

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: Council
MEETING DATE: June 17th 2013
REPORT NO.: EPW.13.061
SUBJECT: Heritage Corners Subdivision
Road Re-Surfacing
PREPARED BY: Jim McCannell, Manager Roads and
Drainage

A. Recommendations

THAT Council receives Report EPW.13.061 entitled; "Heritage Corners Subdivision Road Re-surfacing";

AND THAT Council redirect \$50,000 in 2013 taxation **from** a "Transfer to a Roads Reserve" **to** directly fund the Heritage Corners Road Re-surfacing project, Capital G/L account 6-308-0450, budgeted at \$50,000;

AND THAT Council approve the transfer of up to \$2500 from the Roads Reserve for costs of the project that exceed \$50,000;

AND THAT Council approve the change in scope of the project from a resurface project to a micro surface project, inclusive of the entire Heritage Corners Subdivision.

B. Background

During the 2013 budget process Council wished to explore other options for resurfacing the roads in the Heritage Corners Subdivision. This project was added to the spring road tour in May to allow members of the Committee to inspect the road conditions.

Following the road tour Staff met with several different road construction contractors to determine possible other resurfacing options. The road surface was installed in 1986 or 1987 and is a single lift of 50 mm hot mix asphalt. The road is now more than 25 years old and is showing signs of fatigue cracking; the asphalt has lost the support along the edges and is beginning to break off. The road surface has been repaired in several locations including around the manholes. The cracking around the manholes indicates the road is heaving in the winter while the concrete manholes are not. These patches were placed prior to 2007. The road is not showing signs of wheel rutting.

It was determined that if the road surface is not addressed in the near future, the road will deteriorate further to the point where it will require full reconstruction. The weakened surface will allow water to enter the granular base and will start washing the fine material away. This will result in the loss of support for the asphalt surface and lead to settlement or wheel rutting. If this occurs new granular material will need to be added. The cost to remove the old road, place and shape new granular material and replace the asphalt wearing surface is much higher than sealing the road surface at this

time. It is anticipated that sealing the road surface with a double layer of micro-surface will provide a 10 year extension to the life of the road, at which time the road surface will be re-evaluated and the appropriate measures will be taken. The roads in the Heritage Corners Subdivision are a good candidate for micro-surface sealing.

Micro surface is a mixture of asphalt binder like tar and chip, with black stone and some cement added to the mix. The stone is coated with the asphalt binder and cement mixture and placed on the road. The new surface requires about an hour to dry before traffic can drive on the new surface. The cost of micro surface submitted to the Town by MSO Contracting is \$2.33 / m². The cost for double surface treatment is 2x \$2.33 or \$4.66. This is in comparison to the \$16/ m² to place hot mix asphalt. The submitted costs are as per the County of Grey's tender for similar work discussed below.

While the micro-surface treatment may only last 10 year versus the 20 years for hot mix, the cost is only ¼ of the cost for hot mix, and if placed at the right time within the life cycle of a roadway is an effective means to extend the useful life of the road.

The Manager of Roads and Drainage is recommending the placement of a double layer of micro-surface treatment on the Heritage Corners Subdivision. The scope of the program has been expanded to include Settler's Way and Farmgate per the attached location map. This will provide a project that is large enough for the contractor to mobilize to the site. Generally the contractor requires 20,000 m² to justify mobilizing his equipment. The expanded works are approximately 10,000 m².

The anticipated cost of the work is \$46,600 plus applicable taxes. (10,000 m² x \$4.66/ m²)

The Town will have some work to prepare the site. The roads require the shoulders cut down to allow the storm water to drain off the road and into the ditch. This work can be completed within the permitted purchasing limits and can be applied to the capital project. The anticipated cost is \$3,000. Some cold patch material will be required to fill and level holes in the current road surface. This material can be purchased from the Roads Spot Improvement allocation.

The contractor is expected to complete the works for the County of Grey before the end of June. The Contractor has indicated they expect to be available to complete the Town's works on June 27/ 28 or July 2/3. After that crews will leave the area. The extended price is based upon completing the works while in Grey County. They will not be able to hold this price if they are required to remobilize to The Blue Mountains in the fall.

County Tender Process

Since the Town was not part of the County's tendering process, Town Staff contacted MSO Construction to negotiate a price for the works required by the Town. MSO Construction Ltd has agreed to extend the tendered prices received by the County to the Town. The County has confirmed the tendered price as well. The submitted price is a fair industry price and represents good value to the Town.

The County did proceed with their tender in a public forum. The tender was advertised publicly and awarded in the same manner, with bids being received by 2 companies. In essence, the administration of the County's tendering process for the Single Surface and Double Surface Treatment Tender complied with the Town's Purchasing By-law.

