

PUBLIC WORKS AND SAFETY COMMITTEE

Wednesday, March 29, 2017 – 4:15 p.m.

City Council Chambers

A g e n d a

1. [Small Cell Encroachment Permit – SC1 1](#)
2. [Small Cell Encroachment Permit – SC1 2](#)
3. [Small Cell Encroachment Permit – SC1 3](#)
4. [Small Cell Encroachment Permit – SC1 4](#)
5. [Small Cell Encroachment Permit – SC1 5](#)
6. [Small Cell Encroachment Permit – SC1 6](#)
7. [Bus Para-Transit Policy](#)
8. [Bus Five Year Plan](#)
9. [Burdick Expressway Reconstruction Cost Participation and Maintenance \(CPM\) Agreement \(4179\)](#)
10. [US 83 Bypass 4 Lane Project Bid Concurrence and Cost Participation and Maintenance Agreement Amendment \(4040\)](#)
11. [Request to Accept Hazardous Materials Water Emergency State Grant](#)
12. [Minot City and Minot Rural Auto Aid Agreement](#)
13. [Request to Sell Rescue Truck](#)
14. [Award of Bid- Water Main Replacement \(4251\)](#)
15. [Ordinances on Second Reading](#)
16. [Discussion- Internal/External Snow Plan Review](#)

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 1

MEMO TO: Public Works and Safety Committee
FROM: City Clerk's Office
RE: Agenda for Wednesday, March 29, 2017 4:15 p.m.

1. Small Cell Encroachment Permit – SC1 1

A request has been received for an encroachment permit from Dakota Carrier Network on behalf of Verizon Wireless for placement of a small cell communication facility within the public right-of-way. This facility is intended to increase Verizon's wireless telecommunication network capacity and ensure reliable access to mobile broadband communication services.

The site name for this facility is ND01 MINOT DAKOTA SQ MALL SC1 1. The exact GPS coordinates of the proposed location are latitude: N 480 12' 31.40" longitude: W 1010 19' 3.92". Moreover, a general description of the proposed location is the west side of 16th St SW, approximately 250 feet south of the 22nd Ave / 16th St SW intersection.

The small cell equipment installed at this facility will include:

- (1) 35-foot Mono-Pole
- (2) Panel antennas
- (2) Ericsson RRUS32
- (1) Electrical Pedestal
- (1) Hand Hole

The 35-foot mono-pole and equipment will require installation of a larger concrete foundation for structural support and will replace the existing City street light pole. Furthermore, the permit holder will attach the original street light fixture and wiring to the new structure, as well as, provide an independent power source for their equipment.

The City of Minot will not be responsible for routine maintenance on the permit holder's equipment. However, the City will continue to maintain the street light fixture and circuit. In addition, the permit holder will provide a spare pole for stockpile, in the event of a knockdown.

Encroachments within the right-of-way are interpreted as a permanent encroachment as defined in Article I. Section 28-3 of the Code of Ordinances. If the City Council deems that the request is warranted, it should be approved with the following recommendations:

- 1. The City Council approves the encroachment listed above.
- 2. The permit holder agrees the costs of maintenance and replacement be his responsibility.
- 3. The City Attorney prepares the encroachment permit agreement, including language to protect the City from liability.
- 4. The City Council retains the right to revoke the encroachment permit if it becomes necessary for any reasons.
- 5. The permit holder pays a \$100 permit fee.
- 6. The permit holder pays a \$1500 annual fee.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 2

7. The acquisition of electrical power and electrical service charges shall be the sole responsibility of the permit holder.
8. The permit holder shall obtain and comply with insurance coverage requirements.
9. No person may construct, install or modify a wireless communication facility within the public right-of-way without having first obtained a permit from the City Engineer.

Staff recommends approval of the encroachment permit for the small cell communication facility ND01 MINOT DAKOTA SQ MALL SC1 1, on the west side of 16th St SW, approximately 250 feet south of the 22nd Ave / 16th St SW intersection.

