

**AGENDA
STORMWATER UTILITY
COMMITTEE**

**WEDNESDAY, JULY 27, 2011
ROOM 202
4:30 P.M.**

***Anthony Nudo, Chairman
G. John Ruffolo, Vice Chairman
Steve Bostrom***

***Patrick Juliana
Jan Michalski
Ray Misner***

A. APPROVAL OF MINUTES

A-1 Approval of minutes of regular meeting held on July 13, 2011.

C. REFERRED TO COMMITTEE

C-1 Disbursements for the month of June 2011.

C-2 Approval of Professional Service Agreement with Ruckert Mielke For Multi-Plate Storm Sewer Project Plan.

INFORMATIONAL:

1. June 30th Storm Funding
2. April Monthly Disbursement
3. Comsys Agreement

**CITIZENS COMMENTS RELATED ONLY TO JURISDICTION OF STORMWATER UTILITY
COMMITTEE**

STAFF COMMENTS

ALDERMAN COMMENTS

**IF YOU ARE DISABLED AND IN NEED OF ASSISTANCE CALL 653-4050 BEFORE NOON ON THE DATE INDICATED FOR THIS
MEETING.**

**NOTICE IS HEREBY GIVEN THAT A MAJORITY OF THE MEMBERS OF THE COMMON COUNCIL MAY BE PRESENT AT THE MEETING,
AND ALTHOUGH THIS MAY CONSTITUTE A QUORUM OF THE COMMON COUNCIL, THE COUNCIL WILL NOT TAKE ANY ACTION AT
THIS MEETING.**

STORM WATER UTILITY COMMITTEE
- MINUTES -

WEDNESDAY, July 13, 2011
4:30 P.M.

Anthony Nudo, Chairman
G. John Ruffolo, Vice Chairman
Patrick Juliana

Jan Michalski
Ray Misner
Steve Bostrom

The regular meeting of the Storm Water Utility Committee was held on Wednesday, July 13, 2011 in Room 202 of the Municipal Office Building. The following members were present: Chairman Anthony Nudo, Vice Chairman G. John Ruffolo, Aldermen Jan Michalski and Steve Bostrom and Ray Misner. Alderman Patrick Juliana was excused. The meeting was called to order at 5:37 p.m. Staff members in attendance were Director Ron Bursek, City Engineer Mike Lemens, Asst. City Engineer Shelly Billingsley and Asst. City Engineer Kevin Risch.

- A-1 Approval of minutes of regular meeting held on June 29, 2011.
*It was moved by Alderman Bostrom and seconded by Alderman Misner to approve.
Motion passed 5-0.*
- C-1 Approval of Change Order # 1 for Project 11-1127 MacWhyte Site Storm Water Detention Basin (14th Avenue & 31st Street). (**District 1**) (*also referred to Public Works Committee*)
*It was moved by Alderman Ruffolo and seconded by Alderman Misner to approve.
Motion passed 5-0.*
- C-2 Proposed Ordinance to Create Section 1.06 T of the Code of General ordinances for the City of Kenosha to establish a Mayor's Commission on the Arts.
It was moved by Alderman Ruffolo and seconded by Alderman Ray Misner to defer this matter for 30 days. Motion passed 4-1 with Alderman Michalski voting nay.

INFORMATIONAL:

1. June 30th Storm Update
 - A. Tree Damage
 - B. Sidewalk Repair

Director Bursek gave a report on the efforts by Public Works Employees to clean up the tree debris. The Committee acknowledged the efforts of PW employees.

Great Lakes Restoration Initiative Grant

Ms. Billingsley reported on the progress to date and presented a drawing showing the locations of proposed sediment removal structures, and proposed bioswales.

2. SWU Both At Food Folks and Spokes

Ms. Billingsley reported that as part of the public education efforts the Storm Water utility will be staffing a booth the Food Folks and Spokes event again this year. Members were encouraged to come to the event and see the booth.

