

National Construction Forum: Impacts to Outcomes

**National Academy of Construction
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Executive Summary

On May 6th and 7th 2015, the National Academy of Construction (NAC) hosted its Fourth National Construction Forum (NCF) in Washington, DC. The stated meeting purpose for this NCF was to intensify efforts by members ultimately generating “outcomes” from the “impacts” already made. Twenty-nine individuals attended the 2015 NCF meeting, including NAC members and non-members from numerous industry and academic organizations. The NCF focused on the progress made in its three workstream areas (Workforce Development, Image and Best Practices) since the last NCF was held in 2013; significant time was spent identifying potential contributions in new areas.

This publication overviews the updates, discussions and additional communication shared at the NCF. The presentations given and forum participants are detailed in this report. The path forward and immediate actions items for each workstream are also outlined here as well.

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1. INTRODUCTION

This document describes the National Academy of Construction's (NAC)¹ ongoing work to develop a forum for addressing the pressing needs of the construction industry. This summary provides an overview of the Fourth National Construction Forum (NCF) meeting that took place at the Hilton in Crystal City, VA on Wednesday May 6th and Thursday May 7th, 2015. At the Forum, progress on the three NCF sponsored workstreams (Image, Workforce Development and Best Practices) was presented and future workstreams were discussed.

The vision of the NCF is to identify and promote awareness of industry issues, ultimately driving "improved efficiency and effectiveness of the capital project process" through integrating the efforts of key organizations. The NAC convenes periodic workshops and other working groups to identify major issues impeding the development and deployment of work force and capital project best practices, and facilitating the formation and execution of work streams to resolve these issues. The genesis and history of NCF is given in Appendix B.

The Purpose of the National Construction Forum is to provide a significant national voice for the engineering, design, and construction industry to help drive positive change.

The proposed products of the Fourth NCF include:

- Actions and activities needed to take current workstreams (Image, Workforce Development and Best Practices) to the next level of effectiveness:
- List of potential new workstreams
- List of potential additional Forum participants

Attendees

In total 29 individuals from various industry, academic, government and association organizations attended the 2015 forum (detailed contact information is given in Appendix D). More attendees participated at this forum (compared to the Third Forum in 2013), although several individuals who had planned to attend were called away due to job requirements. Participation in the discussions was good and the contributions made by those in attendance was significant and impactful.

Welcome, Safety and Introductions

The Forum started Wednesday evening with a welcome mixer that was followed by dinner for the group. After dinner, Jim Porter officially started the Forum with a review of the agenda, safety contact item, NCF mission, meeting purpose and products. To keep the schedule short each workstream gave a brief presentation on their current status. In total, there were six brief presentations (detailed in the subsequent paragraphs). The purpose was to quickly update the audience on progress made and preview discussion topics for the breakout sessions on Thursday.

¹ For more information on NAC, see Appendix A.

Presentations | Summary of May 6th Updates and May 7th In-Depth Presentations

Image

Neil Eldin provided a presentation on the Public Image of Construction. It involved issues regarding how the public perceives working in construction and how those perceptions have developed into an unattractive image. The presentation promoted thought regarding how to shift the public perception of the construction industry from an unattractive image to an attractive image. The notion that construction had a more attractive image during the mid-1900's was introduced drawing attention to several potential reasons the image was more attractive during that time period.

Neil considered the question, "Who is the public?" that we are trying to reach and how their perception might be influenced with the right messages. He engaged forum participants to identify what they believe is the current public perception of working in the construction industry. Most of the responses typically indicated a negative image.

Workforce Development

Jimmie Slaughter presented an overview of the 2013 workforce development forum path forward. It centered on the problem statement, "For more than twenty years, the construction industry has recognized the emerging and growing shortages of skilled craft workers, but the broad industry-wide support needed to solve the problem has not been obtained. The issue will intensify in the coming years as the industry recovers." The workstream recognizes that workforce development efforts are mainly local or regional in nature. The NCF needs to be a proponent of workforce development activities and with the NAC taking a leading role and pushing members to help improve the industry. Two active workstreams, Workforce Development and Industry Image, address this problem. Initiatives encouraged by the workstream included industry advocacy, owner survey, whitepapers, and industry engagement with such organizations as "Go Build."

