

SLIDE-IN BRIDGE CONSTRUCTION WORKSHOP

Participant Handbook

July 2015



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Photo courtesy of Horrocks Engineers

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ACKNOWLEDGMENTS

This Slide-in Bridge Construction Workshop: Participant Handbook is part of a training package prepared for Federal Highway Administration (FHWA) under contract DTFH61-13-D-00009, Task Order 2, with Iowa State University (ISU). The ISU team sincerely appreciates the support of FHWA in providing this low- or no-cost training to appropriate audiences across the United States. In particular, the team is grateful for the guidance and support provided by FHWA Task Managers Romeo Garcia and Chris Schneider.

During the process of developing these training materials, the ISU team was advised by a technical working group (TWG) consisting of national experts in slide-in bridge construction. The members of the TWG are

Hugh Boyle, H. Boyle Engineering
Michael Culmo, CME Associates, Inc.
Larry Gescher, Slayden Construction Group
Finn Hubbard, Fish & Associates, Inc.
Mike LaViolette, HDR Engineering, Inc.
James Nelson, Iowa DOT
Scott Nettleton, T.Y. Lin International
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Alan Preston, W.W. Clyde & Co.
Bala Sivakumar, NHTB Corporation
Charlie Stein, Michigan DOT

The TWG reviewed drafts of the course presentation materials at several key points during their development. Feedback from the TWG was invaluable, as were the many photographs and video clips TWG members provided to enhance the presentation slides. The ISU team appreciates every comment and suggestion from the TWG and trusts that the final training package represents the best of their input.

TABLE OF CONTENTS

INTRODUCTION.....	1
WORKSHOP OBJECTIVES	1
WORKSHOP CONTENT	1
WORKSHOP AGENDA	3
COURSE FORMAT	3
POST-WORKSHOP ACTIVITIES	3
FOR MORE INFORMATION.....	4
EVALUATION FORM	5
 PRESENTATION HANDOUTS	

INTRODUCTION

Slide-in bridge construction (SIBC) is one of several accelerated bridge construction (ABC) technologies being advanced by the Federal Highway Administration (FHWA). Compared to more traditional methods of bridge construction, and due to its shorter work zone durations and reduced impacts on traffic, SIBC (like other ABC technologies) can

- Increase safety for workers and travelers.
- Enhance mobility.
- Reduce impacts of construction on the environment.

Because of these potential benefits, the FHWA (through the Every Day Counts 2 initiative, or EDC-2) has sponsored the production of resources for agencies, designers, and construction contractors desiring to learn more about SIBC technologies.

Under contract to the FHWA (DTFH61-13-D-00009, Task Order 2), a team led by Iowa State University's Institute for Transportation has developed materials for six (6) instructor-led short courses (or workshops) on SIBC, plus this Participant Handbook, an Instructor Guide, and an optional Notes Booklet. The goal of the courses is to provide various key audiences with the essential information and incentive to begin selecting and implementing SIBC technologies for appropriate projects.

Workshop participants are encouraged to investigate another useful resource for owner-agencies, designers, and construction contractors interested in SIBC: A web page with links to dozens of complementary materials and resources, organized by category, along with information about other training opportunities: www.fhwa.dot.gov/construction/sIBC/ (search “FHWA slide”).

WORKSHOP OBJECTIVES

To varying degrees, each of the six (6) SIBC courses/workshops will help participants understand

- The potential benefits of SIBC.
- Various issues to be considered when determining the feasibility of SIBC for a specific bridge project.
- The potential challenges and issues related to planning, designing, and constructing an SIBC project.

WORKSHOP CONTENT

Six SIBC courses (workshops) are available. Table 1 gives the general description and proposed audience for each workshop, as well as its approximate duration.

