

Navigating to Flexible Projects

Making Implementation of Design Build Projects a Reality for Publicly Funded Projects

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- Design build at the local level- laws and regulations
- Choose wisely- setting criteria for selection
- Case studies
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THE FLEXIBILITY OF DESIGN BUILD

- Well-established as one of better delivery methods for Stream Restoration
- Mitigation projects already demonstrates years of successful design-build stream restoration projects in NC
- Not used heavily at local government level in North Carolina- specific laws apply since 2014

Why Design-Build for Stream Restoration?

Mitigates for Inherent uncertainty in stream restoration

- *change orders avoided*
- *Design changes occur quicker*

Risk shifted to design-builder

Construction costs provided throughout design process

Potential Downsides

Owner loses designer-advocate

Contractor and designer can conflict- can affect design

Cost can increase

WHY IS DESIGN BUILD DIFFERENT FOR LOCAL GOVERNMENT?

- Subject to special laws:
 - Virginia- **two-step negotiation process**- QBS then cost
 - South Carolina- allows cost and quals based
 - North Carolina- Qualifications-based selection (QBS) only for local governments
 - Design-Build Law passed in 2013

NORTH CAROLINA DB SELECTION PROCESS

“SELECT FIRMS QUALIFIED TO PROVIDE SUCH SERVICES ON THE BASIS OF DEMONSTRATED COMPETENCE AND QUALIFICATION FOR THE TYPE OF PROFESSIONAL SERVICES REQUIRED WITHOUT REGARD TO FEE OTHER THAN UNIT PRICE INFORMATION AT THIS STAGE”



NORTH CAROLINA DB PROCESS FOR LOCAL GOVERNMENT

Determine Criteria when to use Design Build

Governing board approval not required but advised

Keep short and simple

Develop Request for Qualifications

This is where the bulk of your time is

Start with a "wish list" of fundamental needs for your project

Advertise and Select Firms

Consider how much you want to read- what time does everyone have to invest?

Include some stream restoration experts on the selection committee if you can

Negotiate Fee and Contract

If your cost is fixed- this can be made known in the RFQ

Report on process- Sec. of Admin Report

Requirement under NC law

INGREDIENTS OF THE RFQ TO MAINTAIN FLEXIBILITY FOR STREAM RESTORATION

- Key: Simplicity

Template

- Boilerplate
- Example RFQ

Pick your Standard Contract

DBIA

EJCDC

AIA

ConsensusDocs

Craft Your Selection Criteria/Qualifications

Casting a big net
vs. small net

What is your
project like?

Craft your Specific Project Requirements

How is your
project unique or
different than
what's been done
before?

CRAFT YOUR SELECTION/QUALIFICATION CRITERIA

**Casting a big net
vs. small net**

**Limiting the field
could increase
costs**

**What are the
project risks?**

**First stream
restoration project
Vs. ongoing series**

**Designer
experience vs.
Contractor
Experience**

**Broad expertise vs.
narrow**

**Designer/Contract
Teaming
Experience and
DB Experience**

**Have they worked
together before?**



**Have they built the
same types of
projects?**

**Does one matter
more than the
other?**

CRAFTING THE QUALS: FOCUS ON KEY PERSONNEL

Lead
Designer/Engineer
of Record

Project Manager

Site
Superintendent

Primary Equipment
Operator

Permitting
Specialist

Vegetation
Specialist

- Stream Restoration is a specialist practice
- The successful outcome of projects is often dictated by the influence of a few key individuals on the design and construction
- Focus the qualification questions on key personnel more than the companies
- Require personnel to be maintained for project unless agreed in writing

CRAFT YOUR SPECIFIC PROJECT REQUIREMENTS

What makes your project unique?

Grant requirements:

- Schedule
- Monitoring
- Reporting

Regulatory requirements



What do you want from this project?

