# ***ATTACHMENTS***

X

6.1

Gen. Ord. No. 13 -18 - 19. By Alderperson Wolf. August 20, 2018.

AN ORDINANCE repealing Gen. Ord. No. 42-17-18 and creating new parking restrictions permitting parking on N. 9th Street from Pershing Avenue north.

WHEREAS, pursuant to Gen. Ord. No. 42-17-18, parking is not permitted on N. 9th Street from the north curb line of Pershing Avenue to 525 feet north of the north curb line of Pershing Avenue from 2:00 a.m. to 6:00 p.m. daily.

WHEREAS, there is a need for parking on N. 9th Street between 2:00 a.m. and 6:00 a.m.

THEREFORE, THE COMMON COUNCIL OF THE CITY OF SHEBOYGAN DO ORDAIN AS FOLLOWS:

Section 1. Gen. Ord. No. 42-17-18 is hereby repealed.

Section 2. Pursuant to Sec. 118-126 of the Municipal Code entitled "Prohibitions and Restrictions Authorized," the east side of N. 9th Street from 375 feet north of the north curb line to its terminus and the west side of N. 9th Street from 363 feet north of the north curb line of Pershing Avenue to its terminus are hereby added to the list of locations where no parking is permitted from 2:00 a.m. to 6:00 a.m.

Section 3. The Department of Public Works and the Police Department are hereby authorized and directed to remove and install signs to give notification of the aforementioned parking restriction.

Section 4. All ordinances or parts thereof in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict, and this ordinance shall be in effect from and after its passage and publication.

Public Works

**I HEREBY CERTIFY that the foregoing Ordinance was duly passed by the Common Council of the City of Sheboygan, Wisconsin, on the _____ day of _____, 20____.**

Dated_____ 20____. _____, City Clerk

Approved_____ 20____. _____, Mayor

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** An ordinance repealing Gen. Ord. No. 42-17-18 and creating new parking restrictions permitting parking on North 9th Street from Pershing Avenue north.

**REPORT PREPARED BY:** Ryan Sazama, City Engineer

**REPORT DATE:** August 23, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

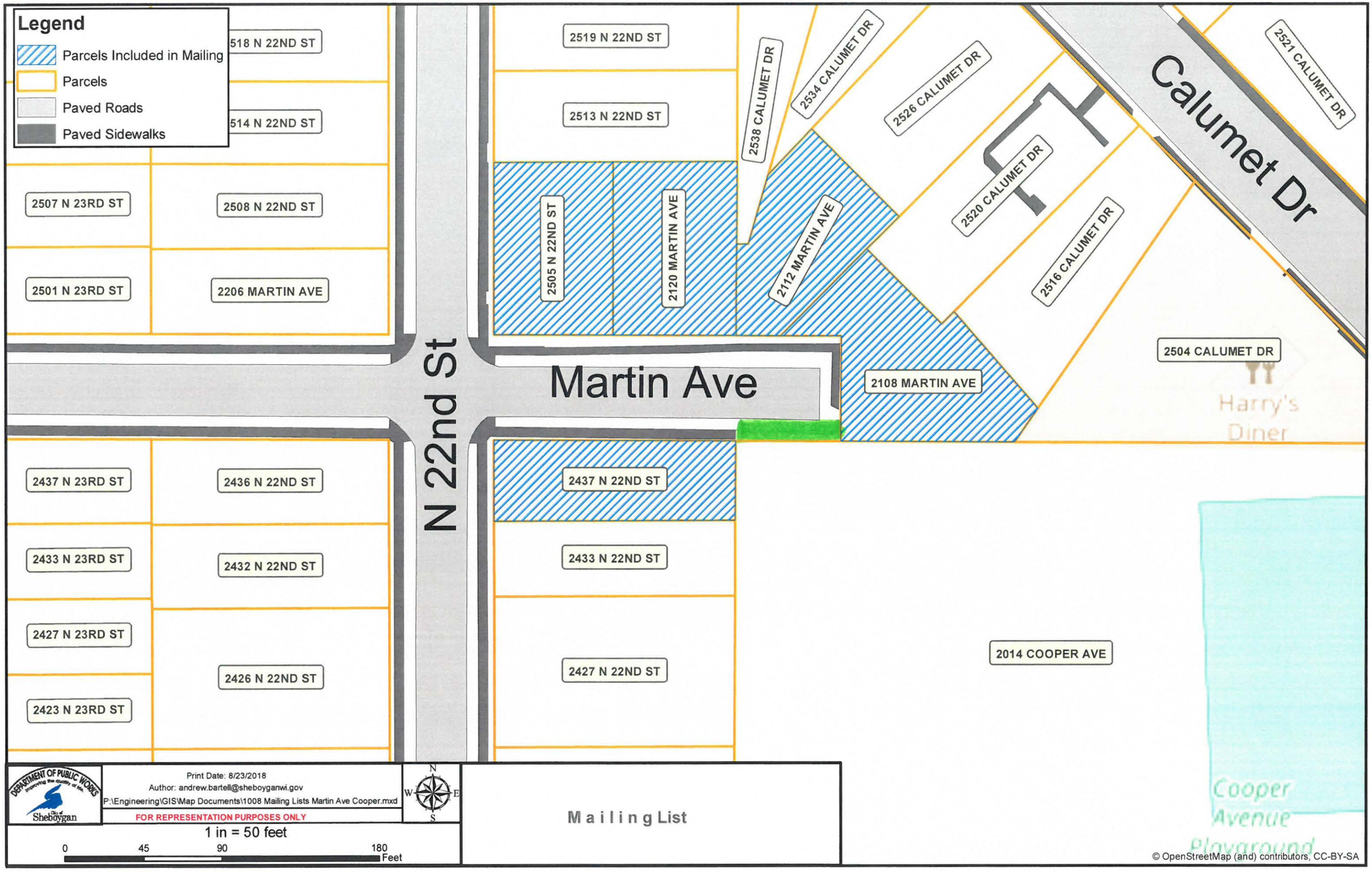
**BACKGROUND / ANALYSIS:** Currently North 9th Street from Pershing Avenue to its terminus to the North has No Parking 2:00 a.m. to 6:00 a.m. on both sides of the street. After much discussion and correspondence with the property owners on this section of North 9th Street they would like this parking restriction to remain in place in front of the residences located at 3414, 3413, 3410, 3409 and 3404 North 9th Street (see attached map). The rest of this section of North 9th Street would have the No Parking 2:00 a.m. to 6:00 a.m. removed.

**STAFF COMMENTS:** As stated above after much discussion and correspondence with the property owners on this section of North 9th Street the revised parking restrictions is what all property owners on this section of North 9th Street have agreed upon.

**ACTION REQUESTED:** Motion to recommend the Common Council approve Gen. Ord. No. 42-17-18 by Alderperson Wolf creating new parking restrictions permitting parking on North 9th Street from Pershing Avenue north.

**ATTACHMENTS:**

I. Gen. Ord. 13-18-19


Legend
Parcels Included in Mailing
Parcels
Paved Roads
Paved Sidewalks
518 N 22ND ST
514 N 22ND ST
2507 N 23RD ST
2508 N 22ND ST
2501 N 23RD ST
2206 MARTIN AVE
2519 N 22ND ST
2513 N 22ND ST
2538 CALUMET DR
2534 CALUMET DR
2526 CALUMET DR
2520 CALUMET DR
2516 CALUMET DR
2521 CALUMET DR
Calumet Dr
2505 N 22ND ST
2120 MARTIN AVE
2112 MARTIN AVE
2108 MARTIN AVE
2504 CALUMET DR
Harry's Diner
Martin Ave
N 22nd St
2437 N 23RD ST
2436 N 22ND ST
2433 N 23RD ST
2432 N 22ND ST
2427 N 23RD ST
2426 N 22ND ST
2423 N 23RD ST
2437 N 22ND ST
2433 N 22ND ST
2427 N 22ND ST
2014 COOPER AVE
Cooper Avenue Playground
DEPARTMENT OF PUBLIC WORKS
City of Sheboygan
Print Date: 8/23/2018
Author: andrew.bartell@sheboyganwi.gov
P:\Engineering\GIS\Map Documents\1008 Mailing Lists Martin Ave Cooper.mxd
FOR REPRESENTATION PURPOSES ONLY
N
W
E
S
1 in = 50 feet
0
45
90
180
Feet
Mailing List
© OpenStreetMap (and) contributors, CC-BY-SA

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** An ordinance relating to parking restrictions on the south side of Martin Avenue east of North 22nd street.

**REPORT PREPARED BY:** Ryan Sazama, City Engineer

**REPORT DATE:** August 23, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** Currently there are no parking restrictions on Martin Avenue between North 22nd Street to its terminus to the east. The owner of the property at 2108 Martin Avenue has made a request to have the parking restriction of No Parking, Stopping or Standing implemented on the south side of Martin Avenue for a 45 foot section which is adjacent to the Cooper School green space(see attached map area is highlighted in green). The owner of the property claims that cars will park at this location and then cars are not able to enter or exit the property at 2108 Martin Avenue.

**STAFF COMMENTS:** The Department of Public Works sent letters to the 5 property owners on this section of Martin Avenue to ask them if they would have any issues with implementing this parking restriction on this 45 foot section of Martin Avenue. Our office did not receive any opposition from the property owners for this proposal.

**ACTION REQUESTED:** Motion to recommend the Common Council approve G.O. 14-18-19 by Alderperson Wolf relating to parking restrictions on the south side of Martin Avenue east of North 22nd Street.

**ATTACHMENTS:**

I. Gen. Ord. 14-18-19
II. Martin Avenue Location Map

6.2

Gen. Ord. No. 14 - 18 - 19. By Alderperson Wolf. August 20, 2018.

AN ORDINANCE relating to parking restrictions on the south side of Martin Avenue east of North 22nd Street.

THE COMMON COUNCIL OF THE CITY OF SHEBOYGAN DO ORDAIN AS FOLLOWS:

Section 1. Pursuant to Section 118-126 of the Municipal Code entitled, "Prohibitions and Restrictions Authorized," the south side of Martin Avenue from 155 feet east of the east curb line of North 22nd Street to 200 feet east of the east curb line of North 22nd Street is hereby added to the list of locations where no parking, stopping, or standing is permitted.

Section 2. The Department of Public Works and the Police Department are hereby authorized and directed to install signs to give notification of the aforementioned parking restriction.

Section 3. All ordinances or parts thereof in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict, and this ordinance shall be in effect from and after its passage and publication.

Public Works

**I HEREBY CERTIFY that the foregoing Ordinance was duly passed by the Common Council of the City of Sheboygan, Wisconsin, on the _____ day of _____, 20____.**

Dated_____ 20____. _____, City Clerk

Approved_____ 20____. _____, Mayor

II

3.3

R. O. No. 103 - 18 - 19. By CITY CLERK. August 20, 2018.

Submitting a communication from Matt Wierzbach regarding parking during the Para World Sailing Championships.

Public Works

CITY CLERK

World Sailing | USA 2018 Para World Sailing Championships | SEAS SAIL SHEBOYGAN US SAILING CENTER

August 1, 2018

City of Sheboygan
Common Council Members
626 Center Ave
Sheboygan WI 53081

Dear members of the Sheboygan Common Council,

The Sailing Education Association of Sheboygan (SEAS), will be hosting the Para World Sailing Championships for all disabilities the week of Sept. 16th-22th. The primary location will be at the Sheboygan Yacht Club and Harbor Centre Marina with spectating for races off of South Pier. We are very excited to be hosting these events as it brings focus to the City of Sheboygan to the sailing world.

This event will be one of our largest with containers and boats coming from around the world. Therefore, we request permission from the City of Sheboygan Common Council to use space in the parking lot located at the Harbor Centre Marina immediately north of the Sheboygan Yacht Club, in front of the Sheboygan Youth Sailing Center, to store containers for easy access, evening storage of the boats, mobile facilities for officials, and to relocate the sailboats from the Sheboygan Yacht Club during the week of the event from Sept. 16-22. The day after the conclusion of the World Sailing Championships, the boats will be returned to the lot on the Sheboygan Yacht Club grounds and containers will begin to leave.

We seek permission to reserve the parking stalls on the western most portion of the parking lot as early as September 7th and close the full lot as of September 12th- 25th. By only using a portion for containers prior to the event we hope to minimize disruption to as much as possible. We also ask permission to use the Armory parking lot for additional storage and parking space beginning September 7th.

Thank you for your consideration.

With respect,

Matt Wierzbach
Regatta Chairman

1837 Superior Ave
Sheboygan WI 53083
info@seasheboygan.org ~ SEASheboygan.org
920-547-5582

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** Submitting a communication from Matt Wierzbach regarding parking during the Para World Sailing Championships.

**REPORT PREPARED BY:** David H. Biebel, Director of Public Works

**REPORT DATE:** August 22, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** Sheboygan has developed an exceptional reputation for hosting major international sailing events. The City of Sheboygan was the host of the 2016 Women's Match Racing World Championship, Blind Match Racing World Championship and the 2017 Blind Fleet Racing World Championship. As a result of the city's proven track record, Sheboygan will be hosting the Para World Sailing Championships to be held September 16-22, 2018.

**STAFF COMMENTS:** The Department of Public Works Department has worked collaboratively with Sail Sheboygan and the Sailing Education Association of Sheboygan (SEAS) in the past with positive results. By providing parking and barricades for the event, the DPW contributes to the success of the event.

**ACTION REQUESTED:** Motion to recommend the Common Council approve R.O. No. 103-18-19 by City Clerk submitting a communication from Matt Wierzbach regarding parking during the Para World Sailing Championships.

**ATTACHMENTS:**

I. R.O. No. 103-18-19

III

4.5

Res. No. 75 - 18 - 19. By Alderpersons Wolf and Sorenson. August 20, 2018.

A RESOLUTION authorizing executing an easement for a mini-storm sewer.

RESOLVED: That the Mayor and City Clerk are hereby authorized and directed to execute the attached Easement for the City to construct a mini-storm sewer at the following location:

Tony M. and Nancy L. Berken, 3228 North 7th Street, Sheboygan, WI

Public Works

**I HEREBY CERTIFY that the foregoing Resolution was duly passed by the Common Council of the City of Sheboygan, Wisconsin, on the _____ day of _____, 20____.**

Dated _____ 20____. _____, City Clerk

Approved _____ 20____. _____, Mayor

# EASEMENT

**THIS INDENTURE,** made this _____ day of _____, 2018, by Tony M. Berken, and Nancy L. Berken, a married couple residing at 3228 N. 7th Street, Sheboygan, Wisconsin 53081, "**GRANTOR,**" and the City of Sheboygan, a Municipal Corporation of the State of Wisconsin, "**GRANTEE**";

Return To:
City Attorney
828 Center Avenue, Suite 304
Sheboygan WI 53081-4442

59281012140
Tax Parcel No.

**WITNESSETH:**

**KNOW ALL MEN BY THESE PRESENTS,** that the said **GRANTOR,** in consideration of the sum of one ($1.00) dollar and other valuable consideration in hand paid by said **GRANTEE,** receipt whereof is hereby confessed and acknowledged, and the covenants hereinafter contained, hereby grants a permanent easement to **GRANTEE** for municipal purposes, to construct and maintain a mini-storm sewer in, under, and along the north 8 feet and the west 8 feet of the following described property:

> NORTH SHORE SUBDIVISION NO. ONE (1), THE NORTH THIRTY ONE (31) FEET OF LOT TWO (2), ALL OF LOT THREE (3), AND THE EAST FIFTEEN (15) FEET OF THE SOUTH SIXTY SEVEN (67) FEET SIX (6) INCHES, OF LOT FIVE (5), ALL IN BLOCK TWO (2), ALSO THE EAST FIFTEEN (15) FEET OF THE VACATED PLAYGROUND ADJACENT THERETO, EXCLUDING THE SOUTH SEVENTY SEVEN (77) FEET THEREOF, CITY OF SHEBOYGAN, SHEBOYGAN COUNTY, STATE OF WISCONSIN.

The **GRANTOR** further grants unto the **GRANTEE,** its successors and assigns, the right, privilege and easement to enter on said premises for the purposes of laying, patrolling, maintaining, cleaning, repairing and renewing said mini-storm sewer.

**GRANTEE** shall not specially assess **GRANTOR** for the mini-storm sewer construction. However, **GRANTOR** acknowledges and agrees that no site restoration is to be provided by **GRANTEE** in connection with construction of the mini-storm sewer.

The covenants herein contained shall be binding upon the parties hereto and their successors and assigns.

**IN WITNESS WHEREOF,** the **GRANTOR,** has caused the execution of this document on this _____day of _____, 2018.

_____
Tony M. Berken
(Sign in the presence of a Notary Public)

_____
Nancy L. Berken
(Sign in the presence of a Notary Public)

STATE OF WISCONSIN )
) §
SHEBOYGAN COUNTY )

Personally came before me, this _____day of _____, 2018, Tony M. Berken and Nancy L. Berken, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

_____
Notary Public-Sheboygan County
My commission expires _____

ACCEPTED BY: CITY OF SHEBOYGAN

BY: _____
Michael Vandersteen
Mayor

ATTEST: _____
Meredith DeBruin
City Clerk

STATE OF WISCONSIN )
) §
SHEBOYGAN COUNTY )

Personally came before me, this _____day of _____, 2018, Michael Vandersteen, Mayor, and Meredith DeBruin, City Clerk, of the above-named municipal corporation, to me known to be such Mayor and City Clerk of said corporation, and acknowledged that they executed the foregoing instrument as such officers of said corporation, by its authority.

_____
_____
Notary Public-Sheboygan County
My commission expires _____

Acceptance is authorized by and in accordance with Res. No._____.

This instrument drafted by:
Jordan L. Sucha, City of Sheboygan Dept. of Public Works

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** A Resolution authorizing executing an easement for a mini-storm sewer.

**REPORT PREPARED BY:** Ryan Sazama, City Engineer

**REPORT DATE:** August 23, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** The Department of Public Works annually budgets $50,000 through the Capital Improvements Program for the construction of mini-storm sewers. Mini-storm sewers are constructed with 8 inches up to 12 inch pipes which are installed either in the backyards or front yards of neighborhoods. These sewers are installed so the residences can connect their sump pump discharge to the City's storm sewer system. Some neighborhoods have natural high ground water conditions in which the sump pumps constantly discharge into their yards or their neighbors' yard which can create a nuisance. When this sump pumps discharge, constantly the back/front yards are constantly saturated and therefore are unusable.

With this annual budget of $50,000, the Department of Public Works hires private contractors to construct these mini-storm sewers. On the average 4 to 6 mini-storm sewers are constructed throughout several neighborhoods in the City of Sheboygan.

**STAFF COMMENTS:** When mini-storm sewers are constructed many times they are installed on private property. They are usually constructed in the front, side or back yards of residential homes to alleviate sump pump discharge and saturated yards. Because these mini-storms are constructed on private property, a permanent construction easement is needed so that the City has the ability to repair, clean and/or replace the sewer in the future.

**ACTION REQUESTED:** Motion to the Common Council approve Res. No. 75-18-19 by Alderperson Wolf authorizing executing an easement for a mini-storm sewer.

**ATTACHMENTS:**

I. Res. No. 75-18-19

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** A resolution authorizing the appropriate City Officials to enter into a contract with Vortex International Inc. of Montreal Canada, through a cooperative purchasing agreement with National Purchasing Partners (NPP), for the purposes of purchasing and installing a 58 feet five inch by 41 feet seven inch splash pad facility in Optimist Park.

**REPORT PREPARED BY:** Joseph L. Kerlin, Superintendent of Parks and Forestry

**REPORT DATE:** August 22, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | | |
|---|---|---|
| Budget Line Item: | 47753000-631100 | $75,000.00 |
| | 26553000-631100 | $35,000.00 |
| | 40053000-631100 | $10,000.00 |
| | 10153000-63110 | $40,000.00 |
| Budget Summary: | Capital Fund not to exceed $160,000.00 | |
| Budgeted Expenditure: | N/A | |
| Budgeted Revenue: | N/A | |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** The City park system currently has two splash pads of similar size at Workers Water Street Park and End Park. This project is in the City's five year Comprehensive Outdoor Recreation Plan and is in the Capital Budget for this year.

**STAFF COMMENTS:** The current splash pads in our parks are a very popular destination for families that live in our community on hot summer days. An additional splash pad on the south side of the city will be a great addition to our park system providing splash pad use on the north, middle and now south side. A splash pad in Optimist Park will also complement the current shelter, restrooms and playground area.

**ACTION REQUESTED:** Motion to recommend the Common Council approve Res. No. 76-18-19 by Alderperson Wolf authorizing the appropriate City officials to enter into a contract with Vortex International Inc. of Montreal Canada, through a cooperative purchasing agreement with National Purchasing Partners (NNP), for the purposes of purchasing and installing a 58 feet five inch by 41 feet seven inch splash pad facility in Optimist Park.

**ATTACHMENTS:**

I. Res. No. 76-18-19
II. Scope of Work
III. Quotation
IV. Site Layout
V. Concept Design, Vortex

# SHEBOYGAN SPLASHPLAD

## WISCONSIN

VORTEX

OUR WATER PLAY SPACES ARE

## MORE THAN ENTERTAINMENT.

THEY BECOME A FOCAL POINT OF YOUR SITE, A PLACE WHERE VISITING BECOMES A **RITUAL.**

THEY FOSTER **GROWTH, IMAGINATION, INTERACTIONS.**

ENDLESS **THRILLS.**

**MEMORIES.**

**A UNIQUELY UNFORGETTABLE EXPERIENCE, FOR ALL.**

# LET'S PLAY!

IMMERSE
THRILL
REFRESH
COMPETE
EXPLORE
DISCOVER
IMAGINE

VORTEX

# Why Vortex?

Vortex carefully assesses specific needs and desires on all of the projects that we work on in order to come up with the best solution and water management system. We consider demographics, theming requirements, market share, entertainment value, size, initial budget and long term operational costs. We have seen--time and time--again that resort parks that add a waterpark/Splashpad consistently sell more rooms which increase occupancy rates (OR) and increase length of stay (LOS) than resorts without a water amenity. They archive higher occupancy then ordinary resorts as the water park acts as a key differentiator. Adding a waterpark to a resort can add substantial dollar value to the room rate per person. The extent of the impact on the average daily rate (ADR) depends on the size and entertainment value.

# Play Value

Vortex Aquatic Structures International Inc. designs every Splashpad with a variety of water effects to ensure the maximum play value for the users. Emphasis is put on interactive play and narration throughout the Splashpad. The goal is to stimulate imagination and creativity, unscripted free play encourages children to create their own play experiences. Our products are designed with the Universal Design principal at its core. This results in an esthetically pleasing design that can be enjoyed by users of all ages and ability. Our exclusive Vortex Technologies encourage interactivity and allow users to control the water and the feature itself.

# Quality and Durability

Our products are made of stainless steel and we utilize some of the most durable materials in the industry; including our unique Seeflow material, our Soft-touch elastomer as well as lead-free brass nozzles for maximum durability. Our components are vandal resistant as well as UV and chemical resistant. We create products that are safe, durable and of the highest quality ensuring your Splashpad will endure season after season of use. Our products have been installed worldwide and are manufactured to withstand the most harsh climates.

# We have Experience

Vortex Aquatic Structures International Inc. is the world leader in Aquatic Play Landscapes and entertainment. With installations at more than 6000 locations around the world in public, commercial and entertainment settings, Vortex International provides imaginative, durable aquatic play and water feature solutions that create everlasting memories. Our ongoing mission is to develop fun, safe and reliable products for families and children of all ages and abilities.

In summary, adding a water park to your resort in a competitive market can potentially improve revenue, increase OR, ADR and LOS. The type and size of Splashpad depends on demographics, site, budget and operational costs.

