

East
Stoney
Lake
Cottagers'
Association
5 Year
Road Plan

ESLCA 2013 to 2018

ESLCA
2013
to
2018

Executive Summary

The purpose of our road plan is to provide East Stoney Lake Cottagers' Association with strategies for all of the potential issues the Association would reasonably expect to address within a five-year period. The Association's Executive met several times and created terms of references to describe our process to create this 5 Year Road Plan. Numerous consultations occurred, relevant resources were reviewed. These are listed in the endnotes to this plan with their websites, when available. The entire Executive had the opportunity to review and provide input into this final plan. The recommendations made in all areas we believe the Association will need to address over a five year period. The key recommendation of this road plan is to improve the road drainage and drivability of our road, by re-gravelling of the entire road over a three year period.

To create a financially responsible plan, we needed to review our past expenditures, analyze them, and project forward expected costs. To adhere to a principle of transparency, we have included our previous annual financial statement data, our analysis of it and a projected budget. Based on the cost of continuing road maintenance and re-gravelling, we projected the necessary increased annual Association fee for a three year period: \$200 for 2013/14, and \$195.00 for 2014/15 and 2015/16. We expect to return to a considerably lower annual fee in 2016/17, when the re-gravelling is complete.

The Road Plan is designed improve communication, prevent conflict and provide a timely process for resolving conflict when it occurs. It describes expanded use of membership e-mail addresses; it provides the Executive strategies for contemporaneous communication, and processes to intervene on road flooding, downed trees on road, and other incidental road issues which impact cottage owners; and, it expands the use of the AGM for an annual review of road planning and presentation of a budget for the next year.

We hope the 5 Year Plan will help our Association in moving forward to create a higher quality road and a dependable and worry-free road management strategy.

Your Executive.

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2. Introduction

The purpose of our road plan is to provide East Stoney Lake Cottagers' Association with strategies for all of the potential issues the Association would reasonably expect to address within a five-year period. Additionally, the 5-year road plan will facilitate the Executive's adherence to a principle approach to road management, following the following values: sound financial management in expenditures and budgeting; transparency for association membership in planning and decision-making; and timeliness in addressing both emergent safety issues and road maintenance.

3. Background

ESLCA's private road begins at 2377 South Bay Road, includes Hull Road, and ends at the "T" intersection. At the "T" the road divides into South Bay Shore Road West and South Bay Shore Road East, and has several branches off each portion.

The total length of the road is: 2.58 KMs. Currently the road has 69 lots with 68 cottages with several lots having out-lying buildings (separate garages, boathouses and bunkhouses). All sections of our private road are maintained throughout the year. The road has only cottage owners' properties with a right-of-use for cottage owners. There are no commercial properties or public use areas on the road or accessed by the road. No length of the road accesses public property, crown land or provides public access to a waterway, therefore, the private road has no right-of-use by the public.

There is a single association membership fee for road maintenance; we do not differentiate from summer or year-round users. Our annual fee is currently **\$110.00**, which is low for cottage associations in general and for our geographic area. Most cottagers pay this annual fee on time. A very few cottagers are behind in their fees but these are eventually paid. We have not ever pursued outstanding fees through the court process within the two-year time limit, the legal process to address 'undue enrichment' through non-payment of private road fees.

ESLCA is regulated through our conservation authority *Otonabee Regional Conservation Authority (ORCA)*:

"ORCA has a legislative mandate to protect people and property against natural hazards, including flooding and erosion, and does this in two ways:2) providing individual property owners and land developers with assistance in obtaining a permit for works under Ontario Regulation 167/06 - Development, Interference with Wetlands and Alterations to Shorelines and Watercourses - under Section 28 of the Conservation Authorities Act."

4. Current Situation

We have no plans for re-gravelling the road, no winter sanding, our grading is problematic as poor drainage quickly returns road to poor conditions, we have poor road crown shape in many areas due to lack of gravel and sunken road surfaces, this reduces drainage. In many areas with drainage issues there is a lack of available road width, resulting in no ditches or shoulder or mowing of shoulders (mowing allows graders to reclaim displaced gravel). The need for culvert maintenance is minimal, our road has low traffic and no chronic saturated areas. There is some seasonal flooding of the road. We have no plan to address serious flooding, downed trees or redress cottage construction impact on the road.

4.1 Re-Gravelling

Re-gravelling is replacing gravel on a road which has been lost due to traffic spraying it off the road or gravel shoveled off the road through snow-clearing. No re-gravelling was completed in 2012. In 2011, two stretches of the road had gravel added to them, one stretch at the base of the bridge over the large culvert, the second around 2403 South Bay Road, on a corner by a marshy area (Significant Provincial Wetland), where the clay bed under the road was becoming visible with gravel loss (clay can become slick for driving on when wet). Currently we have no annual or long-term plan to address re-gravelling. Gravel roads with higher traffic levels are typically re-graveled every 2 to 3 years (we will not recommend this cycle for our road). Re-gravelling sections is not considered fill placement requiring ORCA permission or private road patching, or routine maintenance (4.2.1(1), not requiring a permit.ⁱⁱ The local conservation authority enforcement officer, Dan Bujas confirmed this but recommended we phone ORCA prior to re-gravelling to consult on this issue.ⁱⁱⁱ

4.2 Sanding

Currently we have no sanding occurring on the roads during winter months. In previous years contractors were called upon to sand roads on a sporadic basis, only when certain sections were extremely icy and considered potentially impassable. To-date we have had no accidents due to icy conditions. Over the last two years, we have had several complaints from drivers and walkers about road ice. Sanding does cause the road surface to thaw, increasing wear on the road in winter.^{iv} Two sanding contractors were approached; neither was willing to come to our road. Our previous snow removal contractor decided not to plow for us this year. A new contractor has been retained for snow removal and he has limited sanding capacity.

4.3 Downed Trees

Currently downed trees are cleared by property owners or good neighbors when they block our roads. Downed trees on hydro lines are removed by the hydro company, with no cost to property owners. Bell Canada is extremely slow to remove trees downed on power lines. They do remove them if they have downed a Bell line. The cottage association has played an important role in this process by initiating voluntary work on trees blocking our roads. This intervention has been timely and fallen trees have not impaired emergency vehicle access. The same informal approach has applied to property owners removing trees at risk of blocking roads (standing dead or leaning trees). The association carries no insurance for these situations. To this date, this informal approach has worked. [Note: as of 2018 we no longer use volunteers other than property owners for downed trees]

4.4 Construction

Construction takes a toll on our roads. We have no clear procedure for seeking remuneration to off-set the additional wear. Every year a number of cottagers rebuild, renovate and landscape. This often involves a variety of heavy equipment being hauled over the roads, use of dump trucks for fill and heavy deliveries of items like lumber and armor rock. Also, our road has heavy trucks for garbage pick-up, propane delivery and septic tank pumping. This has been discussed previously at AGMs but a workable solution has not been implemented. Some cottagers have contributed to grading costs after construction but this has not been consistent. Some cottagers have had the heavy work done over the winter, when the road is often frozen and the heavy loads are believed by the cottagers to have less of an impact on the road. Some damage has still occurred despite winter conditions (days when road surface melts). Additionally, heavy equipment work like pouring foundations and demolishment cannot always be done in winter.

