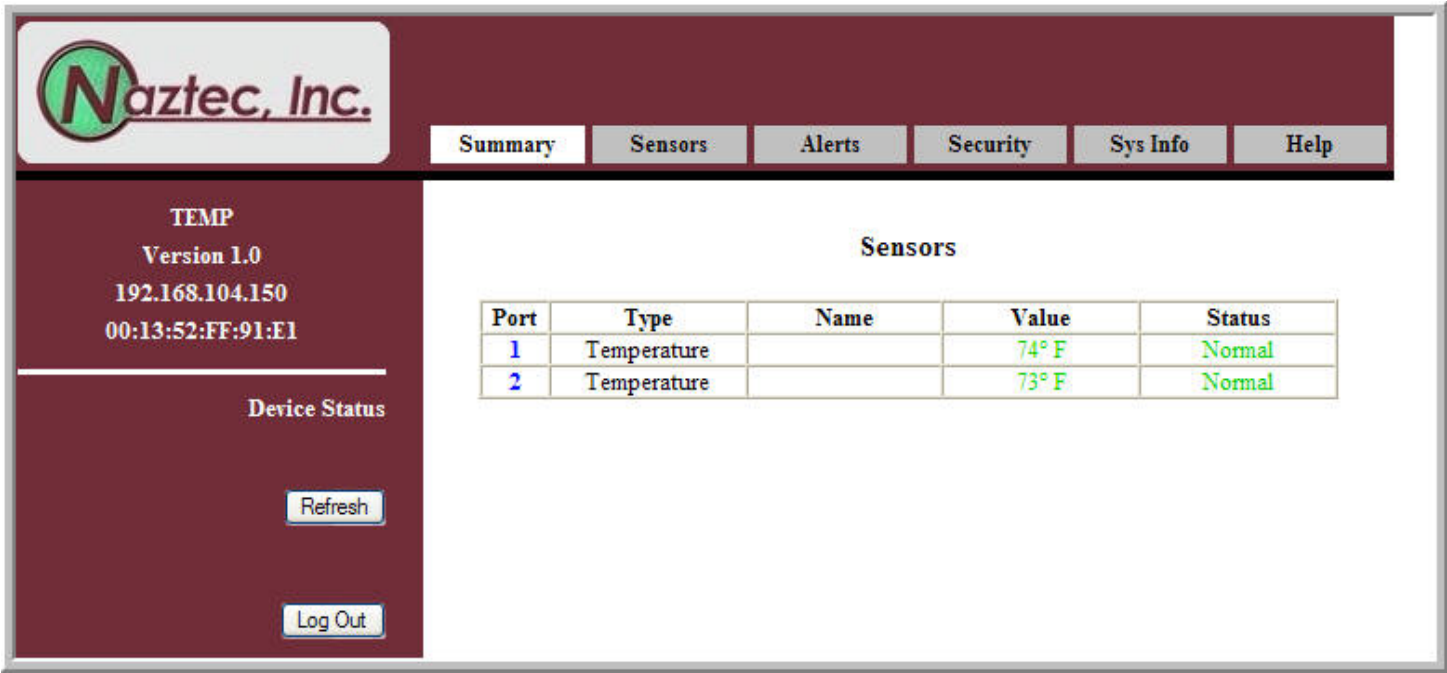
1) The temperature probe module can be accessed by going to a browser such as internet explorer and typing in the IP address in the menu bar. If the module is communicating you should see the following login screen. **Use the default IP address 192.168.0.100 for initial setup.**



2) Login with the name "**admin**" and do not enter a password.

3) Once you log in you can configure them via the menus. Keep in mind that the temperature probe modules are pre-configured with a username / password, the site location name and a static IP address. Also note that The IP address can be modified to match your existing settings using the SYSINFO Tab





4) Temperature probe data is collected from each signalized intersection that is so equipped. Via ATMS.now you can set up a website that will monitor the temperature probes and update them every 5 minutes for accuracy. Consult the ATMS.now Manual for further information.

Average air & pavement temperatures are calculated and automatically displayed on an interactive traveler's information website in real-time as shown below.



5) If you can't access the Temp Probe via IP you can connect to it serially. Using your computer's serial port connect to the temp probe deice using a serial cable.

- a) Open HyperTerminal and set the port parameters to **9600,8,None,1,Hardware** and connect to the device.
- b) You will see a command prompt **TEMP%**.
- c) Type **help -v** to list all the commands available to reset the device.
- d) If you don't see a prompt then type in "**silent sane**" to get a prompt.
- e) You can now get the IP Address by typing:

**TEMP% ifconfig**

- f) To Set the IP Address :

**TEMP% ifconfig [ipaddress mask]**

**TEMP% ifconfig 192.168.100.1 255.255.255.0**

## Summary

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The Naztec temperature probe is easily installed and can give accurate data for the motorist to use for safe travel throughout a region.

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