

# Anatomy of a Successful Partnering Program on a Megaproject

**LEE L. ANDERSON JR., P.E., M.ASCE;**

**ROBERT D. DOUGLASS, P.E., M.ASCE; AND**

**BRIAN C. KAUB, P.E., M.ASCE**

*ABSTRACT: This article describes how partnering works on the Woodrow Wilson Bridge (WWB) project. At the 50-percent point in construction, this \$2.4 billion megaproject is on schedule and on budget. One of the key factors contributing to this achievement has been the partnering system used, which recognizes common interests, provides for disciplined communication, and measures team effectiveness. The time and place for identifying common interests on the project is at the initial partnering kickoff workshop. Five specific lessons learned in the course of conducting ten workshops are described in the article. Every month, or every other month, each partnering team then meets again to reassess its performance and confront the issues that have arisen. One important characteristic of every periodic WWB partnering meeting is the cheering section at the end. Telling everybody what went right during the period reinforces positive behavior and builds team spirit. The WWB project collects rating surveys immediately before each partnering meeting using an interactive feature on the project Web site, rather than at each meeting. The article describes in detail how the rating system works and what use is made of the data collected.*

**A**s a result of having a \$2.4 billion dollar megaproject on schedule and on budget at the 50-percent point, the Woodrow Wilson Bridge (WWB) replacement has enjoyed remarkably positive coverage in both the local press and the national trade press. *ENR* published a very flattering project

overview on Jan. 31, 2005, featuring the WWB project on its cover. For construction engineers of a certain age, with apologies to Dr. Hook, having your project on the cover of *ENR* ranks right up there with having your picture on the cover of *Rolling Stone*.

Neil Pedersen, Administrator of the Maryland State Highway Administration (MdSHA), was quoted in the *ENR*



Figure 1. Rendering of the new Woodrow Wilson Bridge; completion is scheduled in 2008

article saying, “You have to have a genuine partnering process in place so trust has been built to resolve problems as quickly as possible.” Maryland’s partnering process on this megaproject has been a genuine one—and it is one reason why the program has been so successful. The partnering process here has three essential elements:

- Recognizing common interests
- Providing for disciplined communication
- Measuring team effectiveness

Before discussing how these three elements work on the WWB project, it would be helpful to put them into context. Maryland’s portion of the WWB project is divided into twenty-two separate construction or environmental mitigation contracts, with an estimated aggregate net construction cost of just under \$1 billion. MdSHA has had an active statewide partnering program since the early 1990s, and all of the WWB construction contracts awarded by MdSHA have offered the construction contractor the opportunity to partner. All of the construction contracts after the initial dredging as well as the larger environmental mitigation contracts have been partnered. The contractor and the state split the out-of-pocket costs of running a partnered contract (workshop location, facilitator, refreshments) equally. Each bears the salary costs of its own participants, and partnering does not appear as a billable item in the schedule of quantities .

The partnering program has been successful in degrees varying from one contract to the next. The most successful ones have exemplified the values listed in the MdSHA *Field Guide to Partnering on MSHA Projects* (2002). These include trust, teamwork, communication, motivation, empowerment, and issue resolution. The most important predictor of success has been trust—the degree to which each party honors

the commitments its people make up and down the organizational chain.

Some in the construction industry have had bad experiences with “partnering,” where it became more of a giveaway program or a “one-way street.” The experience on the WWB project, however, has been overwhelmingly positive. On the foundations contract, for example (Anderson *et al.* 2004), MdSHA was willing to relax disincentive-burdened contract milestones in exchange for the contractor waiving potential contract extras for differing site conditions. On the Rosalie Island soil improvement contract, the contractor waived potential delay-claim entitlements, while MdSHA found ways to break the work into smaller pieces to keep him working when soil consolidation timing differed from that predicted. On the bascule span and Maryland approach span contracts, MdSHA was willing to negotiate price relief for unanticipated steel escalation costs in exchange for placing that relief at risk as an additional critical milestone disincentive. This enabled corridor-long interfaces to be met with greater confidence. This sense of “give-and-take” has been so pronounced on the WWB partnering that adding “give-and-take” to the *Field Guide’s* (MdSHA 2002) list of values would make much sense.

