

(The following is not a verbatim transcript of comments or discussion that occurred during the meeting, but rather a summarization intended for general informational purposes. All motions and votes are the official records).

REGULAR MEETING – CITY COUNCIL

-DECEMBER 21, 2015-

Regular meeting of the City Council was held on Monday, December 21, 2015 in the Council Chambers, City Hall, Cranston, Rhode Island.

The meeting was called to order at 7:10 P.M. by the Council President.

Roll call showed the following members present: Councilmen Farina, Botts, Council Majority Leader Archetto (appeared at 7:10 P.M.), Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

Absent: Councilman Stycos -1.

Also Present: Mayor Allan W. Fung; Robert Coupe, Director of Administration; Christopher Rawson, City Solicitor; Robert Strom, Finance Director; Anthony Moretti, City Council Internal Auditor; Patrick Quinlan, City Council Legal Counsel.

On motion by Councilman Aceto, seconded by Councilman Farina, it was voted to dispense with the reading of the minutes of the last meeting and they stand approved as recorded. Motion passed on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto; Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

I. PUBLIC ACKNOWLEDGEMENTS AND COMMENDATION

CRANSTON HIGH SCHOOL EAST BAND – WINNERS OF THE NE STATES GROUP II OPEN CHAMPIONSHIP

Mayor Fung presented Citations to Mr. Colozzi.

Council Vice-President Santamaria presented Citations to members of the band on behalf of the City Council.

DARLENE GRIFFIN – RETIREMENT FROM CRANSTON SCHOOL DEPT.

Mayor Fung presented Citations to Ms. Griffin

Council Vice-President Santamaria presented Citations to Ms. Griffin on behalf of the City Council.

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II. PUBLIC HEARINGS
(limited to docketed matters)

Roland Coutu appeared to speak regarding proposed Ordinance 11-15-02.

Peter Lapolla, City Planner, appeared to speak regarding proposed Ordinances 11-15-01 and 11-15-03.

Douglas Doe, Chair of Conservation Commission, appeared to speak and stated that the Commission met earlier this evening and recommended approval of proposed Ordinance 11-15-03 as amended by the Ordinance Committee.

Richard Tomlins, 400 Farmington Ave., appeared to speak regarding proposed Ordinance 8-15-03 and stated that whatever happens, it is going to cost the City more money. He asked that the City Council look into the State Police Report and major consideration is what is best thing to secure this City.

III. RESOLUTIONS

None.

IV. REPORT OF COMMITTEES

PUBLIC WORKS COMMITTEE
(Councilman Mario Aceto, Chair)

**11-15-04 ORDINANCE IN AMENDMENT OF TITLE 13, CHAPTER 04 OF THE
CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'WATER
SERVICE SYSTEM'**

On motion by Councilman Farina, seconded by Councilman Paplauskas, the above Ordinance was adopted on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

**RESOLUTION INSTITUTING PROCEEDINGS FOR THE ABANDONMENT OF A
PORTION OF KENSINGTON ROAD**

On motion by Council Minority Leader Favicchio, seconded by Councilman Paplauskas, the above Resolution was adopted on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

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ORDINANCE COMMITTEE
(Councilman Paul Archetto, Chair)

8-15-02 ORDINANCE IN AMENDMENT OF TITLE 10 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'MOTOR VEHICLES AND TRAFFIC' (Handicap and Disabled Parking Space Permits)

On motion by Councilman Aceto, seconded by Council Majority Leader Archetto, it was voted to adopt the above Ordinance.

Under Discussion:

Council Minority Leader Favicchio stated that there is a negative endorsement from the Traffic Engineer and no fiscal impact statement and also not in compliance with ADA.

Mr. Coupe stated that there is no way to determine the fiscal impact and the Traffic Engineer's denial is due to ADA requirements, not just on this street, but other areas in the City.

Solicitor Rawson stated that the main concern is this is a tight street.

Councilman Farina stated that the intention of this Ordinance is well, but he has questions of the sponsor, who is not present, and due to the negative endorsement of the Traffic Engineer, he would like more information from the Traffic Engineer, such as emergency vehicle access. He also questions who will be enforcing this.

Council Vice-President Santamaria asked if there is an appeal process if an applicant is denied. Solicitor Rawson stated that he does not think there is one.

Councilman Aceto asked for withdrawal of his motion and refer the Ordinance back to Committee for more discussion.

Council President Lanni stated that this process seems to work very well in Providence.

Motion and second were withdrawn.

On motion by Council Vice-President Santamaria, seconded by Councilman Farina, it was voted to recommit this Ordinance to Committee. Motion passed on a vote of 7-1. The following being recorded as voting "aye": Councilman Farina, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -7. The following being recorded as voting "nay": Councilman Botts -1.

11-15-01 ORDINANCE APPROVING CRANSTON 2015 MULTI-HAZARD MITIGATION STRATEGY (Hazard Mitigation Plan)

On motion by Councilman Farina, seconded by Councilman Paplauskas, the above Ordinance was adopted on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

11-15-03 ORDINANCE IN AMENDMENT OF CHAPTER 17.24 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'ZONING' PERFORMANCE STANDARDS (Solar Power)

On motion by Councilman Farina, seconded by Councilman Paplauskas, the above Ordinance was adopted on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

-DECEMBER 21, 2015-

RESOLUTION PROPOSING AMENDMENT TO SECTION 3.19 OF THE CRANSTON HOME RULE CHARTER AND DIRECTING THE SECRETARY OF STATE TO PLACE ON THE BALLOT THE FOLLOWING AS A REFERENDUM QUESTION (Non-Interference in Administrative Matters)

On motion by Councilman Aceto, seconded by Council Majority Leader Archetto, it was voted to recommit this Resolution back to Committee. Motion failed on a tie vote of 4-4. The following being recorded as voting "aye": Council Majority Leader Archetto, Councilmen Aceto, Council Vice-President Santamaria and Council President Lanni -4. The following being recorded as voting "nay": Councilmen Farina, Botts, Paplauskas and Council Minority Leader Favicchio -4.

On motion by Councilman Aceto, seconded by Council Majority Leader Archetto, it was voted to adopt this Resolution.

Under Discussion:

Council Majority Leader Archetto stated that the Charter provision currently is draconian.

Councilman Farina stated that he does not think that the City Council should vote to change its own Statute or set penalty until we know what the penalty is. He has never had a problem with any Directors and does not see this as an issue.

Council Vice-President Santamaria stated that the reason he asked to recommit this Resolution is the censure is just too general.

Councilman Botts state that there is separation of powers and to him, the City Council should not be giving Directors orders. It is a waste of our time and voter's time to have this on the ballot.

Council Minority Leader Favicchio stated that the Council usually receives information from the Administration in a fairly reasonable time. It is the Administrations' duty to handle day to day functions and dealing with Directors.

Councilman Paplauskas agreed with Council Minority Leader Favicchio's remarks.

Council Minority Leader Favicchio questioned when this was enacted. Council President Lanni stated, probably in the 1960's. Council Minority Leader Favicchio asked if this has ever been utilized in removing a Council member from office. Council President Lanni stated, no, not that he is aware of.

Councilman Botts stated that he believes this was proposed last year and failed on a bipartisan vote of 4-2. He is not sure why this is being reintroduced again, but he urged his colleagues to vote against this.

Council Minority Leader Favicchio suggested changing some of the rules in the Council Rules clarifying, understanding and governing the Council's own conduct.

Council Majority Leader Archetto stated that he believes the Charter supersedes Ordinances. The Council Rules can be amended after the Charter is changed.

Roll call was taken on motion to adopt the above Resolution and motion failed on a tie vote of 4-4. The following being recorded as voting "aye": Council Majority Leader Archetto and Councilman Aceto, Council Vice-President Santamaria and Council President Lanni -4. The following being recorded as voting "nay": Councilmen Farina, Botts, Paplauskas and Council Minority Leader Favicchio -4.

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11-15-02 **ORDINANCE IN AMENDMENT OF TITLE 8.28 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'PROPERTY MAINTENANCE STANDARDS' (Stagnant Water Accumulation Prohibited). Failed in Committee 12/17/2015. No Action to be taken.**

Reported out as failed in Committee. No action.

FINANCE COMMITTEE
(Councilman Steven A. Stycos, Chair)

ANNUAL CITY FISCAL AUDIT FISCAL YEAR ENDING JUNE 30, 2015 – Marcum LLP

On motion by Councilman Farina, seconded by Councilman Botts, it was voted to accept the Audit.

Under Discussion:

James Prescott and **Erica Olobri** of Marcum Accountants, appeared to speak regarding the Audit. Ms. Olobri stated that all financials are fairly stated.

Councilman Aceto questioned why the Management Letter is being provided now, the week before Christmas. Mr. Prescott stated that this is the typical time they preset this. The report itself is not due until December 31st. A contributing factor this year is a new GASB requirement and a lot of communities have been delayed.

Mr. Strom stated that normally the Management Letter is not provided until the end of January or beginning of February. The Audit has to be approved by December 31st.

Ms. Olobri addressed the outline report. She also addressed the draft of the Management Letter. She stated that one thing they found is there is no communication between departments.

Mr. Strom stated that the Purchasing Agent handles fixed assets and entering into database on a timely basis has not been done. There are a number of reasons for this, but going forward this will be addressed on a monthly basis so this does not occur again.

Council President Lanni addressed the issue of centralizing Grants Accounting and asked if this recommendation has been made in the past. Ms. Olobri stated, yes. Council President Lanni stated that this Administration has been in office for seven years and he questioned why this problem has not been addressed. Mr. Strom stated that this is not a problem, it is a recommendation. Ms. Olobri indicated that as to past years' recommendations, some were corrected this year and have been eliminated.

Discussion took place on bank reconciliation not being up to date.

Council President Lanni stated that no bank reconciliation in seven months is a problem. Mr. Strom stated that there was a change in staff in April. There were daily cash reconciliation to the General Ledger from April to October.

Councilman Farina asked the Auditors if they felt that a Personnel Director would address some of the issues. Ms. Olobri stated yes.

Discussion ensued regarding the City's need for a Personnel Director.

Mr. Moretti asked if hiring a personnel director was being made as a recommendation? and if so it was not within their role as Auditors to do so. Mr. Prescott stated that this will not be part of the Management Letter. This was suggested in general.

Council President Lanni asked when the final Management Letter will be completed. Ms. Olobri stated that it is expected to be done the end of January and will be have management response included.

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Councilman Farina asked Auditors if they see any reasons why the Council should not approve this Audit this evening. Ms. Olobri stated, no.

Discussion took place on the computer backups recommendation. Councilman Aceto asked if this is being addressed. Mr. Strom stated that he spoke to the IT Director and he is working on a plan and process to accomplish this offsite by the first of the year. Mr. Strom stated that currently the City Clerk does daily backups which are stored off site.

Discussion took place on the fraud prevention program and Ms. Olobri stated that these have been recommended the last few years.

Roll call was taken on motion to accept the Audit and motion failed on a tie vote of 4-4. The following being recorded as voting "aye": Councilmen Farina, Botts, Paplauskas and Council Minority Leader Favicchio -4. The following being recorded as voting "nay": Council Majority Leader Archetto, Councilman Aceto, Council Vice-President Santamaria and Council President Lanni -4.

8-15-03 ORDINANCE IN AMENDMENT OF TITLE 2 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'POLICE DEPARTMENT' (Composition)

On motion by Councilman Aceto, seconded by Councilman Farina, it was voted to adopt the above Ordinance.

Under Discussion:

Council Vice-President Santamaria asked for opinion from Mr. Quinlan since there is a lawsuit on this. Mr. Quinlan recommended that this be referred back to Committee or continued to next month due to pending litigation.

Councilman Botts asked if there is a Memorandum of Understanding from Officer Josefson. Mr. Coupe stated, no.

Motion and second were withdrawn.

On motion by Councilman Aceto, seconded by Council Majority Leader Archetto, it was voted to recommit to Committee. Motion failed on a tie vote of 4-4. The following being recorded as voting "aye": Council Majority Leader Archetto, Councilman Aceto, Council Vice-President Santamaria and Council President Lanni -4. The following being recorded as voting "nay": Councilmen Farina, Botts, Paplauskas and Council Minority Leader Favicchio -4.

On motion by Council Minority Leader Favicchio, seconded by Councilman Farina, it was voted to table this Ordinance. Motion failed on a tie vote of 4-4. The following being recorded as voting "aye": Councilmen Farina, Botts, Paplauskas and Council Minority Leader Favicchio -4. The following being recorded as voting "nay": Council Majority Leader Archetto, Councilman Aceto, Council Vice-President Santamaria and Council President Lanni -4.

Councilman Botts motioned to adopt the above Ordinance and Council President Lanni seconded the motion for discussion purposes.

Under Discussion:

Councilman Farina stated that he would like this Ordinance tabled until there is a resolution on the Josefson matter. At that time, this Ordinance can be reconsidered.

Councilman Aceto asked if there has been any movement in the Josefson litigation. Mr. Coupe stated that there has been communication and it has not gone well. As to the Ordinance as drafted, he does not think it can achieve the goal.

Roll call was taken on motion to adopt the above Ordinance and motion failed on a vote of 0-8. The following being recorded as voting "nay": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

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Council Majority Leader Archetto motioned to reconsider the vote and Council President Lanni seconded the motion for discussion purposes. No discussion was held. Motion failed on a tie vote of 4-4. The following being recorded as voting "aye": Council Majority Leader Archetto, Councilman Aceto, Council Vice-President Santamaria and Council President Lanni -4. The following being recorded as voting "nay": Councilmen Farina, Botts, Paplauskas and Council Minority Leader Favicchio -4.

RESOLUTION AUTHORIZING REAL ESTATE TAX ABATEMENTS

On motion by Councilman Farina, seconded by Council Majority Leader Archetto, the above Resolution was adopted on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

RESOLUTION AUTHORIZING MOTOR VEHICLE TAX ABATEMENTS

On motion by Council Majority Leader Archetto, seconded by Council Minority Leader Favicchio, the above Resolution was adopted on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

TAX INTEREST WAIVER APPROVALS

On motion by Councilman Farina, seconded by Council Vice-President Santamaria, it was voted to approve the above Tax Interest Waiver Approvals. Motion passed on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

TAX INTEREST WAIVER DENIALS

On motion by Councilman Farina, seconded by Councilman Botts, it was voted to approve the above Tax Interest Waiver Approvals. Motion passed on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

CLAIMS COMMITTEE

(Councilman Michael W. Favicchio, Chair)

REPORT OF SETTLED CLAIMS (*Informational purposes*: Mercedes Frias \$1,077.59 vehicle damage; Robert & Lauren Cook \$10,000.00 property damage; Verizon \$21,049.50 property damage; Progressive Insurance for Victor Martinez \$2,848.21 property damage; Janice A. Moretti \$183.15 vehicle damage; Gerald A. St. Angelo, Jr. \$300.00 vehicle damage.

No action needed.

V. PUBLIC HEARINGS

Richard Tomlins, 400 Farmington Ave., appeared to speak and stated that with all the turmoil in the Police Department, we have not exercised leadership.

VI. ELECTION OF CITY OFFICIALS

None.

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VII. REPORT OF CITY OFFICERS

None.

VIII. EXECUTIVE COMMUNICATIONS

**REPORT ON HIRING OF SPECIAL COUNSEL, CONSULTANTS, ETC.,
PURSUANT TO CHARTER SECTION 15.05.**

Council Vice-President Santamaria questioned why there are a lot of bills from Partridge, Snow & Hahn and move in the redistricting litigation. Solicitor Rawson stated that there could be a decision next June. This is on hold now and he would think these bills will level off.

**REQUEST TO BE PLACED ON PENSION EFFECTIVE JANUARY 13, 2016:
DETECTIVE DONALD BUCCI, CRANSTON POLICE DEPARTMENT**

Mr. Coupe appeared to speak.

On motion by Councilman Aceto, seconded by Councilman Farina, it was voted to approve the above request. Motion passed on a vote of 8-0. The following being recorded as voting "aye": Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

SETTLED CLAIMS BY SOLICITOR: Joseph Saccoccio & attorneys Gilstein, Kinder & Levin, LLP \$1,500.00 personal injury

No action needed.

IX. COUNCIL PRESIDENT COMMUNICATIONS

Council President Lanni wished everyone a Merry Christmas and Happy Holidays.

X. COUNCIL MEMBER COMMUNICATIONS

COUNCILMAN STYCOS:

- **Status of Knight Farm trail application to DEM (Cont. 11/23/2015)**

Council President Lanni stated that since Councilman Stycos is not present, this item will be continued.

COUNCILMAN ARCHETTO:

- **Street paving in relationship to Providence Water and utilities (Cont. 11/23/2015)**

Council Majority Leader Archetto asked that this item be removed from the docket since it was addressed last month.

COUNCILMAN ACETO:

- ***Illegal dumping – Burlingame, Hope, and Laten Knight Roads***

Councilman Aceto stated that this issue is very severe. Mr. Coupe stated that he will look into it and see what can be done.

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- ***Stagnant Water Ordinance – Adm. enforcement report & violations***

No discussion was held.

COUNCIL MINORITY LEADER FAVICCHIO:

- ***Capuano Dr. update***

Mr. Coupe stated that the Community Development Department has money to rehabilitate the building and sell it. They are working with Solicitor Marsella trying to get the bank to turn that property over to the City.

COUNCILMAN BOTTS:

- ***Snow Plowing of Streets***

Councilman Botts asked that Administration stress to the Highway Department and snow plow vendors that from the first snowfall, they need to plow curb to curb correctly. He also thanked the Highway Department for addressing recent potholes in his Ward.

COUNCIL VICE-PRESIDENT SANTAMARIA:

- ***Bridge on Park Ave.***

Council Vice-President Santamaria stated that the Bridge across from Catanzaro's on Park Ave. has had orange and white barriers for a few years and he would like an update as to whether this bridge is safe and when these barriers will be removed. Mr. Coupe stated that he will look into this.

COUNCILMAN PAPLAUSKAS:

- ***Enterprise St.***

Councilman Paplauskas stated that there are potholes on Enterprise St. Mr. Coupe stated that he will look into it and will as Highway Department to address it.

COUNCILMAN FARINA:

- ***Boat Trailer Signs***

Councilman Farina asked that the boat trailer signs be looked into because they are not installed yet.

XI. OLD BUSINESS

None.

XII. INTRODUCTION OF NEW BUSINESS*

*(for informational purposes. All new business is referred to Committee for public hearing)

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| 12-15-01 | ORDINANCE IN AMENDMENT OF TITLE 5.12 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'ALCOHOLIC BEVERAGE LICENSES (Alcohol Server Training Certification – Class A) |
| 12-15-02 | ORDINANCE IN AMENDMENT OF CHAPTER 10.32 OF TITLE 10 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'MOTOR VEHICLES AND TRAFFIC' STOPPING, STANDING AND PARKING ON SPECIFIC STREETS (Legion Way from Pontiac to Elsie). |
| 12-15-03 | ORDINANCE RATIFYING THE INTERNATIONAL ASSOCIATION OF FIREFIGHTERS, AFL-CIO LOCAL UNION 1363 (FY 2016-2019) |

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RESOLUTION FOR TEMPORARY SEASONAL SPEED BUMPS ON LAUREL HILL AVE. FROM ARGYLE ST. TO OXFORD ST.

RESOLUTION FOR TEMPORARY SEASONAL SPEED BUMPS ON HEATHER ST. AT INTERSECTION WITH BROWN ST.

RESOLUTION FOR TRAFFIC SAFETY REPORT ON GLADSTONE ST. SCHOOL VICINITY.

TAX INCENTIVE APPLICATION FOR JMDH REAL ESTATE OF CRANSTON, LLC (Restaurant Depot) – TEN YEAR COMMERCIAL.

NATIONAL GRID AND VERIZON JOINT POLE LOCATION REQUEST – HOSEY DR.

CLAIMS:

- **Property damage claim of Lewis J. Emma from alleged incident on February 20, 2013.**
- **Claim of Matthew Josefson, Cranston Police Department.**
- **Property damage claim of Janice Moretti from alleged incident on November 18, 2015.**
- **Property damage claim of Michele Hutchinson from alleged incident on December 5, 2015.**
- **Property damage claim of Everett Petrosinelli from alleged incident on December 8, 2015.**

On motion by Councilman Aceto, seconded by Councilman Botts, it was voted to refer the above new business to the respective Committees. Motion passed on a vote of 8-0. The following being recorded as voting “aye”: Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

XIII. MISCELLANEOUS BUSINESS ON CLERK’S DESK

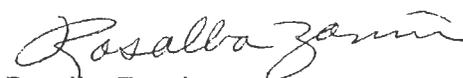
MUNICIPAL COURT 2016 SCHEDULE FOR APPROVAL

On motion by Councilman Farina, seconded by Councilman Aceto, it was voted to approve the above schedule. Motion passed on a vote of 8-0. The following being recorded as voting “aye”: Councilmen Farina, Botts, Council Majority Leader Archetto, Councilmen Aceto, Paplauskas, Council Minority Leader Favicchio, Council Vice-President Santamaria and Council President Lanni -8.

The meeting adjourned at 10:05 P.M.



Maria Medeiros Wall, JD
City Clerk



Rosalba Zanni
Assistant City Clerk/Clerk of Committee

(See Stenographic Notes of Ron Ronzio, Stenotypist)

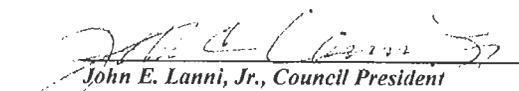
11-15-04

THE CITY OF CRANSTON

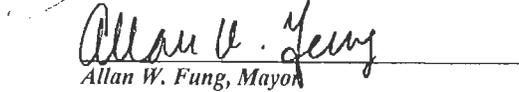
ORDINANCE OF THE CITY COUNCIL
IN AMENDMENT OF TITLE 13, CHAPTER 04, OF THE CODE OF THE CITY OF
CRANSTON, 2004, ENTITLED "WATER SERVICE SYSTEM"
(Water Control Facilities)

No. 2015-36

Passed:
December 21, 2015


John E. Lanni, Jr., Council President

Approved:
December 30, 2015


Allan W. Fung, Mayor

It is ordained by the City Council of the City of Cranston as follows:

Section 1: Title 13, Chapter 13.04 is hereby amended by deleting the following in its entirety:

[13.04.060 - Water control facilities division—Established.

There shall be a water control facilities division in the public works department which shall consist of the superintendent of water control facilities and such other employees necessary to the operation of the division as may be authorized by the city council.]

[13.04.070 - Water control facilities division—Powers and duties,

The water control facilities division shall have and exercise all the powers and duties of the former sewer division and all the powers and duties with respect to the supervision, management, control, maintenance and operation of water distribution facilities throughout the city vested in the city under existing and future laws.]

[13.04.080 - Water control facilities division—Rules and regulations.

The director of public works shall make and promulgate all needful rules and regulations for the operation of the Western Cranston water system and for providing water service from such system.]

11-15-04

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39 • [13.04.090 - Water service rates.

40 Water supplies from the Western Cranston water system shall be furnished by meter only at
41 the following rates:

42 A.

43 Retail Water Rates per Hundred Cubic Feet (HCF).

Annual Accounts	
\$1.31739 per hundred cubic feet	"0" to 4000
\$0.89100 per hundred cubic feet	over 4000
Quarterly Accounts	
\$1.31739 per hundred cubic feet	"0" to 1000
\$0.89100 per hundred cubic feet	over 1000
Monthly Accounts	
\$1.31739 per hundred cubic feet	"0" to 333
\$0.89100 per hundred cubic feet	over 333
	Usage in HCF

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45 B.

46 Industrial Accounts. The same rates apply as noted above under "Retail water rates".

47 C.

48 Cost of Water Meters.

5/8 inch meter	\$106.39
3/4 inch meter	137.90
1 inch meter	177.49
1 1/2 inch meter	471.50
2 inch meter	611.80
3 inch meter	2,472.50
4 inch meter	3,463.80
6 inch meter	6,504.00
8 inch meter	8,700.00

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50 D.

51 Connection Charges for Service Pipes. Service pipes are installed by the Cranston water
52 department from the distribution main in the street to the curb stop just inside the curb
53 line. The charge for this installation will be based upon current prices per "water
54 service installation contract".
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11-15-04

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E.

Service Charges. These charges are billed in addition to subsections (A) and (B) of this section:

5/8	\$63.67	\$15.94
3/4	72.44	18.11
1	89.68	22.42
1 1/2	114.01	28.50
2	167.88	41.97
3	322.36	80.59
4	496.21	124.06
6	979.00	244.75
8	1,588.15	389.54
10	2,234.15	558.54
12	3,006.52	751.63
Meter Size (in.)	Annual Accounts	Quarterly Accounts

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These rates shall be effective upon the final adoption of this section. (Editor's Note: Ordinance 94.26, which established the rates in this section was adopted May 23, 1994.)]

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[13.04.100 - Purchase Kent County water authority lines.

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The mayor and the finance director are authorized to purchase all rights, water lines and equipment of the Kent County water authority in the Oaklawn area bounded on the north by P-37, on the east by I-295, on the south by the Cranston-West Warwick city line, and on the west by Natick Avenue. Meaning and intending to include all their rights west of I-295 excluding those properties in the southerly portion of the above described area which are presently served by Kent County water authority water mains emanating in West Warwick.]

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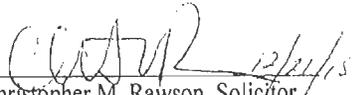
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Section 2: This Ordinance shall take effect upon its final adoption.

Positive Endorsement

Negative Endorsement (attach reasons)


Christopher M. Rawson, Solicitor

Christopher M. Rawson, Solicitor

Sponsored by: Councilman Michael W. Favicchio
Referred to Public Works December 7, 2015

U/Ordinances/Water Control Facilities

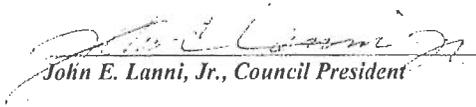
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THE CITY OF CRANSTON

**RESOLUTION OF THE CITY COUNCIL
INSTITUTING PROCEEDINGS FOR THE ABANDONMENT OF A PORTION OF
KENSINGTON ROAD**

No. 2015-39

Passed:
December 21, 2015


John E. Lanni, Jr., Council President

Resolved that

Proceedings be instituted for the abandonment of a portion of Kensington Road described as follows:

That certain parcel of public highway located at the southerly terminus of Kensington Road in the City of Cranston, County of Providence and State of Rhode Island, which parcel is shown on a survey plat entitled "PLAN OF SURVEY MINOR SUBDIVISION COGGINS PLAT ASSESSOR'S PLAT 2/2 LOTS 935, 2334 & 3987 NARRAGANSETT BOULEVARD & KENSINGTON ROAD CRANSTON, RHODE ISLAND SCALE: 1"=30' DATE: AUGUST 11, 2015 PROJECT NO.: SS2679.01 DRAWING NO.: SS4202", by Scituate Surveys, Inc., and which parcel is more particularly bounded and described as follows:

Commencing at an iron rod in the westerly line of Kensington Road at the southeasterly corner of land now or formerly of John W. Sinapi, Jr. and Bernard H. Larivee and the northeasterly corner of land now or formerly of William T. Coggins and Colleen M. Coggins, thence proceeding by a magnetic bearing S00°26'36"E along the westerly line of said Kensington Road bounded westerly by land now or formerly of said Coggins a distance of 11.45 feet to an iron rod and to the true point and place of beginning of the herein described parcel;

- (1) thence continuing S00°26'36"E along the westerly line of said Kensington Road bounded westerly by land now or formerly of said Coggins a distance of 68.16 feet to a point in the northerly line of land now or formerly of The Kathleen A. Mulkerin Declaration of Trust;
- (2) thence N89°14'52"E along the most southerly terminus of said Kensington Road and bounded southerly by land now or formerly of said Mulkerin Declaration of Trust a distance of 40.00 feet to the southwest corner of other land of William T. Coggins and Colleen M. Coggins;
- (3) thence N00°26'36"W along the easterly line of said Kensington Road bounded easterly by land now or formerly of said Coggins a distance of 67.95 feet to the southwest corner of land now or formerly of Edward S. Katz and Patricia F. Katz;

51
52 (4) thence S89°33'24"W a distance of 40.00 feet to the true point and place of beginning.

53
54 The above described parcel contains 2,722 square feet, more or less.

55
56 (Legal description prepared by Scituate Survey, Inc. No. SS2679.01)

57
58 And be it further resolved that the Committee on Public Works give notice as
59 required by law of a hearing thereon in accordance with Title 24 of Chapter 6 Section 2 of
60 the General Laws of 1956 and Section 41 of Chapter 3106 of the Public Laws of 1953.

61
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63
64 Petition filed by William T and Colleen M. Coggins

65
66 Referred to Public Works Committee February 1, 2016

11-15-01

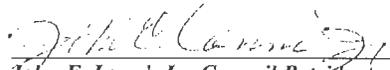
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THE CITY OF CRANSTON

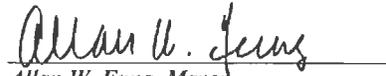
ORDINANCE OF THE CITY COUNCIL
APPROVING CRANSTON 2015 MULTI-HAZARD MITIGATION STRATEGY
[HAZARD MITIGATION PLAN]

No. 2015-37

Passed:
December 21, 2015


John E. Lanni, Jr., Council President

Approved:
December 30, 2015


Allan W. Fung, Mayor

WHEREAS, the City of Cranston is vulnerable to natural hazards including hurricanes, flooding, severe winter storms, thunder storms, high wind events, tornados, lightning, hail storms, coastal erosion and wildfire, and

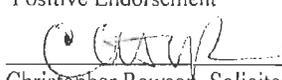
WHEREAS, total vulnerabilities are conservatively estimated at \$1,040,441.740 in property damages with potential risks to each of the City's 80,529 residents, and

WHEREAS, the Cranston Hazard Mitigation Committee has updated the City's 2010 Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 that documents specific courses of action that can be taken in advance of natural hazard events to reduce the City's vulnerabilities, and

WHEREAS, adoption of a local Multi-Hazard Mitigation Strategy will qualify the City to compete for implementation funds from the Federal Emergency Management Agency's Pre-disaster Mitigation Grant PROGRAM,

It is ordained by the City Council of the City of Cranston as follows:

that the 2015 Multi-Hazard Mitigation Strategy updated by the Hazard Mitigation Committee is adopted as the City's policy document, see attached Exhibit CD, which assesses the community's risk to natural hazards and which identifies appropriate mitigation actions for potential implementation.

Positive Endorsement	Negative Endorsement (attach reasons)
 12/21/15	
Christopher Rawson, Solicitor	Christopher Rawson, Solicitor
Date	Date

Sponsored by: Allan W. Fung, Mayor
Referred to Ordinance Committee December 17, 2015

Allan W. Fung
Mayor



Peter S. Lapolla
Planning Director



CITY PLAN COMMISSION
Cranston City Hall
869 Park Avenue, Cranston, RI 02910

Michael Smith
Chairman

James Moran
Vice Chairman

Ken Mason, P.E.
Mark Motte
Gene Nadeau
Robert Strom
Frederick Vincent
Lynne Harrington
Kimberly Bittner

December 3, 2015

Council President Lanni
Cranston City Hall
869 Park Avenue
Cranston, RI 02910

RE: **Ordinance #11-15-01** Ordinance approving Cranston 2015 Multi-Hazard Mitigation Strategy

Dear Council President Lanni:

On December 1, 2015, the above referenced ordinance was reviewed by the City Plan Commission for the purpose of providing the Council with an advisory recommendation, as required by Section 45-24-52 of the Rhode Island General Laws and Section 17.120.030 of the Cranston Zoning Code.

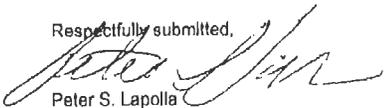
The Multi-Hazard Mitigation Strategy is a FEMA required document/planning process designed to help local communities identify and assess natural hazards that could impact a community and to develop strategies/programs to mitigate those impacts. This current update Multi-Hazard Mitigation Strategy was prepared by staff of the Department of Planning with the assistance of a Hazard Mitigation Committee and with the assistance CDR Maguire hired through a FEMA grant.

The Strategy

- Identifies the natural hazards that may impact the City:
 - > Flood Related Hazards
 - > Winter Related Hazards
 - > Hurricanes
 - > Wind, Lightning and Hail Storms
 - > Tornadoes
 - > Geologic Related Hazards: Earthquakes
 - > Coastal Erosion
 - > Wildfire and Drought.
- Assesses the probability of an occurrence for each hazard.
- Identifies the risks (impacts) to be expected for natural hazards including an assessment of public facilities, fiscal impacts and impacts to the City's Population.
- Identifies/assesses the City's current programs and capabilities to address natural hazards.
- Identifies a range of actions that could be taken to mitigate the impact from the occurrence of a hazard.
- Suggests a program to both implement the mitigative actions identified and to update the Multi-Hazard Mitigation Strategy on a periodic basis.

The Multi-Hazard Mitigation Strategy, as briefly summarized above, has been reviewed and approved by FEMA. As a final step in the planning process, FEMA requires the City to formally adopt the approved Strategy. Therefore, upon motion made by Mr. Vincent and seconded by Ms. Bittner, the City Plan Commission unanimously voted (7/0) to recommend that the City Council adopt the Multi-Hazard Mitigation Strategy as approved by FEMA.

Respectfully submitted,

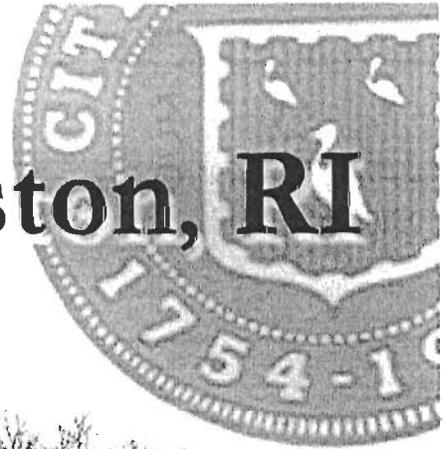

Peter S. Lapolla
Director

Telephone: (401) 461-1000 ext 3136

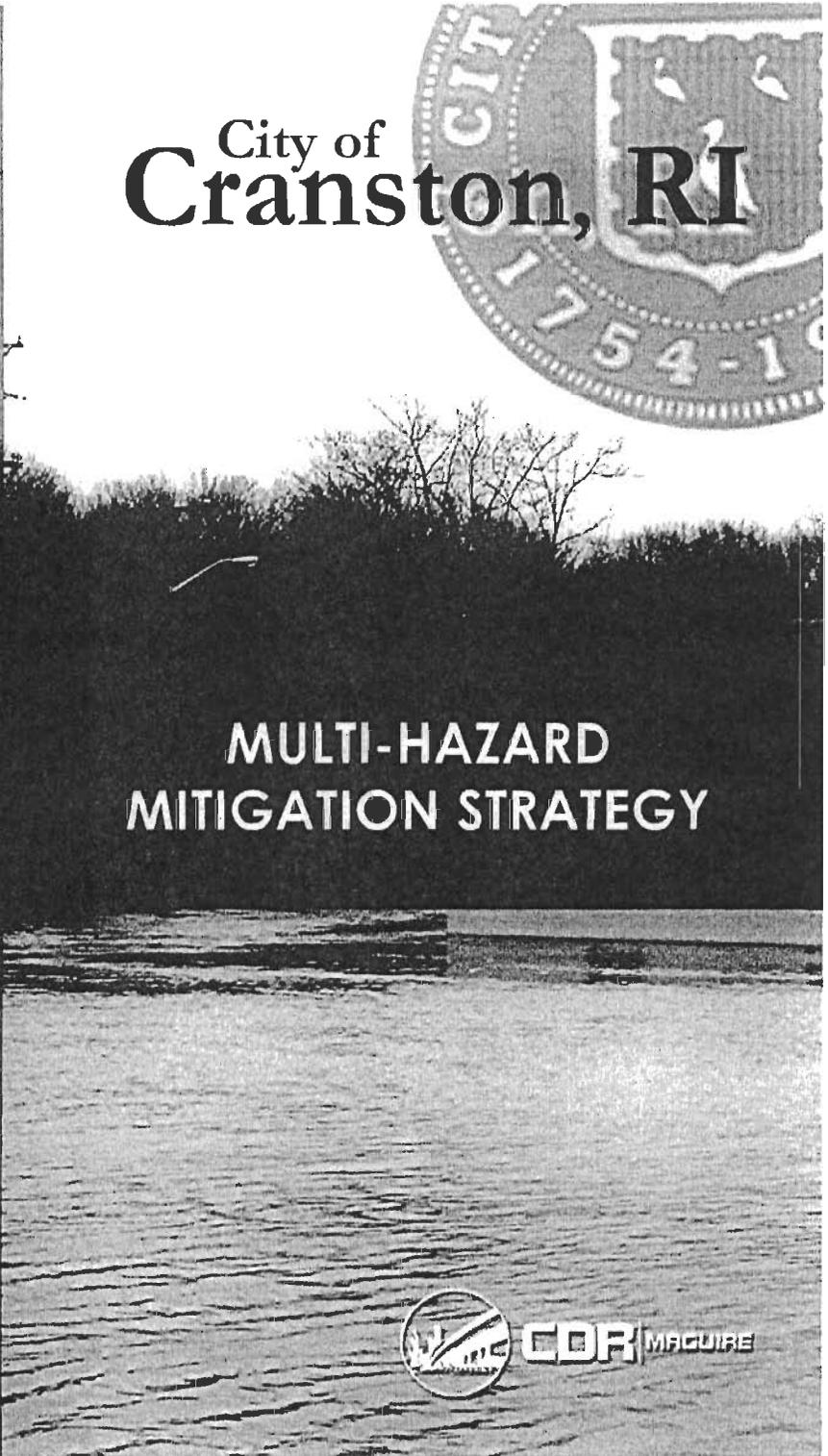
Fax: (401) 780-3171

2015 UPDATE

City of Cranston, RI



MULTI-HAZARD MITIGATION STRATEGY



City of Cranston Hazard Mitigation Plan - June 2015

Acknowledgements

The City of Cranston commends the efforts of its Hazard Mitigation Committee in completing this important plan. The effort is sure to result in the protection of life and property and special thanks are extended to Committee members:

Peter Lapolla – Planning Director, Cranston Department of Planning and National Flood Insurance Program Coordinator; Hazard Mitigation Committee Chair
Mario Aceto – Cranston Councilman
Stephen Boyle – Cranston Chamber of Commerce
Lawrence DiBoni – Director, Cranston Department of Economic Development
Ed Greene – Sage Business Solutions
Hy Goldman – Greylawn Food Corporation
Kenneth Mason – Director, Cranston Public Works
William McKenna – Chief, Cranston Fire Department and Emergency Management Agency
Marco Palumbo – Cranston Police
Jason Pozzulo – Cranston Planning
Stanley Pikul – Director of Building Inspections, Cranston

In addition the City also recognizes the contribution of the Cranston Tax Assessors Office, Planning Department, School Department, Recreation Department, Historic District Commission, Engineering Division, Harbormaster and Housing Authority; the United States Department of Agriculture Natural Resource Conservation Service; the American Red Cross; Narragansett Electric; Veolia Water; the Providence Water Supply Board; Cox Communications; and Verizon Telecommunications for assisting with the compilation of facilities inventories and in reviewing proposed mitigation actions.

Mayor

Allan W. Fung

Cranston City Council

John E. Lanni, Jr. – President
 Michael J. Farina – City-Wide
 Richard Santamaría - City-Wide
 Anthony Lupino – City Wide
 Steven Slycos - Ward 1
 Donald Bolts, Jr. - Ward 2
 Paul H. Archetto - Ward 3
 Mario Aceto – Ward 4
 Christopher Paplauskas. - Ward 5
 Michael W. Favicchio - Ward 6



Cranston City Hall
 869 Park Avenue
 Cranston, RI 02910

City of Cranston Hazard Mitigation Plan - February 2015

Executive Summary

This Hazard Mitigation Plan (HMP) is a product of the Cranston Hazard Mitigation Committee (CHMC). It has been approved by the Cranston City Council, the Rhode Island Emergency Management Agency, and the Federal Emergency Management Agency in accordance with the Disaster Mitigation Act of 2000.

Its overview of past natural hazard occurrences verifies that the area is vulnerable to diverse events including blizzards, floods and even tornados. The discussion puts the likelihood of these events into historical perspective and recognizes that although the probability of thunderstorm, high wind and lightning events may be higher; the intensity and potential impacts from less likely events such as hurricanes and earthquakes can be far greater.

The risk assessment portion of the plan confirms that the City has much to lose from these events. Total vulnerabilities are conservatively estimated at \$1,044,441,740 in property damages with potential risks to each of the City's 80,529 residents (U.S. Census 2012 estimate). More specifically, the four highest ranking risks identified include flood prone drainage systems (\$599,862,240) estimated property damage with an at-risk population of 7,727, potential dam failures, and damage to adult care and sewerage treatment facilities. Those classified as medium risks include the, high density residential developments, electrical substations and critical municipal response facilities. Those facilities classified as lower risks include the State concerns at the Pastore Center, Western Cranston Water District, Tennessee Gas Pipeline, recreational facilities, schools, marinas and private mooring facilities and historical resources.

To address these risks the 2015 HMP put forth a clear mission, a distinct set of goals and 25 specific mitigation actions. As part of this update, the CHMC reviewed each mitigation action with regards to activities completed to date and with regards to if the mitigation actions identified in the 2010 HMP should be carried forward into the 2015 HMP. The City's hazard mitigation mission is to protect and enhance the quality of life, property and resources by identifying areas at risk and implementing appropriate mitigation actions. The specific goals include upgrading infrastructure, protecting property, integrating planning and management approaches, strengthening regulatory control, improving response effectiveness and raising awareness of hazard mitigation benefits and procedures. Each of the subsequent mitigation actions for achieving these goals summarizes specific problems and possible solutions, details the primary tasks to be undertaken, identifies an appropriate lead and anticipates funding concerns.

In reviewing the 2010 HMP, the CHMC found that

- 4 of the 17 mitigation actions have been completed: Pump Station Flood Proofing, Flood Proofing of Peters School, Bridge Retrofitting and Repair, and CHMP Evaluation and Update.
- 11 of the 17 mitigation actions have been partially completed or are underway: Pocasset River Flood Improvements, WCWD Service Loop, Sewage Infiltration and Inflow Analysis, Tree-Trimming Program, Acquisition/Mitigation Program, Debris Management Plan, NFIP Community Rating System, Repetitive Loss Strategy, and Small Business Outreach Program.
- Two mitigation actions are no longer necessary and will be removed in the next plan update: Long Term Disaster Mitigation Plan and ARC Shelter Capacity
- One mitigation action: Meshanticut Brook Flooding Improvement has not been started yet due to funding concerns.
- One mitigation action, Hazard Mitigation Coordinator was marked as completed in 2010 but circumstances have changed and the 2015 CHMC has decided that this action does not need to be carried forward.

City of Cranston Hazard Mitigation Plan- February 2015

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Chapter 1: Introduction

1.1 Plan Purpose

The purpose of the City of Cranston Hazard Mitigation Plan (Plan) is to create a comprehensive review of Cranston's existing capabilities, vulnerabilities, risks, and mitigation actions, before a disaster occurs. This plan was constructed using input from a variety of municipal and private stakeholders and the general public involved in the planning process. This plan serves as guidance to help the City reduce their losses and vulnerabilities relating to floods, winter storms, hurricanes, wind, lightning, hail, tornadoes, earthquakes, coastal erosion, wildfire, and drought.