**SPLASHPAD®**
*VIEW 1*

**SHEBOYGAN SPLASHPAD, WI**
Version A - 30752

VORTEX

**SPLASHPAD®**
*VIEW 2*

**SHEBOYGAN SPLASHPAD, WI**
Version A - 30752

VORTEX

**SPLASHPAD®**
*VIEW 3*

**SHEBOYGAN SPLASHPAD, WI**
Version A - 30752

VORTEX

**SPLASHPAD®**
*VIEW 4*

**SHEBOYGAN SPLASHPAD, WI**
Version A - 30752

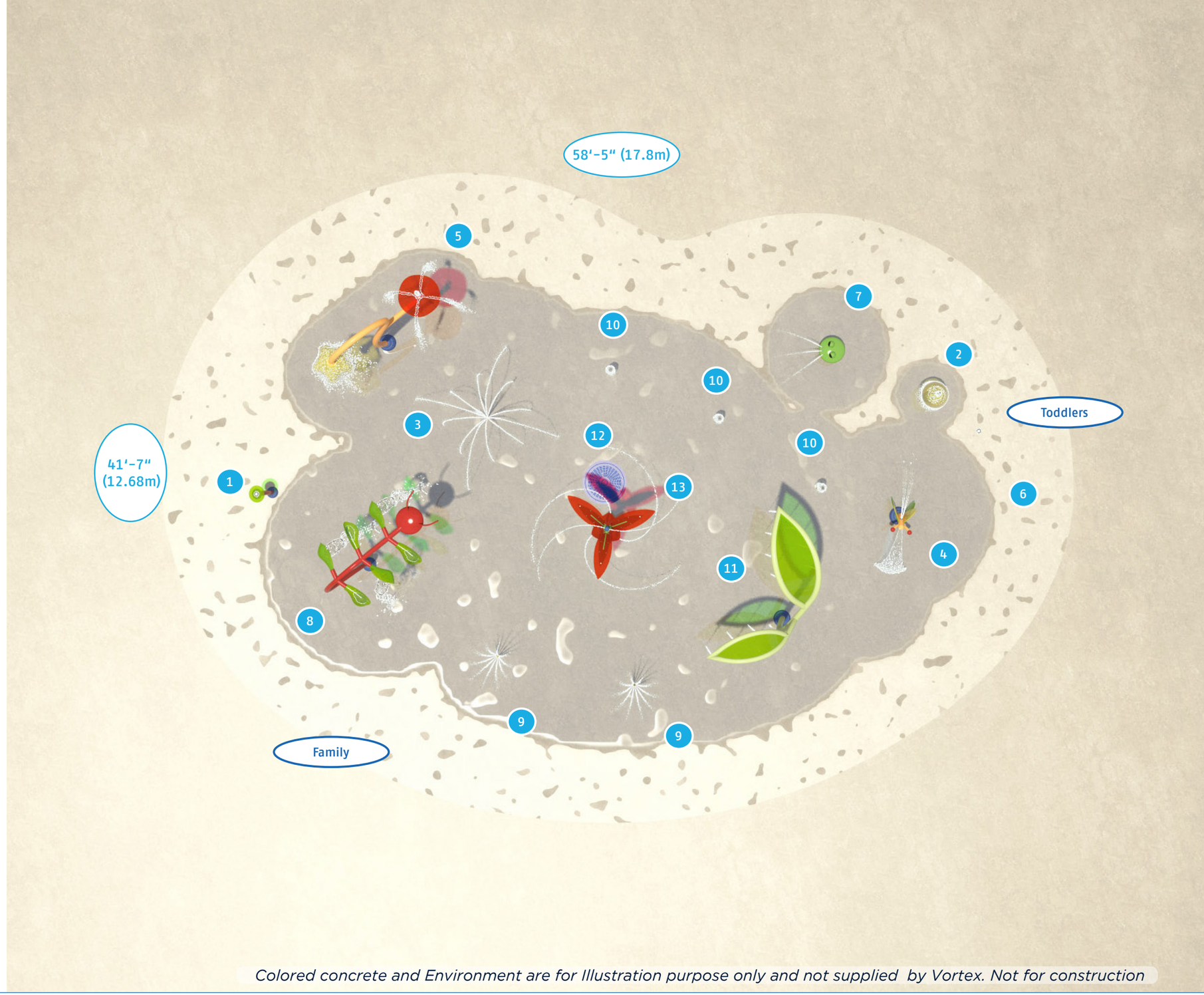
VORTEX

# SPLASHPAD® COMPONENTS

Total area: 1929 ft² (179 m²)

Spray area: 1200 ft² (111 m²)

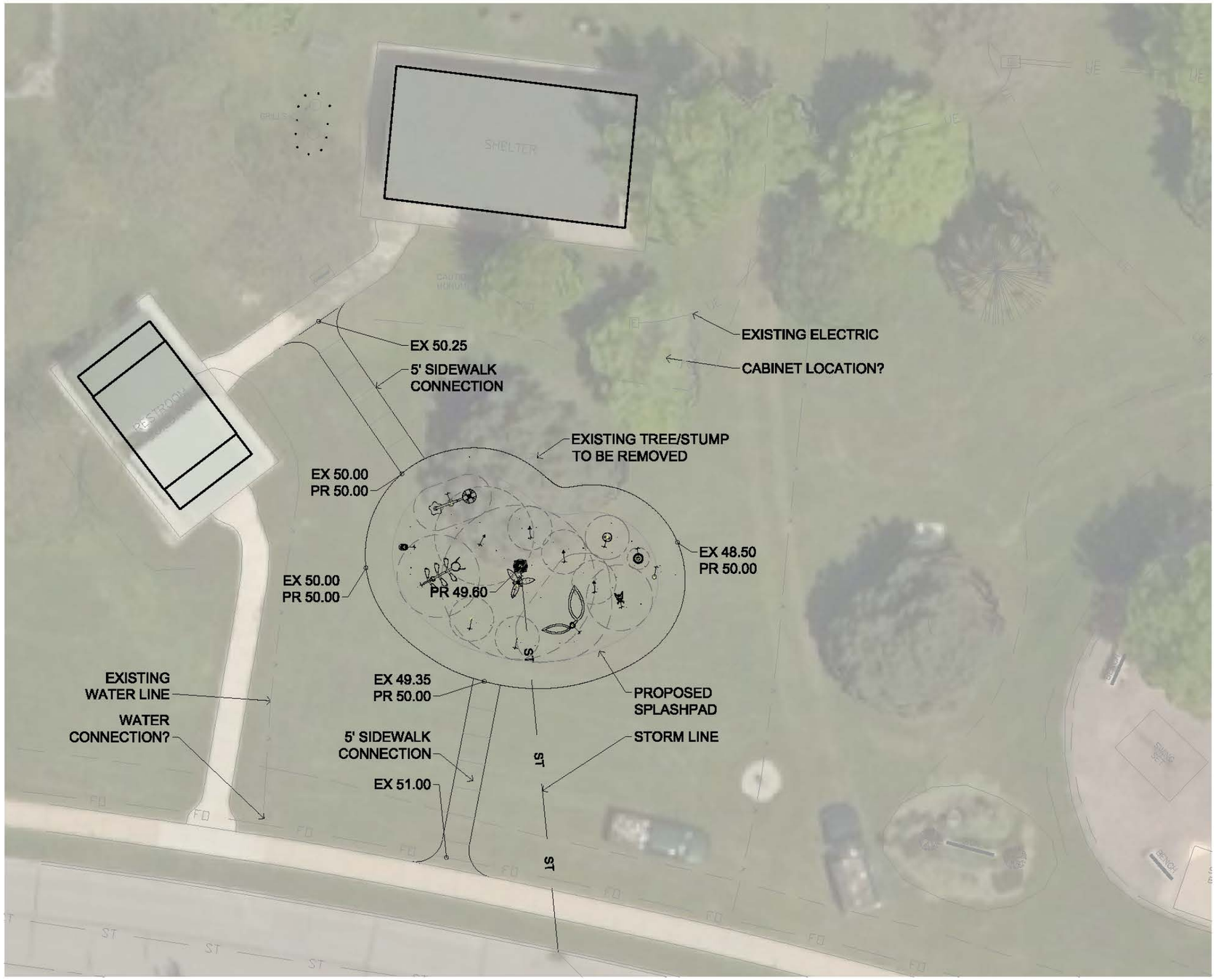
| REF | PRODUCT | QTY | GPM | LPM |
|---|---|---|---|---|
| 1 | Activator N°2<br>VOR 613 | 1 | 0 | 0 |
| 2 | Aqualien Flower N°3<br>VOR 7389 | 1 | 2 | 7.6 |
| 3 | Bloom N°1<br>VOR 7486 | 1 | 8.5 | 32.2 |
| 4 | Butterfly No.1<br>VOR 7792 | 1 | 6.5 | 24.6 |
| 5 | Flower N°2<br>VOR 7550 | 1 | 22.5 | 85.2 |
| 6 | Foot Activator<br>VOR 606 | 1 | 0 | 0 |
| 7 | Frog N°2<br>VOR 7201 | 1 | 4 | 15.1 |
| 8 | Gardenbug<br>VOR 7785 | 1 | 9 | 34.1 |
| 9 | Geyser<br>VOR 301 | 2 | 9 | 34.1 |
| 10 | Jet Stream N°2<br>VOR 325 | 3 | 12 | 45.4 |
| 11 | Leaf N°3<br>VOR 7672 | 1 | 10 | 37.9 |
| 12 | Playsafe Drain N°1<br>VOR-1001.4000 | 1 | 0 | 0 |
| 13 | Water Bloom N°1<br>VOR 322 | 1 | 9 | 34.1 |
| | TOTAL WATER FLOW | QTY | GPM | LPM |
| | | 16 | 92.5 | 350.3 |




*Colored concrete and Environment are for Illustration purpose only and not supplied by Vortex. Not for construction*

VORTEX

# A CLEAR SOURCE OF FUN




1 SP-1 SITE LAYOUT

1"=20'-0"

0 10' 20' 40'

# OPTIMIST PARK

SHEBOYGAN, WI



CRS Design

REVISIONS:

| REV #: | DATE | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

INFORMATION ONLY

PROJECT NO: -

DATE: AUG. 8, 2018

SHEET NAME:

SITE LAYOUT

SHEET #:

SP-1

COMMERCIAL RECREATION SPECIALISTS

August 17, 2018

City of Sheboygan
Joe Kerlin
2026 New Jersey Ave
City of Sheboygan, WI 53081

Dear Joe,

The Commercial Recreation Specialists (CRS) Team is pleased to present this proposal for a manufacturer's certified installation of a Splashpad Installation at Optimist Park in Sheboygan, WI. We are excited to share our many years of experience in the commercial recreation market to assist you in creating what we feel will be a very exciting and dynamic project.

## Scope of Work

Installation of Splashpad water features and mechanicals include the following:

- Please see Vortex Quote #00021382, submitted 8/17/2018

## Complete Installation of a Commercial Splashpad to include the following:

- Installation of Vortex Water Features, Safeswaps and 10-Valve Smartpoint Command Center -Flow Through System
    - All Products as Noted on Vortex Design #30752 version A.
    - Artist Renderings, Spray Zone Layout and Piping & Electrical Schematics.
- Installation to Include:
    - Staking and elevations provided by CRS.
    - Installation to be Performed by a Certified Vortex Installer
    - Excavation of Splashpad container, and Irrigation Cabinet
    - Concrete Subbase to be 6" compacted Class 5
    - Concrete to be 6" thick, #4 rebar reinforced, 12" O.C., Medium Broom Finish
    - Concrete Sidewalks 4" thick as per CRS drawing
    - Drain Line installation and connection to stubbed drain line (By Others). Stubbed pipe to be no more than 3'deep
    - Provide concrete foundations for Vortex water features.
    - Mechanical Cabinet Installation (Excavation, forming, and concrete)
    - Provide and install Schedule 80 PVC between manifold and water features.
    - Pressure test water feature piping.
    - Installation of 3/8" gravel/ stone chips around piping. Others (hired by CRS) to provide fill to final grade and compact with light compactor prior to concrete.
    - Coordinate installation of Splashpad equipment with concrete paving surfaces indicated. Installation of splashpad in accordance with contract documents (Shop drawings, P&E, etc.)



CORPORATE 807 Liberty Dr, Suite 201, Verona WI 53593 | 608-848-8781 fax 608-848-8782
SALES OFFICE PO Box 682, Edison NJ 08818 | 732-433-6871 fax 608-848-8782

- Backflow preventer and Pressure Regulator to be installed by Certified Plumber hired by CRS. Product included in installation cost.
- Electrical work to include bonding of all Water Features and Concrete Rebar and wiring to activator by a local State Certified Electrician hired by CRS. Includes Electrical Permit and Inspection prior to Concrete Pour.

## Field Quality Control:

- Flush system with water to eliminate any construction debris.
- Conduct system test
- Adjust water features' water flow to required flow rate.

## Start Up & Training:

- Includes initial startup of splashpad and staff training on maintenance, winterization and pre-season startup.
- Furnish client with manufacturer's product drawings and installation manuals.

## Site Work Required Before CRS arrives on site:

- Water line plumbed to meter (if required) before manifold.
- 3" water line (with meter if required) in a workable location. We will pick up the line downstream from meter.
- Storm drain stubbed up to pad, no more than 3' deep.

**CRS assumes and understands that the site is buildable and has suitable subsurface conditions to support splashpad construction.**

**Unsuitable Soils**: In the event unsuitable soils are encountered, with prior Owner approval, CRS will remove and dispose of any unsuitable soils to a point where the project can be safely completed. After removal of unsuitable soils CRS will furnish and install approved fill materials as needed to complete the project as designed. Unsuitable soils are defined as soils or materials which are not satisfactory for their intended use. Soils or materials that are determined to be toxic, hazardous or require special disposal are not included in this definition. To remove and dispose of unsuitable soils, furnish and install new fill materials CRS will issue a change order proposing a fee per cubic yard.


CORPORATE 807 Liberty Dr, Suite 201, Verona WI 53593 | 608-848-8781 fax 608-848-8782
SALES OFFICE PO Box 682, Edison NJ 08818 | 732-433-6871 fax 608-848-8782

## Exclusions (Done by others):

- Permits and permitting fees not stated above provided by other.
- Water supply line from city water main and water meter.
- Others to supply water meter hookup.
- Storm drain stubbed up to pad.
- Site restoration.

All products and materials are guaranteed to be as specified. Commercial Recreation Specialists is not responsible for supplying any equipment, materials, or work other than those indicated. All work is to be completed in a professional manner, according to standard industry practices. Any alterations or deviations from this proposal that involve extra cost will be executed only upon a written change order and will become an extra charge over and above the quotation provided in this proposal. In the event that items are deleted from this proposal, Commercial Recreation Specialists reserves the right to re-quote the remaining items. In the event of a change from the agreed-upon quote, immediate notification to Commercial Recreation Specialists is required, or additional charges may apply. For orders cancelled after acceptance, restocking and freight fees will apply.

By signing this proposal, the client acknowledges and agrees that they have read and understood the customer responsibilities in this document and agree to them as noted.

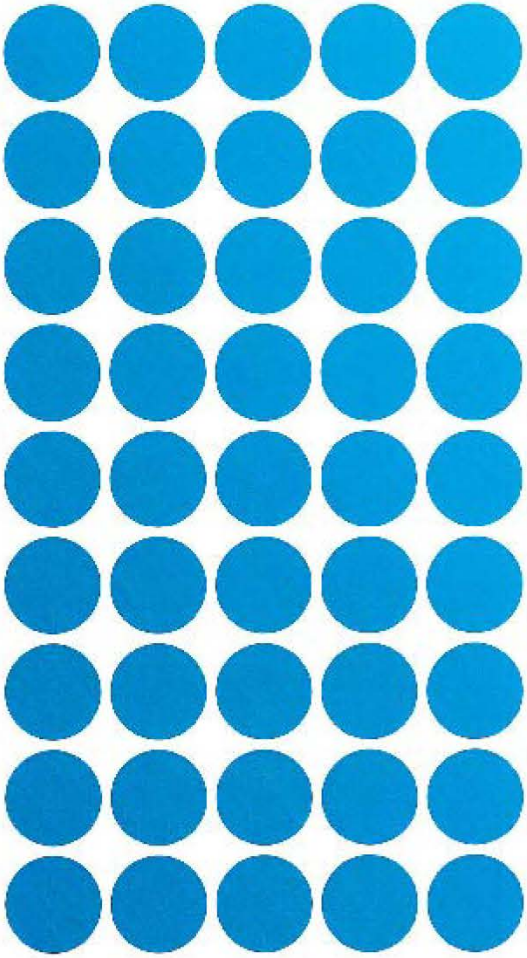
***A signature below indicates that this proposal is acceptable, and that Commercial Recreation Specialists is authorized to proceed accordingly with the work as proposed, and that the Client agrees to the scope, price, responsibilities, and terms as specified. This proposal is valid for 30 days from August 17th, 2018.***

| | |
|---|---|
| _____ | _____ |
| *Commercial Recreation Specialists Representative* | *Client Representative* |
| _____ | _____ |
| *Date* _____ | *Date* |



**CORPORATE** 807 Liberty Dr, Suite 201, Verona WI 53593 | **608-848-8781** fax 608-848-8782
**SALES OFFICE** PO Box 682, Edison NJ 08818 | **732-433-6871** fax 608-848-8782

COMMERCIAL **RECREATION** SPECIALISTS



This certifies that

RON ROMANS

of

COMMERCIAL RECREATION SPECIALISTS

Has successfully completed the

# VORTEX CERTIFIED INSTALLER COURSE

JANUARY 12 2017

with all rights and privileges pertaining thereof.

Auditor: DONALD DOUCETTE

Certificate valid until: FEBRUARY 28 2020

VORTEX

Serious about FUN!™

CRS4Rec.com

**CORPORATE** 807 Liberty Dr, Suite 201, Verona WI 53593 | **608-848-8781** fax 608-848-8782
**SALES OFFICE** PO Box 682, Edison NJ 08818 | **732-433-6871** fax 608-848-8782

III

4.6

Res. No. 76 - 18 - 19. By Alderperson Wolf. August 20, 2018.

A RESOLUTION authorizing the appropriate City Officials to enter into contract with Vortex International Inc. of Montreal Canada, through a cooperative purchasing agreement with National Purchasing Partners (NPP), for the purposes of purchasing and installing a 58 feet five inch by 41 feet seven inch splash pad facility in Optimist Park.

WHEREAS, the cooperative purchasing agreement through National Purchasing Partners is a national agreement which meets all specifications and waives the need for competitive bidding for this project.

WHEREAS, Community Recreation Specialists Inc. of Verona Wisconsin is the distributer in Wisconsin for Vortex International Aquatic Structures and will be responsible for the installation and startup, and will also provide training for city staff for startup, seasonal shutdown and ongoing maintenance of the equipment.

RESOLVED: That the appropriate City officials are hereby authorized to enter into contract with Vortex International Inc. of Montreal Canada in the amount not to exceed $160,000 for the purchase and installation of a splash pad in Optimist Park and are authorized to draw funds from the following accounts: 26553000-631100 $35,000, 47753000-631100 $75,000, 40053000-631100 $10,000, and 10153000-631100 $40,000 in payment of same.

Public Works

**I HEREBY CERTIFY that the foregoing Resolution was duly passed by the Common Council of the City of Sheboygan, Wisconsin, on the _____ day of _____, 20____.**

Dated _____ 20____. _____, City Clerk

Approved _____ 20____. _____, Mayor

# QUOTATION

| | | | |
|---|---|---|---|
| Account Name | City of Sheboygan- WI | Created Date | 17/08/2018 |
| Project Name | Sheboygan Splashpad- WI | Quote Number | 00021382 |
| Project ID | 30752 | Quote Name | Version B |
| | | Prepared By | Martina Madlener |
| | | Phone | +1-514-694-3868 |
| | | Email | mmadlener@vortex-intl.com |

| | |
|---|---|
| Bill To Name | City of Sheboygan |
| Bill To | Wisconsin<br>United States |

| Quantity | Item No. | Product Description |
|---|---|---|
| 1.00 | 7785.2008R02 | GARDENBUG (SW,PC) |
| 1.00 | 7389.0000R01 | AQUALIEN FLOWER N°3 (SW,PC) |
| 1.00 | 7672.2008R02 | LEAF N°3 (SW,PC) |
| 1.00 | 7550.2008R01 | FLOWER N°2 (SW,PC) |
| 1.00 | 7486.2008R02 | Bloom No1 (SW-PC) |
| 1.00 | 7792.2008R01 | Butterfly No 1 (SW-PC) |
| 1.00 | 7201.2008R02 | FROG N°2 (SW, PC) |
| 2.00 | 301.4100R03 | GEYSER (EM,LFN) |
| 3.00 | 325.4000R01 | Jet Stream No2 (EM) |
| 1.00 | 322.4000R01 | Water Bloom No1 (EM) |
| 1.00 | 1910.0600R03 | SMARTPOINT No1 - 10SV_3" inlet_1.5" outlets_AC ctrl_NO PR_FOOT activator |
| 1.00 | 710.6000R02 | FT SmartFlow 2 ™ CONTROLLER 10 OUPUT 120-VAC |
| 1.00 | 255 | BUYING GROUP SERVICE DISCOUNT for supply |
| 1.00 | 255 | BUYING GROUP SERVICE DISCOUNT for install |

## Terms & Totals

| | | | |
|---|---|---|---|
| Field Credit Terms | To Be Determined | Subtotal | USD 60,781.95 |
| Ship Via | Best Way | Installation | USD 95,988.05 |
| Incoterm | DAP (shipment to door) | Freight | USD 1,300.00 |
| | | Embed Freight | USD 750.00 |
| | | Grand Total | 158,820.00 |

**Vortex USA Inc.**
1420 Valwood Parkway Suite 205, Carrollton, TX 75006
Tel: +1-(877) 586-7839 Fax: (972) 410-3697
Email: sfax@vortex-intl.com
Web: www.vortex-intl.com

**Enquire about our cooperative purchasing programs!**

# QUOTATION

**Lead Time:** Standard lead time of 6-8 weeks for Play Products, 10 weeks for Water Recirculation Equipment and 16 weeks for Elevations. These times are contingent upon receipt of purchase order, approved drawings and all applicable color selections
**Excludes:** Unloading, storage, installation, fees and permits, taxes, Health Department approval, electrical, site work, surfacing, stamped drawings, OHSA paper work, anything not specifically included above.
**Material Handling:** Equipment may be required for off loading.
**Deposit:** Should a deposit be required, production begins upon receipt of the deposit.
**Taxes:** All applicable taxes are the responsibility of the purchaser
**Warranty:** See standard Vortex Aquatic Structures International warranty for full detail.

**Conditions of sales:** Prices quoted above are valid for a period of 60 days, upon which they are subject to change without notice. Freight charge applies to complete shipment. Please note: freight charge is an estimate and is subject to change without notice. Should embed equipment be required ahead of scheduled delivery date, additional freight charges will apply. Taxes not included, and will be invoiced if applicable. In the event of non-payment, Vortex Aquatic Structures International reserves the right to cease manufacturing or shipping until such payments with penalties, if any, is made by the purchaser with no liability on the part of Vortex Aquatic Structures International. Should said purchaser fail to make subsequent payments as required, Vortex Aquatic Structures International shall be entitled to retain payments previously made as liquidated damages. Storage fees may apply for orders ready for delivery but the purchaser has requested a delay in shipment.

**Vortex USA Inc.**
1420 Valwood Parkway Suite 205, Carrollton, TX 75006
Tel: +1-(877) 586-7839 Fax: (972) 410-3697
Email: sfax@vortex-intl.com
Web**:** www.vortex-intl.com

**Enquire about our cooperative purchasing programs!**

# QUOTATION

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|---|---|---|---|
| Account Name | City of Sheboygan- WI | Created Date | 17/08/2018 |
| Project Name | Sheboygan Splashpad- WI | Quote Number | 00021382 |
| Project ID | 30752 | Quote Name | Version B |
| | | Prepared By | Martina Madlener |
| | | Phone | +1-514-694-3868 |
| | | Email | mmadlener@vortex-intl.com |

| | |
|---|---|
| Bill To Name | City of Sheboygan |
| Bill To | Wisconsin<br>United States |

| Quantity | Item No. | Product Description |
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| 1.00 | 710.6000R02 | FT SmartFlow 2 ™ CONTROLLER 10 OUPUT 120-VAC |
| 1.00 | 255 | BUYING GROUP SERVICE DISCOUNT for supply |
| 1.00 | 255 | BUYING GROUP SERVICE DISCOUNT for install |

## Terms & Totals

| | | | |
|---|---|---|---|
| Field Credit Terms | To Be Determined | Subtotal | USD 60,781.95 |
| Ship Via | Best Way | Installation | USD 95,988.05 |
| Incoterm | DAP (shipment to door) | Freight | USD 1,300.00 |
| | | Embed Freight | USD 750.00 |
| | | Grand Total | 158,820.00 |

**Vortex USA Inc.**
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# QUOTATION

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**Excludes:** Unloading, storage, installation, fees and permits, taxes, Health Department approval, electrical, site work, surfacing, stamped drawings, OHSA paper work, anything not specifically included above.
**Material Handling:** Equipment may be required for off loading.
**Deposit:** Should a deposit be required, production begins upon receipt of the deposit.
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**Vortex USA Inc.**
1420 Valwood Parkway Suite 205, Carrollton, TX 75006
Tel: +1-(877) 586-7839 Fax: (972) 410-3697
Email: sfax@vortex-intl.com
Web**:** www.vortex-intl.com

**Enquire about our cooperative purchasing programs!**

III

4.7

Res. No. 77 - 18 - 19. By Alderperson Wolf. August 20, 2018.

A RESOLUTION authorizing the acceptance and signing of a sanitary sewer easement across the future Fairfield Inn property located on South Taylor Drive.

NOW, THEREFORE, BE IT RESOLVED: That the Common Council hereby authorizes the Mayor and City Clerk to sign and record the Sanitary Sewer Easement, a copy of which is attached hereto and incorporate herein.

Public Works

**I HEREBY CERTIFY that the foregoing Resolution was duly passed by the Common Council of the City of Sheboygan, Wisconsin, on the _____ day of _____, 20____.**

Dated _____ 20____. _____, City Clerk

Approved _____ 20____. _____, Mayor

| Document Number | Document Title |
|---|---|

SANITARY SEWER EASEMENT

**THIS INDENTURE**, made this XX day of MONTH, 2018, by Sheb Pro, LLC, a Wisconsin limited liability company, "**GRANTOR**", and the City of Sheboygan, a Municipal Corporation of the State of Wisconsin, "**GRANTEE**";

Name and Return Address
City of Sheboygan
City Attorney's Office
828 Center Ave, Suite 304
Sheboygan, WI 53081-1442

Part of 59281470615 and
Part of 59281470610
Parcel Identification Number (PIN)

**WITNESSETH:**

**KNOW ALL MEN BY THESE PRESENTS**, that the said **GRANTOR**, in consideration of the sum of one ($1.00) dollar and other valuable consideration in hand paid by said **GRANTEE**, receipt whereof is hereby confessed and acknowledged, and the covenants hereinafter contained agree as follows:

1. **GRANTOR** does hereby give and grant to said **GRANTEE**, its successors and assigns, a permanent non-exclusive 20' wide easement to construct, operate, use, maintain, and repair a sanitary sewer in, under, and along the property shown and described in Exhibit "A" – Map and Exhibit "B" – Legal Description.

