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Streamlining the Project Management Process at NJDOT's Bureau of Research

FINAL REPORT

2/14/2014

Submitted by

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This document provides a detailed description of the research project management process (Business Process) at NJDOT's Bureau Research based on the information collected by the authors.

16. Abstract

In order to enhance customer service and strengthen the capacity of the Bureau of Research to ensure the quality of research products, the Bureau initiated a project to rethink and improve the existing data organization, sharing, and processing systems. The ultimate objective of these improvements is to integrate the existing information resources into a centralized project benchmark tracking, document bookkeeping, and performance monitoring system. This system will synthesize the Bureau's research project management processes so as to facilitate effective and efficient communication and information sharing among Bureau staff. This project completed the first phase of the system development, which consisted of: analyzing the current processes and staff activities within the Bureau of Research and identifying the underlying information flow; identifying the system logic that replicates activities conducted by the Bureau's staff in the research project management process; streamlining the information sharing and reporting functions among different activities; developing a decision support methodology that will use project benchmarks to calculate performance measures; developing reporting requirements according to the needs of the Bureau's staff; developing a methodology to streamline submittal of quarterly reports and requests for time extension and budget modification by participating faculty and researchers, and other NJDOT Research Partners.

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BACKGROUND

The Research Project Management and Progress Tracking System (ProMPTS) is a research project management information system (MIS) developed for the NJDOT Bureau of Research. The purpose of this system is to increase efficiency of the research project management process through use of information technology. The system is designed to help the users track project status and progress through the entire project lifecycle, starting with a problem statement and ending with the project close-out and implementation review. Besides streamlining the project management process, one of the goals of the system is to provide a user-friendly data management tool that allows the users to quickly and easily obtain project-related data, update the financial and business status of projects, and create executive or operational reports summarizing relevant financial and business information.

The current version of ProMPTS MIS is developed in Microsoft Access. It is installed as a distributed application: the central database resides on NJDOT Intranet server, and client applications are installed on individual workstations assigned to the staff of the Bureau of Research. To take advantage of the latest information technology, and to improve usability, accessibility, maintenance, and the overall performance of ProMPTS, the NJDOT Bureau of Research decided to replace the current system with a web-based application. The purpose of this document is to describe in detail the business process of managing research projects at the Bureau of Research, which is a necessary first step for identifying functional and information requirements of the web-based ProMPTS application.

PLAYERS AND ROLES

Figure 1 illustrates the major players involved in the research project management process at the NJDOT Bureau of Research. Each player's role, including responsibilities and related activities, is described in detail in the following sections.

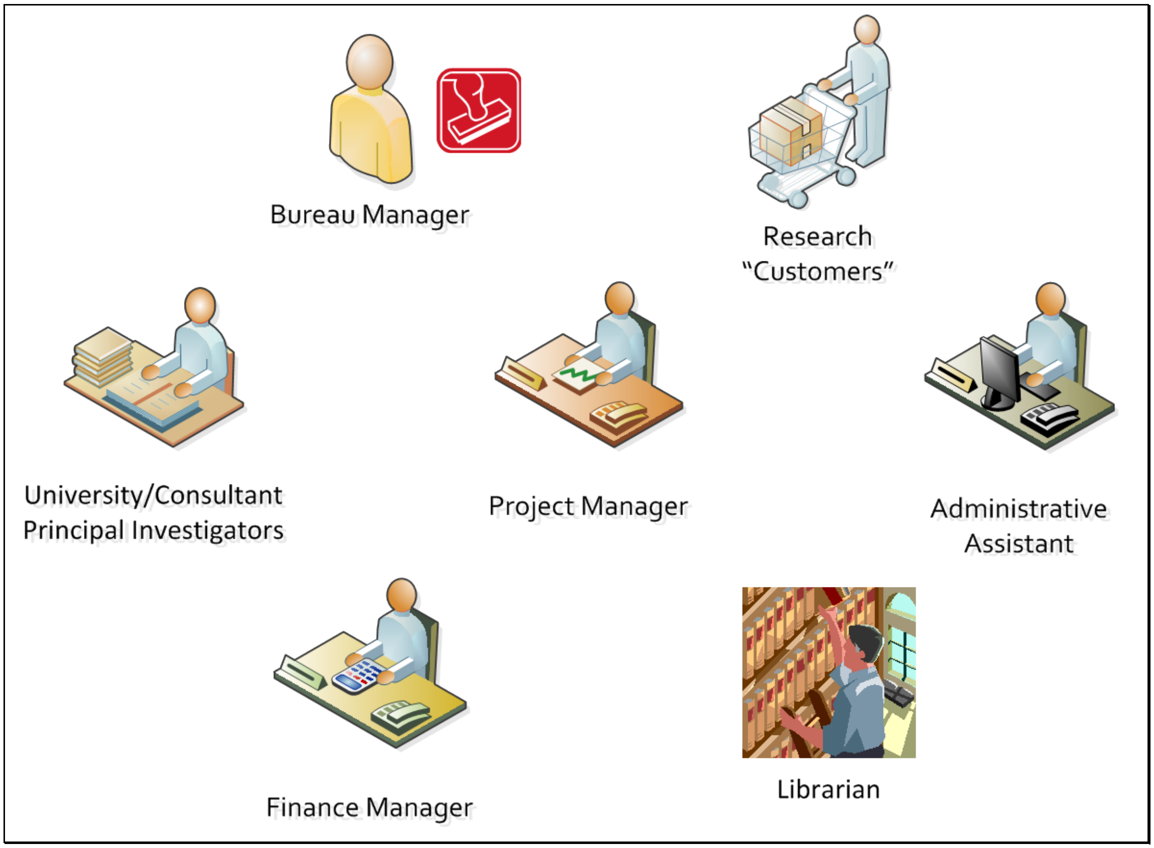

Figure 1: Major Players

Customers

A ***customer*** is an employee or a group of employees working at NJDOT, NJ Transit, and other State Agencies that may have transportation research needs. They participate in various stages of the research process managed by the Bureau of Research, in which they perform the following tasks:

- Submit the Request for Research to the Bureau of Research, in which they describe the problem that requires investigation, preliminary research objectives, anticipated benefits of this research to the organization, and envisioned project deliverables.

- Work with the Bureau of Research (Project Managers) on developing an RFP.
- Review and score the proposals.
- As part of the RPSIP, participate in quarterly progress meetings and other technical matters of the project.
- Review final reports.
- Fill out project implementation survey, as well as project benefit and consultant evaluation survey.

Manager of the Bureau of Research

Manger of the Bureau of Research (BOR) supervises all the activities of the Bureau staff. In this capacity the Bureau Manager performs the following tasks:

- Allocates workload to Administrative Assistant/Secretary and PMs.
- Assigns projects to PMs.
- Reviews Requests for Research and compiles a list of requested research to be sent to the members of the Research User Committee (RUC) for their review and scoring.
- Sends out the research questionnaire to RUC members and compiles their feedback and scores.
- Decides which research problem statements should be issued as RFP.
- Approves RFPs.
- Approves project awards, Task Orders, AD-12 (funding allocation) forms, and contract modification requests (MODs).
- Oversees quarterly project progress meetings.
- Monitors Bureau’s program funding, project budget/expenditure, and task progress.
- Evaluates consultant performance.
- Reports to the NJDOT Commissioner and FHWA on program/project up-to-date status.
- Provides update on project status and progress to TRB Research in Progress (RIP) database.

Administrative Assistant

Administrative Assistant mainly provides support to the Bureau Manager with a range of administrative and project management tasks, including:

- Assisting the Bureau Manager with organizing BOR meetings.
- Assisting the Bureau Manager with collecting customers' Requests for Research.
- Tracking external authorizations (sign-offs) for the Task Order, AD-12 form, and MOD requests, and other documents sent out by the Bureau staff.
- Logging-in documents received by the Bureau staff, including approved Task Order, AD-12, and MOD documents, project deliverables, and other project specific documents.
- Generates certain performance reports for the Bureau Manager.
- Forwarding project quarterly progress reports and final reports to NJDOT Webmaster for publication on NJDOT website.

Project Manager

Project Managers (PM) are responsible for "day-to-day" management of research projects assigned to them by the Bureau Manager. In this capacity they perform the following tasks:

- Collects from the customers the details related to Requests for Research that they submitted to the Bureau.
- Prepare and generate RFPs.
- Collect research proposals and keep track of the details for each submitted proposal (e.g., date submitted/received, submitting agency, Principal Investigator, proposed budget, etc.).
- Coordinate with customers review and scoring of submitted research proposals.
- Recommend to the Bureau Manager the proposal to be awarded the project.
- Coordinate negotiations of the project budget and scope with the winning proposal's team.
- Monitor project progress from the beginning to the end, maintaining regular communication with the customer and the consultant (Principal Investigator).
- Initiate the Task Order, Time Extension, and Contract Modification documents for projects and recommends them to the Bureau Manager for approvals.

- Lead quarterly project progress meetings.
- Review quarterly progress reports, including progress by task and expenditure, and checks deliverables.
- Approve quarterly progress reports in coordination with the Bureau Manager.
- Provides input for the semi-annual FHWA reports.
- Sign-off on project invoices and Mod documents (time extension/cost modification).
- Review and approve (accept) final reports and tech briefs.
- Carry out project close-out procedures.
- Send the letter of final acceptance and signs-off on final invoice payments.
- Perform a customer survey to determine the project benefits and evaluate the consultants.

Finance Manager

- Finance Manager assists the Bureau Manager and Project Managers with the financial aspects of the research projects managed by the Bureau of Research. In this capacity, the Finance Manager performs the following tasks:
- Generates the Task Order documents upon the project award (initiated by a Project Manager or the Bureau Manager).
- Requests Contract ID for new projects, and assigns proper accounting details to projects (e.g., account numbers, encumbrance numbers, Job and Sub-job numbers, FHWA Project number, etc.).
- Prepares AD-12 for internal approvals and sign-off.
- Enters executed AD-12 information into the FIMS database and keeps them on record.
- Sends executed Task Order documents to consultants and keeps the originals on record.
- Enters requests for contract modification and extensions into the financial information system (FMIS).
- Keeps track of financial information for each project, including original budget and mods (if any) with amounts, dates, and other relevant accounting details.
- Receives weekly printout of paid invoices from the PMs and enters them into Document Tracking database.

- Upon completion of the close-out procedure, generates (issues) AD-12 form to close the account obligation(s) for a project.
- Generates performance reports for the Bureau Manager (e.g., Problem Statement Funding reports, etc.).

Librarian

- Accepts and files the project final reports.
- Maintains the physical control over the transportation research library space and files.
- Conducts literature research and reference assistance on demand for NJDOT employees.

University/Consultant Principal Investigators

Principal Investigators (PI) are researchers employed by the Research Consultants (i.e., Universities) who conduct research studies in response to RFP advertised by the Bureau of Research, or other research needs identified by the Department of Transportation. A PI can be a faculty or non-faculty member from a University, Research Center, or other research organization qualified to perform research for NJDOT. The PIs are generally leaders of the research teams on individual research projects and are responsible for the overall performance of the research teams, project progress, and deliverables. In this capacity, the Principal Investigators perform the following tasks:

- Submit problem statements to Subject Matter Experts (i.e. Customers) or to the Bureau of Research, which forwards them to the Subject Matter Experts for a review and further action.
- Submit project proposals in response to RFP.
- If needed, participate in contract negotiations prior to an award.
- Once the project is awarded, become the point of contact on the Research Consultant's end for any issues related to the research project they are responsible for.
- Maintain regular communication with the Project Manager and the Customer for the duration of the project.
- Submit quarterly progress reports and attend quarterly progress meetings.
- When needed, submit requests for contract modification and/or time extension.

- Submit Draft and Final Reports and Technical Brief at the conclusion of the project.

RESEARCH PROJECT MANAGEMENT (BUSINESS) PROCESS

Figure 2 schematically describes the Business Process at the NJDOT Bureau of Research. The process can be broken down in five stages, each one comprising of a series of activities. The stages are enumerated and shown in different colors in the figure for better understanding and clear display.

- **Stage 1 (shown in grey color)** includes the activities related to submission and review of the Requests for Research, as well as problem statement scoring and selection process. Each request has to be reviewed, scored, and recommended for funding by the Research User Committee.
- **Stage 2 (green color)** includes the Request for Proposal (RFP) advertisement and Proposal review and selection process. Once the requested research is selected it will be converted to RFP and Universities/consultants will submit their respective proposals. Proposals will be reviewed and scored by Subject Matter Experts (SME), and the highest scored proposal will be recommended for award by the Project Manager. Once the wining proposal is approved by the Bureau Manager, the Project Manager (PM) will negotiate with the Principal Investigator and the wining organization the details of project cost, duration, and scope if applicable.
- **Stage 3 (blue color)** includes activities related to Task Order (contract) and funding authorization process. Once the consultant and the PM agree on contract details, Finance Manager will create the Task Order and AD-12 documentation and send it for approvals and execution. At the end of this process (execution) the appropriate funds will be allocated to the project (i.e. Task Order).
- **Stage 4 (orange color)** includes progress monitoring of the project. The Bureau Manager and Project Managers will hold quarterly meetings, monitor project progress, and maintain communication with the PIs and customers to ensure the project is on schedule, or to make necessary adjustments in project schedule, duration, or funding.
- **Stage 5 (red color)** shows the Close-out process. Once a project is finished and final report is accepted, the Close-out process will be executed.

Each of the stages and associated activities shown in the figure are discussed in detail in the following sections of the report.

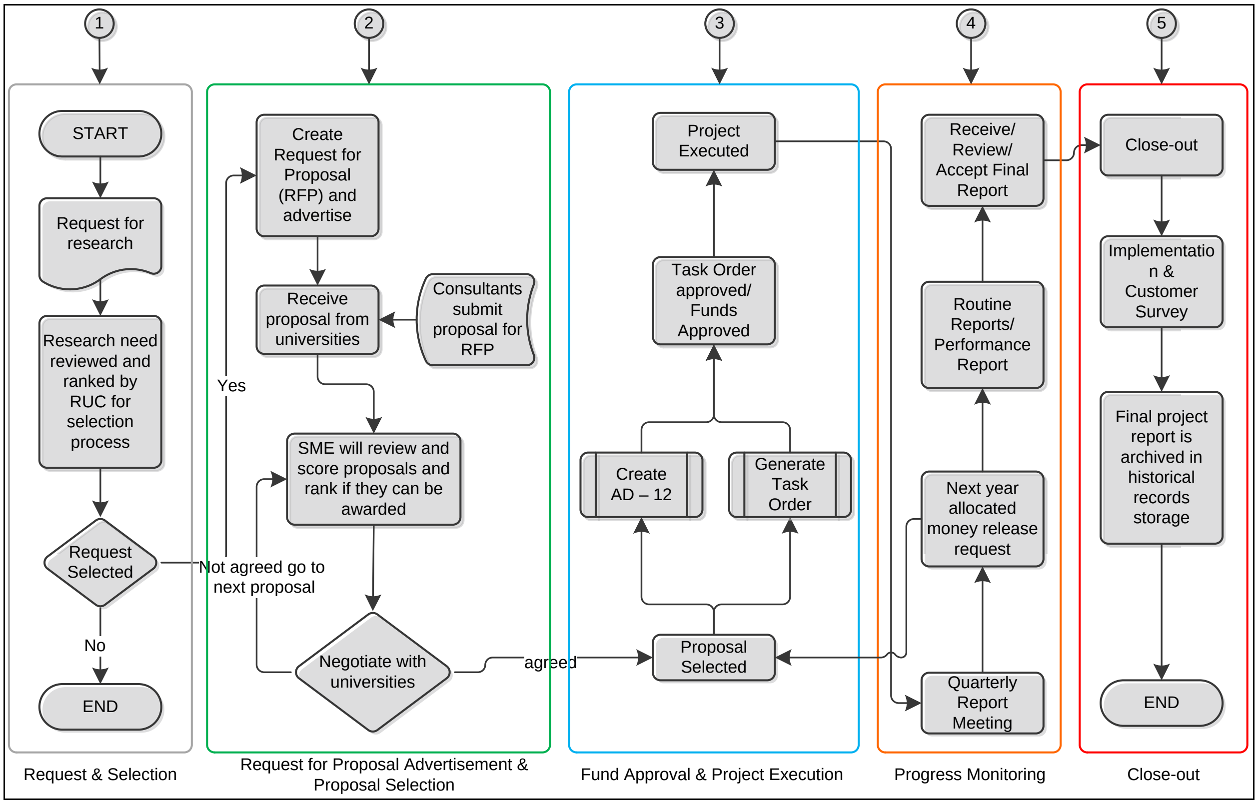

Figure 2: Project management business process at the Bureau of Research

Request & Selection for Research Needs

<u>Request for Research</u>

Figure 3 illustrates the Request for Research process. This can be considered a starting point of the overall research project management process and the project lifecycle. This process is initiated when a customer fills out a "Request for Research" form summarizing a particular Research Need. The request is submitted to the Bureau of Research (BOR) for further processing.

