PART E

SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.

E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available in Adobe Acrobat (.pdf) format on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at http://www.winnipeg.ca/matmgt.

E1.1.2 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

E1.2 The following Drawings are applicable to the Work:

Drawing No.	Drawing
05485	Ridgedale Wastewater Forcemain Renewal Jaymour Dr. to 1.8m E Fairway Pl Sta 2+24
05486	Ridgedale Wastewater Forcemain Renewal Fairway Pl.Sta 2+25 to Roblin Boulevard
05487	Ridgedale Crescent Wastewater Pumping Station
05488	Combined Sewer Renewals External Point Repairs Cornish Avenue MH at Furby Street to 1st MH E of Langside Street

E2. SOILS INVESTIGATION REPORT

E2.1 Further to GC:3.1 of the General Conditions, a geotechnical soils investigation has been done in the vicinity of the proposed works for the Ridgedale forcemain replacement Works to determine the character of the subsurface soil to facilitate the design of the Work. The soil logs are shown on Drawing No. 05485.

E2.2 Bidders are responsible for any interpretation they place on the supplied information and are expected to make such additional investigation of the soil as they feel necessary to satisfy themselves.

E2.3 Any test borings made by the Bidder shall be done in accordance with the requirements of the appropriate authority of the City of Winnipeg. Bidders shall notify the Contract Administrator prior to starting any soil boring operation.

E3. WASTEWATER FORCEMAIN INSTALLATION – RIDGEDALE CRESCENT

E3.1 Description

E3.1.1 The forcemain will be installed in accordance with CW 2110 except where revised , amended and supplemented in this specification.

E3.2 Materials

E3.3 The forcemain shall be one of the following materials

(a) 150 millimetre diameter PVC C900 pipe or,

(b) 150 millimetre diameter Terrabrute C900 pipe, or

(c) 200 millimetre diameter DR11 PE3408 polyethylene pipe (HDPE)

E3.4 Pipe, Fittings and Accessories PVC C900 Pipe

E3.4.1 All pipe, fittings, tapping sleeves, couplings and other accessories shall conform to the requirements of this specification. Products shall be approved for use in the city of Winnipeg in accordance with Specification CW 2110.

E3.5 Pipe Fittings and Accessories for Terra Brute C900 Pipe

E3.5.1 150mm diamenter PVC pipe for pulled in place applications shall be made from pipe stock conforming to AWWA C900 modified with a groove and retaining system.

E3.5.2 All spigot grooves and bell holes will be factory made. Under no circumstances will field grooving or drilling be permitted.

E3.5.3 The minimum dimension ratio of the grooved area on the spigot shall be 26, calculated by dividing the outside diameter of the grooved section by the thickness of the grooved section.

E3.5.4 The bell of the modified pipe shall be sized to accommodate an external ring and pin system on the portion of the bell between the gasket race and the end of the pipe. This portion of the bell shall have a minimum of 12mm diameter factory drilled holes as shown in table 1

Nominal Diameter	**Number of Factory Drilled Bell Holes**
150mm	12

Table 1 – Minimum Number of Bell Holes

E3.6 Internal rings shall be manufactured out of rolled steel sheet (24 gauge). Corrosion protection will be a powder coat.

E3.6.1 External rings will be rolled and welded steel plate (ANSI c-1040).

E3.6.2 Pins will be standard slotted type spring pins (ANSI B18.*.2). Pins may be factory cut.

E3.7 Pipe Fittings and Accessories for HDPE Pipe

E3.7.1 Join HDPE pipe sections together by means of thermal butt-fusion in general accordance with the manufacturer's instructions. Butt fusion shall produce a joint weld with strength equal to or greater than the tensile strength of the pipe itself.

E3.7.2 Join pipe sections together on-site and temporarily store the full length on the south boulevard of Ridgedale Crescent west of Jaymorr Drive.

E3.7.3 Sequence butt-fusion operation to have full pipe lengths stored on boulevard as short a time as possible.

E3.8 Connecting HDPE Pipe to Flanged Fittings

E3.8.1 Connect HDPE pipe to flanged fittings by using a flange assembly consisting of an HDPE stub-end butt-fused to the HDPE pipe and a ductile iron or steel backing flange and gasket.

