When should a cost and/or price analysis be performed?

- OMB Circular A-123 states, paraphrasing:
- The agency head must establish controls that reasonably ensure that (i) obligations and costs are in compliance with applicable law; (ii) funds property, and other assets are safeguarded against waste, loss, unauthorized use or misappropriation; and revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of accounts and reliable financial and statistical reports and to maintain accountability over the assets. ..The objectives are to ensure the effectiveness and efficiency of operations, reliability of financial reporting and compliance with applicable laws and regulations. The safeguarding of assets is a subset of all these objectives.

Reclamation has established AAMD as the review and approval control process.

AAMD requires all financial assistance agreements and contracts that meet certain conditions to have cost and/or price analysis performed by a qualified AAMD Analyst.

The amount of funds provided under the terms of self-determination contracts entered into…shall not be less than the appropriate Secretary would have otherwise provided for the operation of the programs or portions thereof for the period covered by the contract, without regard to any organizational level within the Department of the Interior …at which the program, function, service, or activity or portion thereof, including supportive administrative functions that are otherwise contractable, is operated

- **Why is it important that we have a reasonable budget?**

Reclamation, in fact, all government grants officers and contracting officers or other warranted awarding officials are required to insure that the contracts and agreements they award are allocable, allowable and reasonable. They have to sign their name to a document and state that it is fair and reasonable. There is little in the way of getting around this requirement.

Second Reason

There are projects that don’t get funded in a given year.

Why?

If I obligate $1.2 million on a project that only needs $900,000 what am I doing?

You are the one with the project that got overfunded, you don't care because it is the only project you have.

Now, you are the program manager or recipient with an important program, to you, that did not get funded because there was a $250,000 short fall in available funding.

Now it does not feel so good

- Next Concern
  - What happens when you want to take the family to Disneyworld, what do you have to do?

One of the biggest incentives to managing a budget is a good sound budget or proposal which provides only enough for the completion of the work required in the agreement or contract.

Nephew Bob and Uncle George

Bottom line is that if there is money obligated, it will likely get spent

What about making an award on a project where the proposal or budget was low?

More money needs to be found from some source.

If Not!

The thousands or hundreds of thousands, maybe a million is wasted, gone down a black hole.

No one expects the or proposals budgets to be set in stone.

I want to reiterate that. I don't want anyone leaving and thinking that we are making an attempt to get an exact amount and that we don't expect considerable variation. That would not be true!

It is to be expected!

No one expects the budgets to be set in stone

BUT

Care needs to be taken to make sure that the recipient or contractor has provided a budget which has been well thought out and the cost elements reasonably evaluated and as close to reality as is reasonably possible.

HANDOUT

#1a

	Cost Slassification	Total Cost	Explanation of cost.	Work Performed By:
#4	Architectual and Engineering fees	$ 8,400.00	1. Cultural Resources Assessment $6,200, 2. Overhead and Administrative Costs $2,200	
#9	Construction	$9,156.00	1. Labor $3650.00 2. Materials $2360.00 3. Equipment $400.00 4. P&O $2746.00	
#10	Equipment	$ 180,800.00	1. One Master Hydra-Lopac Gate $46,900.00 2. Three Slave Solar Powered Hydra-Lopac Gates $41,633.33 each 3. Shipping for above parts $3,000.00. 4. 12 Stainless steel Guides $425.00 each and 39.5 man hours @23.00	N/A - Equipment Purchase
#15	Miscellaneous	$54,535.00	1. Four stilling wells $637.50 each 19.5 man hour @$23.00 2. SCADA control System $18,535.00 which includes: (8) concorde Sun Xtender AGM Batteries, (4) Endress & Hauser Waterpilot Submersible Transducers, PCTEL/Maxrad Omni Antenna, Antenna Mast, Belden Heliaz cable, Andrews cable connectores, Mounting and Connection materials, Engineering, OIT Programming, HMI Development, alarm Programming, In-House testing, travel, lodging, installation, field-testing and start up. 3. Control code programming and commisioning. $33000.00 which includes: $26,012 for Employees time, $4640 for Travel, $1000 for Supplies and materials, $846 for Overhead on expenses	Labor by contractor N/A - Equipment Purchase Labor by contractor (TBD)
	Total Expenses	$ 252,891.00		

