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TO: Economic Growth and Infrastructure Committee
Finance Committee
Radio Oversight Committee
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Mel Maier
Phil Bertolini
Laurie VanPelt
Jeff Nesmith
Jim Manning
Pat Coates
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FROM: Bob Daddow

SUBJECT: County 9-1-1 Charge: Rate Proposal for July 1, 2019 to June 30, 2020

DATE: March 21, 2019

BACKGROUND

The Emergency Service Enabling Act, MCL 484.1101, et seq., ("Act") requires that the County Board of Commissioners approve and submit the County 9-1-1 Charge ("County Charge") to the State each year by May 15, to be effective for the following time period of July 1 to June 30.¹ The current County Charge was set by Miscellaneous Resolution # 18143 and established a monthly County Charge of \$.36 per device. The County Charge provides capital and operational funding for the County Public Safety Radio Communications System ("Radio System") and the County 9-1-1 System.

The County Radio System: The County operates the Radio System on behalf of police, fire, emergency medical services, ambulance companies, the Sheriff's Office, hospitals², and other public safety users within the County.³ Non-first responders may use the Radio System, through written agreement, but are charged a fee for use of the Radio System and equipment. This fee is charged, because the County Charge cannot fund non-first responder costs pursuant to the

¹ The Act requires approval and submission of the County Charge by May 15 to provide service suppliers sufficient time to place the County Charge on a bill to be effective by July 1. MCL 484.1401b(7).

² Currently, there are 15 hospital emergency rooms using the Radio System.

³ The County has agreements with the entities using the Radio System, including Interlocal Agreements with cities, villages, and townships in the County approved by Miscellaneous Resolution # 05158.

Act. MCL 484.1401b(14). Currently, there are several non-first responder entities using the County Radio System through written agreement. Presently the Radio System is comprised of 54 towers (either County-owned, leased, or municipality-owned), 1,861 mobile radios, 4,343 portable radios, and radio consoles.⁴ The City of Southfield is not currently using the Radio System, but is expected to join when the Radio System is upgraded.

In January 2018, the County began the process of upgrading and replacing its current Radio System, which is well over a decade old, by issuing a request for proposal. In April 2018, the County received two proposals for the upgrade/replacement of the Radio System. The Radio System Evaluation Committee selected a vendor, Motorola, to enter into negotiations for the Radio System upgrades/replacement. The Radio System Evaluation Committee was comprised of representatives from the Purchasing Division, Radio Shop, law enforcement agencies (including the Sheriff's Office), fire departments and the Board of Commissioners.

Currently, the County is in negotiations with Motorola for the Radio System upgrades and replacement.

The County 9-1-1 System: The County, through its 9-1-1 Plan⁵, also operates the County 9-1-1 System on behalf of municipalities, located within Oakland County, that have Public Safety Answering Points (PSAPs). The operation of the County 9-1-1 System is also funded by the County Charge.

From a basic perspective, the County 9-1-1 System has two components operated by separate vendors: (1) the network over which 9-1-1 connections (call, texts, etc.) are processed (also referred to as an ESINet)⁶ and (2) customer premise equipment (CPE or also referred to as call taking equipment), which process the 9-1-1 calls/9-1-1 connections. The County's ESINET provider is Peninsula Fiber Network (PFN) and its CPE provider is Motorola Call Works. In the past two years, the County 9-1-1 System was replaced and became fully operational in September 2017.⁷

In conclusion, there is a need to increase the monthly County Charge by \$.06 due to the Radio System upgrades/replacements and uncertainties surrounding State reimbursement for the construction of the ESINet (both issues will be further defined and discussed in this memorandum). Prior year funding projections and analyses provided to the Board of Commissioners included an anticipatory monthly increase of \$.06 per device, effective July 1, 2019, bringing the total County Charge to \$.42 per device.⁸

Absent Board of Commissioners approval for the rate increase, the County Charge increase cannot be placed on the telephone bill. If the increased County Charge to \$.42 is not placed

⁴ The radio consoles are in 19 public safety answering points (PSAPs) throughout Oakland County, i.e., 17 primary PSAPs, one secondary PSAP, and one back-up PSAP.

⁵ The Board of Commissioners approved the County 9-1-1 Plan in Miscellaneous Resolution # 13176.

⁶ An ESINet is an "Emergency Services IP Network" that that is a managed IP network used for emergency services communications and can be shared by public safety agencies.

⁷ The Board of Commissioners approved the Interlocal Agreement in Miscellaneous Resolution #16206.

⁸ \$.42 per device, per month, is the maximum amount the Board of Commissioners may assess, pursuant to the Act, without a vote of the residents. MCL 484.1401 b (1).

on the bill, then one alternative funding source, e.g., County General Fund, would be required to operate the Radio System and to address the future capital and operational needs, i.e., the Radio System upgrade and replacement, along with construction costs for the ESINet. Should no rate increase be provided by the Board, the \$.36 per device, as defined, would continue to be included on the telephone bills.

RADIO COMMUNICATIONS FUND

On a quarterly basis, County Administration issues financial statements and related analyses covering the operating results of the Radio Communications Fund. The financial report for the CLEMIS Funds (including the Radio Communications Fund) for the quarter ended December 31, 2018 was submitted to the Board's Economic Growth and Infrastructure Committee in February 2019. The Radio Communications Fund financial statements are presented in Exhibit E attached to this transmittal letter.

The revenue generated by the County Charge is recorded in the Radio Communications Fund. The Radio Communications Fund funds the Radio System's capital and operating needs including the upgrade/replacement of the current Radio System and the capital and operational needs of the County 9-1-1 System.

The net liquid assets held by the Radio Communications Fund at December 31, 2018 represents the "baseline," i.e., starting point for the determination of the feasibility of the anticipated capital project, i.e., the Radio System upgrade/replacement. Along with the baseline, the future cash flow available for funding the capital project, future incremental operating costs associated with the project and means of funding the new Radio system are included in Exhibits A through D, inclusive.

This memorandum covers the financial status of the Radio Communications Fund (Exhibit E) and its capital and operating needs for the next several years (Exhibits A through D, inclusive). In addition, this memorandum also discusses the 15-year period of operation from the signing of the contract (expected in the second quarter of calendar 2019) for the Radio System upgrades/replacement through September 30, 2032. Because the County Charge is one of the principal sources of controllable revenue for the Radio Communication Fund, the sizing of the County Charge going forward is critical to insuring that the capital and operating needs of the Radio Communication Fund are properly met.

OPERATING SURCHARGE LEGISLATION AND OTHER BACKGROUND INFORMATION

The principal funding sources for the Radio System's capital and operating costs come from the State 9-1-1 Charge (year ended September 30, 2018 - \$1,870,000) and the County Charge (year ended September 30, 2018 - \$5,431,000) with a combined total ending September 30, 2019 of \$7,302,000. These two revenue sources comprise 85.7% of the revenues generated for the Radio Communications Fund. The rest of the revenue comes from leasing of tower space, investment income, non-public safety use of the Radio System, and other lesser revenue sources.

For the past several years, police, fire and EMS agencies in the state have attempted to secure support for an increase in the state's 9-1-1 Charge and other revenue collected. The underlying

state fund used to collect and distribute the state's 9-1-1 Charge for local capital and operating needs in providing 9-1-1 services to the public has experienced some fiscal distress before the recently changed state fee legislation.

In the recent past, the expenditures paid from the state 9-1-1 Charge Fund, to all counties, exceeded the revenues generated--to a point, absent increases in rates by the state, the State 9-1-1 Charge Fund would have completely depleted its resources in the very near term. The principal cause of the depletion was the increasing requests for reimbursement by counties and local public safety agencies relating to the operating costs associated with the NG-911 system upgrades and operations.

In early March 2018, the Governor signed Senate Bill 400, Public Act 51 of 2018, that adjusted the rate and other charges that will assist, but not solve, the funding issues of local public safety agencies' needs. The state 9-1-1 Charge was increased from \$.19 per device to \$.25 per device (land lines; cell phones; other devices that could contact 9-1-1) and increased the pre-paid wireless 9-1-1 surcharge from roughly 2% to 5%. A senate fiscal agency analysis indicates that the new revenue generated by these increases would approximate \$20 million.

Prior to Public Act 51 of 2018, the state funding of \$1.87 million might have increased by roughly \$10,000, a very nominal amount relating to the recently-passed legislation. However, the County then had the ability to request funding from the Michigan Public Service Commission for its ESINet costs (\$3.4 million in the first year and \$2.7 million for the next four years).

The County has completed its ESINET. In the summer of 2018, the County, through PFN, applied for reimbursement with the Michigan Public Services Commission (MPSC) for costs associated with the ESINet. The MPSC has yet to hold a public hearing on the County's application for reimbursement or any other counties' application for reimbursement associated with the new revenues generated by Public Act 51 of 2018. There are no assurances that the application will result in the funding requested or a lesser amount, given that there are other counties waiting in queue for these same new revenues arising from Public Act 51 of 2018.

The underlying PFN costs of the ESINet are significant and introduce substantial uncertainty as to how much, if any, will be recovered from the state. The two alternative scenarios are expressed in the assumptions behind Exhibits A and B: no funding coming from the state (meaning the ESINet operating costs are fully funded by the County – Exhibit A) or full funding from the state (Exhibit B).

REPORT FORMAT – EXHIBITS A THROUGH C INCLUSIVE

Several uncertainties exist in the cost and revenue projections incorporated within Exhibits A through D, inclusive principally:

- The request for proposals from two vendors were received on April 20, 2018 for the Radio System upgrade/replacement. Since that time, the County has been analyzing the two proposals, considering what impact that decision might have concerning the interoperability of communications with the surrounding counties, and other very detailed and complex technical issues. The cost projections are based on the County's and Black & Veatch's (the County's radio consultant) analyses in addressing the myriad

of business issues surfacing in the past 9 months arising from the proposal evaluation. Given the extensive inquiries and technical issues, there remains some uncertainty as to the sizing of the entire project that has resulted in no less than a \$4.52 million contingency provision included in the financial projections.

- The amount of reimbursement from the State to cover costs associated with the ESINet cannot presently be determined. The County's contract for the ESINet has a not-to-exceed amount, but no assurances can be provided at this time that the state will fund operating costs and at what level. If the state provides partial or no funding relating to the ESINet, the County is obligated to cover the unreimbursed amounts in the PFN contract.
- The timing of tasks as outlined in Exhibits A through C must be agreed to in a contract with a successful vendor. Many of the tasks are complicated and dependent upon one another as the radio communications system is a 24 x 7 operation and critical for public safety of the County's residents and public safety personnel. The assumption relating to the period from the signing of the contract to project acceptance (i.e. when the system is fully operational) is generally considered to be roughly two to four years. Three years has been used for purposes of the cost projections.
- The radios under consideration have varying levels of functionality with the most sophisticated radios being the most expensive. Presently, most of the current radios in use are at the Tier Three level (the most sophisticated) and may have functionality well beyond the required necessity for normal field operations. Generally, the anticipated radio assumption used in the Exhibits reflect a Tier Two level of functionality which should be adequate for most field use. However, once the vendor has been selected, meetings must be held with the local public safety users and a plan developed that would hone in on the appropriate Tiers for field use and the number of radios required by tier and in total.
- The County 9-1-1 Charge is fixed. Given that this Charge represents the preponderance of revenue generated and an inability of the County to impact the number of wireless and wireline phones upon which the Charge is based, the revenue base is, at best, fixed and most likely going to decline over time, even as the operating costs are not fixed. No provision has been made for the differential, if any, during the launch period as noted in Exhibit A through D. Nor has there been provisions for inflation in the operating costs. Any differential from the projections is insignificant and would be addressed in the project bonding and / or in the annual budgeting process.

The timing of the payments to the successful vendor as expressed in Exhibits A and B represent the proposal presented to the County before contract negotiations have commenced. The County is expecting that during the launch period a fair amount of the dollars expected to be paid in the first and second years would be deferred until later in the launch period. However, at present those final milestone payments cannot presently be determined.

