

# ITS Technical Committee

NCITE/ITS Minnesota

## DRAFT Meeting Minutes

January 6, 2009

1:00 – 3:00 pm

Mn/DOT Training Center, Arden Hills

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### 1. Introductions

Ray Starr, Mn/DOT, welcomed the attendees to the NCITE/ITS Minnesota ITS Technical committee meeting. Introductions were made and attendees are noted below.

<u>Attendee Name</u>	<u>Agency</u>
Rashmi Brewer	Mn/DOT
Dean Deeter	Athey Creek Consultants
Allen Eisinger	TCC
Dennis Foderberg	SEH
Mark Gallagher	SRF
Matt Gjersvik	Mn/DOT
Loren Irwin	Hennepin County
Jon Jackels	Mn/DOT
Jerry Kotzenmacher	Mn/DOT
Gordon Melby	NTT
Sue Sheehan	Mn/DOT
Tom Sohrweide	SEH
Ray Starr	Mn/DOT

### 2. September 9, 2008 Minutes

The group reviewed the meeting minutes and action items from the November 4, 2008 meeting. No changes were noted.

### 3. Old Items of Business

### **Breakaway Supports for ITS Devices**

Mn/DOT is a member of the Roadside Safety Systems Pooled Fund Study, and they do take requests for items to be tested. Jon Jackels from Mn/DOT left a message with Mn/DOT's representative on the pooled fund to identify the process to submit new project ideas. This may be a way to get ITS breakaway supports tested.

### **ITS Warrants**

Mn/DOT is exploring the option of including the ITS Warrants discussed at the last meeting in Minnesota's Traffic Engineering Manual.

## **4. New Topics**

### **Solar Power for ITS Devices**

Mark Gallagher gave a presentation on the designing solar powered systems.

- Improvements in technology have made solar power more feasible. These include better and more cost effective solar panels, batteries, and charge controllers, as well as lower power requirements for devices.
- Designing for solar power involves ensuring the power system is adequate as well as configuring the design to minimize the needed power draw.
- Showed examples of sizing a solar panel, sizing batteries, and modifying the system to reduce the needed power.
- Charts are available on the Internet that show the amount of sunlight and wind to assume in the design, based on geographical location.
- See presentation attached.

The group then discussed solar power considerations:

- Battery life, which depends on the number of charge/discharge cycles along with the depth of discharge.
- Critical applications requiring assurance of continual power need to be carefully designed.
- Mounting of cabinets and solar panel needs to consider roadside safety.
- Systems operating at a different voltage than the batteries, such as those operating at 120 volts have additional considerations beyond what was presented.
- Roadway lighting is not easily powered by solar due to its large power requirements. However, TCC did work on a system in Chicago that used a very large, 30 meter, solar panel array to power lighting at an interchange.
- There has been some experience with systems that failed when the solar power system was inadequate for specific conditions such as prolonged fog, prolonged snow cover on the solar panels, or unusual situations that caused the system to operate more frequently/longer than design power requirements.

- Another way to power with batteries uses roadway lighting power, which is only on at night, to charge the batteries, which then power the system all day.

### **Potential Topics for an ITS Design Manual**

The group discussed potential topics to cover in an ITS design manual:

- Electrical Considerations:
  - Grounding
  - Lighting and surge suppression
- CCTV
- Detection
- Communications
- Cabinets

Wisconsin has a design manual, but it is not currently publicly available. Wisconsin also has purchasing contracts set up for specific pieces of equipment and requires contractors to use the equipment from the contracts. This expedites procurement and brings uniformity in the field, but sometimes makes it difficult to keep up with technological improvements.

## **5. Next Meeting**

The next ITS Technical Committee meeting will be held on Tuesday, March 3, 2009 from 1:00 to 3:00 pm at the Mn/DOT Training Center in Arden Hills.