RESEARCH PROGRAMS

MONTANA DEPARTMENT OF TRANSPORTATION
RESEARCH PROJECT STATEMENT

Each panel should complete a project statement form cooperatively at its first meeting. Instructions are at the end of this form.

Title: _____

Problem Description: _____
_____
_____
_____
_____
_____
_____

Importance/Business Case:
Can the project wait? _____ What will happen if nothing is done? _____
_____
_____
_____

What is the potential affect on MDT business? _____
_____

What is the expected benefit/output? _____
_____
_____

Describe the audience for the project _____
_____
_____

Literature Summary: _____
_____
_____
_____
_____
_____

Are research results already available?_____ If so, how can MDT implement these results?_____

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_____
_____
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_____

Summary:
Does research needs exist?_____ Explain:_____

_____
_____
_____
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_____
_____
_____

Research Objectives:
    1)_____
    2)_____
    3)_____
    4)_____
    5)_____
    6)_____

Research Tasks:
    1)_____
    2)_____
    3)_____
    4)_____
    5)_____
    6)_____
    7)_____
    8)_____
    9)_____
    10)_____

Implementation:
Could results be implemented immediately? _____Would MDT be responsible for implementation?_____If
not, who would be responsible?_____What are the barriers to implementation
and products necessary for implementation?_____

_____
_____
_____
_____
_____

Budget Estimate: $_____

Study Duration: _____months

MDT Involvement:_____

_____

_____

_____

Recommendation:
    _No Research   _In-house Research   _Contract Research
    _NCHRP   _Pooled Fund

Explain:_____

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Technical Panel:

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Instructions
These instructions are intended to help technical panels develop Research Project Statements. Be clear and concise with your answers.

Title

State the title of the research study as you think it should be stated. The title should be brief, but should convey the general idea of the study. You are free to modify the title listed on the original problem statement.

Problem Description

Describe the problem that appears to require research, include what problem will be solved, and/or need met. Identify the nature of the problem, what factors might contribute to the solution, what aspects of the problem may affect the result. Try to be as specific as knowledge permits.

Importance/Business Case

Capture the reasoning for the research project by showing its value and importance. Describe the importance of this study. Will the problem continue unless research is done? Can the research be postponed to another year? What real world costs are associated with the problem? Does future MDT activity depend upon this research? What savings in money or time might result from the research? What improvements could be made from the research (safety, efficiency, services)? Would the research be completed prior to a major implementation (timeliness)? Describe the audience that would benefit from this research project, is it MDT or elsewhere-be specific. Is MDT the correct lead for this project?

Literature Summary

Briefly summarize information available from previous research. Is this problem widespread? Do other's consider it to be important? What work has been done to solve the problem? Would that research apply to our problem? How successful was it?

Results Already Available

If prior research is sufficient to provide a solution to the problem, recommend what MDT can do to adopt these results. Be specific. Identify what would have to be done, who would have to do it, how much it would cost, and what it would accomplish.

Research Need Evaluation

Recommend whether research is needed based upon your evaluation so far. Briefly explain your decision.

Research Objectives

Define the purpose of the research—that is, what it should accomplish. At this point, focus on the goals of the research, but not the details of how they will be achieved. Make sure the goals respond to the needs outlined in the problem description, so the research will actually produce a solution.

Research Tasks

In this section, list the specific tasks you think a researcher needs to perform to meet the objectives listed above. Be specific enough to ensure that the work gets done, but not so specific that no room for

innovation is left. The tasks should be clear, so a researcher can intelligently estimate how much effort they will entail. Example tasks might include:

1. Literature review
2. Surveys
3. Data collection and analysis
4. Product development

Anticipated Implementation

Describe how you think MDT could implement the results. Does MDT have the resources to implement the results (i.e. staff, budget, authority)? Who would be responsible for implementation? Are specification changes anticipated? Procedural changes? Organizational changes? New designs or materials? Determine any barriers to implementation and the products that will be necessary for implementation.

Budget Estimate

Estimate the cost of the proposed research and its duration. Consider only the cost of the research, not of associated construction. Your estimates will be somewhat arbitrary, but nonetheless will very likely become the actual project limits. Use your best judgement.

Federal Highway Statewide Planning and Research (SPR) funds will be used.

MDT Involvement

Identify any involvement in the research that will be necessary by the Department. Consider construction costs, traffic control, materials sampling, heavy vehicles and crew, information or anything else that might be required. Estimate costs.

Recommendation

Recommend what action you feel appropriate. The alternatives and their criteria are listed below. Your recommendation will be the main factor in the Research Review Committee's consideration of the study. Whatever your recommendation, offer some explanation.

1. No Research: You may recommend that no research be done (even if a research need apparently exists) if:

   ➢ Insufficient need exists
   ➢ Cost outweighs benefits
   ➢ Success is unlikely

2. In-House Research: You may recommend that the research be conducted in-house if a research need exists, the Technical Panel would like to proceed with research, and the effort is relatively small and can be addressed with current resources.

3. Contract Research: You may recommend that the research be contracted to an outside entity if a research need exists, the Technical Panel would like to proceed with research, and the effort is more than can be conducted in-house. Most projects fall into this category.

4. NCHRP: You may recommend research as an NCHRP project if the research need is of national significance and the need is not immediate as the NCHRP process can be lengthy and competition is fierce.

5. Pooled fund: You may recommend research as a pooled-fund project if the need is of regional or national significance

Technical Panel

List the project technical panel members.