Of the 31 towers in the new radio communications system, 26 will require an engineering study involving stress loading of new equipment on the tower. While provisions have been made for the studies, which cost is generally known, a contingency has been developed for remediation of

the towers should a loading problem be discovered. The contingency is believed to be enough to address modest remediation issues.

Given the above, the County is again required to assemble two approaches relating to the funding assumptions: one with the assumption that the ESINet will not be funded by the State and one with the assumption that full funding will be provided. The likely outcome of this effort will be that the state will fund an amount somewhere between “all” and “none” of the ESINet operating costs, but the amount cannot presently be determined. Given the new revenue flowing into the state fund from Public Act 51 of 2018 (roughly \$20 million), the state funding is likely leaning towards only a partial funding at the lower level of the scale.

Attached to this memorandum are the following exhibits (as well as the footnotes to Exhibits A and C explaining the capital needs, assumptions used in the cost projections and other business issues relating to the line items as referenced in the Schedules):

- **Exhibit A - Summary of Capital Project Needs and Related Footnotes (Full County Funding; No Support from State)**: a schedule for the periods FY-2019 to FY-2032 showing the incremental capital and operating needs of the radio communication system along with funding sources. Exhibit A reflects a critical assumption that the full operating cost of the ESINet would be funded out of the County’s Charges, the County’s General Fund, and other local sources, rather than the State’s 9-1-1 Charge. Capital costs for the ESINet are borne by the County and cannot be reimbursed by the State under the current legislation. The capital costs of the ESINet have been fully paid for or accrued at December 31, 2018 (‘baseline’).

The types and nature of capital costs being incurred for the ESINet, which are not reimbursable by the state, include but are not limited to: updated network connections, including hardware and software, replacing a copper-based system with current limited technology capabilities (launched circa 1963), technical support in installation, etc. The ESINet is operating and being maintained by a telecom vendor (PFN) and those operating costs would be eligible for reimbursement from the State providing there are enough state resources to do so.

Given the County’s full funding under this assumption, a bond issue would be required in early FY-2020 in the estimated amount of \$25.0 million. In addition, in FY-2021 an additional amount of \$3.0 million would be required of the Delinquent Tax Revolving Fund and \$8.0 million in FY-2022. In addition, periodic loans from FY-2023 to FY-2027 to fund the debt service of the bonded debt would be required.

In FY-2027, the OPEB bonds will be fully paid off and this would free up approximately \$35 million of cash available for operations at that time. Of the \$35 million, approximately 60% to 80% of the freed-up cash flow would be directly attributed to the General Fund. In FY-2028 and in FY-2029, Exhibit A indicates that \$16.5 million and \$18.0 million, respectively, would be provided by the General Fund to repay the DTRF loan. Of course, the final determination of the timing and amounts relating to the repayment of the DTRF loan would have to be agreed-upon by the Board of Commissioners, Treasurer and County Executive at that time.

As noted in Exhibit A, the recommended increase in the County 9-1-1 Charge, effective July 1, 2019, would be \$.06 per device per month. In addition, a General Fund operating transfer of \$1.6 million would be required to cover the full debt service costs beyond that which can be charged statutorily without a vote by the electorate.

Because the County Charge cannot be used for non-public safety funding of capital and operating costs, the County's General Fund will have to fund the Childrens Village and jail operations equipment. The operating fees of the jail portable radios (roughly 270) are being billed currently by the Radio Communications Fund. The future fees to be charged to the Childrens Village are not significant and have not been included in the Exhibits.

- **Exhibit B – Summary of Capital Project Needs and Related Footnotes: With Full State Funding for ESINet** - a schedule for the periods FY-2019 to FY-2032 showing the incremental capital and operating needs of the radio communication system along with funding sources. Exhibit B reflects a critical assumption that the full operating costs of the ESINet would be reimbursed by the State's Michigan Public Services Commission and paid, out of the state's operating surcharge pool of funds. While this assumption is being provided, there can be no assurances that the state could or would provide the full funding of the ESINet operations.

Under this assumption, a lesser amount of bonding would be necessary with approximately \$12.0 million being needed in FY-2020 to complete the project and provide sustained operating funds. No Delinquent Tax Revolving Fund loans would be required. In addition, no annual operating subsidy from the General Fund would be required.

As with the first alternative, the critical assumption is that the recommended \$.06 per device per month increases effective July 1, 2019 will be adopted by the Board of Commissioners in spring 2019.

Because the County Charge cannot be used for non-public safety funding of capital and operating costs, the County's General Fund will have to fund the Childrens Village and jail operations equipment. The operating fees of the jail portable radios (roughly 270) are being billed currently by the Radio Communications Fund. The future fees to be charged to the Childrens Village are not significant and have not been included in the Exhibits.

- **Exhibit C – Recap of the Components: Equipment, Facilities and Other** – this exhibit provides a more refined breakdown of the various components of the new radio communication system as proposed by the successful vendor.
- **Exhibit D – Footnotes to the Exhibits A Through C** – the footnotes provide further explanation as to the amounts, timing and other projections associated with these Exhibits.
- **Exhibit E – Quarterly Financial Report Ended December 31, 2018 to Economic Growth and Infrastructure Committee** – showing the Radio Communications Fund quarterly

operations as of and for the quarter ended December 31, 2018. The net cash position as of December 31, 2018 was used as a starting point in addressing the future operating and capital needs of the Radio Communications Fund.

REVENUE / OPERATING ANALYSIS – RADIO COMMUNICATIONS FUND

A sensitivity analysis was conducted for the County's 9-1-1 Charge resulting in one penny of charge equal to \$164,00⁹ in revenues. The prior sensitivity analysis conducted in 2017 resulted in a penny being worth \$164,000. The revenue per penny has remained relatively constant from year to year and is adequate for the estimation of the incremental per penny revenue projections in connection with Exhibit A and B and for purposes of discussion in this memorandum. For purposes of the projections on additional revenue for FY-2018, the per penny rate used is \$164,600 (or, on a \$.06 increase a total revenue of \$988,000).

Annual state distributions for Oakland increased from \$1,850,000 in FY-2017 to \$1,870,000 in FY-2018, relatively unchanged before any reimbursement of the ESINet costs. The Exhibit A and B projections provide no increase in the state 9-1-1 surcharges as the tentative allocations arising from the recently-passed legislation would indicate a nominal amount of no greater than \$10,000 that would be received by the Radio Communications Fund as estimated last year.

The County has contractually committed to a five-year operating period for operating and support services to PFN (an outside vendor). Once PSAPs are attached to the ESINet, there is little immediate benefit, to the County, for the consolidation of additional PSAPs, as the funding remains largely fixed with or without the consolidation. Should a PSAP decide to consolidate with another, the County will continue to provide 'in-kind' support services in that consolidation (technical support, consultation, transferring the PSAP operations, etc.).

Several other matters not reflective in the attached analysis are pending as well:

- The City of Royal Oak is moving its City Hall in connection with a downtown development project. Presently, the City has title to the tower constructed years ago when the County was launching the radio system upon which the County's radio antenna is located. The tower, which is 240-foot tall, is currently located in or near the downtown area of Royal Oak and next to the City Hall and provides good radio coverage for downtown Royal Oak and some of the surrounding communities. Presently the tower and City Hall share a common generator.

When a local unit moves equipment at its request, the costs of movement are borne by the local unit. If the County requests the movement, the County funds the move. Any movement of the tower further than 70 feet from its current location requires an update of the frequency license to operate often requiring upwards of a year to secure from the Federal Communications Commission (FCC).

⁹ Total actual County 9-1-1 Charge revenue assessed by the Board for the fiscal year ended September 30, 2018 was \$5,431,000. For the period July 1, 2018, the fee was \$.36 per device / 4 periods = \$.09. For the period from July 1, 2017 to June 30, 2018, the fee was \$.32 per device for 3 of 4 periods = \$.24. Combined, the average cost was \$.33 per device. Total revenue = \$5,431,000 / \$.33 per device or \$164,575, rounded to \$164,600.

The County has worked with Royal Oak officials and other tower operators in the area. AT&T is placing a tower on a facility believed to be at enough height to address the radio coverage for the new radio communications system. As such, if the County is successful in negotiating a lease arrangement with AT&T for the tower, it alleviates the necessity of constructing another tower in the downtown area and mitigates Royal Oak's obligation to provide that tower. If the AT&T tower can be used, the Radio Communication Fund will absorb the lease costs of the co-location and the backhauling to the County server (a one-time charge) would be absorbed by Royal Oak. No formal agreement has been reached or contract drafted at this juncture.

- The City of Southfield requested inclusion in the request for proposal for the new Radio System. Southfield is presently the only community in Oakland County on a radio system other than the County's. A provision has been incorporated within the Exhibits A and B involving the cost of bringing Southfield onto the new Radio System. No issues in doing so are expected.
- The County's Radio System presently connects to locally-funded and operated voice logging recorder. The recorder captures voice communications between the dispatch operation, the 9-1-1 caller and public safety field personnel. Recorders are presently decentralized in each of the PSAPs, owned and maintained by the local technical personnel and the Sheriff's Office. While the County was hopeful that the new equipment could have allowed for the replacement of the locally-owned logging equipment, the costs for doing so were substantial and the concept had to be abandoned. A provision of \$525,000 has been provided to reflect the cost of connecting the new radio communications system to the disparate logging equipment maintained at the local dispatch centers.
- The County has retained the replacement of the locally-owned and maintained fire paging equipment on the new Radio System. The local fire departments have been responsible for the replacement and maintenance of these paging units and many of them are decades old. Connecting to a state-of-the-art radio system would have been problematic. As such, the replacement of the existing paging system is contemplated in the launch of the new Radio System.
- The Children's Village has used the current Radio System since its inception for communications within the Village and on a limited basis to those outside of the Village. While Children's Village has roughly 75 portable radios and a few mobile radios out of 1,861 mobile and 4,343 portable units of the existing Radio System, roughly 8% of the radio traffic comes from the Village. Given that the new Radio System will be a 2-slot versus the current 4-slot system, this volume of traffic for a non-public safety system is too great lest it adversely impact future public safety communications.

The Village's future radio system will make use of a UHF radio communications system acquired from the same radio vendor for the public safety system. The Village's system will be patched to the new public safety system and would be permitted to use that latter system should the issue arise.

The cost of the elimination of the Village from the future Radio System is roughly equal to the cost of the UHF system. Regardless, as these radios were not used for public safety purposes, the equipment costs would be borne by the County's General Fund as they do not qualify under State statutes for inclusion within the operating surcharge funding.

NOTICE OF INTENT TO ISSUE DEBT

Any debt issuance requires the Board of Commissioners to authorize a Notice of Intent to borrow. A Notice of Intent provides notification to the public in order that they may object to the debt issuance (with enough signatures and within a 45-day period). The Board authorized a Notice of Intent to be published in a newspaper last year with a not-to-exceed amount of \$25 million. There is no expiration date on the Notice of Intent.

The Internal Revenue Service has certain rules that permit the expenditure of funds in advance of the debt issuance and have that debt proceeds fund those expenditures. A waiver may be required with the assistance of the County's bond counsel.

RADIO OVERSIGHT COMMITTEE

The Radio Oversight Committee met on March 20, 2019 and unanimously approved the radio communications financing plan as outlined in this memorandum, the attached exhibits and the resolution to be provided to the County's Economic Growth and Infrastructure and Finance Committees.

SUMMARY - OPERATING SURCHARGE FOR JULY 1, 2017 TO JUNE 30, 2018

As outlined in the letter of transmittal, Exhibits, and footnotes to the Exhibits, the County administration recommends that the County 9-1-1 Charge presently set at \$.36 per month be increased to \$.42 per device effective July 1, 2019. The \$.42 per device fee would need to be approved in the future, as well until the bonds are fully paid off.

Two alternative courses of action are proposed in Exhibit A and C with vastly different 9-1-1 operating charge requirements as noted below arising principally because of the uncertainties arising from funding the ESINet operations, Southfield and other matters cited subsequently:

- **Exhibit A - County Operating Full Funding of ESINet Operations Through Operating Surcharge** – this alternative would fund the ESINet operations solely out of County revenue sources: currently set at \$.36 per month per device for the period ending June 30, 2019 and as recommended effective July 1, 2019 of an increase of \$.06 per device to \$.42 per month per device.

