276 STE. MARIE STREET TOWN OF COLLINGWOOD

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Orillia Barrie Collingwood Bracebridge



KEY PLAN

Ottawa

FIRST SUBMISSION - FEBRUARY 2019 **CONTRACT No. 117268**



PROPOSED DOUBLE CATCH BASIN MAINTENANCE HOLE/NUMBER 🕕 DCBMH4

PROPERTY LINE	
EXISTING CENTRELINE	
EXISTING EDGE OF ASPHALT	
PROPOSED EDGE OF ASPHALT	
EXISTING EDGE OF SHOULDER	
PROPOSED EDGE OF SHOULDER	
EXISTING DITCH/DIRECTION OF FLOW	·
PROPOSED DITCH/DIRECTION OF FLOW	
EXISTING SANITARY SEWER/SIZE/DIRECTION OF FLOW	200ø_SAN
PROPOSED SANITARY SEWER/SIZE/DIRECTION OF FLOW	<u>200øSAN</u>
EXISTING SANITARY SERVICE	· · · • •
PROPOSED SANITARY SERVICE	<u> </u>
EXISTING SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW	200ø SAN F/M
EXISTING WATERMAIN/SIZE	<u>150ø W/M</u>
PROPOSED WATERMAIN/SIZE	<u>150ø_W/M</u>
EXISTING WATER SERVICE	
PROPOSED WATER SERVICE	
EXISTING STORM SEWER/SIZE/DIRECTION OF FLOW	<u>375ø</u> _ <u>STM</u>
PROPOSED STORM SEWER/SIZE/DIRECTION OF FLOW	<u> </u>
EXISTING CULVERT	$=$ $=$ \blacktriangleright
PROPOSED CULVERT	$\square \blacksquare \blacksquare =$
PROPOSED SWALE LOCATION	
PROPOSED JOINT HYDRO, BELL AND ROGERS	
EXISTING GAS MAIN	
PROPOSED GAS MAIN	
EXISTING WOOD FENCELINE	
EXISTING CHAINLINK FENCELINE	ooo
PROPOSED CHAINLINK FENCELINE	oo o
EXISTING BUSHLINE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
EXISTING CONTOUR	179.00
EXISTING SPOT ELEVATION	× 179.00
PROPOSED SPOT ELEVATION	× 179.00
EXISTING GRADING DIRECTION	
PROPOSED GRADING DIRECTION	
PROPOSED OVERLAND FLOW ROUTE	
PROPOSED SWALE LOCATION	
	O BELL MA
	O HP
	S///
PROPOSED LIGHT STANDARD	
	►LS
EXISTING TRAFFIC SIGN	p 73
PROPOSED TRAFFIC SIGN	
PROPOSED STOP SIGN	
PROPOSED STREET NAME SIGN	STREET N
	E was
EXISTING CONFEROUS TREE	- The
EXISTING SANITARY MAINTENANCE HOLE/NUMBER	SAN MH17
PROPOSED SANITARY MAINTENANCE HOLE/NUMBER	● SAN MH17
EXISTING HYDRANT AND VALVE	-Q- HYD & WV
PROPOSED HYDRO TRANSFORMER	Θ
EXISTING WATER VALVE	\bowtie wv
PROPOSED WATER VALVE	► WV
PROPOSED CURB STOP VALVE	CSV
EXISTING WATERMAIN TERMINATION POINT	С
PROPOSED WATERMAIN TERMINATION POINT	C
EXISTING STORM MAINTENANCE HOLE	STM MH20
PROPOSED STORM MAINTENANCE HOLE/NUMBER	STM MH9
EXISTING CATCH BASIN	□ <i>CBMH 18</i>
PROPOSED CATCH BASIN	■ СВ
PROPOSED CATCH BASIN MAINTENANCE HOLE/NUMBER	O CBMH12



— · — 🏳 00ø_<u>SAN</u>____ <u>)¢ SAN [></u> ------<u>SAN F/M</u>...____ 00 W/M <u>ø w/m ____</u> _____ ____ <u> 5ø_STM___</u>___ 5ø STM = \blacksquare \blacktriangleright = = = _.__.**}**__ _ · _ _ · _ _ _____ ____O____O___ ____**O**____O ~~~~~~ - 179.00 ------179.00 179.00 \longrightarrow ----- \Rightarrow Этвм - SIB BH9 BELL MH O BP þ *ts* ● TS STOP SIGN ★ STREET NAME SIGN SAN MH17 SAN MH17 HYD & WV $\bowtie wv$ M MV CSV J STM MH20 STM MH9 CBMH 1 СВ CBMH12