4.5 Grading

We have historically graded only twice per year in the Spring and Fall. Over the last two years this routine has been problematic. This last year we needed a second grade the 2nd week of August and cottagers would have preferred it be completed in July. By mid-October, poor road conditions had returned. A wet week after our Spring grade impaired the road developing a solid crust after the grading, leading to poor results from the grading. In the prior year, a very wet Spring did not provide a long enough period for the road to dry adequately for grading. (Grading should not be done within 48 hours of an expected rainfall.^v) This delayed the Spring grading until after the May long weekend. This situation aggravated cottagers, some saw the poor road conditions as resulting from failure of the Executive to ensure the road was graded. At the recent AGM, we resolved to add in a mid-summer grade, to reduce the chronic pothole issue. Additionally, a 5-year road plan was to be created to address the underlying drainage issues causing the potholes. Grading does increase the loss of fines in the road and increases polluting effect of gravel roads on nearby water bodies and increases the amount of dust produced (fines are the particles smaller than sand which harden the road so it can tolerate traffic, repel water through retaining a crown shape) .^{vi}

4.6 Drainage

In most stretches of our road, we have trees growing adjacent to the road, as well as rock outcroppings directly adjacent to the road in some areas. This means there is no mowing, which limits improving drainage through grading. The trees prevent reclaiming gravel displaced by traffic and snow-clearing. The trees have positive impacts; they shade the road during dry spells, keeping it moist, which reduces the loss of fines and dust released into the air through traffic. Also, tree roots protect the road bed from erosion and the impact on the road bed from traffic (weight and speed).^{vii} The trees are valued for their esthetics, sound buffering effects and function as a privacy screen for cottages. Cutting down trees to widen the road, mow or create ditches and shoulders, is not being considered as an option in this plan.

In many stretches, there is little ability to create ditches or maintain a consistent shoulder. In these areas, drainage is dependent on road height to develop a crown. In a few areas, years of use has lowered the road level compared to the adjacent properties. These properties drain onto the road. The worn road stretches are difficult to create a crown on through grading, preventing drainage. The cumulated impact of drainage issues is chronic potholes.^{viii}

4.7 Culvert Maintenance

ESLCA Culverts range in 5 to 15 years of use left. Currently, the road has 5 culverts; 4 in place and functioning at 2383 South Bay Road, Frog pond, South Bay Road, bridge, South Bay Shore Road East and 1716, South Bay Shore Road West.

Culvert replacements should have either a letter of permission or a work permit from the responsible conservation authority. (Culverts can be replaced with a letter of permission from the Conservation authority rather than a work permit if the new culvert matches the old culvert in diameter, length, direction, slope, placement location, and there are no complicating flooding or drainage issues).^{ix} Corrugated metal culverts are designed to last 50 to 75 years.^x The expected lifespan of a corrugated metal culvert is 40 years, but this can be greatly reduced by acidic soils or poor initial placement or damage during initial placement.^{xi} Culvert replacement is complicated by new practices of using larger culverts (less seasonal blockage issues and tolerant of upstream development, and less prone too significant damage during periods of heavy flow)^{xii} and the use of larger aggregate material surrounding and above culverts. The latter reduces speed of water flow through during heavy rains or thaw

conditions, thereby reducing pollutant impact, but they do increase the overall drainage downstream and lower high water levels on the upstream side of the culvert. Additionally, higher proportion of aggregate in road bases stretches through marshy areas and leads to a lower risk of water damage to the road.

The most expensive ESLCA culvert is the bridge on South Bay Shore Road East (it would cost approximately \$5,000.00 to replace). We had this assessed and it has at least another 15 years of use left. The continuous water flow through it reduces its aging. Also, we examined the culvert at 1716 South Bay Shore Road West, it has another 10 years of use left. Culvert aging is accelerated by soil acidity which increases corrosion, on our road any of the culverts draining marshy areas are affected by this. When these culverts eventually breakdown, they should be replaced by plastic culverts which have a longer life span. Plastic culverts do require 8 to 10 inches of gravel above them. ^{xiii}

4. 8 Finances

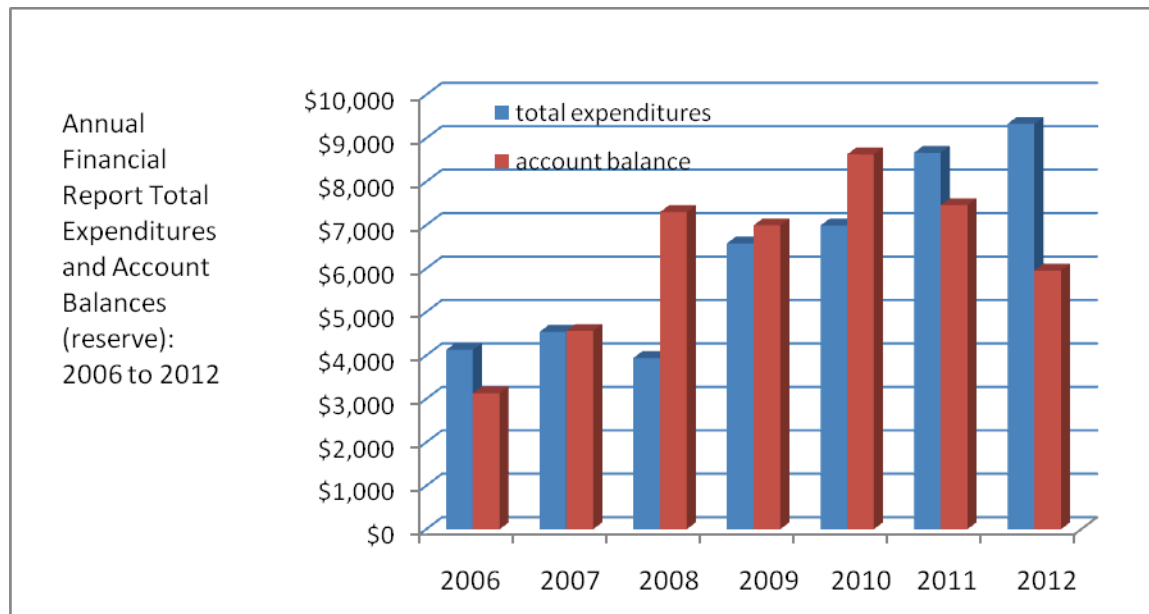
At our last AGM, our annual report included revenues (\$7,820.00) and total expenditures (\$5,150.57) for the period August 1st 2011 to July 31, 2012. Our surplus on Aug 1st, 2012 was (\$2,669.43). The association has a long history of exceeding revenue over costs with a small margin of residual savings (See Table 1 Appendix 8.2). This management strategy has developed over many years a contingency fund for emergency repairs. At this recent 2012 AGM, the membership was advised that there will likely be a rate increase in subsequent calendar years, due to increased maintenance costs. A motion for cost of repairs to the road in the next 12 months was considered and withdrawn after discussion. A motion was put forth that the roads committee meet, create a 5-year road plan with estimated costs and respond to the Executive by October 31, 2012

Road maintenance costs are the fastest increasing component of our annual expenditures. In the Graph 1(below) the trend over the last six years has been an increase in expenditures (17% per year) with a gradually reduced surplus held in reserve. During the same period, there has been no matching increase in annual fees for association membership. During any year, the cash flow between expenditures and annual fees being paid creates a fiscal low point each January; in 2012 the minimum balance in the ESLCA account was: \$2,459. This amount is replenished annually through fee collections (of 69 x \$110 = \$7590). If our regular maintenance costs increase over the 5-year road plan at the same rate as the last 6 years, we could not maintain the road with our current low annual association fee (see next page Table 1: Annual costs changes based on prior fiscal years). Road maintenance planning recommendations will need to include sound management of yearly expenditures to maintain cost increases to a reasonable rate of inflation. Due to a high number of one-time only expenditures over the last several years, we do not expect the past rate of increases in maintenance costs to be predictive of future years cost increases. Table 2 (page 9) details our expected costs for the next 3 years, including maintenance and improvements.

