TOWN OF GRIMSBY STANDARDS)

EX. INV = 90.71± PROP. N. INV = 92.20

20007

#### GENERAL NOTES:

- CONSTRUCTION OF ROADWORKS, SEWERS, WATERMAINS AND RELATED APPURTENANCES SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE TOWN OF GRIMSBY DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS MANUAL. AND OPS.
- INFORMATION REGARDING ANY EXISTING SERVICES AND/OR UTILITIES SHOWN ON THE APPROVED SET OF CONSTRUCTION DRAWINGS IS FURNISHED AS THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE SEES FIT WITH THE UNDERSTANDING THAT THE OWNERS AND HIS AGENTS DISCLAIM ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR
- 3. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION AND HE SHALL REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
- 4. RELOCATION OF EXISTING SERVICES AND/OR UTILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.

SUFFICIENCY. THE CONTRACTOR SHALL ASSUME LIABILITY FOR ANY DAMAGE TO EXISTING WORKS.

5. THE CONTRACTOR SHALL OBTAIN ALL PERMITS FOR CONSTRUCTION.

MANUFACTURED WITH TYPE 50 SULPHATE RESISTANT CEMENT.

- 6. FOR ALL SEWERS AND WATERMAIN IN FILL SECTIONS, THE COMPACTION SHALL BE VERIFIED PRIOR
- . NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE REGIONAL ENGINEER,
- NO BLASTING WILL BE PERMITTED.

TOWN OF GRIMSBY OR THE ENGINEER.

TO LAYING OF PIPE.

- 9. ALL EXCAVATIONS TO BE BACKFILLED WITH SELECT NATIVE MATERIAL, APPROVED BY THE ENGINEER. TO 100% SPD. UNLESS OTHERWISE NOTED.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING SILT CONTROL DEVICES AS SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
- 11. TREE PROTECTION PROCEDURES TO BE IMPLEMENTED IN ACCORDANCE WITH THE TOWN OF GRIMSBY
- 12. ALL UNDERGROUND POURED CONCRETE & ALL UNDERGROUND CONCRETE PRODUCTS ARE TO BE
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC & SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION & REMOVAL OF NECESSARY SIGNALS, DELINEATORS, MARKERS & BARRIERS. ALL SIGNS ETC. SHALL CONFORM TO THE STANDARDS OF THE ONTARIO TRAFFIC MANUAL - BOOK 7.
- 14. THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SEALED BY THE ENGINEER AND INDICATED ISSUED FOR CONSTRUCTION ON THE DRAWING.
- 15. THSEE PLANS ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF S.LLEWELLYN & ASSOCIATES LIMITED.
- 16. EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLANS PREPARED BY A.T. MCLAREN LIMITED DATED MARCH 31, 2020.
- 17. SITE PLAN INFORMATION TAKEN FROM PLANS PREPARED BY CHAMBERLAIN ARCHITECT SERVICES
- 18. PRIOR TO CONSTRUCTION THE CONTRACTOR MUST:
- i. CHECK AND VERIFY ALL DIMENSIONS AND EXISTING ELEVATIONS WHICH INCLUDE BUT ARE NOT LIMITED TO THE BENCHMARK ELEVATIONS, EXISTING SERVICE CONNECTIONS, EXISTING INVERTS AND REPORT FINDINGS IN WRITING TO THE ENGINEER.
- ii. OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND LICENSES.
- iii. VERIFY ALL FINISHED FLOOR ELEVATIONS AND BASEMENT FLOOR ELEVATIONS WHICH MAY APPEAR ON THESE PLANS COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS.
- iv. CONFIRM ALL DRAWINGS ARE USED FOR CONSTRUCTION ARE OF THE MOST RECENT REVISION.
- v. NOTIFY THE ENGINEER OF THE PROPOSED CONSTRUCTION SCHEDULE FOR COORDINATION OF NECESSARY INSPECTIONS.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEER 48 HOURS PRIOR TO COMMENCING SITE WORKS TO ARRANGE FOR INSPECTION. THE ENGINEER SHALL DETERMINE THE EXTENT OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF THE UNDERGROUND SERVICE INSTALLATION AS MANDATED BY THE ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO MAKE SUITABLE ARRANGEMENTS FOR INSPECTION WILL LEAD TO POST CONSTRUCTION TESTING AND INSPECTION AS DETERMINED BY THE ENGINEER. THE COSTS OF WHICH INCLUDING ANY DELAYS IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR. FULL PAYMENT FOR UN-INSPECTED WORKS MAY BE WITHHELD UNTIL THE COMPLETION OF THE POST CONSTRUCTION INSPECTION AND TESTING TO THE SATISFACTION OF THE
- 19. INSPECTION BY THE OWNER'S ENGINEER IS FOR CERTIFICATION AND GENERAL CONFORMANCE PURPOSED AND DOES NOT CERTIFY LINE AND GRADE OR IMPLY AN ASSURANCE OF QUALITY HE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THE INSTALLATION OF THE WORKS TO PROPER LINE, GRADE AND QUALITY TO CURRENT INDUSTRY STANDARDS.
- 20. ANY UTILITY RELOCATIONS AND RESTORATIONS DUE TO THE DEVELOPMENT TO BE UNDERTAKEN AT THE EXPENSE OF THE OWNER/DEVELOPER AND SHALL BE COORDINATED BY THE CONTRACTOR.
- 21. ALL RESTORATIONS AND RECONSTRUCTIONS SHALL BE COMPLETED TO MATCH EXISTING CONDITIONS OR BETTER AND ARE TO BE PERFORMED TO THE SATISFACTION OF THE ENGINEER AND THE TOWN
- 22. SERVICING CONTRACTOR TO MAINTAIN A "CONFINED TRENCH CONDITION" IN ALL SEWER AND WATERMAIN INSTALLTION TRENCHES.
- 23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNALS, DELINEATORS, MARKERS AND BARRIERS. ALL SIGN, ETC. SHALL CONFORM TO THE STANDARDS OF THE ONTARIO TRAFFIC MANUAL - BOOK 7.
- 24. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.

