SARGENT PARK SKATEPARK — Skate Plaza Grading and Drainage Plan

Plan (1/7) — SKATE PLAZA - GRADING AND DRAINAGE, Scale: 1:150

Refer to L3 Site Grading Plan

5%

33.83

33.90

33.90

Perimeter Weeping Tile / Drainage System Refer to 3/D2

1%

1%

34.01

33.95

1.4%

33.90

34.10

HP

Perimeter Weeping Tile / Drainage System Refer to 3/D2

34.10   34.10   34.03

1%

32.60

1%

33.90   33.98

1.3%

CB

33.90

RIM 32.52
INV 32.12
River Bottom Catch Basins
Refer to 2/L7

River Bottom Trench Drain
Refer to 3/L7

1%

32.60

32.60

TC 34.4
BC 34.25
BC 33.90

33.87

34.20

Landscape Grading This Area to be Determined on Site

34.30

2%   1%

34.15   34.15

HP

34.30

TC 34.4

33.87   8%   34.20

33.90   34.20

150mm Dia. HDPE Pipe @ 0.5% slope

1%

34.05   34.05

1.2%

CB

33.90   33.90

1%

RIM 32.51
River Bottom Catch Basins
Refer to 2/L7

1%

32.60

32.60

150mm Dia. HDPE Pipe @ 0.5% slope

33.97   33.90

33.90

Refer to L3 Site Grading Plan

2%

Connect Weeping Tile System to HDPE Pipe

Connect to Existing Catch Basin Refer to L3

2/7 — RIVER BOTTOM CATCH BASINS

0.6
0.1   0.3

Keyway Joint

(6)
(1)
(2)
(3) (4) (5)

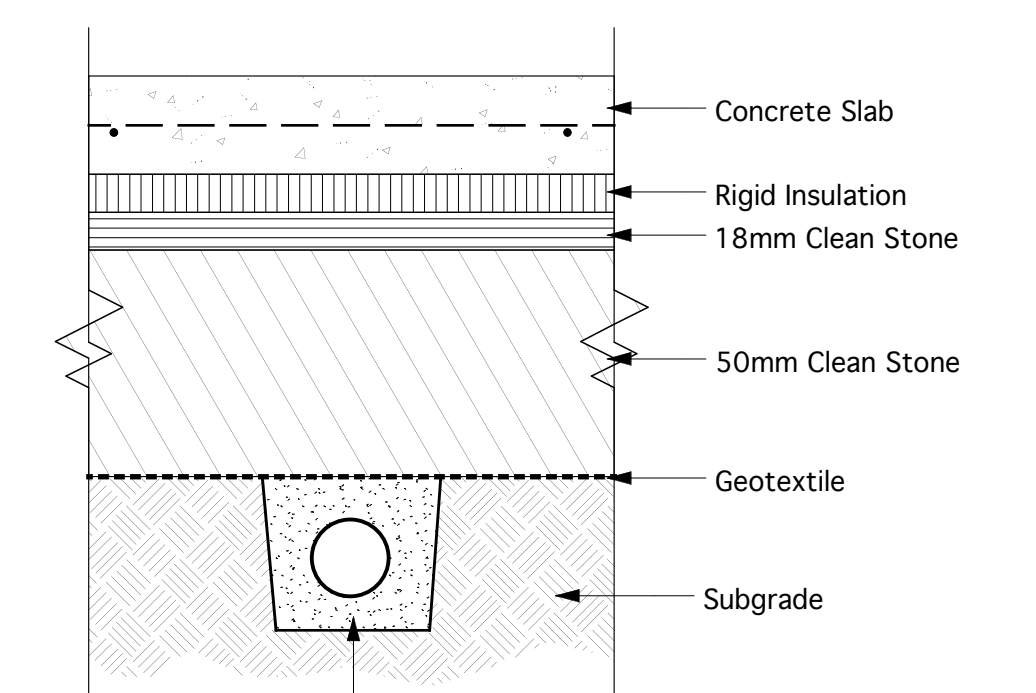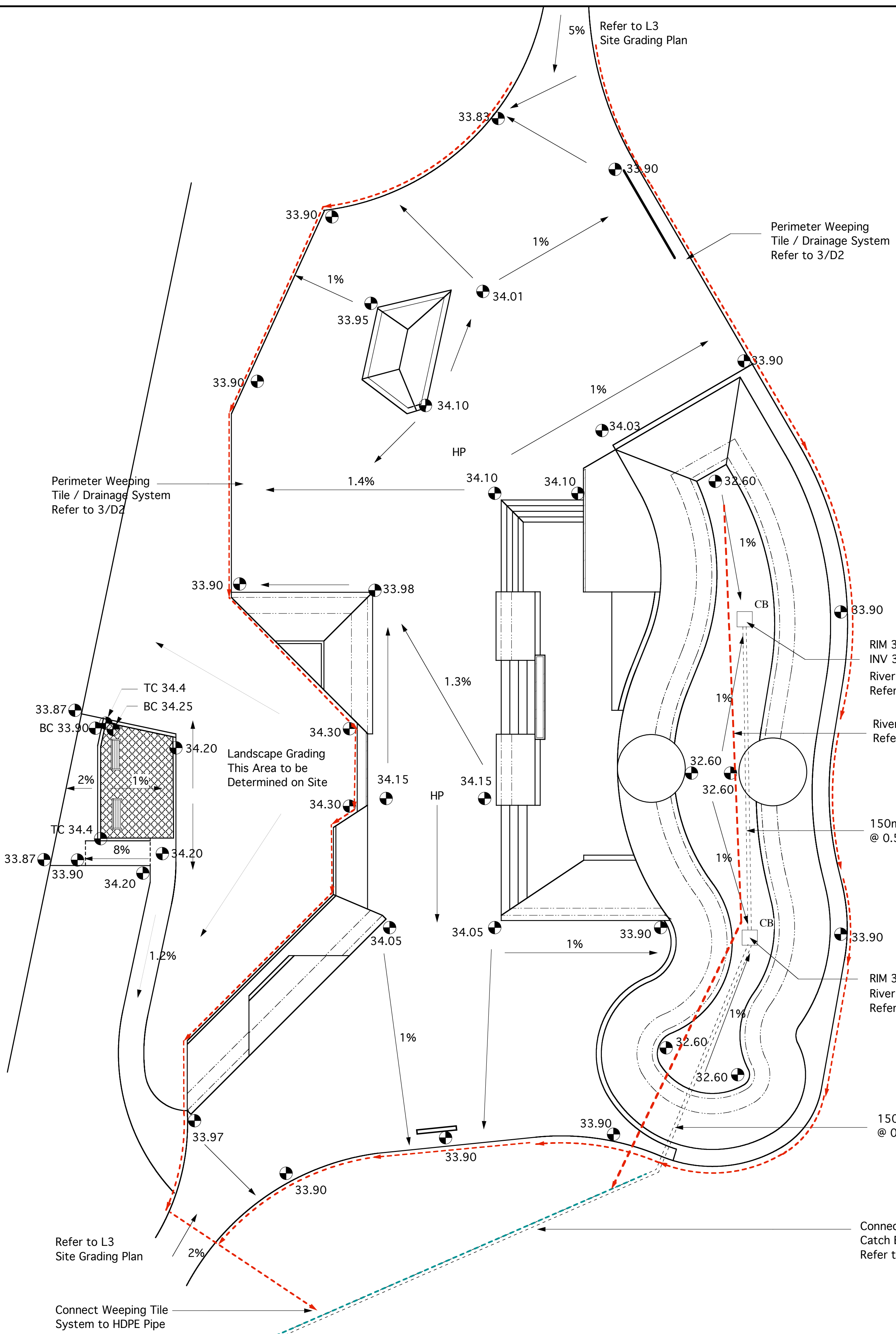(FOR LENGTH, SEE GRADING PLAN FOR INVERT ELEVATION)