E3.8.2 Allow HDPE pipe sufficient time to recover and rebound after pull-in before connecting to flanged fittings

E3.9 Horizontal Directional Drilling

E3.9.1 Horizontal directional drilling method in general accordance with ASTM Standard Guide F 1962 for “Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe of Conduit Under Obstacles, Including River Crossings”.

E3.9.2 Employ experienced personnel to operator the directional drilling and tracking equipment.

E3.9.3 Provide the Contract Administrator with the following information before beginning installation.

(a) Equipment specifications and capabilities

(b) Size of pilot hole.

(c) Number and size of pre-reams.

(d) Method of suspending, supporting and directing pipe during pullback.

(e) Type and capabilities of tracking system.

(f) Drilling fluid and cuttings management plan including type of drilling fluid, drilling fluid pressure and fluid containment.

(g) Management plan for “frac-outs”.

(h) Confirmation of entrance and exit locations.

E3.9.4 Maintain alignment of directional drilling as close as possible to the proposed plan and profile shown on Drawing No. 05485 and 05486 taking into account the capabilities of drilling equipment and the allowable stresses of HDPE pipe. Advise the Contract Administrator of deviations to line and grade as they occur for discussion and approval.

E3.9.5 Continuously monitor and track the drill bore in the pilot hole. Record the depth to the nearest 0.10 metres from ground surface at major changes in surface elevation, at maximum 10 metre intervals along flat surfaces and at horizontal and vertical changes in alignment. Spray paint a mark at the location the depth was recorded to allow the Contract Administrator to survey the coordinates of the location.

E3.9.6 Begin reaming operations to enlarge pilot hole after the Contract Administrator has accepted the pilot bore. The number and size of reaming heads is at the discretion of the Contractor.

E3.9.7 Operate and maintain a closed loop drilling fluid system if possible.

E3.9.8 Ensure drilling fluids and cuttings are contained and stored at entrance and exit hole locations in accordance with the management plan. Drilling fluid shall a no time be directed to the river, sewers, manholes or catch basins. Drilling fluid and cuttings shall be loaded, hauled from the site and disposed of at a site approved by the Contract Administrator.

E3.9.9 Provide a swivel when pulling pipe into bore hole to reduce torsional loads transmitted to the pipe.

E3.9.10 Cap end of pipe before pulling into bore hole to prevent matter and fluids from entering the pipe.

E3.9.11 Provide pipe rollers, side booms or other devices to support and protect pipe while pulling into bore hole.

E3.9.12 Continuously measure the pull back force on the pipe and do not exceed the maximum force allowed by the pipe manufacturer.

E3.10 Handling of HDPE Pipe

E3.10.1 Handle pipe in a manner that will not damage or deform the pipe.

E3.10.2 Replace at own expense pipe that has been kinked or has scratches, cuts or gouges deeper than 10% of the total wall thickness.

E3.10.3 Lift pipe sections using at least two slings spread far enough apart to balance the load. Use pads under chains or cables if used to lift pipe. Do not position slings on butt fused joints.

E3.10.4 Ensure ground where pipe is stored is level and free of sharp objects that may damage the pipe. Limit stacking of pipe to a maximum height as recommended by the manufacturer to prevent excessive deformation of pipes on the bottom.

E3.10.5 Take precautions to ensure joined sections of pipe are not damaged or over-stressed when dragging into position to install in bore hole. Do not drag pipe over sharp and cutting objects. Do not insert chains, cables and ropes into pipe ends to drag pipe.

E3.10.6 Temporarily plug ends of pipe with suitable plugs or stoppers until pipe is joined and installed.

E3.11 Bedding and Backfill

E3.11.1 All open cut trenches or excavations located within paved areas, areas proposed to be paved, or where directed by the Contract Administrator, shall be backfilled with Class 1, Class 2 or Class 3 backfill in accordance with Clauses 2.1 and 3.8 of CW 2030-R6 as indicated by the Contract Administrator.

E3.11.2 Coring excavations less than one (1) metre from paved areas shall be backfilled with Class 2 or Class 3 backfill in accordance with Clause 3.8 of CW 2030-R6. Further to Clause 3.8 of CW 2030-R6, compaction of Class 2 backfill shall be to a density of 95% of the maximum dry density as determined by the Standard Proctor Compaction Test.

