

Why Pre-Qualify Contractors for Stream Restoration Construction

National Stream Restoration Conference

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Phillip Todd



Presentation Overview

- ▶ Pictures are worth a thousand words
- ▶ Why pre-qualify
- ▶ Benefits and limitations
- ▶ Considerations for Qualification Requests

A picture is worth
a Thousand Words

Design or Construction?



Design or Construction?

- ▶ Which was the cause of project failure?
 - Unqualified Consultant?
 - Inexperienced Contractor?
- ▶ Why is the stream aggrading?
 - The design width to depth ratio, incorrect?
 - Sediment Transport - taken into consideration?
 - Contractor overwiden the channel?

Step Pool?



Step Pool?

- ▶ Pools were not installed (straight riffle so no energy dissipation)
- ▶ Structure arms were not anchored into the bank
- ▶ Structures arms were sloped downhill rather than angled slightly up
- ▶ Gap between rocks

Cross Vane?



Cross Vane?

- ▶ Header elevations with top and middle of structure appear to be at same elevation
- ▶ Structure installed too deep
- ▶ Vane arms not keyed into bank

Step Pool & Cross Vane



Step Pool & Cross Vane

- ▶ Functioning as designed & intended
- ▶ Header elevations are correct - low point of channel
- ▶ “Arms” direct water into thalweg (low point)
- ▶ Vane arms keyed into bank at proper angle and slope to maintain thalweg

J-hook?



J-hook?

- ▶ Misplaced in the stream profile (?)
- ▶ Installed too low
 - Log angle
 - 'J' rocks

J-hook



J-hook

- ▶ Functioning as designed & intended
- ▶ Header elevation rock & log are correct - low point of channel to maintain flow
- ▶ “Arm” directs water into thalweg (low point) & maintains downstream pool
- ▶ Arm keyed into bank at proper angle and slope to maintain thalweg and pool

Why Pre-qualify

What is pre-qualification

- ▶ An evaluation & determination process
- ▶ Faithful performance
- ▶ If contractor has:
 - Skills
 - Judgement
 - Integrity
 - Financial Resources
 - Abilities

Why pre-qualify?

- ▶ Industry reputation
- ▶ With stream restoration, construction is not just construction
- ▶ Stream restoration is unique from other GC work
 - Streams are dynamic, not static
 - Detailed implementation of key work components required for the stream work to function per design of trained, qualified designer

Benefits & Limitations

Benefits of Pre-qualification

- ▶ Separates pretenders from contenders
- ▶ Assuming pre-qualification before the bid:
 - Notifies the construction community that a bid is coming
 - Allows 'qualified' firms to be shortlisted to submit a bid
- ▶ Minimizes time of engineer/consultant on-site during construction
- ▶ Provides confidence in resource agency relationship

“Downside” of Pre-Qualification

- ▶ Has the potential to limit pool of contractors to submit bids
- ▶ Has the potential to limit contractor into this type of construction
- ▶ Adds cost to project implementation - review of qualification information
- ▶ Adds time to project implementation schedule

Considerations for Qualification Requests

Remember the Goal!

▶ Purpose of qualification

- Separate pretenders from contenders
- Hire a qualified & experienced contractor to implement a stream restoration project

Differentiators - Project Complexity

- ▶ Project type
 - Urban or Rural
 - Other infrastructure involved
- ▶ Constrained work area?
- ▶ Environmentally sensitive work area?
- ▶ Interactions with the public?

Differentiators - Trained in these matters!

Are the following important to your project?