Bob Wood presented on the progress of the "Go Build" initiative in the states of Alabama and Georgia. "Go Build" is described as a collaboration between trade associations and organized labor to address the current skills gap and change perceptions in students, parents, and educators by encouraging capable young minds to consider the benefits of a career in the skilled trades. As part of the Alabama Workforce Development Initiative (AWDI), the state invested in "Go Build" to increase interest and improve the image of careers in the construction industry. Bob shared that Go Build is gaining traction in other states, such as Tennessee and Indiana. The products developed by Go Build can be made available to other states through a licensing agreement. In the presentation Bob also showed a few recruiting videos and the website for "Go Build."

JD Slaughter (substituting for Eddie Rispone) provided a presentation on Louisiana Workforce Development titled "Building Louisiana's Craft Workforce." The presentation outlined the Louisiana Workforce Investment Council's (LWIC) Craft Taskforce efforts that include: projecting demand for craft workers, implementing standardized, industry based training statewide, identifying cost and funding for training, recruiting individuals into craft training, and determining ongoing related roles and responsibilities. Other efforts include fostering alignment between government, education, and industry, as well as driving government to incentivize colleges to respond to industry workforce needs.

Even with the recent fluctuation in oil and gas prices, there continues to be projected historic demand for industrial craft workers in Louisiana. They have engagement with the LA community and technical college system in development and use of standardized training. They have helped

to mobilize funding to support training through various sources. A retention committee was established to help address attrition.

Randy Walker presented an update on work with the Greater Houston Partnership (GHP), the ABC Industrial Committee, and East Harris County Manufacturers Association (EHCMA). Membership has been gained to the Construction Industry Sector Council of GHP along with success in focusing GHP advertising, pushing craft and feeder organization to the construction professional website, work with local educational entities, and leveraging influence with Houston business leaders. Randy illustrated the GHP coordination model with industry, education, and the community. He described the ABC Industrial Committee “Focus Threads” involving construction image, recruiting, training, career development, and funding. Regarding ECHMA, an initial meeting has been held between Jimmy Slaughter, Russell Hamley, and Randy Walker. A contractor – owner meeting is scheduled for May 21, 2015. Randy provided a summary of the Construction Citizen Construction Professional Website and how it brings together construction professionals, education providers, and employers.

Randy also provided a review on projected industrial craft workforce numbers for the U.S. Gulf Coast, Louisiana, Mississippi, and several Texas regions including Houston, Beaumont, East Texas, Central Texas, West Texas, and Corpus Christi. He related data produced by Industrial Information Resources (**IIR**) for announcement of projects in other parts of the U.S. Ongoing project announcements indicate that resource demands for construction labor continues to be strong in the industrial sector. This will continue to place upward pressure on craft wages. Peak labor demand forecast in some regions appears to have shifted forward in time by one quarter or more.

Best Practices

Roberta Bosfield presented an update of the ongoing work for the Best Practice workstream. The Best Practice workstream was first discussed at the 2011 NCF. The purpose of the workstream is to increase use of industry best practices and in turn potentially increase industry performance. This workstream set about exploring the potential for a “One-Stop-Shop” for best practices and implementing an initial set-up. Starting in the fall of 2012, a feasibility research project, with over 50 study participants, assessed industry interest in an online open repository for best practice information that would free to the A/E/C industry and be crowd-sourced.

A brief overview of the research study was presented. A key finding is that the industry is interested in an open repository. The open repository supports the tenets of effective best practice processes including standardization, commitment, and iteration. The starting repository practices recommended include safety, front end planning, risk management, constructability, project team alignment, and change management. The target audience includes project engineers, project/construction managers, and owners.

There has been industry engagement progress by attending the 2015 CURT conference and presenting the Best Practice Open Repository to companies such as Exxon Mobil, BP and others. Also, the workstream is moving forward by building a Wiki Demo for Safety (sponsored by Construct-X). The demo is currently in progress and was demonstrated at the forum. Next steps for the Open Repository were discussed including: leadership team, management personnel, funding, and formation of a legal entity.

Once these presentations concluded the Plenary was broken into workstream breakouts.

2. WORKSTREAM BREAKOUTS AND DISCUSSION

After each workstream presented Thursday morning, the breakout sessions followed. Forum participants split into three groups for breakout sessions. Originally a two-hour block was scheduled for the sessions. However, the discussions during the plenary presentations ran long, and the sessions lasted about an hour. The Workforce Development session was lead by Jim Porter. Neil Eldin and Hank Hatch led the breakout for the Image workstream. The Best Practice breakout session was led by Edd Gibson and Roberta Bosfield. Once the breakout sessions were completed, each workstream reported the progress made in the sessions.

