

To: Project Team
From: John Albeck
Date: October 11, 2011
Subject: Meeting Notes



Attendees

The following is the attendee list for the ITS Design Course meeting held on October 5, 2011 at the RTMC (room 415).

Name	Email	Attended Meeting
Jon Jackels	Jon.Jackels@state.mn.us	X
Terry Haukom	terry.haukom@state.mn.us	X
Steve Misgen	Steve.misgen@state.mn.us	X
Dan Rowe	Dan.rowe@state.mn.us	X
Jerry Kotzenmacher	Jerry.kotzenmacher@state.mn.us	X
John Albeck	jalbeck@albeckinc.com	X

Background

The individuals listed above (x in attended meeting column) participated in the meeting.

The project documents can be found at www.albeckinc.com/MnDOT/MnDOT_Training_Projects.html. This will include the draft manual and meeting notes.

Discussion Items

The following are the notes from the meeting. Please contact me with changes for additions.

General

- A new name was suggested for the course since this 1-day course would not (could not) be a full design class. One suggestion is ITS Project Management Manual.
- It has been suggested that the class will spread over two days. Day 1 to begin at 10:00 a.m. This will allow individuals to travel in the first morning. Day 1 will end at 3:30 p.m. Day 2 will begin at 8:00 and end at noon. Lunch offered on Day 1 (not day 2).
- The date for the course will likely be sometime in January
- John will meet with a sub-committee to go through the beta/draft manual page by page
- Class would be limited to 30. If there are a few more, then they would be allowed in (if room permits), but the class should not exceed 40 (probably 35). A second class could be offered if there was a high demand.
- The class will have a technical expert that will sit-in during the course to offer comments and answer specific questions. Terry H was suggested for this role.
- During the training, a discussion of design/build issues that come up should be discussed
- Include a discussion and link to the approved products list (APL)

- Regarding products that are used, the specifications listed are normally for ideal conditions. For instance, the distance listed is for ideal conditions and may not always be achieved.
- Product warranties should be discussed
- Operations and maintenance should be discussed in course. Eventually, this could be a completely separate course.
- Jerry K is working on updating the ITS website. The website will include a link to the Enterprise warrants (the warrants will eventually be housed at a new location – possibly at ITS Canada).
- Include a discussion of standard sheets (get some from website)
- Include an explanation of fiber sheets (schematics). John to work with Terry H regarding this.
- ITS designers should have an understanding of field cross-sections (ie, walls, ponds, etc.). This could greatly impact the placement of a device.
- Jon J noted that we should to have a contact sheet for the course.
- Gatorpatches were mentioned. John will confirm if these should be covered in the class

Comments from Terry Haukom

- Fiber testing - people need to understand how to test. Who is going to review and OK results? Need to be an understanding of what is in a test results. Terry can provide screen shots, etc.
- Non-intrusive detection pole is also being used in rural areas for cameras (it does have dual purposes).
- Need a discussion on the Sensys and Bluetoad systems. Sensys with the magnetic signature, Bluetoad with MAC. Lumped into applications
- ILCS - and tolling. Need to give better understanding of cables and equipment. Use an RF based reader. Terry has some MnPass diagrams that would be useful for this discussion.
- DMS wires, fibers, cat6. Putting fibers up to the signs for Cat6. Power requirements need to be discussed too. Power draw varies greatly.
- Need to include the review process. MnDOTs quality management. Need to have a checker, quality control, etc.
- Temp fiber systems. Starting to call out these in construction plans. Need something for the device connection during construction. Doesn't need to be off the APL. If reusing, then has to be on APL.
- Need a discussion on in place communication
- Maybe mention license plate detection. Used for studies.
- RWIS, discuss with Curt Pape
- Magnetometer- power lines can interrupt these. Placement of these needs to be considered (should not be placed over the baskets (steel) of a structure. need to consider the environment when placing these devices.
- Microwave-Different detectors have different systems and amount of lanes. Low barrier, vs. high barrier, cable barriers not an issue. Consider the environment too.

- Wrong way detection. 3m Canoga card has this built in. Could have controller software look at this too and do this. Detection and controlling are two different things.
- IP Video: Now are using IP video that is strictly IP. Terry has one camera that they like.
- Camera control. Need to talk about how this is done (wiring, cabling).
- Temporary cameras. Has a negative connotation, Terry uses the term "construction" cameras. Is this a design/build, etc.
- Flasher beacons. On arterials using 334 cabinets.
- New ramp control and wiring diagrams. Terry can provide.
- Solar discussion. Need to talk about mounting height (theft). Theft prevention mounts (labeling).
- Fiber crush. Need to talk to mention that the RSC is the culprit. Sleeve it with NMC.
- Bride crossing are very unique. Expansion deflection. Need to minimize 90 degrees and angle deflections.

Comments from Steve Misgen

- Steve mentioned the need for a new course name
- Warrants should have a brief discussion and link to the website
- It is very important to understand the system engineering process. This should be discussed in the class.
- There needs to be a plan for operations and maintenance
- At some point, there may be a need for an operations and maintenance manual
- Many of the signal software packages will now do quite a bit. R-Tactics, etc. Mention some proprietary equipment that is available, discuss pros and cons
- The detection section seems to have too much information and overlaps with the signal design course. Some information can be removed (or referenced to the signal design manual).
- If possible, it would be nice to have a strengths and weaknesses chart similar to the one for detection for other ITS devices
- Maybe include a discussion on cost for ITS devices in a strengths and weaknesses chart
- Regarding power, need to know how much power the device is using
- Communications are key to the project. A strengths and weaknesses chart would be very helpful.
- Bandwidth calculation and understanding should be discussed in the manual. Items that can be done to reduce the bandwidth. IE, wireless has issue with this. Need to understand issues with this.
- Have some kind of example to work through - camera on a sign on a signal arterial - camera on ice warning in a rural condition - Have the designers come in and discuss these issues with the class.
- For DMS, Overhead for metro freeway system. But side-mount for rural freeway and arterial.

Action Items

- John and Jerry to arrange a sub-committee to review the book
- John to incorporate comments from meeting into manual
- John and Jerry to arrange time for sub-committee to get together to review book