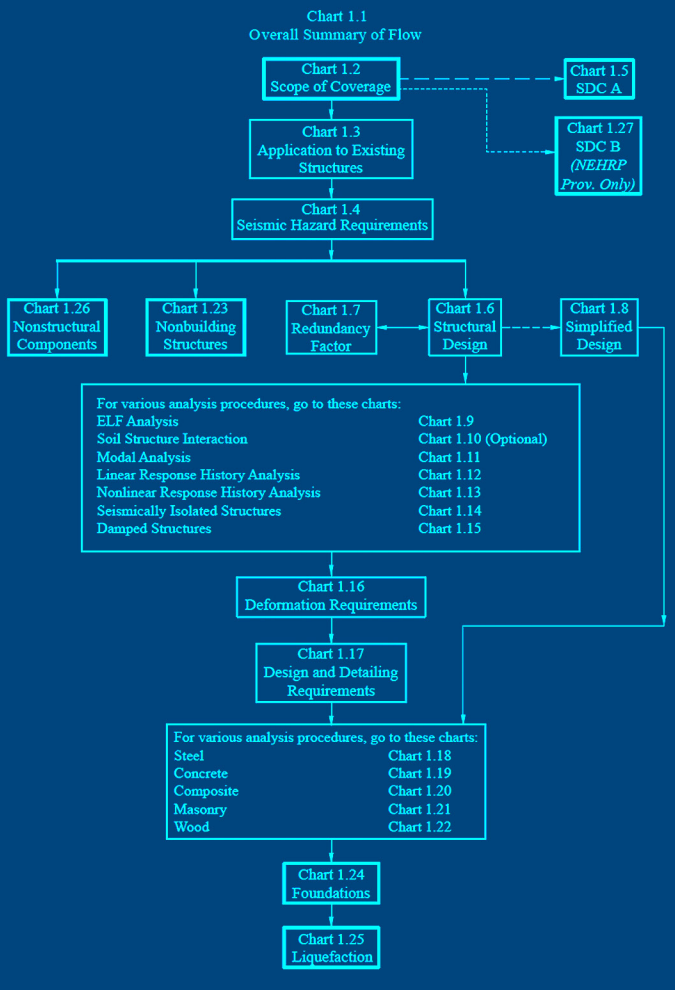


2015 NEHRP Recommended Seismic Provisions: Design Examples

Flow Charts

FEMA P-1051B / September 2016

FEMA

nehrp

Inset Cover Photograph: Willard Marriott Library located on the campus of the University of Utah.
Credit: Kelly Petersen. Used with permission.

Chart 1.1
Overall Summary of Flow

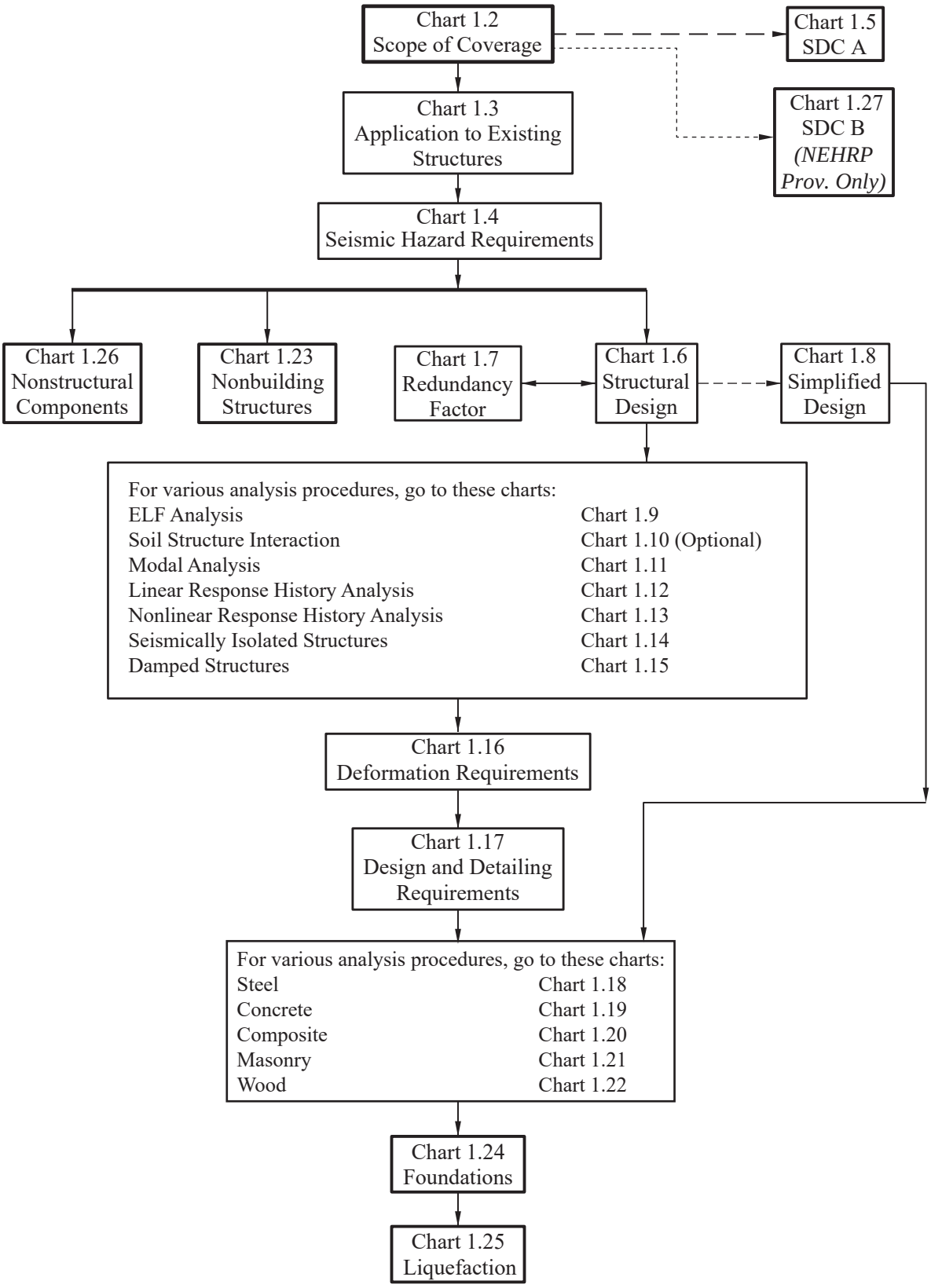


Chart 1.2
Scope of Coverage

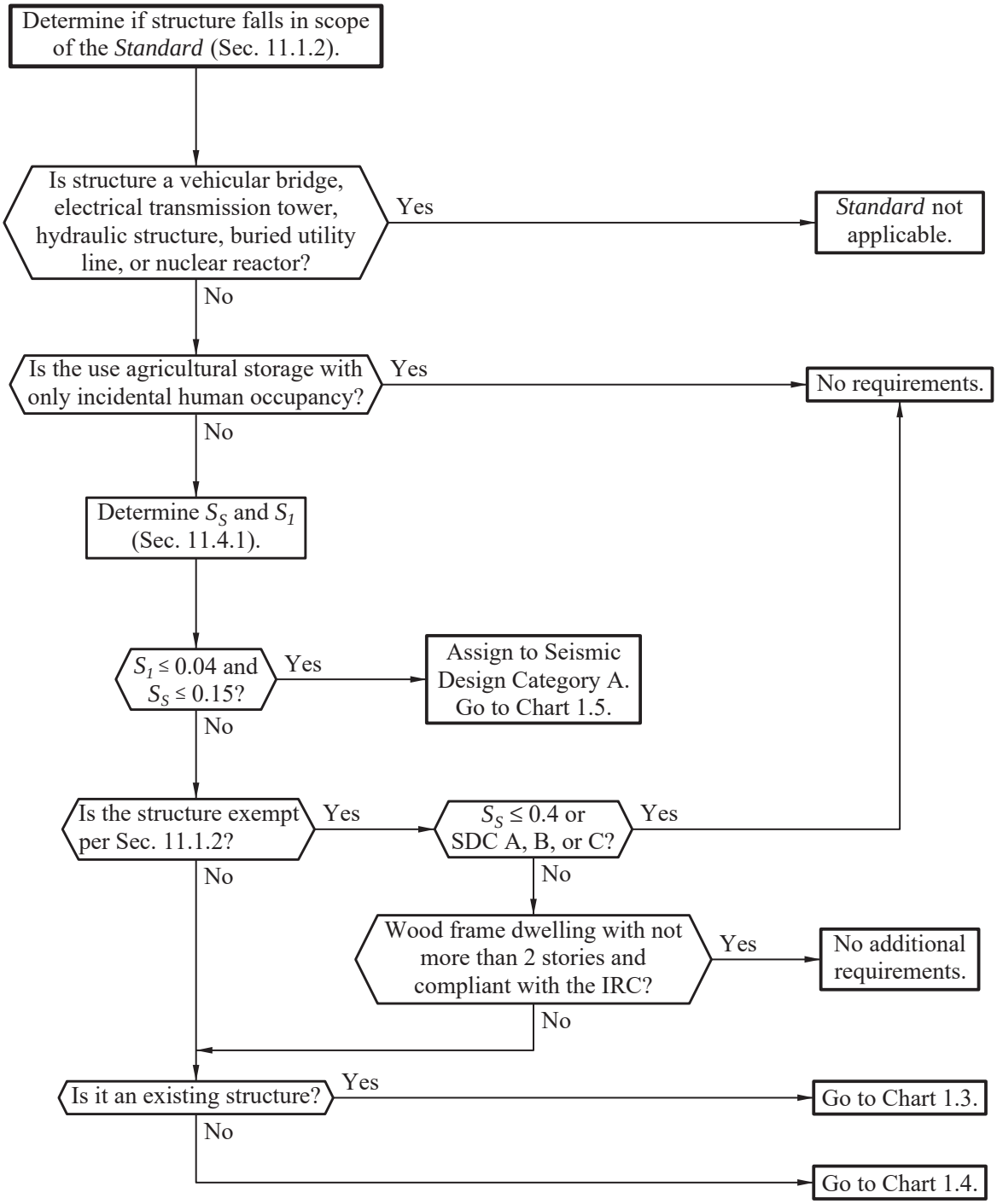
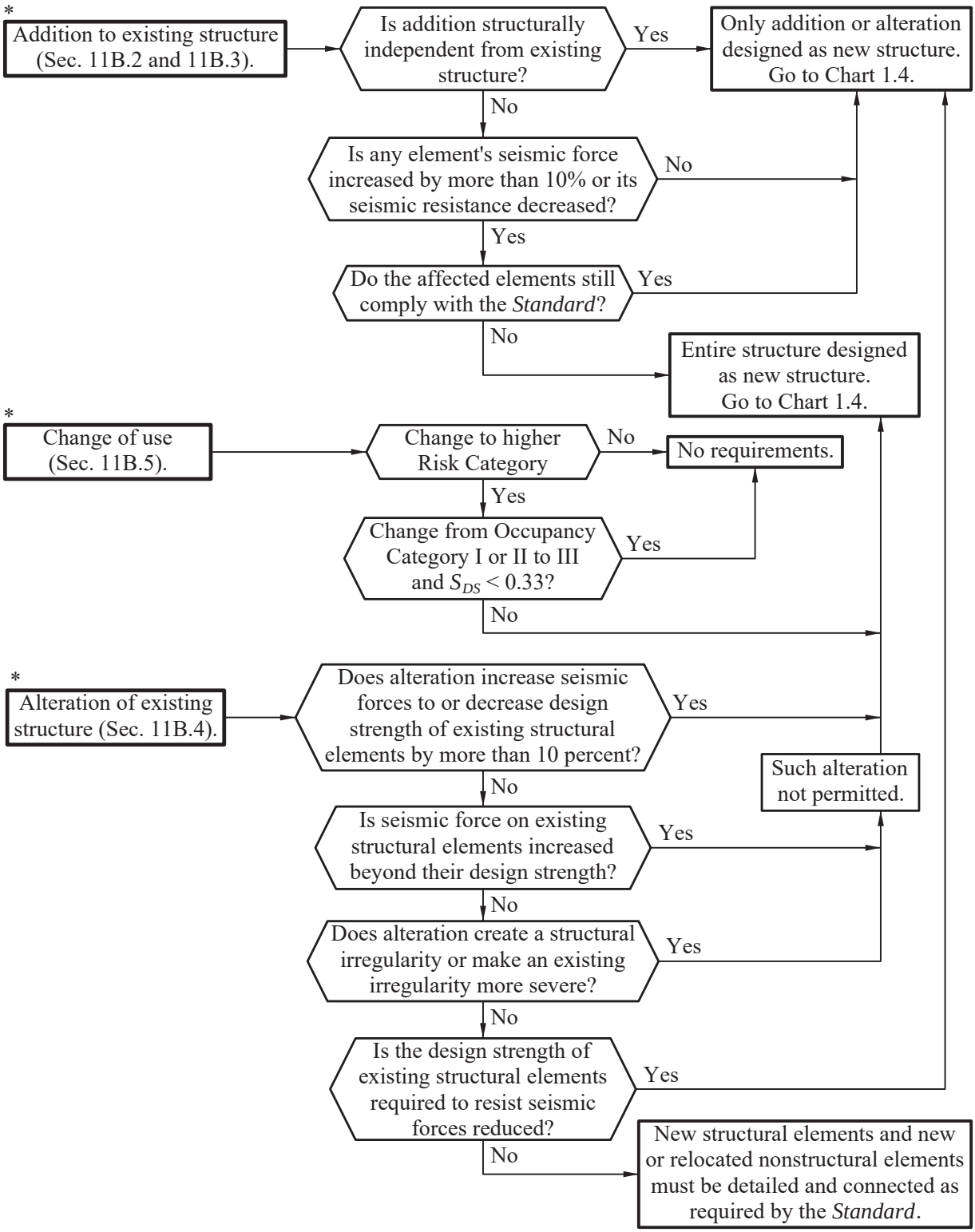