Performance Requirements:

- In-channel Structures
- Vegetation
- Design Storm



Where to put in RFQ:

- Special Conditions of the Contract
- Project Approach requirements
- Selection Criteria/Forms

**IMPORTANT:
DONT LOSE THE
DESIGN-BUILD
ADVANTAGE OF
FLEXIBILITY BY
OVERLY-
CONSTRAINING
YOUR
REQUIREMENTS!!**

EXAMPLE PROCESS- IVEY REDMON STREAM RESTORATION DESIGN BUILD RFQ

- Worked with Town of Kernersville to create design-build RFQ for first stream restoration project
- Drew from collective experiences- stream restoration, legal, ecological, regulatory
- Fit to meet Town's specific project criteria
 - Park Setting
 - CWMTF Grant
 - Potential future greenway interaction
 - Aesthetics
 - First design-build project for Town
 - First stream restoration project for Town



1. High-accuracy excavation and grading of stream channels and floodplains to provide permanent functional natural channel design features including thalweg, riffle, step, pool, run, glide, point bar, inner berm, bankfull bench, and floodplain depressions. Experience with GPS machine control technologies is preferred.
2. High-accuracy installation of boulder structures with size requirements of at least 1 ton for streamflow deflection and grade control. Describe the use of structures including vanes, cross-vanes, step-pools, j-hook vanes, boulder plunge pools, weirs, boulder clusters, and constructed riffles that were used in the 10 or more projects.
3. High-accuracy installation of in-channel log structures for streamflow deflection and grade control. Typical structures include log sills, log rollers, j-hook log vanes, log weirs, and constructed riffles. This does not include toe wood/brush toe/root wads.
4. Successful installation of native riparian vegetation for bank stabilization and riparian habitat, including temporary erosion control grasses, permanent deep-rooted native grasses, wetland plants, live stakes, on-site transplants, bare-root seedlings, and container plants.
5. High-accuracy installation of stormwater collection and treatment ponds, conveyances, outfall pipes, floodplain wetlands, step-pools and energy dissipater basins and vegetative swales for capturing, treating, and discharging concentrated polluted stormwater in a riparian floodplain setting that contributes to overall stream system health and integrity.
6. Successful erosion and sedimentation control measures during river project construction including pump-around, flow diversion, sediment fence, temporary check dams, and other turbidity reduction measures.

Prefer that teams that have worked together on similar projects so we know they have a good relationship and can avoid drama.

Provide a long-term maintenance plan on this project.

Riprap is to be avoided. This project should be natural channel design and structures should blend into the environment.

Select NATIVE vegetation to provide color throughout year.

Select vegetation with key spots having larger species and bright color like yellow (not just seedlings and seed; the attention on this park warrants providing some larger perennials, shrubs and trees to provide an aesthetic appeal to the project).