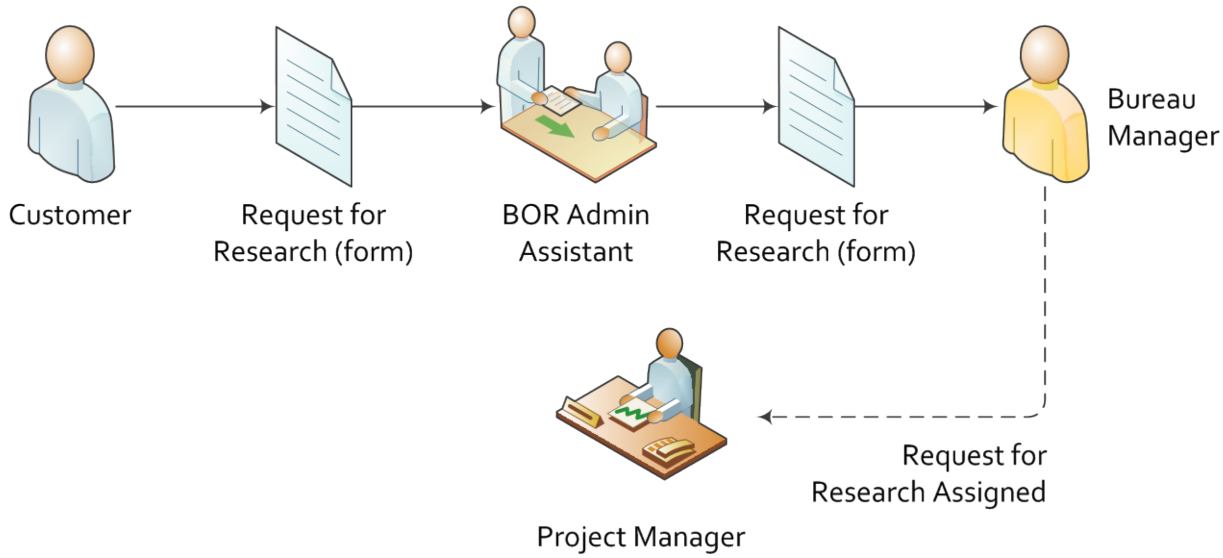

Figure 3: Request for Research

"Request for Research" form (see *Appendix A*) contains the following information:

- Problem number (assigned by BOR)
- Person submitting the request (First/Last Name, Phone Number, e-mail address)
- Date of submission
- Subject/Title (if title is not provided, a tentative title will be assigned by the BOR Manager)
- Division/Bureau submitting the request
- Contact person - this will be the technical customer contact (First/Last Name, Phone Number, e-mail address)
- Problem Statement/Need
- Estimated time for results (weeks/months)
- Anticipated benefits
- Potential annual cost
- Capital investment strategy (CIS)
- Requesting manager

After receiving a Request for Research from a customer, the Administrative Assistant logs-in the information about the received document and forwards the request to the

BOR Manager. The BOR Manager creates a new entry in the list of research needs for the current program year and enters the following information:

- Research subject/title (tentative/preliminary),
- CIS,
- Division/Bureau submitting the request, and
- Contact person (indicated in the Request for Research).

At this stage each research request will be given a tentative title by the Bureau Manager, if not provided by the customer in the request form. The Bureau Manager creates the records for all incoming research requests in the Research Needs "database".

At this time, the Bureau Manager may assigns a PM to this request for research. If assigned at this time, the PM should enter all the remaining information contained in the research request into the newly created record in the project database (ProMPTS). Otherwise, this is done by the BOR Manager or the Administrative Assistant.

Research User Committee (RUC) Review and Ranking

Figure 4 illustrates the Review and Ranking Process for research requests. After receiving all research requests from customers for the current Program Year, the BOR Manager has to decide which Research Needs should be funded. To make this decision, the BOR Manager solicits input from the Research User Committee (RUC), comprised of the Division Directors and Bureau Managers across NJDOT.
The BOR Manager sends each member of the RUC a package containing all problem statements considered for funding in the current Program Year, along with evaluation sheet. The RUC members then review these problem statements and provide score for each one. With these scores, the reviewers rate the importance and relevance of proposed research with respect to the strategic goals of NJDOT, as well as expected benefits from the research results. The score values range from 0 to 3, with 0 representing the least relevant, and 3 representing the most relevant research. The RUC members enter the scores in the attached evaluation questionnaire (see *Appendix B*) and return he completed questionnaire to the BOR Manager. After collecting the filled-out questionnaires from all RUC members, the BOR Manager calculates an average score value for each research need and records it in the project database.

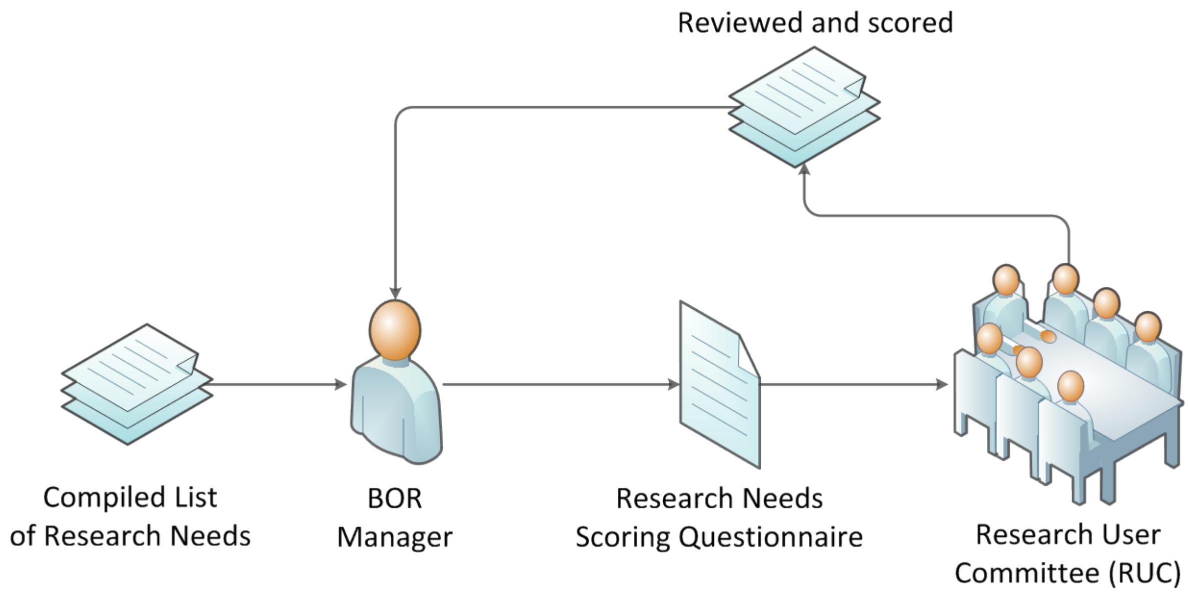

Figure 4: Review and Ranking Process

Research Need Prioritization and Selection for RFP

Figure 5 illustrates a decision process in selecting Research Needs to be funded as research projects and advertised in the RFP process. After receiving the scoring reports from RUC members and compiling the scores for all reviewed Research Needs, the Bureau Manager calculates an average score for each one. The scored Research Needs are then ranked by average score in descending order.

Considering the total available funding for research projects in the next Program Year, as well as estimated costs of all Research Needs, the Bureau Manager chooses the top-scoring Research Needs from the ranking list, whose total estimated cost fits within the available budget. These Research Needs will be funded as Research Projects. They will be assigned to Project Managers, who will turn them into Requests for Proposal (RFP). The RFP are then posted on NJDOT website and advertised to research partners (i.e. University partners). If a Research Need seems worth doing (i.e. ranked very high), but due to limited research budget it cannot be funded as part of the next year's Research Program , it will be considered again the following year, or will be considered as a substitute if any of the Research Needs selected for funding gets canceled.

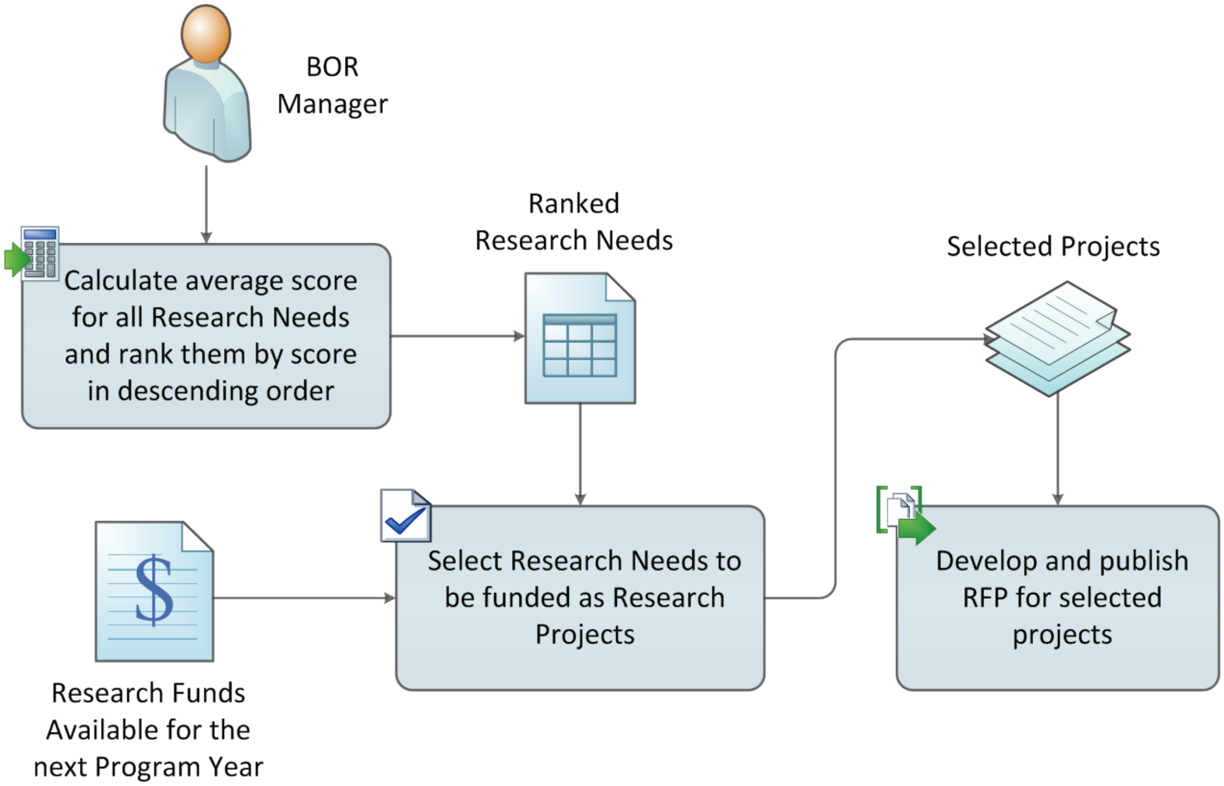

Figure 5: Decision process for Research Need Selection

RFP Advertisement and Proposal Selection

<u>RFP Creation and Advertisement</u>

Figure 6 illustrates the process of developing and advertising Request for Proposals (RFP) for selected research projects. At this stage, project managers (PM) must be assigned to the selected RFP. From that point on, the PM will take over the day-to-day management of the project assigned to them. At this stage of the business proves, the PM will contact and inform the customer that their Research Need will be funded as a research project, and will start working with the customer on developing the RFP. At this time, the PM will ask the customer to provide additional information about their Research Need, including updated (expanded and more detailed) problem statement, research project objectives, preliminary work plan and tasks, estimated project duration, estimated cost of the project, anticipated project benefits and outcomes, deliverables, and any other information that customer sees appropriate and helpful in developing the RFP. The PM will compile and document all the information provided by the customer.

The tentatively assigned title may be changed at this stage as well, in consultation with the customer.

After gathering all the necessary information for RFP, the PM prepares electronic RFP documents (in Microsoft Word and PDF formats), and provides the document files to the Bureau Manager. After receiving all selected RFP documents from the corresponding PMs, the Bureau Manager creates an electronic package of RFP documents and sends them to NJDOT webmaster with instructions to post them on the Bureau's website. The Bureau Manager also prepares and sends an e-mail announcing the new RFP to all research (i.e., University) partners. The e-mail list includes the Principal Investigators (PI) who previously worked on research projects managed by the Bureau of Research, as well as the Chairs of the academic departments and directors of research centers at the partner Universities and other research partners (referred to from this point on as Research Consultants).

