



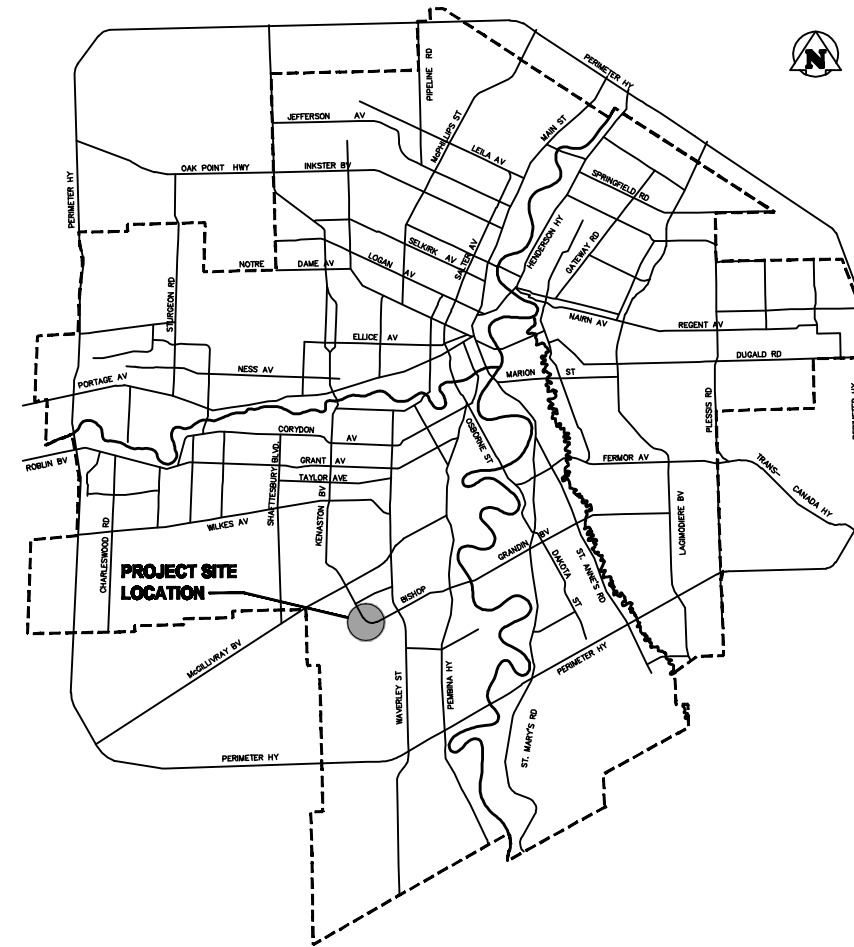
THE CITY OF WINNIPEG

PUBLIC WORKS DEPARTMENT
TRANSPORTATION ENGINEERING DIVISION

KENASTON BOULEVARD AT BISHOP GRANDIN BOULEVARD

CONCRETE CULVERT EXTENSION

BID OPPORTUNITY No. 1003-2010



DESIGN DATA

DESIGN SPECIFICATION - CAN/CSA-S6-06
LIVE LOAD - CL625 - DESIGN LANE LOAD
REINFORCING STEEL - CSA G30.18 - M92 (R2002) GRADE 400W
CONCRETE STRENGTH AT 28 DAYS - 35 MPa

GENERAL NOTES

THESE DRAWINGS TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATIONS.
CONTRACTOR SHALL SITE VERIFY ALL EXISTING DIMENSIONS.
INVERT ELEVATION OF EXISTING CULVERT AT DOWNSTREAM END IS APPROXIMATE ONLY. CONTRACTOR SHALL SITE VERIFY THIS ELEVATION.

REINFORCING

CONCRETE CLEAR COVER TO REINFORCEMENT 65mm FOR TOP FACE OF CULVERT, 50mm FOR ALL OTHER SURFACES.
SUPPLY SUPPORT BARS FOR MAIN REINFORCEMENT AS REQUIRED.

LAP SPLICE SCHEDULE

| BAR SIZE | EMBEDMENT | TENSION LAP |
|----------|-----------|-------------|
| 15M | 400 | 550 |
| 20M | 500 | 700 |
| 25M | 800 | 1100 |

LAP SPLICE SCHEDULE IS FOR CLASS B SPLICE UNLESS NOTED OTHERWISE.

LOCATE REINFORCING SPLICES NOT INDICATED ON THE DRAWINGS AT POINTS OF MINIMUM STRESS. LOCATIONS OF SPLICES TO BE APPROVED BY THE ENGINEER.

