

Meeting Date: 6/22/2010

Agenda Item 11

REQUESTED COMMISSION ACTION:

Consent     Ordinance     Resolution     Consideration/  
Discussion     Workshop

SHORT TITLE Resolution Amending Capital Improvement Plan for FY2010 Through 2014  
OR MOTION: to include a project to provide for repair of the Force Main at Atlantic Blvd. and  
NE 28<sup>th</sup> Avenue; (Cost \$446,422)

Summary of Purpose and Why:

In late February, a leak was observed in the area of the 24" wastewater force main at Atlantic Blvd and NE 28th Avenue. Following the initial investigation by City staff, it was determined that because of the size of the pipe and the complexity of the repair, outside assistance was needed. Chen and Associates was engaged to provide engineering services to ensure the repair adhered to best practices. Because of the size of the main involved, and the depth it was installed at, Molloy Brothers was engaged to actually perform the repair work.

Molloy Bros. performed repairs, via a "piggyback" bid with the City of Ft. Lauderdale. Prices, terms and conditions of this bid are listed in City of Ft. Lauderdale 2009-2-10 Annual Utilities Repair Service Contract # 11496, valid through 5/19/2010. The resultant repair costs of \$446,422 necessitated that a CIP be created.

QUESTIONS TO BE ANSWERED BY ORIGINATING DEPARTMENT:

- (1) Origin of request for this action: Staff
- (2) Primary staff contact: A. Randolph Brown, Utilities Director/Wm. Herrmann Ext. 7044
- (3) Expiration of contract, if applicable: N/A
- (4) Fiscal impact and source of funding: Utility Enterprise Fund 412 is being used to fund this project, per attached Budget Adjustment.

DEPARTMENTAL COORDINATION	DATE	DEPARTMENTAL RECOMMENDATION	DEPARTMENTAL HEAD SIGNATURE OR ATTACHED MEMO NUMBER
City Attorney	<u>6/4/2010</u>	<u>Approve</u>	<u>See Attached Resolution</u>
Utilities Director	<u>6/7/2010</u>	<u>Approve</u>	<u>[Signature]</u>
Engineering	<u>6/11/2010</u>	<u>Approve</u>	<u>[Signature]</u>
Purchasing	<u>6/10/10</u>	<u>Approve</u>	<u>[Signature]</u>
Finance	<u>6/11/10</u>	<u>Approve</u>	<u>[Signature]</u>
Budget	<u>6/11/10</u>	<u>Approve</u>	<u>[Signature]</u>

City Manager [Signature]

ACTION TAKEN BY COMMISSION:

Ordinance	Resolution	Consideration	Workshop
1st Reading	1st Reading	Results:	Results:
2nd Reading			

RESOLUTION NO. 2010-\_\_\_\_\_

**CITY OF POMPANO BEACH**  
**Broward County, Florida**

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, AMENDING THE CAPITAL IMPROVEMENT PLAN FOR THE CITY OF POMPANO BEACH FOR FISCAL YEARS 2010 THROUGH 2014 TO INCLUDE A PROJECT TO PROVIDE FOR REPAIR OF THE FORCE MAIN AT ATLANTIC BLVD. AND NE 28<sup>TH</sup> AVENUE; TO ESTABLISH THE APPROPRIATE BUDGET FOR FY 2010; PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, the City Commission has adopted a Five Year Capital Improvement Plan for the City of Pompano Beach for fiscal years 2010 through 2014 by Resolution No. 2009-304; and

**WHEREAS**, the said Capital Improvement Plan did not include repair of the force main at Atlantic Blvd. and NE 28<sup>th</sup> Avenue; and

**WHEREAS**, it is the desire of the City Commission to have said completed project placed in the City's Capital Improvement Plan; now, therefore,

**BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA:**

**SECTION 1.** That the Capital Improvement Plan for the City of Pompano Beach for Fiscal Years 2010 through 2014 be amended to include a completed Capital Improvement Project for the repair of the force main on Atlantic Blvd.; said project amendment more particularly described in Exhibit "A" attached hereto and made a part hereof.

**SECTION 2.** That an additional budget of \$446,422.00 of capital project's funds be established for FY 2010 for said project.