Besides holding certain values, a successful partnering program depends on the willingness of key people to behave in certain ways. First, the top person on the owner side and the top person on the contractor side must set the tone by respecting each other’s concerns. It’s uncanny how an organization comes to reflect the personality and behaviors exhibited by its leader. MdSHA Project Director Bob Douglass attends every start-up workshop and virtually every periodic partnering meeting. Having someone with high-dollar on-the-spot decision authority represent the owner at every meeting lends credibility to the partnering process that it otherwise wouldn’t have. The contracts where partnering is working well inevitably also have a contractor company officer (vice president or above) sitting on the other side of the table.

The biggest wild card is whether the contractor and owner’s senior field representatives hit it off. Where the contractor project manager/owner-resident engineer relationship is working well, the periodic partnering meetings tend to be short and to the point. The contractor’s project manager and owner’s resident engineer often pre-script the responses to each meeting agenda item wherever they can. But . . . where this relationship is not working, no workshop, no facilitation, and no pledges to do better make much difference. One WWB contract that was lagging behind the others (in both partnering and physical terms) now has its third project manager, and his arrival was like a breath of fresh air.

MdSHA has used only outside facilitators who specialize in the construction industry to preside at the initial partnering workshop for each WWB contract, and this has proved to be a good investment. Facilitators who focus exclusively on

construction partnering bring a degree of credibility to the workshops that the workshops otherwise would lack. Besides focusing on contract issues, there is a place in the workshops for teaching teamwork and communication skills—a “teachable moment.” However, a construction focus must complement this softer side. Beware the erstwhile construction partnering facilitator who also offers marriage counseling or is a “life-style coach”; there are such people out there. The WWB project has organized and moderated the periodic (monthly or bimonthly) follow-up partnering meetings successfully using project staff rather than outside facilitators. One innovation—suggested by the construction contractor, in this case—was to bring the facilitator back for a “half-way through” workshop. Recognizing that the second half of the job would bring challenges very different from the first half, attendees received this workshop very well.

To keep the partnering process rolling month-in and month-out, the WWB project has a partnering coordinator as part of the General Engineering Consultant (GEC) organization. The partnering coordinator organizes workshops and prepares agendas and meeting minutes for periodic meetings. He also oversees collection and reporting of partnering rating surveys. Preparing and distributing detailed meeting minutes within a day or two after each meeting (before their value plummets) is a task that not many resident engineers or office engineers could consistently accomplish. By receiving the minutes as a service to them, the resident engineers and office engineers retain their focus on other pressing project priorities. Having a partnering coordinator prepare minutes is something that a megaproject can afford—and the WWB project experience is that it is a worthwhile investment.

### **RECOGNIZING COMMON INTERESTS: THE PARTNERING WORKSHOP**

The time and place for identifying the common interests on the project is at the initial partnering kickoff workshop. The *MdSHA Field Guide* (2002) devotes several pages explaining how to organize and conduct such a workshop. The principal product from the workshop (besides the chance to meet the participants and work out some initial issues) is a partnering charter or mission statement. In the course of conducting ten workshops like this for Maryland contracts, some useful lessons learned have emerged.

1. Location—pick someplace nice. The WWB project usually holds its workshops offsite. Workshops have been held in hotel ballrooms, in a spartan community center, in project conference rooms, and at two pleasant country clubs. The forty to fifty participants at each meeting should be free from distractions like noise from the next room, an inoperative HVAC system, or a second-rate meal. A back-of-the-envelope calculation will quickly confirm that the greatest cost

of holding the workshop is the salaries of the people attending. This exceeds the combined cost of the facilitator, room, and meal(s) by a factor of three or four. So, the location must not be allowed to detract from the productivity of the participants.

2. Timing—early, but not too early. The MdSHA norm has been to encourage holding the kickoff workshop close to the contract notice-to-proceed (NTP) date—that is, right at the very beginning of the job. This is hard to quarrel with, although sometimes it causes the workshop to happen during a “honeymoon period,” before each party has taken the measure of the other’s staff and before any thorny issues have arisen. Because of some scheduling conflicts, one recent workshop on the WWB project was conducted about three months after NTP. It proved to be one of the most productive workshops ever because there were plenty of real issues to talk about.
3. Duration—one day is enough. The *MdSHA Field Guide* (2002) provides sample agendas for both one-day and two-day partnering workshops. It is unrealistic to expect that either owner or contractor senior executives will make themselves available for a two-day workshop. Sometimes even a half-day is hard to schedule. But the necessary business of the workshop can be accomplished in one day if it is organized efficiently and group wordsmithing is minimized, as discussed below.
4. Organization—let attendees know you appreciate their participation. The people who attend partnering workshops were all invited to be there. Rather than asking them to fill in a blank sign-in sheet, the WWB partnering coordinator prepares a roster in advance with contact information for the expected attendees. Each person then simply initials next to his or her name or corrects any mistaken information on the roster. Further, the WWB project uses a seating plan carefully scripted to seat specific representatives of owner, contractor, designer, GEC, and community agencies with the people they most need to interact with. Placing a name card at each person’s place and posting an alphabetical seating key at the entrance to the meeting room are good ways to implement the seating plan.
5. Minimize group wordsmithing—with forty to fifty people participating, inevitably there will be some who set great store by getting the words in the partnering charter, the issue resolution ladder, and the rating survey instrument “just right.” This can be excruciatingly boring for the majority of the participants. Still, the group needs to participate in setting the final content of these documents in order to feel a sense of ownership of them. On the WWB project,

