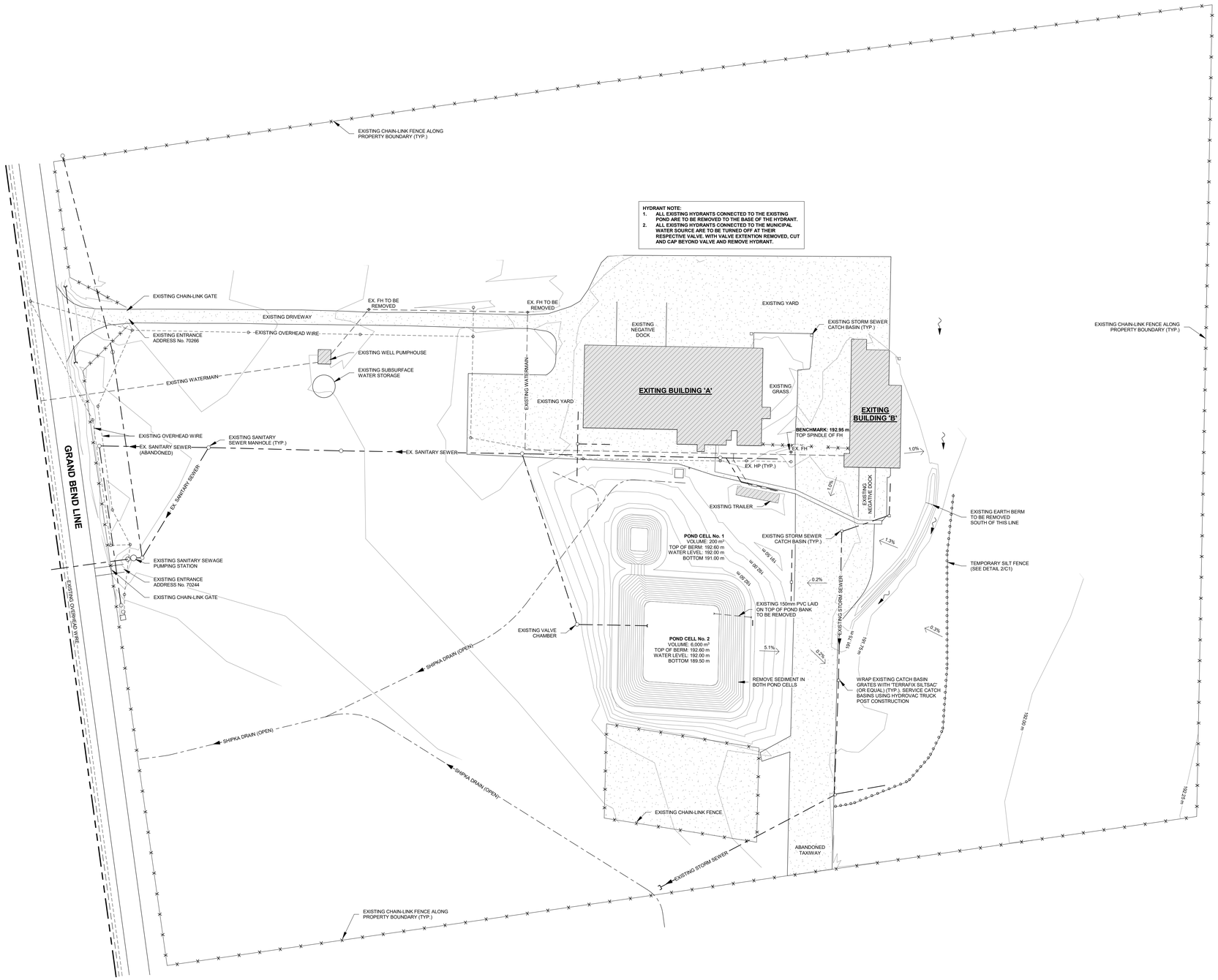
SITE LEGEND

BD	BOLLARD
CB	CATCH BASIN
CS	CURB STOP
FH	FIRE HYDRANT
FM	FORCEMAIN
GUY	GUY WIRE
GV	GUILLOTINE VALVE
HP	HYDRO POLE
INV	INVERT
MH	MAINTENANCE HOLE
SAN	SANITARY SEWER
STM	STORM SEWER
T/G	TOP OF GRATE
WS	WATER SERVICE
WTM	WATERMAIN
WV	WATER VALVE
190.00	EXISTING ELEVATION
+ 190.00 m	PROPOSED ELEVATION
190.00 m	ELEVATION CONTOUR
1.0%	DIRECTION AND SLOPE OF OVERLAND WATER FLOW
	PROPOSED SWALE
A	SIGN AND POST
1	# OF PARKING SPACES
RWL	ROOF WATER LEADER

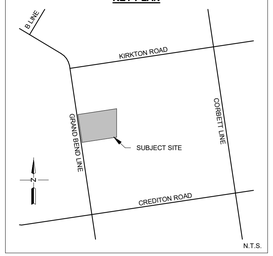
BENCHMARK ELEVATION: 192.95 m
TOP SPINDLE OF FIRE HYDRANT LOCATED SOUTH-EAST OF BUILDING 'A' ON THE SUBJECT PROPERTY.

HYDRANT NOTE:
1. **ALL EXISTING HYDRANTS CONNECTED TO THE EXISTING POND ARE TO BE REMOVED TO THE BASE OF THE HYDRANT.**
2. **ALL EXISTING HYDRANTS CONNECTED TO THE MUNICIPAL WATER SOURCE ARE TO BE TURNED OFF AT THEIR RESPECTIVE VALVE. WITH VALVE EXTENTION REMOVED, CUT AND CAP BEYOND VALVE AND REMOVE HYDRANT.**

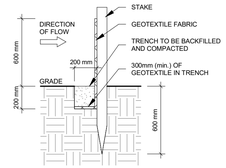


1 EXISTING CONDITIONS PLAN
1 : 1000

KEY PLAN



DRAWING LIST



NOTE:
CONTRACTOR TO MAINTAIN SILT FENCE BARRIER UNTIL VEGETATION HAS BEEN ESTABLISHED ON ALL EXPOSED SOILS WITHIN CATCHMENT AREA.