HANDOUT

#1b

Explanation of cost.	Hourly rates	Reasoning behind decision
See attached proposal from ____). $8,400 was a time and materials total for all relevant labor and technical work.	See Attached. Proposal provided is for all labor and technical work.	
1. Labor $3650.00 2. Materials $2360.00 3. Equipment $400.00 4. P&O $2746.00	Cement mason @ $47.21 hourly, laborer @$4194 hourly	This was competative. Three quotes were obtained from 3 difference cultural resources firms. ___ was selected as the lowest bidder for the work. This was non-competitive. The reason we are using ___ is that they are the construction that we have been using extensively since 2004, and they are familiar with ___structures and operations.
1. One Master Hydra-Lopac Gate $46,900.00 2. Three Slave Solar Powered Hydra-Lopac Gates $41,633.33 each 3. Shipping for above parts $3,000.00. 4. 12 Stainless steel Guides $425.00 each and 39.5 man hours @23.00		This was non-competitive. Reason we chose these gate is to improve the flow contral capabilites and to allow for more accurate releases of interim flows downstream. The gate will also be integrated with the SCADA system that we currently are using at SLCC. There will also be a reduction in operating cost and increase safety for SLCC staff. This was the most cost effictive temprary solution along with the fact the gates need to be removable in times of flooding.
1. Four stilling wells $637.50 each 19.5 man hour @$23.00 2. SCADA control System $18,535.00 which includes: (8) concorde Sun Xtender AGM Batteries, (4) Endress & Hauser Waterpilot Submersible Transducers, PCTEL/Maxrad Omni Antenna, Antenna Mast, Belden Heliaz cable, Andrews cable connectors, Mounting and Connection materials, Engineering, OIT Programming, HMI Development, alarm Programming, In-House testing, travel, lodging, installation, field-testing and start up.		This was non-competitive. The reason we are working with ____ for last 4 years to design and install all of our ____ and structures. We continue to use them since they are fimiliar with our system and how they work.
3. Control code programming and commissioning. $33000.00 which includes: $26,012 for Employees time, $4640 for Travel, $1000 for Supplies and materials, $846 for Overhead on expenses	Chairman $204, Director $156, Senior Irrigation Engineer $141, Project manager $130, Controls Specialist $125, Irrigation Support Engineer III $ 125, Irrigation Faculty (junior) $110, Irrigation Support Engineer II $94, Irrigation Support Engineer I $84, Technical Editor $84, Engineering technician $52	Reason we are using ___ for the control code programming is we have had a working relationship with them for 8years since they installed and programmed the SCADA system at ____. They are also the contractor we use to maintain our SCADA system and programs.

HANDOUT

2a

OVERHEAD

	Machine Shop		ABC	
COST ELEMENT	UNIT(S)	RATE	TOTAL	
Labor				
Supervisor		100	35	3500
Mfg Labor		1000	25	25000
Mfg Labor		1000	15	15000
Total Direct Labor				43500
Fringe			0.35	15225
Total Labor				58725
Material Cost	LS		50000	50000
Subtotal Cost				108725
Overhead			200%	217450
Total				326175

	Machine Shop		XYZ	
COST ELEMENT	UNIT(S)	RATE	TOTAL	
Labor				
Supervisor		10	35	350
Mfg Labor		500	30	15000
Mfg Labor		0		
Total Direct Labor				15350
Fringe			0.35	5372.5
Total Labor				20722.5
Material Cost	LS		50000	50000
Subtotal Cost				70722.5
Overhead			200%	141445
Total				212167.5

HANDOUT

2b

OVERHEAD

ABC		XYZ	
Rent	36000	Rent	36000
Machinery	5000	Machinery	100000
B&P	5000	B&P	5000
Total Overhead	46000	Total Overhead	141000
Total Base	108725	Total Base	70723
Overhead rate	0.423086	Overhead rate	1.993694

HANDOUT

2C

OVERHEAD

	Machine Shop		ABC	
COST ELEMENT	UNIT(S)	RATE	TOTAL	
Labor				
Supervisor		100	35	3500
Mfg Labor		1000	25	25000
Mfg Labor		1000	15	15000
Total Direct Labor				43500
Fringe			0.35	15225
Total Labor				58725
Material Cost	LS		50000	50000
Subtotal Cost				108725
Overhead			42%	46001.55
Total				154726.5

	Machine Shop		XYZ	
COST ELEMENT	UNIT(S)	RATE	TOTAL	
Labor				
Supervisor		10	35	350
Mfg Labor		500	30	15000
Mfg Labor		0		
Total Direct Labor				15350
Fringe			0.35	5372.5
Total Labor				20722.5
Material Cost	LS		50000	50000
Subtotal Cost				70722.5
Overhead			199%	141020.7
Total				211743.2

HANDOUT

#3

WRAP RATES

Cost item	Cost/hour	Hours	Totals
Contractual Services			
ABC (originally $150/hr)	$200	740	$148,000
XYZ	$150	681	$102,150
MNO	$250	853	$213,250
Environmental Consultant	$125	300	$ 37,500
Federal Regulation Expert	$200	458	$ 91,600
Court Process Expert	$200	345	$ 69,000
Expert Witness	$150	345	$ 51,750
Historical Researcher	$125	345	$ 43,125
Public Interest Advocate	$125	345	$ 43,125
Public Relations Specialist	$125	345	$ 43,125
County Water Conservation District	$250	339	$ 84,750
Surface Water Field Engineer.	$100	3600	$360,000
Sub-Total Contractual Services			$1,287,375
Equipment for Field Engineering Activities. (See Details in Attachment 2)			$92,175
Personnel -	$ 75		$870,450
Total Budget			**$2,250,000**

The recipient/contractor must provide the following:

Direct rate
Fringe
Overhead
G&A
Any other additives/rates/factors including profit.