**SECTION 3.** That said project was completed in fiscal year 2010.

**SECTION 4.** That this Resolution shall become effective upon passage.

**PASSED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

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**LAMAR FISHER, MAYOR**

**ATTEST:**

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**MARY L. CHAMBERS, CITY CLERK**

GBL/jrm  
6/4/109  
l:reso/2010-272

## CAPITAL IMPROVEMENT PROGRAM JUSTIFICATION FORM

Purpose of CIP Justification Form: <input checked="" type="checkbox"/> Add new item to CIP <input type="checkbox"/> Modify existing project		Project Name: Force Main Repair NE 28 <sup>th</sup> Avenue  Department: Utilities
Element/Object	FY 10-14 Request	Justification
<u>65-01</u> Program Administration/ Design		____ % of project construction cost
<u>65-02</u> City Fees		Explain basis for estimated fees:
<u>65-03</u> Outside Consulting/ Design	\$21,999	____ % of project construction cost
<u>65-04</u> Other Professional Fees		
<u>65-05</u> Permit Fees		
<u>65-06</u> Scoping Fees		
<u>65-07</u> Survey Fees		
<u>65-08</u> Right-of-Way (R.O.W.) Acquisition		@ _____ per square foot
<u>65-09</u> Land Acquisition		____ acres @ \$__ per acre ____ Other (explain) _____ _____
<u>65-10</u> Furnishings		Explain _____
<u>65-11</u> New Equipment		Explain _____
<u>65-12</u> Construction	\$424,423	Building/Construction: ____ Square ft. @ \$____ per sq. ft. = \$ _____  Water & Sewer Mains: Construction of ____ feet @ \$ _____ per ft. = \$ _____  Reconstruction of ____ feet @ @ \$ _____ per ft. = \$ _____  Renovation = \$ _____  Landscaping = \$ _____  Other _____ = \$ _____  <div style="text-align: right;">Total \$ _____</div>
<u>65-20</u> Project Contingency		Contingencies - ____ % of construction = \$ _____
Project Total:	\$446,422	

Project Status:  Design Phase  Land Acquisition Phase  Construction Phase  Completed

Basis for Construction  On-Site Visits  Design Plans  Consultation w/ Consultant/Contractor

Estimates:  Developed by Architect/Engineer  Similar Work Experience

**Project Rank by Department:** If your department is submitting more than one project, give each project a relative numerical ranking, with #1 being the highest priority project.

Project Rank by department: \_\_\_\_\_

**Outside Source(s) of Funding:** List any outside source(s) of funding (state or federal grants, matching funds, assessments, impact fees, etc.): \_\_\_\_\_

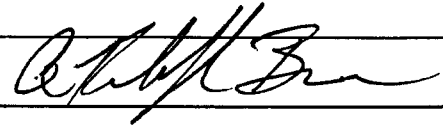
**Annual Operations and Maintenance Costs:**

Additional Personnel \$ \_\_\_\_\_  
Administrative Costs \$ \_\_\_\_\_  
Maintenance Costs \$ \_\_\_\_\_  
Other (specify) \$ \_\_\_\_\_  
  
Total Annual O/M \$ \_\_\_\_\_

**Project narrative/description:** The project narrative/description is a synopsis of the particular capital improvement project. The project narrative should be concise and include a clear description of the project, location, background and other pertinent facts about the project.

In late February, a small leak was located in the area of the force main located on Atlantic Boulevard and NE 28<sup>th</sup> Avenue. The leak was the result of a problem with a fitting in the force main that was installed approximately 12 years ago. Several years ago, a repair was made without disassembling the problem connection.

Given the size of the main, the Engineering services of Chen and Associates were obtained. Permanent repairs were carried out by Molloy Brothers via use of a piggyback contract from City of Ft. Lauderdale.

Department Head Approval: 


Date: 6/2/10

**Project Timetable & Phasing**

QUARTERS	FY 2010	FY ____	FY ____	FY ____	FY ____	FY ____
	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th
Selection/ negotiation process - Design:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> \$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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Land and/or R-O-W Acquisition:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> \$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Selection/ negotiation - Construction :	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> \$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Construction:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> \$ 424,423	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Post - Construction Inspections:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> \$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>Totals =</b>	<b>\$446,422</b>					

## MEMORANDUM

Purchasing #10-055  
June 10, 2010

To: Dennis W. Beach, City Manager  
From: Leeta Hardin, General Services Director   
Subject: Report, Emergency Repair, Force Main

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In accordance with Section 34.29 of the Code "Emergency Procurement", the City Manager authorized issuing emergency Purchase Orders to repair the broken sewer force main at East Atlantic Boulevard and N.E. 28th Avenue.

The construction work was performed by Molloy Bros. Inc., authorized by a Purchase Order based on a piggyback of the City of Fort Lauderdale 2009-2010 Annual Utilities Repair Service Contract. A Purchase Order for materials required for the repair was issued to HD Supply based on price quotations. Engineering services to oversee the repair activities were authorized through a Purchase Order issued to Chen and Associates based on their continuing engineering services agreement with the City. Additional small purchase orders were issued for barricade rental for traffic control (United Rentals) and transportation of wastewater during the shut down of the force main for repairs (F.A. Johnson Inc.)

The total cost of all expenditures related to the emergency repair was \$446,422. As required by the Emergency Procurement procedures, the Commission is requested to ratify the actions taken by City staff.