A) Workforce Development

Problem Statement:
For more than twenty years, the construction industry has recognized the emerging and growing shortages of skilled craft workers, but the broad industry-wide support needed to solve the problem has not been obtained. The issue will intensify in the coming years as the industry recovers

Jim Porter led the Workforce Development workstream breakout session. It was stated that the industry needs a better sense of demand for construction craft workforce. There is currently a lot of discussion and data developed about workforce demand in the U.S. Gulf Coast area and timing associated with that demand. But a better understanding of labor resource requirements in the rest of the country is needed, as well as timing of those needs to plan for workforce development.

There was discussion about linking the NCF Workforce Development workstream to the broader concept of vocational skill needs in the US because that conversation seems to be getting considerable attention recently. The idea is to provide some synergy for construction workforce development, but care should be taken to not sacrifice a focus on construction.

It was stated that in a political context, it seems the current discussion does not involve construction. Most discussions of job creation and workforce preparation are about advanced manufacturing, health care, information technology (IT), etc., but never about construction. Efforts should be made to include construction in these conversations.

The nature of the typical construction business contracting process related to workforce development was discussed. In general, the cost competitive nature of construction contract awards drive contractors out of training. If training is not addressed as a contractual requirement, then the contractor that includes training in the price to perform the work is at a disadvantage to the competition that does not include training in their price. To offset this negative influence on training, it would be helpful for owner organizations to demand the use of contractors that support workforce development.

It was stated that we are currently entering a period of higher construction craft wages coupled with lower productivity as we are required to bring in many new entrants to the construction workforce as demand climbs and retirements increase. A short term solution to meet increasing skilled craft workforce demand may be to take workers already in the industry and close the skills gap. There was discussion concerning the balance required between knowledge and experience to achieve craft competency in our industry. A way must be found to provide both to facilitate entry of future candidates into the construction workforce.

Several relevant questions were raised for discussion and future consideration during the breakout session. These include:

- How do we leverage what has been developed by existing workforce development programs to new programs and new regions that will face similar issues?
- How do we prioritize future regions of craft workforce shortage on which to focus? After the U.S. Gulf Coast regions such as Houston, Lake Charles, and Corpus Christi, where is the next potential imbalance of construction workforce demand and supply?
- How do we better manage diversity issues? It is believed by some that there is currently some English language bias that may cause workforce development issues.
- How do we address vertical versus horizontal opportunities for construction craft employees?

Workforce development efforts are mainly local or regional in nature. NCF needs to be a proponent of the workforce development activities currently ongoing nationally, with the NAC taking a leading role in pushing for improvement through the efforts of its members.

The following summarizes first actions identified by the Workforce Development workstream breakout group in terms of developing a regional craft labor training program. These regional programs should implement forward-looking training and close the skill gap for those who do not pass training programs the first time. At the same time they should link the training to real work, providing an experience basis and also an income stream for those students. Talent is needed both at the work face and supervisory levels, so programs should address training for each. Programs should link manufacturing growth projections with the subsequent demand increase for construction labor, while at the same time looking at labor attrition due to demographics. Programs should pay special attention to diverse and underrepresented sources of workers such as minorities, female, under-employed, and veterans. Funding for such programs are regionally specific, but could include owner's support groups, legislative appropriations, federal grants, fees paid by employers for works, and incremental hourly wage contributions among others. Developers of these regional plans should not underestimate the time required and importance of developing political alliances to promote these efforts. Governors and local politicians can enhance or impede these efforts.

Path Forward:

1. Work hard through NAC to leverage and push current efforts ongoing at the regional level, including Go Build, Louisiana Workforce Development, and Texas Gulf Coast activities to accelerate the pace of workforce improvement.
2. Develop a "primer" outlining how to impact workforce development at the regional level, to include learning from Go Build, Louisiana and Texas Gulf Coast efforts. Among issues addressed would be to:
 - Develop a better mechanism for identification of future workforce regional demand
 - Increase political influence
 - Increase, stabilize funding sources
 - Accelerate closing the knowledge to experience gaps
 - Integrate current workforce processes and capabilities into the regional solution

Breakout Members

1. Bill O'Brien
 2. Jim Porter*
 3. Jimmy Slaughter
 4. Sarah Slaughter
 5. Steve Thomas
 6. Randy Walker
 7. Don Whyte
 8. Bob Woods
 9. Kirk Morrow
- * Session Leader

B) Image

Ten members of the forum participated in the Image breakout and engaged in a spirited discussion of this workstream. The breakout was chaired by Neil Eldin and Hank Hatch.