1.2 Hazard Mitigation and Its Benefits

Hazard mitigation planning is advance action taken to identify specific areas that are vulnerable to natural and man-made hazards within a city, and seeks to permanently reduce or eliminate the long-term risk to human life and property. It coordinates available resources and identifies community policies, actions, and tools for implementation that will reduce risk and the potential for future losses citywide. The process of natural hazard mitigation planning sets clear goals, identifies appropriate actions, and produces an effective mitigation strategy that can be updated and revised to keep the plan current.

States and communities across the country are slowly, but increasingly, realizing that simply responding to natural disasters, without addressing ways to minimize their potential effect, is no longer an adequate role for government. Striving to prevent unnecessary damage from natural disasters through proactive planning that characterizes the hazard, assesses the community's vulnerability, and designs appropriate land-use policies and building code requirements is a more effective and fiscally sound approach to achieving public safety goals related to natural hazards.¹

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) is the latest federal legislation to improve this planning process. It reinforces the importance of natural hazard mitigation planning and establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). Section 322 of the Act specifically addresses mitigation planning at the state and municipal levels of government. It identifies new requirements that allow HMGP funds to be used for planning activities. As a result of this Act, states and communities must now have an approved natural hazard mitigation plan in place prior to receiving post-disaster HMGP funds.² In the event of a natural disaster; municipalities that do not have an approved natural hazard mitigation plan will not be eligible to receive post-disaster HMGP funding.

The City of Cranston also recognizes the important benefits associated with hazard mitigation, its interaction with municipal land use and infrastructure planning, and the need for a comprehensive planning approach, which accommodates these interdependencies. The City's current comprehensive plan addresses land use, housing, economic development, natural resources, services and facilities, open space and recreation. While the entire hazard mitigation plan will not be formally incorporated into the Comprehensive Plan, certain, applicable mitigation actions will be incorporated. The City recognizes coordination between the HMP and the Comprehensive Plan to be of benefit because it will ensure a unified planning approach into the future and ensure that risk reduction remains a critical element of municipal planning.

A second benefit of hazard mitigation allows for a careful selection of risk reduction actions through an enhanced collaborative network of stakeholders whose interests might be affected by hazard losses. Working side by side with this broad range of stakeholders can forge partnerships that pool skills, expertise, and experience to achieve a common goal. Proceeding in this manner will help the City ensure that the most appropriate and equitable mitigation projects are undertaken.³

A third benefit of hazard mitigation would be endorsing a proactive planning approach focused on sustainability, whereby the City of Cranston could minimize the social and economic hardships that have resulted from the occurrence of previous natural disasters. These social and economic hardships include: the loss of life, destruction of property, interruption of jobs, damage to businesses, and the loss of historically significant structures and facilities. This proactive planning approach would look for ways to

City of Cranston Hazard Mitigation Plan - February 2015

combine policies, programs, and design solutions to bring about multiple objectives and seek to address and integrate social and environmental concerns. Linking sustainability and loss reduction to other goals can provide a framework within the state and local governments that will bring the comprehensive planning process full circle.⁴

Lastly, the participation in a hazard mitigation planning process will establish funding priorities. The formal adoption and implementation of this plan will allow the City of Cranston and its residents to become more involved in several programs offered by the Federal Emergency Management Agency (FEMA) including: the Community Rating System Program (CRS); the Pre-Disaster Flood Mitigation Assistance Program (FMA); and the Hazard Mitigation Grant Program (HMGP). Money spent today on preventative measures can significantly reduce the cost of post-disaster cleanup tomorrow.

1.3 Cranston Hazard Mitigation Committee

This Hazard Mitigation Plan (HMP) is a product of the Cranston Hazard Mitigation Committee (CHMC). Committee members included:

Peter Lapolla - Planning Director, Cranston Department of Planning and National Flood Insurance Program Coordinator; Hazard Mitigation Committee Chair

Mario Aceto - Cranston Councilman

Stephen Boyle - Cranston Chamber of Commerce

Lawrence DiBoni - Director, Cranston Department of Economic Development

Ed Greene - Sage Business Solutions

Hy Goldman - Greylawn Food Corporation

Kenneth Mason - Director, Cranston Public Works

William McKenna - Chief, Cranston Fire Department and Emergency Management Agency

Marco Palumbo - Cranston Police

Jason Pezzulo - Cranston Planning

Stanley Pikul - Director of Building Inspections, Cranston

In addition, the CHMC benefited from previous contributions of the Cranston Tax Assessors Office, Planning Department, School Department, Recreation Department, Historic District Commission, Engineering Division, Harbormaster and Housing Authority; the United States Department of Agriculture Natural Resource Conservation Service; the American Red Cross; Narragansett Electric; Veolia Water; the Providence Water Supply Board; Cox Communications; and Verizon as well as from the Rhode Island Emergency Management Agency and the Federal Emergency Management Agency. These entities were not only instrumental in inventorying pertinent facilities and in identifying risks but also in reviewing proposed mitigation actions and implementation plans.

1.4 The Planning Process

This update of the 2015 HMP is the result of a seven step process. It was initiated on September 16, 2013 with the establishment of the CHMC by the City Mayor and the dedication of technical support staff from the City's Planning Department. Step two started the plan update process and included the first meeting of the CHMC on November 22, 2013 which focused on re-ranking hazards and discussing the process for updating the plan. The resulting process is summarized below for convenience and detailed procedural methodologies are presented within the plan's respective chapters. (See Chapter 7 for a more detailed description of both the planning and the public participation process by which the 2015 update of the HMP was completed.)

Step three began with the CHMC reviewing the hazards of concerns identified in the 2010 HMP on December 18, 2013 documenting their historical occurrences and reassessing the likelihood of future events as set forth in the plan. Follow-up meetings of the CHMC were held to finalize its review which is presented in Chapter Two.

Step four involved the review of the assessment of risk identified in the 2010 HMP and which was undertaken through two meetings of the CHMC designed to identify those elements of concern within the City. On December 18, 2013 and January 29, 2014 the CHMC reviewed and updated detailed facility inventories, mapped the concerns, generated fiscal and population impact analyses, determined the level of risk and produced a draft risk assessment matrix.

City of Cranston Hazard Mitigation Plan - February 2015

Step five entailed the CHMC reviewing and adjusting the 2010 HMP hazard mitigation mission statement, specific mitigation goals and individual mitigation actions. As above, a CHMC brainstorming session was used to provide a starting point for the CHMC's efforts. Follow-up meetings of the CHMC were then held to review the drafts and finalize the content of Chapters Four and Five.

Step six focused on the prioritization of the mitigation actions and the development of the implementation, evaluation and revision schedule. This prioritization was completed through individual review of the draft actions and updating the 2015 HMP.

Step seven furthered the public input and review process with the presentation to the City Planning Commission and the general public for review and comment. The HMP was also emailed to Emergency Management Directors in the neighboring towns of Warwick, West Warwick, Providence, Coventry, Johnston, and Scituate for their review and comments. Under the direction of the City's Planning Director, the City's consultant made suggested edits to the HMP and submitted complete first drafts to the Rhode Island for review in June 2014. A final copy was sent to the Federal Emergency Management Agency on XXX.

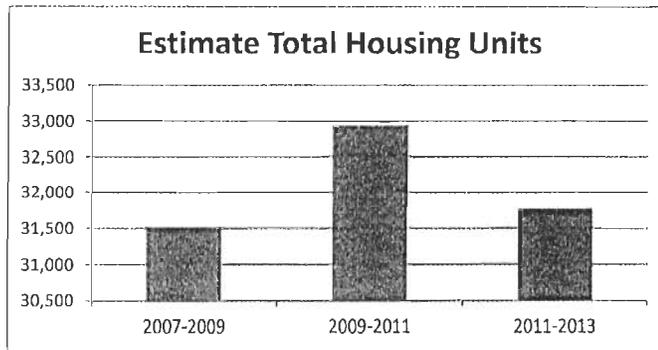
1.5 Background

The City of Cranston is located on the western shore of the Providence River, just north of the head of Narragansett Bay. The City is directly south of the Capital City of Providence and north of the City of Warwick (see map 1). In 2010 U.S. Census estimates the city's 2012 population to be at 80,529; a figure which ranks it as the third largest in the state behind the Cities of Warwick and Providence respectively. The City's 39 square miles of area are primarily drained by the Pocasset River and the Pawtuxet River.

The development pattern of the City is distinctive in that it is densely developed in an urban fashion in the east and gradually transitions to a suburban nature and ultimately to a rural state as one heads west. Land use within the city is approximately 34% residential, 8% industrial, 4% commercial, 6% agricultural, 4% recreational, 11% transportation, 20% forested or vacant, with the remaining 13% classified as other uses.

According to the US Census Bureau, the City of Cranston's current number of housing units has fluctuated between 31,600 and 33,000 from 2007 to 2013. According to the Town Planner, near max buildout has slowed the rate of residential development growth. On average, 15-20 new housing units are constructed each year.

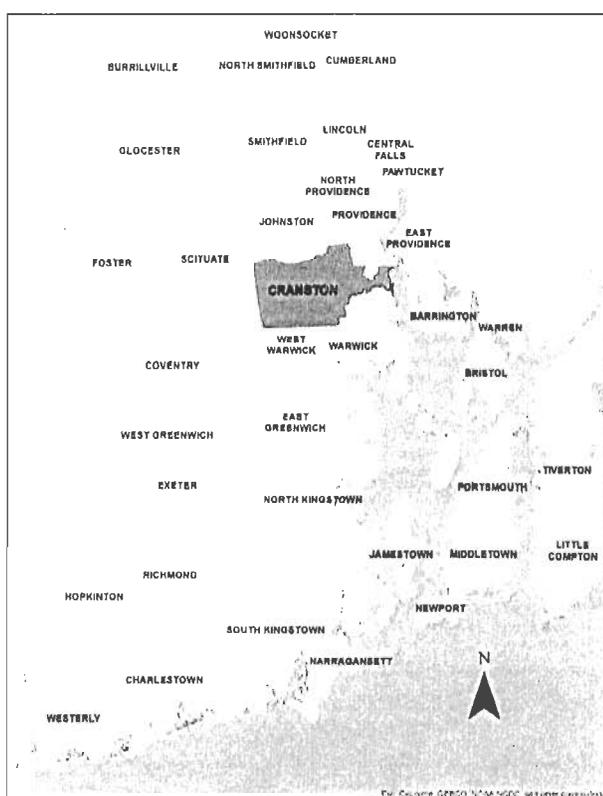
Chart 1: Housing Units in Cranston, RI



Source: U.S. Census Bureau 2007-2013 American Community Survey

City of Cranston Hazard Mitigation Plan- February 2015

Map 1: State of Rhode Island Map



Chapter 2: Natural Hazards

This history of natural hazard events verifies that the area is vulnerable to diverse events including blizzards, floods and even tornadoes. The discussion puts the likelihood of these events into historical perspective and recognizes that although the probability of wildfires, thunderstorm, high wind and lightning events may be higher; the intensity and potential impacts from less likely events such as hurricanes and earthquakes can be far greater.

The primary sources of data researched to identify occurrences of natural hazard events in Cranston were the National Climatic Data Center within the National Oceanic Atmospheric Administration (NCDC-NOAA) (<http://www.ncdc.noaa.gov/stormevents/>) The Rhode Island Hazard Mitigation Plan 2014 Update, United States Geological Survey (USGS) Earthquake Hazards Program (<http://neic.usgs.gov>), the 1998 *Journal-Bulletin: Rhode Island Almanac*, and the Taunton, MA, National Weather Service Forecast Office. The parameters and description of particular events are limited to the availability of information contained in the aforementioned sources.

2.1 Hazards of Concern

2.1.1 Flood Related Hazards

As recent history has shown, the biggest natural threat to Cranston is flooding. According to the RI State Hazard Mitigation Plan, "Flooding is a localized hazard that is generally the result of excessive precipitation. Flooding is the most commonly occurring natural hazard, due to the widespread geographical distribution of river valleys and coastal areas, and the attraction of human settlements to these areas. Floods are among the most frequent and costly natural disasters in terms of human hardship and economic loss.

"A flood, which can be slow or fast rising but generally develops over a period of days, is defined by the National Flood Insurance Program (NFIP) as:

- A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties from: overflow of inland or tidal waters; unusual and rapid accumulation or runoff of surface waters from any source; or a mudflow; or
- The collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above."⁵

For the purpose of this plan, flooding related hazards include riverine flooding, flash floods, urban flooding, coastal flooding, flooding related to climate change and sea level rise, coastal erosion, and dam breaches. Flooding occurs in Cranston because of high storm surges along the coast and excessive runoff from the Pawtuxet River Watershed, which drains an area of 231.6 sq. miles. The excessive runoff is a result of heavy rainfall or in combination with snowmelt. Two flood control structures that lie outside of the City of Cranston are the Flat River Reservoir in Coventry, and the Scituate Reservoir and Pawtuxet River Dam in Scituate. In addition, according to the Rhode Island Department of Environmental Management Dam Safety Program, there are a total of 23 dams within the City, 5 of which are high hazard dams. The high hazard dams in Cranston are: the Cranston Print Works Pond, Clarke's Pond Upper, Curran Lower Reservoir, Curran Upper Reservoir, and Stone Pond. All dams are shown in Appendix F.

The flood during week of March 28, 2010, is considered the flood of record for the main channel of the Pawtuxet River since the construction of the Scituate Reservoir. The flooding that occurred originated from a series of rain events that culminated with 6 to 9 inches of rainfall over the Pawtuxet River Basin on March 29, 2010. Peak discharge within Pawtuxet was approximately 10,400 cubic feet per second (cfs) and flood evaluations reached 11.79 feet above the 9 foot flood stage (20.79 feet in total). While stream gauge data are not currently available for the Pocasset River and Meshanticut Brook, the March, 2010 flooding event was also the record flood event for both bodies. The March, 2010 flooding affected properties along Meshanticut Brook, along the Pocasset River (especially at Fordson Avenue and south of Reservoir Avenue in the flood plain near Blackmore Pond) and along the Pawtuxet River main stem (especially in the

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Perkins Avenue neighborhood). During this flood event, the Natlick Avenue, Elmwood Avenue and Warwick Avenue bridges were all impacted resulting in their closure.

Flood prone areas on Furnace Hill Brook include the area between the State Route 37 (westbound exit ramp) to Interstate Route 295 and Natlick Avenue, and the area immediately downstream of the Pherix Avenue Bridge and downstream of the Pippin Orchard Road Bridge.⁶

Lastly, the City does participate in the NFIP, as do all the communities in Rhode Island. Currently there are 549 NFIP policies in Cranston (both residential and commercial); 5 of which are for structures in the high velocity V-Zone and 339 of which are in the less hazardous A-Zone. The total annual premiums on the 549 properties are \$859,730 providing a total of \$138,688,800 in flood insurance coverage. Since Cranston adopted its flood maps in 1978, there have been a total of 491 claims totaling \$15,082,249. Of the 549 policies held by Cranston property owners, 79 of these properties are classified as repetitive loss with 57 properties located within an A-Zone, 1 within a V-Zone and 21 within B, C or X Zones. A repetitive loss property is defined as a property that has experienced two or more insurance claims of at least \$1,000 due to natural hazards over a period of ten years.⁷ To date, there are 79 Repetitive Loss properties in the City of Cranston. 12 of the properties have been mitigated through voluntary acquisition and demolition. Lastly, it is important to note that the City of Cranston has 101 Letters of Map Amendments (LOMA) on file. Table 2 highlights the most recent flooding events that have affected the City of Cranston.⁷

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 HMP Plan still pose a significant threat to the both the residents and property in Cranston and that the 2015 HMP update needs to document flood events that occurred since 2010. The CHMC further finds that hazards from flooding may increase over time as global warming will contribute to an increase in both the intensity and frequency of storm events.

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Table 1: Recent Flooding Events in Cranston

Date	Type	Comments
04/01/93	Flash Flood	Pawtuxet River was reported flooding onto Woodbury Road, Marine and Wellington Avenues.
04/02/93	Flash Flood	The Pawtuxet River flooded again along Woodbury Road.
11/17/96	Flood	A 5.5' Providence Water Supply Board main ruptured on Oaklawn Avenue. Water from the ruptured main carved a 15' hole in Oakland Avenue, caused a utility outages and the evacuation of a nearby apartment complex and an assisted living facility.
01/24/98	Flood	In Cranston, the Pocasset River overflowed its banks, flooding a local road with 2' of water between 7:00 am and 9:00 am.
03/10/98	Flood	In Cranston, 3.60" of rain fell. Urban street flooding was quite serious. Many roads had to be closed due to flooding for periods varying from a few hours up to 12 to 24 hrs.
06/14/98	Flood	After 6" to 8" of rainfall, the Pawtuxet River was above flood stage from June 12th to the 14th.
07/01/98	Flood	In Cranston, the Pawtuxet River did not reach flood stage until 10:15 am on July 1st, crested at 9'40" at 8 pm on the 1st, and then fell below flood stage at 10 am on July 2nd.
09/16/99	Flood	Torrential rainfall from Tropical Storm Floyd caused the Pawtuxet River to rise out of its banks in Warwick and Cranston. The Pawtuxet went into flood at 11:32 pm on the 16th, and crested at 9'4" at 5:15 am on the 17th, just over its 9' flood stage. It returned to its banks at 2:45 pm on the 17th. Winds were recorded at 57.6mph.
04/22/00	Flood	Widespread urban flooding occurred in Cranston and West Warwick after 2" to 3" of rainfall. It was reported that some roadways were covered by 10" to 12" of water. The Pawtuxet River in Cranston experienced a minor flood, with a crest of 9'4" at 4:15 pm (flood stage is 9').
03/22/01	Flood	In Cranston the Pawtuxet River crested at 11'36" at 6:15 pm on the 22nd (flood stage is 9'). Property damage for Providence County was estimated at \$3,000,000.
03/30/01	Flood	After 3" to 4" of rainfall, the Pawtuxet River crested at 11'86" at 7:15 pm on the 31st (flood stage is 9'). Flooding was limited to several roads in low-lying areas near the river on April 1st.
09/15/05	Flash Flood	An approaching cold front interacted with a very humid air mass producing locally heavy downpours that caused flash flooding across Rhode Island during the late morning and early afternoon hours. Two to five inches of rain fell from this flood event; and most of the rain fell within a three hour period. Most of the flooding occurred across Providence and Kent counties. More specifically, 3' of water was reported on Pontiac Avenue in Cranston, which stranded cars on this flooded roadway. Also, 3' of water was reported on Killingly Street in Providence; and cars parked in the Coventry High School parking lot had water up to their doors. No known injuries directly resulted from this flash flood event.
07/10/06	Flood	Pawtuxet River A late season coastal storm brought heavy rain to Rhode Island, which resulted in widespread flooding in Providence County as well as near Narragansett Bay. Storm total rainfall averaged 2 to 4 inches. In the city of Providence, flooding closed Valley Street at Atwells Avenue. The Pawtuxet River at Cranston went into moderate flood, and crested at 12.57 feet at 4:15 pm EDT on June 8. (Flood stage is 9 feet.)
10/28/06	Flood	Widespread urban flooding was reported in greater Providence. The Pawtuxet River at Cranston went into minor flood, cresting at 9.5 feet which was just over its flood stage of 9 feet. Low pressure intensified as it tracked from the mid-Atlantic states to New England. This system brought damaging winds to much of central and southern Rhode Island, where trained spotters and amateur radio operators reported many downed trees and power lines. About 10,200 customers were left without power throughout the state, as reported by the media. Rainfall totals of 2 to 4 inches produced significant urban flooding from greater Providence to South Kingstown. Several roads were closed. In Providence, the rain collapsed the third-floor ceiling of an apartment building displacing 14 people. The heavy rainfall also resulted in minor flooding on the Pawtuxet River. At Cranston, the river crested at 9.5 feet, which was just over its flood stage of 9 feet. Significant coastal flooding also occurred as a result of the storm.
11/24/06	Flood	Minor flooding occurred along the Pawtuxet River at Cranston, after nearly 4 inches of rain in an 18-hour period. The river crested just below 10 feet during the morning of the 24th. Flood stage is 9 feet. No flood damage was reported. ODE Low pressure tracking well southeast of Nantucket brought strong northeast winds to portions of Rhode Island as well as heavy rain to much of the state. Sustained winds around 30 mph brought down a telephone pole in Warwick, at the corner of Ocean Street and Shore Avenue. Rainfall averaged between 2 and 4 inches which resulted in localized urban and poor drainage flooding. Minor flooding occurred along the Pawtuxet River in Cranston. The river crested just below 10 feet, which was just over its flood stage of 9 feet. No damage was reported.
04/15/07	Flood	Moderate flooding occurred along the Pawtuxet River. At Cranston, the river crested at 12.4 feet at 1 pm on the 17th (flood stage is 9 feet). Flooding was reported in several neighborhoods near the river in Cranston. An unusually strong and slow moving coastal storm for mid-April tracked to western Long Island Sound on April 16th before weakening slowly and drifting offshore. This storm brought a variety of impacts, including damaging

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		winds in excess of 60 mph, widespread river and stream flooding, and significant coastal flooding through several high tide cycles. East to northeast winds gusted as high as 80 mph. The highest gusts reported were 62 mph in
04/15/07 Cont.	Flood	Middletown, 61 mph at T.F. Green Airport in Warwick, and 60 mph in downtown Providence. There were widespread reports of downed trees, large branches, and power lines, especially in southern Rhode Island and as far inland as Providence. Rainfall totals of 3 to 5 inches, combined with wet antecedent conditions, resulted in widespread river and stream flooding, as well as significant flooding of urban areas. Minor to moderate flooding affected the Blackstone and Pawtuxet Rivers. The highest rainfall total reported was 5.00 inches in Little Compton. Many small streams throughout Rhode Island also rose out of their banks and flooded nearby areas, including roadways. Minor to moderate coastal flooding occurred along the coastline of Rhode Island through several high tide cycles, due to the combination of strong onshore winds, high seas, and astronomically high tides. Along the South Coast, the worst coastal flooding occurred with the morning high tide on the 18th, where flood waters and debris closed several shore roads. Large boulders that washed ashore had to be removed with snow plows, according to media reports.
02/13/08	Flood	Route 114 near Greenville Road was flooded in Cranston. Also, Natick and Wilbur Avenues and Fletcher Streets were impassable due to flooding and the Meshanicut Valley construction site was washed out. The Natick Avenue bridge was closed to all traffic because of severe erosion caused by the heavy rain. In addition, Route 116 near the reservoir was flooded with 18 inches of water flowing over the road. In Johnston, severe erosion on the sides of the Plainfield Pike was reported with 12 inches of water flooding portions of the road. A low pressure system developed off the Mid-Atlantic coast and moved up the east coast southeast of Nantucket producing snow, rain, and ice across Southern New England. Widespread two to four inch rainfall amounts resulted in small stream and poor drainage flooding as well as some minor river flooding. In addition, there was some minor wind damage from strong northeast winds, especially along the coast.
2/12/08	Flood	Route 10 and Wellington Road in Cranston were flooded. The Woonasquatucket River at Centerdale overflowed its banks flooding Atwells Avenue in Providence. Benjamin Road in North Providence was closed due to flooding. While a major ice storm affected Massachusetts and Southern New Hampshire, three to five inches of rain fell in Rhode Island resulting in small stream and some street flooding.
08/05/09	Flood	Several streets in Cranston were flooded with water halfway up car tires (about 6 inches). A cold front moved across Southern New England into an unstable atmosphere, resulting in showers and thunderstorms forming along the front. Some of these storms became severe producing strong, damaging winds and frequent lightning strikes. A group of nine people sought shelter under a tree at a sports field. Lightning struck the ground or a fence nearby and the nine felt a shock from the strike. Only minor injuries were sustained.
03/29/10	Flood	Six to nine inches of rain fell across Providence County, resulting in rises on both the Blackstone River at Woonsocket and the Pawtuxet River at Cranston. The Blackstone rose to moderate flood and the Pawtuxet rose to nearly 21 feet, surpassing the previous flood of record set only two weeks prior of nearly 15 feet. Numerous streets and basements were flooded across all of Providence County, including Cranston, North Smithfield, Johnston, Scituate, East Providence, North Providence, Providence, Pawtucket, and Cumberland. Roughly 120 homes were evacuated in the Valley View neighborhood in Cranston. A four building condo complex on Fordson Avenue was also evacuated. About 300 people total were evacuated from their homes in Cranston. Tenants from lower level units of an apartment building on Exchange Court in Pawtuxet were asked to evacuate due to flooding. A car on Valley Street in Providence was stuck in flood waters, leaving the driver stranded. Two homes on Tuxedo Street in Providence were looted while their owners were kept away for safety reasons. The Cranston wastewater treatment plant failed during the flooding, untreated sewage into the Pocasset River at a rate of 8 million gallons per day. In Johnston, the Pocasset Bridge on Route 14 (Plainfield Street) that spans the Pocasset River was closed after it started to show four large cracks. Several items that had floated down the river were caught under the bridge, blocking the water flow. City Hall experienced some flooding as well, prompting employees to shut down the computer system. A low pressure system sat just south of Long Island for two days, bringing heavy rain to much of Southern New England during that time. A persistent southerly low level jet brought very moist air into the area, which resulted in high rainfall rates. A coastal front along the I-95 corridor enhanced rainfall in that area. This event followed a heavy rainfall and record flooding event in mid-March as well as a second lesser rain event about a week prior. Rivers across much of Massachusetts and Rhode Island were still high from those events and warm temperatures in northern Vermont and New Hampshire resulted in a period of snowmelt that resulted in rises on both the main stem Connecticut and Merrimack Rivers. All of these factors led to a second record rainfall and flooding event. Two day rainfall totals across Southern New England ranged from an inch to ten inches. Though concentrated in Rhode Island and southeastern Massachusetts, all of Southern New England was affected by the flooding. In hardest hit Rhode Island, two day rainfall totals ranged from

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		<p>five to ten inches. Providence, set record monthly precipitation totals during the month of March. Providence also set the record for the wettest month ever in the period of record. Both the Pawtuxet River in Rhode Island set flood of record. River and areal flooding resulted in millions of dollars of damage across Rhode Island, with numerous homes, businesses, and people affected. A portion of Interstate 95, the main highway through Rhode Island, was closed for two days after the Pawtuxet River inundated the highway with up to three feet of water. Amtrak service through the state was suspended for several days because portions of the tracks were under up to two feet of water in several locations across the state. Passengers were rerouted through Springfield, Massachusetts. Though all 39 cities and towns in Rhode Island were affected, the most damage was seen in Warwick, West Warwick, Coventry, and Cranston, where the Pawtuxet and Pocasset Rivers flow through. Four dams in Rhode Island were breached and many others were overtopped and close to breaching, which resulted in the inspection of 42 dams throughout the state. Officials estimated that more than 500 people were evacuated from their homes because of rising water or the threat of rising water. More than 500 Rhode Island National Guardsmen were activated during the flooding, filling sandbags, directing traffic, and aiding in evacuations. Six National Grid substations were flooded and four were close to flooded, disrupting electrical service in Westerly and Warwick. Half a dozen sewage treatment plants through the state were overwhelmed or compromised by the flooding, leading to raw sewage being discharged into area rivers and bays. The Governor's office estimated that tens of thousands of properties were impacted by the flooding and about 4,000 workers were affected when the businesses they worked in were closed during and after the flooding. Numerous schools and many businesses, as well as the state government were closed for at least a day because of the flooding. President Obama issued a federal disaster declaration for the entire state of Rhode Island and residents received an automatic extension for filing their state and federal income taxes. The disaster declaration encompassed both the mid-March storm and this storm.</p>
9/8/2011	Flash Flood	<p>A slow moving cold front moved across Southern New England and stalled just south of the area. This front was instrumental in bringing tropical moisture from the remnants of Tropical Storm Lee into New England. A series of shortwaves moved through the northeast during this time period bringing several periods of showers and steady rainfall to parts of Southern New England. Rainfall totals throughout the region over the four days totaled anywhere from two to eight inches, with most areas receiving four to six inches. This resulted in flooding both on the rivers and small streams and in urban areas. The bulk of the flooding in urban areas occurred on Sept. 8 as a band of very heavy rain moved through, dumping up to two inches of rain in an hour to hour and a half in some locations. Cars were stranded on Oaklawn and Wilbur Avenues in Cranston with water nearly to the cars roofs. In Providence, the northbound portion of Route 10 from Union Avenue to Westminster Street was closed due to flooding from 0903am EST to 0924am EST. The southbound portion of Route 10 at Reservoir Avenue were closed as well and reopened at 1030am EST. Numerous cars were stranded in floodwaters in Cranston.</p>
6/7/2013	Flood	<p>The remnants of Tropical Storm Andrea tracked across southeastern Massachusetts bringing heavy rain (3-5 inches) to much of southern New England. This resulted in significant urban flooding, particularly across eastern Massachusetts and Rhode Island, as well as river and small stream flooding. It also contributed to record high rainfall across the area for the month of June. Three to five inches of rain fell across the Providence metro area. In Cranston, Park and Reservoir Avenues were flooded and impassable.</p>
7/11/2013	Flood	<p>A very warm, moist air mass remained in place across Southern New England with precipitable water values over 2 inches. Showers and thunderstorms that developed with an upper level disturbance ahead of a cold front resulted in very heavy rainfall with reports of near 2 inches in 30 minutes in some locations. This resulted in flooding particularly in southeastern Massachusetts and Rhode Island. Atwood Avenue and Pontiac Avenue in Cranston were flooded. A car was stuck in the flood waters on Pontiac Avenue.</p>
9/2/2013	Flash Flood	<p>A nearly stationary warm front draped across southern New England, coupled with a very moist atmosphere, resulted in showers and thunderstorms across the area for the third day in a row. Heavy rain fell within these showers and storms and flash flooding occurred, particularly over portions of Rhode Island. 60 people evacuated from Dean Estate apartment buildings. Flooding at Park and Reservoir Avenues. Flooding in some areas more than 3 feet deep</p>

Source: <http://www.ncdc.noaa.gov/stormevents>

2.1.2 Winter Related Hazards

For the purpose of this plan, winter related hazards include heavy amounts of snow, ice, and extreme cold. All of which may occur independently or at the same time.

"A heavy snow is generally defined as having more than 8 inches of accumulation in less than 24 hours. Heavy snow can bring a community to a standstill by inhibiting transportation, knocking down trees and utility lines, and by causing structural collapse in buildings not designed to withstand the weight of the snow. Repair and snow removal costs can be significant and surpass annual municipal salt and snow removal budgets, often before the end of the season. A winter storm warning is issued when snowfall is expected to accumulate more than 4 inches in 12 hours and/or a quarter inch or more of freezing rain accumulation.

"The term "ice storm" is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Ice storms result from the accumulation of freezing rain, which is rain that becomes super-cooled and freezes upon impact with cold surfaces. Freezing rain most commonly occurs in a narrow band within a winter storm that is also producing heavy amounts of snow and sleet in other locations. If extreme cold conditions are combined with low/no snow cover, the cold can better penetrate downward through the ground and potentially create problems for underground infrastructure as well. When utilities are affected and heaters do not work, water and sewer pipes can freeze and even rupture.

"Excessive cold may accompany winter storms, be left in their wake, or can occur without storm activity. Extreme cold can lead to hypothermia and frostbite, which are both serious medical conditions. What is considered an excessively cold temperature varies according to the normal climate of a region. In areas unaccustomed to winter weather, near freezing temperatures are considered "extreme cold." In Rhode Island, extreme cold usually involves temperatures below zero degrees Fahrenheit.

"The wind chill index attempts to quantify the cooling effect of wind with the actual outside air temperature to determine a wind chill temperature that represents how cold people and animals feel, based on the rate of heat loss from exposed skin. A wind chill index of -5 indicates that the effects of wind and temperature on exposed flesh are the same as if the air temperature alone were 5 degrees below zero, even though the actual temperature could be much higher. The NWS issues a wind chill advisory when wind chill temperatures are potentially hazardous and a wind chill warning when the situation can be life-threatening."⁸

Historically, severe winter storms for Rhode Island have resulted in the closing of schools/businesses, power outages, fallen trees/wires, disruption of transportation systems, and damage to commercial and residential property. The winter of 1978 is considered one of the worst winters on record for the State. On January 13, 1978 an ice storm hit the State. Table 2 highlights severe winter storm events that have affected Rhode Island.

Since then, numerous winter storms events dumping 2 feet or more of snow have occurred: January 7, 1996 (12-24 inches across the state), January 22, 2005 (15-25 inches across the state), February 8, 2013 (24 inches-30 inches across the state), and March 22, 2013 (12-24 inches reported). The severe winter storm that swept through Rhode Island on March 22, 2013 was declared a major disaster (DR-4107) by the Federal Emergency Management Agency. This large storm which stretched from New Jersey into Canada brought more than two feet of snow to Rhode Island in less than 24 hours. National Grid estimated more than 180,000 customers in Rhode Island lost power.

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 HMP have not changed and that the 2015 HMP update needs to document winter storms that occurred since 2010.

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Table 2: Recent Winter Related Storm Events

Date	Precipitation	Damage	Comments
01/07/94	Heavy snow and ice	\$555,000	Storm ended on 01/08/94. Snow accumulation ranged from 6" to 10".
01/07/96	Heavy snow "Blizzard of 96"	N/A	Storm ended on 01/08/96. Snow accumulation ranged from 12" to 24". The heavy snowfall disrupted transportation systems, closed schools, stores and businesses. In addition, several roof collapses were reported throughout the State.
03/31/97	Heavy wet snow "Blizzard of 97"	\$700,000	Storm ended on 04/01/97. Wind gusts recorded across the State ranged from 30mph to 71mph. Snow accumulation recorded in Cranston was 24". Damages were mostly due to snow removal and power restoration. Highway travel was near impossible with over 1,000 tree limbs down, and left 55,000 customers left without power.
03/05/01	Heavy snow	\$10 Million	Storm ended on 03/07/01. Snow accumulation ranged from 6" to 16" and wind gusts were reported to be 47mph to 53mph. Tens of thousands of electric customers left powerless, schools and businesses closed for 3 days in some areas.
03/00/01	Heavy snow	\$500,000	Storm ended on 03/10/01. Snow accumulation ranged from 6" to 8" accumulation.
12/25/02	Heavy snow	\$10,000	Storm ended on 12/26/02. Snow accumulations ranged from 4" to 7" and 40mph wind gusts were recorded at T.F. Green Airport.
2/17/03	Winter Storm	N/A	A major winter storm impacted southern New England with heavy snow and strong winds as it tracked southeast of Nantucket. Snowfall totals of 1' to 2' were widely observed throughout Rhode Island. No significant damage was reported due to the storm, since the snow was fluffy and light with temperatures in the teens and 20s. Impact on travel was minimal, since the storm affected the region on Presidents Day and most schools were closed that week. There were numerous reports of minor accidents as a result of slippery roads. No injuries were reported. The storm total at T.F. Green State Airport in Warwick was 15.0 inches. Of that total, 14.7 inches fell on February 17th, which set a record for the date. The previous record snowfall was 4.1 inches set in 1974. Other snowfall totals, as reported by trained spotters, included 21 inches in Cranston and 17 inches in Warwick, Johnston, and downtown Providence.
03/06/03	Heavy snow	\$290,000	Accumulation recorded in Cranston was 8". Dozens of minor accidents reported.
12/05/03	Winter Storm	N/A	A major winter storm brought heavy snow and strong winds to southern New England, dumping 1' to 2' of snow over a large area as it tracked slowly off the coast. In Rhode Island, snowfall amounts averaged between 10 and 20 inches, and had a major disruption on transportation due to the combination of poor visibility and snow covered roads. Dozens of minor accidents were reported. Two deaths were indirectly attributed to the storm. One man was killed when the inner tube he was riding in, towed behind a truck, hit a utility pole. Another man was killed when he was hit by a train while crossing the tracks on a snowmobile in Exeter. Officially, the snowfall total at T.F. Green State Airport in Warwick was 17.0 inches. Other snowfall totals, as reported by trained spotters, included 21 inches in North Foster; 19 inches in Johnston; 18 inches in downtown Providence and West Warwick; 16 inches in Cranston and North Kingstown; 15 inches in South Kingstown and Barrington; 14 inches in Woonsocket; 12 inches in Exeter and Westerly; and 8 inches in Hope Valley.
12/26/04	Winter Storm	N/A	A powerful winter storm brought heavy snow and strong winds to Rhode Island. Snowfall totals of 6 to 10 inches were widely observed throughout the state, along with winds gusting as high as 50 mph along the south coast. There were dozens of reports of accidents due to the combination of slick roads and poor visibility. Officially, the snowfall total at T.F. Green State Airport in Warwick was 7.0 inches. Other snowfall totals, as reported by trained spotters, included Cranston, downtown Providence, and Woonsocket.
1/22/05	Winter Storm	N/A	A major winter storm brought heavy snow, high winds, and coastal flooding to southern New England. In Rhode Island, snowfall totals of 15 to 25 inches were widely observed. Winds gusting as high as 60 mph at times (mainly around greater Providence) created near blizzard conditions at times, making travel impossible during the height of the storm. Officially, the snowfall total at T.F. Green State Airport in Warwick was 23.4 inches, which was the second greatest snowstorm for the Providence area since records began in 1905. The snowfall total of 16.4 inches on the 23rd set a daily snowfall record, breaking the previous record of 8 inches set in 1965.
2/12/06	Blizzard	\$10,000	Low pressure centered off the Virginia coast intensified into a strong Nor'easter as it tracked about 75 miles southeast of Nantucket Sunday afternoon, 12 February 2006. This strong Nor'easter produced heavy snow and windy conditions across Rhode Island. Blizzard criteria was met at the T.F. Green Airport in Warwick between 1051 AM and 3 PM. 9.4 inches of snow accumulated at T.F. Green airport,

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			which breaks the previous record snowfall maximum for the date. The accumulating snow began around 6 AM and tapered off around 6 PM. Snowfall amounts generally ranged between 9 and 14 inches, with some locations reporting up to 16 inches of snow. No known injuries directly resulted from this winter storm.
2/19/08	Heavy Snow	N/A	Eleven to twelve inches of snow fell across western Kent County. An intensifying coastal low spread heavy snow across southern New England. Snow began in the early afternoon across Connecticut and southwestern Massachusetts, spreading quickly across Massachusetts, Rhode Island, and southern New Hampshire. Eight to twelve inches of snow fell across much of southern New England.
12/19/09	Heavy Snow	N/A	Low pressure off the mid-Atlantic coast intensified dramatically resulting in widespread snowfall along the northeast corridor of the U.S. While the mid-Atlantic received much of the snow and wind from this storm, snow spread across much of Southern New England and blizzard conditions occurred in Newport, Rhode Island. Snowfall totals ranged to 18 to 20 inches across Rhode Island and southeastern Massachusetts. This resulted in numerous flight cancellations out of T.F. Green Airport in Providence and Logan Airport in Boston, school closings, and a struggle by plows to keep the roads clear.
12/28/10	Winter Storm	\$15,000	A strengthening winter storm passed southeast of Nantucket and brought heavy snow and strong winds to much of Rhode Island, resulting in near blizzard conditions at times. More than 2000 flights were cancelled along the east coast due to the storm and Amtrak service between New York and Boston was suspended during the storm. Despite numerous flight cancellations, T.F. Green Airport in Warwick remained open. Snowfall totals ranged from 6 to 8 inches along the south coast to as much as 8 to 15 inches elsewhere. Snowfall totals of 8 to 12 inches were observed in southeast Providence County, including 11 inches in downtown Providence. High winds brought down wires on Pawtucket Avenue in Providence.
1/12/11	Heavy Snow	0	A developing nor'easter coastal storm dumped nearly two feet of snow across portions of Rhode Island in a 24 hour period. This was the second major storm of an above average winter of snowfall. The first occurred December 26 and 27, with several other relatively minor snowfalls in the month of January, and a third major storm February 1 and 2. With only a brief thaw in between the December storm and the January storm, snow piled up across southern New England resulting in numerous roof collapses, towns seeking permission to dump excess snow in area rivers and bays, and numerous disruptions to transportation. Eight to fourteen inches of snow fell across southeastern Providence County.
1/26/11	Heavy Snow	0	A strong low pressure system moved up the coast and southeast of Nantucket producing up to a foot of snow across Rhode Island. Nine to eleven inches of snow fell across southeast Providence County.
2/1/11	Winter Storm	0	A series of low pressure centers impacted the Southern New England Region with a combination of heavy snows and ice. The first area of low pressure on February 1st lifted northeastward offshore of the Southeastern New England shoreline ushering heavy snows across the interior portions of New England, especially north and west. A second area of low pressure deepened through the Ohio River Valley, redeveloping over the Southeastern New England shoreline bringing a combination of heavy snows, sleet and freezing rain over much of the region February 2nd, before changing back to all snow into the end of the event. A total of 6 inches of snow fell across Southeast Providence County over the two day period, with upwards of a tenth of an inch of ice accumulation for isolated locations falling during the morning period on the 2nd.
10/29/11	Heavy Snow Halloween Nor'easter		The Nor'easter brought strong winds across the region, but nothing too strong inland. Nantucket, Massachusetts recorded a 69-mile-per-hour wind gust, which is nearly hurricane strength (74 mph). Fallen trees with wet, heavy leaves still on caused wide spread power outages (over 3 million across New England). About 6 inches of snow fell in Rhode Island.
1/19/12	Winter Weather	0	A cold front moved across Southern New England, resulting in a period of light snow overnight into the morning of the 20th. Two to five inches of snow fell across Southern New England, with the highest amounts focused across southeastern Massachusetts and Rhode Island. Amateur Radio operators reported 3 to 5 inches of snow on the ground.
1/21/12	Winter Weather	0	A weak low pressure system moved southeast of southern New England, bringing snow to much of southern New England. While most of the area received at least an inch of snow, a mesoscale band set up along the south coast of Massachusetts and Rhode Island resulting in incredible snowfall rates. Eight to twelve inches of snow fell along the coast with five to eight inches falling on Martha's Vineyard and Nantucket. Amateur Radio operator reported 3 to 5 inches of snow on the ground.
2/29/12	Winter Weather	0	Several waves of low pressure moved south of southern New England bringing a prolonged period of snow to the region. Anywhere from 1 to 12 inches of snow fell across the area. Three to four inches of snow fell across southeast Providence County.