In addition, in FY-2020, ten-year bonds in the amount of \$25.0 million would be issued and supported by the operating surcharge and approximately \$1.6 million from the County's General Fund during while the debt is outstanding. Certain portions of the debt service would be deferred through the borrowing of an equivalent amount by the Delinquent Tax Revolving Fund of \$3.0 million in FY-2021 and \$8.0 million in FY-2022 and for debt service payments through FY-2027. In FY-2028, cash freed up from the

earlier payment of the OPEB bonds would allow the General Fund to increase an operating subsidy necessary to completely repay the bonds and DTRF loans by FY-2032.

- **Exhibit B - Funding of the ESINet Operations Through the State's Operating Surcharge Pool** – this alternative has as its principal assumption that the ESINet operating costs would be fully funded by state operating surcharge pool. As such, it also depends on the County 9-1-1 Charge being increased by \$.06 to \$.42 per month per device. In addition, in FY-2020, ten-year bonds in the amount of \$12.0 million would be issued and supported by the operating surcharge as well. No General Fund support would be required to address the outstanding debt. No loans from the DTRF would be required as well.

Uncertainties remain that are contributing to the two alternatives noted above – no funding arising from the State's operating surcharge pool and full funding from that surcharge pool. While the County, through PFN, submitted its request for recovery of ESINet operations costs in the summer of 2018, the Michigan Public Services Commission has not acted on the application to date. The timing of this action by the MPSC is unknown.

Unfortunately, the Board of Commissioner's can only set the County 9-1-1 Charge once per year in the spring (in this case for the rate for July 1, 2019) and will be fixed until the next regular review occurs in spring 2020. The adopted Board of Commissioners resolution must be delivered to Lansing on or before May 15, 2019.

ALTERNATIVE FUNDING SOURCES

This memorandum and the Exhibits A through D have provided one proposed source of funding for the Radio System. Other funding mechanisms that could be considered, should the Board of Commissioners pursue altering the attached Exhibits and related assumptions, would be:

- **County Charges Exceeding \$.42 Per Month** – the County could consider seeking voter approval for increases in the County Charge rate beyond the limitation of \$.42 per month per device, as defined. The earliest a vote would be able to be secured would be in the August primary in 2020. The earliest that this increase would be able to be imposed would be on December 1, 2020. Unfortunately, this leaves the interim period unattended and would necessitate a deferral of the project or another interim funding source.
- **Local Fees** – the Board of Commissioners should consider an operating fee on the Radio System public safety users.
- **General Fund Subsidy** – while it may be feasible for the County General Fund to fund a portion or all the capital and / or operating costs, the sizable amounts required (beyond the current projections, timing and amounts) would provide substantial fiscal stress on the General Fund. In doing so, it may require a reduction in County operations in programs other than the Radio Communications Fund.

SUMMARY OF CAPITAL PROJECT NEEDS - RADIO COMMUNICATIONS FUND - NO SUPPORT FROM STATE FOR ESINet (in Thousands)
 OAKLAND COUNTY, MICHIGAN
 March 21, 2019

Notes	Description	On-Going Operations Beyond Launch													
		Sept. 30, 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	Project Capital Costs:														
-	Motorola equipment and other costs - Exhibit C		\$ 22,917.3	\$ 19,175.5	\$ 4,677.0	\$ 158.8	\$ 160.6	\$ 162.5	\$ 164.4	\$ 166.9	\$ 168.9	\$ 170.9	\$ 173.0	\$ 176.2	\$ 178.0
9	MPSCS fees for subscriber unit / pager units		-	-	1,494.0	-	-	-	-	-	-	-	-	-	-
9	MPSCS fee offsets - estimated		-	-	(800.0)	-	-	-	-	-	-	-	-	-	-
-	Bi-directional amplifiers		-	-	168.0	-	-	-	-	-	-	-	-	-	-
10	Logging recorder connections to Motorola system		-	-	525.0	-	-	-	-	-	-	-	-	-	-
11	Children's Village UHF system		-	-	200.0	-	-	-	-	-	-	-	-	-	-
12	Fiber installation and recurring costs		-	1,195.6	957.0	1,136.6	718.3	718.3	718.3	718.3	718.3	718.3	718.3	718.3	718.3
-	Contingencies:		-	-	-	-	-	-	-	-	-	-	-	-	-
13	Towers remediation		-	250.0	-	-	-	-	-	-	-	-	-	-	-
13	New shelters - 5 at \$100,000 each		-	250.0	-	-	-	-	-	-	-	-	-	-	-
13	Shelter remediation - 26 sits at \$25,000		-	260.0	-	-	-	-	-	-	-	-	-	-	-
13	General		-	1,000.0	1,000.0	-	-	-	-	-	-	-	-	-	-
	Capital Project Costs		25,872.9	21,892.5	8,400.6	877.1	878.9	880.8	882.7	885.2	887.2	889.2	891.3	894.5	896.3
	Incremental Operating Costs:														
-	Adjustments to operations - net (gain) loss		(229.0)	41.0	161.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
14	Radio management hardware / software (Motorola)		-	(70.0)	(113.8)	(117.2)	(124.4)	(128.1)	(132.0)	(135.9)	(140.0)	(144.2)	(148.5)	(153.0)	(157.3)
15	ESINet - Increase in operating costs		4,089.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0	2,731.0
	Incremental Capital and Operating Needs		3,860.0	2,772.0	2,632.2	2,773.8	2,766.6	2,762.9	2,759.0	2,755.1	2,751.0	2,746.8	2,742.5	2,738.0	2,733.7
	INCREMENTAL CAPITAL AND OPERATING COSTS		\$ 3,860.0	\$ 28,644.9	\$ 24,714.5	\$ 11,032.8	\$ 3,645.5	\$ 3,643.7	\$ 3,641.7	\$ 3,640.3	\$ 3,638.2	\$ 3,636.0	\$ 3,633.8	\$ 3,632.5	\$ 3,630.0
	Cash and Cash Equivalents - Beginning		28,081.7	\$ 23,362.5	\$ 21,253.2	\$ 2,162.5	\$ 2,199.6	\$ 2,249.3	\$ 2,304.5	\$ 2,165.6	\$ 1,732.0	\$ 1,554.6	\$ 1,883.6	\$ 1,869.1	\$ 1,860.4
17	Estimated Net Cash Flow from Operations		2,753.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8
18	Increase in Operating Surcharge - July 1, 2019 (\$,06)		247.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0
	Incremental Capital and Operating Costs - Net		(3,860.0)	(28,644.9)	(24,714.5)	(11,032.8)	(3,645.5)	(3,643.7)	(3,641.7)	(3,640.3)	(3,638.2)	(3,636.0)	(3,633.8)	(3,632.5)	(3,630.0)
19	Bond issuance		-	25,000.0	-	-	-	-	-	-	-	-	-	-	-
19	Debt service on bonds - principal and interest		-	(352.2)	(704.4)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)	(2,798.0)
19	DTRF borrowing and (repayment)		-	3,000.0	8,000.0	3,000.0	3,000.0	3,000.0	2,800.0	2,500.0	12,150.0	18,000.0	4,500.0	4,500.0	4,500.0
19	General Fund appropriation for debt service		-	-	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	16,500.0	18,000.0	4,611.6	4,598.4	4,592.2
	Net Cash In-Flow for Capital and Operating Needs		27,222.5	24,025.2	5,094.1	4,794.7	5,015.9	5,067.4	4,924.6	4,487.1	4,203.6	4,630.4	4,611.6	4,598.4	4,592.2
	ENDING AVAILABLE CASH AND EQUIVALENTS		\$ 23,362.5	\$ 21,253.2	\$ 2,272.1	\$ 2,162.5	\$ 2,249.3	\$ 2,304.5	\$ 2,165.6	\$ 1,732.0	\$ 1,554.6	\$ 1,883.6	\$ 1,869.1	\$ 1,860.4	\$ 1,858.5
	Note 17 - Adjustments to cash flow:														
17	Adjustments in investment income		\$ 350.0	\$ 200.0	\$ 100.0	\$ 25.0	\$ (100.0)	\$ (100.0)	\$ (100.0)	\$ (100.0)	\$ (100.0)	\$ (100.0)	\$ (100.0)	\$ (100.0)	\$ (100.0)
-	T-1s and improved infrastructure		-	(100.0)	(100.0)	-	-	-	-	-	-	-	-	-	-
17	Project management consulting		(121.0)	(121.0)	(121.0)	(40.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)
17	Reduction in tower charge revenues		-	(20.0)	(40.0)	(40.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)
	NET ADJUSTMENT TO OPERATING BUDGETS		229.0	(41.0)	(161.0)	(15.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)
	Note 16 - Composition of net cash as of Dec. 31, 2018:														
	Cash		\$ 27,567.4												
	Accrued interest		156.9												
	Due from / accounts receivable		1,267.0												
	Accounts payable / other		(909.6)												
	NET CASH AND CASH EQUIVALENTS		\$ 28,081.7												
	Note 17 - Estimation: future cash flow available from operations - based on FY-2018 actual operations:														
	Operating gain for FY-2018 - actual		\$ 473.0												
	Depreciation add-back in above - full year		3,948.8												
	Net actual estimated cash flow		4,421.8												
	Annual cash flow (contingency provision - 25%)		(750.0)												
	FY-2018 ANNUAL CASH FLOW AVAILABLE		\$ 3,671.8												

NOTE - the above projections assume no State support of costs associated with the ESINet operations. All capital and operating support would be required from local resources - the County's General Fund.

SUMMARY OF CAPITAL PROJECT NEEDS - FULL SUPPORT FROM STATE FOR ESINET (In Thousands)
 OAKLAND COUNTY, MICHIGAN
 March 21, 2019