2. Small Cell Encroachment Permit – SC1 2

A request has been received for an encroachment permit from Dakota Carrier Network on behalf of Verizon Wireless for placement of a small cell communication facility within the public right-of-way. This facility is intended to increase Verizon's wireless telecommunication network capacity and ensure reliable access to mobile broadband communication services.

The site name for this facility is ND01 MINOT DAKOTA SQ MALL SC1 2. The exact GPS coordinates of the proposed location are latitude: N 48° 12' 13.80" longitude: W 101° 18' 54.74". Moreover, a general description of the proposed location is north side of 31st Ave, approximately 650 feet east of 16th St SW.

The small cell equipment installed at this facility will include:

- (1) 35-foot Mono-Pole
- (2) Panel antennas
- (2) Ericsson RRUS32
- (1) Electrical Pedestal
- (1) Hand Hole

The 35-foot mono-pole and equipment will require installation of a larger concrete foundation for structural support and will replace the existing City street light pole. Furthermore, the permit holder will attach the original street light fixture and wiring to the new structure, as well as, provide an independent power source for their equipment.

The City of Minot will not be responsible for routine maintenance on the permit holder's equipment. However, the City will continue to maintain the street light fixture and circuit. In addition, the permit holder will provide a spare pole for stockpile, in the event of a knockdown.

Encroachments within the right-of-way are interpreted as a permanent encroachment as defined in Article I. Section 28-3 of the Code of Ordinances. If the City Council deems that the request is warranted, it should be approved with the following recommendations:

1. The City Council approves the encroachment listed above.
2. The permit holder agrees the costs of maintenance and replacement be his responsibility.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 3

3. The City Attorney prepares the encroachment permit agreement, including language to protect the City from liability.
4. The City Council retains the right to revoke the encroachment permit if it becomes necessary for any reasons.
5. The permit holder pays a \$100 permit fee.
6. The permit holder pays a \$1500 annual fee.
7. The acquisition of electrical power and electrical service charges shall be the sole responsibility of the permit holder.
8. The permit holder shall obtain and comply with insurance coverage requirements.
9. No person may construct, install or modify a wireless communication facility within the public right-of-way without having first obtained a permit from the City Engineer.

Staff recommends approval of the encroachment permit for the small cell communication facility ND01 MINOT DAKOTA SQ MALL SC1 2, on the north side of 31st Ave, approximately 650 feet east of 16th St SW.

3. Small Cell Encroachment Permit – SC1 3

A request has been received for an encroachment permit from Dakota Carrier Network on behalf of Verizon Wireless for placement of a small cell communication facility within the public right-of-way. This facility is intended to increase Verizon's wireless telecommunication network capacity and ensure reliable access to mobile broadband communication services.

The site name for this facility is ND01 MINOT DAKOTA SQ MALL SC1 3. The exact GPS coordinates of the proposed location are latitude: N 480 12' 26.08" longitude: W 1010 18' 22.48". Moreover, a general description of the proposed location is the southeast side of the 24th Ave / 10th St SW intersection.

The small cell equipment installed at this facility will include:

- (1) 35-foot Mono-Pole
- (2) Panel antennas
- (2) Ericsson RRUS32
- (1) Electrical Pedestal
- (1) Hand Hole

This proposed location does not have an existing street light. Therefore, the permit holder will place their mono-pole structure in a position for the primary purpose of lighting the 24th Ave / 10th St SW intersection. The permit holder will also accept responsibility for all associated meter and energy costs to provide roadway lighting at the intersection.

The City of Minot will not be responsible for routine maintenance on the permit holder's small cell equipment or street light. In addition, the permit holder will be responsible for replacing the street light and pole in the event of a knockdown.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 4

Encroachments within the right-of-way are interpreted as a permanent encroachment as defined in Article I. Section 28-3 of the Code of Ordinances. If the City Council deems that the request is warranted, it should be approved with the following recommendations:

1. The City Council approves the encroachment listed above.
2. The permit holder agrees the costs of maintenance and replacement be his responsibility.
3. The City Attorney prepares the encroachment permit agreement, including language to protect the City from liability.
4. The City Council retains the right to revoke the encroachment permit if it becomes necessary for any reasons.
5. The permit holder pays a \$100 permit fee.
6. The permit holder pays a \$1500 annual fee.
7. The permit holder assumes all costs associated to provide a street light at the intersection.
8. The acquisition of electrical power and electrical service charges shall be the sole responsibility of the permit holder.
9. The permit holder shall obtain and comply with insurance coverage requirements.
10. No person may construct, install or modify a wireless communication facility within the public right-of-way without having first obtained a permit from the City Engineer.