Chart 1.3
Application to Existing Structures



* The *Standard* applies to existing structures only in the cases of additions to, changes of use in, and alterations of such structures.

Chart 1.4
Seismic Hazard Requirements and Seismic Design Category

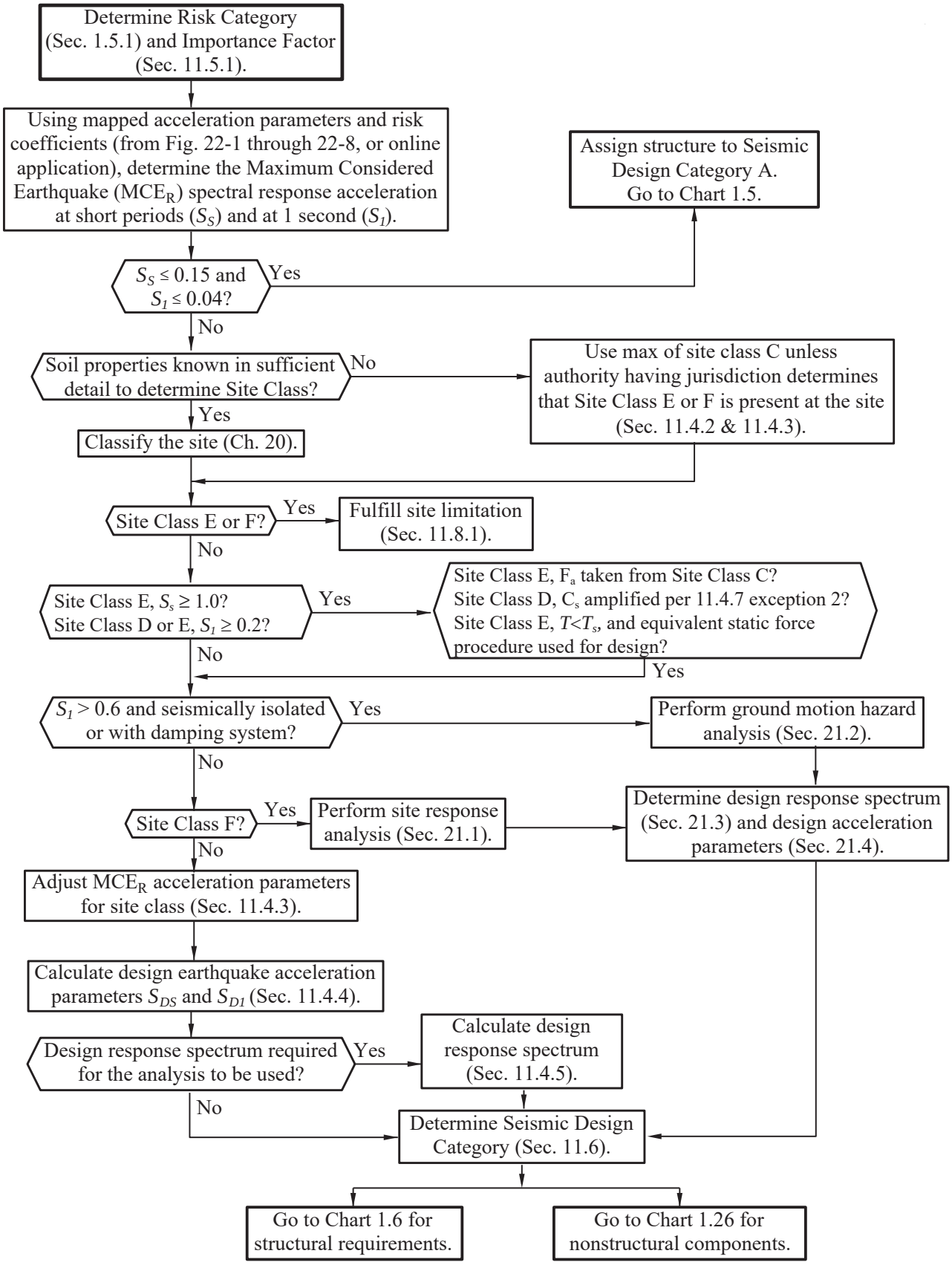


Chart 1.5
Seismic Design Category A

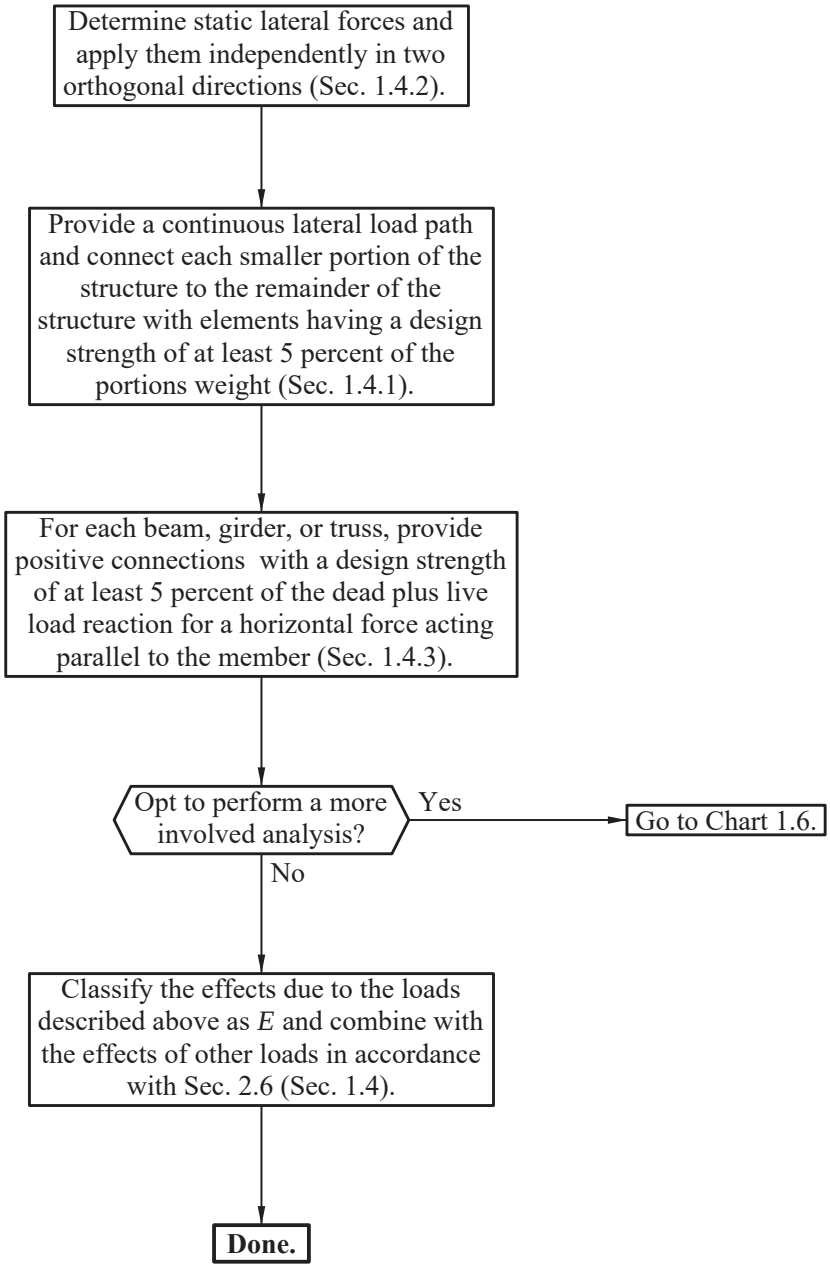