95% COMPACTED SUBGRADE

(1) NDS 300 X 300 SQUARE GRATE, MANGANESE BRONZE, SET TOP OF GRATE FLUSH WITH ADJACENT CONCRETE

(2) NDS 150 RISER

(3) NDS 300 CATCH BASIN

(4) NDS UNIVERSAL OUTLET(S)

(5) DRAIN / SEWER PIPE

(6) CONCRETE SLAB. SEE CONSTRUCTION PLAN.

3/7 — RIVER BOTTOM TRENCH DRAIN

Concrete Slab
Rigid Insulation
18mm Clean Stone
50mm Clean Stone
Geotextile
Subgrade

100mmø Big 'O' Drain Pipe
- 150x150 Trench
- 10mm Pea stone backfill

Drainage Design Notes

1. Rational Formula Used: Skate River Bottom Area
   $Q = CIA$ for 5 Year Strom
   $Q = CIA$
   $C = .9$ Given
   $I = 4.31$ $I = K/t + 8^.828$ $K = 47.2$ $t = 10$ min. $b = .828$
   $A = .228$ Acres

1.1 Design Flow $CFS = I \times C \times A$ .88 CFS

2. Rational Formula Used: Skate Plaza Area
   $Q = CIA$ for 5 Year Strom
   $Q = CIA$
   $C = .9$ Given
   $I = 4.31$ $I = K/t + 8^.828$ $K = 47.2$ $t = 10$ min. $b = .828$
   $A = .33$ Acres

2.1 Design Flow $CFS = I \times C \times A$ 1.28 CFS

3.00 Rational Formula Used: Turf Area c/w drain tile
   $Q = CIA$ for 5 Year Strom
   $Q = CIA$
   $C = .1$ Given
   $I = 2.99$ $I = K/t + 8^.828$ $K = 47.2$ $t = 20 + 8$ min. $b = .828$
   $A = 1.24$ Acres

3.1 Design Flow $CFS = I \times C \times A$ .37 CFS

4 Proposed System

4.1 Given that storm water drains to an existing system, the calculation indicate that event load to the existing system is insignificant.

4.2 Direct connect to existing CB wwith 150mm Std. pipe.

Title Block

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LANDSCAPE ARCHITECTURE • URBAN DESIGN • GOLF COURSE ARCHITECTURE

ARTIFEX

DO NOT SCALE DRAWINGS

	description	date
5		
4		
3	Released for Tender	15-09-06
2	99% Review	6-09-06
1	90% Review	24-08-06
0	70% Review	27-07-06
revisions		

project title

SARGENT PARK SKATEPARK

WINNIPEG, MANITOBA

approved by

designed by

drawn by: LLW/MM   date: 25 August 2006

Client:

Winnipeg

drawing title

SKATE PLAZA GRADING AND DRAINAGE PLAN

project no. 0517   sheet L7   revision no. 0