2. Said Sanitary Sewer Easement area contains 0.123 Acres (5,342 Square Feet) of land.

3. Said sanitary sewer facilities shall be maintained and kept in good order and condition by **GRANTEE**.

4. That in, and during, whatever construction, reconstruction, or repair work it is, or becomes, necessary in constructing and/or maintaining said facilities, so much of the surface or subsurface of the property as may be disturbed will, at the expense of **GRANTEE**, be replaced in substantially the same condition as it was prior to such disturbances. **GRANTEE** shall save harmless **GRANTOR** from any loss, damage, injury or liability resulting from negligence on the part of **GRANTEE** in connection with said work involved in constructing and/or maintaining of said facilities provided that if loss, damage, injury, or liability results from joint negligence of the parties hereto, then the liability therefore, shall be borne by them in proportion to their respective degree of negligence; provided further, however, that these provisions are subject to the legal defenses which under law **GRANTEE** is entitled to raise.

5. **GRANTOR** agrees not to construct, install, and/or erect structures, buildings, fences, pools, landscaping, etc. that would impede, restrict, prohibit, and/or limit ingress and egress over, across, through, and upon said easement.

6. That in connection with the construction by **GRANTOR** of any structure or building abutting said permanent easement defined limits, **GRANTOR** will assume all liability for any damage to the facilities in the above described easement. **GRANTOR** will indemnify and hold **GRANTEE** harmless from any claims for personal injuries or property damage caused by any negligence of **GRANTOR** arising out of the construction by **GRANTOR** of any structure or building abutting the said permanent utility easement defined limits.

7. Both parties mutually agree that this easement and covenants herein shall run with the land.

**IN WITNESS THEREOF,** the **GRANTOR,** has caused this instrument to be signed and sealed this _____day of _____, 2018.

IN PRESENCE OF:

OWNER:

_____ _____

Printed Name: _____ Printed Name: _____

Title: _____ Title: _____

STATE OF_____)
) SS
COUNTY OF _____)

Personally came before me this ____ day of _____, 2018, the above named

_____ and _____
to me known to be the persons who executed the foregoing instrument and to me known to be the

_____ of said land and acknowledged that they executed the foregoing instrument as such by its authority.

_____
Notary Public

My Commission expires _____

Accepted By: **CITY OF SHEBOYGAN**

Michael Vandersteen
City of Sheboygan - Mayor

Meredith DeBruin
City of Sheboygan – City Clerk

STATE OF WISCONSIN )
) SS
COUNTY OF SHEBOYGAN )

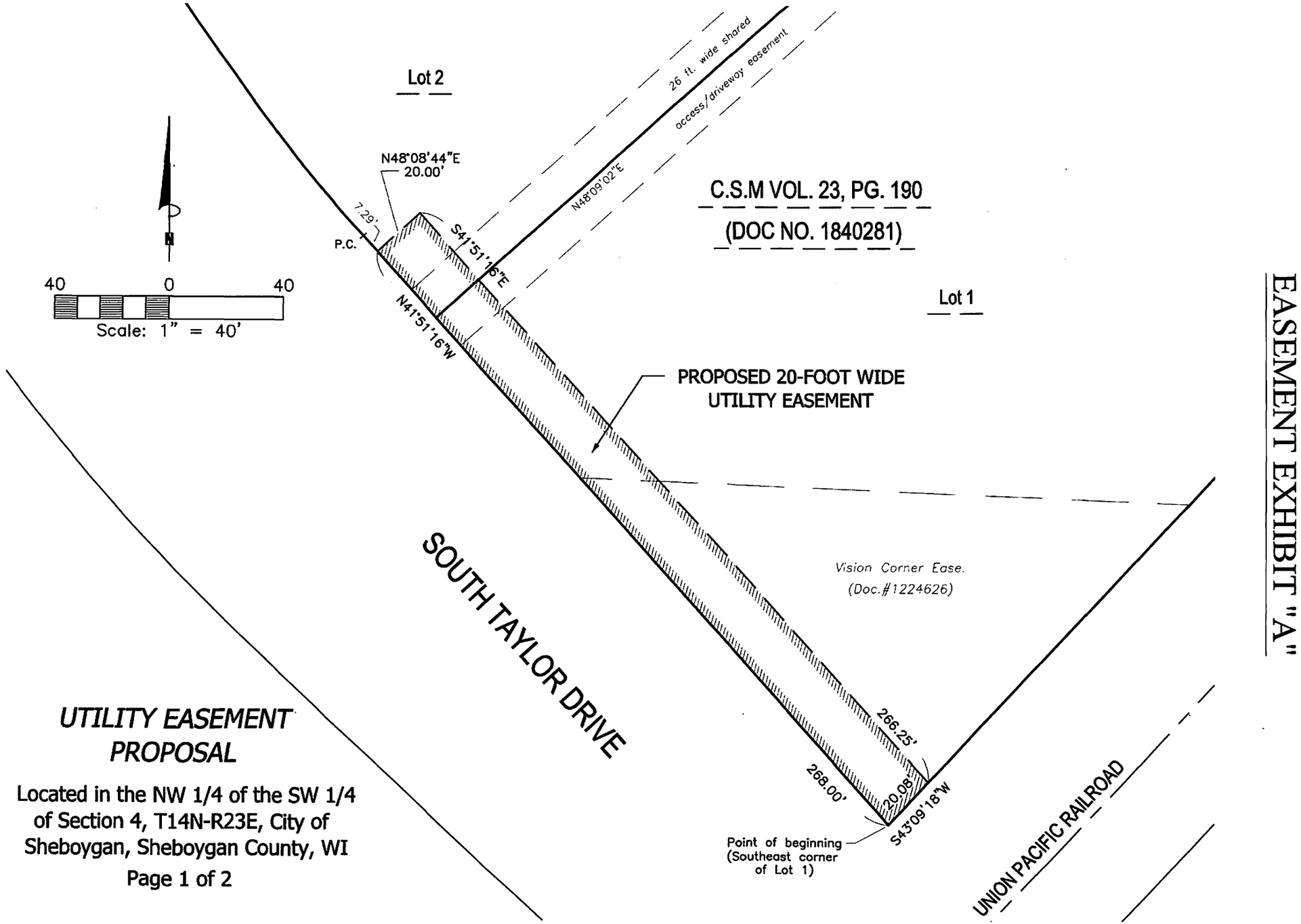
Personally came before me this ____ day of _____, 2018, the above named Michael Vandersteen and Meredith DeBruin to me known to be the persons who executed the foregoing instrument and acknowledged the same.

Notary Public

My Commission expires _____

Acceptance is authorized by and in accordance with Resolution Number _____

This Instrument Drafted By:
Charles C. Adams
Wisconsin State Bar No. 01021454




EASEMENT EXHIBIT "A"

*UTILITY EASEMENT PROPOSAL*

Located in the NW 1/4 of the SW 1/4 of Section 4, T14N-R23E, City of Sheboygan, Sheboygan County, WI

Page 1 of 2

# EASEMENT EXHIBIT "B"

Compsite
Surveying & Mapping

N2472 Mentink Road
Oostburg, WI 53070
Phone: (920) 564-6812
Email: john@compsitesurveying.com

*John M. DuMez – Wisconsin Professional Land Surveyor S-2267*
July 23, 2018



A Proposed 20-foot wide utility easement located on Lot 1 and Lot 2 of a Certified Survey Map recorded in Volume 23, Page 190 of C.S.M.s as Document Number 1840281 being part of the NW ¼ of the SW ¼ of Section 4, T14N-R23E, City of Sheboygan, Sheboygan County, Wisconsin described as:

Commencing at the southeast corner of said Lot 1 of Certified Survey Map recorded in Volume 23, Page 190 of C.S.M.'s as Document Number 1840281, said point being the point of beginning; thence along the right-of-way line of South Taylor Drive and the south line of said Certified Survey Map, N41°51'16"W 268.00 feet; thence N48°08'44"E 20.00 feet; thence S41°51'16"E 266.25 feet to the right of way line of the Union Pacific Railroad; thence along said right-of-way line, S43°09'18"W 20.08 feet to the point of beginning.

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** Resolution authorizing the acceptance and signing of a sanitary sewer easement on the future Fairfield Inn property on South Taylor Drive.

**REPORT PREPARED BY:** Ryan Sazama, City Engineer

**REPORT DATE:** August 22, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** With the planned development of the new Fairfield Inn on South Taylor Drive, there is a need to provide sanitary sewer service to the site. With the limited width of right of way area to use, staff found it necessary to place the new sanitary sewer line on private property to provide service to this development. As such, a sanitary sewer easement is needed.

**STAFF COMMENTS:** As stated above a santiary sewer must be constructed on the Fairfeild Inn property due to the lack of City right of way width. The Fairfiled Inn development must provide the City of Sheboygan a sanitary sewer easment to serve this property.

**ACTION REQUESTED:** Motion to recommend the Common Council approve Res. No. 77-18-19by Alderperson Wolf authorizing the acceptance and signing of a sanitary sewer easement across the future Fairfield Inn property located on South Taylor Drive.

**ATTACHMENTS:**

I. Res. No. 77-18-19
II. Proposed Easement

| Document Number | Document Title |
|---|---|

SANITARY SEWER EASEMENT

**THIS INDENTURE**, made this **XX** day of **MONTH**, 2018, by Sheb Pro, LLC, a Wisconsin limited liability company, "**GRANTOR**", and the City of Sheboygan, a Municipal Corporation of the State of Wisconsin, "**GRANTEE**";

Name and Return Address
City of Sheboygan
City Attorney's Office
828 Center Ave, Suite 304
Sheboygan, WI 53081-1442

Part of 59281470615 and
Part of 59281470610
Parcel Identification Number (PIN)

**WITNESSETH:**

**KNOW ALL MEN BY THESE PRESENTS**, that the said **GRANTOR**, in consideration of the sum of one ($1.00) dollar and other valuable consideration in hand paid by said **GRANTEE**, receipt whereof is hereby confessed and acknowledged, and the covenants hereinafter contained agree as follows:

1. **GRANTOR** does hereby give and grant to said **GRANTEE**, its successors and assigns, a permanent non-exclusive 20' wide easement to construct, operate, use, maintain, and repair a sanitary sewer in, under, and along the property shown and described in Exhibit "A" – Map and Exhibit "B" – Legal Description.

2. Said Sanitary Sewer Easement area contains 0.123 Acres (5,342 Square Feet) of land.

3. Said sanitary sewer facilities shall be maintained and kept in good order and condition by **GRANTEE**.

4. That in, and during, whatever construction, reconstruction, or repair work it is, or becomes, necessary in constructing and/or maintaining said facilities, so much of the surface or subsurface of the property as may be disturbed will, at the expense of **GRANTEE**, be replaced in substantially the same condition as it was prior to such disturbances. **GRANTEE** shall save harmless **GRANTOR** from any loss, damage, injury or liability resulting from negligence on the part of **GRANTEE** in connection with said work involved in constructing and/or maintaining of said facilities provided that if loss, damage, injury, or liability results from joint negligence of the parties hereto, then the liability therefore, shall be borne by them in proportion to their respective degree of negligence; provided further, however, that these provisions are subject to the legal defenses which under law **GRANTEE** is entitled to raise.

5. **GRANTOR** agrees not to construct, install, and/or erect structures, buildings, fences, pools, landscaping, etc. that would impede, restrict, prohibit, and/or limit ingress and egress over, across, through, and upon said easement.

6. That in connection with the construction by **GRANTOR** of any structure or building abutting said permanent easement defined limits, **GRANTOR** will assume all liability for any damage to the facilities in the above described easement. **GRANTOR** will indemnify and hold **GRANTEE** harmless from any claims for personal injuries or property damage caused by any negligence of **GRANTOR** arising out of the construction by **GRANTOR** of any structure or building abutting the said permanent utility easement defined limits.

7. Both parties mutually agree that this easement and covenants herein shall run with the land.

**IN WITNESS THEREOF,** the **GRANTOR,** has caused this instrument to be signed and sealed this _____day of _____, 2018.

IN PRESENCE OF:

_____

Printed Name: _____

Title: _____

OWNER:

_____

Printed Name: _____

Title: _____

STATE OF_____)
) SS
COUNTY OF _____)

Personally came before me this ____ day of _____, 2018, the above named

_____ and _____
to me known to be the persons who executed the foregoing instrument and to me known to be the

_____ of said land and acknowledged that they executed the foregoing instrument as such by its authority.

_____
Notary Public

My Commission expires _____

Accepted By: **CITY OF SHEBOYGAN**

| | |
|---|---|
| _____ | _____ |
| Michael Vandersteen<br>City of Sheboygan - Mayor | Meredith DeBruin<br>City of Sheboygan – City Clerk |

STATE OF WISCONSIN )
) SS
COUNTY OF SHEBOYGAN )

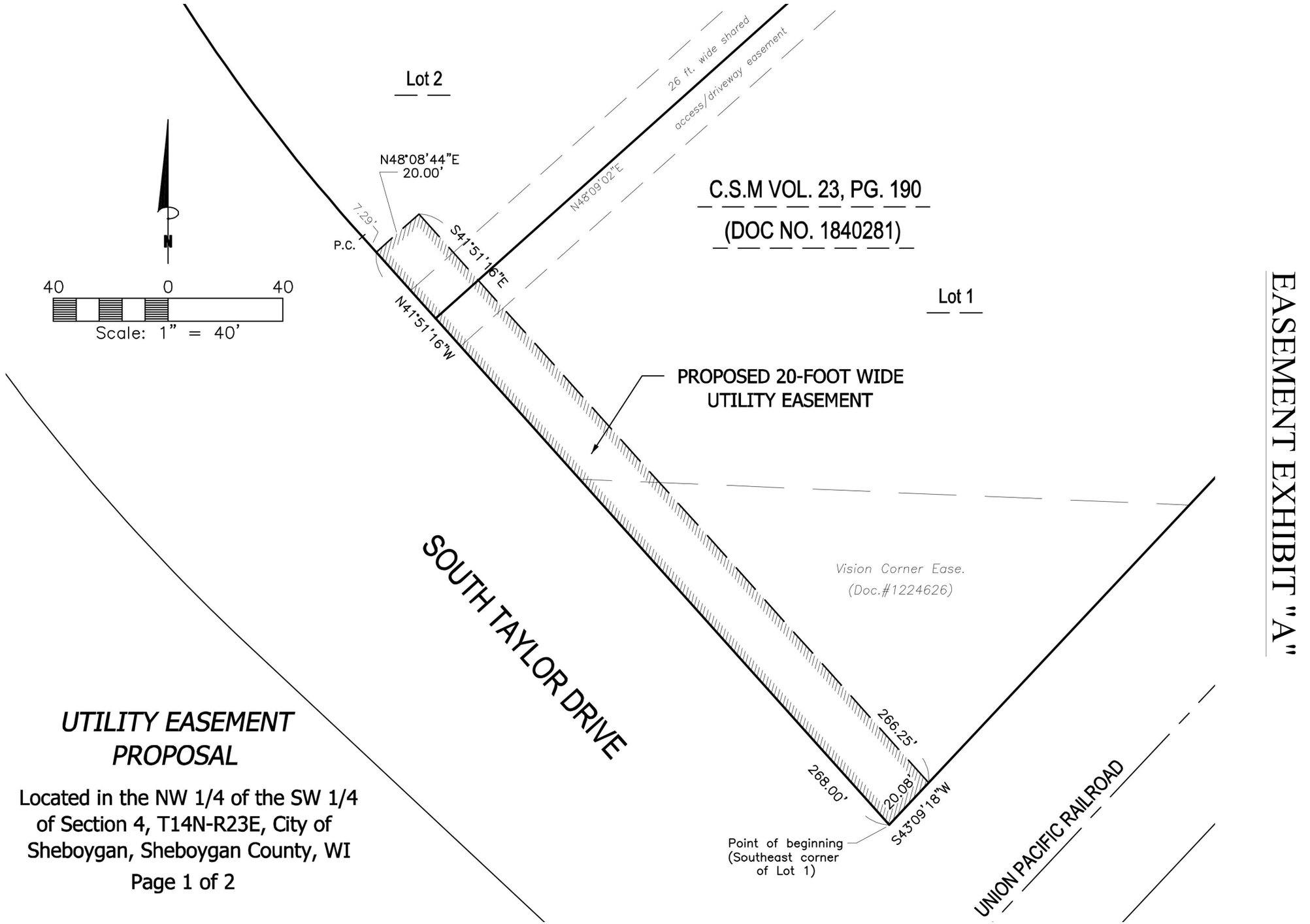
Personally came before me this ____ day of _____, 2018, the above named Michael Vandersteen and Meredith DeBruin to me known to be the persons who executed the foregoing instrument and acknowledged the same.

_____
Notary Public

My Commission expires _____

Acceptance is authorized by and in accordance with Resolution Number _____

This Instrument Drafted By:
Charles C. Adams
Wisconsin State Bar No. 01021454




EASEMENT EXHIBIT "A"

Sheet 4 of 5 Sheets

## *UTILITY EASEMENT PROPOSAL*

Located in the NW 1/4 of the SW 1/4 of Section 4, T14N-R23E, City of Sheboygan, Sheboygan County, WI

# EASEMENT EXHIBIT "B"

Compsite
Surveying & Mapping

N2472 Mentink Road
Oostburg, WI 53070
Phone: (920) 564-6812
Email: john@compsitesurveying.com

*John M. DuMez – Wisconsin Professional Land Surveyor S-2267*
July 23, 2018



A Proposed 20-foot wide utility easement located on Lot 1 and Lot 2 of a Certified Survey Map recorded in Volume 23, Page 190 of C.S.M.s as Document Number 1840281 being part of the NW ¼ of the SW ¼ of Section 4, T14N-R23E, City of Sheboygan, Sheboygan County, Wisconsin described as:

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2423-18 2018 Capital Improvement Televising (#5817666)
Owner: City of Sheboygan, WI
Solicitor: City of Sheboygan, WI
07/10/2018 03:00 PM CDT

| | | | | | Pipetek Infrastructure Services | |
|---|---|---|---|---|---|---|
| **Line Item** | **Item Code** | **Item Description** | **UofM** | **Quantity** | **Unit Price** | **Extension** |
| 1 | SAN1 | Sanitary Sewer Televising - 8-inch | LF | 8450 | $0.90 | $7,605.00 |
| 2 | SAN2 | Sanitary Sewer Televising - 10-inch | LF | 14870 | $0.90 | $13,383.00 |
| 3 | SAN3 | Sanitary Sewer Televising - 12-inch | LF | 2305 | $0.90 | $2,074.50 |
| 4 | SAN4 | Sanitary Sewer Televising - 15-inch | LF | 2021 | $0.90 | $1,818.90 |
| 5 | SAN5 | Sanitary Sewer Televising - 18-inch | LF | 885 | $0.90 | $796.50 |
| 6 | SAN6 | Sanitary Sewer Televising - 21-inch | LF | 217 | $0.90 | $195.30 |
| 7 | SAN7 | Sanitary Sewer Televising - 24-inch | LF | 851 | $0.90 | $765.90 |
| 8 | SAN8 | Sanitary Sewer Televising - 27-inch | LF | 1938 | $0.90 | $1,744.20 |
| 9 | SAN9 | Sanitary Sewer Televising - 30-inch | LF | 338 | $0.90 | $304.20 |
| 10 | SAN10 | Sanitary Sewer Televising - 36-inch | LF | 396 | $0.90 | $356.40 |
| 11 | SAN11 | Sanitary Sewer Televising - 42-inch | LF | 1186 | $1.25 | $1,482.50 |
| 12 | SAN12 | Sanitary Sewer Televising - 96-inch | LF | 1186 | $3.00 | $3,558.00 |
| 13 | SAN13 | Sanitary Sewer Manholes Inspection | EA | 208 | $125.00 | $26,000.00 |
| 14 | STM1 | Storm Sewer Televising - 6-inch | LF | 160 | $0.90 | $144.00 |
| 15 | STM2 | Storm Sewer Televising - 10-inch | LF | 1733 | $0.90 | $1,559.70 |
| 16 | STM3 | Storm Sewer Televising - 12-inch | LF | 3828 | $0.90 | $3,445.20 |
| 17 | STM4 | Storm Sewer Televising - 15-inch | LF | 3895 | $0.90 | $3,505.50 |
| 18 | STM5 | Storm Sewer Televising - 18-inch | LF | 2425 | $0.90 | $2,182.50 |
| 19 | STM6 | Storm Sewer Televising - 21-inch | LF | 1713 | $0.90 | $1,541.70 |
| 20 | STM7 | Storm Sewer Televising - 24-inch | LF | 979 | $1.25 | $1,223.75 |
| 21 | STM8 | Storm Sewer Televising - 27-inch | LF | 404 | $1.25 | $505.00 |
| 22 | STM9 | Storm Sewer Televising - 42-inch | LF | 45 | $10.00 | $450.00 |
| 23 | STM10 | Storm Sewer Televising - 48-inch | LF | 1111 | $1.25 | $1,388.75 |
| 24 | STM11 | Storm Sewer Televising - 54-inch | LF | 394 | $1.25 | $492.50 |
| 25 | STM12 | Storm Sewer Televising - 14-inch x 23-inch | LF | 83 | $5.00 | $415.00 |
| 26 | STM13 | Storm Sewer Televising - 60-inch | LF | 306 | $2.50 | $765.00 |
| 27 | STM14 | Storm Sewer Televising - 54inch x 84-inch | LF | 1401 | $3.00 | $4,203.00 |
| 28 | STM15 | Storm Sewer Manholes Inspection | EA | 82 | $125.00 | $10,250.00 |
| 29 | CLEAN | Blockage Removal (Allowance) | LS | 1 | $5,000.00 | $5,000.00 |
| Base Bid Total: | | | | | | $97,156.00 |

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** A RESOLUTION authorizing the appropriate City Officials to enter into a contract with Pipetek Infrastructure Services the amount of $97,156.00 for Capital Improvement Televising.

**REPORT PREPARED BY:** Kevin Jump, Civil Engineer/Project Manager

**REPORT DATE:** August 22, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | 60134110-631400 |
| Budget Summary: | Wastewater Utility Fund – Sanitary Sewer Lines |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** This document authorizes the department to enter into a contract for televising sewers in advance of the 2019 Annual Resurfacing Program.

Each year the city repairs or replaces sewers in conjunction with the Annual Resurfacing Program. Televising the sewers before construction is an important part of determining the scope of work required.

**STAFF COMMENTS:** The amount of sewer televising required to be completed is more than what City Department of Public Works crews can complete without affecting other work required of the City DPW Crews.

**ACTION REQUESTED:** Motion to recommend the Common Council approve Res. No. 78-18-19 by Alderperson Wolf authorizing the appropriate City Officials to enter into a contract with Pipetek Infrastructure Services the amount of $97,156.00 for Capital Improvement Televising.

**ATTACHMENTS:**

I. Res. No. 78-18-19
II. Summary of Bids Received

III

4.8

Res. No. 78 - 18 - 19. By Alderperson Wolf. August 20, 2018.

A RESOLUTION authorizing the appropriate City Officials to enter into a contract with Pipetek Infrastructure Services in the amount of $97,156.00, for Capital Improvement Televising.

WHEREAS, one bid was received in response to bid #2423-18. The low bid received from Pipetek Infrastructure Services has been determined to meet all the specifications.

RESOLVED: That the appropriate City Officials are hereby authorized to enter into a contract with Pipetek Infrastructure Services in the amount of $97,156.00, for Capital Improvement Televising.

BE IT FURTHER RESOLVED: That the appropriate City Officials are hereby authorized to draw orders on account #60134110-631400 - Wastewater Utility Fund - Sanitary Sewer Lines for $97,156.00 in payment of same.

Public Works

**I HEREBY CERTIFY that the foregoing Resolution was duly passed by the Common Council of the City of Sheboygan, Wisconsin, on the _____ day of _____, 20 .**

Dated _____ 20 . _____, City Clerk

Approved _____ 20 . _____, Mayor

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** Request to allow Randy Schwoerer to provided and install a name plate for Carl Weinberger on the Fountain Park Memorial Bandshell.