E3.11.3 All other trenches and excavations located within the boulevard shall be backfilled with Class 5 backfill in accordance with Clause 3.8 of CW 2030-R6.

E3.11.4 Compaction/tamping of backfill to the specified densities shall be accomplished through the use of vibratory plate compactors. Drop hammers shall not be used.

E3.11.5 The Contractor shall ensure that there is adequate cover over the pipe to protect it from being damaged by the compaction equipment used for the compaction operation.

E3.12 Coring

E3.12.1 The forcemain shall be installed by the Trenchless methods at all existing paved areas (e.g. Streets, lanes, sidewalks, approaches), proposed paved areas, under trees, and where directed by the Contract Administrator. The majority of the forcemain shall be installed by Trenchless methods.

E3.12.2 Where extraction of existing pipe for “on-line” renewals is necessary it shall be considered as a coring method and shall be measured and paid for at the Unit Price for “Forcemain Renewals-in Auger Hole”.

E3.12.3 Where coring is required to be carried out on the same horizontal alignment as and directly below a forcemain to be abandoned, the abandoned forcemain shall be extracted between coring shafts. Abandoned forcemain shall be removed at coring shaft locations. Removal of abandoned forcemain at coring shaft locations shall not be an item of payment and shall be considered incidental to the Unit Price for “Forcemain Renewal”.

E3.13 Open Cut

E3.13.1 Backfill of the open trench shall be as directed by the Contract Administrator and payment made at the unit price for the type of backfill used.

E3.14 Connection to Existing Forcemain

E3.14.1 At the locations shown on the Drawings, the Contractor shall locate, excavate and expose the existing forcemain, remove any necessary length of forcemain, install a plain by flanged DI pipe to the cast iron flange of the existing forcemain complete with a coupling to the PVC for HDPE pipe as required, and any other material necessary to complete the connection of the existing forcemain to the new forcemain. Any damage to the existing forecemain due to the carrying out of this work shall be repaired by the Contractor at his expense and to the satisfaction of the Contract Administrator.

E3.15 Abandonment of Existing Forcemain

E3.15.1 Existing forcemain not removed shall be plugged and abandoned as per clause 4.14 of CW 2110-R7.

E3.16 Installation of Wafer Knife Gate Valve

E3.16.1 As shown on drawing 05487, the contractor shall remove sections of piping on the forcemain located inside the Ridgedale Wastewater Pumping Station and install the wafer knife gate valve as supplied by the City of Winnipeg.

E3.17 Hydrostatic Leakage Testing

E3.17.1 Hydrostatic leakage testing with potable water shall be carried out as specified in CW 2125-R1. Testing will occur prior to the connecting to the existing CI forcemain. All costs associated with hydrostatic leakage testing shall be included in the price bid per linear metre for the renewal of the forcemain.

E3.18 Method of Measurement

E3.19 Forcemain Installation

E3.19.1 Construction of the forecemain shall be measured as specified in Clause 4.1 of CW 2110-R7. There will be no classification for depth.

E3.20 Abandonment of Existing Forcemain

E3.20.1 The abandonment of the existing forcemain pipe will be considered incidental to the works as specified in clause 4.14 of CW 2110-R7.

E3.21 Basis of Payment

E3.22 Forcemain Installation

E3.22.1 Construction of the forcemain shall be paid for as specified in Clause 4.3 of CW 2110-R7. There will be no classification for depth.

E3.23 Connection to Existing Forcemain

E3.23.1 Connecting to existing forcemain shall be paid for at the Contract Unit Price for “Connecting to Existing Forcemain”, as shown on drawing 05486 as specified herein, which price shall be payment in full for performing all operations and supplying all materials and all other items incidental to the work included in this specification.

E3.24 Installation of Wafer Knife Gate Valve

E3.24.1 The installation of the Wafer Knife Gate Valve shall be paid on unit price basis.

E3.25 Fittings

E3.25.1 There will be no payments made for thrust blocks at all bends. Thrust blocks shall be considered incidental to the unit price for "Connecting to Existing Forcemain".

E4. BOULEVARD RESTORATIONS

E4.1 Description

E4.1.1 This Specification shall revise, amend and supplement City of Winnipeg Standard Construction Specification CW 3510-R5.

