

## INDEPENDENT COST ESTIMATE (ICE) FORM

	SHADED AREA FOR PROCUREMENT USE ONLY
Project Name & Title	
Purchase Requisition (PR)#	Assigned Buyer #
	D/M/WBE %

NEW CONTRACT/PROCUREMENT

<input type="checkbox"/> EXPIRING CONTRACT TO BE MODIFIED	Contract #
	PO#

<input type="checkbox"/> CONTRACT MODIFICATION	Contract #
	PO#

DATE \_\_\_\_\_

REQUESTOR \_\_\_\_\_

PHONE NUMBER \_\_\_\_\_

EMAIL \_\_\_\_\_

ESTIMATE \$ \_\_\_\_\_ (include shipping and handling)

**Please substantiate the estimate by providing a complete estimate using one of the attached pages.**

If the scope of work includes any required computer software, hardware, data transmission or electronic equipment needed to comply with Metro's Information Technology (IT), the IT Manager's acknowledgement is required.

IT MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

The budget for this acquisition has been identified and the funds have been allocated.

DIRECTOR OF BUDGET \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTOR OF GRANTS \_\_\_\_\_ DATE \_\_\_\_\_

FTA FUNDED Yes  No   
 IDOT FUNDED Yes  No

UNBUDGETED MEMO ATTACHED? Yes  No

The scope and ICE are complete and conforms with Metro's Policies and Procedures for Procurement.

PROJECT MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

**Requestor:** You are required to provide Procurement with a detailed scope of work and estimate with your Purchase Requisition (PR). Procurement cannot start the acquisition process without the scope, ICE, bid price breakdown form and period of performance. Procurement and Contract Administration will advise you of any deficiencies in writing and will hold the PR and this form for five (5) working days. A scope of Work Checklist, Estimate Guide and Estimate forms are provided as attachments to assist you in completing some of the required information.

**Processing Times:**

- *Request For Proposals* - \$100,000 or greater: **180 workdays** from the time a complete ICE form is assigned to a Contract Specialist/Buyer to the date of Notice To Proceed is issued.
- *Sealed Bids* - \$100,000 or greater: **90 workdays** from the time the complete ICE form is assigned to a Contract Specialist/Buyer to the date the Notice To Proceed is issued.
- *Request For Quotations* – Under \$100,000: **14 to 30 workdays** from the time the complete ICE form is assigned to a Contract Specialist/Buyer to the date the Notice To Proceed is issued.
- *Fax Quotes* - Under \$100,000: **up to 14 workdays** from the time the complete ICE form is assigned to a Contract Specialist/Buyer to the date a Purchase Order is issued.
- *Change Order/Modification* - 15 workdays from the time the complete ICE form, justification and Proposed Change Request (PCR) are provided to the Contract Administrator (CA) to date the change is executed.

- *GEC Task Order – 10 – 20 workdays from the time the complete ICE form and scope of work is provided to the CA to the date the task order is issued. These times are averages and are provided to allow you sufficient time to plan your delivery dates.*

**INDEPENDENT COST ESTIMATE (ICE) GUIDE**  
**PART I (See Part III, Scope OF Services Checklist)**  
**{Enter Project Name}**

The attached Scope of Work contains at a minimum the following:

<b><i>For Materials:</i></b>	<b><i>For Consultants:</i></b>
<input type="checkbox"/> Quantity of items and/or materials required	<input type="checkbox"/> List of responsibilities to be performed by consultant
<input type="checkbox"/> A detailed description of each item required	<input type="checkbox"/> A detailed list of deliverables required from consultant
<input type="checkbox"/> Specifications and/or drawings for materials required	<input type="checkbox"/> Anticipated contract term and start date
<input type="checkbox"/> Date materials are required	<input type="checkbox"/> Location of project
<input type="checkbox"/> Delivery address and Metro's point of contact	<input type="checkbox"/> Project manager's name, phone number, fax number and email address
<b><i>For Contractors:</i></b>	
<input type="checkbox"/> A detailed list of tasks to be performed by the Contractor	<input type="checkbox"/> Anticipated Contract Term and Start Date
<input type="checkbox"/> Specifications, drawings and/or pictures of job site or projected results of contractor's tasks	<input type="checkbox"/> Location of project
	<input type="checkbox"/> Project Manager Name, phone number, fax number and email address

Note: The above are applicable if a firm-fixed price (FFP) contract is contemplated.