**REPORT PREPARED BY:** Joseph L. Kerlin, Superintendent of Parks and Forestry

**REPORT DATE:** August 22, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** In 1987 the City officially named the bandshell in Fountain Park, “Fountain Park Memorial Bandshell” and installed a large plaque upon which numerous name plates memorializing approved individuals would be placed in accordance with the following stipulations:

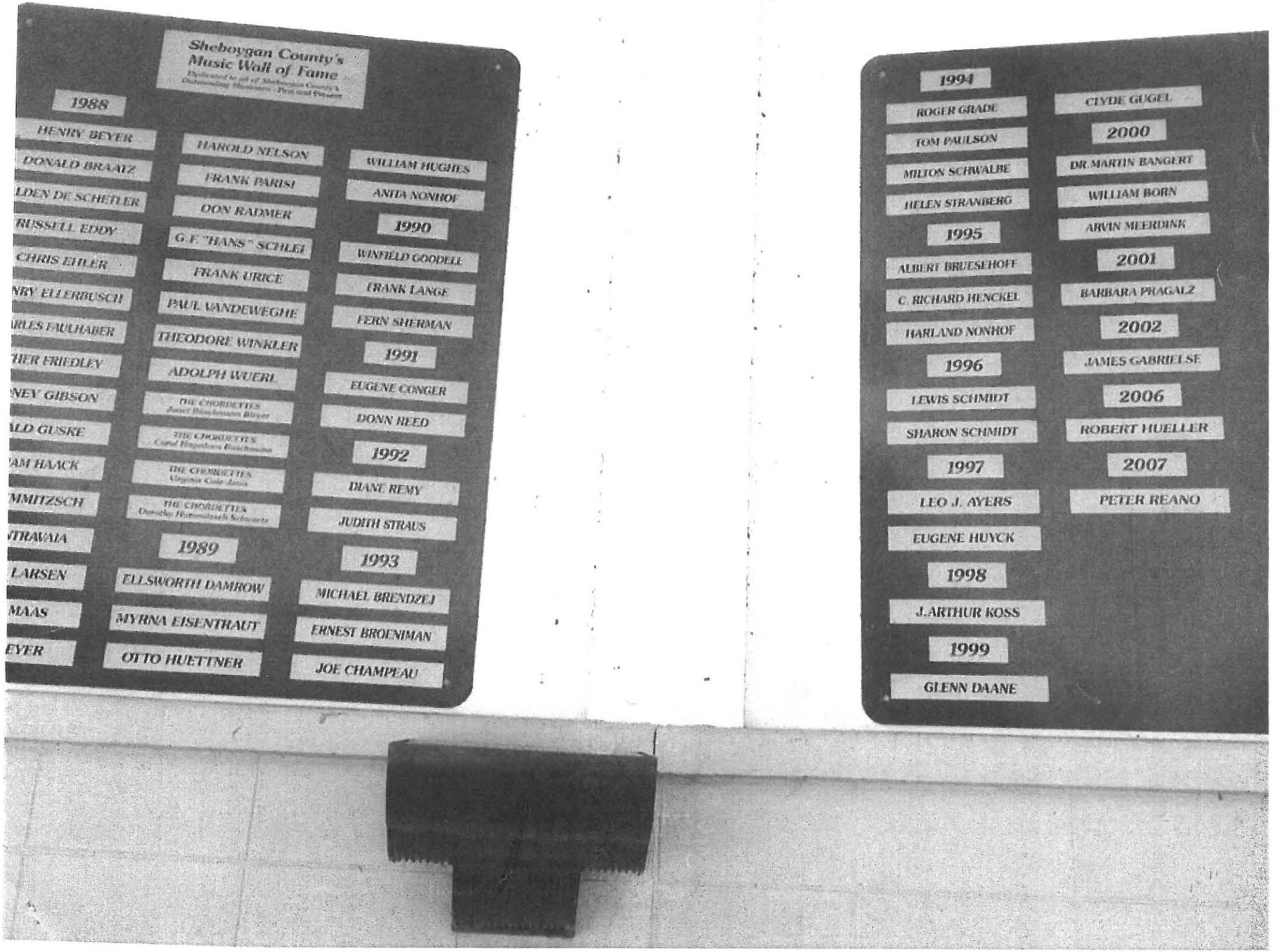
1. Names of individuals to be memorialized and place on said plaque shall be recommended by a music oriented selection committee.
2. The individual names recommended for memorialization and placement on said plaque shall be presented to and received for the Public Works Committee approval and authorization prior to the name placement on the said plaque.

**STAFF COMMENTS:** Fountain Park hosts the farmer's market along with multiple concerts and events throughout the summer. These events put Fountain Park in the spotlight which provides awareness to the community for those individuals being commemorated. It also contains war memorials and a bi-centennial water fountain that offer a historical perspective.

**ACTION REQUESTED:** Motion by the Public Works Committee to approve request allowing Randy Schwoerer to provided and install a name plate for Carl Weinberger on the Fountain Park Memorial Bandshell, in the City of Sheboygan.

**ATTACHMENTS:**

I. Letter of request by Randy Schwoerer
II. Picture of Music Wall of Fame large plaque


Sheboygan County's
Music Wall of Fame
1988
HENRY BEYER
DONALD BRAATZ
LDEN DE SCHETLER
RUSSELL EDDY
CHRIS EHLER
NRY ELLERBUSCH
RLES FAULHABER
HER FRIEDLEY
NEY GIBSON
LD GUSKE
AM HAACK
MMITZSCH
TRAVAIA
LARSEN
MAAS
EYER
HAROLD NELSON
FRANK PARISI
DON RADMER
G.F. "HANS" SCHLEI
FRANK URICE
PAUL VANDEWEGHE
THEODORE WINKLER
ADOLPH WUERL
THE CHORDETTES
THE CHORDETTES
THE CHORDETTES
THE CHORDETTES
1989
ELLSWORTH DAMROW
MYRNA EISENTRAUT
OTTO HUETTNER
WILLIAM HUGHES
ANITA NONHOF
1990
WINFIELD GOODELL
FRANK LANGE
FERN SHERMAN
1991
EUGENE CONGER
DONN REED
1992
DIANE REMY
JUDITH STRAUS
1993
MICHAEL BRENDZEJ
ERNEST BROENIMAN
JOE CHAMPEAU
1994
ROGER GRADE
TOM PAULSON
MILTON SCHWALBE
HELEN STRANBERG
1995
ALBERT BRUESEHOFF
C. RICHARD HENCKEL
HARLAND NONHOF
1996
LEWIS SCHMIDT
SHARON SCHMIDT
1997
LEO J. AYERS
EUGENE HUYCK
1998
J.ARTHUR KOSS
1999
GLENN DAANE
CLYDE GUGEL
2000
DR.MARTIN BANGERT
WILLIAM BORN
ARVIN MEERDINK
2001
BARBARA PRAGALZ
2002
JAMES GABRIELSE
2006
ROBERT HUELLER
2007
PETER REANO

SCHWOERER LLC
2614 Henry Street • Sheboygan, WI 53081 • 920-207-4398 • rschwoerer@aol.com

This is a formal request to have the name of **Carl Weinberger placed on the Music Wall of Fame in Fountain Park in Sheboygan**.

Carl passed away in 2018 and had spent his life in music since 1965. He was a musician (guitar, keyboards and bass) vocalist, music teacher, mentor, recording producer, engineer, and touring artist. Since 1968 Carl was Sheboygan Counties most respected guitar teacher with as many as 20 students per day, 6 days a week. There is no doubt that Carl taught more guitarists than anyone in Sheboygan. As a producer and guitarist he produced a USO show that performed at the Pentagon, toured Turkey, Italy and Spain on the Miss Black America USO Tour.

Date of Placement – Thursday - September 13 – 5 PM at Taste Sheboygan

The name plate will be the same size as others on the wall – 4" tall X 12-14" long.

Please approve the recognition of Carl Weinberger, a Sheboygan hometown talent, who shared his love of music with tens of thousands in Wisconsin and the World.

Randy Schwoerer

920-207-4398

SCHWOERER LLC
2614 Henry Street • Sheboygan, WI 53081 • 920-207-4398 • rschwoerer@aol.com

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Randy Schwoerer

920-207-4398

City of Sheboygan
spirit on the lake.

Proposal

# Conversion of Solid Waste Collection Operations


**City of Sheboygan, Wisconsin**

**April 27, 2018**

Foth

80 Years

Eagle Point II • 8550 Hudson Blvd. North • Suite 105
Lake Elmo, MN 55042
(651) 288-8550 • Fax: (651) 288-8551
www.foth.com

April 27, 2018

Mr. Jason Blasiola
Superintendent of Streets and Sanitation
Streets & Sanitation Division
City of Sheboygan
Municipal Service Building
2026 New Jersey Avenue
Sheboygan, WI 53081

Dear Jason,

RE: Request for Proposal for Consulting Services to Analyze the Conversion of Solid Waste Collection Operations to Fully Automated Collection

Thank you for the opportunity to provide this scope of work and budget to provide consulting services to the City of Sheboygan. Based on our discussions and past experience with collection studies, we feel we have a good understanding of your needs, and we are confident in our ability to provide the services you desire.

Our scope of work, including the deliverables for each task, are described in our proposal. If our scope of work, budget and schedule meet with your approval, please notify us and we will send an agreement for your review and signature.

We look forward to working with the City of Sheboygan with the execution of this project. If you have questions regarding our submittal, please contact Nathan at (651) 288-8519 or nathan.klett@foth.com.

Sincerely,

Foth Infrastructure & Environment, LLC

Nathan O. Klett, P.E.
Project Manager

Jennefer L. Klennert
Senior Consultant

# Table of Contents

# Public Solid Waste Strategic Consulting Services

Foth's focus on public sector clients, and our breadth of knowledge in solid waste, has allowed us to work alongside many public entities to complete strategic and complex projects, such as helping a solid waste authority upgrade its public materials recycling facility (MRF) to a single-stream processing facility; a city to organize collection; and even to purchase a multi-million dollar solid waste processing facility from the private owner.

Foth has assisted a diverse group of public clients with collection and processing consulting services. Projects such as time/motion productivity analysis, collection options analysis, fleet maintenance and repair, recycling facility analysis and development, benchmarking for efficiency, and economic analysis have been accomplished by the Foth solid waste team.

## Strategic Planning

- **Collection Evaluations** to assist government agencies with the planning, design and implementation of improvements in their collection system, including:
  - Converting from dual-stream recyclables collection to single-stream
  - Converting from manual collection systems to fully automated equipment (i.e., carts serviced by a robotic cart lifting arm on the truck)
  - Procurement of agency-owned carts
  - Privatization from formerly public operations
  - Municipalization from formerly private operations
  - Organized collection when transitioning from open/subscription hauling to coordinated/contract operations
- **Feasibility Studies** to determine if a specified project or proposed concept will be sustainable in the long-term from all perspectives: technical, economic, political, social and environmental
- **Implementation Plans** for a wide variety of system upgrades, including:
  - Adding additional materials to existing recycling collection programs
  - Financial plans to analyze project cost estimates, funding needs, alternative budgeting scenarios
  - Rate analyses to determine how competitive public service fees or charges are compared to other similar municipalities, private operations

## Procurement Assistance

Request for proposals and contract negotiations for collection services, facilities construction, or waste related products.

- Client needs assessments
- Strategy development, including scheduling and timing (e.g., early, advanced project planning and resource allocations)
- Recommendations to use a competitive process such as an RFP vs. negotiations
- Strategies to help assure high-value pricing that is competitive in the marketplace today
- Communications and outreach with private contractors and potential RFP respondents to enhance long-term, trusting relationships
- Draft contract language for RFP packet
- Specifications for current, state-of-the-art equipment technologies in a rapidly changing industry
- Assessing current industry practices and standards for annual price adjustments (e.g., CPI price escalators, fuel surcharges, recyclables commodities revenue sharing)
- Assistance with ordinance reviews and amendments to bring requirements up to date with contract specifications, current industry standards, etc.

# Public Solid Waste Strategic Consulting Services, continued

### Collection, Processing and/or Marketing Systems

Based on industry standards, best management practices, supply development and end market development needs, and regulatory requirements for all types of materials, including:

- Trash
- Recyclables
- Organics
- Yard waste
- Bulky waste and other problem materials
- Household hazardous waste
- Construction and demolition (C&D) waste, including asphalt shingles recycling
- Disaster debris materials planning for recovery and disposal
- Processing residuals

### Community Engagement/Public Affairs Services

An essential element of most projects or programs depending on the client's needs and priorities.

- Communications plans
- Public participation and engagement strategies
- Resident and other customer surveys

# Project Team

**Jennefer L. Klennert**

**Client Team Leader**

Jennefer is a technical consultant with 27 years of negotiations, program planning and relationship building in the environmental industry. Jennefer has a strong strategic and marketing sense with contract management skills. She is a strategic consultant for the owner of a 500,000 ton per year refuse derived fuel facility, assisting with operations and ongoing, system-wide analysis of waste flows in the two counties including landfills, transfer stations, and other facilities. Jennefer currently manages a project for the City of Peoria in which the City is seeking to enhance recycling collection services, while increasing awareness and education about options to improve overall solid waste management. She is also advising the City's Public Works Department as they compete in a competitive Request for Proposal Process for solid waste services. Jennefer recently managed a project to assess the City of Grinnell's solid waste and recycling collection systems to identify system improvements and analyze the potential for automating collection of both garbage and recyclable. Jennefer is the current President of the Minnesota Chapter of SWANA (Solid Waste Association of North American) enhancing collaboration and networking opportunities for a public and private membership.

Education: M.S., Technical Communication, Metropolitan State University, St. Paul, MN; B.S., Natural Resources Environmental Studies Program, University of Minnesota, St. Paul, MN

Professional Certification: Solid Waste Certificate, University of Minnesota, Minneapolis, MN

**Nathan O. Klett, P.E.**

**Project Manager**

Nate Klett has worked in the environmental industry for 12 years in both the public and private sectors, for projects that involve landfill design, material recovery/recycling system design, waste characterization studies, regulatory permitting, feasibility studies, pilot studies, closures (RCRA and CERCLA), hazardous wastes, site investigations, remedial investigations, contaminant transport, and monitoring. He also acted as project manager for a project analyzing alternative technologies for managing and processing MMSW. Nate has provided various clients with an evaluation of their existing recycling systems particularly in terms of the equipment used for sorting materials. Projects included evaluating the building, site and equipment related costs of converting the existing recycling system to a single stream system as well as the building, site and hauling costs associated with transferring recyclable materials to an existing single stream processor. Nate has evaluated existing waste processing facilities to determine methods to increase recovery and streamline system processes. Work included evaluating the addition of new technologies to recover materials. He has assisted in preparation of a feasibility study examining the potential to use anaerobic digestion of the organic fraction of MSW for fuel or electrical generation.

Education: M.S. in Civil and Environmental Engineering, University of Wisconsin - Madison; B.S. Civil Engineering, University of Wisconsin - Madison

Professional Registration: Professional Engineer - MN

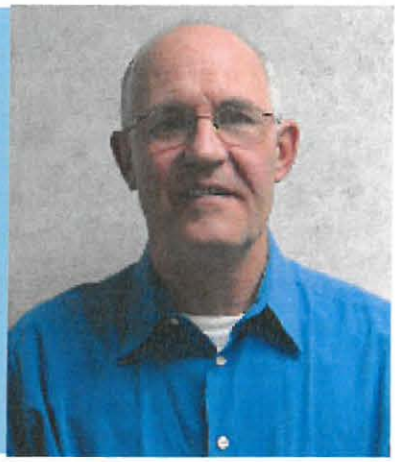
# Foth Team, continued

**Daniel F. Krivit**

**Lead Environmental Scientist**

Dan brings 40 years of solid waste planning and government affairs experience. He has provided consulting services to municipalities, counties, and states, private recycling companies, and end-user industries. He has managed in-depth integrated solid waste management research and development projects including a wide variety of commodity-specific recycling studies: glass, paper, plastics, shingles and construction & demolition (C&D) waste. Dan provides comprehensive research and analysis of collection methods using modeling to analyze the net environmental impacts from various collection and reduction alternatives. He has a broad base of experience in all aspects of recycling research, survey design and implementation, data analysis, strategic planning, and policy development. Dan recently worked on a project for the City of Grinnell, Iowa to conduct Foth's feasibility study of converting the City's collection operations to carts lifted by automated side-loading (ASL) trucks. Dan also recently served on a team to work with the City of Peoria to develop a Request for Proposal as part of a managed competition procurement process for solid waste and recyclables collection. He has worked on many projects involving program performance monitoring and evaluation including recovery rates, participation, composition analysis, and cost-effectiveness measurements.

Education: B.A., Biology, Colorado College; Mini-MBA, University of St. Thomas, St. Paul, MN



**Craig P. Cooper**

**Data Research & Analysis**

Craig Cooper ("Coop") has 40 years of experience in solid waste, 24 of which was spent working for the Minneapolis Public Works Department in various capacities. He began as an MSW route worker and progressed to Foreman, Supervisor, and General Foreman. He has provided technical consulting expertise to several Foth clients, including the Minnesota Pollution Control Agency (MPCA), the City of Minneapolis, the City of Peoria, the Waste Commission of Scott County, the City of Janesville, Wisconsin, and Metro Waste Authority. Coop has analyzed cost and benefits of options for Janesville, including automated collection, one side of street collection, and every other week garbage collection. He completed detailed time/motion productivity analyses for the cities of Davenport and Bettendorf, Iowa. Coop has developed detailed cost analyses of collection options, including semi-automated, automated, single-stream, and bulky waste collection. He has also completed the financial analysis of fleet maintenance options for the City of Minneapolis. Options entailed consolidating maintenance under Public Works or keeping it separate within the division.

# Foth Team, continued

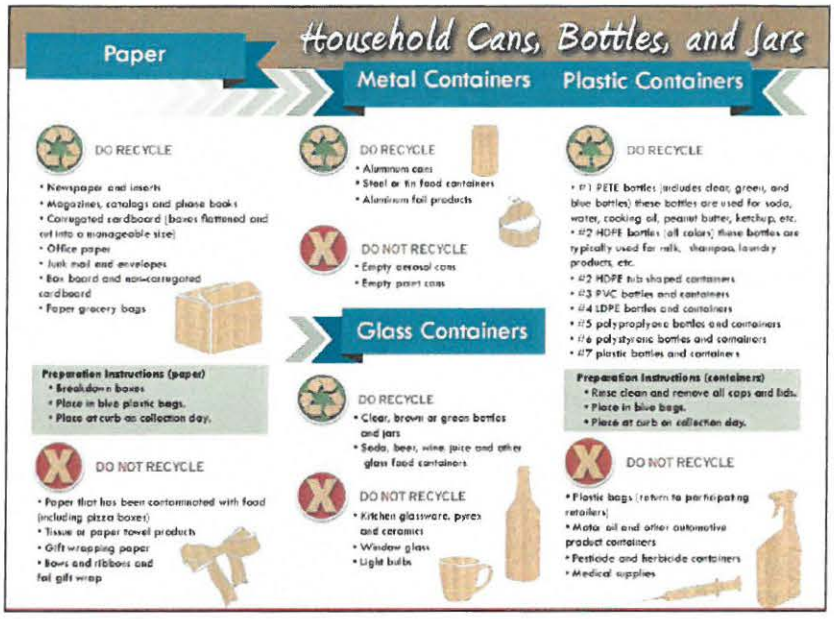
**Kate T. Bartelt**

**Lead Environmental Scientist**

Kate Bartelt is an environmental scientist and strategic consultant with over 15 years of experience focusing on the intersection of public policy and environmental science. She has led strategic consulting analysis for public sector solid waste and transit agencies; managed public outreach and stakeholder engagement programs with a focus on cultural sensitivity; and led long-term planning development and solid waste research studies. Kate has conducted numerous critical analysis and planning for public solid waste clients to find unique solutions including governance documents, policy evaluations, ordinance revisions and reports. She brings diverse solid waste experience along the waste hierarchy, diversion to disposal, with emphasis on organics diversion, program development, and evaluating new technologies. Kate has collaborated with public policy and program management consulting agencies for over 30 different public projects.

Education: M.S., Science, Technology and Environmental Policy, University of Minnesota, Minneapolis/St. Paul, MN; B.S., Liberal Arts & Sciences, Iowa State University

# Scope of Work




## Task 1 – Evaluation of City Provided or Out-Sourced Solid Waste Services

**Description:** Foth will provide a review and update of the City-completed Collection Options Study and provide a recommendation for maintaining City-provided solid waste services, or out-sourcing solid waste services.

**Timeline:** May 14, 2018 to July 31, 2018

**Deliverable:** Memorandum Updating and Comparing the Costs and Risks of City Provided Services as Compared to Out-Sourced Solid Waste Services

Foth will schedule a kick-off meeting conducted with City staff. This kick-off meeting will be a working session to exchange information and data collection. Additional questions that will be discussed at the kick-off meeting include:

- Additional data needs from City staff as requested by Foth.
- Review and discuss City DPW staff implementation questions (as sent to Foth from City staff on Friday, March 16). Additional implementation questions as needed.
- Obtain available information on solid waste services costs for out-sourced solid waste services.
- Prepare and comment on a high level Risk Analysis of City Provided or Out-Sourced Solid Waste Services.
- Verify costs directly applicable to the City providing solid waste services to be included as comparison.
- Discuss equipment procurement processes, equipment choices and purchases.
- Identify alternative funding mechanism available for City provided solid-waste services.

**Assumptions:**

- One in-person meeting to kick off the project with all on-site work completed at that time.
- Foth will provide a Draft Memorandum to the City for comment and feedback. The City will provide one set of consolidated red-lines for inclusion in the Final Memorandum.

## Task 2 – Plan for Implementation of Automated Services

**Description**: Foth will provide a timeline and implementation plan for the City to automate solid waste services. Equipment will be anticipated to be in service by fall of 2019.

Conduct review of existing routes, route observations and crew interviews as needed. Safety and workers compensation information will also be discussed.

**Timeline:** August 1, 2018 to September 30, 2019

**Deliverables:**

1. Specifications for carts
2. Specifications for trucks, number of trucks, and routing analysis
3. Timeline of Implementation Plan
4. Draft and Final Education as listed below for Resident Outreach

Foth will draft an automated system conversion design plan consisting of equipment procurement assistance including trucks and carts and an education and outreach plan with timelines. Tasks for implementation include the following items.

# Scope of Services (continued)

- Prepare an equipment procurement plan and timeline with equipment recommendations including carts and trucks utilizing planning completed in Task 1.
- Provide sample specifications to Public Works and Purchasing staff for use in procurement of equipment.
- In consultation with City staff, provide a timeline and outreach plan for education. Tasks in the timeline will be presented on a monthly basis.
- Foth will provide sample, draft language for education which includes brochures, website, and other outreach tools. Foth anticipates including up to three brochures, draft and final updates for the solid waste portion of the website, education tag, and in-mold label for up to two separate carts (trash and recycle).

**Assumptions:**

- One in-person meeting to kick off the project with all on-site work completed at that time.
- Foth will provide draft specifications for carts and equipment to the City for comment and feedback. The City will provide one set of consolidated red-lines for consolidation in the final document.
- Foth will provide a draft Implementation Plan to the City for comment and feedback. The City will provide one set of consolidated red-lines for consolidation in the final document.
- Foth will provide draft education documents to the City for comment and feedback. The City will provide one set of consolidated red-lines for consolidation in the final document.
- Actual brochure design work, printing and mailing will be completed by the City. These costs are not included in the cost estimate.


## Proposed Costs

| Task | Hours by Project Team Member | | | | | | | | Task Labor Hours | Task Labor Cost | Exp | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NOK | JLK | KTB | DFK | CC | BMS | DJC | VMO | | | | |
| Project Management | 4 | 4 | 4 | 0 | 0 | 1 | 4 | 2 | 19 | $2,500 | $0 | $2,500 |
| Task 1: Evaluation of City Provided or Out-Sourced Solid Waste Services | 5 | 10 | 8 | 26 | 0 | 0 | 0 | 2 | 51 | $7,975 | $0 | $7,975 |
| Task 2: Plan for Implementation of Automated Services | 13 | 10 | 54 | 62 | 44 | 0 | 0 | 4 | 187 | $28,000 | $1,500 | $29,500 |
| **TOTALS** | **22** | **24** | **66** | **88** | **44** | **1** | **4** | **8** | **257** | **$38,475** | **$1,500** | **$39,975** |

Eagle Point II • 8550 Hudson Blvd. North •
Suite 105
Lake Elmo, MN 55042
(651) 288-8550 • Fax: (651) 288-8551
www.foth.com

# Automated Garbage Analysis

Department of Public Works
Streets and Sanitation
Division

City of Sheboygan
spirit on the lake


Overview
Problem / Opportunity
Outdated manual lifting collection system
Solution
Convert to automated cart based residential curbside collection system
Projected Result
• Improved worker health, safety and job satisfaction
• Increased route productivity
• Resident convenience

# Automated Garbage Analysis

Department of Public Works
Streets and Sanitation
Division

City of Sheboygan
spirit on the lake


Sanitation Division
Daily Challenges
Our Team

# Our Team

David H. Biebel
Public Works Director

Heather, Melissa and Dawn
Department of Public Works
Business Office

Jason Blasiola
Streets and Sanitation
Superintendent


Dave Groves
Streets and Sanitation
Supervisor

Bruce Matzdorf
Streets and Sanitation
Leadman

# Our Daily Challenges

2017 Sanitation and Curbside Collection

- 11,260 Tons of Garbage Collected
- 3,037 Tons of Recycling Collected
- Material Recovery Rate 27%

# Worker Health and Safety

- Worker's compensation claims, other injuries and lost-time incidents due to the manual lifting and collection of garbage and recycling is a significant factor in this analysis
- There is real and significant risk due to the repetitive lifting motions and the normal hazards of handling bags of garbage, for example, pricks from needles or other "sharps"

# Automated Garbage Analysis

Department of Public Works
Streets and Sanitation
Division

City of Sheboygan
spirit on the lake


Automated Cart Garbage and Recycling Collection
Both Citizens and the Department of Public Works believe that the City of Sheboygan should move away from manually collecting garbage and move to a cart based system
Advantages


Advantages of Automated Cart Garbage and Recycling Collection
1. Worker Health and Safety
2. Route Productivity
3. Cleaner Collection
4. Increase Recycling

# Sanitation Worker Health and Safety


- Refuse and recyclable material collectors had the fifth-highest fatal work injury rate among civilian occupations in 2016, Bureau of Labor Statistics data shows
- Multiple independent studies have indicated sanitation worker health and safety is significantly improved with automated collection

# Route Productivity

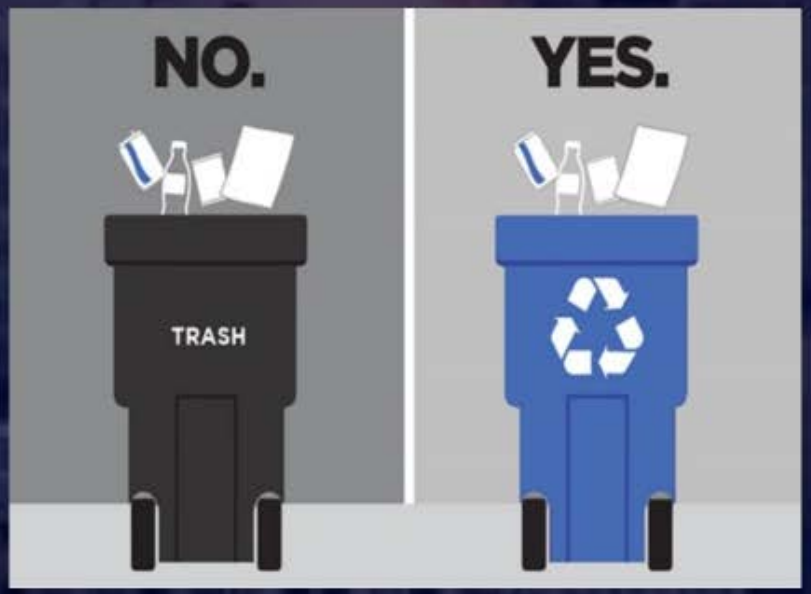
Route productivity (measured as "stops per hour") typically increases with automated collection systems. The time for an automated truck to pick up, tip and set down a cart is on average much less than the time it takes for a crew member to manually collect or "throw garbage".

