

County of Allegheny



GUIDELINES FOR CONSULTANT SERVICES

APRIL 2015, FOURTH EDITION

DEPARTMENT OF PUBLIC WORKS
COUNTY OFFICE BUILDING
PITTSBURGH PA 15219

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ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
GUIDELINES FOR CONSULTANT SERVICES

The Guidelines for Consultant Services are for the use of the County and its Consultants. The Guidelines establish standards for procurement, project implementation and management for work under commission to the Department. Consultants are responsible to ensure that work meets these standards. The Department publishes the Guidelines in loose leaf form to facilitate revisions and extension. It is anticipated that we will revise the Guidelines to stay abreast of technical advances as well as changes in procedures and presentation.

PREFACE

The Guidelines for Consultant Services are a reference tool for architects and engineers. They describe this Department's policies and practices for procuring professional services, clarify policies for project implementation, and describe policies for management and administration of projects.

1.0 INTRODUCTION

1.1 GENERAL

The Allegheny County Department of Public Works (DPW or the Department) is the County's agent for design of maintenance, repair and construction projects for buildings, roads, bridges, and parks; maintenance, repair and construction of roads, bridges, and parks grounds; and, contracted construction of buildings, roads, bridges, and parks. The organization of the Department is closely aligned to its service role. The Department is comprised of the Divisions of Accounting and Administration; Maintenance and Operations; and Engineering and Construction.

The guidelines and instructions in this handbook are for the use of architects and engineers when proposing to provide and when performing professional services to the Department of Public Works. The Guidelines clarify the role and organization of the Department and enumerate the special requirements of grant programs. This manual provides the general procurement and project development requirements of the Department.

The County's facility investment process involves five major phases: planning, programming, budgeting, scheduling, and project implementation. The subject of this handbook is primarily the project implementation and close-out phases which include separate and distinct stages. Project implementation relates to and stands on the preceding phases. In that regard, the Department will provide to the consultant, or make available for his review such information it possesses pertaining to the earlier phases.

If firms use this manual for these stated purposes, it should assist them in estimating services efficiently and in reducing costs. The County directly benefits from this increased efficiency and reduced cost. In the interest of coordination and communication between the County and its consultants, it is imperative that the parties adopt the terminology in the Guidelines for the project implementation stages and the principal activities in each stage. However, it is recognized that at times it may be necessary to use different terminology to convey a specific meaning on a specific project.

The organization of the Guidelines follows the normal sequence of the project implementation stages from the Start-up Stage through the Close-out Stage.

The Guidelines are flexible enough to suit a variety of uses and users. There will, therefore, be parts that may be unclear to some users. Explanations accompanying each part should help the user understand the parts and how they relate to his proposal. This guide does not cover all aspects of the Department's practice as related to professional assignments, and Consultants may also wish to review related Department references including:

- PennDOT Publication 93 (Policy and Procedures for the Administration of Consultant Agreements)
- PennDOT Publication 740 (Local Project Delivery Manual)
- PennDOT Publication 408 (Construction Specifications)
- PennDOT Publication 442
- PennDOT ECMS Website
- American Institute of Architects MasterSpec

Employees of the Allegheny County Department of Public Works will neither solicit nor accept gratuities, favors or anything of monetary value from consultants or contractors. Violators will be subject to discipline, up to and including termination of employment.

These Guidelines are in imperative and abbreviated form. This imperative language is directed to the Consultant, unless specifically noted otherwise. Complete any incomplete sentences by inserting "shall", "the consultant shall", and "shall be", and similar mandatory phrases.

1.2 DEFINITIONS

"AGREEMENT" is the legal instrument describing the offer, acceptance, consideration and related obligations.

"BASIC SERVICES" are those normal to accomplishment of the classic and usually sequential stages of project implementation which follow the Start-up Stage: Schematic Design Stage, Preliminary (Design) Stage, Final (Design) Stage, R.O.W. and Utility Stages, Bidding Stage, Construction Stage, and Close-out Stage.

"CHANGE" is an addition to, or reduction of, or other revision to the scope of work in the Agreement.

"CHIEF EXECUTIVE" means the elected, full time head of the Executive Branch of Allegheny County Government.

"CONSULTANT" means a person, or firm, offering or providing engineering or architectural services to the County.

"COST PER UNIT OF WORK" is a method of payment whereby the County pays the Consultant his direct and indirect payroll costs plus profit on the basis of actual work performed. This method is for use where the cost per unit of work is determinate with accuracy but the number of units of work is indefinite.

"COST PLUS A FIXED FEE" is a method of payment or type of agreement whereby the County reimburses Consultant for allowable direct and indirect payroll costs, non-payroll

costs and expenses, plus a predetermined amount for profit, in incremental payments not to exceed a pre-estimated maximum in accordance with documented progress. The County considers direct non-payroll costs and expenses as a separate item for reimbursement on invoices. This method is useful where the scope, schedule, and costs are indeterminate.

"COUNTY" means the County of Allegheny, a political sub-division of the Commonwealth of Pennsylvania, acting by and through its qualified officials and employees.

"COUNTY COUNCIL" means the body of fifteen elected members of the County Legislature with thirteen members representing one of thirteen County Districts and two "at-large" members.

"COUNTY MANAGER" means the position appointed by the Chief Executive to serve as the policy implementation arm of the County Executive.

"DIRECTOR" means the Director of the County Department of Public Works and each of his Engineers, Assistants and related staff, acting within the scope of the duties and authority that the Director has vested in them.

"DIRECT NON-PAYROLL COSTS" are costs that can be identified specifically with a particular cost objective necessary to carry out the assignment; they may not be in the consultant's overhead percentage, e.g., mileage, prints, ADP services, subcontracts and other out-of-pocket expenses. Consultants may claim such costs for non-professional service subcontracts only if they advertise for bids and solicit approval for award from the County. The County will pay direct non-payroll costs on a certified invoice basis.

"DIRECT PAYROLL" is the cost of salaries at actual or average rates for productive manhours of principals and employees on the assignment prior to deductions or additions for any charges whatsoever.

"EXECUTIVE SELECTION COMMITTEE (ESC)" is comprised of the County Manager, County Solicitor, and the Director of the Department of Public Works. The ESC is responsible for the selection of the consultant team during the procurement process.

"EXTRA WORK" is any service or action required of the Consultant that is above and beyond the obligations of the Agreement.

"FEE PROPOSAL" is an itemized account of direct and indirect costs that the Consultant expects to incur and the amount of profit or net fee that the Consultant desires to obtain for providing a specific service or product.

"FIXED FEE" is a method of payment or type of agreement whereby the County reimburses the Consultant for direct and indirect payroll costs and profit on the basis of a payment schedule that keys in to work products.

"LETTER OF INTEREST" means a document submitted by a firm or team of firms interested in procuring a contract for professional services with the County, typically in response to a request for specific services from the County.

"INDIRECT PAYROLL" is a payroll burden and general and administrative costs that because of their use for common or joint objectives are not treated as direct costs; e.g., employee fringe benefits, health and welfare costs. Where a multiplier or factor comes into play it shall be the (percentage) sum of the overhead percentage and the profit percentage.

"LUMP SUM" is a payment method or type of agreement whereby the County reimburses consultant for direct and indirect payroll costs and profit for 100% completion of the assignment in a lump sum amount in incremental payments on the basis of progress. The County considers direct non-salary costs as a separate item for reimbursement on invoices. The County may use this method where the parties can fully and accurately define scope and schedule and costs are determinate and negotiations can result in agreement on fair compensation.

"MULTIPLIER" is a method of payment whereby the County reimburses consultant for his allowable costs except direct non-salary costs. The County will pay consultant in incremental payments not to exceed a pre-estimated maximum. The pre-estimated maximum will be in accordance with direct salary costs times an agreed multiplier (considered to be the sum of the overhead percentage and the profit percentage), documented direct payroll, and progress. The Department considers direct non-salary costs as a separate item for reimbursement. The County may use this method where scope, schedule, and cost are indeterminate. The Department will not use this method on Federal-aid highway work.

"PRE-QUALIFICATION" is a process by which the Department reviews Letters of Interest and SF-330 form and other qualification statement data on file to ascertain consultants who demonstrate the required qualifications for the project under consideration.

"PROFESSIONAL SERVICES REVIEW COMMITTEE (PSRC)" is appointed by the County Council and is responsible for approving/disapproving/modifying the short-list of preferred consultant teams recommended by the ESC during the procurement process.

"PROFIT" is the reasonable, normally acceptable dollar amount that the parties shall agree to by negotiation to cover the Consultant's return.

"PROGRAM MANAGER" is the Department's representative responsible to oversee a specific program or group of projects within a funding program.

"PROJECT MANAGER" is the Department's representative and project team leader with responsibility to integrate the efforts of project team members. He will see that stages of implementation of the Project are within budgetary, schedule, and scope constraints.

"QUALIFICATIONS SELECTION COMMITTEE (QSC)" is responsible for reviewing, when applicable, qualifications submissions for an assignment for professional services. Members of this committee are selected by the Director on a project-by-project basis.

"REQUEST FOR PROPOSAL" (RFP) is a letter written by the Director to one or more consultants to advise them of their selection for consideration as a consultant to the County. The letter is to request their proposal to the County in response to the scope of work and other requirements.

"SCOPE OF WORK" is the detailing of required services and actions of the Consultant, which will become the obligations of the Consultant in the Agreement.

"SPECIFIC RATE" is a method of payment for use when the scope of work and the required work effort cannot be determined at the time the agreement is executed. The specific rate is established by multiplying the payroll by the specific rate factor established in the agreement. The specific rate factor includes reimbursement for direct labor, overhead and profit.

2.0 PROCUREMENT (START-UP STAGE)

2.1 GENERAL

2.1.1 Description

The Department procures Consultant services to augment the capabilities and capacity of its staff. In the Start-up Stage the Project Manager and the selected Consultant will in a cooperative, interdependent fashion complete those tasks necessary to tentatively establish project requirements. Project requirements include design and performance parameters, type and parameters of work, scope, schedule, and cost, a description of each task, specific responsibilities for each task, the personnel, time and costs required to furnish each task or work product, and the total amount of compensation. The Start-Up Stage concludes with mutual agreement on services at a prescribed cost within a prescribed time frame.

2.1.2 Objectives

To effectively complete the start-up tasks the Department has designed its procurement process to satisfy the following objectives:

- a) To provide the foundation for establishing project control and establish a comprehensive management system for funded projects.
- b) To ensure sufficient detail for incorporation in the project file for use by Department personnel or reviewing authorities.
- c) To provide consistent direction regarding procurement and contract administration policies to the Project Manager, to any Consultant who may submit a proposal in response to an RFP, and to any Consultant that performs professional services.
- d) To reinforce the proper synthesis in RFP's and proposals of the following items:
 - required services for a project
 - proper division of responsibilities for the required services to the project team
 - the method of compensation and allocation of costs for the required services
 - the required legal provisions for the project
- e) To promote a clear understanding on the part of the Project Manager and prospective consultant of the scope of services and compensation by a standardized listing and description of services and methods of compensation.
- f) To promote the use of a family of forms for use by the Consultant and Project Manager to lend uniformity to the management system, interlock the essential parts, and provide legal clarity.

- g) To document, for estimating purposes, actual man-hours by stage and task for completed consultant services on diverse projects. This data is useful for estimating costs for similar services on comparable projects.
- h) To institute methods that may apply in various combinations to suit the unique requirements of any project.

2.1.3 Procurement of Professional Services

Procurement of professional services will follow PennDOT's Standard Selection Procedures:

Procurement of professional services is a qualifications-based, competitive negotiation process based on the following sequential steps:

- The County's Department of Public Works (DPW) provides the public advertisement for Letters of Interest (LOIs) to PennDOT for approval. **
- DPW advertises for the LOIs.
- Interested Consultant teams submit LOIs.
- For 100% County funded projects, representative(s) from the Disadvantaged Business Enterprise (DBE) office in DPW determine if proposed DBE firm(s) is (are) PAUCP/DGC certified.
- Qualification Selection Committee (QSC) reviews LOIs and recommends short list to the Executive Selection Committee (ESC). The ESC will be comprised of the County Manager, Solicitor and Director of DPW.
- The ESC reviews the QSC's recommendation and then recommends a short list of at least three consultant teams for the approval of the Professional Services Review Committee (PSRC).
- The PSRC reviews and approves the ESC recommendation.
- The PSRC-approved short list is sent to PennDOT for approval. **
- PennDOT reviews and approves/disapproves the short list. **
- DPW prepares and sends a Request for Proposal (RFP) to each of the PSRC approved, short-listed firms.
- The QSC reviews technical proposals and sends recommendations to the ESC. Oral presentations to the QSC may be required.
- For Federal, Federal/State and State-funded projects, the ESC ranks the consultant teams in order of preference and sends the ranking to PennDOT for approval. For 100% County funded projects, the ESC selects the preferred consultant team.
- PennDOT reviews and approves/disapproves the ranking. **
- DPW requests a price proposal from the top ranked consultant team.
- DPW negotiates the price with the top ranked consultant team.
- DPW prepares and submits the pre-award evaluation and agreement to PennDOT for concurrence. **
- County executes agreement with selected consultant team.
- A Notice-to-Proceed is sent to the selected consultant team.

The steps listed above are applicable to all Federal, Federal/State, State and 100% County funded projects. The steps marked by a double asterisk (**) at the end of the text indicate tasks are only applicable to Federal, Federal/State and State funded projects, and do not apply to 100% County funded projects.

2.2 PROJECT REQUIREMENTS AND INDEPENDENT ESTIMATE

In this step, the first in the start-up process, the Department's Project Manager will prepare a statement to describe the project. It will discuss project location, proposed scope and type(s) of construction; dimensional and performance parameters, required services, estimated project costs, principal tasks by stage, man-hour loading requirements by stages, a proposed schedule, and any special requirements or unique features.

2.3 ADVERTISEMENT FOR CONSULTING SERVICES

For all projects, the Department will place an advertisement or Project announcement on the Allegheny County internet website and the PAPG (BidNet) website for a minimum of two weeks, in the Pittsburgh Courier two times. For Federal and State funded projects, PennDOT's ECMS system online will be used to solicit letters of interest and requests for proposals from consulting firms in addition to the local advertisements required by the County. The advertisement will include a descriptive synopsis of the project; its scope and location; its approximate size; the required services; the criteria which will apply to evaluation of the applicants; a statement encouraging responses from small firms, minority and women firms, and firms that have not worked for the County; special requirements; and the deadline for receipt of responses - see Exhibit 1. The Director will forward a copy of the ad to the American Council of Engineering Companies of Pennsylvania as well as MBE/WBE economic development assistance agencies and organizations.

2.4 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

The Director will make a special effort to seek out minority and women business enterprises (MBEs and WBEs, respectively) for consideration for work. This effort may include: screening approved DBE/MBE/WBE certification lists maintained by other organizations and written notification to individual DBEs/MBEs/WBEs to solicit Letters of Interest; and written notifications to economic development assistance agencies and organizations of the type of required services. The County's goal for DBE participation in right-of-way acquisition services or design-related services is a minimum of 13% of the total costs for such services for MBE firms and 2% of the total costs for such services for WBE firms. The team proposed in response to the LOI must indicate attainment of these goals. In the rare case where attainment of the goals would not be possible, proposing firms must indicate their efforts to attain the goals and request a waiver. The County will make a determination of sufficient and reasonable effort.

2.5 PRE-SELECTION (SHORT LISTING)

The Qualifications Selection Committee (QSC) reviews the consultants' submissions and evaluates each consultant (from Part 2.3) in accordance with Exhibit 2, Pre-Selection Rating Criteria, tabulates the rating of each prospective consultant (see Exhibit 3) and recommends a short list of consultant teams to the Executive Selection Committee (ESC). The (ESC) reviews the QSC recommendations and approves prior to forwarding to the PSRC. Generally a minimum of three firms will be short-listed and invited to submit proposals, unless a fewer number have submitted a letter of interest. The PSRC will review and approve or disapprove the short-listed firms.

For Federal, Federal/State or State-funded projects, the ratings will be completed in ECMS, and the PSRC will approve the short list before submitting the shortlisted firms to PennDOT in ECMS for review and approval. Upon approval of the short-list by PennDOT in ECMS, DPW will prepare and send Request for Proposals (RFPs) to the approved short-listed firms within ECMS. For 100% County-funded projects, PennDOT approval is not required and DPW will prepare and send Request for Proposals (RFPs) to the PSRC-approved short-listed firms. The selection procedure will proceed in accordance with Parts 2.6 through 2.16.

When only one (1) firm receives an RFP, the process of competitive selection will not apply. The Department will take this option only where it would be in the public interest to do so, e.g., in the case of an emergency; in the case of very small (value) or short term assignments; or in the case of certain specialty or proprietary types of work. The Program Manager will substantiate this type of action in written documentation for the record, and review and approval by the grantor on Federal or State aided projects.

2.6 REQUEST FOR PROPOSAL (RFP)

With pre-selection complete, The DPW will prepare and forward an RFP to each approved short-listed consultant. For Federal and State funded projects, PennDOT's ECMS system will be used to provide the RFP. With the RFP will be:

- a) A program statement or project profile providing:
 - The project's name, number and location.
 - A summary of existing conditions and past or pending actions related to the project.
 - The proposed method of payment.
 - The proposed type of construction, its limits and location, and related dimensional and performance parameters.
 - The principal tasks and desired work products, and target dates for delivery of the latter.
- b) Appropriate excerpts from these Guidelines.

- c) A partially completed draft of the Department's Standard Agreement exclusive of identification of Consultant and fee data.
- d) Any Supplemental Requirements to the general requirements and services in these Guidelines, including, but not limited to, PennDOT's ECMS requirements for Federal and State funded projects.

2.7 PRE-PROPOSAL MEETING

After the RFP is released, the DPW may meet with prospective consultants. Discussions at the Pre-Proposal meeting may include:

- a) A tentative scope of services.
- b) A tentative schedule on Exhibit 4, Project Schedule. The County will identify a point of contact and will have prepared an independent estimate of services, and schedule as a basis for a continuing, comparative discussion throughout the meeting. Other topics for discussion at the meeting will include:
 - c) Administrative controls and contract provisions
 - d) Proposal content and format
 - e) Applicable design criteria and related standards
 - f) Method(s) of compensation
 - g) Proposal submission deadline

If through the Pre-proposal Meetings with prospective consultants a significant change in the scope of services becomes apparent the DPW will notify prospective consultants of those changes and may reschedule the date for receipt of final proposals.

Prospective consultants will then prepare and submit a technical proposal in accordance with the results of the Pre-Proposal Meeting and in accordance with the instructions below.

2.8 PROPOSAL REQUIREMENTS AND CONDITIONS

In the proposal, address project objectives, technical approach, work products, schedule and Staffing Plan. Where geotechnical work is concerned include proposed boring and testing programs, and boring layout. Sample boring and testing programs and boring layout are normally with the Supplemental Requirements for reference purposes. Also include a description of the project team and its qualifications, an organizational chart, and a list of active projects and similar completed projects. Submit an original plus five (5) copies along with an electronic file in pdf format.

On the schedule for construction engineering assignments show by operation (in an extension of the "schedule field" of the form if necessary) the proposed field surveillance and inspection staff by individual for the duration of the job. Label the first column of the form "Operation and Staffing" for these purposes.

On construction engineering assignments, also include in the description of the project team and its qualifications:

- a) The name of the Resident Project Representative who will be on the project full time as the Construction Engineer or Inspector-in-Charge. Include resumes for the Construction Engineer and/or the Inspector-in-Charge to clearly describe his/her qualifications.
- b) The number of subordinate inspectors for assignment to the project.
- c) The number of qualified inspectors available to provide inspection at off-site material plants if necessary.

On highway and bridge construction assignments provide an Inspector-in-Charge and subordinate inspectors with qualifications and level of experience meeting or exceeding those of the Pennsylvania Civil Service Commission Classifications: Transportation Construction Inspector 3, and Construction Inspector 1 or 2 respectively.

2.9 EVALUATION

The QSC will evaluate the proposal with regard to qualifications, scope of services, staffing, schedule, familiarity with the site and/or the work, and technical approach.

2.10 DEPARTMENT EVALUATION AND RECOMMENDATION

With due consideration to the Department's independent analyses of the proposals the QSC will make a recommended selection by ranking the proposals on Exhibit 3 in accordance with the instructions in Exhibit 2. The Project Manager will document the outcome of the Selection Meeting, the overall rankings and technical points of discussion.

2.11 FINAL SELECTION

The QSC's recommendation will be submitted to the ESC for review and approval. In the event of a tie within the QSC, the Deputy Director for Engineering and Construction or a person designated by the Director will rate the firms to break the tie. In no event will the individual selected to break the tie be an individual having previously cast a vote during the selection process.

For Federal, Federal/State and State-funded projects, the QSC's recommendation and the ESC's selection will be submitted to PennDOT for approval.

Following final selection approval, the Department will notify, in writing, the top ranked Consultant.

2.12 FEE PROPOSAL

The Consultant, upon notification of their selection from the Department, shall submit on the Department's forms (Exhibit 6 or similar electronic format) a detailed cost estimate or fee proposal to furnish the Basic and Special Services noted in the RFP. Include in fee proposal the following supportive financial data for Department purposes in evaluating the cost elements of the fee proposal:

- a) (For evaluation of direct salary costs) an explanation of the estimating technique used for project loading, current base rates (actual rates prior to deductions or additions for any charges whatsoever) for personnel; and a schedule of personnel that may be assigned to the project: name, title, classification, current base salary;
- b) (For evaluation of non-salary direct costs) an explanation of the basis for or source of proposed non-salary direct costs;
- c) (For evaluation of indirect costs) a detailed and certified schedule of overhead accounts and rate calculation (as a percentage of direct salary costs) in conformance with Federal Procurement Regulations 1-15 or PennDOT-approved ECMS overhead rate sheets, covering the year during which the fee proposal is being submitted.
- d) A description of the firm's accounting system and its suitability for aggregation of direct and indirect costs.

Where geotechnical work is concerned, base the costs on estimates by a reasonable and prudent engineer under the circumstances and conditions of the proposed project. Note geotechnical work (including sub-consultant work) as payable on the Specific Rate or Cost Per Unit of Work method. Include a detailed breakdown of the proposed drilling (preliminary boring layout, type and depth of drilling, unit costs, mobilization costs, traffic control costs, etc.) and testing programs (identification, number and unit cost of each proposed test) as well as costs as applicable for the sub-consultant (if any) to check the compatibility of his (geotechnical) recommendations to the prime's design. Boring and testing programs are specified in the Supplemental Requirements to the RFP.

2.13 PRE-AWARD AUDIT

On acceptance of fee proposals on a lump sum basis or proposals on other payment methods in excess of \$50,000 the Director will arrange for a pre-award audit. The audit will be performed in accordance with Sub-part 1-3.809 of the Federal Procurement Regulations. The audit report will:

- a) Make specific reference to the proposal by date and amount.
- b) Show whether the proposed indirect costs are allowable in accordance with the Federal Procurement Regulations 1-15 of Sub-part 1-3.809; set forth the last audited percentage rate(s) for indirect costs along with the rate(s) currently being used; itemize (schedule) indirect cost accounts and their percentage amounts.

- c) State whether the Consultant's accounting system will adequately identify and accumulate agreement costs for cost type agreements. This is to provide assurance of the adequacy of the Consultant's accounting system to segregate and accumulate contract costs.
- d) Include appropriate statements of the Consultant's financial capabilities.

If the audit shows the estimate in the price proposal to be improper or subsequent negotiations are unsuccessful in bringing the fee proposal into an acceptable range, within sixty (60) days of the notification to the top ranked consultant, the Director or Deputy Director may terminate these negotiations and negotiation will commence with the number two ranked consultant.

2.14 NEGOTIATION

The Department will notify the successful consultant to attend a Negotiation Meeting. Any adjustments to the project requirements and scope of work will be discussed first. Negotiations and discussion will cover the Consultant's level of effort (hours) - as the County may consider to be reasonable, allocable and allowable based upon its comparative analysis and the cost principals set forth in the current Federal Procurement Regulations. The County will, on the basis of proposal evaluations (technical and audit) and independent man-hour estimates, compare and evaluate the Consultant's corresponding proposal to assure a reasonable and fair level of effort. The County and its Consultant will agree upon a project schedule. The Project Manager will prepare a record of the negotiations and significant points of agreement on a fair and equitable level of effort, schedule, and work products. For 100% County funded projects, the Department may, at its discretion, negotiate costs, direct and indirect, as well as profit or net fee.

2.15 AGREEMENT AND NOTICE TO PROCEED

With mutual agreement on the fee, and PennDOT approval of the technical and price proposal (for Federal and State funded projects), the Project Manager will finalize the agreement and notify all participants of the results of the selection process. A formal Notice to Proceed follows execution of the agreement and receipt of the required insurance certificates. Exhibit 7 is a facsimile of the form of agreement for professional services that will be executed for 100% County-funded projects. For Federal and State funded projects, the agreement signature page will be signed by the consultant and Allegheny County, and then executed in PennDOT's ECMS system electronically.

2.16 START-UP MEETING

The start-up meeting provides a forum for the Project Manager to establish project control. Its purpose is to immediately enhance the project team's response and sensitivity

to the assignment through a productive and participatory dialog. The meeting focuses on a checklist of required submittals, the make-up of those submittals, and a tentative schedule for progress and final submissions. At the conclusion, the parties receive a copy of the checklist with indicated dates and responsibilities.

3.0 BASIC SERVICES

3.1 GENERAL

This Section features eight subsections by implementation stage:

- Schematic Design Stage (Architectural Projects)
- Preliminary Design Stage
- Final Design Stage
- Right-of-Way (ROW) Stage
- Utility Stage
- Bidding Stage
- Construction Stage
- Close-Out Stage

Each subsection specifies the Objectives, Services, Approach and Completeness, and Work Products typical to that stage.

Section 4.0 which follows this section outlines services which may apply in support of or independently of the Basic Services at a level of detail commensurate with the level or stage of implementation.

Consider this listing when preparing a proposal but modify it to suit the specific assignment, for example, when PennDOT Work Breakdown Structure (WBS) scope may be appropriate. Unless the Department should direct you otherwise, make Submissions to this office at a level of detail and quality no less than that in the Department's Submission Requirements for Architectural and Civil Work.

3.2 SCHEMATIC DESIGN STAGE

3.2.1 Objectives

Ascertain project requirements in cooperation with the County, and on that basis select, recommend, and describe the most practical facility in terms of scale; cost; social, economic and environmental effect; physical components and design features; and development schedule.