# **GRADING:**

- 1. ALONG ADJOINING PROPERTIES GRADE TO MEET EXISTING OR PROPOSED ELEVATIONS WITH SODDED SLOPES (MIN. 3H TO 1V) AND/OR RETAINING WALLS AS SPECIFIED.
- 2. ALL RETAINING WALLS, WALKWAYS, CURBS ETC., SHALL BE PLACED A MIN. OF 0.45m OFF THE PROPERTY LINE. ALL WALLS 1.0m OR HIGHER SHALL BE DESIGNED BY A P.ENG.
- 3. SHOULD A RETAINING WALL BE REQUIRED, THE TOP OF WALL ELEVATIONS SHALL BE SET 150mm ABOVE THE PROPOSED SIDE YARD SWALES.
- 4. RETAINING WALLS 0.6m IN HEIGHT OR GREATER REQUIRE CONSTRUCTION OF A FENCE OR GUARD RAIL AT THE TOP OF THE REAR OF THE WALL. GUARDS FOR RETAINING WALLS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF EXTERIOR GUARDS AS CONTAINED IN THE ONTARIO BUILDING CODE.
- 5. WHEN MATCHING TO EXISTING PROPERTIES WHERE A 1.5% GRADE CANNOT BE ACHIEVED, A GRADE LESS THAN 1.5% IS PERMITTED PROVIDED A 150mm SUB-DRAIN IS INSTALLED BELOW THE BOTTOM OF THE SWALE AND DRAINED TO A SUITABLE OUTLET, (WITH A MINIMUM 0.3m COVER OVER THE SUB-DRAIN), OR OTHER MITIGATION MEASURES.
- 6. UNLESS OTHERIWSE NOTED, THE GROUND ELEVATION BETWEEN THE PROPOSED ELEVATIONS ON SIDE LOTS SHALL BE GRADED AS A STRAIGHT LINE.
- 7. TOP OF FOUNDATION WALLS FOR BUILDINGS SHALL BE 150mm (MIN.) ABOVE FINISHED GRADE.
- 8. ALL FILL PLACED ON LOTS SHALL BE COMPACTED TO A MINIMUM 95% SPD (UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER). ALL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm LIFTS.
- 9. FOR DELINEATION OF TREE PROTECTION ZONES, BUFFERS, REMOVALS AND PROTECTION SCHEMATICS, ETC., REFER TO TREE PROTECTION PLAN.
- 10. IF GRADING IS REQUIRED ON LANDS ADJACENT TO THE DEVELOPMENT WHICH ARE NOT OWNED BY THE DEVELOPER, THEN THE DEVELOPER MUST OBTAIN WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNER TO ALLOW THE DEVELOPER TO GRADE ON ADJACENT LANDS, OTHERWISE RETAINING WALLS MUST BE USED.