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11/7/12	Winter Weather	0	Low pressure moved up the east coast spreading snow, rain, and wind across southern New England. Cloudy skies coupled with evaporational cooling to keep temperatures cooler than expected which resulted in snow spread across all but the south coasts of RI and MA as well as portions of southeastern MA. This in turn resulted in higher snow accumulations across much of southern New England. In Rhode Island, accumulations ranged from less than an inch to five inches.
12/29/12	Heavy Snow	0	A rapidly intensifying low moved out of the mid-Atlantic, passing southeast of Southern New England. This spread heavy snow across much of Southern New England, resulting in six to twelve inches of snow across the area. Snowfall totals between eight and ten inches were reported in southeast Providence County.
2/8/13	Blizzard "Blizzard of 2013/Winter storm Nemo"	0	<p>An historic winter storm deposited tremendous amounts of snow over all of southern New England, mainly from the mid-afternoon on Friday, February 8 and lasting into the daylight hours of Saturday, February 9. What made this an amazing storm was the widespread coverage of heavy snowfall. Most locations received 2 to 2.5 feet of snow! Isolated thunderstorms were common across the entire region during the height of the storm.</p> <p>A low pressure system advancing from the Great Lakes region combined forces with a very moist low pressure system moving northeast from the Gulf Coast states. Explosive deepening took place Friday evening, February 8, as a low center moved from the North Carolina coast to south of Nantucket. Strong high pressure to the north of New England helped ensure that cold air remained in place over the area. Snowfall gained intensity during the afternoon, but during the night, 2 to 3 inch per hour amounts were common throughout the region. Snow ended in the morning in western and central MA, southwest NH, most of CT and RI, and in the early afternoon across eastern MA.</p> <p>The Blizzard of 2013 also produced a prolonged period of very strong winds Friday night along the MA and RI coasts. Gusts exceeded hurricane force (74 mph) at a few locations. Gale force gusts (to 50 mph) continued on the MA coast through Saturday afternoon. The strong winds, combined with a wet snow, led to extensive power outages from downed trees and wires in southeast coastal MA and in southern RI. Elsewhere, farther inland, the snow became drier and did not cling to trees like it did along the south and southeast coast of New England. Some wind gusts included: 76 mph at Logan Intl. Airport (Boston, MA), 75 mph at Bedford, MA, 77 mph at Hyannis, MA and 68 mph in Jamestown, RI. Damaging gusts to 60 mph were recorded as far west as Worcester County, MA. Wind gusts of 35 to 50 mph were common elsewhere in southern New England.</p> <p>Minor tidal flooding occurred along the south coasts of Connecticut, Massachusetts, and Rhode Island during times of high tide Friday night and Saturday morning.</p> <p>The Providence Journal reported that almost 170 people sought treatment for storm-related heart attacks, falls, and other injuries related to the storm at Lifespan network hospitals (which includes 4 major Rhode Island hospitals). In addition 10 people were hospitalized with carbon monoxide poisoning. No further information was available.</p> <p>Seventeen to twenty-one inches of snow fell across southeastern Providence County. A Rhode Island man died from a heart attack while shoveling snow from the blizzard. No further details were available, including what city or town the man was from.</p>
2/17/13	Winter Weather	0	A strengthening ocean storm spread advisory level snow across much of southern New England. Two to four inches of snow fell across southeastern Providence County.
3/7/13	Winter Weather	0	This storm brought heavy snow and significant coastal flooding to the forecast area. This was an unusual synoptic set-up, with low pressure lingering off the coast of southern New England for several days. Snowfall was difficult to forecast due to concerns about precipitation type and boundary layer temperature. In the end, precipitation type turned out to be all snow for much of the area, with most locations receiving 1 to 2 feet of snow. In addition, the Massachusetts east coast was hit by widespread moderate and pockets of major coastal flooding for two high tide cycles and beach erosion for at least 5 high tide cycles. Five to six inches of snow fell across southeastern Providence County.

Source: <http://www.ncdc.noaa.gov/stormevents> Note: NCDC only reports hail data from 01/01/1950 to 09/30/2003.

2.1.3 Hurricanes

Hurricanes that strike the Eastern United States originate in the tropical and subtropical North Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico. The Atlantic hurricane season spans a six-month period (June 1st through November 30th). A hurricane is a tropical cyclone with winds that exceed 74 mph. The center of the hurricane spiral marks the "eye" of the storm. The weather conditions within the eye are characterized as generally cloud, precipitation, and wind free and the barometric pressure is the lowest at the very center of the eye. Immediately surrounding the eye are the strongest winds of the storm. The greatest potential for loss of life during a hurricane is from the storm surge, which is the elevated water pushed toward the coast by the force of the winds spiraling around the storm.

Hurricanes are categorized according to the strength of their winds using the Saffir-Simpson Hurricane Scale. A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the strongest. Relatively speaking, a lower category storm can sometimes inflict greater damage than higher category storms based on where they strike and the particular hazards they create.⁹ Hurricanes are considered the greatest natural hazard threat within Rhode Island. RIEMA annually asks the State's 39 communities to rank natural hazards indicating the level of seriousness of each natural hazard to their municipality. Hurricanes consistently rank the highest within the State.¹⁰

The two hurricanes that resulted in the largest loss of life in the State were "The Great New England Hurricane of 1938" and "Hurricane Carol". "The Great New England Hurricane" occurred on September 21st, 1938, and is considered the worst disaster in Rhode Island history. It resulted in the deaths of 262 persons and caused damage estimated at \$100,000,000. The eye of this hurricane tracked to the west of Rhode Island and hit at high tide. During the storm, two storm surges almost 30' high destroyed most of the beach homes along the South Shore. In downtown Providence, the surge flooded the area to a depth of more than 13'9" above the mean high-water mark. As a result, persons drowned trying to escape automobiles submerged in the streets and from buildings where the first floors were flooded to the ceiling.¹¹ In Cranston, an abnormally high tide of 15'7" in the Providence River near the mouth of the Pawtuxet River; this tide was 10'2" above the crest of the Pawtuxet and as a result of dam topping, extensive flooding occurred in the lower portions of the Pawtuxet River Watershed.¹²

Throughout Rhode Island, the American Red Cross (ARC) spent \$433,485 for the rehabilitation of 3,074 families. A total of 19,695 families suffered property loss; 797 permanent homes were destroyed; 1,169 summer homes were washed away; 899 boats destroyed and 888 damaged, 177 barns and 1,800 other buildings of various types were destroyed.¹³

On August 31, 1954, "Hurricane Carol" hit Rhode Island, in the same manner as "The Great New England Hurricane of 1938". As a result, downtown Providence was flooded when the water reached 13' above mean high-water level.¹⁴ In Cranston, Hurricane Carol created an abnormally high tide of 14'7" in the Providence River, near the mouth of the Pawtuxet River. The overtopping of the Pawtuxet Dam resulted in flooding 12' 5", upstream of the dam.¹⁵ Damage to yacht clubs, marinas and pleasure craft was in the millions with the stretch of shoreline from Fields Point to Pawtuxet Neck the hardest hit. Of the 150 craft moored in this area, 75 were sunk and 26 were damaged.¹⁶

The most recent significant weather event to affect the state was a downgraded hurricane. On October 29th 2012, Hurricane Sandy which had been sweeping up the Mid-Atlantic Coast had been downgraded by the time it had reached Rhode Island. Super Storm Sandy hit Rhode Island with strong winds, and storm surge, causing significant coastal erosion. Along the south coast, the storm surge was 4 to 6 feet and seas from 30 to a little over 35 feet were observed in the outer coastal waters. The very large waves on top of the storm surge caused destructive coastal flooding along stretches of the Rhode Island exposed south coast. Washington and Newport Counties suffered the most damage and received FEMA disaster declarations. More than \$39 million has been paid in federal support. Sadly, at least 182 people nationwide lost their lives in what turned out to be the nation's second most costly weather disaster. Fortunately there were no disaster-related deaths in Rhode Island. Cranston's mostly armored shoreline suffered little erosion. The City did experience power outages, fallen tree limbs, and minor flooding in low-lying coastal areas.

In Cranston, Ocean Avenue and Narragansett Boulevard, in the vicinity of Stillhouse Cove, serve as an arterial evacuation route. This evacuation route faces a serious threat to coastal erosion and sea level

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rise. There are two primary threatened neighborhood areas along the coastal flood plain that depend upon this arterial evacuation route. The first area threatened comprises the Edgewood neighborhood. In this area, the roadways east of Narragansett Boulevard are at risk. Specifically these roadways include: Norwood Avenue, Arnold Avenue, Shaw Avenue, Marion Avenue, and Bluff Avenue. The second area threatened comprises the properties in and around Pawtuxet Village. The primary concern here is the threat that Pawtuxet Neck could become separated from the mainland due to the potential flooding of Ocean Avenue and Sheldon Street. Also noteworthy are several smaller roadways on which development extends to the edge of Pawtuxet Cove such as George Street, Aborn Street, Bridge Street, and Springwood Street. Table 4 highlights the most destructive hurricane events that have affected Rhode Island.

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 HMP Plan still pose a significant threat to the both the residents and property in Cranston and that there has been no change in data since 2010. The CHMC further finds that hazards from flooding may increase over time as global warming will contribute to sea level rise and an increase in both the intensity and frequency of storm events.

Table 3: Historic Hurricane Events in Rhode Island

Date	Name	CAT	Tracking of Eye	Sustained Winds (mph)	Wind Gust (mph)	Property Damage (\$ million)	Deaths
09/21/38	N/A	3	New Haven, CT	100	125	100	262
09/14/44	N/A	3	Narragansett & Warwick, RI	82	100	2	0
8/31/54	Carol	3	Old Saybrook, CT	90	105-115	90	19
09/11/54	Edna	3	Cape Cod, MA	75-95	110	0.1	0
08/19/55	Diane	Tropical Storm	South of Block Island, RI	45	N/A	170	1
09/12/60	Donna	2	New Haven, CT	58	81	2.4	0
9/21/61	Esther	Tropical Storm	Offshore, SE of Block Island	35-50	45-65	<2	0
09/27/85	Gloria	1	New Haven, CT	81	120	19.8	1
10/19/91	Bob	2	Newport, RI	75-100	100	115	0
8/28/11	Irene	Tropical Storm	Bridgeport, CT	44 (on land)	N/A	127.3	1
10/29/12	Sandy	Super Storm	New Jersey	60-80	90	0.02	0

Source: Providence Journal-Bulletin, 1998 Journal-Bulletin: Rhode Island Almanac 112th ed. (Providence, RI: Providence Journal Company, 1998) 255-256. David R. Vallee and Michael R. Dion, Southern New England Tropical Storms and Hurricanes: A Ninety-seven Year Summary 1900 - 1998 including several Early American Hurricanes. (Taunton, MA: National Weather Service Forecast Office, 1998).

2.1.4 Wind, Lightning and Hail Storms

The CHMC decided that thunder, wind, lightning, and hail events tend to occur concurrently so they were grouped together. A thunderstorm is formed from a combination of moisture, rapidly rising warm air and a force capable of lifting air, such as the meeting of a warm and cold front, a sea breeze, or a mountain. Most thunderstorms contain lightning. Thunderstorms can occur singly, in clusters, or in lines. Therefore, it is possible for several thunderstorms to affect one location in the course of a few hours. Thunderstorms usually bring heavy rains (which can cause flash floods), strong winds, hail, lightning, and tornadoes. Lightning is caused by the attraction between positive and negative charges in the atmosphere, resulting in the buildup and discharge of electrical energy. Most thunderstorms produce lightning and are dangerous. Lightning is one of the most underrated severe weather hazards, yet ranks as the second-leading weather killer in the United States. Lightning often strikes as far as 10 miles away from any rainfall. One of the less life-threatening yet very damaging natural hazard events is hail. Large hail can dent automobiles, break

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windows, and destroy roofs. Table 8 highlights recent wind, lightning, and hail storms that have affected Cranston and other parts of Rhode Island.

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 Plan have not changed and that the 2015 HMP update included thunderstorm and high wind events that occurred after 2010.

Table 4: Recent Wind, Lightning and Hail Storms in Rhode Island

Date	Event	Magnitude	Comments
5/1/94	Lightning	\$5,000 in damage, 0 injuries	A bolt of lightning struck and heavily damaged a single-family house. Lightning struck the side of the house, traveled through the attic, and blew a hole in the peak of the roof. The electrical system was knocked out and pieces of vinyl siding were blown off and embedded in a neighbor's house.
8/5/94	Lightning	\$5,000 in damage, 0 injuries	Lightning started a fire in a single family house and destroyed a barn.
01/07/95	Wind	58 mph	No damage was reported.
06/20/95	Hail	1.75"	No damage was reported.
07/13/96	Wind	74 mph	Tropical Storm Bertha brought a period of high winds, heavy rain, and minor coastal flooding to Rhode Island. Almost 32,000 electric customers were without power because of falling trees and tree limbs. Approximately 2" to 5.6" of rain fell across the State, resulting in urban street flooding in Coventry, Warwick, and Cranston. At 2:30 pm winds were recorded at 70mph in Cranston.
6/22/97	Hail	0.75"	The hail was produced from a line of severe thunderstorms that moved southeastward across Rhode Island at 3:45 pm. Approximately 18,000 Narragansett Electric customers statewide reported power outages. In Cranston, the Deputy Fire Chief, "rushed from fire to fire like never before." Winds were recorded at 65mph.
03/09/98	Wind	40 to 55 mph	Statewide, damage was reported at \$50,000. Urban street flooding was serious in many parts of the State. Cranston reported 3.60" of rainfall.
5/31/98	Hail	0.75"	The hail produced was from a severe thunderstorm that moved across Northern Rhode Island at 10:03 pm. Winds were recorded at 57.6mph. No damage was reported.
01/03/99	Wind	51 to 73 mph	In a period of less than 12 hours, Cranston recorded 2.56" of rainfall.
01/15/99	Wind	55 mph	More than 2" of rainfall, combined with rapid snowmelt, resulted in considerable urban street flooding. In Cranston, Oaklawn Avenue flooded and several cars were submerged.
01/18/99	Wind	55 to 60 mph	Strong winds downed power lines in Cranston resulting in scattered power outages.
02/03/99	Wind	47 to 65 mph	Cranston reported 2.56" of rainfall.
03/22/99	Wind	49 to 64 mph	Almost 7,000 electric customers in East Providence, Providence, and Cranston reported scattered power outages because strong winds downed tree limbs and power lines.
10/14/99	Wind	50 mph	Approximately 7,300 electric customers, primarily located in Cranston and Johnston, lost power when a tree fell on a main line leading from a substation.
04/3/02	Lightning	\$0 in damage, 1 injury	Lightning from an isolated thunderstorm moving across Rhode Island struck a woman as she waited at a bus stop.
07/23/02	Wind	50 mph	Severe thunderstorms downed trees in Coventry, Providence, and Scituate. Dime sized hail was produced in Cranston at 3:60 pm. Winds were recorded at 57.6mph. There was a total of approximately \$5,000 in damage. Dime sized hail in Cranston.
08/02/02	Lightning	\$8,000 in damages, 0 injured	Lightning from the same storms struck a communications tower and several utility poles.
07/19/05	Wind	52 mph	Scattered strong to severe thunderstorms moved across Rhode Island during the early evening hours of 19 July. The hardest hit areas were in Providence and Newport counties. The police station in Smithfield measured a wind gust of 52 mph during the height of the thunderstorms. Trees were knocked down from these winds. A bolt of lightning set a transformer on fire. Another bolt of lightning hit a house, starting an attic fire, which caused structural damage to the house. In Jamestown, a bolt of lightning knocked out the main power supply to the town. No injuries directly resulted from these thunderstorms.

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07/18/06	Wind	60 mph	Severe thunderstorms moved through Rhode Island at night, in advance of a cold front pushing through southern New England. Thunderstorm winds brought down trees and large limbs in Scituate, Johnston, Cranston, Warwick, Barrington, Middletown, North Kingstown, and Portsmouth. Damage was more widespread in greater Providence, where nearly two dozen large trees were downed around Roger Williams Park and about one hundred others were either split or splintered by strong winds. In Cranston, a large maple tree fell onto a car and another large tree destroyed a garage. An amateur radio operator in Johnston also reported golf ball sized hail as the storms moved through. Lightning from the storms caused considerable damage in the city of Providence. Lightning struck the State House, causing some marble tiles to fall from the roof. A major fire was ignited on a tanker at the port of Providence on Narragansett Bay, when it was struck by lightning. No one was injured in either case. An estimated 37,000 customers lost power during the storms.
06/28/07	Wind	56 mph	Very strong thunderstorms wind gusts. Very hot and humid conditions prevailed across Southern New England on the 28th of June. This in combination with an approaching cold front aided in the development of thunderstorms during the late afternoon and early evening hours. Many of the storms produced wind damage and hail across Rhode Island.
08/13/07	Wind	50 mph	Large tree branches down on Laurehurst Road. Isolated severe thunderstorms developed in association with a weakly unstable air mass on the 13th.
7/23/08	Hail/ Tornado	10.75" EF1	Ping pong to golf ball size hail fell in Cranston. A frontal system moved through southern New England with the warm front moving through first and increasing low level moisture. Then the cold front moved through providing a lifting mechanism for showers and thunderstorms to develop. High levels of moisture contributed to heavy downpours that resulted in flash flooding in Rhode Island and portions of Massachusetts. All of this coupled with strong wind shear (turning of the winds with height) over southeast Massachusetts and Rhode Island provided the perfect environment for a tornado to form. This particular tornado began as a waterspout over Narragansett Bay and traveled east-northeast reaching land over the southern portion of Warren, Rhode Island. The tornado continued for 4.2 miles into Swansea, Massachusetts over a mostly continuous track. Most of the damage sustained was to trees which fell on power lines and houses. This tornado was rated by a National Weather Service damage survey team as an EF1 on the Enhanced Fujita Scale.
6/28/10	Wind	57 mph	A cold front moved across Southern New England producing showers and thunderstorms. An amateur radio operator recorded a wind gust of 58 mph on their home weather station. No damage was reported.
1/25/10	Wind	51 mph	Unseasonably warm temperatures moved into southern New England ahead of a cold front which allowed for excellent atmospheric mixing. This resulted in strong to damaging winds across much of eastern Massachusetts and Rhode Island. A weather station at a spotter's home in Cranston recorded a wind gust of 51 mph. A tree in East Providence was downed. In Cranston, a telephone pole was downed. A 30 foot tall pine tree in Providence was downed.
6/9/11	Wind	57 mph	A Mesoscale Convective System moved out of the Great Lakes and across New York state providing a focus for convection across southern New England. One overnight thunderstorm produced a severe microburst in Providence, RI that downed numerous trees throughout town. Numerous trees, large branches, and wires were downed, including trees on Route 10 South and Maplewood Avenue in Cranston.
4/29/12	Wind	50 mph	Low pressure over the Canadian Maritimes produced winds gusts of 40 to 50 mph throughout southern New England, resulting in scattered wind damage. Strong winds brought down wires on Pawtucket Avenue near Taunton Avenue in East Providence.
9/18/12	Wind	NA	A strong cold front moved through southern New England, resulting in a line of thunderstorms that produced strong to severe winds. In addition, a strong low level jet produced gusty strong to high winds with the front. A branch and wires were downed on Sunset Drive in North Providence.
10/29/12	Wind	60-80 mph	Superstorm Sandy, a hybrid storm with both tropical and extra-tropical characteristics, brought high winds and coastal flooding to southern New England. Easterly winds gusted to 50 to 60 mph for interior southern New England; 55 to 65 mph along the eastern Massachusetts coast and along the I-95 corridor in southeast Massachusetts and Rhode Island; and 70 to 80 mph along the southeast Massachusetts and Rhode Island coasts. A few higher gusts occurred along the Rhode Island coast. A severe thunderstorm embedded in an outer band associated with Sandy produced wind gusts to 90 mph and concentrated damage in Wareham early Tuesday evening, a day after the center of Sandy had moved into New Jersey. In general, moderate coastal flooding occurred along the Massachusetts coastline, and major coastal flooding impacted the Rhode Island coastline. The storm surge was generally 2.5 to 4.5 feet along the east coast of Massachusetts, but peaked late Monday afternoon in

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		<p>between high tide cycles. Seas built to between 20 and 25 feet Monday afternoon and evening just off the Massachusetts east coast. Along the south coast, the storm surge was 4 to 8 feet and seas from 30 to a little over 35 feet were observed in the outer coastal waters. The very large waves on top of the storm surge caused destructive coastal flooding along stretches of the Rhode Island exposed south coast.</p> <p>Sandy grew into a hurricane over the southwest Caribbean and then headed north across Jamaica, Cuba, and the Bahamas. As Sandy headed north of the Bahamas, the storm interacted with a vigorous weather system moving west to east across the United States and began to take on a hybrid structure. Strong high pressure over southeast Canada helped with the expansion of the strong winds well north of the center of Sandy. In essence, Sandy retained the structure of a hurricane near its center (until shortly before landfall) while taking on more of an extra-tropical cyclone configuration well away from the center. Sandy's track was unusual. The storm headed northeast and then north across the western Atlantic and then sharply turned to the west to make landfall near Atlantic City, NJ during Monday evening. Sandy subsequently weakened and moved west across southern Pennsylvania on Tuesday before turning north and heading across western New York state into Quebec during Tuesday night and Wednesday.</p> <p>In Southern New England, Rhode Island was hardest hit. A peak wind gust of 88 mph occurred in Westerly, and nearly the entire Rhode Island shoreline experienced moderate to major coastal flooding. Numerous power outages occurred with winds gusting to 60 mph over the interior and to 80+ mph along the south coast. Major coastal flooding struck the Rhode Island ocean exposed south coast during the Monday evening high tide. This storm tide, especially destructive across shorelines in Westerly, Charlestown, South Kingston, Narragansett, and Block Island, rivaled the impact from Hurricane Bob in 1991. Along the Rhode Island south coast, the damaging coastal flooding was fueled by a storm surge around 5 feet and waves of 30+ feet that propagated on a long fetch into Block Island and Rhode Island Sounds. A survey of impact along Misquamicut Beach revealed an inundation extent consistent with the upper boundary of a category 1 hurricane and very severe erosion. It should also be noted that the previous high tide during Monday morning produced minor to moderate impacts along the Rhode Island coast and likely weakened dunes and other coastal structures in advance of the more destructive Monday evening high tide.</p> <p>A tree was downed onto a car on Veterans Memorial Parkway in East Providence. Those in the car were transported to the hospital. The roof of the U.S. Postal Service building on Newman Avenue in East Providence was partially collapsed after being damaged by high winds. Wind gusts in southeast Providence County were reported by spotters in North Providence and in the Rumford section of East Providence to be between 46 and 52 mph.</p>
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Source: <http://www.ncdc.noaa.gov/stormevents>

Note: NCDC only reports hail data from 01/01/1950 to 09/30/2003.

2.1.5 Tornadoes

A tornado is a violent windstorm with a twisting, funnel-shaped cloud. They are often spawned by thunderstorms or hurricanes. Tornadoes are produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The damage from a tornado is a result of the high wind velocity and wind-blown debris. Tornado season is generally March through August, although tornadoes can occur at any time of year. Tornadoes are most likely to occur between 3pm and 9pm.¹⁷ Damage paths can be in excess of one mile wide and 50 miles long.¹⁸

Tornadoes are categorized according to the damage they produce using the Fujita Scale (F-scale). An F0 tornado causes the least amount of damage, while an F5 tornado causes the most amount of damage. Relatively speaking, the size of a tornado is not necessarily an indication of its intensity. On August, 7th, 1986, a rare outbreak of seven tornadoes occurred in New England. One such tornado, rated F2 on the Fujita Scale, carved its way through Cranston, RI, and Providence, RI, causing twenty injuries and \$2,500,000 in damages. Table 5 highlights tornado events that have affected Rhode Island.

All people are equally vulnerable to tornadoes in Cranston. Transportation and road closures could isolate some neighborhoods and services may be compromised. However, due to the unpredictability destructive

capacity of tornadoes, it is costly to mitigate in a City that has infrequent tornado activity. The City does however have plans for post-disaster debris handling.

The CHMC has reviewed this section and has determined that the hazards identified in the 2010HMP have not changed and that the 2015 HMP update includes tornado events (if any) that occurred since 2010.

Table 5: Recent Tornado Events in Providence County, Rhode Island

Date	Type	Magnitude	Injuries	Damage	Location
08/26/85	Tornado	F1	0	\$0	Providence County
08/07/86	Tornado	F1	0	\$260,000	Providence County
08/07/86	Tornado	F2	20	\$2,500,000	Cranston
08/08/86	Tornado	F1	0	\$250,000	Providence County
09/23/89	Tornado	F0	3	\$250,000	Providence County

Source: <http://www.ncdc.noaa.gov/stormevents/>

2.1.6 Geologic Related Hazards: Earthquakes

"An earthquake is caused by a sudden displacement within the earth. Displacement at relatively shallow depths may be caused by volcanic eruptions, or even by avalanches. The resultant earthquakes are usually light and do little damage. Strong and destructive earthquakes usually result from the rupturing or breaking of great masses of rocks far beneath the surface of the earth. The ultimate cause of these deep ruptures has not been established. All earthquakes produce both vertical and horizontal ground shaking. This ground movement begins at the focus or hypocenter, deep in the earth, and spreads in all directions".¹⁹

The USGS estimates that there is a 40 to 60 percent chance of experiencing an earthquake of magnitude 6.0 or greater on the Richter Scale in the central or eastern United States within the next 30 years. Buildings that are most at risk from earthquakes are the old masonry buildings and large structures such as those along Elmwood Avenue, the Atlantic Tubing Factory, and Cranston Stebbins Stadium.

Although earthquakes are not considered to be a major problem in the Northeast United States, they are more prevalent than one might expect. Table 6 presents historical seismic activity for Rhode Island. It highlights the earthquake epicenter, the Richter magnitude at the epicenter, and the Mercalli Intensity Level. Richter magnitudes are technical quantitatively based calculations that measure the amplitude of the largest seismic wave recorded. Richter magnitudes are based on a logarithmic scale and are commonly scaled from 1 to 8. The higher the magnitude on the Richter Scale, the more severe the earthquake. Mercalli intensity levels are based on qualitative criteria that use the observations of the people who have experienced the earthquake to estimate the intensity level. The Mercalli scale ranges from I to XII. The higher the intensity level on the scale, the closer the person is to the epicenter.²⁰

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 HMP have not changed and that the 2015 HMP update needs to document seismic events that have occurred since 2010.

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Table 6: Seismic Activity in Rhode Island

Date	Epicenter	Epicenter Magnitude	Mercalli Intensity Level
02/28/25	St. Lawrence River Region	7	Intensity level V shock effects were felt on Block Island. Intensity level IV effects were felt in Charlestown. The total area affected by this earthquake was over 5,000,000 sq. km.
11/01/35	Quebec, Canada	6.25	Intensity level IV shock effects were felt on Block Island and at Providence and Woonsocket. The total area affected by this earthquake was about 2,500,000 sq. km.
10/16/63	Massachusetts Coast	4.5	Intensity level V shock effects felt at Chepachet. Other places in the Northern Rhode Island felt shock effects with less intensity.
06/14/73	Western Maine	5.2	Intensity level IV shock effects were felt at Charlestown. Intensity level I - III shock effects were felt at Bristol, East Providence, Harmony, and Providence. This earthquake was felt over an area of 250,000 sq. km.
03/11/76	Near Newport, RI	3.5	Intensity level VI shock effects felt throughout Southern New England. This earthquake has the distinction of being the largest earthquake to originate in Rhode Island.
04/20/02	Plattsburgh, NY	5.2	Intensity level II to III shock effects felt throughout Rhode Island.
03/11/08	Central Connecticut	2.9	No date reported for Rhode Island
6/23/10	Ontario-Quebec	5.0	Felt throughout Rhode Island.
2011	Rhode Island	0.9	Felt locally
2012	Rhode Island	1	Felt locally
2013	Kingston, RI	Unknown	Felt locally

Source: http://neic.usgs.gov/neis/states/rhode_island/rhode_island_history.html

2.1.7 Coastal Erosion

Coastal erosion refers to the wearing away of upland areas as a result of water action. It can be a slow process that occurs over time or a dramatic event fueled by high winds or elevated sea levels. The City of Cranston is relatively protected from this hazard by its location in the low energy environment of the upper bay and due to the fact that 90% of its shoreline has been hardened; but it is not immune. Stillhouse Cove on the eastern shore of Cranston is the largest coastal area without shoreline armoring. Its shoreline is about 0.3 miles long. Residential structures are located landward of Narragansett Boulevard which runs adjacent to Stillhouse Cove. Unfortunately, historic rates of coastal erosion are unavailable for the city. An inventory of other events that might have contributed to this process could include however those documented in tables 4 (hurricanes), 6 (severe winter storms) and 8 (thunderstorms/high wind events) above.

Most properties in Cranston are protected from mild coastal erosion because they are behind a hardened shoreline structure. Those that aren't located landward of a road are thusly protected from seasonal erosion. Therefore, due to the low vulnerability, the City has not created specific mitigation actions for coastal erosion. However, as climate change continues to impact the area and sea level rises, the City will have to address increased flooding in these low lying areas.

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 Plan have not changed. However, the CHMC further finds that hazards from coastal erosion may increase over time as global warming with contribute to sea level rise.

2.1.8 Wildfire and Drought

A wildfire is a natural or human caused uncontrolled burning of vegetative fuel such as grasslands, trees, or woodland. There are many causes of wildfire, from naturally-caused lightning fires to human-caused fires linked to activities such as smoking, campfires, equipment use, and arson. The three major factors that sustain wildfires and predict a given area's potential to burn are fuel, topography and weather. High temperatures, low humidity, high winds, lightning, and drought can all increase the wildfire potential.

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Once a wildfire has been detected and the area assessed, the wildfire is assigned one of the following categories from lowest to highest: category 1 (Incipient- initial), category 2 (growing and threatening), category 3 (major aggressive fires), category 4 (major aggressive fire of at least 5,000 acres expanding at 400 acres per hour), or category 5 (major very aggressive fire of at least 16,000 acres expanding at 1000 acres per hour or more). These categories may change as the wildfire continues to burn.

As noted earlier the City of Cranston is approximately 20% forested or vacant and as such it is possible that wildfires could present a risk. Although the Cranston Fire Department does respond to a small number of brush fires on an annual basis, the Department confirmed that significant wildfires have not occurred in recent memory due to the adequacy of fire response and protection in the less developed portions of the City.

Drought is a gradual phenomenon that occurs slowly, over a multi-year period. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Due to its coastal location in a temperate climate, Rhode Island rarely experiences extended periods of drought. However, seasonal droughts have occurred when precipitation levels are low. Drought conditions can impact crops, water available for fire suppression, and reservoir levels. In Rhode Island, drought conditions can trigger fire hazard warnings.

Past drought events in Rhode Island have affected the entire state. It is generally not an issue that is handled at the local level although the City can enforce particular water bans as dictated by the State. Due to the broad nature of droughts, the City of Cranston does not have specific mitigation actions. For specific statewide mitigation efforts, refer to the current Rhode Island State Hazard Mitigation Plan located online <http://www.rlema.ri.gov/prevention/mitigation/index.php>.

Table 7: Drought Activity in Rhode Island

Date	Type	Location	Injuries	Comments
4/12/12	D2	Regional	0	<p>The U.S. Drought Monitor declared a severe drought across Rhode Island, the eastern half of Massachusetts, and most of northern Connecticut. A moderate drought was declared over western Massachusetts and southwestern New Hampshire. This was declared as the result of a meteorological drought determined by precipitation that had been approximately one half of normal from January 2012 through April 2012. Rivers and streams were most affected as most ran at record low levels during the spring run-off season. No southern New England state issued drought declarations as reservoirs were at normal levels, thanks largely to above normal precipitation falling between August 2011 and November 2011.</p> <p>The main impact of the meteorological drought was periods of very high fire danger. In addition, small pond levels were reduced. While soil moisture was well below normal, this drought occurred prior to the beginning of the growing season. Thus, no agricultural impacts were realized.</p> <p>From January 1 through April 15, precipitation levels were 6 to 8 inches below normal across northeast Connecticut, Rhode Island, and southeast Massachusetts. Across the remainder of southern New England, precipitation levels were 5 to 7 inches below normal. This translates to around or less than 60 percent of normal precipitation for much of southern New England.</p> <p>The U.S. Drought Monitor declared severe drought (D2) over southeastern Providence County from April 12 through April 24. This was deemed a meteorological drought due to precipitation levels approximately one half of normal</p>

The CHMC has reviewed this section and has determined that the hazards identified in the 2010 Plan have not changed. Drought data since 2010 has been added to the 2015 HMP.

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2.2 Likelihood of Future Events

In developing a mitigation plan it is also important to gauge the future likelihood and potential impact of natural hazard occurrences. To do this each member of the CHMC ranked the events based upon the probability of the event occurring and its impacts. The CHMC decided that thunder, wind, lightning, and hail are rarely mutually exclusive so they combined them into one category. The scores were then averaged and represented below. The resulting events were then classified as having high, medium or low probabilities of occurring in Cranston (see Table 8).

Table 8: Likelihood of Future Events

Hazard	Risk Value	Probability
Flooding	1	High
Winter Storm	3	High
Hurricane	3	Medium
Thunder, Wind, Lightning, & Hail	6	Medium/Low
Tornadoes	7	Low
Coastal Erosion	8	Low
Earthquake	8	Low
Wildfire	9	Low

Chapter 3: Risk Assessment

This chapter presents the natural hazard risk assessment performed for the City by the CHMC. The purpose of the assessment is to identify those facilities and population at risk from natural hazards, to overview the particular concerns, to gauge the potential level of impact on people and property, and to assess the level of risk posed within the City.

The Assessment has six primary components that culminate in the Risk Assessment Matrix (3.7). The primary components include a: Facilities Inventory (section 3.1), Hazard Mitigation Mapping (section 3.2), Fiscal Impact Analysis (section 3.3), Population Impact Analysis (section 3.4), Level of Risk Determination (section 3.5) and Vulnerability of Future Structures (section 3.6).

3.1 Facilities Inventory

The first step in the assessment process was to review and update the inventory of facilities of special concern to the City created for the 2010 HMP. The initial inventorying process ultimately addressed at least twenty-four separate topical areas and involved almost all departments of city government as well as staff from contributing entities such as the Providence Water Supply Board (PWSB) and American Red Cross (ARC).

Individual inventories were created for the fire stations, police station, city hall, emergency response headquarters, public works garage, American Red Cross Shelters, RIEMA evacuation routes, FEMA flood zones, city schools, bridges, culverts, high density residential buildings, care facilities and hospitals, child day care facilities, dams, public drinking water facilities, sewage treatment facilities, natural gas distribution facilities, electrical substations, marinas and mooring facilities, state response and correctional facilities, historic resources, repetitive loss properties and recreational facilities. These inventories can either be found depicted on the maps or Risk Assessment Matrix presented at the end of this section.

3.2 Hazard Mitigation Mapping

The facility inventory from the 2010 plan was reviewed and determined to be largely unchanged. The City's GIS data base, including parcel data, orthophotography and FEMA flood zone information, were utilized to complete this task. The use of this system not only allowed the CHMC to estimate potential fiscal and population impacts for individual parcels (see sections 3.3. and 3.4. for results) but also allowed them to analyze spatial relations between variables.

The final output of this exercise is the City of Cranston Risk Assessment Maps (Utilities and Community Resources) located at the end of this section. As the titles imply the focus of the maps is not to duplicate all of the spatial information generated through the inventorying process but rather to present the location of the identified risks as they relate to the City's response facilities. The mapped elements include parcels within flood zones, parcels with repetitive flood insurance claim, high density residential properties, adult and child care facilities, marinas, dams, electrical substations, bridges, city schools, state concerns, the gas metering station, water main extension location as well as ARC shelters, evacuation routes, fire stations, police station, city hall and the public works garage.

3.3 Fiscal Impact Analysis

The City of Cranston Tax Assessor's Database and GIS, and FEMA's 100-year flood plain data were utilized to generate estimates of potential fiscal impacts from natural hazard events. This differed from the 2010 assessment which looked at estimates based on the 500 year flood event. The information utilized from the tax assessor's database and GIS included the improvement values, land usage, and unit counts. The analysis showed that Cranston is comprised of 18,507 acres of land, with 1,110 acres of land (6%) in the regulatory flood plain. These 1,110 acres of land are spread throughout nine geographic areas of the City. Seven of these geographic areas include properties along and within the following seven flood plains: Pocasset River, Pawtuxet River Main Stem, Meshanticut Brook, Furnace Hill Brook, Spectacle Pond, Fenner Pond, and Spring Lakes. The final two geographic areas are the two neighborhoods of Pawtuxet Village and Edgewood, which are within the coastal flood zone.

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Table 9 displays potential damage estimates of property values of parcels that are located wholly or partially within the City's 100 year flood plain. The only limitation noted, using the best available data, is that the tax assessor database does not reflect the current market value of real estate. The table categorizes the improvement values into: residential, commercial/industrial, governmental and mixed use. The table also provides the percentage contribution of the area to the City's total flood plain parcels. This percentage was calculated in order to assist with identifying which areas are at greater risk. According to Table 10, the citywide total potential improvement damages for these flood plain areas are \$444,579,500. As reflected in the table, the areas with the largest percentage of parcels in flood plains are the Pocasset River (43%), the Pawtuxet River Main Stem (18%), and Furnace Hill and Meshanticut Brooks (26.3%). Coincidentally, these three areas have the highest potential dollar damages for total citywide improvements in flood plains. The table indicates that the Pawtuxet River Main Stem Flood Plain accounts for \$92,644,300 (20.8%) of the total improvements in flood plains; and the Pocasset River Flood Plain accounts for \$157,496,400 (35.4%) of the total improvements in flood plains. The sum of these two figures for total citywide improvements in floodplains is approximately triple the potential dollar damages in total improvements for the Furnace Hill and Meshanticut Brooks Flood Plain, which accounts for \$116,021,600 (20.9%) of the total citywide improvements in flood plains.

Further analysis of the City Tax Assessor's property improvement values, indicated the following facilities to be the most costly to replace in order of expense: state concerns, care facilities, sewerage treatment facilities, high-density residential properties within flood plains, historic resources, critical municipal hazard response facilities, schools within flood plains, Tennessee Gas Metering Station impacted properties, recreational facilities, marinas and private mooring facilities, and electrical facilities.

The state concerns within the City of Cranston relate primarily to the Pastore Center, which houses the State Correctional Complex, Medical Center, and the Rhode Island National Guard and RIEMA Headquarters. These concerns are susceptible to heavy rain, high winds, ice damage, and earthquakes. In the event RIEMA becomes non-operational, the State's public response system to hazard events would be hindered. The total potential improvement damages for these facilities are \$560,685,400

Currently, there are 6 public/assisted senior housing facilities, 7 private housing facilities, and 3 private nursing home facilities within the City. The special populations occupying these structures are particularly at-risk to natural hazard events such as high winds, excessive heat, and earthquakes, given the multistory nature of many of these structures. The total potential improvement damages for care facilities are \$72,043,500. Knightsville Manor and Randall Manor (public/assisted senior housing) have obtained Letters of Map Revision (LOMR) which removes them from the 100-year floodplain.

Of the 23 sewerage treatment facilities in Cranston, 14 pumping stations are located on parcels within the 100-year flood plain (see Appendix A – Critical Municipal Facilities). Flooding at these facilities exposes the potential for sewer backups due to large amounts of water infiltrating the piping system and overwhelming the capacity of the pumping stations. These 14 sewerage treatment facilities account for \$5,542,200 in total potential property improvement damages and a loss of function can cause temporary disruption of service. Since the 2010 plan update, the City has flood-proofed the sewerage treatment facilities at risk for flooding. The potential property improvement damages for the Pettaconsett Sewage Treatment Facility (not in the 100-year floodplain) is \$61,768,500.

Within Cranston, 16 high-density residential properties serve as alternative housing facilities that contribute to the City's residential housing stock and account for \$87,344,100 in total potential property improvement damages. Twelve of the high-density residential properties fall within the 100-year flood plain. Not in a flood plain, yet still a concern, is Springfield Apartments because part of the foundation is situated on a rock wall revetment. In the event of an earthquake, this rock wall revetment could become a serious hazard. Springfield Apartments accounts for \$13,919,100 of the aforementioned total potential property improvement damages.

The City has three National Historic Districts and a number of structures on the National Register of Historic Places that could be impacted by natural hazard events (see Appendix D – Inventory of Historic Properties). The total potential improvement damages are \$86,236,800 for all parcel improvements, not just those in the SFHA. The Pawtuxet Village National Historic District is the largest historic district within the City and contains 315 contributing parcels, 55 of which have structures in the SFHA. The estimated potential improvement damages for the entire Pawtuxet Village National Historic District are \$51,773,200. The Furnace Hill Brook National Historical and Archeological District is another historic district within the

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City and has 158 parcels, none of which have historic structures in the SFHA. The estimated potential improvement damages for the Furnace Hill Brook National Historic District are \$29,340,700. The Oak Lawn Village National and Local Historic District is the third largest historic district within the City and contains 41 parcels, two non-historic structures are in the SFHA. The estimated potential improvement damages for the Oak Lawn Village National and Local Historic District are \$5,122,900. These damage estimates are based on improvement values for all parcels in the historic districts based on 2013 tax data, not just for structures in the Special Flood Hazard Area.

Currently, the City has 12 critical municipal hazard response facilities. These facilities include city hall, the fire department/emergency management headquarters, five additional fire stations, the police department, the public works garage, the Hamilton Building, three ARC approved shelters, and the RIEMA evacuation routes (see Appendix A – Critical Municipal Facilities). Of the 26 public education facilities in Cranston, only two facilities have property and structures, within the 100-year flood plain (Oak Lawn Elementary and Cranston West Vocational Facility). See Appendix B – School Inventory. The total potential improvement damages are \$19,951,700.

The Tennessee Gas Pipeline Gatehouse Metering Station poses an additional concern to the City. The Gatehouse is located at 65 Laten Knight Road and is an above ground processing facility for a major gas transmittal line servicing New England. In the event of an earthquake, because of the presence of natural gas, it is extremely important to keep this facility isolated due to the potential for explosion and threat to life. To estimate the potential dollar damages in the event of a blast originating from the Gatehouse, GIS was utilized to create a 1,000' impact zone. Within this zone there would be approximately 31 parcels damaged and the total potential improvement damages could climb as high as \$3,950,400.

Within Cranston, 4 recreational facilities were highlighted as resources of concern and include the CLCF, Budlong Pool, Cranston Stebbins Stadium, and the Cranston Veterans Ice Rink. Currently, the CLCF and Budlong Pool fall entirely within the 100-year flood plain. Cranston Veterans Ice Rink is partially located within the 100-year flood plain. Cranston Stebbins Stadium was highlighted because of the possibility of high wind, ice damage, or even an earthquake. The total potential improvement damages to these four structures are \$2,933,600.

The coastline of Cranston, close to three miles in length, is the home of five marinas containing 405 slips. In addition, there are 137 moorings within the City. Excluding vessels, the total potential improvement damages are \$2,334,400.

The area bounded by Plainfield Pike to the north, Town of West Warwick to the south, Interstate 295 to the east, and Seven Mile Road to the west, is commonly referred to as the "Western Cranston Water District" or the WCWD. This district is currently provided with water through one singular distribution main at South Comstock Road running between Fox Ridge and Tomahawk Trail. If that main were to rupture due to an earthquake, approximately one-third of the City would be without water. The total potential improvement damages are \$1.1M. This figure was derived from the cost to provide a secondary source for water service by connecting a 1,900' gap in service mains.

Lastly, National Grid has a substantial number of general transmission lines running throughout the City and six electrical substations. Although National Grid services these general transmission lines and substations, the total potential improvement damages for the six electrical substations are \$ 71,400. In reviewing this section, the CHMC would note that the \$71,400 identified as the potential for damages represents only the structures on site. The CHMC recognizes that there is substantial value associated with the equipment on site. However, cost estimates are not readily available and will be added into the HMP as they are obtained.

