

Index

A

- Adhesion**, 375-378
- Auger cast piles**, 381-387
- Axial capacity**
 - Effective stress method, 28, 41, 59
 - Friction-end bearing, 188
 - Comparison of techniques, 204

B

- Bentonite slurries**, 250
- Building codes**, 85-88, 507
- Allowable stress**, 88, 273, 301
 - Concrete**
 - Cast-in-place, 92, 510
 - Precast, 91, 510
 - Prestressed, 510
 - Steel**, 94, 509
 - Timber**, 98, 266, 268, 277, 511

C

- Cam-clay model**, 45
- Computer prediction-pile behavior**, 343-356
- Constant rate of penetration (CRP) tests**, 243, 386
- Creep strength**, 66-69
- Critical depth**, 336, 359
- Critical state**, 49

D

- Driving criteria**, 39, 40, 203, 573-576
- Driving stresses**, 70, 283, 567-576
 - Concrete, 67, 321, 325
 - Steel, 66, 283, 421
 - Timber, 70
- Dutch cone penetration**, 15, 204

E

- Effective stress method-axial capacity**, 41-61
- Elastic theory-pile behavior**
 - Vertical load, 485-495
 - Lateral load, 521-524

F

- Factor of safety**, 514, 558-561
 - Caissons**, 554
 - Pile-soil**, 65, 89
 - Structural**, 65, 89
 - Timber**, 113, 134, 269, 277, 280
- Field instrumentation**
 - Cyclic load, 419, 435-463, 466
 - Static horizontal load, 18, 466
 - Static vertical load, 156-159, 364, 435-450
- Franki piles**, 210

G

Green clear wood crushing strength, 120

Group behavior, 74, 475

Grout rehabilitation, 222

N

Negative skin friction (down drag), 58, 73, 159, 172, 241

I

Inclinometer, 19, 449, 468, 583

Installation damage, 284, 325-327

J

Jacked pile, 236, 465

K

Knot limitations, 114

L

Lateral load, 17, 470-475, 524

Lateral soil displacements, 237, 578-591

Load

 Distribution, 7, 372

 Duration (timber piles), 69, 98, 130, 147-149, 271

 Eccentricity, 256

 Reduction factors, 88

 Transfer, 7, 390, 400-408, 429

Longitudinal cracking, 328

Low cycle fatigue

 Concrete, 67, 321

 Prestressed concrete, 325-327

 Steel, 66

 Timber, 70, 116

M

Mill acceptance tests, 288

Minimum reinforcement, 327-329

Mohr-Coulomb, 49, 60

Moment-thrust interaction, 308

O

Overconsolidation ratio, 41

P**Pile**

 Cap damage, 581

 Cap influence, 478

 Damage, 217

 Detection, 501

 Installation, 284, 325-327

 Longitudinal cracking, 328

 Rehabilitation, 222

 Driveability, 39, 89, 516

 Failure modes, 70-76, 513

 Foundation settlement, 226

 Hammers, 183-187, 284-286, 342, 362, 393, 398, 418, 452, 599

 Heave (rebound), 212, 237

 Inclination measurements, 366, 426

 Load tests

 Cyclic

 Horizontal, 472

 Vertical, 416, 435, 469

 Static

 Horizontal, 16-23

 Steel, 470, 475

 Timber, 524-531

 Vertical, 5-16

 Auger cast grout, 222, 384, 452

 Bent, 599

 Caissons, 537-557

 Concrete

 Cast-in-place, 203-225, 243-245, 253-262

- Prestressed, 200-204, 364
 Reinforced, 570
 Jacked, 236-242
 Raymond (step-taper), 203, 451
 Steel
 H, 164-175, 304, 398, 451, 570
 Pipe, 164-175, 182-188, 200-204, 304, 341-343, 393, 398, 451, 464, 570
 Pullout, 165, 176, 342
 Timber, 200-204
 Settlement, 195, 389
p-y curves, 17
- R**
- Reconsolidation stresses, 53
 Reference strength, 119
 Relative
 Depth, 12, 23
 Pile length, 38
 Pile stiffness, 38
 Residual driving stress (loads), 39, 74, 232-235, 240, 243, 337, 372, 413
- S**
- Section strength, 65
 Concrete, 308-321
 Steel, 66
 Timber, 68
 Seismic
 Deformations, 330
 Effects, 473
 Load tests, 425
- Shear strength reduction factor, 12, 23
 Skin friction, 9, 41, 161-169, 410
 Slenderness ratio, 603
 Soil freeze, 71, 513
 Sonic tests, 218
 Standard penetration, 204
 Strength reduction, 69, 310, 516
 Knots, 125, 143, 150
 Spiral grain, 130
 Treatment, 132, 147-149
 Stress history, 41-57
 Stress distribution, 256, 583
 Subgrade modulus, 196, 520-536, 584
- T**
- Telltale, 9, 158, 182, 359, 367, 375, 453
 Tip capacity line, 189
 Tip load analysis, 74
 Treatment, 69
- U**
- Ultimate capacity, 28, 389, 391, 406, 569-576, 598
- V**
- Vibrating-wire strain gages, 252, 261
- W**
- Water hammer, 328
 Wave equation analysis, 20, 205-207, 273, 297, 339, 501, 569-573, 603