Staff recommends approval of the encroachment permit for the small cell communication facility ND01 MINOT DAKOTA SQ MALL SC1 3, on the southeast side of the 24th Ave / 10th St SW intersection.

4. Small Cell Encroachment Permit – SC1 4

A request has been received for an encroachment permit from Dakota Carrier Network on behalf of Verizon Wireless for placement of a small cell communication facility within the public right-of-way. This facility is intended to increase Verizon's wireless telecommunication network capacity and ensure reliable access to mobile broadband communication services.

The site name for this facility is ND01 MINOT DAKOTA SQ MALL SC1 4. The exact GPS coordinates of the proposed location are latitude: N 480 12' 15.84" longitude: W 1010 18' 24.90". Moreover, a general description of the proposed location would be the southwest corner of the 28th Ave / 10th St SW intersection.

The small cell equipment installed at this facility will include:

- (1) 35-foot Mono-Pole
- (2) Panel antennas
- (2) Ericsson RRUS32
- (1) Electrical Pedestal
- (1) Hand Hole

This proposed location does not have an existing street light. Therefore, the permit holder will place their mono-pole structure in a position for the primary purpose of lighting the 28th Ave / 10th St SW intersection. The permit holder will also accept responsibility for all associated meter and energy costs to provide roadway lighting at the intersection.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 5

The City of Minot will not be responsible for routine maintenance on the permit holder's small cell equipment or street light. In addition, the permit holder will be responsible for replacing the street light and pole in the event of a knockdown.

Encroachments within the right-of-way are interpreted as a permanent encroachment as defined in Article I. Section 28-3 of the Code of Ordinances. If the City Council deems that the request is warranted, it should be approved with the following recommendations:

1. The City Council approves the encroachment listed above.
2. The permit holder agrees the costs of maintenance and replacement be his responsibility.
3. The City Attorney prepares the encroachment permit agreement, including language to protect the City from liability.
4. The City Council retains the right to revoke the encroachment permit if it becomes necessary for any reasons.
5. The permit holder pays a \$100 permit fee.
6. The permit holder pays a \$1500 annual fee.
7. The permit holder assumes all costs associated to provide a street light at the intersection.
8. The acquisition of electrical power and electrical service charges shall be the sole responsibility of the permit holder.
9. The permit holder shall obtain and comply with insurance coverage requirements.
10. No person may construct, install or modify a wireless communication facility within the public right-of-way without having first obtained a permit from the City Engineer.

Staff recommends approval of the encroachment permit for the small cell communication facility ND01 MINOT DAKOTA SQ MALL SC1 4, on the southwest corner of the 28th Ave / 10th St SW intersection.

5. Small Cell Encroachment Permit – SC1 5

A request has been received for an encroachment permit from Dakota Carrier Network on behalf of Verizon Wireless for placement of a small cell communication facility within the public right-of-way. This facility is intended to increase Verizon's wireless telecommunication network capacity and ensure reliable access to mobile broadband communication services.

The site name for this facility is ND01 MINOT DAKOTA SQ MALL SC1 5. The exact GPS coordinates of the proposed location are latitude: N 48° 12' 10.69" longitude: W 101° 18' 34.61". Moreover, a general description of the proposed location is the north side of the 31st Ave / 12th St SW intersection.

The small cell equipment installed at this facility will include:

- (1) 35-foot Mono-Pole
- (2) Panel antennas
- (2) Ericsson RRUS32
- (1) Electrical Pedestal
- (1) Hand Hole

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 6

The 35-foot mono-pole and equipment will require installation of a larger concrete foundation for structural support and will replace the existing City street light pole. Furthermore, the permit holder will attach the original street light fixture and wiring to the new structure, as well as, provide an independent power source for their equipment.