Validate the scope and needs for the project with the architectural and engineering disciplines to identify issues that may affect the functional design. An interactive programming session will be conducted with appropriate staff to gain a thorough understanding of the operational characteristics and functional needs of each of the user groups involved. Methods used to gain this knowledge include staff questionnaires, personal interviews with employees representing the groups that may be affected by this project, on-site observations, and review of existing documents related to this project. The information gathered will be organized as follows:

- **General Considerations** - Lists pertinent information that influences design.
- **Space Needs Program** - Delineates the space requirements for functions within building facilities and on the site.
- **Functional Requirements** - Presents the functional requirements for spaces within building facilities and on the site.
- **Site & Building Requirements.** - General criteria relating to architectural, structural, mechanical, electrical, civil, landscaping, and energy efficiency/sustainability issues are addressed.
- **Conceptual Design** - Presents the conceptual level site and floor plans.

Schematic Site and Building Layouts:

- Prepare up to 3 conceptual level development options for presentation to and review by the County. For each option, create conceptual site layouts using block diagrams to represent functionality alternatives. Each option will be reviewed with the County in comparison to the criteria established during the Kickoff/Programming meetings. The County will have the ability to modify the criteria based on the new information being presented for use in determining the concept to be recommended for design.

- Schematic site and building layouts for the proposed options will show critical circulation and access elements, general arrangements of primary spaces, and equipment.
- Exterior building elevations and sections will indicate building sizes, floor to structure elevations and heights, initial material selection, overall building massing and critical interface points between building components. Conceptual renderings of exterior massing will provide a computer generated rendering.

3.2.2 Services

Furnish those services necessary to prepare and submit a schematic design study outlining the project requirements, an assessment of alternatives, and a recommended design solution. Include a statement of costs in accordance with the current project schedule, schematic drawings and preliminary project descriptions. Schematic drawings shall depict the approximate size and location of the physical facility and the scale and relationship of the project components. Preliminary project descriptions shall complement the drawings to describe the physical requirements of the project.

Integrate project components to ensure that the facility will function efficiently and satisfy project requirements. Furthermore, consider definition of the problem(s) and determination or confirmation of project requirements to include tasks undertaken to: conduct on-site reconnaissance, formulate project goals, collect and analyze data, and initiate and conduct a process to identify and access viable alternatives. Ensure that assessment of each alternative including no fewer than two (2) "Build" alternatives, the "Minimum Build" alternative and the "Do Nothing" alternative considers, as applicable, the following: safety; provision for expansion; social, economic, and environmental factors; energy conservation; benefit-cost, "basic" value engineering (VE), life-cycle cost/cost effectiveness; R/W and utility impacts; human, vehicular, and material flow patterns; operating volumes and levels of adequacy; maintenance and protection of human, vehicular or material traffic during construction; geotechnical and geological factors, and physical and design features of each element of design, i.e., architectural including handicapped accessibility design, structural, mechanical, electrical, landscape, and interior design. Found these elements on minimum or desirable dimensional and performance parameters.

Produce a quality reproducible report that describes the alternatives and translates them into a recommended solution with schematic drawings and preliminary project descriptions, a schedule for overall development of the project, and a schedule of costs.

3.2.2.1 List of Services

- a) Project Management
- b) Project Meetings
- c) Definition of Requirements or Problems
- d) Schematics and Concepts

- e) Final Schematic Design Report

3.2.2.2 Description of Services

- a) Project Management. Provide project control to ensure a quality product on schedule and within budgetary constraints. Ensure oversight of tasks by an identified project manager who will integrate planning and control. Provide for project progress reports on a monthly basis; the monitoring, evaluation, and control of in-house personnel and subconsultants; coordinate reviews and approvals by other governmental entities.

- b) Project Meetings. Prepare for and make presentations at study related meetings. Include generally:
 - 1) Administrative and design start-up meetings
 - 2) Preliminary "work program" meeting(s) regarding: Special Services e.g., geotechnical and geological engineering investigations, environmental statements and technical support reports etc.
 - 3) Agency review meetings
 - 4) County Pre-Final Review
 - 5) Public and private sector meetings

- c) Definition of Design Program, Requirements and Problems. Define, quantify or isolate the project requirements and problems and formalize them in a design program of project requirements and deficiencies. Consider these functions to include:
 - 1) On-site reconnaissance to identify:
 - The significance and sensitivity of the area and users to the project features to confirm the scope and emphasis of the study.
 - (For supporting studies - environmental and technical) the significance of the area and users to the parameters defining those elements unique to supportive environmental or technical documents.
 - 2) Formulation of project goals.
 - 3) Data collection and analysis to:
 - Prepare and submit preliminary work programs for supporting studies.
 - Conduct programming, field and lab work:
 - confirm design program and project requirements: dimensional and performance parameters of facility and spaces or elements thereof, functional interrelationships among spaces or elements, requirements for flexibility or expansion, special equipment or systems needs, and site requirements
 - conduct user studies
 - conduct aerial mapping
 - perform surveying
 - perform environmental monitoring
 - perform traffic studies

- perform geotechnical and geological investigations
 - research historical records
 - research utility records
 - research right-of-way records
 - perform photographic or measurement survey (existing facilities surveys or inspection report)
 - check original design and Drawings
 - Research advanced phases: master Drawings, site analyses and feasibility studies.
 - Analyze and present the data to quantify in printed and graphic form existing conditions and deficiencies, system needs, and functional requirements in:
 - a statement of project requirements and deficiencies, or design program
 - topographic base sheets, and
 - initial environmental documents, technical reports, and user/citizen participation reports - see Section 4.0, Special Services.
- d) Schematics and Concepts or Synthesis and Assessment. Translate the design program and initial environmental or technical documents into an analytical (project) solution in terms of (1) identification of alternative candidate facilities, and (2) assessment of the alternative candidates. Found the former on established objectives, identified, available and proven components, the definition and conceptual design of alternatives, and constraints, if any. Base the latter on sound social, economic, environmental, right-of-way, utility, physical, architectural, design, and maintenance bases and analyses. Consider this to include the development and Submission of:
- 1) initial schematics, i.e., site and facility drawings, elevations or profiles, sections and perspectives with approximate dimensions and preliminary material selections.
 - 2) initial preliminary project descriptions to describe groups of construction systems, assemblies, and components.
 - 3) initial architectural, civil, structural, mechanical, electrical, landscape, and interior design concepts in sufficient detail to permit coordination with each other and an adequate review of the alternates.
 - 4) initial conceptual construction cost ranges escalated to the date of the projected bid opening in accordance with the current project schedule and comparable historical area, volume, or unit costs.
 - 5) initial project schedules in accordance with comparable historical job durations.
 - 6) (as directed) Basic VE Analysis
 - 7) (as directed) Benefit-Cost Ratio, Life-Cycle Cost Analysis, Cost Effectiveness Analysis. The County will review and return one marked-up set of items a) - f) above. If requested, the County will schedule and conduct a meeting to discuss this task.

- e) Schematic Design Report. Prepare and submit the final report for approval as the basis to proceed to the next stage. Fully describe in the report the recommended solution in terms of a tabulation of design criteria, the schematics and preliminary project descriptions, a schedule for the overall development of the project, and a schedule of costs.

3.2.3 Approach and Completeness

Subscribe to a technical approach or work program in this stage no less complete than as follows:

- a) On-Site Reconnaissance - Identify the significance of and sensitivity of the area to features of the project to determine the scope of study and major emphasis of study.
- b) Field Work - Perform aerial mapping and/or survey, site measurements, confirm utility information, i.e., type, size and location, and research right-of-way records.
- c) Coordination and Consultation - Review and consider suggestions of interested parties such as local, county, state, or federal governmental entities and concerned users, citizens and groups. Include informal efforts to comply with municipal ordinances, if any.
- d) Architectural and Engineering Services - Prepare topographic mapping; complete studies and design program; perform analyses and schematic designs; prepare report, drawings and preliminary project descriptions; prepare presentations for field view(s) and meetings, and prepare minutes or testimony thereof.
- e) Special Considerations - As directed.

3.2.4 Description of Deliverables

Consider the below form and content as representative of deliverables for this assignment. Provide a well written, illustrated and reproducible Schematic Design Study Report. Append supporting documents and ensure that the report itself is self-contained without the need for excessive cross-referencing. Produce an 8-1/2" x 11" format with oversize graphics folding out to the right and with identification on the right. Consider content of report as follows:

Schematic Design Study Report

- 1.0 Summary, Conclusions and Recommendations
- 2.0 Review of the Data (methodology, collection and analysis)
- 3.0 Design Program (Requirements and Deficiencies)
- 4.0 Assessment of Alternatives

Appendixes

- Schematic drawings

- Preliminary project descriptions (see CSI Manual of Practice, Chapter FF/180 Preliminary Project Descriptions and Outline Specifications)
- Environmental documents
- Technical documents

3.3 PRELIMINARY DESIGN STAGE

3.3.1 Objectives

On Federally-aided or State-aided transportation projects address this stage at any one of three "levels" in accordance with the RFP. At the first Level consider the study to involve a Corridor Location Study to confirm an optimum transportation corridor between identified termini and a Design Location Study to conform the optimum alignment within the recommended corridor. The dual studies unique to Level I are normal to projects on new location where comprehensive planning studies indicate alternate feasible corridors. At the second level consider the study to involve a combined Corridor/Design Location Study to confirm an optimum transportation alignment in a restricted corridor between identified termini. The combined study is normal to projects on new location, in a restricted corridor or proposed projects on existing locations where significant new right-of-way will be necessary. A third level study will involve a Categorical Exclusion Evaluation (CEE) to confirm that the proposed project will have no significant environmental effect. Level 3 is appropriate for proposed projects on existing location where no significant right-of-way is necessary and in general to those types of projects in 23 CFR part 771. In any case, these objectives apply to an assessment of alternate corridors, or (assessment of) alternate alignments within specified corridors or (assessment of) alternate scopes of work within a specified alignment. Section 4.0 describes environmental services for a third level study or CEE.

Furnish final capacity, space, type, size, and location requirements; furnish necessary supportive survey and subsurface data, system development data, cost-benefit and life cycle cost analyses (as directed), definitive drawings, outline specifications, and a tentative cost estimate and construction schedule.

Fix and describe the project in terms of its approximate size and character, exact location, system capacities, construction cost and schedule. Confirm same in the form of preliminary working drawings, project manual, specifications, draft bidding schedule, draft design computations, base bid construction cost estimate and a proposed construction schedule.

3.3.2 Services

Furnish those services necessary to refine or extend the work projects from the approved Schematic Design Study, if any. Provide, as applicable, architectural and engineering data, analyses, and report(s), e.g., survey data, permit data, geotechnical and geological engineering reports, hydraulic and hydrologic reports, structural inspection reports, etc. as necessary to develop and submit definitive general drawings or refined schematics and diagrammatic Drawings, preliminary systems development data, outline specifications, a tentative construction cost estimate, and a tentative construction schedule. Ensure that this work will fix and describe the size, appearance, and form of the facility; the interrelationship, size, and character of the systems; and the exact location of

the facility(ies). Project the tentative construction cost estimate to the date proposed for receipt of bids and include (additive) alternates if the estimate exceeds the budget. Derive estimate from current system or unit prices in accordance with a detailed survey of labor and materials.

Give consideration at this time to system development, major material selections, availability of labor and material, construction techniques, sequence, and scheduling; economic trade-offs, safety and maintenance requirements, access to site/facility handicapped accessibility, acoustical and vibration control, energy conservation, environmental pollution, etc. Include in the development of the various systems in this stage detailed assessment of the physical and design features, cost and impact of various systems types and layouts that fit the general solution from earlier stages and compliment the detailed data collection, analyses and reports from this stage as may be necessary to establish minimum or desirable dimensions and capacities.

Produce at this work level: one (1) set of reproducible drawings and three (3) reproducible sets of other material: permit applications, survey book(s), architectural and engineering reports, e.g., geotechnical and geological engineering report, structural inspection report, etc.; cost benefit analysis, lifecycle cost analysis, outline specifications, preliminary construction cost estimate and construction schedule, and design calculations.

In this stage, the first in the development of the working documents furnish those services necessary to prepare, submit, and secure approval of the following material when the parts are 30 percent or more complete:

- 30 Percent Working Drawings, Project Manual and/or Specifications
- Draft Bidding Schedule
- Draft Design Computations
- Base Bid Construction Estimate
- Preliminary Construction Schedule
- Check Prints

3.3.2.1 List of Services

- a) Project Management
- b) Project Meetings
- c) Definition of Design Program, Requirements and Problems
- d) Support Services
- e) Systems Development
- f) Thirty (30) Percent Submission
- g) System Design Directive

3.3.2.2 Description of Services

- a) Project Management. Provide proper project control to insure a quality product on schedule and within budgetary constraints. Provide for oversight of such tasks by an identified project manager who will integrate planning

and control. Consider such tasks to include: provision for project progress reports on a monthly basis; the monitoring, evaluation, and control of in-house personnel and subconsultants, and project, coordination of reviews and approvals by other governmental entities.

- b) Project Meetings. Prepare for and make presentations at Preliminary Design Stage meetings. Include generally:
 - 1) Administrative and Design Start-up Meetings
 - 2) Preliminary "work program" meeting(s) regarding: Special Services e.g., geotechnical and geological engineering investigations, environmental statements and technical support reports etc.
 - 3) Agency Review Meetings
 - 4) County Thirty Percent Review
 - 5) Public and private sector meetings

- c) Definition of Design Program, Requirements and Problems. Define, quantify or isolate the project requirements and problems and formalize them in a design program of project requirements and deficiencies. Consider these functions to include:
 - 4) On-site reconnaissance to identify:
 - the significance and sensitivity of the area and users to the project features to confirm the scope and emphasis of the study.
 - (for supporting studies - environmental and technical) the significance of the area and users to the parameters defining those elements unique to supportive environmental or technical documents.
 - 5) Formulation of project goals.
 - 6) Data collection and analysis to:
 - prepare and submit preliminary work programs for supporting studies.
 - Conduct programming, field and lab work:
 - confirm design program and project requirements: dimensional and performance parameters of facility and spaces or elements thereof, functional interrelationships among spaces or elements, requirements for flexibility or expansion, special equipment or systems needs, and site requirements
 - conduct user studies
 - conduct aerial mapping
 - perform surveying
 - perform environmental monitoring
 - perform traffic studies
 - perform geotechnical and geological investigations
 - research historical records
 - research utility records
 - research right-of-way records

- perform photographic or measurement survey (existing facilities surveys or inspection report)
 - check original design and Drawings
 - Research advanced phases: master Drawings, site analyses and feasibility studies.
 - Analyze and present the data to quantify in printed and graphic form existing conditions and deficiencies, system needs, and functional requirements in:
 - a statement of project requirements and deficiencies, or design program
 - topographic base sheets, and
 - initial environmental documents, technical reports, and user/citizen participation reports - see Section 4.0, Special Services.
- d) Support Services. Furnish services to:
- 1) obtain or complete field surveys of topography and property as necessary to prepare the design, Drawings, construction cost estimate, and specifications for the project. This may include field stakes, references, benchmarks, baselines, control points and monuments, and survey notes. Notes shall be neat, accurate and complete; compile and mark serially.
 - 2) prepare, submit, and secure approval of applications for permits and orders including as directed:
 - Local Applications (for): Permits, as applicable.
 - County Applications (for): Conservation District Soil and Erosion Control Plan Certification.
 - State Applications (for): State Art Commission Permit, Pennsylvania Department of Environmental Protection (DEP) Erosion and Sediment Control Plan Approval, Pennsylvania DEP Water Obstruction Permit, P.U.C. Order.
 - Federal Applications (for): Department of the Army Section 404 Permit, U.S. Coast Guard Permit.
 - 3) perform the Special Service(s) in the RFP see Section 4.0 for a complete description of those services.
- e) Systems Development. Provide in accordance with Section 3.3.2 no later than (4) weeks prior to the 60 Percent Submission the refined architectural, traffic control, civil, structural, mechanical, electrical, landscape, and interior design concepts that you consider will meet design, construction, and maintenance requirements; ensure sufficient detail to permit preparation of definitive and coordinated Drawings, sections, elevations or profiles, and site plans; cost-benefit and life-cycle cost analyses, a refined construction cost estimate and schedule, and outline specifications. Consider this to include:
- 1) coordination of architectural design with engineering systems

- 2) civil (infrastructure) design development necessary to permit tentative sizing, layout and costing of drainage pipes, (bridge) structures, roadway elements, traffic control devices (signals, signs, markings, lighting, channelization); site, roadway and bridge lighting; sewage and water supply and preparation of General Civil Drawings.
- 3) structural design development (buildings and related structures) to permit tentative sizing of structural components, identification of clearances and preparation of general floor Drawings, elevations, site Drawings, sections and line perspectives
- 4) mechanical design development to permit tentative sizing of components and preparation of diagrammatic Drawings
- 5) electrical design development to permit tentative sizing of components and the preparation of diagrammatic Drawings
- 6) landscape design development sufficient to permit identification of ground improvements and tentative contour grading and preparation of general site Drawings
- 7) interior design development sufficient to identify tentative finish materials and "landscaping" and preparation of diagrammatic Drawings

Bind the original, reproducible, clear and legible design development material individually or collectively in a 8-1/2" x 11" protective cover with title sheet and a label on the binder showing the project name and project number. Consider design development material to include: architectural design, geometries, traffic engineering analyses, structural analyses, hydraulic and/or hydrologic analyses, mechanical analyses, electrical analyses, landscaping, sketches and contour maps and interior design layout and selections. Each analysis will include a table of results.

- f) Thirty (30) Percent Submission. Develop and submit the following:
- 1) refined, definitive and coordinated drawings including general plan and elevation or profile sections, site or index maps, line perspectives (as directed) and diagrammatic Drawings.
 - 2) draft, outline specifications to describe an itemized list of the major systems/assemblies/products and tentative material and system selections.
 - 3) draft construction cost estimate in accordance with current system or unit prices escalated to the date of the projected bid opening.
 - 4) draft construction schedule showing the controlling operations on the job, the dependency relationships between them, the duration of each, and the total duration of the job to substantial completion and operational status.
 - 5) draft (system) cost-benefit analyses and (system) life cycle costing analyses considering first cost and annual cost of operation and maintenance.
 - 6) refined design data from the System Development task for civil, structural, mechanical, electrical, landscape, and interior design systems

in sufficient detail to permit sizing and detailing of the facility and to permit the identification of the interrelationship, size, and character of the systems.

Submit a draft of the above documents for the County's advance review before the final Submission.

Furnish one (1) to three (3) sets of the following incorporating the decisions of the County:

- 1) drawings – 1 set
 - 2) outline specifications – 3 sets
 - 3) construction cost estimate – 3 sets
 - 4) construction schedule – 3 sets
 - 5) cost-benefit and life-cycle cost analyses-3 sets
 - 6) "marked-up" preliminary drawings
 - 7) quantity computations – 3 sets
- g) System Design Directive. Furnish services to provide the detailed architectural and engineering design and calculations necessary to establish exact dimensions and capacities. Prepare preliminary, accurate, and coordinated working drawings to show the general outline, dimension and detailed makeup of the facility. Draft the project manual including bidding schedule--with and without prices--and preliminary construction schedule. Consider this work to include:
- coordination of architectural design with the engineering systems for preparation of the preliminary architectural working drawings including specific handicapped accessibility details
 - civil (infrastructure) calculations necessary to size, layout, and cost: drainage, bridge structures, roadways, traffic control devices; site, roadway, and bridge lighting; sewage and water supply facilities, and permit preparation of the preliminary civil working drawings
 - structural (buildings and related structures) calculations necessary to size, layout, and cost structural components, specify clearances and permit preparation of the preliminary structural working drawings
 - mechanical calculations necessary to size, layout, and cost mechanical components, specify clearances and permit preparation of the preliminary mechanical working drawings
 - electrical calculations necessary to size, layout, and cost electrical components, specify clearance and permit preparation of the preliminary electrical working drawings/landscape design necessary to size, layout, and cost landscaping and site furnishings and permit preparation of the preliminary landscaping working drawings
 - interior design necessary to size, layout, and cost interior design elements and permit preparation of the preliminary, interior design working drawings.

Bind the original, reproducible, clear and legible design computations individually or collectively in an 8-1/2" x 11" protective cover with title sheet and a label on the binder showing the project name and project number. Design computations may include: geometric calculations, traffic engineering calculations, structural calculations, hydraulic and/or hydrologic calculations, sanitary calculations, mechanical calculations, electrical calculations, landscaping calculations, and interior design notes. Include with each set of calculations a summary table of results.

3.3.3 Approach and Completeness

Subscribe to a technical approach or work program in this stage that is at least as detailed as the following:

- a) On-Site Reconnaissance. Identify the significance of and sensitivity of the area to features of the project to determine the scope of study and major emphasis of study. Accommodate site visits to confirm or view project features as implementation proceeds.
- b) Field Work. Perform aerial mapping and/or survey, traffic studies, historical, confirm utility information, i.e., type, size and location, and research right-of-way records. Provide aerial mapping and/or survey, utility and R/W research; confirm original designs and Drawings, research advanced phases, etc.
- c) Coordination and Consultation. Review and consider suggestions of interested parties such as local, county, state, or federal government entities, private companies, and concerned users, citizens and groups. Include informal efforts to comply with municipal ordinances, if any.
- d) Architectural and Engineering Services. Prepare topographic mapping; complete studies and design program; perform analyses and do design; prepare report, drawings and preliminary project descriptions; prepare presentations for field view(s) and meetings, and prepare minutes or testimony thereof. Prepare: architectural or engineering data, reports, or analyses related to the various systems comprising the project; cost benefit analyses, life-cycle cost analyses, outline specifications, preliminary working drawings, the draft project manual, a draft bidding schedule, draft design computations, a base bid construction cost estimate, a preliminary construction schedule; and meeting related presentations and minutes and general or diagrammatic architectural and engineering Drawings.
- e) Special Considerations. As directed.

3.3.4 Description of Deliverables

Provide deliverables no less complete in form and content than as follows:

- a) Permits and Orders
 - 1) Local Permits or Approvals: as directed

- 2) County Permits or Approvals: County Conservation District Soil and Erosion Control Plan and Narrative
- 3) State Permits or Approvals:
 - State Art Commission
 - Drawings
 - Narration
 - Pennsylvania DEP Erosion and Sediment Control Package:
 - Plan:

Construction Drawings as available at the 30% stage or later to show: details of erosion and sedimentation features, with special details and specifications for seeding, etc., as well as facility plan and elevation, and stream plan and elevation. U.S.G.S. or other topographic maps to show: approximate required R/W, slope lines, drainage divides, erosion and sedimentation plan features, and other drainage elements involved.
 - Narrative:
 - Introduction: description of project, summary of sediment and erosion control, and schedule
 - Review of Existing Conditions: Topographic features and soils
 - Assessment: Hydrologic and Hydraulic analyses
 - Conclusions and Recommendations: program and staging of earthmoving activities, and temporary and permanent control measures; maintenance program
 - Pennsylvania DEP Water Obstruction Permit (including flood plain and storm water considerations)
 - General Plan and Elevation Sheet
 - Site Plan
 - Facility and channel - plan and elevation
 - Hydraulic and Hydrologic Report
 - Letter of approval from Conservation District
 - Application for Water Obstruction Permit
 - Pennsylvania DEP Sewage Permit
 - Pennsylvania DEP Public Water Supply Permit
- 4) Federal Permits
 - Department of the Army Section 404 Permit
 - Current Version of the Application for a Department of the Army Permit Engineering Form 4345
 - Plan:
 - Vicinity Map
 - Plan and Elevation or Section Views
 - Notes
 - U.S. Coast Guard
 - Permit Application
 - Plan:
 - Vicinity map

- Plan and elevation showing navigation opening and navigation clearances
- b) Survey Books
 - 1) Identification: Book number, surveyor's name, project name, main office location
 - 2) Survey data, sketches, dimensions, computations, etc.
- c) Aerial Mapping. In accordance with current guide specifications for Aerial Surveys and Mapping.
- d) Architectural and Engineering Reports
 - 1) See Section 4.0, Special Services
 - 2) Other:
 - Table of Contents
 - List of Figures and Photographs
 - List of Tables
 - 1.0 Summary, Conclusions and Recommendations
 - 2.0 Review of Related Data and Studies
 - 3.0 Assessment of Alternates Appendixes
- e) Economic Analyses
 - 1) Benefit-Cost
 - 2) Life-Cycle Cost
- f) Outline Special Provisions or Supplementary Conditions and Specifications
 - 1) Comply with latest applicable specifications guidance for federal-aid or architectural projects.
- g) Design Data
 - 1) Geometrics with summary table
 - 2) Systems development data with summary table of results
 - 3) Quantity calculations with summary table of results
- h) Preliminary-Working Drawings
 - 1) Architectural
 - Cover Sheet
 - General Site Plan: Topography, proposed contour grading and drainage, building locations, infrastructure layout
 - Plan Sheet(s)
 - Elevation Sheet(s)
 - Sections and Detail Sheet(s)
 - 2) Civil
 - Roadway Facility
 - Title and Index Sheet
 - Typical Section - General Notes Sheet

- (Optional) Summary Sheet(s): pay items
 - (Optional) Tabulation Sheet(s) pay items by construction type
 - Detail Sheet(s)
 - Special Detail Sheet(s)
 - Intersection Contour Grading and Drainage Sheet(s)
 - Cross-Section Sheet(s)
 - Bridge Facility
 - Title and Index Sheet
 - General Plan Sheet
 - (Optional) Summary Sheet(s)
 - (Optional) Tabulation Sheet(s)
 - Detail Sheet(s)
 - Staking Sheet(s)
 - Foundation Sheet(s)
 - Traffic Control Facility
 - Traffic Signal Plan
 - Title and Index Sheet
 - (Optional) Summary Sheet(s)
 - Plan Sheet(s): (for) construction items and operational details,
 - Special Detail Sheet(s)
 - Signing and/or Sign Lighting Plan
 - Title and Index Sheet
 - (Optional) Summary Sheet
 - (Optional) Tabulation Sheet(s)
 - Detail Sheet(s)
 - Layout Sheet(s)
 - Structural Plan and Elevation Sheet(s)
 - Fabrication Sheet(s)
 - Traffic Control Plan
 - Staging Sheet(s): Devices and Markings, Layout and Temporary Construction
 - Site, Road or Bridge Lighting Facility
 - Title and Index Sheet
 - (Optional) Summary Sheet(s)
 - Detail Sheet(s): General Notes, Wiring Schematics, Detail Drawings, Schedules for foundations, poles, and fixtures
 - Plan Sheet(s): Layout, Legend for construction items, Cable Runs - number of wires and sizes, Mounting Heights, Tabulation of Quantities
 - Structural (Buildings and Related Structures) See Item a) 2) Bridge Facility, above
- 3) Mechanical
- Cover Sheet
 - Detail Sheet(s): Floor Drawings - Schematic Diagrams - Sections or Elevations - Equipment Schedule

- 4) Electrical
 - Cover Sheet
 - Detail Sheet(s) Legend, Floor Drawings, Sections or Elevations, Diagrams, Schedules, Special Drawings
- 5) Landscape
 - Cover Sheet
 - Typical Section Sheet
 - Summary and Tabulation Sheet
 - Detail Sheet(s): Symbols, Plant List, Plant Materials

- i) Project Manual, if required. Guidance to be provided by ACDPW.
- j) Bidding Schedule.
- k) Design Computations-as directed.
- l) Construction Cost Estimate- Estimate dated and signed
 - 1) Use current required format for County or Federal, Federal/State, and State funded projects
 - 2) Provide supportive statement regarding detailed survey of labor and material and cost data sources
- m) Construction Schedule. See Exhibit 4 regarding Instructions.

