



Kevin J. Murphy
City Manager
Mike McGovern
Assistant City Manager

October 12, 2017

Mayor Edward J. Kennedy, Jr.
and
Members of the City Council

REFERENCE: **8.7. 10/10/17 C. Samaras/C. Leahy** - Req. City Mgr. provide an update regarding costs of all infrastructure improvements (ie. Water/Sewer upgrades); include the costs associated with the replication of all the open space areas pursuant to Article 97.

Dear Mayor Kennedy and Members of the City Council:

Attached, please find a motion response from Mark Young, LRWWU Executive Director and Nicolás H. Bosonetto, P.E., City Engineer (Interim) in regards to the above council motion request. This is a very complex issue and Mr. Young and Mr. Bosonetto will be present at the Council meeting to answer questions in more detail. Also, attached is a copy of a response by Tom Bellegarde, Assistant City Manager/DPW Commissioner outlining Article 97 replication costs.

Please feel free to contact me if you have further questions regarding this matter.

Sincerely,

Kevin J. Murphy
City Manager



Nicolás H. Bosonetto, P.E.
City Engineer (Interim)

Date: October 12, 2017
TO: Kevin J. Murphy, City Manager
VIA: Tom Bellegarde, Assistant City Manager/DPW Commissioner
FROM: Mark A. Young, LRWWU Executive Director
Nicolás H. Bosonetto, P.E., City Engineer (Interim)

SUBJECT:

City Council Motion 11.9. (7/25/17) - C. Leary - Request City Mgr. provide an update regarding the flooding/drainage issues on Alcott Street and Douglas Road.

City Council Motion 8.7 C. Samaras/C. Leahy – Request City Manager provide an update regarding the costs of all Infrastructure Improvements (I.e. Water/Sewer Upgrades); Include the costs associated with the replication of all the open space areas pursuant to article 97.

The area around Cawley Stadium is a natural wetland area which originally encompassed land around the Phoenix Avenue, lower Douglas Road, Cawley Stadium, and Clark Road. This wetland system eventually drains to the Merrimack River through the Trull Brook Golf Club.

During the 1920's and 1930's the area was developed for residential neighborhoods and the system of wetlands became fragmented. Today there are various culverts under Phoenix Avenue, Rogers Street, Douglas Road, and Clark Road which interconnect these wetlands.

Around 1938, the Oakland Trunk Sewer Line was built to support the growth in residential neighborhoods. Originally the trunk line carried both sewer and stormwater, however, the line would surcharge (i.e. overflow) during strong storms and low-lying street areas around Douglas Road and Windward Road would flood with sewage.

In 1982 the City attempted to rectify the problem by building separate stormwater system to collect stormwater from Alcott Street, Windward Road, Douglas Road, the skating rink and the Cawley stadium parking lot and dumping it into the wetland. The problem still exists however, and the Oakland Trunk Line still surcharges in front of 35 Windward Road during strong storm events. The surcharge consists of sewage and water, which floods the street and then drains into the wetland through the aforementioned separated storm drains.



Nicolás H. Bosonetto, P.E.
City Engineer (Interim)

The Wastewater Utility has recently been informed that street flooding issues in this area may still occur during times of heavy rain. In June, the Wastewater Utility installed a level sensor to monitor levels in the local sewer system during wet weather to determine if further action is necessary.

There have been a number of wet weather events since the installation of the level sensor with the only overflow occurring during the rain event of Tuesday, July 18th. The surcharge was approximately 1.5 feet above the street level and lasted for about 25 minutes. (see attached chart) This very intense rainstorm also caused other surcharge issues in the City. Currently sewer backups in the Douglas/Winward Road/Alcott Street area are minimal, do not occur on a regular basis, and occur only during very intense downpours.

With the LHS at Cawley project, additional stormwater and sewage will increase the volume flowing into the Oakland Trunk Sewer Line. It is recommended that further studies and engineering be conducted in conjunction with the LHS project to determine the exact requirements and costs of mitigation strategies. Preliminarily, it is believed that a storm water storage/retainage system could be constructed under the Cawley Parking lot to attenuate strong storm events and relieve the surcharge problem. An approximate cost of such a project would be about \$5 Million. As part of the design for a new high school at the Cawley site, Perkins | Eastman is aware that underground retainage systems will be needed to address issues related to the needs of a new high school. Perkins | Eastman will work with Mark Young and the City Engineer to during design phases to incorporate and address wastewater and water needs beyond the boundaries of the new high school site. Infrastructure site improvements are reimbursable up to 8% of the total construction costs.

The Water Utility has conducted flow test in various areas of the City to assess the condition of water mains and adequate flow capacity. Recent water main replacement projects in the Humphrey Street area and Mammoth Road addressed the poor conditions of the water main and provided increased water flow in these areas.

Flow test performed on Rogers Street and the Cawley feed main indicated flow restrictions most likely caused by the poor condition of the existing 6" cast iron mains.

The estimated costs to replace the Rogers Street main is \$700,000.00 it is recommended that when funding is available the 6" Rogers Street water main be replaced with a 12" main. To ensure adequate water flow to a new high school on the Cawley site replacement of the existing water main to Cawley with a 12" main is an estimated cost of \$600,000.00.



Thomas R. Bellegarde
Assistant City Manager/Public Works Commissioner

To: Kevin Murphy, City Manager
From: Thomas Bellegarde, Assistant City Manager/Public Works Commissioner
Date: June 1, 2017
RE: Field Replication Costs for Carvalho Field and Manning Complex

For your consideration, the Department of Public Works has compiled budget estimates to replicate Carvalho Field at Cawley Stadium and a full renovation/construction at the proposed Manning Field Complex located at 303 Boston Road. The budget estimates are as follows.

Carvalho Field: The scope of work at Carvalho Field is significantly less due to the fact that the subsurface has already been installed. The replacement costs are estimated at \$355,000 and are broken down below.

- Replacement of exiting field turf – 60,000 sq. ft. x \$5.50/sq. ft. = \$330,000
- Repairs to subsurface and track - \$25,000

Manning Field Complex: Renovations, repairs, replacement, and construction are all part of the scope at the Manning Field site. The work will involve an expansion of the existing parking lot, construction of a “Drop-Off Parking” area, construction of a new regulation multi-purpose field (soccer dimensions), complete renovations of Manning Field and Ventura Field, landscaping site improvements, and the installation of a nature trail to connect the fields. Budget estimates are listed below.

- Construction of new multi-purpose field - \$1,320,000
 - Sub-surface construction \$350,000
 - Field Turf (80,000sq. ft.) \$750,000
 - Site Improvements including drainage and landscaping \$75,000
 - Engineering \$25,000
 - Contingency (10%) \$120,000
- Renovations to Ventura Field and Manning Field - \$60,000
 - Complete renovation to infields including sod, pitcher’s mound and home plate, warning track, fencing, dugout improvements, foul poles, grading, fertilizing, and conditioning – 2 fields x \$27,500 - \$55,000
 - Irrigation repairs - \$5,000
- Nature Trail - \$110,000
 - Site preparation performed with in-house labor - \$7500
 - 5’ wide trail x 2,000LF =10,000 sq. ft. of porous concrete - \$87,500
 - Landscaping improvements to entire site - \$15,000
- Parking Improvements - \$125,000
 - New drop off parking area - \$75,000
 - Expanded Parking area and repairs to existing parking \$50,000

Total Costs: \$1,970,000

Please feel welcome to contact me with any questions you may have on this matter.