Description	Notes	EXHIBIT B													
		Launch					On-Going Operations Beyond Launch								
		Nine Months Ended Sept. 30, 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Project Capital Costs:															
Motorola equipment and other costs - Exhibit C	-	\$ 22,917.3	\$ 19,175.5	\$ 4,677.0	\$ 158.8	\$ 160.6	\$ 162.5	\$ 164.4	\$ 166.9	\$ 170.9	\$ 173.0	\$ 173.0	\$ 176.2	\$ 178.0	
MPSCS fees for subscriber unit / pager units	9	-	-	1,494.0	-	-	-	-	-	-	-	-	-	-	
MPSCS fee offsets - estimated	9	-	-	(800.0)	-	-	-	-	-	-	-	-	-	-	
Bi-directional amplifiers	-	-	-	168.0	-	-	-	-	-	-	-	-	-	-	
Logging recorder connections to Motorola system	10	-	-	525.0	-	-	-	-	-	-	-	-	-	-	
Children's Village UHF system	11	-	-	200.0	-	-	-	-	-	-	-	-	-	-	
Fiber installation and recurring costs	12	-	1,195.6	957.0	1,136.6	718.3	718.3	718.3	718.3	718.3	718.3	718.3	718.3	718.3	
Contingencies:															
Towers remediation	13	-	250.0	250.0	-	-	-	-	-	-	-	-	-	-	
New shelters - 5 at \$100,000 each	13	-	250.0	250.0	-	-	-	-	-	-	-	-	-	-	
Shelter remediation - 26 sites at \$25,000	13	-	260.0	260.0	-	-	-	-	-	-	-	-	-	-	
General	13	-	1,000.0	1,000.0	1,000.0	-	-	-	-	-	-	-	-	-	
Capital Project Costs			25,872.9	21,892.5	8,400.6	877.1	878.9	880.8	882.7	885.2	887.2	889.2	891.3	894.5	
Incremental Operating Costs:															
Adjustments to operations - net (gain) loss	-	(229.0)	41.0	161.0	15.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	
Radio management hardware / software (Motorola)	14	-	-	(70.0)	(113.8)	(117.2)	(124.4)	(128.1)	(132.0)	(135.9)	(140.0)	(144.2)	(148.5)	(153.0)	
ESINet - increase in operating costs	15	(229.0)	41.0	91.0	(98.8)	42.8	35.6	31.9	28.0	24.1	20.0	15.8	11.5	7.0	
INCREMENTAL CAPITAL AND OPERATING COSTS			\$ 25,913.9	\$ 21,983.5	\$ 8,301.8	\$ 919.9	\$ 914.5	\$ 912.7	\$ 910.7	\$ 909.3	\$ 907.2	\$ 905.0	\$ 902.8	\$ 901.5	
Cash and Cash Equivalents - Beginning	16	\$	28,081.7	\$ 31,540.5	\$ 22,076.4	\$ 5,498.7	\$ 1,617.5	\$ 3,971.6	\$ 6,338.3	\$ 8,710.5	\$ 11,088.6	\$ 13,472.0	\$ 15,861.6	\$ 18,257.6	\$ 20,660.1
Estimated Net Cash Flow from Operations	17	2,753.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8	3,671.8
Increase in Operating Surcharge - July 1, 2019 (\$.06)	18	247.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0	988.0
Incremental Capital and Operating Costs - Net	20	229.0	(25,913.9)	(21,983.5)	(8,301.8)	(919.9)	(914.5)	(912.7)	(910.7)	(909.3)	(907.2)	(905.0)	(902.8)	(901.5)	
Bond issuance	20	-	12,000.0	-	-	-	-	-	-	-	-	-	-	-	
Debt service on bonds - principal and interest	20	-	(169.0)	(338.0)	(338.0)	(1,343.0)	(1,343.0)	(1,343.0)	(1,343.0)	(1,343.0)	(1,343.0)	(1,343.0)	(1,343.0)	(1,343.0)	
DTRF borrowing and (repayment)	20	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Fund appropriation	20	-	-	1,175.0	-	-	-	-	-	-	-	-	-	-	
Net Cash In-flow for Capital and Operating Needs			\$ 31,311.5	\$ 22,117.4	\$ 5,589.7	\$ 1,518.7	\$ 4,014.4	\$ 6,373.9	\$ 8,742.4	\$ 11,116.6	\$ 13,496.1	\$ 15,881.6	\$ 18,273.4	\$ 20,671.6	
ENDING AVAILABLE CASH AND EQUIVALENTS			\$ 31,540.5	\$ 22,076.4	\$ 5,498.7	\$ 1,617.5	\$ 3,971.6	\$ 6,338.3	\$ 8,710.5	\$ 11,088.6	\$ 13,472.0	\$ 15,861.6	\$ 18,257.6	\$ 20,660.1	
NET ADJUSTMENT TO OPERATING BUDGETS			\$ 229.0	\$ (41.0)	\$ (161.0)	\$ (15.0)	\$ (160.0)	\$ (160.0)	\$ (160.0)	\$ (160.0)	\$ (160.0)	\$ (160.0)	\$ (160.0)	\$ (160.0)	
NET CASH AND CASH EQUIVALENTS			\$ 28,081.7	\$ 21,535.4	\$ 5,337.7	\$ 1,502.5	\$ 3,811.6	\$ 6,178.3	\$ 8,550.5	\$ 10,928.6	\$ 13,302.0	\$ 15,701.6	\$ 18,117.6	\$ 20,521.6	
NET CASH AND CASH EQUIVALENTS			\$ 28,081.7	\$ 21,535.4	\$ 5,337.7	\$ 1,502.5	\$ 3,811.6	\$ 6,178.3	\$ 8,550.5	\$ 10,928.6	\$ 13,302.0	\$ 15,701.6	\$ 18,117.6	\$ 20,521.6	

Note 16 - Composition of net cash as of Dec. 31, 2018:

Cash	\$ 27,567.4
Accrued interest	156.9
Due from / accounts receivable	1,267.0
Accounts payable / other	(909.6)
NET CASH AND CASH EQUIVALENTS	\$ 28,081.7

Note 17 - Estimation: future cash flow available from operations -

based on FY-2018 actual operations:	
Operating gain for FY-2018 - actual	\$ 473.0
Depreciation add-back in above - full year	3,948.8
Net actual estimated cash flow	4,421.8
Annual cash flow (contingency provision - 25%)	(750.0)
FY-2018 ANNUAL CASH FLOW AVAILABLE	\$ 3,671.8

NOTE - the above projections assume FULL State support of costs associated with the ESINET operations. The capital costs and have been previously funded by the County while the operating costs of the ESINET, as noted, would be fully funded by the State.

RECAP OF COMPONENTS - EQUIPMENT, FACILITIES AND OTHER
 OAKLAND COUNTY, MICHIGAN
 March 21, 2019

EXHIBIT C

<u>Description</u>	<u>Notes</u>	<u>Amount</u>
Subscriber units - portable and mobile units - net	1	\$ 20,413,496
Paging equipment	2	746,546
Infrastructure and dispatch	3	34,926,402
Southfield dispatch	4	882,564
Channels with DDM at 31 tower sites	5	2,896,530
Channels in Washtenaw County / City of Howell	6	1,059,460
Miscellaneous		320,106
Use of Master Network Controller - Northville (deduct)	7	(859,392)
Infrastructure discount	8	<u>(13,615,649)</u>
TOTAL MOTOROLA EQUIPMENT AND OTHER		<u>\$ 46,770,063</u>

<u>Motorola Proposed Payment Schedule</u>	<u>FY - 2020</u>	<u>FY-2021</u>	<u>FY-2022</u>	<u>Total</u>
25% of contract price upon contract execution	\$ 11,692,516	\$ -	\$ -	\$ 11,692,516
60% of contract price upon shipment of equipment	11,224,815	16,837,223	-	28,062,038
5% upon installation of equipment	-	2,338,503	-	2,338,503
5% upon beneficial use	-	-	2,338,503	2,338,503
5% payment of retainer at system acceptance	-	-	<u>2,338,503</u>	<u>2,338,503</u>
TOTAL MOTOROLA EQUIPMENT AND OTHER	<u>\$ 22,917,331</u>	<u>\$ 19,175,726</u>	<u>\$ 4,677,006</u>	<u>\$ 46,770,063</u>

EXHIBIT D: FOOTNOTE ASSUMPTIONS TO SUMMARY OF CAPITAL NEEDS – EXHIBITS A THROUGH C

RADIO COMMUNICATIONS FUND, OAKLAND COUNTY, MICHIGAN

March 21, 2019

Footnote references are provided as an explanation of the line items included on the attached Exhibit entitled “Summary of Capital Project Needs – Radio Communications Fund”, Exhibits A, B and C, in support of the projected County 9-1-1 Charge, other funding, and capital needs. The period addressed is a 3-year implementation period and 10 years of operations thereafter. Exhibit C provides a detail of the Motorola contract proposal before negotiations of that contract have occurred. Exhibit E is the financial statements for the Radio Communications Fund as of and for the quarter ended December 31, 2018.

Critical assumptions in assessing the incremental County Charge and other funding needs, along with timing of the funding needs with more detailed explanations provided in the body of the Footnotes follow:

- The current County charge is \$.36 per wireline / wireless device per month, as defined, for the year ended June 30, 2019. The proposed County Charge for FY-2020 (effective July 1, 2019) is being proposed by the County administration to be \$.42 per month at least through the repayment of the bonded debt. The proposed increase for FY-2020 of \$.06 per device, as defined and beyond is the same increase proposed in the prior year County Charge plan for the fiscal year County Charge period. The increase of \$.06 per device should provide \$988,000 in additional revenues.
- There are two alternative courses of action arising from the inaction to date of the Michigan Public Services Commission concerning the County’s application submitted in August 2018 for reimbursement of the ESINet operating costs:
 - **Exhibit A** – the County fully funds the projects, including the ESINet capital and operating costs with NO State support forthcoming. This alternative is the most conservative approach anticipated as the ESINet operating costs would be solely borne by the County’s General Fund. It requires that the County to seek a bond in the amount of \$25.0 million in 2020.

In addition to the bonded debt, total loans of \$11.0 million in FY-2022 and FY-2023 would be required from the Delinquent Tax Revolving Fund (DTRF) to cover the capital costs during launch. Further loans from the DTRF would fund the bond debt service starting in FY-2023 and ending in FY-2027.

In FY-2027, the County’s OPEB bonds are completely paid off, at which time in FY-2028, approximately \$35 million of cash flow is freed up from the County no longer having to fund OPEB debt service. Of the \$35 million, between 60% and 80% of the freed-up cash would inure to the General Fund for the repayment of the DTRF loan of \$25.3 million. As presented, the repayment of the DTRF would occur in two large payments such that the DTRF loan would be paid off by FY-2029 in its entirety.

The General Fund would be expected to cover \$1.6 million in subsidies under this assumption starting in FY-2020 plus the increased amounts as shown on the Exhibit starting in FY-2028. The projected General Fund subsidy of \$1.6 million is incorporated within the County's strategic financial plan for the period FY-2020 to FY-2023 as well as the recommended operating budget for that period.

The proposed increase to the County Charge, which is critical to the funding of this project and borrowed debt, must be approved by the Board of Commissioner and the application submitted to the State (along with a certified copy of the underlying Board resolution) to the MPSC no later than May 15, 2019. The absence of the application with the proposed increase would result in the County being unable to include any County Charge on telephone bills effective July 1, 2019. Should the Board deny the increase, the \$.36 County Charge would continue on the telephone bills starting on July 1, 2019 without the necessity of an application.

- **Exhibit B** – this Exhibit assumes that the State provides full funding for the operating costs of the ESINet as it has provided to other counties to date. The State Legislature recently increased the State technical surcharge rate and provided for additional enforcement of prepaid telephone cards at an increased fee among other amendments to the then surcharge legislation. The State-wide technical surcharge was increased from \$.19 per device per month to \$.25 per device per month and is expected to generate roughly \$20.0 million in additional State-wide revenues available to support 9-1-1 services locally. The County participates in the receipt of funds from the State-wide technical surcharge fund.

Under this alternative the County would be expected to issue \$12.0 million in bonds in FY-2020. No General Fund support would be provided in this alternative scenario other than for the jail and Childrens Village radios not eligible for County Charge under state statutes.

- **Exhibit C** - this Exhibit represents the detail of the costs from the signing of the contract through the launch of the accepted radio communication system expected at the end of FY-2022. It also reconciles the proposed contract amount with the Motorola proposed timeline of the critical milestones. At present, the timing as reflected in Exhibits A and B will be modified arising from upcoming contract negotiations. The Exhibit's timing is as proposed by Motorola which has not been accepted by the County. Because this is currently the most conservative presentation in the timing, it has not been adjusted to reflect where the County's position on the timing matter.

The critical milestone in the timing and implementation for this Exhibit is on June 30, 2022. The resources assembled to fund the radio communications system must cover the costs through the three-year implementation period ending September 30, 2022.

- **Exhibit D** – represents detailed explanatory footnotes to Exhibits A through C, inclusive.
- **Exhibit E** - represents the 'baseline' of net liquid assets as of December 31, 2018 available for funding the capital project as reflected in the quarterly Radio Communications Fund financial statements.

- Exhibits A and B represent the incremental costs above the current level of operations for the Radio Shop. Except for depreciation expense (a non-cash expense), all operating revenues and expenses are assumed to be equivalent to the cash needs at the time incurred. The amounts reflected in Exhibits A and B are the incremental changes to the actual results of the Radio Communications Fund for the fiscal year ended September 30, 2018.
- The on-going operations, including the current operations of the Radio Communication Fund, have generally not been adjusted for inflation for the projections ending in FY-2032. The Exhibits represent the incremental costs and amendments to the existing actual operations for the year ended September 30, 2018. Any fluctuations arising from inflation would be addressed in budgetary planning relating to the Radio Communication Fund and would adjust the amounts borrowed from the DTRF necessary to retain an ending net cash position of approximately \$2.0 million in equity (i.e. working capital).

These footnotes cover Exhibits A, B and C as referenced by line item and provide further understanding of the details surrounding the assumptions used in the dollars cited and timing required for the radio communications project capital and incremental operating costs.

