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MEMORANDUM

Date: April 28, 2016

To: Honorable Mayor and City Council
Thomas Terry, City Administrator

From: Rich Revering PE, City Engineer

Subject: Suggested Woodcrest Sewer Program
Resolution Ordering Improvement and Preparation of Plans – Woodcrest Sewer
Elko New Market, Minnesota
T15.102632

BACKGROUND

The City Council has been asked to order by resolution the preparation of plans and specifications for sewer improvements outlined in the feasibility report accepted by the Council at its February 11, 2016 meeting. A Public Hearing on the project was held on March 10th, 2016.

Following the hearing, the Council directed staff to revisit project costs and funding before it takes further action on the staff proposal. The Council stated that it is specifically interested in reducing costs to Woodcrest property owners and avoiding/minimizing the impact on other wastewater customers.

A revised Woodcrest Sewer Program to achieve these objectives is presented in this memo. The reader is directed to the previously presented *Feasibility Study* for a review of the previous program proposal. This memo assumes the reader is familiar with information previously provided and feedback from stakeholders.

SUMMARY

This memo presents changes to the Woodcrest Sewer Program to address City and Resident concerns over costs and other issues.

The changes presented in this memo are based on the following premises:

- At least one option for a long-term wastewater disposal option that is as affordable as possible, compatible with parcel constraints, and regulatory-compliant must be available

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for each home and future home in Woodcrest. This is not the current condition at Woodcrest.

- The current condition is the fault of no single stakeholder group.
- It is fitting that the Woodcrest residents and the City-as-a-whole be partners in any solution.
- Woodcrest residents, like other City residents, will generally favor having the ability to choose over being forced to take actions they perceive as not being in their interests.
- The sharing of grinder pump stations is ill-advised due to the potential for increased probability of accidental backups, disputes over service disruptions or accidents, trouble-shooting complications, and administrative burdens.

Accordingly, the proposed program changes involve giving and taking on each side. The program described in this memo is complex, but it attempts to address the concerns of Woodcrest residents and the City. The proposed program changes are summarized in the following paragraphs:

1. The forcemain network would be built in only two stages. The Pilot Branch in 2016 will serve the two homes with an imminent need. The remainder of the network will be installed under one contract during or before the year 2021, in conjunction with another major utility project if and when opportune. The benefit of this is anticipated reduced installation costs through increased economies of scale. The primary downside is that the City will lose the ability to finance the project in smaller pieces.
2. Residents will be given a choice at the time the full network is installed – agree to pay for the parcel’s share of the forcemain network (the “Forcemain Charge”) or opt to have this cost deferred. The Forcemain Charge is estimated at \$3,751.
 - a. Choosing to pay the Forcemain Charge via an Assessment Agreement for forcemain with the City will make the parcel eligible for a future waiver of the Connection Fee at the time of future hookup. The fee waived would be the amount of the Connection Fee in effect in the year an Assessment Agreement for hookup is signed. (This fee is \$1,882 for 2016)
 - b. Choosing to have the cost to the Owner’s parcel(s) deferred would mean both the Forcemain Charge and Connection Fee would need to be paid at the time of hookup if hookup is eventually required. Neither the charge nor the Connection Fee under this option would need to be paid if the parcel is never hooked up.
3. Grinder stations and hookups would be installed each summer by the City at those properties whose Owners have entered into an Assessment Agreement for hookup with the City by the annual deadline.
4. Shared grinder stations and service lines would be prohibited. Partly to soften the cost impact of this restriction and partly to incent elimination of substandard SSTS, a waiver of the Trunk fee (\$3,751 for 2016) would be included in the Assessment Agreement for hookup. Homeowners give up potential cost savings from sharing and the cost benefits of existing



SSTS, the City gives up the fee revenue. But both parties benefit from eliminating the potential management issues of shared systems and the potential impacts from non-compliant SSTS.

