



## TRADERS CROSSING

1462 OLD #117 HWY BAYSVILLE,  
TOWNSHIP OF LAKE OF BAYS,  
DISTRICT OF MUSKOKA, ONTARIO



PINESTONE ENGINEERING LIMITED | [www.pel.ca](http://www.pel.ca)

SHEET NO.

EX-1  
PH-1  
SANITARY-1  
WATER-1  
SWM-1  
DET-1

DESCRIPTION

EXISTING CONDITIONS PLAN  
PHASING PLAN  
SITE SANITARY SEWAGE COLLECTION PLAN  
SITE WATER DISTRIBUTION PLAN  
SITE GRADING STORMWATER MANAGEMENT AND CONSTRUCTION MITIGATION PLAN  
STANDARD NOTES AND CONSTRUCTION DETAILS

## INDEX

PROJECT NO. 22-11710-M

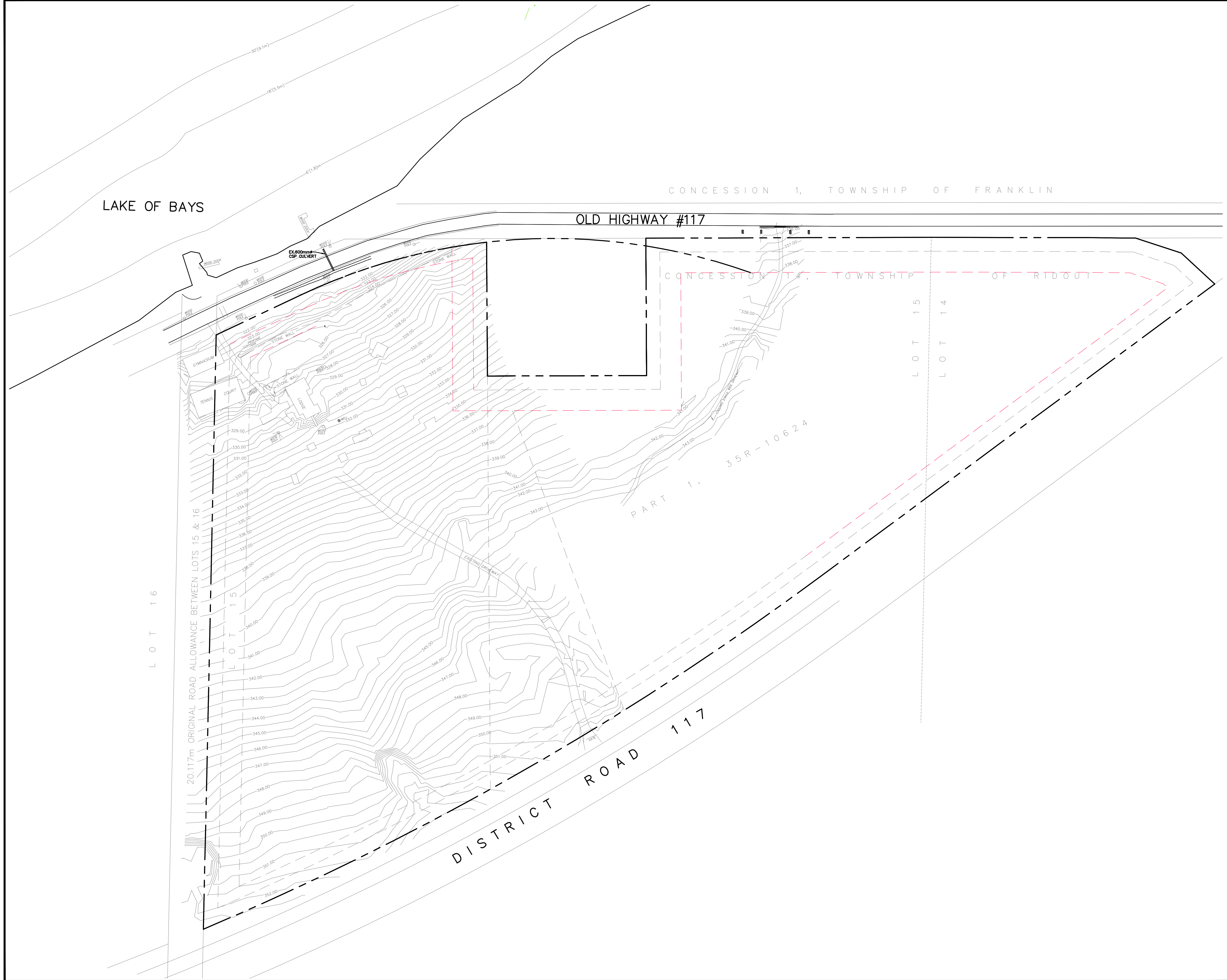
FOR REVIEW  
AUGUST 2023



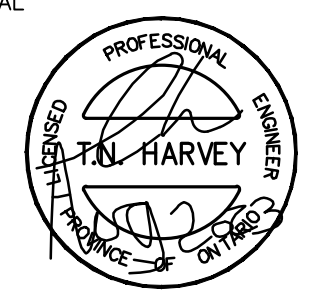
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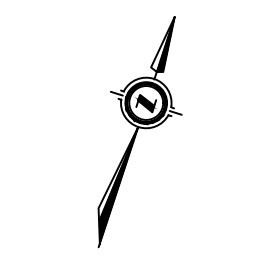


NO.	YY.MM.DD	REVISION	BY
1	23.08.14	SITE PLAN REVISION	G.N.