E4.2 Construction Methods

E4.3 Boulevard Grading

E4.3.1 Boulevard grading shall be done in accordance with Clause 9.6 of Specification CW 3110-R5.

E4.4 Boulevard Restoration

E4.4.1 All boulevard (i.e. unpaved) surfaces, including ditches, shall e restored with sod using imported top soil in accordance with Specification CW 3510-R5.

E4.5 "Big Roll" Sod

E4.5.1 where "Big Roll" sod is to be installed, the Contractor shall ensure that any reinforcement netting which may be used to assist with the harvesting and/or installation of the sod roll and which could prove hazardous to the public, is removed before final placement of the sod.

E4.6 Sod Laid Prior to September 15th

E4.6.1 Where the Contractor lays sod prior to September 15th and termination of the sod maintenance period is not achieved in accordance with the specifications in that same year, the Contractor shall be responsible for replacement of any sod damaged over the winter due to winter-kill, ice damage, sand/salt applications on adjacent streets, or from snow removal or spring clean-up equipment.

E4.7 Sod Laid after September 15th

E4.7.1 The Contractor shall not lay sod after September 15th unless the Contract Administrator gives written approval or direction to proceed.

E4.7.2 Where sod is laid after September 15th and termination of the sod maintenance period is not achieved in accordance with the specifications in that same year, the Contractor will not be held responsible for sod damage over the winter due to winter-kill, ice damage, sand/salt applications on adjacent streets, or from snow removal or spring clean-up equipment, provided the layover is due only to the late season start and not the supply, installation or maintenance or sod failing to conform to the specifications. Where the Contractor is not to be held responsible for winter damage to sod, as determined by the contract Administrator, the City will assume all costs related to the replacement of the damaged sod.

E4.8 Thirty (30) Day Maintenance Period

E4.8.1 Immediately after the sod has been laid to the satisfaction of the Contract Administrator, the Contractor shall provide and pay for the continuous maintenance of the sodded area, the criteria specified for termination of the maintenance period has been met.

E4.8.2 In situation where the termination of the Thirty (30) Day Maintenance Period is not granted by the Contract Administrator before the end of the growing season, a new Thirty (30) Day

Maintenance Period will commence on May 15th of the following year or such date as is mutually agreed upon by all parties, at which time all sodded areas must meet the requirements as specified.

E4.9 Spring Clean-Up

E4.9.1 Where termination of the sod maintenance period has not been achieved in accordance with the Specifications prior to the end of the growing season, the Contractor shall complete all operations related to the clean-up of the area in the following spring. This shall include, but not be limited to, the cleaning and removal of all dead vegetation, leaves, debris, snowmold and any sand or gravel resulting from winter sanding/deicing operations from turf areas to encourage healthy and uniform grass growth. All costs for spring clean-up operations, excluding replacement of sod damaged over the winter, will be considered incidental to the specified sod maintenance requirements.

E4.10 Method of Measurement

E4.11 Boulevard grading

E4.11.1 Boulevard grading shall not be measured for payment and shall be considered incidental to boulevard restoration.

E4.12 Boulevard Restoration

E4.12.1 Sodding of damaged or disturbed boulevard areas, due to construction or caused by Contractor negligence and carelessness, at and adjacent to the work site will not be measured for payment and restoration and shall be considered incidental to watermain renewals and hydrant installations. These areas will be measured for a Boulevard Restoration Holdback.

E4.12.2 Sodding of additional boulevard areas in the construction area, that were not damaged or disturbed by the Contractor but which were directed by the Contract Administrator to be sodded shall be measured on an area basis. The area to be paid for shall be the total number of square metres sodded in accordance from measurements made by the Contract Administrator.

E4.12.3 Spring removal and replacement of boulevard sod damaged over the winter, as determined by the Contract Administrator, where the contractor is not to be held responsible for the damage, shall be measured on an area basis. The area to be paid for shall be the total number of square metres sodded in accordance with this specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

E4.13 Basis of Payment

E4.14 Boulevard Sodding

E4.14.1 Where the cost of sodding is incidental to Watermain Construction and Hydrant Installations, the Contract Administrator shall retain a holdback amount which will be the greater of one hundred percent (100%) of the Contract Unit Price for “Sodding”” or four dollars ($4.00) per square metre, multiplied by the total area of sod measured for Boulevard Restoration Holdback. Seventy percent (70%) of the Boulevard Restoration Holdback will be released upon installation of the sod to the satisfaction of the Contract Administrator. The remaining thirty percent (30%) of the Boulevard Restoration Holdback will be released upon termination of the thirty (30%) day maintenance period.

