Invitation to Tender

CITY OF KENORA

INVITATION TO TENDER / ADVERTISEMENT

Sealed Tenders
for:

2026 City of Kenora Sewer and Water Reconstruction
(the "Project")
Tender Number:411-431-001-26

Will be received
by:

City of Kenora
(the "City")

at:

1 Main Street South
Kenora, ON P9N 3X2
Attention: City Clerk

Time and date for Tender Closing is:

11:00:00 a.m. CST/CDT on March 26, 2026
(the "Tender Closing")

1. The work to be undertaken generally involves, but is not necessarily limited to: water main, sanitary sewer, storm sewer, and roadway reconstruction (the "Work") as set out on the list of drawings and specifications described as follows: Refer to Appendices "A" through "H" of the tender documents.

2. The Successful Bidder shall achieve substantial performance of the Work for the Project by the dates set out in Appendix "E" Supplemental General Conditions.

3. The drawings and specifications for the Project can be obtained from MERX under the name '2026 City of Kenora Sewer and Water Reconstruction' or from sstiller@kenora.ca.

4. All written inquiries regarding the technical aspects of the drawings and specifications for the Work shall be emailed to sstiller@kenora.ca, however the bidder(s) acknowledge and agree that the CITY does not have an obligation to provide a response to any written inquiry and that it is in the sole and unfettered discretion of the CITY to provide any written response to a written inquiry. Telephone inquiries and email inquiries will not be replied to.

5. Submission of a tender by a Bidder gives the CITY the right to require the Bidder to execute the contract to perform the Work as set out within the tender documents. Tenders may not be withdrawn after the Tender Closing and will be irrevocable and open for acceptance by the CITY for a period of sixty (60) days following the end of the day of the Tender Closing. The Successful Bidder will be notified in writing of the award of the Tender when the CITY delivers a letter of intent to the Successful Bidder.

INSTRUCTIONS TO TENDERERS

CITY OF KENORA

INSTRUCTIONS TO TENDERERS

1 BACKGROUND

1.1 The City of Kenora (the "CITY") is seeking tenders for the **2026 City of Kenora Sewer and Water Reconstruction** (the "Work") as more particularly set out in Appendices "A" through "H" attached to these Instructions to Tenderers

1.2 The CITY will receive sealed tenders until 11:00:00 a.m. CST/CDT on March 26, 2026 ("Tender Closing"). Faxed tenders will not be accepted and will be returned to the Tenderer.

2 SUBMISSION OF TENDERS

2.1 Each Tender shall be addressed to the CITY in a sealed envelope clearly marked with the Tenderer's name, address and tender number. The sealed envelope containing the Tender shall be delivered before the Tender Closing to the CITY in accordance with the Invitation to Tender and the Instructions to Tenderers at:

City of Kenora
1 Main Street South
Kenora, ON P9N 3X2
Attention: Heather Pihulak, City Clerk

2.2 In the event of a dispute or issue about whether or not a tender complies with the Instructions to Tenderers, the CITY reserves the right to retain and open a copy of the tender in question in order to seek and obtain a legal opinion in relation thereto. The opening of a tender does not in any way constitute an admission by the CITY as to the compliance, or not, of the subject tender.

2.3 Inquiries are permitted until March 20th at 4:30pm CST and are to be directed to the below City Contact via email.

Stefan Stiller, P.Eng – Project Manager

sstiller@kenora.ca

3 TENDER FORM

3.1 Each Tenderer shall submit a complete tender on the Tender Form which forms part of the Tender Documents with the blank spaces filled in. The tender sum must be written in words as well as figures, and must be for a sum in Canadian Dollars including all tariffs, freight, duties and taxes other than the Goods and Services Tax which must be shown as a separate amount unless otherwise specifically stipulated (hereinafter referred to as the "Tender Sum"). In the event of a discrepancy between an amount written in words and an amount written in figures, the amount written in words shall be deemed the intended amount. Tenders shall be written in English.

3.2 Notwithstanding the foregoing, the CITY shall be entitled to accept a Tender in such form as the CITY in its sole and unfettered discretion deems acceptable irrespective

of irregularities whether of a trivial nature, or whether the Tender is noncompliant in a trivial manner.

3.3 The CITY shall not be obligated to accept Tenders that are unsigned, incomplete, conditional, illegible, unbalanced, obscure, contain irregularities of any kind, or contain mathematical or calculation errors of any kind. On Unit Price Tenders, if there is a discrepancy found between the unit price and the extended amount, the unit price shall be deemed to represent the intention of the Tenderer. Discrepancies between words and figures will be resolved in favour of the words. Discrepancies between the indicated sum of any figures and the correct sum thereof will be resolved in favour of the correct sum. Any discrepancies between the Tender Form and a post Tender Closing submission required by the Tender Documents will be resolved in favour of the post Tender Closing submission.

3.4 Tenders shall not be withdrawn, modified or clarified after being delivered in accordance with the Tender Documents unless such withdrawal, modification or clarification is made in writing and actually received by Heather Pihulak of the CITY prior to the Tender Closing. Any withdrawal, modification or clarification of the Tender must be followed by a letter of confirmation signed and sealed in the same manner as the Tender and delivered to the address for the CITY in the Invitation to Tender within 48 hours of the Notice of the Withdrawal, Modification or Clarification.

4 THE FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

4.1 All documents submitted to the CITY will be subject to the protection and disclosure provisions of Ontario's *Freedom of Information and Protection of Privacy Act* ("*FOIP*"). *FOIP* allows persons a right of access to records in the CITY's custody or control. It also prohibits the CITY from disclosing the Tenderer's personal or business information where disclosure would be harmful to the Tenderer's business interests or would be an unreasonable invasion of personal privacy as defined in sections 17 and 21 of *FOIP*. Tenderers are encouraged to identify what portions of their submissions are confidential and what harm could reasonably be expected from its disclosure. However, the CITY cannot assure Tenderers that any portion of the Tenderer's documents can be kept confidential under *FOIP*.

5 TENDER DOCUMENTS

5.1 The documents for the Tender are:

- Invitation to Tender
- Instructions to Tenderers
- Tender Form & Unit Price Schedules
- Appendix A – Submission Documents
- Appendix B – Tender Submission Checklist
- Appendix C – Drawings
- Appendix D – Proposed Contract
- Appendix E – Supplemental General Conditions
- Appendix F – General Requirements and Specifications
- Appendix G – Special Provisions for Mellick Avenue
- Appendix H – Supplemental Reports

(hereinafter collectively referred to as the “Tender Documents”)

By submitting its Tender, the Tenderer acknowledges and agrees that it has received and reviewed the Tender Documents.

6 VARIATION IN TENDER DOCUMENTS AND NO IMPLIED OBLIGATIONS

6.1 The Tenderer shall carefully examine the Tender Documents. Any errors, omissions, discrepancies or clauses requiring clarification shall be reported in writing to the CITY at least 10 calendar days prior to the Tender Closing. Where necessary the CITY shall respond to reported errors, omissions, discrepancies or clauses requiring clarification by way of Addenda.

6.2 Should a Tenderer fail to report any such errors, omissions, discrepancies or clauses requiring clarification at least 10 calendar days prior to the Tender Closing, the CITY shall be the sole judge as to the intent of the Tender Documents.

6.3 No implied obligation of any kind by or on behalf of the CITY shall arise from anything in the Tender Documents, and the express covenants and agreements contained in the Tender Documents and made by the CITY, are and shall be the only covenants and agreements that apply.

6.4 Without limiting the generality of Article 6.3, the Tender Documents supercede all communications, negotiations, agreements, representations and warranties either written or oral relating to the subject matter of the Tender made prior to the Tender Closing, and no changes shall be made to the Tender Documents except by written Addenda.

7 ADDENDA

7.1 Any changes to the Tender shall be in writing in the form of Addenda. Any Addenda issued to the Tender shall form part of the Tender Documents, whether or not the receipt of same has been acknowledged by a Tenderer, and the cost for doing the work therein shall be included in the Tender Sum. Verbal representations shall not be binding on the CITY nor form part of the Tender Documents. Technical inquiries into the meaning or intent of the Tender Documents must be submitted in writing to the person identified in Article 2.3 of the Instructions to Tenderers.

8 TENDER

8.1 Tenderers submitting Tenders shall be actively engaged in the line of work required by the Tender Documents and shall be able to refer to work of a similar nature performed by them. They shall be fully conversant with the general technical phraseology in the English language of the lines of work covered by the Tender Documents.

8.2 Each Tenderer shall review the Tender Documents provided by the CITY and confirm that it is in possession of a full set of Tender Documents when preparing its Tender.

8.3 Tenders shall be properly executed in full compliance with the following requirements:

8.3.1 The signatures of persons executing the Tender must be in their respective handwriting; and

8.3.2 If the Tender is made by a limited company, the full name of the company shall be accurately printed immediately above the signatures of its duly authorized officers and **the corporate seal shall be affixed**;

8.3.3 If the Tender is made by a partnership, the firm name or business name shall be accurately printed above the signature of the firm and the Tender shall be signed by a partner or partners who have authority to sign for the partnership;

8.3.4 If the Tender is made by an individual carrying on business under the name other than its own, its business name together with its name shall be printed immediately above its signature or

8.3.5 If the Tender is made by a sole proprietor who carries on business in its own name, the proprietor shall print its name immediately below its signature.

8.4 Tenders received from agents representing principals must be accompanied by a Power of Attorney signed by the said principals showing that the agents are duly authorized to sign and submit the Tender and have full power to execute the Contract on behalf of their principals. The execution of the Contract will bind the principals and have the same effect as if it were duly signed by the principals.

9 TENDER DEPOSIT

9.1 The Tenderer is required to submit with its Tender, a Consent of Surety and a Bid Bond in a form acceptable to the CITY, or in lieu of a Bid Bond, a Tenderer may submit, along with a Consent of Surety, a certified cheque or an irrevocable letter of credit in favour of the CITY equal to 10% of the Tender Sum as a guarantee that, if awarded the contract for the Work, the Tenderer will execute a contract and submit the Performance Bond and the Labour and Material Payment Bond referred to in Article 10 within the specified time frames.

9.2 The Bid Bonds, certified cheques or irrevocable letters of credit of the unsuccessful Tenderers shall be returned as soon as possible after the Contract has been duly executed by the Successful Tenderer.

9.3 The CITY will not pay any interest on money furnished as security.

9.4 The Bid Bond and Consent of Surety shall be issued by a Surety Company licensed in the Province of Ontario and satisfactory to the CITY.

10 PERFORMANCE AND LABOUR AND MATERIAL PAYMENT BONDS

10.1 The Successful Tenderer shall be required to furnish at its own expense a Performance Bond and Labour and Materials Payment Bond. For the purposes of this Article, both of these bonds shall be referred to as the "Bonds".

10.2 The Performance Bond shall guarantee the faithful performance of the Contract, and in default thereof, shall protect the CITY against any losses or damage arising by reason of failure of the Successful Tenderer to faithfully perform the Contract.

10.3 The Bonds are to be issued by a Surety Company licensed in the Province of Ontario and satisfactory to the CITY in the amount of 100% of the Contract Price for the Performance Bond and 50% of the contract price for the Labour and Materials Payment Bond.

10.4 The Performance Bond shall remain in force as a Maintenance Bond for the Warranty Period as defined in the Contract. For Contract values not including Harmonized Sales Tax greater than $500,000 the Bonds must be provided using Form 31 and Form 32 under Section 85.1 of the Construction Act, Ontario.

10.5 The Bonds shall be in the form set out in the Tender Documents or in such other form as may be acceptable to the CITY.

10.6 The CITY may consider alternate forms of security in lieu of the Bonds. The Tenderer shall make known any alternative form of security it wishes the CITY to consider and obtain the CITY's approval prior to submitting a Tender.

10.7 The Successful Tenderer shall provide all required Bonds to the CITY no later than 5 working days after receipt of the Letter of Intent from the CITY provided in accordance with Article 16. The Bonds must be received prior to the execution of the contract.

10.8 The Successful Tenderer shall supply all required Bonds before any Work is undertaken by the Successful Tenderer.

10.9 No payment shall be made by the CITY to the Successful Tenderer for any of the Work performed by the Successful Tenderer until the required Bonds have been provided.

11 INSURANCE

11.1 The Tender shall be accompanied by a Certificate of Insurance, certifying that the insurance as required by the Contract, is in place or, if the required insurance is not in place, by a Letter of Insurability or Undertaking of Insurance in standard form from the Tenderer's Insurance Broker certifying that the required insurance will be issued to the Tenderer if the Tenderer is the Successful Tenderer.

11.2 The Successful Tenderer shall be required to secure and maintain at its own expense the insurance provided for in the Contract.

11.3 The Successful Tenderer shall provide all required insurance to the CITY no later than 10 working days after receipt of a Letter of Intent from the CITY provided in accordance with Article 16.

12 COMMENCEMENT AND COMPLETION OF WORK

12.1 The Successful Tenderer shall commence the Work within 10 working days after receipt of the Letter of Intent from the CITY and shall complete the Work by the dates specified in the Contract.

13 SITE CONDITIONS

13.1 The Tenderer is responsible for inspecting the site(s) of the Work and for making whatever inquiries or arrangements necessary for it to become fully informed of the nature of the site(s) of the Work, including the soil structure and topography of the site(s), and of the Work to be performed and all matters which may in any way affect the Work. Without limiting the foregoing, by the submission of its Tender, the Tenderer acknowledges that it has investigated and satisfied itself as to:

a) the nature of the Work;

b) the location and all conditions relating to the location of the Work including, but not limited to, accessibility, general character, surface and sub-surface conditions, soil structure, utilities, road, uncertainties of seasonal weather and all other physical, topographical, geological and geographic conditions;

c) the general character, conditions, laws and restrictions applicable to the Work that might affect the performance of the Work;

d) all environmental risks, conditions, laws and restrictions applicable to the Work that might affect the Work; and

e) the magnitude of the work required to execute and complete the Work.

13.2 The Tenderer is fully responsible for obtaining all information required for the preparation of its Tender and for the execution of the Work. The CITY is not responsible for undertaking any investigations to assist the Tenderer. Any information, plans, drawings, shop drawings or existing equipment or facilities, photos of the original construction, reports or other documents which are not included or referred to in the Tender Documents (the “Non-Tender Information”), form no part of this Tender. The CITY and the CITY’s Consultants assume no responsibility of any kind whatsoever arising from or relating to its failure to include or refer to such Non-Tender Information. Tenderers who obtain or rely upon such Non-Tender Information or other documents, do so entirely at their own risk.

13.3 The Tenderer’s obligation to become familiar with the information described in Article 13.1 is not lessened or discharged by reason of any technical reports, including soils reports or data, test hole drilling reports or other soils information, made available or supplied in conjunction with the tendering process. Any technical reports so provided are for information only and neither the CITY nor the CITY’s Consultants accept or assume any responsibility for the contents or accuracy of such technical reports and the Tenderer agrees that the CITY, the CITY’s Consultants and their representatives shall not be liable in any way to the Tenderer in respect of such technical reports. The Tenderer further agrees that it shall not

rely upon any oral information provided to it by the CITY, the CITY's Consultants or their representatives.

14 PRIME COST AND CONTINGENCY SUMS

14.1 The Tenderer shall include in its Tender Sum any prime cost sums or contingency sums. The Goods and Services Tax shall be shown as a separate amount.

15 PERMITS AND INSPECTIONS

15.1 The Tenderer shall include in its Tender Sum the cost of permits and inspections required by any governmental or other authority having jurisdiction or as required to fully perform the Work in accordance with the Contract.

16 SUCCESSFUL TENDERER

16.1 Award of Contract by the CITY occurs once the Tenderer receives a Letter of Intent duly executed by a Director of the CITY after they have been duly and legally authorized by the CITY to send such Letter of Intent.

16.2 Following the receipt of the Letter of Intent, the Successful Tenderer shall provide the Certificate of Insurance unless previously provided.

16.2.1 Upon the Successful Tenderer complying with the requirements of both Articles 16.2 and 16.4, the certified cheque or Bid Bond or irrevocable letter of credit, as the case may be, shall be returned to the Successful Tenderer.

16.2.2 If the Successful Tenderer fails to comply with either or both of the requirements of Articles 16.2 and 16.4, the certified cheque or Bid Bond or irrevocable letter of credit, as the case may be, shall be forfeited to the CITY as compensation for damages the CITY may suffer.

16.3 The forfeiture of a Successful Tenderer's certified cheque or Bid Bond or irrevocable letter of credit shall not be construed as a waiver of any rights or remedies which the CITY may have against such Tenderer for loss or damages incurred or suffered in excess of the amount of such certified cheque or Bid Bond or irrevocable letter of credit.

16.4 Within 10 working days of receipt of the Contract from the CITY, the Successful Tenderer shall duly execute the Contract and return the Contract to the CITY.

16.5 Within 10 working days of receipt of a Letter of Intent in accordance with Article 16.1, the Successful Tenderer shall submit a proposed Construction Schedule showing the anticipated time of commencement and completion of each of the various operations to be performed under the Contract.

17. TENDER EVALUATION CRITERIA

17.1 Each Tender will be evaluated on the basis of the criteria listed below and the CITY will have the sole and unfettered discretion to award up to the maximum number of

points for each criteria as listed below. By submitting a Tender, the Tenderer acknowledges and agrees that the CITY has, and it is hereby entitled to exercise, the sole and unfettered discretion to award the points for the evaluation of the noted criteria.

17.2 By submitting its Tender, each Tenderer acknowledges and agrees that it waives any right to contest in any legal proceedings, the decision of the CITY to award points in respect of the criteria noted below. The criteria and the maximum number of points for each criteria are as follows:

1. Price	**100 points.**
Total Points	**100 points**

18 WORKERS' COMPENSATION

18.1 Each Tenderer is to submit with its Tender, a letter of account from the Workers' Compensation Board – Ontario. This letter is to be current and not dated 14 calendar days prior to the Tender Closing.

18.2 The Tenderers who do not have an account with the Workers' Compensation Board- Ontario shall provide with their Tender evidence of a subcontractor or other company that will carry such coverage on their behalf.

18.3 If the Tenderer is performing work in any exempt industry within the meaning of the Workers Compensation Board Act (the "WCB Act") and does not carry coverage, the Tenderer acknowledges that

18.3.1 the CITY is subject to a deeming order under s. 14(2) of the WCB Act (the "Deeming Order"); and

18.3.2 the Deeming Order states that all of the Tenderer's employees, directors, proprietors, partners or employees are deemed to be CITY employees for the purposes of the WCB Act while performing work for the CITY; and

18.3.3 the effect of the Deeming Order is that the Tenderer's employees, directors, proprietors and partners who are injured while performing work for the CITY under the Contract, have no right to sue anyone and are limited to a claim under the WCB Act.

18.4 The Tenderer shall communicate the existence and effect of the Deeming Order to all of its employees, directors, proprietors, partners or employees.

18.5 The CITY will reject any Tender which fails to comply with the provisions set out in Article 18.

19 REGISTRATION

19.1 Prior to commencing the Work, the Successful Tenderer shall obtain all authorizations required by the laws of the Province of Ontario and of the Country of Canada enabling it to carry on business to complete the Work required under the

Contract. Failure to be properly authorized shall entitle the CITY to forthwith terminate the Contract without compensation.

20 TENDERS EXCEEDING BUDGET

20.1 In addition to the rights contained within Article 20 herein, if the Tender Sum of every Tenderer exceeds the amount the CITY has budgeted for the Work, the CITY may reject all Tenders or attempt to negotiate a lower price with the Tenderer who, in the sole and unfettered discretion of the CITY, has submitted the most advantageous Tender.

20.2 Each Tenderer acknowledges and agrees that the CITY has the sole and unfettered discretion to employ any criteria in order to determine the Tender most advantageous to the CITY, that the CITY has no obligation to neither disclose such criteria nor employ the criteria listed outlined in Article 17 Tender Evaluation Criteria.

20.3 By submitting its Tender, each Tenderer waives its right to contest in any action, application, case or legal proceeding in any court, the decision which the CITY may pursue under Article 20.1 and 20.2 herein.

20.4 If the Tender Sum of every Tenderer exceeds the amount budgeted for the Work and the CITY negotiates with the Tenderer who has submitted the Tender considered most advantageous to the CITY:

20.4.1 All statements made by either side in the course of negotiation are without prejudice and confidential;

20.4.2 In particular, the CITY's attempt to negotiate with such Tenderer does not constitute a rejection of its Tender; and

20.4.3 The CITY will not attempt to obtain a lower price for the same work that the Tenderer originally bid on, but may attempt to obtain a lower price for an altered scope of work. In no event will the CITY be obliged to disclose the amount budgeted for the Work.

21 CERTIFICATE OF RECOGNITION ("C.O.R.") SAFETY PROGRAM REQUIREMENT – NOT USED

21.1 N/A

21.2 N/A

21.3 N/A

21.4 N/A

21.5 N/A

22 CANADIAN FREE TRADE AGREEMENT

22.1 The provisions of the Canadian Free Trade Agreement ("CFTA") apply to this Tender.

23 ACCEPTANCE OR REJECTION OF TENDERS

23.1 As it is the purpose of the CITY to obtain the Tender most suitable and most advantageous to the interests of the CITY, and notwithstanding anything else contained within the Tender Documents, the CITY reserves the right, in its sole and unfettered discretion, to reject or accept any Tender, including the right to reject all Tenders. Without limiting the generality of the foregoing, any Tender which

a) is incomplete, obscure, irregular or unrealistic;

b) is non-compliant in a trivial/immaterial or substantial/material manner, or conditional;

c) has erasures or corrections;

d) omits a price on any one or more items in the Tender;

e) fails to complete the information required in the Tender;

f) is accompanied by an insufficient certified cheque, irrevocable letter of credit or by a Bid Bond in an unsatisfactory form,

may at the CITY's sole and unfettered discretion be rejected or accepted. Further, a Tender may be rejected or accepted on the basis of the CITY's unfettered assessment of its best interest, which includes the CITY's unfettered assessment as to a Tenderer's past work performance for the CITY or for anyone else or as to a Tenderer's financial capabilities, completion schedule, or ability to perform the Work, or the CITY's desire to reduce the number of different contractors on the location of the Work at any given time. The CITY reserves the right to negotiate after Tender Closing time with the Tenderer that the CITY deems has provided the most advantageous Tender; in no event will the CITY be required to offer any modified terms to any other Tenderer prior to entering into a Contract with the successful Tenderer and the CITY shall incur no liability to any other Tenderers as a result of such negotiation or modification.

24 LAW AND FORUM OF TENDER

24.1 The law to be applied in respect of the Tender Documents and the Contract shall be the law of the Province of Ontario and all civil actions commenced in relation to the Tender Documents or Contract shall be adjudicated by the Courts of the Province of Ontario and by submitting Tenders, Tenderers are taken to have agreed to attorn to the jurisdiction of the Courts of the said Province.

25 ACCEPTANCE PERIOD

25.1 The Tender shall be irrevocable and open for acceptance by the CITY for the period of time contained in the Invitation to Tender, namely, sixty (60) days following the end of the day of the Tender Closing. The time and date of the Tender Closing is as defined in the Invitation to Tender.

TENDER FORM

Tender Number: 411-431-001-26
Tender Title: 2026 City of Kenora Sewer and Water Reconstruction

We, _____
(Company)

of _____
(Business Address)

having examined the Tender Documents as issued by: the City of Kenora (the "City"), and having visited the site(s) of where the Work is required to be undertaken; hereby offer to enter into a Contract to perform the Work required by the Tender Documents for the Tender Sum as follows:

1. Third Avenue South Back Lane (Part A) $_____
2. Mellick Avenue (Part B) $_____
3. Sub-Total (summation of Items 1 and 2 above)

_____
(Tender Sum written in words)

_____
(Tender Sum in figures)

4. Ontario Harmonized Sales Tax (HST = 13%) $_____
5. Tender Sum (summation of Items 3 & 4 above)

_____
(Tender Sum including HST written in words)

_____
(Tender Sum including HST in figures)

in Canadian funds, which price includes any specified cash and contingency allowances and the applicable taxes in force at this date and except as may be otherwise provided in the Tender Documents. The following quantities being approximate quantities, we agree to accept final payment on actual quantities measured during and on completion of the work at the unit prices stated hereafter.

Unit Price Schedule:

The Unit Price Schedule shall be completed in accordance with the Tender Documents; any errors will be corrected as identified in Article 3.0.

DESCRIPTION OF WORK		ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
PART A – BACK LANE BETWEEN 3RD AVE. S & 4TH AVE. S FROM 5TH ST. S TO 7TH ST. S					
A.1	**General Requirements (Max. 10% of Construction Cost)**	1	LS	$	$
A.2	**Temporary Potable Water Servicing**	1	LS	$	$
A.3	**Watermain - On-Line Renewal**				
a)	100mm	5	l.m.	$	$
b)	150mm	10	l.m.	$	$
c)	300mm	310	l.m.	$	$
A.4	**Off-Line Hydrant Assembly**	1	each	$	$
A.5	**Gate Valves**				
a)	150mm	1	each	$	$
b)	300mm	6	each	$	$
A.4	**Watermain Fittings**				
a)	Bends				
	i) 150mm - 45° Bend	1	each	$	$
	ii) 300mm - 90° Bends	2	each	$	$
b)	Tees				
	i) 300mm x 300mm x 150mm	2	each	$	$
c)	Plugs				
	i) 100mm	1	each	$	$
A.7	**Water Service Pipe**				
a)	19mm	90	l.m.	$	$
b)	25mm	25	l.m.	$	$
c)	38mm	65	l.m.	$	$
A.8	**Factory Tapped Coupling (c/w Corporation Stop)**				
a)	300mm x 300mm x 19mm	26	each	$	$
b)	300mm x 300mm x 25mm	3	each	$	$
c)	300mm x 300mm x 38mm	1	each	$	$

d)	100mm x 100mm x 25mm	1	each	$	$
e)	100mm x 100mm x 38mm	1	each	$	$
A.9	**Copper Tees**				
a)	19mm x 38mm	3	each	$	$
A.10	**Curb Stop & Curb Box**				
a)	19mm	29	each	$	$
b)	25mm	4	each	$	$
c)	38mm	2	each	$	$
A.11	**Connect to Existing Water Service**				
a)	19mm	29	each	$	$
b)	25mm	4	each	$	$
A.12	**Connect to Existing Watermain**				
a)	100mm	1	each	$	$
b)	150mm	1	each	$	$
c)	300mm	2	each	$	$
A.13	**Wastewater Sewer - On-line Renewal**				
a)	250mm	40	l.m.	$	$
b)	375mm	140	l.m.	$	$
c)	450mm	145	l.m.	$	$
A.14	**Wastewater Sewer Service Pipe**				
a)	100mm	28	l.m.	$	$
b)	150mm	85	l.m.	$	$
A.15	**Wastewater Sewer Fittings**				
a)	Service Tee				
i)	100mm	9	each	$	$
ii)	150mm	30	each	$	$
iii)	200mm	1	each	$	$
A.16	**Connection to Existing Sewer**	6	each	$	$
A.17	**Connect to Existing Wastewater Sewer Service**				
a)	100mm	9	each	$	$
b)	150mm	30	each	$	$

A.18	**Remove and Replace Existing Manhole**				
a)	1200mm	15.00	v.m.	$	$
A.19	**Install New Manhole**				
a)	1200mm	6.00	v.m.	$	$
A.20	**Storm Sewer Renewal - Catch Basin Lead Pipe**				
a)	250mm	15	l.m.	$	$
A.21	**Remove & Replace Existing Catch Basin**	2	each	$	$
A.22	**Television & Mandrel Inspection**	325	l.m.	$	$
A.23	**Box Insulation**				
a)	50mm	53	l.m.	$	$
b)	100mm	120	l.m.	$	$
A.24	**Rock Removal**	10	hour	$	$
A.25	**Pavement Restorations**				
a)	Asphalt Paving - 50mm (HL4)	1220	m^2	$	$
b)	Asphalt Patching - 80mm (HL4)	230	m^2	$	$
c)	Granular A - 150mm Base Course	230	cu.m.	$	$
d)	Granular B Type II - 300mm Subbase	80	cu.m.	$	$
e)	Concrete Curb and Gutter	20.00	l.m.	$	$
f)	Concrete Sidewalk	20.00	m^2	$	$
g)	Asphalt Mountable Curb and Gutter	50.00	m^2	$	$
				PART A - SUBTOTAL	$

	DESCRIPTION OF WORK	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
PART B - MELLICK AVENUE FROM 9TH STREET NORTH TO 10TH STREET NORTH					
MISCELLANEOUS ITEMS					
B.1	Mobilization/Demobilization	Lump Sum			$
B.2	Traffic Control	Lump Sum			$
REMOVALS ITEMS					
B.5	Asphalt Pavement Removal, Full Depth	1,866	m²	$	$
B.6	Asphalt Pavement Removal, Partial Depth (Milling)	12	m²	$	$
B.7	Concrete Curb & Gutter Removal	288	m	$	$
B.8	Concrete Sidewalk Removal	441	m²	$	$
B.10	Watermain Removal	345	m	$	$
B.11	Hydrant Set Removal	1	ea	$	$
B.12	Sanitary Sewer Removal	407	m	$	$
B.13	Sanitary Sewer Structure Removal	2	ea	$	$
B.14	Storm Sewer Removal	92	m	$	$
B.15	Strom Sewer Structure Removal	5	ea	$	$
STORM SEWER					
B.16	CB1 - Precast Catch Basin, 600x600mm	Lump Sum			$
B.17	CB2 - Precast Catch Basin, 600x600mm	Lump Sum			$
B.18	375mmØ PVC DR25 Storm Sewer - CB1 to CB2	11.2	m	$	$
B.19	450mmØ PVC DR25 Storm Sewer - CB2 to CB3	71.7	m	$	$
SANITARY SEWER					
B.20	Sanitary Sewer Bypass System	Lump Sum			$
B.21	SAMH1 - Precast Maintenance Hole, 1200mmØ c/w 300mm wide joint wrapping	Lump Sum			$
B.22	SAMH2 - Precast Maintenance Hole, 1200mmØ c/w 300mm wide joint wrapping	Lump Sum			$
B.23	300mmØ PVC DR35 Sanitary Sewer - SAMH1 to SAMH2	70.6	m	$	$
B.24	300mmØ PVC DR35 Sanitary Sewer - SAMH2 to SAMH3	86.3	m	$	$
B.25	100mmØ PVC DR35 Sanitary Services	162	m	$	$

B.26	Sanitary Service Connection & Appurtenances	16	ea	$	$
WATERMAIN					
B.27	Temporary Potable Water Supply Services	Lump Sum			$
B.28	Connection to City's Watermain System	5	ea	$	$
B.29	150mmØ PVC DR18 Watermain	18	m	$	$
B.30	200mmØ PVC DR18 Watermain	168	m	$	$
B.31	200mm x 200mm x 100mm Ø PVC Tee	1	ea	$	$
B.32	200mm x 200mm x 150mm Ø PVC Tee	2	ea	$	$
B.33	100mmØ Gate Valve	1	ea	$	$
B.34	200mmØ Gate Valve	3	ea	$	$
B.35	200mmØ PVC Elbow - 11¼°	2	ea	$	$
B.36	200mmØ PVC Elbow - 22½°	2	ea	$	$
B.37	Fire Hydrant & Valve Installation	2	ea	$	$
B.38	19mmØ Residential Water Service with Thaw Cable	172	m	$	$
B.39	19mmØ Residential Water Service Connection & Appurtenances incl. water valve box to contain thaw cable and curb stop	16	ea	$	$
B.40	200mm x 200mm x 200mm x 200 Ø PVC Cross	1	ea	$	$
B.41	Extruded Expanded Polystyrene - 25mm Thickness	50	m²	$	$
ROADWAY					
B.42	Earth Excavation - Grading, Roadway	1,350	m³	$	$
B.43	Pipe Subdrain - 150mmØ	304	m	$	$
B.44	Geotextile	2,480	m²	$	$
B.45	Geogrid	2,480	m²	$	$
B.46	Granular “B”, Roadway (In-Place)	740	m³	$	$
B.47	Granular “A”, Roadway (In-Place)	247	m³	$	$
B.48	HL8 Hot Mix Asphalt - Base Course	206	tonnes	$	$
B.49	HL3 Hot Mix Asphalt - Surface Course	206	tonnes	$	$
B.50	HL3 Hot Mix Asphalt - Driveway & Boulevards	441	m²	$	$
B.51	Tack Coat	1,768	m²	$	$
B.52	Concrete Curb & Gutter	268	m	$	$
B.53	Reinforced Concrete Curb & Gutter	45	m	$	$

B.54	Concrete Sidewalk	398	m²	$	$
B.55	Reinforced Concrete Sidewalk (200mm Thickness)	44	m²	$	$
B.56	Pavement Markings	Lump Sum			$
B.57	Restore Retaining Walls, Walkways & Gardens	Lump Sum			$
B.58	Topsoil & Sod	542	m²	$	$
B.59	Street Lighting - Conduit in Boulevard	168	m	$	$
B.60	Street Lighting - Conduit in Roadway	10	m	$	$
B.61	Street Lighting - Pole Bases	5	ea	$	$
				PART B - SUBTOTAL	$

PROVISIONAL ITEMS

B.62	Soils Investigations and Remediations	Lump Sum	

Definitions: ea – each, m – Linear Metres, m2 – Square Metres, m³ - Cubic Metres

Declarations:

We hereby acknowledge and declare that:

(a) we agree to perform the Work in compliance with the required completion schedule stated in the Contract;

(b) no person, firm or corporation other than the undersigned has any interest in this Tender or in the proposed Contract for which this Tender is made;

(c) the Tender Security is attached to this Tender. We specifically acknowledge and agree that the Tender Security may be forfeited to the City pursuant to the terms set forth in the Instructions to Tenderers;

(d) we hereby acknowledge and confirm that the City has the right to accept any tender or to reject any or all tenders in accordance with the Instructions to Tenderers;

(e) this Tender is open to acceptance for a period of sixty (60) days from the date of Tender Closing.

Signatures:

Signed, seated and submitted for and on behalf of:

Company: _____
(Name)

_____
(Street Address or Postal Box Number)

_____
(City, Province & Postal Code) ***(Apply SEAL above)***

Signature: _____

Name &Title: _____
(Please Print or Type)

Witness: _____

Dated at _____ this _____ day of _____, 20___

APPENDIX A
SUBMISSION DOCUMENTS

CITY OF KENORA

Schedule of Subcontractors

The Contractor states that the following Subcontractors shall be utilized on this Contract:

Items of Work	Subcontractor

The Contractor agrees that if a named Subcontractor is not acceptable to the City, the Contractor shall name an acceptable alternative Subcontractor.

Schedule of Suppliers and Manufacturers of Materials

The Contractor states that the following material suppliers and manufacturers shall be utilized for the supply items on this Contract.

Items	Supplier	Manufacturer

The Contractor agrees that, if a named supplier or manufacturer of materials and equipment is not acceptable to the City, the Contractor shall name an acceptable alternative.

Schedule of Equipment

The Contractor states that the equipment listed shall be available for the Work on this Contract.

The Contractor agrees that if the equipment listed is not acceptable to the City, the Contractor shall identify acceptable alternatives.

Description of Unit	Size or Capacity	Condition	Age	Location

Schedule of Alternative Proposals

The Contractor offers the following alternative units of equipment, materials, or methods of doing the Work, and offers to increase or decrease the Contract Price as stated for each unit of equipment, materials or methods of doing the Work. The increase or decrease includes allowance for the cost of making any adjustments to the Work, which may be required in order to make the proposed alternative fit into the Work as originally specified. The increase or decrease in price shall be added to or subtracted from the price bid for the Work as originally specified. A Change Order will be issued should the alternative(s) be accepted.

Item No.	Specification Section	Original Item	Bid Price	Alternate Item	Alternate Price Difference

The Contractor provides for review by the City the following details concerning the alternative equipment, materials, or methods of doing the Work. If insufficient space exists, please attach additional pages. Attach all back up information and specifications.

_____

_____

_____

_____

_____

_____

_____

APPENDIX B
TENDER SUBMISSION CHECKLIST

CITY OF KENORA

The Tender Submission Checklist is provided for the convenience of Tenderers as a summary of mandatory submission requirements. In the event of any discrepancy between the Tender Articles and the Tender Submission Checklist, the Tender Articles shall govern. The Checklist is for reference only, and the City makes no representations or warranties regarding its accuracy or completeness. By submitting a Tender, the Tenderer acknowledges and agrees that the City shall not be held liable for any errors, omissions, or discrepancies in the Checklist and expressly waives any and all claims, demands, or legal actions against the City arising from or relating to its use.