PROFESSIONAL ENGINEER  
PAUL HARVEY  
MUSKOKA DISTRICT

NORTH ARROW



DESIGN BY:	T.H.
DRAWN BY:	J.L.
CHECKED:	T.H.
DATE:	MAY 2023
SCALE:	1:1000

CLIENT/PROJECT

**TRADERS CROSSING**  
1462 OLD #117 HWY BAYSVILLE,  
LAKE OF BAYS TOWNSHIP  
MUSKOKA, ONTARIO

DRAWING TITLE

**EXISTING CONDITIONS PLAN**

PROJECT NO.	DRAWING NO.	REVISION
22-11710M	EX-1	1



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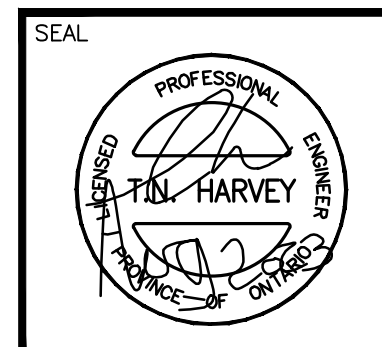
**NOTES**

1. TOPOGRAPHIC INFORMATION PROVIDED BY TULLOCH ENGINEERING AND SURVEYING.
2. SITE PLAN PROVIDED BY MDP LANDSCAPE ARCHITECTS
3. PATHWAY CULVERT TO BE 300mm Ø MIN.
4. THIS PLAN TO BE USED IN CONJUNCTION WITH THE LANDSCAPE PLAN.
5. PRIOR TO ANY IN WATER WORK PROCEEDINGS DRAWINGS DETAILING THE WORKS ARE TO BE SUBMITTED TO MNR AND DFO FOR REVIEW AND ALL NECESSARY PERMITS ARE TO BE SECURED.

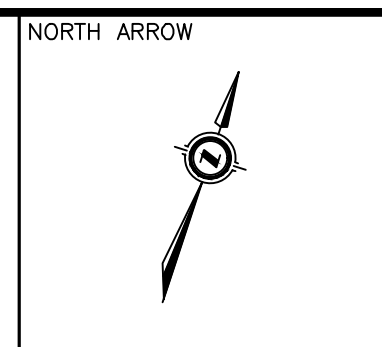
**LEGEND**

-  PHASE LIMIT
-  PHASE 1
-  PHASE 2

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**TRADERS CROSSING**  
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DRAWING TITLE

**PHASING PLAN**

PROJECT NO.	DRAWING NO.	REVISION
22-11710M	PH-1	1





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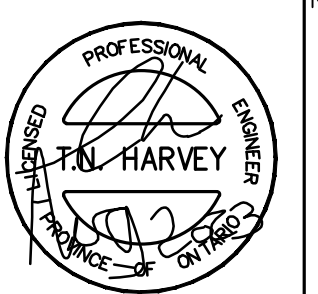
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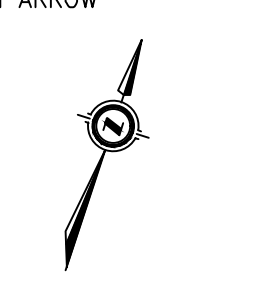
- PRIVATE SEWAGE PUMP  
E-ONE OR EQUIVALENT
- 50mmØ P.E. FORCEMAIN
- 38mmØ P.E. FORCEMAIN

1	23.08.14	SITE PLAN REVISION	G.N.
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SEAL