E4.14.2 Where sodding is measured for payment seventy percent (70%) of the Contract Unit Price per square metre for “Sodding” will be paid upon installation of the sod to the satisfaction of the Contract Administrator. The remaining thirty percent (30%) of the Contract Unit Price

per square metre for “Sodding will be upon termination of the thirty (30) day maintenance period.

E5. PAVED SURFACE RESTORATIONS

E5.1 Method of Measurement

E5.2 Renewal of Miscellaneous Concrete Slabs and Sidewalks

E5.2.1 Removal of concrete slabs and sidewalk will be measured on an area basis. The area to be paid for shall be the total number of square metres of concrete of specified thickness and classification that are removed and disposed of in accordance with this specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

E5.2.2 Installation of concrete slabs and sidewalk will be measured on an area basis. The are to be paid for shall be the total number of square metres of concrete of specified thickness and classification in accordance with this specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

E5.3 Renewal of Concrete Curbs and Gutters

E5.3.1 Removal of concrete curbs and gutter will be measured on a linear measure basis. The length to be paid for shall be the total number of metres removed and disposed of in accordance with this specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

E5.3.2 Installation of concrete curbs and gutters will be measured on a linear measure basis. The length to be paid for shall be the total number of metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

E5.4 Basis of Payment

E5.5 Renewal of Miscellaneous Concrete Slabs and Sidewalk

E5.5.1 Removal of concrete slabs and sidewalk will be paid for at the Contract Unit Price per square metre for “Renewal of Miscellaneous Concrete Slabs – Removal” as identified on the Schedule of Prices which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this specification.

E5.5.2 Installation of concrete slabs and sidewalk will be paid for at the Contract Unit Price per square metre for “Renewal of Miscellaneous Concrete Slabs – Installation” as identified on the Schedule of Prices which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this specification.

E5.6 Renewal of Concrete Curbs and Gutters

E5.6.1 Removal of concrete curbs and gutters will be paid for at the Contract Unit Price per square metre for “Concrete Curb Renewal – Removal” as identified on the Schedule of Prices which price shall be payment in full for performing all operations herein described and all other incidental to the work included in this specification.

E5.6.2 Installation of concrete curbs and gutters will be paid for at the Contract Unit Price per square metre for “Concrete Curb Renewal – Installation” as identified on the Schedule of Prices which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this specification.

E6. AFTER HOURS WORK

E6.1 Further to Section 3.10 of CW 1130 of the General Requirements, the Contractor shall obtain written permission from the Contract Administrator for any work to be performed after regular hours of work. Regardless of the Contract Administrator's approval, any such work done by the Contractor between these hours shall conform to all applicable Laws, By-Laws and Ordinances.

E7. EXISTING SERVICES AND UTILITIES

E7.1 Further to Section 3.3 of CW 7120 of the general Requirements, information shown on the drawings is supplied by the City to the best of their knowledge from record information. It is hereby expressly understood that the information provided with respect to the type of, or location of services shall be accepted by the Contractor at his own risk, and the City shall assume no responsibility for the accuracy or completeness of the information contained therein.

E7.2 Existing watermain depths at most locations are unknown and have been estimated for design purposes. When requested by the Contract Administrator, the Contractor shall expose existing watermains at the proposed tie-in locations and any other locations as directed, at the commencement of construction to allow for design grade elevations to be modified and/or vertical bends to be incorporated.

E8. RELOCATION OF EXISTING SERVICES

E8.1 Further to Section 3.4 of CW 1120 of the General Requirements, the City will be responsible for the costs of relocating existing trees, poles, traffic signals, signs and lamp standards which are shown on the drawings as "to be relocated by others", or which interfere with the proposed construction and are approved for relocation by the Contract Administrator.