- ▶ Staff Training
 - Management staff
 - Field staff
- ▶ Experience in stream restoration construction
- ▶ Experience constructing in-stream structures

General Consideration

- ▶ Weeks before the anticipated bid
 - At the bid opening
 - Read qualification first & determine whether to open
 - Read qualification after all bids are opened
- ▶ ‘Reasonable’ time period after bid opening

General Consideration

- ▶ Time Period for Qualification
 - Single project
 - Multiple projects
 - ❖ Expiration/ time limit of pre-qualification
 - ❖ Yearly renewal at owner's discretion
- ▶ Adjust qualification differentiator(s) based project complexity

What to request - General Info

Contractor Name:		Date of Evaluation:
1. MINIMUM REQUIREMENTS (Must meet minimum requirements to proceed to Section 2.)		
1.a.	General Information	Ye
1.b.	Business Type	
1.c.	Minimum Licensing Requirement	
1.d.(1)	Bonding Letter	
1.d.(2)	Funds Expended by Surety?	
1.d.(3)	List Surety Companies in past 5 yrs	
1.e.(1)	Lawsuits or Arbitrations?	
1.e.(2)	Judgments, Claims, Arbitrations, Lawsuits?	
1.f.	Evidence of Insurance	
4. Signature Form		
4.a.	Signed/Dated	
4.b.	Notary Certification	

What to request - General Info

2. GENERAL REQUIREMENTS (Must have a minimum of 30 points to proceed to Section 3.)		
2.a.(1)	Number of years under current name (>5 yrs=5, 0-5 yrs=2)	
2.a.(2)	Previous NC construction experience (SCO exp=5, NC public =3, NC private=1)	
2.a.(3)	Prequalified and failed to submit bid w/o notice of good cause (no=3, yes with good cause=3, yes without cause=0)	
2.b.(1)	NC office management (yes=4, no=0)	
2.d.(1)	Work inspection and approval processes (well described=5, poorly described=0)	
2.d.(2)	Management procedures (well described=5, poorly described=0)	
2.e.	Financials - Listed/attached (provided=4, not provided=0)	
2.f.(1)	Failed to complete construction contract (no=3, yes with sufficient explanation=3, yes=0)	
2.f.(2)	Paid liquidated damages? (no=2, yes with sufficient explanation=2, yes=0)	
2.f.(3)	Filed claim(s) w/SCO in past 5 yrs (no=3, yes with good cause=3, yes without cause=0)	
2.f.(4)	Convicted of charges (no=3, yes=0)	
2.f.(5)	Barred from bidding (no=3, yes=0)	
2.g.(1)	EMR rate (EMR less than or equal to 1.0= 2, EMR greater than 1.0 = 0)	
2.g.(2)	OSHA 300 log (provided=1 , not provided=0)	
2.h.(1)	Documented HUB Plan (yes=1, no=0)	
2.h.(2)	Typical % HUB participation (greater than 10%=2, less than 10%=0)	
2.i.(1)	US Army Corps of Engineers Cease and Desist Order (no=3, yes=0)	
2.i.(2)	NC Division of Water Quality NOV (no=3, yes=0)	
2.i.(3)	NC Land Quality NOV (no=3, yes=0)	
	Subtotal	

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	Subtotal

What to request - Experience

- ▶ Staff Training
 - Geomorphological Training Requirement (two weeks) for Site Superintendent/ Foreman
- ▶ Experience in stream restoration construction
 - Footage Completed for Company
 - Footage Completed by Site Superintendent/ Foreman
- ▶ Experience constructing in-stream structures
 - Footage for toewood, geolifts, etc.
 - Number of rock cross vanes constructed, j-hooks constructed, etc.

What to request - Project Specifics

Section 3. PROJECT SPECIFIC REQUIREMENTS

3.a. Project information. Complete information sheets for up to five (5) similar projects. The similar projects should have been completed within the last ten (10) years, at least one of which within the last five (5) years. Firms are strongly encouraged to highlight projects that match the region, watershed type, and work performed identified below in the table below.