1) Tender Form and Unit Price Schedules – Article 3.0 – Completed in the forms provided in the Instructions to Tenderers

2) Tender Deposit – Article 9.0 – Consent of Surety and Bid Bond

3) Insurance – Article 11.0 – Certificate of insurance or a Letter of Insurability or Undertaking of insurance. Level of insurance detailed in Appendix E – Supplemental General Conditions

4) Workers' Compensation – Article 18.0 – Letter of account from the Workers' Compensation Board – Ontario or alternatives as listed in Article 18.0

5) Schedule of Subcontractors – Appendix A

6) Schedule of Suppliers and Manufacturers of Materials – Appendix A

7) Schedule of Equipment – Appendix A

8) Schedule of Alternative Proposals – Appendix A (Optional)

APPENDIX C
DRAWINGS

CITY OF KENORA

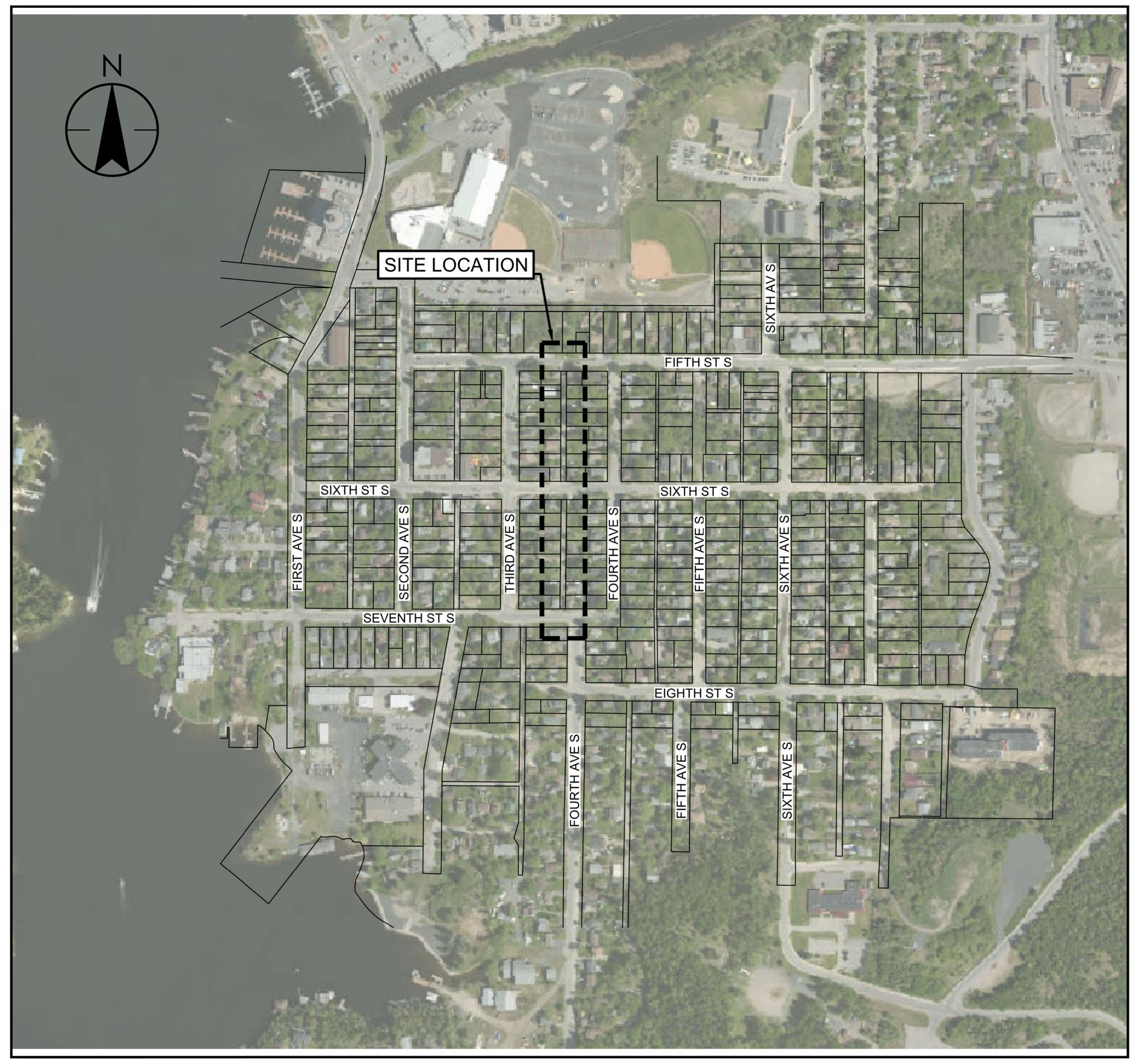
Stantec

Lake of the Woods KENORA

CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

FEBRUARY 2026
ISSUED FOR TENDER
PROJECT NUMBER: 111220983



KEY PLAN

DRAWING INDEX

GENERAL

G-001	COVER SHEET AND DRAWING INDEX	1	OF	1

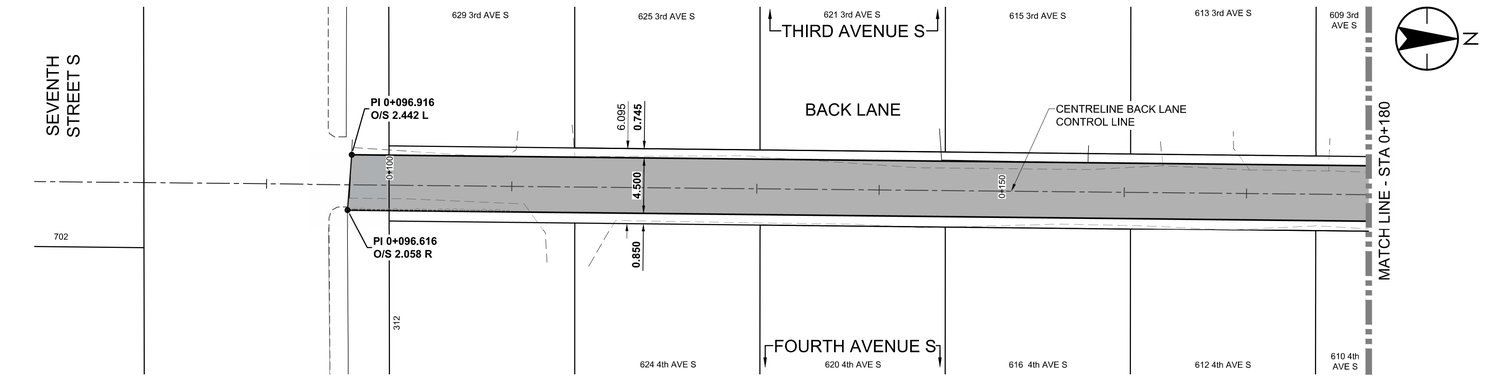
CIVIL

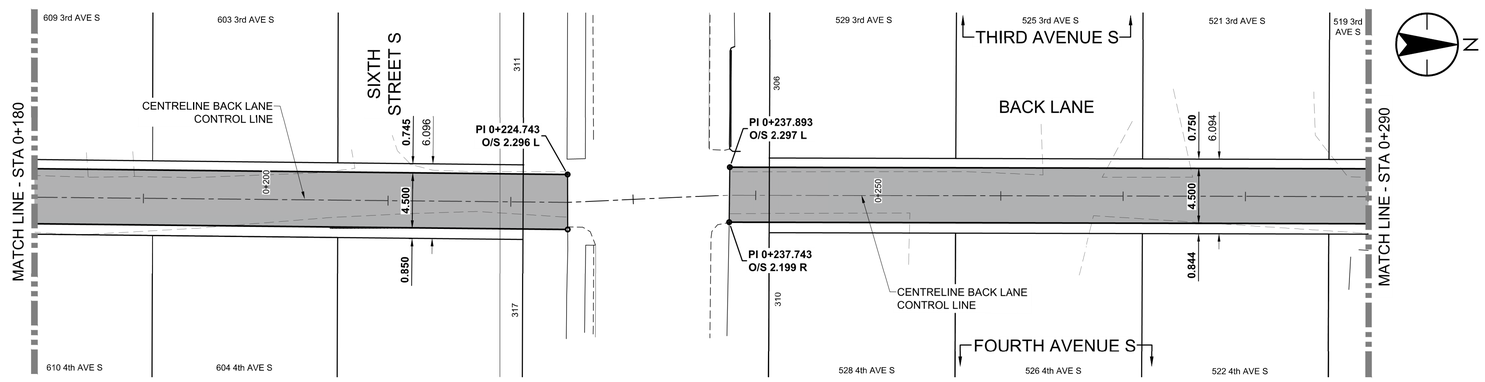
ROADS

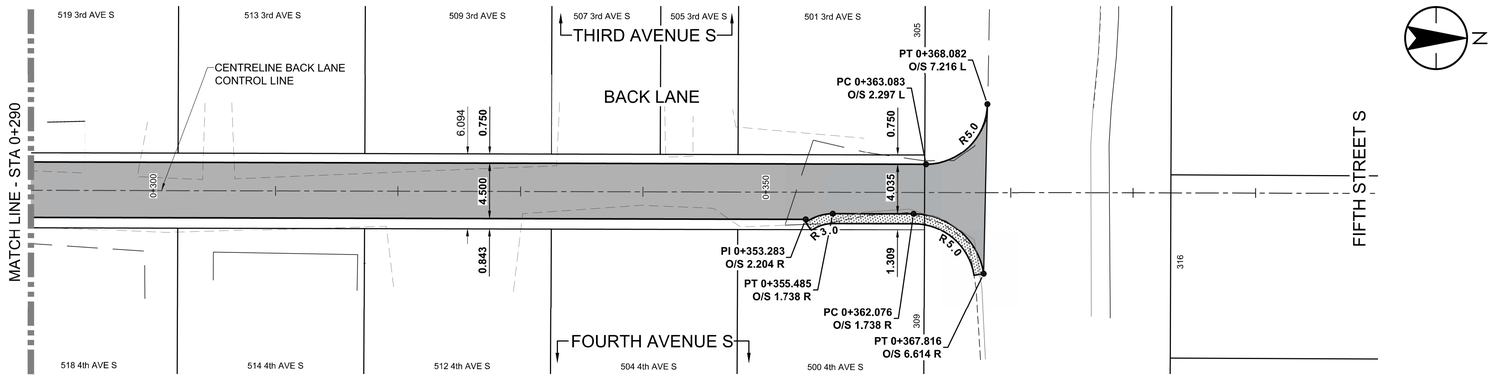
C-101	BACK LANE - HORIZONTAL GEOMETRY	1	OF	4
C-102	BACK LANE - PLAN & PROFILE - SEVENTH STREET SOUTH TO STA 0+140	2	OF	4
C-103	BACK LANE - PLAN & PROFILE - STA 0+140 TO STA 0+250	3	OF	4
C-104	BACK LANE - PLAN & PROFILE - STA 0+250 TO FIFTH STREET SOUTH	4	OF	4

UNDERGROUND

CU-201	BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE SEVENTH STREET S TO STA 2+00	1	OF	5
CU-202	BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE STA 2+00 TO STA 3+25	2	OF	5
CU-203	BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE STA 3+25 TO FIFTH STREET S	3	OF	5
CU-204	LOT 509 - BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE	4	OF	5
CU-501	UNDERGROUND DETAILS	5	OF	5







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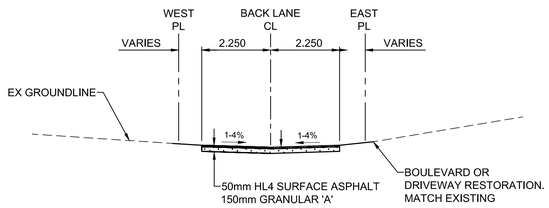

TYPICAL SECTION

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0 SCALE 1:100 V 4.0m

EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT	
	VALVE	
	CURB STOP	
	MANHOLE	●
	CATCH BASIN / CATCH PIT	■
	CURB INLET	▲
	POLE	
	LIGHT STANDARD	
	TRAFFIC SIGNAL POLE	
	SURVEY BAR	
	GEODETIC BENCH MARK	
	STORM / SANITARY MAIN	
	WATER MAIN	
	GAS	
	TRAFFIC SIGNALS	
	POWER	
	COMMUNICATIONS	
	CURB RENEWAL	
	PROPERTY LINE	
	RAMP CURB	
329.000	ELEVATIONS	(329.333)
	TREE / TREELINE	
	CONCRETE	
	CONC SIDEWALK / MEDIAN	
	ASPHALT	
	PAVING STONE	
	GRAVEL	
	PLANING / REMOVAL	
	DITCH FLOW	
	TOP OF SLOPE	
	BOTTOM OF SLOPE	
	CULVERT	
	SEWER FLOW DIRECTION	
BH25-01	BORE HOLE LOCATION	

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

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2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/01 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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Notes

Revision	By	Appd	YYYY.MM.DD
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A FOR 33% REVIEW	DL	RS	2025.11.21

File Name: 20983c-101-104.dwg	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD
	DML	MEE	MEE	2025.11.21

Permit/Seal

Client/Project Logo

Client/Project
CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

Kenora, ON

Title
BACK LANE
HORIZONTAL GEOMETRY

Project No.	Scale
111220983	AS NOTED

Revision	Sheet	Drawing No.
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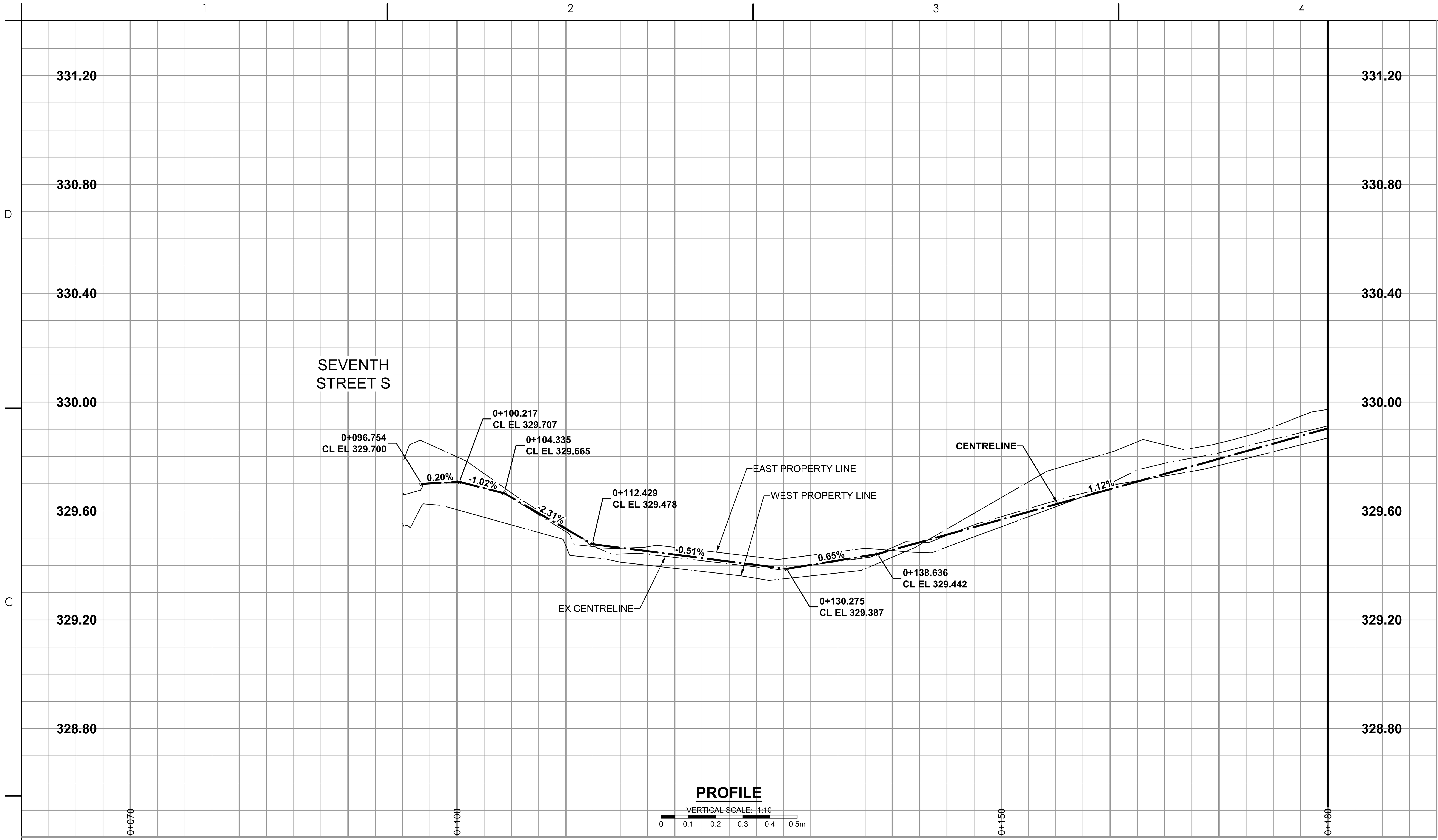

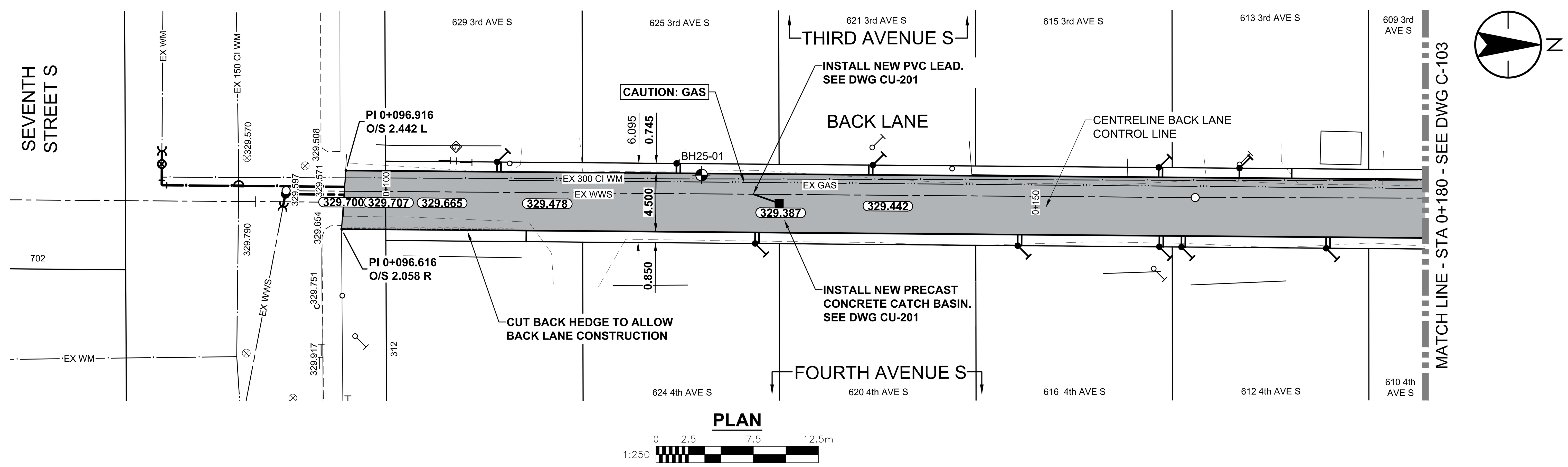

EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT	
	VALVE	
	CURB STOP	
	MANHOLE	●
	CATCH BASIN / CATCH PIT	■
	CURB INLET	▲
	POLE	
	LIGHT STANDARD	
	TRAFFIC SIGNAL POLE	
	SURVEY BAR	
	GEODETIC BENCH MARK	
	STORM / SANITARY MAIN	
	WATER MAIN	
	GAS	
	TRAFFIC SIGNALS	
	POWER	
	COMMUNICATIONS	
	CURB RENEWAL	
	PROPERTY LINE	
	RAMP CURB	
329.000	ELEVATIONS	(329.333)
	TREE / TREELINE	
	CONCRETE	
	CONC SIDEWALK / MEDIAN	
	ASPHALT	
	PAVING STONE	
	GRAVEL	
	PLANING / REMOVAL	
	DITCH FLOW	
	TOP OF SLOPE	
	BOTTOM OF SLOPE	
	CULVERT	
	SEWER FLOW DIRECTION	
BH25-01	BORE HOLE LOCATION	

NOTES

1. REMOVED & REPLACED EXISTING MANHOLE FRAME AND COVERS TO BE SALVAGED AND TAKEN TO CITY OPERATIONS YARD. ADJUST TO NEW GRADES.
2. REFER TO TENDER FOR DETAILS REGARDING TRAFFIC MANAGEMENT.
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13. CONTRACTOR SHALL VERIFY ALL PIPE INVERTS IN THE FIELD.
14. ADD 300.000 m TO ABBREVIATED ELEVATIONS TO OBTAIN GEODETIC ELEVATIONS.

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Permit/Seal

LICENSED PROFESSIONAL ENGINEER M. E. EDGAR 100210694 FEB 17 2026 PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods KENORA

Client/Project
CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

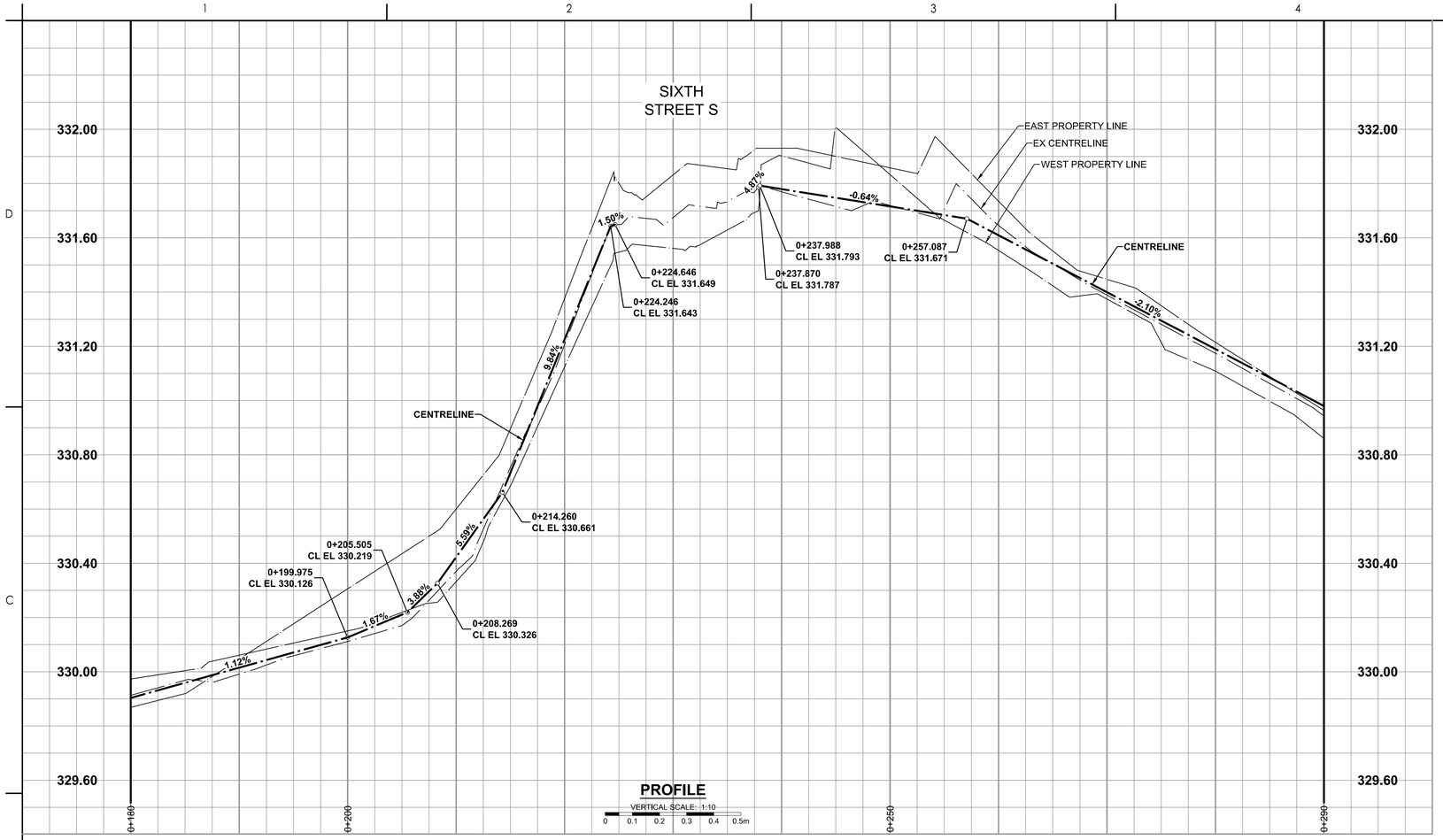
Kenora, ON

Title
BACK LANE
PLAN & PROFILE
SEVENTH STREET SOUTH TO STA 0+140

Project No.	Scale
111220983	AS NOTED

Revision	Sheet	Drawing No.
0	2 of 4	C-102

ORIGINAL SHEET - ISO A1 v23.01



PROFILE

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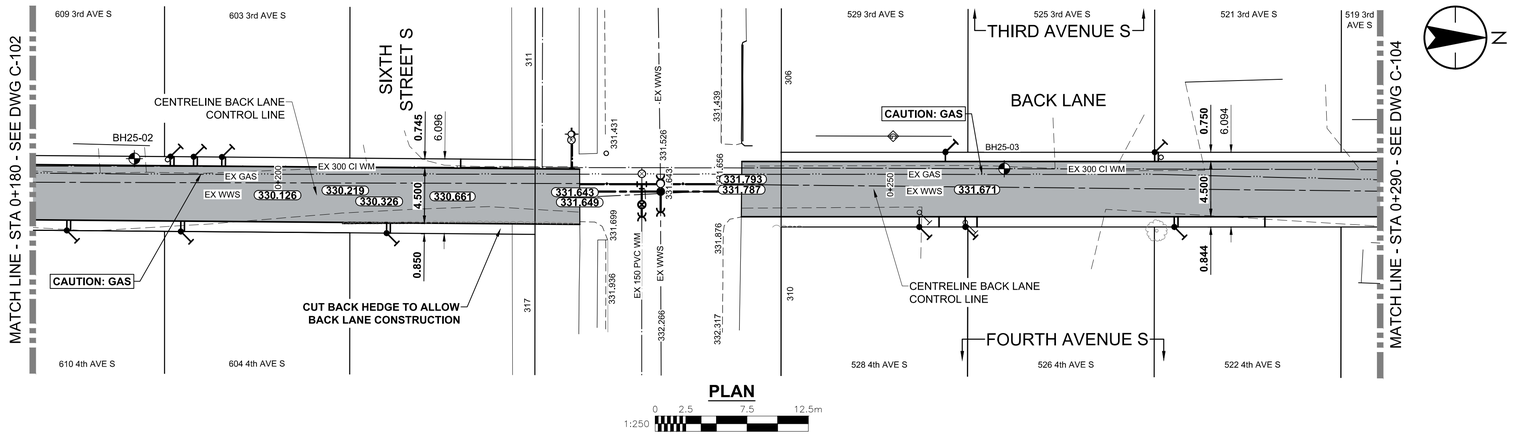

PLAN

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	HYDRANT	
	VALVE	
	CURB STOP	
	MANHOLE	●
	CATCH BASIN / CATCH PIT	■
	CURB INLET	▲
	POLE	
	LIGHT STANDARD	
	TRAFFIC SIGNAL POLE	
	SURVEY BAR	
	GEODETIC BENCH MARK	
	STORM / SANITARY MAIN	
	WATER MAIN	
	GAS	
	TRAFFIC SIGNALS	
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Permit/Seal

LICENSED PROFESSIONAL ENGINEER
M. E. EDGAR
100210894
FEB/3/2026
PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods KENORA

Client/Project

CITY OF KENORA

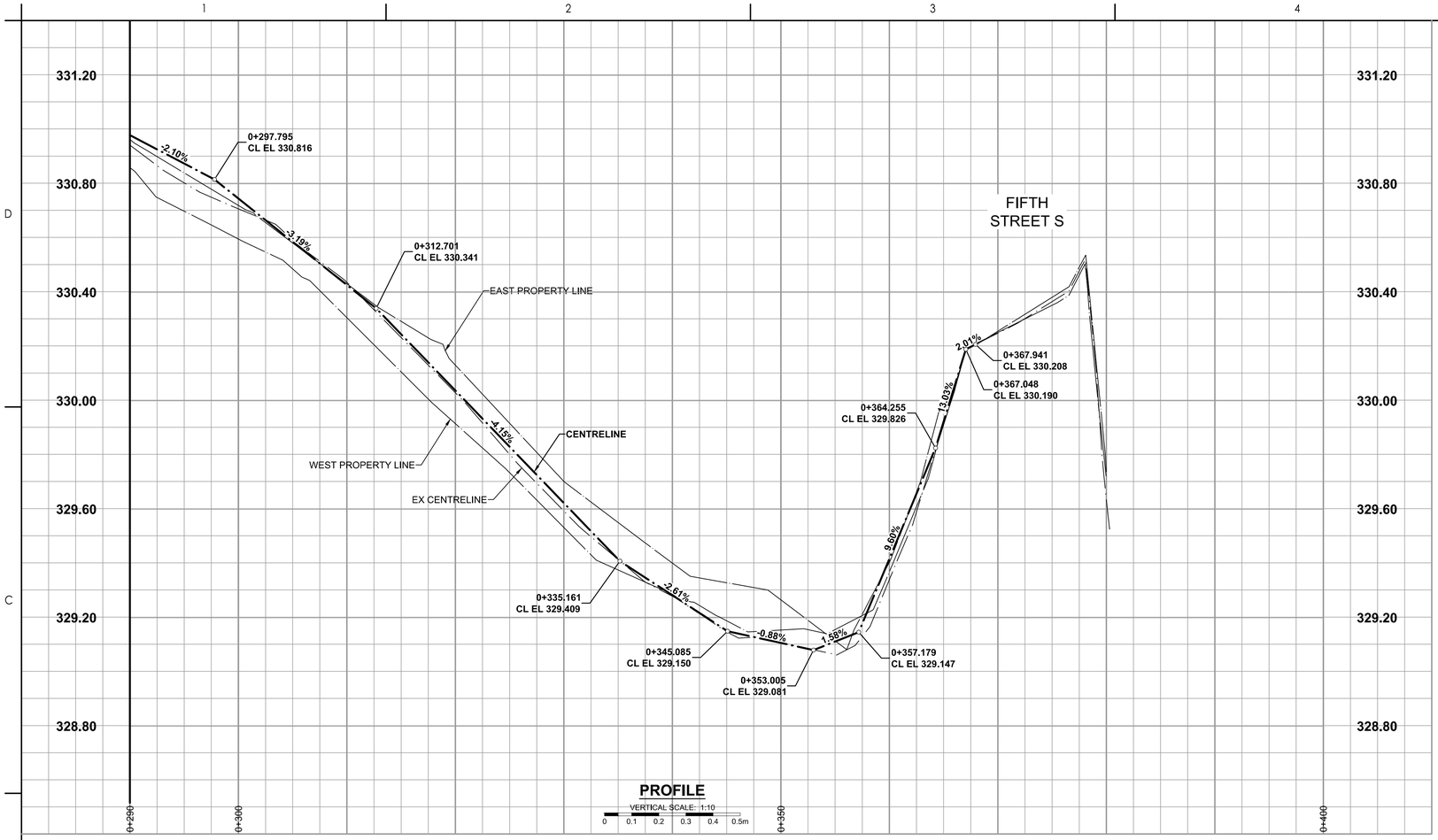
2026 SEWER AND WATER RECONSTRUCTION

Kenora, ON

Title

BACK LANE
PLAN & PROFILE
STA 0+140 TO STA 0+250

Project No.	Scale
111220983	AS NOTED
Revision: 0	Sheet: 3 of 4
	Drawing No.: C-103



PROFILE

VERTICAL SCALE: 1:10

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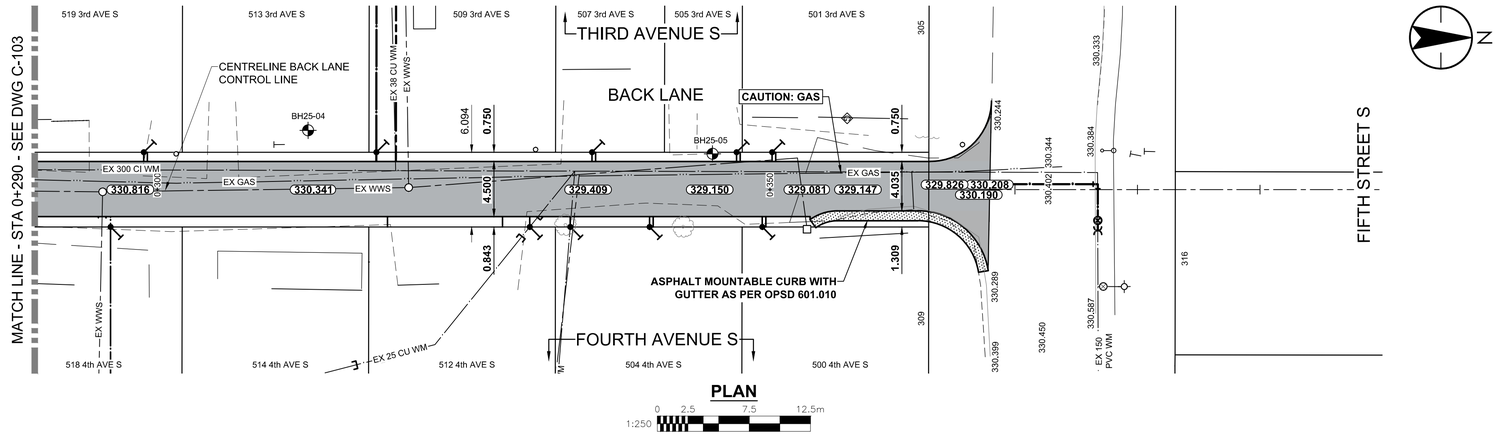

PLAN

0 2.5 7.5 12.5m

1:250

EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT	
	VALVE	
	CURB STOP	
	MANHOLE	
	CATCH BASIN / CATCH PIT	
	CURB INLET	
	POLE	
	LIGHT STANDARD	
	TRAFFIC SIGNAL POLE	
	SURVEY BAR	
	GEODETIC BENCH MARK	
	STORM / SANITARY MAIN	
	WATER MAIN	
	GAS	
	TRAFFIC SIGNALS	
	POWER	
	COMMUNICATIONS	
	CURB RENEWAL	
	PROPERTY LINE	
	RAMP CURB	
329.000	ELEVATIONS	(329.333)
	TREE / TREELINE	
	CONCRETE	
	CONC SIDEWALK / MEDIAN	
	ASPHALT	
	PAVING STONE	
	GRAVEL	
	PLANING / REMOVAL	
	DITCH FLOW	
	TOP OF SLOPE	
	BOTTOM OF SLOPE	
	CULVERT	
	SEWER FLOW DIRECTION	
BH25-01	BORE HOLE LOCATION	

NOTES

1. REMOVED & REPLACED EXISTING MANHOLE FRAME AND COVERS TO BE SALVAGED AND TAKEN TO CITY OPERATIONS YARD. ADJUST TO NEW GRADES.
2. REFER TO TENDER FOR DETAILS REGARDING TRAFFIC MANAGEMENT.
3. LAMP STANDARDS, HYDRO POLES, AND ANCHORS THAT REQUIRE TEMPORARY SUPPORT, REMOVAL OR REPLACEMENT, TO BE DONE SO AT THE EXPENSE OF THE CONTRACTOR AS NECESSARY.
4. UTILITIES SHOWN ARE APPROXIMATE ONLY, THE CITY OF KENORA AND ITS REPRESENTATIVES WILL NOT BE HELD ACCOUNTABLE FOR MISREPRESENTATION OF WATER AND SEWER SERVICES ON THIS DRAWING. CONTRACTOR IS RESPONSIBLE FOR UTILITY LOCATES PRIOR TO CONSTRUCTION.
5. CONTRACTOR TO COORDINATE WORK WITH UTILITY PROVIDERS.
6. LOT LINES SHOWN ARE APPROXIMATE ONLY AND SHOULD BE VERIFIED BY CONTRACTOR.
7. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
8. EXISTING RESIDENTIAL PATHWAYS, STAIRS, RAMPS TO BE TIED IN TO BACK OF WALK.
9. CONTRACTORS TO BE RESPONSIBLE FOR REINSTATING ANY REGULATORY, WARNING OR STREET SIGNS THAT ARE REMOVED DURING CONSTRUCTION. THE REINSTATMENT OF SIGNAGE SHALL BE DEEMED INCIDENTAL TO THE CONTRACT WORK.
10. EXISTING RESIDENTIAL PATHWAYS, STAIRS, RAMPS, DRIVEWAYS TO BE REINSTATED AND CONSIDERED INCIDENTAL TO THE WORKS.
11. DRIVEWAYS AND CURB DROPS SHOWN ON DRAWINGS ARE APPROXIMATE, FINAL LOCATIONS TO BE FIELD DETERMINED WITH THE CONTRACT ADMINISTRATOR TO ACCOUNT FOR EXISTING CONDITIONS AND FEATURES.
12. ALL CATCH BASINS AND CATCH BASIN MAINTENANCE HOLES ARE TO HAVE SUMPS OF 0.6 m BELOW THE LOWEST PIPE INVERT CONNECTED TO EACH INDIVIDUAL STRUCTURE.
13. CONTRACTOR SHALL VERIFY ALL PIPE INVERTS IN THE FIELD.
14. ADD 300.000 m TO ABBREVIATED ELEVATIONS TO OBTAIN GEODETIC ELEVATIONS.

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:
1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
SEE PROVINCIAL REGULATION 210/01 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

Stantec

Stantec Consulting Ltd.
500-311 Portage Avenue
Winnipeg MB R3B 2B9
Tel: (204) 489-5900
www.stantec.com

Consultant

Notes

Revision	By	Appd	YYYY.MM.DD
0			
D FOR TENDER	ME	ME	2026.02.17
C FOR 99% REVIEW	DL	RS	2026.01.21
B FOR 66% REVIEW	DL	RS	2025.12.24
A FOR 33% REVIEW	DL	RS	2025.11.21

Issued

File Name: 20983c-101-104.dwg	DIML	MEE	MEE	2025.11.21
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
M. E. EDGAR
100210894
FEB/3/2026
PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods KENORA

Client/Project

CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

Kenora, ON

Title

BACK LANE
PLAN & PROFILE
STA 0+250 TO FIFTH STREET SOUTH

Project No.	Scale
111220983	AS NOTED

Revision	Sheet	Drawing No.
0	4 of 4	C-104

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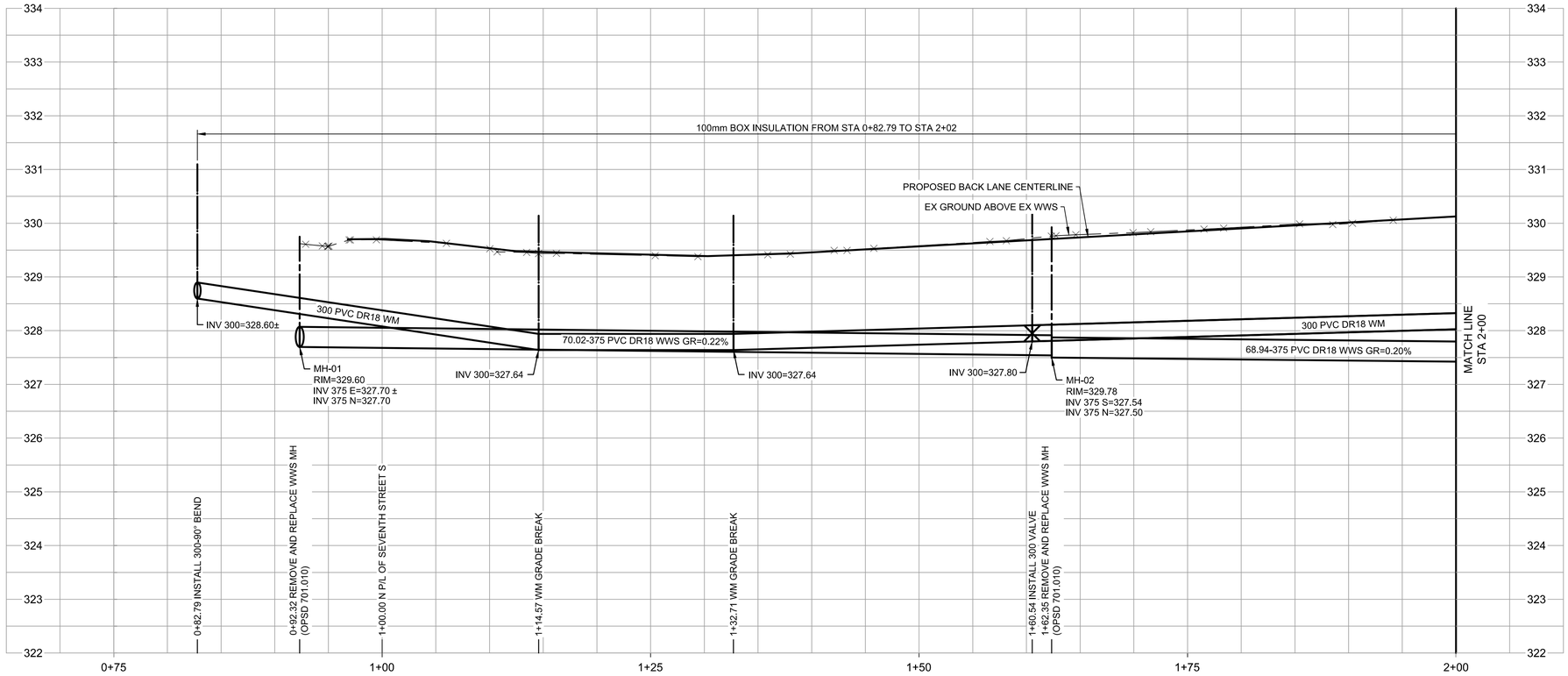
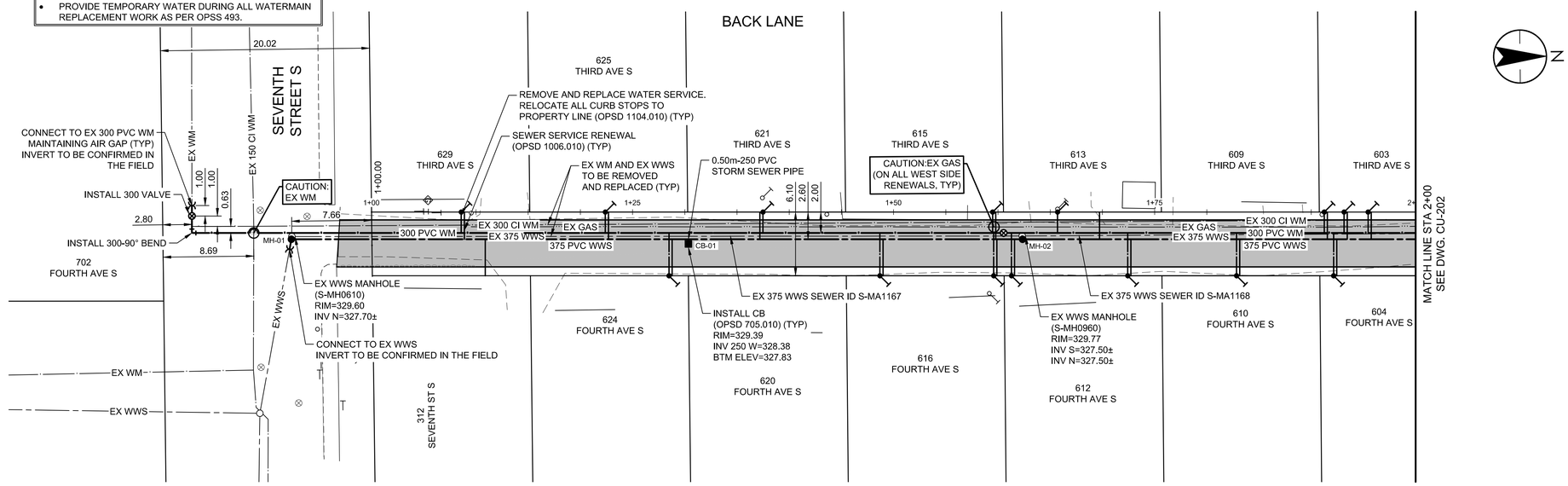
2026.2.17 2:27 PM By: Amness, Amy

ORIGINAL SHEET - ISO A1 v23.01



NOTES:
- CHAINAGES SHOWN ARE ALONG WEST PROPERTY LINE.
- EX WM AND WWS NOT SHOWN IN PROFILE FOR CLARITY.
- PROPOSED WWS ASSUMES ON-LINE RENEWAL.
- PROVIDE TEMPORARY WATER DURING ALL WATERMAIN REPLACEMENT WORK AS PER OPSS 493.



EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT			PROPERTY LINE	
	VALVE			RAMP CURB	
	CURB STOP		33.000	ELEVATIONS	33.333
	MANHOLE			TREE / TREELINE	
	CATCH BASIN / CATCH PIT			CONCRETE	
	CURB INLET			CONC SIDEWALK / MEDIAN	
	POLE			ASPHALT	
	LIGHT STANDARD			PAVING STONE	
	TRAFFIC SIGNAL POLE			GRAVEL	
	SURVEY BAR			PLANING / REMOVAL	
	GEODETIC BENCH MARK			DITCH FLOW	
	STORM / SANITARY MAIN			TOP OF SLOPE	
	WATER MAIN			BOTTOM OF SLOPE	
	GAS			CULVERT	
	TRAFFIC SIGNALS			SEWER FLOW DIRECTION	
	POWER		BH25-01	BORE HOLE LOCATION	
	COMMUNICATIONS				
	CURB RENEWAL				

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA1167		
DISTANCE FROM S-MH0610		
DISTANCE	DIAMETER	CLOCK
16.4	150	10
18.4	150	2
30.2	100	10
36.3	150	2
44.7	150	10
56.5	100	2
67.3	150	11
67.4	150	2
69.1	150	2

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA1168		
DISTANCE FROM S-MH0960		
DISTANCE	DIAMETER	CLOCK
6.8	150	12
9.8	150	12
20.2	100	1
28.6	150	10
29.5	150	1
30.5	100	11
32.8	150	9
46.3	150	12
52.0	100	12

1:250H 0 2.5 7.5 12.5m
1:50V 0 0.5 1.5 2.5m

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

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2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

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METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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Consultant

Notes

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS, EXCEPT WHERE NOTED OTHERWISE IN THE DRAWINGS OR PROJECT SPECIFICATIONS.
2. EXACT LOCATION OF ALL BURIED UTILITIES UNKNOWN. CONTRACTOR TO VERIFY LOCATION, SIZE, AND MATERIAL OF ALL EXISTING BURIED UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS.
3. IT IS ASSUMED THAT EX WATER AND WASTEWATER SEWER ARE LOCATED IN A BLASTED COMMON TRENCH. FINAL LOCATIONS OF PROPOSED WATERMAIN AND WASTEWATER SEWER RENEWALS TO BE DETERMINED IN THE FIELD. A MINIMUM 0.5m VERTICAL AND HORIZONTAL SEPARATION TO BE MAINTAINED AT ALL TIMES.
4. TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED WITH COMMON OR SUITABLE IN-SITU MATERIAL AS NOTED IN SPECIFICATIONS.
5. MINIMUM COVER TO TOP OF WATERMAIN SHALL BE 2.10m, UNLESS NOTED OTHERWISE.
6. INSTALL INSULATION AS PER OPSD 1109.030 WHERE EXISTING UTILITIES WILL NOT ALLOW FOR 2.10m COVER.
7. LOCATION OF EX WATER SERVICES ARE UNKNOWN AND ARE TO BE CONFIRMED IN THE FIELD. ALL SERVICES ARE 19mm UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
8. LOCATION OF EX SEWER SERVICES ARE APPROXIMATE AND ARE TO BE CONFIRMED IN THE FIELD.
9. WHERE MINIMUM VERTICAL SEPARATION OF 0.5m CANNOT BE ACHIEVED BETWEEN THE WATERMAIN AND WASTEWATER SEWER, WASTEWATER SEWER PIPE MATERIAL TO BE PVC DR18 AND WATERMAIN AND WASTEWATER PIPE JOINTS TO BE STAGGERED AND NOT DIRECTLY PARALLEL WITH ONE ANOTHER.
10. INSTALL MANHOLE ADJUSTING RINGS AS PER OPSD 704.010 AND FROST STRAPS AS PER OPSD 701.100.