3.4 FINAL DESIGN STAGE

3.4.1 Objectives

Develop a complete, accurate, and coordinated set of documents: construction drawings, R/W condemnation drawings, project manual, specifications, dated construction cost estimate; and construction schedule.

3.4.2 Services

Furnish those services necessary to prepare and submit the bid documents: 100 percent complete working drawings, project manual, specifications; provide other supportive material: construction cost estimate and schedule, and design calculations. Submit the specified number of complete sets of the bid documents, updated estimate, schedule, design computations; and one (1) CD-ROM or DVD containing the set of the Drawings.

3.4.2.1 List of Services

- a) Project Management
- b) Project Meetings
- c) Sixty (60) Percent Submission
- d) Ninety-Five (95) Percent Submission
- e) One Hundred (100) Percent Submission (Bid Documents and Supportive Material)
- f) Reproduction

3.4.2.2 Description of Services

- a) Project Management. Provide project control to ensure a professional product on schedule and within budgetary constraints. Provide for oversight of such tasks by an identified Project Manager with integrate planning and control. Consider such tasks to include: provision for project progress reports on a monthly basis, the monitoring, evaluation, and control of in-house personnel and subconsultants, and project coordination of reviews and approvals by other governmental entities.
- b) Project Meetings. Prepare for and make presentations at Final Design Stage Meetings. Include generally:
 - 1) Agency Review Meetings
 - 2) County Sixty (60) Percent Review
 - 3) County Ninety Five (95) Percent Review
- c) Sixty (60) Percent Submission. Develop and submit in a form in accordance with Section 3.4.4:
 - 1) three (3) sets of prints of sixty (60) percent complete, accurate, and coordinated working drawings showing the general outline, dimensions, and detailed makeup of the facility

- 2) three (3) sets of the draft project manual and/or specifications
 - 3) three (3) sets of the Draft Bidding Schedule
 - 4) two (2) sets of design calculations as detailed above
 - 5) three (3) sets of the Base Bid Construction Cost Estimate on a current "unit price" basis with material, labor, and equipment components and an additional amount for indirect costs, sales tax on materials, and profit for the job. The estimate shall include as directed one or more deduct alternates for possible acceptance in the bidding schedule as listed without omission of any intermediate numbers
 - 6) three (3) sets of the proposed construction schedule prepared in accordance with Exhibit 4
 - 7) check prints from the 30% Submission - if any
The County will review and return to the Consultant one (1) marked-up set of items 1) - 7) above. At the Consultant's request, the County will schedule and conduct a meeting to discuss these products.
- d) Ninety Five (95) Percent Submission
- 1) three (3) sets of prints of ninety five (95) percent complete, accurate, and coordinated working drawings showing the general outline, dimensions, and detailed makeup of the facility
 - 2) three (3) sets of the draft project manual and/or specifications
 - 3) three (3) sets of the Draft Bidding Schedule
 - 4) two (2) sets of design calculations as detailed above
 - 5) three (3) sets of the Base Bid Construction Cost Estimate on a current "unit price" basis with material, labor, and equipment components and an additional amount for indirect costs, sales tax on materials, and profit for the job. The estimate shall include as directed one or more deduct alternates for possible acceptance in the bidding schedule as listed without omission of any intermediate numbers
 - 6) three (3) sets of the proposed construction schedule prepared in accordance with Exhibit 4
 - 7) check prints from the 60% Submission - if any
The County will review and return to the Consultant one (1) marked-up set of items 1) - 7) above. At the Consultant's request, the County will schedule and conduct a meeting to discuss these products.
- e) One Hundred (100) Percent Submission (Bid Documents and Supportive Material). Finalize and submit the following material in accordance with the approvals at the Preliminary Design Stage:
- 1) Bid Documents exclusive of portions for insertion by County.
 - One Hundred (100) percent complete, accurate, and coordinated set of mylar drawings.
 - Project Manual for 100% locally funded projects
 - Specifications and/or Special Provisions
 - Bidding Schedule
 - Electronic copies of all above documents, as required.

2) Other Supportive Material

- Final construction cost estimate (2 sets). Original, updated, signed and dated final estimate (update it where the Ninety Five Percent (95%) estimate precedes it by 4 weeks or more).
- Original construction schedule (2 sets) prepared in accordance with Exhibit 4 (instructions).
- Original computations (2 sets) with the initials of both computer and checker.
- Check prints from the previous Submission.

The County will check items 1) and 2) above and return the original drawings, complete project manual, and specifications and/or special provisions where you are to provide copy services (for 100% County funded projects).

- f) Reproduction. Provide copy services to submit the specified number of complete sets of the bid documents, updated estimate, schedule, design computations, as required in Section 3.4.2 above.

3.4.3 Approach and Completeness

Subscribe to a technical approach or work program in this stage no less complete than as follows:

- a) Coordination and Consultation. Review and consider suggestions of involved parties such as local, city, state or federal government entities, private companies and concerned citizens groups.
- b) Architectural and Engineering Services. Prepare, reproduce (as requested) and submit the final bid documents, drawings, project manual, specifications and/or special provisions and supportive material i.e., final estimate, construction schedule, and computations.

3.4.4 Description of Deliverables

Provide work products addressing the assignment in the same basic form and content as outlined in the Preliminary Design Stage.

3.5 RIGHT-OF-WAY STAGE

3.5.1 Objectives

Provide for Right-of-Way Drawings: Condemnation Drawings, Plot Drawings, and Viewers Drawings necessary for the County to acquire required right-of-way by gift, agreement, purchase, and/or condemnation proceedings.

3.5.2 Services

Furnish those services necessary to prepare Right-of-Way Drawings and Property Plats for the determination of property damages and acquisition of property by amicable settlement, deed or deed of easement, Right-of-Entry, or condemnation proceedings. Ensure that development of the Right-of-way Drawings reflects the same degree of accuracy as that of the construction working drawings, and is coordinated with the construction drawings, and is consistent with right-of-way information on existing Drawings for adjacent facilities, if any.

Produce one (1) complete set of right-of-way drawings in the following form and content in ink on 3 mil double matte mylar, pre-titled standard size, 22" x 34" or 24" x 36" Department sheets, as directed.

Standards for plan development and required information on the Drawings will be in accordance with PennDOT Design Manual 3 or approved Department of Public Works requirements for Architectural and Civil Work.

The Department's PUC and R/W Supervisor and the County Law Department will undertake formal condemnation proceedings and acquisition.

3.5.2.1 List of Services

- a) R/W Investigation
- b) Field Investigation
- c) Drawings Preparation
- d) Board of Viewers' Drawings

3.5.2.2 Description of Services

- a) R/W Investigation. Obtain copies of deeds, applicable subdivision or other plot Drawings, tax records, and lot and block information as necessary to define property lines and current ownership. Confirm ownership no more than 30 days prior to submittal of the plan.
- b) Field Investigation. Contact residents for purposes of verifying ownership, location of property lines, corners, easements, etc.
- c) Drawings Preparation. Perform engineering and drafting work necessary to develop, plot, and trace right-of-way limits and details and plat Drawings,

and reproduce and assemble the drawings. Consider this to include preparation of basic property plats, plotting property lines, plotting cut and fill slope lines to estimate R/W take lines, transposing R/W take lines to property plots and computing/checking areas of take, inking slope limits, property lines and R/W take lines on tracings, preparing and inking cover sheet and typical section sheet, transposing existing and relocated utilities and easements to tracings, attending a plan check meeting and correcting and returning the drawings in accordance with comments received at the plan check meeting.

- d) Board of Viewers' Drawings. Prepare and submit Board of Viewers' Drawings that the County Law Department will present to the Board of Viewers for right-of-way claims that go to litigation.

3.5.3 Approach and Completeness

- a) On-Site Reconnaissance. Identify the significance of and the sensitivity of the area to the project Right-of-Way requirements to determine the scope and major emphasis of the condemnation drawings.
- b) Field Work. Contact residents for purposes of verifying ownership, location of property lines, corners, and easements. Research records to obtain copies of deeds, applicable subdivision or other plot Drawings, tax records, and lot and block information.
- c) Coordination and Consultation. Review and consider suggestions of interested parties such as local, county, state or federal government entities, concerned citizens and groups, and claimants.
- d) Architectural and Engineering Services. Prepare condemnation drawings with Plat Drawings and Board of Viewers' Drawings and compute/check areas of take, etc.
- e) Special Considerations. As directed.

3.5.4 Description of Deliverables

- a) Condemnation Drawings
 - 1) Cover Sheet
 - 2) Typical Section Sheet(s)
 - 3) Detail Sheet(s)
 - 4) Property Plat(s)
- b) Board of Viewers' Drawings (22" x 34" or 24" x 36")
 - 1) Title Area
 - 2) Deed Information
 - 3) Drawings

3.6 UTILITY STAGE

3.6.1 Objectives

As appropriate, ascertain, show, and specify existing and proposed utility facilities on the construction and right-of-way drawings and in the project manual in accordance with the necessary relocation or adjustments of the company. Make arrangements with the company or companies to relocate facilities in a manner that will not impede the construction of the project.

3.6.2 Services

Furnish those services necessary to: ascertain, verify, show, and specify type, size, and location of existing utilities and proposed utility adjustments on the drawings and in the project manual in conformance with information from the company(ies). Establish information and adjustments for representation on/in the drawings and project manual by solicitation and receipt of verification drawings from the companies and subsequent meetings with the companies to confirm the same.

3.6.2.1 List of Services

- a) Utility Verification and Meetings
- b) Utility Drawings (Marked Prints) and Specifications
- c) For Federal and State funded projects, follow the requirements of PennDOT Publication 16 (Design Manual 5), including generating form D-419.

3.6.2.2 Description of Services

- a) Utility Verification and Meetings. Obtain utility information on the latest available Drawings to verify the type, size, and location of existing facilities. Initiate and lead meetings as may be necessary to spot utilities, exchange information (re: the engineering characteristics of facilities, future Drawings for the area, relocation adjustment scheduling, utility problems) and conduct the final review of proposed relocations in accordance with utility information on updated drawings or "hard drawings". Said drawings should show existing facilities and adjustments and/or relocations (by symbol) and alignment (profile(s)) of crossings over or under the facility, and the method and type of attachment to the facility, if necessary. For Federal and State projects, included with this task is collecting PennDOT form D-4181 and completing PennDOT form D-419.
- b) Utility Drawings (Marked Prints) and Specifications. Clearly and accurately mark on the drawings and specify in the project manual existing, proposed and temporary utility facilities. Indicate type, size, location, and necessary operating and design features. Unless directed otherwise, the Project Manager will be responsible for grant applications and utility agreements with grant agencies, authorities, or companies and associated Board Actions.

3.6.3 Approach and Completeness

Subscribe to a technical approach or work program in this stage no less complete than as follows:

- a) Coordination and Consultation. Review and consider suggestions of involved parties such as private utility companies, and municipalities or authorities owning utility facilities.
- b) Architectural and Engineering Services. Conduct meeting presentations and prepare minutes; obtain information; draft on the mylars and specify in project manual the necessary relocations or adjustments in accordance with the company's/ municipality's/ authority's design, and as directed, provide preliminary utility estimate packages and utility clearance packages for reimbursement purposes.

3.6.4 Description of Deliverables

- a) Marked Verification Drawings
- b) Marked Hard Drawings
- c) Minutes of Utility Meetings
- d) (As Directed) Estimate and Clearance Packages
 - 1) Preliminary Estimate Package
 - 2) Utility Clearance Package

3.7 BIDDING STAGE

3.7.1 Objectives

Provide pre-bid assistance and if requested evaluate the bids and provide a report regarding the responsibility and experience of the apparent low bidder.

3.7.2 Services

Furnish those services or provide assistance to the County as necessary to obtain bids, award, process the contract and issue a Notice to Proceed. Consider the products produced at this work level to include: Addenda and, as directed, a report of your bid evaluation, and recommendation, and other administrative correspondence, consulting, research, etc.

3.7.2.1 List of Services

- a) Authorization to Advertise
- b) Advertisement and Bid Opening
- c) Award
- d) Contract
- e) Monitoring/Surveillance Plan and Pre-Construction Meeting

3.7.2.2 Description of Services

- a) Authorization to Advertise. The Project Manager and Contract Supervisor will secure approval to advertise for bids. Provide assistance ONLY as directed under this item.
- b) Advertisement and Bid Opening. If/as directed, prepare agenda, chair, and prepare minutes for the Pre-Bid Conference. In accordance with Department's requirements, prepare technical addenda as the Director may request to clarify ambiguities found in the bidding documents. The Project Manager and Contract Supervisor will work with PennDOT as required for Federally and State-funded projects to distribute the bid documents, accommodate any postponement of the bid opening, and issue addenda. For 100% County projects, the Consultant, if his estimate of construction costs--with inflation to the date of the bid opening--is lower by five percent (5%) of the lowest acceptable bid, may be required to revise the drawings and specifications at his own expense to reduce the construction cost to no more than the inflated estimate plus five percent (5%).
- c) Award. If directed, prepare bid evaluation, tabulation and recommendation. The Project Manager and Contract Supervisor will secure, as necessary, supportive data from the Contractor and grant agency approvals; and prepare an Executive Action for authorization to award the contract. The Executive Action to award will attach the Bid Tabulation and Executive Action for authorization to advertise. Provide assistance ONLY as directed.

- d) Contract. Provide assistance as requested in preparing the contract documents for the Contractor, responses to Contractor's bid questions, and addenda to the bid.
- e) Monitoring/Surveillance Plan and Pre-Construction Meeting. Prepare and submit a plan for construction monitoring or surveillance. Before the start of construction, review and recommend acceptance of submittals: Schedule, Traffic Control Plan, Shop Drawing Schedule, and List of Permits and Approvals; participate in and (if no CM) prepare and distribute the minutes of the Preconstruction Meeting; prepare and distribute work flow diagrams to own Project personnel before work begins, and (if you have to have a resident on-site) organize field office.

Synthesize the Construction Monitoring or Surveillance Plan from an analysis of: construction items, standards for monitoring or inspecting construction, required material, quality control and acceptance programs, and the number of and experience qualifications for the personnel necessary to carry out the Plan. Include in the Plan:

- 1) a list of operations and related inspection standards;
- 2) a list of material and equipment for quality control and acceptance sampling and testing. Cite specific test methods and frequencies;
- 3) the staff that will comprise your portion of the construction team: the name of the Resident Project Representative, if any, that you will assign to the project full time as the Construction Architect/Engineer or Inspector-in-Charge; the name of your Project Representative or Monitor and others to have a role in Project; the number of subordinate inspectors, if any, for assignment to the project; the number of qualified inspectors, if any, available to provide inspection at off-site material plants as required; a Project Staffing Chart (see Exhibit 5) to depict for the duration of the job by operation: the proposed surveillance, and inspection staff, if any; working days and a summary or digital histogram in man-days for the monitoring/surveillance staff and inspection staff. Attach the resumes of the Construction Engineer and Inspector-in-Charge or Project Representative to document the designees, qualifications.

3.7.3 Approach and Completeness

Subscribe to a work program in this stage no less complete than as follows:

- a) Coordination and Consultation. Review and consider suggestions of interested parties such as local, county, state, or Federal government entities or private companies.
- b) Architectural and Engineering Services. Prepare addenda as necessary and, as directed, a report of bid evaluation and recommendation, the bid tab and other administrative correspondence, research, etc.

3.7.4 Description of Deliverables

Provide work product(s) in the form and content as follows:

Addendum

- Revisions to Drawings
- Monitoring/ Surveillance Plan
- Organization
- Duties
- Schedule

3.8 CONSTRUCTION STAGE

3.8.1 General

To effectively implement construction projects undertaken by this Department, the Department may establish a Construction Surveillance and Management Plan if required. The purpose of establishing a plan is to affect a professional construction surveillance/management approach to the construction process and to retain within the Department responsible charge and direct control of the work from the opening of the bids to final payment.

Construction surveillance/management includes three possible distinct identities (organizations): the Owner, the Architect or Engineer and where appropriate the Construction Manager. The Owner's key players are the Project Director (the Department's Director) and the Project Manager (PM). The Architect's or Engineer's key players are the Architect (A) or Engineer (E) and Construction Monitor (A-M or E-M) or Construction Inspector (A-I or E-I). The Construction Manager's (CM) key players are the Construction Administrator (CM-A) and Construction Monitor (CM-M) or Construction Inspector (CM-I). The number of people in the team varies with the work load (nominally where the Owner is concerned because most if not all his supportive staff are part of the team through interface management regardless of job size) as will the array of skills and internal relationships. The following three paragraphs set-forth the general roles and attendant responsibilities, and qualifications of the organizations and individual players.

The Director represents a variety of personnel and staff skills and special knowledge. He has sole authority for decision by the owner in matters of cost, scope, schedule and quality. He makes the owner's decision at key points as the construction proceeds. He resolves differences of opinion between the PM, CM, and Architect or Engineer. The Director is responsible to and reports to the County Manager.

The PM is the Owner's pilot, voice and presence on the job. He requires detailed and current construction method and contract management expertise where the Owner's experience and practice are concerned as well as the industry as a whole. The PM is the Owner's specialist who pilots the project through processes of the Department. The PM is responsible to and reports to the Manager of the Construction Division. Direct job correspondence to the Director to the attention of the PM with copies to as applicable the Architect or Engineer, Construction Manager, and Contractor.

The Architect or Engineer is the functional leader of his organization; interpreter, reviewer, and advisor to the Owner. He requires a working knowledge of design and construction practices, construction materials, specifications, and contract provisions. His responsibility in cooperation with the PM and CM, if any, is to assure that workmanship and materials are in fact in conformance with the requirements/intent of the drawings and specifications. The Architect and Architect's Monitor or Engineer and Engineer's Monitor are responsible to the Director through his Chief Construction Engineer's designated PM.

On civil (heavy) work the E-I, as the Engineer's on-site eyes and ears, is responsible for the observance of the work and the recordation/documentation of it. He has a duty to see that details are in accordance with the Drawings, that the requirements of the specifications have been met, that workmanship and construction practices are equal to or in excess of standards called for in the contract documents, that the Director notes and documents deficiencies (including lack of progress) to the Contractor, and that the Contractor follows-up on corrective action. When the CM is part of team, the A-M's random surveillance role is separate from and not a substitute for the CM's regular on-site surveillance and documentation of the work. The A-M has a duty to visit the site at appropriate intervals to familiarize himself with the quality of the Work to determine in general if the Work has or will meet the design intent. The Architect or Engineer requires a working knowledge of construction practices, construction materials, specifications, contract provisions, field administration, and source documentation.

The Construction Manager (CM) functions as an independent arm of the Owner, its expediter, on-site troubleshooter, and independent assurance evaluator. He requires detailed and current construction cost and methods expertise. His responsibility in cooperation with the PM, Architect or Engineer and A-M/E-M or A-I/E-I is to achieve and maintain acceptable documentation, quality, time schedule, and total cost. His role on civil (heavy) work is separate from and not a substitute for the E-I's full time on-site surveillance and documentation of the work. His regular on-site surveillance role on architectural (building) work is separate from and not a substitute for the Architect's or Engineer's random surveillance of the work. In this role the CM is responsible for the observance of the work and the recordation/documentation of it. His duty is to confirm that work and details are in accordance with the Drawings and Specifications and acceptable standards of practice; (to) notify the Contractor of and document deficiencies in the work and (to) monitor remedial measure. The CM is responsible to and reports to the Director through his Chief Construction Engineer's designated PM. See Part 4.6, Construction Management, for the description of these services.

The Director, PM and other "Owner" participants retain responsible charge and direct control by controlling the points of interaction or interface events between various elements of the construction project, products that make it up, and the organizations involved. Interface events are those which denote a change of responsibility or a point of interaction between two or more elements of the WBS in the task/responsibility matrix. In other words "interface management" consists of identifying, documenting, scheduling, communicating, and monitoring interface events related to both the product (facility components) and the project. Project interfaces in construction link preceding work with the following activity and include: change of responsibility interfaces existing when one task is completed and the result is sent to another individual for accomplishment of the following task (for example, a current estimate is completed by the CM and sent to the PM for his review); "management interfaces" exist where important management decisions, approvals or other actions will impact the project (for example, the Director's approval and signature on a change order initiates the County Manager's authorization of expenditure of funds).

3.8.2 Objectives

Ensure that the project is completed in accordance with the design intent of the drawings and specifications and in accordance with the contract between the County and the Contractor.

3.8.3 Services

The Description of Services which follows has been written to support/reinforce the complementary roles of the Architect or Engineer and the Construction Manager, if any. When the team includes no CM the Project Manager may absorb as appropriate the specified services in Part 4.6 for the CM.

3.8.3.1 List of Services

- a) Construction Planning and Scheduling Services
- b) Technical Services
- c) Contract Administration Services
- d) Office Services
- e) Inspection/Observation Services

3.8.3.2 Description of Services

- a) Construction Planning and Scheduling Services. Provide weekly written reports describing the progress of the work. Indicate the contractor's compliance with the progress schedule, the design intent, and the status of your review of Shop Drawings and other submittals. Participate in the periodic Progress Meetings to review the overall project status and problems. Prepare and distribute minutes except where CM is part of team, and update and submit your Progress Report.
- b) Technical Services. Identify the need for technical services and advise the CM/PM accordingly. Perform or cause to be performed technical services outlined in Part 4.6. Where Record Drawings are concerned, from an accurate record of field conditions and contractors annotated Drawings, prepare Record Drawings on the original tracings of the Drawings.
- c) Contract Administration Services. In the capacity of the Engineer, monitor administration of the contract and serve as the County's Resident Project Representative and liaison person during construction. In the capacity of the Architect, monitor construction to confirm that work is in general accord with the design intent.
 - 1) Monitor the project progress, extent of construction, and quality of completed work to confirm that construction is in accordance with the design intent and contract documents. Document compliance in a records system with source documentation per below. Maintain the records system to permit field audits during the course of the project as well as complete audits after final payment. Ensure system auditability

through proper cross references between payment documentation and dated source documents showing a clear audit trail from one to the other. Identify work items on source documents by Item Numbers and/or Description per the bid tabulation sheets, or by the nomenclature in Schedule of Values. Consider source documentation to include: Field Inspectors Diaries, if any, or Field Log; Field Survey Book; Item and Calculation Book or Application for Payment Book; Master Diary/Daily Report or Log; Material File; and Record Drawings.

- 2) Assist the CM/PM and contractor(s) in understanding the intent of the contract documents. Explain the use of new materials, novel applications of standard materials, or application of unique design concepts.
- 3) Communicate with the Contractor working principally through the CM/PM and Contractor's project architect/engineer and on-site superintendent;
- 4) Note conditions which may cause construction delays; keep the Construction Manager /Project Manager aware of such conditions; and initiate changes in the construction schedule as necessary. Be cognizant of (the arrival of) material and equipment on the job site. Monitor submittals via a Submittal Log to ensure that you conduct reviews expeditiously and that your acceptances are timely.
- 5) If/as directed, confirm the Contractor's compliance to wage rate, DBE, MBE and Equal Opportunity Employer (EEO) provisions by field checks.

d) Office Services.

- 1) Maintain orderly files and source documents (at site if providing resident services) including a Field Book or Field Inspector's Diary, Field Survey Book, Item and Calculation Book or Application for Payment Book, Daily Report Book or Master Diary or Log, Material File, Record Drawings, correspondence, reports of job conferences, shop drawings and sample Submissions, reproductions of original contract documents including Addenda, Change Orders, Field orders, additional drawings issued subsequent to the execution of the contract documents, and other project related documents. Also maintain (at site if acting in Resident's capacity) a file containing the names, addresses, and telephone numbers of contractors, subcontractors, and major suppliers of equipment and materials.
- 2) Record in Daily Report Book or Master Diary/Log: project progress, the contractor's staffing, site conditions, data relative to questions of extras or deductions, equipment and material on-site, project activities, decisions, general observations, and notes on test procedures. The Daily Report Book or Master Diary/Log of events and conditions will serve as a record to aid in verification of estimates, project construction, schedules and Record Drawings. If Resident, also note the working hours for contractors' staff and weather conditions, site visitors and daily activity in Daily Report and Diary.

- 3) Review submissions of the contractor and any special consultants or technical agencies to ensure that submissions meet the requirements of the contract documents. More specifically, receive, log, review and approve and/or secure approval of contractor's submittals including subcontractor and supplier lists, shop drawings, product data, samples, the results of tests and inspections and other data which contractor is required to submit, for conformance with the design concept of the project and compliance with the information given in the contract documents. For structural work, perform the following services in connection with shop drawings for fabricated structural steel, pre-stressed concrete beams or other pre-stressed structural members, metal railings, drainage piping systems, scuppers and downspouts, reinforced elastomeric expansion dams, armored preformed neoprene compression dams, bearing assemblies and other superstructure components:
 - Check the fabricator's geometrics for conformance to principal dimensions shown on the Drawings. Consider this check not to exclude the check of detail dimensions.
 - Check splices, joints and connections for conformance with intent of the Drawings and Specifications.
 - Check material connections, splices and structural welds for conformance with the Drawings and Specifications. Check calculations incidental to pre-stressed concrete beams and/or other fabricated pre-stressed members. These calculations usually cover unbonding, strand pattern and/or force variations, draping, and occasional redesigns for forces on and eccentricities of members to suit fabrication facilities and methods.
 - Confirm that the structure is detailed to provide the camber required by the Drawings, or, in the case of pre-stressed beams, that the camber shown on the shop drawings reflects the plant's experience; check strand and reinforcement details, draping arrangements, unbonding, insert location and other pertinent items.
- 4) Consult with the Construction Manager/Project Manager with regard to any case where it seems advisable or necessary to make a major change in material or type of detail from that on the Drawings.
- 5) Consult with the Construction Manager/Project Manager when you detect errors and/or omissions in the Drawings during the process of checking the shop drawings.
- 6) Determine the acceptability of substitute materials and equipment proposed by the contractor(s), and receive and review (for general content as required by the Specifications) maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection which the contractor is to assemble in accordance with the Drawings and project Specifications.
- 7) Consider and evaluate the Contractor's suggested modifications to the Drawings and Specifications and make recommendations to the

Construction Manager/Project Manager with consideration to cost and schedule impacts.