Chart 1.6
Structural Design

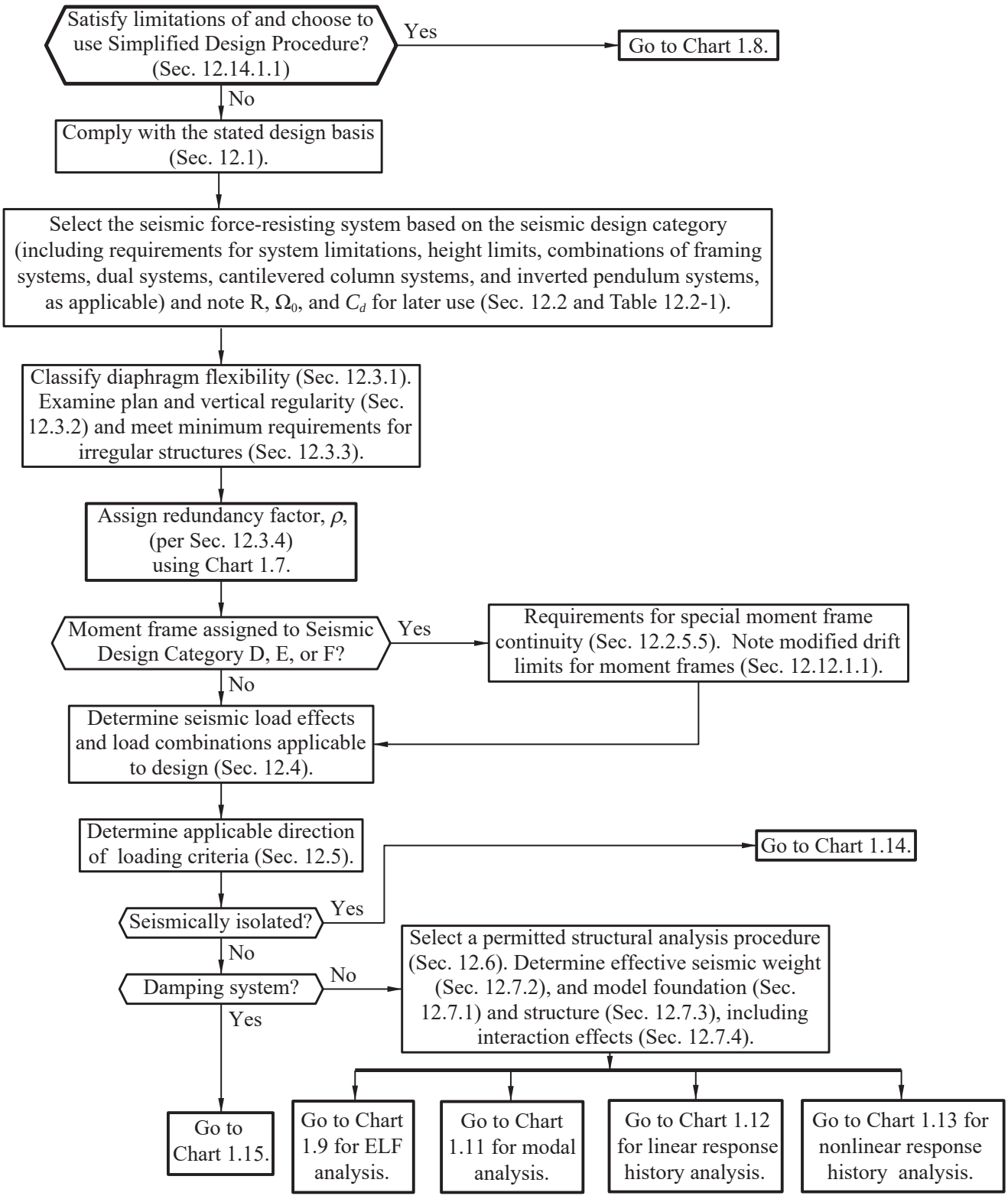
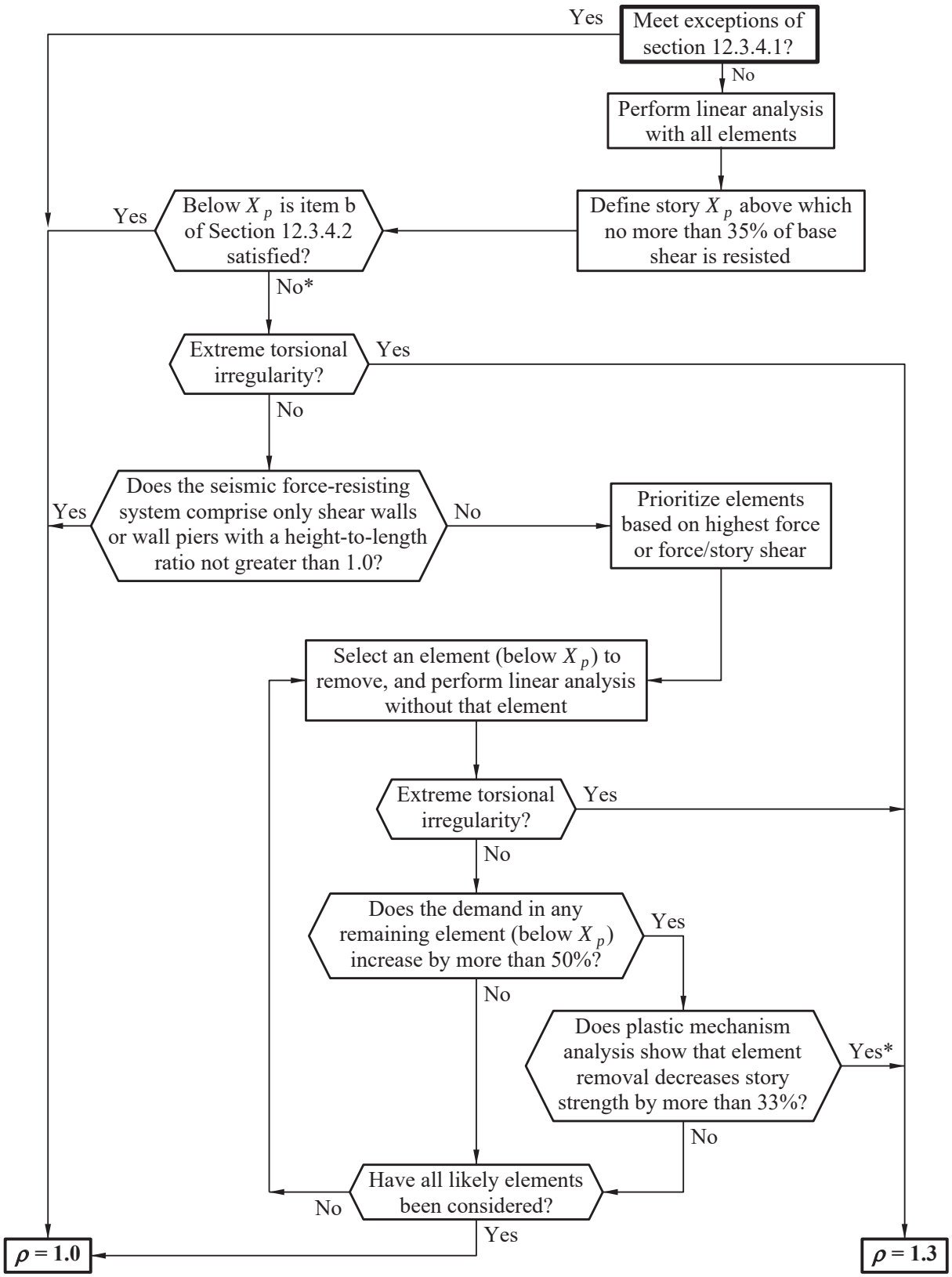


Chart 1.7
Redundancy Factor



* or not considered

Chart 1.8
Simplified Design Procedure

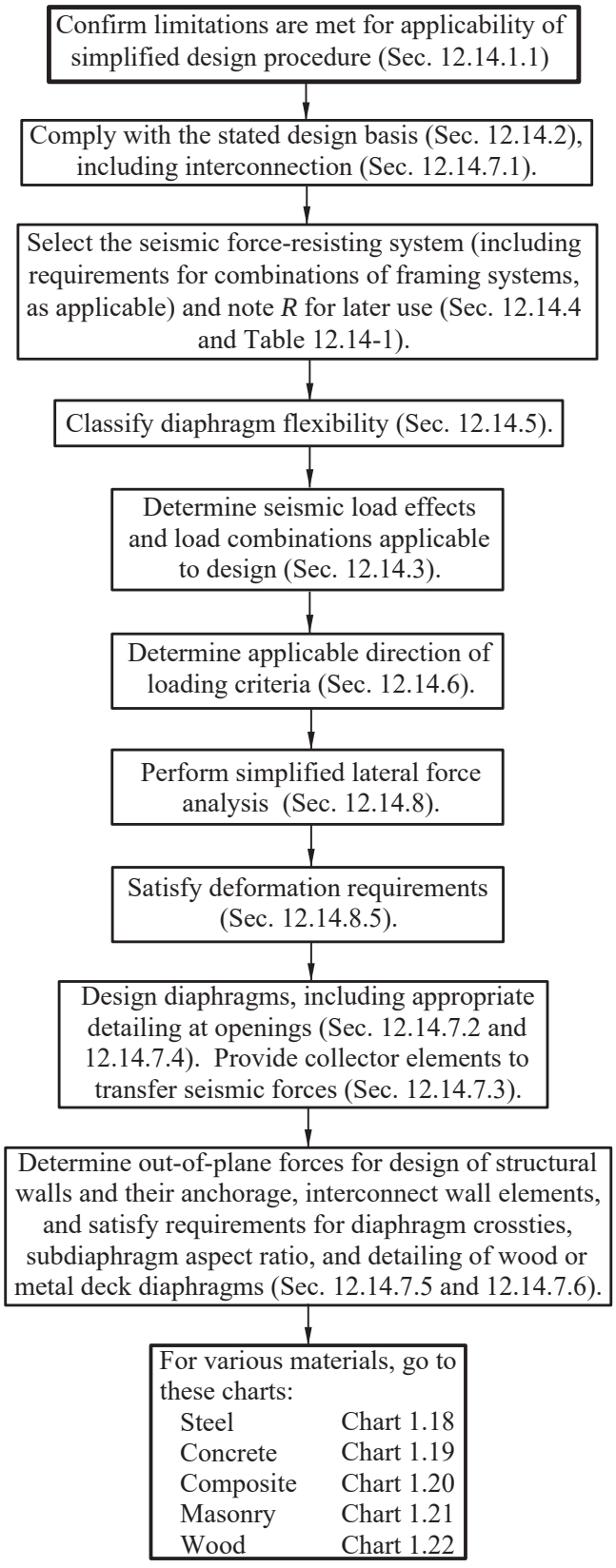


Chart 1.9
Equivalent Lateral Force (ELF) Analysis

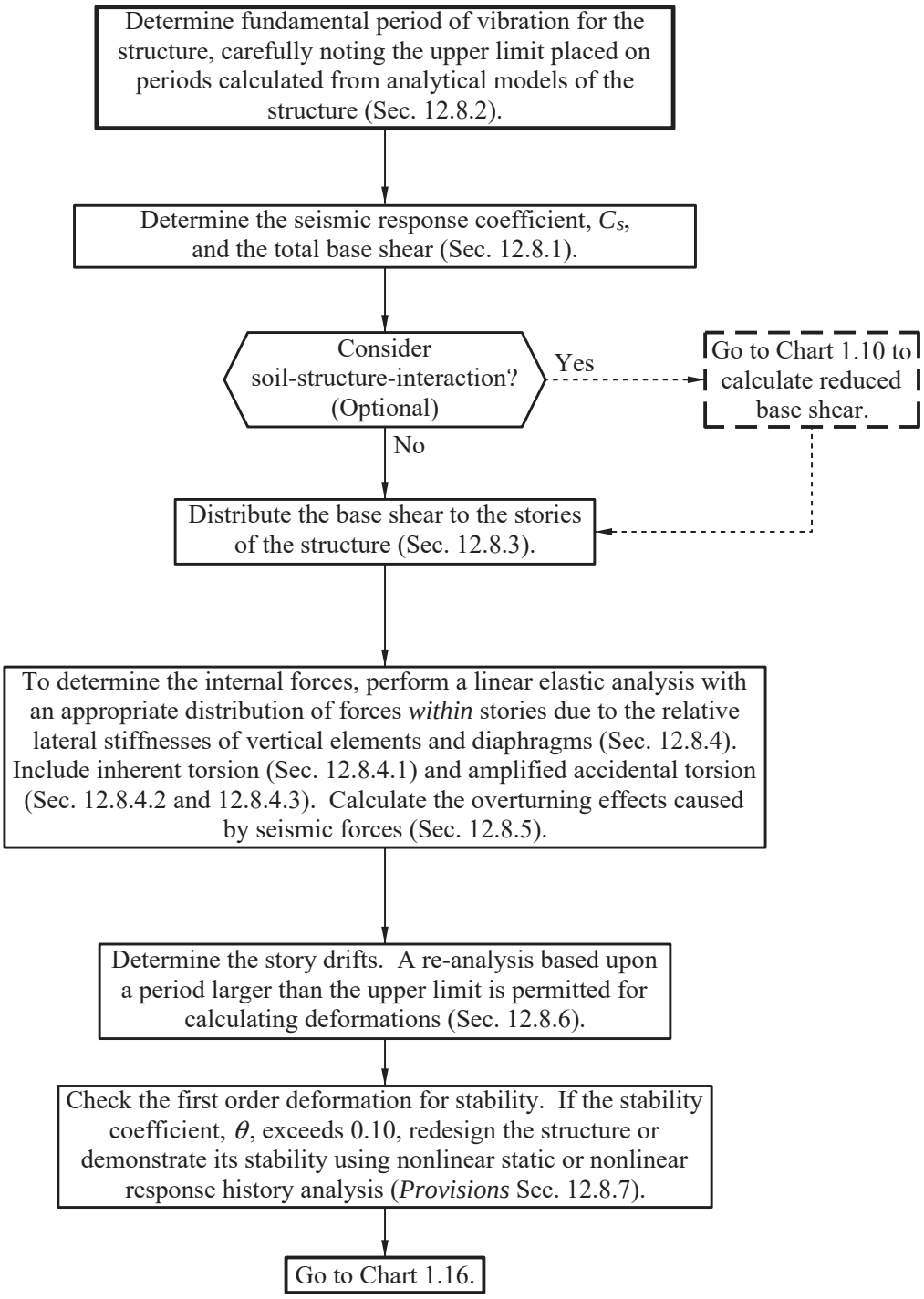


Chart 1.10
Soil-Structure Interaction (SSI)