the partnering coordinator usually circulates drafts of the key documents to senior owner and contractor managers before the workshop—that way their ideas can be incorporated in advance. The facilitator then generally reviews the wording of the proposed charter with the entire group before lunchtime; the project manager and resident engineer finalize any needed changes during the lunch break.

### PROVIDING FOR DISCIPLINED COMMUNICATION: REGULAR MEETINGS

Could it be that those who say “partnering didn’t work” just attended one workshop and expected some kind of permanent inoculation from it—sort of like getting their childhood shots? On the WWB project, the workshop is just the beginning. Every month, or every other month, each contract team meets again to reassess its performance and confront the issues that have arisen. Think of the periodic meetings as required booster shots!

There is no set formula on the WWB project for how often to meet. On some contracts everybody meets monthly, with a smaller “executive partnering group” added once per quarter. On others everybody meets every two months. On others, everybody meets every two months, but the “executive partnering group” meets once per month. The “executive partnering group” includes senior owner, contractor, and GEC representatives from organizational levels above the project manager/resident engineer.

The partnering coordinator uses the minutes of the previous meeting plus the weekly contract status report to prepare regular meeting agendas. This tends to result in meetings where the talk is of situations and schedules, much like a progress meeting. Some people would prefer to see the meetings be more like brainstorming sessions, where specific problems are brought up for group resolution. Whatever the format, however, the essential thing seems to be simply the act of assembling everyone together regularly, usually with coffee or a soft drink and a light snack. Much of the good “partnering” that happens at these meetings is not scripted on the agenda, and it often happens before or after the formal part of the meeting.

One important characteristic of every periodic WWB partnering meeting is the cheering section at the end. The agenda prompts the meeting chairperson to ask what went *right* during the period since the last meeting and to identify the individuals or teams who helped make it happen. This usually prompts meeting attendees to offer at least a handful of kudos. Even when a job is struggling in certain respects, there is usually something positive happening. Telling everybody about it reinforces positive behavior and builds team spirit.



Figure 2. The Virginia Approach Span contract has been a great example of partnering success (© 2005 David Sailors, with permission)

### MEASURING TEAM EFFECTIVENESS: THE RATING SYSTEM

The MdSHA *Field Guide* (2002) envisions that the attendees at each month’s partnering meeting will fill out a rating form at each meeting, evaluating how the partnering is going. On the WWB project, people also fill out ratings for each meeting. The project uses survey questionnaires measuring five standard criteria from the MdSHA business plan (safety, issue resolution, maintenance of traffic, erosion and sediment control, and material clearance) and up to eleven additional criteria. The additional metrics are tailored to the contract’s situation and often correspond to goals established in the partnering charter.

A big difference between the WWB project and standard MdSHA practice is that the WWB project collects rating surveys immediately before each partnering meeting using an interactive feature on the project Web site, rather than at each meeting. *This has worked great!* It is accessible and convenient for the project team members to use, and it provides results so they can be discussed at the current meeting rather than one or two months later, as would be the case if questionnaires were just filled out at the meeting.

Here’s how it works. The rater logs on to the URL and selects “partnering rating forms” from a pull-down menu. He or she must enter a commonly assigned user ID and password to access the rating section, making the system inaccessible to the general public. When the rater chooses a contract from the menu, the pertinent contract rating form appears. While the majority of raters complete the rating forms electronically, the system accommodates those without Internet access. Selecting an icon allows the user to print a copy of the rating in PDF format to be filled out by a colleague (perhaps a field superintendent) who faxes the completed form to the partnering coordinator. Most users assign scores by clicking on the interactive computer form and

must score something on every criterion; “I don’t know” is an option. There is also a field for typing in comments on each rating category.