NORTH ARROW

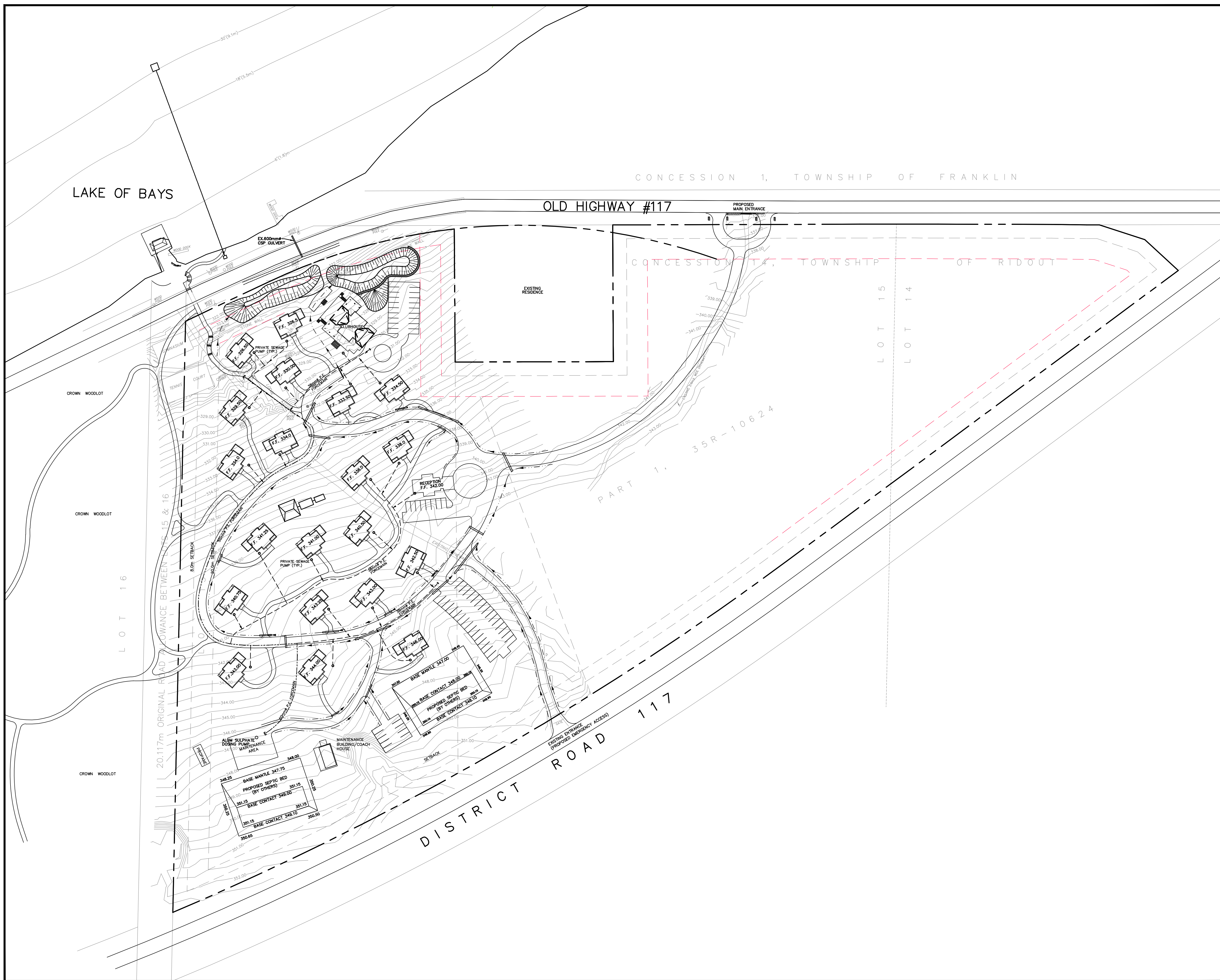


DESIGN BY:	T.H.
DRAWN BY:	J.L.
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DATE:	MARCH 2023
SCALE:	1:1000