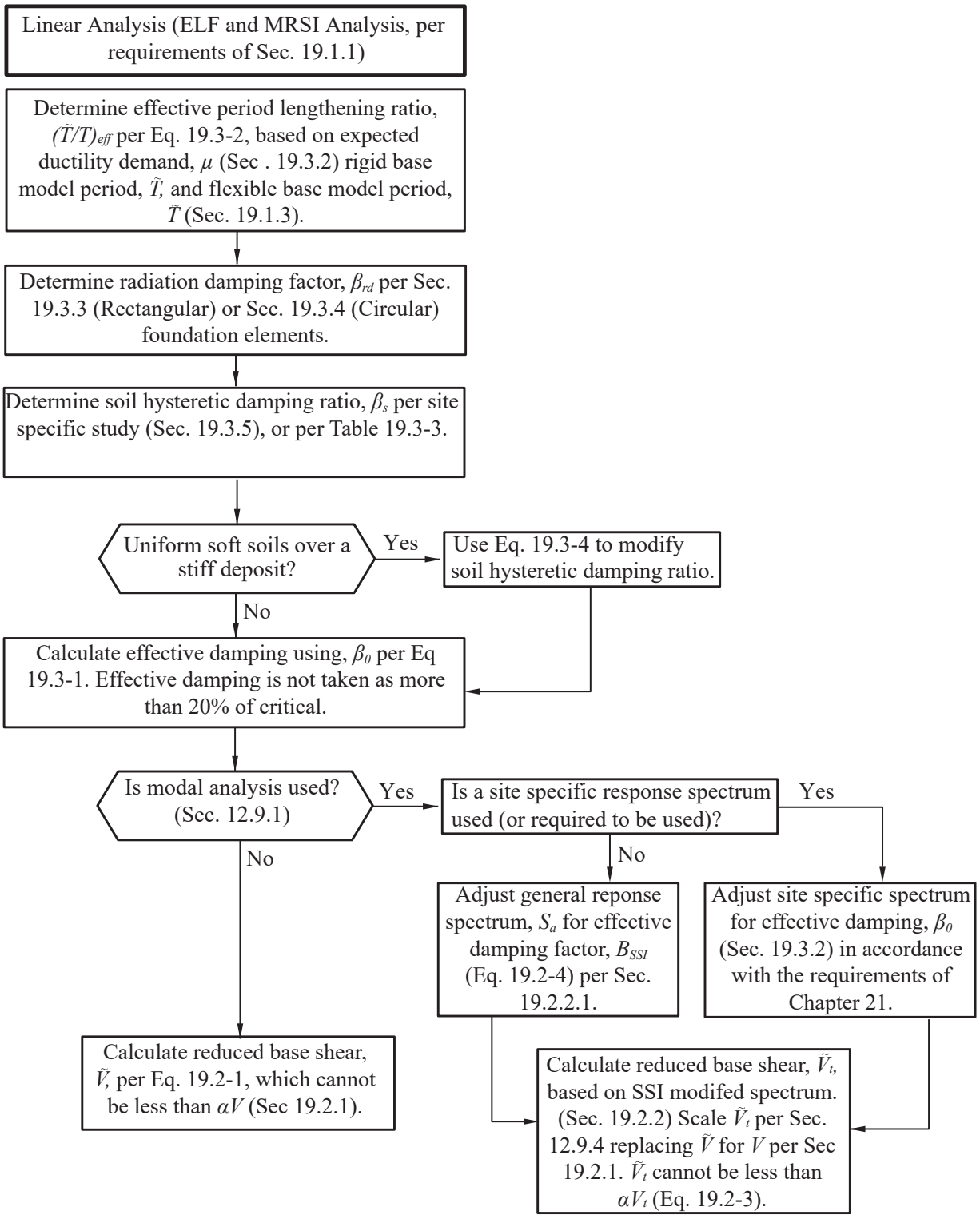
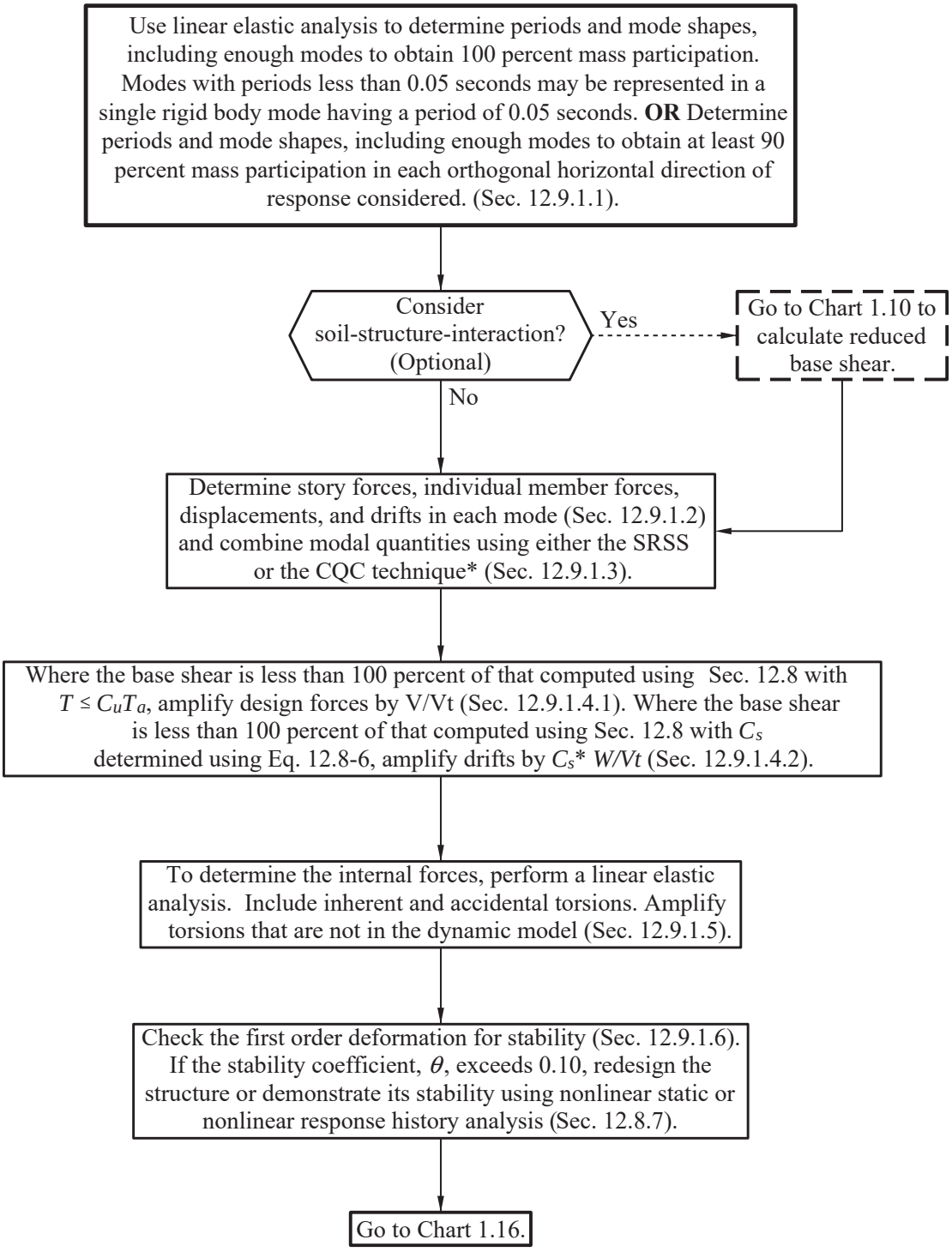


Chart 1.11
Modal Response Spectrum Analysis



*As indicated in the text, use of the CQC technique is required where closely spaced periods in the translational and torsional modes will result in cross-correlation of the modes.