Problem Statement:
People generally perceive the industry to be dirty, difficult, dangerous, low-paying, unglamorous, and low-tech. Further, they expressed their awareness of a public opinion that construction is a narrow and compartmentalized industry, a necessary evil to get infrastructure built, and an invisible process, the products and benefits of which are taken for granted.

The first topic was to agree on the scope of the Image workstream. Is it to address the construction industry as a whole or to focus on image issues that affect the industry's ability to attract and retain the requisite workforce? While it was agreed that the Workforce and Image workstreams are inextricably linked, the group concluded that the Image workstream should address the larger scope of the image of the industry as a whole. That said, the group agreed that the workforce ramifications of image should have our priority attention.

The group next discussed the use of the term "image." Some felt that it is defensive that we should refer to the issue in a more positive, even offensive manner. The group talked about the experience of the American Society of Civil Engineers when it decided to address the image of civil engineers a few years ago. One member pointed out that ENR gently chided ASCE editorially for "whining." ASCE abandoned using the term image and chose to rename the effort as one to enhance the public's awareness, understanding and recognition of civil engineers. In a similar vein the National Academy of Engineering has a program to improve the public understanding of engineering and has published a book titled "Changing the Conversation: Messages for Improving Public Understanding of Engineering". The NAC might learn from these ASCE and NAE experiences.

As the group discussed the public understanding part, several offered examples of the positive messages we should convey such as the contributions of construction to progress, economic development and the welfare of society (while protecting the environment). One member emphasized that our messaging should convey our passion and demonstrate our burning desire to make our case to the public and for the public's benefit.

The group discussed the use of mass and social media in improving the public's perception of our industry and workforce. Go Build was cited as a great example of an effort targeting the potential workforce that seems to be working and could be expanded/replicated. The Go Build brochure that was circulated during the general session is very impressive.

It was pointed out that there are many fragmented efforts to attract the workforce – 47 alone targeting veterans.

The group concluded that any effective NAC effort to target the workforce aspects of the issue must be through strong partnerships with industry organizations – those whose members are companies and those whose members are individuals. NAC should not address this issue in isolation.

So what is the best role for the NAC? The group concluded that it is as a convener, bringing the many stakeholders together to promote a unified effort. We don't need to invent something that is already there, but we can contribute to increasing the efficiency and effectiveness of currently scattered programs.

One approach might be to take an existing program like Go Build and promote its adoption/application nationwide. A first step should be to inventory programs like that to insure we can catalogue at least the best.

Industry image is a multifaceted issue. There are immediate actions available for image improvement; in addition, long-term issues such as the impact of contractor ethics can have a significant impact on industry image.

The ideal image of construction included being perceived as a more professional, higher-tech, and innovative industry. The industry should promote itself as a custodian of society, and as a builder of the society's future. The industry should position itself as an enabler and magnifier of modern life and an engine of the economy.

Path Forward

1. Develop inventory of existing programs that advance the industry and workforce.
2. Develop strategy to convey information about existing programs identified in inventory.

Breakout Members

1. Bruce D'Agostino
2. Lester Edelman
3. Neil Eldin*

4. Jerry Eyink
 5. Hank Hatch*
 6. Milo Rivero
- * Session Leaders

C) Best Practices

The Best Practice workstream's starting mission was to help increase the usage of best practices in the industry. The hope being with increased usage, project performance could improve. The workstream started a feasibility research project in the fall of 2012. Steps to create, develop and manage a wiki repository were explored through structured interviews a two-round Delphi study, and two focus groups sessions. A feasibility white paper, written in 2014, summarized the findings and presented a path forward for the open repository.

Initial Problem Statement:
Not all best practices (BPs) are applicable to every project, project type, or organization, and they are not universally applied within individual organizations. Across the industry, the terminology for best practices is not universal.

During the plenary presentation, there were great suggestions and discussion among the group. These discussion topics carried over in the breakout session.