- 8) On unit price contracts, prepare and submit or review and accept Current Estimate on County provided form. On other types of contract, review and accept Contractor's Application for Payment. See Exhibit 11 to visualize the payment process.
- 9) Submit data necessary for preparation of and review and sign Change Orders. See Exhibit 10 which illustrates the Change Order process.

Consider the following criteria as a basis for acceptance of a Change Order:

- Required change due to design errors or adjustments
- Minor changes due to differences in estimated versus actual quantities
- Major changes with or without design adjustments
- Proper method of payment:
 - Additional
 - Extra
 - Force account work

- e) Inspection/Observation Services. Observe and record the quality of the work, construction procedures and completed work. More specifically:
 - 1) Observe the work in progress and document it in source documentation to record project progress and conformity to contract requirements.
 - 2) Note compliance to the Traffic Control Plan. Consider 67 PA Code, Chapter 203 as the standard to traffic control where vehicular conflicts not covered in the Traffic Control Plan are identified. Ensure that the Field Book/Field Inspector's Diary indicates compliance or non-compliance to the Traffic Control Plan. In the latter case provide written notification to the CM/PM regarding deficiencies and necessary corrections. The CM/PM will inform the Project Director and the Contractor of the deficiencies and necessary corrections as well as any penalties involved.
 - 3) As a witness note quality control sampling methods, tests, and personnel and compliance to requirements in the project specifications. Confirm that the contractor has taken necessary steps to ensure that material samples are representative of the material used.
 - 4) Notify the contractor/inform the CM/PM of any work that does not conform to the Drawings and Project Specifications, or inspections/tests criteria. Advise the Construction Manager/Project Manager of appropriate corrective action and of any special testing or inspection that may be necessary.
 - 5) Note or, if resident on-site, maintain an accurate log of completed utility work for possible use in verification of completed utility relocation costs.
 - 6) If resident on-site, accompany visiting inspectors or engineers representing public agencies or others having an interest in the Project

and record the outcome of these inspections to the Construction Manager/Project Manager.

- 7) Participate in periodic job site meetings as necessary with the contractor and subcontractor to review day to day requirements and problems, and (if no CM) prepare and circulate copies of the minutes.

3.8.4 Approach and Completeness

Your contribution to the construction team shall be a technical approach or work program in this stage no less complete than as set forth below. Section 3.8.2 describes individual responsibilities.

- a) Preconstruction Operations. Provide a Plan for Construction Monitoring/Surveillance founded on identified quality control, staffing, schedule and budget requirements; if no CM is on team, present job requirements at the Pre-Construction Meeting and prepare minutes of the Meeting.
- b) Field Architectural and Engineering Services. Observe construction operations and tests; provide technical services as directed; monitor and inspect as necessary to determine conformity to the Specifications, and maintain source documentation, e.g., Field Diary(ies) or Logs(s), the Field Survey Book(s), Item and Calculation Book or Application for Payment Book, Master Diary/Daily Report, material record file, and Record Drawings for control, measurement, acceptance, payment and claim purposes.
- c) Office Architectural and Engineering Services. Provide documentation, records, consultation and reviews to ascertain contract compliance and acceptability of work; check construction/shop drawings, review tests of materials and equipment; prepare current progress reports and estimates, and orders for additional, extra or force account work.

3.8.5 Description of Deliverables

The construction team shall furnish work products in the following form and content: Section 3.8.2 sets forth deliverables.

- a) Source Documentation
 - 1) List of Source Documents
 - Field Diary/Book or Field Log
 - Field Survey Book
 - Item and Calculation Book or Application for Payment Book
 - Daily Report/Master Diary or Master Log
 - Project Material Record File
 - Record Drawings
 - Plant Documentation and Records
- b) Description of Source Documents
 - 1) Field Diary/Book or Field Log. Show the Book or Log Number, name of field person, Project name(s), and location of the main office on the front

cover. Number the pages with the initial entry on each page. Specify in your entries the following data:

- type(s) of operation(s) in progress and limits
- labor and equipment of contractor and subcontractors for each operation
- details regarding conditions etc. especially those that could result in litigation
- reference to other source documents as necessary

Reference the Item Book or Application for Payment Book or other source documents that tie into the Field Diary/Book or Log on any entry.

- 2) Field Survey Book. Show the book number, the surveyor's name, the project name, and the main office location on the front cover. Record in the form of sketches, dimension, statements and computations necessary field information.
- 3) Item and Calculation Book or Application for Payment Book.
 - Item and Calculation Book. Bind in a loose leaf binder, label by project name and subdivide into two parts cross referenced to the Field Inspector's Diary and/or other source documents by book and page number:
 - Part I, "Payment Estimate" sheets - Serially compile the estimate sheets in the Department's format in the front of the binder. Ensure that the compiler's signature and the date on which it was affixed appears below the final dollar figure for each estimate.
 - Part II, "Daily Item" sheets - Serially compile the daily item sheets in the Department's format in the back of the binder by item number. Show the estimate number just to the right of the subtotal figure corresponding to the respective estimate. Transfer quantities to the estimate document from the respective payment estimate sheets. Show sketches and calculations directly behind the appropriate daily item sheets.
 - Application for Payment Book. Use specified format in Project Manual. Bind in loose leaf binder and label by project name.
- 4) Daily Report/Master Diary or Field Log. Compile the Report from the individual entries on a daily/periodic basis in the Department's format.
- 5) Project Material Record File. File here material test records for delivered material on or off site. Use forms from the Department's Materials, Testing and Research Section.
- 6) Record Drawings. In accordance with own and contractor's annotated record of field construction on Drawings prepare Record Drawings in County format to show field revisions on the original tracings.
- 7) Plant Documentation and Records. As directed, inspect materials and processes at off-site material plants in the event the contractor obtains material from an approved plant that has no County or County approved inspectors. Ensure that the source documentation and related forms demonstrate the accountability of the sampling and testing program.

c) Other Documentation

1) List of Documents

- Construction Plan for Monitoring/Surveillance
- Project Operational Diagram
- Project Work Flow Diagrams
- Agenda: Pre-Construction Conference
- Meeting Minutes
- Project Progress Reports
- Exception Reports
- Current Estimate(s)
- Change Order(s)

2) Description of Documents

- Construction Management/Surveillance Plan
 - Construction Inspection Items and Standards
 - Material and Equipment: Test Methods and Frequencies
 - Staffing Statement
 - Staffing Schedule and Histogram
 - Quality Acceptance Program
- Project Operational Diagram
 - Contractual Relationships
 - Functional Relationships
- Project Work Flow Diagram
 - Office and Field Personnel Work Flow Diagram
- Agenda: Pre-Construction Conference
 - Construction Planning and Scheduling:
 - Lines of Communication
 - Proposed Construction Schedule
 - Project Review Meetings
 - Notification Requirements, Utilities and Detour
 - Contract Administration:
 - Insurance and Bonds
 - Labor Compliance
 - Equal Opportunity Requirements
 - Construction Inspection and Surveillance Plan
 - DBE/WBE Compliance
 - Technical Services and Design:
 - Technical Services as required
 - Environmental features
 - Roadway design
 - Structure design and shop drawings
 - Traffic Engineering and related Drawings
 - Soils design
 - Electrical design
 - Mechanical design
 - Utilities

- Right-of-Way
- Office:
 - Source documentation and records
 - Estimates
 - Change Orders
 - Contractor Submittal Log including Change Orders
- Field Monitoring/Surveillance:
 - Staffing
 - Conformity with Drawings, Specifications and contract
 - Measurement and recommended acceptance for payment
 - (Optional) Quality Acceptance Program, Review of
 - Acceptance Sample Reports, offsite material plants staffed by
 - County or other personnel
- Meeting Minutes. As required.
- Project Progress Report. In accordance with Exhibit 8.
- Exception Reports. As required.
- Current Estimates as directed. Per County standard form.
- Change Orders as directed. Per County standard form.

3.9 CLOSE-OUT STAGE

3.9.1 Objectives

Ensure, before acceptance of work and final payment that workmanship meets standards, that work is in place and complete, that systems and equipment have passed all tests and are operational and that the final Board Action/Change order, Final Estimate, Maintenance Bond, Contractor's Certificate, Statement of Surety, and applicable warranties and guarantees are in order. By warranty inspection, secure correction of defects for which the Contractor or others are liable by warranty or guarantee.

3.9.2 Services

Acting as the County's Architect or Engineer furnish those services, or assist as necessary to accept the Work and make final payment to the contractor. Services include those tasks related to the Pre-Final and Final Inspection, completion of Specification requirements, Final Change Order/Board Action, Final Estimate and the Warranty/Guarantee Inspection.

The products of close-out work shall be the required source documentation along with other contract items. The description of services here and in Part 4.6 illustrates the complementary roles of the Construction Manager (CM) and Architect or Engineer.

3.9.2.1 List of Services

- a) Pre-Final and Final Inspections
- b) Completion of Specification Requirements
- c) Final Change Order and Final Estimate

- d) Data Entry
- e) Warranty/Guarantee Inspection
- f) Evaluation

3.9.2.2 Description of Services

- a) Pre-Final and Final Inspections
 - 1) Review notice of substantial completion from the contractor.
 - 2) Prepare the project inspection checklist(s) including operational test items.
 - 3) Prepare and participate in Pre-final and Final Inspections.
 - 4) Prepare and distribute preliminary and final punch lists.
 - 5) If/as directed, prepare and submit Substantial Completion and Final Acceptance Certificates.

- b) Completion of Specification Requirements. Assemble and transfer to the Construction Manager/Project Manager the following contract and agreement items:
 - 1) Source Documentation:
 - Field Diary/Field Inspector's Diary
 - Field Survey Books
 - Item and Calculation Book or Application for Payment Book
 - Daily Report File
 - Master Diary or Log
 - Project Material Record File
 - Record Drawings
 - 2) Other:
 - Change Order Log
 - Contractor Submittal Log
 - Construction Photography
 - Operating Manuals, Instructions and Schedules
 - Maintenance Stock Items
 - Shop Drawings
 - Catalog Cuts
 - Contract Documents Distribution Record
 - Facility Audit Forms for Data Entry, e.g. PennDOT BMS Forms for Data Entry (Engineer)

- c) Final Change Order and Final Estimate. Measure and calculate as applicable the final quantities and amount due and submit with approved source documentation Item and Calculation Book or Application for Payment Book and final survey as applicable. Prepare and submit with the source documentation a written report describing the progress of work and the status of completion of other requirements. Prepare and submit final Change Order; or prepare, negotiate and submit proposal for final Change Order. Prepare and submit the Final Estimate or review, approve and submit the

Contractor's final Application for Payment after approval of the Final Change Order.

- d) Data Entry. Enter facilities management data from audit forms into facilities management database.
- e) Warranty/Guarantee Inspection. If/as directed, prepare a Project checklist including operational items, attend inspection, and prepare and distribute a defects list for correction by the contractor.
- f) Evaluation. (As directed) Evaluate the programmed usage or the actual usage of the facility, price, quality, operation and effectiveness of the system(s) and materials. Evaluate applicability and utility of the design and construction processes for developing the facility and tender recommended revisions to the same to enhance the implementation phase from a design and performance viewpoint.

3.9.3 Approach and Completeness

Subscribe to a program no less complete than the following. Section 3.9.2 describes individual and organizational responsibilities.

- a) Field Architectural and Engineering Services. Attend and document Pre-Final and Final Inspections, assemble and transmit field source documents and other contract requirements; and attend and document a Warranty/Guarantee Inspection as directed.
- b) Office Architectural and Engineering Services. Prepare Final Board Action/Change Order and the Final Estimate as directed, secure applicable warranties and guarantees; and complete and assemble the remaining source documentation, Change Order Log, Contractor's Submittal Log, operating manuals, instructions and schedules, maintenance stock items, shop drawings, catalog cuts, etc.

3.9.4 Description of Deliverables

The construction team shall furnish work products in the form and content set forth below. Section 3.9.2 describes deliverables.

- a) List of Documents
 - 1) Inspection Check List
 - 2) Punch List
 - 3) Change Order Log
 - 4) Contractor's Submittal Log
 - 5) Final Executive Action/Change Order
 - 6) Final Estimate
- b) Description of Documents
 - 1) Inspection Check List
 - Contractor's list of items to be completed or corrected

- Complete project check list including operational test items
- 2) Punch List
 - Uncompleted work
 - Outstanding Deficiencies
 - 3) Change Order Log
 - 4) Contractor's Submittal Log
 - Date In
 - Reference Specification section or Number
 - Reference Drawing Number
 - Description
 - Number of copies
 - (Person) Referred to
 - Action taken
 - Remarks
 - Date Out
 - 5) Final Executive Action/Change Order - per County Standard form
 - 6) Final Estimate - per County Standard form

4.0 SPECIAL SERVICES

This section features subsections by service type. Special Services may be supportive of or independent of the basic services under Section 3.0.

4.1 GEOTECHNICAL AND GEOLOGICAL DESIGN SERVICES

4.1.1 Objectives

In the Schematic Design Study Stage report, provide sufficient geotechnical and geological data to identify obvious influencing soil conditions. In the Tentative Stage, support the recommended sites, alignments and/or proposed structure locations and render estimates for permissible slopes. In the Post Tentative Stage or Preliminary Stage develop and implement a program of investigation that will describe and interpret subsurface conditions as necessary to finalize design of the facility and its related infrastructure and to prescribe solutions to subsurface problems.

4.1.2 Services

- a) Prepare and submit Preliminary Plan of Proposed Investigation with Description and Recommendations.
- b) Attend meeting(s) to present a complete Program of Investigation. Review preliminary Drawings and Program to assure adequacy, maximum utilization of available information, treatment of special concerns, proper sampling methods, proper format and content of report and profile.
- c) Conduct Field Work and Surveys.
- d) Attend Meeting(s) to present Field/Survey Findings upon completion of 75 percent of field work. Review the data and associated problems. Record action necessary to assure collection of sufficient additional subsurface information to resolve problem(s).
- e) Conduct Lab Tests.
- f) Conduct Engineering Analyses.
- g) Prepare and submit Draft Report and Drawings.
- h) Attend Meeting(s) to present Draft Report and Drawings. Consider the minutes of this meeting as direction to prepare and submit a Final Report.

In the Schematic Design Study Stage view these services if and as they apply in the following sequence:

- 1) Data Acquisition
 - Conduct Site Reconnaissance
 - Select Typical Study Sections
 - Prepare Test Boring Layout and Soil Testing Program
 - Monitor and/or Conduct Test Boring Program
 - Provide Project Representative During Test Boring
 - Monitor and/or Conduct Soil Testing Program
 - Prepare Geologic Sections
- 2) County Review (50%-75%- Completion of Field Work)

- 3) County Review (100%- Data Acquisition)
- 4) Design
 - Address and design erosion protection for types of construction.
 - Address and design solution for potential for mine subsidence in project area.
 - Address and design solution for potential for total and/or differential settlement for types of construction.
 - Address and design surface and subsurface drainage requirements for types of construction.
 - Address and design solution for frost action effects on types of construction.
 - Address and define backfill characteristics and requirements for culverts, conduits, retaining structures, abutments, etc.
 - Address and define bedding requirements for culverts and conduits.
 - Address and design disposal of excavated material including wasted material from excavations.
 - Address and define fill and borrow material characteristics and requirements for embankments.
 - Address and design stability of foundations for structures and embankments.
 - Address and design stability of embankment slopes, existing slopes, and cut slopes.
 - Address and design stability of retaining structures.
 - Address and define subgrade characteristics of pavements.
 - Address and perform pavement designs.
 - Prepare schematic design Drawings of alternatives.
 - Prepare schematic cross sections.
 - Prepare report with alternatives, design recommendations, and cost estimates.
- 5) County 50%- Review of Item 4
- 6) County Pre-Final Review of Draft Report
- 7) Final Report: Revise According to County Pre-Final Review
- 8) County Final Review: Review of alternatives; selection of alternative for final design

4.1.3 Approach and Completeness

- a) On-site reconnaissance or research. Identify the total single line profile or area of investigation.
- b) Field Work. Provide rigs, perform borings; obtain disturbed and undisturbed samples, core, do in-situ tests, conduct geophysical surveys, and photo geology studies.
- c) Lab Work. Conduct tests per PTM, AASHTO or ASTM testing and sampling procedures.
- d) Engineering Services. Program a complete investigation or develop a plan of investigation that recognizes previously identified problems, and the data

collection efforts necessary to solve them. Conduct analyses and prepare report; provide field supervision, field views and minutes; prepare Reconnaissance Geotechnical and Geological Study, or Geotechnical and Geological Engineering Report and Profile.

4.1.4 Description of Work products

Provide clearly written, illustrated and reproducible Soils and Geological Engineering Report. Append supporting documents but ensure that the report itself is self-contained without the need for excessive cross-referencing. Provide an 8 ½” by 11” format with oversize graphics folding out to the right (or in an attached pocket to the report), with identification on the right. Arrange report content as follows:

Table of Contents

List of Figures

List of Tables

1.0 Summary, Conclusions and Recommendations

2.0 Description of Study Area

3.0 Methods

4.0 Results

5.0 Discussion

Appendices: Boring Logs, Test Results, Calculations, Bibliography

In Part 2.0 address the base data: general geology and mining, etc. at the site. In Part 3.0 address the program for data acquisition and analysis as well as coordination and consultation(s) during the study. In Part 4.0 address data collection, and analysis of the data. Identify methods of analysis and supply calculations or references. Identify and document the basis for critical design parameters and values thereof for each type of construction that contractor could encounter on the job: embankment, slope and excavation, pavement (new, repair, approach slabs), culvert and conduit, retaining structure (sheet-pile wall, gravity wall, crib wall, wing wall, cantilever wall, abutment); and structure foundation construction. Consider the critical design parameters to include but not be limited to:

- a) (for embankment construction) Fill and borrow material characteristics and requirements (e. g. method of compaction, moisture density relationships, sufficient quantity and suitability of on-site material, determination of borrow areas for sufficient quantities of suitable material), stability of slopes, potential for mine subsidence, potential for settlement (total and/or differential), surface and subsurface drainage requirements, erosion protection;
- b) (for slope and excavation construction) Stability of slopes, potential for mine subsidence, surface and subsurface drainage requirements, erosion protection, disposal of excavated material (including wasted material);
- c) (for pavement construction) Subgrade characteristics, surface and subsurface drainage requirements, pavement design, frost action, potential for mine subsidence;

- d) (for culvert and conduit construction) Bedding requirements, hydrologic and hydraulic requirements, potential for mine subsidence, potential for settlement (total and/or differential), backfill material characteristics and requirements;
- e) (for retaining structure construction) Stability of structure (bearing capacity, sliding, overturning, etc.), potential for mine subsidence, potential for settlement (total and/or differential), surface and subsurface drainage requirements; and (for structure foundation construction) stability of foundation, potential for settlement (total and/or differential), surface and subsurface drainage requirements, potential for mine subsidence, frost action.

Finally in Part 5.0, address the soils and geological impact of each alternative and the recommended design parameters and mitigation measures for the various types of construction shown on each alternate.

4.2 ENVIRONMENTAL SERVICES

4.2.1 Objectives

- a) Ensure Full Integration with the Basic Stage.
- b) Provide appropriate quantitative analysis of the existing quality of the parameters defining those social, economic, environmental, or technical element(s) unique to the document.
- c) Provide a projection of the future condition/level of the elements resulting from the identified alternative facilities.
- d) Identify possible mitigation measures.

4.2.2 Services

- a) Conduct Preliminary investigation(s) and present formal Preliminary Plan (Work Program).
- b) Prepare for and attend Program Review Meeting(s).
- c) Conduct survey(s) and monitoring.
- d) Prepare for and attend survey/monitoring meeting(s) to discuss data upon completion of 75 percent of field work or earlier to assure recognition of associated problems and action necessary to collect sufficient information to solve problems.
- e) Document existing conditions.
- f) Perform projections/modeling of future conditions.
- g) Do assessment and prepare pre-draft, draft and final environmental/ document or technical basis report.

4.2.3 Approach and Completeness

- a) On-Site Reconnaissance. Identify the significance of and sensitivity of the area to determine the scope of study and major emphasis of study.
- b) Preliminary Work Program. Identify the basic field investigative techniques, analytical tools for data interpretation, and impact forecasting methodology.

- c) Coordination and Consultation. Review and consider suggestions of interested parties such as local, county, state, or federal government entities and concerned citizens and groups.
- d) Special Considerations. Provide certification of lab analyses, equipment calibration, collector's permit, etc.
- e) Engineering Services. Provide detailed analyses and prepare/provide the environmental document and/or necessary technical report(s), field supervision, field views and minutes.

4.2.4 Description of Work Products

- a) Environmental Documents. As directed
- b) Technical Basis Report:
 - I. Summary, Conclusions and Recommendations
 - II. Description of Study Area - Conditions and characteristics related to study elements (base data, maps, etc.)
 - III. Methods - Approach or methodologies used in collection and analysis of data, coordination and consultation during study
 - IV. Results - Presentation of data, analysis of data
 - V. Discussion - Predicted impact of action and its alternatives
 - Appendixes

4.3 BRIDGE INSPECTION

4.3.1 Objectives

- a) Routine NBIS Bridge Inspection Report. To provide enough information to complete the Bridge Management System forms in such a way that the following criteria are met:
 - 1) Bridge Inventory and Appraisal - description, location, and pertinent history of the structure; and documentation of existing conditions with emphasis on changes from the previous inspection report.
 - 2) Update/supplement the evaluation for posting needs. Determine if re-rating is warranted.
 - 3) Recommendations -
 - Immediate. Repairs or actions necessary to remedy unsafe conditions or conditions posing imminent danger to the structure.
 - Rehabilitative. Repairs, not immediate, necessary to correct deficiencies that you discovered during the inspection.
 - Long-term. (e.g. replace, widen structure, etc.)
- b) In-depth Bridge Inspection Report
 - 1) Bridge Inventory and Appraisal. FULL documentation of history and existing conditions using research, field inspection, sampling and testing, and structural analyses; identification of deficiencies, both urgent and programmable. An In-depth report is typically used in conjunction with preliminary design services for a bridge replacement project

- 2) Recommendations. Immediate, rehabilitative, and long-term recommendations, in accordance with design and cost analyses.

4.3.2 Services

- a) Research bridge history and existing documentation.
- b) Solicit bids and award contracts for subcontractor services (rigging, underwater inspection, sampling and testing, etc.)
- c) Attend County meetings, as requested, and keep the County informed as to project progress.
- d) Conduct field inspection of the bridge.
- e) Perform required structural analyses.
- f) Estimate repair quantities and repair costs.
- g) Prepare and submit final draft of work products to the County for review.
- h) Prepare and submit the original (and 2 copies) and a pdf on compact disk of final report containing work products, taking into account the County's review of the final draft.
- i) Update and/or complete the required minimum BMS2 inventory and inspection items via PennDOT's BMS2 web.

4.3.3 Approach and Completeness

- a) Bridge History and Documentation. Consider research of bridge history to include the use of: original Drawings, shop drawings and design live loading, past inspection reports, load rating changes, past maintenance/repair records, damage records, and pertinent subjective information useful in assessing the bridge's value to the community and transportation network. The County will furnish information in this regard.
- b) Inspection Related Services. Consider rigging where inspection reveals areas of concern that are inaccessible but only by permission of the Director.

Should it become necessary in the performance of the work to limit or obstruct traffic, provide and maintain necessary traffic warning and control devices and/or flagmen conforming with the latest edition of " Temporary Traffic Control Guidelines" (Publication No. 213) by PennDOT and 67 PAModel, Chapter 203, Work Zone Traffic Control. At least 4 weeks prior to beginning inspection, submit a Traffic Control Plan for this work with a detailed sequence of operations to the Director for his approval.

When authorized, conduct special sampling and testing. Prepare sampling and testing program for County authorization and approval in writing. Examples of such sampling and testing include: steel coupon tests, chloride ion tests, concrete compression tests and paint tests, delamination soundings, pachometer readings, and cores samples.

Do no surveying unless the Director so orders. When required, assume that level of effort necessary for profile/elevation checks, to determine

substructure alignment or settlement, or to determine other geometric features of the structure. Then, obtain detailed structural measurements, together with appropriate photographs and field sketches.

As directed perform underwater inspection in accordance with the latest edition of PennDOT Specifications for Underwater Bridge Safety Inspection.

- c) Attendance at County Meetings. Attend meetings at the request of the County. Periodically, or as requested, keep the County informed pertaining to the progress of the inspection.
- d) Field Inspection. Perform the inspection including but not limited to items listed in the "Standard" (see below) in accordance with the Department's instructions, and in conformance with the following publications:

National Bridge Inspection Standards (NBIS).

"Manual for Condition Evaluation of Bridges", (current edition), AASHTO (hereinafter referred to as the "Standard").

"Bridge Inspector's Reference Manual, FHWA NHI Publication No. 03-001, (current edition)."

"Fracture Critical Inspection Techniques for Steel Bridges , NHI Publication 02-037.

Bridge Safety Inspection Manual, Policies and Procedures, PennDOT Publication 238.

"Bridge Management System 2 (BMS2) Coding Manual", PennDOT Publication 100A.

Perform the inspection with qualified inspectors possessing the minimum qualifications cited in the National Bridge Inspection Standards under the direct supervision of a Professional Engineer registered in Pennsylvania.

Prepare, as required, letters of "request -to -enter" and railroad right-of-way permits and insurance as necessary to complete the work.