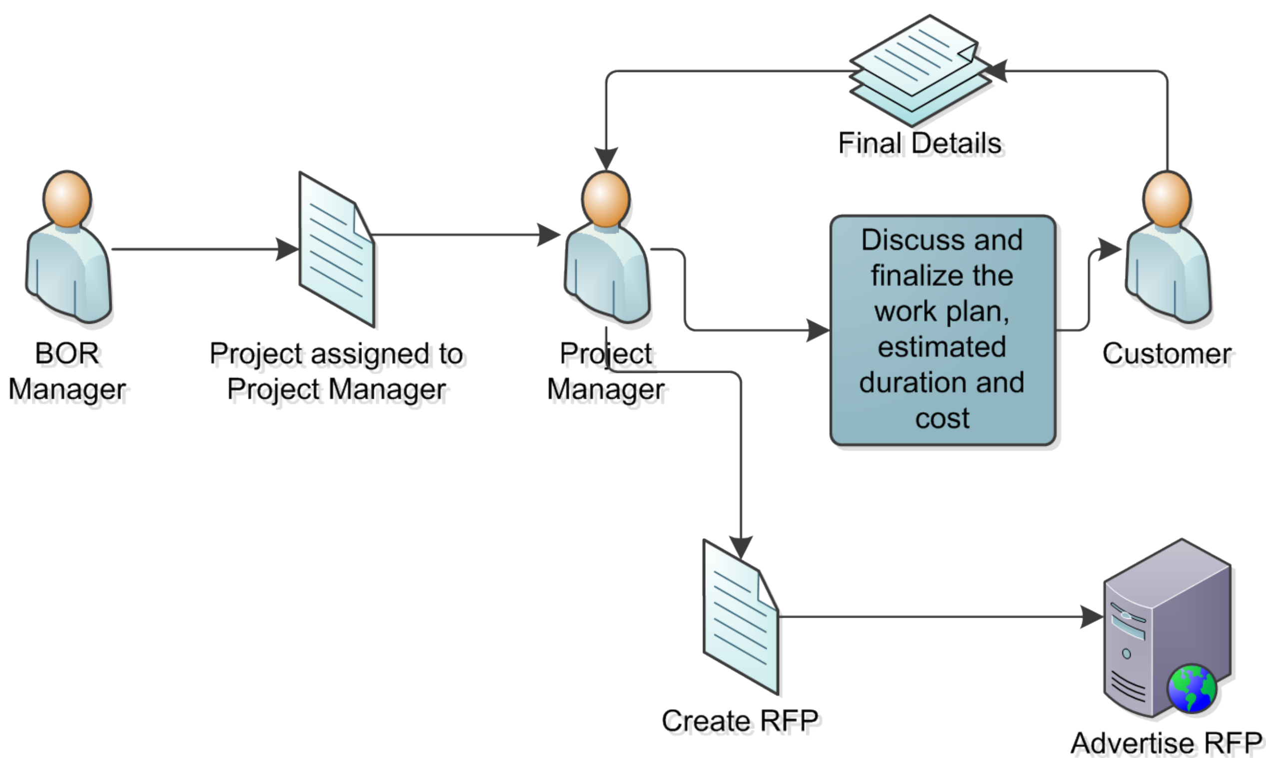

Figure 6: Process for creating and advertising a research RFP

A Request for Proposal (RFP, see *Appendix C*) contains the following information:

- RFP number
- RFP posting date
- RFP closing date
- Project Title
- Problem Statement
- Objectives
- Anticipated results
- Envisioned (preliminary) work plan with the list of tasks
- Implementation and training plan requirements (the Principal Investigator (PI) will develop an implementation plan as per the guidelines provided by NJDOT Research Bureau)
- List of deliverables
- Contract time (the PI must provide the anticipated research study duration based on the proposed tasks)
- Contact Information (Name, Unit, Phone # and Email address)
- Proposal delivery instructions, including the submission date and time deadline

Proposals

Figure 7 provides a schematic overview of the Proposal Selection process. Proposals are submitted by Research Consultants (i.e. Universities and other research partners) in response to an RFP. They are delivered to NJDOT my mail or currier service in 10 bound copies. The proposals must contain two volumes: (1) Scope of Work, which outlines the research approach, work plan, deliverables, time schedule and project milestones, qualifications of the research team, facilities and equipment available to the research team; and (2) Budget proposal, which provides a detailed breakdown of estimated project costs by task, by line item, and by year for multi-year projects.
As the proposals are received at the Bureau of Research, they are logged in by the Administrative Assistant and delivered to the appropriate Project Manager (PM). For each received proposal, the PM will note the following details into the files:

- RFP Number and Title
- Contracting Agency (University or Contracting Agency representing a University or a Research Center)

- Lead Institution of Higher Education (IHE) for the proposed work (usually the University and/or Research Center of the Principal Investigator)
- Principal Investigator (PI)
- Proposed project completion time

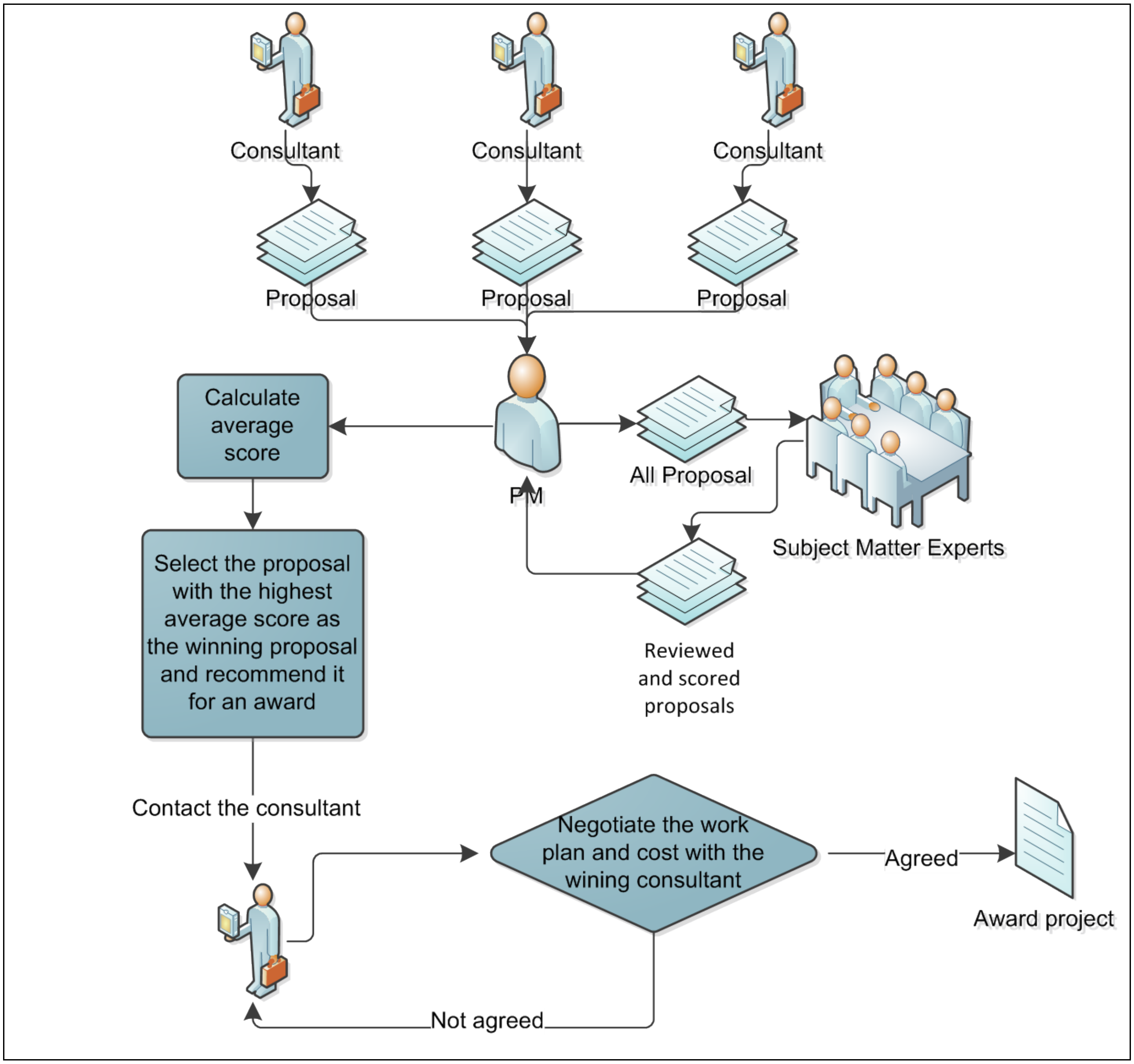

Figure 7: Proposal Selection Process

After the proposal submission deadline noted in the RFP, the PM sends one copy of each proposal along with a Proposal Evaluation Forms (see Appendix D) to the

Proposal Review Committee comprised of the Subject Matter Experts (SME) for the corresponding subject area. The members of the Proposal Review Committee are suggested by the customer for an RFP and are confirmed by the PM. Each member of the committee will review the proposals and score them based on a set of criteria provided in the Proposal Evaluation Form. Upon completion of the review, the members of the committee will send the evaluation forms with scores and comments to the PM. After receiving completed Proposal Evaluation Forms from all members of the Proposal Review Committee, the PM compiles the scores for each proposal and calculates for each proposal the average overall score and the average scores by the scoring criteria. Usually, the proposal with the highest average overall score is declared a “winner” and recommended to the Bureau Manager for an award.

If there is a need to make any adjustments in the winning proposal (e.g., budget), the PM will meet the Principal Investigator and (if needed) contracting officer representing the winning institution (i.e., Research Consultant) for contract negotiations. In the event that agreement cannot be reached, the PM would recommend the next best scored proposal for an award and repeat negotiations with its team.

After making the final recommendation for the project award, the Bureau Manager sends out a formal letter informing the winner that their proposal is selected for an award. The letter is sent to the winning Principal Investigator, with a copy sent to the Research Consultant’s contracting officer, appropriate academic department Chair, and/or research center Director. At this time, the PM would contact the PI and request a short Project Abstract (i.e., description of the project, including summary of the problem statement, research objectives, proposed methodology, and anticipated results).

In rare cases, none of the proposals submitted in response to the RFP adequately address the problem statement, or have inadequate budgets (e.g. the proposed budgets are too high). In those cases, the current RFP will be canceled and it may be re-advertised later with the same or revised requirements, but with a different RFP Number.

Project Award

In order to officially award a project to a Research Consultant, Bureau of Research needs to prepare and get approved two important documents: the Funding Obligation Request (Form AD-12), and the Task Order document. Both documents are prepared by the Finance Manager, with information about the winning proposal provided by the Project Manager.

Task Order Request Preparation

The Task Order (TO) document is based on a “Basic Agreement” between NJDOT and the Research Consultant (e.g., University), which outlines the contracting framework and universal provisions that apply to all contracts between NJDOT and the Research Consultant. Depending on the provisions of the “Basic Agreements”, Task Order forms may have different formats for different Research Consultants. The “Basic Agreements” are usually updated on regular basis (e.g., every 5 years), so the formats for the corresponding Task Order forms may also need to be updated accordingly. The process of issuing the Task Order is illustrated in Figure 8.

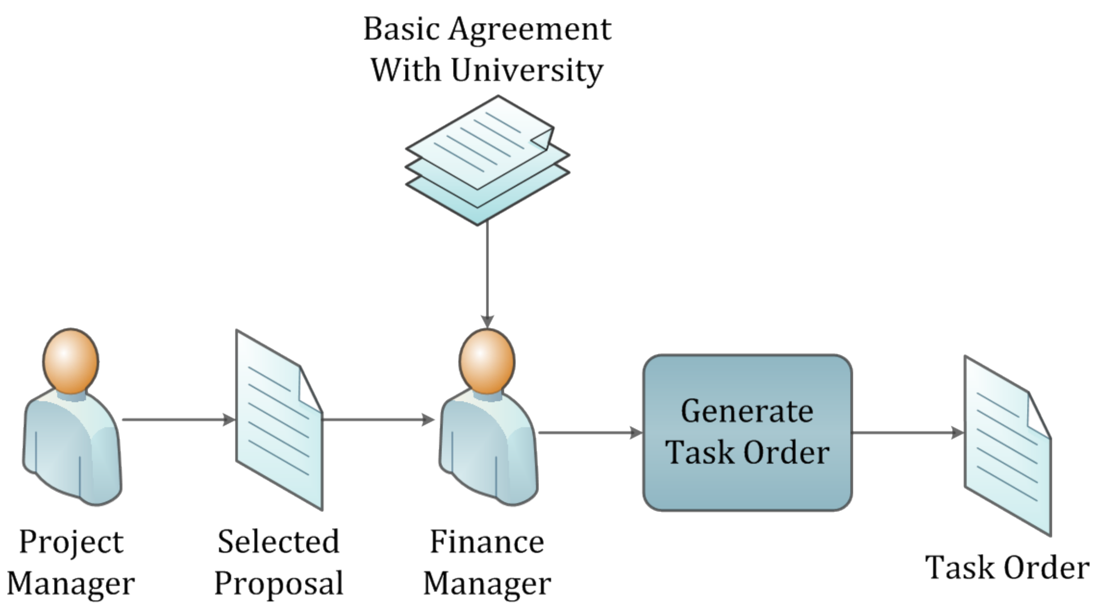

Figure 8: Task Order Preparation Process

The TO document is prepared by Finance Manager with information obtained from the PM responsible for the project. Besides the information about the ‘winning’ research team and their affiliation, the PM gives the Finance Manager the final project cost negotiated with the Contracting Agency for the Research Consultant. In case of a multi-year project, the final negotiated project cost must be broken by year (Year 1, Year 2 …). The project cost summary must indicate the portion to be funded through NJDOT, as well as Research Consultant cost share (matching funds). An example of this information is shown below:

	NJDOT	Match	Match %	
Year 1	$120,000.00	$31,357.00	26 %	√
Year 2	$107,000.00	$17,211.00	16 %	X
TOTAL	**$227,000.00**	**$48,568.00**	**21 %**	√

This can be implemented in the project management MIS (ProMPTS) in the "Proposal Module/Screen" with the following features:

- It should be allowed to add years dynamically.
- The PM or Finance Manager should be entering the data in text boxes. The 'Total' row and 'Match %' column should be calculated automatically.
- The Finance Manager should be able to lock this section of the screen for editing ones the Task Order is generated and sent out for signatures. The PM should still be able to see this table in the "Proposal Module/Screen".
- These cost numbers should not be tied directly to any accounting action. However, the total project cost should be displayed (at least the total cost of the project) on the project information summary screen.

Currently the funding source and funding amounts by source for each research project are determined by the Bureau Manager in consultation with Finance Manager. This should be known at the time of the award. This information should perhaps be entered in an MIS system as well via the appropriate screen.

At this point the Finance Manager can generate the Task Order document. There are several data items that are entered into the Task Order document:

1. Project Title – Provided by the Project Manager and usually (but not always) the same as the Proposal Title. Once the Task Order is executed, the project title cannot be changed.
2. Primary IHE (University and Center), Contracting Agency (usually the Primary IHE University), Principal Investigator, Year 1 Project Cost (cost) – this all comes from the proposal.
3. University Agreement No. – This is based on the Contracting Agency. It is the number of the currently effective Basic Agreement between the Contracting Agency (University) and NJDOT. The Finance Manager has this information.

This number changes with every renewal of the basic agreement (every 5-10 years, depending on University). For convenience, it would be useful to provide a link in PROMPTS to the Basic Agreement PDF (scanned) and the corresponding Task Order template on the Task Order screen (once the Contracting Agency is selected).

4. Start Date and End Date: Provided by the Project Manager (also could be entered on the Proposal screen as “Anticipated Start Date” and “Proposed Project Duration”). It can also be estimated based on the Task Order issue date and the estimated time it takes to execute the Task Order. For example, a rule may be adopted that the Start Date is (by default) 8 weeks after the date when Task Order is printed and sent for signatures by the Finance Manager. In PROMPTS this can be automated, with an option for the Finance Manager to change the Start Date manually before printing the Task Order document. .
5. Task Order Number: Assigned by the Finance Manager following the ascending sequence for each Contracting Agency. The project management MIS could provide a module that would keep track of Task Orders issued for each Contracting Agency. This would be helpful since the Finance Manager issues Task Order numbers to other NJDOT units for their projects with Universities (Contracting Agencies), which are not managed by the Bureau of Research.
6. Contract ID – The Finance Manager obtains this from the Office of the Director of Statewide Planning.
7. Task Order Approval Date – The date of execution. This is not known at the time of issuing Task Order.