2 TEMPORARY SILT FENCE DETAIL
1 : 25

PART LOTS 13 & 14
CONCESSION 20
IN THE GEOGRAPHIC TOWNSHIP OF STEPHEN
MUNICIPALITY OF SOUTH HURON
COUNTY OF HURON

NOTES:
1. PROPERTY BOUNDARIES ARE APPROXIMATE AND BASED OFF OF GIS DATA AND SATELLITE IMAGERY.
2. EXISTING STRUCTURES AND SITE FEATURES FROM TOPOGRAPHIC SURVEY COMPLETED BY MR ENGINEERING AND DESIGN LTD., DATED JUNE 16, 2021.
3. SITE SKETCH IS CONCEPTUAL. FINAL SITING BY OTHERS.
4. THIS IS NOT A LEGAL SURVEY.

SCALE 1:1,000
0m 10m 20m 30m 40m 50m 100m

NOTES:

@	AT	OHD	OVERHEAD DOOR
c/w	COMPLETE WITH	PROJ.	PROJECTION
Ø	DIAMETER	P.T.	PRESSURE TREATED
FRR	FIRE-RESISTANCE RATING	r/w	REINFORCED WITH
FDN	FOUNDATION	SG	SLIDE GATE
e/w	EACH WAY	T&G	TOUNGE AND GROOVE
EX.	EXISTING	t/o	TOP OF
H	HIGH/HORIZONTAL	TYP.	TYPICAL
HR	HOUR	u/s	UNDERSIDE
LLV	LONG LEG VERTICAL	V	VERTICAL
LVL	LAMINATED VANEER LUMBER	w/	WITH
max.	MAXIMUM	W	WIDE
min.	MINIMUM	WWM	WELDED WIRE MESH
OBC	ONTARIO BUILDING CODE		
o/c	ON CENTER		

NORTH

DESIGN	TM	No.	REVISION DESCRIPTION	MM/DD/YY	CH'KD
DRAWN	TM	1.	ISSUED FOR SITE PLAN APPROVAL	09/08/21	MR
CHECKED	MR	2.	REVISED BASED ON MUNICIPAL COMMENT	09/09/21	MR
APPROVED	MR	3.	FIRE ACCESS ROUTE DIMENSIONS ADDED	11/04/21	MR
DATE DECEMBER 2021		4.	REVISED BASED ON ABCA COMMENT	12/22/21	MR

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MR ENGINEERING AND DESIGN LTD.
CIVIL • COMMERCIAL • AGRICULTURAL
145 Thames Road, West, Unit 4, Exeter, ON, N0M 1S3
Telephone: (519)-317-0128
Email: admin@mrengdesign.com