CLIENT/PROJECT  
**TRADERS CROSSING**  
1462 OLD #117 HWY BAYSVILLE,  
LAKE OF BAYS TOWNSHIP  
MUSKOKA, ONTARIO

DRAWING TITLE  
**SITE SANITARY SEWER  
COLLECTION PLAN**

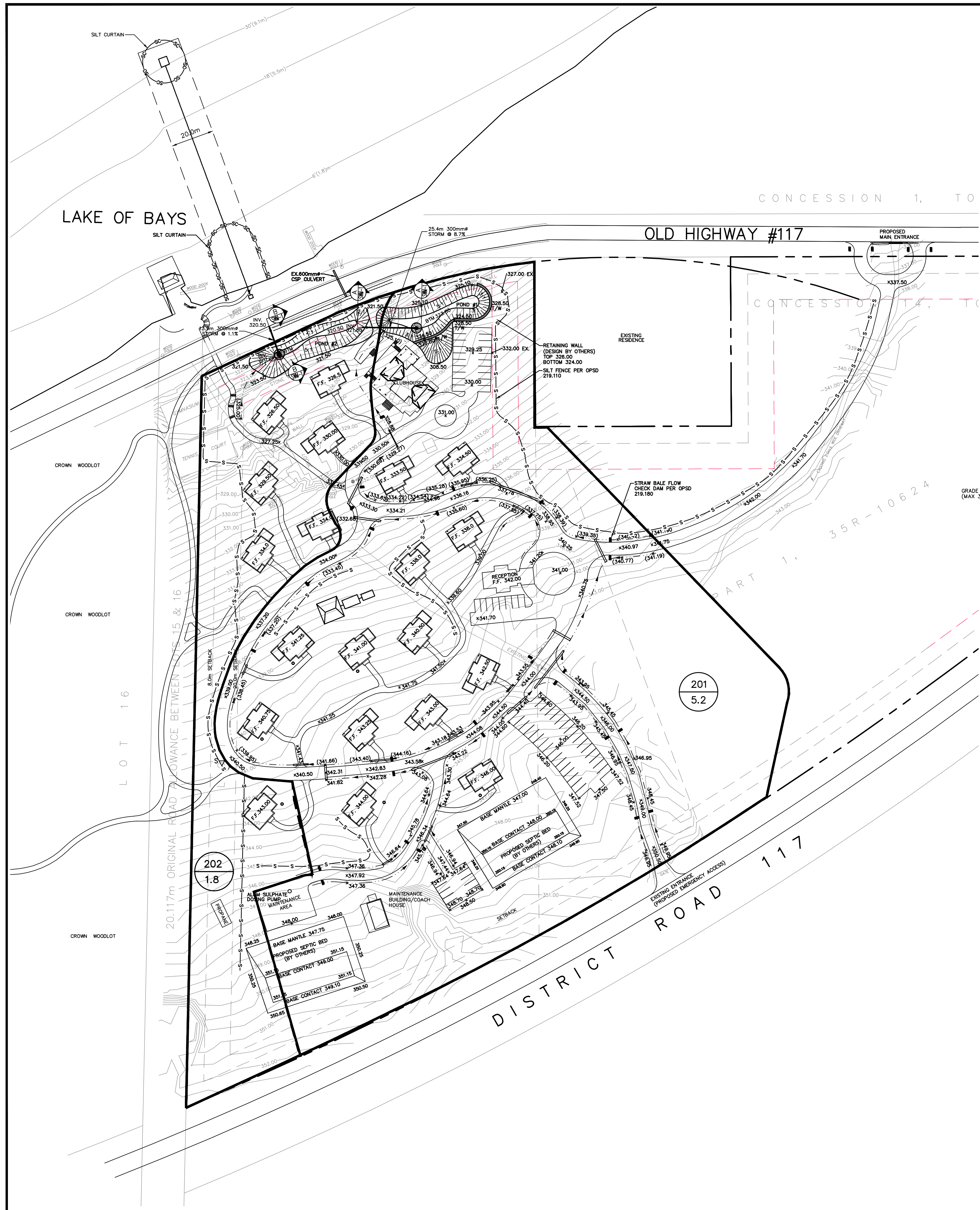
PROJECT NO.	DRAWING NO.	REVISION
22-11710M	SAN-1	1