Labor cost

Two parts

Hours

Pay received for the hours

- Payment is also broken down into two parts.
  - Direct Pay
  - Fringe (labor burden)

What is the direct rate?

Direct labor rate - The actual gross amount actually allocated to the employee.

Fringe costs would typically include payroll taxes such as FICA, unemployment, workers compensation.

Fringe can also include:

- Retirement
- Health Insurance
- Retirement
- Annual, Sick and Holiday Leave

Fringe does not include depreciation, rent, custodial services, state or federal income taxes, employee portion FICA or other such costs.

Fringe costs are compensation related, not operational related.

Fringe can be:

- a dollar amount
- a rate
- a combination of dollars and rates

Labor overhead would typically be the next element in a wrap/loaded rate although indirect type costs could be included with G&A.

The contractor or/recipient must identify the overhead cost, typically a rate, to you.

Recipient's must have their rate reviewed and negotiated each year by NBC or their cognizant agency.

The contractor/recipient needs to be able to verify how they determined their subcontract costs to be fair and reasonable which means allowable, allocable and reasonable.

It is our job to review that process and insure that the recipinet/contractor has done an adequate job. If they receive a proposal from a consultant for 150 hours at $200 per hour, they need to be able to show us that they evaluated the proposed hours and why those hours are reasonable as proposed by the consultant as well as the rate proposed.

The same thing goes for all other subcontract or vendor costs.

The *total cost* of an agreement or contract should be the sum of allowable, allocable and reasonable direct and indirect costs incurred, or to be incurred, less any allocable credits.

- Direct Costs are things such as
  - Material
  - Most labor
  - Supplies
  - Equipment
  - Subcontractors
  - Consultants
  - Engineering Firms
  - Other Direct Costs

- Indirect costs are things such as
  - Fringe
  - Material Overhead
  - Labor Overhead
  - Manufacturing Overhead
  - Engineering Overhead
  - G&A
  - Computer Services Allocation
  - May be a Myriad of Other Types

POOL/BASE is the calculation for a burden(fringe) rate.

Pool costs are all the costs associated with the base, in the case of fringe the base would be labor, which cannot be identified to a final cost objective.

The base is always a direct cost.

POOL/BASE is the calculation for a burden rate.

87,000/250,000

solution is .348 or 34.8%

For every direct cost budgeted/proposed, or incurred, the associated allowable and allocable fringe or burden would be $0.348.

This is assuming that all the pool costs were considered to be allowable, allocable and reasonable.

If I have proposals/budgets with:

$100,000 in direct costs Burden $34,800

$ 50,000 in direct costs Burden $17,400

$ 50,000 in direct costs Burden $17,400

$ 25,000 in direct costs Burden $ 8,700

$ 15,000 in direct costs Burden $ 5,200

$ 10,000 in direct costs Burden $ 3,480

$250,000 in direct costs r $87,000 in burden

Rates are always developed using the same calculation

Pool/Base

ORIGINAL

NONPROFIT RATE AGREEMENT

[redacted]

DATE: September 21, 2001

ORGANIZATION:

[redacted]

FILING REF.: The preceding Agreement was dated NONE

Washington DC 20001-4542

The rates approved in this Agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES*

RATE TYPES: FIXED FINAL PROV.(PROVISIONAL) PRED.(PREDETERMINED)

TYPE	EFFECTIVE PERIOD FROM	TO	RATE(%)	LOCATIONS	APPLICABLE TO
FINAL	10/01/98	09/30/99	29.5	All	All Programs
FINAL	10/01/99	09/30/00	19.8	All	All Programs
PRED.	10/01/00	09/30/01	19.8	All	All Programs
PROV.	10/01/01	UNTIL AMENDED	Use same rates and conditions as those cited for fiscal year ending September 30, 2001.		

*BASE:
Total direct costs excluding capital expenditures (building, individual items of equipment; alterations and renovations), and that portion of each subaward in excess of $25,000.

