

MISCELLANEOUS CONCRETE

1 General

1.1 RELATED WORK

.1 Coordinate the requirements of this section with all other sections, including but not limited to:

- .1 Section 01410 Testing Laboratory Services
- .2 Section 02210 Rough Grading
- .3 Section 02233 Granular Base
- .4 Section 02723 Pipe Culverts
- .5 Section 02810 Irrigation
- .6 Section 02831 Chain Link
- .7 Section 02842 Steel Bollards
- .8 Section 02870 Site Furnishings
- .9 Section 02871 Play Equipment

1.2 QUALITY CONTROL

.1 **City of Saskatoon, Parks Branch** to approve concrete construction.

.1 Submit for concrete material before delivery to site:

- .1 Name of supplier.
- .2 Class and compressive strength of concrete.
- .3 Other information requested to verify product quality.

.2 Notify **City of Saskatoon, Parks Branch** when Contractor schedules delivery of concrete and intends placement of concrete.

- .1 Schedule delivery and placement of above ground concrete when outside temperature is above 2 degrees C and rising, unless hording is specified.
- .2 Schedule delivery and placement of in ground concrete when outside temperature is above -5 degrees C and rising, unless approved by **City of Saskatoon, Parks**. Insulation required.

1.3 INSPECTION

.1 Notify **Consultant** for inspection of:

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- .1 Layout and location of concrete work.
- .2 Granular base preparation, formwork and footing excavations.
- .3 Concrete installation and finishing work.

1.4 TESTING

- .1 Concrete work is subject to analysis by an approved testing laboratory service include:
 - 1. Compressive Strength (3 cylinders).
 - 2. Slump.
 - 3. Air Content.

2 Products

2.1 CONCRETE

- .1 Minimum comprehensive strength of concrete requirements: 25 MPa at 28 days, unless otherwise noted.
- .2 Concrete requirements CSA A23.1-04/A23.2-04.
- .3 When no preliminary strength test of concrete is made, water-cement ratio not to exceed values per CSA A23.1-04, Section 4.3.5.
- .4 Consistency of the concrete requirements; slump not to exceed 100mm or be less than 50mm.
- .5 Air content of hardened concrete to conforming with CSA A23.1-04, Section 4.4.4.2.
- .6 Sulphate resistant cement (CSA designation HS) is required for all concrete, per CSA A23.1-04, Table 6.
- .7 Proportions of concrete mixture to work readily into corners and angles of forms and around reinforcement.

3 Execution

3.1 LAYOUT

- .1 Establish and maintain line and grade controls using appropriate survey personnel and equipment.
 - .1 Contractor is responsible for layout accuracy.
- .2 Establish layout of concrete work accurately as required per drawings, ensuring proper depth of concrete.

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- .1 Contractor is required to stake layout of concrete work, construct formwork and obtain approval before placement start.

3.2 SUB GRADE PREPARATION

- .1 See Section 02210 - Rough Grading.
- .2 Excavate to depths required for installation specified.
 - .1 Remove all loose material in excavations and compact with equipment suitable for the Work.

3.3 GRANULAR BASE FOR CONCRETE PADS

- .1 See Section 02233.

3.4 CONCRETE DELIVERY AND INSTALLATION

- .1 Equipment for transporting concrete requirements: cleaned. Areas to receive concrete requirements; free of debris and ice.
 - .1 Convey concrete from mixer to place of final deposits.
 - .2 Equipment for chuting, pumping and pneumatically conveying concrete requirements; size and design to ensure continuous flow of concrete to final destination.
 - .3 Re-tempered or concrete contaminated by foreign material is prohibited.
- .2 Place concrete in final position to avoid segregation due to re-handling or flowing.
 - .1 Concrete placement rate requirements; plastic and flowing only.
 - .2 No interruption of concrete placement per area is allowed between start and finish.
 - .3 Protect concrete from hot weather or wind with windbreaks, sunshades, fog sprays or other devices as required.
 - .4 Protect concrete from cold and freezing temperatures with hoarding or insulation as required.
 - .1 Placement of concrete against frozen surfaces is not allowed.
- .3 Consolidate concrete thoroughly by mechanical vibration during placement.
 - .1 Vibrator requirements; type and design suitable for the work.
 - .2 Vibration application requirements: at the point of deposit and in areas of freshly deposited concrete.

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- .3 Vibrators are required to move constantly in and out of concrete and applied at points uniformly spaced for optimum visible effectiveness.
- .4 Vibration in one location can not draw a pool of grout from the surrounding concrete.
- .5 Apply vibration to ensure distribution of surface concrete effectively, no contact or damage to forms is allowed.
- .6 Vibration directly to reinforcement or set concrete is not allowed.
- .7 Vibration to make concrete flow into forms over distances causing segregation is not allowed.
- .8 Spade areas inaccessible by vibrator to ensure smooth surfaces and dense concrete.

