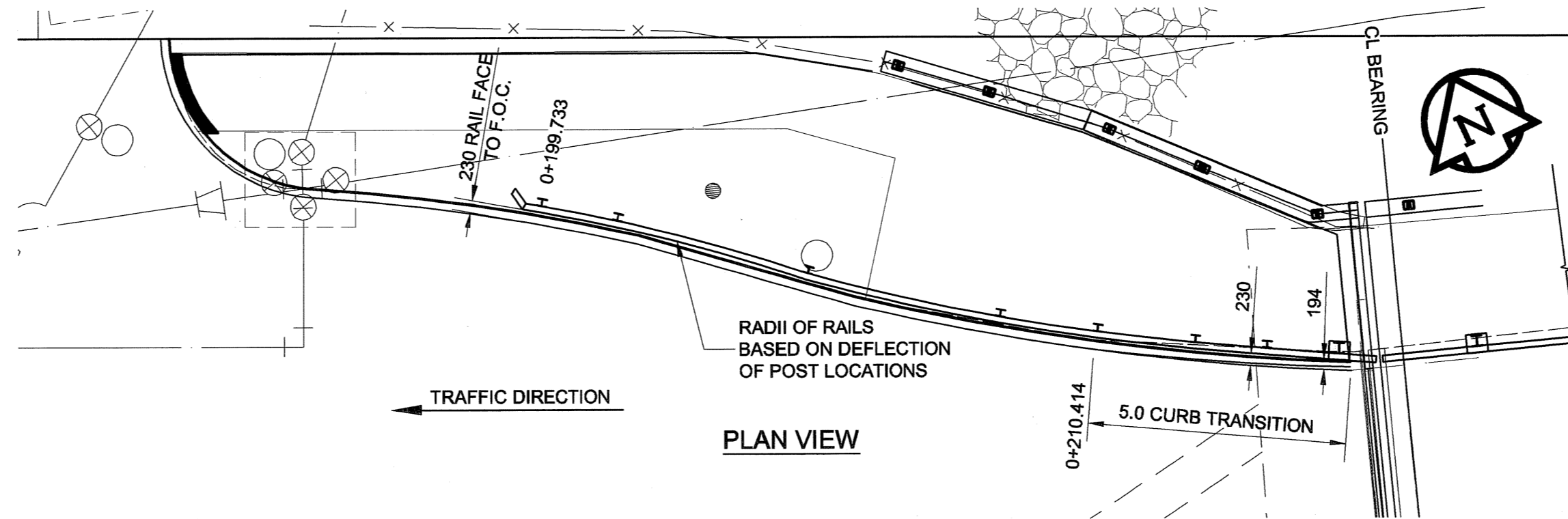
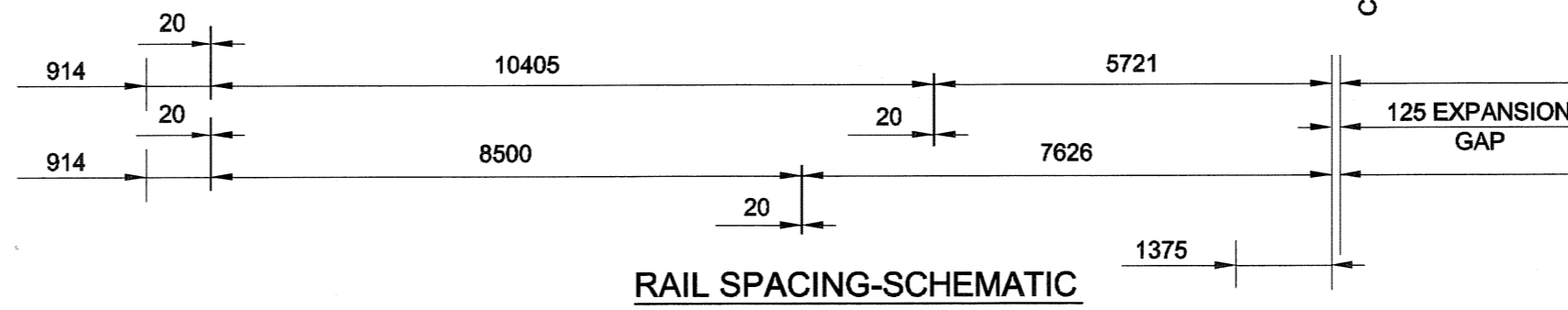
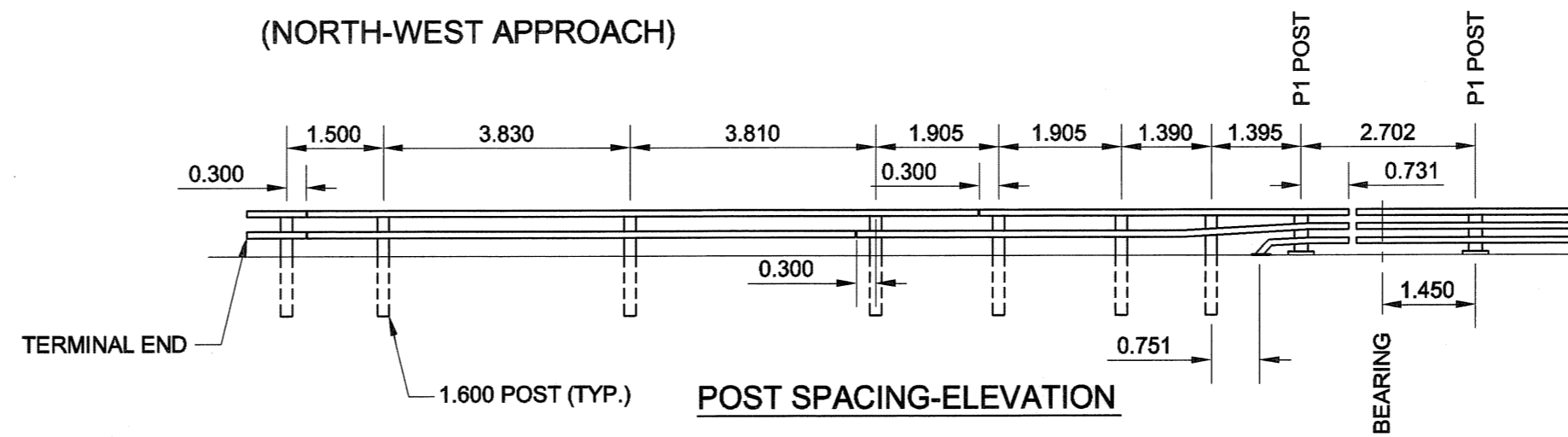