# Cleaner Collection

- Lids keeps materials contained
- Bulky materials fit
- More room for recyclables
- Rolling easier than carrying to curb
- Protection against birds and rodents
- Improved neighborhood aesthetics

# Increased Recycling

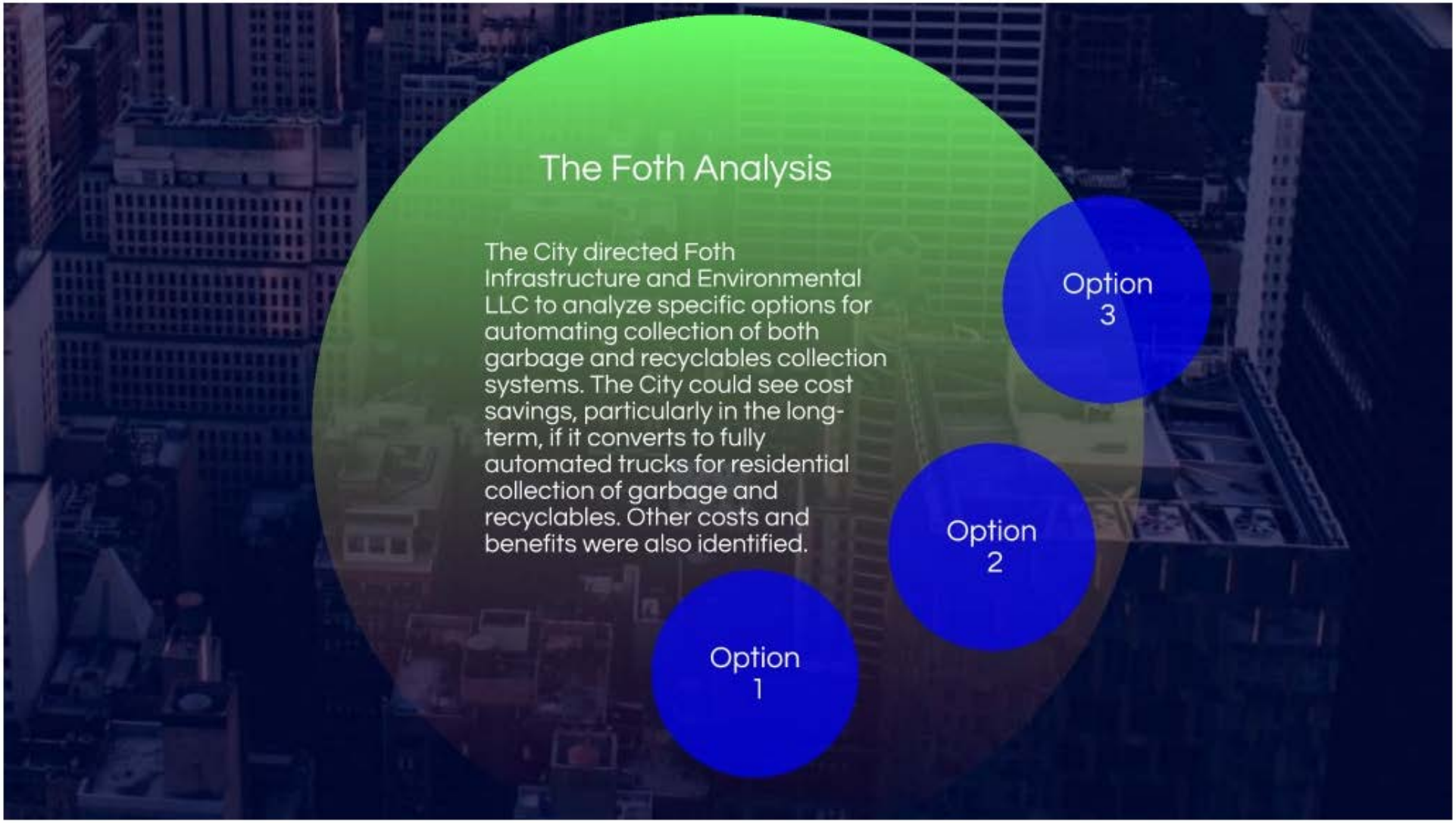
Carts used in an automated system typically increase recycling participation and recovery. Other communities have typically experienced 10 to 30 percent increases in recyclables by switching from bags to carts.



# Automated Garbage Analysis

Department of Public Works
Streets and Sanitation
Division

City of Sheboygan
spirit on the lake


The Foth Analysis
The City directed Foth Infrastructure and Environmental LLC to analyze specific options for automating collection of both garbage and recyclables collection systems. The City could see cost savings, particularly in the long-term, if it converts to fully automated trucks for residential collection of garbage and recyclables. Other costs and benefits were also identified.
Option 3
Option 2
Option 1


Option 1
Maintain Current System
• City owned trucks
• 60/40 split body, rear load packers
• Two person crew; manual loading
• Collecting weekly for garbage and recyclables
Advantages
Disadvantages

# Maintain Current System Advantages

- Already in place
- No transition to a new system
- Citizens are already familiar with the process
- Easiest option

# Maintain Current System Disadvantages

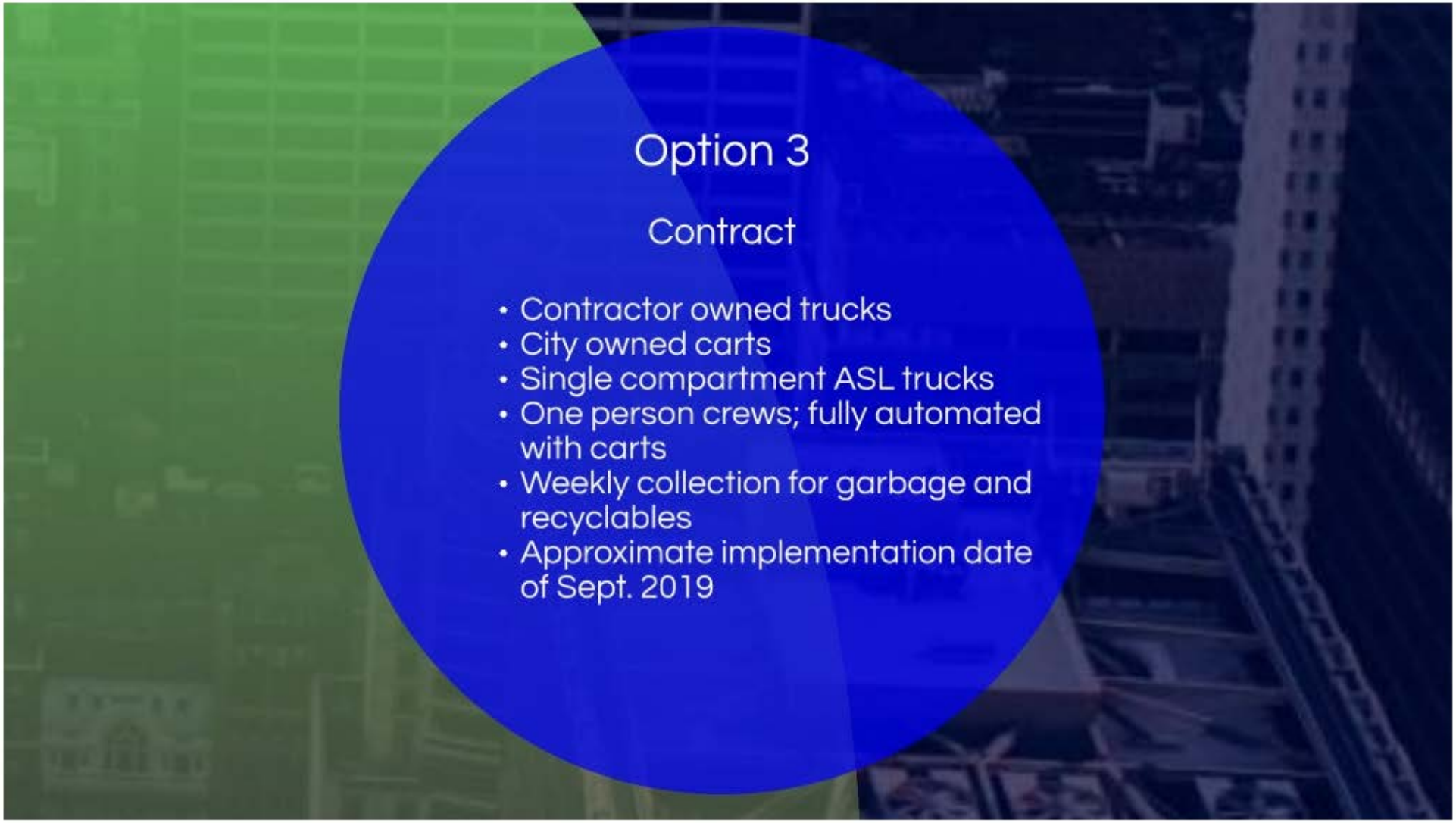
- Less safe method of collecting solid waste and recyclables
- Most prone collecting method to creating litter
- Lest appealing aesthetics
- Requires two Sanitation Employees


Option 2
Automated Cart Garbage and Recycling Collection
• City owned trucks and carts
• Single compartment, ASL trucks
• One person crews; fully automated with carts
• Weekly collection for garbage and recyclables
• Approximate implementation date Sept. 2019
Advantages
Disadvantages

# Advantages of Automated Cart Garbage and Recycling Collection

- Worker Health, Safety and Job Satisfaction
- Route Productivity
- Resident Convenience Due to Standardized Carts
- Cleaner Collection
- Increase in Recycling


Disadvantages of Automated Systems
• Higher truck capital and maintenance costs
• Higher cart capital and maintenance costs
• Storage of carts
• Avoidance of overhead obstacles such as trees


Option 3
Contract
• Contractor owned trucks
• City owned carts
• Single compartment ASL trucks
• One person crews; fully automated with carts
• Weekly collection for garbage and recyclables
• Approximate implementation date of Sept. 2019

# Risks of Private Collection Contract Operations

After contracting and within the term of the contract (e.g., five years), the service may need to change and the City may have a challenge getting a competitive price for a change order.

There may be a lack of adequate competition if the City releases a RFP for contracted collection services. For example, only one company may respond.

In the future, the City may not be able to readily get back into the collection operations if the City sells all of its garbage and recycling trucks and re-assigns or lays off its garbage and recycling crews. Combined with the risk, lack of competition, this may also mean that there is little "back up" plan if the contractor is unable to continue service for whatever reason.

# Additional risks

The City's management demands would change to contract oversight and compliance, hauler performance monitoring, and dealing with customer complaints about the hauler. For example, the contractor may fail to perform collection or customer service operations per the contract standards or customer expectations.

The customer service may be adversely affected if there are changes to the contractor's key management personnel or if the contractor sells to another firm.

Operational requirements could still increase as more material streams are added into the list of collection services (e.g., yard waste, bulky items, etc.). This could become a procurement challenge to get competitive rates for expanded service during the term of a contract.

Funding sources may change or become less reliable from a City cost perspective. A contract may not have adequate flexibility to change terms if the City needs to adjust to a new revenue reality. For example, less funding may require less service.

# Automated Garbage Analysis

Department of Public Works
Streets and Sanitation
Division

City of Sheboygan
spirit on the lake


Findings and Conclusions

# Findings and Conclusions

- Option 2 of this cost analysis assumes the City would purchase six (6), new ASL trucks to service all residents' garbage and recycling needs using one collection driver per truck and one material type per truck. The ASL trucks should both be "standard" style bodies with single compartments.
- To optimize the efficiency gains of the new ASL system, residential route collection should be revised.

# Findings and Conclusions

- Along with the ASL trucks, standardized, garbage and recycling carts should be purchased and rolled-out to all residents in the City.
- For Option 2 and Option 3, the City would need to develop a detailed implementation plan for all elements of the new automated system including: truck purchase (Option 2); cart purchase; community engagement / public education; ordinance amendment; route optimization plans (Option 2); cart roll-out; etc. The comprehensive implementation plan.


Pricing
Monthly total operating cost per household
Option 1
$8.50
Maintain current system
Option 2
$8.45
Automated cart garbage and recycling collection
Option 3
$9.80
Contract

# Automated Garbage Analysis

Department of Public Works
Streets and Sanitation
Division

City of Sheboygan
spirit on the lake

II

4.11

R. O. No. 94 - 18 - 19. By DIRECTOR OF PUBLIC WORKS. August 6, 2018.

Submitting an analysis of the City of Sheboygan's curbside garbage and recycling collection system for the potential to convert to an automated "garbage cart system". The recommendation from the analysis will be used to assist with formulating the 2019 operation and capital budget.

Public Works

DIRECTOR OF PUBLIC WORKS

Foth Infrastructure & Environment, LLC
8191 Birchwood Court, Suite L
Johnston, IA 50131
(515) 254-1393 • Fax: (515) 254-1642
www.foth.com

July 17, 2018

**TO:** Jason Blasiola, Superintendent Streets and Sanitation,
City of Sheboygan, Department of Public Works (DPW),

**CC:** David Biebel and Dave Groves, Sheboygan DPW

Dan Krivit, Foth Infrastructure & Environment, LLC (Foth)

**FROM:** Jennefer Klennert, Foth
Nathan Klett, Foth

**RE:** Analysis of the City of Sheboygan's Potential Options
for Garbage & Recycling Collection System

## Executive Summary

The City's Streets & Sanitation Division currently operates a residential garbage and recyclables collection system based on manual lifting and collection of materials from bags (purchased by residents). Continuing the current manual collection system utilizing split-body, rear-load packer trucks is identified as "Option 1" for purposes of this simple cost analysis. Option 1 has an estimated first year cost of $8.50 per household per month.

The City directed Foth to analyze specific options for automating collection of both garbage and recyclables collection systems. The City could see cost savings, particularly in the long-term, if it converts to fully automated trucks for residential collection of garbage and recyclables. Other costs and benefits were also identified.

The two (2) options for conversion to a new automated system were:

**"Option 2"** The *City purchases and operates* six (6) new Automated Side Loader (ASL) trucks. At an estimated purchase price of $275,000 per truck, the total capital cost to the City of these new trucks is $1.65 million. Foth used a cost estimate of $236,000 for the first year capital costs for the trucks based on an expected useful life of 7 years. Option 2, in total, has a first year cost estimate of approximately $8.45 per household per month (including capital costs of carts).

**"Option 3"** The *City contracts* for automated collection of garbage and recyclables. Option 3 has an estimated first year cost of approximately $9.80 per household per month based on an informal budgetary price quote from a potential local hauler. This informal budget quote assumes the City would own the carts and continue to do the billing. The City is also responsible for any costs associated with disposal of garbage and processing of recyclables, which is included in the approximate cost of $9.80.

For this analysis, Foth assumed in both Option 2 and Option 3 that the City would continue a weekly recycling and garbage collection schedule. The City may want to consider converting to an every other week recycling collection to reduce labor costs. Every other week recycling collection is a generally accepted industry practice for both municipal and private hauler recycling systems.

For this analysis, Foth also assumed that the City would own the new standardized garbage and recycling carts under either Option 2 or Option 3. Approximately 34,200 carts would need to be purchased by the City at an assumed price of $57 per cart for an estimated capital cost of $1.95 million. Based on an estimated 10-year useful life of the carts and a simple costing method, the capital costs of new carts would be about $1.97 per household per month. This capital cost estimate of City purchase of the carts is included in the total per month cost estimate of Option 2 and Option 3.

Any conversion to a new automated collection system would require advance planning, a deliberate equipment procurement process, and a planned public education program.

## Introduction

Foth was retained by the City of Sheboygan, Wisconsin (City) to conduct an independent analysis of the current manual garbage and recycling collection system operated by the City's Streets & Sanitation Division in comparison to two (2) potential options for services: in-house automated collection of garbage and recycling and contracted collection of garbage and recycling. The Streets & Sanitation Division's current fleet of trucks has an average age of eleven (11) years and several trucks are near the end of their useful life. City staff have been studying alternative collection methods for several years. The City is fully committed to providing quality, cost-effective collection service to the residents.

This memo provides a summary of the City's existing collection system, including a description and analysis of current costs. The memo provides an independent, comparative cost analysis of alternative systems options.

This analysis is not a rate study nor an in-depth cash flow financial cost assessment of the City's current and alternative system options. The full costs of the City's current operation may need further review; municipal budgets for an operating division often do not include indirect costs including administrative overhead, adequate equipment replacement funds, etc.

Other system assumptions were held constant to simplify the cost comparison. For example, the total number of households served was assumed to be constant over the ten (10) year analysis. Also, while this memo mentions the potential for increased recycling and a corresponding reduced amount of garbage due to lidded recycling carts and the addition of a "Pay As You Throw"[1] fee schedule for the various garbage cart sizes, these variables are not included in this preliminary, simple cost analysis. However, since the City is paying the costs associated with disposal of garbage and processing of recyclables in both Options 2 and 3, an increase in recycling and decrease in garbage would effectively change the per household costs equally for either option.

Foth did not assume a change in the Parks Department collection system. The focus of this analysis was on the residential collection systems (for both garbage and recyclables). An analysis of the current garbage and recycling transfer, landfilling and recyclables processing / marketing arrangements was outside the scope of this project.

## Methods

Foth used a series of methods to conduct this analysis. Background data and information was requested and provided by City staff. Information and data were reviewed from the City web site including financial and budget reports. Information on the current system was analyzed and summarized in this memo, including the 2017 and 2018 Community Survey results.

Truck and cart equipment vendors were contacted to establish approximate purchase prices, truck specifications and performance information. This information about potential future collection improvements was analyzed and is summarized in this memo. A local third party waste hauler was contacted for budgetary pricing for a contract option service comparison. This information is also included in the memo.

Current solid waste system costs were quantified (Option 1). Equipment and operational changes were then applied within this cost analysis to analyze the capital and operating cost changes for converting to a fully automated system for residential collection of both garbage and recycling operated by the City (Option 2).

The possibility of cost savings from combining some small commercial accounts was not incorporated. Finally, a simple cost analysis was prepared to compare the "Contract Option" (Option 3) based on the informal price quote from one potential contractor.

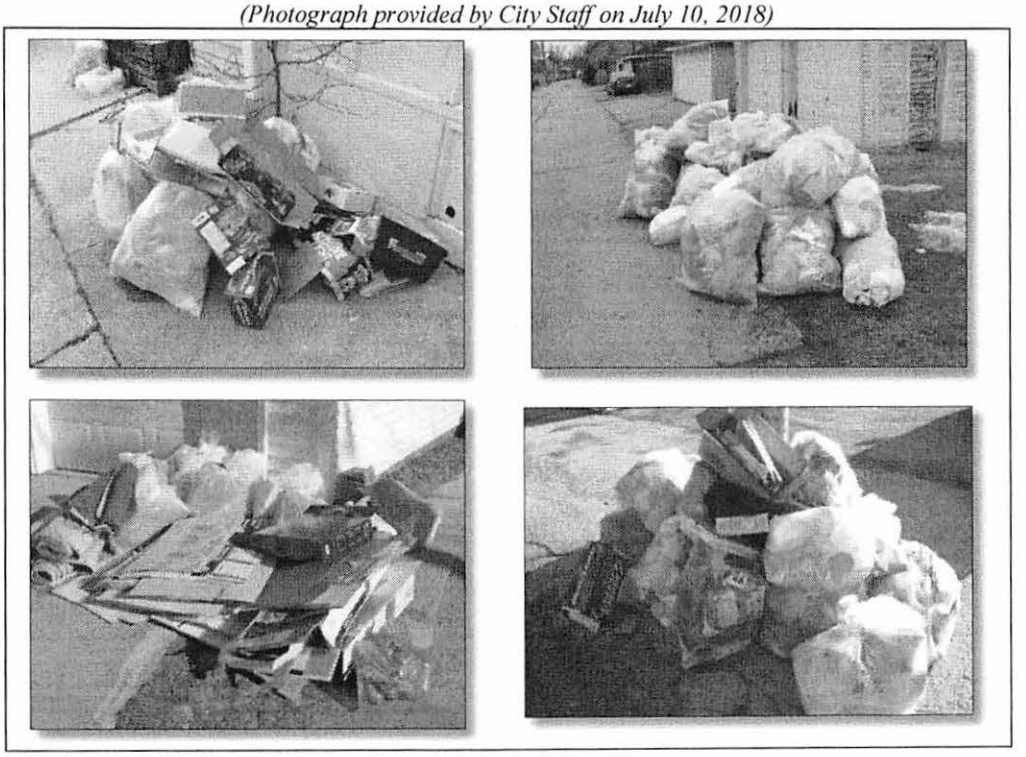
[1] "Pay As Your Throw" would include multiple cart sizes and a variable rate pricing system designed to encourage additional waste reduction and recycling (i.e., the larger cart services are more expensive).

## Summary of Current System Operations

The City's current solid waste collection system collects the following residential materials on a weekly basis as described on the City's "Garbage and Recycling" web page[2]:

- **Garbage.** Residents must use their own clear or opaque plastic bags (13 gallon minimum). Black bags, garbage cans or receptacles are not acceptable. Plastic grocery bags are not adequate to secure garbage. Refuse not suitable for placement in bags must be bundled (under three feet in any dimension and less than 35 pounds).
- **Recyclables.** Residents may commingle their City-specified recyclables into a single-stream of materials. For containers (cans, glass, plastics), residents must use blue plastic bags. Recyclable paper items may also be put into the blue bags in small sizes and quantities or may be bundled separately with string or twine (maximum of two feet square).

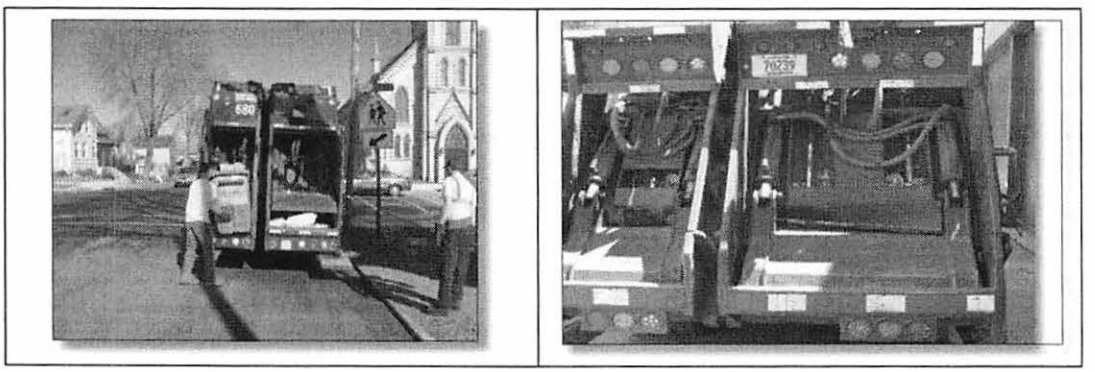
**Figure 1**
**Sample Residential Recyclables Set Out**
*(Photograph provided by City Staff on July 10, 2018)*



[2] City of Sheboygan "Garbage and Recycling" web page:
http://www.sheboyganwi.gov/departments/public-works/streets-sanitation/garbage-and-recycling/

Garbage and recyclables are *co-collected* on the same day by City crews in a split-body rear load packer truck. Sixty percent of the truck's capacity is apportioned for garbage and forty percent for recyclables. Bags are manually lifted by City staff into one of the two rear loading hoppers.