*(Insert Scope of Work here)*

Submitted By:

Date:

PR#

**Estimate Guide**  
**PART II**

<b>Estimate Type</b>	<b>Items to Include</b>	<b>Where to find supporting information</b>
Services (Other than A&E)	<ol style="list-style-type: none"> <li>1. The tasks you want done</li> <li>2. The types of people needed (i.e., supervisor, admin assistant other)</li> <li>3. The positions required (i.e., Project Manager, Deputy PM, Senior Engineer/Planner, other)</li> <li>4. The estimated hours by position</li> <li>5. The salary/billing rates applied</li> <li>6. Prevailing wage rate category applied</li> <li>7. The profit/applied fee</li> <li>8. Direct expenses</li> <li>9. Completion schedule</li> </ol>	<ol style="list-style-type: none"> <li>1. Current or past contracts for similar services</li> <li>2. Other properties/departments doing similar work</li> <li>3. Project Control/Engineering or Contract Administration staff can assist you in obtaining historical price and cost data</li> </ol>
Architect, Engineers, Designers	<ol style="list-style-type: none"> <li>1. The tasks you want done</li> <li>2. The types of people needed (i.e., engineers, admin assistant, other)</li> <li>3. The positions: Project Manager, Deputy PM, Senior Engineer/Planner, Other</li> <li>4. The estimated hours by position</li> <li>5. The salary/billing rates applied</li> <li>6. The profit/applied fee</li> <li>7. Overhead rate %</li> <li>8. Direct expenses</li> <li>9. Completion schedule</li> </ol>	<ol style="list-style-type: none"> <li>1. Current or past contracts for similar services</li> <li>2. Other properties/departments doing similar work</li> <li>3. Project Control/Engineering or Contract Administration staff can assist you in obtaining historical price and costs data</li> </ol>
Goods/Equipment	<ol style="list-style-type: none"> <li>1. Product needed</li> <li>2. Quantity</li> <li>3. Unit price</li> <li>4. Markups – overheads – profit</li> <li>5. Delivery Schedule desired</li> <li>6. Warranty</li> </ol>	<ol style="list-style-type: none"> <li>1. Vendor survey/Market survey</li> <li>2. Current or past contracts for the same or similar product</li> <li>3. Procurement and Contract Administration staff can assist you in obtaining historical price and costs data</li> </ol>

<p>Construction</p>	<ol style="list-style-type: none"> <li>1. Product needed</li> <li>2. Labor (at a minimum use Davis Bacon)</li> <li>3. Materials</li> <li>4. Bonds</li> <li>5. Insurance</li> <li>6. Mobilization</li> <li>7. Equipment</li> <li>8. Mark ups; fringes, overheads, profit</li> <li>9. Completion schedule</li> </ol>	<ol style="list-style-type: none"> <li>1. "Means Book"</li> <li>2. "Blue Book"</li> <li>3. Davis Bacon Wage Rates <a href="http://www.gpo.gov/davisbacon">www.gpo.gov/davisbacon</a></li> <li>4. Current or past contracts for the same project</li> <li>5. Project Control/Engineering or Contract Administration staff can assist you in obtaining historical price and cost data</li> </ol>
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Submitted By:	Date:	PR#
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**Metro**  
**ARCHITECTURAL AND ENGINEERING (A&E) SERVICES**  
**WORK ESTIMATE SHEET**  
**PART IIa**