REM	IOVAI	_S	PL



NOTES
LOOP W/M UNDER SANITARY AT CROSSING. DEPTH OF W/M 1.81m



			APPROVED	276 STE. MARIE S COLLINGWOOD, ONT
			T A. E. BHOWNHIDGE T 100120565 FeB 28 19	LOT GRADING AN
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REVISIONS	DATE	INITIAL		









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CONTRACT DRAWINGS CONTRACTOR MUST VERIFY ALL DIMENSIONS	CONTRACT DRAWINGS LEGAL INFORMATION SHOWN AND LOT DIMENSIONS	BENCHMARK INFORMATION TBM 1 ELEV. 183.73		-
AND BE RESPONSIBLE FOR SAME. ANT DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.	SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PREPARED BY ZUBEK, EMO, PATTEN AND THOMSEN LTD OLS DATED JANUARY 2017 WHICH MAY NOT BE FINAL AND ARE NOT GUARANTEED	POLE, LOCATED ALONG SOUTH SIDE OF PROPERTY, IN THE 4.5m MAINTENANCE EASEMENT.		
C.C. TATHAM & ASSOCIATES LTD. CLAIMS COPYRIGHT TO THIS DOCUMENT WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENONE TO WITHOUT THE OWNER/CLIENT AND THE	FINAL REGISTERED PLAN OF SUBDIVISION SHALL BE REFERRED TO FOR CONFIRMATION OF THE DATA. TOPOGRAPHIC SURVEY INFORMATION TAKEN FROM			_
C.C. TATHAM & ASSOCIATES LTD.	& ASSOCIATES DATED APRIL 6, 2018.		1.	-
			NO	