Re-gravelling will require a substantial increase in our cottage association's annual fee for a three year period. We consulted with the Douro-Dummer Townships roads manager on expected costs for re-gravelling our road. He estimated \$17,500.00 as a maximum cost over a 3 year period. We then pursued and received a written quote from Drain Bros. which came in lower than the township estimate for total costs (including new gravel, grading of new gravel and compaction). The total estimated costs over a 3 year period are \$18,178.88 (including HST).

Future cost pressures will come from adding a third grade mid-summer, higher costs with a new contractor for snow clearing, potentially adding sanding to winter road costs and potentially acquiring

cottage association insurance. We are not purchasing an association insurance policy yet. The policy we have reviewed lacked road accident insurance for the association; any possible liability due to road accidents and maintenance is carried by individual property owners and their individual insurance policies. Also, in the last several years we have added in annual spraying calcium after the Spring grade. If we follow the Douro-Dummer Township's practice, we could reduce this cost to every second or third year, depending on the amount of calcium being used. This will offset the cost of the added grade and higher snow removal costs (\$1,714.67 was spent on calcium in 2012).



Graph 1 Annual Expenditures compared to Remaining Savings

Table 1

Date	Total Costs on Aug 1st	Savings on Aug 1st	annual cost increase from prior year	Total AVG
1-Aug-06	4129.87	3131.69		
1-Aug-07	4546.75	4565.31	10.09%	
1-Aug-08	3941.99	7302.35	-13.30%	
1-Aug-09	6581.62	6996.07	66.96%	
1-Aug-10	6990.47	8630.44	6.21%	
1-Aug-11	8667.20	7461.23	23.99%	
1-Aug-12	9333.40	5954.12	7.69%	16.94%

Table 2 Expected Costs for next 3 years
—including re-gravelling with required annual fee increase (yellow).

	2013/2014	2014/2015	2015/2016
Annual Dues			
Cottagers/Homes	69.00	69.00	69.00
Annual Fee (Current)	110.00	110.00	110.00
Total	7590.00	7590.00	7590.00
Expenses (Typical)			
Snow Removal	3600.00	3600.00	3600.00
Grading	2000.00	2000.00	2000.00
Chemical	667.00	667.00	667.00
Traditional Expenses	6267.00	6267.00	6267.00
Balance (carry over)	1323.00	1323.00	1323.00
Drain Bros Re-grading	6387.33	5904.25	5887.30
Cottagers	69.00	69.00	69.00
Additional Fees	92.57	85.57	85.32
Total Dues Required	202.57	195.57	195.32
Rounded Down	200.00	195.00	195.00
Total Dues	13800.00	13455.00	13455.00
Total Expenses	12654.33	12171.25	12154.30
	1145.68	1283.75	1300.70
Cumulative Surplus	1145.68	2429.43	3730.13

4.9 Communication Plan

Communication occurs to the membership through attendance at the AGM and one mail-out for annual billing. This year a newsletter was included in the billing. Emergency phone numbers email and street addresses for permanent residences are kept for each member of the association. E-mail addresses are collected but not consistently. We have started to use group e-mailing distribution lists for circulating our AGM minutes to our membership. We do not send out association-wide advisements on emergent issues like power outages, downed trees blocking roads or planned road maintenance and repair events. To improve use of email as a tool in communicating with the membership, the Executive would need to ensure they have email addresses for all members, and stress that these are kept confidential—they will not be given out or shared and would be used only for important news updates.

4. 10 Work Permits

The Executive does not have a legal right to apply for required work permits, only property owners have the legal right to apply for these (this right includes maintenance responsibilities). Cottage associations can apply for work permits if they have the written permission of the property owners to act on their behalf in the application for a specific work permit.^{xiv} The vast majority of the work in maintaining our private roads can be done without work permits (including culvert replacements).

4. 11 Membership Responsibilities

Each member of the cottage association shares the legal responsibility for the maintenance of the portions of the road they travel to access their cottage and the portions of our right-of-access private road which travels through on their property. Without an association, maintenance costs are the responsibility of the property owners, including billing for reasonable maintenance costs to those with access rights to lots only accessible through the property owner's portion of our private road.^{xv} The cottage association assumes the role of addressing these responsibilities, organizing maintenance and collection of fees, collectively on behalf of all association members. Each property owner has a legal (and enforceable) responsibility to pay reasonable maintenance fees to the association.^{xvi} In the absence of an association and a volunteer Executive to organize its work, each lot owner bears resolving these responsibilities individually.

4.12 Conflict Resolution

Community Mediation seeks to resolve problems within a COMMUNITY, through the efforts of the people who live or work in that community. Community mediation empowers people to work out their problems themselves. Where possible, the mediators who help resolve a dispute will reflect some of the background, culture, age and other characteristics of the people involved. Community can mean any setting where people interact together such as a neighborhood, a workplace, or a cultural group.

Community Mediation is a "facilitative" process: it helps people meet, talk and understand the problem without the mediator evaluating (making judgments) or expressing an opinion. It is a "transformative" process: seeking to change the way people relate, not just to solve the problem. In Community Mediation the solution is yours. The mediators do not take sides or make decisions about who is right or wrong. There is no agreement until those involved in the conflict are satisfied. Agreements made through mediation are effective, because the people involved truly want them to work. How the mediation process works: Once a disagreement is identified and the entire Executive has been notified, a member/members of the Executive will be assigned to meet with the involved resident(s), listen to their concern(s) and explain it to the other members of the Executive. The Executive will schedule a mediation meeting with the people involved in the conflict. Each party will be asked to explain their side of the issue(s) and, in turn, listen to the other's side. After discussing options and when both parties are satisfied, a letter of understanding will be drawn up and a copy given to each participant. If no solution can be achieved, and both parties agree, a third party mediator would be sought. A meeting would be scheduled with both parties privately, by the mediator, to explain their side of the issue. The mediator would then schedule a common meeting. Each party will be asked to explain their side of the issue and, in turn, listen to the other's side. After discussing options and when both parties are satisfied, a letter of understanding will be drawn up and a copy given to each participant.^{xvii} If both parties cannot agree on the mediation process, the local governing body (eg. municipality, ORCA etc..) will be contacted and asked to intervene. No work will proceed until both parties are satisfied or the local governing body has made clear what work is allowed.

5. Conclusion: what problems need addressing in 5-year window?

ESLCA lacks a longitudinal view on maintaining and improving our road. Two key problem issues are chronic potholes and culvert replacement. The mandate to produce this 5-year road plan came from a heated AGM where frustrated cottage owners voiced concerns on the state of the road and the lack of a plan to adequately address this need. The road plan needs to address the causes of chronic potholes as the repeated grading is not dealing with the underlying conditions, creating the potholes. This creates a

planning dilemma: it is not possible with our current low annual fee to repair our current drainage issues. On the issue of culvert replacement, the Executive needs a plan which prevents or mitigates conflicts with cottage owners, complies with ORCA's regulatory requirements and ensures adequate drainage throughout the year. This plan will need to address any repeated water flowing across the road occurrences within the five year period of the plan.

6. Recommendations (what we should do to address problems in 5-year window, include costing)

6.1 Re-Graveling

We recommend the sections of the road with the following conditions be re-graveled based on two priorities: 1) re-gravelling due to safety; and, 2) re-gravelling to reduce chronic drainage issues. Some areas of the road may deteriorate to a degree necessary to become a safety issues. These areas will become the highest priority over pre-planned and scheduled maintenance. Road safety concerns could result from slippery conditions, sitting water on road, soft road surface, downed trees blocking road (when not addressed by property owners), Re-graveling to resolve chronic drainage issues is recommend to be completed over a 3-year period. In Year 1 one of the work plan, the section of the road from South Bay Road township road's responsibility to the "T" junction (where South Bay Shore Road West and East join South Bay Road.) This area will be re-graveled first as it has the most traffic and sustains the greatest wear. The approximate cost will be a maximum of \$6,000 for re-graveling each section annually. In Year 2, South Bay Shore Road West will be re-graveled, as it has the next highest level of need for repair. In Year 3, South Bay Shore Road East will be re-graveled. In addition, the re-graveled sections will need compaction. A motion for the AGM on re-graveling is addressed in the finance recommendations.