NOTE 1 (EXHIBIT C) – SUBSCRIBER UNITS: PORTABLES AND MOBILES (\$21,413,000)

The portable and mobile units ('subscriber units') have been reviewed as to the number of units required (roughly 700 less than the existing level of units) and the 'tier' of radios (i.e. functionality). In the past, the County generally acquired the high-end radios (Tier 3) with the greatest level of functionality. A review by the Radio Shop has determined that Tier 3 full functionality of the portable radios is generally not used by most police officers, firemen and EMS technicians. As such, the County has reduced the tiers to either Tier 1 or 2 for purposes of this schedule. The list price of these radios (1,854 Tier 1, 4 helicopter mobile radios, 3,500 Tier 2 radios and 114 Tier 1 control stations) is \$24,810,000, before discount and encryption.

The reduction of the number of radios over the existing levels in the field today largely arises from a reduction of policemen, firemen and EMS personnel located in the local public safety agencies since the initial radio communications system was installed.

In addition, the current radio communications system did not require encryption as it was located on a private (i.e. County) network, was an IP-based system, and could not be accessed by the public. The Motorola system is a digital system that absent encryption would enable the public to access the communications and requires encryption software (not previously considered in the spring 2018 operating fee cost projections in the amount of \$4,041,000).

The subscriber unit list cost and encryption totaling \$29,815,000 has been discounted by \$9,402,000 to reflect a net cost of \$20,413,000.

NOTE 2 (EXHIBIT C) – FIRE PAGING EQUIPMENT (\$746,500)

Presently, fire paging equipment is owned and maintained by the local fire departments. Some equipment is several decades old, has been acquired from disparate vendors, is not well maintained, and very difficult to connect to the *existing* County radio communications system let alone the higher

functioning new radio communications system. In connection with the local units, the County requested a quotation from the prospective vendors as to a uniform P-25 based fire paging solution that works with the anticipated new radio communications equipment. Motorola proposed a fire paging solution in the amount of \$746,500. Once the new system is implemented, the fire paging equipment will be owned and maintained by the County providing a substantial reduction in business connectivity issues experienced with the existing locally-maintained fire paging equipment.

NOTE 3 (EXHIBIT C) - INFRASTRUCTURE AND DISPATCH EQUIPMENT (\$34,926,000)

The infrastructure and dispatch equipment are the costs associated with the consoles at 19 dispatch centers, 31 tower sites and other related equipment. It includes the preparation of radio coverage plans, acquisition and installation of equipment, personnel and other costs associated with the enabling of the equipment.

NOTE 4 (EXHIBIT C) - SOUTHFIELD DISPATCH EQUIPMENT (\$882,500)

At present, Southfield is not included on the County's radio communications system. As part of the request for proposal process, Southfield requested to be included in the new radio communications system. Prior to this time, the limitation in bringing Southfield into the current radio communications system was frequency capacity. Frequencies were difficult, if even possible, to acquire preventing Southfield from joining the current radio communications system.

With the proposed system, the frequency issue is no longer an issue for a number of technical reasons. The cost in this line item is to outfit the dispatch center with consoles and other related dispatch equipment. The Southfield subscriber units have been included in the costs reflected in that line item (see Note 1).

NOTE 5 (EXHIBIT C) – CHANNELS WITH DDM AT 31 TOWER SITES (\$2,896,500)

The DDM feature ('dynamic dual mode') will permit an FDMA user (i.e. users in local public safety agencies in surrounding counties) to communicate on the County's TDMA system when they are within the County's borders, as well as public safety agencies being able to communicate with those on the state's radio communication system. This feature (equipment / software) will be installed on two channels in each of the 31 County tower sites.

NOTE 6 (EXHIBIT C) – CHANNELS IN WASHTENAW COUNTY AND CITY OF HOWELL (\$1,059,500)

After the preliminary review of the radio communications coverage within the County and in a five-mile radius around the County it was determined by Motorola that additional channel capacity was required in Washtenaw County (one channel) and Howell (three channels). The full cost of this requirement, which is still being reviewed, has been incorporated within this cost proposal. However, the County intends on launching the radio communications system and then determining the need based on actual operating conditions. As such, the full amount as included in the Exhibit may not eventually be required but represents the 'worst-case' scenario.

The Michigan Public Safety Communication System (MPSCS) serving the Howell area presently has radio coverage issues. The radio users in this area are experiencing 'busies' (i.e. attempts to secure a channel for communication but being unable to do so often due to an insufficiency of channel capacity or other

reasons). The County's improvement of this channel to enable County public safety officials to communicate with surrounding counties / local public service agencies will not only benefit the County but help resolve a known MPSCS channel capacity problem. Accordingly, the County would be expecting some recompense from the State in the remediation of this issue, if the upgrade benefits both the County and the Howell and Washtenaw public safety users.

NOTE 7 (EXHIBIT C) – USE OF MASTER CONTROLLER NORTHVILLE (DEDUCT) – (\$859,000 – DEDUCT)

The original County request for proposal and the above costs in the infrastructure and dispatch equipment (as discussed in Note 3) reflects the County owning and then having to maintain a network controller. Because of the anticipated agreement with the State, which is generally used by other counties and local public safety agencies, the County will be able to use the Northville controller in lieu of acquiring its own controller. As such, this 'deduction' eliminates the controller costs as reflected in Note 3 from the launch costs.

NOTE 8 (EXHIBIT C) – INFRASTRUCTURE DISCOUNT (\$13,615,500)

As noted in Note 3, the amounts included in this line item are at list prices. This deduction reduces the list prices to reflect the net amount proposed by Motorola relating to this project.

NOTE 9 (EXHIBITS A AND B) – MPSCS SUBSCRIBER FEES (\$1,494,000) AND ESTIMATED CREDITS (\$800,000)

The State charges a one-time fee for inclusion on the MPSCS for the subscriber units and fire paging equipment. In turn, because the County is bringing the ability of MPSCS users to communicate in the County on the County's infrastructure (not only the State Police but local public safety agencies in surrounding counties), a credit is provided against the one-time fee. The credit is calculated based on the infrastructure costs incurred by the County relating to towers, generators, shelters, network, channels, and related equipment. The credit is calculated against this aggregate depreciated cost to the extent of 5% of that infrastructure.

Neither the County nor the State has yet agreed on the detailed infrastructure by site or the detailed net costs related thereto. However, even as the County launches, some of the costs cited herein on Exhibits A, B and C (channel costs for example) would be the type of cost included for accessing the credit. The \$800,000 is presently a placeholder at a little more than half of the fees charged by the State. The actual amount will be negotiated as the project is built out and final costs are known circa 2022.

NOTE 10 (EXHIBITS A AND B) – LOGGING RECORDER CONNECTIVITY (\$525,000)

In the County's request for proposal required the proposing vendors to replace the existing logging recorder equipment at the dispatch centers. The dispatch centers presently own and maintain the logging recorder equipment in the dispatch centers. The proposing vendors indicated that the equipment costs and installation would be in the range of \$8 million to provide this function to the local units, plus on-going operating costs. Unfortunately given the costs involved for the other radio communications components, the County could not continue to include the logging recorder replacements and related operations within the revenue levels expected from the County Charge. The notion of replacing the logging equipment to enable a uniform system on a county-wide basis was not financially feasible.

Notwithstanding the above, the dispatch consoles and other equipment will be required to connect to the local logging recorder equipment. This provision of \$525,000 is an estimate for the expected cost to connect the existing local logging equipment to the new dispatch equipment.

NOTE 11 (EXHIBITS A AND B) – CHILDRENS VILLAGE EQUIPMENT

The Childrens Village operation currently uses the County’s Radio Communications System. State statues involving the County Charge does not permit non-public safety units (like Childrens Village and the jail operations) to use the radio communications system funded by the County Charge. Accordingly, the Childrens Village has been funding the current radio equipment and operations through user fees within its operating budget and support of the General Fund.

At present, the Childrens Village has approximately 75 portable and a half dozen mobile units of the current radio communications system. Even as there are roughly 6,000 mobile and portable subscriber units in the entire County, Childrens Village comprises roughly 8% of the communication traffic on the current radio communications system. Virtually all of the traffic is between employees on the service campus.

Given the requirement of the General Fund to fund the Childrens Village equipment, level of communications traffic and UHF equipment being less costly than the radio communications used for public safety purposes, a Motorola UHF solution will be pursued to address the Childrens Village needs. The UHF portable radios and related equipment will be capable of connecting to the new radio communications system when needed. It is likely that the Childrens Village mobile units may be replaced with UHF or the new radio communications system, but no final decision has been made involving this equipment.

NOTE 12 (EXHIBITS A AND B) – FIBER INSTALLATIONS AND RECURRING COSTS (\$3,290,000)

After the County and Motorola performed a preliminary radio coverage study, the tower sites to be included as part of the new radio communications system were determined. Eleven of the thirty-one tower sites are critical for minimum radio communications coverage. The additional twenty tower sites assist in filling in gaps in the radio communications coverage. Once the preliminary radio coverage study was complete, it permitted the Information Technology Department to address several key networking issues required of the new radio communications system, including signal backhauling, cybersecurity, virus protection, network monitoring, and other technical needs. A more detailed study will be conducted as part of the initial planning phases of implementation.

The County’s current network, OAKNet, is a closed system meaning that the connections from / to the towers and local governmental units are closed to any ability of outsiders or hackers in penetrating the system. This minimizes the risks of intrusion. The new network upgrades, which were not included in the costs when considering the spring 2018 operating County Charge, will have points at which intrusion will be possible both now and into the future. As the technology evolves, more features and capabilities are possible (such as using an I-Phone as a subscriber unit via a software application), but this comes with further opening the County’s future upgraded network system to attack.

This increased risk of attacks complicated the backhauling of radio communications from / to the County’s switch to / from the towers and providing for added features now and into the future.

Monitoring the network for virus attacks on the equipment, virus patches, preparing for future technology functions, and other cybersecurity issues have resulted in a need for a substantial capital and on-going operating costs unnecessary in today's radio communications system.

During the launch period, the equipment and other upgrades and related operating costs are combined for the periods from FY-2020 to FY- 2022.

NOTE 13 (EXHIBITS A AND B) – CONTINGENCIES (COMBINED \$4,520,000)

During the evaluation period from late April 2018 to February 2019, the County had 10 voting proposal evaluators. The evaluators reviewed the written proposals, participated in the oral presentations, asked substantial clarifying questions (as well as non-evaluators) and otherwise performed their due diligence in the selection of the proposed vendor, Motorola. The evaluators included members from the law enforcement and fire agencies, Purchasing, Information Technology and one commissioner.

Because of the technical, programmatic and financial complexity of the project and the numerous instances of clarification, a rather higher than normal contingency is warranted. Known uncertainties include twenty-six of thirty-one towers that will require engineering studies and, if necessary, remediation if stress issues are discovered. Several of the shelters are believed to be too small to address the new radio communications system equipment at the same time the existing system is still operational. These shelters may have to be replaced. Other issues involving generators and shelter electrical systems will have to be evaluated in detail and remediated if necessary. As such, specific contingency allowances have been provided concerning the tower sites.

A general contingency of \$3.0 million has also been provided for presently unforeseen issues that undoubtedly will crop up during implementation.

NOTE 14 (EXHIBITS A AND B) – RADIO HARDWARE / SOFTWARE (MOTOROLA) – (\$1,550,000)

The County will be acquiring the capability to perform over-the-air-programming (OTAP) in lieu of the public safety agencies having to bring their radios and mobile units to the Radio Shop. The cumbersome and labor-intensive process of bringing radio to the Radio Shop for updates of software, hardware, talk groups and related features will be conducted remotely. OTAP updates will save substantial time in addressing these maintenance issues both in terms of the number of hours incurred as well as the length of time involved in upgrading software for all radio users. The Exhibit reflects the costs of the software and annual licensing fees to enable this feature.

NOTE 15 (EXHIBITS A AND B) – ESINet ANNUAL OPERATING COSTS \$3,406,000 IN FIRST YEAR; \$2,731,000 THEREAFTER

The ESINet project has two components. The first component is the capital equipment costs. The capital equipment component has been provided by ECW, Inc. and was the funding responsibility of the County. These costs were incurred and paid (or accrued) prior to the December 31, 2018 and are no longer a burden on future cash flows.