Conduct a field inspection that includes the visual observations of bridge components, appurtenances (e.g. railings) and coating system for signs of corrosion, wear or stress. Carefully inspect pin connections, if any, and fatigue and fracture critical members. Measure deteriorated members to determine section losses due to corrosion. Examine concrete and masonry for

alignment and determine condition by sounding with lightweight hammers. Inspect the deck for wear, fatigue cracks, fracture, and corrosion. Examine expansion dams and bearings to determine if they are functioning properly. Document location and ownership of utilities on the structure and approaches. Check the immediate roadway approaches for safety features such as poor vertical or horizontal alignment, substandard width, guiderail conditions, etc. Note absence of load limit signs where bridge has a load restriction and document same in report.

Bring any unsafe condition, existing or imminent, encountered on or approaching the structure to the immediate attention of the Director.

Anticipate incorporation of inspection notes, sketches, and color photographs into the inspection report. Ensure that color photographs include roadway views, elevation views, and, where feasible, views of damaged or deteriorated elements. Catalogue and cross-reference these to inspection drawings and report.

Ensure that the field inspection includes the items listed in the "Standard" to the extent applicable to a routine or an in-depth bridge inspection.

e) Structural Analysis:

1) Routine NBIS Bridge Inspection. Consider structural analysis of a bridge superstructure required when:

- The critical design live loading for the bridge is unknown and/or the safe load capacity is questionable.
- Bridge inspection reveals critical section reductions in bridge components from that of the original design.
- Bridge inspection reveals critically damaged bridge components.
- Current load limitation requires verification or alteration.

When required, analyze the bridge superstructure in accordance with current AASHTO Specifications to determine critical live load limits due to AASHTO H, AASHTO HS25, PA's ML-80 , and PA's TK-527 vehicle configurations. In addition, rate bridges using PA's P82 permit vehicle at Operating Rating only. Use the member sizes on the original construction drawings with appropriate reduction in section in accordance with the field inspection. Determine Inventory and Operating Load Ratings on the basis of the various loadings above. Submit computations with report in reproducible, written form, bound in 8-1/2" x 11" folders.

When you determine that structural analysis for the entire bridge is not necessary, include in the Inspection Report a general statement in accordance with the inspection results to indicate that the bridge structure is currently

capable of safely carrying the live loading for which the bridge has been designed.

2) In-depth Bridge Inspection:

- Perform a stress analysis on the load-carrying members of the original or "as built" bridge with accommodation/consideration to structural work since date of construction. Use an existing analysis if/as possible. Provide a stress analysis consisting of the following:
 - Calculation of dead loads, dead load moments, shears, bar forces, and reactions.
 - Computation of live-load shears, moments, and reactions. Use the required vehicle configurations indicated above.
 - Computation of section properties.
 - Calculation of inventory and operating ratings.
 - Perform a stress analysis on the load carrying members of the bridge as it currently exists. If varying degrees of deterioration are evident determine reduced section properties for deteriorated elements. Perform this analysis per 1) above.
 - Produce stress tables showing data for each member, both in its original state and its reduced or deteriorated state.
 - Identify areas or structural members with reduced load carrying ability and fatigue or fracture critical members, and non-redundant members with problems.
- f) Preparation and Submission of Final Draft. Prepare and submit a final draft of the inspection report containing work products for review and comments.
- g) Preparation and Submission of the Final Inspection Report. Prepare and submit an original inspection report containing work products and 2 copies of same plus a pdf copy on compact disc. Ensure that the final inspection report reflects the recommendations of the review of the final draft inspection report.
- h) BMS Data Entry. Conduct a complete inventory and field inspection using iForms. Complete BMS2 inventory data items via BMS2 web and inspection iForms.

4.3.4 Description of Deliverables

Prepare and furnish a bound written report on reproducible paper measuring 8-1/2" x 11". Include in report those appropriate subjects in the "Standard" to the extent applicable to the inspection. Ensure that the report contains the following:

- a) Recommendations and Conclusions. Recommend as appropriate required Posting or Closure. Provide a discussion of the recommended emergency or corrective maintenance, preventive maintenance/rehabilitation, estimated costs/ anticipated life of the structure with and without repair, and schedule of

- work. Recommend need for interim and/or supplemental inspections and signing needs (vertical clearance, narrow bridge, etc.).
- b) Description. Describe/provide data regarding: type, size, location, existing weight restriction, roadway width, vertical and horizontal clearances, span length, etc.
 - c) Bridge History. Cite dates of construction, rehabilitation, posting, past inspections and traffic.
 - d) Bridge Inspection Procedure. Discuss methods and documentation/recordation.
 - e) Inspection Results. Provide summary of inspection findings for the structure and describe conditions and/or deficiencies found in the structure. Lend special emphasis to pin-eyebars connections, if any, expansion dams, bearings and other support points,
 - f) Results of Structural Analysis. Provide the controlling inventory and operating ratings by member and designate the location of the controlling members. Also include here a statement designating the proper legal load limit of the structure and reasons why this limit was selected.
 - g) Bridge Management System forms. Complete the BMS coding forms in accordance with PennDOT Bridge Management System Coding Manual. Include same in the report. Prepare the sections on PROPOSED IMPROVEMENTS AND ESTIMATED COSTS after reviewing preliminary findings with the County.
 - h) Location Map
 - i) Appendix. Typically include as appended materials:
 - Color Photographs. Record existing conditions on photographs; note roadway and structure elevations upstream and downstream, and damage/deterioration.
 - Inspection Drawings. Reproduce drawings from County files and reduce or reference only by County drawing numbers. If drawings are not available, prepare drawings for work. For a routine bridge inspection, ensure that inspection drawings depict the general plan and elevation, structure cross-sections, framing and sectional views; streambed cross sections, profile and soundings including areas of streambed scour; use other drawings and sketches where applicable. For an in-depth bridge inspection, ensure that drawings and sketches show the same views and convey enough information to fully document the structure.
 - Stress Analysis Calculations. As applicable.
 - Field Survey. As applicable.
 - Field Inspection Notes
 - Lab Reports for Materials Testing. As applicable.
 - List of Reference Drawings

4.4 BUILDING INSPECTION

4.4.1 Objectives

- a) **Cursory Building Inspection Report.** To provide enough information to complete the Building rating forms in such a way that the following criteria are met:
 - 1) **Building Audit and Inspection** - description, location, and pertinent history of the building; and documentation of existing conditions with emphasis on changes and information not in the previous inspection report.
 - 2) **Recommendations**
 - **Immediate.** Repairs or actions necessary to remedy unsafe conditions or conditions posing imminent danger to the public/building.
 - **Renovation.** Repairs, not immediate, necessary to correct deficiencies that you discovered during the inspection.
 - **Long-term.** Upgrades or actions recommended for future planning purposes to prolong the term useful life of a building component or system.

- b) **In-depth Building Inspection Report**
 - 1) **Building Audit and Inspection** FULL documentation of history and existing conditions using research, field inspection, sampling and testing, and structural analyses; identification of deficiencies, both urgent and programmable.
 - 2) **Recommendations.** Immediate, renovation, and long-term recommendations, in accordance with design and cost analyses.

4.4.2 Services

- a) Research building history and existing documentation.
- b) Solicit bids and award contracts for subcontractor services (scaffolding, subsurface inspection, sampling and testing, etc.)
- c) Attend County meetings, as requested, and keep the County informed as to project progress.
- d) Conduct field inspection of the building.
- e) Perform required structural or other system analyses.
- f) Prepare and submit final draft of work products to the County for review.
- g) Prepare and submit the original (and 4 copies) of final report containing work products, taking into account the County's review of the final draft.

4.4.3 Approach and Completeness

- a) **Building History and Documentation.** Consider research of building history to include: original Drawings, shop drawings and design loading, past inspection reports, load rating changes, past maintenance records, damage records, and pertinent subjective information useful in assessing the buildings value to the County/community. The County will furnish this information.

- b) **Subcontractor Services.** Use scaffolding if/as necessary but only by permission of the Director.

Should it become necessary in the performance of any work herein to limit or obstruct vehicular traffic, provide and maintain necessary traffic warning and control devices and flagmen conforming with (the current form of) " Temporary Traffic Control Guidelines" (Pub. No. 213) by PennDOT and 67 PA Code, Chapter 203, Work Zone Traffic Control.

Where the above condition applies, at least 4 weeks prior to beginning inspection, submit a Traffic Control Plan with a detailed sequence of operations to the Director for his approval.

When authorized, conduct special sampling and testing. Prepare sampling and testing program for County authorization and approval in writing. Examples of such sampling and testing include: steel coupon tests, chloride ion tests, and concrete compression tests.

Do no surveying unless the Director so orders it. When required, assume that level of effort necessary for elevation checks, to determine foundation alignment or settlement, or to determine other geometric features of the building. Then, obtain detailed building measurements, together with appropriate photographs and field sketches.

- c) Attendance at County Meetings. Attend meetings requested by the County. Periodically, or as requested, keep the County informed pertaining to the progress of the inspection.
- d) Field Inspection. Perform the inspection in accordance with specific Department instructions, and in conformance with current industry standards.

Perform the inspection with qualified inspectors and County representatives under the direct, ON-SITE supervision of a Professional Architect, registered in Pennsylvania.

Ensure that the field inspection includes the visual observations of building systems/ components for code deficiencies, signs of corrosion, wear or stress. Measure deteriorated structural members to determine section losses due to corrosion. Examine concrete and masonry and determine the extent of damage by sounding with lightweight hammers. Inspect the roof for deterioration. Examine expansion joints and bearings to determine if they are functioning properly. Check the immediate pedestrian and vehicular access ways for safety features such as handicapped amenities, poor alignment, substandard width, guiderail conditions, etc.

Bring any unsafe condition, existing or imminent, encountered in or approaching the building to the immediate attention of the Director.

Incorporate inspection notes, sketches, and color photographs into the inspection report. Ensure that color photographs include building plan views, elevation views, and, where feasible, views of damaged or deteriorated components. Catalogue and cross reference these to inspection drawings.

Ensure that the field inspection includes the items in Section B.3 of the "Standard" to the extent applicable to an in-depth or cursory building inspection.

e) Structural Analysis:

1) Cursory Building Inspection. Consider structural analysis of a building superstructure necessary when:

- The design floor or roof loading for the building is unknown and/or the safe load capacity requires determination.
- Building inspection reveals damaged or critically reduced structural sections.
- Current load limitation requires verification or reduction.

When required, analyze the building framework in accordance with the applicable code, ACI, AISI, AISC, AITC requirements to determine load levels due to live load per code and impact using the member sizes on the original construction drawings with appropriate adjustment or reduction in section in accordance with the field inspection. Determine inventory and operating load ratings on the basis of design or code required loading. Submit computations in reproducible, written form, bound in 8-1/2" x 11" folders.

When you determine that structural analysis for the entire building is not necessary, include in the Inspection Report, a general statement in accordance with the inspection results to indicate that the buildings framework is currently capable of safely carrying the live loading for which the building was designed.

2) In-depth Building Inspection:

- Perform a stress analysis on the load-carrying members of the original or "as built" building. Use an existing analysis if/as possible. Provide a stress analysis:
 - Calculate dead loads, dead load moments/shears/member forces and reactions.
 - Compute live-loads (wind, snow), live load shears/ moments/ member forces/ and reactions.
 - Compute section properties.
 - Calculate inventory and operating ratings.
- Perform a stress analysis on the load carrying members of the building as it currently exists. Due to the varying degrees of deterioration, determine reduced section properties for deteriorated elements. Perform this analysis as outlined in paragraph 1 above.

- Produce stress tables showing data for each member, both in its original state and its reduced or deteriorated state.
- f) Preparation and Submission of Draft Inspection Report. Prepare and submit a draft inspection report, containing work products, for review and comments.
 - g) Preparation and Submission of the Final Inspection Report. Prepare and submit an original inspection report, containing work products, and 4 copies of same. Ensure that the final inspection report reflects the recommendations of the review of the final draft inspection report.

4.4.4 Description of Deliverables

Prepare and furnish a bound written report on reproducible paper measuring 8-1/2" x 11". Include in report, the appropriate subjects in Section B. 3 of the "standard" to the extent applicable to an in-depth or cursory inspection. Ensure that the report contains the following:

- a) Recommendations and Conclusions. Provide a discussion of the recommended corrective maintenance, renovative repairs, estimated costs and anticipated life of the structure.
- b) Description. Provide data regarding: building type, location, existing restrictions, and code deficiencies and accessway widths, vertical and horizontal clearances, etc.
- c) Building History
- d) Building Inspection Procedure
- e) Inspection Results. Provide summary of inspection findings for the building and describe conditions and/or deficiencies that you found in the building. Lend special emphasis to structural connections and system code deficiencies.
- f) Results of Structural/System Analyses. Provide the controlling inventory and operating ratings by member and designate the location of the controlling members. Also include here a statement designating the proper load limit of the structure and reasons why you selected this limit. Similarly provide controlling data for other systems.
- g) Building Rating Forms. Complete the rating forms and keyboard data in ACDPW database in accordance with Allegheny County Department of Public Works' instructions. Include the complete set of forms in the report. Prepare the sections on PROPOSED IMPROVEMENTS and COST OF IMPROVEMENTS after reviewing preliminary findings with the County.
- h) Location Map
- i) Appendix. Typically include as appended materials:
 - Color Photographs
 - Inspection Drawings or Sketches - Reproduce drawings from County files and reduce or reference only by County drawing numbers. For a cursory building inspection, ensure that inspection drawings and sketches depict the general plan, elevation framing and sectional views.

For an in-depth building inspection, ensure that drawings and sketches show the same views and convey enough information to fully document the building, excepting existing drawings.

- Stress Analysis/Other System Analyses Calculations
- Field Survey Results
- Field Inspection Notes

4.5 ROADS AND PAVEMENT INSPECTION

4.5.1 Objectives

Reserved.

4.5.2 Services

Reserved.

4.5.3 Approach and Completeness

Reserved.

4.5.4 Description of Deliverables

Reserved.

4.6 CONSTRUCTION MANAGEMENT

4.6.1 Objectives

In the pre-construction period, provide or assist in the preparation of special surveys, analyses, and presentations necessary to establish a management program/profile and the scope, schedule and cost requirements necessary to plan, program and budget for project design and construction.

Apply construction and facilities management expertise toward the optimization of proposed Project construction and operations in terms of scope, time, and cost in cooperation with the Architect/Engineer and owner; if/as directed produce, assemble and reproduce specified Project bidding documents.

In the bidding, construction and close-out period, furnish and apply, in cooperation with the County and Architect/Engineer, knowledge and practice of construction administration and management to aid in and further the expeditious, economical and quality construction of project.

4.6.2 Services

Furnish those services necessary during preconstruction to prepare/assemble and submit: a tentative evaluation of program, design, cost, and schedule; preliminary and final recommendations on contract documents' coordination, assignment of responsibilities for temporary work for common use, advance procurement, labor requirements, and prequalification; and Bidding Documents.

Furnish these services prior to, during and after the construction period as necessary to monitor and confirm conformance to drawings and project manual/specifications through field inspection, materials acceptance sampling and testing, and review of work submittals. Monitor and confirm conformance to contractual completion date and project construction schedule through own estimation/evaluation of actual vs. projected dates; regular meetings to discuss progress; and coordination of the work of the contractors with each other, self, owner, Architect/Engineer, and Director. Monitor and confirm adherence to budget through own estimation of progress/expenditures vs. outstanding work/encumbrances; regular meetings to discuss costs; change order process; recommendations on payment and cost accounting records.

4.6.2.1 List of Services

Pre-Construction

- a) Pre-Design
- b) Design Development
- c) Advance Procurement
- d) Construction Documents
- e) Bidder Interest and Minority and DBE Participation
- f) Temporary Construction/Facilities
- g) Estimates and Schedules
- h) Contract Management
- i) Bidding, Construction and Close-Out
- j) Bidding
- k) Construction Planning and Scheduling Services
- l) Technical Services
- m) Contract Administration
- n) Office Services
- o) Surveillance/Inspection Services
- p) Pre-Final and Final Inspections
- q) Completion of Specification Requirements
- r) Final Change Order/Executive Action and Final Estimate
- s) Warranty/Guarantee Inspection
- t) Evaluation

4.6.2.2 Description of Services

- a) Pre-Design. Identify and evaluate the impact of factors affecting the feasibility and cost of alternatives. These factors will include the following:

- 1) Existing Functional and Design and Construction Data
- 2) Design Criteria and Substandard Design Warrants
- 3) Physical Requirements, Spatial Relationships and Limits
- 4) Functionality
- 5) Project Budgeting and Probable Costs
- 6) Service Life
- 7) Level of Automation, Safety and Security
- 8) Type of Construction
- 9) Ancillary Services
- 10) Capacity
- 11) Functional Integration
- 12) Future Expansion
- 13) Functional/Structural Adequacy
- 14) Traffic Patterns
- 15) Availability of Parking
- 16) Acquisition of Property
- 17) Re-zoning Requirements
- 18) Availability of Utilities
- 19) Applicable Laws, Statutes and Regulations

Visit existing facility, if any, to evaluate the conditions that affect the Pre-design evaluation. In addition, make at least one visitation to sites which utilize feasible/proven approaches to facilitate the evaluation of variables that impact the decision making process. Develop a scope which outlines construction requirements, including materials, equipment and systems.

Use this scope as a recommended program to identify features to be provided in the facility as well as features of related facilities. Develop a means of demonstrating the comparative feasibility of the alternatives to facilitate the development of a final recommendation to the County. In addition, prepare cost estimates as necessary to demonstrate the anticipated cost of each alternative as well as the impact of various assumptions on the alternatives. Include in cost estimates the cost of professional fees, land acquisition, utility relocation, permits, construction, and operation of the Project.

Make a written report and recommendation to the County on the approach to constructing the facility. Identify the factors affecting the recommendation including the impact of operating costs and the impact of operating joint facilities, if any. Ensure that report also includes a recommendation as to the disposition of any existing facilities that serve the same function.

- b) Design Development. Thoroughly familiarize yourself with evolving concepts, drawings, documents and specifications, and continuously follow the development of the design and the construction documents -

Drawings, and Project Manual. Review design development documents including but not limited to drawings, specifications, and estimates and make recommendations as may be appropriate on site use and improvements, foundation, selection and availability of materials, building systems and equipment; provide recommendations concerning the conditions under which the work is to be done, and cost reducing alternatives. Furnish pertinent information as to the availability of required materials. Make recommendations affecting Project construction feasibility and practicability. Bring to the attention of the Project Manager and Architect any obvious defects in the design affecting construction feasibility and practicality.

- c) Advance Procurement. Identify, recommend for purchase and expedite the procurement of equipment, materials and supplies which can or must require long lead time for procurement or manufacture. If/as directed, prepare the Contract for procurement exclusive of Drawings and Specifications and package the entire set of documents for advertisement or invitation for bids for procurement.
- d) Construction Documents. If/as directed, prepare the project Manual Documents and Division I, General Requirements exclusive of Divisions 2-16 - for each contract and package each complete set of Bidding Documents -Project Manual and Drawings - for advertisement for bids. Make recommendations to the Project Manager and upon approval advise the Architect regarding the division of Work for the purpose of bidding and awarding contracts to effect economies and permit phasing of procurement and construction, taking into consideration such factors as type and scope of work, time of performance, availability of labor and materials, community relations, factory versus on-site construction costs, shipping costs and size limitations, minority contractors, and other limiting factors. Ensure, wherever necessary, that the complete construction requirements are covered in the separate documents for long lead procurement and related construction contracts. Ensure that the general conditions in each separate construction contract are uniform and do not conflict with the general conditions to advance procurement. Bring to the attention of the Project Manager and Architect any obvious omissions, overlaps, and any lack of correlation between drawings and other construction documents. Manage fast tract development; and ensure the timely letting of contracts.
- e) Bidder Interest and Minority and DBE Participation. Develop and implement a program to stimulate interest of qualified contractors. Provide direction to separate the Work into separate contracts in such a way as to enable minority firms to bid competitively on the Work. To this end, make inquiries as to the identity of prospective minority firms, the Work

categories in which they are qualified to perform and the maximum size of contract that they are capable of undertaking.

- f) Temporary Construction/Facilities. Review the Documents, Specifications and Drawings to ensure that they contain provisions for temporary facilities necessary to enable contractors to perform their work and eliminate overlap of facilities. Make arrangements for job site facilities necessary to enable the contractors to perform duties efficiently and avoid unnecessary duplication of contractor facilities.

Ascertain what temporary enclosures, if any, of building areas should be provided to assure orderly progress of the work in periods when extreme weather conditions are likely to be experienced.

- g) Estimates and Schedules. Prepare for each separate construction contract a construction cost estimate and suitable work schedule; integrate separate prime estimates and schedules in one Project Construction Estimate and Schedule.
- h) Contract Management. If required, develop a detailed Management Plan for Construction and submit it to the Director for his approval no later than one month before the initial advertisement or invitation for Bids. Describe in detail in the Plan the program of and requirements for execution of the work by the organizations party to the work. Consider Plan as evolutionary to include, but not to be limited to, the following:
 - 1) Project Definition
 - 2) Organization Charts
 - 3) Duties
 - 4) Schedules
 - 5) Written Procedures for Communications, Documentation, Control and Coordination
 - 6) Public Relations

With the approval of the Director, continuously update and revise the major aspects of the Management Plan as necessary to maintain the plan as a viable management tool. Also see Section 3.10.2.

Develop, implement and utilize throughout the term of the work a Schedule Control System for time monitoring and control. System reports, documents, and data shall represent an accurate assessment of the current status of the Project and of the remaining work. The Schedule shall provide a sound basis for identifying variances and problems, and for making management decisions. Provide scheduling information in a timely fashion to the Director. The Management Plan shall describe reports, documents and data, together with their frequency of preparation.

Submit periodic reports based upon the continuously updated and detailed Schedule Control System.

- i) Bidding. Submit a Construction Management Plan featuring:
 - 1) An operations diagram to set forth lines of communication, authority and procedures within the project team (County, Contractor(s), and Consultants).
 - 2) The names, titles address, and telephone numbers of your team personnel.
 - 3) The name of the Resident Project Representative who will be on the project full time. Attach the resume of the Resident to document the designee's qualifications.
 - 4) The number of subordinate inspectors, if any, who will be on the project.
 - 5) As applicable, the number of qualified inspectors available to provide inspection at off-site material plants.
 - 6) A Project Staffing Chart (see Exhibit 5) depicting for the duration of the job by operation the proposed surveillance staff and inspection staff, if any, and working days therefore, and a summary or digital histogram in man-days for the surveillance and inspection staff-if any.
 - 7) In tabular form as directed - a list of materials for testing by the Contractor, and those for testing under the County's independent acceptance program. Show sampling methods, test methods, frequency of tests, and material certifications.

Prepare and submit a refined Project Construction Schedule and agenda for the Preconstruction Meeting; prepare and submit a Preconstruction Meeting Notice for distribution to involved parties; chair the Meeting and present the General and Supplementary Conditions, Specifications, and other requirements. Prepare and distribute minutes. Review and recommend approval of the Contractors' Construction Schedules (for entry in Project Construction Schedule), Traffic Control Plan, Safety Plan, Subcontractor List, and Supplier List.

- j) Construction Planning and Scheduling Services
 - 1) Update, prior to the Pre-Construction Meeting and monthly thereafter, the Project Construction Schedule (see Exhibit 4) in accordance with the requirements of the owner and contractors, making possible allowances for unknown conditions. Consider the schedule a control tool and your basis on which to estimate rate of progress, percent completion, and cash flow. Monitor variances between scheduled and probable completion dates. Assist in resolving problems to meet the contract completion date.
 - 2) Do and submit cash flow reports with forecasts and identified variances between actual and budgeted costs and make

recommendations to the County whenever projected costs exceed the budget or the contract amount.

- 3) Keep the owner informed of aspects of the construction program via a weekly problem reporting system and monthly Submission of the Project Progress Report (see Exhibit 8). Your written reports and those of the Architect/Engineer will serve as input to the Progress Report. The system will emphasize problems to the Director on a by-exception basis, and present solutions for the problems which will enable management to make decisions on a "go" or "no-go" basis. Complete instructions regarding the completion and submittal of the Project Progress Report are with Exhibit 8.
 - 4) Hold periodic Progress Meetings to enable involved parties to review construction progress, procedures, scheduling, design interpretations, problem areas and overall coordination; prepare and distribute minutes.
 - 5) Under special circumstances as may be necessary, prepare a Board Action request identifying and justifying project time extensions. If an adjustment in payment is necessary, also identify and justify it in the Board Action.
- k) Technical Services. Confirm the need for technical services and assist the County in procuring such technical services. Monitor these services during their performance. Consider included under technical services:
- 1) Surveying. As required in the General or Supplementary Conditions the Architect/Engineer will conduct survey work to establish baselines and bench marks of known elevation or other reference points for the contractor to ensure an expeditious start of construction and to facilitate and control the work. From time to time the Architect/Engineer will check completed work for location and elevation. Ensure timely surveying work to avoid delays to contractor. If/as applicable, use the data from surveying work to determine the quantities for payment.
 - 2) Sampling and Testing. Materials other than those accepted on certification will be subject to contractor's quality control sampling and testing and acceptance sampling and testing by the County with your assistance if/as directed.
 - 3) Geotechnical Investigations. Refer questions or problems regarding soils or foundations to the Architect/Engineer. Request the services of the Architect/Engineer with care to clearly define the question or problem requiring attention. The Director will make decisions to utilize the Architect/Engineer depending on the details of the specific situation.
 - 4) Construction Photography. The Architect/Engineer will provide photographs as directed to document project progress and quality and to serve as legal evidence.