3.5 CONCRETE FOOTINGS

- .1 Preparation requirements:
 - .1 Remove water from deposit place before concrete placement.
 - .2 Install accessories; support posts, anchor bolts, pipes, sleeves, frames, etc., as specified.
 - .3 Install plum, level and to design elevations as indicated.
 - .4 Support accessories during installation and curing to prevent movement.

3.6 CONCRETE PADS

- .1 Preparation requirements:
 - .1 Forms; wet or oily including masonry filler units.
 - .2 Reinforcement material; clean of dirt, loose rust, mill scale, and other coatings.
- .2 Screed and level per drawings and details.

3.7 FINISHING

- .1 Finished concrete surfaces requirements: profile and cross-section of 6.0+/- mm, no depressions exceeding 3mm as measured with 3m straight edge.
- .2 Trowel concrete surface per drawings and details.
- .3 Provide construction joints and saw cuts for concrete surfaces.

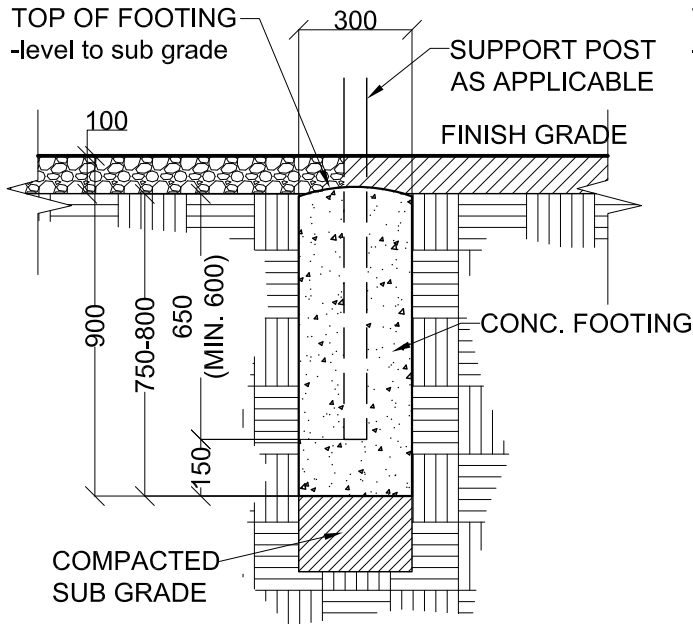
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3.8 CLEAN-UP

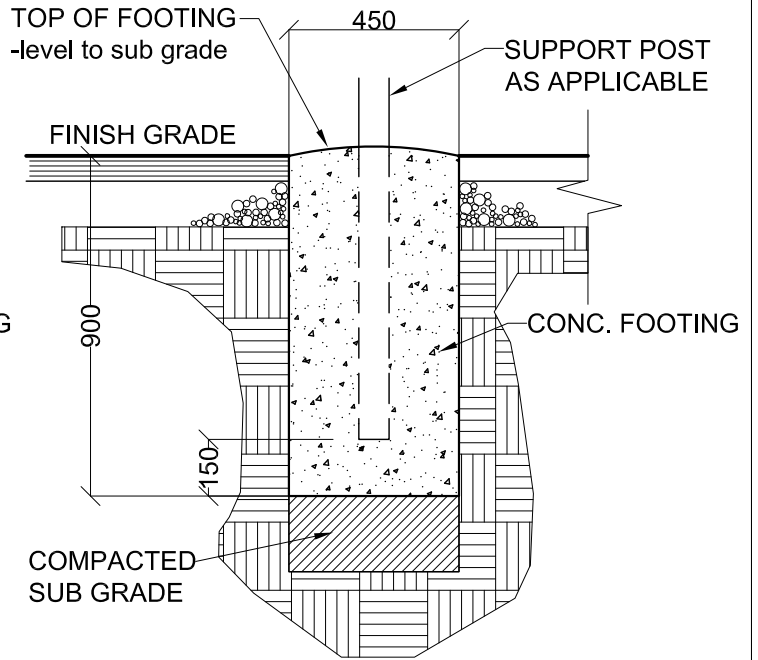
- .1 Clean adjacent walks and road surfaces at the end of each working day.