<u>GENERAL</u>

- A. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF COLLINGWOOD STANDARDS AND OPS STANDARDS. WHERE CONFLICT OCCURS, TOWN STANDARDS TO GOVERN. B. THE ENGINEER SHALL PROVIDE BENCHMARK ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
- C. LEGAL SURVEY BOUNDARIES SHOWN ON DRAWING ARE APPROXIMATE, CONTRACTOR SHALL CONFIRM ALL BOUNDARIES AS REQUIRED TO COMPLETE THE WORK.
- D. ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY OLS AT CONTRACTORS EXPENSE IF DISTURBED DURING CONSTRUCTION. E. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
- F. DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS.MUNI 517, OPSS.MUNI 518, OWRA AND O.REG 64/16. MAINTAIN ALL TRENCHES IN A DRY AND STABLE CONDITION. A PERMIT TO TAKE WATER (PTTW) HAS NOT BEEN OBTAINED FOR THIS PROJECT.
- G. ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
- H. EXCAVATION AND GRADING TO BE IN ACCORDANCE WITH OPSS.MUNI 206 AND OPSS.MUNI 510. I. ALL STRUCTURES TO BE INSTALLED WITH FROST STRAPS IN ACCORDANCE WITH OPSD 701.100.
- J. TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE MATERIAL IN ACCORDANCE WITH OPSS.MUNI 1010. BACKFILL TO BE PLACED IN MAXIMUM 200 mm THICK LIFTS (OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER) AND COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- K. PIPE EMBEDMENT TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. BACKFILL AND EMBEDMENT IN ACCORDANCE WITH OPSD 802.010 (FLEXIBLE PIPE), GRANULAR A EMBEDMENT OR OPSD 802.031 (RIGID PIPE) CLASS "B", GRANULAR A BEDDING, GRANULAR B COVER (MAX. AGGREGATE SIZE 25 mm). MINIMUM BEDDING DEPTH 150 mm, MINIMUM COVER DEPTH 300 mm ON ALL PIPES. L. CLEAR STONE COMPLETELY WRAPPED IN FILTER FABRIC CAN BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF
- APPROVED BY THE ENGINEER. M. DISTURBED AREAS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
- N. REINSTATEMENT OF ALL DISTURBED BOULEVARDS TO INCLUDE REGRADING, PLACEMENT OF MIN. 100 mm
- TOPSOIL AND SOD IN ACCORDANCE WITH OPSS 802 AND OPSS 803. O. LOCATION OF EXISTING INFRASTRUCTURE BASED ON A TOPOGRAPHICAL SURVEY COMPLETED BY C.C. TATHAM & ASSOCIATES LTD., AS-BUILT DRAWINGS AND/OR GIS INFORMATION PROVIDED BY THE TOWN. DEPTH OF WATERMAIN IS APPROXIMATE, BASED ON FIELD MEASUREMENTS AT EXISTING VALVES AND AS-BUILT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATION IN THE FIELD (INCLUDING DYE TESTING, TEST PITS AND/OR CCTV INSPECTION AS REQUIRED).
- P. LOCATIONS OF EXISTING UTILITIES ARE NOT GUARANTEED. THE CONTRACTOR SHALL OBTAIN LOCATES FROM ALL RELEVANT UTILITY COMPANIES, 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK AND IF NECESSARY LOCATE UTILITIES BY HAND DIGGING. CONTRACTOR SHALL ASSUME THERE ARE FULL UTILITY SERVICES TO THE BUILDING (GAS, BELL, ROGERS, HYDRO, SANITARY, WATER) NOT NECESSARILY SHOWN ON THE DRAWINGS. CONTRACTOR SHALL WORK AROUND ALL EXISTING SERVICES AS NECESSARY TO COMPLETE THE WORK
- Q. EXISTING WATER AND SANITARY SERVICE LOCATIONS SHOWN ARE APPROXIMATE ONLY, BASED ON AS-BUILT DRAWINGS AND GIS INFRASTRUCTURE INVENTORY PROVIDED BY THE TOWN. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATION IN THE FIELD (INCLUDING DYE TESTING, TEST PITS AND/OR CCTV INSPECTION AS REQUIRED).
- R. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL EXISTING INFRASTRUCTURE/FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION ACCORDINGLY.
- S. ALL SILTATION & EROSION CONTROL PROTECTION DEVICES ARE TO BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL MAINTAIN CONTROL DEVICES THROUGHOUT CONSTRUCTION AND REMOVE THE CONTROL DEVICES ONCE GROUND COVER IS ESTABLISHED IN ALL DISTURBED AREAS.
- T. DURING CONSTRUCTION, TRAFFIC MARKERS & SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES WITHIN THE MUNICIPAL RIGHT-OF-WAY. U. ALL CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO RESTORATION OF DISTURBED
- AREAS. V. ALL SIGNAGE TO BE LAWFULLY ERECTED AND MAINTAINED IN ACCORDANCE TO THE TOWN SIGN BY-LAW.
- W. ALL FENCING TO BE LAWFULLY ERECTED AND MAINTAINED IN ACCORDANCE TO THE TOWN FENCE BY-LAW. X. GRADING TO OPSS.MUNI 206.
- Y. COMPACTING TO OPSS.MUNI 501.

ROADS/PARKING AREAS

- A. SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. SUBGRADE TO BE PROOF ROLLED AND CERTIFIED PRIOR TO PLACING GRANULAR 'B'. B. GRANULAR A AND B TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 100% OF THE MATERIAL'S
- RESPECTIVE SPMDD. C. ALL GRANULAR AND ASPHALT MATERIAL TO BE PLACED IN ACCORDANCE WITH OPSS 310 AND OPSS.MUNI
- D. ASPHALT TO BE COMPACTED TO A MINIMUM OF 92% OF THE MATERIAL'S MAXIMUM RELATIVE DENSITY. E. ACCESS/PARKING AREAS TO BE CONSTRUCTED WITH MIN. 300 mm GRANULAR B, 150 mm GRANULAR A,
- 60 mm HL3 SURFACE COURSE ASPHALT. F. JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT AND TACK COAT SHALL BE APPLIED TO EXISTING ASPHALT. WHERE EXISTING ASPHALT IS GREATER THAN 75 mm DEPTH, A 300 mm WIDE BY 40 mm DEEP LAP JOINT SHALL BE GROUND INTO EXISTING ASPHALT, OTHERWISE A BUTT JOINT SHALL BE USED.
- G. IF SIGNS MUST BE TEMPORARILY REMOVED OR RELOCATED TO FACILITATE THE WORK, THEY ARE TO BE REMOVED, SALVAGED AND REINSTALLED TO TOWN STANDARDS H. CONCRETE CURB WITHIN PRIVATE LANDS IN ACCORDANCE WITH OPSD 600.110, MODIFIED PER DETAIL,
- CONCRETE CURB AND GUTTER ON STE. MARIE STREET TO OPSD 600.040 I. CONCRETE SIDEWALK IN ACCORDANCE WITH OPSD 310.010 AND OPSS 351. SUBBASE TO CONSIST OF 150 mm DEPTH GRANULAR A COMPACTED TO 100% OF THE MATERIAL'S SPMDD.
- J. SUBDRAINS TO BE PERFORATED, COMPLETE WITH FILTER SOCK, OTHER THAN THE 2.0 m SECTION IMMEDIATELY UPSTREAM OF ALL STRUCTURES WHICH SHALL BE NON-PERFORATED. CONNECTION TO STRUCTURES IN ACCORDANCE WITH OPSD 216.021. INSTALL SUBDRAIN BELOW BARRIER CURB AND ALONG NORTH PROPERTY BOUNDARY AND CONNCECT TO CB1 AND CB2. K. ASPHALT BOULEVARDS TO BE RECONSTRUCTED WITH MIN. 150 mm GRANULAR A. 50 mm HL3 SURFACE
- COURSE ASPHALT. L. ROAD REINSTATEMENT ON STE. MARIE STREET TO MATCH EXISTING. AS A MINIMUM 300mm GRANULAR B, 150mm GRANULAR A, 50mm HL8 AND 40mm HL3.