Important: In PROMPTS, the Finance Manager should have the ability to lock editing of the award information once the TO and AD 12 are printed and sent for approvals. This would pertain to information contained in the Task Order and obligation AD-12 forms, including the project cost information.

After preparing the Task Order document, Finance Manager sends it to Research Consultant’s contracting officer for signature. Once signed by the authorized representative of the Research Consultant, the Task Order form is circulated for internal approvals along with the Obligation Request Form (AD-12). The approval sequence for the Task Order document is explained in one of the next sections.

Funding Obligation Request (Form AD-12)

The AD-12 form needs to be completed by the Finance Manager as part of the project award documentation, and sent for approvals through several instances. The AD-12 form is a financial document, by which the Bureau of Research requests obligation of funds equivalent to the agreed project cost. The form contains detailed breakdown of funding sources and amounts that will be used for the project. A project can be funded from a single or multiple funding sources, including Federal, State, and other accounts (e.g., private funds). The decision about what funding sources and accounts will be used to fund a project is made by the Bureau Manager with the assistance from the Finance Manager.

After receiving the signed Task Order document from the Office of Deputy Attorney General (DAG), the Finance Manager prepares AD-12 (see *Appendix D*). The form contains the following data items:

1. Project Title, Contracting Agency (University), Task Order Number, Contract ID, Total Obligation Amount (Year 1 project cost) – These data items are filled in from the Task Order document.
2. Project Description – Short project description or Abstract, provided by the Principal Investigator for the winning proposal.
3. Current Status – “New research award”
4. Reasons for Requested Approval of Task Order Agreement – Narrative provided by the Project Manager (alternatively a generic narrative can be used for all new research awards, e.g. “Approve/allocate funds”)
5. Request – “Review and approve the Task Order Agreement and obligation request”
6. Action – “Review and approve the Task Order Agreement for project duration from ‘mm/dd/yyyy’ through ‘mm/dd/yyyy’”
7. Reason – “This project was approved by the Research Users Committee (RUC) for inclusion in the current Work Program”
8. Date – AD-12 initialization date (filled in by the Finance Manager). PROMPTS should generate this automatically as the “current date”, but let the Finance Manager revise if needed.
9. Appropriation Account Numbers – Entered by the Finance Manager. For federal funds, these accounts are assigned by the Manager of the Bureau of Statewide Strategies at the beginning of each Federal 2-Year Program cycle and they stay in effect for the duration of the Program. They can be used for multiple projects. For State (Transportation Trust Fund, or TTF) funds, the appropriation accounts change every year. The Finance Manager obtains the account numbers that can be used for research projects from the Bureau of Capital Program Development.

IMPORTANT: a single research project can be funded from multiple Federal and/or State (TTF) appropriation accounts.

10. Funding Amounts – entered by the Finance Manager. Includes the following items:

    - Federal Fund Sharing: $ Amount and % of total project funding
    - State Fund Sharing: $ Amount and % of total project funding
    - Total Amount: $ Amount and % of total project funding (this is always 100%)

    Note: "In-kind" funding lines in the form are never used for research projects (left blank). The sections of the form pertaining to "Outside/Other Party Sharing" and "Non-Participating–State Share" are never used as well and are left blank.

    The tools should be provided in the PROMPTS application to calculate the Federal % and State % shares automatically, as well as the Total Amount (as a sum of Federal and State amounts).

11. % State – Percent of total project funding from State (TTF) funds (entered by the Finance Manager). This is the State Fund Sharing % for the requested obligation. PROMPTS should calculate this automatically and fill-in this field.

12. Job No. – Assigned for every funding account. For federal accounts, this number is related to the Federal Appropriation Account Numbers (each federal appropriation account will have a corresponding unique Job Number). For Non-Federal accounts, this number is different for every project and it is obtained from the Bureau of Capital Program Development (along with the TTF appropriation account numbers).

13. Subjob No. – Only applies to projects funded with federal dollars. The Finance Manager assigns this number in the ascending sequence. This is a 4-digit number starting with "7". PROMPTS could provide a module that would keep track of Subjob Number assignment (with TO# and Project Title). This will make it easy to determine which number is next in sequence. However, if these numbers are re-used after some time (e.g., the Bureau runs out of 4-digit numbers starting with "7"), then a different Subjob number tracking should be designed.

14. Year & Item No. – Obtained from NJ State Financial Management Information System (FMIS), screen AA01. This code is related to the Federal Appropriation Account Number used to fund the project. This code is the same for projects funded from the same Federal Appropriation Account.

15. Federal Project Number/Federal Agreement Number – Obtained from the Manager of the Bureau of Statewide Strategies. It is tied to Federal Appropriation Account and is identical for all projects funded from the same Federal Appropriation Account. Federal Project Number is a combination of Appropriation Code (first 4 characters) and Federal Job Number (the remaining characters).
16. Program Reference Number – Entered by the Accounting Office.
17. Requisition Number(s) – Entered by the Accounting Office for each obligation account. The Division of Accounting and Auditing sets up obligations for each obligation account that funds the project, both Federal and State. They fill-in this information in AD-12 form when they receive it, and also record this information in FMIS.

Task Order and AD-12 Approval (sign-off) Sequence

Upon completing the Task Order document and Form AD-12, the Finance Manager sends 2 original copies of the Task Order and one original of AD-12 form for approvals. The sequence of approvals is as follows (see Figure 9):

1. *University's Contracting Officer*. Initialized Task Order document sent to the Contracting Agency (University) for signature (sent by the Bureau Manager). The Bureau Secretary records the date the Task Order is sent in the Document Tracking database. The University Contracting Officer signs the Task Order document and sends it back to the Bureau of Research. The Bureau Secretary records the date of the Task Order receipt in the Document Tracking database.
2. *NJ Deputy Attorney General (DAG)*. Bureau Manager sends the Task Order document to the DAG. The Bureau Secretary records the date the Task Order is sent in the Document Tracking database. After signing-off, the DAG sends the document back to the Bureau of Research. The Bureau Secretary records the date of the Task Order receipt in the Document Tracking database.

   From this point on, the **Task Order document goes together with AD-12** for the rest of the sign-offs.
3. *Manager, Bureau of Research*. The Bureau Manager signs-off the AD-12. If Federal SPR funding is provided for the Task Order, the Task Order/AD-12 package is sent to the Manager of the Bureau of Statewide Strategies. Otherwise the package is sent to the Director of the Division of Accounting and Auditing. The Bureau Secretary records the date the Task Order/AD-12 package is sent for signatures in the Document Tracking database.

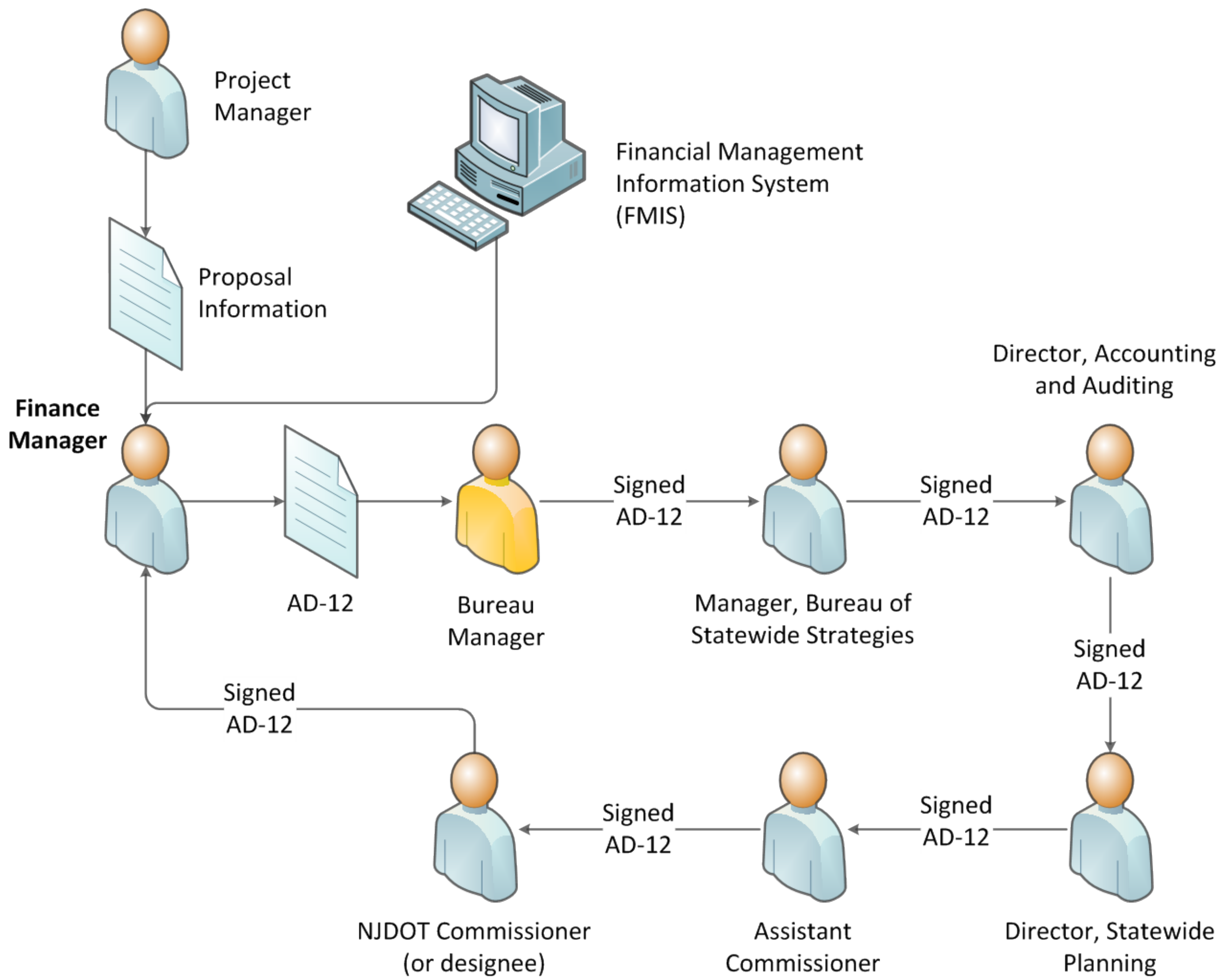

Figure 9: AD-12 approval process

4. *Manager, Bureau of Statewide Strategies*. If federal SPR funding is provided for the Task Order, signs the AD-12 and forwards the package o the Division of Accounting and Auditing.
5. *Director, Division of Accounting and Auditing*. Signs AD-12 and forwards the package to the Division of Statewide Planning.
6. *Director, Division of Statewide Planning*. Signs AD-12 and forwards the package to the Assistant Commissioner.
7. *Assistant Commissioner, Capital Investment Planning and Grant Administration*. Signs both AD-12 and Task Order and forwards the package for execution by the Office of the Commissioner.
8. *NJDOT Secretary (for the Commissioner)*. Signs both Task Order document and AD-12.

9. *Bureau of Research (Finance Manager)*. After the final sign-off, the executed Task Order and AD-12 are sent back to the Bureau of Research. The original of the Task Order and a copy of AD-12 are sent to the Contracting Agency (University). The Finance manager keeps the copies for the Bureau's records. The Bureau Secretary records the date of the receipt of executed Task Order in the Document Tracking database.

***Important**: Keeping track of sign-off status*. It will be useful to provide functionality in PROMPTS that would allow keeping track of dates the Task Order and AD-12 are received and sent out by the Bureau of Research. Currently this information is maintained by the Administrative Assistant in the "Document Tracking" database. The "received" and "sent" dates are also recorded in the AD12 and TO tracking sheet/table. Both the Bureau Manager and Finance Manager should have the ability to enter these dates into the tracking table as well.

Approval (Execution) of the Award

After Task Order execution, the Bureau of Research Finance Manager performs the following tasks:

- Ensures there are no changes in the financial information on AD-12 after sign off process (e.g. appropriation account and/or funding source have been changed). If any modifications are noted in AD-12, the Finance Manager updates the corresponding records in the project documentation. The Finance Manager should be able to make the same modifications in PROMPTS.
- Records the *Task Order and AD-12 Approval Date* (the date of execution). In PROMPTS there should be a checkbox (or a switch button) that would indicate that the TO is executed. Once the Finance Manager checks this off the task order information can no longer be changed (edited). This should also trigger the indicator on the main project screen that the TO for the project is executed, along with the execution date.
- Reviews the *project information in FMIS* and notes *Encumbrance ID* (in AD-12 labeled as *Requisition No.* and in Federal documents as *Obligation No.*) for every individual account used to fund the project. This is also recorded in AD-12 (by the Accounting Office). Encumbrance ID should be updated in PROMPTS from FMIS downloads (Contract ID and Appropriation Account Number for a particular project –specific obligation can be matched with FMIS records to get the appropriate Encumbrance Number).

- Enters the project budget in FMIS. If it is a lump-sum agreement, enters the Year 1 budget as a lump-sum. If it is a cost-reimbursement agreement, enters the Year 1 budget by line item.
- Ensures there are no discrepancies in the financial information (screen CPO5). In PROMPTS, the current checkbox “CPO5” should be replaced by “Entered in FMIS”. This happens after the Task Order is executed.

After Task Order Execution the Manager of the Bureau of Research instructs the Bureau Secretary to prepare and send the award letter to the University (the Principal Investigator and Contracting Officer) informing them of the award, with the attached copy of executed task Order document. The Bureau Secretary records the date the Award Letter and a copy of Executed Task Order are sent to the Research Consultant (University).

Contract Modifications

There are four (4) types of contract modifications:

1. *Obligation Increase or Decrease*. This type of contract modification involves change in project budget (total project obligation), either an increase or decrease, including the following cases:
    a) In multi-year projects, the obligations for Year 2 and every subsequent project year.
    b) Cost of additional project tasks that had not been included in the original project scope.
    c) Reduction of project budget resulting from canceling, reducing, or otherwise modifying scope of a project.
2. *Zero-Dollar Contract Modifications*. These are modifications of project budget that involve changes in individual budget line items, without changing the total obligation for the project.
3. *No-cost Time Extensions*. These contract modifications result in changes of the project end date.
4. *Obligation transfers*. These are not “real” contract modifications, but rather transfer of funds obligated for a particular project to new account(s) when a new Federal program rolls out every two years. The Federal obligation accounts are closed at the end of the corresponding two-year Federal program, and all remaining balances are transferred into new accounts, and new Requisition (Encumbrance) ID numbers are assigned to each active project obligation. This

affects only the projects funded with Federal dollars with positive remaining obligated balance (i.e. unspent funds at the end of a Federal two-year program). The Finance Manager keeps record of all obligation transfers.

All contract modifications except Obligation Transfers are initiated by the responsible Project Managers. They are then processed depending on their type:

a) *Obligation Increase/Decrease* and *Zero-Dollar Contract Modifications* are processed by the Finance Manager.

b) *No-cost Time Extensions* are processed by the Project Manager without involvement of the Finance Manager.

