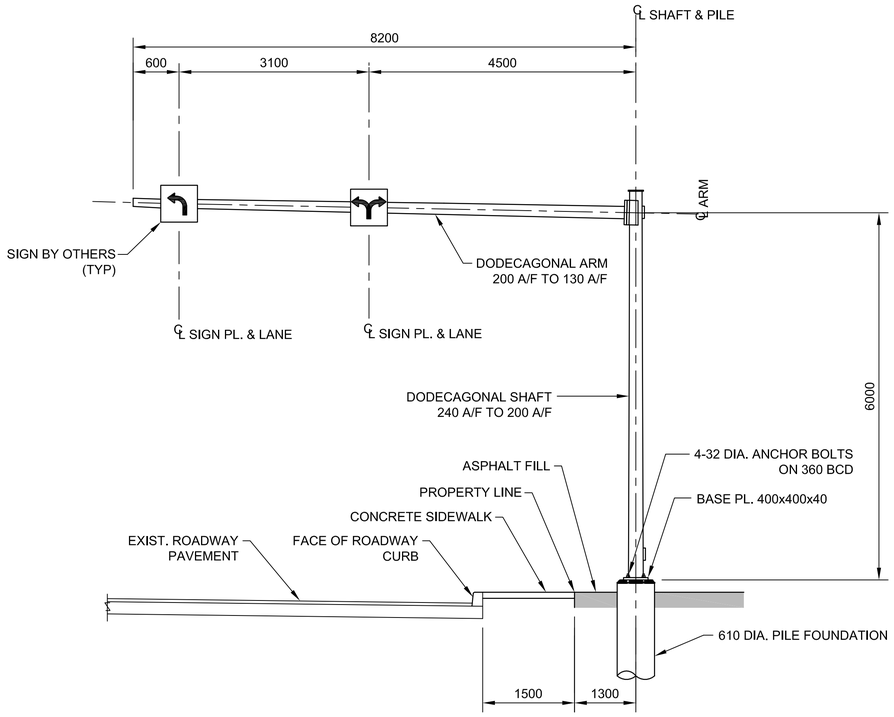
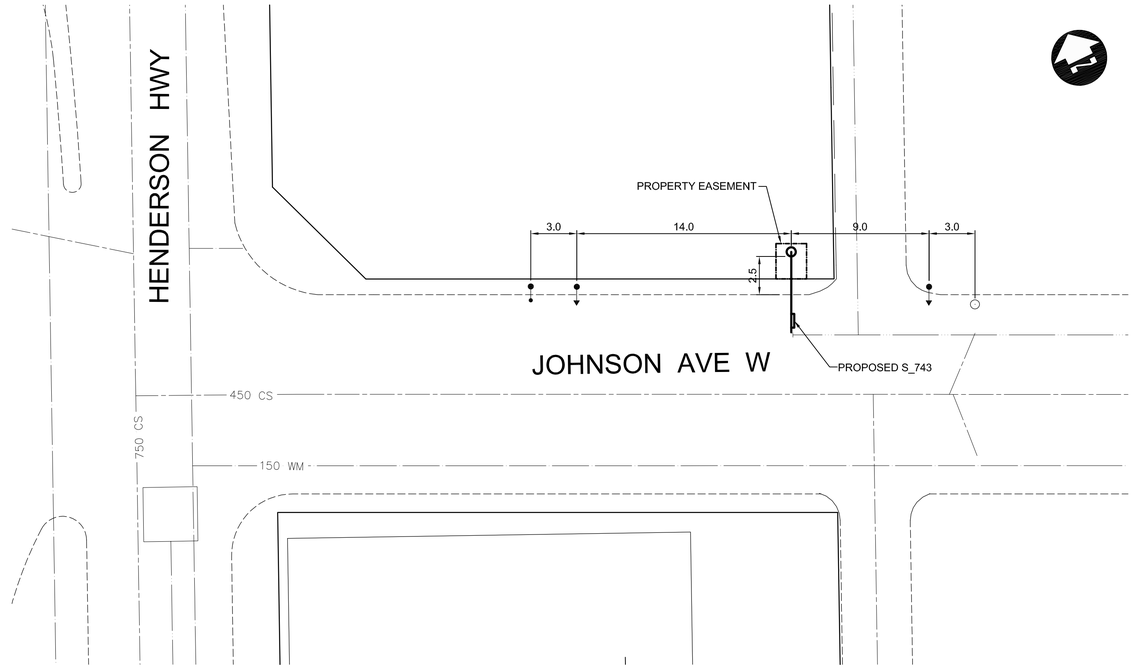