5. The City Council is being asked to discuss allowing property owners to choose to replace existing SSTS – even if the forcemain network is available – provided a valid permit can be obtained with no variances. This would allow Owners who believe the system is not needed to opt out, but would have forcemain in place for the long term should it eventually be needed. This meets the underlying goal of the project. The City risks delayed recovery, or possibly non-recovery, of costs incurred for those portions of the forcemain network.
6. The program still includes a second Assessment Agreement at the time of hook up that wraps in all remaining costs and offers payment in installments through the County property tax system. Residents that opted to pay the Forcemain Charge would not be charged again for a share of the forcemain and the Connection Fee would be waived in their Assessment Agreement for hookup. The agreement would also include a waiver of the Trunk Fee (assuming an application for a shared system isn't applied for and an exception granted by the Council). Total City fee waivers up to \$5,633 – depending upon resident choices – would be included in the cost total. This would reduce the estimated total cost to residents to just below \$19,000.

DISCUSSION

Staff considered several background issues in arriving at a modified implementation strategy. These include needs and timing of needs, procurement cost reduction strategies, Woodcrest property owner perspectives, City-as-a-whole perspectives, cost relief opportunities and strategies, and non-financial ways to address project concerns.

1. Needs and Timing of Needs

There is consensus between the City Engineer's Office and Scott County Environmental Services that City sewer will be the most viable long-term option overall for the Woodcrest parcels. This is based on small parcel sizes, cohesive and impacted soils, and ages of the existing systems. While no Council vote was held, there appears to be some agreement among staff and councilmembers that City sewer will eventually be needed for most parcels. There was also some support voiced among Woodcrest property owners.

No credible, viable, and economically competitive alternatives to City sewer for meeting all the long term needs at Woodcrest were presented by those opposed from any group of stakeholders. The City Engineer and County staff are aware of no such alternatives.

The conclusion of examination of options thus far is that, for most parcels, City sewer using low-pressure sewer is the best long-term solution to meeting the wastewater disposal needs for the neighborhood.



The City Engineer's plan includes individual pumps connected to a common forcemain network. Concerns have been raised during the process about the functionality, reliability, and durability of these systems. The City Engineer provided evidence that these systems work well, are robust and long-lived. No testimony based on first-hand knowledge of a comparable system was presented that refutes this; however, a small project demonstrating the viability of the system may be beneficial to prove out the system. The pilot project already proposed would achieve that.

There are currently five parcels needing or desiring to replace or avoid installation of an SSTS. Two of these need to make a change in 2016. Two will need to reach compliance during or before 2022. The last one has until sometime in 2023. A recent fire at a home in Woodcrest may lead to a sixth parcel needing to upgrade its system. No official notification of this has yet been received and may or may not materialize.

A pilot project proposed in 2016 to evaluate this system and address the immediate need for the two parcels cited remains in the recommended program.

2. Project Cost Reduction Strategies

Staff discussed and arrived at the following list of strategies to promote lowest implementation costs for City sewer at Woodcrest:

a. Project Minimization

The City has been asked about the use of shared grinder stations where possible. For any two parcels, this strategy could reduce the investment needed for grinder stations and controls, service forcemain, and electrical service. Sharing grinder stations has been found by other agencies; however, to lead to increases in disputes over costly service disruptions or accidents, trouble-shooting complications, and administrative burdens. A shared grinder station doubles not only the probability (although still low) of a backup at any given home, it potentially doubles the amount of backed up sewage during an event. Staff recommends sharing of stations be prohibited despite the potential savings.

Another opportunity to minimize investment would be to ensure the most efficient layout is selected for the shared forcemains based on actual existing well and SSTS locations and use of existing easements and rights of way. Refinement of current information would require site visits and surveys for essential site features.

b. Sound Bidding Practice

The following are strategies typically used by the City, when applicable, to obtain better bids:



Projects viewed as low-risk by the market result in more favorable bids. The construction risks we would identify for this project would include soil conditions, potential property owner complaints, and managing expectations around existing surface features. Soil-related risks can be mitigated by providing either reliable soils information or items of work intended to compensate the Contractor if unexpected conditions are encountered. Property owner risks can be reduced by confining the work to City rights of way and easements, a robust information campaign before and during construction, and the City providing a project representative to be the link between property owners and contractors. Expectations around existing surface features are best addressed before construction by identifying and locating sensitive features and designing away from them if possible, or bidding to protect, restore, or replace them if necessary.