To process an Obligation Increase/Decrease and Zero-Dollar Contract Modification, the Finance Manager prepares and fills-out forms DC-45A and AD-12 for pertinent project, and sends the forms for approvals (i.e., execution) following the same sequence as the Task Order, with exception of DAG (whose approval is not required for contract modifications). DC-45A form contains the following information (see *Appendix E*):

1. Contract ID Number – for the pertinent contract (already on record).
2. Modification (Mod) Number – The next number in a sequence of modifications for the pertinent contract, starting with "1" for the first contract modification. In PROMPTS, this number should be automatically generated as the next in sequence. Note: Mod # is NOT DEFINED for No-cost Time Extensions.
3. Consultant – Name of the Contracting Agency/University.
4. Consultant ID Number – Contracting Agency's unique ID used for accounting purposes. This information is obtained from FMIS. In PROMPTS, this should be automatically populated as a unique attribute of each Contracting Agency on file.
5. University Agreement Number – Same as the one used in the Task Order document for the pertinent contract.
6. University Agreement Date – Same as the one used in the Task Order document for the pertinent contract.
7. Task Order Number – Same as the one used in the Task Order document for the pertinent contract.
8. Project Title – Same as the one used in the Task Order document for the pertinent contract.
9. Federal Project Number – Same as the one used in the Task Order document for the pertinent contract.

10. Job Number – Same as the one used in the Task Order document for the pertinent contract.
11. Original Agreement Amount – Obligation originally approved for the Task Order Agreement (as listed in the Task Order document).
12. Total of Previous Modifications – The sum of additional obligations approved for the agreement to date through previous contract modifications.
13. This Modification Amount (obligation amount) – If the contract modification increases or decreases the obligation for the contract, then this is the amount of additional obligation, or obligation reduction. Otherwise this value is equal to zero.
14. New Modified Agreement Amount – The new obligation ("budget") for the project including the existing obligations and modification amount. (PROMPTS can calculate this automatically as the current obligation + modification amount)
15. Original Agreement Completion Date – The original project end date listed in the Task Order document.
16. Extension date (if applicable) – New end date for the contract, if the contract modification includes the extension of the project.

An additional field may be added in PROMPTS: *Description (or comments)*. This field would be for internal information purposes only, and is not entered on DC-45.

The DC-45 is accompanied by AD-12 form (similarly to the Task Order). In case of Obligation increase or decrease, the AD-12 lists accounts and amounts of new obligation(s). Otherwise, the accounting and obligation information is NOT provided, only a note that no new obligations are requested.

In addition, the appropriate narrative is included on the second page that briefly describes the obligation request (e.g., "*… increase the budget and continue work as described in the original work plan (budget attached) requested*").

As mentioned before, the sign-off sequence for the Contract Modification request DC-45A and accompanying AD-12 are the same as in the case of Task Order, except that DC-45A *does not* need to be approved by the DAG.

Once the AD-12 for a Contract Modification is back with signatures (i.e., the contract modification is executed), the Finance Manager records the Requisition (Encumbrance) Numbers for all new obligations (if any).

To process *No-cost Time Extension* Contract Modification, Project Manager records the following information on the Bureau of Research Time Extension form:

a) Date requested (received from the Contracting Agency/University)

b) Requested New Completion Date

The form is then sent along with AD-12 for approvals. The AD-12 form for No-cost Time Extensions is created by the Bureau Secretary after receiving the request from the Consultant /University, or from the Project Manager. The approval sequence for the No-cost Time Extension requests is as follows:

1. AD-12 generated/initiated by the *Bureau Secretary*
2. *Project Manager* – signs-off the No-cost Time Extension form.
3. *Manager, Bureau of Research*. The Bureau Manager signs-off the AD-12 and No-cost Time Extension form and sends the package to the Director of Statewide Planning.
4. *Director, Division of Statewide Planning*. Signs No-cost Time Extension form and AD-12 and forwards the package back to the Bureau of Research.
5. Once the approved No-cost Time Extension form is received by the Bureau of Research, it is forwarded to the *Project Manager*. The Project Manager records the Extension Approval Date in project records.
6. The package is then forwarded for the rest of the signatures on AD-12, following the <u>same sequence as in the case of a Task Order</u>.

All this information should be recorded in PROMPTS, with addition of the date that AD-12 is generated and sent for signatures.

<u>Obligation Transfers</u> are recorded in FMIS by the Finance Manager. They should be recorded in PROMPTS via FMIS downloads – there should be no need for the Finance Manager to enter them manually into PROMPTS.

Integrating Data from New Jersey State FMIS

In order to keep track of financial information and status of financial actions related to projects (e.g. obligations, receipt and payment of invoices, account balances, etc.), the Finance Manager regularly logs into the State Financial Management Information System (FMIS). Sample screen printouts from FMIS are provided in *Appendix F*. In addition, the Bureau gets FMIS data relevant to the research projects it manages on weekly bases as a series of text files stored on the shared intranet drive. The files are then loaded into PROMPTS database and used to update the financial information for individual projects. This has worked with limited success and it has been noted that the following improvements are desirable:

- FMIS downloads and subsequent update of corresponding data fields in PROMPTS should be performed every night.
- Claimed and Expended expenditure from FMIS master table should be recorded/updated in PROMPTS to reflect submitted and paid invoices to date.
- No-cost Time Extensions are not entered into FMIS! This is important to keep in mind when updating contract modifications and their sequence.
- In order to maintain compatibility with FMIS data, CCM code must be recorded in PROMPTS for every Contract Modification using the following convention:
    a) Obligation Increase or Decrease Contract Mod: in sequence of mods starting with 001, followed by 002, 003, 004, etc.
    b) Zero-Dollar Contract Modifications (changing budget line items): starts with 999 followed by a sequence in descending order for every subsequent modification.
    c) No-cost Time Extensions: starts with 600, followed by a sequence in ascending order for every subsequent no-cost time extension.
    d) Obligation Transfers – follows the sequence of No-cost time extensions.

Quarterly Reports

Bureau Manager and Project Manager hold regular quarterly progress meetings with consultant/University PI. PI for all projects prepare and submit to the PM the quarterly progress reports ahead of each meeting. The reports summarize the project progress for the previous quarter, including the completion and expenditure by task.

Currently, all quarterly reports are submitted as hard copies and as PDF via e-mail. It would be more efficient and accurate if all quarterly reports were submitted online and stored directly in the PROMPTS database.

The following data item that are entered into Quarterly Reports:

1. Project Title – Same as the one used in Task Order document for the pertinent contract. Stays the same for the duration of project, unless the title is changed via Contract Modification.
2. RFP Number – If assigned, same as the one used when RFP is published. Stays the same for the duration of project. In PROMPTS, RFP Number will be assigned to all the RFPs.
3. NJDOT Project Manager – Name of the current Project Manager. PM may change during the course of the project, and this (if and when it happens) should be reflected in quarterly reports.

4. Task Order Number – Same as the one used in the Task Order document for the pertinent contract. Stays the same for the duration of project.
5. School/Consultant – Name of the Contracting Agency/University. Stays the same for the duration of project.
6. Customer – Name of the person who requested the research or who is currently a contact for the research project. The project customer or customer contact may change during the course of the project, and this (if and when it happens) should be reflected in quarterly reports.
7. Principal Investigator – Name of the current project PI. The project PI may change during the course of the project, and this (if and when it happens) should be reflected in quarterly reports.
8. Project Starting Date – The date when project started. Stays the same for the duration of project (as indicated in the Task Order).
9. Original Project Ending Date – The original project end date listed in the Task Order document.
10. Modified Completion Date (if applicable) – The most recent approved (modified) end date for the project (if any). If the original end date is still in effect this field is left empty.
11. Period Start and End Date – The start and end date for the reporting quarterly period. As suggested, this may be accompanied by the count of the quarterly report, e.g., Quarterly Progress Report No. 1, No. 2, … etc.)
12. Task Progress – Progress of project broken down by Task (Task 1, Task 2, …), in a tabular format which contains the following columns:
    - Task – Name or description of the task.
    - % of Total Project Budget – Task budget percentage with respect to total project budget.
    - Total (Project) Task Budget – Total budget for each individual task.
    - % of Task This Quarter – Percentage of each individual task completed in reporting quarter.
    - Cost This Quarter – Total expenditure for each individual task in the reporting quarter.
    - % of Task to Date – Percentage of each individual task completed to date.
    - Total Cost to Date – Total money expended for each individual task to date.

13. Project Objectives – Objective of the research project as stated in the RFP and refined from the proposal. This should be on the record at the time of project award.
14. Project Abstract – A brief summary of the problem statement, research approach and expected project outcomes. This should be on the record at the time of project award.
15. Progress This Quarter – A narrative describing the work that has been done during the reporting quarter by task.
16. Proposed Activity for Next Quarter by Task – A narrative describing (outlining) the work plan and activities to be performed in the next quarter.
17. Deliverables – List of deliverables provided during the reporting quarter by task, with dates each item was delivered.
18. Progress on Implementation and Training Activities – A narrative summiting the work performed on project implementation and training.
19. Problems/Proposed Solutions – A narrative summarizing any problems that may or would affect the successful and timely completion of the research and within the approved budget.
20. Budget Summary – Provides a budget and expenditure summary information in a tabular format, including the following data items (see the sample table below):
    - Total Project Budget – the total budget for the multi-year study (e.g. two-year total budget).
    - Budget by Year – funding information broken by year (Year 1, Year 2, …). If the funding is not obligated for the future years it should be marked as "* not yet obligated".
    - Total Project Expenditure to Date – the amount billed to date by the Contracting Agency/University.
    - % of Total Budget Expended – the percentage of the total project budget billed to date.
    - % of Project Completed – the percentage of project completed to date.

Total Project Budget	$270,074	
Year 1 Funding (2011)	$176,853	
Year 2 Funding (2012)	$93,221	*not yet authorized
Total Subsequent Budget Modifications	$0	
Total Project Expenditure to Date	$95,885	
% of Total Project Budget Expended	35.5%	

The quarterly reports are reviewed by the NJDOT Research Project Manager. The Project Manager confirms that all deliverables and activities in the last quarter have been accomplished as planned. If the quarterly report is accepted, the Project Manager will sign off the quarterly report and approve the billed amount. The Project Manager records his/her concurrence by signing the quarterly report on the signature line provided at the bottom of the quarterly report form. The Project Manager also records the approval date on the form.

Invoice Processing

Once a quarterly report is approved by the Project Manager the following steps are taken to process the invoice submitted by University/consultant:

1. University's Accounting Officer generates the invoice for the previous quarter and sends it to Project Manager. The invoice amount is usually equal to the quarterly expenditure amount indicated in the quarterly report (subtotal of the column labeled "Cost This Quarter").
2. The Project Manager reviews the invoice and forwards the approved invoice to Bureau Secretary.
3. The Bureau Secretary records the invoice information in Document Tracking database and sends the invoice to Finance Manager for processing.
4. The Finance Manager prepares the invoice document packet (a sample document packet is attached) and sends it to the Bureau Manager, who forwards the packet to the Bureau Secretary.
5. The Bureau Secretary sends the invoice document packet to NJDOT Accounting Office.
6. The Accounting Office processes the payment for the invoice, sends the payment to Contracting Agency, and updates the invoice and payment information in FMIS.

It will be useful to provide invoice-processing functionality in the ProMPTS application. This functionality would allow the Project Manager or Finance Manager to enter new invoice in the system and generate the invoice document packet. The payment information would be obtained from FMIS. Once the updated data is downloaded from FMIS, ProMPTS would update the status of the Billed Amount as "*Outstanding*" or "*Paid*", depending on the actual status of the invoice. The Finance Manager and Project Manager (as well as Bureau Manager) should have the ability to view this information in ProMPTS.

The following Figure provides a schematic overview of the Quarterly Report submission and approval process, as well as Invoice processing.

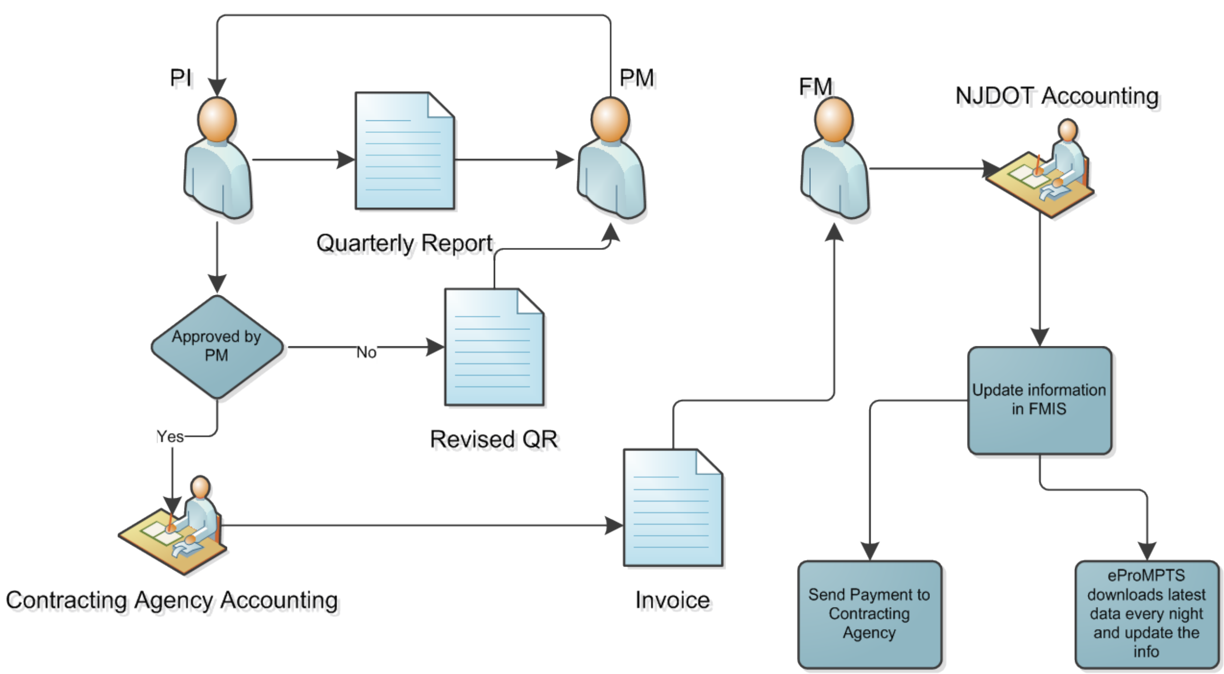

Figure 10: Quarterly Report and Invoice Processing

<u>Invoice Document Tracking</u>

This task is performed by the Bureau Secretary who keeps the records of sent and received invoice documents in the "Document Tracking" management information system. This MIS provides a GUI through which the Bureau Secretary enters and keeps track of the following data items:

- This document is being tracked by – Name of the person who is tracking the invoice.