6.2 Sanding

We recommend the Association pursue an annual sanding contract. If a snow removal contractor is able to sand, we recommend we combine both sanding and snow removal as one contracted service. If this is not possible, the Executive should maintain a call-in contractor for sanding when the road has icy conditions, after it has been cleared of snow.

6.3 Downed Trees

We recommend that we continue with the current informal approach to addressing downed trees on our road as the first response to addressing fallen trees. If within a 72-hour period, an informal plan has not been resolved to address a downed tree, the Executive will contract for the bucking or pushing of the fallen tree onto the property it was originally rooted from. We will request the owner pay this service directly.

6.4 Grading

We recommend grading be completed two times per year, with a third optional grade, to the following schedule:

- a) Full grade of all roads in Spring prior to May long-weekend; b) a partial grade/light grade completed mid-July when road conditions warrant it; and c) a partial/light grade to full grade be completed in the Fall.

6.5 Culvert Replacement

In this section we have 4 separate recommendations:

- i) **We recommended any sections of the road which become flooded become priorities for improvement.** We recommend that if, during any period of heavy rains or the spring thaw,

a section of road is under water, or has significant water flowing across or along the road, that section of road becomes the priority for being upgraded during the following mid-summer dry season.

- ii) **We recommend the road landowners and the adjacent cottage property owners be advised in writing by the Executive of our intent to request a work permit application or (ORCA) letter of permission by the road landowner to address the flooding problem, and that this notice occur when the drainage issue is occurring.** If the land owners disagree with the pursuit of a work permit, they and the Executive may exercise the conflict resolution option in section 4.12 and subsequent recommendation 6.8
- iii) **We recommend that if any section of the road washes out or erodes to the point that it would be reasonable to consider it a safety hazard, the Executive will contact the road landowners and ORCA and seek an immediate resolution to the work being completed.** Adjacent cottage owners will be advised by phone on this situation prior to the repair being completed, when possible.

6.6 Finances

6.6.1 In order to fund road improvements and regular maintenance, **we recommend the Executive institute an annual cottage association fee of: \$200 effective January 1st, 2013, \$195.00 effective January 1st, 2014, and \$195.00 effective January 1st, 2015.**

6.6.2 **We recommend the association plan to retain at least \$2,000 as a minimum balance as a reserve for emergency funding throughout the fiscal year.**

6.6.3 **We recommend the Executive create a projected annual budget based on actual expected costs for each AGM for the following fiscal year.** The AVG rate on increase of 16.94 percent for existing expenditures for the past 6 fiscal years should not be considered predictive of the future year to year costs for the existing road maintenance practices; but, in the current fiscal year (August 1st to July 31st) costs will increase due to a new snow removal contractor, and the addition of a third grade mid-summer. Once these costs are assimilated, future years costs are expected to stabilize for routine maintenance.

6.6.4 **We recommend the ESLCA set a one-time fee of \$300.00 for new construction (renovating, building and landscaping) in excess of a total of \$80,000.00 of improvements, this fee amount should be voted on as a motion at the 2013 AGM.**

6.6.5 **We recommend the Executive detail in the annual financial statement sub-categories expenditures which include gravel, grading, calcium and incidental repairs.** This will maintain transparency and accountability.

6.7 Communication Plan

In this section we have two recommendations:

- i) **The Executive use the January 2013 billing mail-out to collect all outstanding e-mail addresses for all ESLCA members.** In this mail-out, The Executive should advise the membership that the e-mail addresses provided will be used for communicating with them on conditions described in recommendation below (and that their email address is always kept confidential.)
- ii) **The Executive use the membership e-mail distribution list to advise the membership of emergent and pre-planned road works.** This will include expected grading and other road

maintenance dates, any seasonal flooding across roads, icy road conditions, downed trees blocking access, and prolonged power-outages, including downed power lines, and pursuit of letters of permission for road works or road work permits applications by or for road land owners, and planning of emergency road work (to address an emergent safety condition like a washout).

6.8 Conflict Resolution Process

We recommend the Executive follow the community mediation process described in section 4.12 with two exceptions: discretion on use of third party mediator and addressing immediate risk issues. First exception, the use of a third party mediator will be an option for the Executive rather than a requirement, if the first steps to resolve conflict have not worked. The Executive will balance the costs of the mediator with the expected gains and the current priorities for use of ESLCA funds. Second exception, in any situation where the Executive is aware of a potential safety risk, or a risk of liability for the association, they act to eliminate the risk as the first priority.

6.9 Road Plan Schedule

We recommend ESLCA follow the 5-year road plan schedule described in Section 7 of this 5-year road plan.

7.0 The Road Plan Schedule

In the schedule below, Year 1 will run April 1, 2013 to March 31, 2014. Future years repeat this cycle. Roads Commissioner refers to either the Roads Commissioner or the two Assistants. Depending on revenue and the necessity for emergent road repairs, the number of repairs each year may increase. Any adjustments to the 5-Year Road Work Plan will be reported to the membership in Annual Report and discussed at the AGM.

5 Year Road Work Plan For Period: April 1st 2013 to March 31st 2018

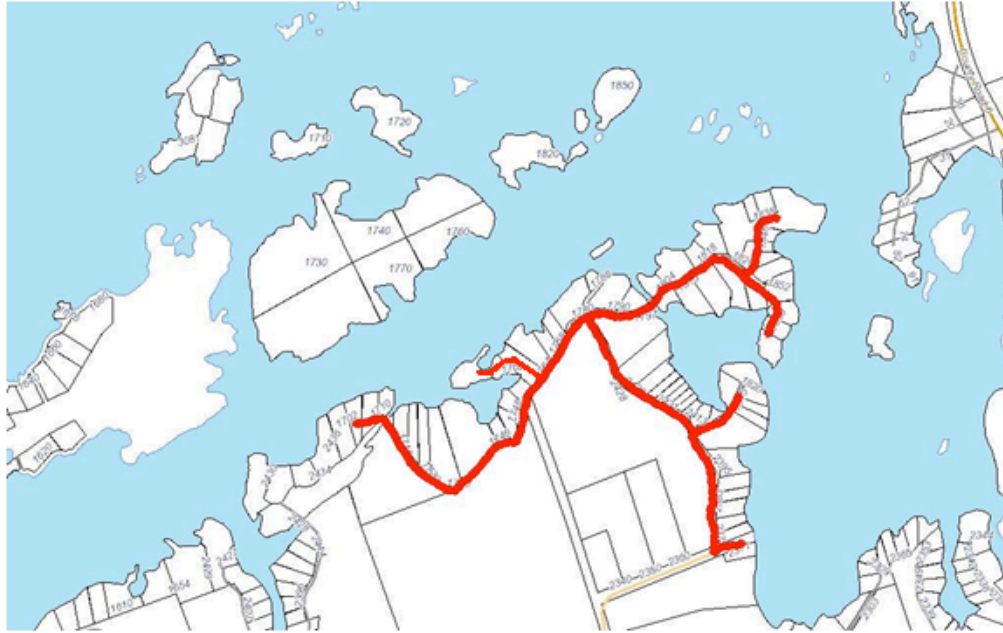
year	task	date completed by
year 1	Complete 1st section South Bay Rd	May long weekend
year 1	full grade	May long weekend
year 1	full grade	July 15th, 2013
year 1	E-mail Annual Report on progress on road repairs	Aug 1st, 2013
year 1	2 Motions on annual roads rate increase	AGM
year 1	Motion on continuing 5 year plan voted on at AGM	AGM
year 1	confirm snow and sandings removal contracts	Oct 15th, 2013
year 1	partial grade	Oct 31st, 2013
year 2	Complete 2nd section S Bay Shore RD W	May long weekend
year 2	full grade	May long weekend
year 2	full grade	July 15th, 2014
year 2	E-mail Annual Report on progress on road repairs	Aug 1st, 2014
year 2	Motion on continuing 5 year plan voted on at AGM	AGM
year 2	confirm snow and sandings removal contracts	Oct 15th, 2014
year 2	partial grade	Oct 31st, 2014
year 3	Complete 3rd section S Bay Shore RD E	May long weekend
year 3	full grade	May long weekend
year 3	full grade	July 15th, 2015
year 3	E-mail Annual Report on progress on road repairs	Aug 1st, 2015
year 3	Motion on continuing 5 year plan voted on at AGM	AGM
year 3	confirm snow and sandings removal contracts	Oct 15th, 2015
year 3	partial grade	Oct 31st, 2015
year 4	full grade	May long weekend
year 4	full grade	July 15th, 2016
year 4	E-mail Annual Report on progress on road repairs	Aug 1st, 2016
year 4	Motion on continuing 5 year plan voted on at AGM	AGM
year 4	confirm snow and sandings removal contracts	Oct 15th, 2016
year 4	partial grade	Oct 31st, 2016
year 5	full grade	May long weekend
year 5	full grade	July 15th, 2017
year 5	E-mail Annual Report on progress on road repairs	Aug 1st, 2017
year 5	Motion on developing next 5 year plan	AGM