If a natural hazard event were to occur, the improvement damages and the fiscal impacts to the City could be crippling. Approximately 75 percent of the City's revenue is generated from property tax (76 percent from residential and 24 percent from commercial). Should any of the tax base be destroyed by a natural disaster, remaining property owners would carry an increased financial burden with regards to property taxes. Therefore, it is in the best interests of the City of Cranston to take the appropriate provisions necessary to protect both persons and property from natural disasters. In addition, as Cranston's population continues to grow, so does the burden of protecting people and property.²¹

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Table 9: Assessment of Property Improvement Values within Flood Plains

Pawtuxet Watershed												
		Residential		Commercial		Other		Governmental		Total		
Floodplain	Parcels	%	Improvements	%	Improvements	%	Improvements	%	Improvements	%	Improvements	
Pocasset	1,072	43	\$72,662,700	40.7	\$21,106,500	37.6	\$42,760,500	44	\$20,966,700	18.3	\$157,496,400	35.4
Pawtuxet	419	18	\$10,521,000	5.9	\$6,181,300	11	\$12,845,800	13.5	\$63,096,200	55	\$92,644,300	20.8
Spectacle Pond	72	3	\$921,400	0.5	\$34,203,400	43.1	\$154,900	0.2	\$38,400	0.03	\$25,318,100	5.7
Spring Lake	5	0.2	\$238,000	0.1	\$0.00	0	\$0.00	0	\$250,000	0.2	\$488,000	0.1
Furnace Hill Meshanticut Brooks	654	26.3	\$227,000	0.1	\$3,266,700	5.8	\$15,277,500	16	\$25,023,800	22	\$43,795,000	9.8
Fenner Pond	42	1.7	\$53,146,700	29.8	\$0.00	0	\$3,429,100	3.6	\$0.00	0	\$56,575,800	12.7
Subtotal	2,294	92	\$137,716,800	77	\$51,757,900	97.7	\$74,467,800	78.2	\$109,375,100	95.3	\$376,317,600	84.6
Coastal Areas												
		Residential		Commercial		Other		Governmental		Total		
Floodplain	Parcels	%	Improvements	%	Improvements	%	Improvements	%	Improvements	%	Improvements	
Subtotal	198	8	\$40,814,700	23	\$1,310,000	2.3	\$20,718,500	21.8	\$5,418,700	4.7	\$68,261,900	15.1
Total	2,492	100	\$178,531,500	100	\$56,067,900	100	\$95,186,300	100	\$114,793,800	100	\$444,579,500	100

Source: City of Cranston IT Department and Tax Assessor's Database. 2014.

Note: The values contained in the tax assessor database do not reflect the current market value of real estate.

3.4 Population Impact Analysis

In order to estimate the number of City residents impacted by natural hazard events, the number of occupied dwelling units was multiplied by the average household size per occupied dwelling unit (2.45).²¹ This approach was utilized throughout this population analysis.

Using the 2014 Tax Assessor's Database and the City's GIS, there are total of 585 residential structures within City's 100-year flood zone. This includes a mix of single family, multi-family and larger condo/apartment structures.

In addition, according to Table 10, an estimated 5,236 (68.7%) residents live within the Pawtuxet River and Pocasset River flood plain and 1,447 (19%) residents located in the Furnace Hill and Meshanticut Brooks flood plain. Based on Table 10, an estimated 1,020 (12.3%) residents live in the City's coastal flood zone flood plain area (Pawtuxet Village and Edgewood)

The Providence Water Supply Board holds 2,089 residential accounts in western Cranston that are served by the singular distribution main at South Comstock Road. The at-risk population was estimated to be 5,307 which are slightly more than 10% of the entire Cranston population.

The occurrence of a natural hazard event creates a higher potential for the special populations at the Pastore Center to be rendered vulnerable due to higher security and health concerns. The average monthly population at this state institution center was reported at 3,169 in the 2013 Cranston Emergency Operations Plan.

Currently, there are 1,435 occupied dwelling units within the sixteen high-density residential properties, including the Johnson & Wales dormitories, located in the City. The high-density residential properties at-risk population was estimated to be 3,611. Excluding Springfield Apartments (which is not within a flood plain) the population estimated to be at-risk is 3,096.

The fifteen care facilities in the City have a total capacity of 1,545 residential units. Assuming a one person-per unit occupancy rate, the population at these facilities has been estimated at 1,545.

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The two public schools that are within the City flood plain areas are Oak Lawn, and the Cranston West Vocational Facility. In the event of a natural hazard as many as 1,800 students could be displaced from these schools. [Note the Cranston School Department does not count Cranston West and Cranston West Vocational enrollments separately. Students share classes at both campuses.]

Approximately 31 parcels are located the 1,000' impact zone of the Tennessee Gas Pipeline Gatehouse Metering Station with an estimated 79 residents to be considered at-risk.

The final two facilities of concern for which at-risk population estimates were developed for included the sewerage treatment facilities, and the general transmission lines and six electrical substations. These estimates project worst-case scenarios. Therefore, considering that the sewerage treatment facilities serve 22,870 residential units, the appropriate calculation yields 58,090 at-risk residents. With regard to the general transmission lines and the six electrical substation facilities that serve the City of Cranston, the entire 80,529 city population is classified as at-risk.

Lastly, at-risk population estimates could not be developed for historic resources, critical municipal hazard response facilities, recreational facilities, and marinas and private mooring fields. Therefore, the analysis classifies the at-risk population as not available.

Table 10: Population Living within Flood Plains

Pawtuxet River			
Flood Plain Area	Occupied Units	Population	%
Pocasset River	1492	3789	49.7
Pawtuxet River	570	1447	19
Furnace Hill Brook & Meshanicut Brooks	570	1447	10
Spectacle Pond	8	20	0.6
Spring Lake	1	3	0.1
Subtotal	2640	6707	87.7
Pawtuxet Village	183	545	6.1
Edgewood	187	475	6.2
Subtotal	370	1020	12.3
City Wide Total	3010	7726	100

Source: City of Cranston GIS and Tax Assessor's Database. 2014.

3.5 Level of Risk Determination

Determining the City's level of risk from natural hazards was completed through a combined ranking, of the fiscal and population impacts for each of the 14 resources of concern (see Table 11). These rankings were then divided into high, medium, and low categories using a quantile approach.

The statistical rankings were then analyzed to determine if additional non-numerical factors should be adjusted for. In the end, the classifications for the state concerns, the WCWVD, schools, critical municipal response facilities, and historic resources were adjusted.

The state facilities were designated as a medium, because the administration and management of the Pastore Center falls under the control of the State. The WCWVD concern was designated as low, because the historical analysis of earthquake occurrences proved it to have a low probability. School facilities designated as a low because schools are likely to be closed during a major storm event. Historic facilities were designated as a low because the low probability that all historic resources would be affect by any one event. Critical municipal hazard response facilities were designated as a medium, because they are key for coordinating a strong governmental response to a natural hazard event. Since 2010, all pump stations in the 100-year floodplain have been floodproofed, reducing potential improvement damages but the facilities still remain a high concern for the City.

The level of risk determination as presented in 2010 was reviewed by the CHMC. While the fiscal impacts have changed since then, the level and ranking of risks remains unchanged.

Table 11: Level of Risk Determination

Risk	Fiscal Impacts		Est. Population Impacts		Combined Ranking	Classification	
	Damages	Ranking	Population	Ranking		Initial	Final
Flood Prone Drainage Systems	\$599,862,240	12.5	7,726	10.5	23.0	High	High
Dams	N/A	12.5	N/A	10.5	23.0	High	High
Sewage Treatment Facilities	\$5,542,200	9	58,090	13	22.0	High	High
State Concerns	\$560,685,400	14	4,051	9	23.0	High	Medium
Care Facilities	\$72,043,500	11	1,545	6	18.0	High	High
High Density Residential	\$87,344,100	7	3,096	8	15.0	Medium	Medium
Electrical Facilities	\$71,400	1	81,686	16	17.0	Medium	Medium
Western Cranston Water District	\$1,100,000	2	5,307	12	14.0	Medium	Low
Schools	\$3,152,500	6	2,270	7	13.0	Medium	Low
Historic Resources	\$86,236,800	10	N/A	2.5	12.5	Medium	Low
Tennessee Gas Pipeline	\$3,950,400	5	79	5	10.0	Low	Low
Critical Municipal Response Facilities	\$560,685,400	8	N/A	2.5	10.5	Low	Medium
Recreational Facilities	\$2,933,600	4	N/A	2.5	6.5	Low	Low
Marinas & Private Mooring Facilities	\$2,334,400	3	N/A	2.5	5.5	Low	Low
			Mean	15	High Quartile Range= 23 to 17.2		
			Cut Points	5.8	Medium Quartile Range= 17.1 to 11.3		
					Low Quartile Range= 11.2 to 5.4		

3.6 Vulnerability of Future Structures

A preliminary buildout analysis produced by the Cranston Planning Department projects that the potential exists for an additional 2,760 residential, 231 commercial, and 84 industrial units to be constructed within the city over the years to come. Whereas all of these may be at risk to hazards such as earthquakes, hail, hurricanes, lightning, tornados, severe winter storms, high wind events and thunderstorms; the possibility does exist for 551 residential, 21 commercial, and 9 industrial units to be developed specifically within flood zones. The CHMC has reviewed the build out analysis and has determined that, given the significant downturn in the economy since 2010, the assumption and conclusions of the buildout analysis remain unchanged.

3.7 Risk Assessment Matrix

The matrix (Table 12: Risk Assessment and Identification of Priority Problems in Cranston) represents the culmination of the risk assessment process and is the final product. Its purpose is to gather all the pertinent results in one place for ease of presentation and to serve as a starting point for discussion of specific mitigation actions. It not only lists the specific concerns, but provides detailed location information, summarizes the applicable hazard, problem, mitigation benefits, and the perceived level of risk.

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Table 12 Risk Assessment Matrix

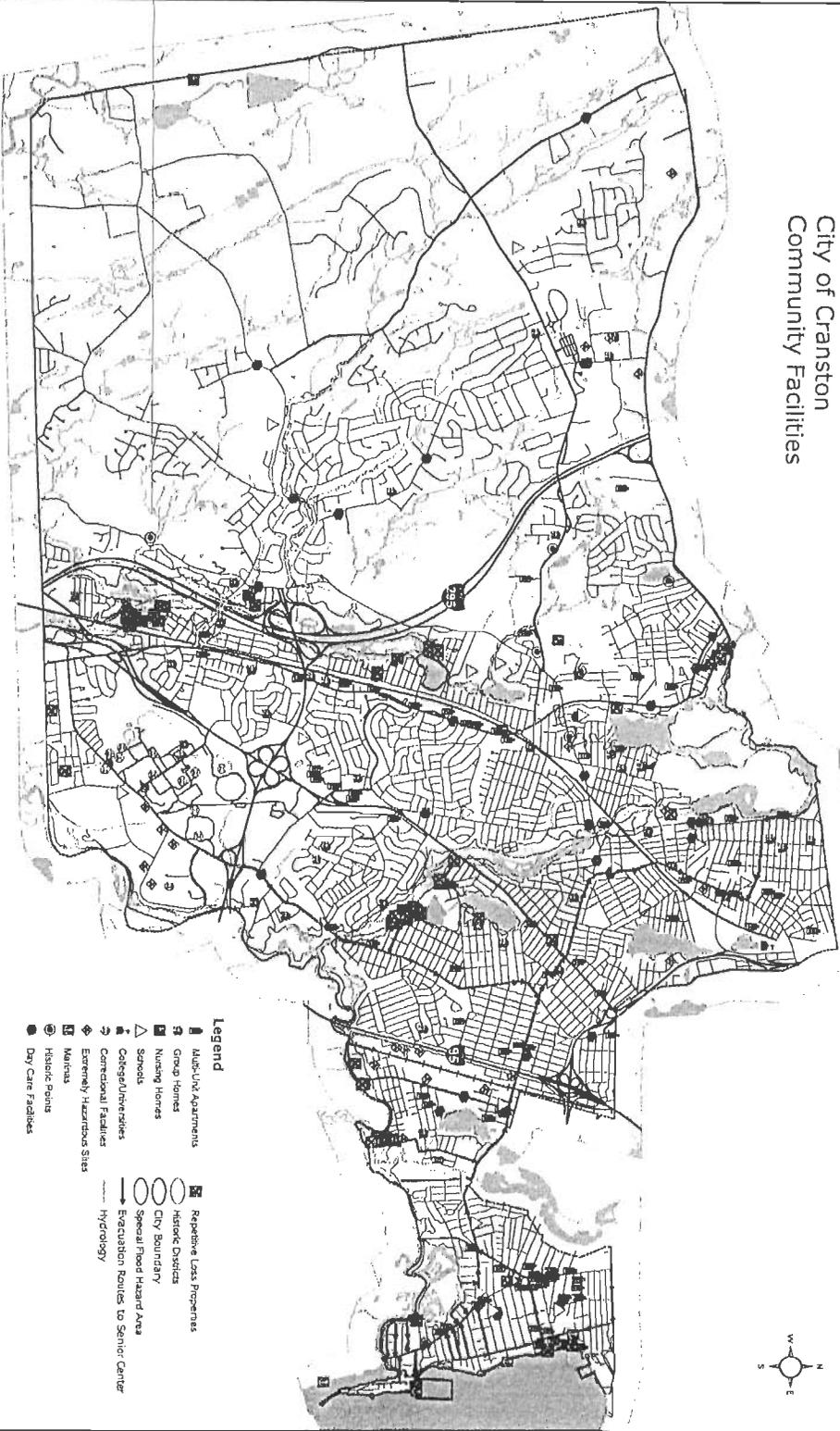
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Risk Assessment Maps

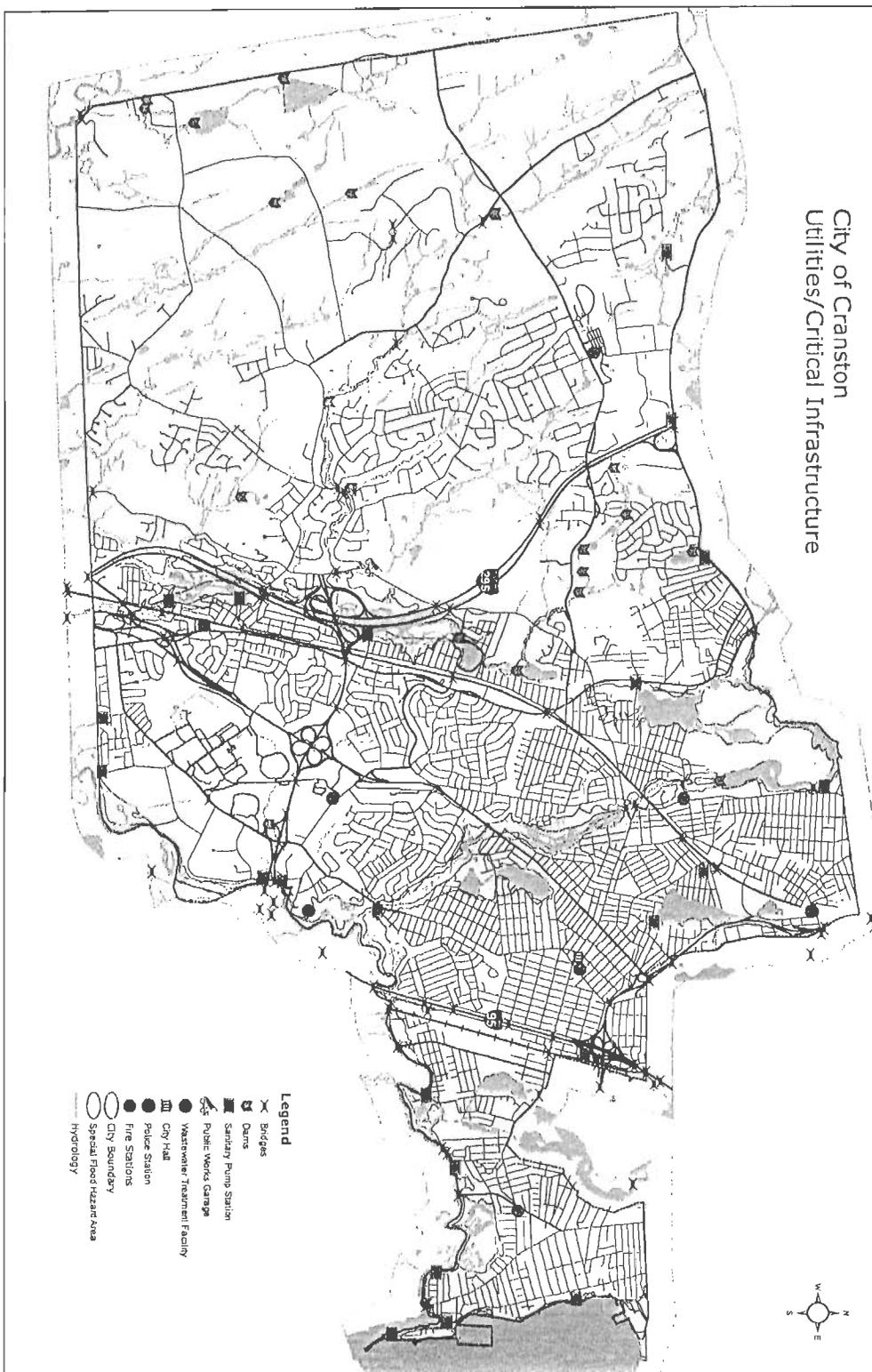
Map 2: Community Facilities

Map 3: Public Utilities

City of Cranston Community Facilities



City of Cranston Utilities/Critical Infrastructure



- Legend**
- X Bridges
 - Dams
 - Sanitary Pump Station
 - ⊞ Public Works Garage
 - Wastewater Treatment Facility
 - Ⓜ City Hall
 - Police Station
 - Fire Stations
 - City Boundary
 - Special Flood Hazard Area Hydrology

Chapter 4: Programmatic Capability Assessment

4.1 Purpose

This capability assessment examines the existing studies, plans, programs, and policies that have incorporated hazard mitigation and other pro-active tools into the City system. The purpose of the capability assessment is to highlight successes, identify shortcomings, and to lay the groundwork for possible improvement. Cranston recognizes that the inclusion of mitigation initiatives would not only benefit the community by reducing human suffering, damages and the costs of recovery, but would also help build and maintain the sustainability and economic health of the City. Section 4.2 details the City's existing plans, ongoing programs, and policies.

4.2 Primary Programs

4.2.1. Cranston Comprehensive Plan

The Cranston Comprehensive Plan was originally adopted in February 1992. In 2010 the City updated its comprehensive plan. The updated plan was approved by the City Plan Commission and adopted by the City Council in 2012. The plan outlines the goals, policies, issues, and actions that guide the community to fulfilling its vision for future development. It addresses land use, housing, economic development, natural resources, services and facilities, open space and recreation, and circulation, with some hazard mitigation activities. The City recognizes the importance of hazard mitigation, its interaction with municipal land use and infrastructure planning, and the need for a comprehensive planning approach which accommodates these interdependencies.

4.2.2. Cranston Waterfront Storm Preparedness Plan

The Rhode Island Coastal Resources Management Council (RICRMC) guidelines for Harbor Management Plans require municipalities with approved HMP's to provide waterfront storm preparedness plans. The purpose of these plans is to detail specific measures to be taken in mitigating storm damage, preparing vessels and their structures for storm events, and appropriate response procedures for waterfront boating facilities. On December 17, 2008, the Cranston City Council adopted the City's first Harbor Management Plan and on May 27, 2010 the RICRMC approved said plan had been approved by CRMC. Said plan includes a storm preparedness and hazard mitigation plan for the City's coastal areas.

4.2.3. Subdivision and Land Development Regulations

The subdivision and land development regulations are one of the City's primary tools for regulating development in the City. The purpose of the regulations are to protect the public health, safety, and welfare of the community by ensuring that development respects the natural limitations of specific locals including those presented by natural hazards.²⁴ The subdivision and land development process is overseen by the City's seven member Plan Commission, and it is here, where the majority of the coordination between various regulatory siting and design programs actually occurs.

4.2.4. Cranston Flood Hazard District

In 1984, the Federal Emergency Management Agency (FEMA) completed a scientific engineering report entitled *Flood Insurance Study: City of Cranston, Rhode Island* with accompanying Flood Insurance Rate Maps (FIRM's). As a result, in accordance with the Code of Federal Regulations Title 44 Chapter 1 Part 9 "The Flood Plain Management and Protection of Wetlands" (44CFR Ch. 1 Part 9), the City of Cranston subsequently adopted its own local flood hazard management ordinance that, in conjunction with the Rhode Island State Building Code, discussed below, provides specific regulations for the building of, or substantial improvement to, structures within Special Flood Hazard Areas. In 2013, FEMA issued updated FIRM's for the City. In conjunction with the issuance of new FIRM's, the City updated its local flood hazard management ordinance to reflect current regulatory practices.

The provisions of the Cranston Flood Hazard District are implemented by the Planning Department and the Building Inspections Department. Planning's role is to determine if, in fact, a particular proposal will take place within a Flood Hazard Area and Building Inspections determines whether construction techniques and calculations conforms to the specifics of the ordinance.

4.2.5 Rhode Island State Building Code

All municipalities within the State of Rhode Island share a single building code (RIGL 23-27.3-100 et. Al.). The Code itself (which incorporates the International Building Code) was last amended in 2012 and provides comprehensive construction requirements designed to mitigate the impacts from natural hazards, such as high wind events. The Code is enforced by the Cranston Building Inspections Department and provides an additional layer of regulatory control to those discussed above.

4.2.6. Cranston Emergency Operations Plan (EOP)

The Cranston EOP was last updated in January 2013. Its primary purpose is to plan for the coordination and execution of specific roles, duties and responsibilities of individual municipal emergency response personnel in the event of a disaster or general emergency. Cranston's plan combines mitigation, preparedness, response, and recovery. It is currently up to date and has been approved by RIEMA and FEMA.²⁵

4.2.7. Cranston Public Education Program

The fire chief/emergency management officer does implement public education programs that are geared toward school-age children and residents of the City residing in elderly housing. In fact, the CEMA does circulate a pamphlet entitled "Sheltering in Place Guidelines" throughout the Cranston School Department. In addition, once a month CEMA does produce a series of public education articles that are published in the Cranston Herald. These articles routinely cover topics ranging from fire safety to natural disaster preparation and response. However, this publication has been temporarily discontinued in order to focus on the enforcement of new fire code safety legislation.

4.2.8 Rhode Island State Dam Safety Program

The City of Cranston participates in the State Dam Safety Program because the Cranston Print Works Dam is classified as one of sixteen high hazard dams within the State. The State Dam Safety Program was created to facilitate the enforcement of the primary dam inspection law (RIGL 46-19, Inspection of Dams and Reservoirs). RIGL 46-19 states that dam owners are responsible for the safe operation, maintenance, repair, and rehabilitation of a dam, which are the essential elements in preventing dam failure; furthermore, dam owners are liable for the consequences of accidents or failures of their dams. According to the Dam Safety and Maintenance Task Force, RIGL 46-19 needs to be updated to address the specifics of a comprehensive dam inspection and permitting program. In addition, the current law does not address the fiscal impacts of dam repairs or removal, and the possible need for state financial assistance to assist dam owners undertake crucial and necessary repairs.²²

4.2.9 National Flood Insurance Program (NFIP): Community Rating System (CRS)

The National Flood Insurance Program (NFIP) is a FEMA administered program that provides affordable flood insurance for property owners and encourages municipalities to adopt floodplain management standards. The Community Rating System (CRS), part of the NFIP, is a voluntary program for municipalities. The CRS allows participating communities to be rewarded with incentives for doing more than meeting the minimum NFIP requirements to help their property owners prevent or reduce flood losses. These incentives are in the form of flood insurance premium discounts.

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Although Cranston does participate in the CRS Program, it is currently ranked in the lowest classification. Steps are being taken by the City to receive credit for what it is already doing, but also to receive credit for the appropriate elements of this plan as they are implemented. There are 10 CRS classes: Class 1 requires the most credit points and gives the greatest premium reductions; Class 10 identifies a community that does not apply for the CRS or does not obtain a minimum number of credit points and receives no discount.²⁷

4.2.10. The Pocasset River Flood Plain Study and Management Plan

The Pocasset River Flood Plain Study and Management Plan was initiated with the Natural Resource Conservation Service (NRCS), as a result of a storm event that occurred in August of 1999. Funded through the Federal Small Watershed Program it analyzes existing conditions, models present and future hydrology, provides updated Flood Insurance Rate Maps, analyzes alternative solutions to flooding concerns, proposes recommended strategies, and provides connections for needed implementation funds.²⁸ Since the 2005 HMP, the NRCS has completed hydrologic studies. Since the 2010 HMP, a public hearing has been held and a study has been accepted by both Johnston and Cranston so that the study can be submitted for Congressional approval. In addition, NRCS has funded the design of a floodwall on Fletcher Avenue, the first of three floodwall proposals in the study. However, the need for funding, especially the local match, has caused project to be delayed.

4.2.11. The Meshanticut Brook Flood Plain Management Study: Cranston and Warwick, RI

The Meshanticut Brook Flood Plain Management Study was published in October 1983 and is known as the "Popular Report". This report was produced by the United States Department of Agriculture: Soil Conservation Service (currently known as NRCS); and it identifies problem areas within the flood plain and provides an analysis of potential alternatives and recommended solutions. Five recommendations originate from this study and are as follows²³:

1. All property owners in the 100-year flood plain should participate in the NFIP.
2. Flood plain property owners, particularly those within the 10-year flood plain, should consider having a qualified engineer evaluate their property for specific nonstructural measures.
3. Both Cranston and Warwick, with the full participation of and coordination with affected property owners, should develop a flood warning plan.
4. Several wetlands, natural areas, and ponds located along Meshanticut Brook upstream of the Furnace Hill Brook confluence provide significant natural storage for floodwater. These areas moderate flood discharges similar to a dam. Without this existing storage, flood damage would be much worse. The City of Cranston should take action to protect these areas from any alteration that would reduce the volume of storage presently available.
5. The City of Cranston should make full use of the existing erosion and sediment control standards and enforcement ordinances to insure that development projects within the City will be adequately controlled.

Since the 2010 HMP, the City has encouraged property owners in specific flood-prone neighborhoods to participate in the City's voluntary buyout program. To date, the City has acquired one property for demolition, and another six are proposed. The City and NRCS have completed all necessary steps for submittal to Congress for adoption.

4.2.12. Ongoing Hazard Mitigation Activities

The following activities identified by the CHMC are currently underway and remain as active components to helping the City reduce their damages, stem economic losses, and improve public safety.

Coordinated Tree-Trimming Program

Summary - Maintaining electrical service provision during and after natural hazard events is critical in mitigating property damages and protecting life. Electricity is not only essential for lighting, heating and refrigeration but is also relied upon for traffic control, health support,

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communications and security. Unfortunately many of the electrical transmission lines in the city are jeopardized by the ever increasing number of tree limbs that grow in their midst. During high wind and ice events these limbs often break bringing down transmission lines and electrical service. Increasing the strategic removal of these subject limbs beforehand can go a long way in mitigating the impacts of natural hazard events.

Primary Tasks

- a. Establish a working committee with representation from Cranston Emergency Management, Narragansett Electric, Verizon Telecommunications, and Cox Communications.
- b. Identify existing tree trimming programs, priorities and available resources.
- c. Identify priority transmission corridors for trimming.
- d. Work to better coordinate existing programs in priority areas as a Phase I effort.
- e. Seek and secure additional funding for Phase II expansion of coordinated program.
- f. Develop a communication network with the public to assist with maintenance and carry out implementation program.
- g. Educate the public regarding the need to properly maintain and trim trees on private property that are adjacent to power lines.
- h. Evaluate program effectiveness and initiate planning process for additional phases if feasible.

Project Lead - Cranston Emergency Management Agency (CEMA) in partnership with Narragansett Electric, Verizon Telecommunications, and Cox Communications.

Funding Concerns - Phase I coordination costs are minimal and can be covered by stakeholders existing budgets, whereas the focus of Phase II is to identify additional funding grant opportunities for expanding the program. The anticipated costs associated with the Phase II expansion of the program are \$1,137,500.00 for tree trimming, \$200,000.00 for tree removal, and an additional \$36,400.00 for police details.

Actions Since 2010 HMP - The CHMC notes that the electric and telecommunications utilities have an ongoing and highly effective program of tree trimming to remove dangerous limbs. The CHMC has determined that in addition to the above activities identified under that action item, the City has not enacted an ordinance which would prohibit the planting of trees within a utility easement. However, the City does have a fully trained arborist that knows where to plant trees that will not interfere in the future with utility lines.

Priority: MEDIUM

Hazards- Winter weather, hurricanes, wind

Mitigate Wildfire Risk to Vegetated Areas

Summary- The John L. Curran Management Area is a 332 acre undeveloped state owned park comprised primarily of deciduous hardwood trees, oaks, maple, and beech. Shoreline habitats along the Upper and Lower Reservoirs provide food and shelter for wildlife.

Primary Task - Support the Rhode Island Department of Environmental Management with fire prevention and suppression efforts. This is especially important during dry periods in the summer when temperatures are hotter.

Primary Lead - Cranston Fire Department

Funding Concerns - fire department staff time and budget as needed

Actions Since 2010 HMP:- New action

Priority: LOW

Hazards- Wildfire

Program of Acquisition or Mitigation for Flood Damaged Properties

Summary – As a result of the March, 2010 flood event, the CHMC recognizes the City needs to move beyond the typical, after the fact, response of providing disaster relief. Based on data provided by FEMA, in excess of 218 flood insurance claims were processed after the March event with many of the claims being repetitive. The HMP recommends that the City initiate a pro-active program to provide mitigation to flood damaged properties. Said program will include a range of activities including, but not limited to, acquisition and demolition, acquisition and relocation, elevating or flood proofing structures and elevation or flood proofing of utilities. This mitigation program will initially target those neighborhoods that have suffered a large number of repetitive losses or have experienced substantial damage from flooding. Based on data from the March, 2010 flood event, as supplied by FEMA, the neighborhoods with significant impact to be targeted include, but not limited to, the Perkins Avenue neighborhood, the Amanda Avenue/Warren Avenue neighborhoods, the Fordson/Davis Avenue neighborhoods, the Fletcher Avenue neighborhood, the Pontiac Avenue neighborhood and the Pawtuxet Village area. The HMP recognizes that the costs for providing mitigation will be than offset by the long term costs from insurance claims from future flood events.

Primary Tasks –

Identify properties within the above identified neighborhoods that have filed repetitive claims or have experienced substantial flood damage.
 Determine the appropriate mitigation measures for the individual properties identified.
 Develop criteria for prioritize mitigation projects to meet available resources.
 Secure funding to acquire said properties.

Project Lead – Mayor's Office and the Planning Department.

Funding Concerns - The costs for implementation cannot be accurately estimated at this point. However, implementation costs will be identified through planning and outreach process. A majority of the costs are anticipated to be budgeted from appropriate grants.

Actions Since 2010 HMP: The City is currently implementing an acquisition and mitigation program. They have prioritized their actions and have already engaged in a voluntary acquisition program with residents. To date, the City has acquired one property on Perkins Avenue, and another six are proposed for future acquisition and removal from the floodplain. The City needs to develop a program to procedurally obtain the tax titles for acquisition properties in the floodplain.

Priority: HIGH

Hazards- Flooding**Small Business Hazard Mitigation Training and Disaster Outreach Program**

Summary - The City of Cranston understands the importance of small businesses to the City's economic vitality. The City also realizes that small businesses face larger challenges recovering from natural disasters. Therefore, the City will create a Small Business Disaster Outreach Program that will educate small business owners about the Small Business Administration (SBA) Pre-Disaster Mitigation Loan Program. The Small Business Disaster Outreach Program will present financial options available to small business owners for implementing mitigation measures to protect business property from damage that may be caused by future disasters.

Primary Tasks

- a. Compile contact information for all businesses located within all identified risk areas of the City and update annually.
- b. Identify local contact at the SBA regarding disaster loan programs and establish a working relationship.
- c. Confirm understanding and availability of programs and procure educational materials.

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- d. Educate small business owners as to the availability of the programs through direct mailings and informational workshops.

Project Lead – Cranston Department of Economic Development

Funding Concerns - The Department currently estimates the cost for completing the primary tasks to be \$5,000.00.

Actions Since 2010 HMP – The CHMC has reviewed this action. Since 2010, the Greater Cranston Chamber of Commerce, in partnership with the Division of Economic Development, have offered informational sessions to business owners based on their needs. Past sessions have focused on flooding, SBA loans, and how to get assistance after a disaster.

Priority: LOW

Hazards- All

4.3 Other Resources

The other resources included within this capability assessment are located in Appendices G, and H. Appendix G highlights existing state, federal, and other entities that provide technical and financial assistance for mitigation. Appendix H identifies existing federal and state protection systems. Lastly, Appendix I details additional financing options not identified in Chapter 5.

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Table 13: Review of 2010 HMP Mitigation Actions and Objectives

Actions From 2010 Plan	Implementation Status			Implementation Notes <i>(e.g. work completed, next steps, no funds, staff limitations, no longer an issue, carry forward to 2010 plan update)</i>
	Complete	Partially Complete	Pending	
1 Pocosset River Flooding Improvement		X		The NRCS has completed hydrologic analysis of the Pocosset River Basin and has completed preliminary design. The final engineering design studies have been completed for a floodwall at Fletcher Ave. There is currently no funding available to begin construction.
2 Mashanticut Brook Flooding Improvement			X	No actions have been taking on these proposed activities. In reviewing this action item, the CHMC identified drainage improvements to Withur Avenue where it passes under the State's bike path as the primary issue to be addressed. In addition, the CHMC identified other areas with similar flooding issues that should be addressed in a similar manner. These areas are Lake Street, Randall at Atwood Avenue and Cranston Street at Haven Street. The City has been unsuccessful in securing funding for this project.
3 W/CWD Service Loop		X		The PW/SB has completed design activities. PW/SB has a bench contract to construct the 16" main.
4 Sewage Infiltration & Inflow Analysis		X		Field Surveys are nearly complete for the Allard Pump Station (including its sub-tributaries) and the Randall / Plainfield Circle pump stations and sub-tributary areas. A draft report was developed and the final report is pending some additional field surveys that are being completed at the time of the report. Study has been completed. Tasks add are done. Infiltration and inflow analyses were not and continue not to be a major concern for the City based upon initial survey results.
5 Pump Station Flood Proofing	X			Since the March 2010 flooding, all pump stations in the floodplain have been floodproofed.
6 Flood Proof Peters School	X			As per CHMC's recommendation in 2010, Empirical and historical floodplain data was reviewed by the City and FEMA. It was determined that the school was not in the floodplain. A Letter of Map Revision (LOMR) was submitted in September 27, 2013 and new flood maps were created for the Upper Pocosset area.
7 Tree-Trimming Program		X		The CHMC notes that the electric and telecommunications utilities have an ongoing and highly effective program of tree trimming to remove dangerous limbs. The CHMC has determined that in addition to the above activities identified under that action item, the City has not enacted an ordinance which would prohibit the planting of trees within a utility easement. However, the City does have a fully trained arborist that knows where to plant trees that will not interfere in the future with utility lines.
8 Bridge Retrofitting and Repair	X			This action was reviewed by the CHMC and has been deemed complete. Repairs have been done on non-City maintained bridges such as Dyer Ave at Park Ave., Reservoir Avenue, and Pontiac Avenue. The RIDOT has surveyed all of the City's bridges. All have acceptable load ratings with the exception of the bridge at Main Street that runs over Clark Brook which needs repairs. The bridge at Furnace Brook Road is no longer accessible due to changes in road design and was recommended to be removed.

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Actions From 2010 Plan	Implementation Status			Implementation Notes <i>(e.g. work completed, next steps, no funds, staff limitations, no longer an issue, carry forward to 2010 plan update)</i>
	Complete	Partially Complete	Pending	
9 Establish Program for Acquisition or Mitigation for Flood Damaged Properties		X		The City is currently implementing an acquisition and mitigation program. They have prioritized their actions and have already engaged in a voluntary acquisition program with residents. To date, the City has acquired one property on Perkins Avenue and another six are proposed for future acquisition and removal from the floodplain.
10 Debris Management Plan		X		The City is in the process of completing their debris management plan. They currently have contracts for hauling and monitoring.
12 NFIP Community Rating System		X		The City is currently preparing documents for the CRS application.
13 Hazard Mitigation Coordinator	X			Due to improved staffing at RIEMA since the 2010 plan, the CHMC recommends eliminating this action and relying on the RIEMA Regional Planner to supplement the City's work.
14 CHMP Evaluation & Update	X			Upon review, the CHMC recommend that it meets annually to update the HMP. The CHMC has prepared this current update as part of its ongoing activities.
15 Long Term Disaster Mitigation Plan		X		The LTGR Planning Committee is also the CHMC. The LTGR Planning Committee has evaluated this action and discussed the elements. There are no funds or needs at this time but have created a framework that can be quickly deployed immediately following a disaster. This is an ongoing action generally managed at the State level.
16 ARC Shelter Capacity		X		Red Cross shelters are managed regionally. The City does support its own shelters which are not managed by the Red Cross.
17 Repetitive Loss Strategy			X	Given the number of repetitive loss properties, the City is required to develop a flood plain management plan or repetitive loss analysis as part a CRS application. The City intends to submit a CRS application to FEMA.
18 Flood Hazard Districts Training for Municipal Officials	X			The workshops offered through RIEMA have minimized if not altogether eliminated the need for City sponsored workshops for local development.
19 Small Bus. Outreach Program		X		Ongoing effort between the Greater Cranston Chamber of Commerce and the Cranston Division of Economic Development.
20 Public Preparedness & Education Program			X	Develop public education and outreach programs on disaster mitigation and preparedness.

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Table 14: Overview of 2015 HMP Mitigation Actions

Actions In 2015 Plan	Action Type	Status	Timeframe*	Implementation Notes
1 Pocasset River Flooding Improvement	Mitigation	Partial	Medium	The NRCS has completed hydrologic analysis of the Pocasset River Basin and has completed preliminary design. The final engineering design studies have been completed for a floodwall at Fletcher Ave. There is currently no funding available to begin construction. Awaiting Congressional approval.
2 Mashanicut Brook Flooding Improvement	Mitigation	Pending	Long	No actions have been taken on these proposed activities. In reviewing this action item, the CHMC identified drainage improvements to Wilbur Avenue where it passes under the State's bike path as the primary issue to be addressed. In addition, the CHMC identified other areas with similar flooding issues that should be addressed in a similar manner. These areas are Lake Street, Randall at Atwood Avenue and Cranston Street at Haven Street. The City has been unsuccessful in securing funding for this project.
3 W/CWD Service Loop	Mitigation	Partial	Long	The Providence Water Supply Board (PWSB) has completed design activities. PWSB has a bench contract to construct the 16 main.
4 Sewage Infiltration & Inflow Analysis	Planning	Partial	Medium	Field Surveys are nearly complete for the Allard Pump Station (including its sub-turbines) and the Randall / Plainfield Creek pump stations and sub-turbinary areas. A draft report was developed and the final report is pending some additional field surveys that are being completed at the time of the report. Study has been completed. Some tasks are done. Infiltration and inflow analyses were not and continue not to be a major concern for the City based upon initial survey results.
5 Sewage Pump Station Flood Proofing	Mitigation	Complete	-	Since the March 2010 flooding, all pump stations in the floodplain have been floodproofed (generators elevated).
6 Flood Proof Paters School	Planning	Complete	-	As per CHMC's recommendation in 2010, Empirical and historical floodplain data was reviewed by the City and FEMA. It was determined that the school was not in the floodplain. A Letter of Map Revision (LOMR) was submitted in September 27, 2013 and new flood maps were created for the Upper Pocasset area.
7 Bridge Retrofitting and Repair	Mitigation	Complete	-	This action was reviewed by the CHMC and has been deemed complete. Repairs have been done on non-City maintained bridges such as Dyer Ave. at Park Ave., Reservoir Avenue, and Pontiac Avenue. The RIDOT has surveyed all of the City's bridges. All have acceptable load ratings with the exception of the bridge at Main Street that runs over Clark Brook which needs repairs. The bridge at Furnace Brook Road is no longer accessible due to changes in road design and was recommended to be removed.

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Actions in 2015 Plan		Action Type	Status	Timeframe	Implementation Notes
8	Stormwater Drainage System Evaluation	Planning	New	Medium	The City will complete a comprehensive analysis of specific drainage areas to determine the course of action for minimizing the effects of flooding.
9	Debris Management Plan	Planning	Partial	Short	The City is in the process of completing their debris management plan. They currently have contracts for hauling and monitoring.
10	NFIP Community Rating System	Planning	Partial	Short	The City is currently preparing documents for the CRS application.
11	Hazard Mitigation Coordinator	Planning	Complete	-	Due to improved staffing at RIEMA since the 2010 plan, the CHMC recommends eliminating this action and relying on the RIEMA Regional Planner to supplement the City's work.
12	CHMP Evaluation & Update	Planning	Ongoing	Medium	Upon review, the CHMC recommend that it meets annually to update the HMP. The CHMC has prepared this current update as part of its ongoing activities.
13	Long Term Disaster Mitigation Plan	Planning	Eliminated	Medium	The L.TCR Planning Committee is also the CHMC. The L.TOR Planning Committee has evaluated this action and discussed the elements. There are no funds or needs at this time but have created a framework that can be quickly deployed immediately following a disaster. This is an ongoing action generally managed at the State level.
14	ARC Shelter Capacity	Planning	Partial	Short	Red Cross shelters are managed regionally. The City does support its own shelters which are not managed by the Red Cross. The current personal in the City's CERT program cannot support more than two facilities.
15	Repetitive Loss Strategy	Planning	Pending	Short	Given the number of repetitive loss properties, the City is required to develop a flood plain management plan or repetitive loss analysis as part a CRS application. The City intends to submit a CRS application to FEMA in 2015.
17	Public Preparedness & Education Program	Planning	Pending	Medium	Develop public education and outreach programs on disaster mitigation and preparedness. This will be one of the first outreach activities in the CRS in 2015.

*Timeframes are defined as: Short (under 3 years), Medium (3-5 years) and Long (beyond the 5 year applicability of this Plan update).

Chapter 5: Identification of Mitigation Actions

Whereas the two preceding chapters identify risks from natural hazards and programmatic shortcomings, this chapter defines a broad mission for the City in mitigating these risks, re-evaluates the series of hazard mitigation goals and specific implementation actions that were identified in the 2010 HMP.

5.1 Mission Statement

It is the mission of the City and the CHMC to protect and enhance the quality of life, property and resources by identifying areas at risk from natural hazards and implementing hazard mitigation actions to protect the City's residents; infrastructure; economy and its historical, natural and cultural resources.

5.2 Mitigation Goals

To achieve its mission the Cranston Hazard Mitigation Committee established a series of goals that could be used to focus mitigation efforts and provide a framework for discussion of specific actions. These goals include: upgrading infrastructure and protecting property, integrating planning and management approaches, strengthening regulatory control, improving response effectiveness and raising awareness of hazard mitigation benefits and procedures.

Upgrading infrastructure and protecting property refers to improving the structural facilities needed to sustain and protect residential, commercial, and industrial uses and the people who occupy them. Examples include drainage structures, bridges, dams, and municipal facilities such as schools.

Integrating planning and management refers to the incorporation of hazard mitigation principles into the plans, policies, programs and administrative actions of both public and private entities. Examples include development of a debris management plan and participation in the Community Rating System.

Regulatory change refers to improvements to rules or procedures that regulate the location of new development as well as construction techniques. Examples include municipal subdivision regulations; flood hazard overlay districts and building codes.