- Date – Date the invoice tracking document is created (usually this is the date the approved invoice is given to the Bureau Secretary by the Project Manager).
- Registry Number – Internal document tracking number.
- Date of Correspondence – The date of the invoice (usually this is the date indicated on the invoice, or the date it was sent by the Contracting Agency/University Accounting Office).
- To/From – Name of the Contracting Agency/University.
- Task Order Number – Task Order Number of the research project.
- Invoice Amount – The billed amount.
- Invoice Number – Self-explanatory.
- Project Manager – Name of the Project Manager currently assigned to the project
- Final Invoice – Check Box indicating if it is final invoice or not.
- Subject Matter – Project Title followed by the period of performance indicated on the invoice (usually coincides with quarters).
- Tracking Summary – Provides summary of tracking in tabular format which contains the following columns:
    a) Date to Ed Kondrath – date the Bureau Secretary delivers the invoice to Ed Kondrath. His role is of an ‘accountant” for the Bureau of Research and he checks every invoice for accuracy and completeness.
    b) Date returned from Ed Kondrath (to Bureau Secretary)
    c) Date to Project Manager – Secretary delivers the invoice to Project Manager for a review and approval.
    d) Date returned from the Project Manager (to Bureau Secretary)
    e) Date to Finance Manager – Secretary delivers the invoice to the Finance Manager for processing and creation of the invoice document packet.
    f) Date returned from the Finance Manager (to Bureau Secretary) – The Finance Manager delivers the invoice document packet to Bureau Secretary.
    g) Date returned to Project Manager – The Bureau Secretary delivers the invoice document packet to the Project Manager.
    h) Date returned from the Project Manager (to Bureau Secretary) – The Project Manager signs off and returns the invoice document packet to Bureau Secretary.

i) Date to Bureau Manager – The Bureau Secretary delivers the invoice document packet to the Bureau Manager for review and approval.

j) Date returned from the Bureau Manager (to Bureau Secretary) – The Bureau Manager signs off and returns the invoice document packet to the Bureau Secretary.

k) Date to Accounting – The Bureau Secretary sends the approved invoice document packet to the Accounting Office for processing and payment.

l) Date Paid by Accounting – The invoice payment record is received by the Bureau Secretary and noted in the Invoice Tracking System.

- Amount Paid – Amount paid to the Contracting Agency.
- Processed – Check-box indicating if invoice is processed.
- Sent Back – Check-box indicating if the invoice is sent back. PM or Ed Kondrath will review the invoice and if there is any inconsistency they will send it back to University/consultant before it's sent to accounting.
- Sent back date – If the "Sent Back" check-box is checked, then what date it is sent back.
- Reason – If the "Sent Back" check-box is checked, then reason for sending back the invoice.
- "Hold for Backup" – Checkbox indicating that the invoice is being held at the Bureau of Research with expectation of additional supporting documents requested from the University/consultant.
- "Hold for Final Report" – If this is the final invoice, this checkbox indicates that it is being held until the acceptance of the final report.

It is desirable to integrate the Invoice Document Tracking into the "Invoice Processing" functionality in the ProMPTS application. Sample document package for the Final Invoice is provided in *Appendix G*.

Tracking the Progress of the Pooled Fund Studies

The information on Pooled Fund Studies to which NJDOT Bureau of Research contributed financially are tracked by the Bureau Manager and Ed Kondrath. They are primarily tracking financial information (e.g. expenditure), status, and date of completion. This is currently done using a Microsoft Excel spreadsheet. The information is obtained primarily from Pooled Fund Study websites:

The process for the Pooled Fund Studies starts with a solicitation and a problem statement submitted by a State DOT to the local FHWA Division office. The solicitation includes a request for approval of 100% SPR funding for the project. The following are the next steps in setting up and managing a pooled-fund study:

- FHWA assigns TPF No. to proposal and creates a Title.
- The lead agency posts their pooled fund solicitation on the TPF (Transportation Pooled Fund) website.
- The Manager of the Bureau of Research reviews the solicitations and decides which ones NJDOT should participate in. She also decides how much money the Bureau of Research should contribute to a pooled fund for each selected study.
- The financial contribution to a pooled fund study is a two-step process.
    1. Making a funding commitment on the TPF website
    2. Submitting a funding transfer form: *FHWA-1575* for State-to-State transfers or *FHWA-1576* for State-to-FHWA transfers.
- Designated TPF Manager (currently Ed Kondrath) obligates funds for current year on TPF website and records the information in Excel spreadsheet.
- The TPF Manager prepares the transfer request for the FHWA HQ to transfer the obligated funds to the pooled fund project’s Job Number.
- Currently the TPF Manager keeps track of obligated money spent for each pooled fund study. The TPF Manager and Bureau Manager keep track of project status using the information obtained from the following sources:
    a) Federal FMIS
    b) State FMIS screen PA20
    c) Pooled fund studies website: http://www.pooledfund.org/Home/Participate
- If a pooled fund project is a multiyear project, the Bureau Manager submits a new transfer request form to the FHWA HQ to obligate the committed funds for every subsequent year.
- Federal FMIS only shows obligated and spent funds, not committed (promised) funds.
- After project is closed, the FHWA sends a notice to the Bureau Manager to close out the obligation.
- Bureau Manager generates a final acceptance memo and submits AD-12 for close out.

- Report is generated showing how much money spent for the project, and how much money is owed (committed, but not obligated).
- Bureau of Research participates in about 3 TPF projects per year.

It is desirable that the tracking of pooled fund studies (projects) be integrated in the ProMPTS application. This could be accomplished by either entering the information manually or importing the data from Excel spreadsheet, or by downloading the data from the pooled fund website.

Note: the pooled fund studies can be identified by appropriation code: if it includes ‘TPF’ that means it is a pooled fund study, and the number followed by ‘TPF’ is a job number.

FHWA Reports

The research projects are reported in the SPR Work Program Reports every 6 months, and are also included in the SPR Work Plan for every calendar year. The Work Plan is created in August for the following calendar year of a 2-year SPR program (e.g. for the federal program for calendar years 2013-2014 the work plan is created in August 2012). Both Progress Reports and Work Plan documents include information about:

- Projects starting next year;
- Active projects continuing next calendar year;
- RUC approved projects.

If a project is ending in the current calendar year, it will not be included in the work plan for the next calendar year.

Progress of the project is reported every six months as follows:

- 6-month report is done in July and is presented in a Microsoft Excel spreadsheet.
- 12-month report is done in January and is presented in a Microsoft Excel spreadsheet.
- 18-month report is done in July and is presented in a Microsoft Excel spreadsheet.
- 24-month report is done in January and is presented in document with full details for every individual project.

The FHWA report is grouped in two categories:

a) Research Management, and

b) Research Studies.

The following data items are reported in FHWA reports for each active project, as well as Research Management activity:

1. Activity: is the name of the activity followed by sub job number like “Project Management of Contracts-7021”
2. Manager: Name of the unit manager which is in this case is “Camille Crichton-Sumners”
3. Amount Authorized
    a) In House: is funding authorized for in house expenditure
    b) Consultant: is funding authorized for consultant expenditure
4. Amount Spent to Date
    a) In House: Money spent to date in house for project management
    b) Percentage Spent (In House): percentage of total authorized in house money spent to date
    c) Consultant: money spent to date(billed to date) by consultant
5. Year Goal: Set goal to achieve for the specified year
6. Year to Date Accomplishment: progress of the project and task accomplished for the period of report
7. Status: Status of the project like On Schedule, Behind Schedule, Will start in next 6 months, On Hold, Completed, and Dropped
8. Comments: Comments about the project

Project Closeout

When the project is near completion final report is submitted to Project Manager. The PI must submit the draft final report to NJDOT three months before the authorized end date. It is desirable that the ProMPTS application create an automatic reminder notification to Project Manager 90 days prior to the project’s end date about the final report. The following are the steps that take place after the receipt of the draft final report:

- PM reviews the report, and if any changes are required then sends it back to PI to make changes.
- Following dates are recorded by PM

a) Date draft report is received

b) Date draft is reviewed and sent back to PI

c) Date final report is received

d) Date final report is accepted

- Once the final report is accepted PM will generate Final Report acceptance letter (sample acceptance letter is provided by Camille), and send it to PI (ProMPTS should be able to record the date automatically when letter of acceptance is sent out). A sample of the Final Report acceptance letter is shown in *Appendix H*.
- Final Report number will be assigned to the report once it is accepted. The Final Report number should follow the format "(FHWA-)NJ-2003-01", where:

  a) 'FHWA' – if federal funding is used to fund the project.

  b) '2003' – represents project completion year.

  c) '01' represents sequential number and should reset every new calendar year.

  The ProMPTS application should be able to generate report number automatically, and send it in an email to both PI and PM.

- Once PI gets the letter, university sends the final invoice to NJDOT.
- Final invoice follows the same steps as any invoice.
- Once the invoice is processed and paid (confirmed through FMIS) closeout AD-12 will be generated by the Finance Manager (sample close-out AD-12 is provided in Appendix I). The following information is different in closeout AD-12 than original AD-12

  a) Subject will always be" Close Contract Obligations"

  b) Project description will always be same as provided in the sample.

  c) Table is included providing the details like FY, Obligation No., Agreement No., Job No., Sub Job No., Task Order No. and Project Title (if it is not federal funded then there will be no agreement no. and sub job number).

  d) Description will always be "Close Contract Obligation".

- Closeout AD-12 will follow the same signoff process as AD-12.

Important: It should be noted that ProMPTS application should stop synchronizing (updating) the FMIS data for closed out projects.

Customer satisfaction survey is performed after the final report is accepted.

Implementation survey is performed 6 months after the final report is submitted.

Cambridge Systematics Projects

If the Manager of Bureau of Research decides that a project is going to be done by private consultant or when a customer needs research done immediately, then a project goes to Cambridge Systematics. In such cases the project is awarded to Cambridge Systematics and the award process is different from regular project awards (see the schematic diagram in Figure 11):

- No RFP is required, and project can directly be awarded after Request for Research Need. All other steps in-between will be skipped.
- Cambridge Systematics projects are funded entirely with State funds.
- Obligation process is different from other agencies, does not go through AD-12 process.
- Once the Manager of Bureau of Research decides to award a project to Cambridge Systematics, the Finance Manager requests Job Number from Department's Capital Programming Division.
- Through APRWS procurement website the Finance Manger gets purchase order and sends it to Cambridge Systematics. The Purchase Order Number can be thought of as Obligation Number, but it can be same for multiple projects. Once the Purchase Order is sent to Cambridge Systematics it is assumed that the project is awarded.
- Quarterly report is not mandatory for Cambridge Systematics projects.
- Cambridge Systematics submits invoices monthly.

The schematic diagram of the awarding process for Cambridge Systematics projects is shown

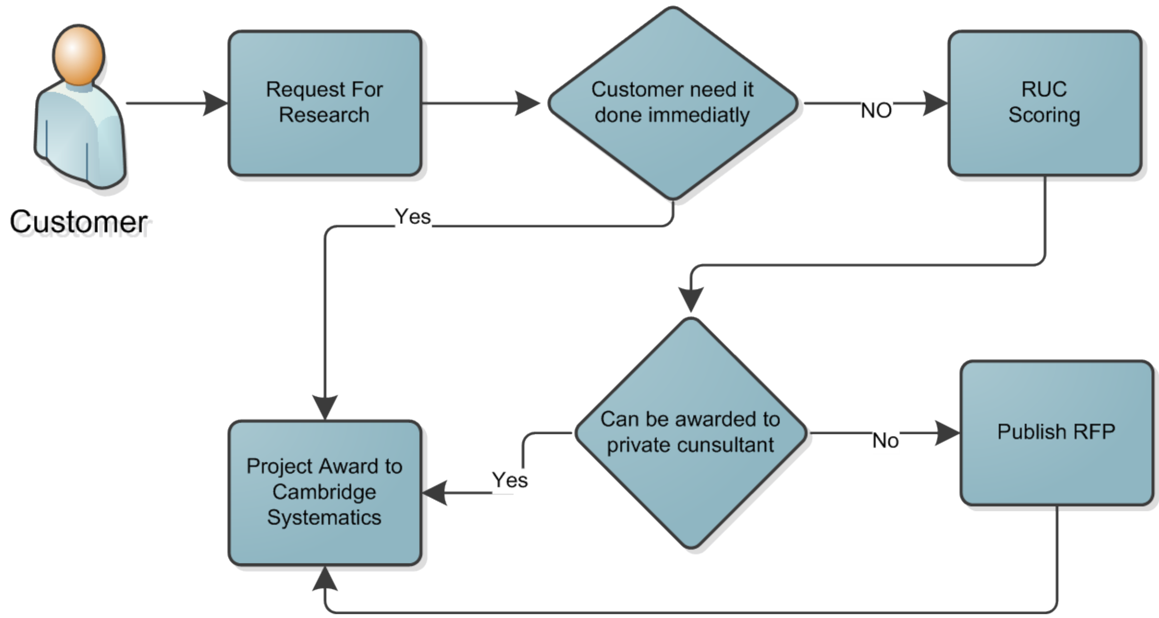

Figure 11. Award process for Cambridge Systematics projects

APPENDIX A: Request for Research Sample

Attachment A

PROBLEM NO.: ____________ 200X
(Assigned by Research)

NEW JERSEY DEPARTMENT OF TRANSPORTATION
REQUEST FOR RESEARCH
"Turning Problems into Solutions"

TO: Bureau of Research

SUBMITTED BY: ______________________________ DATE: ____________

SUBJECT/TITLE: ____

DIVISION/BUREAU: ____

CONTACT PERSON: __________________________ PHONE NO. ____________

PROBLEM STATEMENT/NEED:

ESTIMATED TIME FOR RESULTS (WEEK/MONTHS):

ANTICIPATED BENEFITS:

POTENTIAL YEARLY COST SAVING (if applicable):

REQUESTED BY: ______________________________
MANAGER

APPENDIX B: Research Rating Form Sample

Research User's Committee (RUC)

2010 Research Rating Form

Enclosed please find a listing of research needs statements and embedded descriptions, submitted for consideration for the 2010 Research Program. In addition to the annual Research Solicitation, we are also accepting Research Problem Statements throughout the calendar year and have set up mechanisms to accommodate these requests. These mechanisms include the procurement of a Research Consultant, Cambridge Systematics, as well as establishing additional line items in the State Planning and Research program in order to offer greater flexibility.

In accordance with the approved research solicitation process, please review the attached and provide a score for the projects listed herein using the provided *2010 rating* worksheet. The needs will be prioritized and programmed based on: the averaged ratings which you provide; the Departments goals; and funding and staffing resources. Customer prepared problem statements are attached for each of the potential studies providing some detail for each research need.

Please complete this rating form and submit it by *MMM,DD,YYYY*

via E-mail to: Camille.CrichtonSumners@dot.state.nj

or mail a hard copy to:

Bureau of Research * 1035 Parkway Avenue * PO Box 600 * Trenton, NJ 08625

RATING SYSTEM	
Definition	**score**
high value to the state of New Jersey	**3**
medium value to the state of New Jersey	**2**
low value to the state of New Jersey	**1**
no value to the state of New Jersey	**0**

To see a project description, please place curser on each title and left click. To return to this page left click on "Home" button.

Source	CIS Linkage	LRP	2010 Research Problem Statements	Enter Score "0" to "3"

APPENDIX C: Request for Proposals Template

Date of RFP 11/01/2011	New Jersey Department of Transportation Bureau of Research **RESEARCH PROJECT** **Request for Proposals** **[Program Year]**	Closing Date 12/15/2011

[Project Title]

Project No. [20XX-XX]

(Proposals must be prepared in accordance with NJDOT's *Information and Instructions for Preparing Proposals.* Please visit:
http://www.state.nj.us/transportation/refdata/research/pdf/techpropresproj.pdf
Revised Proposal Evaluation Forms are available for your information on the website.)

Proposals will be based on the merit of the information contained in the proposal. Budgets will be evaluated separately. Please place three (3) copies of the budget for this project in a separate sealed envelope.

RESEARCH PROBLEM STATEMENT, BACKGROUND AND OBJECTIVES

Problem Statement inserted here.