The City of Minot will not be responsible for routine maintenance on the permit holder's equipment. However, the City will continue to maintain the street light fixture and circuit. In addition, the permit holder will provide a spare pole for stockpile, in the event of a knockdown.

Encroachments within the right-of-way are interpreted as a permanent encroachment as defined in Article I. Section 28-3 of the Code of Ordinances. If the City Council deems that the request is warranted, it should be approved with the following recommendations:

1. The City Council approves the encroachment listed above.
2. The permit holder agrees the costs of maintenance and replacement be his responsibility.
3. The City Attorney prepares the encroachment permit agreement, including language to protect the City from liability.
4. The City Council retains the right to revoke the encroachment permit if it becomes necessary for any reasons.
5. The permit holder pays a \$100 permit fee.
6. The permit holder pays a \$1500 annual fee.
7. The acquisition of electrical power and electrical service charges shall be the sole responsibility of the permit holder.
8. The permit holder shall obtain and comply with insurance coverage requirements.
9. No person may construct, install or modify a wireless communication facility within the public right-of-way without having first obtained a permit from the City Engineer.

Staff recommends approval of the encroachment permit for the small cell communication facility ND01 MINOT DAKOTA SQ MALL SC1 5, on the north side of the 31st Ave / 12th St SW intersection.

6. Small Cell Encroachment Permit – SC1 6

A request has been received for an encroachment permit from Dakota Carrier Network on behalf of Verizon Wireless for placement of a small cell communication facility within the public right-of-way. This facility is intended to increase Verizon's wireless telecommunication network capacity and ensure reliable access to mobile broadband communication services.

The site name for this facility is ND01 MINOT DAKOTA SQ MALL SC1 6. The exact GPS coordinates of the proposed location are latitude: N 480 12' 21.48" longitude: W 1010 19' 2.88". Moreover, a general description of the proposed location is the east side of 16TH St SW, approximately 30 feet north of 26th Ave SW.

The small cell equipment installed at this facility will include:

- (1) 35-foot Mono-Pole

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 7

- (2) Panel antennas
- (2) Ericsson RRUS32
- (1) Electrical Pedestal
- (1) Hand Hole

The 35-foot mono-pole and equipment will require installation of a larger concrete foundation for structural support and will replace the existing City street light pole. Furthermore, the permit holder will attach the original street light fixture and wiring to the new structure, as well as, provide an independent power source for their equipment.

The City of Minot will not be responsible for routine maintenance on the permit holder's equipment. However, the City will continue to maintain the street light fixture and circuit. In addition, the permit holder will provide a spare pole for stockpile, in the event of a knockdown.

Encroachments within the right-of-way are interpreted as a permanent encroachment as defined in Article I. Section 28-3 of the Code of Ordinances. If the City Council deems that the request is warranted, it should be approved with the following recommendations:

1. The City Council approves the encroachment listed above.
2. The permit holder agrees the costs of maintenance and replacement be his responsibility.
3. The City Attorney prepares the encroachment permit agreement, including language to protect the City from liability.
4. The City Council retains the right to revoke the encroachment permit if it becomes necessary for any reasons.
5. The permit holder pays a \$100 permit fee.
6. The permit holder pays a \$1500 annual fee.
7. The acquisition of electrical power and electrical service charges shall be the sole responsibility of the permit holder.
8. The permit holder shall obtain and comply with insurance coverage requirements.
9. No person may construct, install or modify a wireless communication facility within the public right-of-way without having first obtained a permit from the City Engineer.

Staff recommends approval of the encroachment permit for the small cell communication facility ND01 MINOT DAKOTA SQ MALL SC1 6, on the east side of 16TH St SW, approximately 30 feet north of 26th Ave SW.

7. Bus Para-Transit Policy

Minot City Transit is requesting that Council review and adopt the [2017 Para-Transit Policies and Riders Guide](#). This plan is required to be updated every three years. Once adopted this plan will be submitted to the North Dakota Department of Transportation. This plan will fulfill Minot City Transit's requirement to provide paratransit service commiserate to the fixed route services provided according to the Americans with Disabilities Act.