The second component is the ESINet operating costs provided by PFN, Inc. and the impact on the Fund's cash flow. PFN is a telephone company providing service regulated through the Michigan Public Services Commission (MPSC). PFN has the ability (as it has done in many other counties) to provide the

operating services relating to an ESINet and seek cost recovery from the State's operating surcharge pool once approved by the MPSC.

Several issues, however, exist in the above:

- Prior to the recently-passed legislation (which provided nominal statewide increases for funding of E-9-1-1 networks), the State operating surcharge pool was not covering its committed costs to the local units and the State's radio needs. Essentially, the pre-legislative changes amount of \$.19 per device per month the State charges on both landline and wireless services was raised to the current statutory limits (\$.25 per device per month) to cover counties converting to an E-9-1-1 infrastructure. The total statewide increase in operating surcharge revenues relating to this increase was approximately \$20 million but was well below that requested of the counties.
- The principal operating and capital costs associated with the ESINet are dependent by the number of dispatch centers located in Oakland County (i.e. presently at 20, including Southfield, as previously noted with no dispatch centers presently considering consolidation with the Sheriff's Office or other surrounding dispatch centers). Because the ESINet has now been built out and is in operation, the benefits of dispatch center consolidation have declined as the County is committed to fund the ESINet9-1-1 operating costs at a fixed amount for the five-year period starting roughly in July 2019.
- The State requires the telephone company to build out and begin operating the network before the telecom can petition the MPSC for reimbursement of its operating costs. As such, this further complicates the ability of the County to determine whether the ESINet operating costs can be recovered until the State is petitioned and supports in full, rejects in full or pays some presently undetermined portion of the PFN operating costs. To the extent that the operating costs are not funded through PFN's efforts seeking cost recovery from the State, these costs will become the financial responsibility of the County.

With the completion of the ESINet9-1-1 in July 2018, PFN in cooperation with the County prepared an application for reimbursement of the operating costs of the network. Unfortunately, the MPSC has yet to hold a public hearing on the County's application as well as other pending counties' applications. This lack of information on how much the State may reimburse the County complicates the sizing of the bond and DTRF debt issues needed to complete the launch of the project as well as fund debt service on that debt.

- Given the above concerns on how much the County may be reimbursed, the analysis has assumed in Exhibit A that NO amounts will be forthcoming from the state while Exhibit B has assumed that the state will FULLY fund the ESINet9-1-1 operating costs. It is likely that the state will reimburse some of the operating costs but without even a hearing having been held there is no way of assessing how much might be reimbursed.

In discussing this matter with PFN and their work with the MPSC and other counties, it is their belief that the County would be able to secure upwards of 95% of the ESINet costs and no less than 17% as a minimum. A critical concern involving this matter is the State Legislature funded the upgrade in charges at a level below what was believed to be necessary to fund the on-going operations of all E-9-1-1 systems once fully operational. As such, there can be no assurances of the adequacy of the added charges being collected since spring of 2018 to cover these new

county costs. In addition, because there is no specific MPSC standards established and no statutory rule to support a specific operating reimbursement of E-9-1-1 operating costs, the County is compelled to reflect Exhibits A and B on a 'no' reimbursement / 'full' reimbursement basis until better information is known on the state funding levels of the ESINet.

The County entered into a five-year operating agreement with PFN for the ESINet to be paid in annual installments of \$3,406,000 the first year and \$2,731,000 in years 2 through 5. Exhibit A assumes that the State will fund NO costs. No substantial amounts have been paid to PFN even as the network became operational in July 2018. **No amounts were accrued at December 31, 2018 relating to this matter as well in Exhibit E meaning that it must be considered as part of the Exhibits A to fund these costs as the County's financial responsibility will reduce the cash position after the December 31, 2018 date.**

The calculation of the payment expected (assuming no amounts forthcoming from the MPSC) would be \$3,406,000 for the period July 2018 to June 2019 and one-quarter of annual amount of \$2,731,000 for the period from July 2019 to September 30, 2019 of \$683,000 – for a total for the 15 months ended September 30, 2019 of \$4,089,000. In years beginning in FY-2020, the amount assumed in Exhibit A would be the annual amount fixed of \$2,731,000 through FY-2023 and beyond.

Given that the assumption involving Exhibit B reflects full funding of the ESINet costs, this schedule reflects a zero-net impact on the operations of the fund (i.e. that the costs incurred in the operations of the ESINet are completely offset by the State's reimbursement of these costs). While this is an assumption unlikely to occur when the MPSC finally rules, it represents the 'best' case scenario.

NOTE 16 (EXHIBITS A AND B) – BEGINNING CASH BALANCE (\$28,082,000)

The detail of the beginning net cash and cash equivalent balances as of December 31, 2018 was obtained from the attached Exhibit E for the Radio Communication Fund's operations as of and for the quarter ended December 31, 2018. The accounts receivable is based on cash receipts from the telephone companies received in January 2019 for the quarter ended December 31, 2018 (essentially 'cash' at or about December 31, 2018). See Exhibit E and the Schedule for the details of the cash and cash equivalents net of accounts payable as of December 31, 2018.

NOTE 17 (EXHIBITS A AND B) – ADJUSTMENTS TO CASH FLOW (VARIOUS)

A review of the budget variances arising from the FY-2018 final actual operations and the first quarter FY-2019 was made to assess the validity of the amounts budgeted and to be projected in the coming years. The nominal adjustments involved issues associated with the project's implementation. Comments follow –

- **Investment income** – the delay in the launch of the project and the increasing interest rates have provided investment income benefits beyond the budgetary expectations. In the first quarter of FY-2019, the Fund earned \$140,000 in investment income even as the *annual* FY-2019 investment income budget is stated at \$160,000. As such for the first few years of the project, the invested cash available should well exceed expectations as follows – annualization of FY-2019 investment income x 4 quarters = \$560,000, less budgeted amount of \$160,000 = \$400,000. Use \$350,000 for FY-2019 and stepped down based upon the approximate use of the cash during the launch period through FY-2023.

- **Project consulting costs** – the \$121,000 annually is the estimated amount required to continue with the assistance of Black & Veatch through the launch period on a time and material basis, as needed.
- **Adjustment to tower charges** – technology is changing concerning the need for commercial vendors in their use of towers. Smaller versions of many antenna ('pucks') located at lower heights on buildings and similar structures may be available in the future – limiting the need for co-location fees. Other competitive issues are surfacing as well. The revenue from tower co-locations has been reduced to reflect this changing environment.

NOTE 17 (EXHIBITS A AND C) – ESTIMATION OF NET CASH FLOW AVAILABLE FOR CAPITAL AND OPERATING NEEDS (\$3,672,000 ANNUALLY)

The projection of the cash flow available for incremental capital and operating needs has been derived from the Fund's accrual-based actual operations for FY-2018. The 'positive' *actual* cash flow for FY-2018 represents the excess of revenues over cash expenses and transfers as reflected in annual Radio Communications Fund included in the County's 2018 Comprehensive Annual Financial Report. The critical assumption in the use of this 'positive actual cash flow' is that future operations will mirror that of FY-2018, with modest adjustments for known future deviations such as: increase in the operating County Charge, investment earnings exceeding prior levels, etc.

It further assumes that the accrual-based operations are relatively closely related to the cash flow. Given that the balance sheet has few non-cash transactions, this assumption is acceptable, particularly since the only non-cash items on the balance sheet are inventory and prepaid expenses, are not significant, and have been excluded from the net cash balances in this Exhibit.

The Fund's 'operating gain' for FY-2018 must be adjusted for the non-cash impact of depreciation expense and is added back to the gains to secure an estimated net cash flow from operations for purposes of this Exhibit available for the new radio communications system. Given that this is an imprecise approach to the projection of cash flow into the future (as would other alternatives that might have been used), the projection of \$4,421,000 in operating cash flow available for capital and operating needs has been reduced to \$3,671,000 to provide for a more conservative projection for purposes of the Exhibit. This reduction of \$750,000 contributes to a annual cash flow that would be a further 'contingency' as well. A review of the projected cash flow for FY-2018 in last year's analysis was reasonably comparable to the actual cash flow results identified in the preliminary FY-2019 financial statements.

NOTE 18 (EXHIBIT A AND C) – COUNTY CHARGE RATES AND REVENUE (\$988,000 ANNUAL INCREASE)

The Schedule addresses the impacts of the proposed County Charge rate increases effective July 1, 2019 (\$.06 per wireline / wireless device) based on the \$164,600 per penny of County Charge (\$162,000 in last year's calculation). With the added rate increase, the revenue for the quarter ended September 30, 2019 would be increased by one-quarter of the annual amount to be collected of \$987,600, or \$247,000. Annually starting in FY-2020, the annual increase of \$987,600 would provide for incremental revenue for the operations and capital needs of the Radio Communications Fund beyond existing levels of the County Charge revenue.

One troubling aspect of the County Charge is that it is based on a 'per device' unit that is solely out of the control of the County. The units include both landline and wireless services. Landlines are generally declining while the wireless services may have fully penetrated the market (meaning, these units may not grow beyond the current levels). Further, the County Charge is currently capped at \$.42 per device by state statutes. As such, there will be little if any future County Charge (revenue) growth. While the state may consider addressing the operating charge legislation in the future, no provision for changes in levels of County Charge revenues – either up or down – have been assumed in these Exhibits.

NOTE 19 (EXHIBIT A) – BONDING AND DEBT SERVICE

Exhibit A reflects an assumption that PFN (telecom vendor) will not be able to secure any reimbursement of the ESINet operating costs from the State surcharge pool. Effective July 1, 2019 the Exhibit assumes an increase of \$.06 per device per month elevating the County Charge from \$.36 to \$.42 for FY-2020 per wireline / wireless device per month.

The assumptions relating to securing the necessary funding of the capital program follow –

- In FY-2020, the County would bond for \$25.0 million to be repaid by FY-2032. During the first three (launch) years, the Radio Communications Fund would fund the interest on the debt with no principal payments occurring. Starting in FY-2023, both principal and interest would be paid. The debt service requirements on the \$25.0 million bond were calculated by MFCI based on their assessment of the current market conditions, the structure of the debt repayment terms and a total interest rate of 2.47%. The County had previously issued a Notice of Intent to issue debt in the amount of \$25.0 million and would not have to adjust that Notice.
- The above debt would not be enough to cover the required funding needs for the launch of the radio communications system (including the operating costs of the ESINet as noted). The \$25.0 million bond can only be used for the acquisition of equipment and related costs directly associated with its implementation; operating costs cannot be bonded. An additional loan from the Delinquent Tax Revolving Fund would be sought in FY-2021 of \$3.0 million and another loan in FY-2022 in the amount of \$8.0 million to finish the project through the launch period ending September 30, 2022.
- In addition, the cash flow for the Radio Communications Fund at the \$.42 per device level is also insufficient to cover the projected capital, operating and debt service needs of the Fund. As such and during the period from FY-2023 to FY-2027, further DTRF loans would be required to fund the debt service of the bond noted above.
- Unrelated to the Radio Communications Project and in FY-2028, the County will have fully paid off the OPEB bonds. The result will be an overall cash flow improvement by the County of \$35 million annually in no longer having to fund the OPEB debt service. Of the amount of improved cash flow, between 60% to 80% would be directly attributed to the General Fund operations. Out of this cash flow, the County would fund the repayment of the bonded debt and DTRF loans. The present model reflects two General Fund payments in FY-2028 and FY-2029 of \$16.5 million and \$17.0 million. It would be up to the Board of Commissioners, the Treasurer and County Executive to address the timing and the amounts to be repaid on the DTRF in the FY-2027 budgeting process. Many different arrangements could be made at that time depending upon the budgetary needs of the County.

The County's adopted budget for FY-2020 and beyond assumes that there will be a \$1.6 million operating subsidy for the Radio Communications Fund. A portion of the subsidy will be used to fund equipment not eligible for reimbursement from the County Charge (Childrens Village - \$200,000 and jail operations - \$975,000).