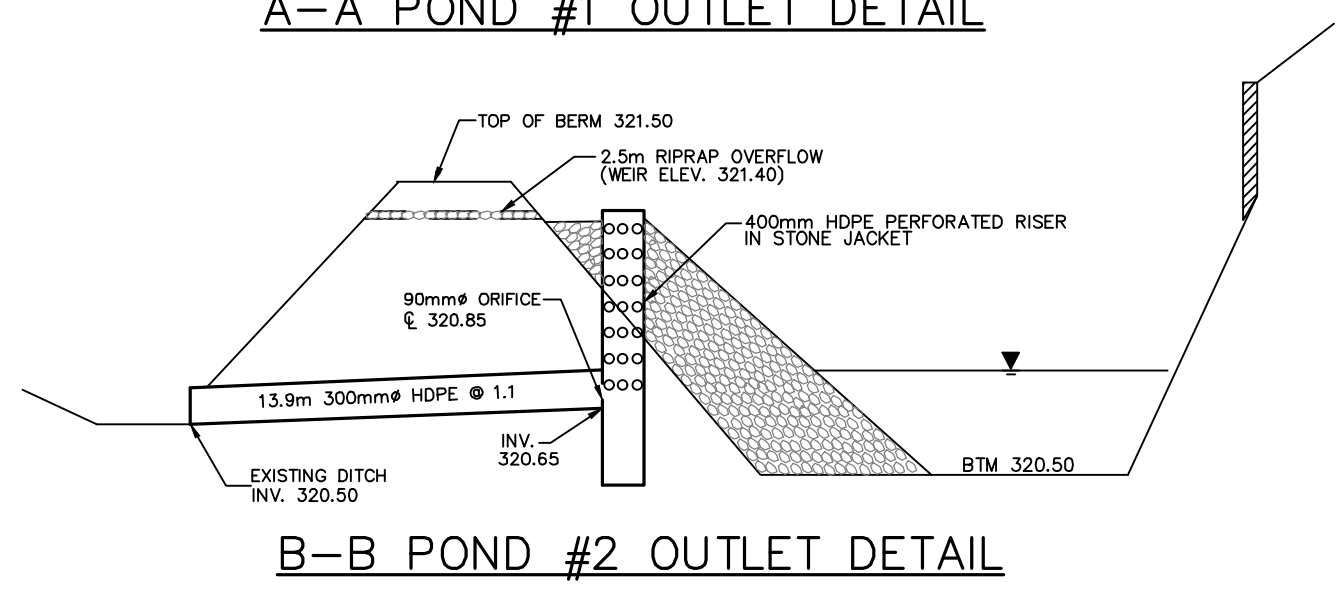
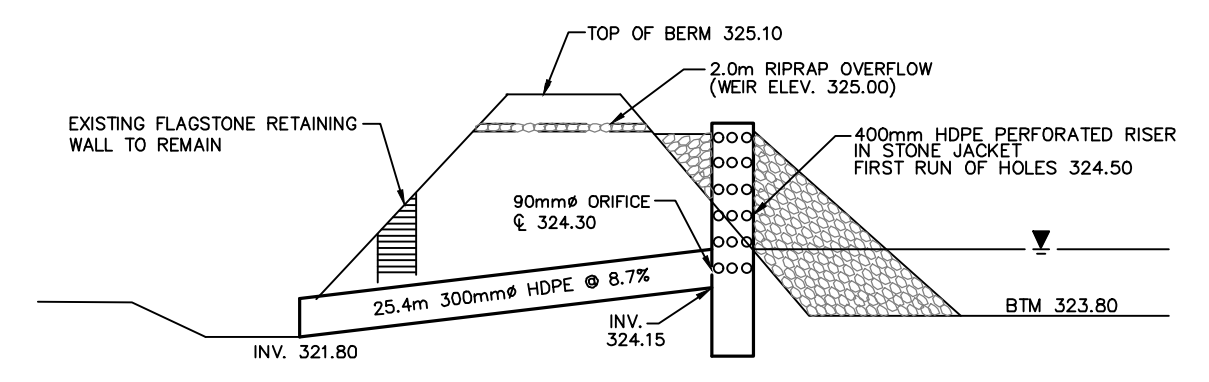
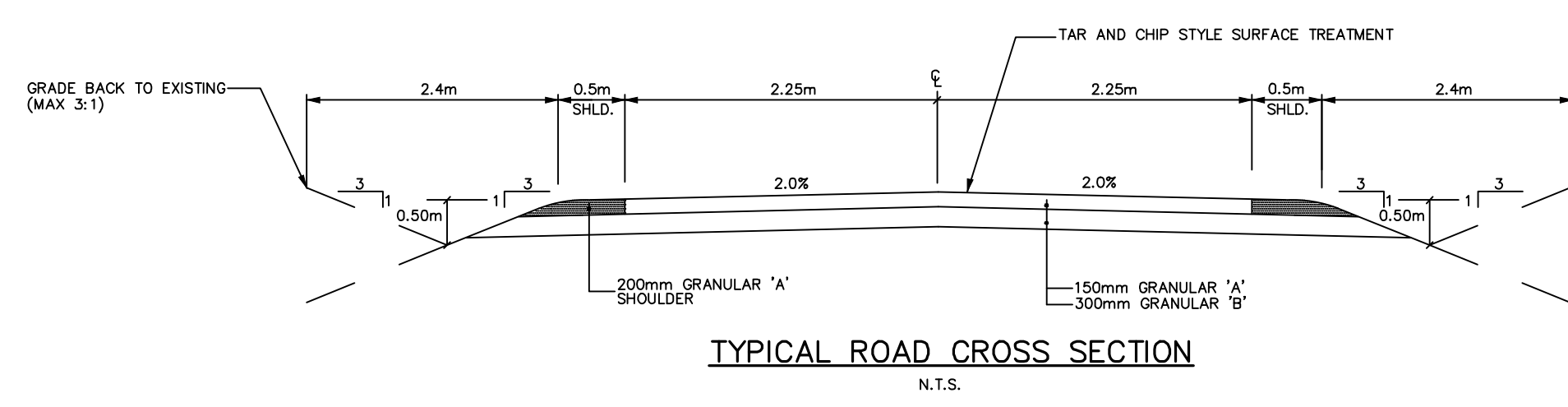
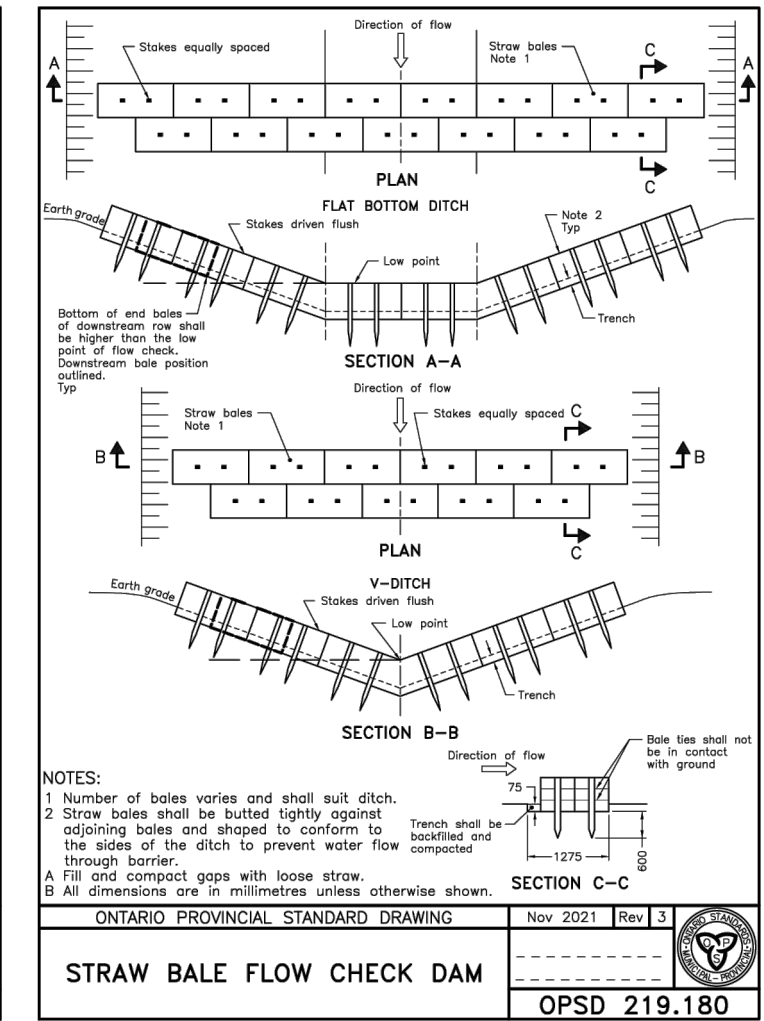
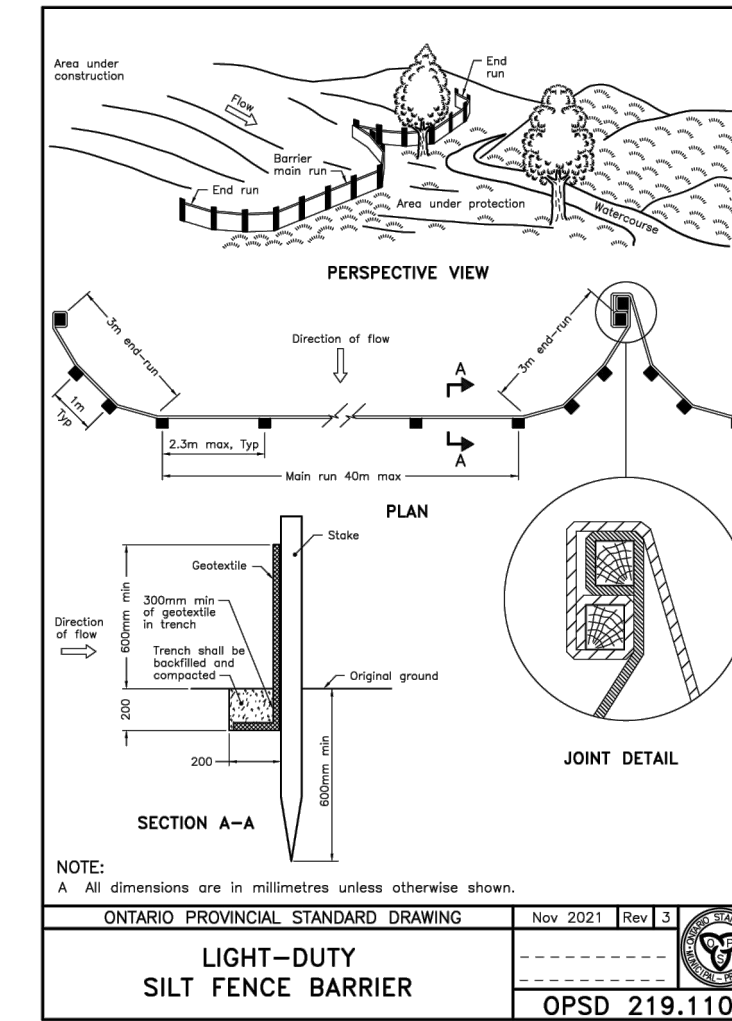