Table 1. Description of SIBC Courses/Workshops

Course No.	Description and Audience(s)	Duration
1	Overview for Designers	45–60 min total (with 1 case study)
2	Overview for Contractors	45–60 min total (with 1 case study)
3	Overview for Owner Agencies	45–60 min total (with 1 case study)
4	Overview (All Audiences)	60 min (30-min overview plus 3 case studies)
5	Case Studies (All Audiences)	3 case studies from courses 1, 2, 3, plus 3 more
6	Half Day Training (All Audiences)	4 hr (includes 6 case studies from course 5)

With the exception of course 5, all workshops cover the following general topics to varying degrees, depending on the intended audience:

- Definition of SIBC
- Benefits
- Challenges
- Costs
- Decision Making (When and where to use ABC, and which type of ABC to use)
- Delivery Methods / Contracting
- Planning
- Design and Detailing
- Hardware and Equipment
- Submittals
- Media / Public Relations
- Case Studies

Courses 1, 2, and 3 are short (up to one hour) overviews of SIBC intended for designers, construction contractors, and owner agency decision makers, respectively. After a summary of SIBC focused on the interests of the specific audience, each of these short courses includes an approximately 10-minute description of a case study, each of which was carefully selected to match the interests of the specific audience.

Course 4 is a short (one hour) overview intended for a mixed audience of designers, construction contractors, and owner agency decision makers. After a 30-minute general overview, course 4 describes each of the case studies from courses 1, 2, and 3.

Course 5 consists solely of case studies. In addition to those presented in courses 1, 2, and 3, it includes three more case studies that represent additional challenges and considerations for SIBC selection, design, and construction.

Course 6 is a half-day (four-hour) workshop for all audiences. It includes an in-depth discussion of SIBC, plus a thorough description of all six case studies presented in course 5.

WORKSHOP AGENDA

Courses 1 through 5 are approximately one hour in length, and the agenda for each is outlined in the presentation slides. Following is a general agenda for course 6, the half-day overview for all audiences:

Topic	Estimated Time (Minutes)
SIBC overview	90
Break	10
Case study: Massena	20
Case study: Dingle Ridge.....	30
Case study: Wanship.....	25
Break	10
Case study: Elk Creek	25
Case study: Mesquite	25
Case study: Jamaica Avenue.....	25

COURSE FORMAT

Although the amount of content dictates a fairly swift pace, the SIBC workshops are intended to be interactive. Participants are encouraged to ask questions and actively participate. Course 6 (the half-day workshop) includes “Knowledge Checks” at intervals to review material and provide opportunities for participants to ask questions and share information. Be sure to complete the Evaluation Form on page 5 and turn it in to your instructor at the end of the workshop.

POST-WORKSHOP ACTIVITIES

Take what you’ve learned back to other staff in your office or shop. Determine if other personnel would benefit from attending this workshop and encourage them to do so.

Note: See related resources at www.fhwa.dot.gov/construction/sibc/ (search “FHWA slide”). These resources will eventually include this Participant Handbook, an Instructor Guide, and related presentation slides for “do-it-yourself” SIBC training in your organization.

FOR MORE INFORMATION

For information about the SIBC workshop and materials, contact the following:

Romeo R. Garcia
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Federal Highway Administration
202-366-1342
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EVALUATION FORM

Date: _____

Location: _____

Instructor's name: _____

Course (check one):

- Overview for Designers
- Overview for Contractors
- Overview for Owner Agencies
- Overview (All Audiences)
- Case Studies
- Half Day Training

Your title: _____

Your organization (optional): _____

Your name (optional) _____

1. Rate each criterion below by circling the appropriate number:

Criteria	Excellent	Good	OK	Needs Improvement	Very Poor
Organization of material	5	4	3	2	1
Technical level of the material	5	4	3	2	1
Visual presentation of material	5	4	3	2	1
Usefulness of material for on the job	5	4	3	2	1
Instructor's knowledge of subject	5	4	3	2	1

2. Fill in the blanks:

I would have liked more information about _____

Other comments: _____

THANK YOU FOR HELPING US IMPROVE THIS WORKSHOP FOR FUTURE PARTICIPANTS.