The market tends to reward large projects with reduced pricing per unit of work. This is due to economies of scale and predictability of workload. It would be recommended for unit pricing advantages that the Woodcrest shared forcemain be built in as few phases as possible, and, if opportune, lumped with a larger project that involves similar trades. It is further recommended that future hookups be lumped together to the extent practicable while still protecting public health and complying with applicable codes.

The market rewards projects conducted during good weather and that have flexible schedules. The City should do all it can to conduct this construction work during times of the year that tend to have warm and dry weather. The City should be as flexible as possible with completion dates to attract more bidders and promote pricing that doesn't depend upon overtime, offsetting opportunity cost, or a need to mitigate risk of damages for non-completion.

c. Use City Forces Where Possible

City staff is already on the payroll, so an option for hookups may be that City Public Works staff conducts, or take over and continues to conduct, the coordination and oversight of various trades needed for the hookups instead of a general contractor or the consulting City Engineer's office.

If employees are in a period between other duties and able to complete portions of the work, the only incremental cost to build things is for materials and equipment fuel, wear and tear, or rental. Contractors need to charge also for labor, overhead, and profit, so costs are higher for the City to hire them to build the same works. Opportunities for City forces construction at Woodcrest may include open-cut installation areas of shared forcemain for the pilot project, and possibly portions of the hookup work at each property. Staff cautions, however, against relying on City employees doing the construction, as other priorities can disrupt schedules and cause delays.

3. Woodcrest Property Owner Perspectives



The majority of property owners voicing opinions indicated they were opposed to the project; however, this dropped to a minority when cost was excluded as a consideration. While at least some owners may remain opposed no matter what the program revisions include, the changes proposed here will be primarily based on the idea of saving cost to the property owners. Preservation of property owner choice is also discussed.

4. City-As-A-Whole Perspective

Staff recommends the City's position be focused on the following objectives, in order of highest priority:

- a. To facilitate a regulatory-compliant and economically viable long-term wastewater disposal option for each developable parcel or future parcel in Woodcrest in advance of any need for system replacement at any given parcel.
- b. To prohibit shared grinder stations.
- c. To minimize rate impacts to non-Woodcrest Elko New Market wastewater customers.

5. Cost-relief opportunities and strategies

Staff has considered various options for City assistance in bringing the overall connection cost down for Woodcrest parcel owners and has formed the opinion that the most feasible options involve waivers or discounts of the City trunk and connection fees. The following reasons apply. The intent is that - collectively - these form justification for City assistance for Woodcrest only. Other projects or neighborhoods that may inquire about discounts or rebates on fees paid must be considered independently and on their circumstances, even though one or more reasons below may overlap with those projects:

- a. While no party is to blame for the sewer situation at Woodcrest, sewage disposal in this neighborhood is a legacy problem that the City played a part in – even if only by accepting the original development.
- b. Sewer infrastructure external to Woodcrest normally funded with trunk fees is already in place and was fully paid by others. No expenditures for City trunk facilities were or are required.
- c. All new infrastructure internal to Woodcrest will be assessed to Woodcrest parcels prior to or upon connection. No developer beyond Woodcrest is bringing sewer to Woodcrest parcels incidentally.
- d. If City sewer is not extended to Woodcrest, no trunk or connection fees would be assessed. In other words, the City is not waiving fees to recover costs already expended or currently due. It would be foregoing revenue that would benefit the system and future users in the longer term, and should consider gaining a benefit in return.
- e. The City will benefit over the long term in helping resolve long-term sewage disposal needs from improved protection of public health, ability of the Woodcrest housing stock to be preserved and enhanced, preservation of residential tax base, and reduced



staff and council time in dealing from time to time with crises caused by non-compliant system discoveries.

The 2016 Trunk Fee is \$3,751.00. The 2016 Connection Fee is \$1,882.00. In 2016 dollars, staff sees an opportunity for the City to offer total assistance in the amount of \$5,633.00 with no corresponding cash outlay. The loss of revenue would be offset by the benefits described above and as described in the next section.