Preparedness to reduce losses refers to ensuring that needed facilities are in place to assist people during natural hazard events and that the City is ready to respond effectively. Examples include increasing the capacity of American Red Cross approved shelters and development of repetitive loss strategies.

Education and training refers to raising community awareness of how to prepare for and respond to natural hazard events. Examples include flood hazard training workshops for municipal officials, small business disaster outreach programs and public education and preparedness programs.

5.3 Identified Actions and Objectives

The following mitigation actions and objectives were developed by the CHMC with review and opportunity for input from each of the prospective project leads. They are organized in accordance with the topical areas of the five mitigation goals discussed above and each summarizes the specific problem and proposed possible solution, details the primary tasks to be undertaken, identifies an appropriate lead and anticipates funding concerns. Each action was given a priority ranking of low, medium, or high as determined by the CHMC. A low priority does not mean that the action is unimportant, but rather it is being managed by a non-City entity.

5.3.1. Infrastructure Improvement and Property Protection

A. Implement the NRCS Pocasset River Flood Plain Study and Management Plan

1. *Summary* - The Pocasset River Watershed is 20.6 sq. miles or 13,200 acres in size. Three municipalities are located in the watershed: the Town of Johnston, the City of Cranston, and the City of Providence. The City of Cranston comprises approximately 29 percent of the watershed. The Pocasset River has experienced numerous major flood events in the past twenty years. Commercial and residential property in the Fletcher Avenue area of Cranston has been particularly vulnerable to damage from these floods.

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The floods also pose a threat to the environment and public health and safety. By most accounts, flooding in the past few years is both more frequent and severe. Previous efforts by local, state, and federal interests have failed to solve this problem.

In October 1999, a senatorial appropriation of \$500,000 was earmarked for the Natural Resources Conservation Service (NRCS) Small Watershed Program budget for FY 2001 to complete a watershed study and plan for the Pocasset River. The City of Cranston will support and seek implementation for the NRCS Pocasset River Watershed Flood Plain Management Plan. The plan addresses the repetitive flooding in the watershed. Under the framework of the Small Watershed Program the project completed the following tasks:

- a. Collected data on river flow rates and flood heights.
- b. Inventoried the natural resources in the flood plain including: wildlife habitat, wetlands, and cultural resources.
- c. Located and surveyed structures at risk to flooding.
- d. Estimated past and potential financial losses.
- e. Identified elements contributing to the increased flooding rates.
- f. Drafted alternatives for mitigating future losses.

NRCS and their field crews surveyed cross sections along the Pocasset River and its tributaries. The data collected built the present and future hydrologic and hydraulic models of the watershed. These models in turn were used to analyze the mitigation alternatives. Following the analysis of the mitigation alternatives, NRCS produced benefit/cost ratios for Cranston, Johnston, and the Pocasset Watershed as a whole. A benefit/cost ratio of 1.07 was produced for Cranston. This ratio, being greater than one, indicates a financially beneficial outcome for Cranston. The benefits depict reduced flood damages as a result of installing flood prevention measures.

Below are the draft mitigation action alternatives presented by NRCS in the *Pocasset River Watershed Flood Plain Management Study*.²⁴

2. Primary Tasks

- a. Perform debris removal throughout the Pocasset River Channel to prevent natural damming and increase the flow rates and volume.
- b. Increase the distance between the abutments for the Rhode Island Department of Transportation (DOT) bridge on Garden City Drive (DOT bridge # 75801) - *State task*.
- c. Flood proof structures in the vicinity of the Garden City Drive flood plain.
- d. Flood proof structures and retrofit Lower Eden Park with two floodwalls to control river flow, or have the City obtain land rights for the potential removal of structures in the Lower Eden Park flood plain. (The first floodwall will encompass Willow Brook Apartments. The second floodwall will encompass the Riverview Acre Apartments and Davis Court.)
- e. Floodproof structures and retrofit Upper Eden Park with a floodwall to control river flow, or have the City obtain land rights for the potential removal of structures in the Upper Eden Park flood plain. (This floodwall will encompass the Forest Hills Nursery located on Reservoir Avenue. This is A.P. - 9/2 Lots 2431 - 2436, 2526, 3089, 3500 and 3513).
- f. Flood proof structures in the vicinity of the Park Avenue bridge (DOT # 48001), or have the City obtain land rights for the potential removal of structures in the vicinity of the Park Avenue bridge (DOT bridge # 48001).
- g. Increase the distance between the abutments of Park Avenue bridge (DOT bridge # 48001) - *State task*.
- h. Flood proof structures in the vicinity of the Dyer Avenue bridge (DOT bridge # 49401).
- i. Increase the distance between the abutments of Dyer Avenue bridge (DOT bridge # 49401) - *State task*.

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- j. Flood proof structures and retrofit the Dyer Avenue Industrial Park with a floodwall to control and channel the river flow.
 - k. Flood proof structures and retrofit Fletcher Avenue Industrial Park Area with a floodwall to control and channel the river flow, or have the City obtain land rights for the potential removal of structures in the vicinity of the Fletcher Avenue Industrial Park.
 - l. Flood proof structures in the vicinity of the Plainfield Street flood plain, or have City obtain land rights for the potential removal of structures at Plainfield Street.
 - m. Increase the distance between the abutments of Plainfield Street bridge (DOT bridge # 8101) - *State task*.
3. Project Lead - The NRCS Small Watershed Program has joint sponsorship between the City of Cranston and Town of Johnston to coordinate implementation with regards to securing sufficient funding and ensuring the recommendations are carried out in a timely fashion.
4. Funding Concerns - The total estimated cost to implement the corrective measures within the entire Pocasset Watershed is \$30,653,386. The total estimated cost to implement the corrective measures in Cranston is \$14,856,180. The NRCS Small Watershed Program will provide \$11,611,200 in funding toward the estimated cost for the Cranston area. Specifically, the NRCS Small Watershed Program will provide 100% funding for floodwall costs and 75% funding for flood proofing and home removal. The NRCS Small Watershed Program will not pay for utilities.
- Cranston will be responsible for securing the remaining \$3,088,050.00 in funding. In addition, the City will be responsible for the cost of obtaining land rights, if recommendations acted upon include structure removal. Lastly, the City will be responsible for bridge retrofitting costs if the City maintains bridge; and the State will be responsible for bridge retrofitting costs if the State maintains the bridge.²⁵
5. Actions Since 2010 HMP - Since the 2010 HMP, a public hearing has been held and a study has been accepted by both Johnston and Cranston so that the study can be submitted for Congressional approval. In addition, NRCS has funded the design of a floodwall on Fletcher Avenue, the first of three floodwall proposals in the study. The NRCS and the City is currently seeking funds so that NRCS can undertake final engineering design and undertake the flood improvements proposed. Action item k: a floodwall system for Fletcher Avenue has been designed and gone out for bid. However, the City is still waiting for Congress to appropriate the funds to NRCS. There will be no adverse downstream impacts. The downstream section of the Pocasset River to Mill pond will not rise. The other proposed floodwalls (items "e" and "j" above) may not be cost effective. The City has asked the NRCS to do another cost-effectiveness study. There may be 50-80 acres of land that can be restored to its natural state and better protect the area. If NRCS is appropriated the funding from Congress, these projects cannot be funded by another federal agency such as FEMA.
6. Priority: HIGH
7. Time Frame for Completion - Five years once funding is secured. Partially shovel ready but dependent on federal funding. The City still sees this as a high priority even though the funding may not come soon.
8. Hazards- Flooding

B. Flooding Improvements (Meshanticut Brook Flooding Improvements)

- 1. Summary - The flooding on Wilbur Avenue occurs east of Warren Avenue and west of Oaklawn Avenue, under the State's bike path and is the primary area of concern within the Meshanticut Brook Flood Plain. Preliminary opinions suggest that the flooding is a result of limited water flow capacity due to an inadequately sized drainage system with little to no land slope. The City of Cranston will study and choose the most cost-effective alternative to replace the current drainage system beneath Wilbur Avenue. The

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alternative will increase the size of the drainage piping and increase the capacity of flow from the intersection of Wilbur and Oaklawn Avenues to the Meshanticut Brook outfall. One option may be the installation of a subsurface retention system to increase temporary storage during the "first flush" of a rain storm.

Similar flooding concerns occur along Lake Street, Randall at Atwood Avenue and Cranston Street at Haven Street. The CHMC decided in 2010 that these areas be addressed in a similar way as Wilbur Avenue, above.

2. Primary Tasks

- a. Secure funding for study and design components.
- b. Reassess recommendations of the *Meshanticut Brook Flood Plain Management Study* prepared by the Soil Conservation Service (SCS or NRCS - 1983).
- c. Study the current condition of the drainage system and flooding concern to assess potential residential, commercial and public property cost damages.
- d. Conduct a cost-benefit analysis for the design alternatives.
- e. Design the selected replacement drainage systems.
- f. Develop a method to monitor and maintain new drainage system.
- g. Secure implementation funding and obtain necessary permits
- h. Advertise an invitation to bid and award contract.
- i. Construct, monitor and maintain new drainage system.

3. Project Lead - City of Cranston Public Works Department.4. Funding Concerns - The Public Works Department must first obtain funding for study and design and then for implementation. The Department currently estimates design costs to be \$35,000.00, and the study to cost \$5,000.00. The costs for implementation cannot be accurately estimated at this point. However, implementation costs will be identified through the study and design process. The capital improvement planning process, as well as appropriate grant opportunities should be pursued as funding sources for both study and implementation.5. Actions Since 2010 HMP - No actions have been taking on these proposed activities. The City has been unsuccessful in securing grants to fund this project. The flooding affects nearby businesses, and the road, not homes or lives.6. Priority: MEDIUM7. Time Frame for Completion - Depending on funding.8. Hazards- FloodingC. **Western Cranston Water District Service Loop**

1. Summary - The Western Cranston Water District (WCWD) is roughly bounded by Plainfield Pike on the north, the Town of West Warwick to the south, Interstate 295 to the east, and Seven Mile and Pippin Orchard Roads to the west. Currently the primary concern involves the southerly half of the District, which is serviced by only one distribution main. If that main were to be compromised by earthquake damage, servicing the southern portion of the District would not be possible. Therefore, the Providence Water Supply Board (PWSB) will be encouraged to complete this secondary distribution main, lying approximately between Pippin Orchard Road and Alpine Estates Drive. Correcting the problem in this fashion will loop the system, thereby allowing a secondary means of service to the southerly portion of the District.

2. Primary Tasks

- a. Finalize PWSB Capital Improvement Plan for WCWD.
- b. Revise WCWD needs assessment and Impact fee calculation.
- c. Design 16" distribution main project.
- d. Have project lead address funding concerns and obtain necessary permitting.
- e. Advertise an invitation to bid and award contract.
- f. Construct the most cost-effective 16" distribution main.

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3. Project Lead - Providence Water Supply Board (PWSB).
4. Funding Concerns - This project will be funded by the PWSB using monies collected through the Western Cranston Water District Impact Fee Program. Cost is currently estimated at \$1,100,000.
5. Actions Since 2010 HMP - Since the 2005 Plan, the PWSB has completed design activities a. to d. above. All of the design elements have been done. Since the 2010 plan, the PWSP has a bench contract to construct the 16" main. Construction is expected to begin Spring 2015.
6. Priority: MEDIUM
7. Time Frame for Completion - The PWSB does not have a date for when this will be completed.
8. Hazards- Earthquake

D. Sewage Infiltration and Inflow Analysis

1. Summary - During a large rainfall event, the City of Cranston sewage pump stations may experience sewer backups due to large amounts of storm water infiltrating the piping system and overwhelming the capacity of the pump stations. This creates a serious potential health concern and liability for the City. To alleviate this concern, Veolia Water, operator of the City's sewage treatment facilities, will conduct an infiltration/inflow analysis that will identify illegal entry points of non-effluence into the City sewer system. Flow tests will be performed to model different intensity storms. If the analysis indicates infiltration/inflow contributing to overwhelming the sewage pump station capacity, the City will pursue a form of recourse. This recourse will detail the consequences associated with allowing the infiltration/inflow to exist and the contrary. Lastly, conclusive evidence should guide Veolia Water regarding their ability to eliminate infiltration/inflow or upgrade the pump stations to accommodate the infiltration/inflow.
2. Primary Tasks
 - a. Identify illegal inflow points of non-effluence within the sewage system.
 - b. Calculate an infiltration volume measure to determine whether infiltration is an issue.
 - c. Determine a form of recourse against individuals or entities regarding illegal inflow into the sewage system.
 - d. Conduct a cost-benefit analysis to identify the ramifications associated with allowing the illegal inflow to exist verses removal.
 - e. Evaluate conclusive evidence to guide decisions related to alternatives that limit the illegal inflow within the sewage system or upgrade the pump stations to accommodate the inflow.
3. Project Lead - Veolia Water and the City of Cranston Public Works Department.
4. Funding Concerns - Primary tasks a. and b. have been initiated and the costs to complete these tasks will be approximately \$808,942.00. The costs to complete primary tasks c. - e. have not been identified as of yet since they are dependent on primary task a. and b. All costs are anticipated to be budgeted costs into the Sewer Enterprise Fund and through appropriate grants.
5. Actions Since 2010 HMP - Field Surveys are nearly complete for the Allard Pump Station (including its sub-tributaries) and the Randall / Plainfield Circle pump stations and sub-tributary areas. A draft report was developed and the final report is pending some additional field surveys that are being completed at the time of the report. Study has been completed. Tasks a&b are done. Infiltration and inflow analyses were not and continue not to be a major concern for the City based upon initial survey results.
6. Priority: LOW

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7. Time Frame for Completion

- a. Primary tasks a. and b. were completed.
- b. Tasks c. - e. are estimated to be completed in approximately three years after tasks a. and b. although this is contingent upon funding.
- c. However, Inflow and Infiltration Analysis is not a priority for the City but will need to be conducted on an on-going basis.

8. Hazards- Flooding

E. Sewage Pump Station Flood Proofing

1. Summary - The City of Cranston has an additional concern regarding the potential for sewer backups to occur during a large rainfall event. This concern is focused on the short-circuiting of sewage pumping equipment caused by the overland flooding of the sewage pump stations themselves. The first step to resolve this concern will be to conduct a cost-benefit analysis to address which of the nine pump stations within the flood plain could benefit by being flood proofed. The Allard, Randall, Pontiac and Mayflower Pump Stations are of particular concern due to their flood history and the Sea View Pump Station is of concern due to its location within a V-Zone (see Appendix A – Critical Municipal Facilities).
2. Primary Tasks
 - a. Secure funding for study and design components.
 - b. Study the current flooding conditions to assess the potential public property cost damages and the potential for sewage backups.
 - c. Conduct a cost-benefit analysis to determine which of the nine pump stations within the flood plain could most benefit by being flood proofed.
 - d. Design flood proof improvements for selected sewage pump stations.
 - e. Develop a method to monitor and maintain flood proof improvements.
 - f. Secure Implementation funding and obtain necessary permits.
 - g. Advertise an invitation to bid and award contract.
 - h. Retrofit selected sewage pump stations with flood proof improvements.
3. Project Lead – Veolia Water and City of Cranston Public Works Department.
4. Funding Concerns - The Public Works Department must first obtain funding for study and design and then for implementation. The Department currently estimates the study and design costs to be \$30,000.00. The costs for implementation cannot be accurately estimated at this point. However, implementation costs will be identified through the study and design process. All costs are anticipated to be budgeted costs into the Sewer Enterprise Fund and through appropriate grants.
5. Actions Since 2010 HMP – Completed. *Since the March 2010 flooding, all pump stations (including their generators) in the floodplain have been floodproofed. Pump stations outside of the floodplain will not be floodproofed.*
6. Priority: NOT APPLICABLE
7. Time Frame for Completion – Completed.
8. Hazards- Flooding

F. Flood Proof George J. Peters Elementary School

1. Summary - George J. Peters Elementary School is located within the Pocasset River Flood Plain, and has historically flooded. The school plays a vital role in educating Cranston's youth and also is utilized as a YMCA child daycare facility. The occurrence of a natural hazard event creates a higher potential for recurring and more severe property damage. Flood proofing the school could efficiently minimize these recurring property damage costs and ensure the buildings viability as an educational center.

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2. Primary Tasks
 - a. Secure funding for study and design components.
 - b. Estimate Impact of proposed Pocasset River Drainage Improvements on expected flood levels at the site.
 - c. Study the current and potential future flooding condition to assess the public property cost damages.
 - d. Assess and identify appropriate structural flood proofing alternatives.
 - e. Conduct a cost-benefit analysis that compares the cost of damages with the improvement benefits.
 - f. Design flood proof Improvements for George J Peters Elementary School.
 - g. Develop a method to monitor and maintain flood proof Improvements.
 - h. Secure implementation funding and obtain necessary permits.
 - i. Advertise an invitation to bid and award contract.
 - j. Retrofit George J. Peters Elementary School with selected improvements.
3. Project Lead - Cranston School Department.
4. Funding Concerns - The School Department must first obtain funding for study and design and then for implementation. The Department currently estimates the study and design costs to be \$25,000.00. The costs for implementation cannot be accurately estimated at this point. However, implementation costs will be identified through the study and design process. Cost and funding sources to be identified in Primary Task 2e above.
5. Actions Since 2010 HMP - As per CHMC's recommendation in 2010, Empirical and historical floodplain data was reviewed by the City and FEMA. It was determined that the school was not in the floodplain. A Letter of Map Revision (LOMR) was submitted and new flood maps were created for the Upper Pocasset area.
6. Priority: NOT APPLICABLE
7. Time Frame for Completion - Completed
8. Hazards- Flooding

G. Bridge Retrofitting and Repair

1. Summary - The City of Cranston recognizes the importance of safe and convenient circulation for residents and commuters traveling about the City. Understanding the extreme likelihood that a natural hazard will occur, all City maintained bridges (see Appendix C) are to be evaluated, regarding their structural integrity and resistance to earthquakes, and retrofitted as needed. All retrofits will be made in accordance to the *RIDOT Standard Specifications for Road and Bridge Construction*.
2. Primary Tasks
 - a. The City of Cranston Public Works Department - Engineering Division must inspect all City maintained bridges to ensure structural integrity and earthquake resistance.
 - b. Identify retrofits needed to bring all City maintained bridges into compliance with *RIDOT Standard Specifications for Road and Bridge Construction*.
 - c. Project construction costs for each individual retrofit.
 - d. Identify total funding available for implementation of bridge retrofits.
 - e. Prioritize desired retrofits given available funding, traffic carried, relation to evacuation routes and alternative circulation options.
 - f. Complete design, funding acquisition and permitting for prioritized retrofits.
 - g. Finalize overall implementation plan and execute.
3. Project Lead - City of Cranston Public Works Department - Engineering Division.
4. Funding Concerns - Bridge inspections have been performed by the Rhode Island Department of Transportation (DOT). Funding needs to be secured through the capital budget or through various grants to hire a consultant to prioritize and design the bridge

repairs. The DOT is responsible for providing funding for retrofitting all state maintained bridges.

5. Actions Since 2010 HMP – This action was reviewed by the CHMC and has been deemed complete. Repairs have been done on non-City maintained bridges such as Dyer Ave.at Park Ave., Reservoir Avenue, and Pontiac Avenue. The RIDOT has surveyed all of the City's bridges. All have acceptable load ratings with the exception of the bridge at Main Street that runs over Clark Brook which needs repairs. The bridge at Furnace Brook Road is no longer accessible due to changes in road design and was recommended to be removed.
6. Priority: NOT APPLICABLE
7. Time Frame for Completion – Completed.
8. Hazards- Earthquakes

H. Stormwater Drainage System Evaluation

1. Summary – Flash flooding during high intensity rain events has become problematic in several areas of the City. Areas of concern include Wedge/Cranston Street, Garden Street, Lodge/Abbott Street, and Zinnia Drive/Poplar Circle. These flash floods have caused damage to roads, drainage infrastructures, flooded basements and yards, and vehicular damage. There is a need for the City to complete a comprehensive analysis of these drainage areas to determine a course of action for minimizing the effects of this flooding.
2. Primary Tasks
 - a. Secure funding for study and design components
 - b. Complete a condition assessment of the current drainage infrastructure including a structural assessment, and cleaning of drain lines.
 - c. Perform hydraulic analysis of drainage system to determine capacity under multiple design storm events.
 - d. Identify, rank and prioritize drainage improvement projects.
 - e. Prepare estimated construction costs for improvements.
 - f. Secure funding and obtain necessary permits.
 - g. Advertise an invitation to bid and award design.
 - h. Construct, monitor and maintain drainage improvements.
3. Project Lead – City of Cranston Public Works Department
4. Funding Concerns – The public works department has obtained funding for the initial assessment, hydraulic analysis and study of the problem drainage areas. Funding for final design and construction of the improvements will be pursued when estimated costs become available.
5. Actions Since 2010 HMP: This is a new action.
6. Priority: HIGH
7. Time Frame for Completion – Five Years.
8. Hazards- Flooding

5.3.2. Planning and Management

A. Debris Management Plan

1. Summary - Currently, the City does not have a debris management plan. A debris management plan is a critical component to efficient recovery efforts when a disaster strikes. Debris removal is described as the clearance, removal and/or disposal of items such as trees, sand and gravel, building components, wreckage, vehicles and personal property. Having a debris management plan will establish better circulation for people moving back to their properties, allow for the safe passage of emergency vehicles, and increase accessibility to critical infrastructure. The creation and adoption of the debris management plan will consist of two phases. The first phase of the debris management plan will focus on the identification of priority roadways, bridges, dams, and culverts that have a tendency to collect debris and inadvertently contribute to potential road and property flooding. The second phase will concentrate on the scheduled debris clean-up efforts. In addition, it will address the how, who, and where will assist the City in the implementation of clean-up efforts.
2. Primary Tasks
 - a. Prioritize roadways for debris removal.
 - b. Identify the bridges, dams and culverts that are most susceptible to collecting debris.
 - c. Identify waste disposal methods (i.e., dumping, chipping, recycling, etc.).
 - d. Identify and prepare debris storage and reduction sites.
 - e. Obtain appropriate Federal, State and local permits.
 - f. Advertise an invitation to bid and award debris removal contract based on cost and the contractor's debris removal monitoring and staffing plan.
 - g. Implement a public information campaign that instructs the general public on guidelines for dealing with debris.
3. Project Lead - City of Cranston Public Works Department.
4. Funding Concerns - The estimated number of staff hours to complete this task is 200. In light of this, the City of Cranston has estimated the cost for producing this plan to be \$20,000.00. In addition, minimal costs are anticipated to advertise the invitation to bid and public information campaign.
5. Actions Since 2010 HMP - The City is in the progress of completing their debris management plan. They currently have contracts for hauling and monitoring.
6. Priority: MEDIUM
7. Time Frame for Completion - Three months.
8. Hazards- *Flooding, winter storm, hurricane, wind, tornado, earthquake,*

B. National Flood Insurance Program Community Rating System

1. Summary - The Community Rating System (CRS) is a part of the National Flood Insurance Program (NFIP). The CRS allows participating communities to be rewarded with incentives for doing more than meeting the minimum NFIP requirements to help their property owners prevent or reduce flood losses. Currently, Cranston is rated a Class 10.

Other incentives for communities to participate in CRS include free technical assistance in designing and implementing recommended flood plain management activities. Implementing some CRS activities, such as flood plain management planning, can help a community qualify for certain federal assistance programs. With the benefits of participating in the CRS program far outweighing the costs, the City NFIP Coordinator and other relevant City Administrators should prepare and implement those activities that will deal with Cranston's priority problems.

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2. Primary Tasks
 - a. Establish a working relationship between the City of Cranston NFIP Coordinator and the RIEMA CRS officer.
 - b. Obtain a letter from the FEMA Regional Office detailing the level of the community's compliance with the latest NFIP requirements.
 - c. Inventory the City of Cranston for the 18-flood plain management activities credited by the CRS program.
 - d. Prepare application and appropriate documentation that supports the City's intention for implementing the flood plain management activities recognized in the *CRS Coordinator's Manual*.
 - e. Submit application to RIEMA CRS officer, as well as copies to FEMA and the state NFIP Coordinator.
 - f. Upon feedback given from FEMA and the state NFIP Coordinator to the CRS officer, a verification visit may be scheduled if warranted.
 - g. Continue to recertify application each year that it is continuing to implement those activities specified in the first application.
 3. Project Lead - City of Cranston National Flood Insurance Program (NFIP) Coordinator.
 4. Funding Concerns - The City of Cranston Planning Department has salaried individuals on staff qualified to complete this project. The estimated number of staff hours to complete this task is 400 hours.
 5. Actions Since 2010 HMP - Items a. to c. above have been completed. The City is currently preparing documents for the CRS application.
 6. Priority: HIGH
 7. Time Frame for Completion - During 2015
 8. Hazards: Flooding
- C. Hazard Mitigation Coordinator
1. Summary - The City will minimize the potential effect of natural disasters by planning proactively. However, this ability to plan proactively is hindered because the full DMA 2000 requirements, as well as the implementation and evaluation of the full plan is beyond the capacity of current staff resources. The City simply cannot carry out these tasks without hiring more people.
 2. Primary Tasks
 - a. Secure funding to hire an additional planner on staff for the City of Cranston Planning Department that will specialize in natural hazard mitigation and act as a liaison with the Rhode Island Emergency Management Agency (RIEMA).
 - b. Advertise planning position and hire qualified applicant.
 3. Project Lead - City of Cranston Planning Department and the Cranston Emergency Management Agency (CEMA)
 4. Funding Concerns - The CHMC has estimated the cost of an additional planner on staff to be \$50,000.00. In addition, minimal costs are anticipated to advertise said position.
 5. Actions Since 2010 HMP - Due to improved staffing at RIEMA since the 2010 plan, the CHMC recommends eliminating this action and relying on the RIEMA Regional Planner to supplement the City's work.
 6. Priority: NOT APPLICABLE
 7. Hazards: All

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D. Evaluation, Revision, and Update of the Cranston Hazard Mitigation Plan

1. Summary - The City will bi-annually evaluate the Cranston Hazard Mitigation Plan, complete annual supplemental revisions, and five-year updates. This process of evaluation, revision, and update will identify additional priority problems as they may occur, and will allow the City to monitor project implementation schedules to bring the planning process full-circle.
2. Primary Tasks
 - a. Administer annual project evaluations that assess project completeness.
 - b. Conduct biannual public meetings that evaluate the progress of the mitigation actions within the HMP.
 - c. Complete annual supplemental revisions of the HMP, which will address additional natural hazard concerns as they arise.
 - d. Update the HMP every five years.
3. Project Lead – City of Cranston Planning Department and the Cranston Emergency Management Agency (CEMA).
4. Funding Concerns – The City of Cranston has estimated the cost for the evaluation, revision, and update of the Cranston Hazard Mitigation Plan to be \$5,000.00 in staff time.
5. Actions Since 2010 HMP – Upon review, the CHMC recommend that it meets annually (from date of plan adoption) to update the HMP. The CHMC has prepared this current update as part of its ongoing activities.
6. Priority: MEDIUM
7. Time Frame for Completion – within 5 years or as needed in response to an event.
8. Hazards- All

E. Long Term Disaster Mitigation Plan

1. Summary – Under the National Response Framework, Emergency Support Function (ESF) #14 Long-Term Community Recovery [LTCR] coordinates the resources of federal departments and agencies to support the long-term recovery of States and communities and to reduce or eliminate risk from future incidents. As a result of the March, 2010 flood event, the CHMC realizes the importance and need to develop a Long-Term Recovery Plan. The CHMC further recognizes that said plan needs to focus on those areas that received the greatest impact during said event [i.e. Perkins Avenue and the Fordson Avenue areas]. Long term recovery efforts are driven by State/local priorities, focusing on permanent restoration of infrastructure, housing, and the local economy. ESF #14 recognizes the primacy of affected State and local governments and the private sector in defining and addressing risk reduction and long-term community recovery priorities, and in leading the community recovery planning process. ESF #14 long-term community recovery and recovery planning efforts will be coordinated with State/ local-level stakeholders.
2. Primary Tasks
 - a. Appoint LTCR Planning Committee.
 - b. Establish a public information and participation program.
 - c. Identify the major LTCR issues to be addressed
 - d. Identify goals and objectives for the LTCR Plan.
 - e. Identify, evaluate and prioritize LTCR projects to be included in a recovery plan. Project may include:
 - Providing permanent disaster-resistant housing units;
 - Initiating a by-out of flood-prone properties and designating them community open space;

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- Initiating a low-interest business loan program to assist businesses that sustained damages from a disaster or
 - Widening bridges or other roadway improvements to improve evacuation routes.
 - f. Designate lead agencies or bodies to implement projects.
 - g. Prepare a LTCR funding strategy.
 - h. Implement the LTCR Plan.
 - i. Evaluate and update the LTCR on annual basis.
3. Project Lead – City of Cranston Planning Department and the Cranston Emergency Management Agency (CEMA).
 4. Funding Concerns – Base on its experience with updating its HMP, the City anticipates that it will expend between 100 to 200 hours of staff time at a cost of \$20,000 and will expend an additional \$5,000 in administrative costs [i.e. advertising and printing].
 5. Actions Since 2010 HMP - The LTCR Planning Committee is also the CHMC. The LTCR Planning Committee has evaluated this action and discussed the elements. There are no funds or needs at this time but have created a framework that can be quickly deployed immediately following a disaster. This is an ongoing action generally managed at the State level.
 6. Priority: LOW
 7. Time Frame for Completion – Eliminated
 8. Hazards- All

5.3.3. Preparedness to Reduce Losses

A. American Red Cross Approved Shelter Capacity

1. Summary - Providing sufficient shelter capacity is a primary means for protecting life and thereby mitigating the impact from natural hazards. The primary problem that the City faces in increasing its capacity is the number of options that exist, and the need to find the most cost efficient solutions that balances the need with the City's ability to provide staffing during natural hazard events. Whereas the City has a population of 80,529 it only has three American Red Cross (ARC) approved emergency shelters. The Cranston Senior Center, Western Hills Middle School, and Park View Middle School have all been designated as ARC approved emergency shelters. The majority of the evacuated population (87%) do not use public shelters.²⁶

A shelter use rate of 13% of the evacuated population may change depending on advance warning, hazard location, and severity. If the "evacuated population" is defined as the City population living within flood plains, this would indicate that 1,004 residents would seek emergency shelter. The City's three emergency shelters are capable of providing public shelter for 753 individuals. Therefore, the City currently faces a deficit of 251 spaces for public emergency sheltering.
2. Primary Tasks
 - a. Project cost for hiring of consultant to evaluate concern.
 - b. Secure funding for consultant and services.
 - c. Advertise a request for proposal and award contract to consultant.
 - d. Identify desired additional capacity based on the City's ability to staff.
 - e. Identify City owned structures that could be considered for shelter designation.
 - f. Identify requirements for receiving ARC approval - create a matrix.
 - g. Compare existing conditions of individual structures against ARC requirements to determine needed improvements for ARC designation at each facility.
 - h. Estimate cost of providing needed improvements at each facility.
 - i. Estimate additional shelter capacity to be gained with appropriate retrofits.
 - j. Analyze information above to identify most cost efficient means for increasing shelter capacity to the targeted level identified in primary task 2a.

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- k. Select appropriate projects for implementation based on the above as well as geographic location.
- l. Develop implementation plans including consideration for project design, funding, permitting, contractor selection, official ARC designation and project leadership.
- 3. Project Lead – The Cranston Emergency Management Agency (CEMA) and the American Red Cross (ARC).
- 4. Funding Concerns - The City of Cranston anticipates the cost of hiring a consultant for this project to be \$15,000.00. In addition, minimal costs are anticipated to advertise the request for proposal.
- 5. Actions Since 2010 HMP – Red Cross shelters are managed regionally. Waiting for Warwick to sign on as a regional back-up. The City does support its own shelters which are not managed by the Red Cross. Item 2d: The current personnel in the City's CERT program cannot support more than 2 facilities. Item 2e: Cranston high school West and East have not yet been approved but could serve as additional shelters.
- 6. Priority: MEDIUM
- 7. Time Frame for Completion – Two and half years from initiation.
- 8. Hazards- All

B. Repetitive Loss Strategy

- 1. Summary - Repetitive loss properties are those properties enrolled in the National Flood Insurance Program (NFIP) that have experienced two or more insurance claims of at least \$1,000 due to natural hazards over a period of ten years. In other words, repetitive loss properties are properties that are regularly impacted by natural hazards and have a higher than average probability of being impacted in the future and thereby represent a priority for mitigation action. According to the Federal Emergency Management Agency (FEMA) there are currently 549 NFIP holders in the City of Cranston, of which there are 79 repetitive loss properties.
The creation of a repetitive loss strategy simply entails the development of a mitigation plan for each property within the City that experiences repetitive losses. The individual parcel-specific plans can range from structural alterations to complete removal and when combined form a strategy for addressing repetitive losses. In this manner, the development of a repetitive loss strategy directly advances the goals of hazard mitigation planning while also bolstering the City's potential participation in the NFIP Community Rating System Program (CRS).
- 2. Primary Tasks
 - a. Obtain repetitive loss data from NFIP.
 - b. Map property location and determine if mitigation recommendations have already been generated through other efforts such as the NRCS Pocasset River Watershed Flood Plain Management Plan.
 - c. Estimate cost for hiring of consultant to evaluate concern and produce mitigation designs for repetitive loss properties that have none.
 - d. Secure funding for consultant and services.
 - e. Advertise a request for proposal and award contract to consultant.
 - f. Complete study and design phase, produce final repetitive loss strategy, including individual project estimates, funding sources and implementation schedules.
 - g. Initiate implementation.
- 3. Project Lead - City of Cranston National Flood Insurance Program (NFIP) Coordinator.
- 4. Funding Concerns – Development of the strategy can be completed by the City's NFIP Coordinator. However, the cost to implement the strategy cannot be identified at this time and it is anticipated that a variety of private as well as public grant funds will be needed. In addition, the City of Cranston has estimated the cost of hiring a consultant to evaluate concern and produce mitigation designs for repetitive loss properties that have

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none to be \$15,000.00. Lastly, minimal costs are anticipated to advertise the request for proposal.

5. Actions Since 2010 HMP – Given the number of repetitive loss properties (currently 79), the City is required to develop a flood plain management plan or repetitive loss analysis as part of any CRS application. As noted above, the City is in the process of submitting a CRS application to FEMA which will address the Repetitive Loss mitigation actions.
6. Priority: HIGH
7. Time Frame for Completion – During 2015
8. Hazards- Flooding

5.3.4. Education and Training

3. Hazards- All

A. Hazard Mitigation Public Preparedness & Education Program

1. Summary - The City will seek assistance from the Cranston Emergency Management Official (CEMO) and the American Red Cross (ARC) as a phase I effort to develop public education and outreach programs on disaster mitigation and preparedness, and distribute and make material available concerning: evacuation routes, emergency shelters, critical facilities and maps of City risks. In addition, as a phase II effort, the City will seek assistance from the Cranston National Flood Insurance Program (NFIP) Coordinator to provide property owners information regarding properties that are subject to flooding. Discussion topics will include property protection measures appropriate for flood mitigation and basic facts about the NFIP.
2. Primary Tasks
 - a. Establish a working relationship between the Cranston National Flood Insurance Program (NFIP) Coordinator, the Cranston Emergency Management Agency (CEMA), and the American Red Cross (ARC) regarding topics to be discussed with public.
 - b. Draft an agenda for the phase I effort that includes topics to be discussed such as: materials concerning: evacuation routes, emergency shelters, critical facilities and maps of City risks.
 - c. Draft an agenda for the phase II effort that includes topics to be discussed such as property protection measures appropriate for the flood mitigation and the basic facts about flood insurance.
 - d. Secure venue for workshops.
 - e. Schedule the trainings along with outreach materials that are to be distributed at least 90% of the target audience.
 - f. Advertise public preparedness education workshops available to the public.
3. Project Lead – The Cranston NFIP Coordinator, the CEMA, and the ARC.
4. Funding Concerns - Federal certification funding is available. Minimal costs are anticipated to advertise the public preparedness workshops.
5. Actions Since 2010 HMP – No action has been taken on this activity but it will be one of the first outreach activities with CRS in 2015.
6. Priority: LOW
7. Time Frame for Completion – Two years after initiation.
8. Hazards- All

Chapter 6: Implementation Element

6.1 Prioritization of Mitigation Actions

Having identified appropriate mitigation actions the Cranston Hazard Mitigation Committee set about prioritizing them for implementation. To accomplish this for the 2015 plan, the CHMC ranked the actions as low, medium, or high priority. The prioritized results of this process are displayed in Table 14.

Table 15: Activity Prioritization

Mitigation Actions	
High Priority	5.3.1.A. Precasset River Flooding Improvement
	5.3.1.I. Acquisition/Mitigation Flood Damaged Properties
	5.3.1.J. Stormwater Drainage System Evaluation
	5.3.2.D. NFIP Community Rating System
	5.3.3.B. Repetitive Loss Strategy
Medium Priority	5.3.1.B. Meshanticut Brook Flooding Imp.
	5.3.1.C. WCWD Service Loop
	5.3.1.G. Coordinated Tree-Trimming
	5.3.2.A. Debris Management Plan
	5.3.2.F. Update Hazard Mitigation Plan
Low Priority	5.3.3.A. Increase ARC Shelter Capacity
	5.3.1.D. Sewage Infiltration & Inflow Analysis
	5.3.2.G. Long Term Disaster Mitigation Plan
	5.3.4.A. Municipal Hazard Training
	5.3.4.B. Small Bus. Outreach Program
5.3.4.C. Public Preparedness Program	
Completed	5.3.1.H. Sewage Pump Station Flood Proofing
	5.3.1.F. Flood Proof Peiers School
	5.3.1.H. Bridge Retrofitting and Repair
	5.3.2.B. Waterfront Storm Preparedness Plan
	5.3.2.C. Comp Plan - Hazard Mitigation
5.3.2.F. Hazard Mitigation Coordinator	

6.2 Evaluation and Revision

6.2.1. Monitoring, Evaluating and Updating the Plan

The plan is a living document that requires adjustments to maintain its relevance. The CHMC will meet annually to review the status of the mitigation actions; and provide a yearly status report to the Mayor. It is recommended that this review be conducted prior to the City's annual budget process so that any locally funded projects can be considered in the budget process. The plan will be reviewed and updated every 5 years using the same process as the initial plan adoption with public workshops and public hearings. The CHMC will utilize the August 2003 FEMA How to Guide "Bringing the Plan to Life/Implementing the Hazard Mitigation Plan" as a resource document to update this plan. This guide contains worksheets which will help the Committee evaluate and monitor the results of the mitigation actions. The CHMC will also identify potential mitigation projects that can be implemented in a post-disaster scenario taking the opportunity to improve Cranston's disaster reliance.

6.2.2. Continued Public Involvement

- Cranston will continue public involvement in the plan maintenance process by:
- a. The approved/adopted plan will be posted on the town's web site;
 - b. The annual meeting of the CHMC to review the implementation of the Plan is a public meeting and will be posted per town guidelines.
 - c. The CHMC will include the public in the preparation of the five-year Plan Update using the same public participation process as in the development of this plan.

Chapter 7: Public Input and Adoption Processes

7.1 Summary

Prior to public release of the 2015 HMP, the CHMC reviewed and updated the 2010 HMP. Said review was undertaken through a series of committee meetings. While these meetings did not rise to the level of public hearings and were not advertised, they were open to the public. Table 13 below provides a summary of the HMPC meeting dates and the activities that they conducted:

Table 16 Summary of CHMC Activities

Date	Meeting Summary
11/22/2013	Kick off meeting. CHMC set strategy for update and established future meeting dated. The CHMC re-ranked the probably hazards and discussed the process for updating the plan.
12/18/2013	The CHMC reviewed the hazards of concern and updated the list of critical infrastructure. The CHMC also began the review of mitigation actions as proposed in the 2010 plan.
1/29/2014	The CHMC reviewed and finished updating the mitigation actions.
4/03/2014	The CHMC reviews draft of 2015 HMP document for accuracy and revisions.
April 2014	Edits made to draft plan by City's consultant under the guidance of the Planning Director
5/1/2014	Draft of 2015 HMP posted for public comment , public notice and article ran in Cranston Herald
5/2/2014	Article in Providence Journal
5/6/2014	2015 HMP was presented to City Planning Commission
5/20/2014	2016 HMP was emailed to neighboring Emergency Management Directors for review.
5/23/2014	City's consultant made document changes as per public comments and final edits.
5/30/2014	Sent to RIEMA for review.
TBD	Edits made to draft plan by City's consultant under the guidance of the Planning Director
TBD	Sent to FEMA for review
TBD	Edits made to draft plan by City's consultant under the guidance of the Planning Director
TBD	Plan approved and adopted by Planning Commission

This hazard mitigation plan benefits from two distinct types of public input strategies that were utilized by the CHMC during the drafting process and prior to its adoption by the City Planning Commission.

The 2010 plan utilized many stakeholders that contributed greatly to the plan's comprehensiveness. Consequently, the 2015 plan was more of an update and required less data gathering. The 2015 CHMC included non-City employees such as representatives of the Cranston Chamber of Commerce, Greylawn Food Corporation (a major business located in Cranston), and a small business owner. The CHMC's roles focused on reviewing the content of the risk assessment matrix to ensure proper classification of problems and estimates of potential impacts; formulation of mitigation actions and sequencing of primary tasks; and identification of feasible implementation methods and schedules. Their comments were incorporated into the final 2015 HMP.

The second public input strategy used in the formulation of this plan was geared toward the general public as opposed to specific stakeholders. The general public was encouraged to become involved through a public participation process. A copy of the draft 2015 HMP was posted to the Planning Department's page on the City of Cranston's web site. The public was informed of both the web page posting and the Planning Commission workshop and were encouraged to comment on the HMP and attend the workshop. A public notice and newspaper articles in the Providence Journal and Cranston Herald (newspapers of general circulation within the City) ran the first week of May. Notice of the Planning Commission Workshop was also posted as an agenda item on the City's web site and the Rhode Island Secretary of State's website and at the Cranston Public Library and City Hall in accordance with state law. On May 6, 2014, the City Planning Commission conducted a public workshop on the HMP as part of their monthly meeting. For the next plan update, it is recommended that the workshop portion be moved to earlier on the agenda so that all meeting attendees would be present to hear the presentation.

The draft plan was emailed to the neighboring Emergency Management Directors in Warwick, West Warwick, Providence, Coventry, Johnston, and Scituate for review.