8. Appendixes

This includes 3 maps showing the road, provincially significant wetlands and an Ariel view. Maps are from Peterborough County GIS website.

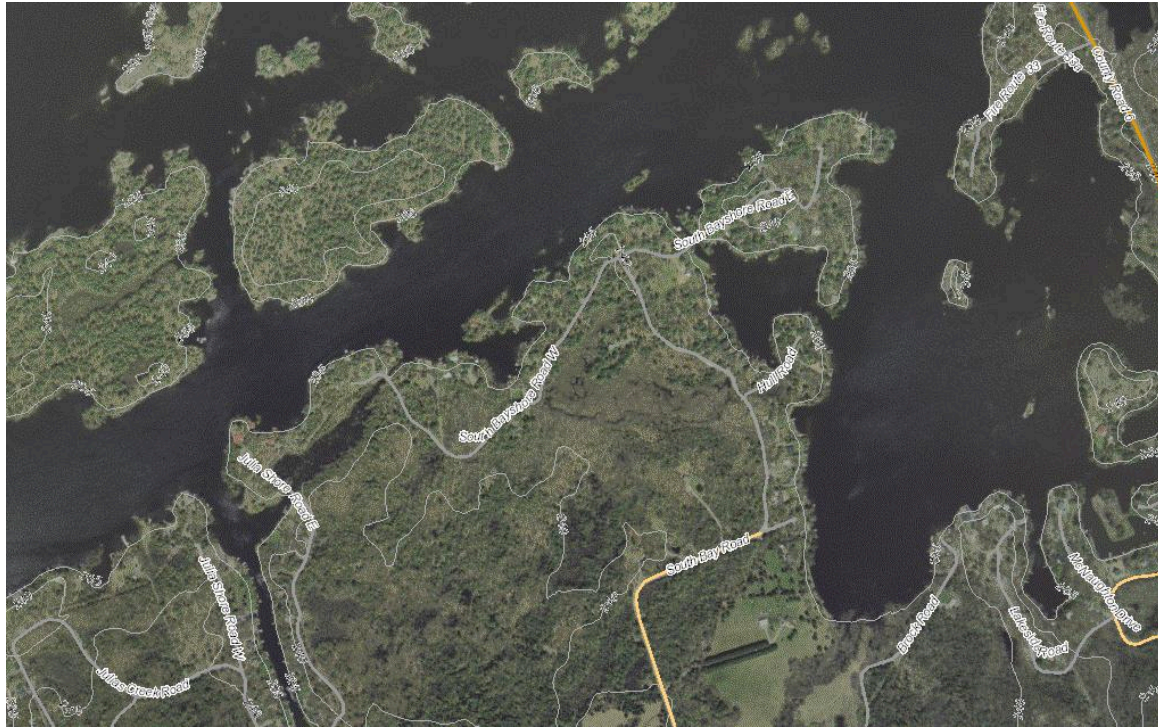
8.1 Maps

Map 1. Simple Road Map: shows ESLCA roads in red.



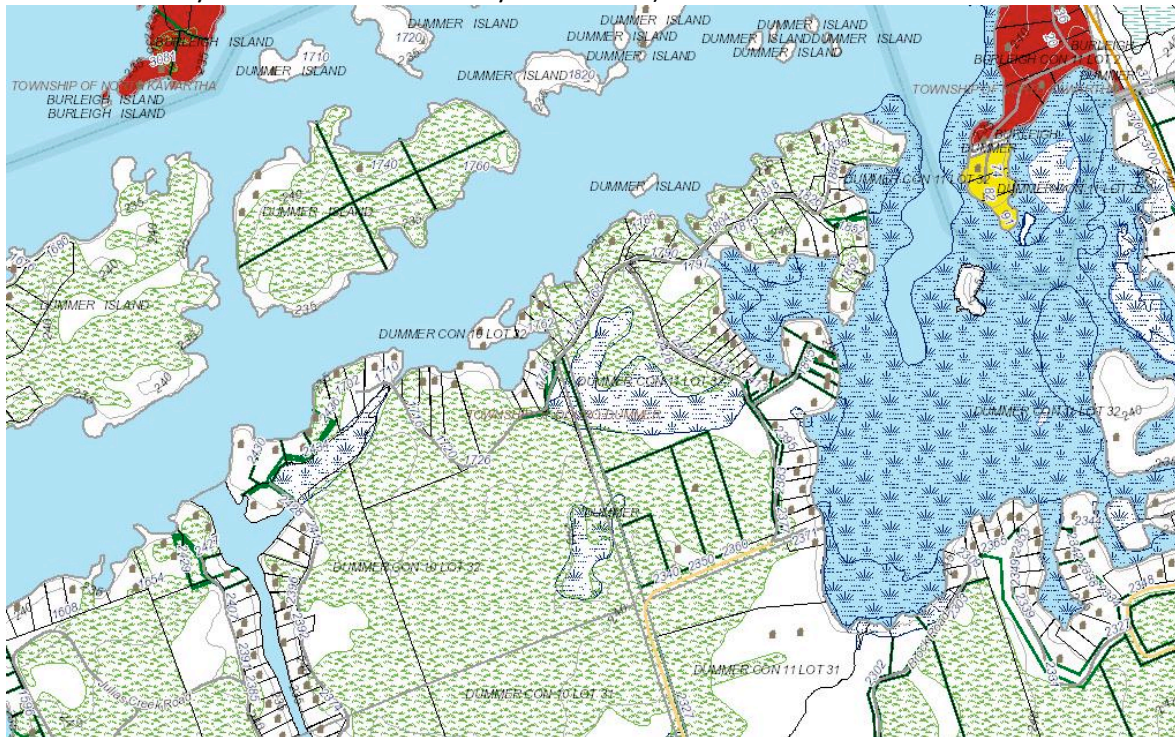
Map 2

Arial Map with contours (poor drainage areas are grey-green or dark)



Map 3

Detailed Map – includes contours, treed and swampy areas (note the large marsh area which drains across South Bay Road East and South Bay Shore Road)



8.2 Finance Appendix

Table 1: Summary of Annual Financial Reports from Period 2005 to 2012.