**EROSION CONTROL NOTES:**

1. All silt fencing to be installed prior to any grading or excavation.
2. Erosion control fencing to be installed around the base of all stockpiles.
3. Additional erosion control measures may be required as site development progresses. Contractor to provide all additional erosion control structures as directed by the engineer.
4. Pinestone Engineering Ltd. to monitor erosion control structures to ensure fencing is installed and maintenance is performed to municipal requirements.
5. Erosion control structures to be monitored regularly and any damage repaired immediately. Sediments to be removed when accumulations reach a maximum of 1/2 the height of the fence.
6. All erosion control structures to remain in place until all disturbed ground have been re-stabilized either by paving or restoration of vegetative ground cover.
7. No alternate methods of erosion protection shall be permitted unless approved Pinestone Engineering Ltd. and the Township of the Lake of Bays department of public works.
8. Contractor is responsible for municipal roadway to be cleared of all sediments from vehicular tracking etc. at the end of each day.

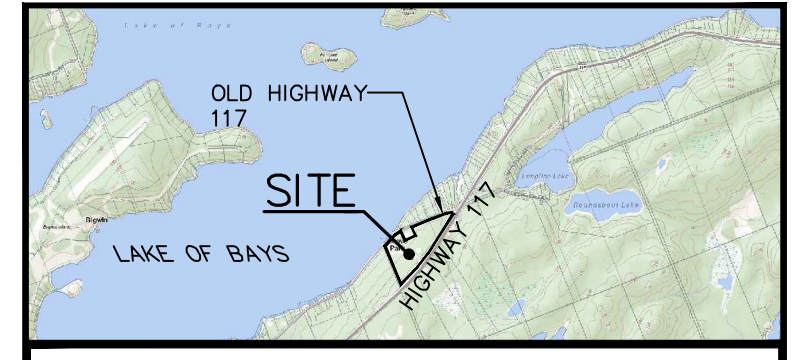


**PEL**  
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- NOTES**
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  2. SITE PLAN PROVIDED BY MDP LANDSCAPE ARCHITECTS
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**LEGEND**