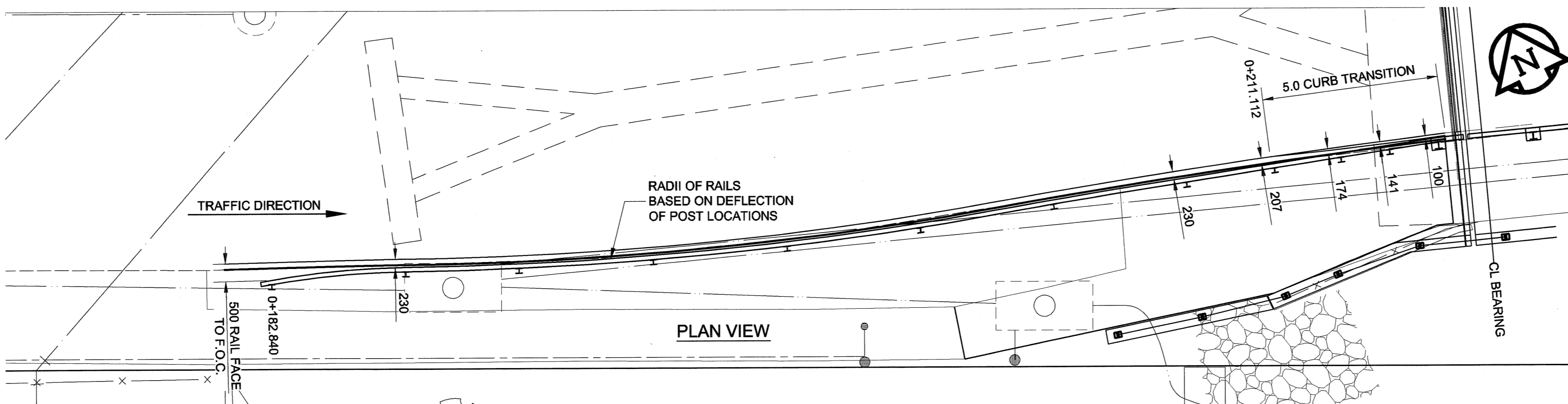
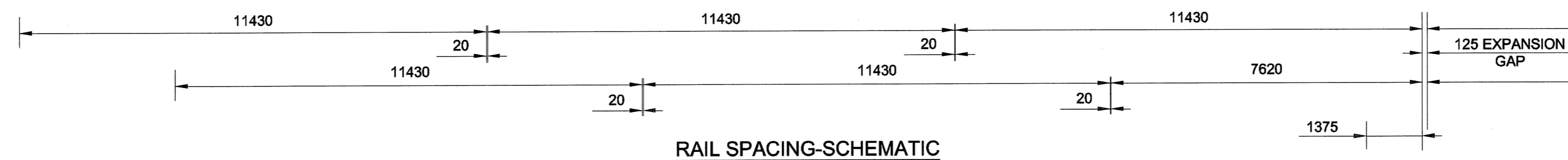
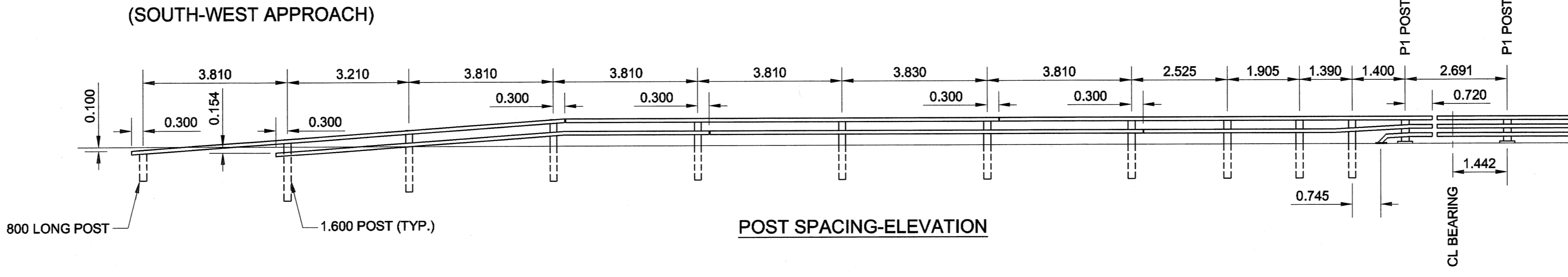