STORM SEWER

SANITARY SEWER

<u>WATERMAIN</u>

- TOWN STANDARDS.

<u>MATERIALS</u>

- B. SANITARY SERVICE CONNECTIONS PVC SDR 28 (GREEN).
- 320kPa OR EQUAL)

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276 STE. MARIE S **COLLINGWOOD, ONT**

A. MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES IN ACCORDANCE WITH OPSD 701.010 AND OPSD 701.011 AS APPROPRIATE. B. MAINTENANCE HOLES TO BE BENCHED IN ACCORDANCE WITH OPSD 701.021.

C. MAINTENANCE HOLE AND CATCH BASIN MAINTENANCE HOLE STEPS IN ACCORDANCE WITH OPSD 405.010. D. MAINTENANCE HOLE FRAMES AND GRATES IN ACCORDANCE WITH OPSD 401.010 (OPEN COVER).

E. PIPE SUPPORT AT ALL STRUCTURES IN ACCORDANCE WITH OPSD 708.020. F. ALL MAINTENANCE HOLE AND CATCH BASIN FRAME AND GRATES TO BE SET TO FINISHED COURSE ASPHALT

ELEVATION IN ACCORDANCE WITH OPSD 704.010. G. CATCH BASINS IN ACCORDANCE WITH OPSD 705.010, WITH 1000 mm SUMP.

H. CATCH BASIN AND CATCH BASIN MAINTENANCE HOLE FRAMES AND GRATES IN ACCORDANCE WITH OPSD 400.020. FRAME AND GRATES TO BE INSTALLED IN THE CURB LINE IN ACCORDANCE WITH OPSD 610.010. I. CATCH BASIN LEADS TO OPSD 708.010.

J. BRENTWOOD STORMTANK SHIELD STKS-18 TO BE INSTALLED IN CATCH BASINS 1 AND 2 AS PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS. K. CATCH BASINS AND INLET STRUCTURES FITTED WITH FILTER FABRIC OR SEDIMENT TRAPS DURING CONSTRUCTION ACTIVITIES SHALL BE CLEANED OUT AS REQUIRED PRIOR TO ASSUMPTION OF THE WORK. FOLLOWING ASSUMPTION, FILTER FABRIC OR SEDIMENT TRAPS SHALL BE REMOVED AND DISPOSED.

J. ALIGNMENT OF NEW SERVICES SHALL BE AT 90° TO THE MAINLINE SEWER, UNLESS OTHERWISE APPROVED BY THE ENGINEER TO AVOID CONFLICT WITH EXISTING FEATURES. K. SERVICE CONNECTIONS IN ACCORDANCE WITH OPSD 1006.020, GRANULAR A EMBEDMENT (MIN. 150 mm BEDDING AND 300 mm COVER). RADIUS BENDS TO BE USED ON ALL SEWER CONNECTIONS WHERE THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER EXCEEDS 90°. L. SERVICE CONNECTION TO OPSD 1006.010.

M. NEW CONNECTION TO EXISTING PIPE SHALL BE MADE USING AN INSERTA-TEE OR APPROVED EQUAL IN STRICT ACCORDANCE WITH MANUFACTURERS GUIDELINES.

