

A REPORT ON THE ORGANIZATION

OF THE

MATERIALS ENGINEERS' COMMITTEE

PRELIMINARY REPORT

FOR

REVIEW

May, 1987

## INTRODUCTION

At the February 1987, Transportation Conference a designated group of Materials Engineers and Assistant District Engineers met to discuss the future direction and need for formalizing a statewide Materials Engineers Committee.

It was clear from this meeting that there was a need for a formal organization and for maintaining a strong relationship between the Central Office and Districts. The Assistant District Engineers encouraged the group to formally organize listing some of the benefits as:

- more effective resolution of problems
- ability to make all members accountable
- clean definition of authority
- improved recognition of the group

As a result of these discussions and encouragements an organization committee was formed given the following charge

- to evaluate the direction and emphasis of the Materials Engineers Committee.
  
- To make recommendations with respect to the future purpose, structure, direction and relationship of the Materials Engineers' Committee.

This report documents those recommendations and was prepared by the Organizational Committee consisting of:

Ray Adolfson - C.O. Geotechnical Engineer  
Steve Baker - District Materials Engineer  
George Cochran - C.O. Pavement Engineer  
Paul Jensen - C.O. Engineer of Tests  
Steve Oakey - District Pavement Engineer  
Sylvester (Bud) Wyborny - District Materials Engineer

## CONCERNS/OBJECTIVES WITH MAINTAINING THE UNITY BETWEEN THE DISTRICT MATERIALS/PAVEMENT SECTIONS AND OFFICE OF MATERIALS, RESEARCH & STANDARDS

One of the main objectives/concerns of the organizational committee was "that the close ties that have developed between the District Materials/Pavement sections and the Office of Materials, Research & Standards section be left intact and possibly enhanced." In conjunction with this concern the committee feels that it would not be practical or desirable to develop this organization without having Office of Materials, Research and Standards personnel involvement with full voting privileges. By involvement of Central Office personnel, it is hoped that the continued exchange of ideas, cooperation, information and dependency between the Districts and Central Office will be maintained.

## PURPOSE OF ORGANIZING THE DISTRICT PAVEMENT/MATERIALS AND THE OFFICE OF MATERIALS, RESEARCH AND STANDARDS

### PURPOSE

Having recognized the benefit of sharing experiences and discussing general materials/pavement engineering topics of mutual interest, the Districts and Central Office Pavement/Material Engineers have been meeting informally several times a year since the 1970s. However, at present, it has become quite clear, that a formal type of organization will better address the current pavement/materials type challenges and will also provide a vehicle for transfer of this challenge.

Listed below are some of the major goals/purposes of this organization:

1. Focal point to which other organizations can make inquiries to.
2. Will provide a means for making all members accountable.
3. Will be able to make more effective resolutions of problems.
4. Will be able to utilize the concept of "two heads are better than one", "group communications to exchange ideas and obtain information."
5. Will be able to have a designated line of authority.
6. Provide a means for organizational recognition.
7. A means for strengthening relationship/communication between this organization and others.
8. To provide leadership in appropriate areas.
9. To provide a means for distributing appropriate information.
10. To achieve personal development.
11. To stay abreast of new technology and methods.
12. To influence policy and procedures where operations of the districts are affected.
13. To broaden perspective of what's going on in Mn/DOT through exposure to other organizations.
14. To respond to emerging issues.

## MEMBERSHIP

There will be three classes of membership for the Materials Engineers Committee.

1. Members
2. Regular Attendees
3. Participants to be available as necessary

The members will consist of the Principal Engineers with equal representations from Central Office & Districts. The regular attendees are those that have a strong direct relationship to the membership. The role of the regular attendees is to provide necessary communication, provide their perspective on issues and provide advice and guidance. Other participants will attend as necessary when topics affecting their areas are discussed.

Decisions to take action on issues will be made by the members of the Materials Engineers Committee by a majority vote.