Project Name (Identify by the Name Under the Grant if applicable):			
Direct Labor	Hours	Rate/Salary	Total Labor Hours/Rate/Salary
Project Manager			\$ 0.00
Senior Engineer			\$ 0.00
Senior Engineer			\$ 0.00
<b>List applicable labor categories:</b>			
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
Other Staff			\$ 0.00
<b>Total Direct Labor</b>			<b>\$0.00</b>
	Overhead _____%		<b>Total Overhead Costs Overhead x Total Labor</b>
Overhead/Indirect Costs	%		\$0.00
<b>Fixed Fee (Limited to 10% of the total labor and overhead expense)</b>	%		<b>\$0.00</b>
<b>Direct Expenses</b>			
Travel (Lump Sum)			\$ 0.00
Travel (Per Mile)			\$ 0.00
Meals			\$ 0.00
Lodging			\$ 0.00
Postage			\$ 0.00
Telephones			\$ 0.00
Copies			\$ 0.00
Other Direct Expenses (Describe ODCs)			\$ 0.00
Other Direct Expenses (Describe ODCs)			\$ 0.00
<b>Total Direct Expenses</b>			<b>\$0.00</b>
<b>TOTAL ESTIMATED COST</b>			<b>\$0.00</b>

If federal funds are used cost principles of FAR Part 31 for cost reimbursement type contracts apply. See website <http://www.arnet.gov/far>.



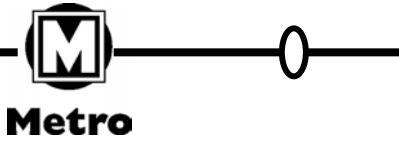
**Metro**

Submitted By:	Date:	PR#
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**SERVICES WORK ESTMATE SHEET  
PART IIb**

<b>Project Name (See previous page):</b>			
Labor Type	# of Hours	Billing Rate*	Total Labor Hours x Billing Rate
Site Supervisor			\$ 0.00
Journeyman 1			\$ 0.00
Journeyman 2			\$ 0.00
Journeyman Assistant			
<b>Provide Specific Labor Category:</b>			\$ 0.00
Other			\$ 0.00
Other			\$ 0.00
Other			\$ 0.00
Other			\$ 0.00
Other			\$ 0.00
		<b>Total Labor:</b>	<b>\$0.00</b>
Other Expenses	Qty	Unit Rate	Total Cost Hours x Unit Rate
Training			\$ 0.00
Insurance			\$ 0.00
Warranty			\$ 0.00
Transportation			\$ 0.00
Equipment (Rental/Lease)			\$ 0.00
Repair Job			\$ 0.00
<b>TOTAL ESTIMATED SERVICES:</b>			<b>\$0.00</b>

\* Use current prevailing wage rate



Submitted By:	Date:	PR#
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**EQUIPMENT ESTIMATE SHEET  
PART IIc**

Quantity	Item Description	Unit Of Measure (ea, lb., ft., box, gal, crtn., ton.)	Unit Price	Total Price <sup>1</sup>
				\$ 0.00
				\$ 0.00
				\$ 0.00
				\$ 0.00
				\$ 0.00
				\$ 0.00
				\$ 0.00
				\$ 0.00
	Warranty			\$ 0.00
	Training			\$ 0.00
	Handling Fee (If applicable)			\$ 0.00
	Shipping Costs (If applicable)			\$ 0.00
	<b>Total Equipment Estimate (Rental/Lease Equipment)</b>			<b>\$0.00</b>

<sup>1</sup> Multiply the Quantity by the Unit Price to determine the total price





**Metro**

## SCOPE OF SERVICES (SOS) CHECKLIST

### PART III

The Scope of Services (SOS) generally consists of a title page and six sections as follows:

- Title Page
- Introduction [Section 1.0]
- Background [Section 2.0]
- Scope [Section 3.0]
- Reference Documents [Section 4.0]
- Technical Requirements [Section 5.0]
- Deliverables/Contract Data Requirements List (CDRL) [Section 6.0]