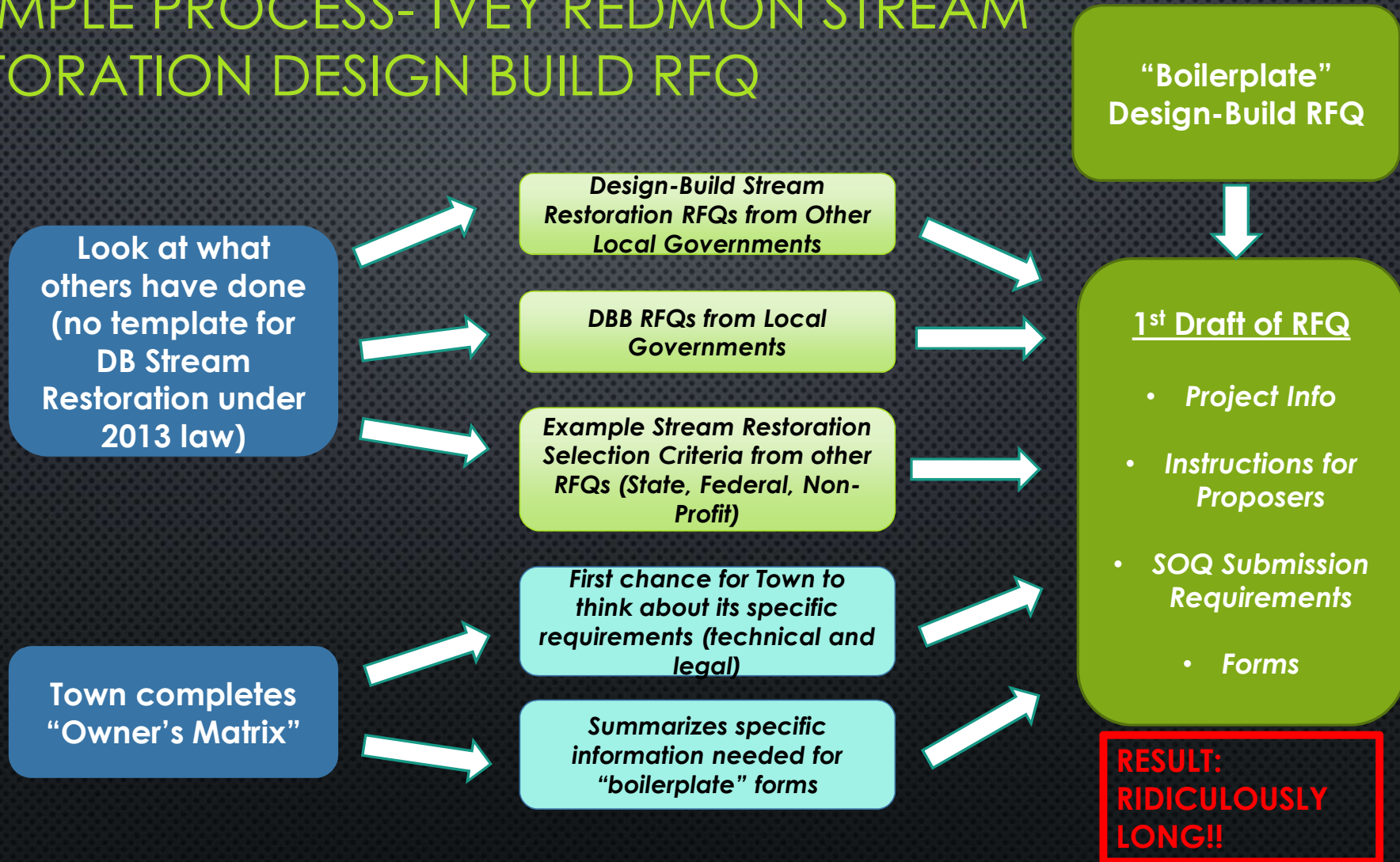
Experience working with the public and educating citizens not just professionals on construction/planting practices. Workshops are going to be a major part of this project throughout the process.

Invasive management is needed in some areas and should be built into project for removal (primarily multiflora rose and privet in Reaches 4 and 5; small amount of elaeagnus in Reach 7).

Plan for 3 phases of restoring watershed and team will assist with grant writing.

Team should work with developer of property that is adjacent to Reaches 7 and 3 while they and we are in project phases so neither group has a big surprise.

EXAMPLE PROCESS- IVEY REDMON STREAM RESTORATION DESIGN BUILD RFQ



LET THE TRIMMING BEGIN!

- Key to finalizing RFQ: collaboration and brainstorm sessions
- Met after each draft completed
- Key questions during these sessions:
 - What questions should be asked?
 - Easiest way to ask these questions?
 - How can the Town be protected?
 - How can we ensure collaboration between Town and Design-Builder during project?
- All decisions about RFQ made in this committee format

Ex.: # Projects, Length of Stream

Use Forms, "Yes/No" vs. written

Identify risks, build in "stop gaps"

Build in collaboration

Key: make the proposers not work as hard (bullets vs writing, forms)

KEY TAKEAWAYS/LESSONS LEARNED

- Even with trimming the requirements, SOQs ended up too long!
 - Lots of reading for committee
- Further streamlining needed
- Now have template

Questions?



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