When the form is filled out, the user clicks a button to submit the rating. The Web server generates a thank-you confirmation message to the user and an e-mail report to the Potomac Crossing Consultants (PCC) partnering coordinator and a backup person. The e-mail report includes the scores and comments that the user submitted.

The PCC partnering coordinator compiles the scores into an Excel spreadsheet and copies and pastes the comments into a Word document. A refinement to the system might be to automate tabulation of the scoring, but this has not been undertaken. Keeping a person “in the loop” allows for quality control. For example, the partnering coordinator has the opportunity to correct the classification where a subcontractor rater identifies himself as a “contractor” person, meaning prime contractor, rather than a subcontractor. It also allows raters to specify by comment that they wish to assign a score in between the choices offered: say, a “3.5” instead of a “3” or a “4.”

One question that came up often at early WWB partnering workshops was whether the ratings should be anonymous. Some people worried that requiring names would inhibit candor and dampen response. As the project gained experience, however, the matter was settled: names are required on each rating survey for all new jobs. This allows the partnering coordinator to check off who has submitted a rating and send a reminder to those who are tardy in doing so. Rating participation increases markedly when people know that they are being held accountable for submitting the rating and delinquents receive a dunning e-mail on the due date. The e-mail reminder always triggers a cascade of ratings the day before a meeting. Having to sign your name may also remind people of the seriousness of the exercise and instill a greater sense of accountability.

Whether to *disclose* the identity of the rater is another issue, however, separate from whether the rater must identify himself or herself. On the current Maryland WWB contracts, no names are disclosed. The PCC partnering coordinator acts as a trusted agent, compiling scores and comments without attributing them to their sources. Knowing the name, however, allows the partnering coordinator to ask a rater to clarify a comment if its meaning is unclear. On rare occasions it also offers the partnering coordinator an opportunity to discuss an intemperate comment with the author and encourage him or her to reconsider whether the comment would help achieve its intended purpose or not. As an aside, one WWB contract partnering team on the Virginia side of the Potomac River decided to fully disclose the names of people with their rating scores and comments. This has not inhibited comments, which are numerous and seemingly candid on that contract. The construction industry

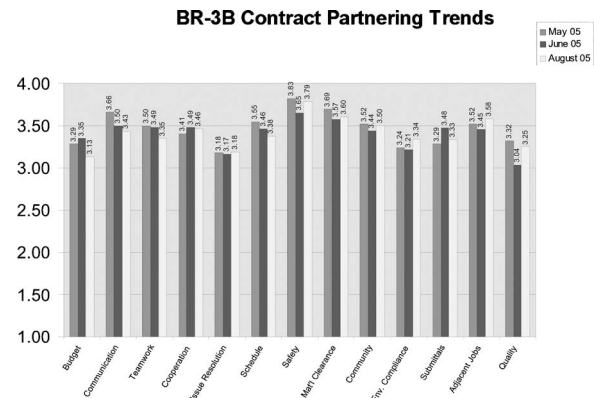


Figure 3. Average scores for all rating criteria; current and two previous periods

tends not to attract people who are shy about expressing their views...

After collecting and compiling them, the PCC partnering coordinator presents the rating results at the start of each partnering meeting. The presentation includes the three elements listed below.

1. Raw scores: There are three reasons for providing a table with the raw scores. First, it gives an opportunity to discuss participation in the rating process. Full, 100-percent participation is always the goal, but it is rarely achieved. On the WWB project it is normal to see about 65 to 80 percent of a particular contract’s participants cast votes. The participation percentage depends strongly on how much management emphasis this aspect receives. The consequence is self-evident: having many raters score a criterion is more compelling evidence that the measurement is “real” than if only one or two raters scored it. Second, displaying the raw scores gives an opportunity to look for outliers—situations where most raters score a category high but one or two score it low. This often prompts discussion, even though the scores are displayed without attribution. Third, it allows an opportunity for many eyes to perform a quality check on the spreadsheet formulas. An error occasionally will creep into the spreadsheet update process, and this public quality control check is a great motivator to avoid mistakes.
2. Trend charts: Since the beginning of the WWB partnering effort, the average scores for each criterion have been presented as a bar chart showing the current scores and scores from the two previous meetings. This gives the team an opportunity to see how they are scoring themselves compared to the recent past. The results are very sensitive to what is happening at