(1) N01220

RECLAMATION

	2009 Projected From Income Statement
Income	34313857
Cost of Construction	25411558
Shop Operations	2212851
Total Operating Costs	25624409
Less Depreciation	1861799
Total Base	29762810
Advertising	9575
Bad Debts	0
Bank Service charges	7358
Bidding	258884
Computer	99837
Contributions	38549
Office Depreciation	68825
Dues	49182
Employee Benefits	422760
Equipment Acquisitions	33662
Insurance	272656
Insurance	120124
Interest	0
Licenses	14148
Misc	227347
Postage	5156
Office Salaries	464465
Payroll Burden	761744
Professional Services	38917
Rent	171935
Repairs	188100
Taxes	2632
Telephone	34406
Training	123388
Travel	16527
Total Admin	3415778
Less unallowable costs	
Bad Debts	0
Contributions	38549
Equipment Acquisition (eq	33662
Interest	0
Total Unallowable	72211
Total Pool	3343467
G&A	0.14070285

RECLAMATION

Total Direct Costs $500,000

2% $10,000

20% $100,000

40% $200,000

100% $500,000

RECLAMATION

- Reasonable Test
  - As cost is reasonable and necessary if, in its nature or amount, it does not exceed what would be incurred by an ordinarily prudent person in the conduct of “competitive business”.

- Allocable Test
  - A cost is allocable to a government contract if it is incurred specifically for the contract, benefits both the contract and other work, and can be distributed in reasonable proportion to the benefits received.

- Or
  - is necessary to the overall operation of the business, even though a direct relationship to any particular cost objective cannot be shown.

- Allowable Test

- Who has the responsibility to prepare, submit and support the budget/proposals provided?
  - Ownership
  - Responsibility
  - Understanding
  - Contractual Obligations

- What should be included in a budget/proposal

- What should be included in a budget/proposal
  - All cost elements should be included in detail
    - Hours
    - Direct labor rate
    - Fringe
    - Materials
    - Subcontracts
    - Other Direct Costs
    - Overhead
- The basis for the estimate for each of these cost elements needs to be identified.

The information does not have to be extremely accurate for cost reimbursable agreements or contracts. We simply need to know that there is a good basis and that reasonable action has been taken to insure that the costs are allowable, allocable and reasonable.

- Basis for costs
  - Bottoms up estimate
  - Past experience for the same or similar items
  - Models
  - Industry/Process based estimating manuals and data
  - Competition
  - Quotes

- Past Experience
  - Identify projects
  - Rationale as to why the past projects are the same or similar and applicable to the current project
  - Rationale as to why the past costs were allocable, allowable and reasonable

- Models

- Estimating Manuals such as RS Means

- Competition

- Quotes

2,080 hours – 320 hours = 1,760 hours that I am actually at work.

In this scenario, a FTE (full time equivalent is 1,760 hours)

As a recipient, or a contractor, I would typically use the 1,760 hours in a budget or proposal because that is the time that I expect to be at work.

Support for labor rates is easy to obtain and to evaluate.

Recipient/contractor pays the employee at least monthly, may be some exceptions, so they have continual and plentiful supporting documentation

- RS Means is an excellent source for developing government estimates. It compiles all kinds of data to develop averages, anticipated costs and benchmarks.

- RS Means is not, however, valuable in evaluating costs such as direct labor costs, fringe and other indirect costs such as labor overhead and G&A included in a budget from a recipient or contractor.
  - WHY?

How can the recipient support that material /supply costs are allocable, reasonable and allowable?

Written quotes by vendors

Historical documentation by the recipient for the same or similar items

Historical documentation by others

Parametric estimating

- Entities need to be consistent in the way they do their business.
- It is the law!

Technical analysis should

- Evaluate the type, quantities and quality of materials budgeted
- Indicate in a report what was budgeted/proposed and why as well as what is reasonable, allocable and allowable from a technical standpoint and why plus a discussion on why any materials are not reasonable and why.

The technical analysis should also

- Evaluate past projects used by the recipient/contractor to support their material costs to determine that the past projects are
  - The same
  - Similar enough to be used as a comparison for the current project
  - Report as to why or why not

CONSTRUCTION COST HANDOUT

Construction Budget

APPENDIX C: DETAILED COST ESTIMATE

1) Listed items should be shown in sufficient detail to evaluate the reasonableness of the cost, for example, show different pipe diameters and cost per linear foot.
2) Unless justification is provided in Part III Section D of the application for a different value, the Habitat Replacement Plan should be 5% of the Total Construction Cost. For further information, see FOA Section B.3.D.1. The applicant is responsible for the full cost of the HRP even if it exceeds the 5% value.
3) Costs must be included for NEPA compliance and cultural resources surveys.
4) Provisions for contingencies should be noted in the text and included in unit prices; do not show as a separate line item.