ALDERMAN COMMENTS: *Chairman Nudo reported that this is Director Bursek's last appearance at the Public Works Committee due to his retirement on Friday. Committee members expressed congratulations and praise for his efforts.*

ADJOURNMENT: *there being no further business to come before the Public Works Committee, it was moved by Alderman Misner and seconded by Alderman Bostrom to adjourn. Motion passed unanimously. Meeting adjourned at 5:50 pm.*

C-1

START DATE FOR SUMMARY: 6/01/11 END DATE FOR SUMMARY: 6/30/11

CHECK #	CHECK DATE	VENDOR NAME	ACCOUNT	DESCRIPTION	AMOUNT
106091	6/01	VULCAN MATERIALS COMPANY	501-09-50105-354-000	05/11 AGGREGATE MATE	1,598.69
106105	6/01	ROEKERT & MIELKE, INC.	501-09-50102-219-000	OUTFALL SCREENING	238.50
106123	6/01	MENARDS (KENOSHA)	501-09-50105-353-000	05/11 SW MERCHANDISE	91.54
106132	6/01	ROSSOW INVESTMENTS	501-00-13114-000-000	SWU 29704 OVERPAY	23.47
			501-00-13114-000-000	SWU 29705 OVERPAY	5.83
				..... TOTAL	29.30
106137	6/03	BOBCAT PLUS INC	501-09-50106-344-000	CHIPPER KNIVES	128.16
106166	6/03	LINCOLN CONTRACTORS SUPPLY	501-09-50105-367-000	04/11 SW TOOLS AND S	191.92
106228	6/08	COMSYS, INCORPORATED	501-09-50101-215-000	6/08-7/7/11 SERVICE	9,329.31
106236	6/08	LORENZ TOPSOIL	501-09-50105-353-000	5/11-TOPSOIL	55.00
106244	6/08	KENOSHA YMCA	501-09-50101-264-000	BOOTH-FOLKS/SPOKES	300.00
106247	6/08	TDS METROCOM	501-09-50101-227-000	4/18-5/31/11 MAIN	183.75
			501-09-50101-225-000	4/18-5/31/11 MAIN	.50
				..... TOTAL	184.25
106252	6/08	LINCOLN CONTRACTORS SUPPLY	501-09-50105-344-000	5/11-SW TOOLS/SUPPLI	165.38
			501-09-50105-361-000	5/11-SW TOOLS/SUPPLI	45.99
				..... TOTAL	211.37
106266	6/08	WASTE MANAGEMENT OF WI	501-09-50104-253-000	05/11 447.48 TONS	9,844.56
			501-09-50104-253-000	05/11 WDNR TONNAGE	5,817.24
			501-09-50104-253-000	05/11 FUEL SURCHARGE	768.93
			501-09-50105-253-000	05/11 29.35 TONS	645.70
			501-09-50105-253-000	05/11 WDNR TONNAGE	381.55
			501-09-50104-253-000	05/11 ENVIRO SURCHG	204.00
			501-09-50105-253-000	05/11 FUEL SURCHARGE	49.66
			501-09-50105-253-000	05/11 ENVIRO SURCHG	6.00
				..... TOTAL	17,717.64
106362	6/10	ZARNOTH BRUSH WORKS, INC.	501-09-50104-344-000	5/11-SWEEPER PARTS/B	1,920.60
			501-09-50104-344-000	5/11-SWEEPER PARTS/B	1,244.85
			501-09-50104-344-000	5/11-SWEEPER PARTS/B	1,128.20
				..... TOTAL	4,293.65