CONTRACTOR

LICENSED PROFESSIONAL ENGINEER
12/22/21
M. W. RUNGE
100162955
PROVINCE OF ONTARIO

70266 GRAND BEND LINE
GRAND BEND, ON
N0M 1T0

ELLEN & HEINER HOLLAND STORAGE WAREHOUSE

EXISTING CONDITIONS, REMOVALS AND EROSION CONTROL PLAN

PROJECT No. *MR21-218*

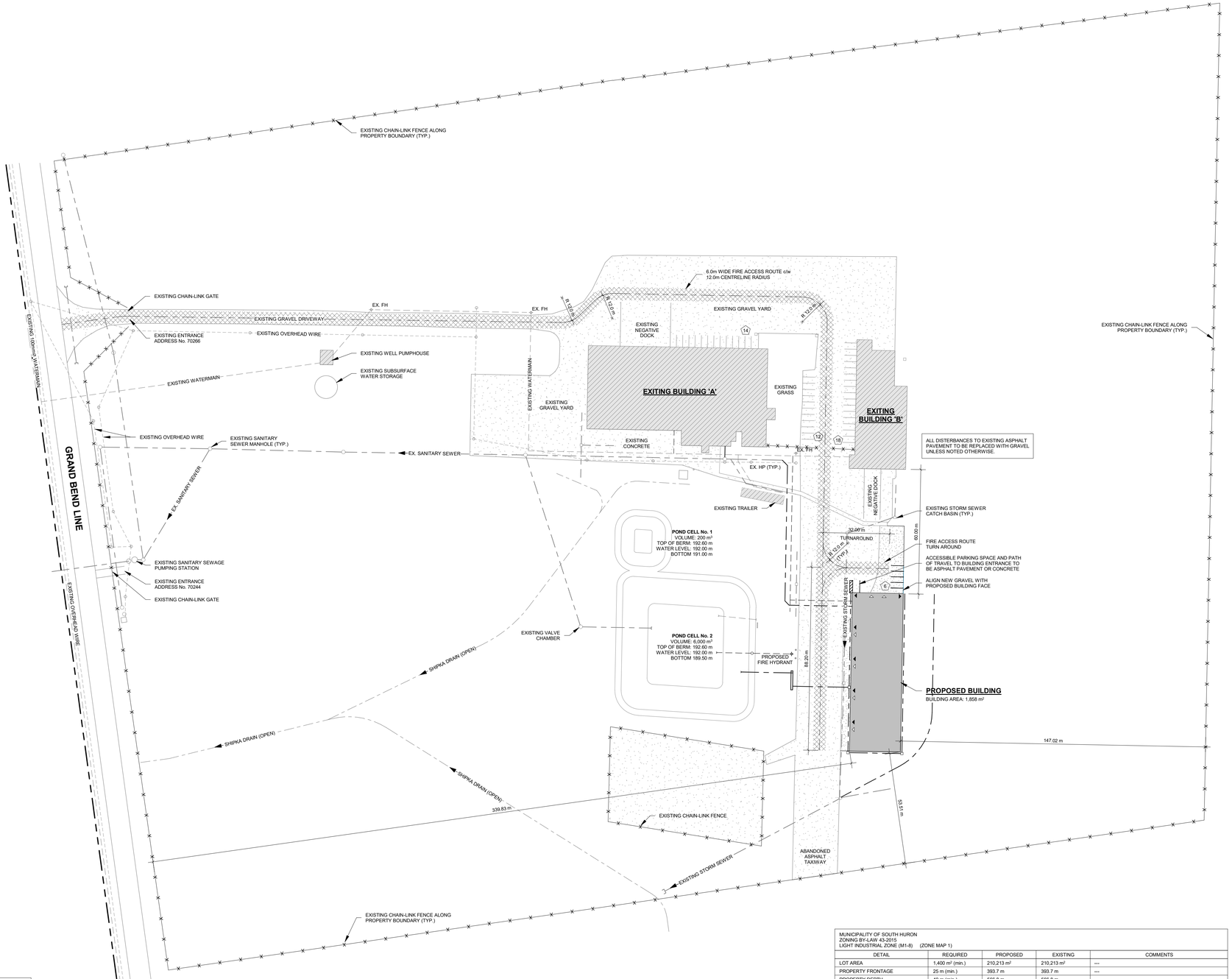
SHEET No. C1

SCALE As indicated

SITE LEGEND

BD	BOLLARD
CB	CATCH BASIN
CS	CURB STOP
FH	FIRE HYDRANT
FM	FORCEMAIN
GUY	GUY WIRE
GV	GUILLOTINE VALVE
HP	HYDRO POLE
INV	INVERT
MH	MAINTENANCE HOLE
SAN	SANITARY SEWER
STM	STORM SEWER
T/G	TOP OF GRATE
WS	WATER SERVICE
WTM	WATERMAIN
WV	WATER VALVE
192.00 m	EXISTING ELEVATION
+ 190.00 m	PROPOSED ELEVATION
190.00 m	ELEVATION CONTOUR
1.0%	DIRECTION AND SLOPE OF OVERLAND WATER FLOW
	PROPOSED SWALE
A	SIGN AND POST
(1)	# OF PARKING SPACES
RWL	ROOF WATER LEADER

BENCHMARK ELEVATION: 192.95 m
TOP SPINDLE OF FIRE HYDRANT LOCATED SOUTH-EAST OF BUILDING 'A' ON THE SUBJECT PROPERTY.



PART LOTS 13 & 14
CONCESSION 20

IN THE GEOGRAPHIC TOWNSHIP OF STEPHEN

MUNICIPALITY OF SOUTH HURON
COUNTY OF HURON

NOTES:

1. PROPERTY BOUNDARIES ARE APPROXIMATE AND BASED OFF OF GIS DATA AND SATELLITE IMAGERY.
2. EXISTING STRUCTURES AND SITE FEATURES FROM TOPOGRAPHIC SURVEY COMPLETED BY MR ENGINEERING AND DESIGN LTD., DATED JUNE 16, 2021.
3. SITE SKETCH IS CONCEPTUAL. FINAL SITING BY OTHERS.
4. THIS IS NOT A LEGAL SURVEY.

0m 10m 20m 30m 40m 50m 100m
SCALE 1:1,000

(1) SITE PLAN
1 : 1000

KEY PLAN

GENERAL NOTES:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL EXISTING CONDITIONS, LOCATIONS AND ELEVATIONS. REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING.
2. THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR IS TO OBTAIN ALL UTILITY LOCATES. NOT ALL EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY MAY BE SHOWN.
3. ALL EXTERIOR LIGHTING TO BE CONFINED TO THE BUILDING FACE , LANES AND PARKING AREAS SO AS NOT TO CAST A GLARE ONTO THE STREET OR ADJACENT PROPERTIES.

ITEM	ONTARIO BUILDING CODE DATA MATRIX PARTS 3 & 9		OBC REFERENCE	
1	70266 GRAND BEND LINE GRAND BEND, ON ■ NEW ☐ ADDITION ☐ ALTERATION ☐ CHANGE OF USE	☐ PART 11	■ PART 3	☐ PART 9 2.1.1 9.10.1.3
2	MAJOR OCCUPANCY(S) MEDIUM HAZARD INDUSTRIAL		3.1.2.1.(1)	9.10.2
3	BUILDING AREA (m²) EXISTING 0 NEW 1,858 TOTAL 1,858		1.4.1.2	1.4.1.2
4	2nd FLOOR AREA (m²) EXISTING 0 NEW 1,858 TOTAL 1,858		1.4.1.2	1.4.1.2
5	NUMBER OF STOREY(S) ABOVE GRADE 1 BELOW GRADE 0		3.2.1.1 & 1.4.1.2	1.4.1.2 & 9.10.4
6	HEIGHT OF BUILDING (m) 8.9		1.4.1.2	
7	NUMBER OF STREETS / ACCESS ROUTES 1		3.2.2.10 & 3.2.5.5	9.10.20
8	BUILDING CLASSIFICATION 3.2.2.70.		3.2.2.20-.83	9.10.2
9	SPRINKLER SYSTEM PROPOSED ☐ ENTIRE BUILDING ☐ BASEMENT ONLY ☐ IN LIEU OF ROOF RATING ☐ ADDITION ■ NOT REQUIRED		3.2.2.20-.83 3.2.1.5 3.2.2.17	9.10.8
10	STANDPIPE REQUIRED	☐ YES ■ NO	3.2.9	
11	FIRE ALARM REQUIRED	☐ YES ■ NO	3.2.4	9.10.18.2
12	WATER SERVICE/SUPPLY ADEQUATE	■ YES ☐ NO ☐ N/A	3.2.5.7	
13	HIGH BUILDING	☐ YES ■ NO	3.2.6	
14	PERMITTED CONSTRUCTION ☐ COMBUSTIBLE ☐ NON-COMBUSTIBLE ■ BOTH ACTUAL CONSTRUCTION ☐ COMBUSTIBLE ■ NON-COMBUSTIBLE ☐ BOTH		3.2.2.20.-.83	9.10.6
15	MEZZANINE(S) AREA (m²) N/A		3.2.1.1.(3)-(8)	9.10.4.1
16	OCCUPANCY BASED ON ☐ m²/PERSON ■ DESIGN OF BUILDING BUILDING OCCUPANT LOAD: LOAD: 10 PERSONS (SEE NOTE 1.) TOTAL LOAD: 10 PERSONS		3.1.17	9.9.1.3 & T 3.1.17.1
17	BARRIER-FREE DESIGN	■ YES ☐ NO	3.8	9.5.2
18	HAZARDOUS SUBSTANCES	☐ YES ■ NO	3.1.3.2.(1) & 3.3.1.19.(1)	9.10.1.3 (4)
19	REQUIRED FIRE RESISTANCE RATING (FRR) HORIZONTAL ASSEMBLIES FRR (HOURS) — LISTED DESIGN No. OR DESCRIPTION (SB-2) FLOORS 0.75 HOURS — N/A ROOF N/A HOURS — NON-COMBUSTIBLE MEZZANINE 0.75 HOURS — N/A FRR OF SUPPORTING MEMBERS (HOURS) — LISTED DESIGN No. OR DESCRIPTION (SB-2) FLOORS 0.75 HOURS — N/A ROOF N/A HOURS — NON-COMBUSTIBLE MEZZANINE 0.75 HOURS — N/A		3.2.2.20-.83 & 3.2.1.4	9.10.8 9.10.9
20	SPATIAL SEPARATION - CONSTRUCTION OF EXTERIOR WALLS (SEE NOTE 2.)		3.2.3	9.10.14