Even though most of the session members were not new to the BP worksteam, a brief recap was needed. Edd Gibson reiterated that the emphasis of the open repository was to focus on the management practices instead of "means and methods." However, it was acknowledged that "means and methods" knowledge would eventually be included. Also, the knowledge in the open repository would be from subject matter experts in the industry not proprietary information with industry organizations.

Open Repository Funding and Industry Engagement

It was mentioned several times at the NCF that funding is vital to the success of the open repository. The group agreed that in order to move forward, funding is critical to moving forward the progress from the last three years. The group discussed additional organizations that would be interested in the open repository. JD Slaughter suggested that we find funding from multiple sources. In contrast, Wayne Crew suggested that that a large donation from a single organization might be better. He also mentioned that Zurich (and other insurance companies as well) would be interested. Initiatives improving project performance and safety on projects would likely entice the insurance industry. Jan Tuchman recommended that the leaders of Safety Week, organized by the Construction Industry Safety Initiative (CISI), should be involved in the initiative (Jan is willing to make introductions if needed).

Open Repository Industry Benefactors

The open repository can be the building block of converting the industry to creating knowledge workers and the forward movement of the industry. Cameron Oskvig commented that the open

repository is a resource for the betterment of the industry through knowledge sharing and informing. It helps in the dissemination of knowledge to the industry.

Not only does the open repository benefit the industry, the NAC also wins if the effort succeeds. First there is a branding opportunity for the NAC; the open repository will be linked to the NAC website. There is also collaboration opportunity for the NAC group as well. Finally the NAC would be seen as a knowledge management leader if the open repository is developed and sustained over time.

The gap between CII companies and non-CII companies was discussed. Often in the NAC and CII groups, we sometimes forget that these organizations outperform the rest of the industry. There are many organizations that don't have the resources for consistent internal knowledge groups for the sustained project performance. Many organizations might not contribute to the open repository but would benefit from the knowledge shared. This would be a big opportunity to uplift the industry.

Potential Challenges

Also in the discussion potential challenges were identified. Bob Prieto raised concerns about the legal ramifications of using the term "best practice." He said, "stay away from best practices." The insight is important and it was one raised in the feasibility research project by study participants; it should not be overlooked in the future. Also it was suggested that the legal aspects around intellectual property rights and ownership should be reviewed.

The group also discussed the design of the Best Practice Open Repository. As shown in the demo², the current design is based on the wiki format (MediaWiki software). It was acknowledged that traditional wiki design and structure might not be the most ideal for the knowledge that we are trying to organize. Lucio Sobielman mentioned that the system should fit the knowledge being disseminated. There are software options such as a Learning Management System (LMS) or Drupal themes that could work for the open repository. Bob Prieto mentioned that software design and management is not the construction industry's expertise maybe we should look to other industries for guidance (perhaps a Google, IBM, Facebook or Microsoft might be interested in the open repository).

With the continued progress of this NCF, the problem statement for the Best Practice Workstream moves beyond the previous problem in previous years. With the feasibility research project concluding, the industry has expressed interest in a best practice open repository and framework to create, develop and sustain the resource was a result of the project. Therefore the problem statement for the Best Practice Workstream is as follows:

Current Driving Force:
With the research project completed and framework in place to create, develop and manage the Open Repository, we need to show the potential of it ultimately better engage industry organizations for "buy-in", including funding.

² Hosted by Construct-X at the website:
http://boomlift.acrodelon.com/index.php/AEC_Best_Practice_Open_Source_Repository

Path Forward

1. Present on National Academy of Construction Strategic Meeting
 - a. Write Proposal for Creation, Development and Management of the open repository
2. Convene Leadership/Development Team
3. Procure Funding
 - a. \$150-200K
4. Continue Safety Pilot
5. Continue to Engage Industry Organizations

Breakout Members

1. Stu Anderson
 2. Roberta Bosfield*
 3. Wayne Crew
 4. Edd Gibson*
 5. JD Slaughter
 6. Cameron Oskvig
 7. Bob Prieto
 8. Lucio Soibelman
 9. Jan Tuchman
- * Session Leaders

3. FUTURE WORKSTREAMS AND FUTURE PARTICIPANTS

Jim Porter led a discussion regarding potential future workstreams. The following question was presented to participants: “Where would a focused initiative deliver sustainable improvement to the efficiency and effectiveness of the capital project process?” This generated considerable discussion and proposed ideas for future workstreams. The following provides a list of those ideas:

- Ways should be sought to include construction in the larger Industry/Government conversations. Today the conversations with policy makers that seem to get attention are mostly about advanced manufacturing, IT, and healthcare. Construction is typically not a part of the prominent discussion.
- Dispute avoidance and resolution
- Construction contracts
- Knowledge management/transfer
- How to address the grand challenges of our time such as large scale infrastructure needs, water, climate, energy...
- Systems development/deployment/interoperability
- Metrics
- Life cycle costs measures and management
- Technology transfer
- Professional workforce development
- Construction productivity
- Construction and operations interfaces
- Construction innovation

Additional work will need to be done to prioritize this list of ideas and develop potential scopes for future review.