Physiographic Region	<input checked="" type="checkbox"/> Mountains	<input checked="" type="checkbox"/> Piedmont
Watershed Type	<input checked="" type="checkbox"/> Agricultural Land Cover	<input checked="" type="checkbox"/> Forested Land Cover
Work Performed	<input checked="" type="checkbox"/> Floodplain grading <input checked="" type="checkbox"/> Stream channel excavation <input checked="" type="checkbox"/> Crossvane installation <input checked="" type="checkbox"/> J-hook installation <input checked="" type="checkbox"/> Brush mattress installation <input checked="" type="checkbox"/> Culvert installation <input checked="" type="checkbox"/> Ford crossing installation <input checked="" type="checkbox"/> Invasive vegetation removal <input checked="" type="checkbox"/> Fence installation <input checked="" type="checkbox"/> Winter construction <input checked="" type="checkbox"/> Stream channel pump around <input checked="" type="checkbox"/> Log grade control structure installation	

What to request - Project Specifics

Project Information Sheet

Project Name, County, State

Contract Type

Design Bid Build Design Build Full Delivery Other :

Physiographic Region

Mountains Piedmont Sandhills Coastal Plain

Project Watershed Type

Agricultural Forested Urban
Enter % here Enter % here Enter % here
 % Agricultural land cover % Forested Land cover % Urban land cover

Project Type

Stream Restoration Wetland Restoration Riparian Buffer Restoration
Enter l.f. here Enter ac. here Enter ac. here
 Linear footage Acreage Acreage

Project Requirements

Item

Provide a brief description of quantity and/or type of work performed:

- Floodplain, Wetland Grading
- Stream Construction
- In-stream Structure Installation
- Bridge, Culvert, Ford Installation
- Reforestation, Invasive Vegetation Management
- Other

Qualification Scoring

3. PROJECT SPECIFIC REQUIREMENTS		
3.a.(1)	Similar Project #1	Greater than 5000 l.f. = 8 ; 2000-5000 l.f. = 5 ; less than 2000 l.f. = 2
3.a.(2)	Similar Project #2	Greater than 5000 l.f. = 8 ; 2000-5000 l.f. = 5 ; less than 2000 l.f. = 2
3.a.(3)	Similar Project #3	Greater than 5000 l.f. = 8 ; 2000-5000 l.f. = 5 ; less than 2000 l.f. = 2
3.a.(4)	Similar Project #4	Greater than 5000 l.f. = 8 ; 2000-5000 l.f. = 5 ; less than 2000 l.f. = 2
3.a.(5)	Similar Project #5	Greater than 5000 l.f. = 8 ; 2000-5000 l.f. = 5 ; less than 2000 l.f. = 2
		Subtotal

- ▶ Don't limit project scoring to only stream length implemented as this pre-qualification did
- ▶ Consider project complexity and requirements & weight accordingly

Qualification Recommendations from a Contractor

- ▶ If establishing conditions to bid, implement Pre-Qualification either:
 - Prior to Bid
 - Prior to Reading Bids

Qualification Recommendations from a Contractor

- ▶ Why pre-qualify prior to bid reading:
 - Bid does not influence Bidder Recommendation for Award
 - Prevents influence of Politics
 - Prevents waste of time to bid for Unqualified Contractors
 - Enables contractors who have questionable experience to determine if they meet project qualification requirements

Qualification Recommendations from a Contractor

- ▶ Implementing qualification scoring
 - Grade data requested with your project components
 - Review entire project & its complexity, not one ‘graded’ item (i.e., length)
 - ❖ ‘Channel relocation’ (i.e., drainage swale) within DOT right of way likely does not have same challenges as fish passage project or project in urban watershed

Pre-qualification - Summary

- ▶ Selection of an experienced, qualified contractor
- ▶ Best if implement prior to bid reading
- ▶ Focus on past performance
 - Faithful
 - Skills
 - Ability
 - Judgement
- ▶ In long term for project with pre-qualification,
 - Less CA time so less funds expended
 - Less likelihood for change order or liability

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Questions?

▶ Contact Information

- p.todd@nsenv.com
- (919) 971-5641