20 WALL	AREA OF EBF (m²)	L.D. (m)	L/H OR H/L	PERMITTED MAX. % OF OPENINGS	PROPOSED MAX. % OF OPENINGS	FRR (HOURS)	LISTED DESIGN OR DESCRIPTION	COMB. CONSTR	COMB. CONSTR. NON-COMB. CLADDING	NON-COMB. CONSTR.
EX. SOUTH	200.0	30.0	3:1	100	24.8	0		YES		
NORTH	192.0	30.0	2.7:1	100	27.1	0		YES		
SOUTH	192.0	53.5	2.7:1	100	0.0	0		YES		
EAST	522.6	147.0	11:1	100	0.4	0		YES		
WEST	522.6	339.8	11:1	100	22.0	0		YES		

21	FIRE SEPARATIONS							
	EXITS	☐ 0-HR	■ 0.75-HR	☐ 1-HR	☐ 1.5-HR	☐ 2-HR	3.4.4.1	9.9.4.2 & 9.9.4.7
	SERVICE ROOMS	☐ 0-HR	☐ 0.75-HR	■ 1-HR	☐ 1.5-HR	☐ 2-HR	3.6.2	9.10.10.3
	VERTICAL SERVICE SPACES	☐ 0-HR	☐ 0.75-HR	☐ 1-HR	☐ 1.5-HR	☐ 2-HR	3.6.3	
	HORIZONTAL SERVICE SPACES	☐ 0-HR	☐ 0.75-HR	☐ 1-HR	☐ 1.5-HR	☐ 2-HR	3.6.4	9.10.9.10
	JANITOR ROOMS	☐ 0-HR	■ 0.75-HR	☐ 1-HR	☐ 1.5-HR	☐ 2-HR	3.3.1.20	
	DIFFERENT OCCUPANCIES	☐ 0-HR	☐ 0.75-HR	☐ 1-HR	☐ 1.5-HR	☐ 2-HR	3.1.3. & 3.3.2-5	9.10.9
22	EXIT THROUGH A LOBBY		☐ YES	■ NO			3.4.4.2	9.9.8.5
23	INTERCONNECTED FLOOR SPACE		☐ YES	■ NO			3.2.8	9.9.4.7

24 PLUMBING FIXTURES			3.7.4	9.31
OCCUPANCY	OCCUPANT LOAD	WC REQUIRED	WC PROVIDED	
WAREHOUSE	10 PERSONS	1 FOR BOTH SEXES	1 FOR BOTH SEXES	

NOTE:

1. POST A PERMANENT SIGN INDICATING "10 PERSONS MAXIMUM OCCUPANT LOAD" IN A CONSPICUOUS LOCATION.
2. SPATIAL SEPARATION HAS BEEN CALCULATED FOR THE MAXIMUM AGGREGATE AREA OF UNPROTECTED OPENINGS IN THE EXTERIOR WALLS USING LINEAR AND BILINEAR INTERPOLATION OF OBC DIVISION B - PART 3, CLAUSE 3.2.3.1.(1)(a); TABLE 3.2.3.1.C.

MUNICIPALITY OF SOUTH HURON
ZONING BY-LAW 43-2015
LIGHT INDUSTRIAL ZONE (M1-8) (ZONE MAP 1)

DETAIL	REQUIRED	PROPOSED	EXISTING	COMMENTS
LOT AREA	1,400 m² (min.)	210,213 m²	210,213 m²	---
PROPERTY FRONTAGE	25 m (min.)	393.7 m	393.7 m	---
PROPERTY DEPTH	40 m (min.)	566.8 m	566.8 m	---
FRONT YARD	7 m (min.)	236.2 m	236.2 m	---
INTERIOR SIDE YARD	5 m (min.)	53.5 m	124.9 m	---
REAR YARD	30 m (min.)	147.0 m	147.0 m	---
LOT COVERAGE	50 % (max.)	2.5 %	3.4 %	---
LANDSCAPED OPEN SPACE	10 % (min.)	85.8 %	87.0 %	---
BUILDING HEIGHT	20 m (max.)	8.9 m	---	---
PARKING SPACES	28 SPACES (min.)	50 SPACES	44 SPACES	SEE NOTE 1.

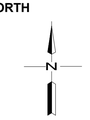
NOTE:

1. ON-SITE PARKING REQUIREMENTS
   a. INDUSTRIAL ESTABLISHMENT = 3 SPACES FOR EVERY 4 EMPLOYEES (18 SPACES) (BUILDING 'A' = 12 EMPLOYEES, BUILDING 'B' = 12 EMPLOYEES).
   b. WAREHOUSE = 1 SPACE PER 185 SQUARE METRES OF TOTAL FLOOR AREA (10 SPACES).