TASKS

[Provide a listing of appropriate general tasks divided into phases based on types of work (e.g., laboratory, field) or by year (e.g., year 1, year 2) or other appropriate milestones]

The NJDOT is seeking the insight of proposal responders on how best to achieve the research objectives. Proposers are expected to describe a research effort that can realistically be accomplished as expeditiously as possible. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach for conducting the required research.

PHASE I – Literature Search

Conduct a literature search of the current state of the practice.
After the award of the project, a more comprehensive literature search should be conducted. At the completion of this literature search, the PI will make a presentation to the Research Project Selection and Implementation Panel to discuss their findings and to discuss the appropriate research approach.

PHASE II – Research Approach and Anticipated Results

Clear description of how you will solve the problem and implement anticipated findings. Work may be divided into phases (e.g., Laboratory, Field or Year 1, Year 2) as necessary to clarify tasks. *Exit Criteria* must be developed during this phase.

IMPLEMENTATION AND TRAINING PLAN

The PI must meet with the Research Project Selection and Implementation Panel (RPSIP) and other NJDOT units to present the findings and as appropriate train these personnel in the use the project results.

The PI will develop an implementation plan as per the guidelines provided by NJDOT Research Bureau.

DELIVERABLES:

[List of minimum deliverables necessary to complete the project]

- Presentation of Summary of Literature Search Results
- Discussion to Support and Refine the Project Tasks
- Project work plan.
- Technical Memorandum on the survey results
- Technical memorandum on the measures that are working or not working
- Technical memorandum on actions taken
- Interim Status reports suitable for Senior Leadership if required
- Quarterly Reports and Final report with appropriate tables, graphs and charts in hard copy version, PDF file format, Word, and on CD ROM. Two copies plus one per RSIP member of each presentation, technical memorandum, draft final report and Final Report (plus 10 copies).
- The Final Report and Tech Brief are due three (3) months before the end date of the project to allow time for review by the Research Project Selection and Implementation Panel. The Final Acceptance will be granted upon receipt of ten copies of the approved final report.

CONTRACT TIME:

The PI must provide the anticipated research study duration based on the proposed tasks. Consideration should be given to potential impediments so that adjustments are incorporated into the schedule minimizing the need for time extensions.

A Contract Duration time frame would be preferred.

CONTACTS:

Questions on this topic **shall not** be directed to any Research Project Manager, Research Customer, or any other NJDOT person. All questions are to be directed to Camille Crichton-Sumners by sending an e-mail to Camille.CrichtonSumners@dot.state.nj.us, or by phone (609-530-5966).

A meeting may be scheduled with interested parties after the RFP's are distributed to refine the objectives and deliverables and to promote a better understanding of the research needs. **This must be requested on or before Month, Date, Year**.

DEADLINE

Proposals (10 single-bound copies) are due at the NJDOT Bureau of Research no later than 5:00 p.m. on mm/dd/yyyy

Authorization to Begin Work: TBD

PROPOSAL DELIVERY INSTRUCTIONS:

For private, paid messenger services such as Federal Express, DHL, UPS, etc., or for hand-carried deliveries:

2012 PROPOSAL-NJDOT
New Jersey Department of Transportation
Bureau of Research
1035 Parkway Avenue
Trenton, New Jersey 08625-0600

For U.S. Postal Service mail:

New Jersey Department of Transportation
ATTN: Camille Crichton-Sumners
Manager, Bureau of Research
P.O. Box 600
Trenton, New Jersey 08625-0600

APPENDIX D: AD-12 Form Template

Form AD-12 07/2011

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DEPARTMENT ACTION SLIP

Pink – Original - Department
Blue – Original - Local Aid – Only
Yellow - Copy

DOT SECRETARY USE ONLY
CERTIFIED ACTION / SCHEDULE PAGE #

Leave Blank

Date: November 27, 2012

Page 1 of 2
CONTRACT ID NUMBER 12-60154

From the Task Order document

CONTACT PERSON: Lorraine Stallings
TELEPHONE NUMBER: (609) 530-5959

Subject: Task Order No. 283, with Rutgers University

Project: Highway Repair Consolidation Feasibility

Default contact

From the Task Order document

Auto Date (the document creation/print date). The user should be allowed to change the date.

CERTIFIED SCHEDULE NUMBER:
Leave blank

APPROVED AND ACTION CERTIFIED:
Leave blank

Form AD-12 07/2011

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DEPARTMENT ACTION SLIP

Pink – Original - Department
Blue – Original - Local Aid – Only
Yellow - Copy

DOT SECRETARY USE ONLY

CERTIFIED ACTION / SCHEDULE PAGE # Leave blank

Date: November 27, 2012

Subject: Task Order No. 283, with Rutgers University

Project: Highway Repair Consolidation Feasibility

Page 2 of 2
CONTRACT ID NUMBER 12-60154
CONTACT PERSON: Lorraine Stallings
TELEPHONE NUMBER: (609) 530-5959

From the first page

Approval and execution of the attached originals of Task Order No. 283 between Rutgers University and the NJ Department of Transportation to provide funds for the subject research study in accordance with the attached work plan and budget is requested.

Request that one obligation be established for $168,488.40

From the Task Order

Please provide an original of this action to the Director, Division of Accounting and Auditing.

PROGRAM REFERENCE NUMBER
Filled by Accounting

ROUTE (S)	SECTION (S)	DESCRIPTION
N/A – Leave blank	N/A – Leave blank	Highway Repair Consolidation Feasibility ← Title Task Order No. 283, with Rutgers University ← TO #, University/Consultant

From the Task Order

Year & Item No. Construction Program	Sub-Org Code	Appropriation Account Numbers
11-HR-0104 Lorraine gets from FMIS – screen AA01. Related to appropriation account.	30 (always 30 – by default)	2011-480-078-6300-FJC-TCAP-7310

- Can be more than one account, from different sources (Federal SPR, State TTF, etc.)
- Account numbers assigned by the Finance Manager.
- Federal account numbers change every 2 years.
- State (TTF) account numbers change every year.

State Fund Sharing
Cash $ 0 0 % ← Finance Mngr.
In-kind $ N/A N/A %
N/A = Leave blank

Federal Project Number	0% State	Job Number	Federal Fund Sharing
L56E0010042 ← Finance Mngr. enters (from FMIS). Related to appropriation account	Auto calculate	4500011/7130 Finance Mngr.	$ 168,488.40 100 % Auto. Based on accounts and amounts.

Outside/Other Party Sharing	Non-Participating–State Share	Total Amount	Accounting Use-Req. No
Cash $ N/A N/A %	N/A – Leave this box blank	Cash $ 168,488.40 100 %	Filled by the Accounting. Financial Mngr. notes (records) the Req. numbers after receiving the executed TO and AD-12.
In-kind $ N/A N/A %	$ ______ ______ %	In-kind $ N/A N/A % N/A = Leave blank	

EXECUTIVE APPROVALS: NAMES, TITLES and DATES

See the approval sequence in the Notes document

Name Camille Crichton-Sumners DATE
Title Manager, Bureau of Research

Name James B. Lewis DATE
Title Manager, Bureau of Statewide Strategies

Name DATE
Title

APPROVED BY:

Name DATE
Title

Name DATE
Title

CERTIFICATION OF FUNDS

DIRECTOR ACCOUNTING & AUDITING DATE

CERTIFIED SCHEDULE NUMBER:

APPROVED AND ACTION CERTIFIED:

FOR THE NJDOT
COMMISSIONER OF TRANSPORTATION

Jacqueline Trausi, Secretary, NJDOT

APPENDIX E: Task Order (Contract) Modification Form DC-45A

DC-45A (4/11)

Page 1 of 1

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSULTANT AGREEMENT MODIFICATION

CONTRACT ID NUMBER: ____________________ **MODIFICATION NUMBER:** ________

CONSULTANT: ____________________ CONSULTANT ID NUMBER: ____________

AGREEMENT NUMBER: ____________________ AGREEMENT DATE: ____________

PROJECT: Task Order No. , ____________________ FEDERAL PROJECT NUMBER: ____________

JOB NUMBER: ____________

IN ACCORDANCE WITH THE PROVISIONS OF THE ABOVE REFERENCED AGREEMENT, THE AND THE STATE AGREE TO THE FOLLOWING CHANGES TO THE AGREEMENT:

1. The STATE and the UNIVERSITY agree to amend the scope of services and budget for Task Order No. in accordance with the attached revised scope of services, dated.
2. The STATE and the UNIVERSITY agree to provide additional funds in the amount of $ (detailed budget attached) for extra work as described in the attached scope of work for the subject project
3. The STATE and the UNIVERSITY agree to extend the end date of this task order to _____.
4. All other Terms and Conditions of the Agreement remain in effect.

Original Agreement Amount	$
Total of Previous Modifications (Mod No. 1-2)	$
This Modification Amount	$
New Modified Agreement Amount	$

ATTEST/WITNESS/AFFIX SEAL:

Name: ____________________ Date
Title:

ACCEPTED BY:

Name: University Contract Officer ____________ Date
Title: Sr. VP for Research and Development University

RECOMMENDED BY: ____________________ Date
Name: Edward Kondrath
Title: Project Manager
Unit: Bureau of Research

REVIEWED BY: ____________________ Date
Name: Camille Crichton-Sumners
Title: Manager
Unit: Bureau of Research

APPROVED BY: ____________________ Date
Name: Andrew Swords
Title: Director
Division: Division of Statewide Planning

CERTIFICATION OF FUNDS ____________________ Date
Name: Anna Rossi
Title: Director
Unit: Division of Accounting & Auditing

APPROVED BY: ____________________ Date
Name: David Kuhn
Title: Assistant Commissioner
Division: Capital Investment Planning & Grants

Distribution: Original: Division of Accounting & Auditing, University
Copy: Professional Services, Contract Manager, File

APPENDIX F: Sample Printouts from State FMIS

FMIS Screen AA01 Printout Sample (this comes back along with executed AD-12)

```
=====================================================================================

06/28/12     15:04  HPT0          FMIS                 #OMK  AA01 FMM0011
                 ACCOUNT INQUIRY : PRE-ENCUMB/ENCUMB DETAIL
ACCOUNT ID
                    APPR           PROJECT     RPTG   LINE   ORG
    FY FND AGY  ORG UNIT ACT  OBJ  NUMBER      CATG    NO    LEV
  2012 480 078 6300 FML                        FHWA    01     03

 ENCUMB ID : 62009833138     ENCUMB TYPE: 0 OBLIGATION/PURC
      NJCFS INFORMATION                  NJDOT INFORMATION
 STATUS        : A ACTIVE               JOB TYPE      : PL METRO PLANNING
 VENDOR ID     : V13198819003           JOB NUMBER    : 2205368
 NAME          : RESEARCH FOUNDATION    AGREEMENT ID  :
 LINE AMOUNT  : 214,998.00              CONTRACT ID   : 1260144
 LINE CLOSED  :        .00              FIS ENCUMB ID :
 LINE ENC/EXP :        .00
 LINE OUTSTAND: 214,998.00

 LINE DESC     : TO#RFCUNY-44 W/RESEARCH FOUNDA


 1-MENU                         15-RETURN  16-PRIOR              18-FIRST
                                                        FAST PATH =====>
012-00PS-WRONG PFKEY

=====================================================================================
```

FMIS Screen AA04 Printout Sample

```
==================================================================================

12/12/12     11:44  HPT0      FMIS              #12I  AA04 FMM0064
                         ENCUMBRANCE INQUIRY : HEADER

Encumbrance ID : 62009780458          Encumbrance Type : O OBLIGATION/PURCHASE
Fiscal year    : 2009

       NJCFS INFORMATION                              NJDOT INFORMATION
Status        : A ACTIVE                   Job Type       : CON CONSTRUCTION
Vendor ID     : V22600211500               Job Number     : 5639302
Name          : NORTH ARLINGTON BORO       Agreement ID   : C220B00S986
Amount        :        446,246.47          Contract ID    : 11 70385
Closed        :        239,421.67          FIS Encumb ID  :
Expended      :              0.00
Outstanding   :        206,824.80
Close Date    :

Description   : AGREEMENT 20




 1-MENU                               15-RETURN
                                                     FAST PATH ===>

0256-NO MORE RECORDS FOR DISPLAY

===================================================================================
```

This information is entered by the Accounting.

APPENDIX G: Final Invoice Package Sample

Print This

Bureau of Research
Document Tracking Sytem

Run Query
Monthly Invoice Summary
1st Monday each month

Date:	11/2/2012	**Registry No:**	12-182	**Run Query** **Print Report**
To/From:	NJIT	**Task Order Number:**	102	
Document Type:	Invoice	**Project Manager:**	Paul Thomas	**Add PM**
Subject Matter:	Snow Model Analysis (4/1/12 - 6/30/12)			**Refresh**

Invoice Amount:	$30,540.00	**Invoice_No**	4
Date of Correspondence:	10/24/2012	**Date to Manager:**	11/05/2012
Date to Ed Kondrath	11/01/2012	**Date Sec to Accounting**	11/07/2012
Date Sec to Project Manager:	11/02/2012	**Amount Paid**	$30,540.00
Date Sec to Lorraine Stallings	11/05/2012	**Processed?**	☑
Date Sec return to Project Manager:	11/05/2012	**Date Paid by Accounting:**	12/04/2012
Invoice Sent Back: ☐ **Date:**		**Reason:**	

Print Invoice Tracking Sheet

☐ **HOLD For Backup** ☐ **IHOLD For Final Report**

Final Report Status:

Date Last Action

Page 1

01/16/13 15:15 HPT0 FMIS #0L5 CP40 FMM0205

CONTRACT INQUIRY : DETAIL2

Contract Information

Prime Contractor ID : V22600091000 NEW JERSEY INST OF TECH

Contract ID : 1160125

TO 10 ✓

Cost Claimed Thru : 06/30/12

Date Last Pymt : 12/04/12

Orig Ceiling	:	227,000.00
Modifications	:	125,701.00
Curr Ceiling	:	352,701.00
Claimed	:	181,620.00
Adjustments	:	.00
Cash Retainage	:	.00
Retainage Paid	:	.00
Amount Paid	:	181,620.00
Outstanding	:	171,081.00
Required Retain	:	.00
Bonds Applied	:	.00

1-MENU 15-RETURN 17-NEXT 18-FIRST

19-PRV-PGE FAST PATH =====>

CONTRACT IS IN BALANCE

Page 2

Lorraine's
Copy

Bureau of Research

Document Tracking System

INVOICE

This document is being tracked by: **Stephanie Nock** 5-5637

Date: 11/2/2012 Registry No: 12-182

Date of Correspondence: 10/24/2012

From/For NJIT

Task Order Number: 102 Invoice No: 4

PM: Paul Thomas ☒ **FINAL INVOICE**

Subject Matter: Snow Model Analysis (4/1/12 - 6/30/12)

	Date	Date Returned to Secretary
Sent to Ed Kondrath	11/1/12	11/2/12
Date Sec to Project Manager	11/2/12	11/5/12
Date Sec to Lorraine Stallings	11/5/12	11/5/12
Date Sec returns to Project Manager	11/5/12	11/5/12
Date to Bureau Manager	11/5/12	11/7/12
Date Sec to Accounting	11/7/12	
Date Paid by Accounting		

☒ **Sent Back** **Sent back date:**

Reason sent back:

☐ **HOLD For Backup**

☐ **HOLD For Final Report**

Page 3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: P. Thomas
C. Crichton-Sumners
Lauren Pitts, Accounting Operations

FROM: Lorraine Stallings, Bureau of Research

SUBJECT: **Invoice #995679-4 - $30,540.00 (Costs thru 6/30/12)**
Task Order No. 102
NJIT

DATE: November 5, 2012

PHONE: 530-5959

Attached is an invoice and supporting documentation submitted by NJIT, as well as NJDOT's FMIS Form AC-1641, for the subject project for the period noted.