**Figure 2**
**Current Truck Design – Split Body, Rear Load Packers**
*(Photograph provided by City Staff on July 10, 2018)*



Bulky items (e.g., large appliances, furniture, etc.) and yard waste are not collected as part of the curbside program. The City has a "Residential Recycling Center" resident drop off for yard waste, drain oil, cooking oil, scrap metal, automotive batteries, and non-Freon appliances.[3]

The City Division of Streets and Sanitation (A Division of the Department of Public Works) operates the garbage and recycling collection system. The City's "Solid Waste" Ordinance (Chapter 102) provides for the legal requirements, standards and system management of garbage and recycling including storage and collection.[4]

Table 1 lists the number and type of residential households served by the City garbage and recycling collection system.[5] Residential garbage and recycling are collected Monday through Friday each week. Residential drivers collect within the daily residential routes identified on the City's map.[6]

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[3] City of Sheboygan "Residential Recycling Center" section of the "Streets & Sanitation" web page: http://sheboyganwi.wpengine.com/departments/public-works/streets-sanitation/

[4] City of Sheboygan "Solid Waste" Ordinance (Chapter 102): https://library.municode.com/wi/sheboygan/codes/code_of_ordinances?nodeId=MUCO_CH102SOWA

[5] Based on data provided by City staff via email on March 16, 2018.

[6] City map of Garbage and Recycling collection days: https://gis.sheboyganwi.gov/portal/apps/webappviewer/index.html?id=32e1f3a92a9e44379f744e2b8562e5d6

## Table 1
## Residential Garbage and Recyclables by Type of Households

*(Number of Households)*

| Total Collection Points (Households Served) | 17,107 |
|---|---|
| Single Family Residence | 16,837 |
| Two Family Units (Duplexes) | 162 |
| Four Family Units (Quadplexes) | 108 |

Garbage and recyclables are hauled and unloaded separately at the Waste Management Inc. – Sheboygan Falls Transfer Station. According to City staff, the 2018 tipping fees are $33.05 for garbage and $0.00 for recycling. The avoided cost of garbage tipping fees is one of the major financial incentives for the City to enhance the recycling program.

Table 2 lists the seven trucks currently in use by the City's Streets and Sanitation Division to collect regular garbage and recyclables. There are two additional trucks in the fleet for seasonal leaf collection and one used for garbage collection by the Parks Department. Table 2 provides the City's vehicle identification number, primary route assignment, manufacture year, engine/chassis manufacturer, body capacity, body configuration (single compartment or "full" vs. "split/body"), additional equipment such as a semi-automated "cart tipper" on the rear hopper, and the City department operator.

The City's Parks Department owns and operates one (1), 13-cubic yard rear load packer truck (#87). This Parks' truck was not included in this analysis, but should be considered as part of any overall system improvement implementation plan. Based on City reports, residential garbage collected is approximately 11,273 tons per year. Personnel providing the labor for solid waste collection services are mostly dedicated to eight (8) assigned positions. This does not include administration and management staff.

## Table 2
## Sheboygan Garbage and Recycling Truck Fleet

| Truck # | Function | Year | Engine/ Chassis Make | Packer Body Model | Body Configuration | Body Capacity *(Cubic Yards)* | Tipper | Operator |
|---|---|---|---|---|---|---|---|---|
| 082 | Spare Garbage | 2006 | Crain Carrier | PakMor | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 087 | Park Garbage | 2004 | Sterling | New Way | Full | 13 | Yes | Parks Dept. |
| 094 | Leaf Pick Up | 2000 | International | McNeilus | Full | 25 | Yes | Streets & Sanitation Div. |
| 095 | Leaf Pick Up | 2000 | International | McNeilus | Full | 25 | Yes | Streets & Sanitation Div. |
| 096 | Spare Garbage | 2006 | Crain Carrier | PakMor | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 097 | Spare Garbage | 2006 | Crain Carrier | PakMor | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 680 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 685 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 686 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 689 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |

Worker's compensation claims, other injuries and lost-time incidents due to the manual lifting and collection of garbage and recycling is a significant factor in this analysis. There is real and significant risk due to the repetitive lifting motions and the normal hazards of handling bags of garbage (e.g., pricks from needles or other "sharps"). See Figure 3 for a photograph showing sharps in a resident's trash.

**Figure 3**
**Sharps in Manually Collected Trash**
*(Photograph taken by City Staff On May 21, 2018)*

The current solid waste and recycling system is financed through a combination of the general fund and user fees.

The current system (Option 1) has an estimated first year cost of approximately $8.50 per household per month. Note that costs of operations are likely to escalate over time. Some line item costs will escalate at different rates. The timing of equipment replacements and truck salvage value also will have an impact.

## Summary of Citizen Survey Results

A Community Survey has been used by the City to gain an understanding of the views and preferences of the citizens of Sheboygan. The following results summary are from the citizens responses to survey on questions in 2017 and 2018 related to garbage, recyclables and yard waste collection services.[7]

Table 3 presents the summarized responses to question number 4: "Using the list of services and functions provided by the city, please indicate how important each city function is to you and your household."

[7] City of Sheboygan Community Survey for 2017 and 2018, including the "2018 Executive Summary", http://www.sheboyganwi.gov/wp-content/uploads/2018/03/Community-Survey-2018-Exec-Summary.pdf and tabulated responses for the 2017 and 2018 surveys as provided by City staff.

**Table 3**

**Citizens Survey Results: How Important is Each City Function**

*(Percent of respondents replying "Very Important" or "Important")*

| | 2017 | 2018 |
|---|---|---|
| Leaf pick-up | 62% | 66% |
| Recycling and garbage collection | 90% | 91% |
| Residential yard waste | 72% | 77% |

Table 4 presents the summarized responses to question number 5: "Using the same list, please indicate how well you think the city is doing in each area."

**Table 4**

**Citizens Survey Results: How Well is the City Doing?**

*(Percent of respondents replying "Excellent" or "Good")*

| | 2017 | 2018 |
|---|---|---|
| Leaf pick-up | 68% | 74% |
| Recycling and garbage collection | 74% | 76% |
| Residential yard waste | 60% | 67% |

As can be seen from Table 3 and 4, there is generally high regard for both the importance and performance of these City solid waste and recycling services. In all cases, there has been improvement in 2018 survey results compared to 2017 results.

The Appendix contains the verbatim comments from Sheboygan residents responding to the open-ended survey questions in 2017 and 2018 that relate to the City's solid waste and recycling services.[8] The opinions, while not analyzed from a statistical perspective, can be inferred to represent the thoughts of some Sheboygan residents about specific collection system design issues. The most common themes from these comments can be summarized as follows:

- The City should move away from the current system of containing and setting out garbage and recyclables in plastic bags only. Instead, the City should modernize the system to be like most other neighboring cities and use garbage and recycling carts with lids and wheels.
- The bag system enables animals (e.g., sea gulls) to rip into the garbage and spread the materials as litter. A new cart-based system could help better contain prevent spreading the materials.
- The aesthetics of the current bag system makes the City look less neat and tidy compared to a cart system.
- A couple of residents equated the option of privatizing the system with their desire for changing to a cart system.

[8] City of Sheboygan Community Survey, comments from the 2017 and 2018 survey results as provided by City staff.

- One resident complained about the need to purchase blue bags for recycling. Also, the impression was that if recyclables are in regular trash bags, the material is thrown away and therefore not recycled.
- Several residents stated or implied they would be willing to pay more for a cart – based system.
- One resident stated the need to implement a new automated collection system (i.e., using trucks equipped with a robotic arm to lift carts) instead of the current system of manual lifting of bags.
- One resident suggested cancelling the leaf pick-up in the Fall. On the opposite side of the issue, another resident state they wanted to see more yard waste curbside collection days.
- One resident wanted more curbside collection options for bulky item materials.

The results of the Community Survey over the past two years indicate strong support of the City's services, but the verbatim comments also indicate a portion of the residents want to see the operations modernized using a cart – based system.

## Summary of Potential Future System Options

Table 5 lists current operations (Option 1) in comparison to the automated system option and the contracted option developed for this analysis:

- Option 1 – Current City system.
- Option 2 – Automated system owned and operated by the City.
- Option 3 – Automated services operated under contract to private hauler.

For Option 2, the analysis is based on the potential savings from the purchase of six ASL trucks and standardized carts for residential garbage and recyclables in 2019. The estimated purchase price for budgeting purposes for a new ASL truck is $275,000. The estimated purchase price for 34,200 residential carts (at $57 per cart) is $1.95 million. Thus, the total capital cost of the new automated system is approximately $3.6 million.

For Option 3, the analysis is based on a budgetary quote provided by a local hauler that could potentially provide services to the City and assumes services would be automated as the City is requiring carts be used by residents.

Prices per household in the analysis range from $8.45 per household month for Option 2 to $9.80 per household per month for Option 3. Option 1 is $8.50 per household per month. The variables included in each are the variable of providing collection service plus costs of garbage disposal, recycling processing, and purchase of carts, where applicable.

The potential new system options would need to include comprehensive public education and outreach. The City would also need to amend the current solid waste ordinances to reflect the new operations and resident instructions (e.g., use and care of the City carts, etc.).

**Table 5**
**Description of System Options**

| | OPTION #1 | OPTION #2 | OPTION #3 |
|---|---|---|---|
| **Proposed System Title** | **Maintain Current System** | **New, Fully Automated Side Loaders (ASL)** | **Contract** |
| Truck Owner | City | City | Contractor |
| Cart Owner | n.a. (i.e., no carts) | City | City |
| Equipment Type | 60/40 split body, rear-load packers | Single compartment, ASL trucks | Single compartment, ASL trucks |
| Collection Process | Two person crews; manual loading (resident bags, etc.) | One person crews; fully automated with carts | One person crews; fully automated with carts |
| Collection Frequency | Weekly for garbage Weekly for recyclables | Weekly for garbage Weekly for recyclables | Weekly for garbage Weekly for recyclables |
| Approximate Implementation Date | Immediate (i.e., maintain current system) | Sept 2019 | Sept 2019 |

Table 6 provides a summary of Foth's economic cost-benefit analysis for this memo. The intent of this analysis is to help estimate the cost differences between the current system and potential future options. The current, Option 1, system costs are based on elements of the current solid waste system, Option 2 includes new fully automated side loaders, and Option 3 includes contract services.

Option 1 and 2 include labor, capital replacement costs, truck maintenance, fuel, and lost time due to injuries. Option 3 is a budgetary number provided by a local hauling company. In Option 2 and Option 3 the cost to purchase carts is itemized. In all three options, garbage tipping fees and recycling revenue or charges are itemized. Most of the cost data are based on City budget reports provided by staff. When not available, Foth made assumptions based on industry standards.

Other cities in eastern Wisconsin have recently converted to automated, cart – based systems. For example, the City of Neenah recently made a decision to transition to automated collection and are currently finalizing the details of cart sizes and color.[9]

The article states that other cities in the Fox River Valley area have also transitioned to automated collection (Appleton, Oshkosh, Menasha, Kaukauna, Grand Chute and Fox Crossing).

[9] Post Crescent article (July 2, 2018), *"Neenah Talks Trash: Size and Color Matter to People"*.

From the Wisconsin Garbage Collection Study, the following additional Wisconsin cities are listed as having cart – based collection systems: Greenfield, Beloit, Brookfield, Wausau, New Berlin, Fond du Lac, Wauwatosa, La Crosse, West Allis, Janesville, Waukesha, Racine, Green Bay, and Madison.[10]

**Table 6**
**Summary of Cost – Benefit Analysis**

| | OPTION #1 | OPTION #2 | OPTION #3 |
|---|---|---|---|
| **Proposed System Title** | **Maintain Current System** | **New Fully Automated Side Loaders (ASL)** | **Contract** |
| **First Year Truck Capital Costs:** | **$445,600** | **$235,714** | |
| **First Year Cart Costs:** | | **$405,040** | **$405,040** |
| **Monthly cost of carts per household** | | $1.97 | $1.97 |
| **"Total Personal Services"** | **$645,961** | **$484,470.75** | |
| **Truck Operating Costs:** | **$273,994** | **$236,995.50** | |
| **Subtotal from above (no garbage/recycling tipping fees)** | ***$1,365,555*** | ***$1,362,220*** | |
| **First year cost per household per month** | $6.65 | $6.64 | |
| **ASSUMED MONTHLY CONTRACT COLLECTION PRICE PER HOUSEHOLD** | | | **$6** |
| **First year contract collection cost** | | | **$1,231,704** |
| **Garbage Disposal Price per Ton (2018)** | **$33.05** | **$33.05** | **$33.05** |
| **First year garbage disposal cost** | **$372,588** | **$372,588** | **$372,588** |
| **Monthly garbage disposal cost per household** | $1.81 | $1.81 | $1.81 |
| **Recyclables Disposal Price per Ton (2018)** | $0.00 | $0.00 | $0.00 |
| **TOTAL OPERATING COST (First Year)** | **$1,738,143** | **$1,734,808** | **2,009,331** |
| **Monthly total operating cost per household** | $8.50 | $8.45 | $9.80 |

[10] Wisconsin Garbage Collection Study (unpublished data), as provided by City staff.

## Summary of Advantages and Disadvantages

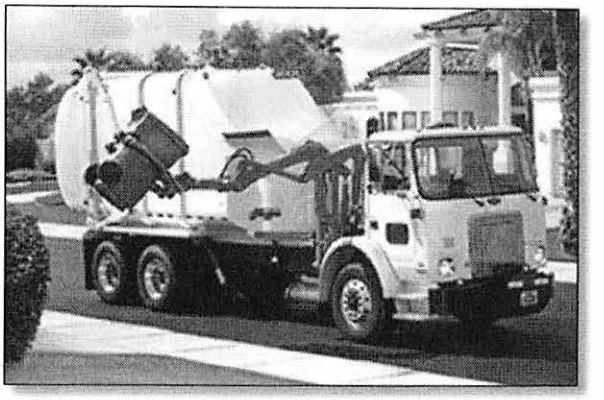
The City has a mature and well-functioning garbage and recycling collection system. However, opportunities for greater efficiencies, employee safety, improved customer experience (ease of use, aesthetics) and increased recycling rates are available through equipment, operational and program/policy changes.

Option 2 and Option 3 assume a conversion to an automated collection system using trucks equipped with robotic arms and standardized carts for residential garbage and recycling instead of the current manual collection methods (Option 1).

### Advantages of ASL Systems

There are various costs and benefits associated with a potential change to ASL trucks and carts for residential solid waste collections, which include the following.

**Figure 4**
**Example of Automated Side Load Trucks**



### Worker Health, Safety and Job Satisfaction

Multiple independent studies have indicated sanitation worker health and safety is significantly improved with automated collection, especially when compared with full manual collection operations such as is used with the City's current residential system. This improved safety is due to significantly reduced lifting and the ability to serve most households from inside the truck cab using the ASL controls, avoiding the hazards of getting in and out of the truck which exposes employees to traffic and varying weather conditions.

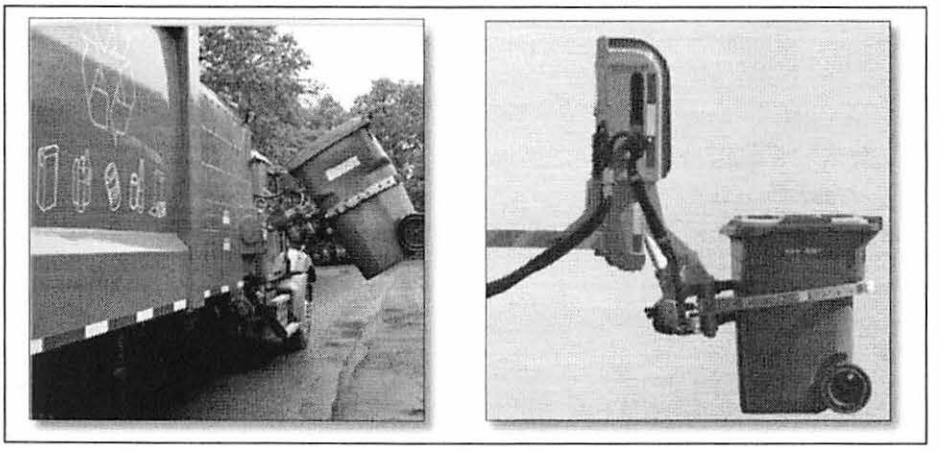
Automated systems are generally operated with one crew member and do not need a second crew member to serve as the helper. A second crew member may have additional safety risks of being outside of the truck when it is being operated.[11] The amount of

[11] National Institute for Occupational Safety and Health (NIOSH), Publication 97-110, "Preventing Worker Injuries and Deaths from Moving Refuse Collection Vehicles": https://www.cdc.gov/niosh/docs/97-110/pdfs/97-110sum.pdf

exposure to hazards (e.g., sharps) is dramatically reduced with automated systems. There are typically direct savings in reduced accidents, injuries and lost time. ASL drivers report much higher job satisfaction and positive employee engagement due to working in the climate-controlled environment of their cab instead of having to get out at each stop.

ASL trucks do however require a higher level of operator training and certification compared to manual-loading trucks due to the more sophisticated robotics. Maintenance is also more complex. The purchase of ASL trucks would require an investment in the City's workforce.

**Figure 5**
**Example of Automated Side Load Lifting Arms**



### Route Productivity

Route productivity (measured as "stops per hour") typically increases with automated collection systems. The time for an automated truck to pick up, tip and set down a cart is on average much less than the time it takes for a crew member to get out of the cab, lift the bags (or other receptacles) of materials into the truck hopper, occasionally cycle the packer ram blade from outside the truck, and then get back into the cab. The time in-between stops would be the same between an automated system and the current manual system.

### Resident Convenience Due to Standardized Carts

When provided with standardized, wheeled, lidded carts, residents typically comment on the added convenience, improved safety, added capacity and privacy. The wheels on the carts make moving materials to the collection location easier for residents with less lifting and carrying of multiple receptacles.

**Figure 6**
**Example of Standardized Cart**


*Source: http://tools.recyclingpartnership.org/wp-content/uploads/2017/03/recycling_carts_guide.pdf*

Under a potential new automated system, the City could offer two cart sizes. The standard "large" sized cart would be about ninety-five (95) gallons (nominal capacity). The standard "medium" sized cart would be about sixty-five (65) gallons (nominal capacity). Depending on the cart size, cart manufacturer, automated truck system, and City specifications the maximum weight in a medium or large cart could range from 200 to 300 pounds.

Under the potential new system, residents may still be required to bag their garbage and place the secured/tied bags inside their City-provided cart. This keeps the carts cleaner and helps further prevent blowing litter during the cart unloading operations particularly under windy conditions.

The current recycling blue bags and paper bundles are publicly visible and thus less secure. The lids on carts help prevent recyclables from getting wet. The cart design and construction with tight fitting, hinged lids generally provide added protection against rodents and other animals resulting in less fugitive litter and providing improved neighborhood aesthetics. For Option 2 and Option 3, Foth assumed the City would own the carts and residents would no longer need to purchase blue bags for recyclables.

**Figure 7**
**Example of Set Out of Carts for Automated Service**
*(Stock Foth Photograph)*

Carts used in an automated system typically increase recycling participation and recovery. Other communities have typically experienced 10 to 30 percent increases in recyclables by switching from bins to carts. This increase was not accounted for in Foth's analysis due to the difficulty of predicting a specific outcome. Additionally, since the City is paying the costs associated with disposal of garbage and processing of recyclables in both Options 2 and 3, an increase in recycling and decrease in garbage would effectively change the per household costs equally for either option.

### Modernizing the City Fleet of Trucks

Option 2 assumes the City's Streets & Sanitation Division would retire its existing fleet of trucks and convert to six new ASL trucks. The City would be able to take advantage of the opportunity to modernize its fleet, significantly reduce the average age of the trucks, and help reduce annual maintenance costs.

### Opportunities for Third Party Grants and Technical Assistance

Converting to an automated system with standardized carts creates additional opportunities for third party grants and technical assistance. One source of technical assistance is The Recycling Partnership (TRP). TRP offers recycling cart grants, free technical assistance, public education tools and other resources for recycling program improvements such as upgrading to carts.[12]

[12] The Recycling Partnership (TRP) web site: https://recyclingpartnership.org/

## Disadvantages of Automated Systems

Disadvantages of a potential new automated system includes: the capital and maintenance costs of the new ASL – equipped trucks, the costs of the carts, and the education needed for the change to a new standard of materials preparation and set-out instructions.

### Higher Truck Capital and Maintenance Costs

The average cost of purchasing an ASL-equipped truck is generally more expensive than standard rear-load packer trucks of the same size. This analysis uses a conservative budgeting estimate of $275,000 per truck.

Vehicles with automated equipment generally require more maintenance due to the increased number and complexity of the mechanical parts. This analysis conservatively estimates 30 percent more maintenance per new ASL truck compared to current rear-load packer trucks.

For option 2, Foth recommends the City develop a regular ASL truck maintenance schedule and routine to help extend the life of the robotic arm and other truck components.

### Higher Cart Capital and Maintenance Costs

The purchase of standardized carts is an essential component of an automated system. These carts are conservatively estimated to cost $57 each. Option 2 and Option 3 assumed the City would budget for a new cart replacement and maintenance program.

### Storage of Carts

Whenever a solid waste program converts to the use of standardized carts, whether for garbage or recycling, some residents are concerned there will be a lack of adequate storage space in their garage or alongside their house. This is a legitimate concern and the City may need to discuss potential policy and procedural options (e.g., different cart size choices, options for storage location restrictions, requirements that the cart not be left on the boulevard after collection, etc.)

### Avoidance of Overhead Obstacles

ASL drivers must be fully trained to avoid overhead obstacles (e.g., wires, tree branches, etc.) when operating the robotic arm. The Streets and Sanitation Division will need to evaluate the need to trim boulevard trees that obstruct safe operation of the trucks prior to the launch of the new ASL system evaluated (Option 2 or Option 3). The cost of tree trimming was not included in this analysis and is assumed to be the same for Option 2 and Option 3.

## Municipal versus Contract Operations Risk Analysis

Option 1 and Option 2 in this analysis both assume the City will own and operate the garbage and recycling collection system, regardless of the collection equipment. Option 3 assumes the same collection methods and the same equipment as Option 2 except that ownership of trucks and all operations are contracted to a private hauler.

This section of the analysis explores the relative risks and benefits of municipal versus contract collection operations. This risk analysis is a preliminary framework for further discussion and policy development. For example, if the City elects to contract its collection system, further planning is needed, including more detailed written collection service specifications. With Option 3, the City would need to utilize a request for proposal (RFP) or other standard procurement process.

### Risks of Municipal Operations

The following risks are an outline of potential disadvantages to continued municipal operations:

- Management demands continue and may increase.
- Operational requirements will likely increase as more material streams are added into the City's list of collection services (e.g., yard waste, bulky items, etc.).
- Taking advantage of changing collection technologies and other industry innovations require specialized knowledge about solid waste collection systems.
- Workers compensation insurance rates and injury claims for the City may increase.

Many of these risks identified above will be similar to the risks of private contract operations, but the risks and benefits may be shared differently.

For most of the risks of municipal operations above, mitigation strategies are available such as management training and systems planning. Also, continuing education and peer networking are additional means to anticipate changing industry trends.

### Risks of Private Collection Contract Operations

The underlying assumption for Option 3 is that both garbage and recycling collections would be contracted to a private hauler via RFP or similar procurement process. Option 3 also includes the assumption that the City would continue to do the billing and customer service. (e.g., residents call the City for service change requests).

For this analysis, Foth assumed the City's contract for garbage disposal and recyclables processing/marketing services would remain as a separate contract (essentially "as is" under the current system) for all three options. Option 3 assumes disposal and processing will continue to be a separate contract, and the City will purchase the carts.

The following risks are an outline of potential disadvantages to a change to contract collection operations:

- After contracting and within the term of the contract (e.g., five years), the service may need to change and the City may have a challenge getting a competitive price for a change order.
- There may be a lack of adequate competition if the City releases a RFP for contracted collection services. For example, only one company may respond.
- In the future, the City may not be able to readily get back into the collection operations if the City sells all of its garbage and recycling trucks and re-assigns or lays off its garbage and recycling crews. Combined with the risk, lack of competition, this may also mean that there is little "back up" plan if the contractor is unable to continue service for whatever reason.
- Coordination of contracted disposal service with contracted collection service is a City risk. (E.g., the transfer station contractor could require conditions that cause the City to pay for a change order for the contract hauler).
- The City's management demands would change to contract oversight and compliance, hauler performance monitoring, and dealing with customer complaints about the hauler. For example, the contractor may fail to perform collection or customer service operations per the contract standards or customer expectations.
- The customer service may be adversely affected if there are changes to the contractor's key management personnel or if the contractor sells to another firm.
- Operational requirements could still increase as more material streams are added into the list of collection services (e.g., yard waste, bulky items, etc.). This could become a procurement challenge to get competitive rates for expanded service during the term of a contract.
- Funding sources may change or become less reliable from a City cost perspective. A contract may not have adequate flexibility to change terms if the City needs to adjust to a new revenue reality. For example, less funding may require less service.

As noted, many of these risks identified above will be similar to the risks of municipal operations. In some cases, the collection contract may specify how these risks and management services will be shared between the City and the contractor. The relationship and close communication between City staff and the contractor will be a key strategy to a successful partnership and quality service to Sheboygan residents.

## Findings and Conclusions

### Program Findings

1. Prices per household per month including collection services, garbage disposal, recycling processing, and cart purchase, where applicable are $8.50 for Option 1, $8.45 for Option 2, and $9.80 for Option 3.
2. This cost and benefit analysis used a simple cost analysis approach deemed appropriate for the current project. However, a more detailed analysis may be warranted including: a multi-year discounted cash flow analysis of these options; financing options and costs; review of non-Sanitation Division City costs impacted by the decision.
3. This analysis assumed no change for yard waste and bulky waste items collections. These and other non-curbside collected materials would continue to be managed and collected as per the current system without change.