E9. SAFETY PRECAUTIONS

E9.1 Further to Section 3.1 of CW 1130 of the General Requirements, the Contractor shall ensure that any excavation left open or exposed overnight, over a weekend or any length of time unattended shall have full and adequate safety precautions provided. These precautions shall include but not be limited to covering the excavation with timber planks or steel plates and erecting a barricade completely around the excavation complete with signing in accordance with the City of Winnipeg Manual of Temporary Traffic Control.

E10. ENCROACHMENT ON PRIVATE PROPERTY

E10.1 Further to Section 3.11 of CW 1130 of the General Requirements, the Contractor shall confine his work to the public right-of-ways at all times, except if he has received written permission from the property owner. The Contractor shall provide the Contract Administrator with a copy of any written permission he has received to enter onto private property.

E10.2 The contractor's construction activities shall be confined to the minimum are necessary for undertaking the work and he shall be responsible for all damage to private property resulting from his work. Particular care shall be taken to assure no damage is done to buildings, trees and plants and provision shall be made to maintain full drainage for private properties during construction.

E10.3 All repairs to damaged private property shall be to the satisfaction of the property owner and the Contract Administrator with all costs borne by the Contractor.

E11. DAMAGE TO EXISTING STRUCTURES AND PROPERTY

E11.1 Further to Section 3.13 of CW 1130 of the General Requirements, special care shall be taken to avoid damage to existing adjacent structures and properties during the course of the work.

E11.2 Any damage caused by the Contractor or his Subcontractors to the adjacent structures or properties shall be promptly repaired by the Contractor at his own expense to the satisfaction of the Contract Administrator.

E12. TRAFFIC CONTROL AND MAINTENANCE OF ACCESS

E12.1 Further to Section 3.7 of CW 1130 of the General Requirements, should the Public Works Department require that work on regional streets be carried out at night, on Sundays, on public holidays or that work be restricted or suspended during peak traffic hours, the Contractor shall comply without additional compensation being considered to meet these requirements.

E12.2 Should any regional street have to be closed to accommodate construction activities, the Contractor will have to carry out Work on Saturdays, Sunday or public holidays or as directed by the Contract Administrator. The Contractor's construction activities shall not interfere with any parade for which the City may have issued a permit for.

E12.3 The Contractors shall be required to restrict his construction activities so as to disrupt only the curb lane traffic on any regional street, Monday to Friday between 7:00 a.m. and 9:00 a.m. as well as between 3:30 p.m. and 5:30 p.m. No access to any other lane of traffic will be permitted during these times. During other times of the day, access to the Construction Site will be permitted from other lanes of traffic provided the Contractor provides flagmen to maintain traffic safety.

E12.4 In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the Manual") shall reimburse the City for all other costs incurred from the placement of traffic control devices by the City of Winnipeg in connection with the works undertaken by the Contractor.

E13. VERIFICATION OF WEIGHTS

E13.1 All material which is paid for on a weight basis shall be weighed on a scale certified by consumer and corporate Affairs, Canada.

E13.2 All weight tickets shall have the gross weight and the time and date of weighing printed by an approved elector/mechanical coupled to the scale.

E13.3 The tare weight and net weight may either be hand written or machine printed. All weight, scales and procedures shall be subject to inspection and verification by the Contract Administrator. Such inspection and verification may include, but shall not be limited to:

(i) checking Contractor's scales for Consumer and Corporate Affairs certification seals;

(ii) observing weighting procedures;

(iii) random checking of either gross or tare weights by having such truck or truck/trailer(s) combinations as the Contract Administrator shall select weighed at the nearest available certified scale;

(iv) checking tare weight shown on delivery tickets against a current tare.

E13.4 The Contractor shall ensure that each truck or truck/trailer(s) combination delivering Material which is paid for on a weight basis carries a tare not more than one (1) month old.

E13.5 The tare shall be obtained by weighing the truck or truck/trailer(s) combination on a certified scale and shall show:

(i) upon which scale the truck or truck/trailer(s) combination was weighed;
(ii) the mechanically printed tare weight;
(iii) the license number(s) of the truck and trailer(s);
(iv) the time and date of weighing.

E14. TRUCK WEIGHT LIMITS

E14.1 The City shall not pay for any portion of material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law* unless such vehicle is operating under special permit.