START DATE FOR SUMMARY: 6/01/11 END DATE FOR SUMMARY: 6/30/11

CHECK #	CHECK DATE	VENDOR NAME	ACCOUNT	DESCRIPTION	AMOUNT
106422	6/10	MENARDS (KENOSHA)	501-09-50105-344-000	05/11 SW MERCHANDISE	161.33
			501-09-50105-344-000	05/11 SW MERCHANDISE	147.62
			501-09-50105-361-000	05/11 ST MERCHANDISE	39.41
				..... TOTAL	348.36
106468	6/15	MINNESOTA LIFE INSURANCE	501-09-50101-156-000	07/11 PREMIUM	32.32
			501-09-50105-156-000	07/11 PREMIUM	28.54
			501-09-50103-156-000	07/11 PREMIUM	4.45
				..... TOTAL	65.31
106491	6/15	CONCRETE SPECIALTIES CO.	501-09-50105-355-000	05/11 ST MERCHANDISE	986.00
			501-09-50105-355-000	05/11 ST MERCHANDISE	225.00
				..... TOTAL	1,211.00
106493	6/15	WISCONSIN DNR	501-09-50102-219-000	2011 ENVIR STRM FEES	10,000.00
106496	6/15	MANDLIK & RHODES INFORMATION	501-09-50102-219-000	06/11 ADMIN FEE	350.00
106520	6/15	WIS DEPT OF COMMERCE	501-09-50103-264-000	RNWL SOIL EROSION	40.00
106536	6/15	NASECA OF WISCONSIN	501-09-50103-264-000	CHRIS PAGELS 6/15/11	100.00
106571	6/17	KEN-CRETE PRODUCTS CO., INC.	501-09-50105-355-000	05/11 CONCRETE/MTRL	2,882.51
106585	6/17	AT&T	501-09-50101-225-000	05/28-06/27/11 MAIN	15.60
106591	6/17	HOLLAND SUPPLY, INC.	501-09-50105-344-000	6/11-SW HYDRAULIC FI	97.86
106602	6/17	WASTE MANAGEMENT OF WI	501-09-50104-253-000	05/11 94.60 TONS	2,081.20
			501-09-50104-253-000	05/11 WDNR TONNAGE	1,229.80
			501-09-50104-253-000	05/11 FUEL SURCHARGE	160.03
			501-09-50104-253-000	05/11 ENVIRO SURCHG	60.00
				..... TOTAL	3,531.03
106646	6/22	ACE HARDWARE	501-09-50105-344-000	05/11 SW MERCHANDISE	50.33
			501-09-50104-389-000	05/11 SW MERCHANDISE	29.16
				..... TOTAL	79.49
106673	6/22	LINCOLN CONTRACTORS SUPPLY	501-09-50105-361-000	5/11-SW TOOLS/SUPPLI	18.71