NOTES:

@	AT	OHD	OVERHEAD DOOR
c/w	COMPLETE WITH	PROJ.	PROJECTION
Ø	DIAMETER	P.T.	PRESSURE TREATED
FRR	FIRE-RESISTANCE RATING	r/w	REINFORCED WITH
FDN	FOUNDATION	SG	SLIDE GATE
e/w	EACH WAY	T&G	TOUNGE AND GROOVE
EX.	EXISTING	t/o	TOP OF
H	HIGH/HORIZONTAL	TYP.	TYPICAL
HR	HOUR	u/s	UNDERSIDE
LLV	LONG LEG VERTICAL	V	VERTICAL
LVL	LAMINATED VANEER LUMBER	w/	WITH
max.	MAXIMUM	W	WIDE
min.	MINIMUM	WWM	WELDED WIRE MESH
OBC	ONTARIO BUILDING CODE		
o/c	ON CENTER		

NORTH



DESIGN	TM	No.	REVISION DESCRIPTION	MM/DD/YY	CH'KD
DRAWN	TM	1.	ISSUED FOR SITE PLAN APPROVAL	09/08/21	MR
CHECKED	MR	2.	REVISED BASED ON MUNICIPAL COMMENT	09/09/21	MR
APPROVED	MR	3.	FIRE ACCESS ROUTE DIMENSIONS ADDED	11/04/21	MR
DATE	DECEMBER 2021	4.	REVISED BASED ON ABCA COMMENT	12/22/21	MR

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CONTRACTOR

LICENSED PROFESSIONAL ENGINEER
12/22/21
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100162955
PROVINCE OF ONTARIO

70266 GRAND BEND LINE
GRAND BEND, ON
N0M 1T0

ELLEN & HEINER HOLLAND STORAGE WAREHOUSE

SITE PLAN

PROJECT No. *MR21-218*

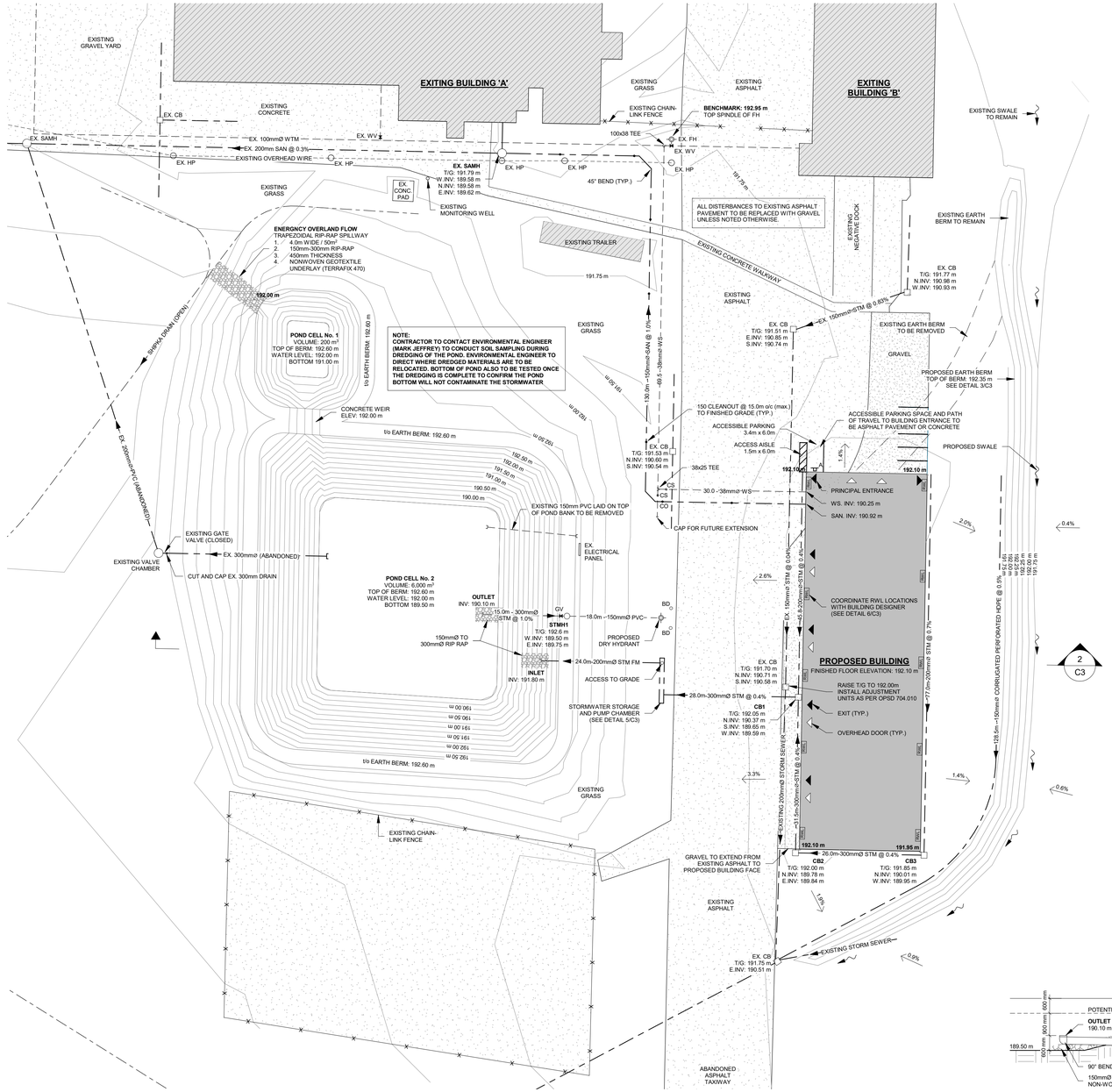
SHEET No. C2

SCALE As indicated

SITE LEGEND

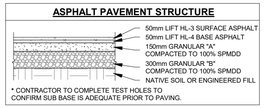
BD	BOLLARD
CB	CATCH BASIN
CS	CURB STOP
FH	FIRE HYDRANT
FM	FORCEMAIN
GUY	GUY WIRE
GV	GUILLOTINE VALVE
HP	HYDRO POLE
INV	INVERT
MH	MAINTENANCE HOLE
SAN	SANITARY SEWER
STM	STORM SEWER
T/G	TOP OF GRATE
WS	WATER SERVICE
WTM	WATERMAIN
WV	WATER VALVE
x 000.00	EXISTING ELEVATION
+ 190.00 m	PROPOSED ELEVATION
190.00 m	ELEVATION CONTOUR
1.0%	DIRECTION AND SLOPE OF OVERLAND WATER FLOW
	PROPOSED SWALE
A	SIGN AND POST
1	# OF PARKING SPACES
RWL	ROOF WATER LEADER

BENCHMARK ELEVATION: 192.95 m
TOP SPINDLE OF FIRE HYDRANT LOCATED SOUTH-EAST OF BUILMING 'A' ON THE SUBJECT PROPERTY.