NOTE 20 (EXHIBIT B) – BONDING AND DEBT SERVICE

Exhibit B reflects an assumption that PFN (telecom vendor) will be able to secure FULL reimbursement of the ESINet operating costs from the State surcharge pool. Effective July 1, 2019 the Exhibit assumes an increase of \$.06 per device per month elevating the County Charge from \$.36 to \$.42 for FY-2020 per wireline / wireless device per month.

The assumptions relating to securing the necessary funding of the capital program follow for the capital and debt service follow –

- In FY-2020, the County would bond for \$12.0 million to be repaid by FY-2032. During the first three (launch) years, the Radio Communications Fund would fund the interest on the debt with no principal payments occurring. Starting in FY-2023, the County would begin paying both principal and interest. The debt service requirements were calculated by MFCI based on their assessment of the current market conditions, the structure of the debt repayment terms and a total interest rate of 2.47%. The County had previously issued a Notice of Intent to issue debt in the amount of \$25.0 million and would not have to adjust that Notice.
- Under this assumption, there would be no need to secure additional loans from the DTRF, have the DTRF fund the bond debt service or secure operating subsidies from the General Fund. The single General Fund contribution in FY-2022 represents the purchase of subscriber units for the Childrens Village (\$200,000) and jail operations (\$975,000) as they cannot be funded from the County Charge. As cited in Note 3, the County's operating budget being recommended for FY-2020 and beyond (as well as the adopted budget for FY-2020) has reflected a \$1.6 million General Fund subsidy that is enough to cover the ineligible equipment.

Robert J. Daddow /
Special Projects Deputy County Executive

TO: Radio Oversight Committee
Jeff Nesmith
Jim Manning
Mel Maier
Pat Coates
Keith Bradshaw
Bob Runyon
Shawn Phelps

FROM: Bob Daddow

SUBJECT: Radio Communication Fund – Financial Statements and Schedules
for the Quarter Ended December 31, 2018

DATE: February 10, 2019

The following financial statements are attached as of and for the quarter ended December 31, 2018 for the Radio Communications Fund:

- Statement of Net Position (Exhibit A). This statement provides the assets, liabilities and net assets (e.g., equity) of the Radio Communications Fund.
- Statement of Revenues, Expenses, and Changes in Net Position (Exhibit A-1). This statement compares the adopted budget to actual operating results.
- Operating Transfers In and Out (Exhibits A-2 and A-3) - the operating transfers into the Fund were for the acquisition of individual portable and mobile radios (\$8,00) for the Sheriff's operations.

The Operating Transfers Out of \$71,500 involved the reimbursement of the Information Technology and the CLEMIS Operating Funds for administrative and communications services and Help Desk support costs.

- Brief Explanations (Exhibit A-4) – a set of explanations of operating budget to actual variances included in the financial statements and schedules above.

The operations and capital needs of the Radio Communications Fund are under consideration and a substantial replacement of much of the equipment, antennas and other infrastructure will be required in the next several years. While this memorandum

covers, in general, the nature of the projects to be undertaken, the principal purpose of this memorandum is to provide financial information as of and for the quarter ended December 31, 2018. In turn, this memorandum will be used as a 'baseline' for the net liquid assets available for the capital needs in connection with the launch of the new equipment and operating needs during that period. A separate memorandum will be prepared in the near term that will cover the baseline net assets, projected cash flows available for capital needs, and the cost of the new equipment as the County enters the negotiations with the successful vendor supplying that equipment. In addition, that future memorandum will be used to justify the increase in operating surcharge from \$.36 per month per device as defined in the state statutes to \$.42 per month per device.

The County administration recommended, and the Board of Commissioners approved, a four-cent increase in the monthly operating surcharge effective for the period July 1, 2018 to June 30 2019 to bring the total monthly surcharge to \$.36 per device as defined. The fee increase beginning July 1, 2019 is expected to be \$.06 per device fee for a total of \$.42 per device (maximum amount that can be assessed without a vote of the residents under state statutes).

A \$.06 per device fee increase would be expected to raise \$987,600 annually (\$164,600 / penny) in new revenue. The operating surcharge memorandum, which will be prepared shortly, will assume the passage of the increased fee starting on July 1, 2019 as part of the future cash flow availability relating to the radio communication project. **By state statute, the operating surcharge assessed at any level must be adopted by the Board of Commissioners through a resolution and submitted no later than mid-May 2019 in order that any operating surcharge can be included on the July 1, 2019 telephone bills and beyond.**

The \$.42 per device is expected to be in place for roughly 10 years during which time the underlying bonded debt will be outstanding in connection with the upgrade of the radio communications system components. The absence of increasing the fee to \$.42 per device or its elimination altogether would require support from the County's General Fund in lieu thereof and / or fees imposed upon the local radio users. In addition and as discussed more fully in the operating surcharge memorandum, the Michigan Public Services Commission has yet to hold a public hearing on the County's application (and other counties' applications) in the setting of the amounts to be paid to counties relating to the E-911 services that started in Oakland County in July 2018.

Black & Veatch (BV), a radio consultant, was secured to develop alternative courses of upgrade to the system, the scope of work on the selected alternative course of upgrade for the vendor request for proposal, estimating the cost to do so, and other related efforts. The BV report was issued prior to the release of the request for proposal and was the basis for the request for the prior year's increase.

One of the more significant BV tasks, however, was the development of an extensive request for proposal (exceeding 300 pages) released to the vendor community in January 2018. Two complete proposals were returned on April 24, 2018 along with other

proposals having been received involving potential components of the future radio communication system (portables; logging equipment; etc.).

The RFP scope and requirements were highly technical, exceedingly detailed and complex. A proposal evaluation committee was selected and has reviewed the proposals over the period through the end of calendar 2018. The committee was a diverse group of individuals representing police, fire, Information Technology, Radio Shop and included a commissioner representative. Oral presentations from the two vendors and follow-up meetings since were held during the third week of June 2018. As the evaluation committee performed its due diligence, written questions for clarification on the proposed systems from each vendor and even on-site visits and further demonstrations were held.

The tentative vendor selected, Motorola, is also the radio communications vendor used by the Michigan Public Safety Communications System (MPSCS) serving both the Michigan State Police, other state departments and many local governmental units throughout the state. The counties surrounding Oakland County use Motorola equipment via the MPSCS. Interoperability between public safety within Oakland County and that of the surrounding counties was a critical aspect in the tentative selection of Motorola. The evaluation process included roughly 200 separate elements graded by the evaluation committee with Motorola obtaining a programmatic score based on the written proposal, oral presentation and subsequent responses to questions roughly 10% higher than that of the County's current vendor.

The selection of Motorola and interoperability, however, has introduced additional research required on the way interoperability would occur between Oakland and the surrounding counties using the MPSCS. It is highly complex and technical in nature given two disparate platforms being used by Oakland and the surrounding counties.

Oakland's request for proposal specified a TDMA, simulcast, 2-slot system while the surrounding communities using the MPSCS uses a FDMA, multicast / simulcast, 2-slot system. While both solutions are based on Motorola equipment, these two variants are on different platforms and conversions during communication to / from TDMA / FDMA must be considered to ensure seamless interoperability. The loading capacities' as well as radio coverage of not only the County's need must be considered, so must that of the surrounding communities (as the County's launch of a Motorola system cannot cause degradations of the surrounding communities' radio coverage). The issues are very complex and care must be entertained in order to avoid commitments that result in unforeseen costs on the part of the County.

At present, the radio communication system has 54 towers and cell units (soon to be 55 towers and cell units - County-owned or locally-owned by governmental units within the County or leased space from private vendors), 1,861 mobile radios and 4,343 portable radios in use. Radio consoles are in 20 public safety dispatch centers (PSAPs) throughout Oakland County (17 primary PSAPs, one back-up, one secondary and Southfield that is not formally on the County's radio system today). There are 15 hospital emergency rooms using the County's radio communication system and

numerous private ambulance companies as well. Non-public safety units use the County's radio system for a monthly operating fee.

The capital project cost for the new radio communications system, which will be based on the proposal submitted by Motorola, the oral presentation and subsequent answers to requests for information in the upcoming operating surcharge memorandum. The below discussions will be used in setting the 'baseline' net available resources as of December 31, 2019 for this capital program. Cash flow projections, estimated capital costs and added on-going operating costs and other matters of interest will be discussed as part of the operating surcharge memorandum and are not included herein. A 15-year operating projection of capital and operating costs compared to anticipated revenues will also be presented in that memorandum.

Comments concerning the financial information contained in Exhibits A through Exhibit A-4 follow:

- The Fund has approximately \$28.1 million in cash, investments and receivables, net of liabilities and excluding prepaid expenses and inventories at December 31, 2018 (\$26.6 million at September 30, 2018). The net cash position is above the expectations in the March 31, 2018 project memorandum. This net cash position can be used for the purposes of funding the capital program.
- The ending equity has been classified as 'unrestricted – designated for projects' in the amount of \$21,473,102 and 'unrestricted' in the amount of \$8,332,524 as of December 31, 2018. The combined total is approximately equal to the cash available for capital needs and the designations are no longer particularly meaningful.

At present, the Motorola proposal is being finalized for the following critical business issues:

- **Radio Coverage.** The radio coverage is a key element to the system as the towers must be sited and the back-haul method (fiber, microwave, none, etc.) must be considered prior to pricing out the sites. The sites have generally been agreed upon but the costing of the sites, shelter needs, generator replacement needs and back-haul costs are pending.
- **Network Improvements.** The original scope of work for the request for proposal and fee memorandum in the spring of 2018 did not contemplate any significant costs for the improvement of the OAKNet system. Nor, did it contemplate the need for cyber-security and software monitoring (as the present system does not require any significant costs in this area separate from the overall OAKNet system operation) as access to the OAKNet was restricted; penetration would be exceedingly difficult. As the newer system will provide for access from outside sources, the need to secure the network, provide for virus and related updates and monitor it has become an unforeseen cost that must be addressed before launch.

The network improvement costs are dependent upon the finalization of the location and needs of improvement for the tower sites and back-hauling of the communications to the central site (which is nearing completion but still pending at this writing). The shelter and generator needs must be finalized and costed out. Finally, the back-haul, cyber-security and virus updates and other costs must be finalized in this area.

- **State v. County-owned System.** Because the State and many local governments use the Motorola system¹, the County has pursued joining the MPSCS either as a full member, partial member or continuing as a separate Motorola system with an interface to the MPSCS. No final decision has been made but the County is seriously considering connecting to the state system as a partial member. This decision is critical and must be agreed upon by the County, the state and Motorola before any contract is negotiated and signed. The decision will impact the costs required to fund the capital needs and will also impact on-going operations.
- **Costs.** Once the agreed-upon format for interoperability is finalized, as well as a number of other cost issues, the operating surcharge memorandum can be completed. It is hoped that the final contract can be negotiated with Motorola and the state by June 30, 2019 such that implementation can begin in the fourth quarter of the County's fiscal year.

Should there be any questions concerning the above, please contact me.

¹ The State's Motorola system is a two-slot, simulcast FDMA system versus the County's proposal to secure a two-slot TDMA system the County requested in the RFP scope of work. The surrounding communities using the State system are generally multi-cast. This divergent systems' architecture complicates the selection process as each have their programmatic and financial cost advantages and disadvantages.