Revision	By	Appd	YYYY.MM.DD
0			

Issued	By	Appd	YYYY.MM.DD
D FOR TENDER	DL	SP	2026.02.17
C FOR 99% REVIEW	DL	RS	2026.01.21
B FOR 66% REVIEW	DL	RS	2025.12.24
A FOR 33% REVIEW	DL	RS	2025.11.21

File Name: 20983cu-201-203.dwg	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD
	AM	MP	DL	2025.11.21

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
S. M. PHILLIPS
100224174
2026.02.17
PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods KENORA

Client/Project

CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

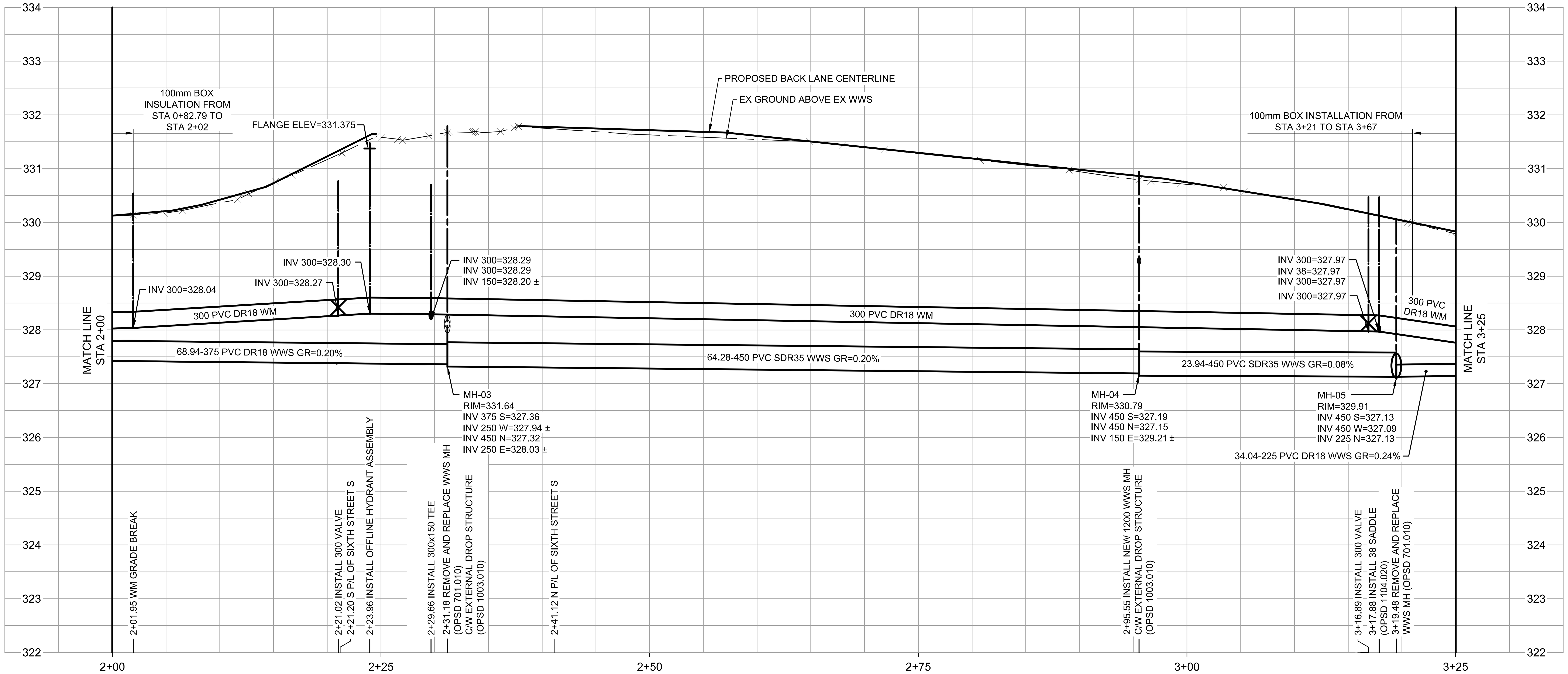
Kenora, ON

Title

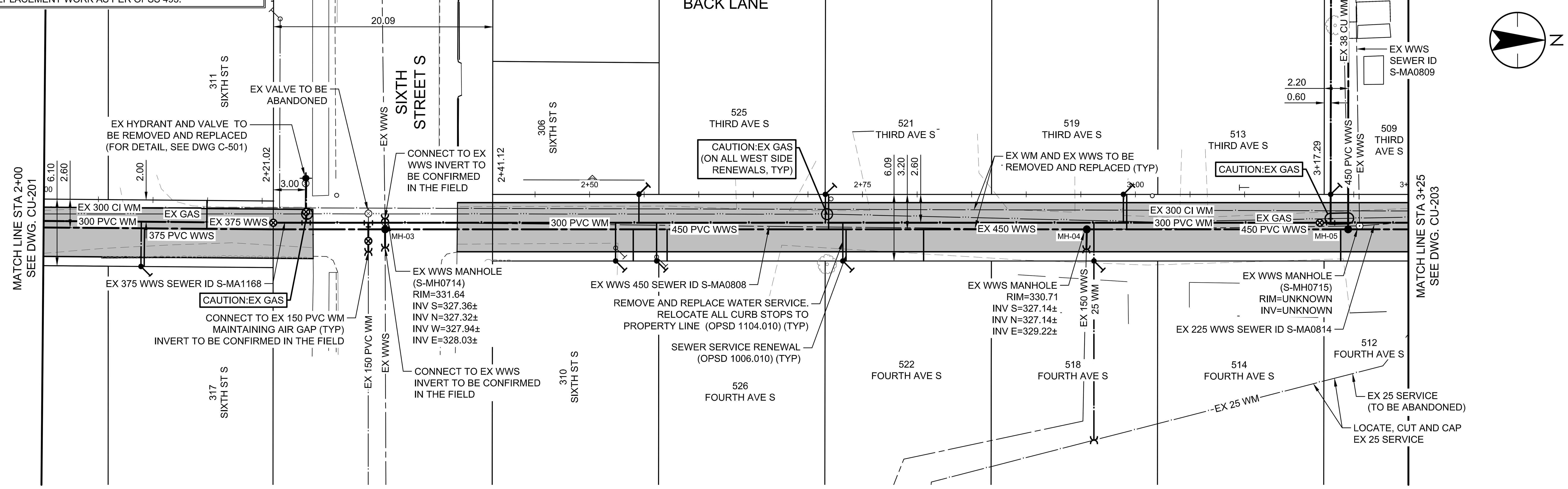
BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE SEVENTH STREET S TO STA 2+00

Project No.	Scale
111220983	1:250H 1:50V

Revision	Sheet	Drawing No.
0	1 of 5	CU-201



NOTES:
- CHAINAGES SHOWN ARE ALONG WEST PROPERTY LINE.
- EX WM AND WWS NOT SHOWN IN PROFILE FOR CLARITY.
- PROPOSED WWS ASSUMES ON-LINE RENEWAL.
- PROVIDE TEMPORARY WATER DURING ALL WATERMAIN REPLACEMENT WORK AS PER OPSS 493.



EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT			PROPERTY LINE	
	VALVE			RAMP CURB	
	CURB STOP		33.000	ELEVATIONS	33.333
	MANHOLE			TREE / TREELINE	
	CATCH BASIN / CATCH PIT			CONC SIDEWALK / MEDIAN	
	CURB INLET			ASPHALT	
	POLE			PAVING STONE	
	LIGHT STANDARD			GRAVEL	
	TRAFFIC SIGNAL POLE			PLANING / REMOVAL	
	SURVEY BAR			DITCH FLOW	
	GEODETIC BENCH MARK			TOP OF SLOPE	
	STORM / SANITARY MAIN			BOTTOM OF SLOPE	
	WATER MAIN			CULVERT	
	GAS			SEWER FLOW DIRECTION	
	TRAFFIC SIGNALS		BH25-01	BORE HOLE LOCATION	
	POWER				
	COMMUNICATIONS				
	CURB RENEWAL				

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION

SEWER ID S-MA1168

DISTANCE FROM S-MH0960

DISTANCE	DIAMETER	CLOCK
6.8	150	12
9.8	150	12
20.2	100	1
28.6	150	10
29.5	150	1
30.5	100	11
32.8	150	9
46.3	150	12
52.0	100	12

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION

SEWER ID S-MA0808

DISTANCE FROM S-MH0714

DISTANCE	DIAMETER	CLOCK
22.2	150	12
25.3	100	12
40.1	150	12
41.7	150	12
48.8	150	12
64.1	100	12
67.4	100	11
87.0	150	1

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION

SEWER ID S-MA0814

DISTANCE FROM S-MH0715

DISTANCE	DIAMETER	CLOCK
8.1	150	1
15.7	150	9
20.4	150	3
27.5	150	9
29.6	100	3
30.4	150	9
31.9	150	3

1:250H 0 2.5 7.5 12.5m
1:50V 0 0.5 1.5 2.5m

WARNING

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2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/01 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

Stantec

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Winnipeg MB R3B 2B9
Tel: (204) 489-5900
www.stantec.com

Consultant

Notes

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS, EXCEPT WHERE NOTED OTHERWISE IN THE DRAWINGS OR PROJECT SPECIFICATIONS.
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9. WHERE MINIMUM VERTICAL SEPARATION OF 0.5m CANNOT BE ACHIEVED BETWEEN THE WATERMAIN AND WASTEWATER SEWER, WASTEWATER SEWER PIPE MATERIAL TO BE PVC DR18 AND WATERMAIN AND WASTEWATER PIPE JOINTS TO BE STAGGERED AND NOT DIRECTLY PARALLEL WITH ONE ANOTHER.
10. INSTALL MANHOLE ADJUSTING RINGS AS PER OPSD 704.010 AND FROST STRAPS AS PER OPSD 701.100.

Revision

		By	Appd	YYYY.MM.DD
0				

Issued

		By	Appd	YYYY.MM.DD
D	FOR TENDER	DL	SP	2026.02.17
C	FOR 99% REVIEW	DL	RS	2026.01.21
B	FOR 66% REVIEW	DL	RS	2025.12.24
A	FOR 33% REVIEW	DL	RS	2025.11.21

File Name: 20983cu-201-203.dwg	AM	MP	DL	2025.11.21
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
S. M. PHILLIPS
100224174
2026.02.17
PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods KENORA

Client/Project

CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

Kenora, ON

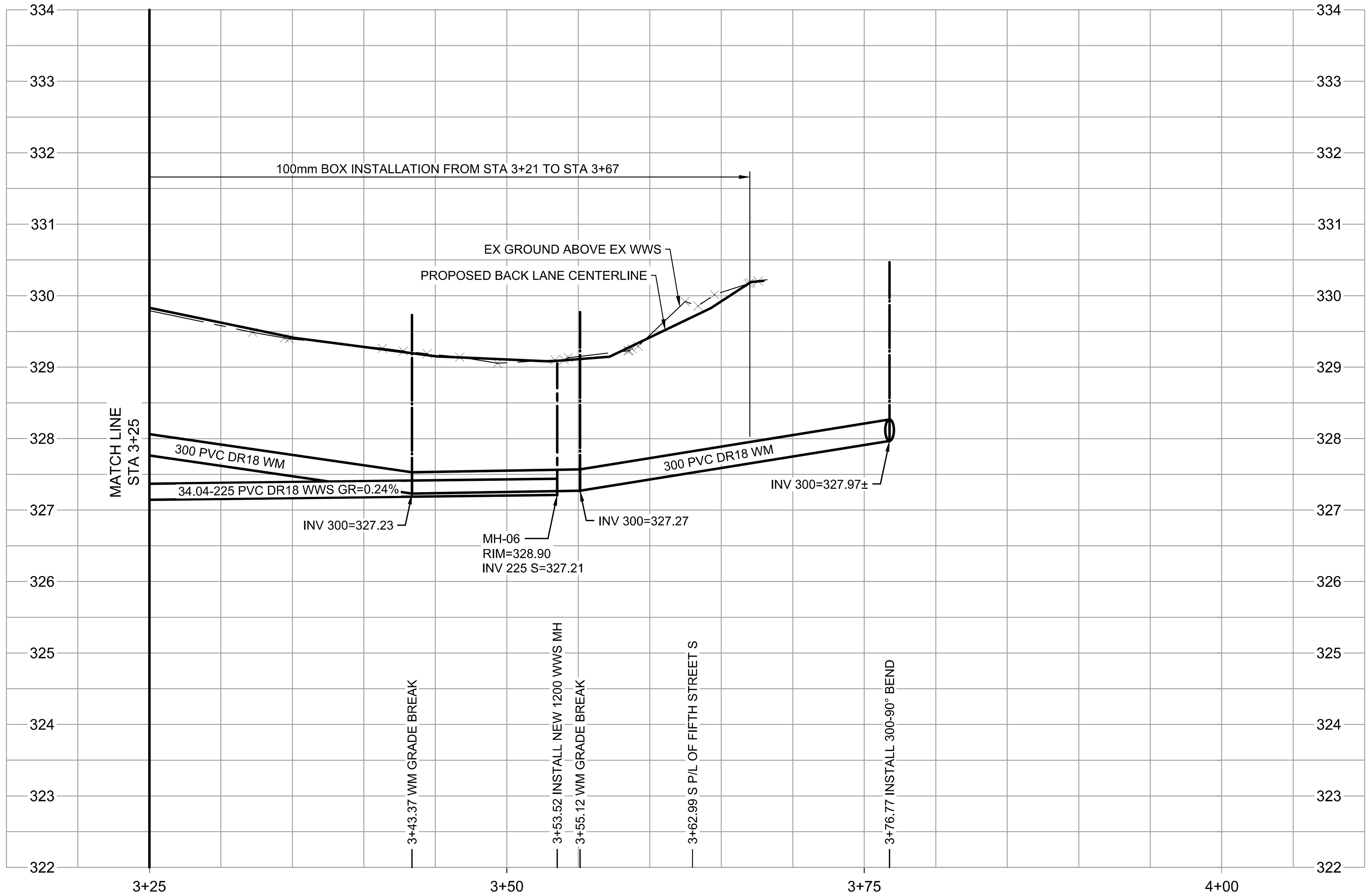
Title

BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE
STA 2+00 TO STA 3+25

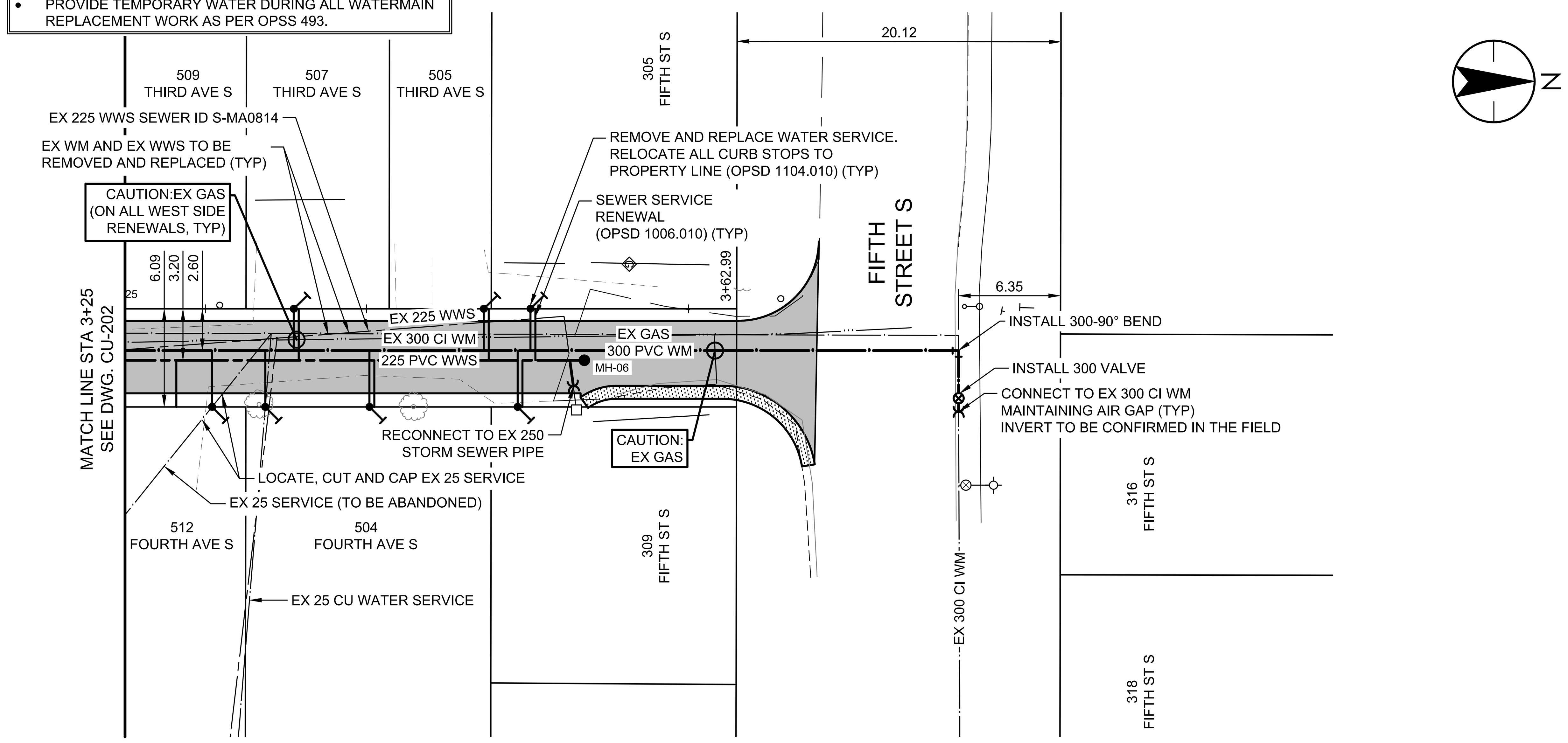
Project No. 111220983 | Scale 1:250H 1:50V

Revision 0 | Sheet 2 of 5 | Drawing No. CU-202

ORIGINAL SHEET - ISO A1 v23.01



NOTES:
- CHAINAGES SHOWN ARE ALONG WEST PROPERTY LINE.
- EX WM AND WWS NOT SHOWN IN PROFILE FOR CLARITY.
- PROPOSED WWS ASSUMES ON-LINE RENEWAL.
- PROVIDE TEMPORARY WATER DURING ALL WATERMAIN REPLACEMENT WORK AS PER OPSS 493.



EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT			PROPERTY LINE	
	VALVE			RAMP CURB	
	CURB STOP		33.000	ELEVATIONS	33.333
	MANHOLE			TREE / TREELINE	
	CATCH BASIN / CATCH PIT			CONCRETE	
	CURB INLET			CONC SIDEWALK / MEDIAN	
	POLE			ASPHALT	
	LIGHT STANDARD			PAVING STONE	
	TRAFFIC SIGNAL POLE			GRAVEL	
	SURVEY BAR			PLANING / REMOVAL	
	GEODETIC BENCH MARK			DITCH FLOW	
	STORM / SANITARY MAIN			TOP OF SLOPE	
	WATER MAIN			BOTTOM OF SLOPE	
	GAS			CULVERT	
	TRAFFIC SIGNALS			SEWER FLOW DIRECTION	
	POWER		BH25-01	BORE HOLE LOCATION	
	COMMUNICATIONS				
	CURB RENEWAL				

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION

SEWER ID S-MA0814

DISTANCE FROM S-MH0715

DISTANCE	DIAMETER	CLOCK
8.1	150	1
15.7	150	9
20.4	150	3
27.5	150	9
29.6	100	3
30.4	150	9
31.9	150	3

1:250H 0 2.5 7.5 12.5m
1:50V 0 0.5 1.5 2.5m

WARNING

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1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.

2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

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WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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Notes

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10. INSTALL MANHOLE ADJUSTING RINGS AS PER OPSD 704.010 AND FROST STRAPS AS PER OPSD 701.100.

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A FOR 33% REVIEW	DL	RS	2025.11.21

File Name: 20983cu-201-203.dwg	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD
	AM	MP	DL	2025.11.21

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
S. M. PHILLIPS
100224174
2026.02.17
PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods
KENORA

Client/Project

CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

Kenora, ON

Title

BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE
STA 3+25 TO FIFTH STREET S

Project No. 111220983

Scale 1:250H 1:50V

Revision 0

Sheet 3 of 5

Drawing No. CU-203

ORIGINAL SHEET - ISO A1 v23.01

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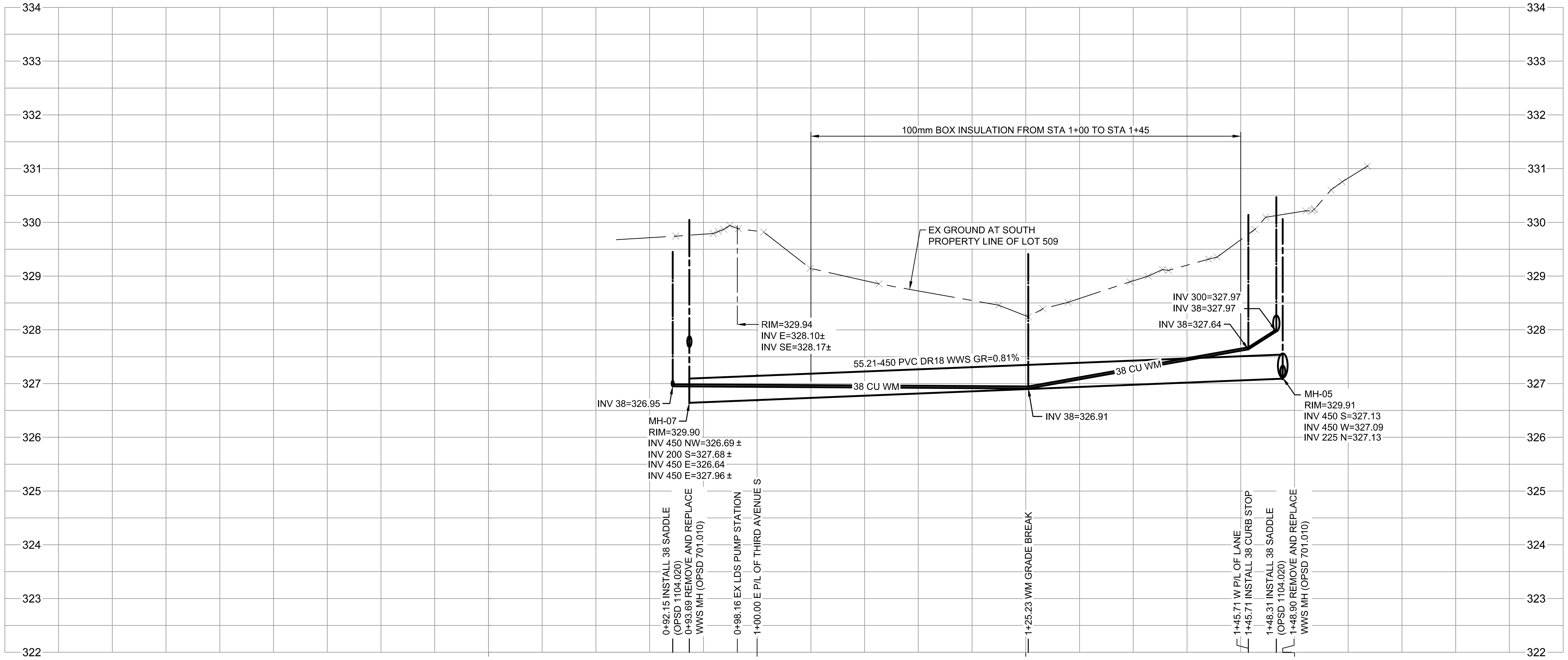
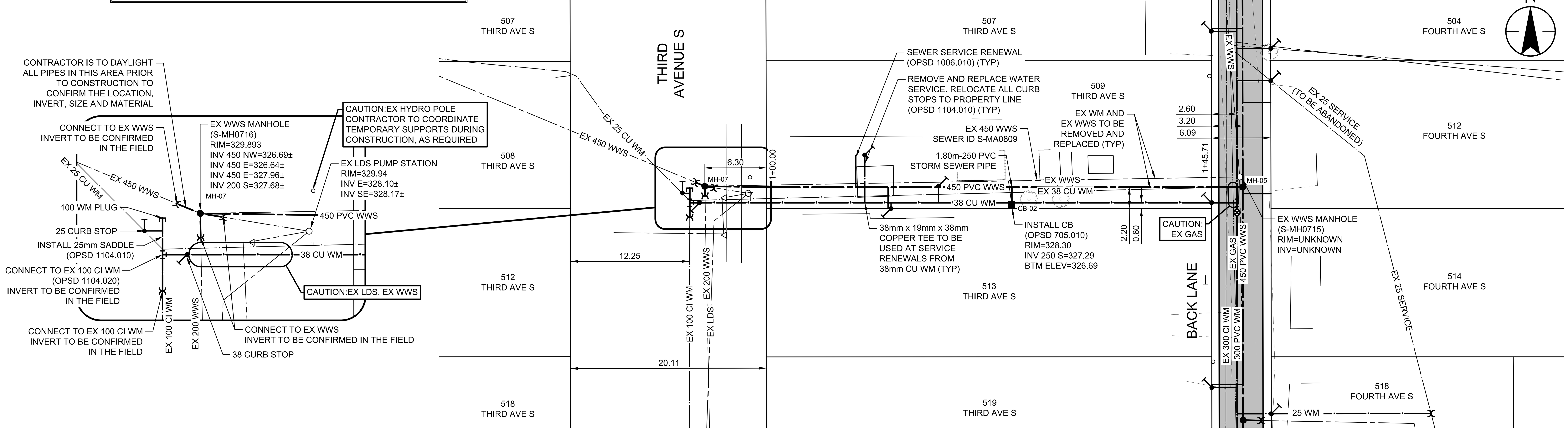


NOTES:
- CHAINAGES SHOWN ARE ALONG SOUTH PROPERTY LINE OF 509 THIRD AVE S.
- EX WM AND WWS NOT SHOWN IN PROFILE FOR CLARITY.
- PROPOSED WWS ASSUMES ON-LINE RENEWAL.
- PROVIDE TEMPORARY WATER DURING ALL WATERMAIN REPLACEMENT WORK AS PER OPSS 493.

FOR CONTINUATION SEE DWG. CU-203



FOR CONTINUATION SEE DWG. CU-202

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
	HYDRANT			PROPERTY LINE	
	VALVE			RAMP CURB	
	CURB STOP		33.000	ELEVATIONS	33.333
	MANHOLE			TREE / TREELINE	
	CATCH BASIN / CATCH PIT			CONCRETE	
	CURB INLET			CONC SIDEWALK / MEDIAN	
	POLE			ASPHALT	
	LIGHT STANDARD			PAVING STONE	
	TRAFFIC SIGNAL POLE			GRAVEL	
	SURVEY BAR			PLANING / REMOVAL	
	GEODETIC BENCH MARK			DITCH FLOW	
	STORM / SANITARY MAIN			TOP OF SLOPE	
	WATER MAIN			BOTTOM OF SLOPE	
	GAS			CULVERT	
	TRAFFIC SIGNALS			SEWER FLOW DIRECTION	
	POWER		BH25-01	BORE HOLE LOCATION	
	COMMUNICATIONS				
	CURB RENEWAL				

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA0809		
DISTANCE FROM S-MH0716		
DISTANCE	DIAMETER	CLOCK
15.0	150	9
18.3	150	1
30.7	200	2

1:250H 0 2.5 7.5 12.5m
1:50V 0 0.5 1.5 2.5m

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:
1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
SEE PROVINCIAL REGULATION 210/01 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

Stantec

Stantec Consulting Ltd.
500–311 Portage Avenue
Winnipeg MB R3B 2S9
Tel: (204) 489-5900
www.stantec.com

Consultant

Notes
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS, EXCEPT WHERE NOTED OTHERWISE IN THE DRAWINGS OR PROJECT SPECIFICATIONS.
2. EXACT LOCATION OF ALL BURIED UTILITIES UNKNOWN. CONTRACTOR TO VERIFY LOCATION, SIZE, AND MATERIAL OF ALL EXISTING BURIED UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS.
3. IT IS ASSUMED THAT EX WATER AND WASTEWATER SEWER ARE LOCATED IN A BLASTED COMMON TRENCH. FINAL LOCATIONS OF PROPOSED WATERMAIN AND WASTEWATER SEWER RENEWALS TO BE DETERMINED IN THE FIELD. A MINIMUM 0.5m VERTICAL AND HORIZONTAL SEPARATION TO BE MAINTAINED AT ALL TIMES.
4. TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED WITH COMMON OR SUITABLE IN-SITU MATERIAL AS NOTED IN SPECIFICATIONS.
5. MINIMUM COVER TO TOP OF WATERMAIN SHALL BE 2.10m, UNLESS NOTED OTHERWISE.
6. INSTALL INSULATION AS PER OPSD 1109.030 WHERE EXISTING UTILITIES WILL NOT ALLOW FOR 2.10m COVER.
7. LOCATION OF EX WATER SERVICES ARE UNKNOWN AND ARE TO BE CONFIRMED IN THE FIELD. ALL SERVICES ARE 19mm UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
8. LOCATION OF EX SEWER SERVICES ARE APPROXIMATE AND ARE TO BE CONFIRMED IN THE FIELD.
9. WHERE MINIMUM VERTICAL SEPARATION OF 0.5m CANNOT BE ACHIEVED BETWEEN THE WATERMAIN AND WASTEWATER SEWER, WASTEWATER SEWER PIPE MATERIAL TO BE PVC DR18 AND WATERMAIN AND WASTEWATER PIPE JOINTS TO BE STAGGERED AND NOT DIRECTLY PARALLEL WITH ONE ANOTHER.
10. INSTALL MANHOLE ADJUSTING RINGS AS PER OPSD 704.010 AND FROST STRAPS AS PER OPSD 701.100.

Revision		By	Appd	YYYY.MM.DD
0				

Issued		By	Appd	YYYY.MM.DD
D	FOR TENDER	DL	SP	2026.02.17
C	FOR 99% REVIEW	DL	RS	2026.01.21
B	FOR 66% REVIEW	DL	RS	2025.12.24
A	FOR 33% REVIEW	DL	RS	2025.11.21

File Name: 20983cu-204.dwg	AM	MP	DL	2025.11.21
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
S. M. PHILLIPS
100224174
2026.02.17
PROVINCE OF ONTARIO

Client/Project Logo

Lake of the Woods KENORA

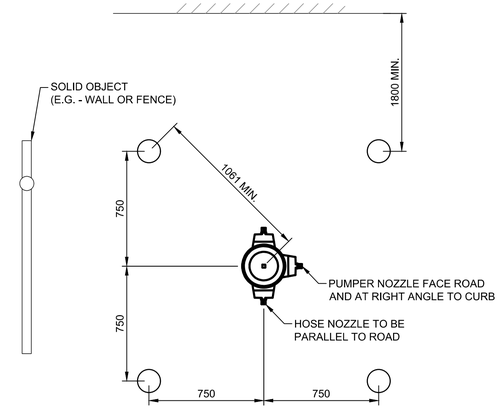
Client/Project
CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

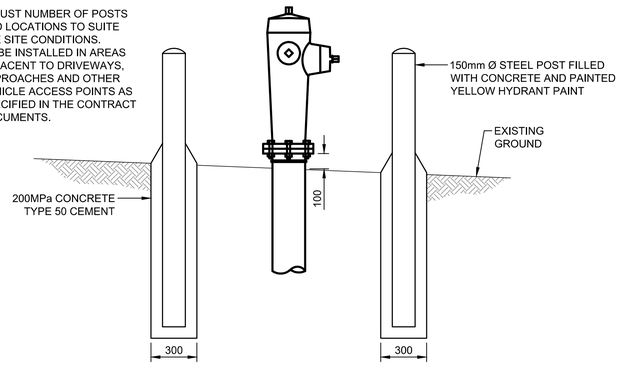
Kenora, ON

Title
LOT 509 - BACK LANE BETWEEN THIRD AVE S AND FOURTH AVE S - PLAN PROFILE

Project No. 111220983
Scale 1:250H 1:50V
Revision 0
Sheet 4 of 5
Drawing No. CU-204



NOTE:
1. ADJUST NUMBER OF POSTS AND LOCATIONS TO SUITE THE SITE CONDITIONS.
2. TO BE INSTALLED IN AREAS ADJACENT TO DRIVEWAYS, APPROACHES AND OTHER VEHICLE ACCESS POINTS AS SPECIFIED IN THE CONTRACT DOCUMENTS.



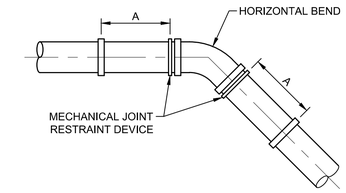
TYPICAL HYDRANT PROTECTION PLACEMENT
N.T.S.

TYPICAL HYDRANT AND VALVE DETAIL
N.T.S.

NOTE:
1. HYDRANTS ARE TO BE MUELLER CANADA VALVE OR CLOW M67 BRIGADIER WITH THE FOLLOWING CONNECTIONS:

A. HOSE CONNECTIONS:	B. PUMPER CONNECTIONS:
- #1 PATTERN STYLE	- 5.745" MAJOR DIAMETER
- 3.124" MAJOR DIAMETER	- 5.580" PITCH DIAMETER
- 2.995" PITCH DIAMETER	- 4 THREADS PER INCH
- 5 THREADS PER INCH	- 0.186 THREAD DEPTH
- 0.146 THREAD DEPTH	- CSA TAPERED THREAD
- CSA TAPERED THREAD	- MUELLER CANADA VALVE CODE 33B
- MUELLER CANADA VALVE CODE 12B	

2. HYDRANTS TO BE PAINTED WITH APPROVED YELLOW COLOR USING EXTERIOR ENAMEL PAINT.
3. HYDRANT DRAIN HOLES TO BE PLUGGED IN AREAS OF HIGH GROUND WATER.
4. HYDRANT ASSEMBLIES FROM UNDER FLANGE ELEVATION (U.F.E.) TO TOP OF HYDRANT LEAD TO BE TYPICAL 2.65m.
5. ALL BOLTS TO BE STAINLESS STEEL WRAPPED WITH DENSO MASTIC AND DENSO TAPE.
6. GATE VALVES TO BE 150 DIAMETER MUELLER VALVES.
7. MECHANICAL RESTRAINTS TO BE INSTALLED ON ALL HYDRANT FITTINGS.



NOTE:
1. REVIEW RESTRAINT METHOD WITH CONTRACT ADMINISTRATOR PRIOR TO INSTALLATION.
2. ALL JOINTS SHALL BE RESTRAINED.
3. ALL JOINTS WITHIN INTERSECTIONS SHALL BE RESTRAINED.
4. RESTRAINED LENGTHS BASED ON SAND SILT [GM & SM] SOIL CONDITIONS.
5. WATERMAIN TO BE PLACED WITH GRANULAR 'A' BED & COVER.
6. RESTRAINED LENGTHS BASED OFF OF 1034kPa WATERMAIN PRESSURE.
7. RESTRAINED LENGTHS BASED OFF OF SW BACKFILL.

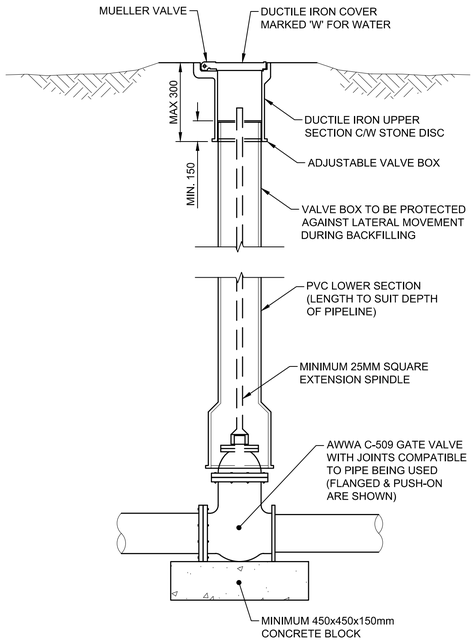
TEE OR HYDRANT LEAD			
MAIN LINE DIAMETER (mm)	BRANCH DIAMETER (mm)	DEPTH OF BURY (m)	RESTRAINED LENGTH (m)
250	200	2.1	7.6
250	200	1.8	9.1
250	150	1.8	5.2
200	150	2.4	4.0
200	100	2.4	3.0
200	100	1.5	3.0

MECHANICAL JOINT RESTRAINT (150psi)
N.T.S.

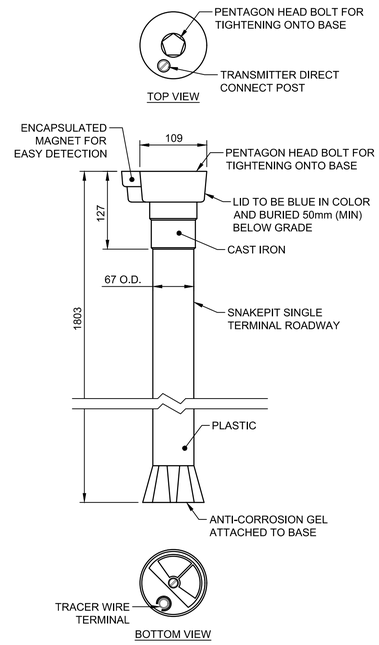
VERTICAL BEND						
MAIN LINE DIAMETER (mm)	HIGH SIDE			LOW SIDE		
	BEND ANGLE (DEGREES)	DEPTH OF BURY (m)	RESTRAINED LENGTH (m)	BEND ANGLE (DEGREES)	DEPTH OF BURY (m)	RESTRAINED LENGTH (m)
200	11.25	1.5	1.5	11.25	1.8	0.9

REDUCER			
MAIN LINE DIAMETER (mm)	BRANCH DIAMETER (mm)	DEPTH OF BURY (m)	RESTRAINED LENGTH (m)
250	150	2.7	6.4

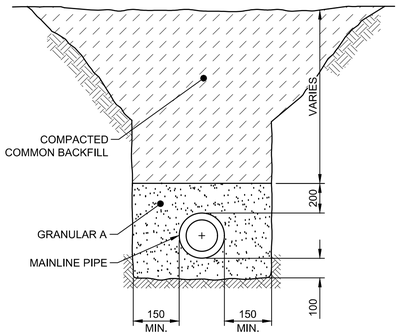
PLUG END OR VALVE		
MAIN LINE DIAMETER (mm)	DEPTH OF BURY (m)	RESTRAINED LENGTH (m)
200	2.7	8.5



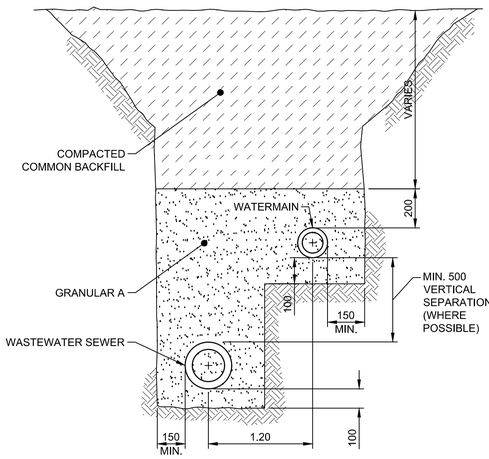
VALVE DETAIL
N.T.S.



THAW CABLE ACCESS DETAIL
N.T.S.



SINGLE TRENCH DETAIL
N.T.S.



COMMON TRENCH DETAIL
N.T.S.