City of Cranston Hazard Mitigation Plan- February 2015

Under the guidance of the Planning Director, the City's consultant made the necessary edits to the HMP as per feedback from the CHMC, Planning Commission, and public comments. Review and comments from the Federal Emergency Management Agency and the Rhode Island Emergency Management Agency were incorporated prior to adoption.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDICES

City of Cranston Hazard Mitigation Plan - February 2015

APPENDIX A

Critical Municipal Facilities Inventory

<i>Name</i>	<i>Location</i>	<i>Zip Code</i>	<i>A. P.</i>	<i>Lot</i>
Cranston City Hall	889 Park Avenue	02910	6/2	240
Cranston Fire Department - Auburn/Cranston Emergency Management Headquarters	301 Pontiac Avenue	02910	6/2	280
Cranston Fire Department - Edgewood	131 Park Avenue	02905	2/5	1319
Cranston Fire Department - Knightsville	1384 Cranston Steel	02910	8/2	2642
Cranston Fire Department - Garden City	180 Sockanosset Cross Road	02920	14	12
Cranston Fire Department - Oaklawn	1009 Oaklawn Avenue	02920	18/4	1280
Cranston Fire Department - Constock	1155 Scituate Avenue	02921	36/3	85
Cranston Police Station*	276 Ahwood Avenue	02920	12/4	2700
Cranston Public Works Garage	828 Phenix Avenue	02920	17/1	200
Cranston Senior Services Center - ARC	1070 Cranston Street	02920	7/4	2371
Western Hills Middle School - ARC	400 Phenix Avenue	02920	17/2	1810
Park View Middle School - ARC	25 Park View Boulevard	02910	4/4	1400
Pettaconsett Sewage Treatment Facility*	Pettaconsett Avenue	02920	10/2	27
Allard Pumping Station*	85 Allard Street	02920	18/4	892
Amanda Pumping Station	5 Redfern Drive	02920	18/3	1575
Bay Street Pumping Station*	9 Bay Street	02905	2/3	2769
Burnham Street Pumping Station	77 Burnham Street	02921	7/5	1429
Cranston Commons Pumping Station	38 Starline Way	02921	35	207
Dyer Avenue Pumping Station*	399 Dyer Avenue	02920	8/4	2891
East Street Pumping Station	328 East Street	02920	15/3	1803
Glosson Street Pumping Station	11 Glosson Street	02910	6/4	2124
Hollow Tree Pumping Station*	1771 Pontiac Avenue	02920	15/3	1577
Howard Pumping Station*	103 Kenney Drive	02920	10/4	1488
Mayflower Pumping Station	140 Mayflower Drive	02905	4/5	2805
Plainfield Circle Pumping Station	1680 Plainfield Circle	02920	37/2	In Right of Way (Underground)
Pontiac Avenue Pumping Station	900 Pontiac Avenue	02920	5/4	1
Randall Street Pumping Station (Libera, Fletcher and Cross Country)*	178 Randall Street	02920	12/4	2825
Seaview Avenue Pumping Station*	85 Seaview Avenue	02905	1	408
Sheldon Street Pumping Station*	115 Sheldon Street	02905	1	82
Sherman Avenue Pumping Station*	90 Sherman Avenue	02920	17/3	1822
Worthington Street Pumping Station	246 Station Street	02910	6/3	2502
Westvt-205 Pumping Station	1970 Plainfield Pike	02921	38/2	55
Woodbury Road Pumping Station*	110 Woodbury Road	02905	1	487
Worthington Road Pumping Station*	54 Worthington Road	02920	10/4	787
Youlden Street Pumping Station*	7 Youlden Avenue	02910	4/3	822
Alpine Estates Water Booster Station	8 Basil Crossing	02921	35	131
Aqueduct/Scituate Water Booster Station Western Cranston Water Facility	430 Scituate Avenue	02921	20/2	2122
Cranston Commons Water Booster Station	34 Starline Way	02921	35	208
Dean Estates Water Booster Station	50 Melody Lane	02920	16/4	1088
Garden Hills Water Booster Station	80 Rockcrest Street	02920	10/3	781

Sources: Jack McGivray, Cranston Public Works Aide, 05/06/2003. Robert Warren, Chief of the Cranston Fire Department, 05/14/2003.
 Note: * Within flood plain.

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX B

School Inventory

School Name	Address	Zip Code	A. P.	Lot	Grados	Floors	ADA Compliant	Generators
Arlington Elementary	155 Princess Avenue	02920	7/4	3248	K - 5	1	No	No
Chester Barrows Elementary	9 Beaumont Avenue	02908	3/1	1283	K - 5	2	No	No
William R. Duteuple Elementary	32 Garden Street	02920	6/1	142	K - 5	2	No	No
Edon Park Elementary	160 Oakland Avenue	02910	9/3	2847	K - 5	1	No	No
Edgewood Highlands Elementary	180 Pawtuxet Avenue	02905	2/3	3487	K - 5	2	Yes	Yes
Garden City Elementary	70 Plantation Drive	02910	10/1	709	K - 5	1	Yes	No
Gladstone Elementary	50 Gladstone Street	02920	7/4	2357	K - 5	3	No	No
Glen Hills Elementary	60 Glen Hills Drive	02920	18/4	138	K - 5	1	Yes	No
Hope Highlands Elementary	300 Hope Road	02921	24	8	K - 5	2	Yes	No
Horton Elementary	1188 Park Avenue	02910	0/4	1710	K - 5	2	No	No
Norwood Avenue Elementary	205 Norwood Avenue	02905	2/3	834	K - 5	2	No	No
Oak Lawn Elementary*	28 Stoneham Street	02920	18/4	692	K - 5	2	No	No
Orchard Farms Elementary	1555 Scituate Avenue	02921	34	8 & 9	K - 5	1	Yes	Yes
George J. Peters Elementary*	15 Mayberry Street	02920	12/4	3244	K - 5	1	No	No
Edward S. Rhodes Elementary	160 Shaw Avenue	02905	2/2	1674	K - 5	2	No	No
Stadium Elementary	100 Crescent Avenue	02910	7/5	1900	K - 5	1	Yes	No
Stone Hill Elementary	21 Village Avenue	02920	37/2	268	K - 5	1	No	No
Daniel D. Waterman Elementary	722 Pontiac Avenue	02910	6/2	2109	K - 5	2	No	No
Woodridge Elementary	401 Budlong Road	02920	11/6	3151	K - 5	1	Yes	No
Hugh B. Bain Middle School	135 Gansett Avenue	02910	7/5	1180	6 - 8	2	No	No
Park View Middle School	25 Park View Boulevard	02910	4/4	1400	6 - 8	2	No	No
Western Hills Middle School	400 Phoenix Avenue	02920	17/2	1810	6 - 8	2	Yes	Yes
Cranston East High	899 Park Avenue	02910	6/2	650	9 - 12	3	No	No
Cranston West High	80 Metropolitan Avenue	02920	17/2	199	9 - 12	2	Yes	Yes (Just Gym)
Cranston West Vocational Facility*	80 Metropolitan Avenue	02920	17/2	1956	9 - 12	2	Yes	Yes
Cranston Charter School	4 Sharpe Drive	02920	13	61	9 - 12	1	Yes	Yes

Source: Joel Zisserson, Cranston School Department Director of Transportation, 07/02/2003 and 07/08/2003.

Note: * Within flood plain.

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Millgallon Plan- February 2015

APPENDIX C

Bridge and Culvert Inventory

RIDOT Bridge #	Bridge or Culvert	Structure Carried	Utilities	Feature Intersected	A. P.	Ownership	Maintaince
101*	Bridge	Elmwood Avenue	X	Pawtuxet River	4/2	State	State
2301*	Bridge	Reservoir Avenue		Pocasset River	9/2	State	State
2401*	Bridge	Providence Street		Mashanicut Brook	18/3	State	State
2501	Bridge	Providence Street		State Bike Path	18/3	State	State
8101*	Bridge	Plainfield Pike	X	Pocasset River	12/2	State	State
8201*	Bridge	Plainfield Pike	X	Locust Brook	36/1	State	State
16001*	Bridge	Warwick Avenue	X	Pawtuxet River	4/5	State	State
19201	Footbridge	Furnace Hill Road	X	Furnace Hill Brook	19/1	City	City
19001*	Bridge	Broad Street	X	Pawtuxet River	1	State	State
20101*	Bridge	Pontiac Avenue	X	Pocasset River	10/2	State	State
28801	Bridge	Oaklawn Avenue		State Bike Path	11/3	State	State
32801	Bridge	Gansett Avenue		State Bike Path	11/2	City	City
32901	Bridge	Scituate Avenue		Brook	12/6	State	State
33001*	Bridge	Scituate Avenue		Mashanicut Brook	34	State	State
33101	Bridge	Pleppin Orchard Road	X	Brook	34	State	State
33201*	Bridge	Pleppin Orchard Road	X	Furnace Hill Brook	34	State	State
33301*	Bridge	Pleppin Orchard Road	X	Mashanicut Brook	28	State	State
34701	Bridge	Dean Parkway	X	State Bike Path	17/4	City	City
34901*	Bridge	Phenix Avenue	X	Furnace Hill Brook	17/1	State	City
35701	Bridge	Pontiac Avenue		Branch R.R.	13	State	State
41301	Bridge	Phenix Avenue		Furnace Hill Brook	21/2	City	City
42001	Bridge	State Bike Path		Wilbur Avenue	18/4	State	State
42002	Bridge	State Bike Path		Wilbur Avenue	18/4	State	State
42101	Bridge	Reservoir Avenue		Mashanicut Interchange Lane B	15/1	State	State
42102	Bridge	Reservoir Avenue		Mashanicut Interchange Lane B	15/1	State	State
42201	Bridge	Mashanicut Interchange		Oaklawn Avenue	18/3	State	State
42202	Bridge	Mashanicut Interchange		Oaklawn Avenue	18/3	State	State
42301	Bridge	Mashanicut Viaduct		Oaklawn Avenue & Lane C	15/1	State	State
42302	Bridge	Mashanicut Viaduct		Oaklawn Avenue & Lane C	15/1	State	State
42401*	Bridge	New London Avenue - Lane H		Mashanicut Interchange - Lane A	18/3	State	State
43401*	Bridge	Natick Avenue		Furnace Hill Brook	19/1	State	State
45301	Bridge	Route 10 Viaduct		Cranston Street, SR -3 & AMTRAK	7/1	State	State
46302	Bridge	Route 10 Viaduct		Cranston Street, SR -3 & AMTRAK	7/1	State	State
48001*	Bridge	Park Avenue	X	Pocasset River	11/1	State	State
48401*	Bridge	Dyer Avenue Extension	X	Pocasset River	11/1	State	State
54101	Skeleton Vellay Bridge	Scituate Avenue		Pedestrian Underpass	12/8	State	State
61801	Bridge	Interstate - 95		Glen Hills Drive	16/4	State	State
81802	Bridge	Interstate - 95		Glen Hills Drive	16/4	State	State
61701	Culvert	Interstate - 95		Three Ponds Brook	13	State	State
82001	Bridge	Cranston Park Ramp E - N		Interstate - 205 S	19/1	State	State
82002	Bridge	Cranston Park Ramp E - N		Interstate - 205 S	19/1	State	State
82101	Bridge	Route 37		Cranston Street	17/3	State	State
82201	Bridge	Route 37		State Bike Path	17/3	State	State
82301	Bridge	Route 37		Oaklawn Avenue	16/1	State	State
82302	Bridge	Route 37		Oaklawn Avenue	16/1	State	State
82401	Bridge	Route 37		New London Avenue	14	State	State
82402	Bridge	Route 37		New London Avenue	14	State	State
82501	Bridge	Route 37		Howard Service Road	14	State	State
82601	Bridge	Route 37		Branch R.R.	10/4	State	State
82701	Bridge	Route 37		Pontiac Avenue	10/4	State	State
82801*	Bridge	Route 37 E		Pawtuxet River (South)	10/4	State	State
82901*	Bridge	Route 37 W		Pawtuxet River (North)	10/4	State	State
86101	Bridge	Interstate - 95		Wellington Avenue	3/3	State	State
86201	Bridge	Interstate - 95 & Ramp CB		Wellington Avenue	3/3	State	State
88301	Bridge	Wellington Avenue and AMTRAK		Interstate - 95	3/3	State	State
86401	Bridge	Route - 10 North Ramp BC		Interstate - 95	3/3	State	State
86402	Bridge	Route - 10 North Ramp BC		Interstate - 95	3/3	State	State

Source: David DeNuccio, Cranston Engineering Dept., 06/27/2003.

Note: * Within flood plain.

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX C (CONTINUED)

Bridge and Culvert Inventory

RIDOT Bridge #	Bridge or Culvert	Structure Carried	Utilities	Feature Intersected	A. P.	Ownership	Maintainee
66501	Bridge	Route - 10 Viaduct		Interstate - 95 & AMTRAK	3/3	State	State
66502	Bridge	Route - 10 Viaduct		Interstate - 95 & AMTRAK	3/3	State	State
66801	Bridge	Route - 10 South Ramp DB		Interstate - 95	3/3	State	State
66802	Bridge	Route - 10 South Ramp DB		Interstate - 95	3/3	State	State
66801	Bridge	Pontiac Avenue		Route - 10	6/1	State	State
66802	Bridge	Pontiac Avenue		Route - 10	6/1	State	State
67501	Bridge	Park Avenue East		Route - 10	3/2	State	State
67502	Bridge	Park Avenue East		Route - 10	3/2	State	State
67601	Bridge	Park Avenue		Interstate - 95	3/2	State	State
67602	Bridge	Park Avenue		Interstate - 95	3/2	State	State
67701	Bridge	Laurons Street		Interstate - 95	3/2	State	State
67702	Bridge	Laurons Street		Interstate - 95	3/2	State	State
67801	Bridge	Milford Street		Interstate - 95	5/2	State	State
67802	Bridge	Milford Street		Interstate - 95	5/2	State	State
67901	Bridge	Branch R.R.		Interstate - 95	5/2	State	State
67902	Bridge	Branch R.R.		Interstate - 95	5/3	State	State
68001*	Bridge	Interstate - 95		Pawtuxet River	5/3	State	State
72601	Bridge	Providence Street		Interstate - 295	18/3	State	State
72602	Bridge	Providence Street		Interstate - 295	18/3	State	State
72701*	Bridge	Interstate - 295 N		Wilbur Avenue (Northbound)	18/4	State	State
72721*	Bridge	Interstate - 295 S		Wilbur Avenue (Southbound)	18/2	State	State
72801*	Bridge	Cranston Park East - Route 37		Interstate - 295 N	19/2	State	State
72802*	Bridge	Cranston Park East - Route 37		Interstate - 295 N	19/2	State	State
72821*	Bridge	Cranston Park West - Route 37		Interstate - 295 S	19/2	State	State
72822*	Bridge	Cranston Park West - Route 37		Interstate - 295 S	19/2	State	State
72901	Bridge	Phenix Avenue (Eastbound)		Interstate - 295 N	17/1	State	State
72902	Bridge	Phenix Avenue (Eastbound)		Interstate - 295 N	17/1	State	State
72921	Bridge	Phenix Avenue (Westbound)		Interstate - 295 S	17/1	State	State
72922	Bridge	Phenix Avenue (Westbound)		Interstate - 295 S	17/1	State	State
73001	Bridge	Interstate - 295 N		Water Aquaduct (Northbound)	26/1	State	State
73021	Bridge	Interstate - 295 S		Water Aquaduct (Southbound)	26/1	State	State
73101	Bridge	Interstate - 295		Scituate Avenue	37/3	State	State
73102	Bridge	Interstate - 295		Scituate Avenue	37/3	State	State
73201	Bridge	Interstate - 295 N		Plainfield Pike (Northbound)	36/2	State	State
73202	Bridge	Interstate - 295 N		Plainfield Pike (Northbound)	36/2	State	State
73221	Bridge	Interstate - 295 S		Plainfield Pike (Southbound)	36/2	State	State
73222	Bridge	Interstate - 295 S		Plainfield Pike (Southbound)	36/2	State	State
75801*	Bridge	Garden City Drive		Pocasset River	8/1	State	State
81201	Culvert # 2	Interstate - 295		Moshanic Brook (Northbound)	18/1	State	State
81221*	Culvert # 2	Interstate - 295 S		Moshanic Brook (Southbound)	18/1	State	State
81301	Culvert # 3	Interstate - 295		Moshanic Brook	18/3	State	State
81321	Culvert # 3	Interstate - 295 S		Moshanic Brook (Southbound)	18/1	State	State
81401*	Culvert # 4	Interstate - 295 N		Moshanic Brook (Northbound)	18/4	State	State
81421*	Culvert # 4	Interstate - 295 S		Moshanic Brook (Southbound)	18/2	State	State
81501*	Culvert # 5	Interstate - 295 & Route 37 Ramp		Moshanic Brook	17/1	State	State
81601*	Culvert # 6	Route 37 Ramp & Interstate 295 S		Moshanic Brook	19/1	State	State
81701*	Culvert # 7	Interstate - 295 Ramps W & SW		Moshanic Brook	19/1	State	State
81801*	Furnace Hill Brook Culvert	Interstate - 295 S & Ramp W - S		Furnace Hill Brook	17/1	State	State
81901*	Culvert	Wilbur Avenue		Moshanic Brook	18/2	State	State
83101	Bridge	Route 37 Ramp		Cranston Street Ramp	17/3	State	State
84201	Bridge	Hill Street (Coventry)		Pawtuxet River	30/1	State	City
92201	Bridge	Park Avenue		AMTRAK	3/2	State	State
92401	Bridge	AMTRAK		Cranston Street (Providence)	7/1	State	State
93801	Bridge	Providence-Worcester R.R. (track removed)		Cranston Street	7/2	NY, NH & H R.R.	City
98501*	Bridge	Cranston Street		Pocasset River	8/2	State	City
98601*	Bridge	Seven Mile Road		Clark Brook	30/1	State	City
106101*	Bridge	Park Avenue		Elm Lake Brook	4/4	State	State

Source: David DeNuccio, Cranston Engineering Dept., 06/27/2003.
 Note: * Within flood plain.

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX C (CONTINUED)*Bridge and Culvert Inventory*

<i>Lot</i>	<i>Bridge or Culvert</i>	<i>Structure Carried</i>	<i>Utilities</i>	<i>Feature Intersected</i>	<i>A. P.</i>	<i>Ownership</i>	<i>Maintained</i>
844*	Bridge	Dyer Avenue		Pocasset River	844	Pocasset Cemetary	Private
2085	Bridge	Burnham Avenue		Bike Path	744	City	City
2630*	Bridge	Mill Street		Pawtuxet River	4/5	Ciba - Gally	Private
1102*	Footbridge	Mill Street		Pawtuxet River	4/5	Ciba - Gally	Private
41	Bridge	Beechwood Drive		Stream	29	Resident	Private
47	Bridge	Beechwood Drive		Stream	29	Resident	Private
2560*	Bridge	Wellington Avenue (Railroad)		Pawtuxet River	5/3	NY, NH & H R.R.	Private
24*	Bridge	Phenix Avenue		Furnace Hill Brook	2573	City	City
1525*	Bridge	Amenda Court		Bike Path	1873	City	City
679	Bridge	Natick Avenue		Stream	1871	City	City

Source: David DeNuccio, Cranston Engineering Dept., 06/27/2003.

Note: * Within flood plain.

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Mitigation Plan - February 2015

APPENDIX D

Historic Properties Inventory

<i>Historic Districts</i>	<i>Location</i>	<i>A.P.</i>	<i>Lot</i>
Pawtuxet Village Historic District	Bounded easterly on Narragansett Bay; southerly on the Pawtuxet Cove, Bayside Avenue, and South Fair Street; westerly on South Atlantic Avenue; and northerly on the Pawtuxet River and Ocean Avenue (Cranston and Warwick)	1	
Oak Lawn Village National and Local Historic District	Wilbur Avenue, from Natick Road to Oaklawn Avenue	8/4 and 18/2	
Furnace Hill Brook Historical and Archeological District	Phenix Avenue and Hope Road	21/2/ and 21/3	
Edgewood Historic District: Arnold Farm Plat	Arnold Ave., Albert Ave., Columbia Ave., bounded by Broad Street to the west and Narragansett Bay to the east.		
Edgewood Historic District: Shaw Plat	Shaw Ave., Marrion Avenue. Bound by Broad Street to the west and Narragansett Bay to the east.		
Edgewood Historic District: Taft Estate Plat	Windsor Avenue, Stratford Rd., Circuit Drive. Bound by Broad Street to the west and Narragansett Boulevard to the east		
Lippitt Hill Historic District	Burlingame and Hope Roads, and Lippitt Avenue	23, 30/3 and 30/4	
Norwood Avenue Historic District	Norwood Avenue. Bound by Roger Williams Park to the west, Broad Street to the east.	2/5	
<i>National Register Properties</i>	<i>Location</i>	<i>A.P.</i>	<i>Lot</i>
Rhodes on the Pawtuxet*	60 Rhodes Place	1	299
Nathan Westcott House	56 Scituate Avenue	12	3096
Sheldon House	458 Scituate Avenue	20	2120
Thomas Fenner House	53 Stony Acre Drive	37	795
Governor Sprague Mansion	1351 Cranston Street	8/2	201
The Joy Homestead	179 Whiting Street	12	2877
Knightsville Meeting House	67 Phenix Avenue	12	125
Potter Remington House	571 Natick Avenue	22	69
Rosedale Apartments	1180 Narragansett Boulevard	2	1912
Arad Wood House	407 Pontiac Avenue	9/5	138

Source: Lynn Fumey, Cranston Senior Planner 7/2010 and National Register of Historic Places

Note: * Within 100 year flood plain

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX E

Child Daycare Facilities Inventory

Name	Address	Zip Code	A.P.	Lot
A Safer Start, Child University	117 Woodbine Street	02910	6	47
All About Kids	490 Atwood Avenue	02920	12	2132
Alpine Preschool	400 Pipplin Orchard Road	02921	33	58
Budlong Pre School	10 Budlong Road	02920	11	1862
Candy Cane Preschool	54 Olney Arnold Road	02921	21	58
Candy Cane Two	359 Olney Arnold Road	02920	26	9
Carriage House Day Care	156 Shaw Avenue	02905	2	888
CCAP	160 Pawluxet Avenue	02905	2	2487
CCAP Child Development Ctr.	155 Gansett Avenue	02920	11	2984
CCAP May Westcott School	848 Atwood Avenue	02920	12	720
Cornerstone School	665 Dyer Avenue	02920	8	2780
Creative Ctr.	717 Atwood Avenue	02920	12	454
Doric Day Nursery	145 Pontiac Avenue	02910	6	3255
Faith Nursery School	499 Hope Road	02921	28	65
First Year Learning Center	1400 Elmwood Avenue	02910	4	2817
Henderson Learning Center	74 Alton Street	02910	4	2827
Jendza Creative Center Preschool	1326 Plainfield Street	02920	12	419
Kids Kingdom	116 Puritan Avenue	02920	8	671
Learning Brooke ECE Center	1170 Pontiac Avenue	02920	10	706
Miss Lee Ann's	180 Oaklawn Avenue	02920	11	3419
Noah's Ark (Community World Chapel Outreach)	1308 Phenix Avenue	02921	21	290
Pumpkin Patch Academy	210 Comstock Parkway	02921	36	14
Pumpkin Patch Early Learning Center	220 Comstock Parkway	02921	36	14
St. Paul School	1789 Broad Street	02905	2	1339
Starbirth Day Care	80 East Street	02920	15	20
St. Mary's After School Care	85 Chester Avenue	02920	8	949
Sunshine Preschool	690 Dyer Avenue	02920	8	2725
The Gingerbread House Pre-School	1458 Park Avenue	02920	11	2871
Western Cranston Learning Ctr.	140 Natick Avenue	02921	19	67
Wonderland Early Learning Ctr.	548 Budlong Road	02920	11	3027
YMCA Schools Out	1224 Park Avenue	02910	11	3553
YMCA Community Youth Center	155 Gansett Avenue	02920	11	2984
YMCA -Eden Park School	180 Oaklawn Avenue	09310	11	3419
YMCA (George J. Peters Elementary School)*	15 Mayberry Street	02920	12	3244
YMCA (Edward S. Rhodes Elementary School)	160 Shaw Avenue	02905	12	1874

Source: Cranston Department of Inspection August, 2010

This was reviewed by the 2015 CHMC and no changes were noted.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX F

DAM INVENTORY

Cranston_Dams_12_2013

STATE ID	DAM NAME	CITY/TOWN	HAZARD	CURRENT INSP DATE	CURRENT COND(E,S,G)	NEXT INSP	COND COMMENT
573	CLARKE'S POND UPPER	CRANSTON	HIGH	10/14/2009	P,P,P		
172	CRANSTON PRINT WORKS POND	CRANSTON	HIGH	10/15/2009	FP,F,P	2013	
198	CURRAN LOWER RESERVOIR	CRANSTON	HIGH	6/7/2010	P,P,P		UNSAFE
166	CURRAN UPPER RESERVOIR	CRANSTON	HIGH	3/9/2010	P,P,P		UNSAFE
940	MESHANTICUT PARK POND	CRANSTON	SIGNIFICANT	5/29/2012	F,G,NA		
920	STONE POND	CRANSTON	HIGH	10/15/2009	FP,GP,NA	2013	

Source: RI Department of Environmental Management

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX G

Technical and Financial Assistance for Mitigation State Resources

Coastal Resources Center
University of Rhode Island
Narragansett Bay Campus
Narragansett, RI 02882
(401) 874-6224

Coastal Resources Management Council
Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
(401) 222-2476

Department of Administration/Division of Planning
One Capitol Hill
Providence, RI 02908
(401) 222-6478

Department of Environmental Management
Division of Parks and Recreation
2321 Hartford Avenue
Johnston, RI 02919
(401) 222-2635

Rhode Island Banking Commission/Associate Director
233 Richmond Street
Providence, RI 02903
(401) 222-2405

Rhode Island Builders Association
Terry Lane
Glocester, RI 02814
(401) 568-8006

Rhode Island Department of Business Regulations
233 Richmond Street
Providence, RI 02903
(401) 222-2246

Rhode Island Emergency Management Agency
645 New London Avenue
Cranston, RI 02920
(401) 946-9996

Public Utilities Commission
100 Orange Street
Providence, RI 02903
(401) 222-3500 Ext. 153

State Fire Marshal's Office
272 West Exchange Street
Providence, RI 02903
(401) 222-2335

State of Rhode Island Building Committee Office
Building Commissioner's Office
One Capitol Hill
Providence, RI 02903
(401) 222-3529

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX G (CONTINUED)

**Technical and Financial Assistance for Mitigation
Federal Resources**

Economic Development Administration
143 North Main Street, Suite 209
Concord, NH 03301
(603) 225-1624

**Federal Emergency Management Agency
Mitigation Division**
Region I Office
J.W. McCormack POCH, Room 462
Boston, MA 02109
(617) 223-9561

Small Business Administration
360 Rainbow Boulevard South, 3rd Floor
Niagara Falls, NY 14303
(716) 282-4612 or (800) 659-2955

**U.S. Department of Agriculture
Natural Resources Conservation Service**
451 West Street
Amherst, MA 01002
(413) 253-4362

**U.S. Department of Commerce
National Weather Service Forecast Office**
445 Myles Standish Boulevard
Taunton, MA 02780
(508) 823-2262

**U.S. Department of Housing and Urban
Development
Community Development Block Grants**
Region I – O'Neill Federal Building
10 Causeway Street
Boston, MA 02222
(617) 565-5354

**U.S. Department of the Interior
National Park Service**
Rivers and Trails Conservation Program
Regional Office
15 State Street
Boston, MA 02109
(617) 223-5203

U.S. Environmental Protection Agency
Region I – JFK Federal Building
Government Center
Boston, MA 02203
(617) 565-3400

U.S. Fish and Wildlife Service
New England Field Office
22 Bridge Street, Unit #1
Concord, NH 03301-4986

APPENDIX G (CONTINUED)**Technical and Financial Assistance for Mitigation
Other Resources****The Association of State Flood Plain Managers (ASFPM)**

Professional association with a membership of almost 1,000 state employees that assists communities with the NFIP. ASFPM has developed a series of technical and topical research papers and a series of proceedings from their annual conferences. Many mitigation "success stories" have been documented through these resources and provide a good starting point for planning.

Flood Plain Management Resources Center

Free library and referral service of the ASFPM for flood plain management publications. Co-located with the Natural Hazards Center at the University of Colorado in Boulder, staff can use keywords to identify useful publications from the more than 900 flood-related documents in the library.

Institute for Business and Home Safety (IBHS) (formerly Insurance Institute for Property Loss Reduction)

An insurance industry – sponsored, nonprofit organization dedicated to reducing losses – deaths, injuries, and property damage – resulting from natural hazards. IBHS efforts are directed at five specific hazards: flood, windstorm, hail, earthquake, and wildfire. Through its public education efforts and information center, IBHS communicates the results of its research and statistical gathering, as well as mitigation information, to a broad audience.

Volunteer Organizations

Organizations, such as the American Red Cross, the Salvation Army, Habitat for Humanity, Interfaith, and the Mennonite Disaster Service, are often available to help after disasters. Service organizations, such as the Lions, Elks, and VFW are also available. These organizations have helped others with food, shelter, clothing, money, etc. Habitat for Humanity and the Mennonite Disaster Service provide skilled labor to help rebuild damaged buildings incorporating mitigation or floodproofing concepts. The offices of individual organizations can be contacted directly, or the FEMA Regional Office may be able to assist.

Flood Relief Funds

After a disaster, local businesses, residents, and out-of-town groups often donate money to local relief funds. They may be managed by the local government, one or more local churches, or an ad hoc committee. No government disaster declaration is needed. Local officials should recommend that the funds be held until an applicant exhausts all sources of public disaster assistance. Doing so allows the funds to be used for mitigation and other projects that cannot be funded elsewhere.

New England States Emergency Consortium (NESEC)

NESEC conducts public awareness and education programs on natural disaster and emergency management activities throughout New England. Brochures and videotapes are available on such topics as earthquake preparedness, mitigation, and hurricane safety tips. NESEC maintains a WWW home page that is accessible at <http://www.serve.com/NESEC>.

The New England Flood Plain and Stormwater Managers Association (NEFSMA)

Professional organization for New England flood plain and stormwater managers. Provides workshops, conferences, and a newsletter to membership and interested individuals and companies. Contact: Nicholas Winter, chairman, at (617) 727-0488 or the NEFSMA home page on the Web at <http://www.seacoast.com/~nefsma>.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX H

Existing Protection Systems Federal and State

Coastal Barrier Resource Act

Administered by the U.S. Fish and Wildlife Service, this program has mapped public and private land identified as undeveloped coastal barrier areas. These areas may be denoted as "Otherwise Protected Areas" if they are owned by public entities. In the coastal barrier areas shown on FEMA's flood insurance rate maps, structures newly built or substantially improved after the date shown on the maps are ineligible for federal insurance. This serves to restrict new development in these areas because the purchase of flood insurance is required to obtain backed mortgages and improvement loans for structures located in special flood hazard areas.

Community Rating System (CRS)

A voluntary initiative of the NFIP, the CRS was developed to encourage communities to perform activities that exceed the minimum NFIP flood plain management standards. If a community participating in the CRS performs activities that include maintaining records for flood plain development, publicizing the flood hazard, improving flood data, and conducting flood plain management planning, then the flood insurance premiums paid by policy holders in the community will be reduced by 5 to 45 percent. Developing a flood mitigation plan will help communities gain additional credit under the CRS.

Earthquakes and Hurricanes

A certain amount of funding is allotted to each state per year based on a risk formula for earthquakes. Coastal states are allocated funds based on a risk formula for hurricanes. Each state receiving such funds has the ability to grant project funds to a community. There is not a match requirement on the part of the community, but the funds are limited, and are generally only available once a year. The projects or products proposed for such funding must demonstrate that earthquake or hurricane risk will be reduced or eliminated, and that the proposed project or product is a cost-effective measure (a stringent cost/benefit analysis need not be performed). Information about the amount of funding available per year and the state requirements for eligibility and performance may be obtained from RIEMA at (401) 946-9996.

Economic/Community Development

There may be programs existing to help floodproof homes using Community Development Block Grant funds. There may be housing assistance programs in the community that can be used following a major flood, achieving both objectives of reducing flood damage and improving the communities housing stock (see Appendix F, Federal Resources, for more information).

Evacuation Plans and Systems

Your community's emergency operations center should have evacuation plans in place. For communities near a nuclear power plant, evacuation plans are required, and may be also used for flood evacuation. RIEMA may have additional evacuation plan information.

Land Use Restrictions

There are several federal and state regulations that serve to restrict land use in certain areas that may help reduce flood hazard vulnerability. If your community has open land owned by the state or federal government, examine what restrictions are placed on its development. In addition, the state Wetlands Protection Act regulates the development of all lands identified as significant to the protection of resources identified in the act.

City of Cranston Hazard Mitigation Plan - February 2015

APPENDIX H (CONTINUED)

Existing Protection Systems Federal and State

Septic Systems

If there are areas in the community not served by a public sewer system, state septic system regulations influence development and may be a consideration for mitigation alternatives that include rebuilding and elevation of structures. Specific design requirements must be met for any construction in coastal velocity zones or river floodways. Generally, an inspection of a septic system is required if there is a change in use of the structure, an increase in flow, or a failed system. Limited inspections are required if the footprint of the structure is being changed. Upgrades are required by the state if an inspection reveals a failed system. However, local regulations may be more restrictive than state requirements, requiring inspections or upgrades in other cases.

State Barrier Beaches

Your community may have barrier beaches, as defined by the state's Coastal Resource Management Program. The regulations applying to these areas are enforced by CRMC. These regulations restrict alteration of the beach and/or dunes and the construction of coastal engineering structures. New or substantially reconstructed buildings generally must be elevated to a minimum of 1 foot above base flood elevation. No new commercial development is allowed on barrier beaches. If a structure is damaged more than 50 percent, it cannot be rebuilt.

Warning Systems and Emergency Operations Plans

Your community may have a flood warning system in place and should have a plan for response to flooding. In addition, RIEMA has offices throughout the state that maintain area-wide plans for flood events.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX I

Financing Options

Federal Emergency Management Agency

National Flood Insurance Program (NFIP)

All of Rhode Island's 39 municipalities participate in the NFIP. This program is a direct agreement between the federal government and the local community that flood insurance will be made available to residents in exchange for community compliance with minimum flood plain management regulations. Communities participating in the NFIP must:

- Adopt the flood insurance rate maps as an overlay regulatory district.
- Require that all new construction or substantial improvement to existing structures in the flood hazard area be elevated or (if nonresidential) floodproofed to the identified flood level on the maps.
- Require design techniques to minimize flood damage for structures being built in high hazard areas, such as floodways or velocity zones.

In return for community adoption of these standards, any structure in that community is eligible for protection by flood insurance, which covers property owners from losses due to inundation from surface water of any source. Coverage for land subsidence, sewer backup, and water seepage is also available subject to the conditions outlined in the NFIP standard policy (see Appendix F, Federal Resources, for contacts regarding insurance coverage and purchase). Since homeowners insurance does not cover flooding, a community's participation in the NFIP is vital to protecting property in the flood plain as well as being essential to ensure that federally backed mortgages and loans can be used to finance floodprone property.

Hazard Mitigation Grant Program (HMGP)

Also known as the 404 Program or HMGP, this program is available only after a federally declared disaster occurs. It represents an additional 15 percent of all the infrastructure and individual assistance funds that are provided to states to repair damages and recover from losses, and is administered by the state in partnership with FEMA. Having a plan or completed mitigation action matrix prior to a disaster event is extremely helpful in meeting the state's deadlines for applications and ensuring the project is eligible and technically feasible. It provides 75/25 matching grants on a competitive basis to state, local, and tribal governments, as well as to certain nonprofit organizations that can be matched by either cash or in-kind services. The grants are specifically directed toward reducing future hazard losses, and can be used for projects protecting property and resources against the damaging effects of floods, earthquakes, wind, and other hazards. Specific activities encouraged under the HMGP include acquiring damaged structures to turn the land over to the community for open space or recreational use, relocating damaged or damage-prone structures out of the hazard area, and retrofitting properties to resist the damaging effects of disasters. Retrofitting can include wet- or dry-floodproofing, elevation of the structure above flood level, elevation of utilities, or proper anchoring of the structure.

For further information contact the state of Rhode Island hazard mitigation officer at (401) 946-9996 or FEMA Region I at (617) 223-9540.

Flood Mitigation Assistance Program (FMA)

Two programs that have been authorized under the National Flood Insurance Reform Act of 1994 include the Flood Mitigation Assistance (FMA) program and a provision for increased cost of compliance (ICC) coverage. FMA makes grants available on a pre-disaster basis for flood mitigation planning and activities, including acquisition, relocation, and retrofitting of structures. FMA grants for mitigation projects will be available only to those communities with approved hazard mitigation plans.

APPENDIX I (CONTINUED)**Financing Options**

ICC coverage has recently been implemented for all new NFIP policies and renewals and is intended to be "mitigation insurance" to allow homeowners whose structures have been repeatedly or substantially damaged to cover the cost of elevation and design requirements for rebuilding with their flood insurance claim up to a maximum of \$15,000.00. A certain amount of funding is allotted to each state per year based on a risk formula for floods. Each state has the discretion to award funds to communities or to state government agencies. States may use whatever criteria or method they choose to award the funds as long as the applicant and the proposal are eligible. The program may fund up to 75 percent of the cost of the proposed project, with a minimum of 25 percent of the cost coming from the community. A minimum of half the community share must be cash or "hard match."

Funds can also be granted to communities to help them prepare local flood mitigation plans. The same match requirements apply. Once a community receives a planning grant, however, it is not eligible to receive additional planning grants for another five years. For further information on the FMA program or ICC coverage contact RIEMA at (401) 946-9996.

Natural Resources Conservation Service (NRCS)**Small Watershed Program and Flood Prevention Program**

The Watershed and Flood Prevention Act, P.L. 83-566, August 4, 1954, (16 USC 1001 – 1008) authorized this program. Prior to fiscal year 1996, small watershed planning activities and the cooperative river basin surveys and investigations authorized by Section 6 of the Act were operated as separate programs. The 1996 appropriations act combined the activities into a single program entitled Watershed Surveys and Planning Program.

The purpose of the Watershed Program, including River Basin operations, is to assist Federal, State, local agencies, local government sponsors, tribal governments, and program participants to protect and restore watersheds from damage caused by erosion, floodwater, and sediment, to conserve and develop water and land resources, and solve natural resource and related economic problems on a watershed basis. The program provides technical and financial assistance to local people or project sponsors, builds partnerships, and requires local and state funding contribution.

Resource concerns addressed by the program include watershed protection, flood prevention, erosion and sediment control, water supply, water quality, opportunities for water conservation, wetland and water storage capacity, agricultural drought problems, rural development, municipal and industrial water needs, upstream flood damages, water needs for fish, wildlife, and forest-based industries, fish and wildlife habitat enhancement, wetland creation and restoration, and public recreation in watersheds of 250,000 or fewer acres. Both technical and financial assistance are available.

Wildlife Habitat Incentives Program

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program for people who want to develop and improve habitat primarily on private land. Through WHIP USDA's Natural Resources Conservation Service (NRCS) provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. WHIP agreements between NRCS and the participant generally last from 5 to 10 years from the date the agreement is signed.

National Weather Service (NWS)

The Taunton, Massachusetts NWS office has developed a partnership with RIEMA. NWS donates staff time and tide gauges to help gain more lead time for evacuation.

For further information contact NWS at (508) 823-2262. <http://www.nws.noaa.gov/>.

APPENDIX I (CONTINUED)**Financing Options*****American Red Cross (ARC)***

The ARC chapter of Rhode Island has supplied public education materials and volunteered to conduct training programs and hold seminars for the Rhode Island Hazard Mitigation Project.

For further information contact the Rhode Island Chapter of the American Red Cross at (401) 831-7700. <http://www.redcross.org>.

U.S. Army Corps of Engineers

Beneficial Uses of Dredged Material – Section 204, Water Resources Development Act of 1992, as amended, authorizes projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging an authorized federal navigation project. Non-federal sponsors are responsible for 25 percent of the project cost and 100 percent of the cost of operation, maintenance, replacement and rehabilitation. There is an annual appropriations limit of \$15 million. For projects with an estimated federal cost of less than \$5 million, divisions have approval authority.

1948 Flood Control Act, as amended - Section 205 (Small Flood Damage Reduction Projects) aids in the development and construction of small flood damage reduction projects for eligible non-federal sponsors. The 1960 Flood Control Act, as amended, provides 100 percent funding for technical and planning guidance to state and local governments and federally recognized Native American tribes to help develop and interpret flood and flood plain data, such as flood hazard mapping, and for assessment for structural and non-structural flood damage reduction measures.

Under Flood Control Act of 1946 – Section 14, as amended, projects are eligible for construction only after an analysis demonstrates the engineering and environmental feasibility and economic justification of the improvement. The local sponsor must be a municipality or public agency. Funding may also be available for flood damage reduction measures if the community writes a request letter to the U.S. Army Corps of Engineers. The non-federal cost share is 35 percent of the analysis and implementation, and the initial \$40,000 of the analysis is 100 percent federally funded.

The 1974 Water Resources Development Act, as amended – Section 22 (Planning Assistance to States Program) provides technical assistance for such flood projects as erosion and control. This program uses cost-shared studies with a non-federal sponsor. The non-federal share of the cost is 50 percent and in-kind services are not authorized. The federal limit for each state is \$500,000 annually.

For more information, contact the U.S. Army Corps of Engineers at (978) 318-8087 or (978) 318-8647. <http://www.usace.army.mil>.

State of Rhode Island

The capital budget is approved on a 5-year basis and is proposed by the governor. If there is any surplus available in the emergency fund, this could be a possible source of financing for mitigation projects.

Rhode Island Department of Environmental Management (DEM)

In the 1980's, four major open space bond issues were approved that resulted in an investment of more than \$100 million for recreational and open space land acquisition. Each application is reviewed by a committee to assure consistency with local plans and habitat values. The state participates in funding either through a matching grant or of a revolving loan. Funds may be available through the DEM Parks and Recreation Division for tree trimming, dune restoration and bulkhead repair. In addition, the state has

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX I (CONTINUED)

Financing Options

several funding programs for the acquisition of land or purchase of development rights to protect open spaces. For instance, two Rhode Island municipalities use a real estate transfer tax for land preservation. Rhode Island has incorporated land trusts that work to preserve land and natural resources. Land owners can participate in the Farm, Forest and Open Space Program. Under this program, land may qualify for a reduced property tax assessment if it meets specific criteria as farmland, forest land or open space. For current funding availability contact the Open Space and Recreational Bond Fund Land Acquisition Program or DEM at (401) 222-2776.

Rhode Island Department of Transportation (DOT)

The State Planning Council designates which Transportation Improvements Plan enhancement projects the state will pursue. Applications for the Federal Wooden Bridge Replacement Program can be made through DOT. In addition, DOT has a debris management program that goes into effect during a storm event. The new federal transportation bill, TEA-21, is a successor to the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). There are a few categories within this bill that may have available funding for natural hazard mitigation projects. These include transportation enhancement (categories include storm water remediation, storm water runoff protection, and environmental mitigation) and bridge replacement. The municipality must apply for project funds through DOT. The annual funding averages for Rhode Island are \$156,781.00. There is an average of \$26,749 available under the Bridge Rehabilitation and Replacement category.

For further information contact DOT at (401) 277-2481.

North East States Emergency Consortium (NESEC)

Since 1998, RIEMA has been given funds for preventative measures and maintenance. Providence and Woonsocket both received \$5,000 grants from NESEC for mitigation activities that were addressed in their local hazard mitigation strategies.

For further information contact at (781) 224-9874.

Municipal

Several utility companies have prevention and clean-up programs that require cooperation from municipalities. For instance, companies are usually willing to co-sponsor planting low-growing trees as part of a tree replacement program. Utility companies will provide the bucket truck area lift if the town/city helps dispose of tree trunks.