- STRAW BALE
- SILTATION FENCE
- 202 CATCHMENT NO.
- 1.8 AREA OF CATCHMENT (ha)
- CATCHMENT LIMIT
- X 342.10 PROPOSED ELEVATION
- PARKING LOT DRAINAGE
- LIMITS OF TREE CLEARING

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CLIENT/PROJECT

**TRADERS CROSSING  
1462 OLD #117 HWY BAYSVILLE,  
LAKE OF BAYS TOWNSHIP  
MUSKOKA, ONTARIO**

DRAWING TITLE

**GRADING, STORMWATER  
MANAGEMENT, AND  
CONSTRUCTION MITIGATION PLAN**

PROJECT NO.	DRAWING NO.	REVISION
06-10611	SWM1	1



**GENERAL NOTES**

- All standards in accordance with current Ontario Provincial Standard Drawings (OPSD) and Ontario Provincial Standard Specifications (OPSS) unless otherwise noted.
- All works shall conform to The District Municipality of Muskoka Engineering Design Criteria and Standards Manual.
- All dimensions are in metres. Pipe sizes in millimetres unless otherwise noted.
- Notify Bell Canada, Union Gas, Water and Sewer, Hydro and Cable Departments (where applicable) 72 hours prior to commencement for locates.
- The Contractor shall coordinate the works with the Engineer who shall oversee the project on behalf of the owner.
- All construction to be completed to the satisfaction of the Engineer.
- All services and utilities to be supported as per OPSD-1007.01.
- All trenching to be in accordance with the Occupational Health and Safety Act.
- All traffic control and signage to be in accordance with M.T.O. Book 7 requirements.
- District of Muskoka, Township of Lake of Bays and Engineer to be notified at least 72 hours prior to construction.
- Wherever pipes are passing through uncompacted fill areas, the bedding trench shall be excavated to the undisturbed ground level and backfilled with Granular 'A' compacted to 95% standard proctor density or as otherwise shown on the drawings.
- Maintain a minimum cover of 1.8m for water mains or as otherwise shown on the drawings with insulation.
- Perform all blasting in accordance with the specification. Undertake pre-blast survey and provide copy to Engineer prior to commencement of blasting operations.
- The location of underground and above ground utilities and structures shown on drawings is approximate only and may not be complete. The exact location of all utilities and structures shall be determined by consulting the Municipal authorities and Utilities companies concerned. The contractor shall prove the exact location of all utilities and structures before construction and shall be responsible for adequately protecting them against damage, assuming all liabilities for damage of such.
- The Contractor must check and verify dimensions, obtain all utility locates, and obtain all required permits and licenses and verify existing service elevations before proceeding with any work.
- Latest approved drawings to be used for construction and all discrepancies reported to the Engineer.
- Drawings are not to be scaled.
- All materials to be used on this project shall be lead free.
- Pipe length as labeled is measured horizontally along pipe centre line and may differ from baseline chainage where baseline is not parallel to pipe.
- Utilize erosion and siltation controls as necessary during construction to control sediment/silt runoff from the site.
- Ensure accessibility to existing residential driveways at all times.
- Ensure adequate protection to all culverts.
- Building storm outlets are not to connect to the sanitary lateral and are to discharge to grade.

**FORCEMAIN SEWER NOTES**

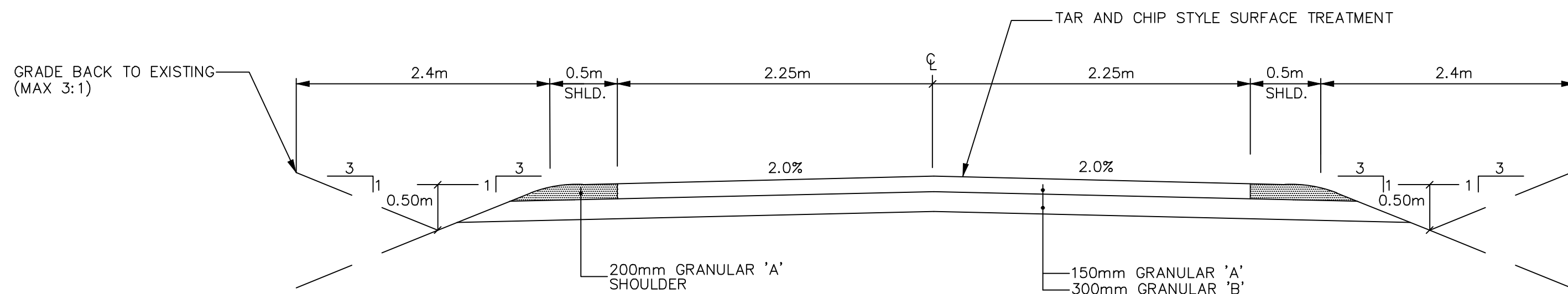
- Construction shall conform to OPSS 412.
- Install No. 12 A.W.G. Type T.W.U. 750 660V insulated stranded copper tracer wire rated for underground use on all low-pressure sewers and services. Tracer wire at valve boxes to be installed per DMM 590.
- Forcemain sewers to have minimum 1.2 m cover.
- Unless otherwise noted, pipe to be CSA Series 160 (DR11) HDPE. All pipe joints to be to be joined with compression fittings. All fittings to be brass with compression type connections. All products to be CSA certified.
- Pipe embedment and backfill shall conform to OPSD 802.010 and 802.013. Pipe embedment material to springline shall consist of Granular "A" or 19mm diameter clear stone. Embedment from springline to 300mm above pipe shall consist of sand. Trench backfill to road subgrade elevation shall consist of approved native material compacted to 95% SPD.
- Low-pressure sewers to be pressure tested in accordance with the Ontario Building Code.