Chart 1.12
Linear Response History Analysis

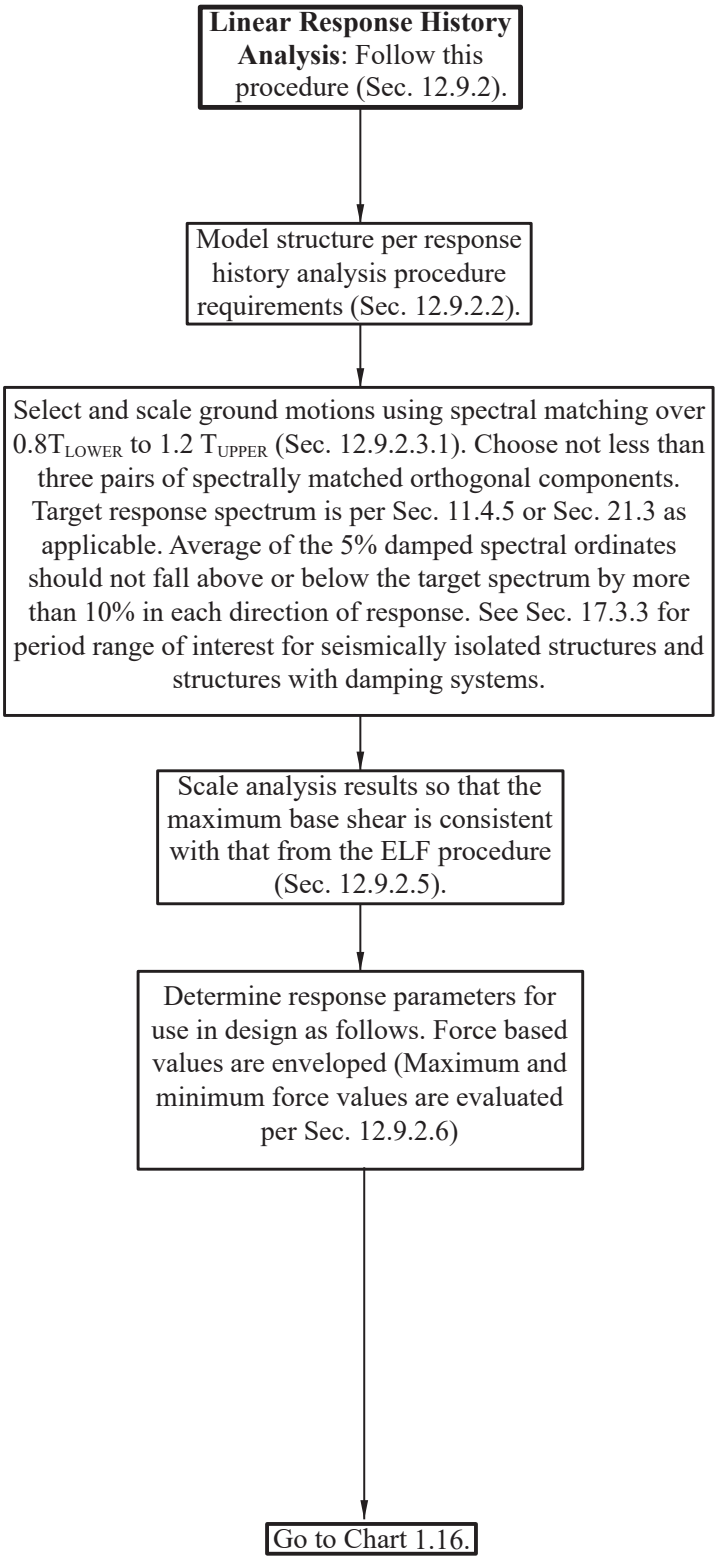


Chart 1.13
Nonlinear Response History Analysis

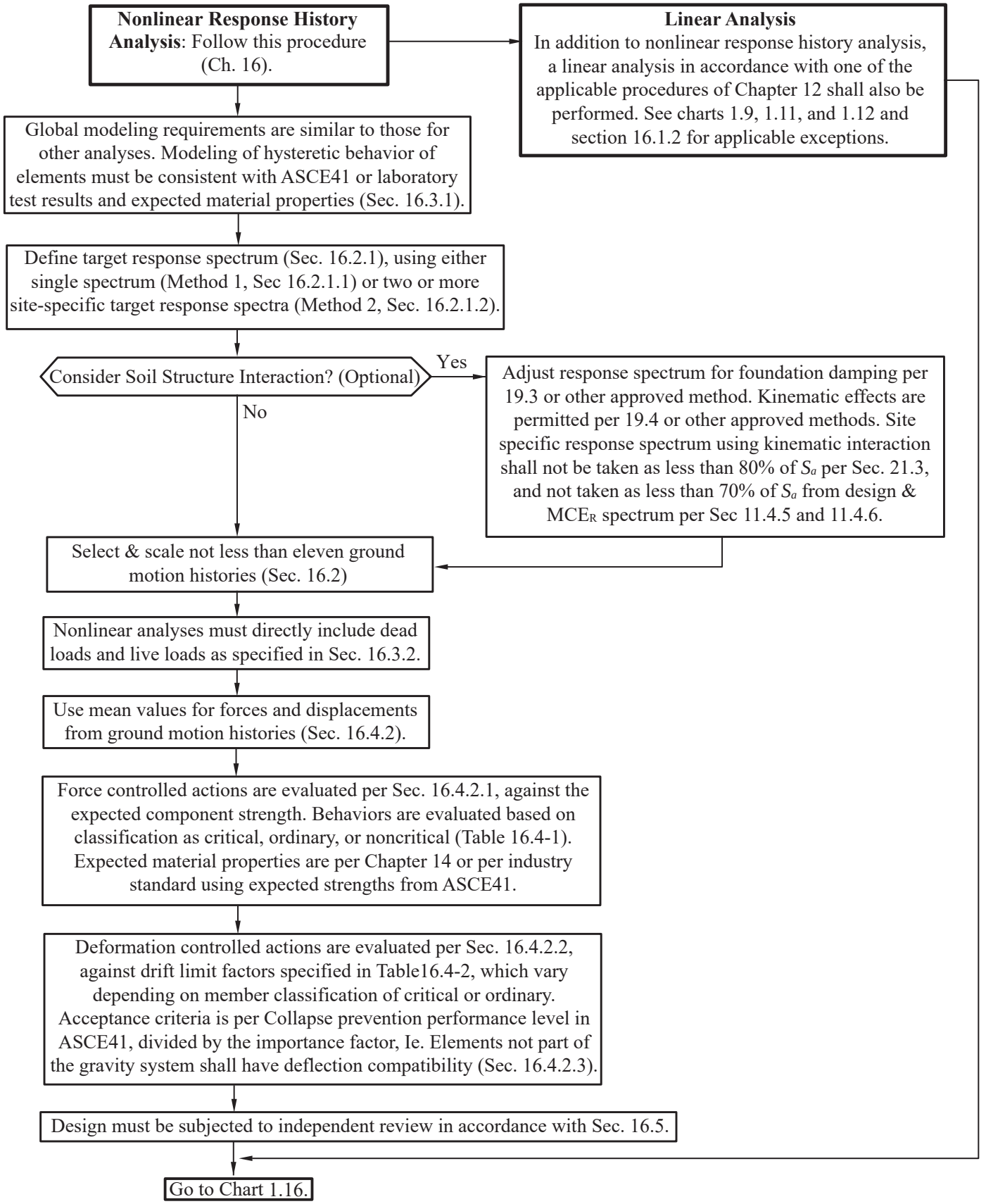


Chart 1.14
Seismically Isolated Structures

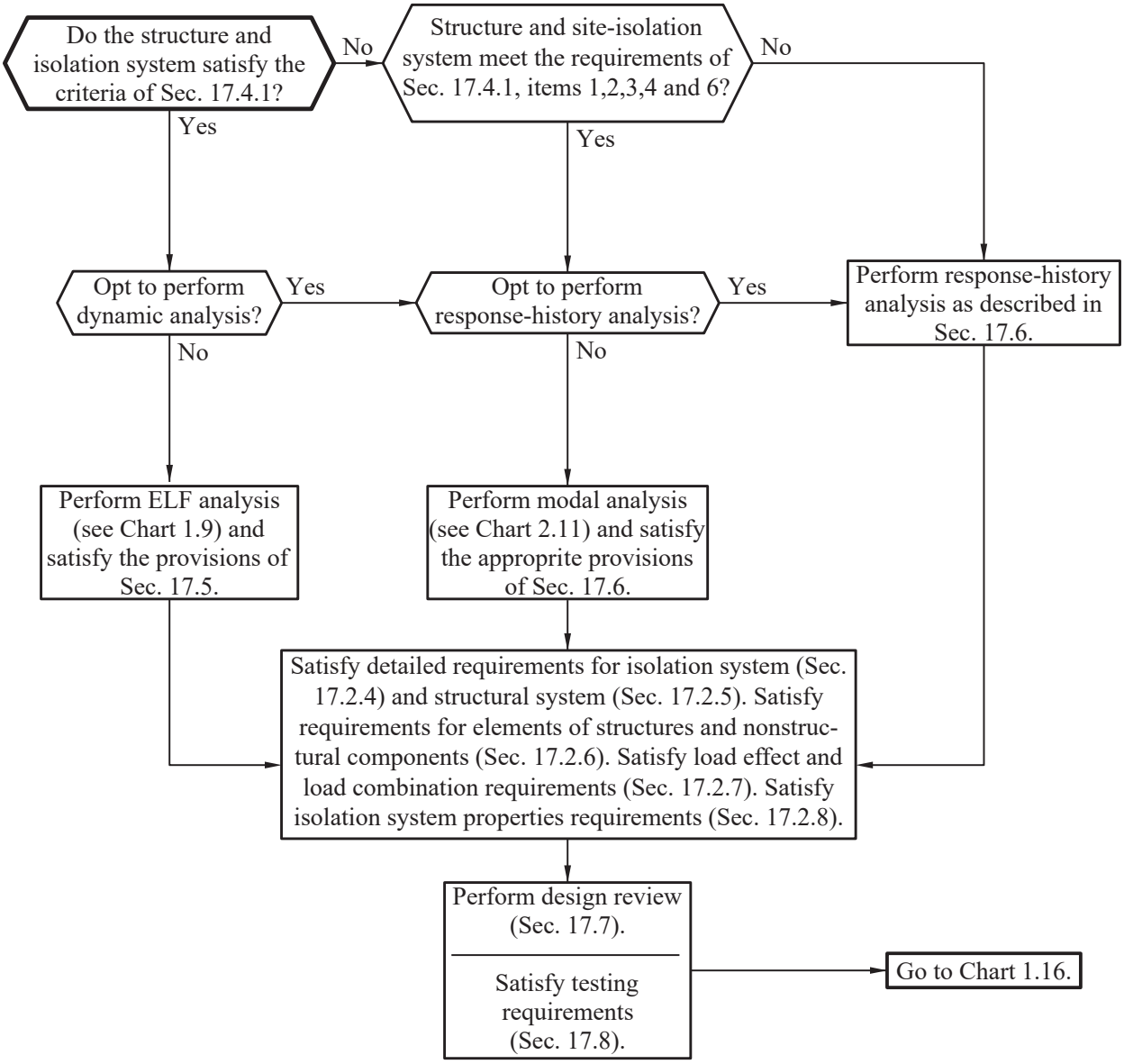


Chart 1.15
Structures with Damping Systems

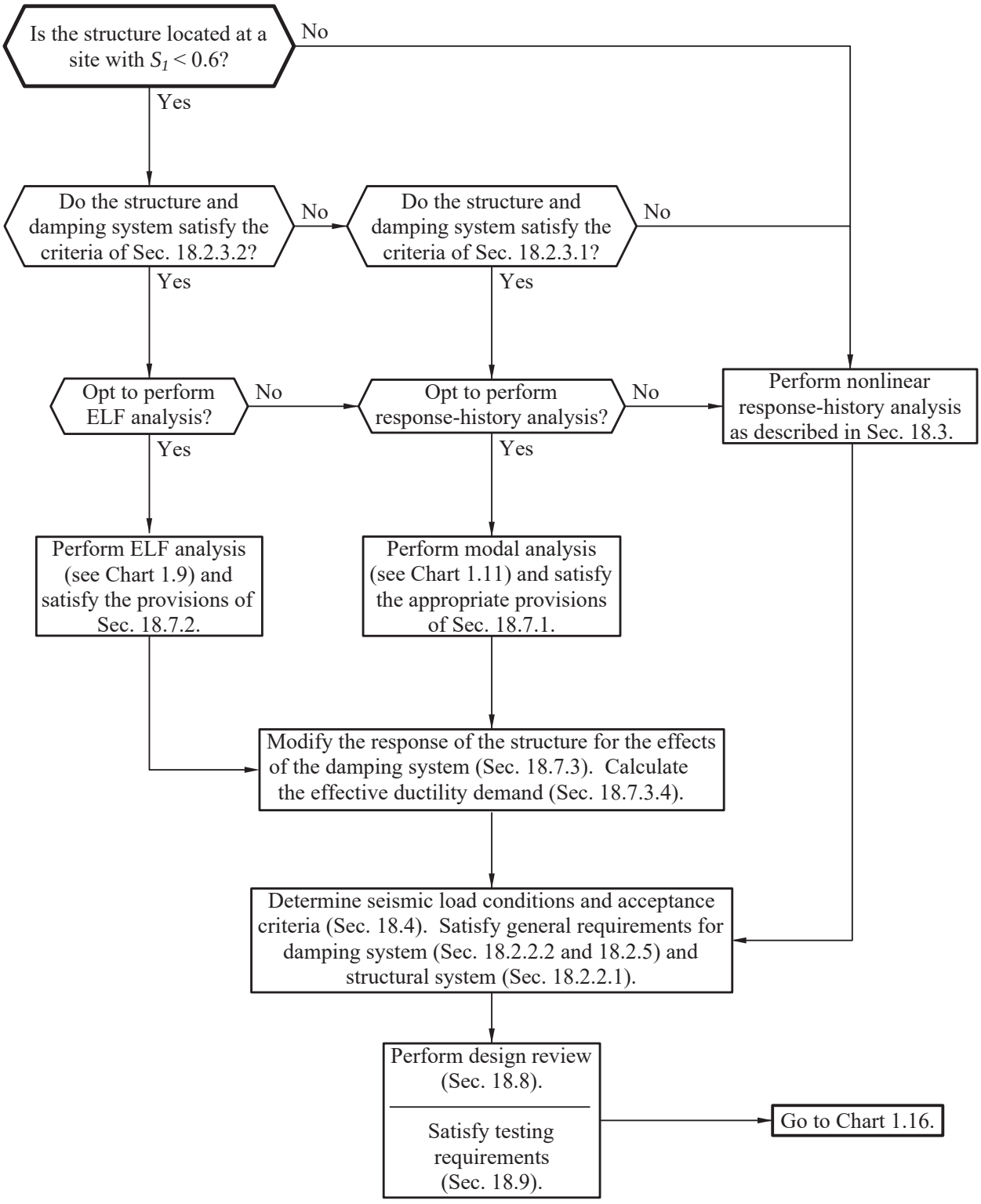