### Implementation of Automated Collection with ASL Trucks

4. Option 2 of this cost analysis assumes the City would purchase six, new ASL trucks to service all residents' garbage and recycling needs using one collection driver per truck and one material type per truck (e.g., garbage or recycling). The ASL trucks should both be "standard" style bodies with single compartments.
5. The City should consider retiring and selling the existing trucks even though some useful life remains, to ensure a City wide transition happens at one time. No estimated value was assigned to these vehicles for Option 2.
6. To optimize the efficiency gains of the new ASL system, residential route collection should be revised.

### Implementation of Automated Collection with Carts

7. Along with the ASL trucks, standardized, garbage and recycling carts should be purchased and rolled-out to all residents in the City.
8. The City should contact The Recycling Partnership to explore a recycling cart grant and associated implementation technical assistance services.
9. The City could still require residents to contain the garbage in plastic garbage bags to reduce the potential for wind-blown litter during unloading and to keep the garbage carts more sanitary.

### Implementation and Education

10. For Option 2 and Option 3, the City would need to develop a detailed implementation plan for all elements of the new automated system including: truck purchase (Option 2); cart purchase; community engagement / public education; ordinance amendment; route optimization plans (Option 2); cart roll-out; etc. The comprehensive implementation plan would be outlined and scheduled to help coordinate the overall project.

11. There are many other communities that have made the conversion to ASL systems with carts that can be used as examples for campaign plans.
12. Once additional technical details are planned, implementation of the new system will require an ordinance amendment to provide the legal and enforcement structure needed to implement many of the new requirements (e.g., resident set out instructions; prohibited items; etc.).
13. Boulevard trees with overhanging branches may be obstacles to the automated robotic arm. Option 2 and Option 3 assume the Streets and Sanitation Division would inventory and trim these obstructing boulevard trees prior to the launch of the new automated system.

## Appendices

Appendix A: Survey Results and Comments

# Appendix A

# Survey Results and Comments

# Appendix
# 2017 and 2018 City of Sheboygan Community Survey: Results Excerpts Pertaining to Solid Waste and Recycling

## 2017 Community Survey

**Q6 Please share with us any comments you wish to make.**
*(Answered: 410; Skipped: 656)*

| Reference # | Comments |
|---|---|
| 31. | "As someone not originally from Sheboygan, I find it abhorrent that we throw our trash bags the side of the road. Not only is it an eye sore, it allows animals to get into the trash and litter the area. I despise the fact that we do not have garbage cans. Even worse, I think it's terrible that we are responsible for purchasing blue garbage bags for recycle, and they aren't in blue bags, the recyclable items are thrown away. This is one of my biggest issues with this city. It makes us look cheap. It makes us look like we're living in the 50's. I cannot believe that this is protocol. I don't care how much it costs to implement trucks that can pick up waste receptacles, it NEEDS to happen. We will turn off any young blood from coming to Sheboygan because literally EVERYWHERE else, people are using garbage and recycle cans. |
| 49. | Stop trying to grow and tighten the belt on what we have. -Bring more attention to the downtown and lake front and less on the highway corridor that will naturally grow. –Nice streets = people wanting to buy a house on that nice street. Come down even harder on slumlords/landlords. A single rundown rental (the majority of rundown houses are rentals) will ruin an entire block of decent homes. -Eliminate the bus service (it's not cost effective and WAY under-utilized). You could give taxi tokens to every person that currently uses the buses (as many as they need) and the city would be further ahead dollar wise. Yes, the city would buy the tokens, but the net result would be incredibly fruitful. -We absolutely need to start using garbage cans at every residence. The number of rodents/seagulls ripping into garbage bags is mind boggling, and the aftermath is atrocious. |
| 74. | l) Did not know we have a tv station<br>2) need to attract more businesses<br>3) need to add garbage cans like other cities use, this place is filthy on trash day from birds attacking garbage bags |
| 93. | Please hire a garbage pickup company so we can use plastic containers. Putting garbage out in bags is unsightly and unsanitary. I would be willing to pay more for this service |
| 143. | The roads are embarrassing. Garbage collection needs to be in automated pickup receptacles. The neighborhoods look bad on trash day |
| 174. | The city needs to have residential trash containers for garbage and recycling |

like other cities instead of just having residents set garbage on curb. Garbage should be in trash containers

220. Garbage on street is disgusting and archaic. Need to go to container system like most of the communities around us use.

233. Can we get some garbage bins so the animals aren't dragging trash everywhere.

238. It's time for some tough decisions. Staffing fire trucks without enough people to perform all the necessary functions at a fire. Georgia Ave. was supposed to be done almost 25 years ago and PART of it is finally scheduled.

Garbage pickup is a feast for the birds, time for bins and automated trucks or privatization. These are examples that are top of mind now, but there are lots of other things that need strong leadership to fix.

248. Cancel leaf pick up in Fall. Stop picking up garbage in black bags.

290. City needs trash cans for garbage. City of Sheboygan seems to be behind on this. Also, would like to see more available paths and places for families with dogs. I feel this is not a pet friendly community. Overall, an ok community to live. It's sad to see so many business go under or leave. Very disappointed to see another grocery store and a Sam's Club coming to the community.

332. With the amount of seagulls we have I think it would be wise to explore the city garbage and recycling cans. So many bags get ripped open by the birds. We need to seriously address the bigotry in this community! The number of deaths by overdose needs to be known. We can't shelter the community from those facts.

345. I would love to see the municipal garbage cans that can be used on the curb. The birds are terrible with tearing up the plastic bags. Some of the neighborhoods have way too many city trees. I don't feel safe walking down those streets because you can't even see the street lights through the trees.

355. Why not let people use roller trash containers like the town does? Why not allow dogs in parks with poop bags?

387. I think the garbage collection and environmental protection could be improved with city provided garbage and recycling bins instead of allowing loose bags of garbage and recycling.

405. I think the city is doing a good job protecting the natural environment. However, if the city moves forward with a fourth Kohler gold course in the Town of Wilson my opinion will change drastically. One of our favorite places to walk our dog is the horse park. It would be sad to see that land be partially used by another golf course we don't need! I would like to see more days available for curbside yard waste pick-up. We have small cars that makes it difficult for us to haul the waste. I also have very bad allergies which makes it difficult for us to burn the yard waste. Another improvement for proficiency, and beautification of the city would be everyone have the same garbage and recycling bin.

## 2018 Community Survey

**Q13 The city is reviewing its list of critical project and potential new initiatives for implementation in 2019 and 2020. Please share with us any project or initiatives that you would like the city to pursue in 2019 and 2020.**
*(Answered: 787; Skipped: 400)*

| Reference # | Comments |
|---|---|
| 107 | garbage collection in bins instead of plastic bags |
| 150 | Garbage pick-up is a potential health hazard. Bags need to be in receptacles. |
| 190 | Something needs to be done about garbage and recycling. Most cities have the canisters out in the curb provided by the city. The garbage bags strewn about is really gross and very off putting. |
| 201 | Continue to repave streets. -Install more street lights.<br><br>-More public trashcans in neighborhoods. - Privatize garbage/recycling collection so we can use cans. This would prevent loose trash being blown around in the wind and cats/raccoons/etc from getting into the bags overnight. |
| 247 | City provided garbage cans rather than the current system |
| 333 | FIX THE STREETS! PROVIDING A MEANS OF GETTING RID OF HOUSEHOLD JUNK EVEN A FEW TIMES A YEAR WOULD BE GREAT. USED TO HAVE A DROP OFF SITE FOR IT. COSTS AN ARM AND A LEG TO TAKE IT TO A PRIVATE SERVICE, CAN IMAGINE WHAT PEOPLES GARAGES AND BASEMENTS LOOK LIKE WITH UNWANTED ITEMS THAT COST SO MUCH TO GET RID OF. I EVEN SEE A LOT OF JUNK IN PEOPLES BACK YARDS. EVEN CHARGING A FAIR PRICE FOR THE SERVICE WOULD BE ACCEPTABLE. |
| 359 | garbage and recycle bins and trucks that pick them up - like other communities. |
| 377 | would like to see public works begin using curbside bins for garbage and recycling collection. I would also love to see sidewalks on my block of Main Avenue, and yes, I'd be ok paying my share. |
| 551 | I would like cleaner streets which means every household should put their trash in a bin provided by the city. Any damaged cans that needs to be replace should be the resident responsibility. This will keep streets clean and away from wild animals such as seagulls and/or small mammals. |
| 604 | - WSCS should be putting their content on YouTube vs. using an obscure player mode. Makes sharing content via social media more difficult.<br><br>- Garbage pickup in bags looks bad. Shocked the community hasn't switched to using garbage bins as it also uses fewer staff to complete the task. Automate downtown parking meters (I'd happily pay more not to carry random change around)<br><br>- Shocked there is a large call for a community center on the Armory. The YMCA which holds community programming, recreation, and teen center is two blocks from there. If you can save the building, save it. But don't hesitate to move on if the local group isn't up to the task. |

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July 17, 2018

**TO:** Jason Blasiola, Superintendent Streets and Sanitation,
City of Sheboygan, Department of Public Works (DPW),

**CC:** David Biebel and Dave Groves, Sheboygan DPW

Dan Krivit, Foth Infrastructure & Environment, LLC (Foth)

**FROM:** Jennefer Klennert, Foth
Nathan Klett, Foth

**RE:** Analysis of the City of Sheboygan's Potential Options
for Garbage & Recycling Collection System

## Executive Summary

The City's Streets & Sanitation Division currently operates a residential garbage and recyclables collection system based on manual lifting and collection of materials from bags (purchased by residents). Continuing the current manual collection system utilizing split-body, rear-load packer trucks is identified as "Option 1" for purposes of this simple cost analysis. Option 1 has an estimated first year cost of $8.50 per household per month.

The City directed Foth to analyze specific options for automating collection of both garbage and recyclables collection systems. The City could see cost savings, particularly in the long-term, if it converts to fully automated trucks for residential collection of garbage and recyclables. Other costs and benefits were also identified.

The two (2) options for conversion to a new automated system were:

**"Option 2"** The *City purchases and operates* six (6) new Automated Side Loader (ASL) trucks. At an estimated purchase price of $275,000 per truck, the total capital cost to the City of these new trucks is $1.65 million. Foth used a cost estimate of $236,000 for the first year capital costs for the trucks based on an expected useful life of 7 years. Option 2, in total, has a first year cost estimate of approximately $8.45 per household per month (including capital costs of carts).

**"Option 3"** The *City contracts* for automated collection of garbage and recyclables. Option 3 has an estimated first year cost of approximately $9.80 per household per month based on an informal budgetary price quote from a potential local hauler. This informal budget quote assumes the City would own the carts and continue to do the billing. The City is also responsible for any costs associated with disposal of garbage and processing of recyclables, which is included in the approximate cost of $9.80.

For this analysis, Foth assumed in both Option 2 and Option 3 that the City would continue a weekly recycling and garbage collection schedule. The City may want to consider converting to an every other week recycling collection to reduce labor costs. Every other week recycling collection is a generally accepted industry practice for both municipal and private hauler recycling systems.

For this analysis, Foth also assumed that the City would own the new standardized garbage and recycling carts under either Option 2 or Option 3. Approximately 34,200 carts would need to be purchased by the City at an assumed price of $57 per cart for an estimated capital cost of $1.95 million. Based on an estimated 10-year useful life of the carts and a simple costing method, the capital costs of new carts would be about $1.97 per household per month. This capital cost estimate of City purchase of the carts is included in the total per month cost estimate of Option 2 and Option 3.

Any conversion to a new automated collection system would require advance planning, a deliberate equipment procurement process, and a planned public education program.

## Introduction

Foth was retained by the City of Sheboygan, Wisconsin (City) to conduct an independent analysis of the current manual garbage and recycling collection system operated by the City's Streets & Sanitation Division in comparison to two (2) potential options for services: in-house automated collection of garbage and recycling and contracted collection of garbage and recycling. The Streets & Sanitation Division's current fleet of trucks has an average age of eleven (11) years and several trucks are near the end of their useful life. City staff have been studying alternative collection methods for several years. The City is fully committed to providing quality, cost-effective collection service to the residents.

This memo provides a summary of the City's existing collection system, including a description and analysis of current costs. The memo provides an independent, comparative cost analysis of alternative systems options.

This analysis is not a rate study nor an in-depth cash flow financial cost assessment of the City's current and alternative system options. The full costs of the City's current operation may need further review; municipal budgets for an operating division often do not include indirect costs including administrative overhead, adequate equipment replacement funds, etc.

Other system assumptions were held constant to simplify the cost comparison. For example, the total number of households served was assumed to be constant over the ten (10) year analysis. Also, while this memo mentions the potential for increased recycling and a corresponding reduced amount of garbage due to lidded recycling carts and the addition of a "Pay As You Throw"[1] fee schedule for the various garbage cart sizes, these variables are not included in this preliminary, simple cost analysis. However, since the City is paying the costs associated with disposal of garbage and processing of recyclables in both Options 2 and 3, an increase in recycling and decrease in garbage would effectively change the per household costs equally for either option.

Foth did not assume a change in the Parks Department collection system. The focus of this analysis was on the residential collection systems (for both garbage and recyclables). An analysis of the current garbage and recycling transfer, landfilling and recyclables processing / marketing arrangements was outside the scope of this project.

## Methods

Foth used a series of methods to conduct this analysis. Background data and information was requested and provided by City staff. Information and data were reviewed from the City web site including financial and budget reports. Information on the current system was analyzed and summarized in this memo, including the 2017 and 2018 Community Survey results.

Truck and cart equipment vendors were contacted to establish approximate purchase prices, truck specifications and performance information. This information about potential future collection improvements was analyzed and is summarized in this memo. A local third party waste hauler was contacted for budgetary pricing for a contract option service comparison. This information is also included in the memo.

Current solid waste system costs were quantified (Option 1). Equipment and operational changes were then applied within this cost analysis to analyze the capital and operating cost changes for converting to a fully automated system for residential collection of both garbage and recycling operated by the City (Option 2).

The possibility of cost savings from combining some small commercial accounts was not incorporated. Finally, a simple cost analysis was prepared to compare the "Contract Option" (Option 3) based on the informal price quote from one potential contractor.

[1] "Pay As Your Throw" would include multiple cart sizes and a variable rate pricing system designed to encourage additional waste reduction and recycling (i.e., the larger cart services are more expensive).

## Summary of Current System Operations

The City's current solid waste collection system collects the following residential materials on a weekly basis as described on the City's "Garbage and Recycling" web page[2]:

- **Garbage.** Residents must use their own clear or opaque plastic bags (13 gallon minimum). Black bags, garbage cans or receptacles are not acceptable. Plastic grocery bags are not adequate to secure garbage. Refuse not suitable for placement in bags must be bundled (under three feet in any dimension and less than 35 pounds).
- **Recyclables.** Residents may commingle their City-specified recyclables into a single-stream of materials. For containers (cans, glass, plastics), residents must use blue plastic bags. Recyclable paper items may also be put into the blue bags in small sizes and quantities or may be bundled separately with string or twine (maximum of two feet square).

**Figure 1**
**Sample Residential Recyclables Set Out**
*(Photograph provided by City Staff on July 10, 2018)*

[2] City of Sheboygan "Garbage and Recycling" web page: http://www.sheboyganwi.gov/departments/public-works/streets-sanitation/garbage-and-recycling/

Garbage and recyclables are *co-collected* on the same day by City crews in a split-body rear load packer truck. Sixty percent of the truck's capacity is apportioned for garbage and forty percent for recyclables. Bags are manually lifted by City staff into one of the two rear loading hoppers.

**Figure 2**
**Current Truck Design – Split Body, Rear Load Packers**
*(Photograph provided by City Staff on July 10, 2018)*

Bulky items (e.g., large appliances, furniture, etc.) and yard waste are not collected as part of the curbside program. The City has a "Residential Recycling Center" resident drop off for yard waste, drain oil, cooking oil, scrap metal, automotive batteries, and non-Freon appliances.[3]

The City Division of Streets and Sanitation (A Division of the Department of Public Works) operates the garbage and recycling collection system. The City's "Solid Waste" Ordinance (Chapter 102) provides for the legal requirements, standards and system management of garbage and recycling including storage and collection.[4]

Table 1 lists the number and type of residential households served by the City garbage and recycling collection system.[5] Residential garbage and recycling are collected Monday through Friday each week. Residential drivers collect within the daily residential routes identified on the City's map.[6]

[3] City of Sheboygan "Residential Recycling Center" section of the "Streets & Sanitation" web page: http://sheboyganwi.wpengine.com/departments/public-works/streets-sanitation/

[4] City of Sheboygan "Solid Waste" Ordinance (Chapter 102): https://library.municode.com/wi/sheboygan/codes/code_of_ordinances?nodeId=MUCO_CH102SOWA

[5] Based on data provided by City staff via email on March 16, 2018.

[6] City map of Garbage and Recycling collection days: https://gis.sheboyganwi.gov/portal/apps/webappviewer/index.html?id=32c1f3a92a9e44379f744c2b8562e5d6

## Table 1
## Residential Garbage and Recyclables by Type of Households

*(Number of Households)*

| **Total Collection Points** (Households Served) | **17,107** |
|---|---|
| Single Family Residence | 16,837 |
| Two Family Units (Duplexes) | 162 |
| Four Family Units (Quadplexes) | 108 |

Garbage and recyclables are hauled and unloaded separately at the Waste Management Inc. – Sheboygan Falls Transfer Station. According to City staff, the 2018 tipping fees are $33.05 for garbage and $0.00 for recycling. The avoided cost of garbage tipping fees is one of the major financial incentives for the City to enhance the recycling program.

Table 2 lists the seven trucks currently in use by the City's Streets and Sanitation Division to collect regular garbage and recyclables. There are two additional trucks in the fleet for seasonal leaf collection and one used for garbage collection by the Parks Department. Table 2 provides the City's vehicle identification number, primary route assignment, manufacture year, engine/chassis manufacturer, body capacity, body configuration (single compartment or "full" vs. "split/body"), additional equipment such as a semi-automated "cart tipper" on the rear hopper, and the City department operator.

The City's Parks Department owns and operates one (1), 13-cubic yard rear load packer truck (#87). This Parks' truck was not included in this analysis, but should be considered as part of any overall system improvement implementation plan. Based on City reports, residential garbage collected is approximately 11,273 tons per year. Personnel providing the labor for solid waste collection services are mostly dedicated to eight (8) assigned positions. This does not include administration and management staff.

# Table 2
## Sheboygan Garbage and Recycling Truck Fleet

| Truck # | Function | Year | Engine/ Chassis Make | Packer Body Model | Body Configuration | Body Capacity *(Cubic Yards)* | Tipper | Operator |
|---|---|---|---|---|---|---|---|---|
| 082 | Spare Garbage | 2006 | Crain Carrier | PakMor | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 087 | Park Garbage | 2004 | Sterling | New Way | Full | 13 | Yes | Parks Dept. |
| 094 | Leaf Pick Up | 2000 | International | McNeilus | Full | 25 | Yes | Streets & Sanitation Div. |
| 095 | Leaf Pick Up | 2000 | International | McNeilus | Full | 25 | Yes | Streets & Sanitation Div. |
| 096 | Spare Garbage | 2006 | Crain Carrier | PakMor | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 097 | Spare Garbage | 2006 | Crain Carrier | PakMor | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 680 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 685 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 686 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |
| 689 | Primary Garbage | 2013 | Peterbilt | Heil | Split 60/40 | 25 | No | Streets & Sanitation Div. |

Worker's compensation claims, other injuries and lost-time incidents due to the manual lifting and collection of garbage and recycling is a significant factor in this analysis. There is real and significant risk due to the repetitive lifting motions and the normal hazards of handling bags of garbage (e.g., pricks from needles or other "sharps"). See Figure 3 for a photograph showing sharps in a resident's trash.

**Figure 3**
**Sharps in Manually Collected Trash**
*(Photograph taken by City Staff On May 21, 2018)*

The current solid waste and recycling system is financed through a combination of the general fund and user fees.

The current system (Option 1) has an estimated first year cost of approximately $8.50 per household per month. Note that costs of operations are likely to escalate over time. Some line item costs will escalate at different rates. The timing of equipment replacements and truck salvage value also will have an impact.

## Summary of Citizen Survey Results

A Community Survey has been used by the City to gain an understanding of the views and preferences of the citizens of Sheboygan. The following results summary are from the citizens responses to survey on questions in 2017 and 2018 related to garbage, recyclables and yard waste collection services.[7]

Table 3 presents the summarized responses to question number 4: "Using the list of services and functions provided by the city, please indicate how important each city function is to you and your household."

[7] City of Sheboygan Community Survey for 2017 and 2018, including the "2018 Executive Summary", http://www.sheboyganwi.gov/wp-content/uploads/2018/03/Community-Survey-2018-Exec-Summary.pdf and tabulated responses for the 2017 and 2018 surveys as provided by City staff.

## Table 3
## Citizens Survey Results: How Important is Each City Function

*(Percent of respondents replying "Very Important" or "Important")*

| | 2017 | 2018 |
|---|---|---|
| Leaf pick-up | 62% | 66% |
| Recycling and garbage collection | 90% | 91% |
| Residential yard waste | 72% | 77% |

Table 4 presents the summarized responses to question number 5: "Using the same list, please indicate how well you think the city is doing in each area."

## Table 4
## Citizens Survey Results: How Well is the City Doing?

*(Percent of respondents replying "Excellent" or "Good")*

| | 2017 | 2018 |
|---|---|---|
| Leaf pick-up | 68% | 74% |
| Recycling and garbage collection | 74% | 76% |
| Residential yard waste | 60% | 67% |

As can be seen from Table 3 and 4, there is generally high regard for both the importance and performance of these City solid waste and recycling services. In all cases, there has been improvement in 2018 survey results compared to 2017 results.

The Appendix contains the verbatim comments from Sheboygan residents responding to the open-ended survey questions in 2017 and 2018 that relate to the City's solid waste and recycling services.[8] The opinions, while not analyzed from a statistical perspective, can be inferred to represent the thoughts of some Sheboygan residents about specific collection system design issues. The most common themes from these comments can be summarized as follows:

- The City should move away from the current system of containing and setting out garbage and recyclables in plastic bags only. Instead, the City should modernize the system to be like most other neighboring cities and use garbage and recycling carts with lids and wheels.
- The bag system enables animals (e.g., sea gulls) to rip into the garbage and spread the materials as litter. A new cart-based system could help better contain prevent spreading the materials.
- The aesthetics of the current bag system makes the City look less neat and tidy compared to a cart system.
- A couple of residents equated the option of privatizing the system with their desire for changing to a cart system.

[8] City of Sheboygan Community Survey, comments from the 2017 and 2018 survey results as provided by City staff.

- One resident complained about the need to purchase blue bags for recycling. Also, the impression was that if recyclables are in regular trash bags, the material is thrown away and therefore not recycled.
- Several residents stated or implied they would be willing to pay more for a cart – based system.
- One resident stated the need to implement a new automated collection system (i.e., using trucks equipped with a robotic arm to lift carts) instead of the current system of manual lifting of bags.
- One resident suggested cancelling the leaf pick-up in the Fall. On the opposite side of the issue, another resident state they wanted to see more yard waste curbside collection days.
- One resident wanted more curbside collection options for bulky item materials.

The results of the Community Survey over the past two years indicate strong support of the City's services, but the verbatim comments also indicate a portion of the residents want to see the operations modernized using a cart – based system.

## Summary of Potential Future System Options

Table 5 lists current operations (Option 1) in comparison to the automated system option and the contracted option developed for this analysis:

- Option 1 – Current City system.
- Option 2 – Automated system owned and operated by the City.
- Option 3 – Automated services operated under contract to private hauler.

For Option 2, the analysis is based on the potential savings from the purchase of six ASL trucks and standardized carts for residential garbage and recyclables in 2019. The estimated purchase price for budgeting purposes for a new ASL truck is $275,000. The estimated purchase price for 34,200 residential carts (at $57 per cart) is $1.95 million. Thus, the total capital cost of the new automated system is approximately $3.6 million.

For Option 3, the analysis is based on a budgetary quote provided by a local hauler that could potentially provide services to the City and assumes services would be automated as the City is requiring carts be used by residents.

Prices per household in the analysis range from $8.45 per household month for Option 2 to $9.80 per household per month for Option 3. Option 1 is $8.50 per household per month. The variables included in each are the variable of providing collection service plus costs of garbage disposal, recycling processing, and purchase of carts, where applicable.

The potential new system options would need to include comprehensive public education and outreach. The City would also need to amend the current solid waste ordinances to reflect the new operations and resident instructions (e.g., use and care of the City carts, etc.).

## Table 5
## Description of System Options

| | OPTION #1 | OPTION #2 | OPTION #3 |
|---|---|---|---|
| **Proposed System Title** | **Maintain Current System** | **New, Fully Automated Side Loaders (ASL)** | **Contract** |
| Truck Owner | City | City | Contractor |
| Cart Owner | n.a. (i.e., no carts) | City | City |
| Equipment Type | 60/40 split body, rear-load packers | Single compartment, ASL trucks | Single compartment, ASL trucks |
| Collection Process | Two person crews; manual loading (resident bags, etc.) | One person crews; fully automated with carts | One person crews; fully automated with carts |
| Collection Frequency | Weekly for garbage Weekly for recyclables | Weekly for garbage Weekly for recyclables | Weekly for garbage Weekly for recyclables |
| Approximate Implementation Date | Immediate (i.e., maintain current system) | Sept 2019 | Sept 2019 |

Table 6 provides a summary of Foth's economic cost-benefit analysis for this memo. The intent of this analysis is to help estimate the cost differences between the current system and potential future options. The current, Option 1, system costs are based on elements of the current solid waste system, Option 2 includes new fully automated side loaders, and Option 3 includes contract services.