START DATE FOR SUMMARY: 6/01/11 END DATE FOR SUMMARY: 6/30/11

CHECK #	CHECK DATE	VENDOR NAME	ACCOUNT	DESCRIPTION	AMOUNT
106677	6/22	JAMES IMAGING SYSTEMS, INC.	501-09-50101-232-000	06/11 PW-COPIER CHGS	66.56
			501-09-50101-232-000	05/11 PW-OVERAGE	43.56
			501-09-50105-232-000	06/11 ST-COPIER SVC	14.71
			501-09-50105-232-000	05/11 ST-OVERAGES	6.02
				..... TOTAL	130.85
106684	6/22	VERIZON WIRELESS	501-09-50101-226-000	05/11 PHONE SERVICE	51.54
106693	6/22	MENARDS (KENOSHA)	501-09-50105-344-000	05/11 SW MERCHANDISE	15.27
106723	6/24	BUMPER TO BUMPER	501-09-50105-344-000	05/11 SW PARTS, MATE	22.50
106761	6/24	CONCRETE SPECIALTIES CO.	501-09-50105-355-000	06/11 ST MERCHANDISE	507.50
			501-09-50105-355-000	05/11 ST MERCHANDISE	310.00
			501-09-50105-355-000	06/11 ST MERCHANDISE	235.00
				..... TOTAL	1,052.50
106772	6/24	HILLSIDE TRUE VALUE	501-09-50105-246-000	5/11-ST MISC. SUPPLI	8.35
106808	6/24	STONEHENDGE LUXURY HOME	501-09-50101-433-000	SWU #31755 OVERPAY	165.13
106832	6/29	HWY C SERVICE	501-09-50106-341-000	5/11-SW SERVICE/PART	244.72
			501-09-50106-344-000	5/11-SW SERVICE/PART	25.07
				..... TOTAL	269.79
106833	6/29	KEN-CRETE PRODUCTS CO., INC.	501-09-50105-355-000	6/11-SW CONCRETE/MAT	3,491.88
106895	6/29	US CELLULAR	501-09-50103-226-000	6/11 INTERNET CARD F	40.71
106896	6/29	WASTE MANAGEMENT OF WI	501-09-50104-253-000	06/11 47.62 TONS	1,047.64
			501-09-50104-253-000	06/11 WDNR TONNAGE	619.06
			501-09-50104-253-000	06/11 FUEL SURCHARGE	78.14
			501-09-50104-253-000	06/11 ENVIRO SURCHG	30.00
				..... TOTAL	1,774.84
106915	6/29	MENARDS (KENOSHA)	501-09-50103-361-000	6/11-SW MERCHANDISE	17.56
106922	6/29	PARCEL & BUSINESS SOLUTIONS	501-09-50105-389-000	4/11-SW UPS SERVICES	56.10
GRAND TOTAL FOR PERIOD *****					60,206.22

C-2



ENGINEERING DIVISION
MICHAEL M. LEMENS, P.E.
DIRECTOR/CITY ENGINEER

STREET DIVISION
JOHN H. PRIJIC
SUPERINTENDENT

ASSISTANT CITY ENGINEER
SHELLY BILLINGSLEY, P.E.
STORMWATER UTILITY

Ronald L. Bursek, P.E., Director

Municipal Building · 625 52nd ST · RM 305 · Kenosha, WI 53140
Telephone (262) 653-4150 · Fax (262) 653-4056

July 20, 2011

To: Anthony Nudo, Chairman
Stormwater Utility Committee

From: Michael M. Lemens, P.E.
Interim Director of Stormwater Utility *7-20-11*

CC: Theodore Ruffalo
Alderman District 2

Subject: ***Multi-Plate Storm Sewer Project Plan***

BACKGROUND INFORMATION

During the evaluation of the Multi-Plate system, from the outfall on 52nd Street to the railroad bridge at approximately 48th Street, the consultant found that the emergency repair that was completed in 2010 has developed some structural deficiencies that caused the Utility to broaden their evaluation through this section of the system.

Staff negotiated a contract for Ruckert-Mielke to complete an alternative report that outlines the steps to stabilize the existing section, recommend short term solutions and to outline long term solutions for the entire multi-plate section. The contract is separated into the following tasks and estimated costs:

1. Resurvey the internal area of the damaged portion of the pipe to the existing portion to determine definite extents of pipe rehabilitation. \$3,550
2. Eight Soil Borings to determine soil stability and soil bearing capabilities on each side of the pipe. \$4,200
3. Determination of Repair Alternatives (not including design) \$5,450.
4. Long-Term Goals for the repair of other areas within the pipe system. This would include a cost benefit analysis to determine the most feasible strategy. This would include two to three alternatives with a recommended time frame and costs for implementation. \$16,500.
5. Engineering Report, specifications, and plans for the repair of the failed multi-plate section. \$23,500.

If unforeseen conditions arise that call for additional effort staff may request additional funds be directed toward this effort.

RECOMMENDATION

Approve Professional Service Agreement between the Kenosha Stormwater Utility and Ruckert-Mielke in the amount of \$53,200 and authorize the Director to execute the contract. The funding for this work will be paid for out of CIP SW-10-004 Flood Control Management.