BILL OF MATERIALS		
ALL APPROACH GUARDRAILS		
ITEMS	NEW	SALVAGED
BARRIER RAIL 11430	1	12
BARRIER RAIL 10405	1	-
BARRIER RAIL 8500	1	-
BARRIER RAIL 7620	4	-
BARRIER RAIL 5721	1	-
TERMINATION RAIL-1375	4	-
TERMINAL END SECTION -915	2	-
STANDARD SPLICE BAR	4	10
BARRIER POST "P1" TYPE-650 LONG	3	1
BARRIER POST-1600 LONG	14	20
BARRIER POST-800 LONG	3	-
RAIL CLAMP BAR	66	100
RAIL PLATE (173x285x15 TH.) CW BOLTS	4	-
BASE PLATE (400x350x50 TH.) CW BOLTS	3	1
13-13x25 SS HEX HEAD CAP SCREWS	252	136
27 ODx14 IDx2 TH. SS WASHERS	252	136
RAIL END CAPS	11	3
ALUMINUM SHIMS	AS REQ'D.	-



(SOUTH-WEST APPROACH)



NOTES
 1. RAIL LENGTHS INDICATED ARE BASED ON LINEAR SCHEMATIC LAYOUT. ACTUAL TRUE LENGTHS OF RAILS MAY INCLUDE ARC LENGTHS BASED ON RADII LOCATED BY ANGULAR DEFLECTION OF POST LOCATIONS. ACTUAL RAIL LENGTHS SHOULD BE BASED ON FIELD DIMENSIONING OF POST LOCATIONS.

PLOT SCALE = 1:0.25
 AutoCAD 15.08 P10269335-03VALDIRedwood Bridge.dwg Redwood Bridge Site.dwg 2003-08-25 1:29pm DTD

Bid Opportunity No. 257-2005
APEGM
 Certificate of Authorization
 UMA Engineering Ltd.
 No. 256 Expiry: April 30, 2008

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

THE CITY OF WINNIPEG
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

REDWOOD BRIDGE
 REHABILITATIVE MAINTENANCE AND
 RELATED WORKS
 WEST APPROACH PAVEMENT RESURFACING
 ALUMINUM BALANCED BARRIER RAIL
 POST, RAIL & CURB TRANSITION LAYOUT

CITY DRAWING NUMBER B113-05-72
 SHEET 72 OF 74
 REV 0

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
---	GAS	○	○	MANHOLE	●	---	CONCRETE	---
---	MTS	□	□	CATCH BASIN/CATCH PIT	■	---	ASPHALT	---
---	HYDRO	△	△	C & G INLET W/BOX	▲	---	MONOLITHIC BULLNOSE	---
---	VIDEON	⊙	⊙	TREE	⊗	---	CONCRETE SIDEWALK	---
---	TRAFFIC SIGNALS	TH-12	TH-12	TEST HOLE	⊕	---	PAVING STONE	---
---	LAND DRAINAGE SEWER	---	---	PROPERTY LINE	---	---	TOPSOIL & SOD	---
---	SANITARY/COMBINED SEWER	---	---	SURVEY BAR	---	---	GRAVEL	---
---	CATCHBASIN LEAD	---	---	FENCE	---	---	RAMP CURB	---
---	WATERMAIN	---	---	BACK OF CURB	---	---	REMOVAL	---
---	SUBDRAIN	---	---	ELEVATION	---	---		---
---	DITCH	---	---		---	---		---

LOCATION APPROVED
 UNDERGROUND STRUCTURES

DATE

NOTE:
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR CONSTRUCTION	05/07/05	MP

UMA Engineering Ltd.
 Consulting • Engineering • Construction • Management Services

DESIGNED BY JGK
 CHECKED BY RPB
 DRAWN BY DID
 APPROVED BY BWS
 HOR. SCALE: 1:100
 VERTICAL: 1:100
 ACCEPTED BY [Signature]
 DATE 2/27/07

ENGINEER'S SEAL
 PROVINCE OF MANITOBA
 REGISTERED PROFESSIONAL ENGINEER
 BRUCE W. BIGLOW
 05-07-06
 CONSULTANT DRAWING NO. 41-09-0265-376-00