It is emphasized that involvement through the Assistant District Engineers and the Office of Materials Research & Standards will be achieved in a variety of forms including this committee structure.

## MEMBERSHIP MATERIALS ENGINEERS COMMITTEE

### Members

District Materials Engineers  
Physical Research Engineer  
Geologist (Drainage)  
Structural Pavement Design Engineer  
Concrete Engineer  
Bituminous Engineer  
Foundations Engineer  
Grading, Design & Construction Engineer  
Physical Testing & Inspection Engineer (NDT)  
Pavement Management Engineer

### Regular Attendees

District Soils Engineers  
Engineer of Tests  
Standards Representative  
Aggregate Engineer  
Erosion Control Turf Establishment Engineer  
Chemical Testing & Inspections  
Pavement Engineer  
Geotechnical Engineer  
Director Office of Materials, Research & Standards  
Research Representatives  
Materials Engineer  
ADE (Materials Representative)  
Federal Highway Administration Representative

## OFFICERS

The chairman and vice-chairman will be elected by the voting members of the committee for the first full year term. The vice chairman will succeed to the chair the following year. The vice chairman will be elected annually at the first meeting of the fiscal year. Each committee member will be given the opportunity to serve before second terms are allowed. Tie votes will be decided by the discretion of the committee chairman.

The chairman's responsibility will include:

- 1) Chairing each meeting of the Materials Engineers' Committee.
- 2) Developing agenda for each meeting.
- 3) Representing the Materials Engineers' Committee as required at other meetings.
- 4) Chair the Executive Subcommittee.
- 5) Prepare Annual Report of Accomplishments.

The meeting secretarial duties will rotate with each meeting. Each committee member will serve in that capacity before repeating (chairman is exempt). It is the secretary's responsibility to prepare and distribute the minutes of the meetings within 3 weeks after the meeting. A schedule will be developed by "pick of the hat" of the committee members.

members.

## EXECUTIVE SUBCOMMITTEE

The Materials Engineers' Executive Subcommittee will be comprised of the Committee chairman, vice chairman, past committee chairman and chairmen of the standing subcommittees. The committee chairman will chair this Subcommittee. The vice chairman will be the secretary. The role of the Subcommittee is to:

1. Recommend strategy for handling issues and make assignments to appropriate standing subcommittee.
2. Review and finalize recommendations on issues subject to review and approval of the committee.
3. Communicate actions to Assistant District Engineer and Director of Materials Research and Standards and to receive communications from them.

This subcommittee will insure timely resolution of issues and general direction of the committee. Resolution of major issues will come from the committee as a whole and liaison with item (3) above will be ensured.

### STANDING SUBCOMMITTEES

Standing subcommittees and special task groups (as needed) shall be established to study and prepare recommendations on various topics. In addition to the executive subcommittee, the Materials Engineers Committee shall have three standing committees: Design Subcommittee, Construction Subcommittee and the Administration/Automation Subcommittee. Membership of these standing subcommittees shall be from the voting members of the committee. All members must serve on at least one subcommittee. Those who are working on projects not completed shall be requested to continue working until the project is completed. Subcommittee members will be appointed by the executive subcommittee after soliciting volunteers. Subcommittee Chairman shall be appointed by the Executive Committee. Special task groups will be formed by the various subcommittees as the need arises. Membership on task groups will be appointed by the appropriate subcommittee chairman after soliciting volunteers. Task group members shall be from committee members, regular attendees and other participants as necessary to insure coverage on issues.

Each Subcommittee will:

- 1) Identify issues and provide recommendations where subcommittee feels action by the Materials Engineers' Committee is needed or desirable.
- 2) Review, study and report to the Materials Engineers' Committee on matters referred to them and activities discussed.
- 3) Act as a resource group for other Mn/DOT Committees and Task Groups.
- 4) Establish task groups as necessary to review & study special issues that require lengthy & detailed study.