WARNING
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METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

Stantec

Stantec Consulting Ltd.
500-311 Portage Avenue
Winnipeg MB R3B 2B9
Tel: (204) 489-5900
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Notes

Revision	By	Appd	YYYY.MM.DD
0			
D FOR TENDER	DL	SP	2026.02.17
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B FOR 66% REVIEW	DL	RS	2025.12.24
A FOR 33% REVIEW	DL	RS	2025.11.21

Issued	By	Appd	YYYY.MM.DD
File Name: 20983cu-501.dwg	Dwn.	Dsgn.	Chkd.
			2025.11.21 YYYY.MM.DD

Permit/Seal

LICENSED PROFESSIONAL ENGINEER
S. M. PHILLIPS
100224174
2026.02.17
PROVINCE OF ONTARIO

Client/Project Logo

Client/Project
CITY OF KENORA

2026 SEWER AND WATER RECONSTRUCTION

Kenora, ON

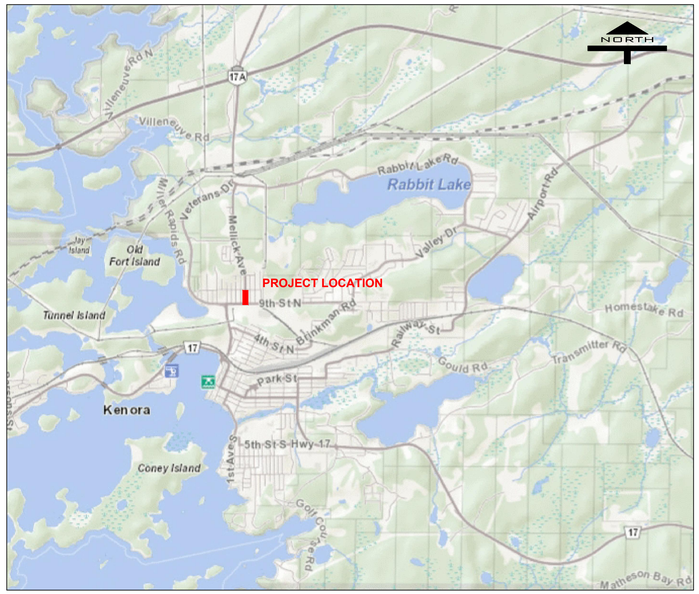
Title
UNDERGROUND DETAILS

Project No.	Scale
111220983	AS NOTED
Revision 0	Sheet 5 of 5
	Drawing No. CU-501

THE CITY OF KENORA

MELLICK AVENUE RECONSTRUCTION

KENORA, ONTARIO



KEY PLAN

LIST OF DRAWINGS

No.	Rev.	DRAWING DESCRIPTION
L1	0	LEGEND
R1	0	EXISTING SITE PLAN & REMOVALS – MELLICK AVENUE
P1	0	MELLICK AVENUE PLAN & PROFILE 10+000 TO 10+110
P2	0	MELLICK AVENUE PLAN & PROFILE 10+110 TO 10+210
G1	0	TYPICAL SECTIONS & STRUCTURE SCHEDULES
G2	0	DETAILS & NOTES

Lake of the Woods KENORA

TULLOCH

PROJECT No. 26-0652

EXISTING

DESCRIPTION	APPEARANCE
LEGAL	
PROPERTY LINE	
PROPERTY LINE (SUBJECT PROP.)	
LOT LINES	
IRON BAR (IB)	
STANDARD IRON BAR (SIB)	
ROUND IRON BAR (RIB)	
ROADWAY	
EXISTING EDGE OF PAVEMENT	
EXISTING CURB	
EXISTING SIDEWALK	
EXISTING GRAVEL	
SANITARY	
EXISTING SANITARY SEWER	
EXISTING SANITARY LATERAL	
EXISTING SANITARY MANHOLE	EX.MH
EXISTING SANITARY CLEANOUT	
STORM	
EXISTING STORM SEWER	
EXISTING STORM LATERAL	
EXISTING STORM MANHOLE	
EXISTING CATCHBASIN	
WATER	
EXISTING WATERMAIN	W
EXISTING WATER SERVICE	
EXISTING WATERMAIN VALVE	
EXISTING CURB STOP	
EXISTING HYDRANT	
EXISTING WATERMAIN CAP	
EXISTING WATERMAIN 45° BEND	
EXISTING WATERMAIN 22.5° BEND	
EXISTING WATERMAIN CROSS	
EXISTING WATERMAIN TEE	
UTILITIES	
EXISTING GAS	GAS
EXISTING OVERHEAD WIRES	OH
EXISTING UNDERGROUND WIRES	UG
EXISTING HYDRO	HYD
EXISTING TRANSFORMER	
EXISTING HYDRO POLE	
EXISTING GUY WIRE	
EXISTING TRAFFIC LIGHT	
EXISTING LIGHT STANDARD	
MISCELLANEOUS	
EXISTING BUILDING	
EXISTING FENCE	X X
EXISTING CONCRETE	
EXISTING BOLLARD	
EXISTING SIGN	
RETAINING WALL	
TREE WITH DRIPLINE	

PROPOSED

DESCRIPTION	APPEARANCE
ROADWAY	
EDGE OF PAVEMENT	
CURB / DEPRESSED CURB	
SIDEWALK	
GRAVEL	
SANITARY	
SANITARY SEWER	
SANITARY LATERAL	
SANITARY MANHOLE	
SANITARY CLEANOUT	
STORM	
STORM SEWER	
STORM LATERAL	
STORM MANHOLE	
CURB INLET CATCHBASIN	
DOUBLE CURB INLET CATCHBASIN	DCICB
DITCH INLET CATCHBASIN	DICB
WATER	
WATERMAIN	W
WATER SERVICE	
WATERMAIN VALVE	
CURB STOP	
HYDRANT	
WATERMAIN CAP	
WATERMAIN 45° / 22.5° / 11.25°	
WATERMAIN TEE	
WATERMAIN REDUCER	
WATERMAIN VERTICAL BEND	VB
WATERMAIN THRUST BLOCK	TB
UTILITIES	
GAS	GAS
OVERHEAD WIRES	OH
UNDERGROUND WIRES	UG
HYDRO	HYD
TRANSFORMER	
HYDRO POLE	
GUY WIRE	
TRAFFIC LIGHT	
LIGHT STANDARD	
MISCELLANEOUS	
BUILDING	
FENCE	X X
CONCRETE	
BOLLARD	
SIGN	
RETAINING WALL	
SWALE	

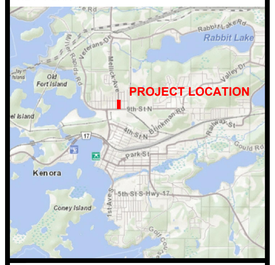
REMOVALS

DESCRIPTION	APPEARANCE
ROADWAY	
EDGE OF PAVEMENT	
CURB	
SIDEWALK	
GRAVEL	
SANITARY	
SANITARY SEWER	
SANITARY LATERAL	
SANITARY MANHOLE	
SANITARY CLEANOUT	
STORM	
STORM SEWER	
STORM LATERAL	
STORM MANHOLE	
CATCHBASIN	
WATER	
WATERMAIN	W
WATER SERVICE	
WATERMAIN VALVE	
CURB STOP	
HYDRANT	
UTILITIES	
GAS	GAS
OVERHEAD WIRES	OH
UNDERGROUND WIRES	UG
HYDRO	HYD
TRANSFORMER	
HYDRO POLE	
LIGHT STANDARD	
MISCELLANEOUS	
BUILDING	
FENCE	X X
CONCRETE	
SIGN	
RETAINING WALL	
REMOVE TREE	

ABBREVATIONS

ABUTMENT	ABUT.
ACRES	AC.
ALLOWANCE	ALL'CE
AMERICAN SOCIETY FOR TESTING AND MATERIALS	A.S.T.M.
APARTMENT	APT.
APPROVED	APP'D
ASBESTOS	ASB.
ASBESTOS CEMENT	A.C.
ASBESTOS CEMENT PIPE	A.C.P.
ASBESTOS CEMENT PRESSURE PIPE	A.C.P.P.
ASPHALT	ASPH.
AVENUE	AVE.
AVERAGE	AV.
AVERAGE ANNUAL DAILY TRAFFIC	A.A.D.T.
AZIMUTH	AZ.
BACKFILL	B'FILL
BACK SIGHT OR BUS STOP	B.S.
BASEMENT	BSMT.
BEDDING	BED.
BEGINNING OF CURVE	B.C.
BEGINNING OF VERTICAL CURVE	B.V.C.
BELL TELEPHONE	B.
BENCH MARK	B.M
BOREHOLE	BH
BOULEVARD	BLVD.
BRICK	BR.
BUILDING	BLDG.
BUILDING LINE	B/L
CANADIAN NATIONAL RAILWAY	C.N.R.
CANADIAN PACIFIC RAILWAY	C.P.R.
CANADIAN STANDARD ASSOCIATION	C.S.A.
CAST IRON PIPE	C.I.P.
CATCH BASIN	C.B.
CENTRE TO CENTRE	C./C
CENTRE LINE	℄ or C.L.
CHAINAGE EQUATION	CH. EQ.
CHAIN LINK FENCE	C.L.F.
CHECKED	CHK'D
CHORD	CH.
CLASS OR CLAY	CL.
CLAY PIPE	CL. P.
CLEAN OUT	C.O.
COMMERICAL	COMM.
CONCESSION	CON.
CONCRETE	CONC.
CONCRETE MONUMENT	C.M.
CONCRETE PIPE	C.P.
CONSTRUCTION	CONST.
CORNER	COR.
CORRUGATED STEEL PIPE	C.S.P.
COURT	CT.
CREEK	CR.
CRESCENT	CRES.
CROSS SECTION	X-SECT
CUBIC	CU.
CUBIC METRE PER SECOND	C.M.S.
CULVERT	CULV.
CURB AND GUTTER	C. & G.
CURVE TO SPIRAL	C.S.
DEGREE OF CURVE	D.
DEPARTMENT	DEPT.
DIAMETER	DIA.
DISTANCE	DIST.
DITCH INLET	D.I.
DIVISION	DIV.
DRAWING	DWG.
DRIVE	DR.
DRIVEWAY	DWY.
DUCTILE IRON PIP	D.I.P.
EACH	EA.
EARTH CUT OR END OF CURVE	E.C.
EARTH FILL	E.F.
EAST OR EXTERNAL	E.
EDGE OF PAVEMENT	E.P.
ELECTRIC	ELEC.
ELEVATION	EL.
END OF VERTICAL CURVE	E.V.C.
ENGINEER	ENG.
ENTRANCE	ENT.
ESTIMATE	EST.
EXISTING	EXIST.
EXPRESSWAY	EXPY.
EXTRA STRENGTH	E.S.
FINAL MEASUREMENT	F.M.
FLOOR	FLR.
FOOTING	FTG.
FORE SIGHT	F.S.
FOUNDATION	FDN.
FRAME	FR
FREEWAY	FRWY.
GALVANIZED	GALV.
GARAGE	GAR.
GAS	G.
GAUGE	GA.
GEODETIC BENCH MARK	G.B.M.
GRADE OR GRAVEL	GR.
GRANULAR	GRAN.
GUIDE RAIL	G.R.
HEADWALL	HD.W.
HIGH POINT	H.P.
HIGH WATER LEVEL	H.W.L.
HIGHWAY	HWY.
HORIZONTAL	HOR.
HOT LAID	H.L.
HOT MIX	H.M.
HOUSE	HSE
HYDRANT	HYD.
HYRDO	H.
INDUSTRIAL	IND.
INSIDE DIAMETER	I.D.
INSTRUMENT	INSTR.
INSULATED	INS.
INTERMEDIATE SIGHT	I.S.
INVERT	INV.
IRON BAR	I.B.
IRON PIPE	I.P.
KILOMETRES PER HOUR	KPH
KILOPASCALS	kPa
LEFT	LT
LENGTH	LEN.
LENGTH OF VERTICAL CURVE	L.V.C.
LIGHT STANDARD	L.S.
LITRES PER SECOND	L.P.S.
LINEAL METRE	L.M.
LOW POINT	L.P.
LOW WATER LEVEL	L.W.L.
MAIL BOX	M.B.
MAN HOLE	M.H.
MAXIMUM	MAX.
METRE	m
METRES BELOW GROUND	mbg
MINISTRY OF TRANSPORTATION OF ONTARIO	M.T.O.
MINIMUM	MIN.
MUNICIPAL	MUN.
NO PARKING	NP
NORTH	N.
NOT TO SCALE	N.T.S.
NUMBER	N^{O}.
OBVERT	OBV.
ORIGINAL GROUND	O.G.
OUTSIDE DIAMETER	O.D.
PARKWAY	PKWY.
PART OR POINT	PT.
PAVEMENT	PAV'T
PERSONS PER HECTARE	P.P.H.
PIPE	P.
POINT OF COMPOUND CURVE	P.C.C.
POINT OF CURVE	P.C.
POINT OF INTERSECTION	P.I.
POUNDS PER SQUARE INCH	P.S.I.
PROPERTY OR PROPOSED	PROP.
PROPERTY LINE	℄ OR P/L
PUMPING STATION	P.S.
QUANTITY	Q.T.Y.
RADIUS	R. OR RAD.
RAILWAY	RWY.
REGISTERED PLAN	R.P.
REINFORCED	REINF.
RESIDENTIAL	RES.
RETAINING WALL	RET. W.
REVISION	REV.
RIGHT	RT.
RIGHT OF WAY	R.O.W.
ROAD	RD.
ROUND IRON BAR	R.I.B.
SAFE PASSING SIGHT DISTANCE	S.P.S.D.
SAFE STOPPING SIGHT DISTANCE	S.S.S.D.
SAND	SA.
SANITARY	SAN.
SECTION	SECT.
SEWAGE TREATMENT PLANT	S.T.P.
SEWER	SEW.
SHEET	SH.
SIDEWALK	S/W
SIGNAL	SIG.
SOUTH OR SUPERELEVATION	S.
SPECIFICATION	SPEC.
SPIRAL TO CURVE	S.C.
SPIRAL TO TANGENT	S.T.
SQUARE	SQ.
STANDARD	STD.
STANDARD IRON BAR	S.I.B.
STANDARD STRENGTH	S.S.
STATION	STA.
STOP OR STREET	ST.
STOPPING SIGHT DISTANCE	S.S.D.
STORM	STM.
STORY	STY.
STRUCTURE	STR.
STUCCO	STUC.
SUBDIVISION	SUBD.
TACTILE WARNING PLATE	TAC
TANGENT	TAN.
TANGENT TO SPIRAL	T.S.
TECHNICAL	TECH.
TELEGRAPH	T.
TERRACE	TER.
TOWNSHIP	TWP.
TRAFFIC LIGHT	T.L.
TRANSFORMER	TRANS.
TURNING POINT	T.P.
TYPICAL	TYP.
VALVE	V.
VELOCITY	VEL.
VERTICAL	VERT.
VERTICAL POINT OF INTERSECTION	V.P.I.
VISIBILITY CURVE	V.C.
VITRIFIED PIPE	VT. P.
VOLUME	VOL.
WALKWAY	W/W
WATER LEVEL	W.L.
WATER OR WEST	W
WATER VALVE	W.V.
WATER SERVICE VALVE	C.S
YARD	YD.

KEY PLAN



ENGINEER'S SEAL:

LICENSED PROFESSIONAL ENGINEER
FEB. 25/26
C.L. KIRBY
100111792
PROVINCE OF ONTARIO

26/02/25	0	ISSUED FOR TENDER	JTS	CLK
DATE (M,M/D/Y)	REV.	REVISION	BY	APP'D

CLIENT:

Lake of the Woods KENORA

CONSULTANT:

TULLOCH

PROJECT TITLE:

MELLICK AVENUE RECONSTRUCTION

DRAWING TITLE:

LEGEND

DRAWN	DESIGNED	CHECKED	APPROVED
JTS	JTS	CLK	CLK
		FEB. 25, 2026	
SCALE		DATE	

PROJECT No.	REVISION	DRAWING
26-0652	0	L1

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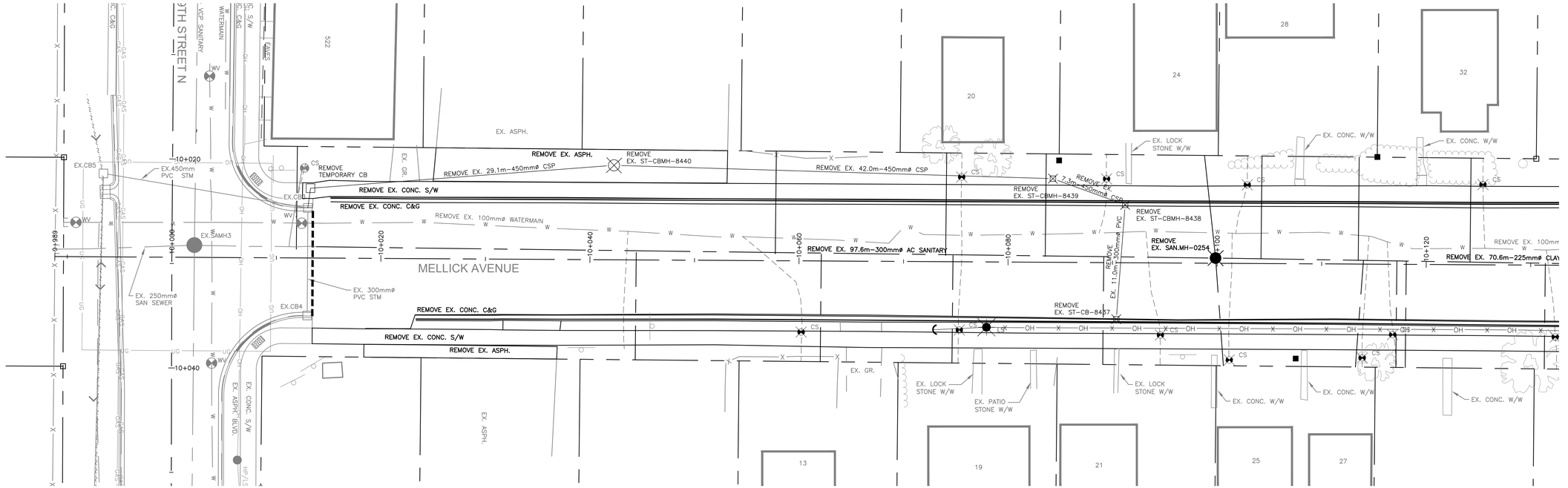

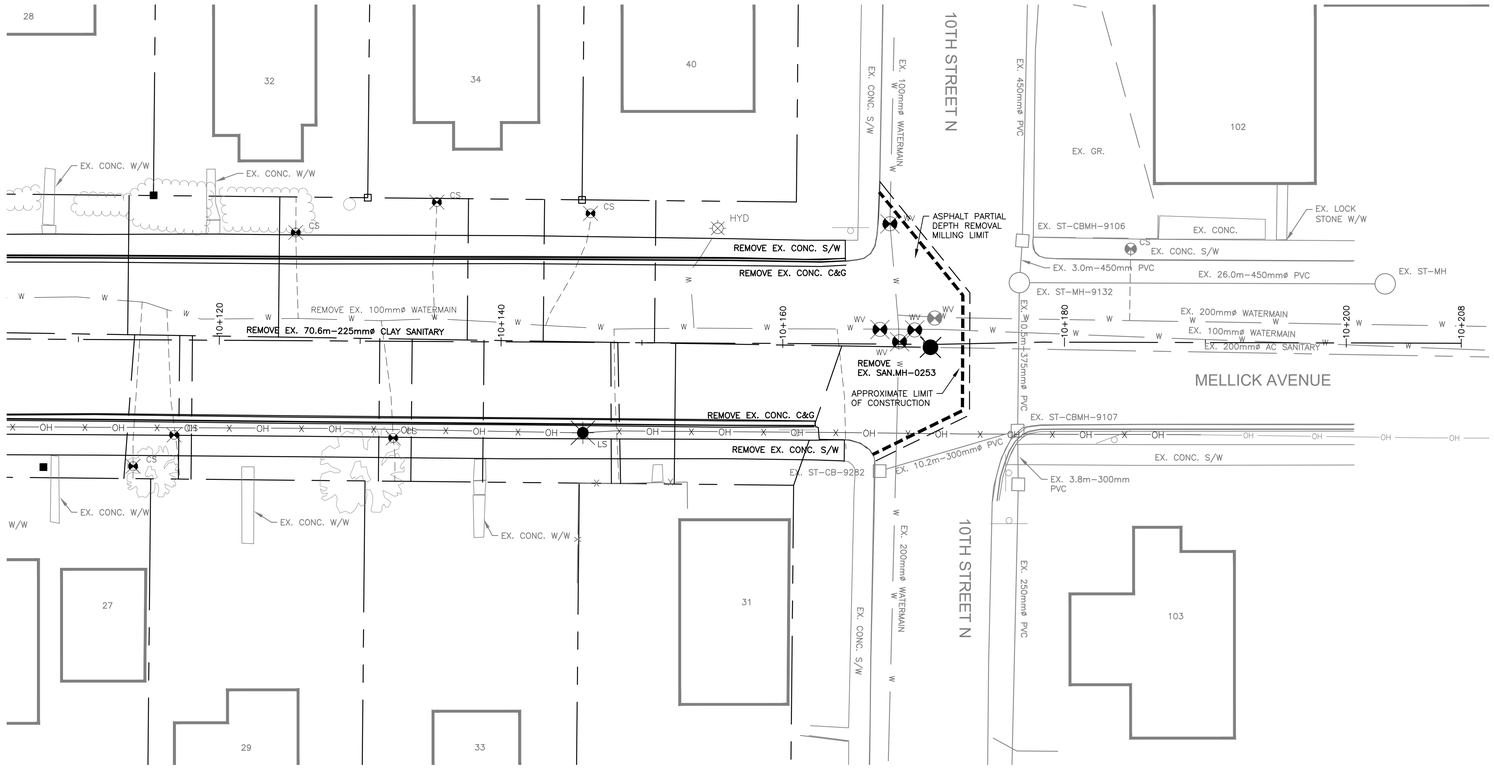

KEY PLAN

ENGINEER'S SEAL:

LICENSED PROFESSIONAL ENGINEER
FEB. 25/26
C.L. KIRBY
100111792
PROVINCE OF ONTARIO

DATE (YR./MTH./DAY)	REV.	REVISION	BY	APP'D
26/02/25	0	ISSUED FOR TENDER	JTS	CLK

CLIENT: Lake of the Woods KENORA

CONSULTANT: TULLOCH

PROJECT TITLE:

MELLICK AVENUE RECONSTRUCTION

DRAWING TITLE:

EXISTING SITE PLAN & REMOVALS MELLICK AVENUE

DRAWN	DESIGNED	CHECKED	APPROVED
JTS	JTS	CLK	CLK

SCALE	DATE
1:200	FEB. 25, 2026

PROJECT No.	REVISION	DRAWING
26-0652	0	R1

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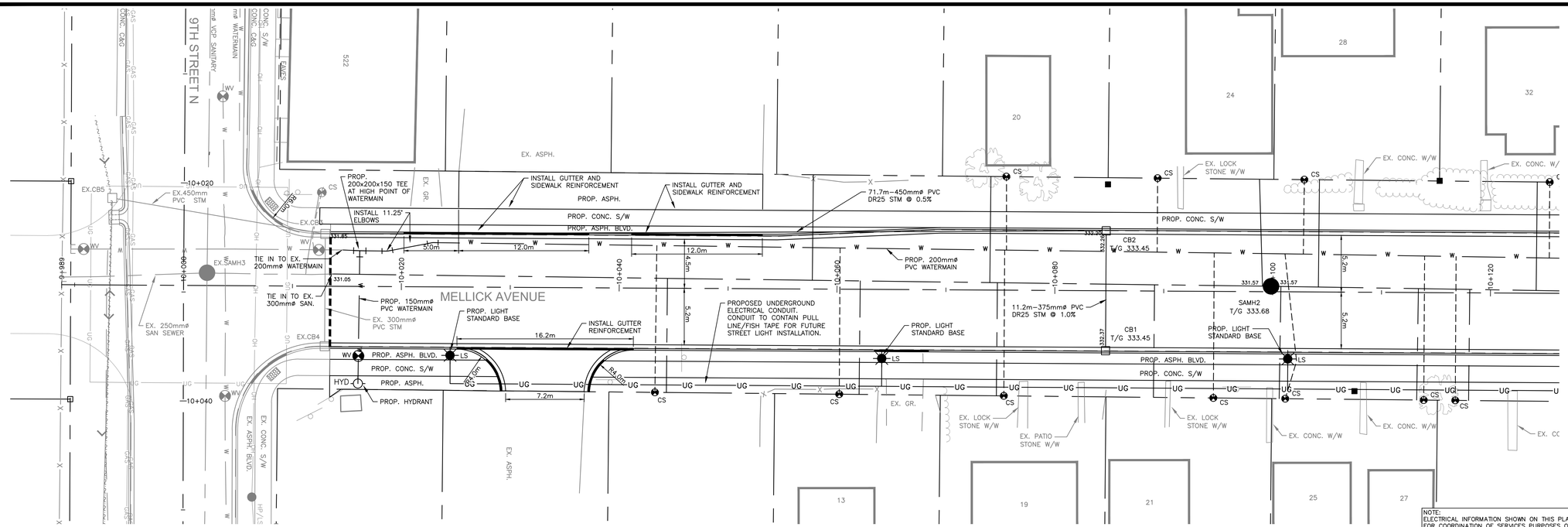
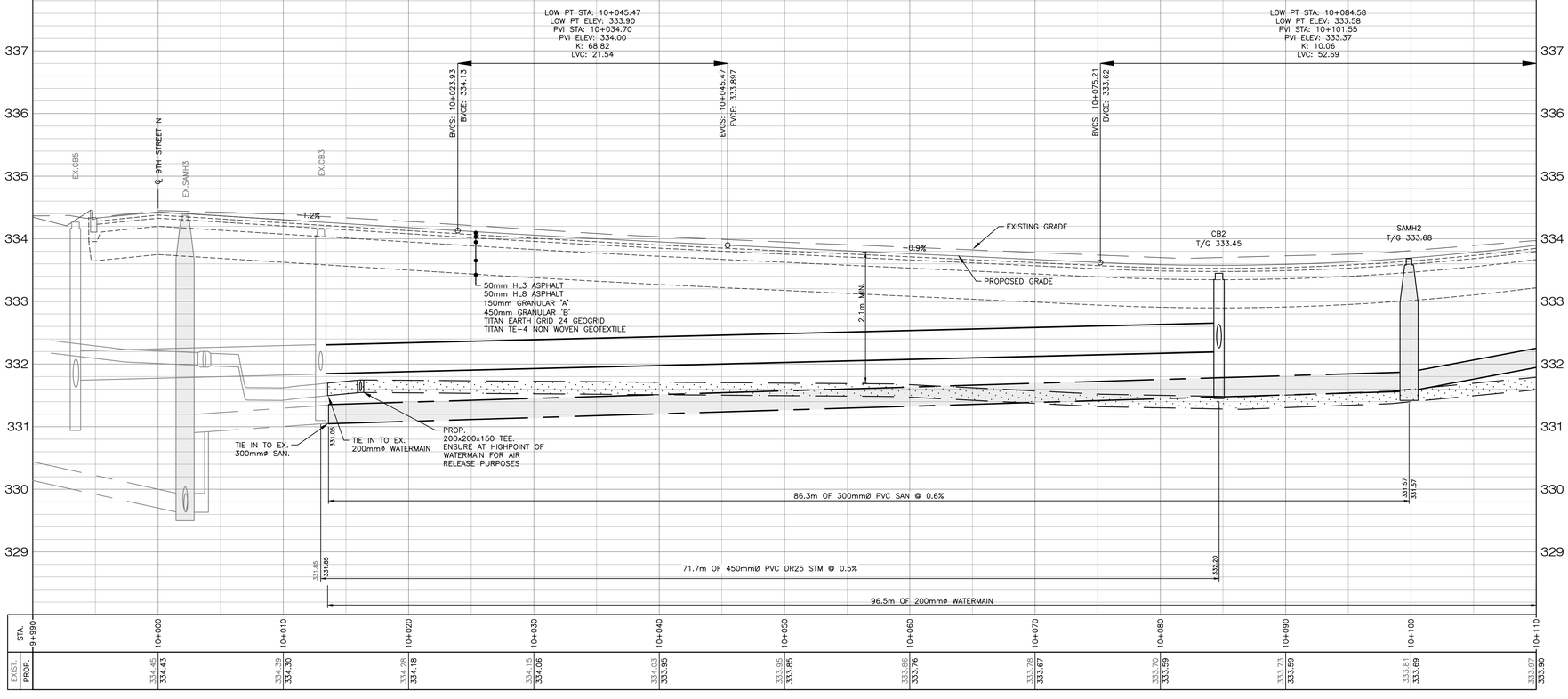


NOTE:
ELECTRICAL INFORMATION SHOWN ON THIS PLAN IS FOR COORDINATION OF SERVICES PURPOSES ONLY. CONSTRUCTION DETAILS FOR ELECTRICAL COMPONENTS ARE PROVIDED SEPARATELY FROM THESE DRAWINGS.



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CLIENT: Lake of the Woods KENORA

CONSULTANT: TULLOCH

PROJECT TITLE:
MELLICK AVENUE RECONSTRUCTION

DRAWING TITLE:
MELLICK AVENUE PLAN & PROFILE 9+990 TO 10+110

DRAWN	DESIGNED	CHECKED	APPROVED
JTS	JTS	CLK	CLK

SCALE	DATE
1:200 H & 1:40 V	FEB. 25, 2026

PROJECT No.	REVISION	DRAWING
26-0652	0	P1

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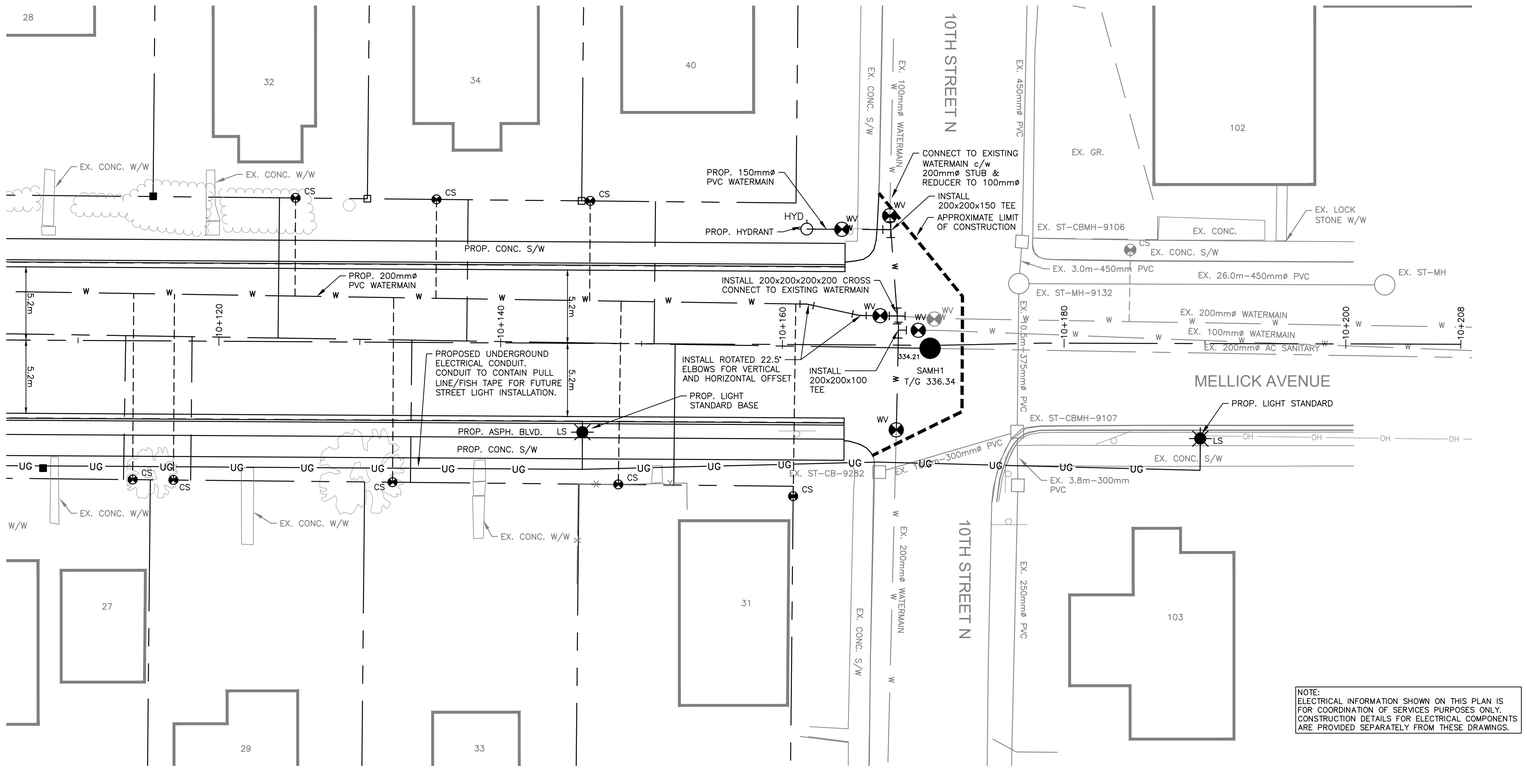

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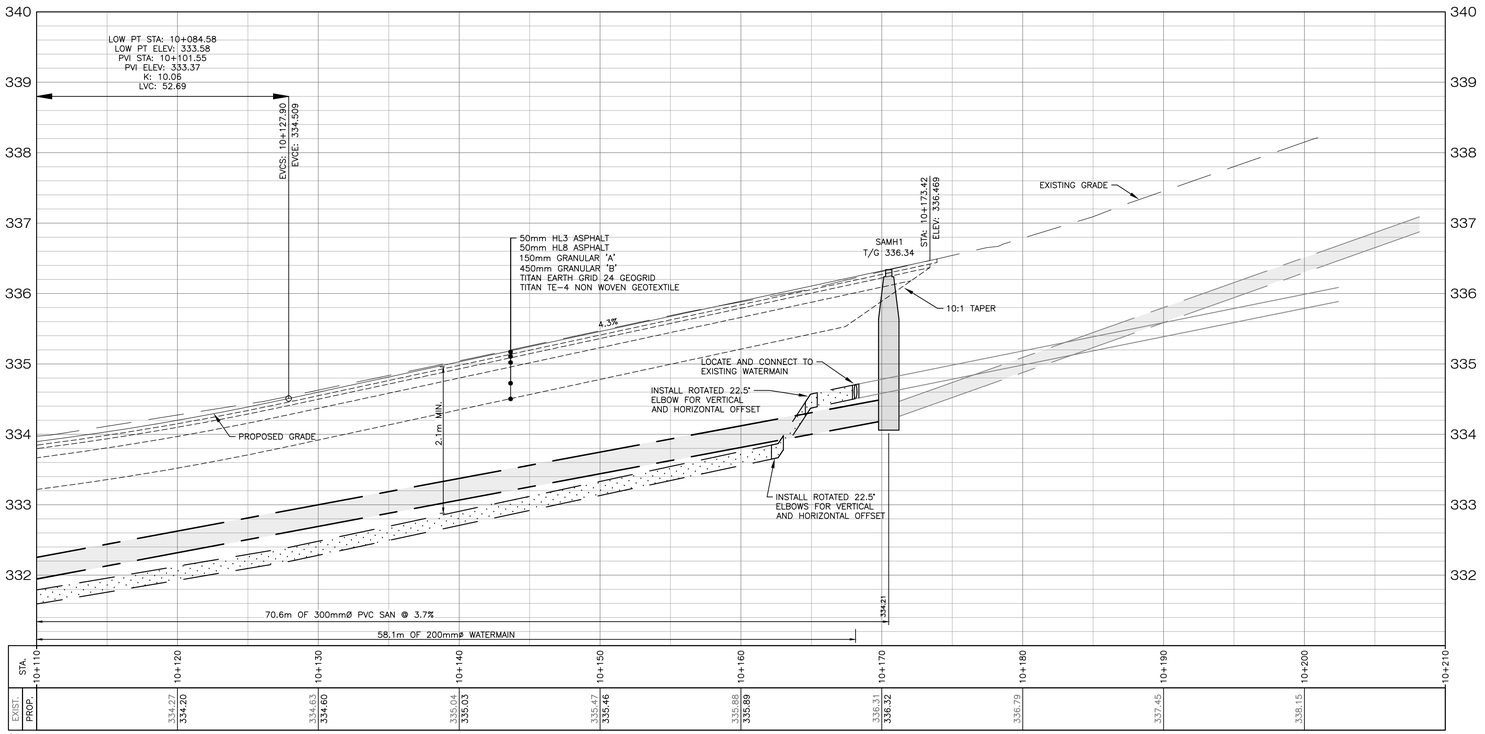

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KEY PLAN

ENGINEER'S SEAL:

LICENSED PROFESSIONAL ENGINEER
FEB. 25/26
C.L. KIRBY
100111792
PROVINCE OF ONTARIO

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26/02/25	0	ISSUED FOR TENDER	JTS	CLK

CLIENT:

CONSULTANT:

PROJECT TITLE:

MELLICK AVENUE RECONSTRUCTION

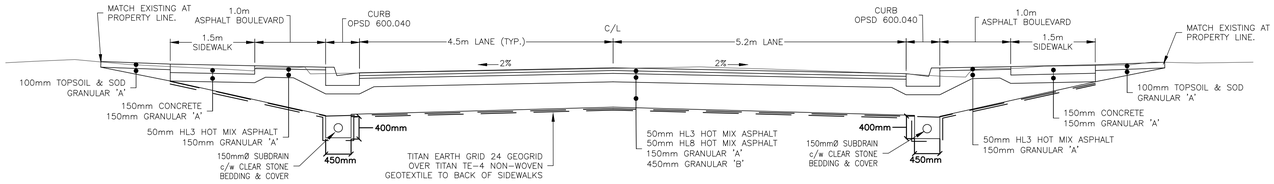
DRAWING TITLE:

MELLICK AVENUE PLAN & PROFILE 10+110 TO 10+210

DRAWN	DESIGNED	CHECKED	APPROVED
JTS	JTS	CLK	CLK

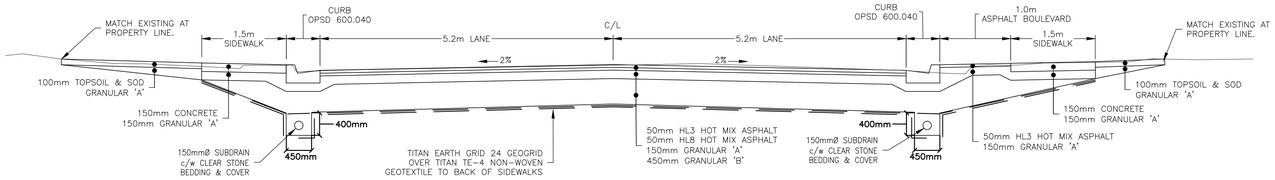
SCALE	DATE
1:200 H & 1:40 V	FEB. 25, 2026

PROJECT No.	REVISION	DRAWING
26-0652	0	P2



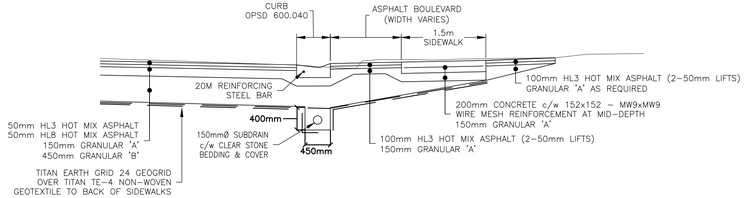
TYPICAL CROSS SECTION - MELLICK AVE 10+000 TO 10+070

SCALE 1:50



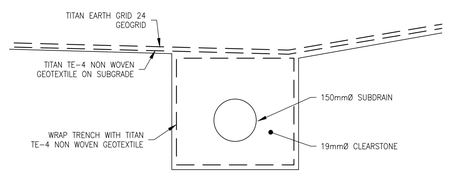
TYPICAL CROSS SECTION - MELLICK AVE 10+070 TO 10+170

SCALE 1:50



TYPICAL REINFORCED ENTRANCE SECTION

SCALE 1:50



TYPICAL SUBDRAIN

SCALE 1:10

SANITARY MAINTENANCE HOLE SCHEDULE

MH NO.	DIAMETER (mm)	OPSD	STATION	OFFSET	PIPE SIZE (mm)								INVERT ELEVATION (m)								GRATE ELEVATION (m)	DEPTHS (mm)		SAFETY PLATFORM	FROST STRAP	FRAME & GRATE
					NORTH	NORTHEAST	EAST	SOUTHEAST	SOUTH	SOUTHWEST	WEST	NORTHWEST	NORTH	NORTHEAST	EAST	SOUTHEAST	SOUTH	SOUTHWEST	WEST	NORTHWEST		SUMP	MHCB			
SAMH1	1200	701.010	10+170.5	0.2 RT	200	-	-	-	300	-	-	-	334.21	-	-	-	334.21	-	-	-	336.34	0	2130	NO	YES	TF-101-6
SAMH2	1200	701.010	10+099.9	0.5 LT	300	-	-	-	300	-	-	-	331.57	-	-	-	331.57	-	-	-	333.68	0	2110	NO	YES	TF-101-6

CATCH BASIN SCHEDULE

CB NO.	SIZE (mm)	OPSD	STATION	OFFSET	PIPE SIZE (mm)								INVERT ELEVATION (m)								GRATE ELEVATION (m)	DEPTHS (mm)		FRAME & GRATE
					NORTH	NORTHEAST	EAST	SOUTHEAST	SOUTH	SOUTHWEST	WEST	NORTHWEST	NORTH	NORTHEAST	EAST	SOUTHEAST	SOUTH	SOUTHWEST	WEST	NORTHWEST		SUMP	CB	OPSD
CB1	600x600	705.010	10+084.7	5.5 RT	-	-	-	-	-	-	300	-	-	-	-	-	-	-	332.37	-	333.45	600	1680	TF-103-4
CB2	600x600	705.010	10+084.7	5.5 LT	-	-	300	-	450	-	-	-	-	-	332.26	-	332.20	-	-	-	333.45	600	1850	TF-103-4

NOTE: GRATE ELEVATION LISTED IS TO THE LOWEST POINT OF GRATE. GRATE TO BE SET TO MATCH SWALE OR GUTTER AND ROADWAY CROSSFALL.

FIRE HYDRANT SCHEDULE

HYDRANT NO.	STREET	PROPOSED STATION	PROPOSED OFFSET	OPSD
1	MELLICK	10+016.07	8.9 RT	1105.010
2	MELLICK	10+155.33	8.2 LT	1105.010

NOTE:
INSTALLATION OF FRAME AND GRATE TO BE COMPLETED IN ACCORDANCE WITH OPSS 408. ADDITIONALLY, THE CITY OF KENORA REQUIRES A MINIMUM OF 150mm OF CONCRETE ADJUSTMENT RINGS TO ACHIEVE FINAL GRADE.