- 11. THE WRITTEN PERMISSION REQUIRED FROM THE ADJACENT LANDOWNER SHALL BE OBTAINED PRIOR TO ENTERING THE LANDS. SHALL PERMISSION NOT BE OBTAINED OR IS WITHDRAWN PRIOR TO COMMENCING THE WORK, THEN THE DEVELOPER SHALL LIMIT HIS ACTIVITIES TO THE LIMITS OF THE DEVELOPMENT SITE.
- 12. DRIVEWAY AND DRIVEWAY APPROACHES SHALL BE LOCATED SUCH THAT HYDRO VAULTS AND OTHER STREET FURNITURE ARE MIN. OF 1.2m FROM THE PROJECTIONS OF THE OUTSIDE GARAGE

### WATERMAINS AND WATER SERVICES:

- 1. ALL WATER SERVICE CONNECTIONS (20, 38 & 50mm DIA.) AND DOMESTIC WATERLINES TO BE PLASTIC MUNICIPEX (PEXa) WATER SERVICE LINE AS MANUFACTURED BY REHAU. TRACER WIRE TO BE INSTALLED PER REHAU SPECIFICATIONS. TRACER WIRE SHALL BE INSTALLED ALONG WATER SERVICE AND BROUGHT TO SURFACE AT CURB STOP, USING DRYCONN WATERPROOF CONNECTIONS
- 2. WATERMAINS TO BE INSTALLED WITH A MINIMUM DEPTH OF COVER 1.5m BELOW GRADE.
- 3. FLEXIBLE WATERMAIN PIPE UP TO 300mm DIAMETER TO BE P.V.C. DR-18 AND CONFORM TO AW.W.A C-900 WITH MECHANICAL JOINTS AS PER A.W.W.A. C-110, AND TO BE INSTALLED WITH A 10 GAUGE TRACER WIRE.
- 4. BEDDING FOR WATERMAINS AND WATER SERVICES AS PER DPW-805 TYPE B.
- 5. ALL VALVE CHAMBER COVERS TO BE SET TO PROPOSED BOULEVARD GRADES.
- 6. VALVE CHAMBERS FOR GATE VALVES AS PER DPW 800A. VALVE CHAMBERS TO BE FITTED WITH 150mm DIA STORM SEWER DRAINS WHERE SHOWN ON DRAWINGS.
- 7. THRUST BLOCKS FOR 100mm TO 300mm DIAMETER WATERMAINS TO BE STANDARD CONCRETE BLOCKS AS PER DPW-802 & DPW-803.
- 8. HYDRANTS TO BE INSTALLED AS PER DPW-801 AS DETAILED.
- 9. ALL FIRE HYDRANTS SHALL CONFORM TO THE TOWN OF GRIMSY FIRE DEPARTMENT'S REQUIREMENTS. ALL HYDRANTS WITHIN SUBDIVISION SHALL BE SUPPLIED BY THE SAME
- 10. COMMISSIONING OF NEW WATERMAIN SHALL CONFORM TO THE TOWN'S STANDARD OPERATING GUIDELINES (DISINFECTION AND TESTING), DOCUMENT No. PW-ES-WD-SOG-012-013.
- 11. ALL TEES, PLUGS, AND HORIZONTAL BENDS TO INCLUDE THRUST BLOCKS AS PER DPW-802. ALL VERTICAL BENDS TO INCLUDE THRUST BLOCKS AS PER DPW-803.
- 12. ALL NEW WATERMAINS TO BE SWABBED IN ACCORDANCE WITH TOWN OF GRIMSBY REQUIREMENTS

