# INDEX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessory equipment</td>
<td>3-22</td>
</tr>
<tr>
<td>Adaptation of floating cranes</td>
<td>3-21</td>
</tr>
<tr>
<td>Anchoring of pile driver rafts</td>
<td>3-22</td>
</tr>
<tr>
<td>Anchor piles</td>
<td>1-3</td>
</tr>
<tr>
<td>Availability</td>
<td></td>
</tr>
<tr>
<td>Cast-in-place piles</td>
<td>2-12</td>
</tr>
<tr>
<td>Precast concrete piles</td>
<td>2-7</td>
</tr>
<tr>
<td>Sheet piles</td>
<td>2-13</td>
</tr>
<tr>
<td>Steel sheet piling</td>
<td>2-14</td>
</tr>
<tr>
<td>Timber piles</td>
<td>2-3</td>
</tr>
<tr>
<td>Batter piles:</td>
<td></td>
</tr>
<tr>
<td>Defined</td>
<td>1-1</td>
</tr>
<tr>
<td>Determining distribution of loads</td>
<td>7-6</td>
</tr>
<tr>
<td>Loads imposed</td>
<td>7-6</td>
</tr>
<tr>
<td>Bearing piles, foundation design:</td>
<td></td>
</tr>
<tr>
<td>Rigid piles in clay</td>
<td>5-13</td>
</tr>
<tr>
<td>Rigid piles in sand</td>
<td>5-13</td>
</tr>
<tr>
<td>Bridge pile foundations, rehabilitation</td>
<td>8-8</td>
</tr>
<tr>
<td>Brush method, preservative treatment of timber</td>
<td>8-4</td>
</tr>
<tr>
<td>Building pile maintenance and rehabilitation</td>
<td>8-1</td>
</tr>
<tr>
<td>Caps, driving</td>
<td>3-11</td>
</tr>
<tr>
<td>Classification of timber piles (table 2-1)</td>
<td>2-2</td>
</tr>
<tr>
<td>Cold weather pile driving</td>
<td>4-25</td>
</tr>
<tr>
<td>Compaction piles</td>
<td>1-1</td>
</tr>
<tr>
<td>Concrete piles, cast-in-place:</td>
<td></td>
</tr>
<tr>
<td>Drilled piers (uncased)</td>
<td>2-13</td>
</tr>
<tr>
<td>Durability</td>
<td>2-13</td>
</tr>
<tr>
<td>Shell-type (cased)</td>
<td>2-12</td>
</tr>
<tr>
<td>Strength</td>
<td>2-13</td>
</tr>
<tr>
<td>Concrete piles, cause of damage</td>
<td>8-8</td>
</tr>
<tr>
<td>Concrete piles, maintenance</td>
<td>8-8</td>
</tr>
</tbody>
</table>

Index-1
Concrete piles, precast:
   Availability  2-10
   Curing       2-10
   Durability   2-10
   Forms        2-9
   Handling     2-12
   Manufacture  2-8
   Placement    2-10
   Shipment     2-12
   Storage      2-12
   Strength     2-10
   Types        2-7

Construction, pile:
   Deliberate  1-5, 2-1
   Hasty       1-5, 2-1

Corrosion of steel piles  8-6

Cutting and capping of piles:
   Anchoring piles  4-32
   Concrete piles   4-30
   Steel piles      4-30
   Timber piles     4-30

Decay, timber piles  8-1

Definitions  1-1

Deterioration of piles:
   Concrete  8-8
   Steel    8-6
   Timber   8-1

Determination of resistance in bearing stratum  5-11

Diesel hammers, pile-driving  3-7

Distribution of loads to piles in a group, foundation design  6-1

Dolphins, defined  1-3

Drilled piles  4-33

Driving (see also pile-driving operations):
   Cold weather  4-25
   Driving problems  6-5
   Permafrost  4-26
   Pile driving in groups  6-1
   Sheet piles  4-32
   Underwater  4-25

Driving requirements  4-8

Index-2
Driving with mobile equipment:
- Bridge or wharf
- Standard trestle, 50-ton
- Temporary earth causeways
- Drop hammers, pile-driving
- Encasement (concrete) of timber piles
- End-bearing piles, defined
- Equipment for pile driving (see pile-driving equipment)
- Expedient pile drivers
- Fender piles
- Floating pile drivers
- Floating rigs
- Followers, pile
- Friction piles, defined
- Friction piles, in clay (design example)
- H-piles
- Hammers, pile-driving
- Jacking
- Jetting, equipment
- Lagging, timber piles
- Lagging, steel piles
- Leads, pile-driving
- Lengths of piles, determining for foundations
- Limitations of pile test loads
- Load-carrying capacity of bearing piles (see bearing piles, foundation design)
- Loading procedures:
  - Constant rate of penetration method
  - Continuous load method
- Maintenance of timber piles
- Marine borers, timber piles
- Materials, piling:
  - Army Facilities Component Systems (AFCS)
  - Consideration in selecting type
  - Costs
  - Material selection

Index-3
Misellaneous sheet piles
Obstructions
Permafrost, pile installation in
Piers (definition)
Pile drivers on barges, pneumatic floats, or rafts

Pile-driving equipment
Air hammers
Assembly
Caps
Devices, hammer and vibrating driver
Diesel hammers
Drop hammers
Expedient drivers
Floating drivers
Followers
Guides
Hammers
Installation
Jetting
Leads
Lead braces
Power for expedient pile drivers
Rigs
Selecting equipment
Skid frame
Spotters
Steel-frame, skid-mounted drivers
Vibrating drivers/extractors
Wood-frame, skid-mounted drivers