Radio Communications Fund
Statement of Net Position
December 31, 2018

EXHIBIT A

ASSETS

Current assets:

Cash and cash equivalents	\$ 27,567,426.52
Accrued interest on investment	156,862.77
Due from other governments	56,263.09
Accounts receivable	1,266,945.66
Inventories	257,632.31
Prepaid items	1,410,132.81
Total current assets	30,715,263.16

Non-current assets:

Capital projects in progress	1,258,339.90
Tower rights	8,585,770.20
Equipment	27,937,929.57
Structures	12,944,790.99
Less accumulated depreciation	(43,464,636.30)
Total capital assets (net of accumulated depreciation)	7,262,194.36
Total assets	37,977,457.52

LIABILITIES

Current liabilities:

Vouchers payable	119,408.94
Due to Municipalities	5,338.68
Unearned Revenue	196,793.88
Accounts payable	588,096.03
Total current liabilities	909,637.53
Total liabilities	909,637.53

NET POSITION

Net Investment in capital assets	7,262,194.36
Unrestricted-designated for projects	21,473,102.03
Unrestricted	8,332,523.60
Total net position	\$ 37,067,819.99

County of Oakland
Radio Communications Fund
Statement of Revenues, Expenses, and Changes in Net Position
For the Three Months Ended December 31, 2018

EXHIBIT A-1

	2018			Year to Date		Favorable (Unfavorable) Variance
	Amended Budget	Percent of Revenue	Allotment	Actual	Percent of Revenue	
Operating revenues						
Antenna Site Management	300,000.00	3.42%	75,000.00	115,136.62	5.03%	40,136.62
E 911 Surcharge	7,928,000.00	90.27%	1,982,000.00	1,976,875.01	86.37%	(5,124.99)
Leased Equipment	250,000.00	2.85%	62,500.00	63,482.58	2.77%	982.58
Outside Agencies	65,000.00	0.74%	16,250.00	19,296.40	0.84%	3,046.40
Parts and Accessories	220,000.00	2.50%	55,000.00	102,199.66	4.47%	47,199.66
Productive Labor	20,000.00	0.23%	5,000.00	11,896.50	0.52%	6,896.50
Total operating revenue:	8,783,000.00	100.00%	2,195,750.00	2,288,886.77	100.00%	93,136.77
Operating expenses						
Salaries	699,790.00	7.97%	174,947.50	161,957.19	7.08%	12,990.31
Fringe benefits	378,221.00	4.31%	94,555.25	78,892.33	3.45%	15,662.92
Contractual services						
Communications	1,000,000.00	11.39%	250,000.00	82,784.49	3.62%	167,215.51
Electrical Service	100,000.00	1.14%	25,000.00	13,868.69	0.61%	11,131.31
Equipment Maintenance	325,000.00	3.70%	81,250.00	47,159.18	2.06%	34,090.82
Freight and Express	8,500.00	0.10%	2,125.00	548.47	0.02%	1,576.53
Indirect Costs	208,080.00	2.37%	52,020.00	48,016.25	2.10%	4,003.75
Laundry and Cleaning	700.00	0.01%	175.00	82.80	0.00%	92.20
Membership Dues	1,000.00	0.01%	250.00	0.00	0.00%	250.00
Personal Mileage	3,500.00	0.04%	875.00	569.53	0.02%	305.47
Printing	500.00	0.01%	125.00	0.00	0.00%	125.00
Professional Services	650,000.00	7.40%	162,500.00	23,327.37	1.02%	139,172.63
Rebillable Services	500.00	0.01%	125.00	0.00	0.00%	125.00
Software Rental Lease Purchase	30,000.00	0.34%	7,500.00	0.00	0.00%	7,500.00
Software Support Maintenance	2,731,280.00	31.10%	682,820.00	0.00	0.00%	682,820.00
Special Projects	40,000.00	0.46%	10,000.00	0.00	0.00%	10,000.00
Tower Charges	525,615.00	5.98%	131,403.75	105,566.73	4.61%	25,837.02
Training	75,000.00	0.85%	18,750.00	0.00	0.00%	18,750.00
Travel and Conference	22,500.00	0.26%	5,625.00	0.00	0.00%	5,625.00
Workshops and Meeting	100.00	0.00%	25.00	0.00	0.00%	25.00
Total contractual services	5,722,275.00	65.15%	1,430,568.75	321,923.51	14.06%	1,108,645.24
Commodities						
Dry Goods and Clothing	1,900.00	0.02%	475.00	367.00	0.02%	108.00
Other Expendable Equipment	131,494.00	1.50%	32,873.50	32,849.04	1.44%	24.46
Metered Postage	126.00	0.00%	31.50	154.74	0.01%	(123.24)
Office Supplies	5,000.00	0.06%	1,250.00	502.30	0.02%	747.70
Parts and Accessories	400,000.00	4.55%	100,000.00	67,399.53	2.94%	32,600.47
Shop Supplies	15,000.00	0.17%	3,750.00	1,452.62	0.06%	2,297.38
Small Tools	5,000.00	0.06%	1,250.00	363.45	0.02%	886.55
Total commodities	558,520.00	6.36%	139,630.00	103,088.68	4.50%	36,541.32
Depreciation						
Depreciation Tower Rights	0.00	0.00%	0.00	214,644.33	9.38%	(214,644.33)
Depreciation Structures	0.00	0.00%	0.00	323,588.40	14.14%	(323,588.40)
Depreciation Computer Equipment	0.00	0.00%	0.00	1,500.00	0.07%	(1,500.00)
Depreciation Equipment	3,969,862.00	45.20%	992,465.50	288,582.42	12.61%	703,883.08
Total depreciation	3,969,862.00	45.20%	992,465.50	828,315.15	36.19%	164,150.35
Internal services						
Bldg Space Cost Allocation	40,166.00	0.46%	10,041.50	10,041.51	0.44%	(0.01)
Info Tech CLEMIS	900,000.00	10.25%	225,000.00	112,355.56	4.91%	112,644.44
Info Tech Development	75,000.00	0.85%	18,750.00	8,681.25	0.38%	10,068.75
Info Tech Operations	260,936.00	2.97%	65,234.00	62,313.42	2.72%	2,920.58
Info Tech Managed Print Svcs	1,780.00	0.02%	445.00	431.74	0.02%	13.26
Insurance Fund	16,883.00	0.19%	4,220.75	508.25	0.02%	3,712.50
Maintenance Department Charges	35,000.00	0.40%	8,750.00	1,895.72	0.08%	6,854.28
Motor Pool Fuel Charges	7,898.00	0.09%	1,974.50	1,989.80	0.09%	(15.30)
Motor Pool	34,727.00	0.40%	8,681.75	6,004.85	0.26%	2,676.90
Telephone Communications	27,500.00	0.31%	6,875.00	6,858.91	0.30%	16.09
Total internal services	1,399,890.00	15.94%	349,972.50	211,081.01	9.22%	138,891.49
Total operating expense	8,758,696.00	99.72%	2,189,674.00	1,705,257.87	74.50%	484,416.13
Operating income (loss)	24,304.00	0.28%	6,076.00	583,628.90	25.50%	577,552.90
Nonoperating revenues (expenses)						
Planned Use of Balance	4,032,852.00	45.92%	1,008,213.00	0.00	0.00%	(1,008,213.00)
Income from investments	160,000.00	1.82%	40,000.00	140,361.80	6.13%	100,361.80

County of Oakland
Radio Communications Fund
Statement of Revenues, Expenses, and Changes in Net Position
For the Three Months Ended December 31, 2018

	2018			Year to Date		Favorable (Unfavorable) Variance
	Amended Budget	Percent of Revenue	Allotment	Actual	Percent of Revenue	
Gain on Sale of Equipment	0.00	0.00%	0.00	0.03	0.00%	0.03
Total nonoperating revenues (expenses)	4,192,852.00	47.74%	1,048,213.00	140,361.83	6.13%	(907,851.17)
Income (loss) before transfer	4,217,156.00	48.01%	1,054,289.00	723,990.73	31.63%	(330,298.27)
Transfers in	38,706.00	0.44%	9,676.50	8,000.00	0.35%	(1,676.50)
Transfers out	(286,000.00)	-3.26%	(71,500.00)	(71,500.00)	-3.12%	0.00
Change in net position	3,969,862.00	45.20%	992,465.50	660,490.73	28.86%	(331,974.77)
Net Position - beginning				36,407,329.26		
Net Position - ending				<u>37,067,819.99</u>		

RADIO COMMUNICATIONS - FUND 53600 Operating Transfers In - Fiscal Year 2019
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Description	Amount
Transfer from the General Fund, Sheriff Dept to Radio Communications Fund per Res. 18-264 for Charter Township of Orion	8,000.00
Total	<u>\$ 8,000.00</u>

RADIO COMMUNICATIONS - FUND 53600 Operating Transfers Out - Fiscal Year 2019

<u>Description</u>	<u>Amount</u>
Operating Transfer from Radio fund to Info Tech fund for 1st quarter FY 2019 OakNet operation costs. 1st Qtr Forecast Amendment to be included in the budget	\$ 59,000.00
Operating Transfer from Radio fund to Info Tech fund for 1st quarter FY 2019. Help Desk support. 1st Qtr Forecast Amendment to be included in the budget	<u>12,500.00</u>
Total	<u><u>\$71,500.00</u></u>

RADIO COMMUNICATIONS FUND 53600
Fiscal Year 2019 – 1st Quarter
Brief Explanation of “Actuals”

Listed below are comments regarding Radio Communications fund's 1st quarter Fiscal Year 2019 financial statements.

STATEMENT OF NET POSITION

- Radio Communications fund reports all monetary assets as Cash. Available cash is invested and managed by the Treasurer as a pool. The Treasurer’s Office allocates interest earned to the participating funds on a monthly basis.
- Due from other governments is the amount due from municipalities for leased equipment.
- Accounts receivable includes \$1,245,982.92 for accrued E-911 operational surcharge revenue which is paid to the County quarterly.
- Inventories include parts and accessories used to maintain customer equipment and the radio system.
- Prepaid items include rent paid in advance per the lease agreements for co-location of radio system equipment and advanced maintenance contract payments.
- Tower rights are the County's rights to co-locate equipment on towers constructed by the Radio fund on land owned by various municipalities. Ownership of the towers was transferred to the municipalities upon completion of construction in exchange for ongoing rights to place radio equipment on those towers.
- Vouchers payable and Accounts payable include accrued 1st quarter expenses.
- Due to municipalities is the City of Novi’s share of lease payments for co-locators on Novi’s antenna site as set forth in the Board of Commissioners Resolution 98-291.
- Unearned Revenue represents advance payments from antenna site co-locators.

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

Revenues:

- The Board of Commissioners’ Resolution 18-143 maintained the E-911 surcharge rate of \$0.36 for the period covering July 1, 2018 through June 30, 2019. The revenue reported for this quarter is based upon current estimated surcharge filings.
- Antenna site management revenue is for telecommunications companies that have contracted with Oakland County to place equipment on county-owned towers.
- The favorable variance for Parts and Accessories indicates higher than anticipated radio equipment purchases and repair requests.
- Productive labor revenue is higher than anticipated due to increased demand for service and reimbursement from CLEMIS for work performed by Radio technical staff on CLEMIS work orders.

RADIO COMMUNICATIONS FUND 53600
Fiscal Year 2019 – 1st Quarter
Brief Explanation of “Actuals”

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (Cont'd)

Expenses:

- Salaries are favorable due to lower than anticipated overtime, on-call hours and un-filled positions.
- Communications cost is favorable due to lower than anticipated cell tower connectivity costs. The budget for this line item includes an expected ISDN rate increase.
- Equipment maintenance is lower than expected due to the timing of services.
- Indirect cost expense is based on the County’s Indirect Cost allocation. It includes Human Resources, Payroll, Treasurer, Accounting, and Budgeting and Administrative services. The final allocation was established after adoption of the current budget.
- Professional services expense is favorable due to the timing of the ESInet project.
- Rebillable services are payments for parts and labor to be invoiced upon work completion.
- Software rental, lease purchase and software support maintenance is favorable due to the timing of the ESInet project.
- Special projects expense is favorable due to the timing of projects. The budget for this line item includes costs associated with tower maintenance such as painting.
- Tower charges represent payments for tower rental agreements.
- Overall commodities are under budget due to a decrease in radio equipment purchases.
- Internal service expense is favorable (overall) based on actual usage of county department services that fall below expectations.

Non-Operating Revenues and Expenses:

- Income from investments represents the portion of income from cash managed and allocated by the Treasurer’s Office.
- Transfers In includes: \$8,000 transferred in the first quarter representing a component of the \$38,706.00 approved by the Board of Commissioners for additional radios of which four are for the Sheriff’s contracts with municipalities.
- Transfers Out includes: \$12,500 for Help Desk support and \$59,000 for OakNet operation costs, both provided by Information Technology.