Potential organizations and participants for the future was discussed at the forum as well. The following question was posed to participants: “Who (individuals and organizations) would be most helpful in advancing efforts improving the efficiency and effectiveness of the capital project process?” The following list of organizations was developed as potential future forum participants.

- American Institute of Architects (AIA)
- Additional Owners
- Various Federal Government Departments and Agencies:
 - General Services Administration (GSA)
 - Department of Energy (DOE)
 - Department of Defense (DOD)
 - Veterans Administration (VA)
 - U.S. Department of Transportation (USDOT)
- National Institute of Standards and Technology (NIST)
- National Institute of Building Sciences (NIBS)
- National Association of Home Builders (NAHB)
- American Subcontractors Association (ASA)
- Unions
- Mechanical Contractors Association of America (MCAA)
- American Fuel and Petroleum Manufacturers (AFPM)

- American College of Construction Lawyers (ACCL)
- American Council of Engineering Companies (ACEC)
- Construction Research Council (CRC) – American Society of Civil Engineers (ASCE)
- Economic Development Administration (EDA)
- Chamber of Commerce (COC)

4. WORKSTREAMS PATH FORWARD SUMMARY

Concluding the meeting, the group reviewed the progress made during the fourth NCF and from the inception. From the presentation updates and breakout sessions, it is clear that progress is being made in the three areas. Also as NAC members shift to other areas, the potential for further progress and contribution from other members is needed to accomplish goals that the NCF initially set.

The advancement of workforce development and industry image, along with industry best practices usage was discussed in the path forward during breakout session. As the Fourth NCF concludes the immediate action items that will drive the path forward (previously discussed) for the three workstreams include:

1. **Workforce Development** - Continue industry workforce development advocacy and exploration of conducting an owner survey. Continue work to widely publish the workforce development white papers through the NAC web site and other venues.
 - a. Work hard through NAC to leverage and push current efforts ongoing at the regional level, including Go Build, Louisiana Workforce Development, and Texas Gulf Coast activities to accelerate the pace of workforce improvement.
 - b. Develop a “primer” outlining how to impact workforce development at the regional level, to include learning from Go Build, Louisiana and Texas Gulf Coast efforts.
2. **Industry Image** - Inventory and research programs such as “Go Build” to catalogue the best programs.
 - a. Continue to work with NAC to support the “Go Build” initiatives.
 - b. Develop inventory of existing programs that advance the industry and workforce.
 - c. Develop strategy to convey information about existing programs identified in inventory.
3. **Best Practices** - Presenting at the NAC Leadership meeting mid May in Texas. Convening the Development/Leadership Board to help further engage the industry and raise funds for the online open repository. Finally, continue progress on the safety pilot/demo wiki website.

Conclusion

In closing, attendees thanked Jimmy Slaughter and J.D. Slaughter for their generosity in sponsoring the meeting. Jim Porter reiterated the important progress made by the group since its inception and thanked all the participants at the Fourth NCF for their outstanding contributions and commitment. Jim Porter also engaged the group regarding comments on the forum. There were a number of positive comments regarding participation by those in attendance including, diversity of industry representation, and the collegial feel of the group. The group give a few concluding comments (“+/ Δ ”):

- + The size of the meeting regarding the number of attendees was good.
- + The food was good
- Δ More time was needed in the Work Stream Breakout Sessions
- Δ Use of wireless microphone would be helpful

APPENDIX A – NATIONAL ACADEMY OF CONSTRUCTION

National Academy of Construction Mission

The mission of the National Academy of Construction is to recognize and honor distinguished achievement in the American construction industry and to make that reservoir of experience available for service to the nation.