ITEM DESCRIPTION (ADD MORE LINES AS NEEDED)	QTY.	UNIT	$/UNIT	TOTAL COST	RECLAMATION FUNDING	RECIPIENT OR OTHER FUNDING
Mobilization	1	L.S.	700,420.00	700,420	233,473	466,947
Traffic Control	1	L.S.	35,000.00	35,000	11,667	23,333
Diversion / Filter Structure	2	L.S.	190,000.00	380,000	126,667	253,333
14" HDPE DR 32.5 Water Pipe	5,000	L.F	16.00	80,000	26,667	53,333
16" HDPE DR 32.5 Water Pipe	5,500	L.F	20.00	110,000	36,667	73,333
20" HDPE DR 32.5 Water Pipe	16,000	L.F	32.00	512,000	170,667	341,333
22" HDPE DR 32.5 Water Pipe	8,500	L.F	34.00	289,000	96,333	192,667
24" HDPE DR 32.5 Water Pipe	4,500	L.F	46.00	207,000	69,000	138,000
30" HDPE DR 32.5 Water Pipe	4,500	L.F	55.00	247,500	82,500	165,000
32" HDPE DR 32.5 Water Pipe	8,500	L.F	60.00	510,000	170,000	340,000
34" HDPE DR 32.5 Water Pipe	5,500	L.F	65.00	357,500	119,167	238,333
36" HDPE DR 32.5 Water Pipe	2,500	L.F	80.00	200,000	66,667	133,333
42" HDPE DR 32.5 Water Pipe	25,500	L.F	90.00	2,295,000	765,000	1,530,000
48" HDPE DR 32.5 Water Pipe	22,000	L.F	120.00	2,640,000	880,000	1,760,000
54" HDPE DR 32.5 Water Pipe	28,000	L.F	160.00	4,480,000	1,493,333	2,986,667
Road Crossing	6	Each	8,100.00	48,600	16,200	32,400
Pipe Bedding	60,000	L.F	11.50	690,000	230,000	460,000
Air/Vac Valves	42	Each	1,380.00	57,960	19,320	38,640
Continuous Air Release Valves	10	Each	1,700.00	17,000	5,667	11,333
Pressure Relief Valves	2	Each	2,000.00	4,000	1,333	2,667
Mainline Drain Assembly	10	Each	3,750.00	37,500	12,500	25,000
8-24" Turnouts	42	Each	8,000.00	336,000	112,000	224,000
Livestock Takeout	20	Each	850.00	17,000	5,667	11,333
Remove and Replace Existing Fence	1,200	L.F.	3.35	4,020	1,340	2,680
Reseeding	55	Acre	500.00	27,500	9,167	18,333
Removal of Structures	1	L.S.	12,000.00	12,000	4,000	8,000
TOTAL CONSTRUCTION COSTS				**14,295,000**	**4,765,000**	**9,530,000**
Habitat Replacement (5%)	1	L.S.	715,000	715,000	238,333	476,667
TOTAL DIRECT COSTS				**15,010,000**	**5,003,333**	**10,006,667**
INDIRECT COSTS						
Design	1	L.S.	985,000	985,000	328,333	656,667
NEPA Compliance	1	L.S.	80,000	80,000	26,667	53,333
Cultural Resources	1	L.S.	20,000	20,000	6,667	13,333
Construction Management	1	L.S.	1,500,000	1,500,000	500,000	1,000,000

BID TABULATION [redacted]

DATE: October 14, 2010

				ENGINEER'S ESTIMATE		Riley		Fibrecom Construction	
	BID ITEMS	ESTIMATED QUANTITY	UNITS	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST
1	Mobilization	1	L.S.	$ [illegible]	$ 85,000.00	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
2	Imported Pipe Bedding	8,400	Lin. Ft.	$ [illegible]	$ 68,562.00	$ 12.00	$ [illegible]	$ [illegible]	$ 8,400.00
3	Solid Rock Excavation	1,000	Lin. Ft.	$ [illegible]	$ 340,000.00	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
4	Remove Trees	6,000	Lin. Ft.	$ 5.00	$ [illegible]	L.S.	$ [illegible]	L.S.	$ [illegible]
5	48" HDPE DR 26 (4710 PSI) IPS (Stations 3+00 to 6+00)	600	Lin. Ft.	$ 158.00	$ [illegible]	$ 174.00	$ 30,450.00	$ 142.86	$ [illegible]
6	48" HDPE DR 26 (4710 PSI) IPS (Station 6+00 to 84+00)	7,800	Lin. Ft.	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ 143.00	$ [illegible]
7	48" 22.5° Bend	2	Each	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ 3,387.58
8	Drainage Drain	6	Each	$ 5,000.00	$ 30,000.00	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
9	Inlet Structures & Appurtenances	1	L.S.	$ 18,500.00	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
10	Outlet Structures & Appurtenances	1	L.S.	$ 21,500.00	$ [illegible]	$ [illegible]	$ 30,000.00	$ [illegible]	$ 12,803.04
11	8" Air Valve Assembly	1	Each	$ 2,500.00	$ 2,500.00	$ [illegible]	$ 1,200.00	$ 4,863.72	$ 4,863.72
12	4" Combination Air/Vacuum Valve	1	Each	$ [illegible]	$ 10,000.00	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
				TOTALS	$ 1,707,950.00		$ [illegible]		$ [illegible]

RECLAMATION

Austin & Wall Canals Combined
HDPE DR 32.5 (50 psi) 4710 Pipeline - Open Channel Flow