Chart 1.16
Deformation Requirements

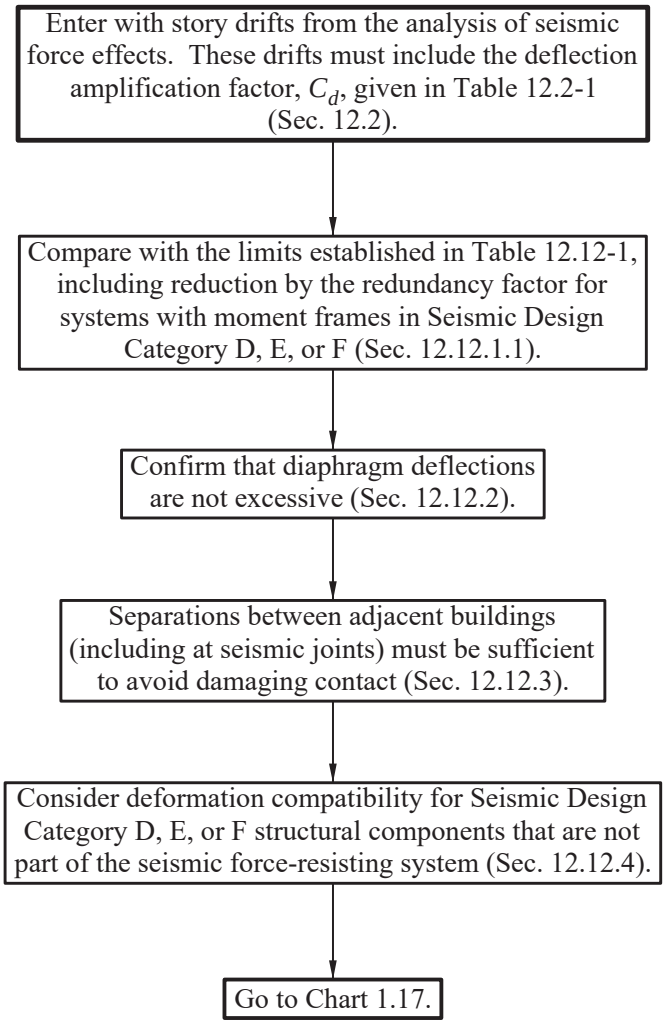


Chart 1.17
Design and Detailing Requirements

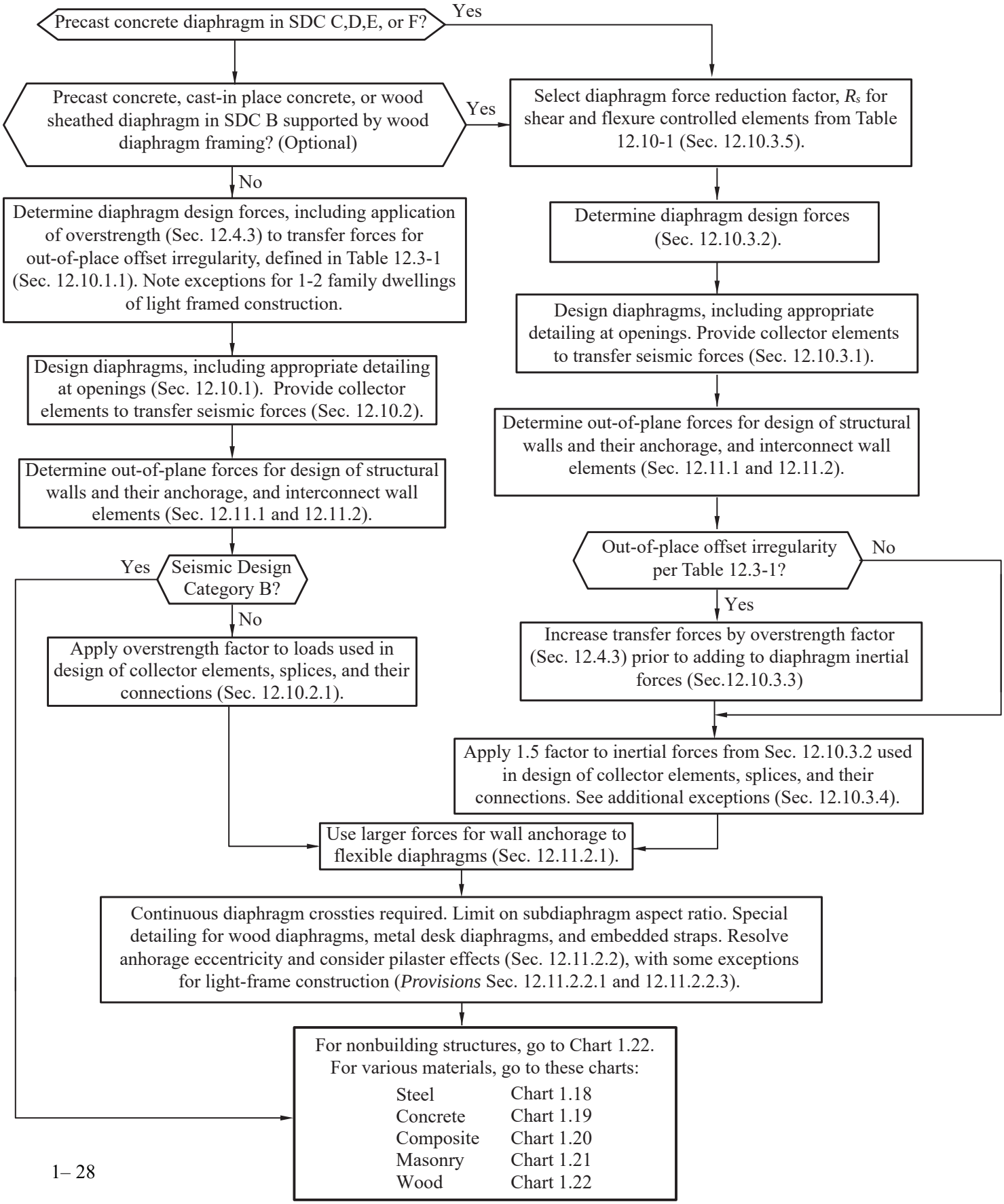


Chart 1.18
Steel Structures

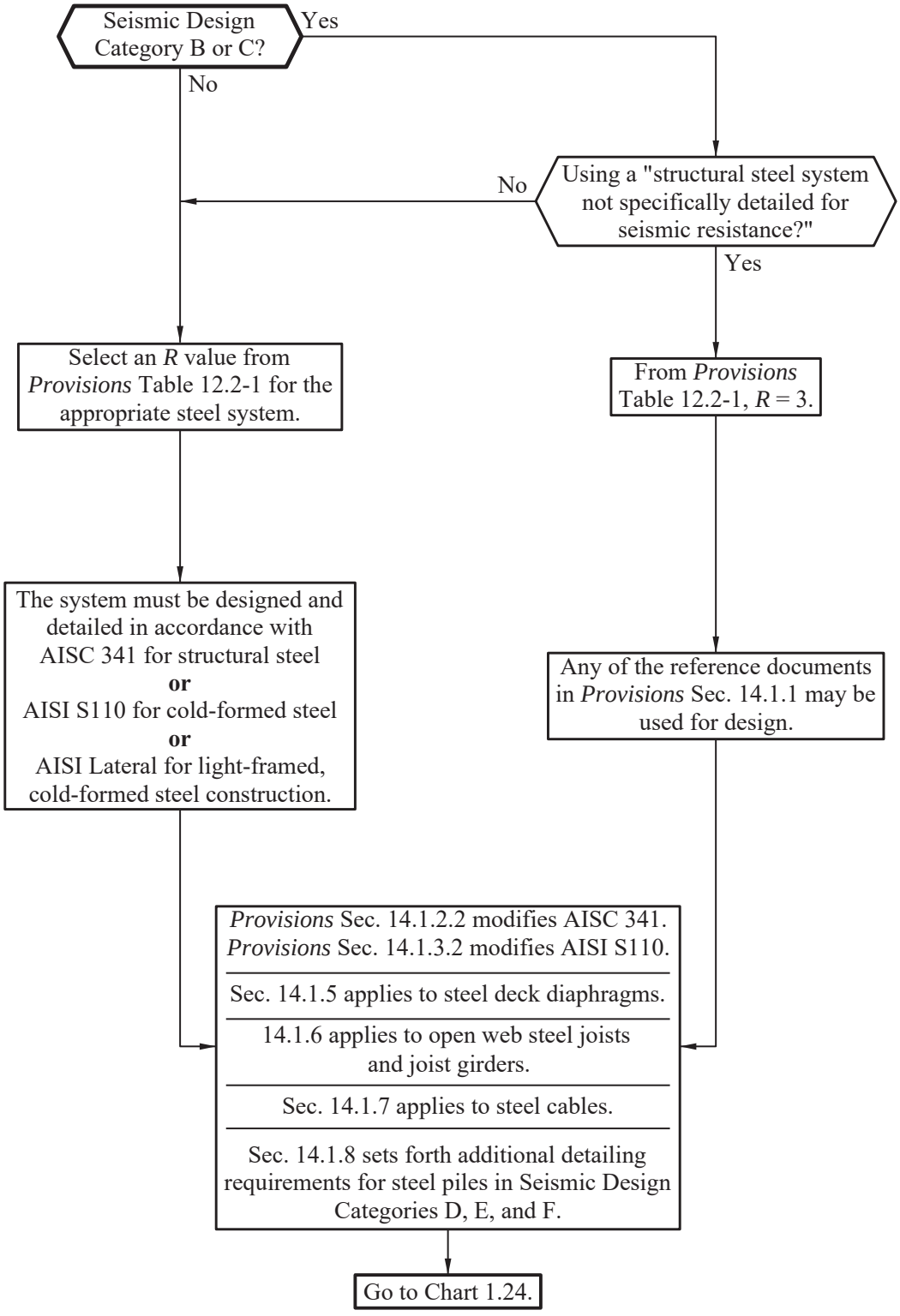


Chart 1.19
Concrete Structures

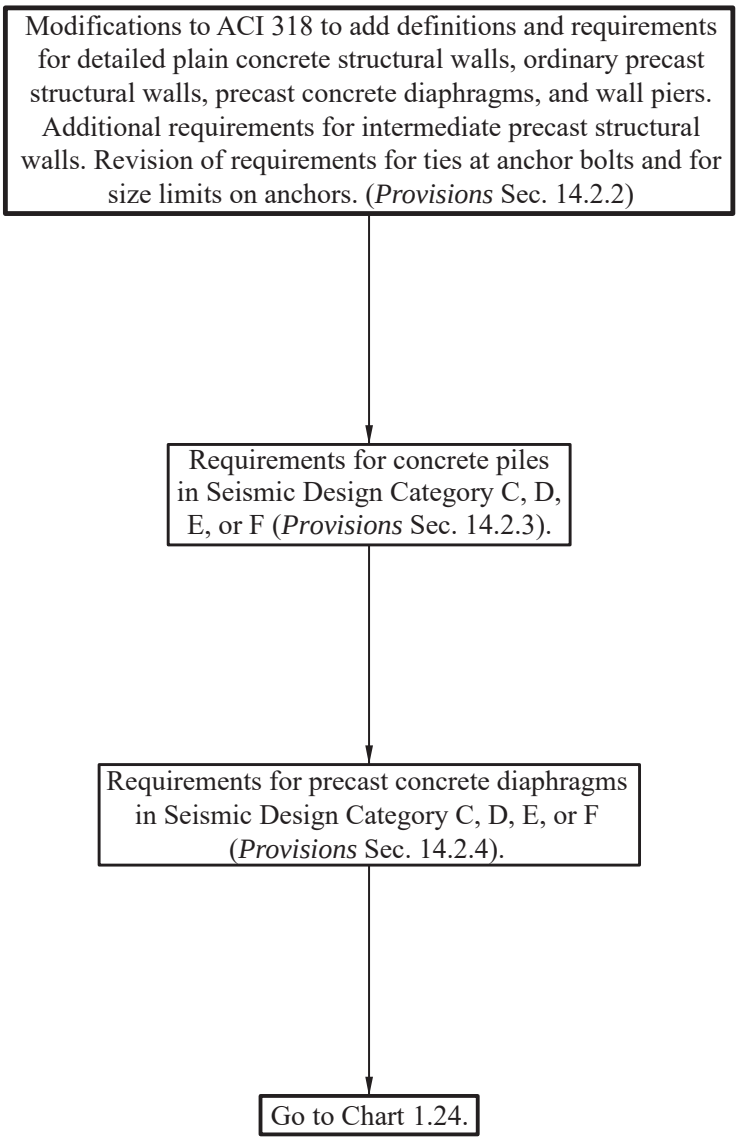