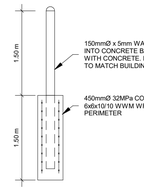


1 SITE GRADING AND SERVICING PLAN
1 : 500

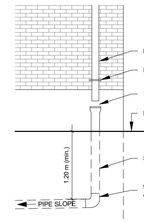
ASPHALT PAVEMENT STRUCTURE



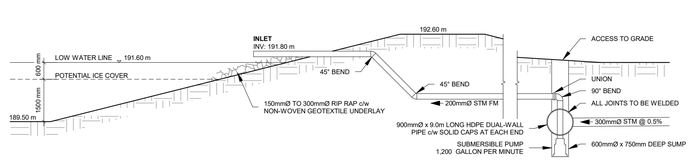
* CONTRACTOR TO COMPLETE TEST HOLES TO CONFIRM SUB BASE IS ADEQUATE PRIOR TO PAVING.



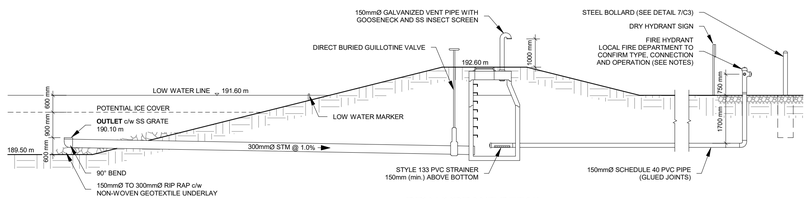
7 TYPICAL BOLLARD DETAIL
1 : 50



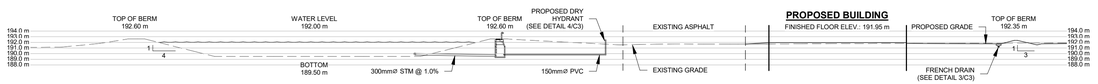
6 RWL TO STORM TRANSITION
1 : 50



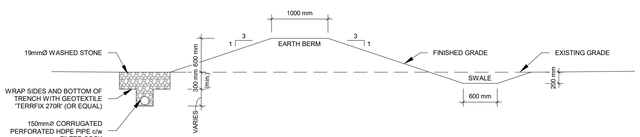
5 STORMWATER STORAGE AND PUMP CHAMBER
1 : 100



4 DRY HYDRANT DETAIL
1 : 100



2 SECTION A
1 : 500



3 FRENCH DRAIN DETAIL
1 : 50

GENERAL NOTES:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL EXISTING CONDITIONS, LOCATIONS AND ELEVATIONS. REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING.
2. THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR IS TO OBTAIN ALL UTILITY LOCATES. NOT ALL EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY MAY BE SHOWN.
3. ALL WORKS ON THE MUNICIPAL RIGHT-OF-WAY TO BE APPROVED BY THE MUNICIPALITY AND LOCAL ROADS AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF ALL BOULEVARD AREAS.
4. CONTRACTOR TO PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 (LATEST EDITION) FOR ALL WORKS WITHIN THE MUNICIPAL RIGHT-OF-WAY. CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLANS TO THE MUNICIPALITY/ENGINEER FOR REVIEW PRIOR TO COMMENCING WITH CONSTRUCTION.
5. PLAN TO BE READ IN CONJUNCTION WITH FUNCTIONAL SERVICING REPORT AND DRAWINGS PREPARED BY MR ENGINEERING AND DESIGN LTD.

SEDIMENT AND EROSION CONTROL:

1. PROTECT ALL EXPOSED SURFACES AND CONTROL ALL RUNOFF DURING CONSTRUCTION. PROTECT ALL CATCH BASINS, MAINTENANCE HOLES AND PIPE ENDS FROM SEDIMENT INTRUSION WITH GEOTEXTILE FABRIC (OR EQUAL).
2. CONTRACTOR TO INSTALL SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETE AND VEGETATIVE COVER IS ESTABLISHED.
3. SEDIMENT AND EROSION CONTROL MEASURES TO BE IN ACCORDANCE WITH THE MINISTRY OF NATURAL RESOURCES GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES.
4. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENT RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.
5. FOLLOWING COMPLETION OF THE PROPOSED WORKS, ALL STORM AND SANITARY SEWERS ARE TO BE FLUSHED, AND ALL CATCH BASIN AND MAINTENANCE HOLE SUMPS ARE TO BE CLEANED OF DEBRIS AND SILT.
6. SEE FUNCTIONAL SERVICING REPORT PREPARED BY MR ENGINEERING AND DESIGN LTD. FOR ONGOING MAINTENANCE RECOMMENDATIONS.