	Item	Yes	No	N/A
<b>A.</b>	<b><u>TITLE PAGE</u></b>			
1.	Does the title page include the following:			
	• Name of project/program			
	• Date prepared (Date changes as SOS is edited)			
	• Name of department preparing SOS			
	• Version number in footer of page (If changes have been made)			
<b>B.</b>	<b><u>INTRODUCTION (SECTION 1.0):</u> The introduction section should give the contractor just enough information to recognize what you are buying. It is normally one to three sentences long. The introduction should focus on clarity and content rather than length.</b>			
1.	Does the introduction provide a quick reference to what you are buying?			
2.	Is the introductory information readily distinguishable from the background and scope sections?			
3.	Have work requirements or other redundant information that is contained in other sections of the SOS been removed?			
<b><u>REMARKS:</u></b>				

	Item	Yes	No	N/A
C.	<b>BACKGROUND (SECTION 2.0):</b> The background section provides historical information which is necessary to understand how and/or why the current requirement evolved and where it is headed, if appropriate. The background section can also provide current information which helps the contractor understand the requirement. If the current requirement is part of a larger program, identify the program and the relationship of this requirement to the overall project.			
1.	Does this section summarize historical information which is necessary to understand the current requirement? Will the contractor understand how and/or why the requirement evolved and where the requirement is headed, if appropriate?			
2.	Is the background information readily distinguishable from the introduction and scope sections?			
3.	Are the facts accurate?			
4.	Have all directions to perform specific tasks, specification requirements and deliverables been eliminated from this section? (They belong in other sections of the SOS)			
<b>REMARKS:</b>				

	Item	Yes	No	N/A
D.	<b>SCOPE (SECTION 3.0):</b> The scope section is an overview of the SOS and should emphasize the most important aspects of the requirement rather than minor details. It should identify the objective or purpose of the requirement; it should help the contractor understand the magnitude of the effort to be performed and it should also define the outside boundaries of the contractor’s performance responsibilities. This becomes important during contract performance in determining whether additional tasks or work is considered within the originally planned responsibilities or is considered new work. The scope section should be clear and consistent with the requirements specified in Section 4.0, Technical Requirements. The scope section should be no more than one to two paragraphs.			
1.	Will the contractor understand the magnitude of the requirement and have a basic understanding of the requirement?			
2.	Is the scope readily distinguishable from the introduction and background sections?			
3.	Is the scope consistent with the tasks or activities specified, and with the end result to be obtained?			
4.	Does the section emphasize the most important aspects (i.e., an overview) of the technical requirements rather than minor details?			
5.	Have all directions to perform specific tasks, specification requirements and deliverables been eliminated from this section? (They belong in other sections of the SOS)			
<b>REMARKS:</b>				

	Item	Yes	No	N/A
E.	<b>REFERENCE DOCUMENTS (SECTION 4.0):</b> This section lists all documents referenced under Section 5.0, technical requirements, that the contractor will have to comply with in the performance of the SOS (e.g., Agency policies, state and federal laws and specifications, state/city codes, etc.). If the technical requirements section describes your requirements in functional or performance terms (i.e., “what is required” versus “how to do it”), then this section should include only a minimum of documents. Generally, this section is prepared after the technical requirements section is completed. The length of this section will depend on the number of documents cited in the technical requirements section.			
1.	Is the applicable document properly cited? (Correct Volume No., date, Revision No. etc.)			
2.	If only portions of the document apply, have you clearly stated which portions apply?			
3.	Are the documents cited really pertinent to the task? (If they are not, they should not be included)			
4.	Do any standard specifications or paragraphs apply in whole or in part? (If so, are they properly cited?)			
5.	Are documents referenced by: <ul style="list-style-type: none"> <li>• Type (e.g., specification, code, etc.)</li> <li>• Number/version</li> <li>• Title</li> <li>• Date</li> </ul>			
6.	Have all directions to perform specific tasks, specification requirements and deliverables been eliminated from this section? (They belong in other sections of the SOS)			
<b>REMARKS:</b>				