E15. PROTECTION OF SURVEY BARS

E15.1 Further to Section of 3.14 of CW 1130 of the General Requirements, all known survey posts, bars, cut crosses and/or control monuments are indicated on the Drawings. If the Contractor is in doubt about the location of any of the foregoing items in the field, he shall contact the Contract Administrator before doing any work in the area. Other survey posts, bars, cut crosses and/or control monuments may exist and the Contractor shall exercise care at intersections and other locations where such survey posts, bars, cut crosses or control monuments may exist.

E15.2 If a survey post, bar, cut cross or control monument lies within two (2) metres of the proposes work and there is the possibility that it may be disturbed, the Contractor shall provide the Contract Administrator with a notice of three (3) working days to have the survey post, bar, cut cross or control monument referenced prior to and replaced, if required, after construction at no cost to the Contractor. However, if the Contractor fails to follow this procedure an inadvertently disturbs, moves, covers, mutilates or destroys a survey post, bar, cut cross or control monument, the Contractor will be charged a replacement cost to a maximum of one thousand dollars ($1,000.00) for each survey post, bar or cut cross and three thousand dollars ($3,000.00) for each control monument.

E15.3 This does not relieve the Contractor of undertaking due care and diligence when working near any survey post, bar, cut cross or control monument. If, in the opinion of the Contract Administrator, the Contractor, through lack of proper care and diligence, caused the need for a replacement of a referenced survey post, bar, cut cross or control monument, the Contractor will be charged the above replacement cost.

E16. DISPOSAL OF SURPLUS SOIL MATERIAL

E16.1 Description

E16.1.1 This Specification shall revise, amend and supplement City of Winnipeg Standard Construction Specification CW 2030-R4.

E16.2 Description of Material

E16.2.1 If the Contractor has not arranged for an approved disposal site, the City shall provide an optional disposal site for all surplus clean clay from the construction site. The material shall not include any refuse, concrete, metals, wood organics, construction waste or any other deleterious materials. Any surplus soil material not meeting these requirements shall not be considered clean clay.

E16.3 Disposal Locations

E16.3.1 The disposal locations provided by the City will be at the Brady Road Landfill Site. The Contractor shall notify the Contract Administrator a minimum of two (2) working days prior to the disposal of any surplus clean clay if he requires access to either of the landfill sites.

The Contract Administrator will make arrangements with staff at the appropriate landfill site for the disposal of the surplus soil material.

E16.4 Tipping Fees

E16.4.1 There will be no tipping fees charged to the Contractor for the disposal of surplus soil material meeting the requirements of clean clay as specified. Tipping fees will be charged for the disposal of material not meeting the requirements of clean clay as specified.

E16.5 Measurement and Payment

E16.5.1 There shall be no measurement of surplus soil material disposed of at any disposal site. No additional payment will be made for disposal of surplus soil materials. It shall be considered incidental to the cost of the work.

E17. WATER USED ON CITY OF WINNIPEG CONSTRUCTION PROJECTS

E17.1 Further to Section 3.14 of CW 2140 and Section 3.7 of CW 1120 of the General Requirements, the Contractor must take out a hydrant permit prior to using any City water. No charge will be assessed for the permit or water used. The tender number will be noted on each permit. Hydrant permits and "donuts" may be obtained from the Public Works Department, Customer Services branch located at 1155 Pacific Avenue.

E17.2 Once the Contractor has obtained they hydrant permit(s), the Water and Waste Department, Water Services Division will arrange for the installation, relocation and removal of all meters and "donuts". The Contract shall be responsible to provide an approved backflow prevention device for each hook-up to a metered hydrant. The Contractor shall be required to provide at least forty-eight (48) hours notice to the Water Services Division prior to a hydrant hook-up.

E17.3 A separate permit will be required for each meter. A permit is only valid for use on the Contract for which it was taken out. Additional permits must be taken out for each subsequent Contract.

E18. PROVISIONAL ITEMS

E18.1 The Provisional Items listed in the Schedule of prices and described by the City of Winnipeg Standard Construction Specifications, are a part of the Contract.

E18.2 No work listed under these provisions will be performed by the Contractor without prior notification from the Contract Administrator. All work carried out will be within the construction areas listed in the Specifications.