**WATERMAIN NOTES**

- Work shall conform to OPSS. 441.
- Install coated No. 12 gauge standard tracer wire on all water mains as per District Standards. Tracer wire at valve boxes to conform to DMM-213
- All water mains to have 1.8m minimum cover as shown on the drawings.
- Unless noted otherwise, all water mains to be Class 235(DR 18) PVC material in accordance with AWWA C-900 Standard. Exterior of all uncoated D.I. fittings, valves, mechanical joint restraints & associated connections shall have denso petrolatum mastic corrosion protection.
- All dimensions are in metres. Pipe sizes are in millimetres unless otherwise noted.
- Exact horizontal and vertical alignment of existing watermain at point of connection to be determined in the field.
- Valve and Valve boxes to be installed accordance with OPSS. 441
- Vertical bend distances (DMM-201) are not indicated on drawings and are to be installed as required. All watermain fittings tee's, bends, end caps etc, must comply with approved products list for the District Municipality of Muskoka
- Water mains located in fill shall have mechanically restrained joints and be bedded on compacted Granular 'A' founded on native ground. Granular 'A' to be compacted to 95% SPD.
- Water mains must be pressure tested (1000 kPa), chlorinated, and pigged with foam swabs as directed by the Engineer. Hydrostatic testing as per AWWA standard C651. Bacteriological testing as per AWWA Standard C651 and DMM Standard operating procedure (SOP) WS-09.
- All gate valves shall be resilient seat type to AWWA C-509 Standards.
- All water services to be 25mm dia. HDPE series 160 unless otherwise noted. Provide 1.8m cover for water services at ditch crossings. Service saddles shall be all stainless steel double bolt, fully galvanized, Rebar 2616 Boss Pad, or Cambridge Brass 8403 PG. Pipe embedment and backfill shall conform to OPSD 802.010 and 802.013. Pipe embedment material to springline shall consist of Granular "A" or 19mm diameter clear stone. Embedment from springline to 300mm above pipe shall consist of sand. Trench backfill to road subgrade elevation shall consist of approved native material compacted to 95% SPD.
- Watermain bedding shall be Granular 'A' to OPSD-802.010.
- Vertical and horizontal bends in watermain to be achieved by manufactured bends only.
- Hydrants shall be pumper type with two (2) 2 1/2" hose nozzles and have plugged boots. Pumper nozzle shall be 4 1/2" Storz quick connect. Hydrants make shall be Clow Concord Premiere D67-M or Mueller Canada Valve Century painted standard hydrant red and supplied with hydrant marker per DMM 204.
- Water mains with gradients 4:1 or greater to be anchored. Shop drawings to be submitted for approval.
- All curb stops shall be ball type with compression joint inlet and outlet, non draining, no lead or brass construction, with blow out proof stainless steel stems and unfilled Teflon seats, rated for 300psi conforming to ANSI/AWWA C800-05 and NSF/ANSI 61, drinking water system components-Health Effects. Connections of newly constructed water mains to existing water mains in accordance with AWWA standard C651 and DMM SOP WS-40.
- Standing water test and sewer test to be completed in accordance with District of Muskoka guidelines. District of Muskoka Staff to be present during standing water test and sag limits. All high points on the watermain shall receive an A.R.I. newest model conforming with- A.R.I. D-090-P within a CB structure OPSD 705.010 c/w Autostable and HDPE risers.

**RESTORATION NOTES**

- Reinstate roads to previous condition or better, where disturbed by construction activity.
- Contractor to restore driveways and ditch work in areas disturbed by construction to equal or better conditions.
- Minimum gravel driveway restoration to be 150mm, Granular 'A'. Asphalt Driveway restoration to be 50mm of HL3, existing gravel subgrade.
- All grassed areas disturbed during construction shall be restored with 100mm topsoil and sod or hydro mulched as per OPSS 507. Maintain until established.
- All restoration work to be completed to the satisfaction of the Engineer.



**TYPICAL ROAD CROSS SECTION**

N.T.S.



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SEAL

NORTH ARROW

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DRAWN BY:	J.L.
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CLIENT/PROJECT

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**STANDARD NOTES AND CONSTRUCTION DETAILS PLAN**

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<b>06-10611</b>	<b>DET-1</b>	<b>1</b>