The invoice has been reviewed by the contract manager and is recommended for payment. Please review the invoice and supporting documentation for accuracy. If you find the charges acceptable, **sign** the invoice and FMIS form where indicated and **forward** to the next person on the list.

It is important for invoices to be processed in a timely manner. Therefore, if you encounter a problem that will delay the processing of this invoice, please notify me immediately.

Attachments

Page 4

Contract Manager Checklist
Submit to Accounting Operations (A/O) with
Payment Voucher PV-C and Expense Distribution AC-1641

Verified/Approved by Contract Manager/ Accounting Operations		A/O	Comments, if rejected by A/O
☒	Appropriate original signature and dates are in correct fields on Payment Voucher **(PV-C)** and Expense Distribution **(AC-1641)**.	☐	
☒	Summary sheets detailing Basic, Extra Work and Sub-consultant costs by contract line item have been provided. **(Attached to PV-C)**	☐	
☒	Supporting documentation has been provided when required by Contract Agreement or Contract Manager. **(Attached to PV-C)**		
☒	Monthly progress reports have been provided by consulting firm and reviewed. **(Attached to PV-C)** NOTE: A/O will include in their review for Fixed Price Contracts only.		
☒	Vendor Name agrees with Executed Contract and/or Official Name Change with approved Department action. **(PV-C)**	☐	
☒	Agreement Date and Agreement Number correct. **(PV-C)**	☐	
☒	Contract ID Number correct. **(PV-C)**	☐	
☒	Fully executed funding action(s) (AD-12, CCM, Task Order) referenced in Payment Voucher has been entered into CP05/10, and the action is available in Agreement Accounting and/or Accounting Operations. **(If not, forward as attachment with PV-C)**	☐	
☒	Request for payment does not exceed the Basic Agreement Ceiling and/or the ceilings on an Extra Work Modification(s), Task Order and related Fixed Fee ceilings.	☐	
☒	Job Number is active and correct. **(AC-1641)**	☐	
☒	Function Code is active and correct. **(AC-1641)**	☐	
☒	Agreement ID Number is active and correct. **(AC-1641)**	☐	
☐	For Concept Development and Design Agreement Contracts- Has submitted Design Communication Reports (DCR's) and complied with the DCR requirements of the Interactive Communications Procedure.	☐	
Verified/Approved by Accounting Operations Only			
	Vendor ID number is correct and Name and Address agree with Treasury. **(PV-C)**	☐	

Lorraine Stallings 11/5/2012
Contract Manager Print Name/Date

Accounting Operations Processor Name/Date

CM-Checklist 7/10

Page 5

STATE OF NEW JERSEY

PAYMENT VOUCHER

(INVOICE)

PV DATE 10/14/12

MACSE DOCUMENT NUMBER

PP START MO	DY	YR	SCHED PAY MO	DY	YR	CHK CAT	OFF LIAB	F A	RF TY	CK FL	ACTG PER	FY
												11

(A) VENDOR ID NUMBER: 226000910

Agreement Date (B)	Agreement No. (B)	Contract ID # (B)
3/15/2007	NJIT-2005	11-60125

PAYEE: SEE INSTRUCTIONS FOR COMPLETING ITEMS (A) THROUGH (H)

C TOTAL AMOUNT: $30,540.00

(D) PAYEE NAME AND ADDRESS
New Jersey Institute of Technology
P.O. Box 18110
Newark, New Jersey 07191

(E) SEND COMPLETED FORM TO:
Ms. Camille Crichton-Summers
Manager, Bureau of Research
New Jersey Department of Transportation
1035 Parkway Avenue
Trenton, NJ 80625-0600

(F) PAYEE DECLARATIONS
I CERTIFY THAT THE WITHIN PAYMENT VOUCHER IS CORRECT IN ALL ITS PARTICULARS. THAT THE DESCRIBED GOODS OR SERVICES >> >> >> HAVE BEEN RENDERED AND THAT NO BONUS HAS BEEN GIVEN OR RECEIVED ON ACCOUNT OF SAID DOCUMENT

Bobbley Padassern For
PAYEE SIGNATURE

Nancy Eng
Director of Grant & Contract Accounting
PRINT PAYEE NAME/ TITLE

OCT 24 2012
DATE

LINE NO	O/R	AGY	FAO/FRA #	LINE	(G) PAYEE REFERENCE NUMBER
1					1-272D48-130002
2					
3					

	FUND	AGCY	ORG CODE	APPR UNIT	ACTIVITY CODE	OBJECT CODE	CFS PROJECT #	REPT CATEGORY
1	480	078	6300	FJC	TCAP	7310		
2								
3								

	ACCOUNTS PAYABLE REFERENCE #	AMOUNT	I/D
1			
2			
3			

COST INCURRED DATES (H)	CONTRACT DESCRIPTION (H)	AMOUNT
04/01/12 – 06/30/12	Interim Invoice for Task Order No.102 "Snow Model Analysis (2011-01)" Invoice #: 995679-4	$30,540.00
	Received 11/1/12	
	TOTAL	$30,540.00

CERTIFICATION BY RECEIVING AGENCY: I certify that the above services have been in accordance with the contract agreement.

Paul Thomas
Signature

Paul Thomas 11/5/12
Print Name/Title Date

CERTIFICATION BY APPROVAL OFFICER: I certify that this Payment Voucher is correct and just and payment is approved.

Authorized Signature -Accounting

Print Name/Title Date

PV (C) 6/08

Page 6

NJIT
New Jersey's Science & Technology University

New Jersey Institute of Technology
University Heights
Newark, NJ 07102-1982

Grant & Contract Accounting

OCT 24 2012

Ms. Camille Crichton-Sumners
Manager, Bureau of Research
NJDOT
1035 Parkway Ave. - CN600
Trenton, NJ 08625-0600

Project Title: Snow Model Analysis (2011-01)

Task Order No.: 102
NJIT Index No.: 995679
NJIT Fund Code: 1-272D48-130002
Budget Period: 05/01/11 - 06/30/13
Reporting Period: 04/01/12 - 06/30/12
Invoice # 995679-4

Dear Ms. Crichton-Sumners:

Enclosed is an interim invoice covering expenditures during the above period.

Kindly remit payment in the amount of $30,540.00 to :

New Jersey Institute of Technology
PO Box 18110
Newark, NJ 07191

Please reference our NJIT Fund Code when making payment.

If you have any questions, please do not hesitate to contact Lian Cheng at (973) 596-5209 or email at Lian.Cheng@njit.edu.

Sincerely,

Bobby Vadasseri
For Nancy Eng
Director of Grant & Contract Accounting

Enc.
file:995679

Received
11/1/12

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	**Snow Model Analysis**		
RFP Number: 2011-01		**NJDOT Project Manager:** Stefanie Potapa	
Task Order Number: TO-102		**Consultant:** New Jersey Institute of Technology	
Customer: Lisa Webber		**Principal Investigator:** Chien, Steven I-Jy	
Project Starting Date:	05/1/2011	**Period Starting Date:**	04/01/2012
Original Project Ending Date:	10/31/2012	**Period Ending Date:**	06/30/2012
Modified Completion Date:			

Task	% of Total Budget	Total Budget	% of Task this quarter	Cost this quarter	% of Task to date	Cost To Date
Literature Search and Review	8.5%	$30,000	0.00%	$0	100.00%	$30,000
NJDOT Data Gathering	17.0%	$60,000	0.00%	$0	100.00%	$60,000
New Snow Model Development	43.3%	$152,700	20.00%	$30,540	60.00%	$91,620
Field Validation of the new Snow Model	23.8%	$84,000	0.00%	$0	0.00%	$0
Final Report	7.4%	$26,000	0.00%	$0	0.00%	$0
TOTAL	100 %	$352,700		$30,540		$181,620

Project Objectives:

the specific objectives of this study are to develop a new snow model to determine how many trucks and snow plows are needed to clear the roads and the time for clearing based on weather predictions, ADTs, the time of day, accounting for weekdays or weekend days, signals, traffic volume, state region (north, central or south), road characteristics (rural, suburban or urban) and snowfall intensity.

Project Abstract:

The New Jersey Department of Transportation (NJDOT) Snow Model was created in 1978 by a task force and uses formulas applicable to the equitable allocation of trucks spreading anti-icing material and snow plowing by both State and contractual forces. There are two models used: one for spreading and one for plowing. The formulas that were developed take into account the applicable speed of the vehicle, the number of lanes, and the total lane miles of the section to be spread or plowed. The Spreading model assumes an entire cycle to be completed in ninety (90) minutes with the Plowing model taking two (2) hours. NJDOT realizes that the model is currently outdated and makes planning

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Total Project Budget	$352,700
Modified Contract Amount	$0
Total Project Expenditure to date	$181,620
% of Total Project Budget Expended	51.49 %

NJDOT Research Project Manager Concurrence: Paul Thomas **Date:** 8/28/12

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DIVISION OF ACCOUNTING & AUDITING
EXPENSE DISTRIBUTION

(1) MACSE DOCUMENT NUMBER

LINE NO.	(2) JOB NUMBER	(3) FUNCTION CODE	(4) SUB JOB NUMBER	(5) PARCEL NUMBER	(6) AGREEMENT ID	(7) AO# (Optional)	(8) AMOUNT
1	4500011	U355	7119		L56E0010042	9806346	$30,540.00
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							

(9)

CONTACT PRINT NAME/TITLE	L. Stallings
TELEPHONE:	530-5959

TOTAL $30,540.00
(10)

Services Performed (11)
Signature: Paul Thomas Date 11/5/12
Print Name/Title: Paul Thomas / Project Engineer, Mng.

Audited By (13)
Signature ______ Date ______
Print Name/Title ______

Recommended For Approval (12)
Signature: C. Crichton-Sumners Date 11/7/12
C. Crichton-Sumners
Manager
Print Name/Title

Verified By (13)
Signature ______ Date ______
Print Name/Title ______

Page 10

APPENDIX H: Final Report Acceptance Letter Sample

State of New Jersey

DEPARTMENT OF TRANSPORTATION
P.O. Box 600
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE
Governor

JAMES S. SIMPSON
Commissioner

KIM GUADAGNO
Lt. Governor

February 20, 2013

Camille Kamga, Acting Executive Director
University Transportation Research Center
The City College of New York
138th Street, Marshak Hall, Room #910
New York, NY 10031

Dear Dr. Kamga:

We are in receipt of final report submissions for UTRC Task Order 25, for the research study entitle: *Cost of Transporting People Phase Two*.

Whereas we have reviewed the final report submissions and find that adequate documentation has been provided with clarity and conciseness, and whereas implementation and or training tasks have been initiated for the referenced research study, we find that the deliverables comply with the objectives as set forth in the contract and hereby recommend final acceptance of: **Cost of Transporting People Phase Two**.

Please submit final invoices to the Department appropriately so that payment and project closeout can be expedited.

Thank you for your participation in the NJDOT Research Process.

Sincerely,

Camille Crichton-Sumners
Manager, Bureau of Research

cc: A. Hirya
K. Ozbay
S. Brillhart
P. Leech
L. Stallings

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APPENDIX I: Project Close-Out AD-12 Sample

New Jersey Department of Transportation

REFERRAL FORM DATE 05/3/2010

TO	FROM
C. Crichton-Sumners (sign AD-12)	L. Stallings
K. Abbott (review)	Bureau of Research
~~B. DeLucia (sign AD-12)~~	
B. Barnes (sign AD-12)	
R. Miller (sign AD-12)	
J. Trausi (sign AD-12) JUN 03 2010	
L. Stallings (return pkg.)	
	Telephone 5-5959

For Your ___ Action _X_ Approval ___ Information ___ Review
___ ~~Comments~~ _X_ Signature ___ File

Sample

SUBJECT: Close Contract Obligation To 197

4580009/7722

Remarks or Special Instructions

This package is forwarded for approvals & signatures.
Attached is the AD-12 to cancel the contract obligation.
All work has been completed.
Please sign all documents as appropriate and forward to the next person on the list.

Please notify Lorraine Stallings at 5-5959 or email when forwarding.

Thank you.

Form AD-12 07/2009

Pink – Original - Department
Blue – Original - Local Aid – Only
Yellow - Copy

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DEPARTMENT ACTION SLIP

CERTIFIED ACTION / SCHEDULE PAGE #

Date: May 3, 2010

Page 1 of 1
CONTRACT ID NUMBER : 07-60010
CONTACT PERSON: L. Stallings
TELEPHONE NUMBER: 530-5959

Subject: Close Contract Obligations

Project: It is recommended that the Assistant Commissioner for Planning & Development approve and execute this Department Action in connection with the closeout of various task order agreements. This action represents completion of the research project(s) listed below.
All work has been completed and the final nvoice has been paid. Reduce all obligations to a $0.00 balance and return remaining funds to the control account.

FY	OBLIGATION	AGREEMENT	JOB NO	SUB JOB NO	TASK ORDER # - PROJECT TITLE
2007	62009730084	L5600010040	4500009	7722	197 - Development of Uniform Standards for Allowable Lane Closures

Please provide an original of this action to the Director, Division of Accounting and Auditing.

PROGRAM REFERENCE NUMBER
10-0770

ROUTE (S)	SECTION (S)	DESCRIPTION
		Close Contract Obligation

Year & Item No. Construction Program/Prem. Engr.

Appropriation Account Numbers
2007-100-078-6200-043-TPLN-3610

State Fund Sharing
Cash $ ______ ______ %
In-kind $ ______ ______ %

Federal/State Project No.

Job Number

Federal Fund Sharing
$ ______ ______ %

Outside/Other Party Sharing
Cash $ ______ ______ %
In-kind $ ______ ______ %

Non-Participating–State Share
$ ______ ______ %

Total Amount
Cash $ ______ 100 %
In-kind $ ______ ______ %

Accounting Use-Req. No

EXECUTIVE APPROVALS: NAMES, TITLES and DATES

ORIGINAL SIGNED
CAMILLE CRICHTON-SUMNERS

Name / Title: Camille Crichton-Sumners, Manager, Bureau of Research — DATE 5/3/10

Name / Title: ______ — DATE ______

Name / Title: James Lewis, Manager, Bureau of Statewide Strategies — DATE 5/21/10

Name / Title: ______ — DATE ______

APPROVED BY:

Name / Title: Brent C. Barnes, AICP, Director, Division of Statewide Planning — DATE 5/24/10

Name / Title: BRENT BARNES Assistant Commissioner, Planning & Development, ACTING — DATE 5/24/10

CERTIFICATION OF FUNDS

5/19/10

ACTING
DIRECTOR ACCOUNTING & AUDITING **DATE**

CERTIFIED SCHEDULE NUMBER:
17 2010

APPROVED AND ACTION CERTIFIED:

FOR THE NJDOT
COMMISSIONER OF TRANSPORTATION

Jacqueline Trausi, Secretary, NJDOT