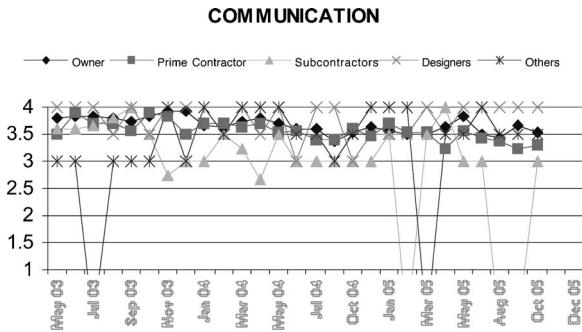


Figure 4. Each rating period is broken out by group to show differences

the time. However, at the start of the Virginia Approach Contract, Brian Kaub, Vice President and Assistant Division Manager of Granite Construction Co., instigated a change in the way trends are shown that the GEC incorporated on that and on all subsequent jobs. Brian pointed out that showing just the team-wide averages risks obscuring differences in how the owner, prime contractor, and others may be scoring a criterion. Recognizing and exploring the causes of disparate perspectives is a fundamental objective of the partnering process. Now, in addition to the composite bar chart, a chart is presented for each criterion that tracks the trend lines separately for each subgroup dating back to the start of the contract. This allows detection of situations where a composite score holds steady because upward and downward changes among the sub-groups offset one another.

3. Digest of comments: The PCC partnering coordinator compiles a one- or two-page document for each meeting displaying all the comments collected in that period's rating survey. The comments digest provides valuable feedback to the contractor's project manager and the owner's resident engineer, and they receive it eagerly (sometimes anxiously). Usually some of the comments are positive and some are negative. There is a temptation to spend each partnering meeting just going over the comments, but the WWB project teams resist that temptation. Raters are strongly encouraged to write a comment if they mark a criterion low; this is not made a mandatory requirement lest it inhibit candor in the scoring.

## CONCLUSION

This article explains the mechanics of partnering on the Maryland Woodrow Wilson Bridge project construction contracts. Vice President of Granite Construction Company and co-author Brian Kaub has lauded the WWB project's exemplary levels of trust and professionalism in its partner-



Figure 5. The complexity of megaproject construction demands disciplined communication (© 2005 David Sailors, with permission)

ing relationships, stating: "Partnering is not a buzzword—it's a living, breathing animal that is well fed and well groomed on WWB. The WWB project is state-of-the-art in partnering."

Recognizing common interests, providing for disciplined communication, and measuring team effectiveness are the three key elements that drive this genuine partnering program. The best idea in the bunch, probably, is having the partnering rating form accessible over the Internet. This and the other innovations discussed here are freely available for imitation in hopes that they will help others enjoy similar acclaim. Well—maybe not to the extent of having your picture on the cover of *Rolling Stone*.

## REFERENCES

- Anderson, L., Brookshire, J., and Gudelski, P. (2004). "A partnering success story at the Woodrow Wilson Bridge." *Leadership Manage. Eng.*, 4(1), 38–45.
- Maryland State Highway Administration (MSHA). (2002). *Field guide to partnering on MdSHA projects*, MdSHA Maryland Quality Initiative, online, <http://www.mdqi.org/documents/SHA%20FieldGuide%20Partnering.pdf> [accessed March 2006].

Larry Anderson is a senior professional associate at Parsons Brinckerhoff, assigned as the partnering coordinator for the Woodrow Wilson Bridge project. He retired as a captain in the Navy Civil Engineer Corps, where he acquired hands-on construction management experience at locations as distant as the South Pole. Robert D. Douglass is project director for the Maryland State Highway Administration (MdSHA) on the Maryland portion of the Woodrow Wilson Bridge

project. Formerly director of the Office of Highway Development for MdHSA, Bob has been involved in the design of highway projects large and small for thirty years. Brian Kaub has worked in heavy construction for twenty-eight years. Currently a vice president with

Granite Construction Company, Brian has successfully bid four large design/build projects, two of which are currently completed. He has experience in bridges, roadways, transit, hydroelectric, wastewater treatment, locks, dams, and tunnel construction. **LVE**

Anderson, L. L., R. D. Douglass, and B. C. Kaub. Anatomy of a Successful Partnering Program on a Megaproject. In *Leadership and Management in Engineering*, American Society of Civil Engineers, Vol. 6, No. 3, July 2006., pp. 110-116. Reproduced with permission of ASCE.

None of this material may be presented to imply endorsement by ASCE of a product, method, practice, or policy.