	Item	Yes	No	N/A
F.	<b>TECHNICAL REQUIREMENTS (SECTION 5.0):</b> This section should identify <i>what</i> the contractor is required to do and <i>not how</i> the contractor should accomplish the effort. Technical requirements are generally identified as major tasks and sub-tasks. All major tasks and sub-tasks need to be defined in adequate detail so that the contractor knows what is required and the Agency knows when and if the contractor has complied with the requirement(s). The SOS should identify the task, the desired output and the associated performance standard or acceptance criteria.			
1.	Are the contractor's responsibilities clearly defined/identified from the introduction, scope and background sections?			
2.	Does the SOS identify only minimum requirements? (Have "nice to haves" been eliminated?)			
3.	Are the tasks in the SOW presented in chronological order or some logical order?			
4.	Is the SOS specific enough to permit you to estimate the probable cost and the contractor to determine the levels of expertise, manpower and other resources needed to accomplish the tasks?			
5.	Are sentences written so that there is no question of whether the contractor is obligated to perform specific tasks? (e.g., "the contractor shall do this work," not "this work shall be required")			
6.	Are contractor responsibilities stated in such a way that he/she knows what is required and the Agency can tell whether the contractor has complied?			
7.	Are the performance standards or acceptance criteria: <ul style="list-style-type: none"> <li>• Necessary?</li> <li>• Realistic?</li> <li>• Specific?</li> <li>• Verifiable?</li> <li>• Objective?</li> <li>• Measurable?</li> </ul>			
8.	Have all elements of quality control and assurance been included (inspection, testing and acceptance)?			
9.	Does the SOS identify the title of data or other deliverables in parenthesis after the task which generated the data? [e.g. Contract Data Requirement List (CDRL) 001]			
10.	If the SOS requests data or reports, have all descriptions of that data (e.g., format and content) been eliminated and subsequently included in Section 6.0 (CDRL) of the SOS?			
11.	Have all solicitation instructions, evaluation criteria and references to the bidder/proposer been deleted and included in the appropriate solicitation provisions of the RFP/IFB?			
12.	Does the SOS identify significant contract milestones?			
13.	Have all points of control or decision points, if applicable been included?			
14.	Does the SOS require the contractor to get permission from, coordinate with or provide something to someone in the Agency? (if so, have			

	specific authorizations and instructions been provided to avoid contractual problems)			
15.	If deliver/completion time is used, does it specify either calendar days or work days and is it consistent throughout?			
16.	If Agency furnished property or services will be provided, are the nomenclature, location and availability stated in the SOS?			
17.	Are requirements specified that are within state-of-the-art industry?			
18.	If brand name or equal descriptions are used, are the salient physical and functional characteristics of the brand name included in the SOS with at least two suggested brand name equivalents (brand name justification must accompany the SOS)?			
19.	Are performance-type specifications (e.g., "at least 3 HP") used in preference to design-type specifications, when appropriate?			

**REMARKS:**

	Item	Yes	No	N/A
<b>G.</b>	<b><u>DELIVERABLES/CONTRACT DATA REQUIREMENTS LIST – CDRL (SECTION 6.0):</u> This section references the data (e.g., cost/progress reports, drawings, software, etc.) required to be submitted by the contractor and referenced throughout the SOS by a “CDRL” designation.</b>			
1.	Are all contract data items (CDRLs) marked with “CDRL” and a corresponding item number? (e.g., CDRL5-301)			
2.	Are the format and content of data items clearly defined?			
3.	Are the quantities and timelines for data delivery appropriately stated and phased?			
4.	If alternate data deliveries may be proposed by the contractor, does the SOS state this?			
5.	Has the cost of the data required been considered and is it reasonable for the specific work task that requires it?			
6.	If the contractor’s format for data is acceptable, does the SOS mention this fact?			
7.	Does the CDRL section contain a master contract data requirements listing showing all required deliverables as an exhibit?			
<b><u>REMARKS:</u></b>				