Each Subcommittee/Task Group shall be responsible for producing a usable product as appropriate to the topic studied. As a minimum, the product produced shall include:

- Topic Definition
- The Reason the topic was studied.
- Who was involved.
- The conclusions and rationale supporting those conclusions.
- Recommendations for Implementation.

## CONSTRUCTION SUBCOMMITTEE

The purpose of this subcommittee is to help provide advanced technical expertise in the selection, control and methodology of use of all construction materials so as to help with the programming, design, construction and maintenance of our transportation system.

This subcommittee will consider issues and problems pertinent to construction and involving materials or materials-soils related items, along with examining and investigating research reports or data of work by other entities dealing with new materials or methods related to construction.

Problems investigated will be those submitted to the Materials Engineers' Committee by the official representative of one of the other engineering groups (i.e., Assistant District Engineers' Organization, Resident Engineers' Organization), or problems brought forth by members of the Materials Engineers' Committee.

This subcommittee will also, upon request, evaluate certain specifications with respect to materials or materials-construction related practices. Along with this, new technologies as they apply to material-construction techniques will also be studied and evaluated.

## ADMINISTRATION/AUTOMATION SUBCOMMITTEE

This subcommittee will consider the more general administration and automation issues and problems that are not directly related to the concerns of the Design and Construction Subcommittees.

Administration issues may include: staffing, personnel development and training, state-wide uniformity of inspection and testing activities; strengthening relationships between Districts and the Office of Materials, Research and Standards and with other organizations; developing testing and inspection procedures and manuals.

Automation issues may include: compatibility of computer systems between district and central office materials sections; provide for appropriate computer training; promote communication with Departments' computer resource persons; review new computer technologies for possible applications; provide materials related inputs to various computer user groups; assistance in materials/pavements/soils data management.

## DESIGN SUBCOMMITTEE

The purpose of this subcommittee is to provide leadership as to which direction the Materials Committee, as well as Central Office and District Materials personnel, should go in the field of grading, base, and pavement design. Care should be taken so as not to become bogged down in minor problem solving activities.

