# 2.1  GENERAL NOTES

## 2.1.1 GENERAL

This policy specifies the requirements for documenting in the structure plan General Notes including the design standards, loads, and materials used in the design of a structure.

## 2.1.2 NOTATIONS

The following symbols are used in this Structure Technical Policy.

| | | |
|---|---|---|
| $c$ | = | cohesion of soil (ksf) |
| $f_u$ | = | specified minimum tensile strength of steel (ksi) |
| $f_y$ | = | specified minimum yield strength of steel (ksi) |
| $f_{ya}$ | = | actual yield strength of steel for existing structure (ksi) |
| $f_{yar}$ | = | actual yield strength of reinforcement for existing structure (ksi) |
| $f'_c$ | = | compressive strength of concrete for use in design (ksi) |
| $f'_{ca}$ | = | actual compressive strength of concrete for existing structure (ksi) |
| $V_{s30}$ | = | shear wave velocity for the upper 100 feet (30 m) of the soil profile (ft/s) |
| $\gamma$ | = | unit weight of soil (lb/ft$^3$) |
| $\phi$ | = | internal friction angle of soil (degree) |
| SEE | = | Safety Evaluation Earthquake |
| FEE | = | Functional Evaluation Earthquake |

## 2.1.3 STANDARDS

The following design standards must be shown, as applicable.

- *AASHTO LRFD Bridge Design Specifications*, xx Edition and the California Amendments, preface dated xx (month, year)

- *AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges*, xx Edition, dated xx (month), xx (year)

- *Caltrans Seismic Design Criteria* (SDC), Version x.x, dated xx (month, year)

- *Caltrans Seismic Design Specifications for Steel Bridges*, xx Edition, dated xx (month, year)

- Caltrans Project Specific Design Criteria or Caltrans Project Specific Seismic Design Criteria, dated xx (month, year)

- Caltrans Structure Technical Policy xx.xx, Title, dated xx (month, year)

- Other Caltrans adopted design specifications dated xx (month), xx (year)

## 2.1.4 LOADS

Loads which are not explicitly addressed in the design standards must be shown in the General Notes. The following loads and data must be shown in the General Notes as follows, if applicable.

### 2.1.4.1 Additional Dead Loads

- 35 psf for future wearing surface

- 10 percent of cast-in-place concrete deck dead load between girder flange edges for precast concrete, and steel girder superstructures, unless stay-in-place metal forms are not allowed

### 2.1.4.2 Live Loads

HL93 and permit design load.

### 2.1.4.3 Seismic Data

- Soil profile*: $V_{s30}$ = *xx* ft/s

- Peak Ground Acceleration x.x*g*  for SEE

- Acceleration response spectra curve, as provided in the Foundation Report for SEE, and FEE if applicable

- A lateral spread load if applicable

## 2.1.4.4 Other Loads and Effects

- The creep/shrinkage model used along with the assumed relative humidity and ambient temperature, for segmental concrete bridges or any structure requiring a detailed estimate of force effects due to time-dependent material properties.

- Soundwall dead load distribution to girders

- Construction loads

- Live load surcharge

## 2.1.5 MATERIALS

The following material properties must be shown in the General Notes as follows, if applicable.

## 2.1.5.1 Reinforced Concrete

- $f_y$   = xx ksi
- $f'_c$ = *xx* ksi

## 2.1.5.2 Prestressing Steel

Prestressing steel properties are generally listed separately in the "Prestressing Notes", and referred to in the General Notes.

## 2.1.5.3 Structural Steel

- Plates: $f_y$ = xx ksi
- Shapes (W, HP, C, L, HSS, etc.): $f_y$ = xx ksi
- Bolts: $f_u$ = xx ksi

## 2.1.5.4 Structural Timber

Structural timber designation or wood species.

## 2.1.5.5 Soil Parameters

- $\gamma$ = xx lb/ft$^3$
- $\phi$ = *xx*$^o$
- *c* = xx ksf

## 2.1.5.6 Footing Pressures

The footing pressures are included in the "Spread Footing Data Table" and referred to in the General Notes.

## 2.1.5.7 Existing Structures

- $f_{ya}$ = xx ksi
- f'$_{ca}$ = xx ksi
- $f_{yar}$ = xx ksi