- 5) Record Drawings, Operating and Maintenance Manuals. Review for acceptance the Architect's/Engineer's annotated drawings and the contractor's Operating and Maintenance Manuals to ensure that they are viable tools for County maintenance personnel and for design research.
- l) Contract Administration:
 - 1) Monitor and confirm adherence to the administrative and compliance requirements of the contract.
 - 2) Prepare administrative correspondence including written documents and correspondence requiring the County's signature and authorization. This does not preclude the preparation of a draft of the same by the Architect/ Engineer.
 - 3) Ensure that the Architect/Engineer has immediate access to every part of the contract documents which relate to his/her personal responsibility as well as those describing related elements with which the work under his/her supervision must be coordinated. Also ensure that the Architect/Engineer understands exactly what the contracting parties have agreed upon. Make available to the Architect/Engineer a copy of the contract, Project Manual and Drawings, Standard Drawings, Traffic Control Plan and Project Construction Schedule.
 - 4) Initiate and maintain a formal Contract Documents Distribution Record to ensure that the Architect/Engineer is aware of his/her responsibilities and any modifications to those responsibilities.
 - 5) As directed, provide follow up to notifications to the contractor by the County regarding renewal of insurance coverage as specified in the General and Supplementary Conditions.
 - 6) Establish records system and confirm establishment of a records system by the Architect/Engineer in conformance with the Departments model to assure and confirm quantities of completed work accurately and on a uniform basis by item or value. The Departments system is designed to permit field audits during the course of the project as well as completed audits after final payment. Check the Architect's/Engineer's source documentation and confirm that proper references are noted between estimates or applications for payment and dated source documents to show a clear audit trail from one to the other. Confirm that work items on source documents are identified by: item numbers and/or description per bid tabulation sheets, or Schedule of Values. Confirm that source documentation includes: Field Diary, Field Survey Book, if any, Item and Calculation Book (Unit Price contracts only) or Application for Payment Book (Contracts other than Unit Price), Master Diary/Daily Report, Material File, annotated drawings and Record Drawings. Maintain a project correspondence file including written documents and correspondence.

- 7) Monitor and record the performance of the contractor to ensure compliance with labor guidelines in the General and Supplementary conditions.
 - 8) Monitor and record the performance of the Contractor to insure that he/she subscribes to applicable training, DBE/WBE and Equal Opportunity Employer (EEO) requirements in the General and Supplementary conditions.
 - 9) Provide liaison with other local agencies such as utility companies, political subdivisions and businesses.
- m) Office Services.
- 1) Review the Engineer's Current Estimates on unit price contracts; submit on acceptance, and monitor payment on Current and Final Estimates. For Lump Sum and Cost Plus Net Fee contracts secure certification of the Contractor's Application for Payment from Architect/Engineer. Review Application for Payment and prepare current estimate as directed, submit on approval, and monitor payment on estimate. Confirm the amount due on Estimates/Applications for Payment through random checks of related source documentation.
 - 2) Recommend necessary or desirable changes including extensions of time to the County; handle administrative aspects of the change order process as you secure the necessary details (material, labor, and equipment costs and/or schedule data) from the Architect/Engineer and Contractor; prepare Change Orders (on Unit Price contracts) or review and approve the Architect's/Engineer's (on other contracts) proposal for Change Order; submit Change order or approved proposal and monitor approval process.
 - 3) Monitor the submittal of shop drawings, catalog cuts, equipment lists, material certifications, samples, lab reports, and test data by the Contractor or others and coordinate the timely approval of the same by the Architect/Engineer. major changes to the Drawings, corrections for errors and omissions, computing or checking weights for prefabricated material, checking of erection stresses, re-computing erroneous elevations and geometry, redesign of deficient design details, or design of details omitted from the Drawings are not in these services.
- n) Surveillance/Inspection Services. In the role of monitor, e.g. with engineer resident on-site, observe construction procedures and completed Work in place. Provide assurance monitoring of the propriety of the quality control sampling and testing program by the Contractor. Limit this effort to unbiased witness inspection of sampling methods, test methods, frequency of tests, experience qualifications, and material certifications.

In the role of resident on-site, e.g. with Architect acting in the capacity of reviewer and monitor, observe and record construction progress, quality, procedures and completed work. More specifically -

- 1) Observe the work in progress and document the same in appropriate source documentation to record project progress and conformity or lack thereof to the requirements of the Drawings and Project Manual. Maintain orderly files and source documents at the site including a Field Book, Field Survey Book, Item and Calculation Book or Application for Payment Book, Master Diary/Log, Material File, annotated Drawings, correspondence, reports of job conferences, shop drawings and sample Submissions, reproductions of original contract documents including Addenda, Change Orders, Field Orders, additional drawings issued subsequent to the execution of the contract documents, and other Project related documents. Also maintain a file containing the names, addresses, and telephone numbers of contractors, subcontractors, and major suppliers of equipment and materials. Record in the Master Diary/Log: project progress, the contractor's staffing, weather conditions, data relative to questions of extras or deductions, equipment and material, arrivals, job site visitors, daily activities, decisions, general observations, and notes on test procedures. The Master Diary or Log of construction events and conditions will serve as one record for verifying estimates, adjusting the Construction Schedule and reviewing the accuracy of Record Drawings.
- 2) Ensure compliance to the vehicular Traffic Control Plan. Consider 67 PA Code, Chapter 203 as the standard to traffic control where you identify vehicular conflicts not in accordance with the Traffic Control Plan. Ensure that the Field Book notes are in compliance to the Traffic Control Plan or lack thereof. In the latter case provide written notification to the PM regarding: deficiencies and necessary corrections. The PM will inform the contractor of the deficiencies and necessary corrections as well as any penalties involved.
- 3) Verify that the contractor takes quality control samples and does tests in accordance with the Project Manual and in the presence of the required personnel, Confirm that the contractor takes the necessary steps to ensure that material samples are representative of the material used.
- 4) Instruct the contractor/inform the PM of Work that does not conform to the Drawings and Project Manual, or inspection test criteria. Advise the Project Manager of appropriate, corrective action and of any special testing or inspection that the Director may require.
- 5) Maintain an accurate log of completed utility work for possible use in verification of utility relocation costs.
- 6) Accompany visiting inspectors or engineers representing public agencies or others having an interest in the Project and record the outcome of these inspections to the Project Manager.
- 7) Hold periodic job site meetings as necessary with the Contractors and subcontractors to review day to day requirements and problems, and prepare and circulate the minutes.

- o) Pre-Final and Final Inspections.
 - 1) Prepare and submit pre-final and final inspection notice to attendees and grant agency
 - 2) Schedule and conduct Pre-final and Final Inspections
 - 3) Prepare and submit Substantial Completion and Final Acceptance Certificates

- p) Completion of Specification Requirements. Assemble and transfer to Project Manager the items in Part 3.11.2.

- q) Final Change Order/Executive Action and Final Estimate. Measure and calculate as applicable the final quantities and amount due and submit with approved source documentation Item and Calculation Book or Application for Payment Book. Prepare and submit with the source documentation the final Change Order/Board Action with a written report describing the progress of work and the status of completion of other requirements. Review, approve, and submit the Contractor's final Application for Payment after approval of the Final Change Order and prepare and submit the Final Estimate.

- r) Warranty/Guarantee Inspection. (As directed) Schedule and conduct the warranty/guarantee inspection prior to expiration of the warranty periods and confirm that the contractor has corrected noted defects from the warranty inspection.

- s) Evaluation. (As directed) Evaluate the programmed usage versus actual usage of the facility, the price, quality, operation and effectiveness of the system(s) and materials; and the applicability and utility of the design and construction processes that the designer used in developing the facility. Recommend revisions to process to enhance the implementation phase from a design and performance viewpoint.

4.6.3 Approach and Completeness

Undertake tasks in these stages no less complete than as follows:

- a) On-Site Reconnaissance. Visit site to confirm capabilities and view project features as design development proceeds.
- b) Review, Coordination and Consultation. Provide own recommendation and, solicit, review and consider recommendations of others on site use and improvement, material selections, systems and equipment, installation and methods, material and labor availability, phasing, division of work, procurement, temporary facilities, scheduling, and costs.
- c) Reports and Document Development: Prepare/Assemble: An evaluation of Project program, design, cost, and schedule; Project Construction Schedule and, if/as directed, Bidding Documents.

- d) Bidding Assistance. Write agenda, chair and prepare minutes for pre-bid meeting; assist with addenda; and do bid and award evaluation.
- e) Construction Administration. Write construction management plan, compose administrative correspondence, prepare agendas and minutes for pre-construction, progress and other meetings; write/develop regular progress reports and construction Schedule; prepare estimates and change orders; review submittals; maintain compliance control records and source documentation.
- f) Close-out Administration. Accept record drawings, type inspection notices, check punch lists, complete and submit source documents, logs, manuals, and maintenance items; prepare final change order and final estimate; complete Substation Completion and Acceptance Certificates.

Review for acceptance the Architect's/Engineer's annotated drawings and the Contractor's operating and Maintenance Manuals to ensure their usefulness to designs for future work and county maintenance personnel.

4.6.4 Description of Deliverables

Provide deliverables addressing the assignment in the general form and context as set forth below:

- a) Project Evaluation
 - 1) Conclusions and Recommendations
 - 2) Description of Project and Site
 - 3) Methods of Project Evaluation
 - 4) Results of Project Evaluation
- b) Schematic Review, Estimate and Schedule
- c) Preliminary Review, Estimate and Schedule
- d) Final Review, Estimate and Schedule
- e) Procurement Documents and Construction Bidding Documents and Supportive Material. If/as directed, develop per Section 3.3.4 exclusive of sections for work, design computations and check prints.
- f) Bid Work - See Part 3.7.4.
- g) Construction Deliverables - See Part 3.8.4.
- h) Close-out Work. See Part 3.9.4.

4.7 PROJECT/PROGRAM MANAGEMENT

4.7.1 Objectives

Reserved.

4.7.2 Services

Reserved.

4.7.3 Approach and Completeness

Reserved.

4.7.4 Description of Deliverables

Reserved.

4.8 AUTOMATED SYSTEMS

4.8.1 Objectives

Reserved.

4.8.2 Services

Reserved.

4.8.3 Approach and Completeness

Reserved.

4.8.4 Description of Deliverables

Reserved.

5.0 CONTRACT ADMINISTRATION

5.1 MONITORING AND AUDITS

The County will schedule and conduct periodic meetings, reviews and checks. Document these monitoring actions in an official record of minutes. At a minimum, the Department will conduct such reviews at those specified points in Sections 3.0 and 4.0.

Submit on the first working day of each month a Project Progress Report - See Exhibit 8 - to provide a current and cumulative record of expenditures versus progress. In the case of construction administration or construction engineering services, include on this report a summary of cash flow.

Before closing-out any Consultant agreement, the County will do a final audit and review to ensure proper finalization of payments, the propriety of any claims, and satisfactory completion of the terms of the agreement in accordance with the previously

cited federal Procurement Regulations Sub-Parts 1-15.2 and 1-15.4. For Federal and State funded projects this information will be submitted to the State with the final invoice.

5.2 COMPENSATION AND PAYMENT PROCEDURES

The County will reimburse the Consultant as may be necessary to complete the requirements as set forth in the agreement between the parties in accordance with these Guidelines. Submit monthly certified invoices on Exhibit 11. Before authorizing payment the County will review invoices to insure that charges are accountable and allowable and supportable by the Consultant's Project Progress Report. Complete invoices as specified in Exhibit 5.

The County will make payments only with prior assurance by audit as to the adequacy of the Consultant's accounting system to segregate and accumulate reasonable, allocable, and allowable direct and indirect costs. Ensure that your system is compatible with those cost principles and standards set forth in the federal Procurement Regulations Sub-Parts 1-15.2 Principles and Procedures for Use in Cost Reimbursement - Type Supply and Research Contract with Commercial Organizations, and 1-15.4 Construction and Architect/Engineer Contracts.

5.3 PERFORMANCE EVALUATION

For future pre-qualification uses, the Project Manager will complete a consultant performance evaluation on completion of each Project. The evaluation will provide a "score" in accordance with a weighed rating of set performance factors – see Exhibits 13 and 14. The Department groups those factors under three classifications. They include under Class 1, Technical Competence: Observance and Application of Design Standards and County Requirements, Quality - Completeness - Accuracy of Work Products; under Class 2, Schedule/Management Competence: Demonstrated Ability to Control Scope of Project, and Demonstrated Ability to meet Milestone Schedule of Work Product Submissions; and under Class 3, Fiscal Competence: Demonstrated Ability to Meet Budget, and Completeness and Accuracy of Invoices.

EXHIBITS

**COUNTY OF ALLEGHENY
PITTSBURGH, PA**

[*Date*]

The Office of the Director of the **DEPARTMENT OF PUBLIC WORKS OF ALLEGHENY COUNTY** will receive Letters of Interest with current Federal Standard Form 330 (SF) *Architect-Engineer Qualification*, until 4:00 p.m., on [*Date*], for the following assignment:

ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS

**[ARCHITECTURAL] [ENGINEERING] [DESIGN] [INSPECTION]
[CONSTRUCTION/PROJECT MANAGEMENT] [CONSTRUCTION SUPPORT SERVICES,
INSPECTION AND MATERIALS TESTING] [AND PREPARATION OF DRAWINGS AND PROJECT
MANUAL]**

**[FOR] [OF]
[CONSTRUCTION] [INSPECTION] OF THE [PROJECT NAME]
COUNTY PROJECT NO. [XXNN-NNNN]
[MUNICIPALITY]**

Submit five (5) copies of your Letter of Interest and current SF 330 to:

**[*Director*]
Allegheny County Department of Public Works
Room 501, County Office Building
Pittsburgh, PA 15219**

This is a federal-aid project with PennDOT oversight. A scope of work on the project and anticipated staffing needs is available online at: www.county.allegheny.pa.us/bids.

Place a Letter of Interest with required forms in a sealed, opaque envelope with firm's name, the title and number of the Project, and the words "Letter of Interest" on the front. If you mail the Letter of Interest, insert the sealed, opaque envelope containing the Letter of Interest and standard forms inside a separate mailing envelope.

The Director will receive Letters of Interest for each project, with accompanying SF 330 until the day and hour stated in the Public Advertisement. The Director will not consider any Letter of Interest received after the set day and hour and will return it to the addressee unopened. The firm is responsible for ensuring that the Director receives its Letter of Interest by the set day and hour.

The County will use only SF 330's of firms responding with Letters of Interest to prequalify firms for consideration for these services.

The County encourages responses from small firms, minority and women owned firms, and firms that have not previously worked for the County. We encourage you to examine in Room [505], County Office Building, Pittsburgh, PA from 9:00 p.m. to 4:00 p.m., on [*Date*] to [*Date*] the information available to Consultants: the Location Map, Project Profile, [*Model Work Products*] and the Department Guidelines for

Consultant Services. Any inquiries into this Advertisement are to be directed to [*County Project Manager*] at [*412-350-NNNN*] or [*email*].

The County will preselect or short-list three firms for consideration for this Project assignment on the following evaluation criteria: **Experience, Record, Size, Workload, and Related Work.** By a Request for Proposal the Department of Public Works will notify the top three short-listed firms (for each assignment) to submit proposals. The County will invite each of those firms to attend a Preproposal Scoping and [Presentation Meeting] [subsequently, to make a formal presentation]. The County will base final selection of [a] [] firm[s] for [this] [these] assignment(s) on the following evaluation criteria: Oral Presentation/ Project Proposal, Organization, Design Ability, Experience, and Special criteria such as community involvement and other sensitive areas of Project development. The County's minority and Women disadvantaged goals for this Project will be 13% of the total price for MBE participation and 2% of the total price for WBE participation. Certification of MBE's and WBE's by the County is mandatory on or before proposal due date.

The Director may reject any or all Letters of Interest/Proposals and may waive any irregularity in the Submission of Letters of Interest/Proposals.

[*Director*]
Department of Public Works of Allegheny County

RATING INSTRUCTIONS FOR PROFESSIONAL SERVICES

PROJECT:

SCOPE OF SERVICES:

DATE:

General Instructions:

1. Introduce selection criteria itemized on second page.
2. Present objective critique of each firm in relation to selection criteria.
3. Confirm rating factors:
 - 5 = Superior
 - 4 = Good
 - 3 = Average
 - 2 = Fair
 - 1 = Poor
4. Assign weight to each criterion:
 - 15 = critical criteria
 - 10 = very important criteria
 - 6 = moderately important criteria
 - 3 = least important criteria
5. Set time limit and instruct selection committee as follows:
Record rating results on Rating Tabulation Form. Rate from top-to-bottom not from left to right. Experience indicates that individuals tend to rate a preferred firm high in areas if the firm is rated against each criteria rather than the criteria being rated against each firm. Using 5 for superior to 1 for poor, proceed from top-to-bottom, inserting the appropriate rating in the upper left-hand portion of each divided block. Base ratings on perceived degree of contribution made towards satisfying each individual criterion. Compute numerical rating by multiplying the weight factor times the rating factor. Insert the result in the lower right-hand portion of each square. Add horizontally and post total in right-hand column: Total.
6. Collect rating forms and tabulate rankings on a separate Rating Tabulation Sheet or in ECMS for PennDOT oversight projects. Compute overall Total scores by adding individual Totals and inserting the result in the right-hand column: Total. Rank the firms from highest to lowest Total scores and insert the result (1, 2, 3) in the right-hand column: Ranking.
7. Prepare and forward Selection Packet to Director: Selection Meeting Agenda, Selection Instructions and Criteria Sheets, Individual and Overall Ranking Sheets; RFP and Project Profile; Proposals with Transmittals and Project Manager's comments. Selections for PennDOT oversight projects will be forwarded to PennDOT in ECMS.

SELECTION CRITERIA

SHORT-LISTING CRITERIA: *

1. Suitability to type of service/work - 15
2. Past performance record - 10
3. Correlation: Size of firm to size of Project - 6
4. Workload - 6
5. Prior related or similar work - 10

FINAL SELECTION CRITERIA: *

1. Oral Presentation/Proposal¹ - 10
2. Organization² - 10
3. Inspection / Design / Construction Surveillance Ability³ - 15
4. Experience⁴ - 15
5. Special⁵ - 10

-
- * Suggested weights for 100% County projects are here; modify only with Director's Approval. Weights for ECMS related projects (PennDOT involvement) must add up to 100.
- 1 Appropriate response to situation in terms of the problem scope, Department, requirements, and constraints; demonstrated interest in project; clarity, cohesiveness, quality, completeness, accuracy and organization of presentation and proposal.
 - 2 Firm's management and production methods; project scope, schedule and cost control methods.
 - 3 Recognition of Department Guidelines for Consultant Services; objectives, comprehension of inspection/design/construction/ management requirements, team adequacy/competency.
 - 4 Presentation of relevant projects and facts; familiarity with applicable design standards and Public Works requirements; experience with value analysis, specifications, CADD, scheduling methods, inspection methods, construction methods.
 - 5 Sensitivity to DBE requirements, public participation, schedule and other sensitive areas.

RATING TABULATION FOR SHORT-LIST

Allegheny County Department Of Public Works
Rating Tabulation For Professional Services

Project:
Project No. :
Services: DATE: _____

Rating Factors		CRITERIA					Total	Ranking
5 = Superior 3 = Average 1 = Poor 4 = Good 2 = Fair		Suitability	Past Perf.	Size	Work Load	Related Work		
CONSULTANT	Weights	15	10	6	6	10		
	Rating							
	Product						0	
	Rating							
	Product						0	
	Rating							
	Product						0	
	Rating							
	Product						0	
	Rating							
	Product						0	
	Rating							
	Product						0	
	Rating							
	Product						0	

RATING TABULATION FOR FINAL SELECTON

Project:								
Project No. :								
5 = Superior 3 = Average 1 = Poor 4 = Good 2 = Fair		CRITERIA					Total	Ranking
		Present.	Organiz.	Ability	Experience	Special		
CONSULTANT	Weights	10	10	15	15	10		
		_____	_____	_____	_____	_____	_____	
		_____	_____	_____	_____	_____	_____	
		_____	_____	_____	_____	_____	_____	
		_____	_____	_____	_____	_____	_____	

PROJECT SCHEDULE

GENERAL INSTRUCTIONS:

Consider that the selection of the most qualified firm to provide the required services will be in accordance with criteria in these Guidelines including schedule criterion in the proposal on the Project Schedule form. Note the following instructions for using the Project Schedule.

DESCRIPTION:

Present on the Project Schedule stages, and/or Special Services including the Schematic Design Stage, the Design Stages, the Bidding Stage, and the Construction and Close-Out Stages are applicable and the milestone tasks comprising each stage. Show in the Bar Diagram field on the Project Schedule, the established time periods for each identified task and the total duration necessary for 100 percent completion. Reserve the left and right sides of the form are for the major tasks and the established value of each task as a percentage of the total effort respectively. Place in the header identification data for the project and the firm

USE:

Present the Schedule at the Pre-Proposal meeting, and in Part 1 of the proposal. Give each scheduled task on the Project Schedule space for one (1) bar to plot a proper bar chart: a solid bar diagram from left to right on a fixed time scale. Note the projected value and loading at fixed time intervals at the bottom of the form. On the left and right sides of the form enter the major project tasks and the established value of each as a percentage of the total effort respectively.

PROJECT STAFFING PLAN, FEE PROPOSAL, PROJECT INVOICES AND PROGRESS REPORTS

GENERAL INSTRUCTIONS:

Consider that the Project Staffing Plan, Fee Proposal Forms and Project Invoices "A", "B" and "C" are the basis for a Department system for fee estimating, proposal analyses, and invoicing. Submit each completed form in the following time frame:

- Project Staffing Plan - At the pre-proposal meeting as your staffing plan.
- Project Staffing Plan and Fee Proposal - If you are selected number one ranked consultant, complete the Project Staffing Plan and Fee Proposal forms.
- Project Invoice "A", Project Invoice "B" or Project Invoice "C" - On or before the 10th of the month for the duration of the assignment use the Project Invoice "A" form for reimbursement for lump sum OR unit of work items. Use the Project Invoice "B" form for reimbursement for cost plus fixed fee. Use the Project Invoice "C" form for reimbursement for multiplier, and specific rate of compensation items.

Definitions of the terms here are in Section 1.2. Review legal obligations regarding invoicing in Exhibit 7 Standard Agreement. Note the following specific instructions when you complete the Invoice Forms.

SPECIFIC INVOICE INSTRUCTIONS:

- I. INVOICE COVER LETTER (EXHIBIT 11 D) – Transmit Invoices to the Department of Public Works under a cover letter which includes the following information:
 1. COMPANY INFORMATION: (Name, Address)
 2. COUNTY ADDRESS
 3. INVOICE INFORMATION IN THE FOLLOWING ORDER:
 - a. DPW Project Name
 - b. DPW Project Code
 - c. Phase
 - d. Allegheny County Contract Number
 - e. Work Period
 - f. Amount of Invoice
- II. INVOICE INSTRUCTIONS
 1. For Open Ended Contracts always complete and submit a Summary Sheet (Exhibit 11 E).
 2. Invoice for Specific Work Task is to be completed for each included Work Task.

3. Must provide back up documentation to support billing (mileage charts, receipts, monthly man hour spreadsheet, sub-consultant invoices, if applicable). County is no longer requiring weekly time sheets with invoices. Consultants are to electronically send weekly times sheets to Project Managers for their reference and to be retained in case of an Audit.
4. DBE Status Report must be completed, signed, and submitted (Exhibit 12).
5. Provide in the header identification of the project, and on the Project Invoice forms, identification of the invoice period and number.

DESCRIPTION:

Present on these forms stages of implementation and/or Special Services including the Schematic Design Stage, the Preliminary Design Stage, the Final Design Stage, the Right-Of-Way Stage, the Utility Stage, the Bidding Stage, the Construction Stage and the Close-Out Stage, as applicable and the milestone tasks comprising each stage as shown on the left side in the "DESCRIPTION OF WORK ITEMS" column or "CONTRACT PAYMENT ITEMS" column on the Project Invoice forms (Exhibit 11).

Provide the staffing and costs - direct and indirect - that you expect to utilize/incur during the life of the assignment. Tabulate the itemization of the actual staff and/or costs on an assignment in each billing period in the center, right side, and bottom of the Project Invoice forms.

USE:

On notification from the County, submit a detailed cost estimate or Fee Proposal. In the Fee Proposal show subconsultant costs on the Project Fee Proposal Form under "Subconsultants". For each subconsultant include a separate and similar support sheet behind the Project Fee Proposal showing the subconsultant's costs - direct and indirect.

Submit the appropriate Project Invoice Form corresponding to the pay item breakdown on the Fee Proposal Form as your monthly invoice. Attach the appropriate Project Progress Report Form and certified net invoices of payments, if any, made on the completed work on the project by subconsultants.

Entries in the "Budget" column for "Out-of-Pocket" expenses on the Project Invoice "A/B/C" form in the middle block, will correspond to the total direct costs beneath the "Direct Non-Salary Cost Items" columns on the Project Fee Proposal Form. Entries in the "Contract Amount" column on the Project Invoice "A" form in the middle block will correspond to the sum of (1) the "Total Budget Direct Salary" column entries times the overhead factor and (2) the "Profit or Fixed Fee" column entries on the Project Fee Proposal form.

Similarly, entries in the "Budget" column shown on the Project Invoice "B" form in the middle block (left side) will correspond to the entries in the "Total Budget Direct Salary" entries on the Project Fee Proposal form.

Similarly, entries in the "Budget" column shown on the Project Invoice "C" form in the middle block (left side) will correspond to the sum of (1) the "Total Budget Direct Salary" column

entries times the overhead factor and (2) the "Profit" column entries on the Project Fee Proposal form.

PROJECT PROGRESS REPORTS ON PROFESSIONAL SERVICE

GENERAL INSTRUCTIONS:

To allow assessment of progress and verification of invoices, submit a Project Progress Report on the first working day of each month using the Project Progress Report form included as Exhibit 8. The following describes the Project Progress Report with instructions for its use.

DESCRIPTION:

Address on the Project Progress Report stages and/or Special Services including the Schematic Design Stage, the Design Stage, the Bidding Stage, and the Construction and Close-out Stages, as applicable, and the milestone tasks comprising each stage. Show on the Project Progress Report form the percent complete and scheduled and revised milestone dates for each task.

USE:

Submit the progress report on the first working day of each month following the authorization to proceed for the duration of the assignment.

On the Project Progress Report form, enter on the left side the stages and task descriptions. Enter progress data or completion percentages on the right side.