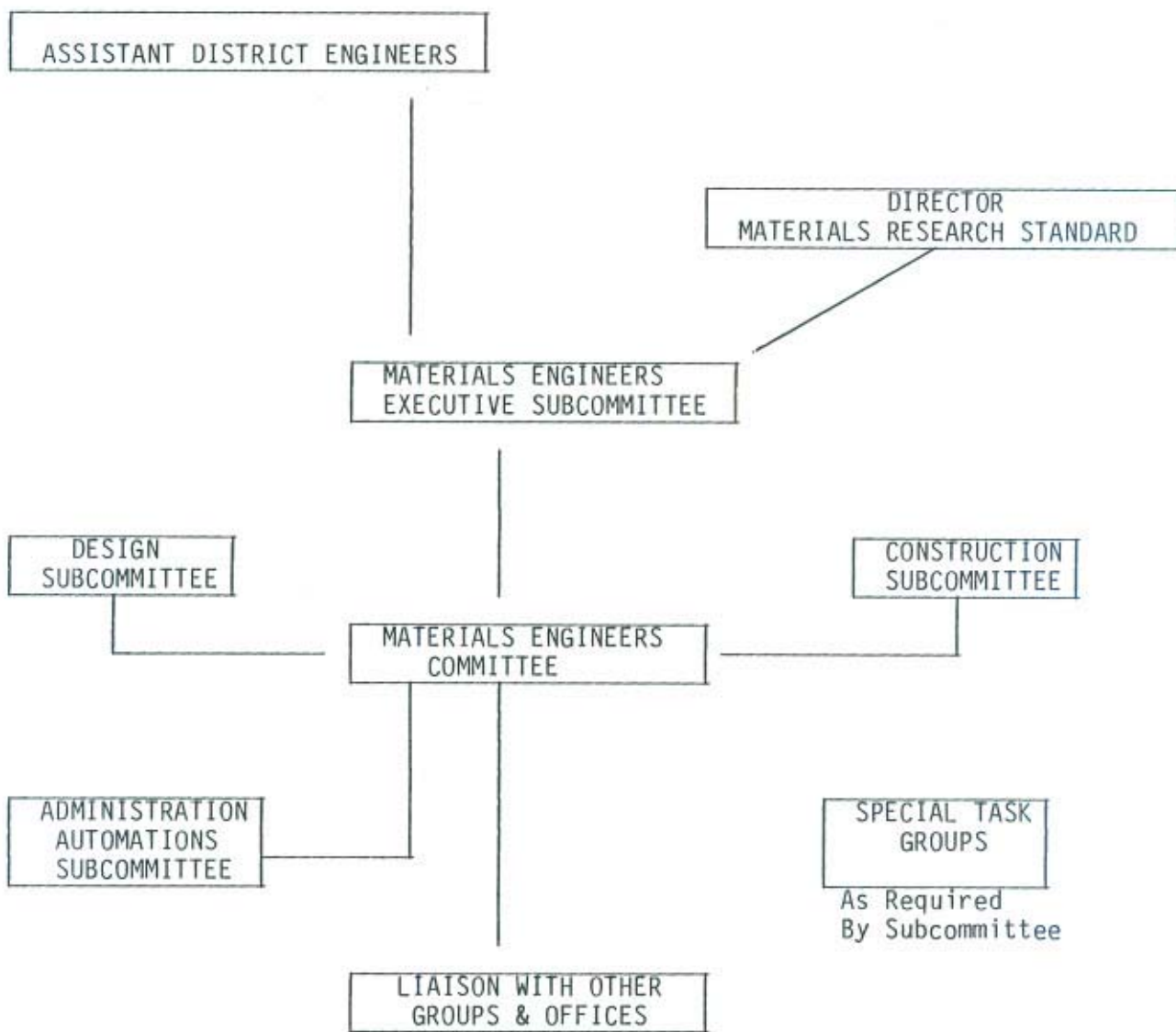
This subcommittee will have jurisdiction over those issues which arise in the design of roadways. Design is defined as preletting activity. Roadways include earthwork, as well as base and pavement. Thus the subcommittee will typically be dealing with problems involving:

- 1) Data Collection
- 2) Material Properties & Tests
- 3) Geotechnical Design
- 4) Pavement Design - new & rehabilitation
- 5) Training in New Technology

