SECTION 03100

CONCRETE FORMWORK

PART 1-.GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC) latest edition apply except as modified herein.

A. Work Included in this Section:

Deliver and store all material in such a manner as to protect it from damage and deterioration.

Design, construction, and safety of all formwork shoring and reshoring shall be the complete responsibility of the Contractor.

It shall be the responsibility of the Contractor to insure that all applicable safety laws are strictly enforced and to maintain a safe construction project.

B. Related Work Specified Elsewhere:

Concrete reinforcement: Section 03200

C. Quality Assurance:

The following codes and standards apply to, and form a part of, this section, where applicable:

Product Standard PS 1-74 for Softwood Plywood.
American Concrete Institute Standard Recommended Practice for Concrete Formwork, ACI 347.

PART 2 - PRODUCTS

A. Materials:

Where finish concrete is below grade or scheduled to be plastered, plywood or sawed lumber formwork shall be constructed of substantial material as selected by the Contractor.

Where finished concrete is above grade and scheduled to be exposed, use Plyform Class I and II B-B, EXT-DFPA or approved equal.

Form coating shall be a non-grain-raising and non-staining type that will not leave residual matter on the surface of the concrete or adversely affect bonding to concrete of paint, plaster, or other applied materials.

PART 3 - EXECUTION

A. Erection:

All concrete above grade shall be cast-in-plywood forms.

All concrete below grade shall be cast-in-plywood or sawed lumber forms.

Concrete below grade may be poured directly against earth in open trenches where specifically approved by the Structural Engineer.
All forms shall be constructed true to line and level, sufficiently tight to prevent leakage of mortar, and shall conform exactly to the dimensions of the finished concrete as shown on the drawings.

In walls and columns over 8' high, clean out panels shall be provided at the bottom of forms to facilitate cleaning prior to pour.

Where studs in formwork are spaced not over 12" o.c., 5/8" minimum plywood shall be used. Where studs are spaced not over 16" o.c., 3/4" minimum plywood shall be used.

For cheek walls Contractor shall form and pour all stairs first. Cheek walls shall be formed and poured after acceptance of the step construction. Cheek walls shall be a minimum of 10" wide.

Place long dimension of plywood sheets perpendicular to direction of studs.

B. Removal of Forms:

Do not disturb or remove forms until the concrete has developed sufficient strength to safely sustain its own weight and the superimposed loads above. After concrete is placed, the following minimum time periods shall elapse before the removal of forms:

	Forms	Shores
Sides of walls and edges of slabs and footings.	3 days	5 days

END OF SECTION - 03100

SECTION 03100
CONCRETE FORMWORK (SITE)

PART 1 – GENERAL

The provisions of the Standard Specifications for Public Works Construction (SSPWC) latest edition apply except as modified herein.

1.1 Work Included in this Section:

a. Deliver and store all material in such a manner as to protect it from damage and deterioration.

b. Design, construction, and safety of all formwork shoring and reshoring shall be the complete responsibility of the Contractor.

c. It shall be the responsibility of the Contractor to insure that all applicable safety laws are strictly enforced and to maintain a safe construction project.

1.2 Related Work Specified Elsewhere:

Concrete reinforcement: Section 03200
Cast-in-place concrete: Section 03300
Rough Carpentry: Section 06100

1.3 Quality Assurance:

The following codes and standards apply to, and form a part of, this section, where applicable:

Product Standard PS 1-74 for Softwood Plywood.
American Concrete Institute Standard Recommended Practice for Concrete Formwork, ACI 347.

PART 2 - PRODUCTS

A. Materials:

Where finish concrete is below grade or scheduled to be plastered, plywood or sawed lumber formwork shall be constructed of substantial material as selected by the Contractor.

Where finished concrete is above grade and scheduled to be exposed, use Plyform Class I and II B-B, EXT-DFPA or approved equal.

Form coating shall be a non-grain-raising and non-staining type that will not leave residual matter on the surface of the concrete or adversely affect bonding to concrete of paint, plaster, or other applied materials.

PART 3 - EXECUTION

A. Erection:

All concrete above grade shall be cast-in-plywood forms.

All concrete below grade shall be cast-in-plywood or sawed lumber forms.

Concrete below grade may be poured directly against earth in open trenches where specifically approved by the Structural Engineer.
All forms shall be constructed true to line and level, sufficiently tight to prevent leakage of mortar, and shall conform exactly to the dimensions of the finished concrete as shown on the drawings.

In walls and columns over 8' high, clean out panels shall be provided at the bottom of forms to facilitate cleaning prior to pour.

Where studs in formwork are spaced not over 12" o.c., 5/8" minimum plywood shall be used. Where studs are spaced not over 16" o.c., 3/4" minimum plywood shall be used.

For cheek walls Contractor shall form and pour all stairs first. Cheek walls shall be formed and poured after acceptance of the step construction. Cheek walls shall be a minimum of 10" wide.

Place long dimension of plywood sheets perpendicular to direction of studs.

B. Removal of Forms:

Do not disturb or remove forms until the concrete has developed sufficient strength to safely sustain its own weight and the superimposed loads above. After concrete is placed, the following minimum time periods shall elapse before the removal of forms:

	Forms	Shores
Sides of walls and edges of slabs and footings.	3 days	5 days

END OF SECTION - 03100