KEY PLAN

ENGINEER'S SEAL:

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FEB. 25/26
C.L. KIRBY
100111792
PROVINCE OF ONTARIO

DATE (YR./MTH/DAY)	REV.	REVISION	BY	APP'D
26/02/25	0	ISSUED FOR TENDER	JTS	CLK

CLIENT:

Lake of the Woods KENORA

CONSULTANT:

TULLOCH

PROJECT TITLE:

MELLICK AVENUE RECONSTRUCTION

DRAWING TITLE:

TYPICAL SECTIONS & STRUCTURE SCHEDULES

DRAWN	DESIGNED	CHECKED	APPROVED
JTS	JTS	CLK	CLK

SCALE	DATE
AS NOTED	FEB. 25, 2026

PROJECT No.	REVISION	DRAWING
26-0652	0	G1

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GENERAL NOTES:

1. ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND ONTARIO PROVINCIAL STANDARD DRAWINGS TO APPLY UNLESS OTHERWISE NOTED.
2. ALL EROSION AND SEDIMENT CONTROLS SHALL FOLLOW AND BE IN ACCORDANCE WITH GENERAL BEST MANAGEMENT PRACTICES PRIOR TO UNDERTAKING WORKS.
3. NOTIFY ALL UTILITY DEPARTMENTS 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. UTILITY PERSONNEL TO BE ON SITE WHEN EXCAVATING ADJACENT TO UNDERGROUND UTILITIES.
4. SUPPORT UTILITIES IN ACCORDANCE WITH THE DIRECTIONS AND GUIDELINES OF THE IMPACTED UTILITY.
5. COMPLETE ALL TRENCHING IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT.
6. THE LOCATION OF UTILITIES SHOWN ON DRAWINGS IS APPROXIMATE AND MAY BE INCOMPLETE. CONFIRM EXACT LOCATION OF UTILITIES WITH MINISTRY, CITY OR UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR PROTECTING AGAINST DAMAGE. THE CONTRACTOR ASSUMES ALL LIABILITY FOR DAMAGE TO UTILITY AND ROAD WORKS.
7. COMPLY WITH THE REQUIREMENTS OF THE CITY OF KENORA IN REGARDS TO TRAFFIC FLOW ON MUNICIPAL STREETS. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES. SHORT TERM FULL CLOSURE PERMITTED TO FACILITATE WORKS.
8. PROVIDE NOTICE TO RESIDENTS WHEN VEHICLE ACCESS WILL BE IMPACTED.
9. ALL INSTALLATIONS ARE TO BE COMPLETED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF KENORA IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

EROSION & SEDIMENT CONTROL NOTES:

1. ALL REQUIRED SILTATION AND EROSION CONTROL MEASURES TO BE IN PLACE PRIOR TO CONSTRUCTION TO PREVENT EROSION AND THE MIGRATION OF SEDIMENT DURING CONSTRUCTION. ALL SILTATION AND EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL GROUND COVER IS RE-ESTABLISHED TO THE ORIGINAL CONDITION OR BETTER AS DETERMINED BY THE ENGINEER OR THE ENGINEER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND INSTALLING ALL REQUIRED EROSION & SEDIMENT CONTROL MEASURES BASED ON THEIR CONSTRUCTION ACTIVITIES. THE MEASURES LISTED ON THESE DRAWINGS ARE THE MINIMUM REQUIRED, HOWEVER ADDITIONAL MEASURES MAY BE NECESSARY.
3. ALL SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICATION PRECIPITATION EVENT AND MAINTAINED, REPAIRED OR REPLACED AS NECESSARY. THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE SHALL MAINTAIN A WEEKLY REPORT ON SEDIMENT CONTROL MEASURES INCLUDING ALL CORRECTIVE ACTION TAKEN DURING THE REPORTING PERIOD TO ENSURE CONTROL MEASURES ARE WORKING EFFECTIVELY. IF THE SEDIMENT AND EROSION CONTROL MEASURES ARE NOT FUNCTIONING PROPERLY, THE CONTRACTOR WILL SUSPEND CONSTRUCTION UNTIL THE ISSUES ARE ADDRESSED.
4. WHEN POSSIBLE, THE CONTRACTOR SHALL MINIMIZE EARTHWORKS DURING WET WEATHER CONDITIONS.
5. SILT FENCING TO BE INSTALLED AT THE BOTTOM OF ALL FILL SLOPES AND DOWN GRADIENT OF ANY STOCKPILED MATERIAL WHEN THERE IS THE POSSIBILITY OF SEDIMENT MIGRATING TO ADJACENT PROPERTIES.
6. SOILS PRONE TO EROSION WILL BE RESTORED AS SOON AS POSSIBLE BY SEEDING AND IF NECESSARY SEEDING AND MULCHING OR INSTALLING EROSION CONTROL BLANKET.
7. WHEN WORK IS COMPLETED AND AREAS ARE STABILIZED AS DEEMED ACCEPTABLE BY THE CONTRACT ADMINISTRATOR, TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED FROM THE WORK SITE.
8. LIGHT DUTY SILT FENCE BARRIER TO BE INSTALLED IN ACCORDANCE WITH OPSS.MUNI 805 AND OPSD 219.110.
9. THE CONTRACTOR SHALL KEEP DUST TO A MINIMUM BY USE OF DUST SUPPRESSANT AS PER OPSS.MUNI 506.
10. FILTER FABRIC TO BE PLACED UNDER GRATES ON ALL CATCH BASINS TO TRAP SEDIMENT. SILT TRAPS ARE TO BE CLEANED REGULARLY AND ARE NOT TO BE REMOVED UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE. FILTER FABRIC FOR SILT CONTROL TO BE TITAN TE-4 OR APPROVED EQUIVALENT.
11. STREET SWEEPING, CATCHBASIN CLEANING AND DUST CONTROL ARE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE KEPT UNDER CONTROL OF ALL ROADWAYS TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF KENORA.

STREET RECONSTRUCTION NOTES:

1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED. LIGHT DUTY SILT FENCE, OPSD 219.110. ADDITIONAL MEASURES MAY BE REQUIRED DURING CONSTRUCTION BASED ON SITE CONDITIONS.
2. ALL REMOVALS TO BE COMPLETED IN ACCORDANCE WITH OPSS.MUNI 510. LIMITS TO BE SAWCUT.
3. ROADWAY ASPHALT AND SIDEWALK SURFACES TO BE REMOVED SEPARATELY FROM UNDERLAYING GRANULARS.
4. EXCAVATION TO BE COMPLETED IN ACCORDANCE WITH OPSS.MUNI 206. EXCAVATIONS TO ALLOW FOR RECONSTRUCTION OF STREET TO DESIGN GRADES AND ELEVATIONS. EXCAVATION TO BE AT 10:1 FOR SUBGRADE TAPER AT INTERSECTING STREETS. ENSURE POSITIVE DRAINAGE ACROSS THE SUBGRADE.
5. PROOF ROLL SUBGRADE PRIOR TO PLACING GEOTEXTILE AND GEOGRID.
6. PLACE GEOTEXTILE – OPSS.MUNI 1860.
7. PLACE GEOGRID – OPSS.MUNI 1860.
8. INSTALL 150mmØ SOCKED SUBDRAINS IN ROADWAY – OPSS.MUNI 405. CONNECT TO CATCH BASINS PER OPSD 216.021.
9. PLACE & COMPACT GRANULAR "B" AND GRANULAR "A" – OPSS.MUNI 314 & OPSS.MUNI 501.
10. INSTALL CONCRETE GUTTER PER OPSS.MUNI 353 AND OPSD 600.040.
11. INSTALL CONCRETE SIDEWALK PER OPSS.MUNI 351.
12. PLACE 50mm HL8 BASE ASPHALT, 50mm HL3 SURFACE ASPHALT, 50mm HL3 BOULEVARD & 100mm ENTRANCE ASPHALT – OPSS.MUNI 310. TACK COATING OF ALL CONCRETE FACES AND BETWEEN BASE AND SURFACE COURSES REQUIRED. RESIDENTIAL ENTRANCES TO BE 50mm THICKNESS, COMMERCIAL ENTRANCES TO BE 100mm THICKNESS, TWO LIFTS.
13. RESTORE ENTRANCES TO PRECONSTRUCTION CONDITIONS. EXTEND ASPHALT ENTRANCES AND CONCRETE WALKWAYS WHERE REQUIRED. EXISTING GRAVEL ENTRANCES TO BE PAVED 1.5m BEYOND BACK OF SIDEWALK.
14. INSTALL TOPSOIL AND SOD TO ALL DISTURBED AREAS AND REINSTATE TO EXISTING CONDITIONS OR BETTER.
15. APPLY PAVEMENT MARKINGS PER OPSS.MUNI 710. INSTALL TRAFFIC SIGNS.
16. CONTRACTOR TO PREPARE TRAFFIC PLAN FOR REVIEW BY THE CONSULTANT AND CITY OF KENORA IN ADVANCE OF CONSTRUCTION. SHORT TERM CLOSURES FROM INTERSECTION TO INTERSECTION MAY BE PERMITTED TO FACILITATE INSTALLATIONS. RESIDENT AND PEDESTRIAN ACCESS MUST BE MAINTAINED WITHIN CLOSURE AREAS.

STORM SEWER NOTES:

1. STORM SEWERS SHALL BE CONSTRUCTED TO OPSS.MUNI 410 AND WHERE SEPARATION PER MECP PROCEDURE F-6-1 CANNOT BE MAINTAINED, STORM SEWER SHALL BE PVC DR25 WITH WATERMAIN STANDARDS FOR MATERIALS AND JOINTS.
2. STORM SEWER PIPE AND FITTINGS SHALL BE AWWA C900 PVC DR25 OR DR35 CLASS 165 STORM SEWER PIPE, OR EQUIVALENT – OPSS.MUNI 1841.
3. EMBEDMENT AND COVER OF STORM SEWER – OPSS.MUNI 410 & OPSD 802.010. GRANULAR "A" OR 19mm CLEARSTONE TO SPRING LINE OF PIPE. COVER MATERIAL TO BE GRANULAR 'A' OR 19mmØ CLEAR STONE. BACKFILL TO SUBGRADE WITH SUITABLE NATIVE MATERIAL. EMBEDMENT AND BACKFILL TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR DENSITY.
4. STORM SEWER STRUCTURES TO BE CONSTRUCTED TO OPSS.MUNI 407
5. CATCH BASINS SHALL BE 600mm X 600mm – OPSD 705.010, FRAMES & GRATES TO BE IN ACCORDANCE WITH TF-103-4 AS LISTED ON THE STRUCTURE SCHEDULE. MINIMUM SUMP OF 600mm. FROST STRAPS PER OPSD 701.100 FOR MULTIPIECE STRUCTURES.
6. STORM SEWER JOINTS AND STORM SEWER STRUCTURE CONNECTIONS SHALL BE WATERTIGHT WITH APPROPRIATE SEALS, GASKETS OR BOOTS, OR OTHER APPROVED METHODS.

WATERMAIN INSTALLATION NOTES:

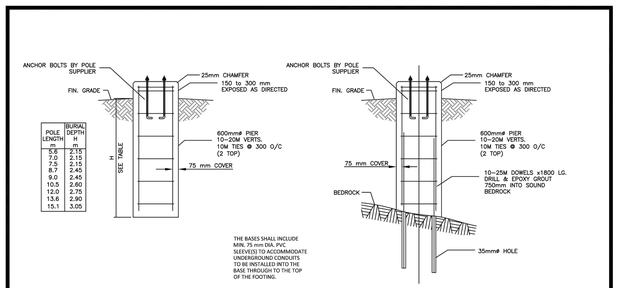
1. WATERMAIN SHALL BE INSTALLED ACCORDING TO OPSS.MUNI 441.
2. THE CONTRACTOR SHALL LOCATE THE EXISTING WATERMAIN AND SUPPLY ROMAC ALPHA MANUFACTURER APPROVED COUPLERS TO MAKE THE CONNECTIONS. THE CONTRACTOR SHALL EXPOSE AND VERIFY EXISTING MATERIALS.
3. WATERMAIN SHALL BE INSTALLED WITH A MINIMUM OF 2.1m OF COVER.
4. PROVIDE INSULATION PROTECTION IN AREAS <2.1m COVER, AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR. INSTALL 25mm THICKNESS OF DOW HI LOAD-60 ABOVE WATERMAIN OR WATER SERVICE FOR EACH 300mm OF COVER REQUIRED (OR PART THEREOF) TO ACHIEVE MINIMUM 2.1m EQUIVALENT COVER.
5. MAINTAIN MINIMUM CLEAR SEPARATION OF 2.5m HORIZONTAL BETWEEN SEWERS AND WATERMAIN. WHERE WATERMAIN SEPARATION TO SANITARY SEWER IS LESS THAN 2.5m HORIZONTALLY, INVERT OF WATERMAIN SHALL BE LOCATED A MINIMUM OF 0.5m ABOVE THE CROWN OF THE SANITARY SEWER. SUCH SEPARATION SHALL BE IN-SITU MATERIAL OR COMPACTED BACKFILL.
   - WHERE VERTICAL SEPARATION CANNOT BE OBTAINED, THE SEWER SHALL BE CONSTRUCTED OF MATERIALS AND JOINTS THAT ARE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WITH THE LENGTH OF WATER PIPE TO BE CENTERED ON THE CROSSING.
6. WATERMAIN PIPE SHALL BE AWWA C900 PVC CLASS 235 DR18 AND BE CERTIFIED TO CSA 137.3. FITTINGS SHALL BE PVC CONFORMING TO AWWA C907.
7. A CONTINUOUS RWU No. 12 SOLID COPPER HMWPE TRACING WIRE SHALL BE INSTALLED WITH PVC WATERMAIN AND HYDRANT LEADS AND BROUGHT TO THE SURFACE AND STRAPPED TO THE BARREL OF EACH HYDRANT.
8. ALL JOINTS INCLUDING CONNECTIONS, CAPS, VALVES, TEES AND BENDS SHALL BE RESTRAINED BY MECHANICAL JOINTS.
9. INSTALL JOINT RESTRAINTS IN ACCORDANCE WITH RESTRAINED LENGTH TABLE. JOINT RESTRAINTS ON NEW PVC SHALL BE STARPIPE OR APPROVED EQUIVALENT.
10. HYDRANTS SHALL BE NEW, MUELLER CANADA CENTURY HYDRANTS, COMPLETE WITH NEW VALVES AND PIPES. FINAL ELEVATION SHALL BE 100mm – 150mm ABOVE FINISHED GRADE. ALL JOINTS BETWEEN WATERMAIN AND HYDRANT TO BE MECHANICALLY RESTRAINED. INSTALL ACCORDING TO OPSD 1105.010. ANODES SHALL BE ZINC ANODES Z-24-48. ANODES SHALL BE CADWELDED TO ALL IRON FITTINGS ACCORDING TO OPSD 1109.011.
11. GATE VALVES SHALL BE EQUIPPED WITH VALVE OPERATOR TO OPSD 1101.020. VALVES SHALL BE MUELLER RESILIENT WEDGE GATE VALVE FOR PVC WITH VALVE BOXES AND OPERATORS. VALVE BOXES SHALL BE PVC WITH STONE PLATE. ANODES SHALL BE ZINC ANODES Z-24-48. ANODES SHALL BE CADWELDED TO ALL IRON FITTINGS ACCORDING TO OPSD 1109.011.
12. REPLACE ALL WATER SERVICES TO THE LOT LINES OR CURB STOP IF BEYOND LOT LINES WITH 19mmØ OR 25mmØ TYPE K COPPER, OR 150mmØ PVC DR18 AS SPECIFIED. LINE AS SPECIFIED, COMPLETE WITH ROBAR CANADA 2616BP MAIN STOP, MUELLER H-15209 CURB STOP, MUELLER H-12940 COUPLINGS PER OPSD 1104.010, AND GREEN JACKETED AWG 4/0 GAUGE THAW CABLE. VALVE BOXES SHALL BE PVC WITH STONE PLATE. CATHODIC PROTECTION PER OPSD 1109.010. HORIZONTAL GOOSENECKS.
13. EMBEDMENT AND COVER OF WATERMAIN ACCORDING TO OPSS.MUNI 441 & OPSD 802.010. EMBEDMENT MATERIAL TO BE GRANULAR "A" OR 19mm CLEAR STONE TO SPRING LINE OF PIPE. COVER MATERIAL TO BE GRANULAR 'A' OR 19mmØ CLEAR STONE. BACKFILL TO SUBGRADE WITH SUITABLE NATIVE MATERIAL. EMBEDMENT AND BACKFILL TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR DENSITY.
14. NO CONNECTION TO THE MUNICIPAL DISTRIBUTION SYSTEM SHALL BE MADE UNTIL THE NEW WATERMAIN HAS PASSED REQUIRED TESTING. THE CONNECTION OF NEW WATERMAIN TO EXISTING WATERMAIN SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE CITY'S WATER SYSTEM OPERATOR AND THE CITY OF KENORA.
15. OPERATION OF ACTIVE WATERMAIN VALVES MAY ONLY BE UNDERTAKEN BY THE CITY'S WATER SYSTEM OPERATOR. ANY WORKS ON THE EXISTING WATER SYSTEM MUST BE OVERSEEN BY THE CITY'S WATER SYSTEM OPERATOR. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE VALVE OPERATIONS AND OVERSIGHT WITH THE CITY'S WATER SYSTEM OPERATOR.

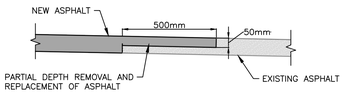
SANITARY SEWER NOTES:

1. SANITARY SEWERS SHALL BE INSTALLED IN IN ACCORDANCE WITH OPSS.MUNI 401, OPSS.MUNI 402 AND OPSS.MUNI 410.
2. SANITARY SEWER PIPE SHALL BE DR35 PIPE MATERIAL IN ACCORDANCE WITH OPSS.MUNI 1841.
3. EMBEDMENT AND COVER OF SEWER – OPSS.MUNI 410 & OPSD 802.010. GRANULAR "A" OR 19mm CLEARSTONE TO SPRING LINE OF PIPE. COVER MATERIAL TO BE GRANULAR 'A' OR 19mmØ CLEAR STONE. BACKFILL TO SUBGRADE WITH SUITABLE NATIVE MATERIAL. EMBEDMENT AND BACKFILL TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR DENSITY.
4. MAINTENANCE HOLES SHALL BE 1200mmØ – OPSD 701.030.
5. ALL MAINTENANCE HOLES SHALL HAVE A SOLID COVER – (TF-101-6), MAINTENANCE HOLE STEPS (OPSD 405.020) AND FROST STRAPS (OPSD 701.100).
6. THE CONTRACTOR MUST MAINTAIN SANITARY SEWER SERVICES TO ALL BUILDINGS AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.
7. MAINTAIN MINIMUM CLEAR SEPARATION OF 2.5m HORIZONTAL AND 0.5m VERTICAL BETWEEN SANITARY SEWER AND WATERMAIN UNLESS OTHERWISE NOTED ON THE DRAWINGS.
8. SANITARY SEWER JOINTS AND MAINTENANCE HOLE CONNECTIONS SHALL BE WATERTIGHT WITH APPROPRIATE SEALS, GASKETS OR BOOTS.
9. SEWER SERVICE SHALL BE MINIMUM 100mmØ DR35 PVC PIPE MATERIAL, INSTALL IN ACCORDANCE WITH OPSD 1006.010.
10. THE CONTRACTOR SHALL LOCATE THE EXISTING SANITARY SEWERS AND SUPPLY NECESSARY MANUFACTURER APPROVED COUPLERS TO MAKE THE CONNECTIONS.

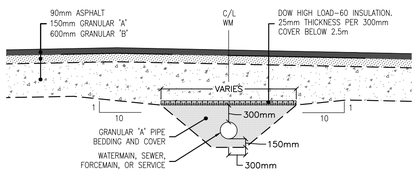
ELECTRICAL NOTES

1. ALL ELECTRICAL CONDUIT TO BE 50mm.
2. ROADWAY CROSSINGS CONDUIT SHALL BE RIGID PVC WITH MINIMUM 1.0m BURIAL DEPTH.
3. BOULEVARD CONDUIT SHALL BE RIGID PVC OR CORLINE CONDUIT WITH MINIMUM 0.6m BURIAL DEPTH.
4. ELECTRICAL WARNING TAPE SHALL BE INSTALLED 300mm ABOVE ALL CONDUIT.
5. POLE BASES SHALL BE INSTALLED IN ACCORDANCE WITH THE "CITY OF KENORA CONCRETE POLE BASE FOOTINGS, MAY 2011" DETAILS.





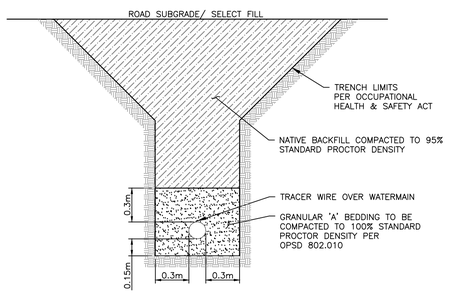
TYPICAL ASPHALT JOINT DETAIL
SCALE 1:15



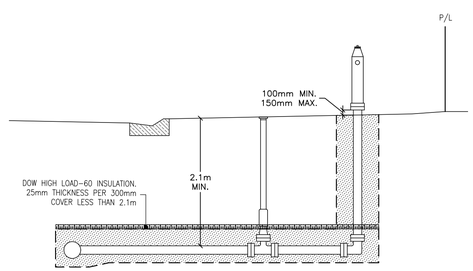
INSULATION REQUIREMENTS		
COVER DEPTH FINISHED GRADE TO TOP OF PIPE (m)	WIDTH OF INSULATION REQUIRED (m) *	THICKNESS OF INSULATION REQUIRED (mm)
2.1	0.00	0
2.0	0.53	25
1.9	0.80	25
1.8	1.04	50
1.7	1.26	50
1.6	1.48	50
1.5	1.70	75
1.4	1.91	75
1.3	2.12	75
1.2	2.32	100

* WIDTH IDENTIFIED SHALL BE CENTRED OVER THE PIPE.

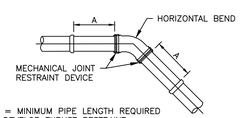
TYPICAL INSULATION DETAIL
SCALE N.T.S.



TYPICAL TRENCH DETAIL
SCALE: 1:25



TYPICAL FIRE HYDRANT DETAIL
SCALE 1:50



"A" = MINIMUM PIPE LENGTH REQUIRED TO DEVELOP THRUST RESTRAINT (NO UNRESTRAINED PIPE JOINTS PERMITTED)

NOTE:

1. REVIEW RESTRAINT METHOD WITH CONTRACT ADMINISTRATOR PRIOR TO INSTALLATION.
2. ALL JOINTS SHALL BE RESTRAINED
3. ALL JOINTS WITHIN INTERSECTIONS SHALL BE RESTRAINED.
4. RESTRAINED LENGTHS BASED ON SAND SILT [GM & SM] SOIL CONDITIONS.
5. WATERMAIN TO BE PLACED WITH GRANULAR 'A' BED & COVER.
6. RESTRAINED LENGTHS BASED OFF OF 1034kPa WATERMAIN PRESSURE.
7. RESTRAINED LENGTHS BASED OFF OF SW BACKFILL.

Tee or Hydrant Lead			
Main Line Diameter (mm)	Branch Diameter (mm)	Depth of Bury (m)	Restrained Length (m)
200	150	2.5	4.0
200	150	1.5	7.9
200	100	1.5	3.0

Vertical Bend						
Main Line Diameter (mm)	High Side			Low Side		
	Bend Angle (DEGREES)	Depth of Bury (m)	Restrained Length (m)	Bend Angle (DEGREES)	Depth of Bury (m)	Restrained Length (m)
200	22.5	1.5	3.0	22.5	1.8	0.9

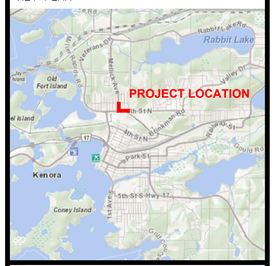
Horizontal Bend			
Main Line Diameter (mm)	Bend Angle (DEGREES)	Depth of Bury (m)	Restrained Length (m)
200	11.25	2.4	0.9

Reducer			
Main Line Diameter (mm)	Reduced Diameter (mm)	Depth of Bury (m)	Restrained Length (m)
250	100	1.5	10.7

Plug End or Valve		
Main Line Diameter (mm)	Depth of Bury (m)	Restrained Length (m)
200	1.5	14.6

MECHANICAL JOINT RESTRAINT (150psi)
SCALE: 1:30

KEY PLAN



ENGINEER'S SEAL:

LICENSED PROFESSIONAL ENGINEER
FEB. 25/26
C.L. KIRBY
100111792
PROVINCE OF ONTARIO

DATE (YR./MTH/DAY)	REV.	REVISION	BY	APP'D
26/02/25	0	ISSUED FOR TENDER	JTS	CLK

CLIENT: Lake of the Woods KENORA

CONSULTANT: TULLOCH

PROJECT TITLE:

MELLICK AVENUE RECONSTRUCTION

DRAWING TITLE:

DETAILS & NOTES

DRAWN	DESIGNED	CHECKED	APPROVED
JTS	JTS	CLK	CLK

SCALE	DATE
AS NOTED	FEB. 25, 2026

PROJECT No.	REVISION	DRAWING
26-0652	0	G2

P:\2026\26052\Civil\Drawings\26-0652 City of Kenora - Mellick Ave_IFT.dwg

APPENDIX D
PROPOSED CONTRACT

CITY OF KENORA

The General Conditions of the CCDC 18 – 2023 Civil Works Contract, including the definitions therein, are hereby incorporated by reference into these Tender Documents as if they were written here in full. The General Conditions are further amended, supplemented, or deleted by the Supplemental General Conditions, General Requirements and Specifications, and Special Provisions.

APPENDIX E
SUPPLEMENTAL GENERAL CONDITIONS

CITY OF KENORA

Part 1 General

1.1 THE CONTRACT

.1 The 2023 edition, Canadian Construction Documents Committee document for Civil Works Contract (CCDC 18), as modified herein forms the basis for the Contract.

.2 Contractors shall retain a copy of CCDC 18-2023 at the jobsite.

.3 Certain General Conditions of CCDC 18-2023 Contract are modified, revised, amended, supplemented as follows hereunder and shall be read in conjunction with CCDC 18-2023.

1.2 DEFINITIONS

.1 Refer to Definitions, "Consultant" and revise "The Consultant shall mean the person(s) designated by the owner to review the construction of the Work on behalf of the Owner. At the discretion of the Owner, the Owner may assume any or all of the roles of the Consultant".

.2 Refer to Definition, "**Value Added Taxes"** to read "Value Added Taxes means such sum as shall be levied upon the Contract Price by the Federal Government and is computed as a percentage of the "Contract Price" and includes the Harmonized Sales Tax (HST), of which the Contractor shall collect and pay as imposed by the tax legislation."

.3 Refer to Definitions, "**Working Day**" to read "Working Day" means any Calendar Day, other than a Saturday, Sunday, or a statutory or civic holiday, on which the Consultant determines atmospheric and site conditions are such that the Contractor is able to work at least seven (7) hours during the period between 7:00 a.m. local time or the time the Contractor's operations normally commence, whichever is the earlier, and 7:00 p.m. local time. Should the contractor choose to work on a Saturday, Sunday, or a statutory or civic holiday, and the Consultant determined atmospheric and site conditions are such that the Contractor is able to work at least seven (7) hours during the period between 9:00 a.m. local time or the time the Contractor's operations normally commence, whichever is the earlier, and 7:00 p.m., this shall be considered a "Working Day". Working on a Saturday, Sunday, or a statutory or civic holiday is subject to approval from the Owner, and at least forty-eight (48) hours notice is required for consideration.

1.3 GC 1.1 CONTRACT DOCUMENTS

.1 Refer to General Conditions GC 1.1 "Contract Documents":

.1 Add the following items to paragraph 1.1.5

.1 Constructed works take precedence over drawing dimensions and details. Prior to fabrication of any item dependent upon accurate dimensions or details of constructed works, the Contractor shall take field measurements of such constructed works.

.2 If none of the above applies, the Contractor shall notify the Owner whose decision shall be final.

1.4 GC 2.1 AUTHORITY OF THE CONSULTANT

.1 Refer to General Conditions GC 2.1 "Authority of the Consultant" and add the following:

2.1.3 The Consultant will have authority in an emergency to stop the progress of the Work wherever, in his opinion, such stoppage may be necessary to ensure the safety of life, or of the Work, or adjoining property. This includes authority to make such changes and to order, assess and award to the Contractor the cost of such extra work to the Contract or otherwise as may in his opinion be necessary.

1.5 GC 2.2 ROLE OF THE CONSULTANT

.1 Refer to General Conditions GC 2.2 "Role of the Consultant" and revise 2.2.3 to read as follows:

2.2.3 The Consultant may provide at the Place of Work, one or more representatives to assist in carrying out the Consultant's responsibilities.

1.6 GC 2.3 REVIEW AND INSPECTION OF WORK

.1 Refer to General Conditions GC 2.3, "Review and Inspection of the Work" and add the following:

2.3.1.1 All workmanship and all materials furnished and supplied under this Specification are subject to inspection and testing by the Consultant including all operation from the selection and production of materials through final acceptance of the specified Work. The Contractor shall be wholly responsible for the control of all operations notwithstanding any inspection or approval that may have been previously given. The Consultant reserves the right to reject any materials or works which are not in accordance with the requirements of this Specification.

2.3.2.1 Reasonable shall mean 48 hours in this instance.

2.3.8 The Consultant shall record all changes made during construction and provide record drawings to the Owner upon completion of the Work.

1.7 GC 2.4 DEFECTIVE WORK

.1 Refer to General Conditions GC 2.4, "Defective Work" and add the following:

2.4.4 If, in the opinion of the Consultant, the correction of defective Work or Work not done in accordance with the Contract Documents will delay the construction of other portions of the project, the Consultant may revise the design of other portions of the project to accommodate the defective work. The cost of such changes (including the design and administration fees) shall be deducted from the contract price, the amount of which shall be determined in the first instance by the Consultant.

1.8 GC 3.4 CONSTRUCTION SCHEDULE

.1 Refer to General Conditions GC 3.4, "Construction Schedule" and revise 3.4.1.1 to read as follows:

3.4.1.1 prepare and submit to the *Owner* and *Consultant*, within ten (10) Business Days after execution of the Contract, a Construction Schedule that indicates the timing of the major activities of the Work and provides sufficient detail of the critical

events and their inter-relationship to demonstrate that the Work will be performed in conformity with the *Contract Time*;

1.9 GC 3.5 SUPERVISION

.1 Refer to General Conditions GC 3.5, "Supervision", and add the following:

3.5.3 The *Contractor* shall not replace or otherwise change its appointed representative without the prior written approval of the *Owner*.

3.5.4 The *Owner* shall have the authority to order the removal from the Work of any supervisor, employee, or other person employed by the *Contractor* or its *Subcontractors* who, in the opinion of the *Owner*, is incompetent, negligent, or otherwise detrimental to the progress, safety, or quality of the *Work*. Such removal shall be carried out promptly by the *Contractor*, and the *Contractor* shall not be entitled to any adjustment in *Contract Price* or *Contract Time* as a result of such removal.

1.10 GC 3.6 LAYOUT OF THE WORK

.1 Refer to General Conditions GC 3.6, "Layout of the Work" and add the following:

3.7.4 The Contractor shall be responsible for construction layout and all survey stakes, lath, paint, and flagging required to establish reference points for construction. The cost for this service is incidental to the work and shall be borne by the Contractor.

1.11 GC 5.2 BASIS OF PAYMENT FOR UNIT PRICE WORK

.1 Refer to General Conditions GC 5.2, "Basis of Payment for Unit Price Work".

.1 Revise Paragraph 5.2.2 to read "The Contractor shall measure the Work and the Consultant will verify such measurements in accordance with the measurement provisions of the Contract Documents. Consultant to communicate verified work completed and communicate with Owner such that payment to the Contractor can be determined."

1.12 WORKING DAYS

.1 Working days will be assessed continuously the first day of the start of the Works and in accordance with the Contractor's rotation schedule.

1.13 GC 5.6 SUBSTANTIAL PERFORMANCE OF THE WORK

.1 For the Work located in the Back Lane shown on Stantec drawings C-101 to C-104, CU-201 to CU-204 and C-501, The Contractor shall achieve Substantial Performance of the Work within fifty (50) consecutive Working Days of the Commencement of the Work, or by August 28th, 2026, whichever occurs first, to allow for upcoming road work (by others) on 4th Avenue South.

.2 For the Work located on Mellick Avenue shown on the Tulloch drawings, the Contractor shall achieve Substantial Performance of the Work by October 30, 2026.

.3 A two percent (2%) warranty holdback will be retained for remedial work following Substantial Performance of the Work. The warranty holdback will not be released to the Contractor until one (1) year warranty period has expired and all deficiencies have been corrected and completed as described in GC 12.3 - WARRANTY.

1.14 LIQUIDATED DAMAGES

.1 Should the Contractor fail to complete the Work in accordance with Section 1.11 to the satisfaction of the Consultant, the Contractor shall pay to the Owner amounts payable by the Owner in respect of site supervision of the Work the sum of five hundred dollars ($500.00) for each and every Working Day that the Work or Works shall remain unfinished after the time so specified. Five hundred dollars ($500.00) is not a penalty, but rather an estimate of the Liquidated Damages that the Owner will suffer by reason of said delay and default. The Owner may deduct and retain the amounts of such Liquidated Damages out of the monies, which may be due or become due to the Contractor under the Contract.

1.15 GC 5.7 FINAL PAYMENT

.1 Add the following to the General Conditions:

5.7.5 On completion of construction and required testing the Contractor shall arrange, attend and assist in the inspection of the Work by the Consultant. Any deficiencies noted shall be properly corrected by the Contractor. The Consultant will arrange a Completion Inspection by the Owner as soon as the deficiencies are corrected. The Contractor shall attend and assist this detailed inspection of the Work by the Owner. Deficiencies noted by the Completion Inspection shall be corrected by the Contractor.

5.7.7 Prior to expiry of the Warranty the Contractor shall arrange, attend and assist inspection of the work by the Consultant. The Contractor shall correct any Contract deficiencies noted and perform such extra work as required for acceptance by the Owner. The Consultant will arrange a Completion Inspection by the Owner as soon as the Work is in satisfactory condition. The Contractor shall attend and assist this detailed inspection of the Work by the Owner. Deficiencies noted by the Completion Inspection shall be corrected by the Contractor.

1.16 GC 6.2 CHANGE ORDER

.1 Refer to General Conditions GC 6.2 “Change Order” and add the following:

6.2.1.1 Whenever practical, notice will be given of a proposed change by the issuance of a Proposed Change Notice (PCN).

6.2.1.2 The Contractor shall respond within fifteen (15) calendar days by indicating any changes to the Contract in cost and/or time beside each item and attach a complete cost breakdown showing separately, materials, labour, and percent mark-up for each item.

6.2.2.4 When the Contract Price is to be adjusted by the method of a lump sum, the adjustment shall be in accordance with the following:

.1 Cost: The valuation of any changes shall include the following costs:

.1 Cost of material required for the change at list price less trade discount.

.2 Cost of labour and supervision required for the change, including all statutory and labour agreement charges.

.3 Cost for the use of rental rates plus transportation costs.

.4 Other costs for the change that are recognized as Contractors' costs by CCDC Document No. 18, 2023.

.2 Mark-up: Cost for increases in the Work, unless otherwise agreed, shall be marked up as follows for overhead and profit:

.1 Contractor:

.1 Ten percent (10%) overhead and five percent (5%) fee on the cost of his own work, and five percent (5%) overhead and five percent (5%) fee on his Subcontractors' prices.

.2 Subcontractor:

.1 Ten percent (10%) overhead and five percent (5%) fee on the cost of his own work. No markup on the Sub-subcontractors' price, unless the Sub-Subcontractor has not marked up their prices, allowing for five percent (5%) overhead and five percent (5%) fee on his Sub-Subcontractors' prices

.3 Sub-Subcontractors:

.1 Ten percent (10%) overhead and five percent (5%) fee on the cost of his own work.

.3 Substantiation: If requested, the Contractor shall submit details of quantities, prices and fess, as outlined above, together with substantiating documentation.

1.17 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

.1 Refer to General Conditions GC 6.4, "Concealed or Unknown Conditions" and add the following.

6.4.5 If the Contractor encounters a contaminated site condition of which the Contractor is not aware or about which the Contractor has not been advised, or if the Contractor has reasonable grounds to believe that such site conditions exist at the site of the Work, The Contractor shall:

.1 take all reasonable steps, including stopping of Work, to ensure that no person suffers injury, sickness or death, and that neither property nor the environment is injured or destroyed as a result of the contaminated site condition;

.2 immediately notify the Consultant of the circumstances in writing. The Consultant will immediately notify the Owner of the Contractors findings; and

.3 take all reasonable steps to minimize additional costs that may accrue as a result of any work stoppage.

6.4.6 For the purposes of GC 6.4.5, a contaminated site condition exists when a solid, liquid, gaseous, thermal or radioactive irritant or contaminant, or other hazardous or toxic substance or material, including moulds and other forms of fungi, is

present at the site of the Work to an extent that constitutes a hazard, or potential hazard, to the environment, property, of the health and safety of any person.

6.4.7 Upon receipt of a notification from the Contractor, the Owner shall promptly determine whether a contaminated site condition exists, and shall notify the Contractor in writing of any action to be taken, or work to be performed, by the Contractor as a result of the Owner's determination.

6.4.8 If the Contractor's services are required by the Owner, the Contractor shall follow the direction of the Owner with regard to any excavation, treatment, removal and disposal of any polluting substance or material.

6.4.9 The Owner, at the Owner's sole discretion, may enlist the services of experts and specialty contractors to assist in determining the existence of, and the extent and treatment of contaminated site conditions, and the Contractor shall allow them access and co-operate with them in the carrying out of their duties and obligations.

6.4.10 Except as may otherwise be provided for in the Contract, the provisions of GC 6.1 CHANGES, shall apply to any additional work make necessary because of a contaminated site condition.

1.18 GC 6.7 QUANTITY VARIATIONS

.1 Refer to General Conditions GC 6.7, "Quantity Variations" and delete paragraphs 6.7.1 to 6.7.5 in their entirety and replace with the following:

6.7.1 Bidders acknowledge that the quantities shown on the Bid Form are estimates only. The City will use the quantities for the purpose of comparing Bid Submissions. The actual quantities may be considerably greater or considerably less than the quantities shown on the Bid Form. Separate prices must be submitted for each item set forth on the Schedule of Prices.

6.7.2 The quantities for which payment will be made will be based on the Work actually performed and completed by the Contractor, as measured and determined by the Consultant in accordance with the applicable Specifications, Measurement and Payment provisions and the General Conditions.

1.19 GC 9.4 CONSTRUCTION SAFETY

.1 Refer to General Conditions GC 9.4, "Construction Safety", and delete paragraph 9.4.1 and replace with the following:

9.4.1 The Contractor shall be responsible for establishing, initiating, maintaining, and supervising the health and safety precautions and programs in connection with the performance of the Work and shall be in accordance with the Occupational Health and Safety Act (Ontario).

1.20 GC 10.2 LAWS, NOTICES, PERMITS AND FEES

.1 Refer to General Conditions GC 10.2 "Laws, Notices, Permits and Fees" and add the following:

10.2.8 The Contractor shall comply with, and the Work shall be carried out, subject to, all regulations and orders made by any Municipal, Provincial, Federal or other governmental authority and applicable to the said Work, and shall, at his own expense, obtain all necessary permits and approvals required.

10.2.9 The Contractor shall observe and comply with the requirements of the Occupational Health and Safety Act and all addendums thereto under the Occupational Health and Safety Act of the Province of Ontario, for the safety of all personnel to be employed on the project.

1.21 GC 11.1 INSURANCE

.1 Revise Clause 11.1.1 to read:

11.1.1 Without restricting the generality of GC 12.1 – INDEMNIFICATION, the Contractor shall provide, maintain, and pay for the insurance coverages specified in GC 11.1 – INSURANCE. Unless otherwise stipulated, the duration of each insurance policy shall be from the date of commencement of the Work until the end of the warranty as described in GC 12.3 - WARRANTY

11.1.2 The Contractor shall provide and maintain the following insurance coverage:

a) commercial general insurance liability insurance, in the amount of at least ten million dollars ($10,000,000.00) inclusive, with the Owner added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations;

b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least ten million dollars ($10,000,000.00) at all times during the performance of the Work and until the date of Substantial Performance;

c) “All Risks” contractors’ equipment insurance covering construction equipment use by the Contractor for the Performance of the Work, shall be in a form acceptable to the Owner ahs shall not allow subrogation claims by the insurer against the Owner. The policies shall be endorsed to provide the Owner with not less than 15 days notice in writing in advance of cancellation, change, or amendment restricting coverage. Subject to satisfactory proof of financial capability by the Contractor for self-insurance, the Owner agrees to waive the equipment insurance requirement.

d) Contractor to ensure that Sub-Contractors maintain adequate insurance coverage.

e) The commercial general liability insurance shall include the Owner and Owner’s Representative as additional insureds with respect to liability arising out of the Contractor’s performance of the Work.

.2 Add Clause 11.1.9, as follows:

11.1.9 The Contractor shall provide the Owner with a certificate(s) of insurance, in a form satisfactory to the Owner, at time of tender closing.

.3 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) days prior written notice to the Consultant.

.4 This Policy shall be in the form of the latest edition of the relevant CCDC endorsement form.

1.22 GC 12.3 WARRANTY

.1 Refer to General Conditions GC 12.3 "Warranty" and add the following:

12.3.7 After due notification in writing to the Contractor, the Owner may proceed with correction of a fault at the expense of the Contractor and his Surety. In emergency situations endangering life or public property, the Owner shall proceed with repairs and thereupon advise the Contractor of the failure. The resulting costs shall be paid by the Contractor.

12.3.8 When submitting his Tender, the Contractor shall note that all his Work, including any extra work as specified herein, shall be subject to the Warranty requirements found within GC 12.3.

Part 2 Products

.1 Not used.

Part 3 Execution

.1 Not used.

END OF SECTION

APPENDIX F
GENERAL REQUIREMENTS AND SPECIFICATIONS

CITY OF KENORA

Stantec

SPECIFICATIONS FOR:

CITY OF KENORA

26SW Sewer and Water System Reconstruction Kenora, Ontario

STANTEC FILE 111220983

February 2026

PROJECT DESCRIPTION

Work for this Contract consists of the supply and installation of approximately 350m of watermain, wastewater sewer renewals, water and sewer service renewals, asphalt paving restorations and associated works as specified in the Contract Documents for the 26SW Sewer and Water System Reconstruction.

DIVISION 01 – GENERAL REQUIREMENTS

DIVISION 31 – EARTHWORK

DIVISION 32 – EXTERIOR IMPROVEMENTS

DIVISION 33 – UTILITIES

Part 1 General

1.1 Drawings

.1 The following is the list of drawings for this project:

Drawing No.	Title
G-001	Cover Sheet and Drawing Index
C-101	Back Lane – Horizontal Geometry
C-102	Back Lane – Plan & Profile – Seventh Street South to Sta. 0+140
C-103	Back Lane – Plan & Profile – Sta. 0+140 to Sta. 0+250
C-104	Back Lane – Plan & Profile – Sta. 0+250 to Fifth Street South
C-201	Back Lane Between 3rd Ave S and 4th Ave S – Seventh Street S to Sta. 2+00
C-202	Back Lane Between 3rd Ave S and 4th Ave S – Sta. 2+00 to Sta. 3+25
C-203	Back Lane Between 3rd Ave S and 4th Ave S –Sta. 3+25 to Fifth Street S
C-204	Lot 509 Plan Profile – Third Ave S to Back Lane Between 3rd Ave S and 4th Ave S
C-501	Underground Details – Sheet 1 of 2
C-502	Underground Details – Sheet 2 of 2

Part 2 Products

.1 Not used.

Part 3 Execution

.1 Not used.

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

Part 1 General

1.1 WORK COVERED BY CONTRACT DOCUMENTS

.1 Work for this Contract consists of the supply and installation of approximately 350m of watermain, wastewater sewer renewals, water and sewer service renewals, asphalt paving restorations and associated works as specified in the Contract Documents for the 26SW Sewer and Water System Reconstruction.

.2 All Works and procedures shall be completed in accordance with the Ontario Provincial Standard Specifications (OPSS), except where noted otherwise in the drawings or project specifications.

1.2 CONTRACT METHOD

.1 Construct Work under Unit Price Contract.

1.3 WORK BY OTHERS

.1 The Contractor's attention is directed to the fact that other contractors, the personnel of other utilities and the staff of the Owner may be working in the areas on or adjoining the site.

.2 The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to cooperate to the fullest extent with personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of this Contract.

.3 The Contractor shall limit the construction activity to adhere to any City of Kenora By-laws regarding noise or construction activity.

1.4 CONTRACTOR USE OF PREMISES

.1 Limit use of premises for Work, and for access, to allow:

.1 Work by other contractors.

.2 Owner usage.

.2 Co-ordinate use of premises under direction of Consultant.

.3 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Consultant.