C. The Blue Mountains' Strategic Plan

These works address the Town's Strategic Plan Goal #2 "Addressing the Town's Municipal infrastructure needs".

D. Environmental Impacts

The micro-surface resurfacing process is a cold process, the stone is not heated or dried. The energy required for this process is less than that of hot mix paving. The energy requirements and emission levels are less than other resurfacing methods. In addition the materials used in these surface repairs can be recycled in the future.

E. Financial Impact

The approved 2013 Roads and Drainage Capital Budget included the Heritage Drive and Pioneer Lane Resurfacing Project (G/L 6-308-0450). The 2013 approved budget included a \$50,000 transfer to the Road Reserve funded from taxation, to be used in conjunction with an additional \$75,000 from taxation in 2014 to fund total project costs of \$125,000 in 2014. The approved project included costs to resurface Heritage Drive and Pioneer Lane and complete should work.

The recommendation within this report to place a double layer of micro-surface treatment on the Heritage Corners Subdivision will result in a:

1. Change from the budgeted resurface treatment with a 20 year life span to the recommended micro surface treatment with a 10 year life span.
2. Reduction in short term costs from the proposed 2014 budget of \$125,000 to the estimated \$50,720 in 2013 (inclusive of non-recoverable HST). The Manager of Roads and Drainage will recommend additional roads for resurfacing in 2014 to utilize the short term savings of \$74,280 (\$125,000-\$50,720)

3. Savings in the short term as identified in item 2, offset by the need to re-evaluate or repair the infrastructure in 10 years rather than 20 years as budgeted.
4. Increase in the number of roads treated. The 2013 budget identified only Heritage Drive and Pioneer Lane for resurfacing for in 2014. The recommendations within this report also include Settler's Way and Farmgate.

Project costs for the micro-surface treatment on the Heritage Corners Subdivision are estimated total at \$50,420.

Heritage Corners - Project Costs	Costs
Microsurface Treatment	\$47,420
Shoulder Work	3,000
Total Project Costs	\$50,420

The 2013 approved capital budget included a \$50,000 transfer to the Roads Reserve funded from taxation for the Heritage Drive and Pioneer Lane 2014 project. Rather than make the transfer to the Roads Reserve, Finance staff recommend that the \$50,000 in taxation sources be used to fund the proposed 2013 Heritage Corners project. Project costs exceeding \$50,000 are recommended to be funded from the Roads Reserve, up to \$2,500. The Roads Reserve has an approximate balance of \$1.7 million.

F. In Consultation With

Serena Wilgress; Manager of Purchasing & Risk Management
Renee Ouellette, Financial Accountant