Staff further views the use of assistance as a tool that can help shape the outcome at Woodcrest in ways that benefit the City. For example, instead of simply granting relief in the above amounts, the City could apply the amounts to support specific outcomes. The following types of possible and useful credits or waivers have been identified by staff. Each furthers the property owners' interest in reducing cost. Each furthers at least one City interest. A brief explanation follows each idea:

- a. General cost impact reduction credit at time of hookup – this credit would reduce the overall cost to each parcel for implementing City sewer. It furthers one City-as-a-Whole interest (See 4.a. above).
- b. Credit at time of hookup for connection within a certain time period – this credit would be to induce connection sooner rather than later as well as reduce costs per parcel. It should be noted that near-term connection is not listed as a City-as-a-Whole interest. Counterintuitively, this credit could be detrimental to other users as the existing fund balance may be significantly impacted or bonding required if a rash of connections happens in a short time period. This option furthers one interest (see 4.a. above) but may have a negative impact (see 4.c. above).
- c. Waiver of Connection Fee at time of hookup for agreeing to pay the Forcemain Charge at the time of forcemain installation – this would reduce costs per parcel and incent early payment for the shared forcemain portion of the project. It would have the potential to reduce City carrying costs. Tracking this activity poses an added, but manageable, challenge. This waiver furthers two City-as-a-Whole interests (see 4.a and c above). This waiver is recommended by staff.
- d. Waiver of Trunk Fee at time of hookup– This waiver for each hookup would be to offset the extra costs of grinder stations that serve only one home and incent elimination of nonconforming SSTS by reducing hookup costs to residents. It assumes sharing of grinder stations is prohibited. This option furthers two City-as-a-Whole interests (see 4.a and b above). This waiver is recommended by staff.

6. Non-Financial Ways to Address Project Concerns

Title 9, Chapter 2, Section 3.D. of the City code currently reads, in part, as follows, “*Connection To Sewer System Required: Any building used for human habitation or occupancy and located*



on property adjacent to a sewer main, or in a block to which the system extends, shall be connected to the city sanitary sewer system within three hundred sixty five (365) days of the date the public sewer becomes available to any such property.” This provision of the code has not been enforced in the past where sewer is available but SSTS remained in service. Connections made were due to failed SSTS or because the property owner chose to hook up for other reasons. It is staff’s opinion that compelling parcels with SSTS where sewer was made available after the home was in place is impractical – the effort and cost to enforce connection could easily exceed the benefits to health and system economics.

At Woodcrest, the intent of the proposed program is not to compel parcels with compliant SSTS to hook up nor to require existing systems to be switched to City sewer if a permit for a replacement SSTS can be obtained from Scott County Environmental Services when the existing system requires replacement. The existing code would require modification to allow compliant SSTS to remain in service, to allow existing SSTS to be replaced on site if a proper permit can be obtained, and to align current enforcement practice with precedent. We recommend Council direct staff to prepare materials as necessary to modify the code to support hookup only when sewer is available to a parcel and the existing SSTS is found to be non-conforming under Scott County Ordinance 4, and the property owner elects to connect or cannot obtain a permit to replace the existing SSTS within parcel boundaries with no variance.

RECOMMENDATIONS

Adopt the attached resolution ordering the improvement and preparation of plans for the Woodcrest Sanitary Sewer Improvement Program described as follows:

1) Shared Forcemain Network –

- a) Design – The entire forcemain network will be designed in 2016 and be ready to bid and install if an opportunity arises.
- b) Schedule
 - i) Pilot Branch - Installed by City in 2016 for two homes needing service
 - ii) Network Remainder (All Other homes) – Woodcrest forcemains installed by City with currently unscheduled Park I-35 Utility Improvements (or similar project) or in 2021 - whichever occurs first in order to increase economies of scale and potentially reduce cost. Sub-branches are possible to install prior to and separately if a need is identified.
- c) Cost and Assessments –
 - i) Pilot Branch – Cost based on contractor-reviewed estimate for entire network to be prorated to two homes and assessed with Public Improvement and Special Assessment Agreement for hookup. City to carry non-assessed portion of Pilot Branch cost.
 - ii) Network Remainder – Cost based on low bid plus non-assessed portion of Pilot



Branch prorated to each parcel and potential parcel (for split-able lots). Property owners will be given the option to pay or defer the Forcemain Charge for each parcel.