STORM SEWERS AND DRAINAGE:

1. ALL FINISHED GRADES TO DIRECT OVERLAND WATER FLOW AWAY FROM ALL STRUCTURES LOCATED ON-SITE. MAINTAIN POSITIVE DRAINAGE TO ALL CATCH BASINS.
2. BUILDING FOUNDATION WEEPING TILE DRAINAGE NOT TO BE DIRECTLY CONNECTED TO THE STORM SEWER SYSTEM. WEEPING TILE DRAINAGE MAY BE PUMPED TO THE STORM SEWER SYSTEM.
3. CATCH BASINS TO BE 600mm x 600mm PRECAST CONCRETE CATCH BASINS AS PER OPSD 705.010 COMPLETE WITH CAST IRON SQUARE FRAME GRATES AS PER OPSD 400.100.
4. MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES TO BE 1500mmØ PRECAST CONCRETE WITH ALUMINUM STEPS AT 300mm o/c AS PER OPSD 701.01. PRECAST CONCRETE SINGLE INLET FLAT CAP AS PER OPSD 703.011. PRECAST CONCRETE RISERS (OPSD 701.041) AND ADJUSTMENTS (OPSD 704.010) AS REQUIRED. MAINTENANCE HOLE LIDS TO BE AS PER OPSD 401.010. CATCH BASIN GRATES TO BE AS PER OPSD 400.100.
5. DITCH INLET CATCH BASINS TO BE 600mm x 600mm PRECAST CONCRETE AS PER OPSD 705.030 WITH SLOPE ON GRATES. DITCH INLET CATCH BASINS GRATES TO BE AS PER OPSD 403.010.
6. PROVIDE SPLASH PADS (OR EQUAL) FOR ALL EAVES TROUGH DOWN SPOUTS THAT DISCHARGE AT GRADE.
7. STORM SEWERS, 150mm AND SMALLER, SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR28 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.
8. STORM SEWERS, 200mm TO 375mm, SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR35 ASTM-D3034 OR RIBBED PVC SEWER PIPE CSA B182.4-M90 ASTM-F794 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS. RIBBED PVC NOT TO BE USED WITHIN RIGHT-OF-WAY.
9. STORM SEWERS LARGER THAN 375mm SHALL BE N-12 DUAL WALL HIGH-DENSITY POLYETHYLENE (HDPE) PIPE WITH INTEGRATED BELL AND SPIGOT UTILIZING SOIL-TIGHT GASKETS.
10. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, 802.031, OR 802.032. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. COVER MATERIAL TO BE GRANULAR "A" PLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
11. INSULATE STORM SEWER PIPES AS PER OPSD 1109.030 WHERE 1.2m COVER CANNOT BE ACHIEVED.

KEY PLAN

WATERMAINS:

1. WATER SERVICE CONNECTIONS 50mmØ AND SMALLER SHALL BE HDPE SERIES 160 AWWA C901 WITH SERVICE SADDLE.
2. WATERMAINS 100mmØ AND LARGER SHALL BE PVC AWWA C900 CLASS 150 INSTALLED WITH 1.9m (min.) OF COVER. FITTINGS 100mmØ AND LARGER SHALL BE PC CLASS 150 (DR18) CSA B137.3. PIPE JOINTS SHALL BE BELL AND SPIGOT WITH RUBBER GASKETS.
3. WATERMAIN SHALL HAVE 8 GAUGE 7 STRAND COPPER INSULATED TRACER WIRE OR #10 AWG SOLID STEEL CORE SOFT DRAWN HIGH STRENGTH TRACER WIRE STRAPPED TO TOP AT 5.0m INTERVALS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT ALL HYDRANTS AND CAD WELDED TO THE LOWER FLANGE OF THE HYDRANT.
4. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, 802.031, OR 802.032. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. COVER MATERIAL TO BE GRANULAR "A" PLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
5. SERVICE SADDLE FOR PIPE DIAMETERS LESS THAN 100mm SHALL BE ROBAR 2600 SERIES SERVICE SADDLE WITH T-304 STAINLESS STEEL BOLTS (OR EQUAL). SINGLE LENGTH PIPE FROM MAIN TO CURB STOP AT PROPERTY LINE.
6. TAPPING SLEEVES FOR PIPE DIAMETERS FROM 100mm TO 600mm SHALL BE ROBAR 6606 STAINLESS STEEL TAPPING SLEEVE WITH T-304 STAINLESS STEEL BOLTS (OR EQUAL).
7. WATERMAIN VALVES 100mmØ AND LARGER SHALL BE AS PER AWWA C509 - MUELLER A2360-23 (OR EQUAL) INCLUDING VALVE BOX AND 2.3Kg ANODE INCLUDING ANODE PROTECTION INSTALLED AS PER MUNICIPAL STANDARD.
8. WATERMAIN FITTINGS TO BE SUPPLIED WITH MECHANICAL JOINT RESTRAINTS. FOR WATERMAIN PIPE SIZES 150mmØ OR LESS ALL JOINTS TO BE RESTRAINED WITHIN 5.0m FROM ALL FITTINGS IN EACH DIRECTION. FOR WATERMAIN PIPE SIZES LARGER THAN 150mmØ ALL PIPE JOINTS TO BE RESTRAINED WITHIN 10.0m FROM ALL FITTINGS IN EACH DIRECTION. ALL TEES TO HAVE 2.0m (min.) SOLID PIPE LENGTH ON EACH RUN OF THE TEE, OR PROVIDE A THRUST BLOCK AS PER OPSD 1103.010.
9. ALL METALLIC FITTINGS (EXCLUDING CURB/MAIN STOP AND BRASS FITTINGS) AND APPURTENANCES ARE TO BE PROTECTED USING AN ANTI-CORROSION PROTECTION SYSTEM, MEETING ISO 9001 STANDARDS, CONSISTING OF PRIMER, MASTIC AND TAPE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
10. HYDRANTS SHALL BE MUELLER CANADA VALVE "CENTURY" (OR EQUAL) WITH 2-64mmØ HOSE CONNECTIONS AND 1-100mmØ "STORZ" TYPE PUMPER CONNECTION INCLUDING 5.5Kg ANODE. HYDRANT TO OPEN COUNTER-CLOCKWISE. PAINT CHROME YELLOW.
11. MAIN STOPS, CURB STOPS AND COUPLINGS SHALL BE AWWA C.800 COPPER TO COPPER FLANGED OR COMPRESSION CONNECTION OR APPROVED EQUIVALENT.
12. LOCAL MUNICIPALITY TO SUPPLY WATER METER. CONTRACTOR TO INSTALL CHAMBER, METER, ALL VALVES, PIPING AND REMOTE METER READOUT AT LOCATION ON BUILDING EXTERIOR ACCEPTABLE TO THE MUNICIPALITY.
13. ALL WATERMAIN TO BE PRESSURE TESTED IN ACCORDANCE WITH OPSS 441. DISINFECT ALL WATERMAIN IN ACCORDANCE WITH AWWA C651-05 INCLUDING CHLORINATION, BACKFLOW PREVENTER AND 24 HOUR DUPLICATE SAMPLING. ALL TESTING AND DISINFECTION TO BE COMPLETED UNDER THE SUPERVISION OF THE ENGINEER.
14. INSULATE WATERMAINS AND SERVICES AS PER OPSD 1109.030 WHERE 1.7m COVER CANNOT BE ACHIEVED.
15. FIRE SERVICE MAINS AND WATER SERVICE PIPES COMBINED WITH FIRE SERVICE MAINS TO BE DESIGNED, CONSTRUCTED AND TESTED IN CONFORMANCE WITH NFPA 24 "INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES".
16. WATER SERVICE TO BE SEPARATED FROM SANITARY/STORM SEWER BY 2.44m (min.). CROSSINGS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE M.O.E. "DESIGN GUIDELINES FOR DRINKING WATER SYSTEMS".
17. ALL UNDERGROUND SERVICES ARE TO BE CONSTRUCTED IN COMPLIANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE (2012), (PART 7 - PLUMBING), THE PROVINCIAL STANDARD SPECIFICATIONS (OPSD), AND LOCAL REGULATIONS.