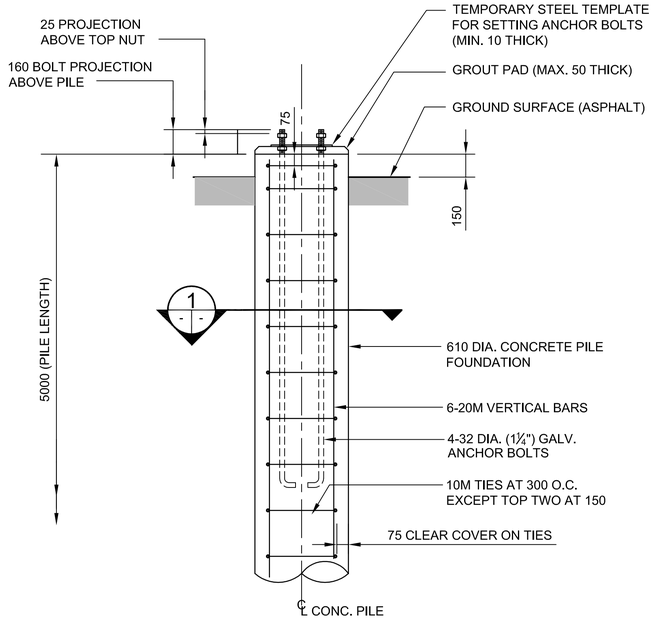
SITE ELEVATION - LOOKING WEST

1: 50 OVERHEAD SIGN STRUCTURE NO. S_743



S_743

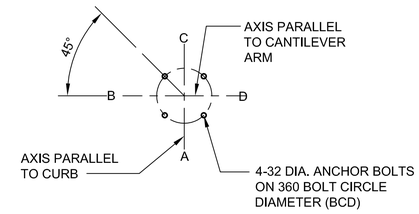
SCALE - 1:200



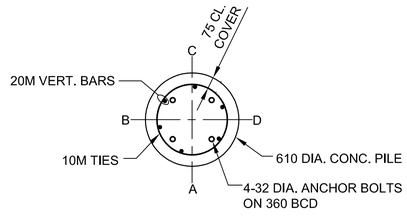
ELEVATION

CONCRETE PILE FOUNDATION DETAIL

1:20



ANCHOR BOLTS LAYOUT



SECTION 1 (- | -)

PILE CONSTRUCTION NOTES

1. REINFORCING STEEL
   - CSA G30.12 GR. 400
   - VERTICAL BARS FULL LENGTH OF PILE
   - HOT DIP GALVANIZED

2. ANCHOR BOLTS
   CSA G40.21 GR. 300W
   4-32 (1¼") DIA. x 1500 LONG + 150 HOOK
   EACH BOLT C/W 2 NUTS & 2 WASHERS
   TOP 300 THREADED
   HOT DIP GALVANIZED FULL LENGTH
   BCD = BOLT CIRCLE DIAMETER TO CENTRE OF BOLT GROUP

3. ANCHOR BOLTS SHALL BE ALIGNED WITH A TEMPORARY STEEL TEMPLATE. PLACEMENT OF ANCHOR BOLTS AND CONCRETE WITHOUT THE TEMPLATE WILL NOT BE PERMITTED.

4. TOP OF PILE SHALL BE FORMED WITH A TUBULAR FORM (SONOTUBE) AS FOLLOWS:
   (a) BORED PILES - MIN. 1000 mm BELOW FINAL GRADE
   (b) "HYDRO-JET EXCAVATED" PILES - MIN. 1500 mm BELOW FINAL GRADE

5. CONTRACTOR SHALL REMOVE THE BASE TEMPLATE, NUTS AND FORM, FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.

6. CONCRETE MIX DESIGN
   CONCRETE MATERIAL SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES IN ACCORDANCE WITH CSA A23.1-04:
   i) CLASS OF EXPOSURE: S-1
   ii) COMPRESSIVE STRENGTH @ 56 DAYS = 35 MPa
   iii) WATER/CEMENTING MATERIALS RATIO = 0.4
   iv) AIR CONTENT: CATEGORY 2 PER TABLE 4 OF CSA A23.1-04 (4-7%)
   v) CEMENT - TYPE HS OR HSb, HIGH SULPHATE RESISTANT.

150 WM	WATERMAIN	150 WM	HYDRO	HYDRO	HYDRO	150 mm W.M.	WATERMAIN	150 mm W.M.
⊹	HYDRANT	◆	MTS	M.T.S.	MTS	⊣	HYDRANT	⊣
⊗	VALVE	⊗		CONCRETE			VALVE	
300 LDS	LAND DRAINAGE SEWER	300 LDS		ASPHALT		300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.
250 WWS	WASTE WATER SEWER	250 WWS		PLANING		250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.
○	MANHOLE	●		SIDEWALK			℄ PROFILE	
□	CATCH BASIN	■		PAVING STONES			NORTH/WEST GUTTER	
▽	CURB INLET	▼		PARTIAL DEPTH REPAIR			SOUTH/EAST GUTTER	
	JUNCTIONS			PROPERTY LINE			NORTH/WEST T/LANE	
	CULVERT		⊕	SURVEY BAR			SOUTH/EAST T/LANE	
100 GAS	GAS	100 GAS		PARAPLEGIC RAMP				
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.

NO.	REVISIONS	DATE	BY
2	ISSUED FOR TENDER	06/19/09	TJH
1	ISSUED FOR REVIEW	06/04/09	TJH

DESIGNED BY SSR
DRAWN BY TJH
CHECKED BY NBU
APPROVED BY
HOR. SCALE AS NOTED
VERTICAL
DATE

DILLON CONSULTING

RELEASED FOR CONSTRUCTION
DATE

ENGINEER'S SEAL
PROVINCE OF MANITOBA — ORIGINAL STAMPED BY S.S. RIHAL 06/19/09 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER
09-1545

Winnipeg

THE CITY OF WINNIPEG
TRANSIT DEPARTMENT

ON STREET TRANSIT PRIORITY IMPROVEMENTS - PHASE 3

OHSS NO. S_743 (1 OF 2) JOHNSON AVE. WEST WESTBOUND, EAST OF HENDERSON HWY.

CITY DRAWING NUMBER
S743-09-01

SHEET 20 OF 23

CONSULTANT DRAWING NUMBER

G:\CAD\09\1545\Contract\OHSS\OHSS—STRUCTURAL—DETAILS—2.dwg