It is recommend the Committee and Council approve the Para-Transit Policy.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 8

8. Bus Five Year Plan

Minot City Transit is requesting that Council review and adopt the [2017 Transit Five Year Service Plan](#). This plan is required to be updated every year. Once adopted this plan will be submitted to the North Dakota Department of Transportation. This plan will fulfill Minot City Transit's requirement to provide 3 – 5 year service planning to allow the City to apply for federal grants through the North Dakota Department of Transportation.

It is recommend the Committee and Council approve the proposed Five Year Transit Plan.

9. Burdick Expressway Reconstruction Cost Participation and Maintenance (CPM) Agreement (4179)

Burdick Expressway from 9th St to 15th St SE is slated for reconstruction in 2017. The project will be managed and bid under the direction of the NDDOT. The CPM agreement between the City and NDDOT identifies the funding splits and maintenance responsibilities for the project. The language in this agreement is standard language the City has agreed to on all other NDDOT projects similar to this one. The project is currently on schedule to be bid in mid-April.

Fiscal Impact: The total project cost with construction, engineering, and right of way is estimated to be \$6,428,944. The federal and state funds total \$4,482,768 and the City's cost share is \$1,946,176. The majority of the City's cost, \$1,270,432 is the replacement of the nearly 100 year old water and sewer infrastructure. The rest of the City's cost share is for the roadway and storm sewer improvements. The City has a separate engineering contract for the water and sewer design costs. The cost breakdown is included in the agreement. The costs for this project were included in the City's Capital Improvement Plan in the 2017 Budget and will be funded with general obligation and revenue bonds.

It is recommended the Committee and Council approve the [Cost Participation and Maintenance Agreement](#), and authorize the Mayor to sign the agreement. Also, to approve the resolutions required to issue revenue bonds and general obligation bonds for this project.

10. US 83 Bypass 4 Lane Project Bid Concurrence and Cost Participation and Maintenance Agreement Amendment (4040)

On March 17, 2017 the NDDOT opened bids for the US 83 Bypass 4 Lane Project, SOIB-CPU-TRP-4-083(130)920 PCN 20749. The project will add two new lanes from US 2-52 intersection, north to the 4th Ave interchange. The project will also signalize the 21st Ave NW intersection and realign and extend 21st Ave west to 30th St NW.

The lowest bid was submitted by Gladen Construction, Inc. from Laporte, MN in the amount of \$13,541,620.04. The engineer's estimate was \$18.1 million.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 9

The City of Minot has a cost share for this project which is detailed in the approved cost participation and maintenance agreement (CPM) and shown on the attached Appendix A.

The City also previously signed a memorandum of understanding (MOU) with the NDDOT on how the funding split would occur regarding the bridge work needed for the flood control improvements. The MOU stated the City would pay 100% of the cost for 100 feet of the added bridge length, while the CPM agreement stated the City would pay 100% of the cost for 80 feet of the bridge length. The CPM agreement needs to be [amended](#) to reflect the accurate amount of bridge cost share to be 100 feet in length.

Fiscal Impact: The City's cost share will be paid for with general obligation bonds for the roadway improvements on 21st Ave NW (\$695,596) and flood control sales tax/State Water Commission funding for the flood control improvements associated with this project (\$1,371,309). Funds for this project have been identified in the 2017 capital improvement plan for the City's cost share on this project.

It is recommended the Committee and Council concur with the bid submitted by Gladen Construction, Inc. in the amount of \$13,541,620.04 for the US 83 Bypass 4 Lane Project.

11. Request to Accept Hazardous Materials Water Emergency State Grant

The Minot Fire Department was awarded \$46,570.11 which will provide the department with additional equipment to assist in the mitigation of water hazardous materials emergencies. This grant will allow the City to procure additional absorbent pads, dive equipment certified for use in a hazardous environment, scene lighting and intrinsically safe radios. This grant is part of the regional response agreement which was approved by Council and signed by the Mayor in June, 2016.