#### STORM & SANITARY SEWERS:

- 1. CONSTRUCTION OF STORM & SANITARY SEWERS SHALL BE IN ACCORDANCE WITH TOWN OF GRIMSBY SPECIFICATIONS AND ONTARIO PROVINCIAL STANDARDS.
- 2. ALL CONCRETE PIPE IS TO BE FROM PLANTS APPROVED BY THE MINISTRY OF THE ENVIRONMENT.
- 3. ALL NON-REINFORCED CONCRETE PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1-M1982.
- 4. ALL REINFORCED CONCRETE PIPE, CLASSES 50-D, 65-D, 100-D, & 140-D, SHALL BE IN ACCORDANCE WITH CSA A257.2-M1982.
- 5. SANITARY SEWER BEDDING AS PER DPW-612 TYPE B.
- 6. STORM SEWER BEDDING AS PER DPW-613 TYPE B.
- 7. STORM AND SANITARY SERVICE LATERALS TO BE INSTALLED AS PER DPW-607, DPW-607A, DPW-607B AND 607C. ALL LOTS TO BE SERVICED WITH 1 100mm DIA SANITARY SERVICE LATERAL AS SHOWN.
- 8. MANHOLE COVERS TO BE AS PER DPW-608.
- 8. SINGLE CATCH BASINS AS PER DPW-610. FRAMES AND COVERS AS PER DPW-615.
- 9. DOUBLE CATCH BASINS AS PER DPW-611.
- 10. CATCHBASIN LEADS TO BE 250mm DIA PVC DR-35.
- 11. ALL SANITARY SEWERS TO BE TESTED BY INFILTRATION/EXFILTRATION TEST, FLUSHED AND C.C.T.V. INSPECTED PRIOR TO START OF MAINTENANCE PERIOD.
- 12. ALL STORM SEWERS TO BE FLUSHED AND C.C.T.V. INSPECTED. PVC (SANITARY AND STORM) SEWERS ARE TO BE TESTED FOR DEFLECTION (MANDREL PASSAGE).
- 13. ALL MANHOLES & CATCHBASINS SHALL BE BACKFILLED WITH 300mm GRANULAR 'A' COMPACTED TO 100% S.P.D.
- 14. CONCRETE HEADWALL FOR SEWER OR CULVERT PIPE AS PER DPW-621.

## **RESTORATIONS:**

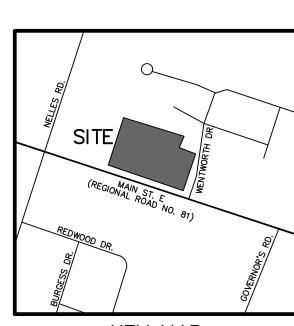
- ALL TRENCH EXCAVATIONS WITHIN EXISTING ROAD ALLOWANCES SHALL BE BACKFILLED WITH GRANULAR "A" COMPACTED TO 100% SPD. PAVEMENT RESTORATION SHALL CONSIST OF FULL DEPTH GRANULAR "A" (AS PER TOWN OF GRIMSBY SPECIFICATIONS AND REGION OF NIAGARA SPECIFICATIONS ) 50mm OF HL8 BASE ASPHALT AND 40mm OF HL3 FINE TOP COURSE ASPHALT, ALL THICKNESSES BEING COMPACTED DEPTHS
- 2. EXISTING PRIVATE FENCING IS TO BE MAINTAINED THROUGHOUT CONSTRUCTION. WHERE REMOVAL OR RELOCATION OF FENCING IS NECESSARY IT SHALL BE RESTORED OR REPLACED TO ORIGINAL CONDITIONS OR BETTER UNDER THE DIRECTION OF THE ENGINEER.
- 3. ALL BOULEVARDS TO BE RESTORED WITH #1 NURSERY SOD ON A MINIMUM 100mm OF SELECT
- 4. PAVEMENT SURFACE ON EXISTING STREETS TO BE REPAIRED BY CONTRACTOR AT THEIR EXPENSE IF DAMAGED BY CONSTRUCTION TRAFFIC.