Project Fee Proposal

Direct Non-Salary Costs Sheet _____ of _____	To: Allegheny County Department of Public Works From:	Project: Dept. Project No.
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Stages & Principal Activities	Direct Non-Salary Cost Items	Budget	Direct	Non-Salary	Costs	Budget	Direct	Non-Salary	Costs	Budget	Direct	Non-Salary	Costs
	Rates												
Sub-Total Prime Consultant													
Sub-Total Sub-Consultant(s)													
Total													

Project Fee Proposal

Direct Salary Costs & Summary Sheet ____ of ____	To: Allegheny County Department of Public Works From:	Project: Dept. Project No.
---	--	-------------------------------

Stages & Principal Activities	Names, Titles & Rates of Prime's Project Mgt. & A/E Team										Total Budget Direct Salary	Budget Direct Non-Salary Costs
		Rates								% of Total		
Totals												

Party	Accounts	A. Direct Salary	B. Overhead (__%)	C. Total Salary (A+B)	D. Fixed Fee & Profit (A x __%)	E. Escalation (A x __%)
	Prime Consultant \$					
	Sub-Consultant(s) \$					
	Total \$					

Party	Accounts	F. Total Salary + Fixed Fee & Profit & Escalation (C+D+E)	G. Direct Non-Salary	H. Grand Total (F+G)
	Prime Consultant \$			
	Sub-Consultant(s) \$			
	Total \$			

A G R E E M E N T

MADE AND ENTERED into this _____ day of _____, 2014, between the County of Allegheny, a political sub-division of the Commonwealth of Pennsylvania, hereinafter referred to as “COUNTY”,

**A
N
D**

<FIRM NAME>. a corporation having its principal place of business at <FIRM ADDRESS>, hereinafter referred to as “CONSULTANT”;

W I T N E S S E T H

WHEREAS, COUNTY requires <TYPE OF SERVICES> Services including <DESCRIPTION OF SERVICES> in connection with the <PROJECT NAME> hereinafter referred to as “PROJECT” all as further defined hereinafter; and

WHEREAS, COUNTY desires to secure the professional services of CONSULTANT for the aforementioned purposes and upon the terms and conditions hereinafter set forth to be conducted and performed under the direction and supervision of the County’s Director of the Department of Public Works, hereinafter called “DIRECTOR”; and

WHEREAS, CONSULTANT is willing and able to perform the aforesaid professional services and accepts such engagement upon such terms and conditions;

NOW, THEREFORE, the COUNTY and CONSULTANT mutually covenant and agree as follows:

I. DEFINITIONS

- A. Construction Engineering – The supervision and inspection of construction activities; additional staking functions considered necessary for effective control of the construction operations; testing materials incorporated into construction; checking shop drawings; and measurements needed for preparation of pay estimates.
- B. (The) Engineer – The private consulting engineering firm having primary responsibility for the preliminary engineering and/or construction engineering of/for a facility.
- C. Facility – Any one of the affected bridges and associated roadways and appurtenances included in the Project and identified below.

- D. Guidelines for Consultant Services – A reference manual of the Allegheny County Department of Public Works which provides to the public and private sectors a synopsis of the Department’s procurement and contract administration policy and practice as well as a guide to project implementation (development). The guide includes basic and special professional services by implementation stage.
- E. Implementation Stages – The schematic, preliminary and final design stages; right-of-way acquisition and utility relocation stages; bid/award stage, construction stage, and close-out stage all as necessary to the preliminary engineering, acquisition of rights-of-way, relocation of utilities, and construction of a facility.
- F. Program/Project Management – Integrative program/project planning and control through a single point of integrative responsibility, the Consultant. To perform detailed tasks: planning, scheduling, negotiating, monitoring, communicating, evaluating, controlling, decision making, and reporting essential to the implementation of the Project.
- G. (The) Project – The design and construction of the rehabilitation and/or replacement of the evaluated facilities identified in Exhibit A.
- H. Project Manual Format – Allegheny County Department of Public Works format for the project manual (bound documentary information prepared for bidding and constructing a facility) available in master guide form to assist Project participants in preparing facility project manuals.
- I. Project Participants – All those parties comprising the Project team which team has collective responsibility for the implementation of the Project. The Consultant, Director, and Engineer are Project participants and members of the Project team.
- J. Project Related Activities – Activities necessary to supplement the program/project management function to insure achieving program/project objectives regarding prescribed dimensional, design and performance criteria, time and cost. To provide guidance and direction for facility design or preliminary Public Works and construction engineering work; to analyze and specify project dimensional and performance criteria to insure the quality, reliability, and maintainability of each facility; to evaluate and compile detailed design by Engineer; to carry out at key milestone events independent design reviews to assure technical objectives have been or will be met and to determine the adequacy of technical or engineering by Engineer prior to commitment to the following stages of implementation; to document a “baseline” system and facility configuration, and control and document any changes to that configuration; secure detailed estimates of facility contract administration, recordation, definition,

independent estimates of manpower (loading) and other requirements, scope control, work authorization and control, schedule control, cost control and evaluation; to provide administration of Project records; and to provide computer related effort to complete Project related work products.

- K. System – A combination of pieces of equipment, things, or parts forming a whole which is intended to perform a particular function within prescribed design and performance parameters. A system may be composed of sub-systems.

II. SCOPE OF SERVICES

- A. Under the direction and supervision of the Director or his designee, CONSULTANT shall perform <DESCRIPTION OF SERVICES> related to certain implementation stages of the facilities identified below and furnish as directed for concurrence and/or approval for County use the Project related work products and Project related computer effort. Said work products and computer related effort shall be furnished in the manner, form, and number designated below or by the Director in writing prior to and during the time of preparation or use. Finally said work products and computer related effort shall be provided in connection with the development of the design, drawings, and project manual, i.e., preliminary engineering by the Engineer.

<INSERT DETAILED SCOPE OF SERVICES HERE>

- B. CONSULTANT in performing the above work shall comply with:

1. Federal, State, and local laws, ordinances and regulations governing such work, including but not limited to Title VI of the Civil Rights Act of 1964, as amended, and 49 CFR 21 through Appendix H and 23 CFR 710.405 (b).
2. Those portions of the Allegheny County Department of Public Works “Guidelines for Consultant Services” as amended which are identified by the Director as being applicable to the Consultant’s work and the Director’s administration of this Agreement;
3. Exhibit A, Consultant’s Proposal; Exhibit B, Employment Provisions, Pennsylvania Human Relations Act; Exhibit C, Certificates of Non-Collusion; Exhibit D, MBE/WBE Requirements; Exhibit E, Engineer’s Acceptance of the Provisions of the Pennsylvania Workmen’s Compensation Act; Exhibit F, Federal Nondiscrimination Equal Employment Opportunity Clauses and Commonwealth Nondiscrimination/Sexual harassment Clause; Exhibit G, Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions; Exhibit H, Engineer Integrity Provisions for Municipal Agreements; Exhibit I, Certification of Restrictions on Lobbying; Exhibit J, Offset Provision for Municipal Agreement; Exhibit K, Commonwealth Contractor Responsibility

Provisions; Exhibit L, Provisions Concerning the Americans with Disabilities Act; Exhibit M, Disadvantaged Business Enterprise Program Assurance; and Exhibit N, Good Faith Effort attached hereto and made a part hereof. To the extent that the provisions found in Exhibit "A" including its supplements conflict with the main body of this Agreement including its supplements the latter shall govern.

III. SCHEDULE

CONSULTANT shall provide <TYPE OF SERVICES> with the objective of implementing the project(s) identified in Exhibit A, and in accordance with the schedule of major implementation stages presented in Exhibit A. The initial term of this Agreement will be <DURATION OF AGREEMENT> consecutive calendar days from the date indicated by the Director in writing, to commence services.

IV. COMPENSATION

- A. Notwithstanding any other paragraph of this Agreement, COUNTY will pay CONSULTANT upon written certification by Director to, and acceptance by the County Executive by the <TYPE OF PAYMENT METHOD, COST PLUS FIXED FEE / SPECIFIC RATE, ETC...> per individual method of payment, non-salary direct costs notwithstanding, as defined in the County’s “Guidelines for Consultant Services” identified above for a sum of approved costs incurred in the performance of services hereunder during the <AGREEMENT DURATION> term not to exceed <AMOUNT> Dollars (\$_____).

The aforementioned sum will be payable in accordance with the following tentative schedule of payments and basic cost elements thereof as are allowable, allocable, and reasonable under the provisions of Part 31 of the Federal Acquisition Regulations (48 CFR, Chapter 1) and Allegheny County Travel – Transportation, Meal and Lodging – Policy rates:

Direct Salary	\$
Non-Salary Direct (Includes Sub- Consultants)	\$
Escalation (<PRIME CONSULTANT> Only)	\$
Sub-Total	\$

- B. The COUNTY will reimburse CONSULTANT on a monthly basis after submittal of a project invoice to the Director. The invoice shall be prepared in accordance with the “Guidelines for Consultant Services” identified above and shall indicate/include the following:

1. a tabulation of man-hours expended, and (of) direct costs, indirect costs, and profit or fixed fee earned; and/or
 2. certified net invoices provided to and paid by the Consultant for work performed on the project by his sub-consultants; and
 3. a progress report prepared in accordance with the "Guidelines for Consultant Services" identified above.
- C. After receipt and approval of said statements and associated work products and materials by the Director, the compensation will become due and payable subject to the Director's review of the project progress report.
1. The final invoice for one hundred percent (100%) completion of all work under this Agreement shall be equal to the full amount of the allowable accrued fee (direct and indirect payroll costs plus profit) not to exceed in any case the sum of the amounts provided in IV.A above for direct and indirect payroll plus profit, less the aggregate sum of same paid by prior partial payments on accrued fees, plus all other allowable and approved direct non-payroll costs less the aggregate sum of same paid by prior payments.
 2. In the absence of good and sufficient reasons, CONSULTANT shall promptly pay subconsultants/subcontractors their earned share of the payments received from the COUNTY.
- D. The COUNTY will not be liable for reimbursement to the CONSULTANT for costs incurred by the Consultant which exceed the amounts set forth above in Subsection IV.A without prior approval of the COUNTY in the form of an amended agreement or Change Order hereto as provided in Subsection V.I. The payment of the final invoice to the CONSULTANT for services and work products under this Agreement does not waive the right of the COUNTY to identify improper or irregular payments disclosed by subsequent audits performed by COUNTY on CONSULTANT'S project records and cost account(s) in accordance with the Audit Clause for Agreements involving Federal Funds OMB Circular A-128. In this regard, should a refund be due the COUNTY as the result of such audit the CONSULTANT shall promptly submit same.
- E. For all County projects which are funded, in whole or in part, by the Federal Government, the Commonwealth of Pennsylvania or other third party sources, the COUNTY shall pay CONSULTANT only after receipt of payment from the funding source. CONSULTANT shall have the right to inquire of the COUNTY whether the project is funded by a third party.**

V. GENERAL PROVISIONS

A. ASSIGNMENT AND DELEGATION

CONSULTANT shall have no right or power to assign, delegate or subcontract any rights or duties pursuant to this Agreement without prior written permission of the Director. Any assignment, delegation or subcontracting shall be subject to all the terms, conditions and other provisions of this Agreement and CONSULTANT shall remain liable to COUNTY with respect to each and every term, condition and other provision hereof to the same extent that Consultant would have been obligated if no assignment, delegation or subcontracting had been made.

B. COUNTY'S DUTIES

1. The COUNTY will make available to the CONSULTANT all necessary data in its possession regarding Project. These data may include, but not be limited to: Design Specifications, Standards, Master Construction Specifications, Policies, Guides, Engineering Reports, Maps, Plans, Drawings, Inventories, and Traffic Data.
2. Except as provided in Exhibit A, the COUNTY will be responsible for all submissions to and necessary approvals from other governmental agencies, environmental, social and economic documents, and public meetings and/or hearings. Consultant will prepare/assemble submissions for approval and appropriate signature by County.

C. DESIGN AND INSPECTION STANDARDS

Standards of design and inspection for work assigned hereunder shall be in conformance with the County's Project Profile, its "Guidelines for Consultant Services", and Exhibit A.

D. DISPUTES AND INTERPRETATION

CONSULTANT'S rights to litigate disputes notwithstanding, except as indicated below, the decision of the COUNTY will be final in the event of any dispute as to the interpretation of the terms of this Agreement.

The County may at its discretion seek settlement of a controversy or claim arising out of or relating to this Contract, or the breach thereof, by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitration panel may be entered in the Court of Common Pleas of Allegheny County, except that the arbitration of a claim or controversy arising out of the manner or amount of payments to be made under the Contract may not be sought until the final invoice is prepared, and that any claim or controversy that threatens to slow or interrupt the completion of the Project will be decided on an interim basis by the

Director, whose decision will be binding until an arbitration decision is obtained. The County may in its discretion refuse to submit to arbitration of any claim, but all actions brought by the Consultant must first be submitted to arbitration unless the County otherwise requests.

If a party seeks arbitration of a dispute, that party must file a notice of an intention to arbitrate with the other party within thirty (30) calendar days of the day the claim or controversy arose or the day the Director issued a decision which is the subject of the claim or controversy. The failure to file a notice of intention to arbitrate within thirty (30) calendar days of the day the claim or controversy arose will result in the Director's decision on the matter becoming final and binding.

Acceptance of the final payment by the CONSULTANT will be considered a full release of all claims against COUNTY arising out of, or by reason of, the work done and materials furnished under this contract.

E. INDEMNIFICATION

1. CONSULTANT agrees to indemnify and hold harmless the COUNTY, its County Executive, officers, agents, and employees and/or agencies of the State and Federal government from and against any and all loss, liability, and damage of whatever nature, for damages, injuries and losses of every kind and nature to persons and property including but not limited to death of any person and loss of the use of any property arising out of any negligent act or omission of CONSULTANT or any agent or employee, contractor/consultant, or sub-contractor/sub-consultant of Consultant for which Consultant is legally liable in performing services under this Agreement.
2. CONSULTANT agrees to defend, indemnify and hold harmless the COUNTY and its Chief Executive, officers, agents and employees from and against any and all claims and liability for compensation under any Worker's Compensation law arising out of injuries sustained or claimed to have been sustained by any employees of CONSULTANT, or of any agent, contractor/consultant or sub-contractor/sub-consultant of Consultant.
3. CONSULTANT'S obligations to protect, defend, indemnify, and hold harmless, as set forth in this Subsection shall include any and all attorney's fees incurred by the COUNTY in the defense and/or handling of said suits, demands, judgments, liens, claims and the like, and all attorney's fees and investigative expenses incurred by the County in enforcing and/or obtaining compliance with the provisions of this Subsection.

F. INCORPORATION OF REGULATIONS

CONSULTANT shall incorporate into and make part of this Agreement, by reference or by setting forth at length, at the option of the COUNTY, any and all

statutes, rules and regulations, and assurances made pursuant thereto, the incorporation of which may now or hereafter be required by any governmental agency, or the incorporation of which may be a pre-requisite to or condition of the COUNTY'S receiving any federal or state grant or loan or other governmental assistance.

G. INSURANCE

During the term of this Agreement and until such time as CONSULTANT shall fully complete all work hereunder, CONSULTANT shall at his own cost and expense, maintain in effect the following insurance coverages issued by an insurance company or companies authorized to do business in Pennsylvania:

1. A Comprehensive General Liability Policy which shall include, but not be limited to, the following coverages:
 - (a) Contractual Liability covering this contract between the Consultant and the County
 - (b) Independent Contractors
 - (c) Broad Form Property Damage
 - (d) Completed Operations

The limits of liability may be satisfied with a combined single limit of One Million and 00/100 dollars (\$1,000,000.00) per occurrence for injury to persons and damage to property. The COUNTY and its Chief Executive shall be named additional insureds in the Comprehensive General Liability Policy with the right of notice.

2. Comprehensive Liability Insurance covering all owned and non-owned automobiles:
 - (a) The Automobile Liability Insurance required may be satisfied with a combined single limit of One Million and 00/100 dollars (\$1,000,000.00) per occurrence for injury to persons and damage to property.
3. Worker's Compensation Insurance as required by law.
4. Architects' and Engineers' Professional Liability Insurance covering claims resulting from error, omission or negligent acts with a limit of not less than Five Hundred Thousand and 00/100 dollars (\$500,000.00) per occurrence.

The CONSULTANT shall provide to the Director, prior to commencing work, Certificates of Insurance evidencing the required insurance described above.

CONSULTANT shall also provide Certificates of Insurance evidencing the renewal of such policies of insurance which expire during the term of this contract. The Certificates shall provide that the insurance company will inform the County, by mail, thirty (30) days prior to the termination of the policy or to any change in the policy which would reduce or restrict the coverages required in the contract or (to) any change of the name of the insured, as such may affect this Contract. Such Certificates shall, in addition to the information relative to the insurance required, contain the following:

- (a) Term of Insurance Policy
- (b) Limits of liability provided
- (c) Coverage provided
- (d) Name of Insurance Company
- (e) Policy Number(s)
- (f) Any self-insured retention applicable to any contract of insurance
- (g) Underlying insurance requirements where policy certifies an excess liability contract

No Certificate will be accepted which exculpates or reduce any rights conferred on Allegheny County by the above.

No deductible or program of self-insured retention shall apply to any of the foregoing coverages without prior approval of the County.

Certificates shall bear a signature of a direct representative of an insurance company authorized to do business in Pennsylvania.

If so requested, certified copies of the policies affording the above insurance shall be furnished to the Director.

Should CONSULTANT be unable to comply with the insurance requirements provided, he may request a waiver or modification of those requirements subject to approval of the County. Consideration of such a request will be based upon documentation evidencing unavailability of coverage, provided said unavailability of coverage is not based in whole or in part upon poor loss experience of Consultant.

The COUNTY reserves the right to withhold any payment to CONSULTANT hereunder in the event of breach of this Section. COUNTY also reserves such rights as are provided by law against CONSULTANT for breach of this Section including any action for damages, contribution or indemnity arising out of CONSULTANT'S professional services.

H. INTERRUPTION, POSTPONEMENT AND ABANDONMENT

1. In the event the work contemplated under this Agreement shall be interrupted, postponed or abandoned by the COUNTY for any reason whatsoever, the CONSULTANT will not be entitled to any further compensation in excess of the amount due him for services rendered up until the time he received notice in writing from the COUNTY to cease work under this Agreement.
2. The amount due at that time or final payment for earnings will be equal to the Consultant's total accrued fee (direct and indirect payroll plus profit) to the date of notification, less the aggregate sum on same paid by prior payments plus all other allowable and approved direct costs other than payroll less the aggregate sum of same paid by prior payments.
3. The COUNTY may also, at its option, cancel this Agreement for cause and recover damages or enter into renegotiation to change the fee as provided herein when it determines that the Consultant's fee transmittal(s) are in error and that the correct data will cause a change in the fee to be paid to Consultant.

I. MODIFICATION OR AMENDMENT

1. This Agreement constitutes the entire agreement of the parties on the subject matter hereof and may not be changed, modified, discharged or extended except by written amendment or Change Order duly executed by the parties.
2. No representations or warranties shall be binding upon County unless expressed in writing herein or in a duly executed amendment or Executive Action hereto.
3. Changes, modifications, dischargings and extensions involving the specified scope of services, work products, time schedule or compensation for Project will be accomplished via a duly executed amendment or Change Order.
4. After the successful Consultant has been notified of his selection and the Proposal has been accepted by the County, the Consultant must notify the County of any changes in the personnel to be used on the Project. This will be necessary during the entire Project. The County must authorize these changes. Any other changes from the final Proposal must also be approved by the County. There will be no exceptions.

J. NON-WAIVER

A failure by either party to take any action with respect to any default or violation by the other party of any of the terms, conditions or covenants of this Agreement shall not in any way limit, prejudice, diminish or constitute a waiver of any right of the non-defaulting party to act with respect to any continuation or repetition of the original violation or default.

K. PROJECT ADMINISTRATION

1. The CONSULTANT'S work shall at all times be subject to the inspection, direction, review and approval of the Director, and where indicated, the inspection, review and acceptance of other governmental agencies.
2. On a periodic basis the Director will conduct reviews and checks with the CONSULTANT, scheduled in advance. Documentation of such reviews and checks shall be furnished by the Consultant to the Director as an official record or minutes.
3. On the first working day of each month, or as indicated by the Director, the CONSULTANT shall submit a project progress report which shall provide a current and cumulative record of expenditures and/or progress.
4. If at any time during the Director's review the Director finds that the CONSULTANT'S work does not conform with the agreement between COUNTY and CONSULTANT, the Director will notify the CONSULTANT in writing and describe in detail the non-conformity. CONSULTANT will be expected to correct all non-conformities outlined at no additional cost to the COUNTY.

L. RECORDS AND INSPECTION

The CONSULTANT shall maintain all books, documents, papers, records, supporting cost proposals, accounting records, employees' time cards, payroll records and other evidence pertaining to costs incurred and shown on any invoice for work done pursuant to this Agreement. He shall make such materials, as well as his work as it progresses, available at all reasonable times during the contract period (and, in the case of records, for three (3) years from the date of final payment for work done pursuant to this Agreement) for inspection and/or audit by the COUNTY, or any other authorized representatives of the State or Federal Government. Copies of records shall be furnished if requested at cost to the requesting agency. Time records for personnel performing any work shall account for direct labor performed on the Project, as well as the time of any personnel included in the computation of overhead costs.

M. REMEDYING ERRORS

Notwithstanding the acceptance and approval of the COUNTY of any work performed or completed under the terms of this Agreement, the CONSULTANT shall continue to be responsible and liable on the contract for any expense or damages incurred by the COUNTY, its County Executive, and their officers and employees in remedying errors, omissions, faulty design and latent defects in any part of the work performed on the contract project due to the proven negligence of the CONSULTANT. In this connection the CONSULTANT will be promptly notified in writing of any error, omission, faulty design, and latent defect

discovered by the Director in the performance of the contract work so that the CONSULTANT might have the opportunity to remedy or correct the same.

N. TERMINATION OF AGREEMENT

Notwithstanding any other provision hereof, the COUNTY may terminate this Agreement at any time upon thirty (30) days prior written notice to CONSULTANT. In the event that this Agreement is so terminated, CONSULTANT shall be paid only for services actually performed and reimbursable expenses actually incurred prior to termination in accordance with Subsection IV.

O. WORK PRODUCTS

1. All work products prepared by CONSULTANT pursuant to this Agreement including but not limited to pre-design programming and reports, studies, reports, structural analyses and other analyses or designs, calculation, tracings, working drawings, specifications, estimates, photographs, and models shall be the property of the COUNTY and not of CONSULTANT. All work products will be delivered to the COUNTY upon request of the Director and in any event upon the cessation of this Agreement, whether the same be by expiration, termination or otherwise; provided, however, that CONSULTANT may retain copies of such work products as part of CONSULTANT'S record of professional activity. Such work products are not intended or represented for reuse by the COUNTY on any extension to the Project or any other project. Any reuse will be at the COUNTY'S sole risk.
2. The CONSULTANT shall not make public proposals developed under this Agreement without prior written approval from the Director prior to said proposals becoming matters of public record.

P. GENERAL PROVISIONS

1. Applicable Law/Venue

Pennsylvania law shall govern the validity, construction, interpretation, and effect of this Agreement. In that regard the parties agree to submit to the jurisdiction of the courts of Pennsylvania for all purposes related to this Agreement. The parties further agree that the Court of Common Pleas of Allegheny County, Pennsylvania shall have exclusive venue of any claim or controversy arising hereunder.

2. Construction

The paragraph headings of this Agreement are for convenience of reference only and do not form a part of the terms, conditions, or covenants of this Agreement or give full notice thereof. As used in the Agreement, the masculine includes the feminine, and the single includes the plural.

3. Benefit

This Agreement shall be binding on, and inure to the benefit of, the parties hereto and their respective successors, and assigns.

4. Entire Agreement

This Agreement constitutes the entire understanding between the parties with respect to the subject matter hereof, no other representations or covenants having induced any party to enter into this Agreement.

5. Severability

If any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement or any other document.

6. Notices

All notices required or permitted hereunder shall be deemed sufficiently given if sent by registered or certified mail, return receipt requested, or by a recognized overnight courier service or by hand delivery to the addresses of the parties identified on the first page of this Agreement.

7. Amendments

This Agreement may not be altered, amended, restated, repealed or revised except by writing duly and adopted by the parties.

Q. REQUIRED ASSURANCE FOR FEDERALLY FUNDED CONTRACTS

- a. CONSULTANT shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. CONSULTANT shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of United States Department of Transportation-assisted contracts. Failure by CONSULTANT to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the County and the Pennsylvania Department of Transportation deems appropriate. If CONSULTANT is

providing services or supplies for the Pennsylvania Department of Transportation pursuant to this contract, it must include this assurance in each sub-contract that it signs with a sub-contractor. If CONSULTANT is a grantee or other recipient of funds from the Department of Transportation, it must include this assurance in each contract into which it enters to carry out the project or activities being funded by this contract.

R. EXAMINATION OF FINANCIAL DOCUMENTS

Contractor shall maintain books, program and financial records, documents and other evidence pertaining to costs and expenses related to this Agreement in such detail as will properly reflect all costs of labor, materials, equipment, supplies, services and other costs and expenses of whatever nature for which County funding has been provided under the provisions of this Agreement. The Contractor shall maintain such books, records, documents and other materials in accordance with Generally Accepted Accounting Principles, where applicable. The Contractor shall provide access, during normal business hours, to such books, program and financial records, documents and other evidence upon request of the County Manager, the county Controller or their designees upon receipt of reasonable advance notice, either oral or written. Contractor's books, records, program and financial records, documents and other evidence pertaining to services provided under this Agreement shall be preserved and made available for a period of three (3) years following the termination of this Agreement. The County Manager, the County Controller or their designees may audit, examine, review, photocopy, and/or make excerpts or transcripts of any Contractor's books, records, program and financial records, documents and other evidence. Any deficiencies noted in any audit reports or otherwise must be fully resolved by the Contractor, to the County's sole satisfaction, within thirty (30) days after the Contractor's receipt of written notice of such deficiencies. Failure of the Contractor to comply with the provisions set forth in this paragraph may constitute a violation of this Agreement and, at the County's sole discretion, may result in the County withholding future payments.

S. CONSULTANT RESPONSIBILITY TO MONITOR PROJECT STATUS

1. **CONSULTANT shall be responsible to monitor the payments received from the COUNTY and any payments which CONSULTANT believes are due to be paid to CONSULTANT and shall alert COUNTY when the total of such payments equals 75% of the total amount of the Agreement or Agreement Part or when CONSULTANT projects that the Total Amount of the agreement will be exceeded.**
2. **CONSULTANT shall also be responsible to notify the COUNTY at least forty-five (45) days prior to the Agreement expiration date whether the CONSULTANT anticipates that the Agreement will or will not require a time extension.**

3. **In the event that the CONSULTANT believes that additional funds or additional time will be required to complete the project and so notifies the COUNTY as set forth in 1 or 2 above, then the parties agree to review the status of the project and the projected future cost and time required to complete the project to determine whether a Change Order is needed or a change to the scope of the project is necessary so as not to exceed the total amount of the Agreement or the schedule for completion. CONSULTANT understands and agrees that no increase in the total cost authorized or the time for completion can be approved without sufficient advance notice to the COUNTY. Nothing in this section shall be construed or is intended to otherwise affect the agreed upon cost or time for completion of the project but rather to allow for sufficient time for the parties to review the status of the project and agree to changes if necessary.**

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first above written.