	Item	Yes	No	N/A
<b>H.</b>	<b>GENERAL COMMENTS (Apply to most sections of the SOS):</b>			
1.	Is the SOS written using the format recommended in this checklist? ( <b>If not, provide rationale to the Procurement Department</b> )			
2.	Does the SOS create an organizational conflict of interest? <ul style="list-style-type: none"> <li>Will a specific contractor receive an unfair competitive advantage on this requirement or future requirements based on its performance under past or present contracts? (e.g., Is the SOS drafted whereby the contractor will prepare an SOS which will be subsequently competitively procured?)</li> <li>Will the contractor be placed in a position where it cannot provide impartial advice and assistance? (e.g., does the SOS require the contractor to review its own work?)</li> </ul>			
3.	Is more than one interpretation (throughout the SOS) possible? (See Attachment 1 to this checklist for a list of phrases to be avoided)			
4.	Has the SOW been checked for spelling and grammar?			
5.	Are acronyms and abbreviations spelled out the first time they are used and the abbreviated version put in parentheses?			
6.	Is the word "shall" used whenever a task or sub-task is mandatory?			
7.	Are tasks and sub-tasks written in the active voice rather than the passive voice? (e.g., "The contractor shall establish a program" and not "A program shall be established by the contractor")			
8.	Are paragraphs and subparagraphs numbered consecutively within each SOS section using a period to separate the number representing each sublevel? For Example: Requirement 5 1 <sup>st</sup> Sublevel 5.1 2 <sup>nd</sup> Sublevel 5.1.1 3 <sup>rd</sup> Sublevel 5.1.1.1			
9.	Are words used in the SOS that properly express the degree of contractor involvement? (See Attachment 2 to this checklist for a list of "work words" that might be appropriate for use in describing your requirement))			
10.	Are sentences written in a short, simple and concise form?			
11.	Have you included revisions numbers in the footer of the SOS pages as changes/edits were made to the SOS?			
12.	Have you provided the following information as appropriate to the s & Procurement Department with this checklist and your SOS attached to the Project Management Checklist? <ul style="list-style-type: none"> <li>Independent cost estimate (ICE)</li> <li>Disadvantaged Business Enterprise (DBE) Goal</li> <li>Proposed delivery schedule</li> <li>Proposed bid schedule</li> <li>Warranty information</li> <li>Method of payment(s)</li> <li>Justification for liquidated damages</li> </ul>			



	<ul style="list-style-type: none"> <li>• Brand name or sole source justification</li> <li>• Proposed evaluation criteria for “best value solicitations”</li> <li>• Proposed list of committee members for RFP procurements</li> <li>• Safety requirements (incorporate in Section 5 of SOS)</li> <li>• Plans, drawings, geotechnical reports, etc.</li> </ul>			
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**REMARKS:**

**ATTACHMENT 1 - PHRASES HAVING MULTIPLE MEANINGS**

This list of phrases having multiple meanings is provided as **an example of those to be avoided**.

- To the satisfaction of the Agency,
- As determined by the Agency,
- In accordance with instructions of the Agency,
- As directed by the Agency,
- In the opinion of the Agency,
- In the judgment of the Agency,
- Unless otherwise directed by the Agency,
- To furnish if requested by the Agency,
- All reasonable requests of the Agency shall be compiled with,
- Photographs shall be taken when and where directed by the Agency.
- In strict accordance with,
- In accordance with best commercial practice,
- In accordance with best modern standard practice,
- In accordance with the best engineering practice,
- Workmanship shall be of the highest quality,
- Workmanship shall be of the highest grade,
- Accurate workmanship,
- Securely mounted,
- Installed in a neat and workmanlike manner,
- Skillfully fitted,