The Clean Water Finance Agency has financing programs for local government units and water suppliers. The clean water state revolving fund uses monies from the Federal Clean Water Act to support sewer work such as sewer extensions and septic system repair, and to give homeowners of all incomes low-interest loans for septic system repairs. The community wide onsite wastewater management plan is a Clean Water Finance Agency program for failing or sub-standard septic systems, and it identifies areas in municipalities where system failures could cause degradation to water quality. Municipal loans for large infrastructure projects are also available through this program at discounted interest rates.

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX J



**THE CITY OF CRANSTON
ORDINANCE OF THE CITY COUNCIL**

APPROVING CRANSTON 2010 HAZARD MITIGATION PLAN

No.

Passed:

John E. Lanni, Jr., Council President

Approved:

Allan W. Fung, Mayor

It is ordained by the City Council of the City of Cranston as follows:

WHEREAS, the City of Cranston is vulnerable to natural hazards including hurricanes, flooding, severe winter storms, thunder storms, high wind events, tornados, lightning, hail storms, coastal erosion and wildfire, and

WHEREAS, total vulnerabilities are conservatively estimated at \$1,570,802,700 in property damages with potential risks to each of the City's 81,686 residents, and

WHEREAS, the Cranston Hazard Mitigation Committee has updated the City's 2005 Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000 that documents specific courses of action that can be taken in advance of natural hazard events to reduce the City's vulnerabilities, a copy of which is appended hereto as Exhibit A and

WHEREAS, adoption of a local Hazard Mitigation Plan will qualify the City to compete for implementation funds from the Federal Emergency Management Agency's Pre-disaster Mitigation Grant PROGRAM,

NOW, THEREFORE, IT IS ORDAINED by the City Council of the City of Cranston that the 2015 Hazard Mitigation Plan updated by the Hazard Mitigation Committee is adopted as the City's policy document which assesses the community's risk to natural hazards and which identifies appropriate mitigation actions for potential implementation.

Positive Endorsement

Negative Endorsement (attach reasons)

Christopher Rawson, Solicitor Date

Christopher Rawson, Solicitor Date

Sponsored by: Allan W. Fung, Mayor

City of Cranston Hazard Mitigation Plan- February 2015

APPENDIX K

**Public Notice
News Article
Meeting Minutes
Public Presentation**

**ORDINANCE COMMITTEE
NOTICE OF PUBLIC HEARING**

A Public Hearing on the following proposed Ordinances will be held before the Ordinance Committee on Thursday, May 15, 2014 at 6:00 p.m., City Council Chambers, 889 Park Avenue, Cranston, R.I. pursuant to Section 3.12 of the Charter.

Complete copies of all proposed Ordinances are available for public review at the City Clerk's Office, at the Cranston Central Library or by e-mail. The hearing on each Ordinance will be held on the following dates:

Individuals requesting interpreter services for the deaf or hard of hearing must notify the City Clerk's Office at 461-1000 ext. 3197 seventy-two (72) hours in advance of the hearing date.

Paul A. Lapolla, Chair
Debra L. Lerman, City Clerk

05-21-14

PROPOSED ORDINANCE 4-14-01 AMENDMENT OF TITLE 10, CHAPTER 28 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED "VEHICLES AND TRAFFIC" (Overnight Parking Permits)

It is ordained by the City Council of the City of Cranston as follows:

Section 1, Chapter 10.28, entitled "STOPPING, STANDING, AND PARKING GENERALLY" is hereby amended by adding thereto the following:

10.28.091 - Overnight Parking Pilot Program

A. Residents of Cranston may obtain a Residential Parking Permit from the Cranston Police Department. Residents of Cranston may obtain a 1-year Residential Parking Permit for a vehicle registered in Cranston. The permit shall be valid from 8:00 a.m. to 7:00 p.m. on days when the permit is not otherwise restricted. The permit shall not be used to park a vehicle in a residential zone, or any other parking zone within this chapter.

5. Should a resident move out of the City of Cranston permanently, the holder of the permit must notify the City of Cranston of the change of address. The Residential Parking Permit shall be voided if the holder permanently moves to a different municipality.

Section 2, Chapter 10.28, entitled "STOPPING, STANDING, AND PARKING GENERALLY" is hereby amended by adding thereto the following:

10.28.90 - All Night Parking Prohibited

It shall be unlawful for the operator of any vehicle to park the same on any street for a period of time longer than two hours between the hours of 1:00 a.m. and 7:00 a.m. of any day, unless the operator of the vehicle has obtained a Residential Parking Permit pursuant to 10.28.090.

Section 3. This Ordinance shall take effect upon its final adoption.

Sponsored by Councilman Aceto and Councilman Syros

PROPOSED ORDINANCE 4-14-02 IN AMENDMENT OF TITLE 10, CHAPTER 4 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED "VEHICLES AND TRAFFIC" (Penalty for Overnight Parking)

It is ordained by the City Council of the City of Cranston as follows:

Section 1, Chapter 10.04.030, entitled "Penalties for Traffic Violations" is hereby amended

As follows:

Offense: All night parking from 1 a.m. to 7 p.m. Fine \$50.00; \$25.00

Section 2: This Ordinance shall take effect upon its final adoption.

Sponsored by Councilman Aceto

05-01-14

417-424-5724



**CITY OF CRANSTON -
CITY PLAN COMMISSION
Notice Of Public
Informational Workshop
HAZARD MITIGATION
PLAN UPDATE**

A public meeting will be held, during the City's Plan Commission May 6, 2014 meeting, for the purpose of seeking input on the City's update of its Hazard Mitigation Plan (HMP). An HMP is necessary to comply with the Federal Emergency Management Agency's (FEMA) Disaster Mitigation Act of 2000 in order to minimize the risks involving possible property damage and possible loss of life associated from natural hazards that may occur. The plan focuses on identifying natural hazards, their potential impact as well as mitigation projects and strategies. The plan must be updated and approved by FEMA every five years to ensure that it reflects relevant information and revised community priorities and that it utilizes enhanced analysis. The date, location and time of the hearing are as follows:

Tuesday, May 6, 2014
7:00 PM
Council Chambers
Cranston City Hall
869 Park Avenue

The Draft Plan is available on Planning Department subpage of City's website in the Planning Department subpage <http://www.cranston.com/generalpage.php?pag=22> and in the Planning Department in City Hall for review by the public during regular office hours, 8:30 A.M. - 4:30 P.M.

Individuals requesting interpreter services for the hearing impaired must notify the Planning Department at (401) 780-3136, 48 hours in advance of the meeting date.

Peter S. Lapolla
Planning Director
Michael Smith
Chairman

Farm Presbyterian Church
499 Hope Road
Rev. Paul A. Terry
822-2070
www.farmchurchofcranston.org

Gateway Pentecostal Fellowship
711 Park Ave. (rear)
Pastor Russell Farmer
457-3830
www.gatewaypfc.org

Holy Apostles Church
800 Pignat Orchard Road
Rev. Richard D. Sheahan
946-5586
www.holyapostles.com

New Beginnings Christian Church
122 Laurens St.
Mario J. Nadich, Pastor
787-0725

Oak Lawn Community Baptist Church
229 Wilbur Avenue
Rev. Barbara DiCosta, Pastor
944-0854

Pawtuxet Baptist Church
2157 Broad Street
Rev. Scott E. Roberts
461-3635
www.pawtuxetbaptist.com

People's Baptist Church
1275 Elmwood Avenue
Pastor Mark Lindsay
www.peoplesbaptistchurch.org

Shepherd Of The Valley United Methodist Church
804 Seven Mile Road
Rev. Edward Ferrall-Shabuck
821-8217
www.sovum.org

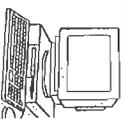
Trinity Episcopal Church
139 Ocean Avenue
(Pawtuxet Village)
Cranston, RI 02905
Rev. Marjorie Harris
941-4324
www.trinityepiscopal.org

Woodridge Congregational United Church Of Christ
548 Budlong Road
Rev. Scott Spencer
942-0654
www.woodridge.org

Word & Prayer Fellowship
828 Oaklawn Ave.
Pastor Chuck Salliby
www.wordandprayer.org

Word Of Life Covenant Church
1308 Phelan Avenue
944-1163
www.wolc.org

Check us out
online
cranstononline.com



KERR

Continued from A1

The hope: A library in a village

It was a tough shoot for Roscoe. He was looking through the lens at a man he has known since they were young kids growing up in

instruments he held while Roscoe photographed him at the VFW.

And he works with an organization called PeaceTrees Vietnam to raise money for schools and libraries.

In 18 years, PeaceTrees has built 8 kindergartens and 11 libraries in Vietnamese villages. It has also worked

O before he dies. "It's a new concept," he said. "It's to help the mothers. It will have classes in how to start businesses, it out loans. And there will be safe house for battered women — a place of their own. Rowe asked Roscoe for donation. Roscoe said he had a problem with that. He was still carrying a lot of anger



CRANSTON

Disaster planning gets public airing

Residents are asked to offer their views at workshop on the city's hazard mitigation plan

By GREGORY SMITH
JOURNAL STAFF WRITER

CRANSTON — Storm, tornado, earthquake, wildfire and drought.

None are in the immediate forecast, but city officials are thinking about them nevertheless. And they would like you, the citizenry, to think about them, too.

A federally required update of the city's hazard-mitigation plan is under way, and residents are invited to a public workshop at the monthly meeting of the city Plan Commission to help brainstorm the contents of the plan.

"Obviously, if something happens we'll be better prepared to deal with it" if a complete plan is in hand, city Planning Director Peter S. Lapolla said this week.

The plan, which dwells on natural hazards rather than manmade hazards such as terrorism, also is meant to be a guide for minimizing problems, before they occur. The city adopted its first such plan in 2005 and this would be the second update.

Among its aspects is the ranking of threats, relative to their likelihood of occurrence.

For example, Lapolla said, "The probability of having a significant tornado is way low." And yet New England has suffered them. On June 1, 2011, a tornado scored a 39-mile path from Westfield, Mass., to Charlton, Mass., and killed three people. On June 9, 1953, a tornado killed at least 90 people in Worcester.

"Our top three hazards are floods, floods, floods," Lapolla

quipped. But he said members of a city Hazard Mitigation Committee want to focus on other threats at the workshop and take up flooding as a separate concern this spring.

The workshop is scheduled for 7 p.m. Tuesday in City Hall. It will begin, Lapolla said, with a presentation of the committee's research to date. Then public comment will be invited. Public hearings on other matters are on the Plan Commission agenda, too.

Among the changes so far are removal of the George J. Peters Elementary School and the area near Kingwood Avenue and May Street from the Randall Pond floodplain. Severe flooding in recent years did not affect the school and its environs, so officials have redefined the floodplain accordingly.

A copy of the draft update, titled Multi-Hazard Mitigation Strategy, may be viewed on the city website, under the Planning Department "Sub-Pages" heading.

When the committee has a finished product, it is subject to review by the Rhode Island Emergency Management Agency and the Federal Emergency Management Agency. If they approve, it is returned to the city for adoption by the mayor and City Council.

The update is a \$17,000 undertaking, for which the city received a \$12,000 grant from the Rhode Island Emergency Management Agency. The balance of the cost is covered by \$2,000 in cash and in-kind services such as staff time from the city. Much of the expense is the hiring of a consulting company, CDR Maguire.

gsmith@providencejournal.com
(401) 271-7334

Cranston Herald Thursday, May 1, 2014

Air seeks to connect vets with job opportunities

CHARLES LAWRENCE Regina University, Iaco, Toray Plastics, UPS and many others.

Providing a means through which military personnel, veterans and their families could connect with opportunities at nearby businesses and agencies, the second installment this year's Mayors' Job



JOINT EFFORT: Mayor Angel Tavelas of Providence and Mayor Allan Fung on April 22.

Public workshop scheduled on hazard mitigation plan update

By DANIEL KITTREDGE

Cranston's Planning Department is inviting the community to participate in an upcoming forum as work continues to update the city's hazard mitigation plan.

"The better we understand what the community's hazards are, the better we can prepare," said Planning Director Peter Lapolla.

The city's first hazard plan was developed in 2005, and the document was updated in 2010. Lapolla said the five-year cycle is mandated through the Federal Emergency Management Agency (FEMA) and Rhode Island Emergency Management Agency (RIEMA), but Cranston was approached by the latter agency and offered funding to begin the process early.

Lapolla said the plan is developed by a Cranston Hazard Mitigation Committee that features representation from various segments of the community, including law enforcement, the business community and city officials. The Planning Commission workshop on the plan, he said, will provide an opportunity for citizens to ask questions and pro-

vide feedback.

The workshop is set for 7 p.m. on May 6 in Council Chambers at City Hall.

Flooding is the primary hazard facing the community, said Lapolla, although that subject will be addressed separately in a process set to begin in May and June.

"When you look at the top three hazards, it's flood, flood, flood, and then everything else falls after that," he said. "We're going to deal with the flooding issue in a separate activity."

In terms of other hazards, Lapolla said a great deal of background is already in place as a result of work done in 2005 and 2010. The plan, he said, incorporates all risks - from earthquakes to tornadoes - and weighs the probability with the risk in recommending action. Severe weather is the second most significant risk, and encompasses a broad range of hazards.

The recommendations vary in terms of specificity, said Lapolla, and the primary goal of the mitigation plan is to serve as a guiding document laying out steps that can be taken as available resources allow.



RHOI MAP

Rhode Island
Disaster Preparedness Handbook

Join us at any of
All events will

Monday, May 5th
Southside Culture
303 Broad Street
Providence, RI

Thursday, May 8th
St. Lucy's Parish
909 West Main R
Middletown, RI

Saturday, May 10th
Risingant Credit
693 Broad Street
Central Falls, RI
9 AM - 12 PM

...reached to
get a job, he said, is essen-
tial.
...over
but she has no
...100 resumes, but she has no

553

934
One of the most important things you can do for your business is to get a good name for your business. The name should be easy to remember, easy to spell, and easy to pronounce. It should also be unique and not too similar to other businesses in your industry. A good name can help you stand out from the competition and make it easier for customers to find you. Consider your options carefully and choose a name that will serve you well in the long run.

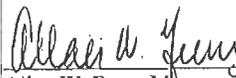
EXECUTIVE ORDER

September 13, 2013

As part of the Federal Emergency Management Agency (FEMA) Grant to update the City's Hazard Mitigation Plan, the City must create a Hazard Mitigation Plan Committee to oversee the update. Pursuant to FEMA'S local Multi-Hazard Mitigation Planning Guidance July 1, 2008, I am hereby issuing the following Executive Order.

Effective this date, I am ordering that:

- A Hazard Mitigation Committee be created whose charge will be to update the City's Hazard Mitigation Plan and to create a Flood Plain Management Plan.
- The Hazard Mitigation Committee will be comprised of the Planning Director, the Public Works Director, the Building Inspector, the Fire Chief, one City Councilperson, one Cranston resident, and two Cranston business owners.


Allan W. Fung, Mayor

9/16/13
Date

**Cranston HMP Committee Meeting
Nov. 22, 2013
Cranston City Hall**

Attendees

Mario Aceto*	Cranston Councilman	MAceto@CranstonRI.org
Lawrence DiBoni	Cranston Economic Dev.	LDiBoni@CranstonRI.org
Ed Greene*	Principal	edgreene@cox.net
William McKenna	Cranston Fire Chief	lrachiel@CranstonRI.org
Hy Goldman	Sales Manager	hy@greylawn.com
Jeff Stevens	CDR Maguire	Jeffrey.Stevens@cdrmaguire.com
Carissa Lord	CDR Maguire	Carissa.Lord@cdrmaguire.com
Ken Mason	Cranston Public Works	KMason@CranstonRI.org
Marco Palombo *	Cranston Polics	mpalombo@CranstonRI.org
Jason Pezzulo	Cranston Planning	jpezzulo@CranstonRI.org
Peter Lapolla	Cranston Planning Dir	plapolla@CranstonRI.org
Stanley Pikul	Cranston Bldg Inspector	SPikul@CranstonRI.org
Stephen Boyle	Cranston Chamber of Com	sboyle@cranstonchamber.com

*Invited but did not attend

The meeting started with introductions around the table and an overview of how CDR Maguire will be assisting the City with the process. It was mentioned that the City is "ahead of the game" in terms of getting an updated plan done before the current one expires. (2015).

Planning Director Peter Lapolla handed out a copy of the current plan, local mitigation plan crosswalk, and FEMA guidelines for creating a plan.

Next Jeff Stevens of CDR Maguire led the group through an exercise which ranked the natural hazards in order of probability and impact (low, medium, high). After, the group discussed the rankings, and possibly combining a few of the categories. The group wasn't able to come to a consensus on some of the lesser hazards. Rankings were collected, processed after the meeting and will be presented at the next meeting.

For "homework", CDR Maguire provided each committee member with a spreadsheet of the current mitigation actions, and critical infrastructure. Each member was asked to review the documents and submit changes, edits, or updates either electronically or via postal mail to CDR Maguire by December 16th.

The next meeting is scheduled for December 18th, 2013 in Cranston City Hall, Council Chmabers.



Cranston HMP Committee Meeting
 December 18, 2013 at 2:00pm
 Cranston City Hall
 Council Chambers

SIGN-IN

Name	Department/Company
Carissa Lovel	CDR Maguire
STAN PIKIL	BEDS INSPECTIONS / CRANE
Ken Mazoni	PWS CURS
Bill MACKENNA	CFID/EMA
LARRY DiBONI	ELECTED
Jeff Stearns	CDR Maguire
Peter S. Lapinski	PLANNING
Stephan Bayle	Cranston Chamber
Jack [unclear]	Savage Business Solutions

**Cranston HMP Committee Meeting #2
December 18, 2013
Cranston City Hall**

Attendees

Mario Aceto*	Cranston Councilman	MAceto@CranstonRI.org
Lawrence DiBoni	Cranston Economic Dev.	LDiBoni@CranstonRI.org
Ed Greene	Principal, Sage	edgreene@cox.net
William McKenna	Cranston Fire Chief	firechief@CranstonRI.org
Hy Goldman*	Sales Manager	hy@greytown.com
Jeff Stevens	CDR Maguire	Jeffrey.Stevens@cdrmaguire.com
Carissa Lord	CDR Maguire	Carissa.Lord@cdrmaguire.com
Ken Mason	Cranston Public Works	KMason@CranstonRI.org
Marco Palombo *	Cranston Police	mpalombo@CranstonRI.org
Jason Pezzullo*	Cranston Planning	jpezzullo@CranstonRI.org
Peter Lapolla	Cranston Planning Dir.	plapolla@CranstonRI.org
Stanley Pikul	Cranston Bldg. Inspector	SPikul@CranstonRI.org
Stephen Boyle	Cranston Chamber of Com	sboyle@cranstonchamber.com

*Invited but did not attend

The meeting began by continuing the previous discussion about ranking hazards of concern for the City. By averaging everyone's proposed ranking the group was able to agree on the following, ranked from highest level of concern to lowest: flooding, severe winter storms, hurricanes, other storms (thunder and lightning, wind, and hail storms), tornadoes, earthquakes, coastal erosion, and wildfires.

Next, the group reviewed and updated the list of critical infrastructure as documented in the 2010 hazard mitigation plan. Updates were made to the list of flood prone drainage systems, recreational facilities, and historic structures. CDR Maguire will check a few other areas of the critical infrastructure matrix for redundancy.

The next item on the agenda was a review of the mitigation actions proposed in the 2010 plan. This discussion focused on "funding concerns", "actions since the 2010 plan", and a revised "time frame for completion". Since we only got through item G on page 7 of the 17 page document, we will continue the review at the next meeting.

The next meeting will be scheduled once everyone returns from the holidays in January 2014.


CDR MAGUIRE

Cranston HMP Committee Meeting
 January 29, 2014 at 2:00pm
 Cranston City Hall
 Council Chambers

SIGN-IN

Name	Department/Company
Ken Wagoner	Cranston City Hall
BILL MCKENNA	CFO/EMA
SWAN PIRSK	CITY OF CRANSTON
ABRIL NITSONI	CITY OF CRANSTON
Ed Greene	Sage Business Solutions
JY GOODMAN	GREYHORN FOOD CO
Jeff Stevens	CDR Maguire
Peter Lapolla	Planned
Carissa Loid	CDR Maguire
Stephen Sample	Cranston Chambers

**Cranston HMP Committee Meeting #3
January 29, 2014
Cranston City Hall**

Attendees

Mario Aceto*	Cranston Councilman	MAceto@CranstonRI.org
Lawrence DiBoni	Cranston Economic Dev.	LDiBoni@CranstonRI.org
Ed Greene	Principal, Sage	edgreene@cox.net
William McKenna	Cranston Fire Chief	wchief@CranstonRI.org
Hy Goldman	Sales Manager	hy@greylawn.com
Jeff Stevens	CDR Maguire	Jeffrey.Stevens@cdrmaguire.com
Carissa Lord	CDR Maguire	Carissa.Lord@cdrmaguire.com
Ken Mason	Cranston Public Works	KMason@CranstonRI.org
Marco Palombo *	Cranston Police	mopalombo@CranstonRI.org
Jason Pezzullo*	Cranston Planning	jpezzullo@CranstonRI.org
Peter Lapolla	Cranston Planning Dir.	plapolla@CranstonRI.org
Stanley Pikul	Cranston Bldg. Inspector	SPikul@CranstonRI.org
Stephen Boyle	Cranston Chamber of Com	sboyle@cranstonchamber.com

*Invited but did not attend

The meeting began by continuing the previous review of the mitigation actions proposed in the 2010 plan. We started with item 5.3.1 H: Coordinated Tree-Trimming Program and finished through 5.3.5.C: Education and Training. This discussion focused on "actions since the 2010 plan", and a revised "time frame for completion". Many of the items are ongoing and a few were declared completed. That concluded the review of the mitigation actions. The meeting ended with a discussion of upcoming deliverable dates.

Proposed Next Steps:

- February 12: CDR Maguire will make the appropriate changes and send a draft to the committee for review.
- February 28: Comments will be due back to CDR Maguire
- March 3-7: additional edits will be made
- March 10: Post for public review
- March 20: Public meeting (may want more than 10 days)
- April 1: Present to Cranston Planning Commission
- April 30: Submit to RIEMA for review

While the plan is being reviewed by RIEMA, we will work on a more specific Flood Mitigation Plan to address specific flooding concerns in the City. This will be attached as an addendum to the hazard mitigation plan.

2/17/2015

City of Cranston
Hazard Mitigation Plan
Update



May 6, 2014

Meeting Objectives

- Discuss hazard mitigation
- Goals of the Cranston Hazard Mitigation Plan
- Hazards Addressed In the Plan
- Mitigation Actions Proposed
- Public Comment and Questions

What is Hazard Mitigation?

...any sustained action taken to reduce or eliminate long term risk to life and property from natural hazards.



Why Hazard Mitigation Planning?

1. Make community more disaster resistant
2. Reduce losses
3. Eligibility for mitigation funds
4. Establish funding priorities
5. Guide mitigation activities in a coordinated manner

2/17/2015

Cranston HMPC

Peter Lapolla – Planning Director, Cranston Department of Planning and National Flood Insurance Program Coordinator; Hazard Mitigation Committee Chair
Marlo Aceto- Cranston Councilman

Stephen Boyle- Cranston Chamber of Commerce
Lawrence DiBoni - Director, Cranston Department of Economic Development
Ed Greene- Sage Business Solutions
Ivy Goldman- Graylawn Food Corporation
Kenneth Mason- Director, Cranston Public Works
William McKenna- Chief, Cranston Fire Department and Emergency Management Agency
Marco Palumbo- Cranston Police
Jason Pezzulo- Cranston Planning
Stanley Pikul – Director of Building Inspections, Cranston

Goals

- Protect and enhance the quality of life, property and resources
- Upgrading infrastructure
- Integrating planning and management approaches
- Improving response effectiveness
- Raising awareness of hazard mitigation benefits and procedures

Hazards

The collage includes several images: a flooded area with water reaching buildings, a winter scene with heavy snow and a person walking, a large storm cloud or hurricane, and a close-up of a wildfire with flames and smoke. The word 'SNOW' is written in large letters over one of the winter images.

Likelihood of Future Events

Hazard	Risk Value	Probability
Flooding	1	High
Winter Storm	3	High
Hurricane	3	Medium
Thunder, Wind, Lightning, & Hail	6	Medium/Low
Tornadoes	7	Low
Coastal Erosion	8	Low
Earthquake	8	Low
Wildfire	9	Low

2/17/2015

Risk Assessment

Identify facilities and populations at risk from natural hazards, estimate potential impacts on people, property, and the City.



Mitigation Actions from 2010 Plan

Completed:
 Pump Station Flood Proofing, Flood Proofing of Peters School, Bridge Retrofitting and Repair, and CHMP Evaluation and Update.

Partially completed or are underway:
 Pocasset River Flood Improvements, WCWD Service Loop, Sewage Infiltration and Inflow Analysis, Tree-Trimming Program, Acquisition/Mitigation Program, Debris Management Plan, NFIP Community Rating System, and Small Business Outreach Program.

No longer necessary:
 Long Term Disaster Mitigation Plan and ARC Shelter Capacity Hazard Mitigation Coordinator

Not started yet:
 Meshanticut Brook Flooding Improvement and Repetitive Loss Strategy have not been started yet.

New Mitigation Actions for 2014

Mitigate Wildfire Risk to Vegetated Areas
 Support the Rhode Island Department of Environmental Management with fire prevention and suppression efforts. This is especially important during dry periods in the summer when temperatures are hotter.

Stormwater Drainage System Evaluation
 Complete a comprehensive analysis of Wedge/Cranston Street, Garden Street, Lodge/Abbott Street, and Zinnia Drive/Poplar Circle to determine a course of action for minimizing the effects of this flooding. Secure funding to construct monitor and maintain drainage improvements.



Next Steps

Flood Mitigation Plan
 The Local Hazard Mitigation Committee will write a supplemental flood mitigation plan. This will provide a more detailed study of the flood-prone areas of the City and propose additional mitigation actions.

Flood Mitigation Plan Public Comment Period
 Post draft Flood Mitigation Plan for public review and comment.

Hazard Mitigation Plan Submittal
 Submit plan to RIEMA for review.
 Submit plan to FEMA for approval.

2/17/2015

 **Public Comments**

Questions or Comments?

 **Contact Information**

Jeffrey Stevens
Jeffrey.Stevens@CDRMaquire.com
401-272-6000

Peter Lapolla
PLapolla@cranstonri.org
401-780-3222

City of Cranston Hazard Mitigation Plan - February 2015

End Notes

- ¹ American Planning Association, Growing Smart Legislative Guidebook. 2002 ed. (Chicago, IL: APA Publications, January 2002) Page 7-143.
- ² FEMA, Local Mitigation Planning Handbook. March 2013. http://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf
- ³ Ibid.
- ⁴ Ibid.
- ⁵ RIEMA, Rhode Island Hazard Mitigation Plan – 2014 Update. (Providence, RI: RIEMA Publications, 2014)
- ⁶ FEMA, Flood Insurance Study: City of Cranston, Rhode Island Providence County. (Washington, DC: FEMA Publications, 18 September 2013) Vol. 2
- ⁷ RIEMA, Courtney Saucedo - Regional Catastrophic Planner. *NFIP Policy and Claims Report* data updated on February 12, 2015.
- ⁸ RIEMA, Rhode Island Hazard Mitigation Plan – 2014 Update. (Providence, RI: RIEMA Publications, 2014)
- ⁹ NOAA. "Hurricane Awareness: Hurricane Basics." NOAA – National Oceanic and Atmospheric Administration. 22 January, 2004. <http://www.nhc.noaa.gov/HAV2/english/basics.shtml>
- ¹⁰ RIEMA, Rhode Island Hazard Mitigation Plan – 2014 Update. (Providence, RI: RIEMA Publications, 2014)
- ¹¹ Providence Journal-Bulletin, 1998 Journal-Bulletin: Rhode Island Almanac 112th ed. (Providence, RI: Providence Journal Company, 1998) 255.
- ¹² FEMA, Flood Insurance Study: City of Cranston, Rhode Island Providence County. (Washington, DC: FEMA Publications, 18 September 2013) Vol. 2
- ¹³ Providence Journal-Bulletin, 1998 Journal-Bulletin: Rhode Island Almanac 112th ed. (Providence, RI: Providence Journal Company, 1998) 255
- ¹⁴ Ibid
- ¹⁵ FEMA, Flood Insurance Study: City of Cranston, Rhode Island Providence County. (Washington, DC: FEMA Publications, 18 September 2013) Vol. 2
- ¹⁶ Providence Journal-Bulletin, 1998 Journal-Bulletin: Rhode Island Almanac 112th ed. (Providence, RI: Providence Journal Company, 1998) 256
- ¹⁷ Ready.Gov. "Tornadoes", April 30, 2014. <http://www.ready.gov/tornadoes>
- ¹⁸ Ibid
- ¹⁹ RIEMA, Rhode Island Hazard Mitigation Plan – 2014 Update. (Providence, RI: RIEMA Publications, 2014)
- ²⁰ Wood, Michelle. "UPSeis: An Educational Site for Budding Seismologists," 21 May. 1997, 5 January, 2004. <http://www.geo.mtu.edu/UPSeis/intensity.html>.
- ²¹ American Fact Finder, US Census Bureau. 2010 http://factfinder.census.gov/bkmk/table/1,0/en/DEC/10_DP/DPDP1/1600000US4419180
- ²² City of Cranston, Emergency Management Agency. Emergency Operations Plan. Cranston, RI: EMA, January 2013.
- ²³ Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service (SCS)). Meshanicut Brook Flood Plain Management Study: Cranston and Warwick, RI. (Greenville, RI: SCS, Popular Report 1983). Pages 12 and 13.
- ²⁴ Natural Resources Conservation Service (NRCS). Pocasset River Flood Plain Management Study. Draft Report. (Warwick, RI: NRCS, February 2004). As discussed in "Preliminary Alternative Plans with Costs," Page 9.
- ²⁵ Ibid

City of Cranston Hazard Mitigation Plan- February 2015

²⁸ Mileti, Dennis S., John H. Sorensen and Paul W. O'Brien. 1992. "Toward an Explanation of Mass Care Shelter Use in Evacuations." *International Journal of Mass Emergencies and Disasters* 10 (1): 25-42.

11-15-03

CITY OF CRANSTON

ORDINANCE OF THE CITY COUNCIL

IN AMENDMENT OF CHAPTER 17.24 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED 'ZONING' - Performance Standards (Solar Power)

No. 2015-38

*As Amended Ordinance Committee 12/17/2015

Passed:
December 21, 2015

John E. Lanni, Jr.
John E. Lanni, Jr., Council President

Approved:
December 30, 2015

Allan W. Fung
Allan W. Fung, Mayor

It is hereby ordained by the City Council of the City of Cranston as follows:

Section 1: Chapter 17.24 entitled "Performance Standards -- Generally" is hereby amended by adding thereto the following new section:

17.24.020 Solar Power Performance Standard

Site Preparation

Clearing of natural vegetation shall be limited to what is necessary for the construction and operation of the solar power facility. Top soil will not be removed from the site. Top soil will not be disturbed except as required for installation of the facility.

Lighting

Lighting of solar power facilities shall be limited to requirements for safety and operation and shall not shine light onto abutting properties.

Noise

Applicants for a building permit to construct a solar power facility must submit a noise study as part of their application. The noise study assesses the potential impacts at *any off site* ~~nearby~~ noise receptors (e.g. residences) due to sound emitted by the solar power facility's electrical equipment including, but not limited to, inverters and transformers. The noise study is required to demonstrate that the facility, as designed, does not exceed a 40 decibel noise level (approximately the noise level experienced in a quiet office or library). The city's review engineer will assess the noise study to determine acceptable distance from the solar facility to *any off site* ~~the nearest residence or~~ receptor.

11-15-03

46 Decommissioning and Abandonment

47
48 A solar power facility which has reached the end of its useful life or has been abandoned
49 consistent with abandonment section shall be removed. The owner or operator shall
50 physically remove the facility no more than 150 days after the date of the discontinued
51 operations.

52 Removal shall consist of

- 53 1. Physical removal of all installations, electrical equipment, all appurtenant structures
- 54 including but not limited to, equipment shelters, storage facilities, transformers,
- 55 substations, security barriers, fences, overhead and underground electric lines.
- 56 2. Disposal of all solid and hazardous waste in accordance with the law.
- 57 3. Stabilization or revegetation of the site as necessary to minimize erosion.

58
59 Abandonment

60
61 A solar facility shall be considered abandoned when it fails to operate for more than one
62 year. If the owner or operator fails to remove the installation within 150 days of
63 abandonment, or the proposed date of decommissioning, the city may enter the property
64 and physically remove the installation.

65
66 Financial surety

67
68 Before receiving a building permit, owners or operators of a solar power facility shall
69 provide a form of surety, either through escrow account, bond or otherwise, to cover the
70 cost of removal in the event the city must remove the facility and remediate the
71 landscape. In no event will the amount exceed 125 percent of the cost of removal and
72 compliance as determined by a qualified engineer hired by the city and paid for by the
73 owner operator. The qualified engineer shall include an estimate of all costs associated
74 with removal and remediation and a mechanism for figuring increased removal costs due
75 to inflation.

76
77 Section 2: This Ordinance shall take effect upon its final adoption.

78
79
80 Positive Endorsement

Negative Endorsement (attach reasons)

81
82 CMR 12/21/15
83

84 Christopher M. Rawson, Solicitor

Christopher M. Rawson, Solicitor

85
86
87 Sponsored by Councilman Stycos

88
89 Referred to Ordinance Committee December 17, 2015

90

Allan W. Fung
Mayor

Peter S. Lapolla
Planning Director



CITY PLAN COMMISSION
Cranston City Hall
869 Park Avenue, Cranston, RI 02910

Michael Smith
Chairman

James Moran
Vice Chairman

Ken Muson, P.E.
Mark Moito
Gene Nadeau
Robert Strom
Frederick Vincent
Lynne Harrington
Kimberly Bitner

December 3, 2015

Council President Lanni
Cranston City Hall
869 Park Avenue
Cranston, RI 02910

RE: Ordinance #11-15-03 Ordinance in amendment of Chapter 17.24 of the Code of the City of Cranston, 2005, entitled "Zoning" Performance Standards (Solar Power)

Dear Council President Lanni:

On December 1, 2015, the above referenced ordinance was reviewed by the City Plan Commission for the purpose of providing the Council with an advisory recommendation, as required by Section 45-24-52 of the Rhode Island General Laws and Section 17.120.030 of the Cranston Zoning Code.

As noted above, the ordinance will set performance standards to govern the installation of a solar power facility as authorized through §17.20.030 Schedule of Uses of the City Code. With the exception of the section that addresses "Decommissioning and Abandonment," the performance standards, as proposed, already exist, in some form, within Title 17 of the City Code. Section 17.20.090 regulates impacts from noise and lighting. Section 17.84.140.C regulates site preparation.

With regard to the standards set for noise, the Commission would note that the ordinance will require a noise impact assessment "at nearby noise receptors (e.g. residences)...." The Commission would suggest that "nearby noise receptors" is an amorphous standard subject to interpretation. The Commission would further suggest that whenever possible, standards should be specific and suggest that the ordinance be amended to read as follows:

"Applicants for a building permit to construct a solar power facility shall submit a noise study as part of their application. The noise study assesses the potential impacts to the nearest off site residential noise receptor due to sound emitted by the solar power facility's electrical equipment including, but not limited to, inverters and transformers. The noise study is required to demonstrate that the facility, as designed, does not exceed a 40 decibel noise level (approximately the noise level experienced in a quiet office or library). The city's review engineer will assess the noise study to determine acceptable distance from the solar facility to the nearest off site residential noise receptor.

With regards to the standards governing the decommissioning of a solar power facility, the Commission would note that a discussion of how and when a facility would be decommissioned would have taken place during a permitting process (Development Plan Review, Major Land Development). The proposed ordinance will now set the standards to inform that discussion.

The Commission would further suggest that, to the extent that the ordinance sets performance standards for an authorized use, the ordinance will be consistent with the Comprehensive Plan. The Future Land Use Plan designates a land use and the Land Use Element specifies an appropriate zoning classification based on the land use designation. Neither the Future Land Use Plan nor the Land Use Element identifies appropriate uses with a particular zoning class and the standards by which those uses are to be implemented.

RECOMMENDATION

The proposed zoning ordinance is consistent with the City of Cranston Comprehensive Plan and with RIGL § 45-24-30 "General purposes of zoning ordinances" with regard to the following applicable purposes:

- (1) Promoting the public health, safety, and general welfare.

Telephone: (401) 461-1000 ext 3136

Fax: (401) 780-3171

Plan Commission Recommendation

Ordinance 11-15-03

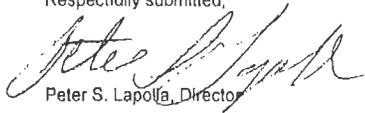
(14) Providing for efficient review of development proposals, to clarify and expedite the zoning approval process.

(15) Providing for procedures for the administration of the zoning ordinance, including, but not limited to, variances, special-use permits, and, where adopted, procedures for modifications.

Therefore, upon motion made by Mr. Motte and seconded by Mr. Vincent, the City Plan Commission unanimously voted (7/0) to forward a favorable recommendation on Ordinance 11-15-03 conditioned on the Noise section of the ordinance being amended as follows:

Applicants for a building permit to construct a solar power facility shall submit a noise study as part of their application. The noise study assesses the potential impacts to the nearest off site residential noise receptor due to sound emitted by the solar power facility's electrical equipment including, but not limited to, inverters and transformers. The noise study is required to demonstrate that the facility, as designed, does not exceed a 40 decibel noise level (approximately the noise level experienced in a quiet office or library). The city's review engineer will assess the noise study to determine acceptable distance from the solar facility to the nearest off site residential noise receptor.

Respectfully submitted,



Peter S. Lapolla, Director

To City Council Members
City of Cranston, Rhode Island

In planning and performing our audit of the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Cranston, Rhode Island as of and for the year ended June 30, 2015, in accordance with auditing standards generally accepted in the United States of America, we considered the City of Cranston, Rhode Island's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the City of Cranston, Rhode Island's internal control. Accordingly, we do not express an opinion on the effectiveness of the City of Cranston, Rhode Island's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore material weaknesses or significant deficiencies may exist that were not identified. However, as discussed below, we identified certain deficiencies in internal control that we consider to be material weaknesses and other deficiencies that we consider to be significant deficiencies.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. We consider the following deficiencies in the City of Cranston, Rhode Island's internal control to be material weaknesses:

Fixed Asset Recordkeeping:

During our audit testing, we obtain a fixed asset schedule from the City that needed several corrections and resulted in approximately \$2 million in adjustments for the construction in progress account. During our testing of the governmental fund capital assets, we noted several changes that needed to be made to the original file provided by the client that lists the assets versus general fund bond expense analysis files. Changes approximated \$708,000 in cost adjustments and \$327,000 of depreciation expense changes.

Recommendation:

We recommend that the City centralize the tracking of the capital assets. All the departments should be reporting to one person and that person should be reconciling their ledger of the assets with the general ledger on a monthly basis.

Management's Response:

***Still Applicable
Schedule of Expenditures of Federal Awards:***

Management is responsible for the preparation of the Schedule of Expenditures of Federal Awards to be complete and accurate. During our single audit testing, it was noted that the schedule of expenditures of federal awards was not complete and accurate when we started to trace back the figures to the underlying records. Management was pulling figures

from all different departments through emails and records of expenses. During this process, we had to go back to a few departments to get clarification on CFDA numbers and how the expenses related back to particular programs.

Recommendation:

We recommend that the City centralize the tracking of the Schedule of Expenditures of Federal Awards. We understand that the different departments are tracking their grants as they come in but this process needs to be summarized by someone in the accounting department. On a monthly basis, the accounting department should be requesting the totals of all federal funds expended by CFDA number, a copy of the grant award (noting the CFDA number) and what reimbursement requests were filed during that period. The accounting department should be able to reconcile this activity back to the general ledger activity for the respective department.

Still Applicable

Federal Grant Compliance over Controls and Compliance Findings:

Management of the City of Cranston, Rhode Island, is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements identified in each of the federal programs that they administer. In planning and performing our audit of compliance, we considered City of Cranston, Rhode Island's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Management is also responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to its federal programs. During our audit of the major federal programs for the purpose of A-133 reporting, we noted some significant control over compliance and compliance findings in two major programs that were tested during our audit. These findings noted material questioned costs that were reported in the A-133 reporting package.

Recommendation:

We recommend that management of the City of Cranston, Rhode Island develop and enforce the following policies as they relate to the following compliance requirements:

- Complete and maintain certifications in accordance with the provisions of OMB Circular A-87.
- To ensure that program costs are paid before reimbursement is requested from the Federal Government in accordance with the requirements of OMB Circular A-133.
- Requirements for checking for suspension or debarment, maintain a record of that check and to add a clause or condition to the covered transaction for parties contracted in accordance with the provisions of OMB Circular A-133.

A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the following deficiencies in the City of Cranston, Rhode Island's internal control to be significant deficiencies:

Still Applicable

Complete General Ledger:

Governmental Accounting Standards Statement #34 requires governmental entities to prepare a government-wide financial statement utilizing the full accrual basis of accounting. Accordingly, the government-wide statements include all long-term debt obligations and capital assets of the governmental activities as well as those reported in the business-type activities. During our audit, we noted that the City of Cranston (including the School Department) does not have adequate policies or procedures in place for maintaining and updating these records.

Recommendation:

We recommend that the City update the general ledger accounting records to properly include balances and activity of long-term debt obligations, as well as capital asset balances and related depreciation expense. The City should conduct an evaluation of the existing accounting system and an analysis of projected needs for the future. This evaluation should focus on ensuring that the City's financial systems maximize the productivity of its accounting staff and meet the future needs of management.

We further recommend that the City shift from the excel spreadsheets to an integrated capital asset software system as noted below to track all capital assets at the time the purchase order is created and or the invoice is processed. Utilization of a fully integrated capital asset module should reduce the risk of understating capital asset acquisitions within a fiscal year. An integrated system would eliminate redundant processing; improve the City's access to information and reduce the risk of entering duplicate assets. Analysis and other reviews could be performed online by the appropriate levels of management based on real-time data entry. Additionally, integrated systems would allow security features to ensure that only authorized personnel would be allowed to enter, modify, or change data. Other approved users would have the ability to look up data but not to originate or change it.

We would be pleased to provide the City with more information about integrated capital asset software systems.

Management's Response:

The City's main focus continues to be on the presentation of the Fund Financial Statements. At some point in the future the City will focus on the Government Wide Financial Statements (GASB 34) if the school department's financial information is incorporated into the City's system. The City is in the process of upgrading the financial software that will eventually give us a fully integrated package that will eliminate the use of Excel spreadsheets and have the proper controls in place to mitigate any potential risk of fraud.

Still applicable***Tax Collections:***

During our testing, we inquired with personnel in the tax collection area to determine if there was a way for us to test the deposit breakdown on the ADMINS system versus what was deposited into the bank. Personnel in the tax collection area noted that they do not reconcile total cash and checks received per the tax collection daily reports to the actual deposit slip. If this reconciliation is not completed, there is a potential for errors in tax collection to go undetected and therefore never corrected.

Recommendation:

We recommend that tax collection personnel review the new software to determine if there is a function that will show what was processed through the system (i.e. cash versus check) and have this report reconciled with the actual deposit slip breakdown at the end of the business day.