Source estimate KAT

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	SCI suggested unit price
1	18" HDPE DR 32.5 Waterline	2,692	L.F.	$ 15.00	$ 25.00
2	21" HDPE DR 32.5 Waterline	4,282	L.F.	$ 20.00	$ 31.00
3	24" HDPE DR 32.5 Waterline	14,936	L.F.	$ 30.00	$ 46.00
4	30" HDPE DR 32.5 Waterline	7,247	L.F.	$ 35.00	$ 49.00
5	33" HDPE DR 32.5 Waterline	3,255	L.F.	$ 42.00	$ 58.00
6	36" HDPE DR 32.5 Waterline	3,736	L.F.	$ 65.00	$ 87.00
7	42" HDPE DR 32.5 Waterline	3,609	L.F.	$ 80.00	$ 91.00
8	48" HDPE DR 32.5 Waterline	9,776	L.F.	$ 110.00	$ 106.00
9	54" HDPE DR32.5 Waterline	18,206	L.F.	$ 250.00	$ 147.00
10	63" HDPE DR32.5 Waterline	34,274	L.F.	$ 200.00	$ 195.00
11	Road Crossing	6	Each	$ 7,000.00	$ 7,000.00
12	Pipe Bedding	142,350	L.F.	$ 10.00	$ 10.00
13	Air/Vac Valves	43	Each	$ 1,200.00	$ 2,300.00
14	Continuous Acting Air Release Valves	20	Each	$ 1,400.00	$ 4,500.00
15	Pressure Relief Valves	2	Each	$ 1,500.00	$ 4,000.00
16	Metered Drain Assembly	4	Each	$ 3,250.00	$ 4,500.00
17	8"-24" Turnout	48	Each	$ 7,000.00	$ 18,700.00
18	Livestock Turnout	20	Each	$ 750.00	$ 950.00

Austin & Wall Canals Combined
HDPE DR 21 (100 psi) 4710 Pipeline - Pressurized

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	SCI suggested unit price
1	8" HDPE DR 21 Waterline	11,361	L.F.	$ 10.00	$ 17.00
2	10" HDPE DR 21 Waterline	1,773	L.F.	$ 13.00	$ 18.00
3	12" HDPE DR 21 Waterline	33,934	L.F.	$ 14.00	$ 23.00
4	18" HDPE DR 21 Waterline	4,834	L.F.	$ 22.00	$ 37.00
5	24" HDPE DR 21 Waterline	6,567	L.F.	$ 28.00	$ 42.00
6	30" HDPE DR 21 Waterline	15,757	L.F.	$ 35.00	$ 56.00
7	36" HDPE DR 21 Waterline	7,533	L.F.	$ 42.00	$ 64.00
8	48" HDPE DR 21 Waterline	2,019	L.F.	$ 45.00	$ 76.00
9	54" HDPE DR 21 Waterline	3,118	L.F.	$ 50.00	$ 83.00
10	54" HDPE DR 21 Waterline	1,865	L.F.	$ 58.00	$ 95.00
11	60" HDPE DR 21 Waterline	752	L.F.	$ 70.00	$ 105.00
12	42" HDPE DR 21 Waterline	21,280	L.F.	$ 80.00	$ 127.00
13	48" HDPE DR 21 Waterline	4,577	L.F.	$ 125.00	$ 158.00
14	63" HDPE DR 21 Waterline	15,822	L.F.	$ 220.00	$ 284.00

NOTE: PIPE FREIGHT NOT INCLUDED IN PRICING ADD APPROX. 905 LOADS @ $800.00 EA = $724,000.00

RECLAMATION

Supplies

labor includes trenching backfill laying pipe

Price Estimate 4710 HDPE (DR 32.5, 50 psi)

High Country Fusion Quote 10/26/2010

Pipe Size	Price ($/ft)	ft/load	Shipping $/ft	Total $/ft cost of pipe delivered	Fusing 10%	Labor	Total Installed
63"	$ 155.80	50	$30.00	$ 185.80	$ 15.58	$ 12	$ 213
54"	$ 115.60	100	$15.00	$ 130.60	$ 11.56	$ 11	$ 153
48"	$ 91.34	200	$7.50	$ 98.84	$ 9.13	$ 10	$ 118
42"	$ 69.93	200	$7.50	$ 77.43	$ 6.99	$ 9	$ 93
36"	$ 51.38	200	$7.50	$ 58.88	$ 5.14	$ 8	$ 72
28"	$ 31.30	450	$3.33	$ 34.63	$ 3.13	$ 7	$ 45
26"	$ 26.80	450	$3.33	$ 30.13	$ 2.68	$ 6	$ 39
24"	$ 22.83	800	$1.88	$ 24.71	$ 2.28	$ 5	$ 32
18"	$ 12.91	1250	$1.20	$ 14.11	$ 1.29	$ 5	$ 20
16"	$ 10.02	1800	$0.83	$ 10.85	$ 1.00	$ 5	$ 17