SANITARY SEWERS:

1. SANITARY SEWERS 200mmØ TO 600mmØ SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR35 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.
2. SANITARY SERVICE CONNECTIONS SHALL BE 125mmØ POLYVINYL CHLORIDE (PVC) PIPE DR28, CSA-B182.1. INSTALLED AT A MINIMUM GRADE OF 2.0% TO A MINIMUM DEPTH OF 2.4m UNLESS NOTED OTHERWISE.
3. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, 802.031, OR 802.032. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. COVER MATERIAL TO BE GRANULAR "A" PLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
4. SANITARY SERVICE CONNECTIONS SHALL USE FACTORY MANUFACTURED TEES AND BE IN ACCORDANCE WITH OPSD 1006.020.
5. SANITARY SERVICE PIPE CLEANOUTS TO BE INSTALLED ON MUNICIPAL SIDE OF PROPERTY BOUNDARY.
6. SANITARY SERVICE CONNECTIONS FOR OPEN CUT LOW PRESSURE FORCEMAIN SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR18, CSA-B137.3 WITH INTEGRATED BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS. MECHANICAL THRUST RESTRAINTS SHALL BE PROVIDED ON ALL FITTINGS. PIPE SHALL HAVE SOLID #12 TWU COPPER TRACER WIRE WITH GREEN JACKET.
7. SANITARY SERVICE CONNECTIONS FOR TRENCHLESS LOW PRESSURE FORCEMAIN SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AWWA CLASS 900, DR18, CSA-B137.3 WITH INTEGRATED BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS. PIPE JOINTS TO BE MECHANICALLY RESTRAINED. PIPE SHALL HAVE SOLID #8 TWU COPPER TRACER WIRE WITH GREEN JACKET.
8. INSULATE SANITARY SEWER PIPES AS PER OPSD 1109.030 WHERE FROST PROTECTION CANNOT BE ACHIEVED.
9. CONTRACTOR IS RESPONSIBLE FOR TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSS 410.
10. ALL UNDERGROUND SERVICES ARE TO BE CONSTRUCTED IN COMPLIANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE (2012), (PART 7 - PLUMBING), THE PROVINCIAL STANDARD SPECIFICATIONS (OPSD), AND LOCAL REGULATIONS.

PART LOTS 13 & 14
CONCESSION 20

IN THE GEOGRAPHIC TOWNSHIP OF STEPHEN

MUNICIPALITY OF SOUTH HURON
COUNTY OF HURON

NOTES:

1. PROPERTY BOUNDARIES ARE APPROXIMATE AND BASED OFF OF GIS DATA AND SATELLITE IMAGERY.
2. EXISTING STRUCTURES AND SITE FEATURES FROM TOPOGRAPHIC SURVEY COMPLETED BY MR ENGINEERING AND DESIGN LTD., DATED JUNE 16, 2021.
3. SITE SKETCH IS CONCEPTUAL. FINAL SITING BY OTHERS.
4. THIS IS NOT A LEGAL SURVEY.

0m 5m 10m 20m 30m 40m
SCALE 1:500

NOTES:

@	AT	OHD	OVERHEAD DOOR
c/w	COMPLETE WITH	PROJ.	PROJECTION
Ø	DIAMETER	P.T.	PRESSURE TREATED
FRR	FIRE-RESISTANCE RATING	r/w	REINFORCED WITH
FDN	FOUNDATION	SG	SLIDE GATE
e/w	EACH WAY	T&G	TOUNGE AND GROOVE
EX.	EXISTING	t/o	TOP OF
H	HIGH/HORIZONTAL	TYP.	TYPICAL
HR	HOUR	u/s	UNDERSIDE
LLV	LONG LEG VERTICAL	V	VERTICAL
LVL	LAMINATED VANEER LUMBER	w/	WITH
max.	MAXIMUM	W	WIDE
min.	MINIMUM	WWM	WELDED WIRE MESH
OBC	ONTARIO BUILDING CODE		
o/c	ON CENTER		

NORTH

N

DESIGN	TM	No.	REVISION DESCRIPTION	MM/DD/YY	CH'KD
DRAWN	TM	1.	ISSUED FOR SITE PLAN APPROVAL	09/08/21	MR
CHECKED	MR	2.	REVISED BASED ON MUNICIPAL COMMENT	09/09/21	MR
APPROVED	MR	3.	FIRE ACCESS ROUTE DIMENSIONS ADDED	11/04/21	MR
DATE	DECEMBER 2021	4.	REVISED BASED ON ABCA COMMENT	12/22/21	MR

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CONTRACTOR

LICENSED PROFESSIONAL ENGINEER
12/22/21
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PROVINCE OF ONTARIO

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ELLEN & HEINER HOLLAND STORAGE WAREHOUSE

SITE GRADING AND SERVICING PLAN

PROJECT No. *MR21-218*

SHEET No. C3

SCALE As indicated