**ATTACHMENT 1 (CON'T) - PHRASES HAVING MULTIPLE MEANINGS**

- Properly connected,

- Properly assembled,
- Good working order,
- Good materials,
- In accordance with applicable published specifications,
- Products of a recognized reputable manufacturer,
- Tests will be made unless waived,
- Materials shall be of the highest grade, free from defects or imperfections, and of grades approved by the Agency.
- Kinks and bends may be cause for rejection,
- Carefully performed,
- Neatly finished,
- Metal parts shall be cleaned before painting,
- Suitably housed,
- Smooth surfaces,
- Pleasing lines,
- Of an approved type,
- Of standard type,
- Any phrases referring to "The Agency Technical Representative (TR)".

**ATTACHMENT 2 – WORK WORDS**

The word list below is not complete but is provided to stimulate the thinking of the SOS writer by pointing out the critical differences in the meaning of work words versus the product words identified in connection with deliverable data. When selecting the key work word that properly expresses contractor's involvement, the SOS writer must define explicitly the total nature of the work requirement in terms of what is to be done. In some cases, the "why" or the application of the results of the performed work may be stated if it clarifies the requirement. The following sample list contains words which have the inherent value of work. This list is offered as a reminder of the various shades of meaning conveyed by choice of words.

analyze (solve by analysis)  
 annotate (provide with comments)  
 ascertain (find out with certainty)  
 attend (be present at)  
 audit (officially examine)  
 build (make by putting together)  
 calculate (find out by computation)  
 consider (think about, to decide)  
 construct (put together; build)  
 control (direct; regulate)  
 contribute (give along with others)  
 compare (find out likeness or differences)  
 create (cause to be; make)  
 determine (resolve; settle; decide)  
 differentiate (make a distinction between)  
 develop (bring into being or activity)  
 define (make clear; settle the limits)  
 design (perform an original act)  
 evolve (develop gradually, work out)  
 examine (look at closely; test quality of)  
 explore (examine for discovery)  
 extract (take out; deduce, select)  
 erect (put together; set upright)  
 establish (set up; settle; prove beyond dispute)  
 estimate (approximate an opinion of)  
 evaluate (find or fix the value of)  
 fabricate (build; manufacture, invent)  
 form (give shape to; establish)  
 formulate (to put together add express)  
 generate (produce, cause to be)  
 identify (to show or to find)  
 implement (to carry out, put into practice)  
 install (place; put into position)  
 inspect (examine carefully or officially)

**ATTACHMENT 2 (CON'T) – WORK WORDS**

institute (set up; establish, begin)  
 interpret (explain the meaning of)

inquire	(ask, make a search of)
integrate	(to add parts to make whole)
investigate	(search into; examine closely)
judge	(decide; form an estimate of)
make	(cause to come into being)
maintain	(to keep in an existing state, to continue in, carry on)
manufacture	(fabricate from raw materials)
modify	(to change, alter)
monitor	(to watch or observe)
notice	(comment upon, review)
observe	(inspect, watch)
originate	(initiate, to give rise to)
organize	(integrate, arrange in a coherent unit)
perform	(do, carry out, accomplish)
plan	(devise a scheme for doing, making, arranging activities to achieve objectives)
probe	(investigate thoroughly)
produce	(give birth or rise to)
pursue	(seek, obtain or accomplish)
reason	(think, influence another's actions)
resolve	(reduce by analysis, clear up)
record	(set down in writing or act of electronic reproduction of communications)
recommend	(advise, attract favor of)
review	(inspection, examination or evaluation)
revise	(to correct, improve)
study	(careful examination or analysis)
seek	(try to discover; make an attempt)
search	(examine to find something)
scan	(look through hastily, examine intently)
screen	(to separate, present, or shield)
solve	(find an answer)
test	(evaluate, examine)
trace	(to copy or find by searching)
track	(observe or plot the path of)
update	(modernize, make current)