A Guide to Fabric-Formed Concrete

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 **CHAPTER** of this document and may accessed by clicking on the hyper-link, **blue text**. Headlines have also been created for each chapter topic. Within these headline topics content may be added by selecting the "**edit**" 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

INTRODUCTION 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

OF

DESIGN TABLES Joists, studs, beams Double members Wood shores Form design Using the Tables Design tables

FORMWORK DRAWINGS

General layout and detail drawings 2. 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
Foundations
Piers
Pier caps and tie struts
Superstructures
Arch bridges
Output

Segmental box girder bridge construction 7.

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

CONTENTS

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

1. Forms for post-tensioning 2. 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**

Permanent link: http://www.fabwiki.fabric-formedconcrete.com/doku.php?id=fabwiki:formwork_guide

Last update: 2023/10/17 12:10