Fiscal Impact: No matching funds are required. These grants have been budgeted in the appropriate accounts in the 2017 budget.

It is recommended the Committee and Council authorize acceptance of the Hazardous Materials Water Emergency State Grant and further authorize the Mayor to sign the agreement.

12. Minot City and Minot Rural Auto Aid Agreement

The Fire Chief is asking the Council to authorize the Mayor to sign the Auto Aid agreement between the Minot Rural Fire Department and the Minot Fire Department. An auto aid agreement is a document that spells out which areas within the two jurisdictions and under what circumstances both agencies will be dispatched to the emergency simultaneously. This document has been reviewed by the Minot City Attorney.

It is recommended the Committee and Council approve the [Auto Aid Agreement](#) between the City of Minot Fire Department and the Minot Rural Fire Department and authorize the Mayor to sign the agreement.

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 10

13. Request to Sell Rescue Truck

The Minot Fire Department is requesting approval to surplus the box of 2000 Ford F-50 rescue truck which has been placed in reserve status. The fleet mechanic is replacing the box with a used box which will allow the department to repurpose this unit as a tow vehicle. The used box was purchased for \$3,800 in 2016 using operational budget money as it met the needs of the department and was one third of the price of a new box.

The Fire Chief is requesting authorization to sell the box and accept the sale price. The money from the sale to be put in the operational budget to replace the funds used to purchase the box and utilize the remainder to purchase the necessary equipment to fully equip the new fire engine that has been ordered. The budget allocated for the purchase of new equipment for the truck is not sufficient to meet the department's needs.

It is recommended the Committee and Council authorize the Fire Chief to sell the box of 2000 Ford F-50 rescue truck and pass an [ordinance](#) amending the 2017 annual budget to increase expenditures and revenues in the fire control operation supplies budget in the general fund for the purchase of extraction tools.

14. Award of Bid- Water Main Replacement (4251)

Each year, the Water and Sewer Department budgets funds for water main replacement in areas where old water mains are in poor condition. The proposed improvements are necessary because of the high maintenance costs over the past several years with respect to the old mains and hydrants.

Due to timing of the bid opening, a tabulation of bids wasn't available before committee packets were printed. A full tabulation of bids along with a recommendation of award will be on Council's desk prior to the March 29th committee meeting

15. Ordinances on Second Reading

The following ordinances need to be considered on second reading:

- a. [Ordinance No. 5173](#) - Amending the 2017 Annual Budget – Interactive TV Network Stations 2 & 3 (FD0061)
- b. [Ordinance No. 5174](#) - Amending the 2017 Annual Budget - Automated Trash Collection Technology System (4249.1)
- c. [Ordinance No. 5175](#) - Amending the 2017 Annual Budget – Replacement Patrol Car #7 (ACDT17)
- d. [Ordinance No. 5176](#) - Amending the 2017 Annual Budget – Fire Extinguishing Training Simulator (FD0062)
- e. [Ordinance No. 5177](#) - Amending the 2016 Annual Budget – Over Budget Line Items #2
- f. [Ordinance No. 5178](#) - Amending the 2017 Annual Budget – Street Dept. Skid Steer Trade In – Capital
- g. [Ordinance No. 5179](#) - Amending the 2016 Annual Budget- Narcotics Task Force Grant

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 11

16. Discussion- Internal/External Snow Plan Review

Internal Review

In reviewing the snow removal policy of other cities in ND, SD and Montana, Minot's policy compares very closely to those other cities, with the exception of Missoula Montana. They do not plow residential streets, which is common with many cities in that region. Missoula, MT notified us during discussions, that they have downloaded the Minot snow removal plan and intend to implement it as their own plan.

Snow removal begins with the major thorough fares or high traffic roadways/snow emergency routes and progresses down to the lower traffic residential roadways.

In review of our plan, we do not see many major changes or modifications that would be made to improve the amount of time it takes to clear the roadways in Minot.