.4 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

1.5 EXISTING SERVICES

.1 Further to the General Conditions, no responsibility will be assumed by the Owner or the Consultant for accuracy or completeness of the drawings with respect to the existing

utilities, pipes or other objects either underground or on the surface, and neither the Owner nor the Consultant shall be liable for the accuracy and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

.2 Contractor to obtain locations of underground services from utility companies.

.3 Notification requirements to the City of Kenora are as follows:

.1 Ten (10) business days notice before mobilizing to site

.2 Three (3) business days notice for changes to traffic control plans, sidewalk closures to be included.

.4 Notification requirements to the affected residents are as follows:

.1 Seven (7) days written notice to lots fronting, backing, or immediately adjacent to work site.

.2 Three (3) days written notice prior to loss of driveway access due to concrete works.

.3 Written notice to include:

.1 Approximate construction dates

.2 Contractor's contact information: name, address, phone number, and 24-hours emergency number

.3 Contractor's contact for reporting damage to personal property, alternative parking arrangements, access, garbage disposal

.4 Summary of potential hazards associated with project works.

.5 Schedule service interruptions or safety watches with utility companies and the Owner. Provide notification to Consultant a minimum of two (2) Working Days prior to service interruption or safety watch. Provide 48-hour written notice to residents prior to service interruptions. Service interruptions with City of Kenora watermain are to be in accordance with Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.6 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.

.7 Where unknown services are encountered, immediately advise Consultant and confirm findings in writing.

.8 Protect, relocate or maintain existing active services.

1.6 DOCUMENTS REQUIRED

.1 Maintain at job site, one copy each document as follows:

.1 Contract Drawings and Specifications.

.2 Addenda.

.3 Reviewed Shop Drawings.

.4 List of Outstanding Shop Drawings.

.5 Change Orders.

.6 Other Modifications to the Contract.

.7 Field Test Reports.

.8 Copy of Approved Work Schedule.

.9 Health and Safety Plan and Other Safety Related Documents.

.10 Manufacturer's recommended installation instructions.

.11 The Ontario Provincial Standard Specifications

.12 Ministry of the Environment, Conservation and Parks – Watermain Disinfection Procedure

.13 Canadian Construction Documents Committee for Civil Works Contract, 2023 Edition (CCDC 18-2023).

Part 2 Products

.1 Not used.

Part 3 Execution

.1 Not used.

END OF SECTION

Part 1 General

1.1 WORK DESCRIPTION

.1 Although the Bid Documents set forth the work of various trades under separate Divisions, it is not intended that the work of that trade is limited to or includes all work set forth in that particular Division. The Bidder shall delegate the extent of the Work to be done by the various trades and shall coordinate execution of the Work by all trades.

.2 Although the specifications are separated into titled Divisions, the Owner will not be an arbitrator to establish limits of any agreements between the Contractor and his Subcontractor.

1.2 RELATED REQUIREMENTS

.1 General Conditions

.2 All other specification sections

Part 2 Products

.1 Not used.

Part 3 Execution

.1 Not used.

END OF SECTION

Part 1 General

1.1 THE WORKSITE

.1 The Owner will coordinate works on the private lands upon which the work related to the proposed works will be undertaken.

1.2 RELATED REQUIREMENTS

.1 General Conditions

.2 Division 01 – General Requirements

1.3 CONTRACTOR'S USE OF THE WORKSITE

.1 The Contractor shall have use and control of the Worksite for lands owned by the Owner, but permit access to the Owner, the Consultant and other Contractors on the Worksite for purposes of operations, inspections, reviews, tests and carrying out the activities related to the Work.

.2 For lands under the ownership of the City of Kenora, the Contractor shall not be entitled to exclusive possession of the Site. The City shall have the right, for itself, its agents, representatives or other persons, to enter, occupy or use any portion of the Site for which they have jurisdiction, at any time and for so long as time as the City may require. Such entry, occupation or use shall not constitute acceptance of the Work by the City, nor shall it relieve the Contractor of responsibilities to complete the Work.

.3 The Owner shall have unfettered use of thoroughfares, streets, lanes and other areas within the Worksite until the Contractor requires those areas for execution of the Work, and after the Contractor has finished the portions of the Work in those areas. The Owner to coordinate with residents and provide adequate notice when the work requires access to private property. The Contractor shall provide detours at locations where thoroughfares, streets or lanes will be inaccessible.

.4 Contractor is responsible for Health and Safety Requirements and security of the project site throughout the duration of construction. Only after achieving Substantial Performance, the Owner shall have use of the area and shall be responsible for Health and Safety Requirements and security of the area.

.5 During the Contractor’s use of a particular area of the Worksite to execute the Work, the Contractor shall be responsible primarily for security and for ensuring compliance with Health and Safety Regulations.

.6 The Contractor shall be responsible for access to the Worksite by means of temporary roads, tote roads, or agreements with the appropriate authorities to use existing means of access.

1.4 CONSTRUCTION ACCESS

.1 No construction equipment or construction traffic is permitted on streets other than those designated as truck routes without authorization in writing from the City of Kenora Public Works Department.

.2 The Contractor shall be solely responsible for any damage, or spillage upon, all roads utilized for hauling materials and equipment to and from the Worksite, provided that the City’s Representative determines such damage or spillage to be a direct consequence of

the actions or omissions of the Contractor or its agents in the performance of the Work under this Contract.

.3 The Contractor shall, at is sole expense and without limitation, maintain all haul roads in a condition satisfactory to the City, including the implementation of dust control measures as required.

.4 Upon receipt of written notice from the City of Kenora Public Works Department that remedial work is required, the contractor shall promptly and diligently clean, repair, and/or restore the designated areas to the satisfaction of the City. All such remedial work shall be performed at no additional cost to the City.

.5 The Contractor shall be responsible for coordinating with all affected residents to ensure continuous and safe access to private properties throughout the duration of construction.

1.5 OPERATION OF EXISTING CITY VALVES AND CURB STOPS

.1 At no time shall the Contractor operate valves, or curb stops on the existing City of Kenora watermain system, or any new valves or curb stops tied into the new system. Operation of any City of Kenora watermain valve and curb stops will be done by City forces upon receipt of adequate notice from the contractor in accordance with the Ontario Provincial Standard Specifications.

.1 For the purpose of this clause, “adequate notice’ shall mean a minimum of forty-eight (48) hours prior to the required valve operation.

Part 2 Products

.1 Not used.

Part 3 Execution

.1 Not used.

END OF SECTION

Part 1 General

1.1 DESCRIPTION OF WORK

.1 Payments will be made on the basis of the Contract Unit Prices bid on the "Bid Form" submitted with the Tender, and will be based on valuation by the Consultant of the percentage of Work completed at the end of the payment period.

.2 The Unit Prices bid, unless specifically noted otherwise, shall include the supply of all labor, Plant, Material and Product equipment necessary to construct the Work in accordance with the drawings and specifications.

.3 The Unit Prices bid shall include the complete supply and installation of the works and shall include full compensation for supplying, hauling, installing, cleaning, testing, and placing in service together with all other work subsidiary and incidental thereto for which separate payment is not provided elsewhere.

.4 Other materials on site, whether existing structures, vegetation, topsoil, gravel, sand or other excavated or piled materials, are the property of the Owner or of the owner of the land on which the Work is located. Only those materials specifically noted in the specification or on drawings as belonging to the Contractor shall become the Contractor's property.

.5 Where there are excess excavated materials, unsuitable materials excavated or materials of any kind that are excavated but not used in the Work, such materials are not the property of the Contractor unless authorized in writing by the Consultant or specified to be disposed of by the Contractor.

.6 Progress payments will not be made for Material and Product unless they are incorporated into the Work and an updated schedule is submitted on a monthly basis to the Consultant.

.7 Quality control testing identified in 01 45 00 – Quality Control shall be the responsibility of the Contractor, as noted, and included in the cost for each relevant work item.

.8 Restoration of existing surfaces, infrastructure or other structures disturbed by construction to pre-construction or better condition shall be included in the Unit Prices bid.

.9 Costs for coordination, temporary support, removal, or replacement of any utility infrastructure affected by the proposed Work is incidental to the Work and shall be the responsibility of the Contractor.

1.2 RELATED REQUIREMENTS

.1 General Conditions.

.2 Division 01- General Requirements

.3 All sections of the Technical Specifications (Div 02 to Div 46).

1.3 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

.1 General Requirements (Item A.1)

The lump sum price for General Requirements shall not exceed 10% of the total contract bid price and shall cover all costs related to insurance, permits, mobilization and demobilization and general administrative costs.

Measurement: Measurement shall be based on the percent (%) complete of the Contract price for General Requirements completed.

Payment: 25% of the lump sum price for General Requirements shall be paid upon completion of mobilization to the site by the Contractor. The remaining 75% shall be invoiced in equal monthly amounts from the second payment through to the date of Substantial Performance.

.2 Temporary Potable Water Servicing (Item A.2)

The lump sum price for Temporary Potable Water Servicing shall include all planning, supply and installation of temporary watermain to be used for the duration of the project. Work to include all labour, materials, equipment, and incidentals required to design (if applicable), supply, install, commission, operate, maintain, monitor, protect, disinfect, sample, flush, winterize (as required), and remove temporary potable water servicing to maintain continuous potable water supply to affected residents for the duration specified on the Drawings and/or as directed by the Contract Administrator. Work includes all connections to existing mains and private services, backflow prevention, service bypasses, crossings, traffic accommodation for surface runs, and reinstatement upon removal, insurance, permits, and general administrative costs.

Measurement: Measurement shall be based on the percent (%) complete of the Contract price for Temporary Potable Water Servicing completed.

Payment: 60% of the lump sum price for Temporary Potable Water Servicing shall be paid upon completion of mobilization and commissioning of the system. The remaining 40% shall be invoiced in equal monthly amounts from the second payment through to the date of removal of the system.

.3 Watermain – On-Line Renewal (Item A.3)

Work includes supply and installation of water distribution pipe where existing watermains are to be renewed including excavation, dewatering, erosion and sediment control, pipe, tracer wire, joint restraints, couplings, thrust blocks, saw cutting, removal and disposal of existing pavement (where required), shoring, utility crossings, bedding, joining, laying, backfilling, compaction, soft digging, cleaning, testing, plugging, abandonment and removal of existing watermain and water services, repairs to existing watermains during construction activities, removal and abandonment of existing valves, valve boxes and hydrants, removal of temporary pressurized water supply upon completion of the works, coordination of shutdowns and other operations with the Municipality, and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on length basis for each size of pipe accepted and measured by the Consultant. Measurement for length of water supply pipe installed will be made horizontally at grade above the centreline of pipe through fittings regardless of installation method and backfill class.

Payment: Contract unit price bid for each size of watermain renewal pipe.

.4 Off-Line Hydrant Assembly (Item A.4)

Work includes the supply and installation of all fittings and materials required to install a hydrant assembly including excavation, dewatering, fittings, couplings, cutting, thrust blocks, base block, gate valve, lead pipe, hydrant, anodes, insulation kits (as specified), shoring, bedding, backfill, compaction, restorations, testing and all incidental work for which payment is not specified elsewhere.

Up to 3.0 metres of hydrant lead pipe measured from the connection to the hydrant tee on the watermain will be included with the hydrant assembly.

Hydrant lead pipe longer than 3.0 metres will be measured for payment in accordance with "Watermain Renewal".

Measurement: Field measurement on unit basis for each "Off-Line Hydrant Assembly" accepted and measured by the Consultant.

Payment: Contract unit price bid for off-line hydrant assembly.

.5 Gate Valves (Item A.5)

Work includes supply and installation of gate valves including excavation, dewatering, valve, valve stem, valve box, anode, insulation kits (as specified), connections, concrete block, shoring, bedding, backfill, compaction, restorations, testing and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size of valve accepted and measured by the Consultant.

Payment: Contract unit price bid for each size of "Gate Valve".

.6 Watermain Fittings (Item A.6)

Work includes supply and installation of watermain fittings including excavation, dewatering, connections, thrust blocks, restraints, shoring, bedding, backfill, compaction, restorations, testing and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size and type of fitting accepted and measured by the Consultant.

No measurement for fittings required for hydrant assemblies, including hydrant tee, will be made. Cost for required fittings for hydrant assemblies to be included in the unit price bid for "Off-Line Hydrant Assembly".

Payment: Contract unit price bid for each size and type of "Watermain Fitting".

.7 Water Service Pipe (Item A.7)

Work includes supply and installation of water service pipe required to connect existing water services to new watermain including excavation, dewatering, erosion and sediment control, water service pipe, fittings, couplings, thaw cable, thaw cable termination points, saw cutting, removal and disposal of existing pavement (where required), shoring, utility crossings, bedding, joining, laying, backfilling, compaction, cleaning, testing and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on length basis for each size of water service pipe accepted and measured by the Consultant. Measurement for length of water service pipe

installed will be made horizontally at grade above the centreline of pipe through fittings regardless of installation method or class of backfill.

Payment: Contract unit price bid for each size of Water Service Pipe.

.8 Fabricated Tapped Coupling (c/w Corporation Stop) (Item A.8)

Work includes supply and installation of factory tapped coupling, corporation stops and associated fittings, including excavation, dewatering, joining, compaction, restorations, testing and all other incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size of fabricated tapped coupling corporation stop (completed with corporation stop) accepted and measured by the Consultant.

Payment: Contract unit price bid for each size of fabricated tapped coupling corporation stop (completed with corporation stop).

.9 Copper Tees (Item A.9)

Work includes supply and installation of copper tube fitting tee, associated fittings, including excavation, dewatering, tee, connections, compaction, restorations, testing and all other incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size of copper tee accepted and measured by the Consultant.

Payment: Contract unit price bid for each size of copper tee.

.10 Curb Stop & Curb Box (Item A.10)

Work includes the supply and installation of water service curb stops and curb stop boxes including excavation, installation, curb stop, concrete block, curb stop box, valve stem, bedding, dewatering, shoring, backfill, compaction, marker post and all other Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size of curb stop and box accepted and measured by the Consultant.

Payment: Contract unit price bid for each size of curb stop and box.

.11 Connect to Existing Water Service (Item A.11)

Work includes the Supply and Installation of a connection to existing water service including excavation, bedding, dewatering, shoring, cutting of existing pipe, reducers, couplings, joining, installation, backfill, compaction, testing and all other materials and operations for which no provision for payment has been made.

Measurement: Field measurement on unit basis for each connection accepted and measured by the Consultant.

No differentiation will be made for size or material of existing water service being connected to.

Payment: Contract unit price bid for each Connection to Existing Water Service.

.12 Connect to Existing Watermain (Item A.12)

Work includes the supply and installation of all coupling and materials required to connect a new watermain pipe to an existing watermain pipe including excavation, locating of existing pipe, soft digging (where required), dewatering, couplings, cutting, thrust blocks, shoring, bedding, backfill, compaction, restorations, testing, coordination of shutoff with City of Kenora and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size and connection type accepted and measured by the Consultant.

Measurement of fittings required for connection will be made in accordance with "Watermain Fittings".

Payment: Contract unit price bid for each size and type of "Connection to Existing Watermain".

.13 Wastewater Sewer – On-line Renewal (Item A.13)

Work includes supply and installation of wastewater sewer pipe where existing wastewater sewers are to be renewed including excavation, dewatering, erosion and sediment control, pipe, couplings, saw cutting, removal and disposal of existing pavement (where required), shoring, utility crossings, bedding, joining, laying, warning tape, backfilling, compaction, soft digging, cleaning, testing, removal, plugging and abandonment of existing wastewater sewer and sewer services, removal of existing wastewater sewer pipe (where required) maintaining existing wastewater flow in accordance with the specification, by-bass pumping operations (where required), 24-hour maintenance of by-pass pumping operations, coordination with the City, and all incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on length basis for each size of pipe accepted and measured by the Consultant. Measurement for length of wastewater sewer pipe installed will be made horizontally at grade above the centreline of pipe through fittings regardless of installation method or backfill class. No measurement will be made for maintenance of existing wastewater sewer flows or by-pass pumping operations used by the Contractor. All labour and materials required to maintain existing wastewater sewer flows or provide by-pass pumping operations are to be included in the unit price bid for wastewater sewer renewal.

Payment: Contract unit price bid for each size of Wastewater Sewer Renewal pipe.

.14 Wastewater Sewer Service Pipe (Item A.14)

Work includes supply and installation of wastewater sewer service pipe required to connect existing wastewater sewer services to new sewer main including excavation, dewatering, erosion and sediment control, sewer service pipe, fittings, couplings, saw cutting, removal and disposal of existing pavement (where required), shoring, utility crossings, bedding, joining, laying, backfilling, compaction, cleaning, testing and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on length basis for each size of wastewater sewer service pipe accepted and measured by the Consultant. Measurement for length of wastewater sewer service installed will be made horizontally at grade above the centreline of pipe through fittings regardless of installation method or class of backfill.

Payment: Contract unit price bid for each size of wastewater service pipe.

.15 Wastewater Sewer Fittings (Item A.15)

Work includes supply and installation of wastewater sewer tees or saddles required to connect sewer services to new sewer main including excavation, bedding, dewatering, shoring, connection to pipe, couplings, backfill, compaction, testing and all other incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each sewer tee or saddle accepted and measured by the Consultant.

Payment: Contract unit price bid for each sewer service tee or saddle.

.16 Connection to Existing Sewer (Item A.16)

Work to include supply and installation of a connection to existing wastewater sewer pipe including excavation, bedding, dewatering, shoring, cutting of existing pipe, eccentric reducers, couplings, joining, backfill, compaction, and all other incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each size of connection accepted and measured by Consultant.

Payment: Contract unit price bid for each connection to existing sewer.

.17 Connect to Existing Wastewater Sewer Service (Item A.17)

Work includes the supply and installation of a connection to existing wastewater sewer service including excavation, bedding, dewatering, shoring, cutting of existing pipe, eccentric reducers, couplings, joining, backfill, compaction and all other materials and operations for which no provision for payment has been made.

Measurement: Field measurement on unit basis for each size of connection accepted and measured by the Consultant.

No differentiation will be made for material of existing wastewater sewer service being connected to.

Payment: Contract unit price bid for each connection to existing wastewater sewer service.

.18 Remove & Replace Existing Manhole (Item A.18)

Work includes the supply and installation of a new manhole to replace an existing manhole including excavation, bedding, dewatering, shoring, removal and disposal of existing manhole, salvage of existing frames and covers, precast manhole base, precast manhole risers, precast flat top reducer, grading rings, frame, cover, poly wrap, frost straps, joint waterproofing, ramnek, grouting, pipe connections, ladder rungs, benching, backfill, compaction and all other incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each vertical metre of manhole removed and replaced accepted and measured by the Consultant. Measurement will be from the lowest manhole pipe invert to the finished rim elevation.

Where new manholes will be connecting to existing wastewater sewer pipes, unit price for “Remove and Replace Existing Manhole” shall include up to 3.0 metres of new wastewater sewer pipe to allow for connection to each existing wastewater sewer pipe. Pipe in addition to 3.0 metres for each connection shall be paid for under “Connection to Existing Sewer”.

Payment: Contract unit price bid for each vertical metre of manhole removed and replaced.

.19 Install New Manhole (Item A.19)

Work includes supply and installation of manhole including, excavation, dewatering, shoring, precast manhole base, precast manhole risers, precast flat top reducer, grading rings, frame, cover, poly wrap, frost straps, joint waterproofing, ramnek grouting, pipe connections, ladder rungs, benching, backfill, compaction and all other incidental Work for which payment is not specified elsewhere.

Measurement: Field measurement on unit basis for each vertical metre of manhole installed and accepted by the Consultant. Measurement will be from the lowest manhole pipe invert to the finished rim elevation.

Payment: Contract unit price bid for each vertical metre of type of manhole installed.

.20 Storm Sewer Renewal – Catch Basin Lead Pipe (Item A.20)

Work includes supply and installation of catch basin lead pipe including excavation, dewatering, erosion and sediment control, pipe, fittings, couplings, locating existing pipe, connection to existing lead pipe (where specified), connection to main line sewer, saw cutting, shoring, utility crossings, bedding, joining, laying, backfilling, compaction, surface restoration, cleaning, deflection testing and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on length basis for each size of pipe accepted and measured by the Consultant. Measurement for length of lead pipe installed in a trench will be made horizontally at grade above the centreline of pipe through fittings from centre to centre of manholes/catch basins.

Payment: Contract unit price bid for each size and class of backfill of “Catch Basin Lead Pipe”.

.21 Remove & Replace Existing Catch Basin (Item A.21)

Work includes supply and installation of catch basins including excavation, dewatering, erosion and sediment control, shoring, bedding, rungs, risers, base, mortar, gaskets, pipe connections, frames, covers, gaskets, backfilling, compaction, surface restoration, cleaning, testing and all incidental work for which payment is not specified elsewhere.

Measurement: Field measurement on a unit basis for each catch basin accepted and measured by the Consultant.

Payment: Contract unit price bid for “Remove & Replace Existing Catch Basins”.

.22 Television Inspection & Mandrel Inspection (Item A.22)

Work includes the supply of all personnel and equipment required to complete CCTV inspections of newly constructed wastewater sewer and shall include cleaning of pipes prior to televising, mandrel testing, supply of videos and summary reports and all other incidental Work for which payment is not specified elsewhere. Televising of existing sewers that were damaged and repaired by the Contractor while completing the work shall be incidental to the Contract and will not be measured for payment.

Measurement: Field measurement on unit basis for each metre of CCTV televising accepted and measured by the Consultant.

Payment: Contract unit price bid for each metre of new wastewater sewer televised.

.23 Box Insulation (Item A.23)

Work shall include the supply and installation of Type 4 Rigid Insulation in 2400mm long x 600mm wide strips to be placed on the sides and top of pipelines. Includes miscellaneous materials, excavation, installation, temporary supports, placing and bedding, backfill and all incidental work for which payment is not specified elsewhere.

Measurement: Actual length of pipe installed with specified box insulation thickness as measured along the horizontal centreline and grade of pipe.

Payment: Unit price bid per linear length of pipe for which specified thickness of box insulation is supplied and installed.

.24 Rock Removal (Item A.24)

Work includes all labour, equipment, materials, supervision required to remove in-situ rock by mechanical hammering, including preparation, excavation, scaling, trimming, handling of fragmented rock, maintaining safe work conditions and all other incidental Work for which payment is not specified elsewhere.

Measurement:

Measurement for rock removal by rock hammering will be measured by the hour, based on the actual time the hammering equipment is actively engaged in breaking rock.

Time will be measured to the nearest 0.5 hour.

Idle time, standby, mobilization, travel, maintenance, or delays outside Contractor's control will not be measured for payment, unless specifically directed by the Consultant.

Payment: Field measurement on an hourly basis for rock removal accepted and measured by the Consultant.

.25 Pavement Restorations (Item A.25)

Work includes the supply and installation of pavement restorations required to replace damaged pavement structures that were removed to allow for installation of the proposed infrastructure including asphaltic concrete patches and new asphalt paving surfacing, concrete sidewalk renewal, and concrete curb and gutter renewal. Work includes excavation, shoring, backfill, granular base course material for pavement restorations, asphalt, concrete, steel reinforcement, dowels, tie bars, compaction, rolling, saw cutting, finishing, compaction testing and all incidental work for which payment is not specified elsewhere.

Measurement:

Field measurement on a square metre basis for asphaltic concrete patches and paving accepted and measured by the Consultant.

Measurement for granular base course and subbase will only be for material placed under pavement restorations on a cubic metre basis. Restoration of any granular surface or approach will be incidental to the works.

Field measurement on a square metre basis for sidewalk renewal accepted and measured by the Consultant.

Field measurement on a length basis for concrete curb and gutter renewal accepted and measured by the Consultant.

Field measurement on a length basis for asphalt mountable curb and gutter accepted and measured by the Consultant.

Payment: Contract unit price bid for each type of pavement restoration.

1.4 INCIDENTAL WORK

.1 The following work will be considered incidental work in this contract, and separate payment will not be made:

.1 Administrative documents.
.2 Resetting of existing culverts.
.3 Removal and replacement of topsoil and sod.
.4 Removal and replacement of trees and shrubs.
.5 Removal and reinstatement of adjacent structures to facilitate project works.
.6 Removal of frost from the ground before trenching.
.7 Disposal of surplus trench excavation material.
.8 Location and protecting existing utilities.
.9 Supports for existing pipe.
.10 Regrading existing ditches after trench backfill.
.11 Removal and disposal of replaced pipes and waste material.

Part 2 Products

2.1 NOT USED

.1 Not used

Part 3 Execution

3.1 NOT USED

.1 Not used

END OF SECTION

Part 1 General

1.1 ADMINISTRATIVE

.1 The Consultant will schedule and administer biweekly project meetings throughout the progress of the Work.

.2 The Consultant will prepare agenda for meetings.

.3 In person meetings will be held at City of Kenora's Public Works Department office located at:

14th Street North,
P9N 4M9
Kenora, Ontario

.4 The Consultant will make arrangements for the meetings and record the meeting minutes.

.5 Representative of Contractor, Subcontractor(s) and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

1.2 PRECONSTRUCTION MEETING

.1 Within five (5) days after award of Contract, or as approved by the Consultant, attend a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.

.2 Owner, Consultant, Contractor, major Subcontractors, and field representative will be in attendance.

.3 Contractor to submit a proposed Work Schedule at this meeting.

1.3 PROGRESS MEETINGS

.1 Meetings will be held weekly, unless otherwise specified by the Consultant.

.2 Contractor, major Subcontractors involved in Work and Consultant and Owner are to be in attendance.

Part 2 Products

.1 Not used

Part 3 Execution

.1 Not used

END OF SECTION

Part 1 General

1.1 DESCRIPTION OF WORK

.1 Shop drawings.

.2 Product data, test reports, certificates.

.3 Manufacturer’s instructions and field reports.

1.2 RELATED WORK

.1 All other specification sections.

1.3 ADMINISTRATIVE

.1 Submit to Consultant submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Do not proceed with Work affected by submittal until review is complete.

.3 Present shop drawings, product data, samples and mock-ups in SI Metric units.

.4 Where items or information is not produced in SI Metric units converted values are acceptable.

.5 Review submittals prior to submission to the Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

.6 Notify Consultant, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.7 Verify field measurements and affected adjacent Work are coordinated.

.8 Contractor's responsibility for errors and omissions in submission is not relieved by Consultant’s review of submittals.

.9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant review.

.10 Keep one reviewed copy of each submission on site

1.4 SHOP DRAWINGS AND PRODUCT DATA

.1 Submission of Shop Drawings in electronic format is required.

.2 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in Province of Ontario, Canada where specifically requested in the specifications. Shop drawings not bearing the required Engineer's stamp will be rejected and returned without being examined.

.3 The Contractor shall prepare a schedule of the dates for provision, review and return of Shop Drawings.

.4 The Contractor shall provide Shop Drawings to the Consultant to review in orderly sequence based on the dates for provision.

.5 The Contractor shall review all Shop Drawings before providing them to the Consultant. The Contractor represents by this review that:

.1 The Contractor has determined and verified all applicable field measurements, field construction conditions, product requirements, catalogue numbers and similar data, or will do so, and

.2 The Contractor has checked and coordinated each Shop Drawing with the requirements of the Work and of the Contract documents.

.6 Shop drawings that do not include the stamp, date, and signature of the person responsible for reviewing the shop drawings on behalf of the Contractor before submittal to the Consultant will be rejected and returned without being examined.

.7 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

.8 Adjustments made on shop drawings by the Consultant are not intended to change the Contract Price. If it is deemed that such adjustments affect the value of Work, state such in writing to the Consultant prior to proceeding with fabrication or the Work.

.9 Make changes in shop drawings that the Consultant may require, consistent with Contract Documents. When resubmitting, notify the Consultant in writing of any revisions other than those requested.

.10 Accompany submissions with transmittal letter, containing:

.1 Date.

.2 Project title and number.

.3 Contractor's name and address.

.4 Identification and quantity of each shop drawing, product data, and samples.

.5 Other pertinent data.

.11 Submissions include:

.1 Date and revision dates.

.2 Project title and number.

.3 Name and address of:

.1 Subcontractor.

.2 Supplier.

.3 Manufacturer.

.4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.

.5 Details of appropriate portions of Work as applicable:

.1 Fabrication.

.2 Layout, showing dimensions, including identified field dimensions, and clearances.

.3 Setting or erection details.

.4 Capacities.

.5 Performance characteristics.

.6 Standards.

.7 Relationship to adjacent work.

.12 Submit product data sheets or brochures electronically for requirements requested in specification Sections and as requested by Consultant where shop drawings will not be prepared due to standardized manufacture of product.

.13 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Consultant.

.1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.

.2 Testing must have been within three years of date of contract award for project.

.14 Submit electronic copies of certificates for requirements requested in specification Sections or (one (1) electronic copy, and as requested by Consultant.

.1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.

.2 Certificates must be dated after award of project contract, complete with project name.

.15 Submit electronic copies of manufacturers' instructions for requirements requested in specification Sections and as requested by Consultant.

.1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

.16 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Consutlant.

.1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

.17 Delete information not applicable to project.

.18 Supplement standard information to provide details applicable to project.

.19 If upon review by the Consultant, no errors or omissions in compliance with the Contract Documents are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If, however, shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through the same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

.20 No extension of Contract Time will be allowed for delays in the Work that may be caused for Consultant's rejection of shop drawings.

.21 Shop drawings that contain deviations from the Contract Documents that are not presented to the Consultant in writing as specified in General Condition GC 3.9 will be rejected and returned without being examined.

.22 Allow twelve (12) business days for Consultant's review of each submission.

.23 The Consultant's review shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings or for meeting all requirements of the Contract Documents.

1.5 CERTIFICATES AND TRANSCRIPTS

.1 Prior to commencement of the Work, provide evidence of compliance with worker's compensation legislation at the Place of the Work, including payments due thereunder.

.2 Submit transcription of insurance immediately after award of Contract with City and City's Representative named as additional insured party.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 CONSTRUCTION SAFETY MEASURES

.1 The Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Constructor in accordance with the Occupational Health and Safety Act (Ontario). Contractor to submit the following:

- .1 Notice of Project (Form 0175).
- .2 Registration of Constructors and Employers Engaged in Construction (Form 1000).

.2 Prior to the start of work, provide the Consultant with a copy of the Contractor's site specific safety plan and signed attestation.

.3 Observe construction safety measures of National Building Code 2005 Part 8 Safety Measures at Construction and Demolition Sites, Occupational Health and Safety Act (Ontario), Workplace Safety and Insurance Board (Ontario), and the Municipal Authority. In case of conflict or discrepancy, the more stringent requirements shall apply.

1.2 WHMIS

.1 Comply with requirements of Workplace Hazardous materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.

- .1 Deliver copies of WHMIS data sheets to Consultant on delivery of material.

Part 2 Products

.1 Not used

Part 3 Execution

.1 Not used

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 General Conditions

.2 Division 01 - General Requirements

1.2 REFERENCES AND CODES

.1 The Laws and Regulations of the City of Kenora, the Province of Ontario and all applicable Federal laws shall govern.

.2 The Bidder shall ensure compliance on his part and on the part of all of his Subcontractors with the Ontario Occupational Health and Safety Act and all regulations thereunder.

.3 Works to be in accordance with the Canadian Environmental Protection Act.

.4 Meet or exceed requirements of:
- .1 Contract documents.
- .2 Specified standards, codes and referenced documents.

.5 The attention of the Bidder is drawn to the requirements of the Ontario Construction Act and the regulations enacted thereunder.

1.3 SECURITY CLEARANCE

.1 Each individual proposed to perform the following portions of the Work:
- .1 any Work on private property;
- .2 any Work within City of Kenora facilities other than:
  - .1 an underground structure such as a manhole;
  - .2 in areas and at times normally open to the public;
- .3 communicating with residents and homeowners in person or by telephone;

shall be required to obtain a Police Information Check from the police service having jurisdiction at his/her place of residence. Or:
- .4 BackCheck, forms to be completed can be found on the website at: http://www.backcheck.net/ ; or
- .5 Commissionaires (Ontario Division), forms to be completed can be found on the website at: https://www.commissionaires.ca/en/ontario/home; or
- .6 FASTCHECK Criminal Record & Fingerprint Specialists, forms to be completed can be found on the website at: https://myfastcheck.com

.2 Prior to the award of Contact, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Consultant with a Police Information Check obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform such Work.

.3 Any individual for whom a Police Information Check is not provided, or for whom a Police Information Check indicates any convictions or pending charges related to property offences or crimes against another person will not be permitted to perform any Work specified in 1.3.1.

.4 Any Police Information Check obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.

.5 Notwithstanding the foregoing, at any time during the term of the Contract, the Owner may, at its sole discretion and acting reasonably, require an updated Police Information Check. Any individual who fails to provide a satisfactory Police Information Check as a result of a repeated Police Information Check will not be permitted to continue to perform any Work specified in 1.3.1.

1.4 HAZARDOUS MATERIAL DISCOVERY

.1 Contaminated site condition: If the Contractor encounters or has reasonable grounds to believe that that a contaminated site exists, including solid, liquid, gaseous, thermal or radioactive irritant or contaminant, or other hazardous or toxic substance or material, they shall take all reasonable steps, including stopping of Work to ensure that no person suffers injury, sickness or death, and that neither property nor the environment is injured or destroyed as a result of the contaminated site condition. Notify the Consultant immediately in writing.

1.5 BURNING

.1 No burning of materials will be permitted.

1.6 EXCESS SOILS

.1 The Contractor is responsible for the management and disposal of all excess excavated materials for the works as per Ontario Regulation 406/19, On-Site and Excess Soil Management.

.2 The Contractor to haul all excess soils to the City of Kenora Area Landfill, located on Jones Road, approximately 12 km North of Highway 17A. Excess soil disposal will be based on a weight basis via the weigh scale located at the City of Kenora Transfer Station, located at 401 Mellick Avenue.

.3 The Contractor shall prepare and submit a Soil Management Plan prior to the commencement of the excavation activities, in accordance with Section 01 33 00 – Submittal Procedures. The plan shall, at minimum, outline procedures for the following:
- .1 Handling;
- .2 Storing;
- .3 Transporting; and
- .4 Disposing of Excess Soils
- .5 Be in compliance with applicable Provincial Legislation.

.4 The Contractor shall maintain detailed haul logs for all excess soils transported to the Kenora Landfill. Logs shall include date, time, quantity, origin, and destination of each load. These records shall be submitted to the Owner upon request.

.5 The Contractor shall coordinate with the City of Kenora to confirm hauling times, designated disposal locations, and any specific means and measures required for the handling of excess soils. Hauling times to be limited to weigh scale and landfill operating hours. After hours hauling will not be permitted. Coordination shall be documented and updated as necessary throughout construction.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 WORK DESCRIPTION

.1 Inspection and testing, administrative, and enforcement requirements.

.2 Tests and mix designs.

1.2 INDEPENDENT TESTING AGENCIES

.1 Independent Testing Agencies will be engaged by the Contractor for the purpose of quality control and/or testing portions of the Work. The testing requirements include, but are not limited to, the following:

- .1 Concrete Slump testing
- .2 Concrete Air Testing
- .3 Concrete Compressive Strength testing
- .4 Asphalt density testing
- .5 Standard Proctor density testing for granular base and subbase materials
- .6 Standard Proctor density testing for asphalt surface material
- .7 Sieve Analysis for granular materials
- .8 Hydrostatic pressure and leakage testing of watermains
- .9 Disinfection of watermains
- .10 Television inspection of sewers

.2 Costs for initial independent testing agencies to be engaged by the Consultant.

.3 If defects are revealed during quality control and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defects and irregularities as advised by and at no cost to the Consultant. Pay costs for retesting and re-inspection.

.4 Costs to allow access to the site and collection of samples required for additional testing by Independent testing agencies engaged by the Contractor shall be included in the Unit Prices Bid and in accordance with Section 01 29 00 – Measurement and Payment.

.5 Provide all necessary equipment required for executing quality control and additional testing by the appointed agencies.

.6 Employment of quality control/testing agencies does not relax the responsibility to perform Work in accordance with the Contract Documents.

1.3 INDEPENDENT TESTING FREQUENCY

.1 The Consultant will engage with Independent Testing Agencies to perform initial quality control and/or testing at the minimum frequencies:

<u>Aggregate material:</u>

- .1 One field density test every 500 square meters per material

.2 Density tests shall be offset as appropriate to provide coverage across the full width of the construction area.

.3 If a density test result is less than the required density, the area shall be reworked and retested until required density is met.

Cast in Place Concrete:

.1 One concrete test shall consist of slump test, air test, One lab cure cylinder – 7 day break, two lab cure cylinders – 28 day break

.2 For pours <100 m^3 per day – the minimum testing frequency per day for each mix design shall be one test on the first truck, then one test every 30 m^3. or part thereof.

.3 For pours >100 m^3 per day – the minimum testing frequency per day for each mix design shall be one test on the first truck, then one test every 100 m^3 or part thereof.

.4 If any air or slump test fails for any concrete load in the day's pour, continue to test slump and air on succeeding trucks until consistency is established.

.5 All air testing, slum testing and cylinder casting to be witnessed by the Consultant.

Asphalt:

.1 One Marshall test.

.2 Minimum of three (3) field density tests per lift of asphalt

1.4 ACCESS TO WORK

.1 Allow inspection/testing agencies access to the Work, offsite manufacturing, and fabrication plants.

.2 Cooperate to provide reasonable facilities for such access.

1.5 PROCEDURES

.1 Notify the appropriate agency and Consultant in advance of the requirement for tests, in order that attendance arrangements can be made.

.2 Consultant to submit initial samples and/or materials required for testing as specifically requested in specification Sections or as may be required. Consultant to submit with reasonable promptness and in an orderly sequence so as not to cause delay in the Work.

.3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.6 DEFECTIVE WORK

.1 Refer to General Conditions.

.2 Remove defective Work, whether a result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by the Consultant as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.

.3 Make good other Contractor's work damaged by such removals or replacements promptly.

.4 If in opinion of the Consultant it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Consultant will deduct from Contract Price difference in value between Work performed and that called for by Contract documents, amount of which will be determined by Consultant.

1.7 REPORTS

.1 Submit electronic copies of additional quality control and test reports directly from the testing agency promptly to the Consultant.

.2 Provide copies to Subcontractor of work being inspected/tested and manufacturer/ fabricator of additional material being inspected/tested.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Temporary utilities

1.2 INSTALLATION AND REMOVAL

.1 Provide temporary utilities controls in order to execute work expeditiously.

.2 Remove from site all such work after use.

1.3 SUBMITTALS

.1 Provide Submittals in accordance with Section 01 33 00 – Submittal Procedure.

1.4 INSTALLATION AND REMOVAL

.1 Provide temporary utilities controls in order to execute work expeditiously.

.2 Remove from site all such work after use.

1.5 TEMPORARY POTABLE WATER SERVICING

.1 Temporary Potable Water Servicing to be in accordance with OPSS.MUNI – 493 – Temporary Potable Water Supply Services.

.2 The Contractor shall design, supply and install temporary watermain to be in use for the duration of the project. No two (2) consecutive fire hydrants may be taken out of service to facilitate temporary potable water servicing.

.3 In advance of submitting the plan to the Consultant, the Contractor shall meet with the City's Representative, Director of Fire Services and Water System Operator to discuss the proposed temporary water supply services plan. The plan shall address how the works will progress and minimize the length of temporary mains required at any given time.

.4 As part of the temporary system costs, the Contractor will be required to supply and install a backflow preventing flushing valve and associated piping at the downstream end of the temporary system. This flushing valve shall be operated by the Contractor to provide a continual flow within the temporary system to eliminate "hot spots" or excessive chlorine residual loss within the temporary system. The flow shall be discharged to an acceptable location within the rear yard of the downstream residence or other approved location.

.5 The Contractor shall, as necessary, replace backflow preventing spigots to allow proper functioning of the temporary water system. Upon removal of the temporary system, the Contractor shall reinstall the existing backflow preventing spigots if requested by the homeowner.

.6 The City's Water System Operator must be onsite for any work on the City's water system including commissioning of the temporary system. They must also be notified immediately should there be any breaks or changes required in the temporary system. Repairs to the temporary system shall not be completed by unqualified persons.

1.6 TEMPORARY HEATING AND VENTILATION

.1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.

.2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders are not permitted.

.3 Provide temporary heat and ventilation in enclosed areas as required to:

- .1 Facilitate progress of Work.
- .2 Protect Work and products against dampness and cold.
- .3 Prevent moisture and condensation on surfaces.
- .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
- .5 Provide adequate ventilation to meet health regulations for safe working environment.

.4 Maintain strict supervision of operation of temporary heating and ventilating equipment to:

- .1 Conform with all applicable codes and standards.
- .2 Enforce safe practices.
- .3 Prevent abuse of services.
- .4 Prevent damage to finishes.
- .5 Vent direct-fired combustion units to outside.

.5 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

1.7 TEMPORARY POWER AND LIGHT

.1 Provide and pay for temporary power required during construction for temporary lighting and the operating of power tools.

.2 Temporary power for electric cranes and other equipment requiring in excess of the supply required for temporary lighting and power tools is the responsibility of Contractor.

1.8 TEMPORARY COMMUNICATION FACILITIES

.1 Provide and pay for temporary telephone, fax and data (Internet) hook up, lines and equipment necessary for Consultant’s use.

1.9 FIRE PROTECTION

.1 Provide and maintain adequate temporary fire protection equipment during performance of Work, as required by local municipal requirement, insurance companies having jurisdiction and governing Codes, regulations and By-Laws.

.2 Burning rubbish and construction waste materials is not permitted on site.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 ACCESS

.1 Clean all roads promptly, as required, when used by Contractor's equipment.

1.2 PROTECTION AND MAINTENANCE OF TRAFFIC

.1 The Contractor is solely responsible for providing temporary signage, barricades, flag persons or other measures deemed necessary to provide safe movement of vehicular and pedestrian traffic.

.2 Traffic control measures shall be in accordance with latest edition of the "Ontario Traffic Manual, Book 7 – Temporary Conditions."

.3 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Owner or Consultant.

.4 Verify adequacy of existing roads and allowable load limit on these roads. Contractor is responsible for repair of damage to roads caused by construction operations.

1.3 CLEAN-UP

.1 Remove construction debris, waste materials, packaging material from work site daily.

.2 Clean dirt or mud tracked onto roadways.

Part 2 Products

.1 Not used

Part 3 Execution

.1 Not used

END OF SECTION

Part 1 General

1.1 REFERENCE STANDARDS

.1 All Work and materials shall be in accordance with the Ontario Provincial Standard Specifications (OPSS) except where noted otherwise in the drawings or project specifications.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 General Conditions

.2 Division 01 – General Requirements

.3 All Technical specification sections

1.2 PROJECT CLEANLINESS

.1 Maintain Work in tidy condition, free from accumulation of waste products, debris and wildlife attractants, other than that caused by Owner or other Contractors not associated with this project.