Financial Statements from 2005 to 2012							
Period	2005 to 2006	2006 to 2007	2007 to 2008	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012
Dues	5637.00	5980.00	6678.33	6265.00	8620.00	7487.00	7820.00
Interest	0.22	0.37	0.70	10.34	4.84	10.99	6.29
Bal Fwd.	1624.34	3131.69	4565.31	7302.35	6996.07	8630.44	7461.23
Total	7261.56	9112.06	11244.34	13577.69	15620.91	16128.43	15287.52
Snow Plowing/Sand ing	2614.00	2612.00	3819.00	3000.00	3000.00	3000.00	3000.00
Road Maintenance	1255.07	1774.31	?	3418.15	3840.07	5538.52	6264.90
Office Supplies & Mailings	93.16	155.44	116.99	161.97	144.40	127.18	64.00
Other (donation)	150.00	0.00	0.00	0.00	0.00	0.00	0.00
Bank Charges	17.64	5.00	6.00	1.50	6.00	1.50	4.50
Total	4129.87	4546.75	3941.99	6581.62	6990.47	8667.20	9333.40
Balance Aug 1 st	3131.69	4565.31	7302.35	6996.07	8630.44	7461.23	5954.12

Explanatory Note on Road Maintenance:

2010-2011 includes calcium \$1974.77; grading \$3563.85

2011-2012 includes calcium 1714.67; new culvert \$1898.40; 3 x grading & limestone \$2651.83

Also, due to late billing by Drain Bros, cost incurred in one year may be paid in the following year, for example 2007-8 above.

8.3 Re-Gravelling Written Quote Appendix

Drain Bros. Excavating Limited

R.R.2, LAKEFIELD, ONTARIO K0L 2H0

TEL: (705) 639-2301

FAX: (705) 639-2516

QUOTATION

To:	East Stoney Lake Cottage Association	Tel.No: 705 768-6261
		Fax No:
		Email:
Attn:	Simon Dadds	From: Darrell Drain
Date:	7-Feb-13	

PROJECT: 3 Year Road Maintenance Proposal**THE FOLLOWING IS AN ESTIMATE FOR:****SCOPE OF WORK****AMOUNT****2013 - South Bay Rd - township section to Junction including Hull Rd.**

Grader	approx. 10 hrs @ 100.00/hr	\$ 1,000.00
Packer	approx. 10 hrs @ 75.00/hr	\$ 750.00
Crusher Run Limestone	approx. 350 tonnes @ 11.15/t	\$ 3,902.50

2014 - South Bay Rd East from Junction.

Grader	approx. 10 hrs @ 105.00/hr	\$ 1,050.00
Packer	approx. 10 hrs @ 80.00/hr	\$ 800.00
Crusher Run Limestone	approx. 300 tonnes @ 11.20/t	\$ 3,360.00

2015 - South Bay Rd West from Junction.

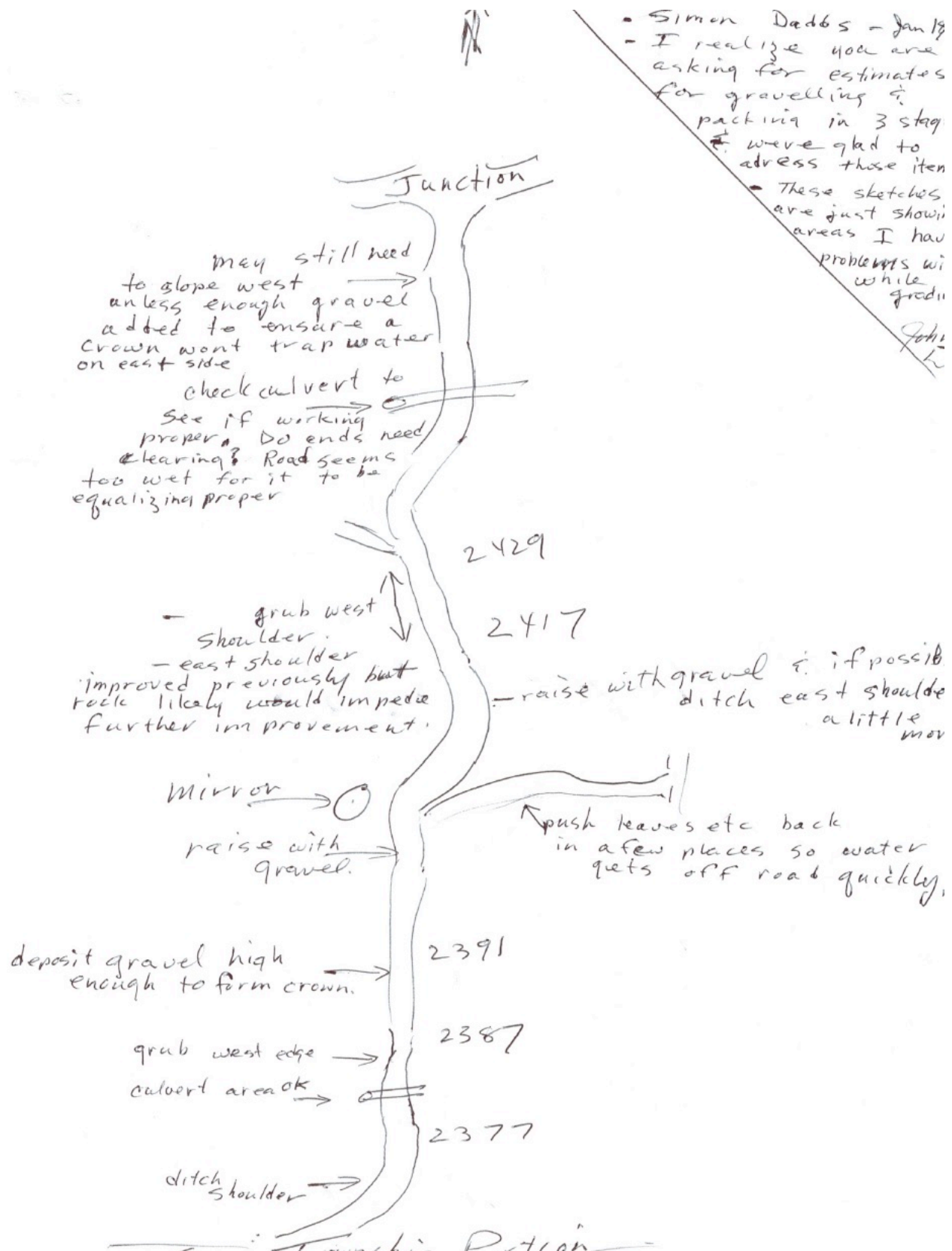
Grader	approx. 10 hrs @ 105.00/hr	\$ 1,050.00
Packer	approx. 10 hrs @ 80.00/hr	\$ 800.00
Crusher Run Limestone	approx. 300 tonnes @ 11.25/t	\$ 3,375.00