Pile-driving operations:
Alignment
Batter piles in groups
Cold weather
Driving requirements
General procedures
Jacking
Jetting
Manpower
Mobile equipment, bridge or wharf
Mobile equipment, temporary earth causeways
Obstructions
Overwater
Permafrost
Placing piles by explosives

Index-4
Pile-driving operations:
- Placing piles by jetting
- Production rate
- Pulling piles
- Safety
- Shell-type
- Sheet piles, general
- Spuds
- Tidal lift
- Underwater
- Water

Pile followers

Pile foundations:
- Capacity in permafrost
- Clay
- Cohesionless soils
- Driving in groups
- Friction piles in clay
- Group action
- Negative friction or down drag
- Pile spacing
- Piles founded on rock
- Point bearing piles in sands

Pile load test

Piles:
- Function
- Selection
- Sizes
- Types

Piling materials (see materials, piling)

Pipe piles

Positioning piles for driving

Precast concrete piles (see concrete piles, precast)

Predrilling operations

Preparation of piles or driving

Preservative treatment, timber

Properties of selected impact pile hammers (table 3-2)

Pulling piles

Rail pile

Index-5
Rehabilitation:
   Basic considerations
   Evaluation of existing pile foundations
   Replacement and repair

Selection of diesel hammers for various sizes of piling
   (table 3-1)

Sheathing, timber piles

Sheet piles:
   Availability
   Definition
   Description
   Driving
   Expedient
   Followers
   Uses

Skid-mounted pile driver

Slenderness ratio

Splicing:
   Steel piles
   Timber piles

Spuds

Standard H-piles

Standard sheet piles

Steel-frame, skid-mounted pile drivers

Steel piles:
   Abrasion
   Bitumastic surfacing
   Caps
   Cleaning
   Durability
   Encasement (concrete)
   Follower
   H-piles
   Handling
   Lagging
   Other physical properties
   Periodic inspections
   Preventive measures
   Reinforcing
   Sections, other
   Shipment
   Strength

Index-6
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength or consistency of undisturbed clays (table 5-1)</td>
<td>5-16</td>
</tr>
<tr>
<td>Structural design of piles:</td>
<td></td>
</tr>
<tr>
<td>Allowable pile stresses</td>
<td>5-2</td>
</tr>
<tr>
<td>Buckling failure</td>
<td>5-2</td>
</tr>
<tr>
<td>Driving stresses</td>
<td>5-2</td>
</tr>
<tr>
<td>Lateral loads</td>
<td>5-2</td>
</tr>
<tr>
<td>Timber piles:</td>
<td></td>
</tr>
<tr>
<td>Alignment</td>
<td>4-12</td>
</tr>
<tr>
<td>Availability</td>
<td>2-3</td>
</tr>
<tr>
<td>Concrete encasements</td>
<td>8-5</td>
</tr>
<tr>
<td>Damage and deterioration causes</td>
<td>8-1</td>
</tr>
<tr>
<td>Decay</td>
<td>8-1</td>
</tr>
<tr>
<td>Description</td>
<td>2-1</td>
</tr>
<tr>
<td>Deterioration, causes</td>
<td>2-3</td>
</tr>
<tr>
<td>Durability</td>
<td></td>
</tr>
<tr>
<td>Fire susceptibility</td>
<td>2-5</td>
</tr>
<tr>
<td>Flexibility</td>
<td>2-5</td>
</tr>
<tr>
<td>Follower</td>
<td>3-14</td>
</tr>
<tr>
<td>Handling</td>
<td>2-5</td>
</tr>
<tr>
<td>Lagging</td>
<td>4-2</td>
</tr>
<tr>
<td>Maintenance</td>
<td>2-3</td>
</tr>
<tr>
<td>Marine borers</td>
<td>2-2</td>
</tr>
<tr>
<td>Periodic inspection</td>
<td>8-5</td>
</tr>
<tr>
<td>Preparation</td>
<td>4-1</td>
</tr>
<tr>
<td>Preservative treatment</td>
<td>8-3</td>
</tr>
<tr>
<td>Preventive measures</td>
<td>8-2</td>
</tr>
<tr>
<td>Sheathing</td>
<td>8-5</td>
</tr>
<tr>
<td>Tabular form for determining load acting on each pile</td>
<td>7-6</td>
</tr>
<tr>
<td>(table 7-1)</td>
<td></td>
</tr>
<tr>
<td>Termites</td>
<td>8-1</td>
</tr>
<tr>
<td>Shipment</td>
<td>2-5</td>
</tr>
<tr>
<td>Sources</td>
<td>2-3</td>
</tr>
<tr>
<td>Splicing</td>
<td>4-2</td>
</tr>
<tr>
<td>Strength</td>
<td>2-3</td>
</tr>
<tr>
<td>Treatment of field problems encountered during pile driving</td>
<td>4-13</td>
</tr>
<tr>
<td>(table 4-1)</td>
<td></td>
</tr>
<tr>
<td>Tripod pile driver</td>
<td>3-15</td>
</tr>
<tr>
<td>Vertical loads, distribution on vertical piles</td>
<td>7-1</td>
</tr>
<tr>
<td>Vibratory driver, pile-driving</td>
<td>3-11</td>
</tr>
<tr>
<td>Welded-angle pile driver</td>
<td>3-18</td>
</tr>
<tr>
<td>Wood-frame, skid-mounted pile drivers</td>
<td>3-15</td>
</tr>
<tr>
<td>Working stresses for timber (table 2-3)</td>
<td>2-4</td>
</tr>
<tr>
<td>Wrapping timber piles</td>
<td>4-1</td>
</tr>
</tbody>
</table>

Index-7