G. Attached

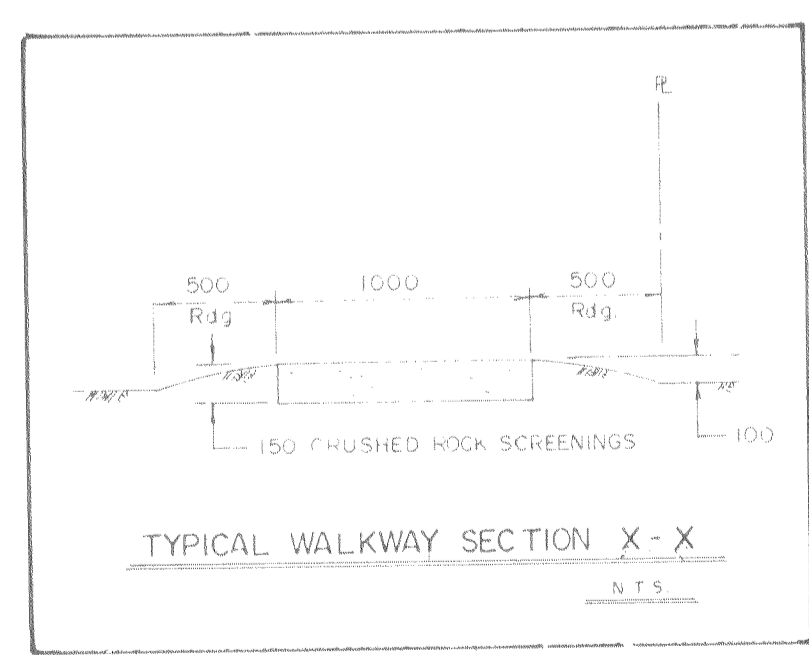
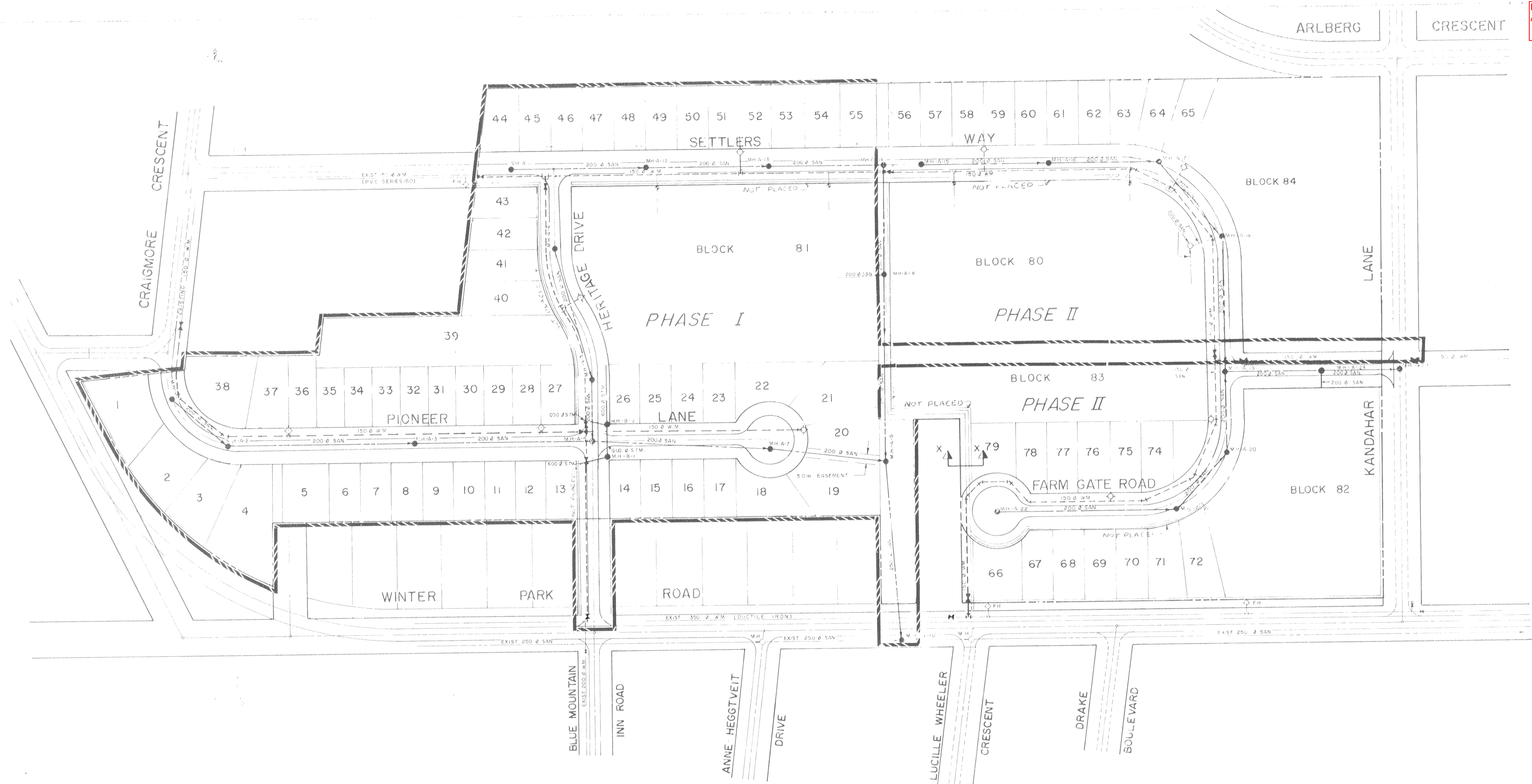
1. Heritage Corner Subdivision General Plan