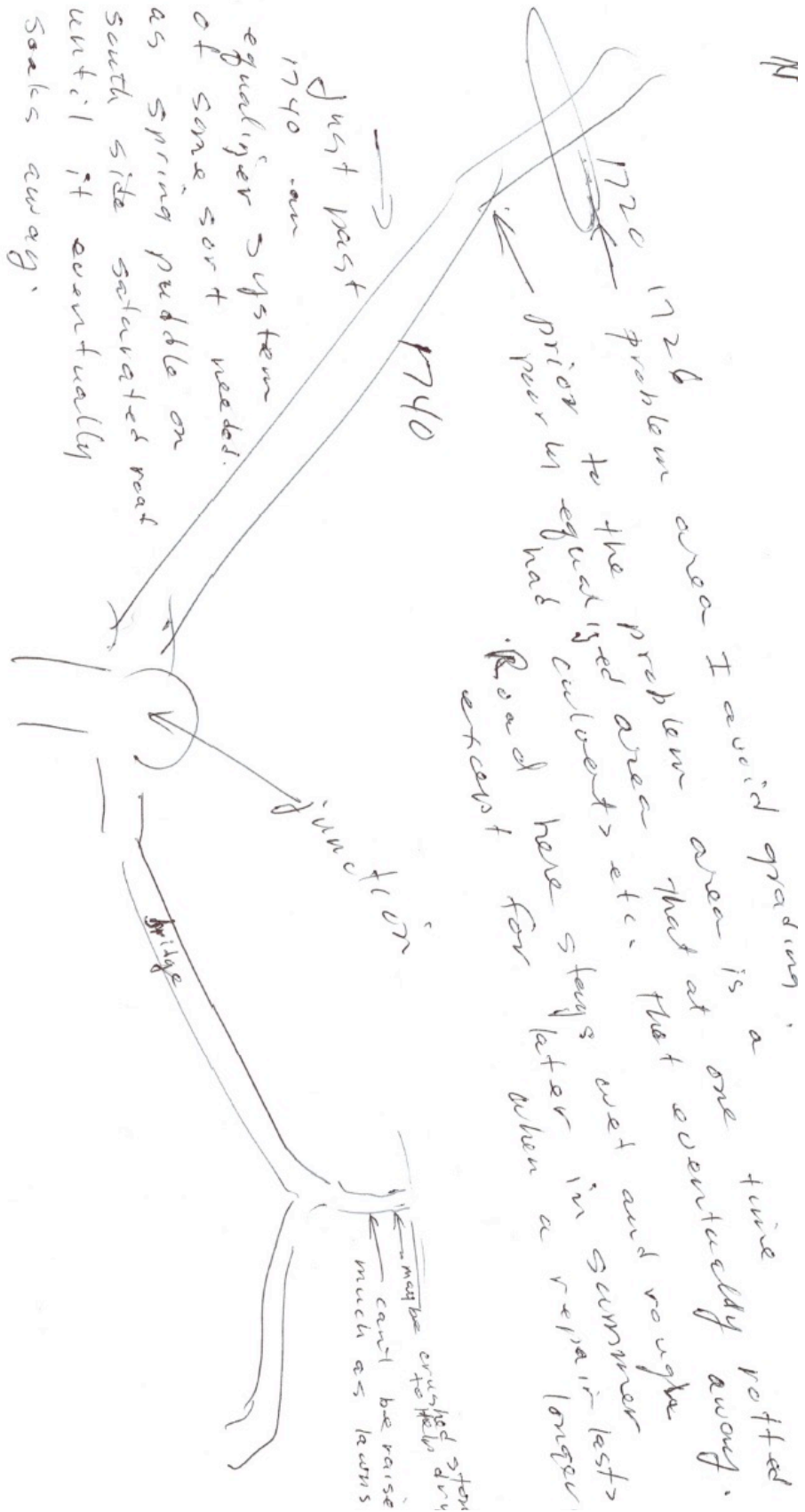
total \$ 16,087.50

Please see suggestions on attached pages and feel free to contact John Drain
for clarification (705 875-4137 cell)


 Darrell Drain
TAXES: HST - Extra**TERMS: Net Due On Completion- 1% Interest
per mth. on accounts over 30 days**

8.4 Re-Gravelling Drain Bros. Sketches Appendix





8.5 Terms of Reference for 5-Year Road Plan Working Group

Terms of references for working group completing a draft 5 year plan for road maintenance for the East Stoney Lake Cottager's Association (referred to as ESLCA).

Guiding principles: the 5-year road plan and its implementation will be both transparent and fair.

1. The working group developing the 5-year road plan will be made up of four members of the Executive: President, and three Road's Commissioners.
2. The working group will adhere to the following time frames:
 - i. Produce draft five year road plan for consideration by Executive by November 17, 2012.
 - ii. Complete amendments to plan based on feedback from Executive by December 1, 2012
 - iv. Finalize plan for Executive review by December 31, 2012.
 - v. Complete final draft of 5 year road plan by January 15, 2013.
 - vi. E- mail-out 5-year road plan by January 31, 2013 (deadline was missed as we were waiting for a written quote from Drain Bros for re-gravelling).
 - vii. Plan takes effect on March 31st, 2013.
 - viii. Present plan at AGM in 2013. Membership votes on continuing plan for full five-year period to March 31, 2018.
3. The 5-year road plan will include individual sections addressing the following maintenance components: work permit requirements, regular grading, snow-clearing, sanding, re-graveling, dust-control, culvert maintenance and problem areas (chronic potholes due to poor drainage and/or weak sub-grade).
4. The five-year road plan will include a section on a Communication plan for road work which impacts adjacent properties.
5. The five year road plan will include a Conflict resolution process over any component of the 5-year road plan.
6. The road plan will be reported on annually at each AGM for the five-year period.
7. The road plan may be amended through motions presented, discussed and voted on during any AGM during the period it is in effect.
8. The Executive retains the authority to amend any planned action within the plan.

9. Definitions

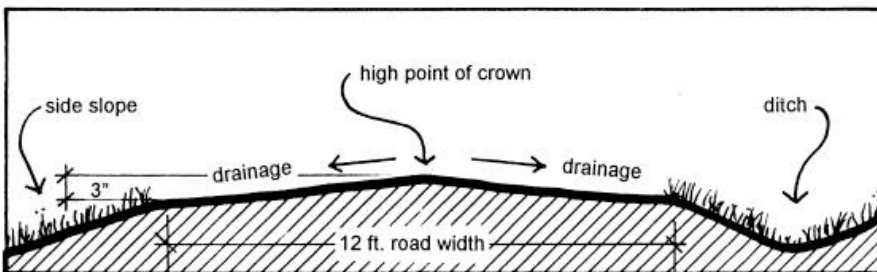
(Note: all definitions are direct quotes from their referenced sources).

Dust in the air is a loss of fine, binder aggregates from road surfaces. Loss of these fines leads to other types of road distresses such as loss of cohesion and compaction of the road fill material and reduced capacity to maintain moisture in the road fill. These deficiencies also tend to feed on themselves, compounding the problems - especially the lack of moisture within the road fill. Mechanically adding water to the road surface for dust control is a very short-term, expensive and infeasible solution. In some cases, dust can be reduced by applying chemical additives which draw moisture from the air to improve fine aggregate cohesion; however, this also can be an expensive solution and may be feasible only in the most severe cases.^{xviii}

Groundwater (subsurface water) flows and is stored under the earth's surface. With roads, the biggest concern is to keep groundwater out of the road base. Groundwater in the road base will make it soft (potentially impassable) and susceptible to tire rutting. Ideally, subsurface water should be drained from the road base and directed to a natural or constructed channel capable of handling the flow without eroding.^{xix}

Potholes are small depressions or voids in the road surface one or more inches deep which are caused by excessive moisture content, poor drainage, poorly graded aggregate, or a combination of these factors. Potholes may be corrected by patching with well-graded materials and compacting and/or spot grading. Large areas of potholed road surface indicate a poor road fill condition over an extended section of roadway and thus may require the re-grading, re-crowning and re-compacting of the affected roadway section to mix aggregates into a well-graded road fill and improve road surface drainage. 'Underdrains' may also be necessary in these areas to drain the sub-grade.^{xx}

Road Crown and grading are the primary means by which surface water is drained off a road surface. To crown a road means to create a high point that runs lengthwise along the center of the road. Either side of this high point is sloped gently away from the center toward the outer edge of the road. Crowning is the quickest way to get water off the road, preventing significant erosion of the road surface.