Chart 1.20
Composite Steel and Concrete Structures

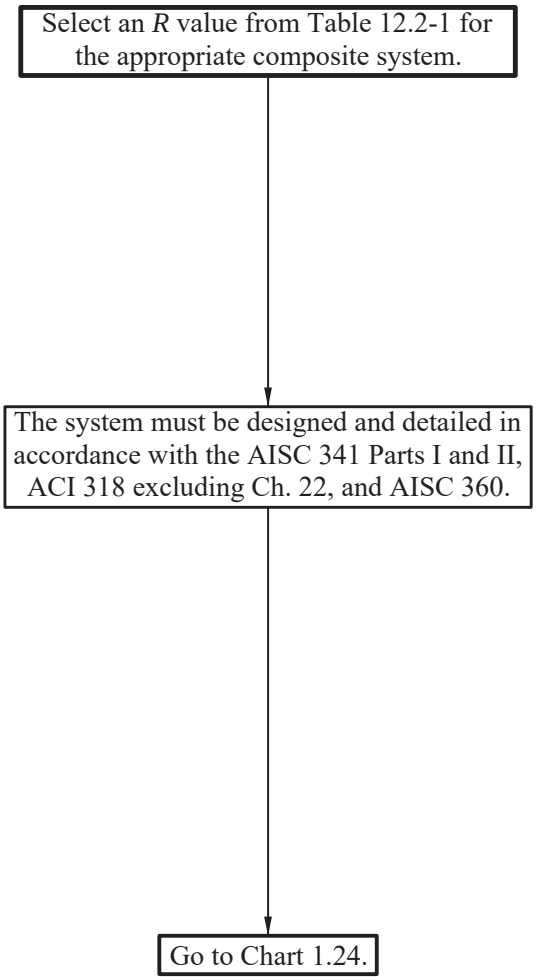


Chart 1.21
Masonry Structures

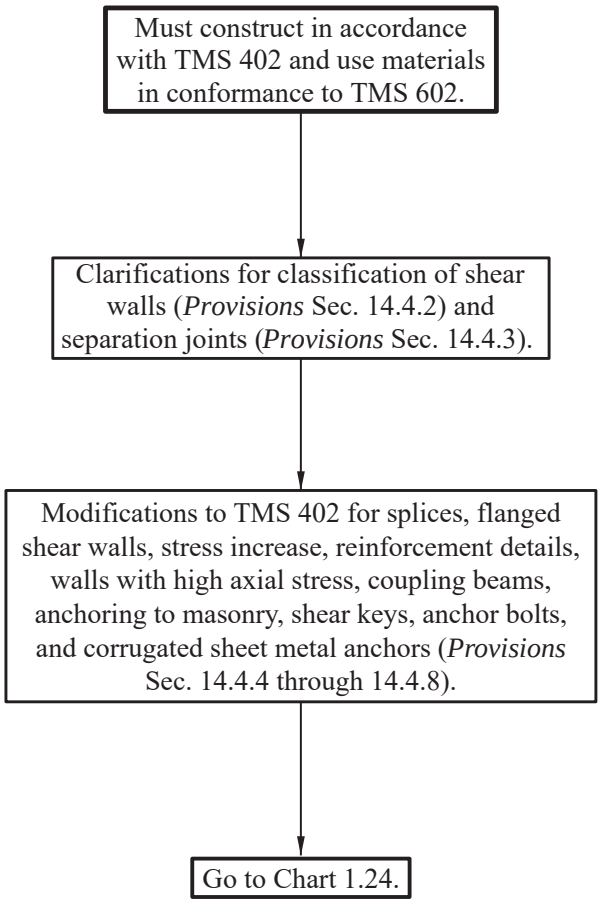


Chart 1.22
Wood Structures

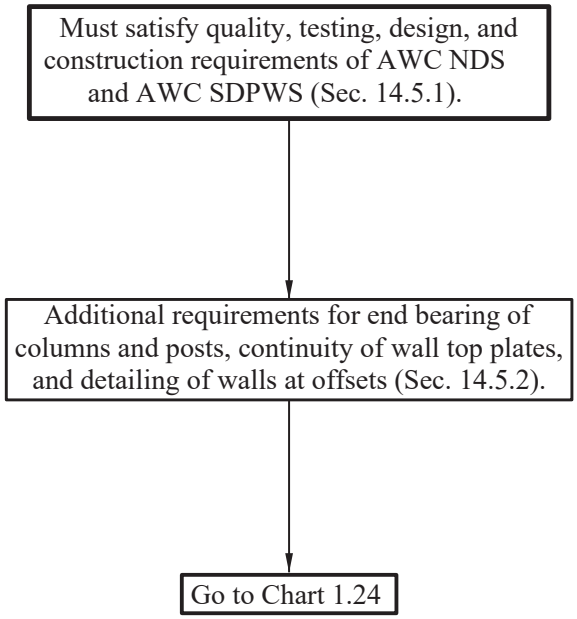


Chart 1.23
Non-building Structures

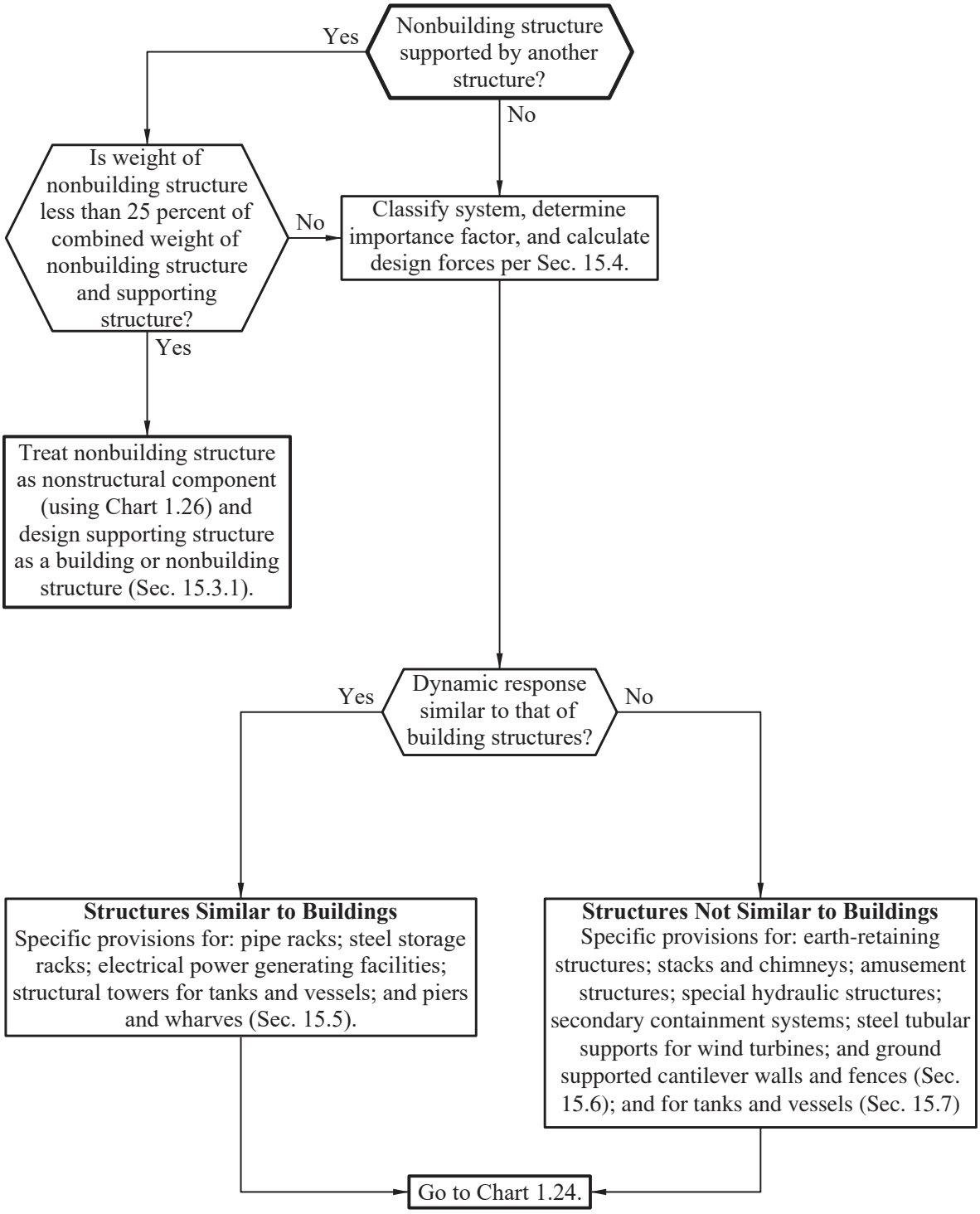


Chart 1.24