Respectfully submitted,

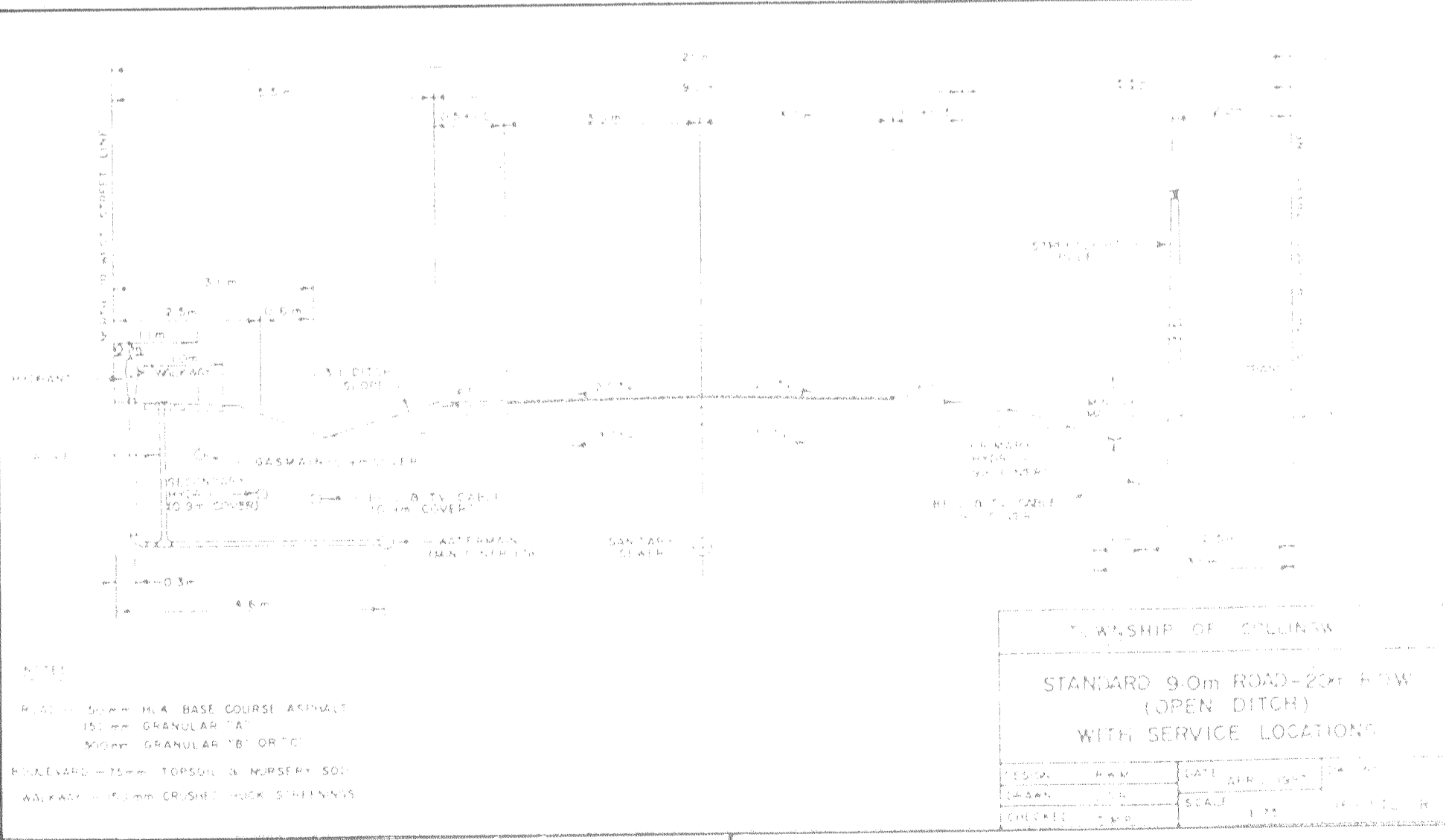
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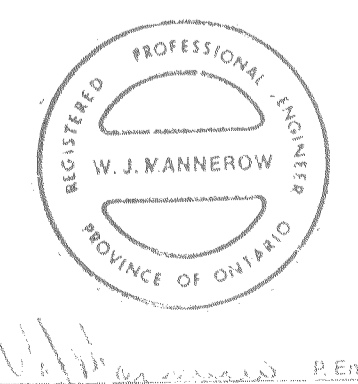
APPROVED FOR
CONSTRUCTION
Amby & Associates Limited
Consulting Engineers
Date



NOTES
1. The contractor shall be responsible for all sanitary sewers and watermains.
2. The bedding material for sanitary sewers will be 20 mm clear crushed stone. The cover material will be granular "A", granular "B", or granular "C" with a maximum stone size of 25 mm.
3. The bedding material for watermains will be granular "A", granular "B", or granular "C" with a maximum stone size of 25 mm.

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE DONE TO THEM.

NO	DATE	REVISION DESCRIPTION	CHECKED
6	MAR 90	AS CONSTRUCTED	J.V.D.
5	NOV 87	AS PER TWP ENGINEERS REVIEW	J.V.D.
4	AUG 87	STREET SECTION REVISED	J.V.D.
3	JUNE 87	AS PER ENGINEERS REVIEW	J.V.D.
2	MAY 87	AS PER PLANNING DEPARTMENT	J.V.D.
1	MAY 87	AS PER TWP ENGINEERS REVIEW	J.V.D.



HERITAGE CORNERS
PART LOT 19, CON. II
TOWNSHIP OF COLLINGWOOD
GENERAL PLAN

GAMSBY AND MANNEROW LIMITED
Consulting Professional Engineers
GUELPH - HALTON HILLS - OWEN SOUND

DRAWN BY B.J.H.	APPROVED BY W.J.M.	PROJECT NO S-1151	DRAWING NO 1
DESIGNED BY J.V.D.	DATE MARCH 1987	SCALE 1:1250	