There are a few modifications we do intend to make, and we will provide for the Council's consideration to improve the time it takes to clear the roadways during a normal 4-8" snow event.

Removing snow gates for all snow events would decrease the amount of time it takes to plow the road by 30% or more. This would provide a tremendous disadvantage to the residents as they would have large windrows of snow in their driveways that they would have to deal with. Since Minot has used snow gates since the 1960's, we do not recommend discontinuing the use of gates.

Adding additional GPS units to the loaders and sand/salt trucks, as well as work with our Razor tracking provider to make the information that is posted to the public more user friendly and provide more detail and history in what the public can access as far as routes the plows have covered in prior days or storms. We also intend to try provide maps to the public on the City website in advance of moving into the residential areas to better inform the public as to where the crews are moving to next.

The feasibility of having a satellite location for sand/salt refilling was looked into. Our existing sand/salt building is 80' x 120' and cost about \$263,000 in 2008. An additional loader would also need to be purchased or rented so trucks can be refilled. A facility of this nature would be very beneficial during a freezing rain event, but for average snow fall conditions a building with additional functionality such as the ability to swap blade cutting edges would be much more useful. A similar sized building with water and sewer connections, HVAC and some tools for small repairs could easily cost \$1 million today. With the marginal benefit these funds would be better spent on additional equipment.

Finally, we have updated the snow emergency routes to reflect new roads added in the past two years.

A few items considered in accelerating the snow removal process, but would be dependent on additional funding for the department are:

PUBLIC WORKS AND SAFETY COMMITTEE

March 29, 2017

Page 12

Add four additional blades to the blades we lease each year to have on stand by for breakdowns, as we experience numerous breakdowns due to the extreme conditions during snow removal.

Require that the leased blades be newer with less hours. This may help with breakdowns, but will cost more than the blades we rent now.

Increase the amount of equipment and manpower to reduce the time it takes to clear all roadways. This cost is dependent on how quickly the Council would like the roadways cleared. Currently it takes us 72-96 hours to clear every road curb to curb. This is done with 8 blades. If the wish is to cut that time in half, we would need to double the equipment we currently use by adding 8 more blades and add 16 men for the two shifts. The alternate to this would be to contract the work to a contractor, which cost approximately \$175/hour for each piece of equipment and they would not utilize snow gates in the removal process.

Consider tighter parking restrictions on snow routes or eliminate it completely from Nov. 1 to April 1 of each year. Enforce parking restrictions or impose tighter restrictions in residential areas during a storm event or look at trying to clear avenues one day and allow alternate parking on street vs avenue during snow removal process.

External Review

In discussions with the snow professionals in Sioux Falls, SD, Bismarck, ND, Missoula Mt, the NDDOT and finally the City of Grand Forks, ND. The following summarizes the equipment and personnel in relation to lane miles maintained and plowed. All of the cities utilize a priority system for removal of snow similar to Minot by starting on snow emergency routes, or major arterial roadways and working their way to the lesser traveled lower traffic local roadways, with the exception of Missoula Mt. They do not clear residential roads only major roadways.

In summary the following is a list of pieces of equipment vs lane miles for various cities:

City	Lane Miles	Equipment	Miles/unit	Time to clear
Minot	1200+ lanes to clear	8 blades, 3 truck plows	109 miles/unit	72-96 hours
Sioux Falls	3000 lane miles	70 units	40 miles/unit	36 hours
Bismarck	1400 lane miles	7 blades/7 loaders/7 truck plows	67 miles/unit	48-60 hours
NDDOT	not given	not given	48/unit	
Grand Forks	750	7 blades/4 plow trucks/6 loaders	44/unit	18-24 hours
Missoula	not given	not given	not given	5-6 days

Missoula's population is about 30% larger than Minot and they do not plow residential streets.

They told city staff, they downloaded Minot's snow plan and have adopted it as what they intend to follow because their plan was very complicated and did not address snow on residential streets.

In summary, all entities stated it is a matter of manpower and equipment. In order to clear the streets quicker, you must increase the manpower and equipment dedicated toward the job, whether it is done with staff and equipment or through local contractors but takes resources and money.