- (1) Choosing to pay will mean the property owner enters into a Public Improvement and Special Assessment Agreement for forcemain with the City allowing assessment for the shared forcemain portion of the City Sewer Program to be levied against the parcel and collected with property taxes over a 5 or 10 year period. Choosing to pay the Forcemain Charge will also qualify that parcel for a Connection Fee waiver when the Owner hooks up to the system.
- (2) Choosing to defer the Forcemain Charge will mean the parcel's share of forcemain costs will not be actively assessed immediately after installation. The deferred amount plus the Connection Fee would be assessed at the time of hookup if the parcel is ever connected. For some parcels the assessment and fee may never be paid.

2) **Grinder Stations and Hookups –**

- a) Schedule
 - i) Pilot Branch – Stations installed in 2016 by City
 - ii) Network Remainder – City each summer to procure and arrange for installation of Grinder Stations and connection at homes that have entered into Public Improvement and Special Assessment Agreements for hookup prior to the annual deadline.
- b) Public Improvement and Special Assessment Agreement for Hookup Requirements
 - i) Design – the grinder station locations will be designed in 2016 based on homeowner information supplemented with City-acquired data, assuming access is provided. The design will include a grinder station for each parcel or potential parcel. The design will guide future placement of the grinder stations and is required to ensure the forcemain design is adequate to accommodate all parcels.
 - ii) Station Sharing – Sharing of grinder stations would be prohibited. In part to reduce the impact of this restriction, a waiver of the City Trunk Fee would be granted and reflected in the Public Improvement and Special Assessment Agreement for hookup. Owners that petition for and are granted an exception to the prohibition would not be eligible for the Trunk Fee waiver.
 - iii) System Choice – The Council may decide to offer an option that lets property owners choose to replace SSTS systems even if the forcemain network is available under the following conditions:
 - (1) The home is currently served by an existing SSTS system
 - (2) The Owner is able to obtain a permit from Scott County Environmental Services with no Variance required. The City will coordinate with Scott County to ensure City Ordinances are revised to facilitate this choice. The forcemain network will not mean sewer is available. This would be defined by ordinance; however, no other requirements for system layout, design, installation, maintenance, or



monitoring will be adjusted. Woodcrest SSTS will need to comply with all other Scott County Ordinance provisions.

If these conditions cannot be met, homes with systems needing replacement in the future as determined by Scott County Environmental Services will need to hook up to City sewer.

- iv) Access – The Public Improvement and Special Assessment Agreement for hookup will contain provisions giving the City access to the property for permanent grinder station installation and on-going access for inspection, maintenance, repair, and replacement as needed.
 - v) Costs and Assessments – the Public Improvement and Special Assessment Agreement for hookup will include the following costs, assessments, and credits:
 - (1) Forcemain Charge, if the Forcemain Charge was deferred.
 - (2) Connection Fee, if the Forcemain Charge was deferred.
 - (3) Waiver of Connection Fee in effect in the year of hookup, if the Forcemain Charge was paid at the time the forcemain network was installed.
 - (4) MCES SAC Fee in effect in the year of hookup
 - (5) On-Site costs for the grinder station, accessories, installation, connections, associated work and overhead.
 - (6) Waiver of Trunk Sewer Fee in effect in the year of hookup unless an exception to the shared grinder station prohibition was requested and granted.
 - vi) Property Owner Responsibilities – The property owner agrees to pay third party electrical costs to operate the grinder station in addition to City bills for usage of the system per the City’s annual Fee Schedule. The City may also identify usage restrictions not currently covered by code to protect the pressure system. These restrictions would likely be no more stringent than current practices required to protect existing SSTS.
- 3) **Maintenance** - The City would be responsible for maintenance and repair of grinder stations, service forcemains, and shared forcemains. Service call outs and repair costs due to deliberate or accidental misuse of the system would be charged to the property owner(s) responsible for the misuse and assessed to property taxes if not paid. Allowed discharges to the system would be codified by the City as necessary.
- 4) **Replacement** – Shared forcemains will be considered lateral sewer for the purpose of computing assessments per City Special Assessment Policy in any future replacement scenario. Service life of lateral sewers is assumed to be at least 50 years.

Direct staff to prepare Ordinance revisions to accommodate homeowner choice for City Sewer versus SSTS under the conditions described above.