HDPE has freight charges estimated at $1,500 per load
4710 50 psi pipe is DR 32.5 or DR 41 depending on the manufacturer

RECLAMATION

Labor cost $12 lf

Total cost $213

Their calculation was as follows:

foreman $280 $35 hour for 8 hours

laborers $600 $25 hour for 24 hours

operator $240 $30 hour for 8 hours

excavator $960 $120 hour for 8 hours

loader $600 $75 hour for 8 hours

forklift $240 $40 hour for 6 hours

laser $100 per day

Pickups, trailers and crew truck $60 per day

Total cost per day $3,080

Average number of feet each day 300

Average cost per foot $10.27

Engineering and Consulting Costs

Review hours

Review direct labor rates

Review fringe

Review material costs

Review subcontracts/consultants and other sub-awards

Review travel

Review other direct costs

Review any indirect rates

You need a valid basis and rationale

"ALWAYS"

You can't just say I think it might cost this.

They need to say:

"because of that"

"I estimate it will cost this"

- Equipment Costs
  - Type of Equipment
    - Identify each piece of equipment
      - Show the number of hours for each piece of equipment
        - Identify and support the rate for each hour

Contingency Costs

Contingencies are not allowed per applicable circulars unless you can provide adequate assurance that the costs will be incurred.

Project one cost $1,100,000 estimate was $1,000,000

Project two cost $900,000 estimate was $750,000

Project three cost $2,100,000 estimate was $2,000,000

Total cost was $4,100,000 total estimate was $3,750,000

The percentage of cost growth was $4,100,000/$3,750,000

Fossil fuel prices are going up

Creates upward pressure on pipe (PVC type) prices

You go to two or three pipe suppliers who tell you that they anticipate the cost of pipe to go up by 10% by the time you are ready to order pipe in a year.

Contingency costs must be disclosed.

- CHECKLIST
- Direct labor Hours by category and time phased as appropriate
- Rationale and basis for the direct labor hours budgeted by category
- Direct labor rates identified by category
- Rationale for labor rates identified by category
- Fringe costs identified separately from the direct labor rates

- Support for fringe rate/costs provided
- Direct material costs identified by category including dollar amount
- Rationale and basis for direct material costs
- Travel costs identified including #days, #people, location, air, per diem rates, mileage
- Rationale for travel costs
- Equipment Costs identified by category including hours and rate (ownership developed rate)

- Rationale for rate
- Rationale and basis for hours
- Construction costs by anticipated contract
- Rationale and basis for construction costs
- Identification of subcontracts/sub-agreements and consulting costs
- Rationale for each subcontract/sub-agreement and consultant

- Determination that each sub-agreement is determined fair and reasonable and why
- Identification of other direct costs
- Rationale for other direct costs
- Identification of other indirect rates such as overhead/G&A
- Support for other indirect rates
- Rationale and support for any contingency costs
- Technical Evaluation

- TECH EVALUATION
- Evaluate type of hours to determine reasonableness for project
- Evaluate the number of hours to determine reasonableness for project
- Evaluate the mix of hours to determine reasonableness for project
- Evaluate types of materials to determine reasonableness for project

- Evaluate the quantities of materials to determine reasonableness for project
- Evaluate the mix of materials to determine reasonableness for project
- Evaluate the rationale and basis provided by the recipient for all budgeted cost elements

- **Budget Pricing Guide/Template**
- **Estimating Techniques Used.** The two most common methods for estimating costs are (i) detailed costs by cost elements, and (ii) parametric estimating. Detailed rationale needs to be provided for parametric estimating.
- ***Budget Reviews of Cost Estimates by Cost Element Details***: Some or all of the following cost element information will apply.
- ***Labor; Does the budget contain the following as applicable?***

- The kind of employee that will be working on the project (job classification/description such as engineer, laborer, program manager)?
- The amount of time each person will be working? This can be a number of hours, days, weeks, percentage of a year, etc.
- The wages paid to the employee? This can be an hourly rate, daily rate, annual salary, etc. to correspond to the measure of the time budgeted but does not include fringe or other indirect rates.

- Supporting documentation for the budgeted rate? This can be payroll records identifying the individual or labor category.
-
- ***Fringe Benefits and Payroll Additives***
- If labor costs are budgeted:
- What is the fringe benefit rate or dollar amount?
- Supporting documentation such as negotiated rates or agreements, qualified CPA recommendation or the actual compilation of thee poll and base costs for Reclamation evaluation.

- ***Equipment:***
- If equipment costs are budgeted:
- The kind of equipment that will be used on the project (type, model, size, etc.)?
- The amount of time each type of equipment will be working? This can be a number of hours, days, weeks, percentage of a year, etc.
- The rate for the equipment? This can be an hourly, daily, annual, etc. to correspond to the measure of the time.