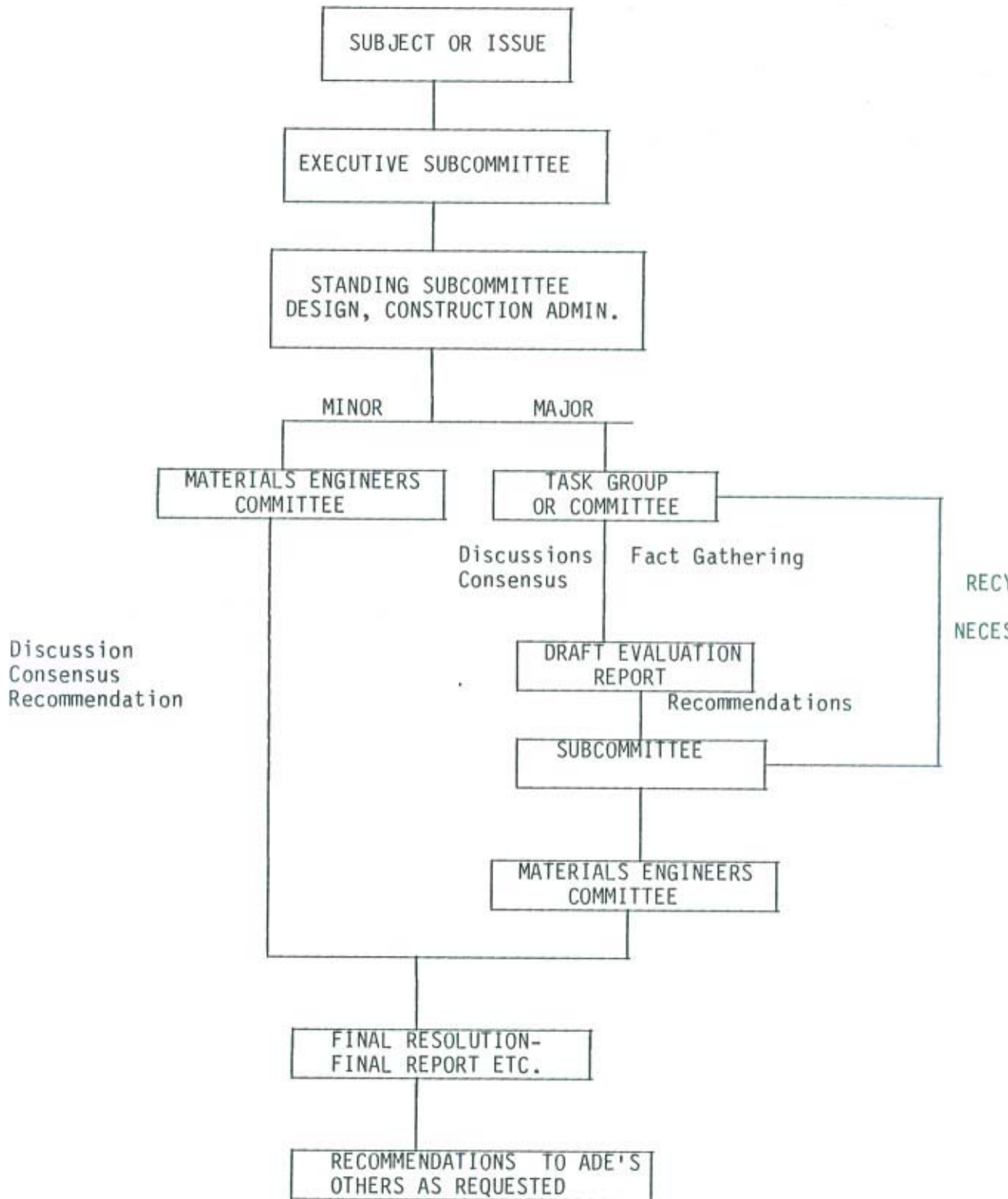
It is anticipated that the problems to be studied will be brought forward from external groups such as the ADEs or internally from within the Materials Engineers' Committee, itself.

Problems which can be dealt with quickly will be addressed by the full subcommittee. More difficult, long term problems will be handled by a Task Group assigned by the subcommittee chairman.

MATERIALS ENGINEERS' COMMITTEE  
ORGANIZATION



TYPICAL SUBCOMMITTEE/TASK FORCE OPERATION



## MEETINGS

- Meetings will be held a minimum of three times a year and will usually be of two day duration, beginning in the morning of the first day and adjournment will be early afternoon of the second day. This will allow for travel to and from the meeting site and also provide an opportunity for presentation of information during the first day and follow up discussion and/or committee action on the second day. Special meetings may be required as the need arises.
- The agenda is to be assembled by the chairman and vice chairman and distributed at least two weeks in advance of the meeting. Agenda should clearly identify action issues separate from information issues.
- The meeting days will be held the 2nd week of the months of February, May and October.
- The committee meetings shall rotate sites with alternate meetings held in one of the outstate districts.
- Minutes of the meeting shall be distributed by the meeting secretary to all members, regular attendees, other participants and others as required.

## Reportability

The outgoing chairman of the Materials Engineers Committee will publish an annual report listing the accomplishments of the Committee.

Each subcommittee chairman is responsible to provide his committee accomplishments for the year to the committee chairman.

Liaison for the Materials Engineers' Committee will be formally with the Assistant District Engineers. Because of the nature of the committee structure it will also keep the Director of Materials, Research and Standards informed of all recommendations. Liaison with others will occur as issues are brought before the committee and input is requested.