Foundations

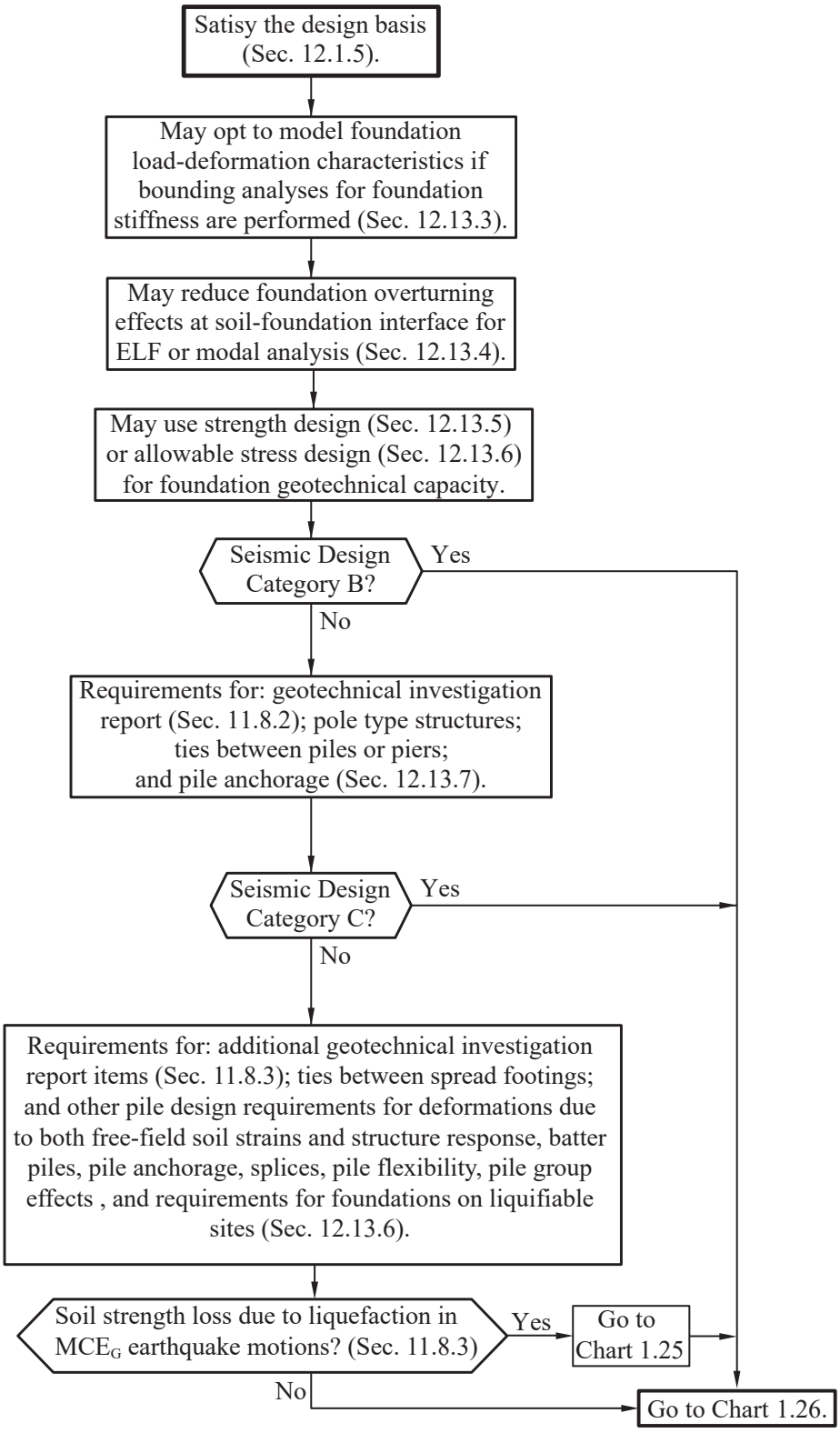


Chart 1.25
Liquifiable Soils

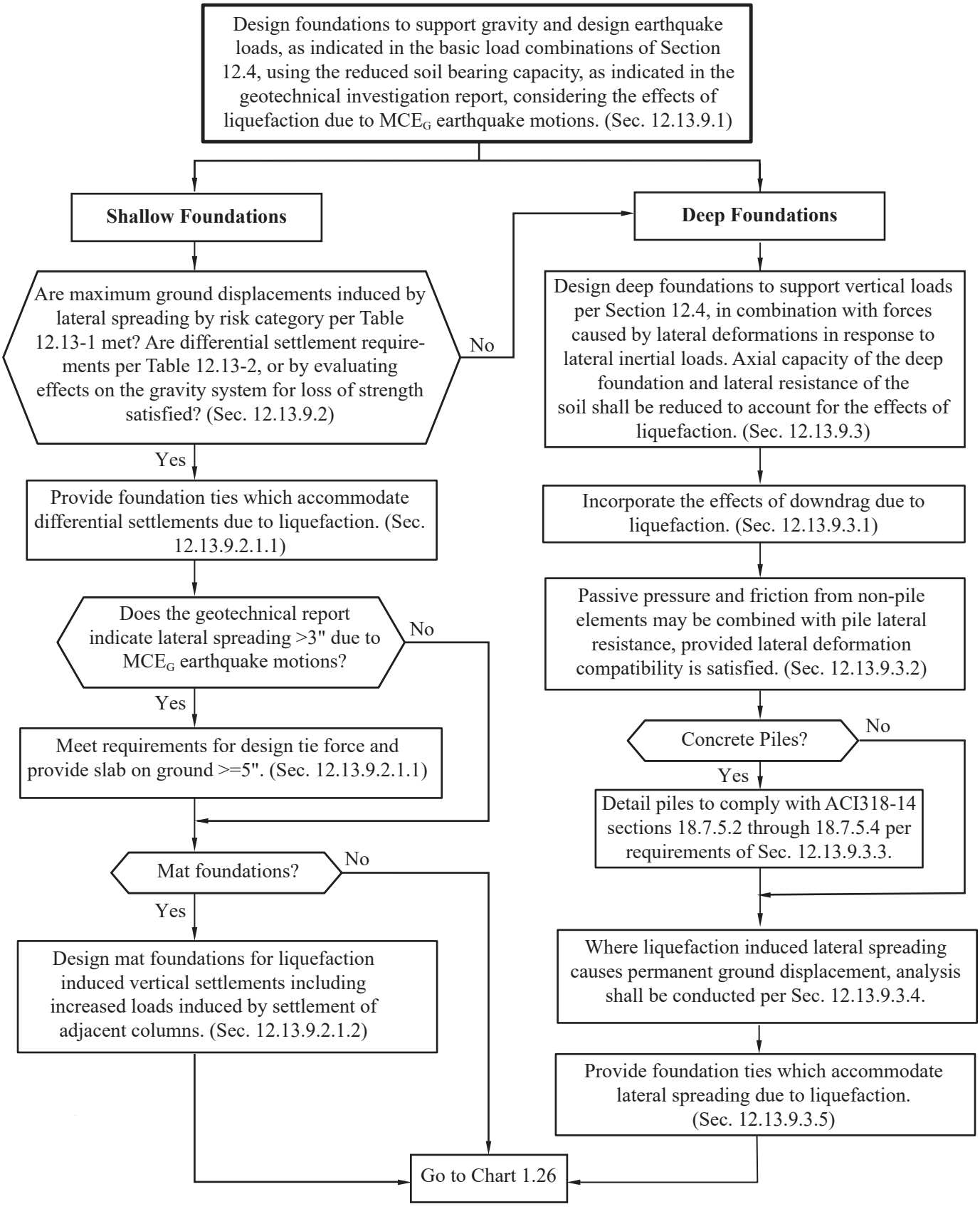


Chart 1.26
Nonstructural Components

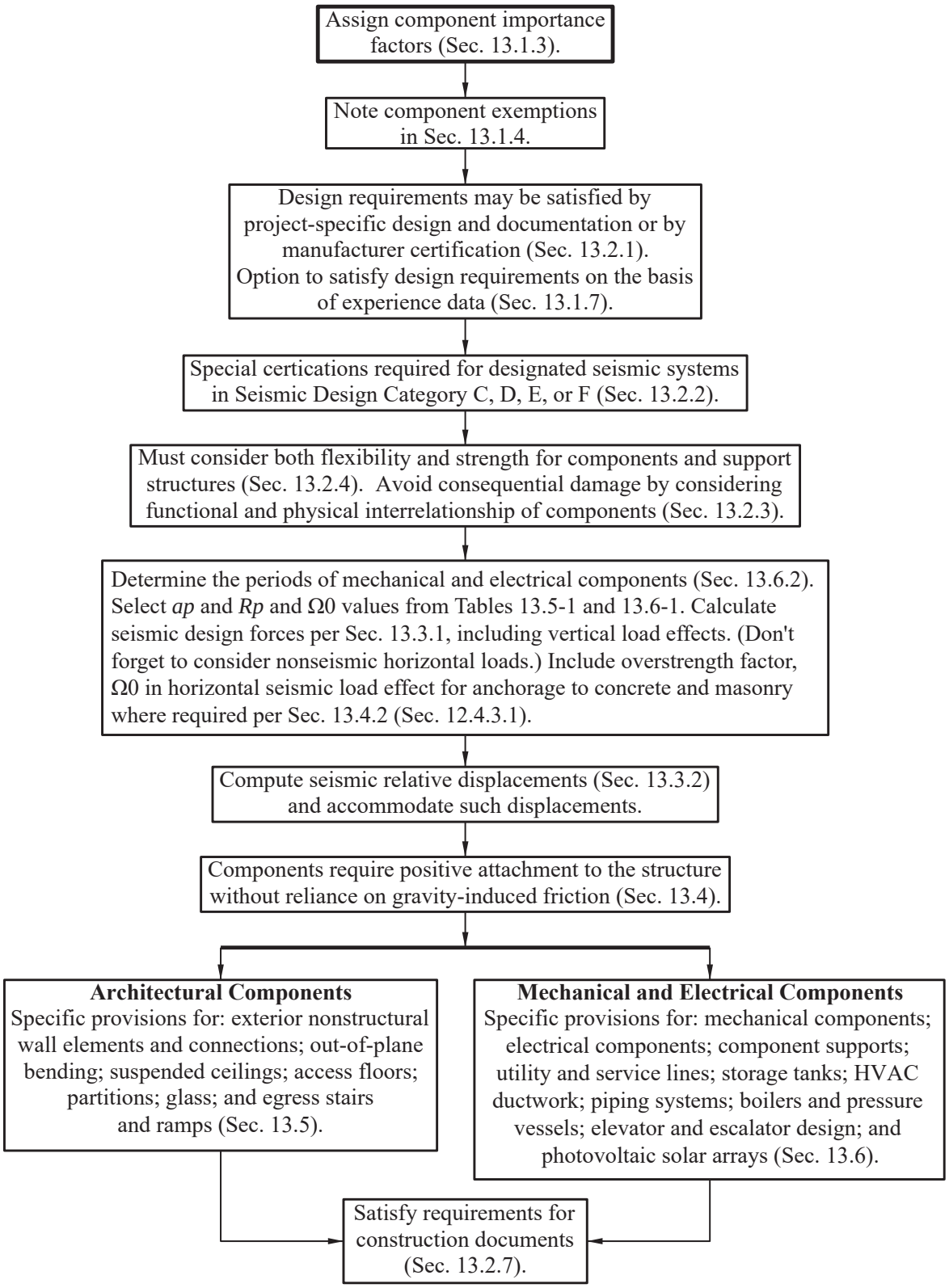
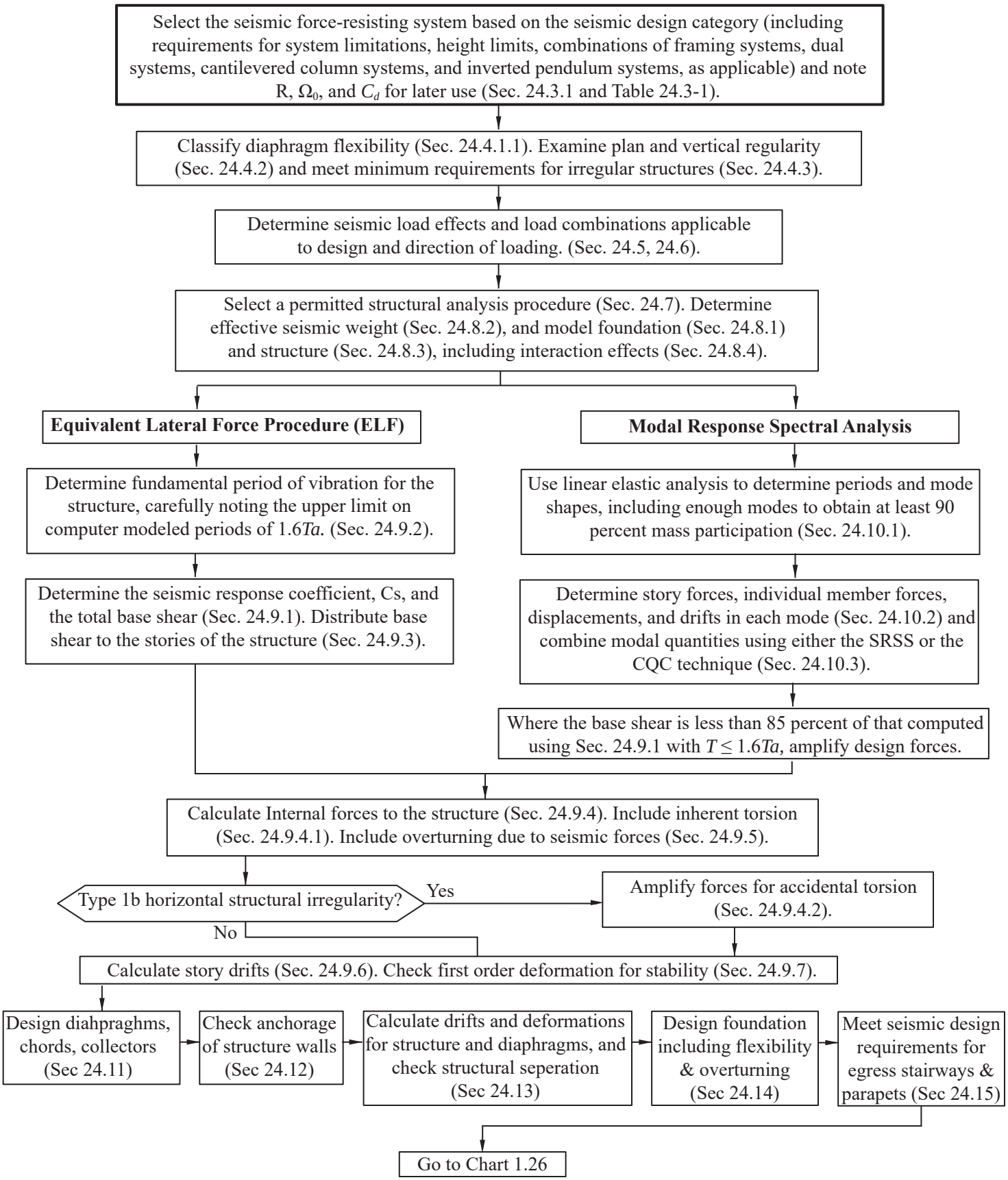


Chart 1.27
SDC B (*NEHRP Provisions* Only)



FEMA

FEMA P-1051 FLOW
Catalog No. 15275-2