END OF SECTION

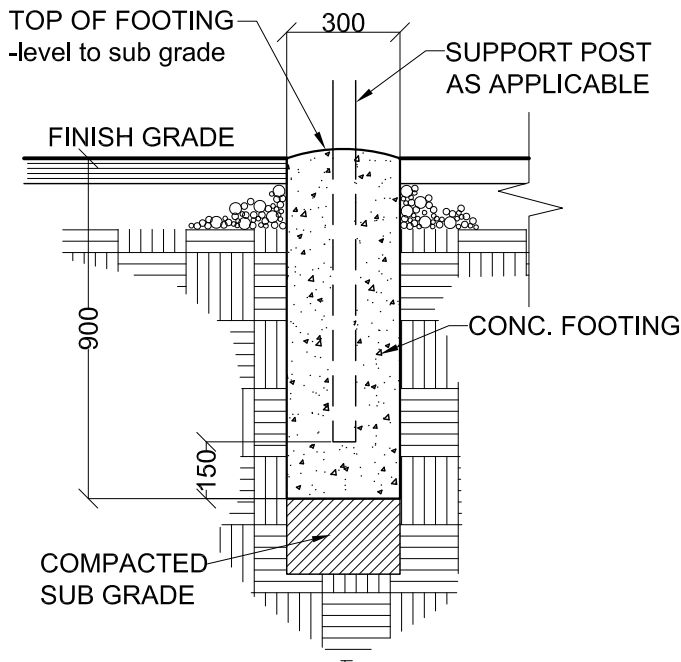
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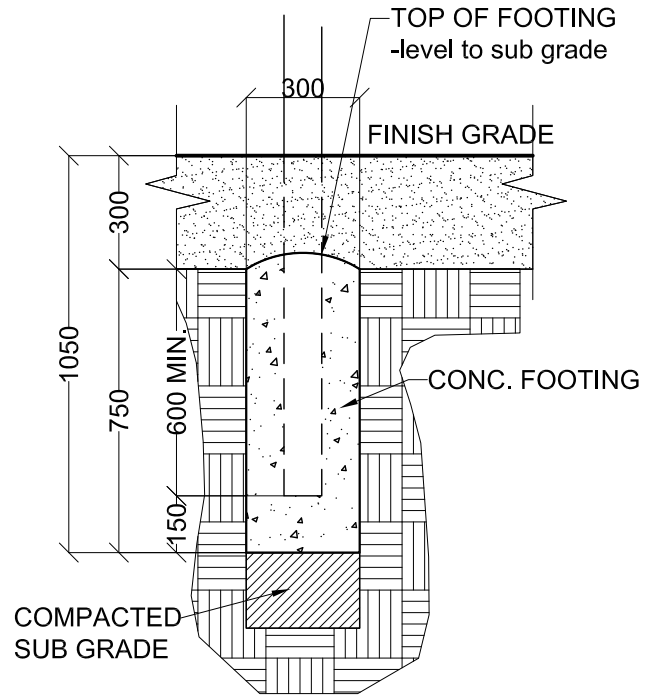
CONCRETE FOOTING CRUSHER
DUST OR PLANTING BED