July 15, 2011

Ms. Shelly Billingsley, P.E.
Assistant City Engineer
City of Kenosha
Municipal Building
625 52nd Street
Kenosha, WI 53140

Re: Multi-Plate Storm Sewer Project Plan

Dear Shelly:

Thank you for allowing us the opportunity to assist the City of Kenosha with the recommendations for repair of the multi-plate storm sewer on Pike Creek. As we discussed on June 27, 2011, you are requesting that Ruekert/Mielke provide a proposal for additional analysis of the project area. There are several primary items that need to be included within the analysis.

- What can be done immediately to prevent further failure of the multi-plate?
- What alternatives exist for the emergency repair of the multi-plate?
- What would be the long-term goals with respect to the rehabilitation of the entire multi-plate?
- Provide a cost benefit analysis of proposed repairs and a long-term improvement program for the existing multi-plate.
- Provide design services for both the emergency repair and potentially the long-term rehabilitation of the multi-plate storm sewer.

There are several items to take into consideration in conducting both the design and the cost benefit analysis. These items would include final results of the internal inspection, which was recently completed with the televising of all storm sewer leads adjacent to the multi-plate.

The City must also assess the current hydraulic conditions that exist within the multi-plate. Because the multi-plate exits into Lake Michigan in a partially submerged condition, the City needs to analyze and determine if any improvements that are made to the multi-plate should include the potential of additional capacity of the structure. As an example, the final 1,000 feet of run of the multi-plate are an 11.5-foot diameter structure as opposed to the upstream diameter of 13 feet. A determination needs to be made as to whether or not additional capacity is needed to avoid any upstream flooding surcharging issues that could occur that would be a detriment to the City or its residents.

The first step in the process would be to determine the possible alternates for the repair of the existing failed section of the multi-plate. As observed in the recent televised inspection, -Kenosha City 8025003 Multi-plate Storm Sewer Inspection > 100 Review > Proposal > Billingsley-20110715-Multi-Plate Storm Sewer Project Plan.doc-



Ms. Shelly Billingsley, P.E.
Re: Multi-Plate Storm Sewer Project Plan
July 15, 2011
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it appears that the multi-plate is continuing to fail with some slight movement taking place within the pipe. When we entered the pipe to do an additional analysis of the failed section, robotic survey data points were taken inside the pipe. That survey can be used to determine the existing pipe shape or change in pipe condition. Two possible scenarios exist at this time. The first would be to simply lessen the load over the top of the existing failed pipe section. This could be done by excavating the area over the pipe to lessen the load. This would then potentially keep pipe sections from continuing to move, possibly towards ultimate failure. However, since the internal portions of the pipe have observed gaps, water and silts may continue to run into the pipe which then could hasten the failure of the pipe or add more debris to the inside of the pipe and reduce its capacity. The simple solution at this time would be to relieve some of the pressure on the top of the pipe by removing some of the overburden. The second step would be to conduct a secondary survey of the internal portion of the pipe to determine any movement that might have occurred inside the multi-plate. The estimated cost to resurvey the internal area of the damaged portion of the pipe to the existing portion in the confined space area utilizing a 4-person crew is \$3,550.

At this time, sufficient data exists from our prior inspections to make a determination as to the length of the pipe that needs to be repaired, however, several alternatives need to be investigated as to whether it would be most cost effective for the repair of the pipe. This would include the additional area that may need to be repaired on either end of the existing damaged section and an analysis of several types of repair that could be undertaken, including replacement with new multi-plate or bridging with a super structure over the top of existing multi-plate. In either event, it is recommended that soil borings be taken on either side of the existing multi-plate to determine soil stability and soil bearing capabilities. This will require at least eight soil borings (four on either side of the pipe) for an approximate 140-foot length in the area of the existing repair. The borings would be approximately 20 to 25 feet deep. Additional borings may need to be taken due to the potential of auger refusal due to debris in the existing backfill area from the original pipe construction. The cost of the soil borings is estimated at \$4,200, or could possibly be performed by the City's contracted geotechnical consultant.