ATTEST:

<FIRM NAME>.

BY: _____

(SEAL)

ATTEST:

COUNTY OF ALLEGHENY

Witness

BY: _____

<NAME>

County Manager

APPROVED:

<NAME> Director
Department of Public Works

APPROVED AS TO FORM:

County Solicitor

Assistant County Solicitor

Agreement between Allegheny County Department of Public Works and <FIRM NAME>. was approved by the County Manager on _____, Executive Action No. _____, Amount: \$_____.

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
MONTHLY STATUS REPORT**

Consultant Name: _____
Federal I.D. #: _____

Purchase Order (P.O.) No.: _____
Estimate No.: _____
Contract No: _____ Work Task No.: _____
Project No: _____ Job No.: _____
Description: _____ Part: _____
Period From: _____ To: _____

DESIGN STATUS THIS MONTH	% COMPLETE	MILESTONE DATES		
		SCHEDULED	REVISED	ACTUAL
<u>OVERALL STATUS</u>				
Task	0.00%	N/A	N/A	N/A
<u>WORK COMPLETED THIS PERIOD</u>				
1.	0.00%			
2.	0.00%			

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
MONTHLY STATUS REPORT**

Consultant Name: _____

Federal I.D. #: _____

Purchase Order (P.O.) No.: _____

Estimate No.: _____

Contract No: _____ Work Task No.: _____

Project No: _____ Job No.: _____

Description: _____ Part: _____

Period From: _____ To: _____

SCHEDULE STATUS

Total Project Completion to Date =0%

Project within 10% of Schedule: Yes _____ No _____

If no, reason behind schedule:

MAJOR ANTICIPATED ACTIVITIES NEXT MONTH

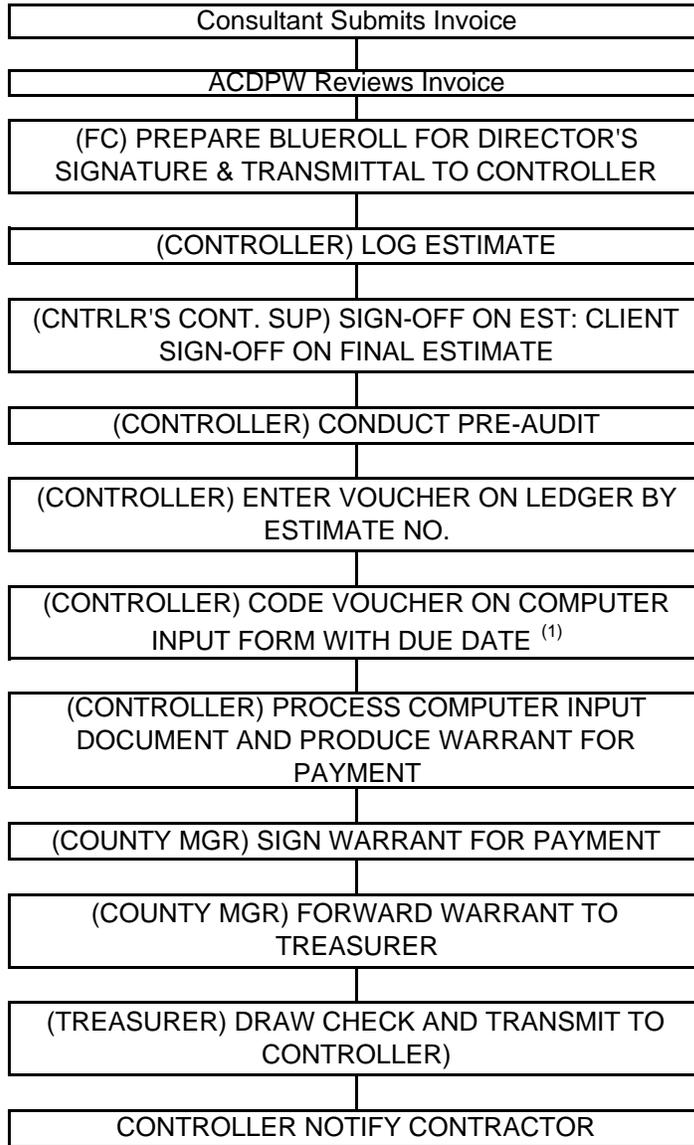
- 1. Overhead Bridge replacement studies
- 2. Develop a Draft report of the study
- 3.
- 4.
- 5.

OUTSTANDING/UNRESOLVED ISSUES

None

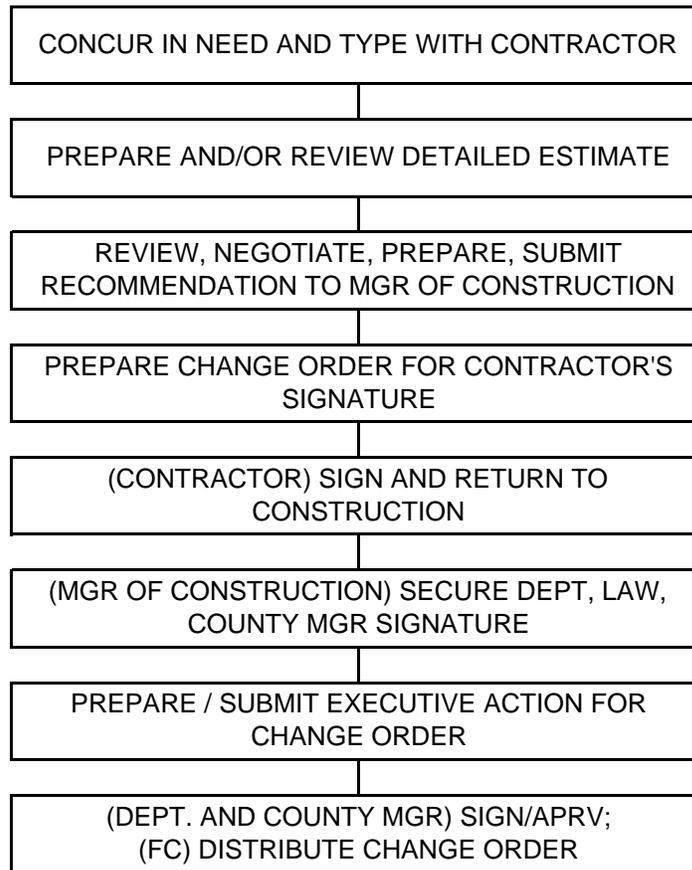
PROJECT MANAGER

PROGRESS AND FINAL PAYMENTS PROCESS



(1) Confirm receipt of: Executive Action, Maintenance Bond, Contractor's Certification, Statement of Surety, Warranties and Guarantees.

CONSTRUCTION CHANGE ORDER PROCESS



(1) Additional Work at contract price; extra work on agreed price; force account on invoice for labor and material with cost breakdown.

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - LUMP SUM**

Consultant Name: _____	Purchase Order #: _____
Address: _____	Estimate #: _____
Federal I.D.#: _____	Contract #: _____
Telephone #: _____	Project #: _____ Work Task #: _____
Contact Person: _____	MPMS #: _____ Job #: _____
Project Manager: _____	Description: _____ Part: _____
	Billing Period From: _____ To: _____

AGREEMENT AMOUNTS (This Part):	AMOUNTS EARNED:	AMOUNTS DUE:
1. Lump Sum	To Date: _____	
Maximum = \$ -	Previous: \$ -	
75% Complete		
\$ -	Amount Due: \$ -	
2. Direct Costs Other Than Lump Sum	To Date: \$ -	
Maximum \$ -	Previous: \$ -	
75% Complete		
\$ -	Amount Due: \$ -	
3. Direct Costs By Others	To Date: \$ -	
Maximum \$ -	Previous: \$ -	
75% Complete		
\$ -	Amount Due: \$ -	
Total:	Max. Agreement Amount:	Total This Invoice:
\$ -	\$ -	
	Total Invoices to Date:	
	\$ -	\$ -
% OF WORK COMPLETED TO DATE: #DIV/0!		

<p><i>I certify that this invoice represents services rendered on this project and is true and correct, and all expenditures were incurred under a fully executed contract.</i></p> <p>_____</p> <p>Consultant's Authorized Representative Date</p> <p>_____</p> <p>County's Technically Responsible Person Date</p>	<p style="text-align: center;">(This Part)</p> <p>Original Contract Amount: \$ _____ -</p> <p>Supplemental Amount: \$ _____ -</p> <p>Cumulative Contract Amount: \$ _____ -</p> <p>Current Contract Expiration: _____</p>
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**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - LUMP SUM**

Consultant Name: _____
Federal I.D. #: _____

Purchase Order (P.O.) No.: _____
Estimate No.: _____
Contract No.: _____ Work Task No.: _____
Project No.: _____ Job No.: _____
Description: _____ Part: _____
Period From: _____ To: _____

Lump Sum Contract Pay Items			Lump Sum Budget	% Completed		Total Invoiced Amount		Budget Remaining	% Remaining
Task No.	Description	(Includes OH, Escalation and Profit)	This Invoice	To Date	This Invoice	To Date			
1	1.10.1	Project Management/Administration	\$10,000.00	10.00%	10.00%	\$1,000.00	\$1,000.00	\$9,000.00	90.0%
2	etc.	Public Involvement	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
3		Level 1B CE	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
4		Surveys	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
5		Preliminary Drainage	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
6		Cross-Sections	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
7		Line and Grade	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
8		Typical Sections	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
9		Preliminary Pavement Design	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
10		Design Field View	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
11		Preliminary Erosion & Sedimentation	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
12		Background Drawings	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
13		Preliminary ROW Activities	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
14		Preliminary Type, Size & Location	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
15		Waterway Permits	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
16		Bridge Inspection	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
17		Prelim Mainten/Protection of Traffic	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
18		Preliminary Pavement Marking Plan	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
19		Preliminary Signing and Sign Lighting	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
20		Safety Review/Audit	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
21		Utilities	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
22		Grade Crossing Activities	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
23		etc	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
24		etc	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
25		etc	\$0.00	0.00%	0.00%	\$0.00	\$0.00	\$0.00	100.00%
TOTAL:			\$10,000.00	10.00%	10.00%	\$1,000.00	\$1,000.00	\$9,000.00	99.60%

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - LUMP SUM**

Consultant Name: _____
Federal I.D. #: _____

Purchase Order (P.O.) No.: _____
Estimate No.: _____
Contract No: _____ Work Task No.: _____
Project No: _____ Job No.: _____
Description: _____ Part: _____
Period From: _____ To: _____

DIRECT COSTS OTHER THAN LUMP SUM	Estimate Cost:	Billed to Date:	Billed this Estimate:
Description:	\$0.00	\$0.00	
TOTAL:	\$0.00	\$0.00	\$0.00

DIRECT COSTS BY OTHERS	Estimate Cost:	Billed to Date:	Billed this Estimate:
Sub Consultant:	\$0.00		
TOTAL:	\$0.00	\$0.00	\$0.00

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - COST PLUS FIXED FEE**

Consultant Name: _____ Address: _____ _____ Federal I.D.#: _____ Telephone #: _____ Contact Person: _____ Project Manager: _____	Purchase Order #: _____ Invoice #: _____ Contract #: _____ Project #: _____ Work Task #: _____ MPMS #: _____ Job #: _____ Description: _____ Part: _____ Billing Period From: _____ To: _____
--	---

AGREEMENT AMOUNTS (This Part):	AMOUNTS EARNED:	AMOUNTS DUE:	
1. Direct/Indirect Payroll Maximum = \$ - 75% Complete \$ -	To Date: \$ -		
	Previous: \$ -		
	Payroll Billed this Invoice \$ -		
	Overhead @ % \$ -		
	Amount Due: \$ -		
2. In-House Direct Costs Maximum : \$ - 75% Complete \$ -	To Date: \$ -		
	Previous: \$ -		
	Amount Due: \$ -		
3. Direct Costs by Others Maximum : \$ - 75% Complete \$ -	To Date: \$ -		
	Previous: \$ -		
	Amount Due: \$ -		
4. Fee Maximum : \$ - 75% Complete \$ -	To Date: \$ -		
	Previous: \$ -		
	Fee @ % \$ -		
	Amount Due: \$ -		
5. Pre-Determined Amount Maximum : \$ - 75% Complete \$ -	To Date: \$ -		
	Previous: \$ -		
	Amount Due: \$ -		
Total:	Max. Agreement Amount:	Total This Invoice:	
	\$ -		\$ -
	Total Invoices to Date:		\$ -
	\$ -		
% OF WORK COMPLETED TO DATE: #####			

<p><i>I certify that this invoice represents services rendered on this project and is true and correct, and all expenditures were incurred under a fully executed contract.</i></p> _____ Consultant's Authorized Representative Date	<p align="center">(This Part)</p> Original Contract Amount: \$ - Supplemental Amount: \$ - Cumulative Contract Amount: \$ - Current Contract Expiration: _____
_____ County's Technically Responsible Person Date	

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - COST PLUS FIXED FEE**

Consultant Name: _____

Purchase Order (P.O.) No.: _____

Federal I.D. #: _____

Estimate No.: _____

Contract No: _____ Work Task No.: _____

Project No: _____ Job No.: _____

Description: _____ Part: _____

Period From: _____ To: _____

DESCRIPTION OF WORK	ESTIMATED COST	BILLED TO DATE	BILLED PREVIOUSLY	BILLED THIS ESTIMATE
2. IN-HOUSE DIRECT COSTS OTHER THAN PAYROLL				
a) Mileage @ \$____/mile	\$ 0.00	\$0.00	\$ 0.00	\$ 0.00
b) Tolls	0.00	0.00	0.00	0.00
c) Lodging	0.00	0.00	0.00	0.00
d) Meals	0.00	0.00	0.00	0.00
e) Plotted Maps / Boards + Handouts	0.00	0.00	0.00	0.00
f) Color Reproductions	0.00	0.00	0.00	0.00
g) Legal Notices	0.00	0.00	0.00	0.00
h) Flood & Navigation Maps	0.00	0.00	0.00	0.00
i) Railroad flaggers Insurance	0.00	0.00	0.00	0.00
j) Report	0.00	0.00	0.00	0.00
k) Prints	0.00	0.00	0.00	0.00
TOTALS:	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
3. DIRECT COSTS BY OTHERS				
	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
TOTALS:	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED WORK COMPLETED - COST PLUS FIXED FEE**

Consultant Name: _____

Purchase Order (P.O.) No.: _____

Federal I.D. #: _____

Estimate No.: _____

Contract No: _____ Work Task No.: _____

Project No: _____ Job No.: _____

Description: _____ Part: _____

Period From: _____ To: _____

ITEM NO.	DESCRIPTION OF WORK	% OF TOTAL FEE	% ITEM COMPLETE LAST REPORT	% ITEM COMPLETE TO DATE	% OF TOTAL FEE TO DATE
A	Project Management	0.0%	0.00%	0.00%	0.00%
B	Status Coord. Meetings	0.0%	0.00%	0.00%	0.00%
C	Mapping and Surveys	0.0%	0.00%	0.00%	0.00%
D	Design Field View Plans	0.0%	0.00%	0.00%	0.00%
E	Preliminary Traffic Control Plans	0.0%	0.00%	0.00%	0.00%
F	Utilities	0.0%	0.00%	0.00%	0.00%
G	Structures	0.0%	0.00%	0.00%	0.00%
H	Preliminary Geotechnical Investigations	0.0%	0.00%	0.00%	0.00%
I	Highway Light Design	0.0%	0.00%	0.00%	0.00%
J	Right of Way Plot Plans	0.0%	0.00%	0.00%	0.00%
K	Environmental	0.0%	0.00%	0.00%	0.00%
L	Public Meeting and Officials Meetings	0.0%	0.00%	0.00%	0.00%
M					
N					
O					
P					
	TOTALS	0% %			0.00% *

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED WORK COMPLETED - COST PLUS FIXED FEE**

Consultant Name: _____

Purchase Order (P.O.) No.: _____

Federal I.D. #: _____

Estimate No.: _____

Contract No: _____ Work Task No.: _____

Project No: _____ Job No.: _____

Description: _____ Part: _____

Period From: _____ To: _____

5. PRE-DETERMINED AMOUNTS

DESCRIPTION	PRE-DETERMINED AMOUNT	AMOUNT AUTHORIZED	DATE AUTHORIZED	BILLED TO DATE	PREVIOUSLY BILLED	BILLED THIS ESTIMATE
N/A						
TOTALS						

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - SPECIFIC RATE OF COMPENSATION**

Consultant Name: _____	Purchase Order #: _____	
Address: _____	Estimate #: _____	
_____	Contract #: _____	
Federal I.D.#: _____	Project #: _____	Work Task #: _____
Telephone #: _____	MPMS #: _____	Job #: _____
Contact Person: _____	Description: _____	Part: _____
Project Manager: _____	Billing Period From: _____	To: _____

AGREEMENT AMOUNTS (This Part):	AMOUNTS EARNED	AMOUNTS DUE
1. Specific Rate of Compensation	To Date: \$ -	
Maximum = \$ -	Previous: \$ -	
75% Complete		
\$ -	Amount Due: \$ -	
2. Direct Costs Other Than Payroll	To Date: \$0.00	
Maximum \$ -	Previous: \$ -	
75% Complete		
\$ -	Amount Due: \$ -	
3. Direct Costs By Others	To Date: \$0.00	
Maximum \$ -	Previous: \$ -	
75% Complete		
\$ -	Amount Due: \$ -	
Total	Maximum Agreement Amount:	Total This Invoice:
	\$ -	
\$ -	Total Invoices to Date:	
	\$ -	\$ -

% OF WORK COMPLETED TO DATE: #DIV/0!

<p><i>I certify that this invoice represents services rendered on this project and is true and correct, and all expenditures were incurred under a fully executed contract.</i></p> <p>_____</p> <p>Consultant's Authorized Representative Date</p> <p>_____</p> <p>County's Technically Responsible Person Date</p>	(This Part)
	Original Contract Amount: \$ -
	Supplemental Amount: \$ -
	Cumulative Contract Amount: \$ -
	Current Contract Expiration: _____

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - SPECIFIC RATE OF COMPENSATION**

Consultant Name: _____
 Federal I.D. #: _____
 Purchase Order (P.O.) No.: _____
 Estimate No.: _____
 Contract No: _____ Work Task No.: _____
 Project No: _____ Job No.: _____
 Description: _____ Part: _____
 Period From: _____ To: _____

DATE
SPECIFIC RATE FACTOR (SRF)
 FIELD SPECIFIC RATE FACTOR: 0.0000
 OFFICE SPECIFIC RATE FACTOR: 0.0000

EMPLOYEE	CLASSIFICATION	1	2	3	4	5	(A)	(B)		(C)
		Task Description	Total Hours this Estimate:	Specific Rate	Rate Approval Date:	AMOUNT DUE THIS PERIOD: C = (A x B)				
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
							0.0	0.00	00/00/00	\$0.00
Total hours this estimate:		0.0	0.0	0.0			0.0			Total this period: \$ -
Total hours previous estimate:		0.0	0.0	0.0			0.0			
Total hours to date:		0.0	0.0	0.0			0.0			
Contract total hours:		0.0	0.0	0.0			0.0			
% hours used to date:		#DIV/0!	#DIV/0!	#DIV/0!			#DIV/0!			

**ALLEGHENY COUNTY DEPARTMENT OF PUBLIC WORKS
ESTIMATED PROGRESS REPORT - SPECIFIC RATE OF COMPENSATION**

Consultant Name: _____	Purchase Order (P.O.) No.: _____
Federal I.D. #: _____	Estimate No.: _____
	Contract No: _____ Work Task No.: _____
	Project No: _____ Job No.: _____
	Description: _____ Part: _____
	Period From: _____ To: _____

DIRECT COSTS OTHER THAN PAYROLL	Estimate Cost:	Billed to Date:	Billed this Estimate:
Description:	\$0.00	\$0.00	
TOTAL:	\$0.00	\$0.00	\$0.00

DIRECT COSTS BY OTHERS	Estimate Cost:	Billed to Date:	Billed this Estimate:
Sub Consultant:	\$0.00		
TOTAL:	\$0.00	\$0.00	\$0.00

Date:

Company Return Address

<Director>
Allegheny County
Department of Public Works
Room 501, County Office Building
542 Forbes Avenue
Pittsburgh, Pennsylvania 15219-2904
Attention: <Project Manager>

Re: DPW Project Name: _____
DPW Project Code: _____
Phase: _____
Allegheny County Contract No.: _____
Work Period From: _____ To: _____
Amount of Invoice: _____

Dear _____:

Enclosed is the invoice for the above referenced project for your review and processing.
We thank you for the opportunity to assist you on this project.

Sincerely,
Company, Inc.

Name
Title

Enclosures

Consultant Evaluation

Date: _____
Municipal Agreement: _____ **Part:** _____
Title of Agreement: _____
Phase: _____
Evaluation Type: **Final** **Interim**
Percent Complete: _____

Initiating Organization: _____
Business Partner Name: _____
Consultant Role: **Consultant** **Subconsultant**
Consultant Project Manager: _____
• Type of Project: _____
• Professional Fees: _____

	Weight (0 to 10)	Rating
1. PROJECT MANAGEMENT		
1.1. Project Manager/Team Members demonstrate cooperation and ability to develop solutions that meet the need of the Department, maximize cost savings, minimize schedule delay, and facilitate the project development process		
1.2. Implementation and use of team organization and chain of command to make decisions, communicate information and establish accountability		
1.3. Project Manager demonstrates knowledge of Federal and State Requirements/regulations		
1.4. Consultant identified issues that will have a potential impact on the project schedule and cost, and offered potential solutions to minimize impacts to the project schedule and budget		
1.5. Project Manager and necessary Team Members communicate project issues on a regular basis with Department		
1.6. Project Manager tracks the contract budget versus the invoiced amounts to ensure work efforts are commensurate		
1.7. Project Manager discusses any work efforts out of scope with the Department prior to completing/initiating tasks		
1.8. Consultant developed or assisted district in developing OpenPlan schedule at the onset of the project that was complete and accurate		
1.9. Consultant provides revisions to OpenPlan schedules to the level of detail required by the time required		
1.10. Consultant meets all milestones/submissions as established in the contract/OpenPlan schedule		
1.11. Consultant makes an effort to meet original project dates when additional or extra work is required		
1.12. Project Manager provides oversight and coordination with all Subconsultants on the contract		
1.13. Consultant monitors status of contracts with DBE/MBE/WBE firms to ensure compliance with goals		
Section Totals:	0	
2. QUALITY MANAGEMENT		
2.1. Consultant prepares and adheres to a Quality Assurance/Quality Control Plan		
2.2. Consultant completes all work in compliance with Federal, State, and Local regulations, policies, procedures and guidelines		
2.3. Design deliverables are accurate, and free of errors and inconsistencies. Consultant satisfactorily corrects identified inconsistencies or errors to ensure compliance with Department, and as applicable, FHWA specifications		
2.4. Consultant submitted an end product which met the needs of the Department and was consistent with the requirements in the Technical Proposal		
2.5 Consultant provides recommendations, with respect to cost and schedule		
Section Totals:	0	

Consultant Evaluation

3. WORK PERFORMANCE

3.1. Dependability		
3.2. Technical Capability		
3.3. Specification Enforcement		
3.4. Staff Qualification		
3.5. Public Relations		
3.6. Project Safety		
3.7. Records/Correspondence		
3.8. Estimates (consultants)		
3.9. Contract Compliance		
3.10. Claims Support		
3.11. Constructability Review		
3.12. Shop Drawing Coordination/Review		
Section Totals:	0	
OVERALL EVALUATION:		0

Municipal Project Manager's Comments:

Indicate the names of any of the consultant's employees whose performance was outstanding on this project and what their contribution was. Similarly, indicate the names of those whose performance was substandard and why.

Municipal Contact Information

Project Manager: _____
 Phone Number: _____
 Fax Number: _____
 Email: _____

Consultant Contact Information

Project Manager: _____
 Address 1: _____
 Address 2: _____
 Address 3: _____
 City: _____
 State: _____ Zip Code: _____
 Phone Number: _____ Ext: _____
 Fax Number: _____

Consultant Evaluation

Please Sign Below:

Municipal Project Manager

Date

Consultant Project Manager

Date

Consultant PM Comments:

Consultant Principal

Date

Consultant Principal Comments:

PennDOT Local Project Manager

Date

LPC Comments:

Assistant Construction Engineer or Manager

Date

ACE Comments:

Assistant District Executive of Construction (if needed)

Date

ADE-C Comments:

Copy to:

Municipal Project Manager

Consultant Company

PennDOT Local Project Manager

Contract & Consultant Agreement Manager

Design Local Project Manager

Gary R. Kleist, P.E., Consultant Agreement Section, PennDOT, 400 North St., 7th Floor Keystone Building, Harrisburg, PA 17105 (Original)

Consultant Evaluation

Directions:

The information at the top of the form needs to be filled in.

For the Weight Column:

The weight value cannot be blank, Please enter a value of 0 if it is non-applicable or a value from 1 to 10 to reflect an appropriate weight for the specific topic. 1 = least important and 10 = most important

For the Rating Column:

Please select the box, and select the appropriate rating from the drop-down selection.

If the weight has a value of zero, then select N/A - Not Applicable from the list.

Please fill in the PennDOT Contact Information and the Consultant Information.

Please have the appropriate personnel sign.

Project:
Project No. :
Agreement No.:

Type of Service:
Date:

CONSULTANT PERFORMANCE EVALUATION

CLASS *	FACTOR	RATING **					WEIGHT	SCORE***	COMMENTS
		0.5	0.7	0.8	0.9	1			
1	Observance and Application of Standards and Requirements								
1	Quality, Completeness and Accuracy of Work Products								
2	Demonstrated Ability to Control Scope of Work								
2	Demonstrated Ability to Meet Milestone Schedule for Deliverables								
3	Demonstrated Ability to Meet Budget								
3	Completeness and Accuracy of Invoices								

NOTES:

* Class 1 = Technical Competence
 Class 2 = Schedule/Management Competence
 Class 3 = Fiscal Competence

** RATING KEY:
 0.5 = Marginal
 0.7 = Acceptable
 0.8 = Occasionally Exceeds Acceptable
 0.9 = Consistently Exceeds Acceptable
 1.0 = Outstanding in All Respects

*** Score = Rating x Weight