A. ALL WORK DONE ON WATERMAIN TO BE COORDINATED WITH THE TOWN.

B. RESTRAIN WATERMAIN IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. C. SERVICE CONNECTIONS TO OPSD 1104.020 DIRECT TAP ON EAST SIDE OF EXISTING 150mm DIAMETER WATER VALVE, MINIMUM 1.0m SEPARATIONS, PROVIDE 200 mm GRANULAR A TRENCH EMBEDMENT. C/W CURB STOP, VALVE, AND BOX AT PROPERTY LINE. D. MINIMUM COVER ON WATERMAIN AND SERVICES TO BE 1.7 m. INSULATION TO BE INSTALLED OVER

WATERMAIN AND SERVICES WITH LESS THAN 1.7 m COVER AS APPROVED BY THE ENGINEER. WHERE CONFLICT EXISTS, WATER SERVICES SHALL BE INSTALLED BELOW SEWERS WITH 0.5 m SEPARATION. E. GENERAL INSTALLATION AND TESTING OF WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH

F. BACK FLOW PREVENTION DEVICES AS PER CSA B64.10-11/B64.10.1-11, OBC AND TOWN WATER BY-LAW TO BE INSTALLED INSIDE BUILDING AND CERTIFIED, AND A COPY OF THE CERTIFICATE OF PASSING PROVIDED TO THE TOWN. TESTING OF THE BACKFLOW PREVENTION DEVICE IS AN ANNUAL REQUIREMENT. G. LIVE TAP OF 38 mmø WATER SERVICE TO BE COMPLETED BY THE TOWN UNLESS OTHERWISE APPROVED.

A. ALL MATERIAL TO COMPLY WITH CSA, OPSS AND TOWN STANDARDS.

C. STORM SEWER - PVC SDR 35, CONCRETE CLASS - MINIMUM 65-D OR AS OTHERWISE REQUIRED TO MEET OPS SPECIFICATIONS FOR ACTUAL COVER AND BEDDING CONDITIONS (REFER TO OPSD 807.010 AND OPSD 807.030), OR SMOOTH WALL HDPE (BOSS 2000 WITH BELL AND SPIGOT AND MIN. PIPE STIFFNESS =

D. STORM SERVICE CONNECTIONS - PVC SDR 28 (WHITE) USING PRE-MANUFACTURED CONNECTION TO MAIN. E. SUBDRAIN (FACTORY PERFORATED) - BIG 'O' WITH GEOTEXTILE FILTER SOCK OR APPROVED EQUAL.

F. AGGREGATES IN ACCORDANCE WITH OPSS.MUNI 1010. G. FILTER FABRIC - TERRAFIX 270R OR APPROVED EQUAL.

H. WATERMAIN - DUCTILE IRON CLASS 52, OR PRESSURE CLASS 350 CEMENT LINED DUCTILE IRON, AS APPROVED BY THE TOWN. CONDUCTIVITY CONNECTORS TO BE USED ON ALL JOINTS. I. WATERMAIN SERVICE CONNECTION - 38mm TYPE "K" SOFT COPPER TUBING.

J. CURB STOP 203NL-H3H3, (NO LEAD-LIFETIME GUARANTEED AGAINST LEAD LEACHATE FROM THE CASTING) BALL STYLE WITH DRAIN C/W S/S STEM, COMPRESSION JOINT BY CAMBRIDGE BRASS.

K. SERVICE BOX NUMBER 7 D-1 CLOW, AND 24" BLACK RODS STRAIGHT.

L. MECHANICAL JOINT DUCTILE FITTINGS - AWWA/ANSI C153/A21.53.

M. LIVE TAP SADDLES - EPOXY COATED C/W STAINLESS STEEL BOLTS. N. LIVE TAP VALVE - RESILIENT SEATED RSGV, LIVE TAP VALVE, OPEN LEFT CLOW OR MUELLER.

O. WATERMAIN RESTRAINERS TO BE ROMAC OR APPROVED EQUAL.

TREET TARIO	H	C.C. Tatham & Associates Ltd. Consulting Engineers						
		Collingwood	Bracebr	idge	Orillia	Barrie	Ottawa	
ND NOTES	SCALE: AS SHOWN			JOB	NO.	117268		
	DESIGN: ASB/CA	CHECKED: AEB		DWG. DE-		DE 4		
	DRAWN: CA	DATE: FEB/19				5-1		