Adopted June 16, 1987 by the Materials Engineers' Committee

_____	DME, District 1, Duluth
_____	DME, District 2, Bemidji
_____	DME, District 3, Brainerd
_____	DME, District 4, Detroit Lakes
_____	DME, District 5, Golden Valley
_____	DME, District 6, Rochester
_____	DME, District 7, Mankato
_____	DME, District 8, Willmar
_____	DME, District 9, Oakdale
_____	Physicals Research Engineer
_____	Geologists
_____	Structural Pavement Design Engineer
_____	Concrete Engineer
_____	Bituminous Engineer
_____	Foundations Engineer
_____	Grading Design & Construction Engineer
_____	Physical Testing & Inspection Engineer
_____	Pavement Management Engineer

I concur: \_\_\_\_\_ Date  
Assistant District Engineers  
Materials Representative

I concur: \_\_\_\_\_ Date  
Director Office of Materials,  
Research & Standards

I concur: \_\_\_\_\_ Date  
Assistant Commissioner Operations

I concur: \_\_\_\_\_ Date  
Assistant Commissioner  
Technical Services

of Transportation  
Bemidji

File

4/7/87

Steve Baker  
District Materials Engineer

755-3807

### Materials Organization

At the Transportation Conference a small group of Materials Engineers and Assistant District Engineers met to discuss the formation of a Materials Engineers Committee.

D-7	Don Raisanen	Steve Oakey
D-8	Mary Gieseke	Art Bolland
D-4	Art Hill	Bud Wyborny
D-2	Steve Baker	
C.O.	George Cochran	

Two questions were asked; why organize and what type of organization and membership appeared to be appropriate. The conclusions of this meeting were in support of a Materials Engineers Committee with District & C.O. representation. This will be discussed at upcoming Materials Engineer meeting.

#### Notes:

##### Why Organize:

- ADE see benefits from other organizations.
- Focal point to address problems.
- Structure for ADE's (any group) to assign problems for resolution.
- Formal group to analyze and follow through - responsible.
- Way to deal with problems - credibility - strength in group
- Elected leader
- Follow through - tracking - implement
- Information exchange sharing technology - training - workshops
- Materials is dynamic changing
- May be individualistic now
- May be the only group which is not formally organized
- Materials is a large group
- Need to maintain District/C.O. relationship - organization can help.

##### Type of Organization/Membership:

- Reasonable size
- Maintain group - steering committee - subcommittee
- Need people who can solve problems
- All Prin. Engineers in District & C.O.
- Expect to change organization as time changes
- Problem types
  - 1) From ADE
  - 2) Internal
  - 3) From C.O.
- Main group is umbrella for all D.O.T. Materials

DEPARTMENT : OF TRANSPORTATION  
Division of Field Operations  
Detroit Lakes

PHONE : (218) 847-1557

DATE : April 9, 1987

TO : Materials Engineers' Organization Committee (Listed Below)

FROM : A. A. Hill, P.E.  
A.D.E. Materials Liaison

AAH

SUBJECT : Materials Organization

STATE OF MINNESOTA  
**Office Memorandum**

Encouragement of all the Engineering groups to formally organize has been a top priority for the Assistant District Engineers. As we have previously discussed some of the benefits are:

1. More effective resolution of problems.
2. Ability to make all members accountable.
3. Clear definition of authority.
4. Improved recognition of the group

In addition, the A.D.E.'s want to request that all the groups prepare an annual report to recap their activities for the past year.

If I can be of any assistance to your effort please advise. I would appreciate being kept informed of your progress.

cc:  
Dick Klobuchar, D-6  
Don Raisanen, D-7

TO:  
George Cochran, Room 132  
Paul A. Jensen, Room 136  
Ray Adolfson, Room 131  
Steve Baker, D-2  
Steve Oakey, D-7  
Bud Wyborny, D-4