Option 1 and 2 include labor, capital replacement costs, truck maintenance, fuel, and lost time due to injuries. Option 3 is a budgetary number provided by a local hauling company. In Option 2 and Option 3 the cost to purchase carts is itemized. In all three options, garbage tipping fees and recycling revenue or charges are itemized. Most of the cost data are based on City budget reports provided by staff. When not available, Foth made assumptions based on industry standards.

Other cities in eastern Wisconsin have recently converted to automated, cart – based systems. For example, the City of Neenah recently made a decision to transition to automated collection and are currently finalizing the details of cart sizes and color.[9]

The article states that other cities in the Fox River Valley area have also transitioned to automated collection (Appleton, Oshkosh, Menasha, Kaukauna, Grand Chute and Fox Crossing).

[9] Post Crescent article (July 2, 2018), *"Neenah Talks Trash: Size and Color Matter to People"*.

From the Wisconsin Garbage Collection Study, the following additional Wisconsin cities are listed as having cart – based collection systems: Greenfield, Beloit, Brookfield, Wausau, New Berlin, Fond du Lac, Wauwatosa, La Crosse, West Allis, Janesville, Waukesha, Racine, Green Bay, and Madison.[10]

## Table 6
## Summary of Cost – Benefit Analysis

| | OPTION #1 | OPTION #2 | OPTION #3 |
|---|---|---|---|
| **Proposed System Title** | **Maintain Current System** | **New Fully Automated Side Loaders (ASL)** | **Contract** |
| **First Year Truck Capital Costs:** | **$445,600** | **$235,714** | |
| **First Year Cart Costs:** | | **$405,040** | **$405,040** |
| **Monthly cost of carts per household** | | $1.97 | $1.97 |
| **"Total Personal Services"** | **$645,961** | **$484,470.75** | |
| **Truck Operating Costs:** | **$273,994** | **$236,995.50** | |
| **Subtotal from above (no garbage/recycling tipping fees)** | ***$1,365,555*** | ***$1,362,220*** | |
| **First year cost per household per month** | $6.65 | $6.64 | |
| **ASSUMED MONTHLY CONTRACT COLLECTION PRICE PER HOUSEHOLD** | | | **$6** |
| **First year contract collection cost** | | | **$1,231,704** |
| **Garbage Disposal Price per Ton (2018)** | **$33.05** | **$33.05** | **$33.05** |
| **First year garbage disposal cost** | **$372,588** | **$372,588** | **$372,588** |
| **Monthly garbage disposal cost per household** | $1.81 | $1.81 | $1.81 |
| **Recyclables Disposal Price per Ton (2018)** | $0.00 | $0.00 | $0.00 |
| **TOTAL OPERATING COST (First Year)** | **$1,738,143** | **$1,734,808** | **2,009,331** |
| **Monthly total operating cost per household** | $8.50 | $8.45 | $9.80 |

[10] Wisconsin Garbage Collection Study (unpublished data), as provided by City staff.

## Summary of Advantages and Disadvantages

The City has a mature and well-functioning garbage and recycling collection system. However, opportunities for greater efficiencies, employee safety, improved customer experience (ease of use, aesthetics) and increased recycling rates are available through equipment, operational and program/policy changes.

Option 2 and Option 3 assume a conversion to an automated collection system using trucks equipped with robotic arms and standardized carts for residential garbage and recycling instead of the current manual collection methods (Option 1).

### Advantages of ASL Systems

There are various costs and benefits associated with a potential change to ASL trucks and carts for residential solid waste collections, which include the following.

**Figure 4**
**Example of Automated Side Load Trucks**

#### Worker Health, Safety and Job Satisfaction

Multiple independent studies have indicated sanitation worker health and safety is significantly improved with automated collection, especially when compared with full manual collection operations such as is used with the City's current residential system. This improved safety is due to significantly reduced lifting and the ability to serve most households from inside the truck cab using the ASL controls, avoiding the hazards of getting in and out of the truck which exposes employees to traffic and varying weather conditions.

Automated systems are generally operated with one crew member and do not need a second crew member to serve as the helper. A second crew member may have additional safety risks of being outside of the truck when it is being operated.[11] The amount of

[11] National Institute for Occupational Safety and Health (NIOSH), Publication 97-110, "Preventing Worker Injuries and Deaths from Moving Refuse Collection Vehicles": https://www.cdc.gov/niosh/docs/97-110/pdfs/97-110sum.pdf

exposure to hazards (e.g., sharps) is dramatically reduced with automated systems. There are typically direct savings in reduced accidents, injuries and lost time. ASL drivers report much higher job satisfaction and positive employee engagement due to working in the climate-controlled environment of their cab instead of having to get out at each stop.

ASL trucks do however require a higher level of operator training and certification compared to manual-loading trucks due to the more sophisticated robotics. Maintenance is also more complex. The purchase of ASL trucks would require an investment in the City's workforce.

**Figure 5**
**Example of Automated Side Load Lifting Arms**

### Route Productivity

Route productivity (measured as "stops per hour") typically increases with automated collection systems. The time for an automated truck to pick up, tip and set down a cart is on average much less than the time it takes for a crew member to get out of the cab, lift the bags (or other receptacles) of materials into the truck hopper, occasionally cycle the packer ram blade from outside the truck, and then get back into the cab. The time in-between stops would be the same between an automated system and the current manual system.

### Resident Convenience Due to Standardized Carts

When provided with standardized, wheeled, lidded carts, residents typically comment on the added convenience, improved safety, added capacity and privacy. The wheels on the carts make moving materials to the collection location easier for residents with less lifting and carrying of multiple receptacles.

**Figure 6**
**Example of Standardized Cart**


*Source: http://tools.recyclingpartnership.org/wp-content/uploads/2017/03/recycling_carts_guide.pdf*

Under a potential new automated system, the City could offer two cart sizes. The standard "large" sized cart would be about ninety-five (95) gallons (nominal capacity). The standard "medium" sized cart would be about sixty-five (65) gallons (nominal capacity). Depending on the cart size, cart manufacturer, automated truck system, and City specifications the maximum weight in a medium or large cart could range from 200 to 300 pounds.

Under the potential new system, residents may still be required to bag their garbage and place the secured/tied bags inside their City-provided cart. This keeps the carts cleaner and helps further prevent blowing litter during the cart unloading operations particularly under windy conditions.

The current recycling blue bags and paper bundles are publicly visible and thus less secure. The lids on carts help prevent recyclables from getting wet. The cart design and construction with tight fitting, hinged lids generally provide added protection against rodents and other animals resulting in less fugitive litter and providing improved neighborhood aesthetics. For Option 2 and Option 3, Foth assumed the City would own the carts and residents would no longer need to purchase blue bags for recyclables.

**Figure 7**
**Example of Set Out of Carts for Automated Service**
*(Stock Foth Photograph)*

Carts used in an automated system typically increase recycling participation and recovery. Other communities have typically experienced 10 to 30 percent increases in recyclables by switching from bins to carts. This increase was not accounted for in Foth's analysis due to the difficulty of predicting a specific outcome. Additionally, since the City is paying the costs associated with disposal of garbage and processing of recyclables in both Options 2 and 3, an increase in recycling and decrease in garbage would effectively change the per household costs equally for either option.

### Modernizing the City Fleet of Trucks

Option 2 assumes the City's Streets & Sanitation Division would retire its existing fleet of trucks and convert to six new ASL trucks. The City would be able to take advantage of the opportunity to modernize its fleet, significantly reduce the average age of the trucks, and help reduce annual maintenance costs.

### Opportunities for Third Party Grants and Technical Assistance

Converting to an automated system with standardized carts creates additional opportunities for third party grants and technical assistance. One source of technical assistance is The Recycling Partnership (TRP). TRP offers recycling cart grants, free technical assistance, public education tools and other resources for recycling program improvements such as upgrading to carts.[12]

[12] The Recycling Partnership (TRP) web site: https://recyclingpartnership.org/

## Disadvantages of Automated Systems

Disadvantages of a potential new automated system includes: the capital and maintenance costs of the new ASL – equipped trucks, the costs of the carts, and the education needed for the change to a new standard of materials preparation and set-out instructions.

### Higher Truck Capital and Maintenance Costs

The average cost of purchasing an ASL-equipped truck is generally more expensive than standard rear-load packer trucks of the same size. This analysis uses a conservative budgeting estimate of $275,000 per truck.

Vehicles with automated equipment generally require more maintenance due to the increased number and complexity of the mechanical parts. This analysis conservatively estimates 30 percent more maintenance per new ASL truck compared to current rear-load packer trucks.

For option 2, Foth recommends the City develop a regular ASL truck maintenance schedule and routine to help extend the life of the robotic arm and other truck components.

### Higher Cart Capital and Maintenance Costs

The purchase of standardized carts is an essential component of an automated system. These carts are conservatively estimated to cost $57 each. Option 2 and Option 3 assumed the City would budget for a new cart replacement and maintenance program.

### Storage of Carts

Whenever a solid waste program converts to the use of standardized carts, whether for garbage or recycling, some residents are concerned there will be a lack of adequate storage space in their garage or alongside their house. This is a legitimate concern and the City may need to discuss potential policy and procedural options (e.g., different cart size choices, options for storage location restrictions, requirements that the cart not be left on the boulevard after collection, etc.)

### Avoidance of Overhead Obstacles

ASL drivers must be fully trained to avoid overhead obstacles (e.g., wires, tree branches, etc.) when operating the robotic arm. The Streets and Sanitation Division will need to evaluate the need to trim boulevard trees that obstruct safe operation of the trucks prior to the launch of the new ASL system evaluated (Option 2 or Option 3). The cost of tree trimming was not included in this analysis and is assumed to be the same for Option 2 and Option 3.

## Municipal versus Contract Operations Risk Analysis

Option 1 and Option 2 in this analysis both assume the City will own and operate the garbage and recycling collection system, regardless of the collection equipment. Option 3 assumes the same collection methods and the same equipment as Option 2 except that ownership of trucks and all operations are contracted to a private hauler.

This section of the analysis explores the relative risks and benefits of municipal versus contract collection operations. This risk analysis is a preliminary framework for further discussion and policy development. For example, if the City elects to contract its collection system, further planning is needed, including more detailed written collection service specifications. With Option 3, the City would need to utilize a request for proposal (RFP) or other standard procurement process.

### Risks of Municipal Operations

The following risks are an outline of potential disadvantages to continued municipal operations:

- Management demands continue and may increase.
- Operational requirements will likely increase as more material streams are added into the City's list of collection services (e.g., yard waste, bulky items, etc.).
- Taking advantage of changing collection technologies and other industry innovations require specialized knowledge about solid waste collection systems.
- Workers compensation insurance rates and injury claims for the City may increase.

Many of these risks identified above will be similar to the risks of private contract operations, but the risks and benefits may be shared differently.

For most of the risks of municipal operations above, mitigation strategies are available such as management training and systems planning. Also, continuing education and peer networking are additional means to anticipate changing industry trends.

### Risks of Private Collection Contract Operations

The underlying assumption for Option 3 is that both garbage and recycling collections would be contracted to a private hauler via RFP or similar procurement process. Option 3 also includes the assumption that the City would continue to do the billing and customer service. (e.g., residents call the City for service change requests).

For this analysis, Foth assumed the City's contract for garbage disposal and recyclables processing/marketing services would remain as a separate contract (essentially "as is" under the current system) for all three options. Option 3 assumes disposal and processing will continue to be a separate contract, and the City will purchase the carts.

The following risks are an outline of potential disadvantages to a change to contract collection operations:

- After contracting and within the term of the contract (e.g., five years), the service may need to change and the City may have a challenge getting a competitive price for a change order.
- There may be a lack of adequate competition if the City releases a RFP for contracted collection services. For example, only one company may respond.
- In the future, the City may not be able to readily get back into the collection operations if the City sells all of its garbage and recycling trucks and re-assigns or lays off its garbage and recycling crews. Combined with the risk, lack of competition, this may also mean that there is little "back up" plan if the contractor is unable to continue service for whatever reason.
- Coordination of contracted disposal service with contracted collection service is a City risk. (E.g., the transfer station contractor could require conditions that cause the City to pay for a change order for the contract hauler).
- The City's management demands would change to contract oversight and compliance, hauler performance monitoring, and dealing with customer complaints about the hauler. For example, the contractor may fail to perform collection or customer service operations per the contract standards or customer expectations.
- The customer service may be adversely affected if there are changes to the contractor's key management personnel or if the contractor sells to another firm.
- Operational requirements could still increase as more material streams are added into the list of collection services (e.g., yard waste, bulky items, etc.). This could become a procurement challenge to get competitive rates for expanded service during the term of a contract.
- Funding sources may change or become less reliable from a City cost perspective. A contract may not have adequate flexibility to change terms if the City needs to adjust to a new revenue reality. For example, less funding may require less service.

As noted, many of these risks identified above will be similar to the risks of municipal operations. In some cases, the collection contract may specify how these risks and management services will be shared between the City and the contractor. The relationship and close communication between City staff and the contractor will be a key strategy to a successful partnership and quality service to Sheboygan residents.

## Findings and Conclusions

### Program Findings

1. Prices per household per month including collection services, garbage disposal, recycling processing, and cart purchase, where applicable are $8.50 for Option 1, $8.45 for Option 2, and $9.80 for Option 3.
2. This cost and benefit analysis used a simple cost analysis approach deemed appropriate for the current project. However, a more detailed analysis may be warranted including: a multi-year discounted cash flow analysis of these options; financing options and costs; review of non-Sanitation Division City costs impacted by the decision.
3. This analysis assumed no change for yard waste and bulky waste items collections. These and other non-curbside collected materials would continue to be managed and collected as per the current system without change.

### Implementation of Automated Collection with ASL Trucks

4. Option 2 of this cost analysis assumes the City would purchase six, new ASL trucks to service all residents' garbage and recycling needs using one collection driver per truck and one material type per truck (e.g., garbage or recycling). The ASL trucks should both be "standard" style bodies with single compartments.
5. The City should consider retiring and selling the existing trucks even though some useful life remains, to ensure a City wide transition happens at one time. No estimated value was assigned to these vehicles for Option 2.
6. To optimize the efficiency gains of the new ASL system, residential route collection should be revised.

### Implementation of Automated Collection with Carts

7. Along with the ASL trucks, standardized, garbage and recycling carts should be purchased and rolled-out to all residents in the City.
8. The City should contact The Recycling Partnership to explore a recycling cart grant and associated implementation technical assistance services.
9. The City could still require residents to contain the garbage in plastic garbage bags to reduce the potential for wind-blown litter during unloading and to keep the garbage carts more sanitary.

### Implementation and Education

10. For Option 2 and Option 3, the City would need to develop a detailed implementation plan for all elements of the new automated system including: truck purchase (Option 2); cart purchase; community engagement / public education; ordinance amendment; route optimization plans (Option 2); cart roll-out; etc. The comprehensive implementation plan would be outlined and scheduled to help coordinate the overall project.

11. There are many other communities that have made the conversion to ASL systems with carts that can be used as examples for campaign plans.
12. Once additional technical details are planned, implementation of the new system will require an ordinance amendment to provide the legal and enforcement structure needed to implement many of the new requirements (e.g., resident set out instructions; prohibited items; etc.).
13. Boulevard trees with overhanging branches may be obstacles to the automated robotic arm. Option 2 and Option 3 assume the Streets and Sanitation Division would inventory and trim these obstructing boulevard trees prior to the launch of the new automated system.

## Appendices

Appendix A: Survey Results and Comments

# Appendix A

# Survey Results and Comments

# Appendix
# 2017 and 2018 City of Sheboygan Community Survey: Results Excerpts Pertaining to Solid Waste and Recycling

## 2017 Community Survey

**Q6 Please share with us any comments you wish to make.**
*(Answered: 410; Skipped: 656)*

| Reference # | Comments |
|---|---|
| 31. | "As someone not originally from Sheboygan, I find it abhorrent that we throw our trash bags the side of the road. Not only is it an eye sore, it allows animals to get into the trash and litter the area. I despise the fact that we do not have garbage cans. Even worse, I think it's terrible that we are responsible for purchasing blue garbage bags for recycle, and they aren't in blue bags, the recyclable items are thrown away. This is one of my biggest issues with this city. It makes us look cheap. It makes us look like we're living in the 50's. I cannot believe that this is protocol. I don't care how much it costs to implement trucks that can pick up waste receptacles, it NEEDS to happen. We will turn off any young blood from coming to Sheboygan because literally EVERYWHERE else, people are using garbage and recycle cans. |
| 49. | Stop trying to grow and tighten the belt on what we have. -Bring more attention to the downtown and lake front and less on the highway corridor that will naturally grow. –Nice streets = people wanting to buy a house on that nice street. Come down even harder on slumlords/landlords. A single rundown rental (the majority of rundown houses are rentals) will ruin an entire block of decent homes. -Eliminate the bus service (it's not cost effective and WAY under-utilized). You could give taxi tokens to every person that currently uses the buses (as many as they need) and the city would be further ahead dollar wise. Yes, the city would buy the tokens, but the net result would be incredibly fruitful. -We absolutely need to start using garbage cans at every residence. The number of rodents/seagulls ripping into garbage bags is mind boggling, and the aftermath is atrocious. |
| 74. | l) Did not know we have a tv station<br>2) need to attract more businesses<br>3) need to add garbage cans like other cities use, this place is filthy on trash day from birds attacking garbage bags |
| 93. | Please hire a garbage pickup company so we can use plastic containers. Putting garbage out in bags is unsightly and unsanitary. I would be willing to pay more for this service |
| 143. | The roads are embarrassing. Garbage collection needs to be in automated pickup receptacles. The neighborhoods look bad on trash day |
| 174. | The city needs to have residential trash containers for garbage and recycling |

like other cities instead of just having residents set garbage on curb. Garbage should be in trash containers

220. Garbage on street is disgusting and archaic. Need to go to container system like most of the communities around us use.

233. Can we get some garbage bins so the animals aren't dragging trash everywhere.

238. It's time for some tough decisions. Staffing fire trucks without enough people to perform all the necessary functions at a fire. Georgia Ave. was supposed to be done almost 25 years ago and PART of it is finally scheduled.

Garbage pickup is a feast for the birds, time for bins and automated trucks or privatization. These are examples that are top of mind now, but there are lots of other things that need strong leadership to fix.

248. Cancel leaf pick up in Fall. Stop picking up garbage in black bags.

290. City needs trash cans for garbage. City of Sheboygan seems to be behind on this. Also, would like to see more available paths and places for families with dogs. I feel this is not a pet friendly community. Overall, an ok community to live. It’s sad to see so many business go under or leave. Very disappointed to see another grocery store and a Sam's Club coming to the community.

332. With the amount of seagulls we have I think it would be wise to explore the city garbage and recycling cans. So many bags get ripped open by the birds. We need to seriously address the bigotry in this community! The number of deaths by overdose needs to be known. We can't shelter the community from those facts.

345. I would love to see the municipal garbage cans that can be used on the curb. The birds are terrible with tearing up the plastic bags. Some of the neighborhoods have way too many city trees. I don't feel safe walking down those streets because you can't even see the street lights through the trees.

355. Why not let people use roller trash containers like the town does? Why not allow dogs in parks with poop bags?

387. I think the garbage collection and environmental protection could be improved with city provided garbage and recycling bins instead of allowing loose bags of garbage and recycling.

405. I think the city is doing a good job protecting the natural environment. However, if the city moves forward with a fourth Kohler gold course in the Town of Wilson my opinion will change drastically. One of our favorite places to walk our dog is the horse park. It would be sad to see that land be partially used by another golf course we don’t need! I would like to see more days available for curbside yard waste pick-up. We have small cars that makes it difficult for us to haul the waste. I also have very bad allergies which makes it difficult for us to burn the yard waste. Another improvement for proficiency, and beautification of the city would be everyone have the same garbage and recycling bin.

# 2018 Community Survey

**Q13 The city is reviewing its list of critical project and potential new initiatives for implementation in 2019 and 2020. Please share with us any project or initiatives that you would like the city to pursue in 2019 and 2020.**
*(Answered: 787; Skipped: 400)*

| Reference # | Comments |
|---|---|
| 107 | garbage collection in bins instead of plastic bags |
| 150 | Garbage pick-up is a potential health hazard. Bags need to be in receptacles. |
| 190 | Something needs to be done about garbage and recycling. Most cities have the canisters out in the curb provided by the city. The garbage bags strewn about is really gross and very off putting. |
| 201 | Continue to repave streets. -Install more street lights.<br><br>-More public trashcans in neighborhoods. - Privatize garbage/recycling collection so we can use cans. This would prevent loose trash being blown around in the wind and cats/raccoons/etc from getting into the bags overnight. |
| 247 | City provided garbage cans rather than the current system |
| 333 | FIX THE STREETS! PROVIDING A MEANS OF GETTING RID OF HOUSEHOLD JUNK EVEN A FEW TIMES A YEAR WOULD BE GREAT. USED TO HAVE A DROP OFF SITE FOR IT. COSTS AN ARM AND A LEG TO TAKE IT TO A PRIVATE SERVICE, CAN IMAGINE WHAT PEOPLES GARAGES AND BASEMENTS LOOK LIKE WITH UNWANTED ITEMS THAT COST SO MUCH TO GET RID OF. I EVEN SEE A LOT OF JUNK IN PEOPLES BACK YARDS. EVEN CHARGING A FAIR PRICE FOR THE SERVICE WOULD BE ACCEPTABLE. |
| 359 | garbage and recycle bins and trucks that pick them up - like other communities. |
| 377 | would like to see public works begin using curbside bins for garbage and recycling collection. I would also love to see sidewalks on my block of Main Avenue, and yes, I'd be ok paying my share. |
| 551 | I would like cleaner streets which means every household should put their trash in a bin provided by the city. Any damaged cans that needs to be replace should be the resident responsibility. This will keep streets clean and away from wild animals such as seagulls and/or small mammals. |
| 604 | - WSCS should be putting their content on YouTube vs. using an obscure player mode. Makes sharing content via social media more difficult.<br><br>- Garbage pickup in bags looks bad. Shocked the community hasn't switched to using garbage bins as it also uses fewer staff to complete the task. Automate downtown parking meters (I'd happily pay more not to carry random change around)<br><br>- Shocked there is a large call for a community center on the Armory. The YMCA which holds community programming, recreation, and teen center is two blocks from there. If you can save the building, save it. But don't hesitate to move on if the local group isn't up to the task. |

**CITY OF SHEBOYGAN**

**REQUEST FOR PUBLIC WORKS COMMITTEE CONSIDERATION**

**ITEM DESCRIPTION:** Submitting an analysis of the City of Sheboygan's curbside garbage and recycling collection system for the potential to convert to an automated "garbage cart system." The recommendation from the analysis will be used to assist with formulating the 2019 operation and capital budget.

**REPORT PREPARED BY:** David H. Biebel, Director of Public Works

**REPORT DATE:** August 23, 2018 **MEETING DATE:** August 28, 2018

**FISCAL SUMMARY:**

| | |
|---|---|
| Budget Line Item: | N/A |
| Budget Summary: | N/A |
| Budgeted Expenditure: | N/A |
| Budgeted Revenue: | N/A |

**STATUTORY REFERENCE:**

| | |
|---|---|
| Wisconsin Statutes: | N/A |
| Municipal Code: | N/A |

**BACKGROUND / ANALYSIS:** The trend in the solid waste industry has been towards automated curbside collection via cart based systems. There are several advantages to this method of collection: first and foremost, employee safety. By utilizing the cart system, employees are not required to physically handle bags which eliminate many health concerns and increases route productivity. Other advantages include increased cleanliness, reduced the number of wildlife disturbances, and increased recycling. The community has expressed a desire for the cart system in recent community surveys.

**STAFF COMMENTS:** It is the Department of Public Works recommendation that the City strongly consider converting our residential curbside garbage collection to an automated cart based system. Based on the feasibility analysis provided by Foth, the lowest cost alternative is to have the City of Sheboygan DPW acquire the necessary equipment and carts and continue to provide collection as a municipal service. The department would like to continue work with Foth Infrastructure and Environmental and work on an implementation plan for an automated system. Foth will help city staff analyze routes, determine the proper amount of trucks needed, and develop communications plans. The department believes that continuing to work with Foth will give more clarity to the total cost of implementation. The Department of Public Works is requesting to continue exploring the feasibility of implementing automated garbage and recycling collection with municipal employees.

**ACTION REQUESTED:** Motion to recommend the Common Council approve R.O. No. 94-18-19 by Director of Public Works submitting an analysis of the City of Sheboygan's curbside garbage and recycling collection system for the potential to convert to an

automated "garbage cart system". The preliminarily data suggests that it is in the best interest for the City of Sheboygan to continue with municipal employees collecting garbage and recycling. The department is requesting to continue with Foth Infrastructure & Environment to explore implementation of an automated garbage collection system for the 2019 budget with full implementation by 2020.

**ATTACHMENTS:**

I. R.O. No. 94-18-19
II. Automated Garbage Analysis
III. Foth Analysis
IV. Foth Proposal for the Conversion of Solid Waste Collection Operations