BEFORE PLACING REBAR ENSURE IT IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER DELETERIOUS MATERIAL WHICH WOULD REDUCE THE BOND TO CONCRETE.

DRAWING INDEX

| DWG. NO. | DESCRIPTION | SHEET |
|------------|--|----------|
| C375-11-01 | COVER SHEET & DRAWING INDEX | 1 OF 13 |
| C375-11-02 | SITE PLAN - EXISTING | 2 OF 13 |
| C375-11-03 | SITE PLAN - DEMOLITION & EXCAVATION | 3 OF 13 |
| C375-11-04 | SITE PLAN - COMPLETION OF CULVERT | 4 OF 13 |
| C375-11-05 | SITE PLAN - COMPLETION OF FUTURE ROADS | 5 OF 13 |
| C375-11-06 | EXCAVATION & EARTHWORK DETAILS | 6 OF 13 |
| C375-11-07 | CONCRETE PLAN & ELEVATION | 7 OF 13 |
| C375-11-08 | CONCRETE SECTIONS & DETAILS | 8 OF 13 |
| C375-11-09 | REINFORCING DETAILS - SHEET 1 OF 3 | 9 OF 13 |
| C375-11-10 | REINFORCING DETAILS - SHEET 2 OF 3 | 10 OF 13 |
| C375-11-11 | REINFORCING DETAILS - SHEET 3 OF 3 | 11 OF 13 |
| C375-11-12 | REINFORCING BILL OF MATERIAL | 12 OF 13 |
| C375-11-13 | RETAINING WALL CONCRETE & REINFORCING | 13 OF 13 |

LIST OF ABBREVIATIONS

| | | | |
|---------|--------------------|--------|------------------------|
| ⊙ | AT | IB | IRON BAR |
| ALT. | ALTERNATING | I.F. | INSIDE FACE |
| ALUM. | ALUMINUM | L.G. | LONG |
| APPROX. | APPROXIMATE | MK. | MARK |
| AVE. | AVENUE | MAX. | MAXIMUM |
| B.C. | BEGINNING OF CURB | m | METRE |
| BOT. | BOTTOM | MIN. | MINIMUM |
| B/W | BOTH WAYS | mm | MILLIMETRE |
| C.I.P. | CAST-IN-PLACE | No. | NUMBER |
| CJ. | CONSTRUCTION JOINT | O.F. | OUTSIDE FACE |
| ⊕ | CENTRE LINE | O/C | ON CENTRE |
| C/W | COMPLETE WITH | O/O | OUTSIDE TO OUTSIDE |
| CONC. | CONCRETE | PL. | PLATE |
| CONT. | CONTINUOUS | QTY. | QUANTITY |
| CL. | CLEAR | R | RADIUS |
| CRES. | CRESCENT | REINF. | REINFORCEMENT |
| DBL. | DOUBLE | SHT. | SHEET |
| DIA. | DIAMETER | S.U. | SUBSTRUCTURE UNIT |
| DTL. | DETAIL | THK. | THICK |
| DWG. | DRAWING | TYP. | TYPICAL |
| E.C. | END OF CURB | T/O | TOP OF |
| E.E. | EACH END | U.N.O. | UNLESS NOTED OTHERWISE |
| E.F. | EACH FACE | U/S | UNDERSIDE |
| E.W. | EACH WAY | VERT. | VERTICAL |
| EQ. | EQUAL | WM | WATERMAIN |
| EQ. SP. | EQUAL SPACE | WP | WORKING POINT |
| EL. | ELEVATION | W/ | WITH |
| GALV. | GALVANIZING | | |
| GRAN. | GRANULAR | | |
| HORIZ. | HORIZONTAL | | |

LOCATION PREFIX

H - HEADWALL

REINFORCING MARK NUMBERING SYSTEM

eg: **H 25 15**
MARK SIZE OF BAR LOCATION PREFIX

SECTION AND DETAILS

| | | |
|--|---|--|
| | A | SECTION NUMBER OR DETAIL LETTER |
| | B | DRAWING WHERE SECTION OR DETAIL IS TAKEN |
| | C | DRAWING WHERE SECTION OR DETAIL IS DRAWN |



Stantec Consulting Ltd.

WINNIPEG

MANITOBA

RELEASED FOR CONSTRUCTION BY:

MICHELLE HARMS, P.ENG. DATE:

CONSULTANT DRAWING No.

G-001

CITY DRAWING No.

C375-11-01

CAD FILE DRAWING No.

04840g-001-727.dwg