National Academy of Construction Purpose

1. Provide recognition to past and present industry leaders for their personal contribution to the engineering and construction industry.
2. Establish a body of engineering and construction industry leaders who are available for advice and service.
3. Establish and administer an awards program to provide recognition to individuals who have made notable contributions to the industry.
4. Provide for a linkage between active INDUSTRY participants and person who have left active employment.
5. Provide for a linkage between active industry participants and persons who have left active employment.

For more information, see <http://www.naocon.org/>

APPENDIX B – GENESIS AND HISTORY OF NCF

The creation of the forum was first discussed within NAC in 2007. A core steering team was formed and met periodically over a two-year period to plan the effort. The consensus on the forum's vision and mission was that it should identify the most important issues facing the national engineering, design, and construction (EDC) industry (owners, contractors, financiers) and leverage the synergy that exists within the industry to tackle these issues. The intent is to do this without asking any single group to change what it does. Rather, the NAC would like to act as a neutral broker to help the industry as a whole leverage what each group does. In this way, the NCF can emerge as an industry voice. The purpose is to be the national voice (which is currently missing), to integrate efforts, to reduce redundancy, and to drive improved efficiency and effectiveness. During the course of the steering committee meetings, the design for the inaugural NCF workshop was developed, including the meeting process, forum vision and mission, and meeting agenda.

The 105 members of the NAC met at its annual conference in late October of 2009 and discussed the forum; the membership was enthusiastic about its chance to change the industry. They were honored to be able to facilitate NCF meetings since the forum is comprised of so many remarkable individuals from all parts of the industry. There is no NAC staff to do this work, only volunteers stepping up to make it a reality. The number of people attending made the inaugural meeting interesting and exciting. Members of National Academy of Construction and others (the "Steering Team") instrumental in developing and organizing the inaugural forum are given in Appendix C.

The first National Construction Forum was held on November 1 and 2, 2009. Twenty-seven participants represented 15 national EDC organizations, also included owners, designers, contractors and academics in total representing 25 employers. The results were published in NAC Publication 2010-1. Highlights of the meeting included alignment and consensus that the NCF is a good idea and NAC is an excellent organization to serve as a neutral broker in this effort. The meeting produced a list of issues that need to be addressed collectively as an industry and a path forward, including an "evergreening" process. Subsequently, a Leadership Team was formed and met in September 2010 in Houston, TX. Four consensus work streams were pared to three and actions assigned to move the process forward.

The Second NCF was planned and conducted in November 2011 again in Washington DC. Detailed workstream plans were developed for the three workstreams and action plans developed. The results of this NCF are detailed in NAC Publication 2012-1. In the intervening time, these action teams have continued to work issues leading up to the Third NCF, which was held on December 10 and 11, 2013, in Washington, DC. The results of this NCF are detailed in NAC Publication 2014-1. The Fourth NCF was held to focus on taking a close look at impacts of activities to date and driving positive outcomes in the near future.

APPENDIX C – MEETING AGENDA

Wednesday, May 6 2015

- **5:30 PM** Mixer
- **6:00** Dinner
- **6:40** Welcome/Safety Moment/Agenda – Jim Porter
- **6:45** Meeting Purpose/Products
- **6:50** Forum History-Objectives/Goals
- **7:00** Workstreams Status
 - Best Practices - Roberta Bosfield / Edd Gibson
 - Image - Neil Eldin
 - Workforce:
 - + Go Build Alabama- Bob Wood
 - + Louisiana- J D Slaughter
 - + Greater Houston-Randy Walker
- **8:00** Potential Future Workstreams
- **8:15** Closing Discussion
- **8:30** Adjourn

Thursday, May 7 2015

- **7:00 AM** Breakfast
- **7:45** Welcome/Safety Moment – Jim Porter
- **7:50** Agenda/Purpose/Products
- **8:00** WorkStreams Next Steps
 - Workforce Development
 - Image
 - Best Practices: Safety Pilot
- **10:00** Break-Outs:Workstreams Next level
 - Workforce Development
 - Image
 - Best Practices: Safety Pilot
- **12:00 PM** Lunch
- **12:30** Potential Future WorkStreams
- **1:00** Report Outs
- **1:45** WorkStreams Pathforward
- **2:45** Potential Future Participants
- **3:00** Adjourn

APPENDIX D – NCF ATTENDEES
May 6-7th, 2015

Associations and Other Entities

ABC (Associated Builders & Constructors)

Michael D. Bellaman
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