PICNIC TABLE CONCRETE FOOTING
ASPHALT / CONCRETE / UNIT PAVING



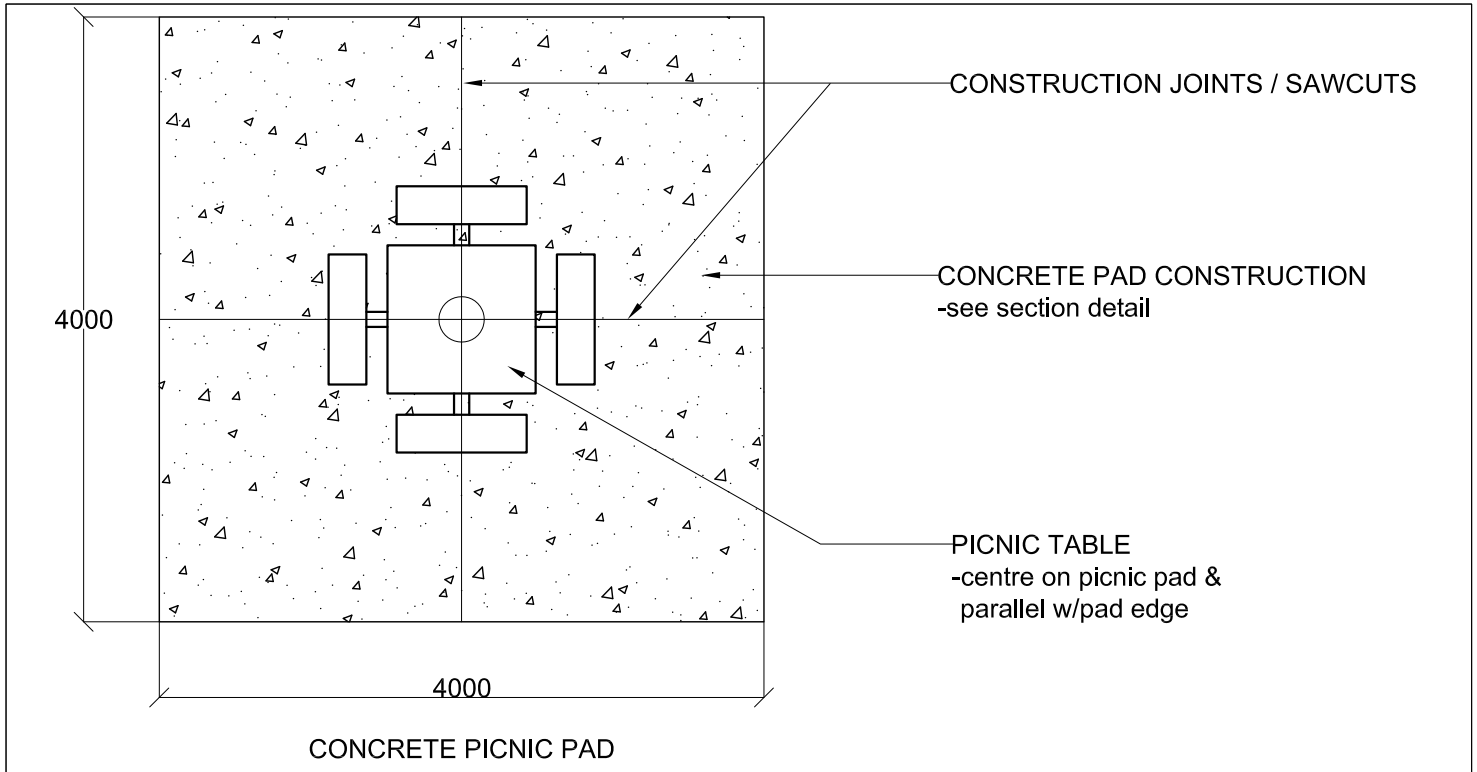
CONCRETE FOOTING
ASPHALT / CONCRETE / UNIT PAVING



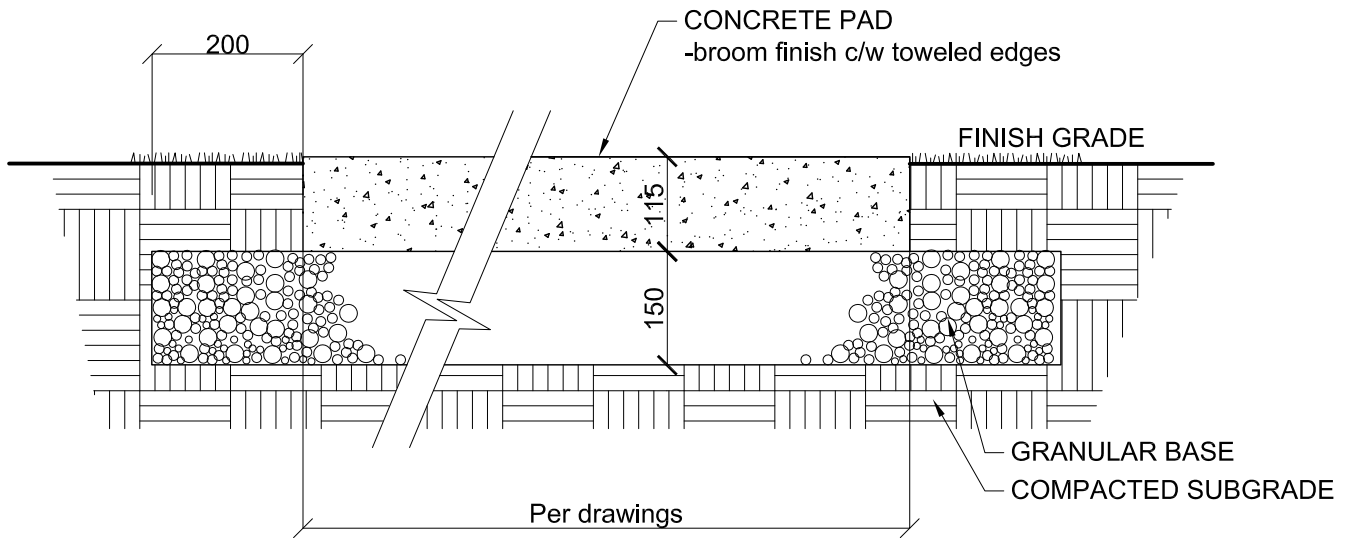
CONCRETE FOOTING
PLAY EQUIPMENT

NOTE:
1. All units are in millimeters U.N.O.

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PLAN
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NOTE:

1. All units are in millimeters U.N.O.
2. Concrete pad to have 2% crossfall in the direction of surface drainage flow (refer to grading plan).
3. Depth and configuration of concrete may vary, refer to all details and drawings.

SECTION
1:10

	Drawing Title <h2 style="text-align: center;">Concrete Pad</h2>		Drawing No. <h2 style="text-align: center;">02523-02</h2>
	Drawn: HMK	Checked: AO	Date Y/M/D 09/11/23
			2012 Standard Detail

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