A Guide to Fabric-Formed Concrete

<align justify>Editor's Note: With this Guide to Fabric-Formed Concrete it is hoped that existing and new techniques that may come along can be documented here for the benefit of others who wish to use this truly unique method of forming concrete for their projects. The Table of Contents shown below contain topics similar to ACI's SP-4 Formwork for Concrete as it is assumed there will be many similar considerations for Fabric-Formed Concrete as well. Topics that may not be applicable can be marked with a question mark, "?". Pages have been created for each <fc #0000FF>CHAPTER</fc> of this document and may accessed by clicking on the hyper-link, <fc #0000FF>blue text</fc>. Headlines have also been created for each chapter topic. Within these headline topics content may be added by selecting the "<fc #0000FF>edit</fc>" link on the right-hand margin. Or, by selecting the "edit tab" at the top of the page, the entire page may be worked on. Where appropriate hyper-links may be added to connect topics on different pages (Chapters). Just use the Internal Link button in the Editorial Toolbar when in edit mode. This is an evolving work where topics and pages can be added or deleted as required. You must be registered and logged in to add or edit content.

TABLE

<align left> INTRODUCTION

Last update: 2023/10/02 14:53

General Objectives in Fabric-formed

Building

How fabric formwork affects concrete

quality Causes of failures

Planning for Safety

Relationship of architect, engineer and

contractor

Measurement and payment for formwork How the architect-engineer can reduce

form costs

OVERALL PLANNING

Development of a basic system Key areas of cost reduction Planning for maximum reuse Economical form construction Setting and stripping

Other costs affected by formwork plan

Planning examples

MATERIALS, ACCESSORIES, PROPRIETARY **PRODUCTS**

Fabric

Lumber

Engineered wood products

Plywood

Other framing and facing materials Insulation and insulating forms

Hardware and fasteners Prefabricated forms Shoring and scaffolding LOADS AND PRESSURES

Vertical loads

Lateral pressure of fresh concrete

Lateral loads Other loads **FORM DESIGN**

Notation

Basic Simplifications Beam formulas Design criteria Bearing examples

Wall, slab and beam form design

Form accessories Column form design Shoring and scaffolding Bracing for lateral loads

Camber and adjustment for settlement

</align>

OF

<align left> DESIGN TABLES

loists, studs, beams Double members Wood shores

Form design Using the Tables

Design tables

FORMWORK DRAWINGS

General layout and detail drawings

Check list of details 3.

Recheck of structural drawings

4.

Drawing approval

BUILDING AND ERECTING THE

FORMWORK

Carpentry Shop and Job Mill

Footings

Slab on grade and paving work

Wall forms Column forms Beam or girder forms

Slab forms

Shoring and Scaffolding

BRIDGE FORMWORK

Foundations

2. **Piers** 3

Pier caps and tie struts

Superstructures

5.

Arch bridges

Segmental box girder bridge

construction

Making precast bridge segments

USING THE FORMS

Placing reinforcement and inserts Preparation for concreting Inspection and form watching

Placing and vibrating-effect on formwork

Removal of forms and shores

Reshoring

Care and storage of forms and

accessories

Cold weather protection

FORMWORK FOR ARCHITECTURAL **CONCRETE**

Specifications: Defining quality Architectural formwork design Exposed concrete surfaces Construction of architectural forms

Stripping

Cleanup and repair

</align>

CONTENTS

<align left> SHELLS, DOMES, FOLDED

PLATES

Shell form design considerations

Building the forms Placing concrete Form removal

Inflated forming methods

MASS CONCRETE

Low lift formwork

Handling, erecting, stripping Non-cantilevered formwork Roller-compacted mass concrete Foundations or starting lifts Curing, joint cleanup, insulation Planning and supervision

Tolerances

TUNNEL FORMING AND SHAFTS

Tunnel forming components Concrete placement methods General design considerations

Form construction Stripping time Tolerances Shafts

SPECIAL TECHNIQUES IN CONCRETE

CONSTRUCTION Slipform construction Horizontal slipforms Traveling forms

Tilt-up construction

Lift method of construction Preplaced aggregate concrete

Shotcrete Tremie concrete

PRECAST CONCRETE

Advantages of precasting

Formwork

Stripping

Erection and joints

PRESTRESSED PRECAST CONCRETE

Forms for post-tensioning

Forms for pre-tensioning

APPENDIX

Acknowledgments

Glossary

Guide to Formwork for Concrete, ACI

347-04 ACI 318-02 Code and Commentary-

Chapter 6, Formwork,

Embedded Pipes, and Construction Joints OSHA Regulations, Subpart Q-Concrete

and Masonry Construction

Index

Metric Conversion Factors

</align>

From:

http://www.fabric-formedconcrete.com/ - fabric-formedconcrete

Permanent link:

http://www.fabric-formedconcrete.com/doku.php?id=fabformwiki:formwork_guide

Last update: 2023/10/02 14:53