Crown profile: $\frac{1}{4}$ " of crown per foot of road width (e.g., $\frac{1}{4}$ " x 12' road = 3" crown).

An insufficient crown will allow water to puddle on the road surface creating potholes or eroding the road surface. The potholes will continue to grow each time a vehicle splashes through them, resulting in the loss of fine clay particles that are necessary for a good road surface. Standing water will also seep into the roadbed, weakening the road and making it susceptible to tire rutting. Proper grading will prevent potholes from forming and provide a safer surface for travel.^{xxi}

Slipperiness is caused when the road surface contains excessive fine aggregates in proportion to coarser aggregates, especially within the crust. Traffic wear can reduce coarse aggregates to finer aggregates, thus dis-proportioning the original road fill aggregate mix. During wet weather, the road surface becomes slippery and may become impassible. This problem can be corrected by mixing the surface fines with coarser aggregate by grading and/or blading the road surface and compacting back in place. Occasionally, coarser aggregate will need to be hauled in and added to the roadway.^{xxii}

Softspots are areas of the road surface and/or sub-grade made weak by poor drainage. These areas depress under vehicular weight and almost always develop one or more of the other types of surface deformations. These areas can be corrected by improving drainage conditions or replacing the soft spot with more drainable materials. Depending on the cost effectiveness and feasibility of each, the following methods may be used to correct soft spots:

- a) Improving the drainage of the road fill and/or sub-grade with underdrain. This method is outlet dependent.
- b) Improving the drainage of the road fill and/or sub-grade by grading road ditches low enough to remove water from beneath the problem area. This may involve piping to move water from one side of the road to the other. This method is outlet dependent.
- c) Patching the soft spot area with a suitable material such as well-graded stone or gravel.
- d) A combination of the above.^{xxiii}

Surface Water is water that is flowing or standing on the top of the ground. On gravel roads, the biggest concern is to get water off the road surface as quickly as possible and to direct it to a natural or constructed drainage channel that is capable of handling the flow without eroding. When surface water is not drained off the road, it can lead to washouts, muddy conditions, and potholes.^{xxiv}

10. Endnotes

ⁱ Role of ORCA <http://www.otonabee.com/692/>

ⁱⁱ ORCA-Watershed-Planning-Regulation-Policy-Manual-Approved-May-17-2012, p. 80
<http://www.otonabee.com/wp-content/uploads/2012/05/ORCA-Watershed-Planning-Regulation-Policy-Manual-Approved-May-17-2012.pdf>

ⁱⁱⁱ E-mail correspondence from Daniel Bujas, Regulations and Enforcement Officer Otonabee Region Conservation Authority 250 Milroy Drive, Peterborough, ON K9H 7M9, October 5, 2012.

^{iv} Add in Harold tour

^v *To minimize opportunity for degradation of the roadway, it is best not to blade, grade, or drag if rain or freezing temperatures are favorable within the 48 hour forecast.* From US Environmental Protection Agency Non-Point Source Pollution Guide. p. 2.,
http://water.epa.gov/polwaste/nps/urban/upload/2001_02_28_NPS_unpavedroads_ch1.pdf

^{vi}

Road Maintenance on Your Dirt Road

Low-tech solutions often are best for assuring a long, healthy life for your dirt road or driveway.

Hollis Walker, September/October 2006, Read more: <http://www.grit.com/Property/Road-Maintenance-on-Your-Dirt-Road.aspx#ixzz27ioXFA00> Grit: American Know-How Magazine (online edition)

^{vii} Road Maintenance Tips: Road maintenance dos and don'ts from the experts., Hollis Walker, September/October 2006, Read more: <http://www.grit.com/Property/Road-Maintenance-Tips.aspx>

^{viii} <http://www.ruralhometech.com/RoadDrivewayMaintenance/TroubleshootingGuide/tabid/80/Default.aspx>
 From *A Ditch in Time*, an online book by Russ Lanoie, accessed on September 2, 2012.

^{ix} ORCA-Watershed-Planning-Regulation-Policy-Manual-Approved-May-17-2012
 p.81. <http://www.otonabee.com/wp-content/uploads/2012/05/ORCA-Watershed-Planning-Regulation-Policy-Manual-Approved-May-17-2012.pdf>

^x Failing Culverts –The Geotechnical Perspective, Al Tenbusch, President, Tenbusch, Inc., Brian Dorwart, Senior Associate, Brierley Associates, Al F. Tenbusch, Engineer, Tenbusch, Inc., August 2009
<http://www.tenbusch.com/tunnel/files/FailingCulvertsGeotechnicalPerspective.pdf>

^{xi} Effectiveness of Metal and Concrete Pipe Currently Installed in Missouri, Prepared by Missouri Department of Transportation, 2008, by John D. Wenzlick, P.E., Jose Albarran-Garcia, P.E.
<http://library.modot.mo.gov/RDT/reports/Ri07058/or08014.pdf>

^{xii} Road Maintenance on Your Dirt Road

Low-tech solutions often are best for assuring a long, healthy life for your dirt road or driveway.

Hollis Walker, September/October 2006, Read more: <http://www.grit.com/Property/Road-Maintenance-on-Your-Dirt-Road.aspx#ixzz27ioXFA00> Grit: American Know-How Magazine (online edition)

^{xiii} Consultation with Douro-Dummer Roads Superintendent Harold Nelson on October 5, 2012, Peter and Simon toured our road with Harold.

^{xiv} E-mail correspondence from Daniel Bujas, Regulations and Enforcement Officer Otonabee Region Conservation Authority 250 Milroy Drive, Peterborough, ON K9H 7M9, October 5, 2012.

^{xv} Bob Aaron, bob@aaron.ca, Toronto Star, May 3, 2008 , Road access critical when buying cottage (Note: this link has the actual legislation and case-law links at bottom of article)
http://www.google.ca/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.aaron.ca%2Fcolumns%2F2008-05-03.htm&ei=OyJwULGRNdKFyQHL4oC4BQ&usg=AFQjCNG8dWti38nLHqAjBn1lbgrw-UfRPA&sig2=3QVI6E7cyAxGUdyH_EA7RQ

^{xvi} <http://www.foca.on.ca/case-law>

^{xvii} Scott Vali completed this section using mediation content in a direct quote from:
<http://www.k3c.org/ResolveKingston/CommunityMediation/tabid/130/Default.aspx>

^{xviii} US Environmental Protection Agency Non-Point Source Pollution guide from
http://water.epa.gov/polwaste/nps/urban/upload/2001_02_28_NPS_unpavedroads_ch1.pdf

^{xix} MAINE EROSION AND SEDIMENT CONTROL BMP 3/2003, from
<http://www.maine.gov/dep/land/erosion/escbmps/escsectionh1.pdf>

^{xx} US Environmental Protection Agency Non-Point Source Pollution guide from
http://water.epa.gov/polwaste/nps/urban/upload/2001_02_28_NPS_unpavedroads_ch1.pdf

^{xxi} MAINE EROSION AND SEDIMENT CONTROL BMP 3/2003, from
<http://www.maine.gov/dep/land/erosion/escbmps/escsectionh1.pdf>

^{xxii} US Environmental Protection Agency Non-Point Source Pollution guide from
http://water.epa.gov/polwaste/nps/urban/upload/2001_02_28_NPS_unpavedroads_ch1.pdf

^{xxiii} US Environmental Protection Agency Non-Point Source Pollution guide from
http://water.epa.gov/polwaste/nps/urban/upload/2001_02_28_NPS_unpavedroads_ch1.pdf

^{xxiv} MAINE EROSION AND SEDIMENT CONTROL BMP 3/2003, from
<http://www.maine.gov/dep/land/erosion/escbmps/escsectionh1.pdf>