.2 Reuse and recycle the maximum amount of waste as possible.

.3 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Consultant. Do not burn waste materials on site.

.4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.5 Dispose of waste materials and debris off site.

.6 Clean interior/exterior Work areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.

.1 The Owner will not perform any cleaning operations prior to the Contractor starting the Work or at any time during the progress of the Work. The Contractor is responsible for all cleaning operations.

.7 Store volatile waste in anti-spill covered metal containers, and remove from premises at end of each working day.

.8 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

.9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.3 FINAL CLEANING

.1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

.2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.

.3 Prior to final review remove surplus products, tools, construction machinery and equipment.

.4 Remove waste products and debris other than that caused by Owner or other Contractors not associated with the project.

.5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Consultant. Do not burn waste materials on site.

.6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.7 Pay all disposal / dumping/ recycling/ tipping fees for waste disposal.

.8 Sweep and wash clean paved areas. Clean debris and dirt from catch basins and manholes.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

DIVISION 31

EARTHWORK

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 22 13 – Rough Grading

.2 Section 31 23 33 – Excavating, Trenching and Backfilling

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

.1 OPSS.MUNI – 180 – Management of Excess Materials

.2 OPSS.MUNI – 510 - Removal

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or the project specification.

.2 Topsoil shall be stripped and stockpiled in back lane right-of-way limits within the project site area.

.3 Excess topsoil to be managed and disposed of as per provincial regulations.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 14 13 – Soil Stripping and Stockpiling

.2 Section 31 23 33 – Excavating, Trenching and Backfilling

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

.1 OPSS.MUNI – 206 – Grading

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standards Specifications, except where noted otherwise in the drawings or the project specification.

.2 Boulevard elevations at property line are proposed finished grades.

.3 Placement of topsoil and sod for proposed works will be required where identified in design drawings and in all other grassed areas damaged or removed by results of the Work.

.4 Suitable site material excavated on site to be used for boulevard grading and other fill operations as required. Once all suitable site fill material has been used, additional fill material shall be imported by the Contractor at their own expense.

.5 Excess Excavated Material not used on site shall become the property of the Contractor and shall be disposed of in accordance with applicable provincial regulations.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 23 33 – Excavating, Trenching and Backfilling

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPPS sections apply to this specification:

.1 OPSS.MUNI – 180 – Management of Excess Materials

.2 OPSS.MUNI – 202 – Rock Removal by Manual Scaling, Machine Scaling, or Trim Blasting

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Scaling, Manual Scaling and Machine Scaling are permitted methods of rock removal for contract works to remove loosened or partially detached rock from existing blasted trench.

.3 It is the Contractor's responsibility to supply suitable equipment to complete the rock removal works for the designated ground conditions.

.1 Rock removal equipment to meet requirements as follows:

.1 Type: Hydraulic Breaker

.2 4,500 J minimum impact energy

.3 1,000 BPM minimum impact rate

.4 Excess rock materials to be managed as per provincial regulations. Hauling of removed rock fragments to be incidental to rock removal.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 22 13 – Rough Grading

.2 Section 31 14 13 – Soil Stripping and Stockpiling

.3 Section 33 05 16 – Manholes and Catch Basin Structures

.4 Section 33 11 16 – Site Water Utility Distribution Piping

.5 Section 33 31 13 – Sanitary Utility Sewerage Piping

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPPS sections apply to this specification:

- .1 OPSS.MUNI – 180 – Management of Excess Materials
- .2 OPSS.MUNI – 314 – Untreated Granular Subbase, Base, Surface, Shoulder, and Stockpiling
- .3 OPSS.MUNI – 401 – Trenching, Backfilling, and Compacting
- .4 OPSS.MUNI – 402 – Excavating, Backfilling, and Compacting for Maintenance Holes, Catch Basins, Ditch Inlets, and Valve Chambers
- .5 OPSS.MUNI – 501 – Compacting
- .6 OPSS.MUNI – 517 - Dewatering
- .7 OPSS.MUNI – 805 – Temporary Erosion and Sediment Control Measures
- .8 OPSS.MUNI – 1010 – Aggregates – Base, Subbase, Select Subgrade, Granular Surface, Shouldering, Bedding and Backfill Material

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Pipe bedding for all pipes, including services shall be Granular A material.

.3 Compacted, in-situ soils are permitted to be used for pipe trench backfill, and shall be free from frozen lumps, cinders, ashes, organic matter, rocks and boulders over 150 mm in any dimension, and other deleterious material. Consultant to approve in-situ material suitability for pipe trench backfill.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Excavation and backfill for pipe installation shall be to the roadway subgrade limits. Suitable in-situ soils shall be salvaged and reused as backfill to subgrade elevation, compacted to minimum 98% standard proctor density.

END OF SECTION

DIVISION 32

EXTERIOR IMPROVEMENTS

Part 1 General

1.1 RELATED SECTIONS

.1 Section 01 45 00 – Quality Control

.2 Section 32 12 16 – Asphalt Paving

.3 Section 32 11 16.01 – Granular Sub-Base

.4 Section 32 16 15 – Concrete Walks, Curbs and Gutters

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

- .1 OPSS.MUNI – 314 – Untreated Granular Subbase, Base, Surface, Shoulder, and Stockpiling
- .2 OPSS.MUNI – 501 – Compacting
- .3 OPSS.MUNI – 1004 – Aggregates – Miscellaneous
- .4 OPSS.MUNI – 1010 – Aggregates – Base, Subbase, Select Subgrade, Granular Surface, Shouldering, Bedding, and Backfill Material

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Granular subbase material shall be Granular B Type II subbase in accordance with OPSS.MUNI 1010.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Where existing asphalt requires reinstatement, the Contractor to shall place and compact granular subbase matching existing or to the following section (whichever is thicker):

.1 Minimum of 300mm subbase materials to be placed on roadway subgrade to finished grades for asphalt patching.

Compaction of granular materials shall be in accordance with OPSS.MUNI 501, Method A.

.3 Where fill material is required for road subgrade, pit-run material in accordance with OPSS.MUNI 1004 shall be used.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 01 45 00 – Quality Control

.2 Section 32 12 16 – Asphalt Paving

.3 Section 32 11 16.01 – Granular Sub-Base

.4 Section 32 16 15 – Concrete Walks, Curbs and Gutters

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

- .1 OPSS.MUNI – 314 – Untreated Granular Subbase, Base, Surface, Shoulder, and Stockpiling
- .2 OPSS.MUNI – 501 – Compacting
- .3 OPSS.MUNI – 1004 – Aggregates – Miscellaneous
- .4 OPSS.MUNI – 1010 – Aggregates – Base, Subbase, Select Subgrade, Granular Surface, Shouldering, Bedding, and Backfill Material

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Granular base material shall be Granular A in accordance with OPSS.MUNI 1010.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Where existing asphalt requires reinstatement or asphalt paving is to be installed, the Contractor shall place and compact granular base course matching existing or to the following section (whichever is thicker):

.1 Minimum 150mm base course materials to be placed on roadway subgrade or on subbase material to finished grades for asphalt paving or asphalt patching, and as noted on drawings.

Compaction of granular materials shall be in accordance with OPSS.MUNI 501, Method A.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 01 45 00 – Quality Control

.2 Section 32 11 16.01 – Granular Sub-Base

.3 Section 32 11 23 – Aggregate Base Courses

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

.1 OPSS.MUNI – 310 – Hot Mix Asphalt
.2 OPSS.MUNI – 1101 – Performance Graded Asphalt Cement (PGAC)
.3 OPSS.MUNI – 1150 – Hot Mix Asphalt (HMA)

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Asphalt cement shall be in accordance with OPSS.MUNI 1101. The asphalt cement shall be PG 58-34. The percentage by weight of asphalt cement contained in the pavement mixture of HL4 shall be between 4.5 and 5.5%.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Mix Design Statement to be provided in accordance with OPSS.MUNI 1150.

.3 Tack coat shall be applied between binder and surface courses and be in accordance with OPSS.MUNI 310. The installation of tack coat is incidental to the unit price of Hot Mix Asphalt, HL4.

.4 All asphalt shall be Hot Laid 4 (HL4) conforming to OPSS.MUNI 1150.

.5 Asphalt paving replacing granular road section to be minimum 50mm thick, HL4.

.6 Asphalt patching to reinstate existing asphalt road section to be minimum 80mm thick, HLA, or match existing asphalt thickness.

.7 Asphalt mountable curb and gutter shall conform to OPSD 601.010.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 32 11 23 – Aggregate Base Courses

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

- .1 OPSS.MUNI – 314 – Untreated Granular Subbase, Base, Surface, Shoulder, and Stockpiling
- .2 OPSS.MUNI – 351 – Concrete Sidewalk
- .3 OPSS.MUNI – 353 – Concrete Curb and Gutter Systems
- .4 OPSS.MUNI – 501 – Compacting
- .5 OPSS.MUNI – 919 – Formwork and Falsework
- .6 OPSS.MUNI – 1010 – Aggregates – Base, Subbase, Select Subgrade, Granular Surface, Shouldering, Bedding, and Backfill Material
- .7 OPSS.MUNI – 1308 – Joint Filler in Concrete
- .8 OPSS.MUNI – 1350 – Concrete – Materials and Production
- .9 OPSS.MUNI – 1440 – Steel Reinforcement for Concrete

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Concrete shall be in accordance with OPSS.MUNI – 1350, with a minimum specified 28-day compressive strength of 32 MPa, Class C-2 Exposure. Coarse aggregate for the concrete shall have nominal maximum size of 19mm.

.3 Expansion joint filling material shall be asphalt impregnated fibreboard having minimum of 12mm thickness and in accordance with OPSS.MUNI 1308, Type A.

.4 Granular A base course material to be used in accordance with OPSS.MUNI 1010.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 All sidewalks disturbed by contract works are to be reinstated to original condition. Concrete sidewalk to be minimum 150mm thick and match existing sidewalk width. Contraction joint saw cuts are to be 1500mm O.C. and installed on minimum 150mm Granular A base course material. Sidewalk slab to be given textured broom finish.

.3 Sidewalk shall conform to OPSD 310.010.

.4 Curbing shall be barrier curb conforming to OPSD 600.040.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 14 16 – Soil Stripping and Stockpiling

.2 Section 31 22 13 – Rough Grading

.3 Section 32 92 23 - Sodding

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

.1 OPSS.MUNI – 206 – Grading
.2 OPSS.MUNI – 802 – Topsoil
.3 OPSS.MUNI – 803 – Sodding

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Placement of topsoil will be required at the following locations or where identified on the design drawings:

.1 Any existing landscaped areas disturbed during construction requiring restoration.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 32 91 19.13 – Topsoil Placement and Grading

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

.1 OPSS.MUNI – 802 – Topsoil

.2 OPSS.MUNI – 803 – Sodding

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications

.1 Placement of sod for proposed Work will only be required in any existing landscaped areas disturbed during construction requiring restoration or where identified on the design drawings.

END OF SECTION

DIVISION 33

UTILITIES

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 23 16.26 – Rock Removal

.2 Section 31 23 33 – Excavation, Trenching and Backfilling

.3 Section 33 41 00 – Sanitary Utility Sewerage Piping

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

- .1 OPSS.MUNI – 402 – Excavating, Backfilling, and Compacting for Maintenance Holes, Catch Basins, Ditch Inlets, and Valve Chambers
- .2 OPSS.MUNI – 403 – Rock Excavation for Pipelines, Utilities, and Associated Structures in Open Cut
- .3 OPSS.MUNI – 407 – Maintenance Hole, Catch Basin, Ditch Inlet, and Valve Chamber Installation
- .4 OPSS.MUNI – 408 – Adjusting or Rebuilding Maintenance Holes, Catch Basins, Ditch Inlets, and Valve Chambers
- .5 OPSS.MUNI – 501 – Compacting
- .6 OPSS.MUNI – 510 – Removal
- .7 OPSS.MUNI – 517 - Dewatering
- .8 OPSS.MUNI – 1351 – Precast Reinforced Concrete Components for Maintenance Holes, Catch Basins, Ditch Inlets, and Valve Chambers
- .9 OPSS.MUNI – 1850 – Frames, Grates, Covers, and Gratings
- .10 OPSS.MUNI – 1853 – Construction Specification for Rubber Adjustment Unite for Maintenance Holes, Catch Basins, and Valve Chambers

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Maintenance hole structures shall be pre-cast concrete 1200mm diameter conforming to OPSD 701.010, complete with frost straps conforming to OPSD 701.100.

.3 Maintenance holes shall frame and cover shall be Trojan Industries, TF-101-6 Frame and Solid Cover, complete with 150mm concrete adjusting rings in accordance with OPSD 704.010. as needed to meet finished elevations.

.4 All pre-cast maintenance hole joints to be externally wrapped with a 300mm wide waterproof membrane. Contractor to utilize Denso Tape or approved alternative.

.5 Catch basins typical shall be 600x600 Precast Catch Basin, Alternative D in accordance with OPSD 705.010.

.6 Catch basin frame and cover shall be Trojan Industries, TF-101-6 Frame and Grated Cover with 150mm concrete adjusting rings in accordance with OPSD 704.010.

.7 Filter fabric for silt control shall be Terrafix 270R or approved alternative.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Filter fabric shall be installed beneath the grates of all storm sewer catch basins for sediment control during construction. Silt traps shall be monitored and cleaned regularly to ensure continued effectiveness and shall not be removed until all construction activities are completed.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 23 33 – Excavation, Trenching and Backfilling

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPSS sections apply to this specification:

- .1 OPSS.MUNI – 316 – Extruded Expanded Polystyrene (EPS), Frost Heave Treatment
- .2 OPSS.MUNI – 401 – Trenching, Backfilling, and Compacting
- .3 OPSS.MUNI – 441 – Construction Specification for Watermain Installation in Open Cut
- .4 OPSS.MUNI – 493 – Temporary Potable Water Supply Services
- .5 OPSS.MUNI – 501 – Compacting
- .6 OPSS.MUNI – 510 – Removal
- .7 OPSS.MUNI – 517 – Dewatering

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 All products in contact with potable water to be NSF/ANSI 61, NSF 372 and AWWA certified. Contractor to provide certificates and/or reports with material compliance as per 01 33 00 – Submittal Procedures.

.3 Watermain pipe shall be PVC DR18 AWWA C900, Class 235 and be certified to CSA 137.3, or approved equal. Watermain fittings shall be PVC conforming to AWWA C907.

- .1 All watermain pipe to be complete with tracer wire; 12 gauge – 7 strand Type RWU90 600V XLPE Copper, with white colour jacket.
- .2 All fittings and joints to be mechanically restrained using Starpipe manufacturer restraints, or approved equals.

.4 Hydrants to be M67 McAcity Brigadier and capable of receiving Storz couplers for fire hoses.

.5 Valves shall be Mueller Resilient Wedge Gate Valve and connections to match type of pipe.

.6 Valve box and extension shall be adjustable to 2.1m bury, complete with extension stem 25mm square mild steel with 50mm operating nut and flange.

.7 Couplers to be Alpha Romac, or approved equal.

.8 Water service connections at mainline shall be C900 tapped coupling service tees. Ipex tapped coupling, or approved equal.

.1 For all water service connections to 38mm copper watermain, a copper tube fittings tee is to be used. Corporations stop will not be used for copper tee connections.

.9 Water servicing pipe size 38mm diameter and smaller shall be Type K copper service pipe., complete with thaw cable, and brought to surface at curb stop location.

.1 All water service pipe to be complete with thaw cable: AWG 4/0 gauge, with green colour jacket.

.2 Ground connectors to be CG-2625, or approved equals.

.3 Thaw cable termination or accesses to be either of the following:

.1 Vehicle rated: for all service pipes and thaw cable access points within approaches or driveways, SnakePit Single Terminal Roadway with blue lid shall be used, or approved alternative.

.2 For services pipes outside of approaches or driveways, 1800-150mm PVC pipe complete with cleanout cap, filled with Granular A shall be used.

.10 Corporation stops and curb stops shall be Mueller or Cambridge Brass.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 All watermain and water services shall have a minimum cover of 2.1m. Install insulation as per OPSD 1109.030 where minimum cover requirements cannot be achieved. All watermain to be hydrostatic and leakage tested in accordance with OPSS.MUNI 441, and disinfected and flushed in accordance with MECP Watermain Disinfection Procedure.

.3 Tracer wire installation:

.1 Install watermain tracer wire along all non-metallic watermains, as shown on the drawings. Secure wire to pipeline with electrical tape at 3 metre intervals. Cadweld wire to hydrant boots.

.2 Loop wire around valves and fittings on north or east side, leaving slack in the cables to permit future removal of the fitting.

.3 All watermain tracer wire shall be interconnected in intersections, tees, and crosses. At tees, the three (3) wires shall be joined using a single 3-way lockable connector. At crosses, the four (4) wires shall be joined using a 4-way connector.

The use of two (2), 3-way connectors with jumper wire between the connectors is an acceptable alternative.

.4 Direct bury wire connectors shall include 3-way lockable connectors and main line to lateral lug connectors specifically manufactured for use in underground tracer wire installation. Connectors shall be dielectric silicon filled to seal out moisture and corrosion and shall be installed in a manner as to prevent any uninsulated wire exposure.

.5 Tracer wire shall be returned to the surface up the outside of valve boxes, secured with electrical tape, and brought into the valve box through a hole drilled in the valve box 0.15m below the termination point of the bottom of the water valve cover. From that point, the tracer wire shall be returned to the surface inside the valve box. One metre of tracer wire, measured from finished grade, shall be provided to allow for connections to be made at the surface. Excess tracer wire is to be neatly coiled, secured with electrical tape, and left in the valve box, to be accessible through the lid of the water valve cover.

.6 Where required, tracer wire shall be returned to the surface on the back side of the hydrant to finished grade. A loop shall be provided, and the terminal end of the trace wire shall be embedded in the ground.

.7 All new tracer wire installations shall be located using typical low frequency (512Hz) line tracing equipment, witnessed by the Contractor, Consultant and Owner as applicable, prior to acceptance of Substantial Completion. This verification shall be performed upon completion of rough grading and again prior to final acceptance of the project. Continuity testing in lieu of actual line tracing shall not be accepted.

.4 Thaw cable installation:

.1 Thaw cable to be securely clamped on body of corporation stop with appropriately sized copper alloy ground connectors.

.2 Thaw cable to be routed alongside the water service pipe, return to the surface, and secured within termination or access point, before curb stop, in line with service pipe facing the property.

.1 Vehicle rated terminations to be buried 50mm below grade.

.2 All other terminations to be buried minimum 100mm below grade.

.3 Contractor to verify electrical continuity between curb stop and thaw cable at each location.

.5 All joints between watermain and hydrants to be mechanically restrained.

.6 The Contractor shall locate existing services and new services to be installed up to property line, to existing curb stop. New curb stops shall be installed at property line.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 31 23 33 – Excavation, Trenching and Backfilling

.2 Section 33 05 16 – Manhole and Catch Basin Structures

1.2 REFERENCES

.1 The Ontario Provincial Standard Specifications (OPSS) shall apply for all Works except where noted otherwise in the drawings or project specifications. The following OPPS sections apply to this specification:

.1 OPSS.MUNI – 401 – Trenching, Backfilling, and Compacting
.2 OPSS.MUNI – 409 – Closed-Circuit Television (CCTV) Inspection of Pipelines
.3 OPSS.MUNI – 410 – Pipe Sewer Installation in Open Cut
.4 OPSS.MUNI – 501 – Compacting
.5 OPSS.MUNI – 510 – Removal
.6 OPSS.MUNI – 517 – Dewatering
.7 OPSS.MUNI – 805 – Temporary Erosion and Sediment Control Measures
.8 OPSS.MUNI – 1841 – Non-Pressure Polyvinyl Chloride (PVC) Pipe Products

.2 The Ontario Provincial Standard Specifications can be found on the province of Ontario's website at:

https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx

Part 2 Products

.1 All products shall conform to the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Wastewater sewer mainline piping shall be PVC SDR35 conforming to ASTM D3034.

.1 Where minimum vertical and horizontal separation of 0.5m cannot be achieved between the watermain and wastewater sewer, mainline pipe material shall be PVC DR18.

.3 Wastewater service pipe shall be PVC SDR28 conforming to ASTM D3034, with minimum diameter of 100mm.

.4 Service connections to mainline shall be made with factory approved fittings.

.5 Storm Sewer catch basin lead pipes to be PVC DR25 AWWA C900, Class 165 in accordance with OPSS.MUNI 1841.

.6 Warning Tape

.1 Polyethelene tape: 150mm wide by 0.15mm thick, as approved by the Consultant.

.2 Tape for sanitary sewers to be green in colour with factory applied markings at one-metre intervals, i.e. “Caution Buried Sewer Line”.

Part 3 Execution

3.1 GENERAL

.1 All works to be supplied and installed in accordance with the Ontario Provincial Standard Specifications, except where noted otherwise in the drawings or project specifications.

.2 Sanitary sewer pipes shall be installed at the elevations and grades as shown on the Drawings, which shall be no higher than existing elevations, such that services do not become any flatter than existing. Contractor to confirm existing wastewater sewer grades and notify Consultant of any discrepancies.

.3 Services shall be installed per OPSD 1006.010 with factory approved tees, extending from the main sewer to the property line, and connected to the existing service material. The installation of the serviced also includes the removal of any existing service pipe. Crossing of watermain shall be complete with maximum separation available and one full pipe length centred over the watermain.

.4 The Contractor must maintain sanitary sewer services to all residents throughout the duration of the construction. the Contractor to prepare a Sewage Bypass Plan to ensure the wastewater sewer mainline is in operation at all times throughout construction. Contractor to submit Sewage Bypass Plan as per 01 33 00 – Submittal Procedures.

.5 All joints and structure connections to be watertight and completed with factory approved fittings.

.6 Warning tape to be installed at the top of the pipe bedding, before compacted common backfill.

.7 All wastewater sewer installed to be televised by CCTV inspection conforming to OPSS.MUNI 409.

.1 All CCTV inspection and reports to be completed in accordance with current NASSCO Pipeline Assessment Certification Program (PACP) standard.

.2 Contractor to provide two (2) copies of all CCTV inspections in USB format and two (2) copies of coding reports identifying all Structural Defects, Operation and Maintenance Observations, Construction Features, and Miscellaneous Features in accordance with NASSCO PACP standard.

.3 Mandrel testing shall be completed on all flexible wastewater sewer pipe installed in accordance with OPSS.MUNI 410. All mandrel testing shall be completed no earlier than 30 days after pipe installation.

END OF SECTION

APPENDIX G
SPECIAL PROVISIONS FOR MELLICK AVENUE (PART B)

CITY OF KENORA

SPECIAL PROVISIONS - GENERAL

1.0 GENERAL

Please read this section carefully.

These general conditions and specifications forming a part of this tender, shall constitute a valid and binding contract between the successful Tenderer and the City of Kenora and it shall ensure to the benefit of, and be binding upon both their successors, executors, administrators and assigns.

2.0 IDENTIFICATION OF LOCAL REGULATORY AUTHORITIES

The following is provided for information only, to facilitate contact with and notification to regulatory authorities as specified in the Contract Documents:

Regulatory Authority	Notification Requirement
MECP: Spills Action Centre (SAC) 1-800-268-6060	For notification of a spill to the environment under the Environmental Protection Act
Municipality: City of Kenora (807) 467-2000	For notification of a spill to the environment under the Environmental Protection Act
MECP: Kenora District Office (807) 456-3584 1-888-367-7622	For Waste Management Approval under the Environmental Protection Act
MNRF: Kenora Area Office (807) 468-2501	For notification of the release of a deleterious substance to a watercourse under the Fisheries Act
DFO: Environmental Response 1-800-265-0237	For notification of the release of a deleterious substance to a watercourse under the Fisheries Act
Local Police: OPP – Kenora 1-888-310-1122	For notification of a Dangerous Occurrence involving dangerous goods under the Transportation of Dangerous Goods Act

3.0 CANADA POST

The Contractor shall be responsible for arranging with Canada Post to ensure uninterrupted service for residents. Any costs associated with ensuring Canada Post's delivery shall be considered to be included in the unit prices for the various items of work and no additional compensation will be considered.

4.0 GEOTECHNICAL INFORMATION

A geotechnical program has been undertaken for the project with the full geotechnical report provided as additional information to the contract. The report provided is for information only to indicate the anticipated ground conditions, however no reliance shall be made upon it by the Contractor. The Contractor shall make their own determination and interpretation of the ground conditions across the site and base their bids accordingly.

5.0 EXCESS SOILS

"O.Reg. 406/19, On-Site and Excess Soil Management" is applicable to this project. As reflected on the form of tender, there is a minimum of 1,350m³ of roadway excavation material, which does not include excavations for sidewalks, boulevards, subdrains and other excavation works.

The Contractor shall be responsible for the management and disposal of all excess excavated materials from the works. Existing granulars shall be removed separate from the native materials. Excess granular materials shall be delivered to the City of Kenora Area Landfill. Unless directed otherwise by a City Representative, suitable native materials shall be stockpiled onsite for reuse as backfill as required, with excess native materials delivered to the City of Kenora Area Landfill located on Jones Road, approximately 12 km north of Highway 17A, and left in a neat and uniform manner. Disposal will be based on a weight basis via the weigh scale and the City of Kenora Transfer Station which is located at 401 Mellick Avenue.

The Contractor must discuss with the City Foreman in advance to identify the locations for disposal at the respective sites, and materials shall be levelled and left in a neat and uniform manner acceptable to the City Foreman. Upon completion of the hauling, or at any time deemed necessary by the Owner or Contract Administrator, the delivered materials shall be piled-up with a front-end loader or equivalent to minimize occupied space. End dumped piles will not be considered as satisfactory permanent stockpiles.

At a minimum, the Contractor will be responsible for tracking all truck loads of material with time, date, stationing and receiving location information, based on truck box measurements. Other tracking measures may be required to ensure compliance with the regulations and will be the responsibility of the Contractor. The Contractor will also be responsible for securing the applicable property release forms in accordance with the regulations and OPSS.MUNI 180.

6.0 NIGHT/EVENING WORK

All works shall comply with the City of Kenora noise bylaws. No work shall occur between sunset and sunrise for the duration of the Contract, unless otherwise approved by the Owner.

The Contractor shall provide and maintain flag persons, traffic signals, barricades, and flares/lights/lanterns, as may be required, to direct the flow of equipment used in performance of work and protect public traffic. The Contractor shall make arrangements with local governing authorities when these facilities will disrupt the normal flow of public traffic.

7.0 ROAD CLOSURES

The Contractor must comply with the requirements of the City of Kenora in regards to Traffic Flow on Municipal Streets. Temporary, short term full road closures between intersecting roads may be permitted for the construction of the works, provided notification to affected residents and alternate access is provided. Pedestrian access must be maintained at all times. Multiple closure areas at the same time will not be permitted.

The Contractor shall prepare a Traffic Plan for review by the Engineer and the City of Kenora in advance of construction based on discussions to be held at the prestart meeting. The Contractor will be responsible for all notification and signage relating to the closures, detours and site conditions.

8.0 MIGRATORY BIRD PROTECTION - GENERAL

The Contractor shall not destroy active nests (nests with eggs or young birds), or wound or kill birds, of species protected under the Migratory Birds Convention Act, 1994 and/or Regulations under that Act. When active nests are encountered the Owner's Engineer must be contacted.

9.0 SANITARY SEWER & STORM SEWER CCTV INSPECTION & MANDREL TESTING

Sewer flushing and CCTV inspections of the installed sanitary, storm sewer, and subdrain lines shall be completed by the Contractor in accordance with OPSS.MUNI 409. Mandrel Testing shall also be completed for installed sanitary sewer. All cctv and mandrel testing shall be completed no earlier than 30 days after pipe installation. All costs associated with the flushing, mandrel testing, and CCTV inspections shall be included in the unit price for the respective item and no additional compensation will be considered.

10.0 EXISTING SIGNAGE

It shall be the Contractor's responsibility to remove and keep in good condition all signs within the limits of the project. If so directed by the Contract Administrator, any existing sign removed by the Contractor to accommodate construction shall be kept operational by placement on a temporary support. Stop signs, road name signs, municipal address signs (911) and address ranges signs (911) **must** be kept operational at all times.

All signs shall be reinstalled by the Contractor in accordance with the OTM after the work operation is complete. Any costs associated with managing existing signage shall be considered to be included in the unit prices for the various items of work and no additional compensation will be considered.

SPECIAL PROVISIONS
SUPPLEMENTARY SPECIFICATIONS
TO ONTARIO PROVINCIAL STANDARD SPECIFICATIONS

ITEM B.2 TRAFFIC CONTROL

SCOPE

This item is for the completion of Traffic Control during construction.

REFERENCES

The requirements outlined in OPSS.MUNI 706 shall apply to this item.

CONSTRUCTION

The Contractor must comply with the requirements of the City of Kenora in regards to Traffic Flow on Municipal Streets. Temporary, short term full road closures between intersecting roads may be permitted for the construction of the works, provided notification to affected residents and alternate access is provided. Pedestrian access must be maintained at all times. The road must be reopened to local traffic each night.

The Contractor shall prepare a Traffic Plan for review by the Engineer and City of Kenora in advance of construction.

Traffic Control Signage shall include all work to fulfil requirements of Book 7 – Temporary Conditions of the Ontario Traffic Manual.

The Contractor shall in addition to the requirements outlined in OPSS.MUNI 706 provide “Road Closed – Local Traffic Only” signs and barricades where necessary based on road closure staging. The Contractor shall also provide continuous notification to residents and businesses within the project site outlining the location, time and duration of the closures.

Notification in accordance with section GC7.07 of the General Conditions of the Contract shall be made to all applicable agencies by the Contractor.

MEASUREMENT FOR PAYMENT

There will be no measurement for payment for traffic control. Payment will be by lump sum. Where payment for work is split over multiple certificates, payment will be prorated over the length of the contract as decided by the Engineer.

BASIS OF PAYMENT

Payment at the contract price for the above referenced tender item shall be full compensation for all labour, equipment and material to do the work.

ITEM B.5 ASPHALT PAVEMENT REMOVAL, FULL DEPTH
ITEM B.6 ASPHALT PAVEMENT REMOVAL, PARTIAL DEPTH (MILLING)
ITEM B.7 CONCRETE CURB & GUTTER REMOVAL
ITEM B.8 CONCRETE SIDEWALK REMOVAL

SCOPE

These items are for the removal of existing asphalt pavement for roadway and entrances, as well as removal of concrete curb & gutter and concrete sidewalk.

REFERENCES

The requirements outlined in OPSS.MUNI 180 and OPSS.MUNI 510 shall apply to these items.

CONSTRUCTION

All removal limits shall be sawcut. Concrete and asphalt materials shall be removed separately from the underlying granulars resulting in a clean product.

Removed asphalt and concrete shall remain the property of the City and shall be delivered to the City of Kenora Operation Centre Yard and stockpiled where indicated by the City Representative.

The Contractor shall be responsible for the management and disposal of excess material in accordance with OPSS.MUNI 180.

No reliance upon the asphalt depths indicated shall be made by the Contractor in determining associated removal volumes for bid preparation. The Contractor shall estimate for themselves prior to submitting their bids. No compensation will be made based on actual asphalt depths encountered.

MEASUREMENT FOR PAYMENT

Measurement for the Items B.5, B.6 & B.8 shall be by square metre of each removed and measurement for the Item B.7 shall be by linear metre removed, including all sawcuts. No separate measurement for sawcutting of asphalt or concrete will be made.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work.

ITEM B.10 WATERMAIN REMOVAL
ITEM B.11 HYDRANT SET REMOVAL
ITEM B.12 SANITARY SEWER REMOVAL
ITEM B.13 SANITARY SEWER STRUCTURE REMOVAL
ITEM B.14 STORM SEWER REMOVAL
ITEM B.15 STORM SEWER STRUCTURE REMOVAL

SCOPE

This item is for the work to remove the existing watermain, water services, sanitary sewer, sanitary services, storm sewer and associated components including but not limited to valves, service saddles, fittings, maintenance holes and catch basins.

REFERENCES

The requirements of OPSS.MUNI 510 shall apply to this item.

CONSTRUCTION

The Contractor is required to remove the existing watermain and services, sanitary sewer and services, storm sewer and associated components. Existing salvageable materials as determined by the Contract Administrator, including but not limited to hydrants, valves, frames, grates, and cast/ductile iron pipes will remain the property of the City and shall be delivered to the City of Kenora Operation Centre Yard and stockpiled where indicated by the City Representative. All non-salvageable steel materials shall be delivered to the scrap steel pile at the City of Kenora Operation Centre. All other non-salvageable materials shall become the property of the Contractor for disposal in accordance with OPSS.MUNI 180.

Native soils excavated to facilitate removals shall be salvaged for reuse. Excess soils shall be managed in accordance with SP 5. Removal areas shall be backfilled with suitable salvaged native materials to subgrade elevation and compacted to minimum 98% standard proctor density.

MEASUREMENT FOR PAYMENT

Measurement for the Items B.10, B.12, & B.14 shall be by linear metre removed. Measurement for the Items B.11, B.13, & B.15 shall be by each hydrant set, sanitary sewer structure, or storm sewer structure removed. Where payment for work is split over multiple certificates, payment will be prorated over the percentage of removals completed as decided by the Engineer.

BASIS OF PAYMENT

Payment at the contract price for the above referenced tender items shall be full compensation for all labour, equipment and material to do the work.

ITEMS B.16 & B.17 PRECAST CATCH BASIN, 600mmx600mm

SCOPE

These items are for the supply and installation of precast catch basin structures including dewatering as may be required.

REFERENCES

The requirements outlined in OPSS.MUNI 402, OPSS.MUNI 403, OPSS.MUNI 407, OPSS.MUNI 408, OPSS.MUNI 501, OPSS.MUNI 517, OPSS.MUNI 1351, OPSS.MUNI 1850, OPSD. 400.020, OPSD 400.030, OPSD. 705.010, and TF-103-4 shall apply to these items.

MATERIALS

Catch basin structures to be constructed in accordance with OPSS.MUNI 407. Catch basins shall be 600mm x 600mm as per OPSD 705.010 with 600mm sumps. Frames and Grates to be in accordance with OPSD 400.020, OPSD 400.030, or TF-103-4 as listed on the contract drawings.

Structure joints and pipe connections shall be watertight.

Bedding and backfill shall be Granular "A" per OPSS.MUNI 314.

CONSTRUCTION

The Contractor shall complete the works required to facilitate the catch basin structures to be installed in accordance with OPSS.MUNI 402, OPSS.MUNI 403 and OPSS.MUNI 407. Backfill material shall extend to the underside of the roadway granulars. Precast catch basin structures supplied in two or more pieces shall be installed with frost straps in accordance with OPSD 701.100, at the Contractor's expense.

Excavation required for structure installation shall be to the roadway subgrade limits. Suitable native materials shall be salvaged and reused as backfill to subgrade elevation, compacted to minimum 98% standard proctor density. No stones larger than 25mm shall be placed within 300mm of the structure. The Contractor shall be responsible for the management and disposal of excess material in accordance with OPSS.MUNI 180 and SP 5.

Filter Fabric to be placed under grates on all storm sewer catch basins to trap sediment. Silt traps are to be cleaned regularly and are not to be removed until all construction activity is complete. Filter fabric for silt control to be Terrafix 270R or approved equivalent.

MEASUREMENT FOR PAYMENT

There will be no measurement for payment. Payment for the above referenced tender items will be by lump sum. Where payment is split over multiple certificates, 90% will

be paid for installation of the structure with 10% paid for setting of the final grade of the grate.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work including rock excavation to subgrade elevation, installation of structures, frames, and grates.

ITEM B.18 375mmØ PVC STORM SEWER
ITEM B.19 450mmØ PVC STORM SEWER

SCOPE

These items are for the supply and installation of PVC storm sewer pipes and associated granulars, connection to structures and existing pipe, as well as dewatering as required. PVC pipes have been specified due to proximity of proposed watermain and need for watermain equivalent seals.

REFERENCES

The requirements outlined in OPSS.MUNI 180, OPSS.MUNI 314, OPSS.MUNI 410, OPSS.MUNI 501, OPSS.MUNI 510, OPSS.MUNI 517, OPSS.MUNI 1841, and OPSD 802.010 shall apply to these items.

MATERIALS

Polyvinyl Chloride (PVC) pipes shall be AWWA C900 PVC DR25 Class 165 or equivalent, per OPSS.MUNI 1841.

Alternate storm sewer pipe equivalent will be considered provided it is a true equivalent in terms of stiffness, joint performance and flow rates. Joints and structure connections shall be watertight. The Contractor will be responsible for providing supporting documentation.

The granular material required in OPSS.MUNI 410 for the bedding, embedment, and cover shall be Granular “A” and shall be included in these items.

CONSTRUCTION

Supply and installation of PVC Pipes shall be completed in accordance with OPSS.MUNI 410 and OPSD 802.010. Backfill material shall extend to the underside of the roadway granulars.

Storm Sewer pipe shall be laid within 10mm ± of the design grade. Excavation for pipe installation shall be to the roadway subgrade limits. Suitable native materials shall be salvaged and reused as backfill to subgrade elevation, compacted to minimum 98% standard proctor density. The Contractor shall be responsible for the management and disposal of excess excavated materials. Excess material shall be managed in accordance with SP 5.

The Contractor shall locate and verify the existing inlet pipe elevations, diameters and materials required for connection to proposed storm sewer. Connections to existing piping shall be completed with factory approved fittings.

Light duty silt fence barriers to be installed at the bottom of all fill slopes and down gradient of any stockpiled material when there is the possibility of sediment migrating to adjacent properties.

Filter Fabric to be placed under grates on all storm sewer catch basins to trap sediment. Silt traps are to be cleaned regularly and are not to be removed until all construction activity is complete. Filter fabric for silt control to be Terrafix 270R or approved equivalent.

MEASUREMENT FOR PAYMENT

Measurement for payment for the above referenced tender items shall be by length in metres installed. There will be no measurement of payment for the granular bedding, embedment, cover and backfill material required for the installation of the storm sewer.

Item B.19 shall include connection to the existing storm sewer structures.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work, including trenching and supply and placement of granulars for bedding, embedment, cover and placement of suitable native backfill to subgrade elevation.

ITEM B.20 SANITARY SEWER BYPASS SYSTEM

SCOPE

This specification covers the requirements related to sewer bypass flow pumping required for the temporary conveyance of sanitary sewage flows. The Work shall include the following: design of a fully operational temporary sewer bypass system; obtaining regulatory approvals for the bypass installation (if required), commissioning, operation and maintenance, monitoring, decommissioning and removal; spill prevention and cleanup; protection of traffic, road, rail, and water body or crossings as required.

The estimated design flow of the sanitary sewer within the pipe replacement area varies due to the connecting streets. The Contractor shall verify sanitary sewer flow rates to ensure their Sewer Bypass System satisfies the requirements.

The City’s Water & Sewer System Operator shall be contacted by the Contractor to discuss options for managing flow rates.

DEFINITIONS

Temporary Sewer Bypass System means temporary piping, plugs, pumping and standby equipment installed and operated for the purpose of intercepting the incoming sewage flow, conveying the flow around the work area, and discharging the flow into the existing sewer system downstream of the work area

DESIGN AND SUBMISSION REQUIREMENTS

The Contractor shall prepare and submit the following:

a) Temporary Sewer Bypass Plan ensuring there is capacity and size to handle the existing peak flows and surcharge flow rates at all times during the bypass operation; and,

b) Spill Response Plan. The Contractor shall not procure or install temporary bypass system until the Temporary Sewer Bypass Plan and the Spill Response Plan are approved by the Contract Administrator.

The Temporary Sewer Bypass Plan and Spill Response Plan shall be submitted four weeks prior to the start of construction to the Contract Administrator.

The Temporary Sewer Bypass Plan shall include all of the following:

- Flow rates and other hydraulic considerations,
- Size of the sewer to be bypassed,
- Bypass connection proposed,
- Site and equipment monitoring,
- Staging areas for pumps,
- Duration of each phase of the work,
- Sewer plugging method, type and size of plugs,
- Location of maintenance holes or access points for suction and discharge piping, including a suitable site map,
- Size, material, location and method of installation of suction and discharge piping,
- Characteristics of bypass pump such as size, capacity and power requirements,
- Calculations of static lift, friction losses and flow velocity,
- Pump curves showing pump operating range, Characteristics of standby pump(s) such as size, capacity and power requirements,
- Standby power generator(s) size and location, and refueling requirements and restrictions,
- Method of protecting discharge maintenance holes or structures from erosion and damage,
- Method of noise control for each pump and generator,
- Details of bypass pipe crossings, for example, driveways and sidewalks,
- Any plans and procedures to mitigate issues related to night work, e.g. light, noise, odour and protection of environmental features specific to work,
- Schedules for installation and demobilization, and
- All provisions and precautions that will be taken during the bypass operations to prevent sewage backups, overflows and spills.

The site-specific Spill Response Plan shall include the following:

- Procedures for notification to the City of Kenora and the Ministry of the Environment, Conservation and Parks (MECP) Spill Action Centre,
- Mandatory regulatory reporting requirements,
- Plan for investigating the cause of the spill,
- Plan for containing the spill and addressing the source of the spill,
- Determine if any service connections, storm drains, watercourses or other infrastructure that could be negatively affected by a spill,
- Plan for preventing public exposure to the spill, including procedures for redirecting pedestrians and traffic away from the impacted area,
- Measures to be taken to avoid or mitigate the adverse effects of the spill on the environment, and
- Name of responsible person and their responsibilities to document and liaise with all agencies during a spill.

Acceptance of the Plans

The Temporary Sewer Bypass Plan and Spill Response Plan should allow the Contract Administrator to understand the manner in which construction on the sewer is to take place, the flow rates accommodated by the bypass and evacuation and contingency plans in case of a spill including cleanup. The plans shall be submitted in PDF format.

The construction shall start only after the Contract Administrator reviews and accepts the Temporary Sewer Bypass Plan and Spill Response Plan. The Contract Administrator will then issue the acceptance letter to the Contractor.

Both plans shall be posted at the site office or site trailer during the sewer bypass operations.

EQUIPMENT

Pumps

Provide electric or diesel powered fully automatic self-priming low noise pumps and low noise generators. The pumps shall be equipped with all necessary stop and start controls.

Temporary Sewer Bypass Piping

The temporary sewer bypass piping shall be able to withstand pressures that are greater than the peak bypass pressure and the traffic load at road crossing ramps. Under no circumstances shall aluminum irrigation type piping or glued PVC pipe be used. The Contract Administrator shall approve discharge hose material type.

CONSTRUCTION

The Contractor shall cease bypass pumping operations when no longer required and return flows to the new or existing sewer or both. During bypassing, no wastewater

shall be leaked, dumped, or spilled in or onto any area outside the existing wastewater system.