Ruekert/Mielke would supply proposed alternative designs, including cost estimates for the repair of the existing failed sections and additional sections on either end of the failed sections, is estimated at the approximate cost for determination of repair alternatives, not including the actual design and including two meetings with City staff would be \$5,450. Actual design costs will vary dependent upon the repair methodology selected.

The next phase would be determination of the long-term goals for the repair of other areas within the pipe system. This would include recommendations for repairs as needed for existing connecting pipes and a long-term strategy to ensure the integrity of the pipe for the next 30 to 50 years. Cost benefit analysis would be conducted to determine the most feasible rehabilitation strategy to undertake. A minimum of two alternatives, with possibly a third alternative, would be presented in this portion of the study.

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Re: Multi-Plate Storm Sewer Project Plan
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The following tasks are included in this phase:

- Review of existing reports on recent inspections
- Recommendations on feasible life spans of existing multi-plate
- Investigation, report and cost/benefit analysis of best long-term rehabilitation
- Recommendation of areas needing repair
- Recommended capital improvements plan and timeline for implementation

It is estimated that this portion, including the cost benefit analysis and two meetings with the City would be approximately \$16,500. It should be noted that Visu-Sewer recently completed the last section of televising of the storm sewer lateral lines. The condition report will be prepared shortly for the City's use.

Preparation of an engineering report regarding the findings obtained and creation of contract documents would be separate from the above analysis. Actual design of the internal pipe repair from the damaged section or future areas would be on a case-by-case basis dependent upon the amount of pipe to be rehabilitated. However, design of a repair multi-plate section for the existing damaged area or a concrete arch overview would be approximately \$23,500, including contract plan and specifications up through a recommendation of award for the repair. The following items would be included in this phase:

- Analysis of soil borings and recommendations
- Project design plans, including site plan
- Project specifications
- Bid assistance through a recommendation of award
- Recommendation of most feasible and cost effective repair

The above phase services would be performed on an hourly basis and the City would only be billed for those costs that would actually occurred. Thus for any phase that is shown, the City would only be billed for the time that actually occurs as opposed to a lump sum basis. The same methodology would apply to the design specifications. In the event that fewer hours are utilized to generate the plans and specifications or if contractor questions can be held to minimum, the cost will be reduced. In the event that the City requests additional services above and beyond those that are requested, the rate would be billed at approximately \$145 per hour.

Ms. Shelly Billingsley, P.E.
Re: Multi-Plate Storm Sewer Project Plan
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Below is a chart that provides an overview of the potential project fees.

Item	Notes	Estimated Fee
Re-survey interior of failed section	Optional	\$3,550
Soil borings adjacent to failed area	Recommended	\$4,200
Prepare proposed repair alternatives for failed section	Recommended	\$5,450
Design of selected alternate for failed section	Recommended	\$23,500 ¹
Long-term recommendations and cost/benefit analysis of entire multi-plate pipe	Recommended	\$16,500
Construction review of repair of the failed section	Optional	\$85 to \$145/hour

¹ Estimated cost dependent on alternate selected. Does not include reimbursable costs such as printing or hazardous waste determinations or DNR permits

During the timeframe of the construction review of the emergency repair section, Ruekert/Mielke would be able to provide on-site technical assistance, dependent upon the portion of the repair that was being undertaken. Dependent upon the level of construction review that is needed, the rates for the construction review personnel would vary between \$75 and \$145 per hour. The scope of services would need to be further defined once the final methodology for the repair is determined.

If you have any questions on the above, please contact this office. Thank you for allowing us to be of service to the City of Kenosha.

Very truly yours,

RUEKERT/MIELKE



Kenneth R. Ward, P.E.
Principal/Office Manager

KRW:crp
cc: File