- Is the equipment owned or rented? Reimbursement for use of owned equipment must be based upon the actual cost to the recipient for the operation and use of the equipment, not on rental rates. If ownership rates are not available, Corp of Engineer recommended rates should be used.

- Is there standby time included?

- ***Material:***
- If material costs are budgeted:
- What items are being purchased, i.e. a description of the items?
- The quantity of each?
- The unit cost of the items?
- Consolidated Bill of Materials
-

- ***Other Direct Costs:*** Other direct costs are anything that is not labor, fringe benefits, equipment, material, or overhead. It can include supplies, room rental, advertising, internet access, copy costs, telephone use, and travel, just to mention a few.
- What the purpose is for the cost?
- What the basis is for the cost in the budget, i.e. how did the requestor come up with the dollar amount for the item?
- Do you have enough information to duplicate the calculation of the amount?

- ***Subcontracts:***
- Did the recipient provide supporting documentation for the subcontract costs determining them to be fair and reasonable? (The budget information needed for subcontractors is identical to the information needed for the recipient. The recipient should have used the same guidance for each cost element budgeted for the subcontractor as you would for the recipient.)

- ***Contingencies:***
- Data provided in the Budget: If costs are budgeted for contingencies, can you determine:
- What events are the contingencies intended to cover?
- What the basis is for the contingency amount, i.e. how the dollar amount is calculated?

- There at two types of contingency costs– one that is reasonably certain to occur, and there is a verifiable basis for the calculated amount; and one for which the probability of occurrence is unknown, and there is no verifiable basis for the cost. The cost associated with the first type of contingency is allowable to the extent it is supportable. Contingency costs for the latter are expressly unallowable)

- ***Overhead:***
- The overhead rate(s) used (there may be more than one)?
- The base(s) to which the overhead is applied e.g. just labor costs, all direct costs, etc.?
- The pool, base and associated costs with each just as with fringe.
- Any agreements with the government or recommendations by qualified CPAs.
-

- ***Parametric Estimates***
- Either an entire budget or only some components may be estimated using parametric estimating techniques.
-
- Rationale as to why use of the data is reasonable for the project described.
- Identify the specific parametric data used.
-

- **Technical analysis.**
- A technical analysis needs to be received in order to determine that the various cost elements are reasonable, allocable and allowable for a particular program. Program managers, GOTRS other field representatives need to state that the hours budgeted, by labor category, are reasonable, necessary, allocable and allowable for the project budgeted.
- The same goes for material costs by material category and for each cost element in the budget.

- The tech should indicate what was budgeted and why. It should then specifically identify what is allowed by the tech and what is questioned. It should also indicate the reason for accepting the costs elements accepted and questioning the costs elements questioned.

- When parametric estimating is used, the technical needs to look at the parametric data and determine that it applies to the current project and state why. They also need to explain the process used to get from there to here and why it is reasonable. For example if the budget is being based in full, or in part, on past projects, the tech needs to identify the past project(s) and why they are acceptable enough for the recipient to base the current effort on. They also need to explain that the past project was for 2700 lf of 12 inch pipe and why the same, or some, costs would be applicable to this one.

- **Budget Pricing Template**
- **Estimating Techniques Used.**
- ***Labor; Does the budget contain the following as applicable?***
- Categories such as engineer or laborer along with number of hours, days, weeks etc
- The direct rates paid corresponding to hours, days, weeks, FTE percentage
- Supporting documentation such as payroll records
- Fringe, labor burden rate or dollar amount?

- Supporting documentation such as negotiated rates or agreements
- ***Equipment:***
- The kind of equipment and number of hours, days, weeks for each piece of equipment e
- The rate for the equipment for each unit of time and how the rate was developed
- ***Material:***
- Description of the material with quantities and unit prices?

- Consolidated Bill of Materials
- Supporting Documentation for the material costs
- ***Other Direct Costs:***
- Other direct costs are anything that is not labor, fringe benefits, equipment, material, or overhead. It can include supplies, room rental, advertising, internet access, copy costs, telephone use, and travel, just to mention a few.
- What the purpose is for the cost?
- Support for the costs

- Do you have enough information to duplicate the calculation of the amount?
- ***Subcontracts:***
- Did recipient identify each subcontract with estimated cost
- Supporting documentation establishing the subcontract costs as reasonable
- ***Contingencies:***
- What events are the contingencies intended to cover?

- What the basis is for the contingency amount, i.e. how the dollar amount is calculated?
- (Note:There at two types of contingency costs– one that is reasonably certain to occur and one for which the probability of occurrence is unknown, and there is no verifiable basis for the cost. The cost associated with the first type of contingency is allowable to the extent it is supportable. ***Overhead:***
- The overhead rate(s) used

- The pool, base and associated costs with each just as with fringe.
- Any agreements with the government or recommendations by qualified CPAs.
- **Technical analysis**

Are there any questions?