E18.3 The City reserves the right to diminish all or any portion of the work listed as Provisional Items and no claim shall be made for damages on ground of loss of anticipated profit or any other ground.

E19. WASTEWATER FLOW DURING CONSTRUCTION

E19.1 Expected wastewater flows of the Ridgedale and Cornish Pumping Station and storage information is as follows:

	Ridgedale	Cornish
Average Dry Weather Flow (ADWF)	4.0 l/s	6.5 l/s
Peak Dry Weather Flow (PDWF)	8 l/s	34 l/s
Service Area Type	Separate	

Allowable Station Shutdown Time for:

PDWF	3.4 hours	7.0 hours
ADWF	6.0 hours	13 hours
Allowable geodetic Elevation of Wastewater at Wet Well Or Inlet Manhole (Critical Basement Elevation)	230.581	227.000
Monitoring manhole located at Station rim elevation	233.624	229.400

E19.2 During construction of the Ridgedale Wastewater Pumping Station the Contractor shall install the new forcemain while maintaining the use of the existing forcemain until manhole and station tie-ins are required. The tie-ins shall only occur after the hydrostatic leakage testing has been performed. During construction of the spot repair at the Cornish Wastewater Pumping Station the Contractor shall Maintain use of the existing wastewater station or have a temporary pumping plan in place as per E21.

E20. DANGEROUS WORK CONDITIONS

E20.1 The Contractor shall be aware that pumping stations, underground chambers, manholes and sewers are considered a confined space and shall follow the “Guidelines for confined Entry Work” as published by the Manitoba Workplace Safety and Health Division.

E20.2 The Contractor shall provide the necessary precautions to safeguard against any confined entry hazard during construction and shall provide adequate safety protection for personnel engaged in this work and for all others who are exposed to the work environment under this Contract.

E20.3 The Contractor shall be aware of the potential hazards which can be encountered in a wastewater pumping station, such as explosive gases, toxic gases and oxygen deficiency.

E20.4 The air in a confined space must be tested before entry and continuously during the time that personnel are inside the space. Equipment for continuous monitoring of gases must be explosion-proof and equipped with a visible and audible alarm. The principal tests are for oxygen deficiency, explosion range and toxic gases. Testing equipment must be calibrated in accordance with manufacturer’s specifications.

E20.5 Ventilation must be provided for at least 15 minutes prior to entry and continue while the confined space is occupied. If no ventilation is supplied, a work must wear a respirator to enter the confined space.

E20.6 The Contract Administrator may shut down the Contractor if he determines the above guidelines are not being followed. The Contractor shall not resume his operations until the Contract Administrator is satisfied the Contractor is following the appropriate procedures. The Contractor shall have no claim for extra time or costs due to shut down for not following these safety guidelines.

E21. STATION SHUTDOWN AND ISOLATION

E21.1 General

E21.1.1 The Contractor is advised that the pumping stations must stay in service during the construction period and pipe removal and installation shall be staged around the allowable station shutdown time and critical basement elevation.

E21.1.2 If the Contact Administrator determines that the wastewater elevation in the trunk sewer has reached the critical basement elevation before the allowable shutdown time is reached or the Contractor has finished his planned activities for that shutdown, the Contractor shall stop his activities and undertake whatever work is required to get the station back into operation.

E21.1.3 The Contractor shall maintain the station in a neat and orderly condition during the construction period so as to allow Collection System personnel to perform their normal duties of maintaining and operating the station.

E21.2 Station Isolation Procedure

E21.2.1 The Contractor shall be aware of the procedures outlined below required to isolate flow to the stations. Operation of all gates and valves shall only be done by Water and Waste Department Collection System personnel who shall be given at least 24 hours advance notice of a required closure. The Contractor shall note that the gate valves or sluice gates may not be completely watertight and it shall be the Contractor's responsibility to contend with any leakage.

E21.2.2 At no time shall the Contractor direct wastewater to a river course or land drainage sewer.

E21.2.3 The Contractor shall not undertake to isolate a station himself for any reason without notifying and receiving approval from the Contract Administrator.

E21.2.4 The Contractor shall be aware that no isolation valve is available on inlet pipe into the Cornish waste water pumping station. The Contractor is responsible for preventing sewer flow into the pumping station during tie-ins.