

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 03 20 00 - Concrete Reinforcing.
- .2 Section 03 30 00 - Cast-in-Place Concrete.
- .3 Section 07 92 10 - Joint Sealing.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A23.1-14/A23.2-14, Concrete Materials and Methods of Concrete Construction.
 - .2 CAN/CSA-O86-14, Engineering Design in Wood.
 - .3 CSA O121-08 (R2013), Douglas Fir Plywood.
 - .4 CSA O151-09, Canadian Softwood Plywood.
 - .5 CSA O153-13, Poplar Plywood.
 - .6 CAN3-0188.0-M78, Standard Test Methods for Mat-Formed Wood Particleboards and Waferboard.
 - .7 CSA O437 Series-93 (R2011), Standards for OSB and Waferboard.
 - .8 CSA S269.1-16 (R2003), Falsework and Formwork for Construction Purposes.

1.3 SHOP DRAWINGS

- .1 Submit shop drawings for formwork and falsework in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Indicate method and schedule of construction, shoring, stripping and re-shoring procedures, materials, arrangement of joints, special architectural exposed finishes, ties, liners, and locations of temporary embedded parts. Comply with CSA S269.1-16, for falsework drawings Comply with CAN/CSA-S269.1-16 for formwork drawings.
 - .3 Indicate formwork design data, such as permissible rate of concrete placement, and temperature of concrete, in forms.
 - .4 Indicate sequence of erection and removal of formwork/falsework as directed by Departmental Representative.
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1.3 SHOP DRAWINGS .5 Each shop drawing submission shall bear stamp and
(Cont'd) signature of qualified Professional Engineer
registered or licensed in Province of Newfoundland
and Labrador, Canada.

1.4 WASTE .1 Separate and recycle waste materials in accordance
MANAGEMENT AND with Section 01 74 21 - Construction/Demolition
DISPOSAL Waste Management and Disposal and the Waste
Reduction Workplan.

.2 Place materials defined as hazardous or toxic
waste in designated containers.

.3 Ensure emptied containers are sealed and stored
safely for disposal away from children.

.4 Use sealers, form release and stripping agents
that are non-toxic, biodegradable and have zero or
low VOC's.

PART 2 - PRODUCTS

2.1 MATERIALS .1 Formwork materials:
.1 Use formwork materials to CAN/CSA-A23.1-16.

.2 Form ties:
.1 Removable or snap-off metal ties, fixed or
adjustable length, free of devices leaving holes
larger than 25 mm diameter in concrete surface.

.3 Form release agent: non-toxic, chemically active
release agents containing compounds that react
with free lime present in concrete to provide
water insoluble soaps, preventing set of film of
concrete in contact with form.

.4 Falsework materials: to CSA-S269.1-16.
.1 Materials required to bear grade marks, or be
accompanied with certificates, test reports or
other proof of conformity.

.5 Premoulded joint fillers:
.1 Bituminous impregnated fiberboard to ASTM
D1751.

2.1 MATERIALS
(Cont'd)

- .6 Bond Breaker:
 - .1 Impermeable tube formed of polyvinylchloride, rubber or similar material to the approval of the Departmental Representative. Internal diameter equal to dowels.
- .7 Sealant: to Section 07 92 10 - Joint Sealing.

PART 3 - EXECUTION

3.1 FABRICATION AND
ERECTION

- .1 Verify lines, levels and centres before proceeding with formwork/falsework and ensure dimensions agree with drawings.
 - .2 Obtain Departmental Representative's approval for use of earth forms framing openings not indicated on drawings.
 - .3 Hand trim sides and bottoms and remove loose earth from earth forms before placing concrete.
 - .4 Fabricate and erect falsework in accordance with CSA S269.1-16.
 - .5 Fabricate and erect formwork in accordance with CAN/CSA-S269.-16 to produce finished concrete conforming to shape, dimensions, locations and levels indicated within tolerances required by CAN/CSA-A23.1-16.
 - .6 Align form joints and make watertight. Keep form joints to minimum.
 - .7 Use 25 mm chamfer strips on external corners and/or 25 mm fillets at interior corners, joints, unless specified otherwise.
 - .8 Form chases, slots, openings, drips, recesses, expansion and control joints as indicated.
 - .9 Build in anchors, sleeves, and other inserts required to accommodate Work specified in other sections. Assure that all anchors and inserts will not protrude beyond surfaces designated to receive applied finishes, including painting.
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3.1 FABRICATION AND
ERECTION
(Cont'd)

- .10 Clean formwork in accordance with
CAN/CSA-A23.1-16, before placing concrete.

3.2 REMOVAL AND
RESHORING

- .1 Leave formwork in place for following minimum
periods of time after placing concrete.
.1 5 days for beams, slabs, decks and other
structural members, or 3 days when replaced
immediately with adequate shoring to standard
specified for falsework.
- .2 Remove formwork when concrete has reached 75% of
its design strength or minimum period noted above,
whichever comes later, and replace immediately
with adequate reshoring.
- .3 Provide all necessary reshoring of members where
early removal of forms may be required or where
members may be subjected to additional loads
during construction as required.
- .4 Space reshoring in each principal direction at not
more than 3000 mm apart.
- .5 Re-use formwork and falsework subject to
requirements of CAN/CSA-A23.1-16.

3.3 JOINT FILLERS

- .1 Locate and form expansion joints as indicated.
Install joint filler in all joints.
- .2 Use 13 mm thick joint filler to separate
slab-on-grade and extend joint filler from bottom
of slab to within 25 mm of finished slab surface
unless indicated otherwise.

3.4 JOINT SEALANT

- .1 Fill expansion and control joints with sealer as
per manufacturer instructions.