/lh



500 West Cypress Creek Road, Suite 410  
Fort Lauderdale, FL 33309  
954.730.0707 (Phone)  
954.730.2030 (Fax)

June 11, 2010  
VIA Email

City of Pompano Beach  
ATTN: A. Randolph Brown  
1201 NE 5th Avenue  
Pompano Beach, Florida 33060

Subject: Emergency Force Main Repair Summary

Dear Mr. Brown:

Per your request, we have prepared a brief summary relating to the necessary actions for the repair of the Force Main in the vicinity of East Atlantic Boulevard and NE 28<sup>th</sup> Avenue. On March 3, 2010, Chen and Associates was asked to visit the aforementioned site for a field meeting to determine the cause of a leak in the middle of Atlantic Boulevard that appeared to be sewage. Over the course of the next approximately six weeks, Chen and Associates assisted the City in the supervision and permitting of the repair performed by Molloy Brothers.

As of this date, the repair has been completed for approximately two months, the FDOT permit has been satisfied and the final information for the Broward County permit is under review. Overall, we would classify the repair as a success, though there were several challenges during the project that complicated the efforts requiring additional work and time. These include:

- The location of the leak was found in the median of Atlantic Boulevard, however the actual leak stemmed at the location of a previous repair under the sidewalk, north of the drainage structure.
- The previous repair was backfilled using flowable fill, which essentially coated all of the repair couplings and other fittings with a low strength concrete. In order to perform any work on this pipe, all of the concrete had to be manually chipped off the pipe without damaging the pipe.
- The location of the leak was found to be a coupling that was immediately outside a conflict structure, meaning that there was less than 6" of existing pipe to work with outside the structure. The only method for repair, therefore, was an electrofusion coupling that utilizes electrical current to heat the pipe and form a permanent bond. This coupling requires that the pipe for the repair be perfectly clean and dry. This required that a bypass be constructed prior to the repair.

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500 West Cypress Creek Road, Suite 410  
Fort Lauderdale, FL 33309  
954.730.0707 (Phone)  
954.730.2030 (Fax)

- In order to manage the flow from east of the Intracoastal and south of Atlantic Boulevard, a permanent 24" bypass was designed and constructed tying into the oldest crossing of the Intracoastal on the North side of Atlantic Boulevard. The pipe needed to be pre-excavated to determine its size and thickness as it had the potential to be a non-standard size due to its age. In order to perform this excavation, the existing drainage needed to be partially removed and constant operations were taken to mitigate the tidal conditions.
- Finally, all of the tie-in operations were required to be performed at night during off peak hours as this line flows at approximately 7 MGD (million gallons per day) of sewage without any bypass.

The efforts associated with this repair were significant, however the repairs were conducted without any sanitary spills into the adjacent environmentally sensitive areas and without incident to the traveling public or adjacent businesses.

Should you have additional questions, I can be reached at (954) 730-0707 x104 or [pmoore@chenandassociates.com](mailto:pmoore@chenandassociates.com).

Respectfully submitted,

A handwritten signature in black ink, appearing to be "P. Moore", with a long horizontal flourish extending to the right.

CHEN AND ASSOCIATES  
Peter M. Moore, P.E.  
President



Utility Field Operations

Water & Reuse Distribution  
Wastewater Transmission  
Wastewater Pumping  
Stormwater  
Phone # (954) 786-4082  
Fax # (954) 786-4003



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**City of Pompano Beach, Florida**

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**MEMORANDUM #10-83**

DATE: June 1, 2010

TO: Leeta Hardin, General Services Director

FROM: William Herrmann, Utilities Field Superintendent *W.H.*

VIA: A. Randolph Brown, Utilities Director *ARB*

SUBJECT: Emergency Repair to Force Main

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Issue:

The 24" force main (pipe used to carry wastewater under pressure) located approximately 200 feet from the IntraCoastal Waterway began to leak.

Explanation:

In late February, a small leak was seen in the area of the above force main. A brief investigation quickly determined that the leak was the result of a problem with a fitting in the force main that was installed approximately 12 years ago. Part of the 2010 investigation identified that approximately 7 years ago a "quick fix" was attempted without disassembling the problem connection. That "quick fix" held, but clearly, it was not a permanent solution. We were able to contain the leak, inform regulatory bodies and stay in compliance, avoiding any fines.

Recommendation:

Given the size of the main, and the environmental impact, it was decided to enact a solution that adhered to *best practices*. The first step was to divert flow to an old force main that was still connected to the system, and is tested periodically to eliminate the possibility of catastrophic failure of the errant connection. Then, a full permanent fix was developed by Chen and Associates and executed by Molloy Brothers Construction while Utilities Field Operations staff both inspected each step of the project and provided some logistical support.

The result of these actions is a repair that adheres to *best practices* so that the problem with the fitting does not reoccur and also left in place the emergency connection to the old force main should some other unforeseen emergency occur.