# SILTATION AND EROSION CONTROL:

- THE NPCA WILL REQUIRE THAT ALL WORKS SHOULD BE CONDUCTED DURING LOW WATER CONDITIONS.
- SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO WORK, AND MAINTAINED DURING THE WORK PHASE TO PREVENT THE DISCHARGE OF SEDIMENT OR DEBRIS OFF
- ALL DISTURBED AREAS SHALL BE STABILIZED AND RE-VEGETATED AS REQUIRED UPON COMPLETION OF WORK AND RESTORED TO PRE-DISTURBED STATE OR BETTER.
- 4. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.
- 5. ALL MATERIALS AND EQUIPMENT USED FOR THE PURPOSE OF SITE PREPARATION AND PROJECT COMPLETION SHALL BE OPERATED AND STORED IN A MANNER THAT PREVENTS ANY DELETERIOUS SUBSTANCE (EG. PETROLEUM PRODUCTS, SILT, DEBRIS, ETC.) FROM ENTERING THE WATER.
- 6. ANY STOCKPILED MATERIALS SHALL BE STORED AND STABILIZED AWAY FROM THE WATER. VEHICLE AND EQUIPMENT RE-FUELING AND MAINTENANCE SHALL BE CONDUCTED AWAY FROM THE WATER.
- 7. THE 5 METRE BUFFER SHALL BE LEFT IN AN UN-MANICURED STATE.

## PAVEMENT DESIGN

COURSE	LIGHT DUTY (mm)	HEAVY DUTY (mm) (TRUCK ROUTES)	OPS SPECIFICATIONS
ASPHALT SURFACE	65	40	HL-3 or HL-3A
ASPHALT BINDER	-	80	HL-8
GRANULAR BASE	150	150	GRANULAR 'A'
GRANULAR SUB-BASE	300	450	GRANULAR 'B' TYPE II



1	JULY 2020	JNC	REVISED PER SITE PLAN REVISION
NO.	DATE	BY	REVISIONS

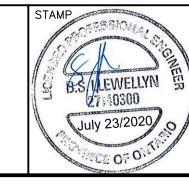
NOTES TO CONTRACTOR: CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING

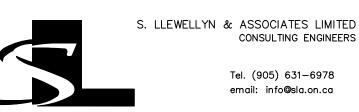
ANY INCONSISTENCIES AND OMISSIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK. . PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND FLEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS. THE POSITIONS OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND A OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWING, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES I NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF

. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, ( REVISED WITHOUT THE WRITTEN CONSENT OF S LIEWFILM AND ASSOCIATES LIMITED MAY 2020

APPROVALS

EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE





3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

DRAWN

**SCALE** 

LOSANI HOMES (1998) LTD. 430 McNEILLY ROAD, SUITE 203, STONEY CREEK, ON

PROJECT NAME

141-149 MAIN STREET EAST, GRIMSBY

NOTES AND DETAILS

PROJECT No. 20007

S:  $\20007\W$ orking $\C$ urrent $\20007$  — Grading and Servicing Plan.dwg Plotted: July 22, 2020 2:53:00 PM By: Jesse Custodio