



1. REINFORCING STEEL
  - ALL REINFORCING STEEL TO BE NEW DEFORMED BARS
  - BARS AND TIES HOT DIP GALVANIZED
  - COVER 75 mm UNLESS OTHERWISE NOTED
  - MATCH EXPOSED WALL FINISH TO EXISTING WALLS
2. ANCHOR BOLTS
  - STAINLESS STEEL "J BOLTS" PROVIDED BY CONTRACT ADMINISTRATOR
  - ANCHOR BOLTS TO BE PLACED USING TEMPLATE PROVIDED BY CONTRACT ADMINISTRATOR
3. CONCRETE - CONCRETE MATERIAL, EXCLUDING THE TREE WELL, SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES IN ACCORDANCE WITH CSA A23.1-04:
  - CLASS OF EXPOSURE: S-1
  - COMPRESSIVE STRENGTH @ 56 DAYS - 35 MPa
  - WATER/CEMENTING MATERIALS RATIO = 0.4
  - AIR CONTENT: CATEGORY 2 PER TABLE 4 OF CSA A23.1-04 (4-7%)
  - CEMENT - TYPE HS OR Hsb, HIGH SULPHATE RESISTANT
4. TOP OF PILE SHALL BE FORMED WITH A TUBULAR FORM (SONOTUBE) FOR 500 mm DEPTH



	WATERMAIN	150 WM		HYDRO		150 mm W.M.		150 mm W.M.
	VALVE			CONCRETE				
	LAND DRAINAGE SEWER	300 LDS		PLANING		300 mm L.D.S.		300 mm L.D.S.
	WASTE WATER SEWER	250 WWS		PAVING STONES		250 mm W.W.S.		250 mm W.W.S.
	MANHOLE			PROPERTY LINE				
	CATCH BASIN			PARALEGIC RAMP				
	CURB INLET							
	JUNCTIONS							
	CULVERT							
	GAS	100 GAS						
EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED

**UNDERGROUND STRUCTURES**

SUPV. U/G STRUCTURES COMMITTEE \_\_\_\_\_ 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.

B.M. ELEV.			

  

DESIGNED BY	SSR
DRAWN BY	PMW
CHECKED BY	
APPROVED BY	
HOR. SCALE	
VERTICAL	

  

NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	28/06/10	DBW

**MCGOWAN-RUSSELL**
  
  
  
**DILLON CONSULTING**

ENGINEER'S SEAL

CONSULTANT PROJECT NUMBER

**09-1545**

**THE CITY OF WINNIPEG**  
TRANSIT DEPARTMENT

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ON STREET TRANSIT PRIORITY IMPROVEMENTS - PHASE 3

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PORTAGE CORRIDOR - STRUCTURAL DETAILS

CITY DRAWING NUMBER

**P-3324-6**

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SHEET **6** OF **16**

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CONSULTANT DRAWING NUMBER