The Contractor shall immediately put the Spill Response Plan into action and notify the supervisor and the Contract Administrator, should a sanitary sewer overflow occur and take the necessary action to clean up and disinfect the spillage to the satisfaction of the Contract Administrator and the MECP and other governmental agencies. If sewage is spilled onto public or private property, the Contractor shall wash down, clean up, and disinfect the spillage to the satisfaction of the property owner at no extra cost to the City of Kenora.

Sufficient power supply and hoses must be on site in order to allow the pump to discharge into the downstream sewer section. The standby bypass pump and power supply shall be of an equal or better capability than the primary bypass pump and power supply. No bypass pumps or related equipment shall be disconnected or removed from the sewer or job site until after all service connections have been reinstated and the Contractor has recorded the post-installation video.

Protect the environment, public, and private property from any damage during the construction and operation of the bypass system.

Minimize the interruption of existing services to the public, residents, and all facilities connected to the bypassed sewer.

The temporary sewer bypass system shall be monitored at all times by the Contractor. The Contractor's employees must have the knowledge, experience and skill to maintain and operate all equipment and to switch to standby equipment if the need arises. The bypass system shall not be in operation unless it is monitored constantly by the Contractor's employee(s).

The Contractor’s must request approval for any changes to the bypass system after the initial set up such as adding a pump to the bypass system due to spike in flows, removal of a pump, changing discharge point and so on. Changes are to be witnessed by the Contract Administrator.

Bypass Equipment and Piping

Place pumps in temporary containments/berms to contain any fuel or sewage that may spill during the bypass operations.

Prior to pumping, flush and clean the sewer section, or maintenance hole, where the suction pumping is located.

When requested by the Contract Administrator, submit the pump maintenance records, pump operation records and fuel monitoring records for review.

Provide and connect standby equipment which can be operational for immediate use in the event of emergency or equipment breakdown.

Perform leakage tests of the bypass system using clean water prior to the actual operation. The sewer bypass pumping system shall be tested prior to installation using clean water. Provide Contract Administrator with 48 hours' notice.

Noise from Operations

Minimize the emission of sound by using low noise pumps and generators and implement additional sound attenuation measures, such as soundproof canopy, acoustic foam insulation and anti-vibration devices in the sound sensitive areas.
All bypass pumps and related equipment must be silenced equipment or contained within an acceptable sound reduction structure below 65 dB(A) at 7 m. The site inspector shall ask the Contractor to operate one pump at a time and measure noise at 7 m radius for each pump. If the noise does not meet the requirement, the Contractor shall have to install additional noise control barrier or replace the pump at no cost to the City of Kenora.

Plugging

Select sewer plugs based on the flow characteristics, size of the sewer and the location of the flow diversion point. Always provide a secondary plug, in the event the primary plug fails. Plug a sewer system by means and methods that will not cause any damage or blockage to the sewer pipes and maintenance holes.

Inspect all plugs for defects prior to every use.

When a plug is no longer needed, remove it gradually to allow flow to return gradually to the normal flow condition.

Crossings

At all times keep the bypass piping within the limits of the Working Area and away from paved roadways and sidewalks.

When the bypass piping is crossing roadways, either construct traffic ramps or place the bypass pipelines in trenches and temporarily restore utility cuts.

Removal, Cleanup and Restoration

Ensure all sewage from the bypass pipes, pumps and fittings is discharged to the specified sanitary. Flush the bypass system with potable water before removal.

Restore bypass pump areas to pre-bypass condition including any cleanup measures necessary due to fuel, oil or sewage leaks. All cleanup measures taken shall be documented.

The disposal or discharge shall be according to MOE Regulations.

MEASUREMENT FOR PAYMENT

Measurement shall be by lump sum and payment shall be when the Work is completed:

1) Temporary Sewer Bypass Plan and Spill Response Plan upon approval of these plans – 5%
2) Installation of the temporary bypass upon successful testing – 50%
3) Operation and maintenance of temporary bypass system – 40%
4) Successful disassembly and removal of the temporary bypass system – 5%

BASIS OF PAYMENT

Payment at the Contract Price shall be full compensation for all labour, Equipment and Material to do the Work.

ITEMS B.21 & B.22 PRECAST MAINTENANCE HOLE, 1200mmØ

SCOPE

This item is for the installation of 1200mmØ sanitary sewer maintenance hole structures, including dewatering as may be required.

REFERENCES

The requirements outlined in OPSS.MUNI 180, OPSS.MUNI 402, OPSS.MUNI 403, OPSS.MUNI 407, OPSS.MUNI 501, OPSS.MUNI 517, OPSS.MUNI 1351, OPSS.MUNI 1850, Titan TF-101-6, OPSD 405.020, OPSD 701.030, 701.0.31, 701.032, OPSD 701.100 and OPSD 704.010 shall apply to the items precast maintenance hole catch basin.

MATERIALS

Maintenance holes shall be constructed according to OPSD 701.030 and shall have a Titan TF-101-6 frame and solid cover with concrete adjustment rings in accordance with OPSS.MUNI 408. The City of Kenora also requires a minimum of 150mm of adjustment rings.

Structure joints and pipe connections shall be watertight with appropriate seals, gaskets or boots

Bedding and backfill shall be Granular A per OPSS.MUNI 314.

CONSTRUCTION

Supply and installation of precast maintenance hole structure shall be completed in accordance with OPSS.MUNI 402, OPSS.MUNI 407, OPSS.MUNI 501, and OPSD 701.010, with benching in accordance with OPSD 701.021. Backfill material shall extend to the underside of the roadway granulars. The Contractor is responsible for the supply and installation of frost straps in accordance with OPSD 701.100, steps in accordance with OPSD 405.020 and frames and grates in accordance with OPSD 401.010.

Excavation required for structure installation shall be to the roadway subgrade limits. Suitable native materials shall be salvaged and reused as backfill to subgrade elevation, compacted to minimum 98% standard proctor density. No stones larger than 25mm shall be placed within 300mm of the structure. The Contractor shall be responsible for

the management and disposal of excess material in accordance with OPSS.MUNI 180 and SP 5.

MEASUREMENT FOR PAYMENT

There will be no measurement for payment. Payment for the above referenced tender items will be by lump sum. Where payment is split over multiple certificates, 90% will be paid for installation of the structure with 10% paid for setting of the final grade of the grate.

BASIS OF PAYMENT

Payment for the Items Precast Maintenance Hole shall be full compensation for all labour, equipment and material to do the work including installation of structures, frames and grates.

ITEMS B.23 & B.24 300mmØ PVC DR35 SANITARY SEWER
ITEM B.25 100mmØ PVC DR35 SANITARY SERVICES
ITEM B.26 SANITARY SERVICE CONNECTION & APPURTENANCES

SCOPE

The item is for the installation of PVC Sanitary Sewer Pipe and Service Laterals. The existing sanitary sewer shall be camera inspected in advance of construction to determine the lateral locations. Lateral locations identified on the contract drawings are approximate and may be incomplete.

REFERENCES

The requirements outlined in OPSS.MUNI 180, OPSS.MUNI 401, OPSS.MUNI 409, OPSS.MUNI 410, OPSS.MUNI 501, OPSS.MUNI 510, OPSS.MUNI 805, OPSS.MUNI 1841, OPSD 802.010 and OPSD 1006.010 shall apply to these items.

MATERIALS

Sanitary sewer pipe and fittings shall be PVC DR35 pipe material in accordance with OPSS.MUNI 1841. Sanitary services shall be 100mmØ for residential locations to property line, unless otherwise noted on the contract drawings. Joints and structure connections shall be watertight with appropriate seals, gaskets or boots. The Contractor will be responsible for providing supporting documentation.

The granular material required in OPSS.MUNI 410 for the bedding, embedment, and cover shall be Granular “A” and shall be included in these items.

Connections to existing sanitary sewer lines shall be made with factory approved fittings.

CONSTRUCTION

The Contractor must maintain sanitary sewer services to all buildings at all times for the duration of construction. The Contractor will prepare a Sewage Bypass Plan to ensure the mainline sewer is in operation at all times during construction. The Contractor must provide appropriate notice to the City and the Engineer in advance of any scheduled connections or any potential service disruptions.

Sanitary sewer pipes shall be installed at the elevations and grades as shown on the Contract Drawings, which shall be no higher than existing elevations, such that service laterals do not become any flatter than existing. Service laterals shall be 100mmØ installed per OPSD 1006.010 with factory approved tees, extending from the main sewer to the property line, and connected to the existing service material. The installation of the service laterals also includes the removal of any existing service laterals. Crossing of watermain shall be complete with maximum separation available and one full pipe length centred over the watermain.

The Contractor shall connect the existing 200mm sanitary sewer on Mellick Avenue to the new sewer line as shown on the contract drawings.

Excavation for pipe installation shall be to the roadway subgrade limits. Suitable native materials shall be salvaged and reused as backfill to subgrade elevation, compacted to minimum 98% standard proctor density. Sanitary sewer installation shall include restoration of street to existing elevation prior to winter shutdown. Existing road base granulars shall be salvaged for reuse and compacted to 98% standard proctor density.

The Contractor shall be responsible for the management and disposal of excess excavated materials. Excess material shall be managed in accordance with SP 5.

The Contractor shall locate existing sewer pipes on intersecting streets prior to connection to the nearest maintenance hole. The Contractor shall determine elevations and materials of the existing sewer and connect to the new sewer lines ensuring positive flows. Adjustment of proposed connecting sewer line elevations may be required.

MEASUREMENT FOR PAYMENT

Measurement for Items B.23, B.24 & B.25 shall be by length by linear metre of pipe installed. Measurement for Item B.26 shall be by each sanitary service connection and appurtenance installed.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender item shall be full compensation for all labour, equipment, and materials to do the work, including CCTV inspection (pre and post), earth trenching, removal of existing service pipes, bedding, embedment, cover and backfill to roadway subgrade elevation or finished grade elevation outside the roadway.

ITEM B.27 TEMPORARY POTABLE WATER SUPPLY SERVICES

SCOPE

The item is for the supply and installation of the temporary water supply and services.

REFERENCES

The requirements of OPSS.MUNI 493 shall apply to this item.

MATERIALS

Backflow preventing spigots shall be equivalent to the existing materials encountered.

Service connections shall be equal size to existing.

CONSTRUCTION

The Contractor shall design, supply and install temporary watermain to be in use for the duration of the project. No two consecutive fire hydrants may be taken out of service.

In advance of submitting the plan to the Contract Administrator, the Contractor shall meet with the City's Representative, Director of Fire Services and Water System Operator to discuss the proposed temporary water supply services plan. The plan shall address how the works will progress and minimize the length of temporary mains required at any given time.

As part of the temporary system costs, the Contractor will be required to supply and install a backflow preventing flushing valve and associated piping at the downstream end of the temporary system. This flushing valve shall be operated by the Contractor to provide a continual flow within the temporary system to eliminate "hot spots" or excessive chlorine residual loss within the temporary system. The flow shall be discharged to an acceptable location within the rear yard of the downstream residence or other approved location.

The Contractor shall, as necessary, replace backflow preventing spigots to allow proper functioning of the temporary water system. Upon removal of the temporary system, the Contractor shall reinstall the existing backflow preventing spigots if requested by the homeowner.

The City's Water System Operator must be onsite for any work on the City's water system including commissioning of the temporary system. They must also be notified immediately should there be any breaks or changes required in the temporary system. Repairs to the temporary system shall not be completed by unqualified persons.

MEASUREMENT FOR PAYMENT

There will be no measurement for payment for the above referenced tender item. Payment will be by lump sum. Payment of 60% will be made upon commissioning of the

temporary system, 35% split over the duration of operation and 5% upon removal of the system.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender item shall be full compensation for all labour, equipment, and materials to do the work including design, supply and installation, locating, isolating and connection to the existing watermains, as well as decommissioning of connections and removal of the temporary system.

ITEM B.28 CONNECTION TO CITY WATERMAIN SYSTEM
ITEM B.29 150mmØ PVC DR18 WATERMAIN
ITEM B.30 200mmØ PVC DR18 WATERMAIN
ITEM B.31 200mm x 200mm x 100mmØ PVC TEE
ITEM B.32 200mm x 200mm x 150mmØ PVC TEE
ITEM B.33 100mmØ GATE VALVE
ITEM B.34 200mmØ GATE VALVE
ITEM B.35 200mmØ PVC ELBOW - 11 ¼°
ITEM B.36 200mmØ PVC ELBOW - 22 ½°
ITEM B.37 FIRE HYDRANT & VALVE INSTALLATION
ITEM B.38 19mmØ RESIDENTIAL WATER SERVICE WITH THAW CABLE
ITEM B.39 19mmØ RESIDENTIAL WATER SERVICE CONNECTION & APPURTENANCES
ITEM B.40 200mm x 200mm x 200mm x 200mm Ø PVC CROSS

SCOPE

The item is for the supply and installation of PVC DR18 watermain pipe, fittings, valves, services, fire hydrants, connections to the City watermain, and dewatering as may be required.

REFERENCES

The requirements of OPSS.MUNI 180, OPSS.MUNI 314, OPSS.MUNI 401, OPSS.MUNI 441, OPSS.MUNI 442, OPSS.MUNI 501, OPSS.MUNI 517, OPSS.MUNI 1842, OPSD 802.010, 802.013, OPSD 1101.020, OPSD 1104.010, OPSD 1104.020, OPSD 1105.010, OPSD 1109.011, OPSD 1109.025 and OPSD 1109.030 shall apply to this item.

MATERIALS

Watermain pipes shall be AWWA C900 PVC DR18 Class 235 and be certified to CSA 137.3, or equivalent. Watermain fittings shall be PVC conforming to AWWA C907.

Tracer wire shall be Solid Copper 12GA - 7 strand Type RWU90 600V XLPE Copper, with white color jacket.

All fittings and joints to be mechanically restrained utilizing Starpipe manufacturer restraints or others as approved by the City of Kenora and the Engineer.

Coupler manufacturer shall be Alpha Romac brand couplers.

Valves shall be Mueller Resilient Wedge Gate Valve for PVC with Valve Boxes and Operators. Valve boxes shall be PVC with stone plate.

Main stops and curb stops shall be Mueller or Cambridge Brass.

Hydrant shall be new, Mueller Super Centurion with Hymax Grip Restraint Coupling, or M67 McAcity Brigadier, complete with Resilient Wedge Gate Valve. Fire hydrants shall be capable of receiving Storz couplers for fire hoses.

Anodes shall be Z-24-48 for fire hydrants and cast-iron pipes.

Anodes shall be Z-12-24 for new watermain components, service lines and tracer wires.

Service lines shall be 19mmØ Type K Copper complete with main stop and curb stop as shown on the contract drawings. Type K Copper service lines shall also be complete with green jacketed AWG 4/0 gauge thaw cable.

The Contractor shall provide the Engineer with a copy of all NSF/ANSI 61, NSF 372 and AWWA certificates and/or reports to prove material compliance with the corresponding regulations.

CONSTRUCTION

The Contractor shall ensure that *"F-6-1 Procedures to Govern Separation of Sewers and Watermains, Ministry of Environment, Conservation and Parks",* is accommodated during installation of the watermain. Where site conditions require major adjustments from the tendered plans to maintain the required separation, such adjustments shall be accounted for under the contingency amount based on the conditions within the specification relating to the item being adjusted.

Watermain shall be laid with a minimum cover depth 1.8m and insulated where a depth of 2.1m is not achieved.

All watermains, appurtenances and tracer wire shall be installed with cathodic protection per OPSS 442. Water services shall be installed with horizontal goosenecks.

Anode spacing for cathodic protection shall be as specified in Tables 4 and 5 of OPSS.MUNI 442.

Excavation for watermain installation including services shall be to the roadway subgrade limits or finished grade beyond the roadway. Suitable native materials shall be salvaged and reused as backfill to subgrade elevation or finished grade beyond roadway, compacted to minimum 98% standard proctor density. Installation shall include all materials required, including but not limited to valves, tees, couplers, reducers and elbows as well as associated joint restraints and cathodic protection.

Connection to the City's Watermain System shall be completed with PVC couplers and joint restraints. The Contractor shall locate the existing watermain identified for connection and determine the appropriate coupler required to make the connection.

The City's operator must be onsite when there is work on a commissioned watermain. All operation of City valves and curb stops must be carried out by the City's operator and will require a minimum 48hrs advanced notice to the City to do so.

All main line tracer wires must be interconnected in intersections, tees, and crosses. At tees, the three wires shall be joined using a single 3-way lockable connector. At crosses, the four wires shall be joined using a 4-way connector. Use of two 3-way connectors with a short jumper wire between them is an acceptable alternative.

Direct bury wire connectors shall include 3-way lockable connectors and main line to lateral lug connectors specifically manufactured for use in underground tracer wire installation. Connectors shall be dielectric silicon filled to seal out moisture and corrosion and shall be installed in a manner as to prevent any uninsulated wire exposure.

Non-locking friction fit, twist on, or tapered connectors are prohibited.

Tracer wire shall be returned to the surface up the outside of valve boxes, secured with electrical tape, and brought into the valve box through a hole drilled in the valve box 0.15m below the termination point of the bottom of the water valve cover. From that point, the tracer wire shall be returned to the surface inside the valve box. One metre of tracer wire, measured from finished grade, shall be provided to allow for connections to be made at the surface. Excess tracer wire is to be neatly coiled, secured with electrical tape, and left in the valve box, to be accessible through the lid of the water valve cover.

Where required, tracer wire shall be returned to the surface on the back side of the hydrant to finished grade. A loop shall be provided, and the terminal end of the trace wire shall be embedded in the ground.

All main line tracer wires must be installed, to ensure full tracing/locating capabilities from a single connection point. Tracer wire must lay continuously, by-passing around the outside of valves and fittings on the north or east side.

The following products and methods shall not be allowed or acceptable:

- Uninsulated tracer wire
- Tracer wire insulations other than HDPE
- Non locking, friction fit, twist on or taped connectors
- Brass or copper ground rods
- Wire connections utilizing taping or spray-on waterproofing
- Looped wire or continuous wire installations, that has multiple wires laid side-by-side or in close proximity to one another
- Tracer wire wrapped around the corresponding utility
- Brass fittings with tracer wire connection lugs
- Wire terminations within the roadway, i.e. in valve boxes, cleanouts, manholes, etc.
- Connecting tracer wire to existing conductive utilities

All new tracer wire installations shall be located using typical low frequency (512Hz) line tracing equipment, witnessed by the contractor, engineer and facility owner as

applicable, prior to acceptance of ownership. This verification shall be performed upon completion of rough grading and again prior to final acceptance of the project. Continuity testing in lieu of actual line tracing shall not be accepted.

Thaw cables for water services shall be clamped securely to the body of the main stop with appropriately sized City approved copper alloy ground connectors. Connectors to be CG-2625 or equivalent ground connectors; all connectors deemed incidental to thaw cable installation. Thaw cables shall be routed alongside the water service, returned to the surface, and secured to the curb stop. The Contractor shall contain the curb stop and thaw cable within a water valve box at the property line where appropriate. The Contractor shall verify the electrical continuity between curb stops and thaw cables at each location.

Construction shall proceed in such a manner as to isolate areas of work to minimize the amount of disruption within the project site as well as minimize the number of residents requiring temporary water supply at any given time.

The contractor shall locate each existing service line and new service lines shall be installed up to the lot line, to the existing curb stop if beyond the lot line, or the limits identified on the plans. New curb stops shall be installed at the property line, or limits identified.

Hydrants shall be installed per OPSD 1105.010 with final elevation 100mm to 150mm above finished grade. All joints between watermain and hydrants to be mechanically restrained.

MEASUREMENT FOR PAYMENT

Measurement for payment for the Items “Connection to City’s Watermain System” shall be for each connection completed.

Measurement for payment for items “Tee”, “Gate Valve”, “Elbow”, “Hydrant” and “Cross” shall be by each item installed. Hydrant valves are included in the hydrant item and will not be measured as a valve item.

Measurement for payment for items “Watermain” and “Services” shall be by length by linear metre of pipe installed.

Measurement for payment for items “Service Connections & Appurtenances” shall be for each connection completed and will include a main stop, curb stop, and valve box with stone plate.

There will be no measurement for payment of tracer wire, thaw cable, joint restraints and cathodic protection. Payment for tracer wire, thaw cable, joint restraints and cathodic protection shall be included in the bid item for the corresponding item requiring tracer wire, thaw cable, restraints and/or cathodic protection.

BASIS OF PAYMENT

Payment for the Items “Connection to City’s Watermain System” shall be full compensation for all labour, equipment and material to make the connection as well as excavation, bedding, cover and backfill to subgrade elevation within the roadway or to finished grade beyond the roadway, as well as the supply and installation all associated joint restraints and cathodic protection.

Payment for items “Watermain”, “Gate Valve”, “Tee”, ”Cross”, “Elbow”, “Hydrant”, “Services”, and “Service Connection & Appurtenances” shall be by each item installed and shall be full compensation for all labour, equipment and material to do the work, including excavation, installation, bedding, embedment, cover and backfill to subgrade elevation within the roadway or to finished grade beyond the roadway, as well as the supply and installation all associated joint restraints and cathodic protection.

ITEM B.41 EXTRUDED EXPANDED POLYSTYRENE INSULATION

SCOPE

This specification is applicable to the installation of insulation for watermain or water service protection, in areas with less than 2.2m of cover, or in areas where water services cross sewers or sewer laterals.

REFERENCES

The requirements of OPSS.MUNI 316 and OPSD 1109 shall apply to this item.

CONSTRUCTION

Insulation shall be placed horizontally spanning the line being protected, or alternatively in a trench configuration in accordance with OPSD 1109.030. Insulation shall be placed between crossing of sewers and watermain or water services.

MEASUREMENT FOR PAYMENT

Measurement for payment shall be by square metres of actual insulation placed, per 25mm thickness. There will be no compensation for quantity over runs and under runs for this item. The tender quantity is an estimated value used to establish unit rate regardless of quantity required to construct the works.

BASIS OF PAYMENT

Payment at the Contract Price shall be full compensation for all labour, equipment, and material to do the work.

ITEM B.42 EARTH EXCAVATION – GRADING, ROADWAY

SCOPE

This item is for the completion of earth excavation related to road construction.

REFERENCES

The requirements outlined in OPSS.MUNI 180 and OPSS.MUNI 206 shall apply to the Item Earth Excavation – Grading, Roadway.

Excess material shall be managed in accordance with OPSS.MUNI 180 and SP 5. "O.Reg. 406/19, On-Site and Excess Soil Management" is applicable to this project.

CONSTRUCTION

Earth Excavation shall be completed in accordance with OPSS.MUNI 206. The Contractor shall be responsible for the management and disposal of all excess excavated materials from the works. Existing granulars shall be removed separate from the native materials. Excess granular materials shall be delivered to the City of Kenora Operation Centre Yard. Unless directed otherwise by a City Representative, suitable native materials shall be stockpiled onsite for reuse as backfill as required, with excess native materials delivered to the City of Kenora Municipal Landfill located on Jones Road, approximately 12 km north of Highway 17A, and left in a neat and uniform manner. Disposal will be based on a weight basis via the weigh scale and the City of Kenora Transfer Station which is located at 401 Mellick Avenue.

The Contractor shall be responsible for the management and disposal of all excess excavated materials from grading works in accordance with SP 5. The Contractor must discuss with the City Representative in advance to identify the locations for disposal, and materials shall be leveled and left in a neat and uniform manner acceptable to the City Representative.

MEASUREMENT FOR PAYMENT

Measurement for payment for the Items Earth Excavation – Grading, shall be plan quantity in cubic metres by in-place method as calculated from the topographic survey completed preconstruction, and the design subgrade surface for the roadway extending to limit of grading, approximately at right-of-way. Payment will be based on earth excavation to subgrade for road construction. There will be no compensation for quantity over runs and under runs for this item. The tender quantity is an estimated value used to establish unit rate regardless of quantity required to construct the works.

BASIS OF PAYMENT

Payment at the Contract Price shall be full compensation for all labour, equipment, and material to do the work.

ITEM B.43 PIPE SUBDRAIN – 150mmØ

SCOPE

The item Pipe Subdrain – 150mmØ is for the supply and placement of the socked pipe subdrain with associated geotextile and clearstone trench.

REFERENCES

The requirements outlined in OPSS.MUNI 180 and OPSS.MUNI 405, OPSS.MUNI 1004, OPSS.MUNI 1860, and OPSD 216.021 shall apply to these items.

MATERIALS

Subdrain pipe shall be 150mm diameter perforated corrugated polyethylene pipe with minimum stiffness of 320kPa and wrapped with knitted polyester sock.

Geotextile shall be Titan non-woven TE-4 or equivalent.

Clearstone shall be 19mmØ according to OPSS.MUNI 1004.

CONSTRUCTION

The Contractor shall supply and install 150mmØ socked subdrain pipe in accordance with OPSS.MUNI 405 and the Contract Drawings. The subdrain trench shall be excavated and wrapped in geotextile, resting on subgrade covered with clearstone, 150mm thickness on top and sides. The Contractor shall complete subdrain connection to catch basin as per OPSD 216.021.

MEASUREMENT FOR PAYMENT

Measurement for payment for the Item Pipe Subdrain will be by actual length measured in metres, including trench excavation, geotextile, granulars, socked subdrain pipe, and connection to structures.

BASIS OF PAYMENT

Payment at the contract price for the above referenced tender item shall be full compensation for all labour, equipment, and material to do the work.

ITEM B.44 GEOTEXTILE
ITEM B.45 GEOGRID

SCOPE

These items are for the supply and placement of Geotextile and Geogrid, identified as face of curb to face of curb. Geotextile and geogrid placed below the curbs and sidewalks shall be accounted for in the respective tender item.

REFERENCES

The requirements outlined in OPSS.MUNI 206 and OPSS.MUNI 1860 shall apply to the items – Geotextile and Geogrid.

MATERIALS

Geotextile shall be Titan non-woven TE-4 or equivalent, with grab tensile strength not less than 445N and AOS no larger than 0.3mm.

Geogrid shall be Titan Earth Grid 24, or equivalent.

CONSTRUCTION

Geogrid and geotextile shall be placed in areas as specified on the Contract Drawings. The Titan Earth Grid 24 geogrid shall be placed directly on top of the Geotextile, spanning the subdrain trenches. Adjacent sections of geogrid and geotextile shall be overlapped a minimum of 1.0 metre. At structure and valve locations the geogrid shall be cut-out circular or square to suit the structure size. Square ending of materials against the structures will not be permitted.

Should the geogrid or geotextile become damaged it shall be repaired by placing a piece of geogrid large enough to cover the damaged section with a minimum 1.0 metre overlap.

MEASUREMENT FOR PAYMENT

Measurement for payment shall be by area from back to sidewalk to back of sidewalk, in place based on plan quantity, in square metres with no allowance for overlaps.

BASIS OF PAYMENT

Payment at the Contract price for the above tender items shall be full compensation for all labour, equipment, and material to do the work.

ITEM B.46 GRANULAR "B", ROADWAY (IN-PLACE)
ITEM B.47 GRANULAR "A", ROADWAY (IN-PLACE)

SCOPE

The item is for the supply and placement of granulars for road construction, identified as the proposed face of curb to face of curb. Granulars placed below the curbs, sidewalks, boulevards and entrances shall be accounted for in the respective tender item.

REFERENCES

The requirements outlined in OPSS.MUNI 314, OPSS.MUNI 501, and OPSS.MUNI 1010 shall apply to these items – Granular "B" and Granular "A".

MATERIALS

Granular "A" shall be Type I according to OPSS.MUNI 1010. Granular "B" shall be according to OPSS.MUNI 1010.

CONSTRUCTION

Supply and placement of Granular “A” and Granular “B” shall be completed in accordance with OPSS.MUNI 314 and OPSS.MUNI 501.

MEASUREMENT FOR PAYMENT

Measurement for payment for the Items Granular “A” and Granular “B” will be by volume “in-place” in cubic metres. The volume will be calculated by the Engineer by utilizing design cross sections and the method of average end areas for an “in-place” compacted volume, per OPSS.MUNI 314.09.01.01.02(aii).

BASIS OF PAYMENT

Payment at the contract price for the above referenced tender items shall be full compensation for all labour, equipment, and material to do the work.

ITEM B.48 HL8 HOT MIX ASPHALT – BASE COURSE
ITEM B.49 HL3 HOT MIX ASPHALT – SURFACE COURSE
ITEM B.50 HL3 HOT MIX ASPHALT – DRIVEWAY & BOULEVARDS
ITEM B.51 TACK COAT

SCOPE

The item is for the supply and placement of HL8 asphalt, HL3 asphalt and tack coat between binder and surface courses.

REFERENCES

The requirements outlined in OPSS.MUNI 308, OPSS.MUNI 310, OPSS.MUNI 311, OPSS.MUNI 710, OPSS.MUNI 1103, and OPSS.MUNI 1150 shall apply to these items.

SUBMISSION AND DESIGN REQUIREMENTS

The Mix Design shall be Contractor Mix Design as specified in OPSS.MUNI 1150.04.01.02.

MATERIALS

Asphalt Cement shall be PGAC 52-34.

Granular “A” shall be Type I according to OPSS.MUNI 1010. Granular “B” shall be according to OPSS.MUNI 1010.

Geotextile shall be Titan non-woven TE-4 or equivalent, with grab tensile strength not less than 445N and AOS no larger than 0.3mm.

Geogrid shall be Titan Earth Grid 24, or equivalent.

CONSTRUCTION

Supply and placement of HL8 Asphalt and HL3 Asphalt shall be completed in accordance with OPSS.MUNI 310 including tack coating of joints and all concrete surfaces. Tack coat shall be applied between binder and surface courses.

Included under the Item HL3 Asphalt – Driveway & Boulevards is the preparation of the subgrade per OPSS.MUNI 206 and OPSS.MUNI 180, as well as supply and placement of geotextile, geogrid, Granular "B" as needed and 150mm Granular "A" base material, per OPSS 1010. Subgrade and base materials shall be compacted in accordance with OPSS.MUNI 501. Excess soils shall be managed in accordance with SP 5.

MEASUREMENT FOR PAYMENT

Measurement for payment for the items "HL8 Base Course" and "HL3 Surface Course" shall be by mass in Tonnes as detailed in OPSS.MUNI 310.09.01.01.01. The Contractor will be required to supply tickets in duplicate that will be signed by the Owner's representative on delivery.

Measurement for payment for the Item "HL3 Asphalt – Driveway & Boulevards" shall be by square metres of asphalt placed. There will be no measurement for excavation, geotextile, geogrid and granulars associated with Item 50.

Measurement for payment for the Item Tack Coat shall be by as detailed in OPSS.MUNI 308.09.01.01.

BASIS OF PAYMENT

Payment at the Contract Price for the above tender items shall be full compensation for all labour, equipment, and materials to do the work, including the excavation, geotextile, geogrid and base granulars for Item 50. In addition, Appendix 310-B is invoked for adjustment on Item 48 & 49, based on changes to the MTO's PGAC Price Index, only when the AC Prices are Rising or Falling by more than $15/tonne.

ITEM B.52 CONCRETE CURB & GUTTER

SCOPE

This item is for the installation of concrete curbs and gutters, including excavation, geotextile, geogrid and granulars beneath the curb and gutter.

REFERENCES

The requirements outlined in OPSS.MUNI 180, OPSS.MUNI 206, OPSS.MUNI 353, OPSS.MUNI 501, OPSS.MUNI 919, OPSS.MUNI 1010, OPSS.MUNI 1350, OPSD 600.040 and OPSD 608.010 shall apply to this item.

MATERIALS

Concrete shall be according to OPSS.MUNI 1350, with a minimum specified 28-day compressive strength of 32 MPa, Class C-2 Exposure.

Granular “A” shall be Type I according to OPSS.MUNI 1010. Granular “B” shall be according to OPSS.MUNI 1010.

Geotextile shall be Titan non-woven TE-4 or equivalent, with grab tensile strength not less than 445N and AOS no larger than 0.3mm.

Geogrid shall be Titan Earth Grid 24, or equivalent.

CONSTRUCTION

Contractor shall construct concrete curb and gutter with a curb machine, in accordance with OPSS.MUNI 353, OPSD 600.040 and OPSD 608.010. Hand placing of curbs will only be permitted in transition areas. Excess material shall be managed in accordance with OPSS.MUNI 180 and SP 5.

Included under the Item Concrete Curb & Gutter is the preparation of the subgrade per OPSS.MUNI 206 as well as supply and placement of the required geotextile, geogrid, granular base material and supporting material, specifically the granulars between the top of subgrade or subdrains to the bottom of gutter, as well as granulars along the back of curb, per OPSS.MUNI 1010. Subgrade and base materials shall be compacted in accordance with OPSS.MUNI 501.

Formwork shall be according to OPSS.MUNI 919 and shall be set true to the lines and grades specified in the Contract Documents and in direct contact with the subgrade or granular course.

The Contractor shall be responsible for the management and disposal of excess excavated materials. Excess material shall be managed in accordance with OPSS.MUNI 180 and SP 5.

MEASUREMENT FOR PAYMENT

Measurement for payment for the above referenced tender items shall be linear metre of curb and gutter installed.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work, including subgrade excavation, geotextile, geogrid and granulars.

ITEM B.53 REINFORCED CONCRETE CURB & GUTTER

SCOPE

This item is for the installation of reinforced concrete curb and gutters at commercial entrances, including excavation, geotextile, geogrid and granulars beneath the curb and gutter.

REFERENCES

The requirements outlined in Item 104 and OPSS.MUNI 1440 shall apply to this item.

MATERIALS

Reinforcing steel shall conform to OPSS.MUNI 1440.05, No. 20M.

CONSTRUCTION

Where indicated, concrete curb and gutter shall be constructed in accordance with item 105 and additionally the contractor shall install a single 20M reinforcing steel bar in the curb section from 50mm inside the expansion joint on either side of the entrance, as shown on the Contract Drawings or determined in the field by the Contract Administrator.

MEASUREMENT FOR PAYMENT

Measurement for payment for the above referenced tender items shall be linear metre of reinforced curb installed.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work, including subgrade excavation, geotextile, geogrid, granulars and reinforcing steel.

ITEM B.54 CONCRETE SIDEWALK
ITEM B.55 REINFORCED CONCRETE SIDEWALK (200mm Thickness)

SCOPE

This item is for the construction of concrete sidewalks.

REFERENCES

The requirements outlined in OPSS.MUNI 180, OPSS.MUNI 206, OPSS.MUNI 314, OPSS.MUNI 351, OPSS.MUNI 501, OPSS.MUNI 919, OPSS.MUNI 1308, OPSS.MUNI 1350, OPSS.MUNI 1440, and OPSD 310.010 shall apply to this item.

MATERIALS

Concrete shall be according to OPSS.MUNI 1350, with a minimum specified 28-day compressive strength of 32 MPa, Class C-2 Exposure. Coarse aggregate for the concrete shall have a nominal maximum size of 19 mm.

Expansion joint filler material shall be asphalt impregnated fibreboard having a minimum of 12mm thickness and shall be according to OPSS.MUNI 1308, Type A.

Granular "A" shall be Type I according to OPSS.MUNI 1010. Granular "B" shall be according to OPSS.MUNI 1010.

Geotextile shall be Titan non-woven TE-4 or equivalent, with grab tensile strength not less than 445N and AOS no larger than 0.3mm.

Geogrid shall be Titan Earth Grid 24, or equivalent.

Reinforcing steel shall conform to OPSS.MUNI 1440, welded wire mesh MW9.1 x MW9 x 152.

CONSTRUCTION

The Contractor shall construct concrete sidewalks at the locations, widths and thicknesses specified in the Contract Documents in accordance with OPSS.MUNI 351 and OPSD 310.010, including drop curbs for pedestrian crossings. The Contractor shall excavate as necessary per OPSS.MUNI 206 to install geotextile, geogrid and the supporting Granular "A" & "B" base material. Excess material shall be managed in accordance with OPSS.MUNI 180 and SP 5.

Formwork shall be according to OPSS.MUNI 919 and shall be set true to the lines and grades specified in the Contract Documents and in direct contact with the subgrade or granular course.

Sections of concrete sidewalk at the commercial entrances shall have a thickness of 200mm as identified per OPSD 310.010. Reinforcing shall be included in concrete sidewalks constructed at commercial entrances as indicated on the contract drawings. Reinforcing shall be welded mesh MW9.1 x MW9 x 152.

Concrete sidewalk placed abutting concrete curb and gutter or existing concrete sidewalk shall be separated utilizing an expansion joint of bituminous impregnated softboard, 12mm thick.

Included under the Item Concrete Sidewalk (200mm Thickness) is the preparation of the subgrade per OPSS.MUNI 206 as well as supply and placement of geotextile and geogrid below the sidewalk, supply and placement of the required granular base material and supporting material, specifically the granulars between the top of subgrade or to the bottom of sidewalk per OPSS.MUNI 1010. Subgrade and base materials shall be compacted in accordance with OPSS.MUNI 501.

The Contractor will be required to supply computer generated tickets of the concrete loads, in duplicate that will be signed by the Owner's representative on delivery.

MEASUREMENT FOR PAYMENT

Measurement for payment for the above referenced tender items shall be by area in square metre of concrete sidewalk installed. There will be no measurement for excavation, geotextile, geogrid, granulars or reinforcing mesh.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work, including excavation, geotextile, geogrid, base granulars, and supply and installation of sidewalk reinforcing.

ITEM B.56 PAVEMENT MARKINGS

SCOPE

These items are for the installation of pavement markings.

REFERENCES

The requirements outlined in OPSS.MUNI 710 and MTO Book 15 shall apply to this item.

MATERIALS

Pavement markings and symbols shall be applied with Traffic Paint with Glass beads in accordance with OPSS 1750.

CONSTRUCTION

Permanent pavement markings for Pedestrian Crossing shall be placed to restore pre-construction conditions at the intersection of Mellick Avenue and 9th Street North. Pavement markings shall include a 10cm wide solid yellow centre line and 60cm wide solid white stop block.

MEASUREMENT FOR PAYMENT

Measurement for Payment for the above reference tender item shall be lump sum.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender item shall be full compensation for all labour, equipment, and materials to do the work.

ITEM B.57 RESTORE RETAINING WALLS, WALKWAYS, & GARDENS

SCOPE

This item is for the salvage and restoration of existing retaining walls, walkways, and landscaping gardens to preconstruction or better conditions.

CONSTRUCTION

Existing retaining walls and garden materials shall be salvaged for reinstallation once construction of the associated works is completed, including pressure testing of watermain where impacted.

Retaining walls, walkways, and gardens shall be reinstalled at the original locations to a minimum preconstruction condition and satisfactory to the Engineer, City and Resident. Any damage to existing materials will be the Contractor's responsibility to replace at their cost.

MEASUREMENT FOR PAYMENT

There will be no measurement for payment. Payment will be by lump sum upon completion of the reinstallation works.

BASIS OF PAYMENT

Payment at the Contract Price for the above tender items shall be full compensation for all labour, equipment and material to do the work.

ITEM B.58 TOPSOIL AND SOD

SCOPE

This item is for the installation of imported topsoil and sod.
REFERENCES

The requirements outlined in OPSS.MUNI 802 and OPSS.MUNI 803 shall apply to this item.

MATERIALS

Topsoil shall be imported.

CONSTRUCTION

Topsoil shall be placed to a compacted uniform depth of 100mm on areas specified in the Contract Drawings and as directed by the Engineer. The Contractor shall excavate or fill to grades and elevations required for placement of the topsoil and sod to final elevations.

Sodding shall not commence until the surface preparation has been approved in writing by the Contract Administrator.

MEASUREMENT FOR PAYMENT

Measurement for payment for the above referenced tender items shall be by the square metre coverage of topsoil and sod placed to a minimum 100mm depth.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work.

ITEM B.59 STREET LIGHTING – CONDUIT IN BOULEVARD
ITEM B.60 STREET LIGHTING – CONDUIT IN ROADWAY
ITEM B61 STREET LIGHTING – POLE BASES

SCOPE

These items are for the installation of street lighting pole bases and conduit.

MATERIALS

Roadway crossings conduit shall be Rigid PVC.

Boulevard conduit shall be Rigid PVC or Corline.

CONSTRUCTION

The Contractor shall be responsible for all regulatory permitting required to facilitate the installations. The contractor shall complete the installations in accordance with all specifications provided on the contract documents.

Boulevard conduit shall be a minimum 0.6m burial depth.

Roadway crossings conduit shall a minimum 1.0m burial depth. Roadways shall be reinstalled to existing conditions or better.

Conduit shall be installed with 150mm Granular A bedding, embedment and cover. Electrical warning tape shall be installed 300mm above all conduit.

Pole bases shall be installed in accordance with the “City of Kenora Concrete Pole Base Footings, May 2011” details.

MEASUREMENT FOR PAYMENT

Measurement for payment for Items B.59 & B.60 shall be linear metre of conduit installed. Measurement for payment for Item B.61 shall be for each pole base installed.

BASIS OF PAYMENT

Payment at the Contract Price for Item B.59 & B.60 shall be full compensation for all labour, equipment, and materials to do the work, including excavation, granulars and roadway restoration.

PROVISIONAL SPECIFICATION ITEMS

ITEM B.62 SOILS INVESTIGATIONS & REMEDIATION

SCOPE

Prior to any construction activities, the Contractor shall conduct soils investigations and remediation for the any areas identified in the Excess Soil Quality Testing Report. A copy of the final report will be provided to the contactor.

CONSTRUCTION

The contractor shall coordinate the investigations with the Contract Administrator, who will attend site and oversee the remediation works. The contractor, at the direction of the Contract Administrator, shall sawcut and remove the existing asphalt, and subsequently remove the impacted soils to the limits determined by the Contract Administrator during investigations. Excavations are to be backfilled with granular materials and asphaltic cold patch materials utilized where investigations are completed in existing paved areas. Excavated soils shall be delivered to the City's Landfill and disposed of in accordance with SP 5.

MEASUREMENT FOR PAYMENT

Payment shall be made based on a Time and Materials basis to complete the work, based on unit rates provided in the form of tender for corresponding items, ie. asphalt removal, excavation, granulars. A cash allowance has been allocated to cover this work, however the amount payable to the contractor will be based on actual work completed. The contractor is not guaranteed the full amount of this allowance.

BASIS OF PAYMENT

Payment at the Contract Price for the above referenced tender items shall be full compensation for all labour, equipment, and materials to do the work.

APPENDIX H
SUPPLEMENTAL REPORTS

CITY OF KENORA

The following reports are available upon request:

- Back Lane Geotechnical Report
- Mellick Avenue Geotechnical Report
- Excess Soils Characterization Report for Mellick Avenue will be supplied to the successful bidder