Management's Response:

The City will discuss this recommendation with its software company to see if such a function is available as part of the upgrade. It is management's goal that our new tax collections software will encompass two components (cash separate from checks) in the daily bank deposit.

*Still applicable****Reporting of Reimbursable Grants:***

During our audit testing, we found several instances where the expenditures that are reimbursable by grant funds were being shown as a net transaction. This activity was discovered when we reviewed the police salary accounts.

Recommendation:

We recommend that the City properly post revenues and expenditures in separate accounts for these types of grants. Many of these grants are federal and should be tracked for the purposes of A-133 reporting.

Management's Response:

The City tries to ensure that all revenues and expenditures are recorded properly but in many instances grants are issued on a reimbursement basis after the budget has been adopted. Therefore there are no line items available to make expenditures from without distorting the adopted budget. Since most grants are now issued on a reimbursement basis we are of the opinion that the best way to show these transaction is to record them on the balance sheet. When expenditure is made a receivable is established and when the corresponding reimbursement is received from the grantor it is used to offset the receivable.

Bank Reconciliation Procedures:

Upon our arrival of fieldwork, we noted that both the general fund cash account and the sewer fund cash account had not been reconciled since April 2015. The bank reconciliations were reconciled up through June 30, 2015 to stay on track with the 2015 audit process.

Recommendation:

We recommend that the City obtain additional help to train the employee in that position to ensure that these cash reconciliations are being completed on monthly basis and that these reconciliations are tied out to the general ledger.

Management's Response:

This communication is intended solely for the information and use of management, Members of the City Council and School Committee, others within the organization, and the Office of the Auditor General of the State of Rhode Island, and others within the organization, and is not intended to be and should not be used by anyone other than these specified parties.

Providence, Rhode Island
December xx, 2015
Except for Management Responses which are dated xx

The following comments are other matters that we believe are opportunities for strengthening internal controls and operating efficiency

Information Technology:

New Hires

Finding: There is no clearly defined process for provisioning access. Communication to IT does not always occur in a timely manner. Access requests are made in person, over the phone, and over email. A checklist for HR including their responsibilities to communicate to IT in a timely manner and a distribution email list to IT from HR could mature the process.

Risk: Effective procedures do not exist to ensure timely action for requesting user accounts. This is a risk to the availability of the data as users do not receive their access in a timely manner. This is also a risk to the integrity of the data as a lack of communication could lead to unauthorized access for new hires.

Management Response: Working with HR to establish a definitive process to notify IT in conjunction with Department Heads as to new hires and access needed.

Terminations

Finding: There is no clearly defined process for removing access. Notification of terminated employees and requests to remove access are often not communicated to IT in a timely manner.

Risk: Access to the financial application and its data are not appropriately restricted. Terminated employees may have unauthorized access to the system. Terminated employees may act maliciously posing a risk to the integrity of data on the system by introducing malware which could add, modify, or delete data. There could be a breach of confidentiality if an unauthorized user stole data off the network. This is also a risk to the availability of the system if an employee caused a disruption on the system. If the user's access to the network and AUC was not removed in a timely manner financial data could also be directly created, modified, or deleted.

Management Response: Working with HR to establish immediate notification of employee's termination.

Domain Administrators

Finding: Three Domain Administrator accounts were active that should have been disabled when they were no longer in use. Additionally the generic Administrator account is being shared within IT for daily duties.

Risk: Domain Administrator accounts should be restricted to as few accounts as possible to reduce the risk that an account is compromised. Once a malicious user has access to a Domain Administrator account they have full access to the system and pose a risk to the integrity of the data, the availability of the system, and confidentiality of private information. When a Domain Administrator account is no longer needed it should be disabled or deleted. A formal review process for the Domain Administrators should help to mature the process by ensuring accounts that are not in use are removed. Additionally the use of a shared generic account is a risk because there is no accountability for actions taken on the system. Accounts should not be shared. Instead users should use their assigned accounts when performing their job duties. The default Administrator account should be phased out of use and access should not be shared.

Management Response: Inactive Administrator accounts have been disabled. Shared account is extremely limited and access is noted. For most uses IT personnel use personal credentials.

Password Configurations

Finding: Password parameters on the network and AUC do not meet best practices.

Risk: Password parameters ensure a minimum level of security in regards to password authentication to access the network and AUC. If strong password parameters are not in place there is a risk that users will use weak passwords. Weak passwords and password policies make it easier for malicious users to guess, breaking, or discovering a password. This causes a risk to the confidentiality, integrity, and availability of data on the network and AUC. The network should meet best practices in security and additional logical security measures can also be used to surround the AUC application with strong password parameters.

Management Response: Stronger password parameters are being looked into.

Backups

Finding: Sampled backup dates did not complete successfully. Additionally, there are no offsite replications or offsite tape backups.

Risk: If backups do not complete successfully and failures are not remediated in a timely manner there is a risk that data could be lost. IT should be notified of failed backups and ensure that they succeed as soon as the next day. Additionally, there are no backups being sent off site. This is a risk because if a disaster were to happen at the City of Cranston location then all of the data would be lost. Having the data in multiple locations significantly reduces the risk of complete data loss.

Management Response: Failed backups are noted and rectified as soon as possible. Actively pursuing a backup process which would enhance backup quality and move toward off site backups and a Disaster Recovery scenario.

The following comments are general recommendations for the City and School Department and are not based on any specific deficiencies noted during our audit of the financial records maintained by the City's Finance Department or the School Department

Still applicable

Fraud Prevention Program:

There have been a number of highly publicized cases in the past two years that have heightened the awareness of fraud within governments and public organizations. As a result, numerous studies have been undertaken to provide guidance aimed at helping to prevent and detect fraud. From one such study, the American Institute of Certified Public Accountants and the Association of Certified Fraud Examiners has published a joint report encouraging organizations to take proactive steps to prevent and deter fraud. The Town currently does not have a proactive fraud prevention program. We believe that the cornerstone of an effective program is the development of a government-wide code of conduct.

Other components of a fraud prevention program may include telephone hotlines and internal audit functions, among other initiatives.

Financial fraud may involve the misstatement of financial statements or the misappropriation of assets. Misstated financial statements contain intentional concealment or distortion of facts by management. Misappropriation of assets can be accomplished by one or several individuals, including management. Misappropriation of assets can also be accomplished by people inside and outside of the Town. Some examples of asset misappropriation include internal embezzlement, theft of assets, conflict of interest schemes involving vendors, bribery and corruption schemes, and false billing schemes. While fraudulent activities are not always material to the financial statements individually, over time the activities can result in substantial losses to an entity.

Recommendation:

While we are not aware of any instances of fraudulent activities, we recommend the City establish a written code of conduct as the first component of its fraud prevention activities. A comprehensive, written code of conduct can be an effective tool to communicate and create a culture of honesty and high ethical behavior, while making individuals aware of the likelihood of the detection and punishment of any undesirable conduct.

Management's Response:

For the past several years the personnel department has been working on a personnel manual which was to incorporate a code of conduct into the document. The document is still a work in progress and will incorporate an appropriate code of conduct section before distribution.

The following comments are general recommendations for the City and School Department and are not based on any specific deficiencies noted during our audit of the financial records maintained by the City's Finance Department or the School Department (Continued)

Still applicable

Reporting Mechanisms for Fraud, Abuse, and Misconduct:

During our audit, we noted that the City's practices do not include any formal or well communicated mechanisms for employees to report suspected fraud or abuse. In the Association of Fraud Examiners latest "Report to the Nation on Occupational Fraud and Abuse," the most frequently cited method of fraud detection was employee tips, which accounted for roughly 40% of all cases studied.

Recommendation:

We recommend that management consider the establishment, and communication of, reporting mechanisms for fraud, abuse and misconduct. Internal reporting channels, such as manager open-door policies, employee surveys, and electronic intranet or e-mail procedures, have been found to be effective. External hotline services have been found to perform better for anonymous tips and certain other types of suspected misconduct, such as harassment.

Management's Response:

The City will consider establishing a mechanism for employees/residents to report fraud. When considering the different options available, the City will recognize the recommendations cited in the "Report to the Nation on Occupational Fraud and Abuse".

DRAFT-FOR DISCUSSION ONLY

December 30, 2015

To the City Council
Of the City of Cranston, Rhode Island

We have audited the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Cranston, Rhode Island for the year ended June 30, 2015. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and, *Government Auditing Standards* and OMB Circular A-133, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated October 15, 2015. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the City of Cranston, Rhode Island are described in Note I to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2015. We noted no transactions entered into by the City of Cranston, Rhode Island during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the City of Cranston's financial statements were:

Management's estimate of the useful lives of capital assets. We evaluated the key factors and assumptions used to develop the useful lives in determining that they are reasonable in relation to the financial statements taken as a whole.

Management's estimate of the allowance for doubtful accounts is based on past experience and on analysis of the collectability of individual accounts (tax, accounts receivable, other miscellaneous receivables). We evaluated the key factors and assumptions used to develop the allowance in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of claims and judgments outstanding at June 30, 2015 is based on a review of correspondence from the City's legal counsel and billings from the City's health insurance carrier. We reviewed these documents provided by management and the assumptions used to develop the

estimated liability in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of the Net OPEB Obligation and the Net Pension Liability at June 30, 2015 is based on a review of the actuarial valuations completed by actuary firms hired by the Town. The valuations contain various assumptions and estimates which may change over a period of time. However at June 30, 2015, we reviewed the most recent actuarial valuations available in determining that the obligations reported in the government-wide financial statements are reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

The disclosure of the Retirement Plans as of and for the fiscal year ended June 30, 2015 described in Note IV to the financial statements.

The disclosure of the other post-employment benefits (OPEB) as of and for the fiscal year ended June 30, 2015 described in Note IV to the financial statements.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. See attachment I for material entries detected as a result of audit procedures.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated December 30, 2015.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the City of Cranston's financial statements or a determination

of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the City of Cranston's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to the management's discussion and analysis, capital assets used in the operations of governmental funds schedules and budgetary comparison information, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on combining and individual nonmajor fund financial statements, which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory and statistical sections, which accompany the financial statements but are not RSI. We did not audit or perform other procedures on this other information and we do not express an opinion or provide any assurance on it.

Restriction on Use

This information is intended solely for the use of City Council, Finance Committee, Audit Committee and management of the City of Cranston, Rhode Island and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,

Marcum LLP

Adjusting Journal Entry JE #1

To correct posting error-wrong account
 800-8000-41405-000000 PASTORE COMPLEX SEWER FEE
 800-8000-15102-000000 DUE FROM PASTORE COMPLEX

1,740,725.91	1,740,725.95
<u>1,740,725.91</u>	<u>1,740,725.91</u>

Total

Adjusting Journal Entry JE #2

To accrue FY15 expenditures
 800-8000-18220-000000 CONSTRUCTION IN PROGRESS
 800-8000-21110-000000 CURRENT YEAR ACCOUNTS PAYABLE

1,593,575.89	1,593,575.89
<u>1,593,575.89</u>	<u>1,593,575.89</u>

Total

Adjusting Journal Entry JE #3

To record sewer depreciation
 800-8000-50870-000000 DEPRECIATION
 800-8000-18500-000000 ACCUMULATED DEPRECIATION

2,320,565.91	2,320,565.91
<u>2,320,565.91</u>	<u>2,320,565.91</u>

Total

Adjusting Journal Entry JE #4

To reclass completed projects
 800-8000-18202-000000 SEWER LINES
 800-8000-18207-000000 TREATMENT PLANT & EQUIPMENT
 800-8000-18220-000000 CONSTRUCTION IN PROGRESS

668,879.38	3,427,049.98
2,758,170.60	3,427,049.98
<u>3,427,049.98</u>	<u>3,427,049.98</u>

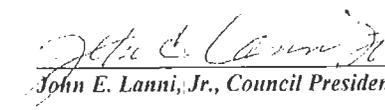
Total

THE CITY OF CRANSTON

RESOLUTION OF THE CITY COUNCIL
AUTHORIZING REAL ESTATE/TANGIBLE TAX ABATEMENTS AS
RECOMMENDED BY CITY ASSESSOR

No. 2015-40

Passed:
December 21, 2015



John E. Lanni, Jr., Council President

Resolved, That

The request of the City Assessor for the following abatements for manifest errors and reasons therein stated be granted and that a certified copy of this Resolution be for the respective amounts a sufficient voucher for the City Treasurer.

(See attached list of Abatements)

U/RES RE ABATE

ALLAN FUNG
MAYOR



SALVATORE SACCOCCIO JR.
CITY ASSESSOR

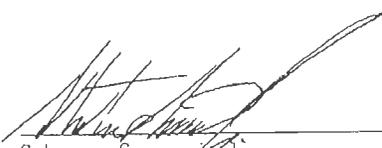
DAVID COLE
DEPUTY ASSESSOR

MEMO

DATE: December 1, 2015
TO: His Honor the Mayor and the Honorable City Council
FROM: City Assessor
RE: Real Estate and Tangible Abatements

The following assessments are recommended for abatement in the amounts and for the reasons hereinafter set forth.

<u>Assessment Date</u>	<u>Value</u>	<u>Tax</u>
December 31, 2014	1,037,183	30,944.47


Salvatore Saccoccio, Jr.
City Assessor

*** RECR1ABY.REP *** Printed 12/01/2015 at 11:00.12 by KARBUR

Page 2

City of Cranston
2015 Abatement List

10	1915177003 008-2040 Location 510 DYER AV RUSO ROBERT J & RUSSO DIANE M 2 ASHBROOK HUN EAST GREENWICH RI 02818	11	2108010001 992-086-100 Location VARIOUS ST TCF EQUIPMENT FINE INC TCF EQUIPMENT FINE INC 1111 WAZATA BLVD STE 801 MINNETONKA MN 55305	12	2108806007 005-2567 Location 20 AVERY RD THE EMELINE COMPANY 765 WESTMINSTER STREET PROVIDENCE RI 02903-4018
	Value Tax		Value Tax		Value Tax
	Original : 274800 9255.20		Original : 331785 11174.51		Original : 404300 16648.02
	ASSESSORS APPE : 24500 825.16		LISTING ERROR : 286776 9658.02		ASSESSORS APPE : 44300 1482.02
	Adjusted : 250300 8430.10		Adjusted : 45009 1515.89		Adjusted : 450000 15158.00
13	2108806003 005-1036 Location 34 AVERY RD THE EMELINE COMPANY 765 WESTMINSTER STREET PROVIDENCE RI 02903-4018	14	2108475001 021-0306 Location 634 WILBUR AV TRAVIS JOSEPH O TRAVIS ROBERTA L 634 WILBUR AVE CRANSTON RI 02921		0000000000 Location
	Value Tax		Value Tax		Value Tax
	Original : 521200 17554.01		Original : 196700 4415.91		Original : :
	ASSESSORS APPE : 53200 1791.78		LISTING ERROR : 15000 366.96		ASSESSORS APPE : :
	Adjusted : 468000 15762.23		Adjusted : 180800 4058.95		Adjusted : :

	Value Tax	on 14 Accounts			
Original	7558083	224257.02			
Abatements	1037183	30944.47			
Adjusted	6516800	193312.55			

City of Cranston
2016 Abatement List

1 0330093001 029-0093
Location 55 CREST DR
CAVALLORO MICHAEL D
P O BOX 8300
CRANSTON RI 02920

	Value	Tax
Original	: 845300	12241.98
ASSESSORS APPE	: 20000	449.00
Adjusted	: 525300	11792.98

2 0331498001 003-1455
Location 14 WESTERN PROM
COMPREHENSIVE COMMUNITY ACTION
311 OORIC AVENUE
CRANSTON RI 02910

	Value	Tax
Original	: 160000	3592.00
Exemption Omlt	: 180000	3592.00
Adjusted	:	

3 0420103001 890-4201-030
Location VARIOUS ST
DELL EQUIPMENT FUNDING LP
ATTN PROPERTY TAX DEPT
1 DELL WAY RR1-35
ROUND ROCK TX 78682

	Value	Tax
Original	: 231578	7799.54
LISTING ERROR	: 12898	434.40
Adjusted	: 218680	7365.14

4 1006676001 034-0074
Location 61 BEECHWOOD DR
JAISWAL SANDEEP
JAISWAL LORI T/E
81 BEECHWOOD DR
CRANSTON RI 02921

	Value	Tax
Original	: 538000	12033.20
ASSESSORS APPE	: 86200	2159.69
Adjusted	: 409800	9873.51

5 1006566501 002-3008
Location 135 ARNOLD AV
JENKINS MELISSA A
135 ARNOLD AVE
CRANSTON RI 02905

	Value	Tax
Original	: 274700	6167.01
ASSESSORS APPE	: 11900	267.18
Adjusted	: 262800	5899.83

6 1312215501 010-0899
Location 1 WHOLESALE WAY
LICHT REALTY COMPANY
786 WESTMINSTER STREET
PROVIDENCE RI 02903-4010

	Value	Tax
Original	: 3010400	181303.30
ASSESSORS APPE	: 268400	8770.27
Adjusted	: 2750000	92020.03

7 1716300501 009-3116
Location 83 FAIRFIELD RD
PAPADOLIAS JULIA K LIFE ESTA
C/O ANGELA BRANSOUCCI
170 PLAINFIELD PIKE
NORTH SCITUATE RI 02857

	Value	Tax
Original	: 164800	3899.76
Exemption Omlt	: 23989	536.78
Adjusted	: 140811	3163.00

8 1915460501 029-0097
Location CREST DR
RESTIVO JOHN R Jr. & RESTIVO J
50 CREST DR
CRANSTON RI 02921

	Value	Tax
Original	: 673300	15115.60
ASSESSORS APPC	: 21700	407.17
Adjusted	: 651600	14828.41

9 1916149501 008-2170
Location 27 WILLIS ST
RUO MICHAEL C
27 WILLIS STREET
CRANSTON RI 02910-112

	Value	Tax
Original	: 141200	3189.94
ASSESSORS APPE	: 5500	123.48
Adjusted	: 135700	3046.46

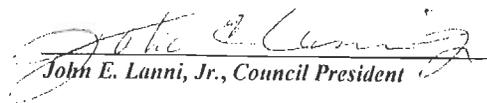
THE CITY OF CRANSTON

RESOLUTION OF THE CITY COUNCIL
AUTHORIZING MOTOR VEHICLE TAX ABATEMENTS AS RECOMMENDED
BY CITY ASSESSOR

No. 2015-41

Passed:

December 21, 2015


John E. Lanni, Jr., Council President

Resolved, That

The request of the City Assessor for the following abatements for manifest errors and reasons therein stated be granted and that a certified copy of this Resolution be for the respective amounts a sufficient voucher for the City Treasurer.

(See attached list of Abatements)

U/RES.MV ABATE

ALLAN FUNG
MAYOR



DIVISION OF ASSESSMENT
869 PARK AVE
CRANSTON, RI 02910

SALVATORE SACCOCCIO JR.
CITY ASSESSOR

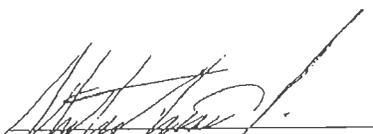
DAVID COLE
DEPUTY ASSESSOR

MEMO

DATE: December 1, 2015
TO: His Honor the Mayor and the Honorable City Council
FROM: City Assessor
RE: Motor Vehicle Abatements

The following assessments are recommended for abatement in the amounts and for the reasons hereinafter set forth:

<u>Assessment Date</u>	<u>Value</u>	<u>Tax</u>
December 31, 2011	4,902	208.02
December 31, 2012	13,346	566.40
December 31, 2013	18,337	778.22
December 31, 2014	<u>30,055</u>	<u>1,275.54</u>
Totals:	66,640	2,828.18


Salvatore Saccoccio, Jr.
City Assessor

*** MECRIABT_CR.REP *** Printed 12/12/16 at 12:02:54 by KARBUR Page 1

City of Cranston
2012 Motor Vehicle
Abatement List

1	42003880	0000080295	605764	00000000	0000000000	00000000	0000000000
	Vehicle 2007	HOND		Vehicle 0000		Vehicle 0000	
	ID 1HGCM72777A013919			ID		ID	
	LAHIGAN LISA A						
	56 BEACHMONT AVE						
	Cranston RI 02905						
		Value	Tax	Original	Value	Tax	Original
	Original :	13,371	546.25	:			:
	STOLEN/SOLO/JUNK/TOT		208.02				
	Adjusted Tax:		338.23	Adjusted Tax:			Adjusted Tax:

For Tax Year: 2012

	Original	Value	Tax	
	:	13371	546.25	
	Adjusted Tax		208.02 on 1	Accounts
	:		338.23	

*** MECRIABT_CR.REP *** Printed 12/01/2015 at 12:03:08 by KAR00A Page 1

City of Cranston
2013 Motor Vehicle
Abatement List

34012880	0000030543	1	01	2	42003730	000000533	606764	00000000	0000000000
Vehicle 2008	CHEV				Vehicle 2007	HOND		Vehicle 0000	
ID 1GCHK28018E148804					ID 1H0CH72777A513919			ID	
DEMARCO CARLO S					LAVIGAN LISA A				
71 BERRY ST					58 BEACHPONT AVE				
CRANSTON RI 02920					Cranston RI 02905				

Original :	Value	Tax	Original :	Value	Tax	Original :	Value	Tax
EXEMPTION OMITTED	7,732	337.28	STOLEN/SOLD/JUNK/TOTA	10840	439.08			
Adjusted Tax:		127.32	Adjusted Tax:		439.08	Adjusted Tax:		
		209.96						

For Tax Year: 2013

Original :	Value	Tax	
Adjusted Tax :	18578	776.36	on 2 Accounts
		566.40	
		209.96	

*** MECRIABT_CR.REP *** Printed 12/01/2015 at 12:03:23 by KARBUH

Page 1

City of Cranston
2014 Motor Vehicle
Abatement List

<p>1 34013898 0000039888 I 91 2</p> <p>Vehicle 2006 CHEV</p> <p>ID 1GCHK29D18E148884</p> <p>DEMARCO CARLO S</p> <p>71 BERRY ST</p> <p>CRANSTON RI 02920</p>	<p>2 42003830 0000081343</p> <p>Vehicle 2007 HOND 806764</p> <p>ID 1H0CH72777A013819</p> <p>LAMIGAN LISA A</p> <p>68 BEACHMONT AVE</p> <p>Cranston RI 02905</p>	<p>3 44000120 0000103158</p> <p>Vehicle 2010 TOYO HO 583</p> <p>ID 1NXB4EEBAZ178311</p> <p>MADEAU CHRISTOPHER J</p> <p>197 FLAT AVE</p> <p>Cranston RI 02910</p>
<p>Original Value Tax</p> <p> 11,704 566.19</p> <p>EXEMPTION OMITTED 127.32</p> <p>Adjusted Tax: 438.87</p>	<p>Original Value Tax</p> <p> 4905 196.90</p> <p>STOLEN/SOLD/JUNK/TOT 196.90</p> <p>Adjusted Tax:</p>	<p>Original Value Tax</p> <p> 9416 382.94</p> <p>STOLEN/SOLD/JUNK/TOT 326.39</p> <p>Adjusted Tax: 46.55</p>
<p>4 60002380 0000142595</p> <p>Vehicle 2005 CHEV 082833</p> <p>ID 1GCDT136168189810</p> <p>TAVARES NICHOLAS D</p> <p>15 GADLIONE CT</p> <p>CRANSTON RI 02921</p>	<p>00000000 0000000000</p> <p>Vehicle 0000</p> <p>ID</p>	<p>00000000 0000000000</p> <p>Vehicle 0000</p> <p>ID</p>
<p>Original Value Tax</p> <p> 7,487 298.63</p> <p>STOLEN/SOLD/JUNK/TOT 118.61</p> <p>Adjusted Tax: 177.92</p>	<p>Original Value Tax</p> <p> 0 0</p> <p>Adjusted Tax:</p>	<p>Original Value Tax</p> <p> 0 0</p> <p>Adjusted Tax:</p>

For Tax Year: 2014

Original	Value	Tax	
	33512	1441.56	
Adjusted Tax		778.22	on 4 Accounts
		863.34	

*** MEDRIABT_CR.REP *** Printed 12/01/2015 at 12:03:36 by KANBUR Page 1

City of Cranston
2015 Motor Vehicle
Abatement List

Line	Vehicle ID	Year	Make	Model	Color	Plate	Owner	Address	City	State	Zip	Value	Tax	Notes
1	34013140	2006	CHEV		I	91	DEMARCO CARLO S	71 BERRY ST	CRANSTON	RI	02920	10,067	470.49	EXEMPTION OMITTED
2	38010260	2012	HOND				HONDA LEASE TRUST	600 KELLY WAY	Holyoke	MA	01040	13488	609462.20	OUT OF STATE REG
3	43005260	2005	ACUR			UE 178	MALO JACOB K	15 MAURAN ST	Cranston	RI	02910	2308	88.87	STOLEN/SOLD/JUNK/TOT
4	44000110	2010	TOYO		HO	583	MADEAU CHRISTOPHER J	187 FIAT AVE	Cranston	RI	02910	7,522	303.40	STOLEN/SOLD/JUNK/TOT
5	48013780	2008	INFI				ROBILLARD MICHAEL P	80 BLAISDELL ST	Cranston	RI	02910	5955	241.57	OUT OF STATE REG
6	48019570	2007	VW			530208	ROSEN MARK D	515 NATICK AVE	Cranston	RI	02921	5800	735.02	STOLEN/SOLD/JUNK/TOT
7	50002350	2005	CHEV			062633	TAVARES NICHOLAS D	15 GAGLIONE CT	Cranston	RI	02921	1,514	59.07	STOLEN/SOLD/JUNK/TOT
8	50010450	2004	PORS			365216	TORRES ANVIA E	414 WELLINGTON AVE	CRANSTON	RI	02910	1061	177.77	STOLEN/SOLD/JUNK/TOTA

For Tax Year: 2015

	Value	Tax
Original	48866	811528.39
Adjusted Tax		1275.54 on 8 Accounts
		810252.86

Dec-15 Waiver of Interest Applications

Page 1

Recommend To Approve:

<u>NAME</u>	<u>ADDRESS</u>	<u>TAX AMT</u>	<u>INTEREST</u>	<u>REASON</u>
Ascoli, Joseph	76 Angell Ave	\$1,118.62	\$134.24	illness
Birch, Robert	53 Squantum St	1,319.11	\$ 197.87	lostcheck
Conti, Ermina	12 Hoffman ave	955.45	\$114.59	illness
Cournoyer, Barbara	134 Park Ave	2,513.65	\$377.05	lostcheck
DeCrosta, Susan	26 Iris Dr	141.64	\$17.00	hardship
DiFanti, Anthony	647 Oaklawn Ave	9,213.65	\$1,382.05	lostcheck
DiGiglio, Nancy	186 Marjoram Dr	1,856.88	\$629.06	hardship
Dowiot, Dawn	255A Scituate Ave	111.39	\$16.67	hardship
Friedman, Roberta	4 Dean Ridge Dr	9,386.91	\$469.35	death
Grislis, Susan	19 Highland St	1,104.08	\$165.61	lostcheck
Hakopyan, Shushanik	21 Mozart St	445.57	\$22.28	lostcheck
Lake, Christopher	51 Arrow Way	168.16	\$15.14	hardship
Licciardi, Frank	59 Fountain Ave	726.27	\$109.30	hardship
Megredichian, Sandra	41 Crocus	2,005.90	\$300.89	death
Morelli, Louis	57 Woodlawn Dr	3,677.54	\$183.88	death
Moretti, Mary	59 Bennington Rd	1,142.24	\$171.34	illness
Palmer, Marsha	2 Clay St	111.39	\$16.71	lostcheck
Reyes, Michael	5 Mayfair Rd	3,571.82	\$357.19	death
Rozman, Anatoliy	121 Castleton Dr	2,089.60	\$313.44	illness
Russen, Herbert	66 Beacon Circle	1,140.26	\$171.04	death
Saltzman, Richard	82 Mt. Laurel Dr	2,499.80	\$374.97	lostcheck
Schiano, Kenneth	30 Ruxton St	688.77	\$103.47	lostcheck
Walker, Betty	4 Beech Ave	4,029.51	\$161.18	hardship
Recommend to Deny				
Carlson Realty LLC	275 Niantic Ave	22,358.60	\$1,117.93	no bill
Verduchi, Clifford	101 Hillcrest Dr	499.95	\$139.99	no bill

12-15-01

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THE CITY OF CRANSTON

ORDINANCE OF THE CITY COUNCIL
IN AMENDMENT OF TITLE 5.12 OF THE CODE OF THE CITY OF
CRANSTON, 2005, ENTITLED "ALCOHOLIC BEVERAGE LICENSES
(Alcohol Server Training Class A)

No.

Passed:

John E. Lanni, Jr., Council President

Approved:

Allan W. Fung, Mayor

It is ordained by the City Council of the City of Cranston as follows:

Section 1. Title 5.12. entitled "Alcoholic Beverage Licenses" is hereby amended as follows:

5.12.090 - Training certification for liquor license holders.

A. Effective ~~{October 1, 1998,}~~ December 1, 2015 and every renewal date thereafter, the holders of all Class A, B (full privilege), B (limited), C, D (full privilege), D (limited), and J liquor licenses, shall present to the committee on safety services and licenses evidence of the successful completion of an alcohol server ~~[s/dispenser's training program by either the license holder or a designated employee.]~~ training regulations as promulgated by the department of business regulation as set forth in RIGL 3-7-6.1(b).

- 1) All persons who sell or serve alcoholic beverages; anyone serving in a supervisory capacity over those who sell or serve alcoholic beverages; anyone whose job description entails the checking of identification for the purchase of alcoholic beverages; and valet parking staff shall receive alcohol server training regulations, as set forth herein.
- 2) Any eligible employee of a licensee shall be required to complete certified training within sixty (60) days of the commencement of his or her employment and must attain a minimum score of seventy-five percent (75%).
- 3) Licensees shall require servers to be recertified every three (3) years.
- 4) As a condition of license renewal, and as part of the license renewal application, each licensee must submit to the City Clerk information verifying that all persons listed under subsection (A)(1) of this section and employed by the licensee for more than sixty (60) days in the past year have completed a certified program within the last three (3) years.
- 5) All persons identified under subsection (A)(1) of this section must have their valid server permits on the premises when engaged in the sale or service of alcoholic beverages.
- 6) Individuals who have been issued a server permit in another jurisdiction by an approved Rhode Island alcohol server training program shall be determined to be in compliance with this section subject to the three-year (3) limitation contained herein.

12-15-01

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B. A certificate of successful completion of the training program shall be posted in a visible area of the licensed establishment.

~~C. [A list of alcohol server's/dispenser's training programs recommended by the mayor's advisory committee on substance abuse will be submitted to the committee on safety services and licenses for their approval.]~~ The office of the city clerk will make available to license holders and new applicants a list of the approved training programs. Approved alcohol server training programs are those that meet the criteria set forth in RIGL 3-7-6.1(c) and the Department of Behavioral Healthcare, Developmental Disabilities and Healthcare.

~~D. [In the event the "designated" employee terminates employment in the licensed establishment, the license holder, or a new "designated" employee has ninety (90) days to provide evidence of successful completion of the training program to the office of the city clerk.]~~

E. In the event that the liquor license is transferred to a new owner, the new license holder, ~~[or a designated employee]~~ has ninety (90) days to provide evidence of successful completion of the training program to the office of the city clerk.

F. Failure of a license holder to provide evidence of the successful completion of the training program to the office of the city clerk, shall result in the notification of said license holder to appear before the committee on safety services and licenses for a show cause hearing.

G. Violations.
Graduated penalties for licensees for violations within a three-year (3) period beginning with an initial written warning for violations within a three-year (3) period for a first violation; a written warning for a second violation; a fine not to exceed two hundred fifty dollars (\$250.00) for a third violation or noncompliance; and a license suspension for subsequent violations.

All licensees shall be in compliance with said regulations within ninety (90) days of December 1, 2015, or be subject to the penalties set forth herein.

Section 2: This Ordinance shall take effect upon its final adoption.

Positive Endorsement		Negative Endorsement (attach reasons)	
_____	_____	_____	_____
Christopher Rawson, Solicitor	Date	Christopher Rawson, Solicitor	Date

Sponsored by: Safety Services & Licenses Committee
Referred to Safety Services: January 4, 2016

12-15-02

THE CITY OF CRANSTON

ORDINANCE OF THE CITY COUNCIL

IN AMENDMENT OF CHAPTER 10.32 OF TITLE 10 OF THE CODE OF THE CITY OF CRANSTON, 2005, ENTITLED "MOTOR VEHICLES AND TRAFFIC", STOPPING, STANDING AND PARKING ON SPECIFIC STREETS (Legion Way from Pontiac to Elsie)

No.

Passed:

John E. Lanni, Jr., Council President

Approved:

Allan W. Fung, Mayor

It is ordained by the City Council of the City of Cranston as follows:

Section 1. Chapter 10.32 Section 350 entitled "No Parking On Certain Streets—Near School When School In Session" is hereby amended by adding the following:

10.32.350(G)

Between the hours of 8:00 a.m. and 4:00 p.m. on days when the Cranston High School is in session, no vehicle shall remain standing for any period of time upon the following streets:

Julia Street, west side, between High School Avenue and Legion Way.

Pontiac Avenue, west side, from Park Avenue southerly to the intersection of Hayward Street.

Rugby Street, east side, from Wollaston Street to Park Avenue.

Legion Way, both sides, from Pontiac Avenue to Elsie.

Section 2: This Ordinance shall take effect upon its final adoption.

Positive Endorsement

Negative Endorsement (attach reasons)

Christopher Rawson, Solicitor Date

Christopher Rawson, Solicitor Date

Sponsored by Councilman Botts

Referred to Ordinance Committee January 14, 2016

12-15-03

THE CITY OF CRANSTON

ORDINANCE OF THE CITY COUNCIL
ORDINANCE OF THE CITY COUNCIL RATIFYING THE INTERNATIONAL
ASSOCIATION OF FIREFIGHTERS, AFL-CIO LOCAL UNION 1363
CONTRACT (FY July 1, 2016 – June 30, 2019)

No.

Passed:

John E. Lanni, Jr., Council President

Approved:

Allan W. Fung, Mayor

It is ordained by the City Council of the City of Cranston as follows:

Section 1. The City of Cranston has through its corporate officials, bargained collectively with the International Association of Firefighters, AFL-CIO, Local 1363 which is the certified bargaining representative of Local 1363 firefighters as set forth in the contract; and Local 1363 and the City of Cranston have reached an understanding respecting the terms of a contract resulting from concession bargaining.

Section 2. That agreement in writing between the City of Cranston and Local 1363, a copy of which is attached hereto and made a part hereof, is hereby ratified, confirmed and approved by this City Council.

Section 3. That except as modified by the terms of the aforesaid agreement, the City of Cranston shall retain all powers vested in it by law and its Charter over the management, regulation and control of said City firefighters.

Section 4. Any additional agreements, letters of understanding, contract addendums or modifications during the life of this collective bargaining agreement between the parties must be ratified by the City Council and comply with Charter Sec.14.17.

Section 5. This Ordinance shall take effect upon its final adoption.

Positive Endorsement

Negative Endorsement (attach reasons)

Christopher M. Rawson, Solicitor

Christopher M. Rawson, Solicitor

12-15-03

47 **Fiscal Note**

48

49 I hereby certify that it is anticipated that sufficient funds will be available to fund this
50 contract, and I have provided a fiscal impact analysis, in accordance with Section
51 3.04.152 of the Cranston City Code.

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55 _____
Robert F. Strom, Director of Finance

56

57 Sponsored by Allan W. Fung, Mayor

58

59 Referred to Finance Committee January 14, 2016

	A	B	C	D	E	F	G	H	I	J	K	L
1	Fire IAFF Proposed Contract July 1, 2016 - June 30, 2019											
2												
3				FY 17			FY18			FY19		TOTAL
4												
5	Salary Increases											
6		3% July 1, 2017					377,434					377,434
7		3% July 1, 2018								388,757		388,757
8												766,191
9	Salary Decreases (8 Firefighters)			(472,853)								(472,853)
10	Salary Decreases (5 Firefighters)						177,320					177,320
11	Salary Decreases (5 Firefighters)									0		0
12												
13	Holiday Pay (15)			0			35,384			40,082		75,466
14												
15	Longevity (10.33%)			0			38,568			39,725		78,293
16												
17	Payroll Taxes (1.46%)			0			6,645			6,794		13,339
18												
19	Pension Currently (11.16%)			0			50,330			52,243		102,573
20												
21	Uniform Clothing Allowance											
22												0
23		6/30/17 \$50.00/ee					9,800					9,800
24		6/30/18 \$50.00/ee								9,800		9,800
25												
26												
27	Uniform Cleaning Allowance											
28		7/1/16 \$100.00/ee deferred to										0
29		7/1/17 \$100.00/ee					19,600					19,600
30												
31	Health Care CoPay Increase											
32		Blue Cross - Family		(28,504)			(9,485)			(19,019)		(57,008)
33		Blue Cross - Individual		(3,896)			(1,208)			(2,588)		(7,792)
34												
35		United - Family		(14,402)			(4,792)			(9,610)		(28,804)
36		United - Individual		(300)			(100)			(200)		(600)
37												
38	OPEB Increases											
39		\$50.00 increase 7/1/16		(9,100)								(9,100)
40		\$50.00 increase 7/1/17					(9,100)					(9,100)
41		\$50.00 increase 7/1/18								(9,100)		(9,100)
42												
43	Delta Dental Co-Share											
44		\$ 5.00 Family per pay period		(20,410)								(20,410)
45		\$ 2.00 Individual per pay period		(4,940)								(4,940)
46												
47	Delta Dental increase Coverage to \$ 3,000									3,429		3,429
48	from \$ 2500											
49				(564,405)			690,206			500,283		\$636,084

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

Tentative Agreement

WHEREAS, this Tentative Agreement between the City of Cranston, Rhode Island and Local 1363, International Association of Fire Fighters is entered into on DECEMBER 15, 2015 as the collective bargaining agreement, titled "Agreement Between the City of Cranston, Rhode Island and Local 1363, International Association of Fire Fighters, AFL-CIO July 1, 2013 to June 30, 2016" is set to expire and;

WHEREAS, except as specifically and expressly set forth in this Tentative Agreement and subject to the ratification procedures of both parties to this Tentative Agreement, all of the terms and conditions in the collective bargaining agreement (dated July 1, 2013 to June 30, 2016) shall continue and remain in effect and are incorporated by reference as if fully reproduced herein; and

WHEREAS, the collective bargaining agreement resulting from this Tentative Agreement shall be subject to ratification by both the City's and the Union's authorized ratifying bodies;

NOW, THEREFORE, the following contains the agreement and understanding of the parties' to enter into a collective bargaining agreement titled "Agreement Between the City of Cranston, Rhode Island and Local 1363, International Association of Fire Fighters, AFL-CIO dated July 1, 2016 to June 30, 2019.

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(1.) p2.

A G R E E M E N T

This Agreement is entered into as of the 1 day of JULY, ~~2013-2016~~, by and between the City of Cranston (hereinafter referred to as "City" or "Employer") and the International Association of Fire Fighters, Local 1363, AFL-CIO (hereinafter referred to as "Union" or "I.A.F.F." or "Local 1363"). This Collective Bargaining Agreement (hereinafter "Agreement"), is entered into pursuant to the authority granted by Rhode Island General Laws Title 28, Chapter 9.1, et seq. known as the Fire Fighters' Arbitration Act, as amended.

AWF 12/2/15 [Signature]
City L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(2)p 10. **Section 4.5 - Vacancies - Privates And Officers Ranks**

1. Vacancies in the Privates' ranks shall be filled as soon as practicable after the date vacancy occurs. A vacancy occurs as a result of a retirement, death, promotion or termination.

Effective July 1, 2016 The City may hold up to eight (8) private positions vacant.

Effective July 1, 2017 and expiring on June 30, 2019 the City may hold up to five (5) private positions vacant.

AWP 12/21/15

City

REV SR

L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(3.) p29 **Section 15.1 - Uniform Clothing Allowance and Voucher**

The uniform issue will be by the voucher system. Each member may choose clothing from the following listed items. NFPA Approved blue uniform shirt and pants, polo shirts, shoes or athletic shoes and a belt. The Chief of the Department may add or delete any additional clothing or equipment he deems necessary to the voucher list. ~~In 2009 the cost of each voucher will not exceed five hundred fifty (\$550) dollars per member.~~

Effective July 1, 2015 the cost of each voucher will not exceed six hundred (\$600.00) dollars.

~~Effective July 1, 2016 the cost of each voucher will not exceed seven hundred (\$700.00) dollars.~~

Effective July 1, 2017 the cost of each voucher will not exceed six hundred and fifty (\$650.00) dollars.

Effective July 1, 2018 the cost of each voucher will not exceed seven hundred (\$700.00) dollars.

AWP 12/21/15
City

Per JR
L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(4.)p 32

Section 15.4 - Clothing Maintenance Allowance

~~Effective July 1, 2015, said amount shall be increased to one thousand and three hundred (\$1300.00) dollars per year.~~

Effective July 1, 2017, said amount shall be increased to one thousand and three hundred (\$1300.00) dollars per year.

AWF 12/21/15
City

PEW JR
L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(5.)p 39 Section 16.4 - Good Attendance (Effective January 1, 1997)

All employees who use four (4) days or less of sick leave including family illness in any calendar year shall receive two (2) days of pay for each year of good attendance accumulated until retirement; which will be paid at one-fifth (1/5) the weekly rate of pay effective for their rank at the time of their retirement (Effective January 1, 1997).

Effective July 1, 2016 Good Attendance shall no longer be accrued by any member. Any member who has received days of pay for each year of good attendance prior to July 1, 2016, shall remain with said member until retirement; which will be paid at one-fifth (1/5) the weekly rate of pay effective for their rank at the time of their retirement.

AWF 12/21/15
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REV JR
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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(6.) p 42

Section 19 - Salary and Longevity

A. Salaries for all members of the Fire Department covered by this Agreement shall be as set forth in Appendix A hereto, which is incorporated herein by reference, which shall include the following increases:

July 1, 2016	Zero (0%) percent
July 1, 2017	Three (3%) percent
July 1, 2018	Three (3%) percent

AWF 12/21/15
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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(7.)p.46, 47 **Section 21 - Medical Insurance, Dental Insurance, Life Insurance and Burial Expenses** subsections A(8) and B(4)

Effective ~~July 1, 2013~~ July 1, 2016 the following on-site co-pays shall apply:

- a) Office visits and Urgent care or "Urgi-care" facilities - Ten (\$10.00) dollars
- b) Emergency Room visits - ~~\$50.00~~ \$100.00

In the event that an Urgicenter or Urgent care facility is not open and a member seeks treatment at an Emergency Room, those covered under the member's health care plan will be reimbursed the Emergency Room Co-payment of ~~fifty (\$50.00) dollars.~~ one hundred (\$100.00) dollars less the Urgent Care co-pay amount. In the event a member is hospitalized after being evaluated in the Emergency Room, those covered under the member's Health care plan will be reimbursed the Emergency Room Co-payment of ~~fifty (\$50.00) dollars.~~ one hundred (\$100.00) dollars.

AWP 12/21/15
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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(8.) p46 Section 21 - Medical Insurance, Dental Insurance, Life Insurance and Burial Expenses

A. Blue Cross/Blue Shield

7. Health Care Co-Share – Each member shall pay, by payroll deduction, a pretax amount of twenty-three dollars and fifteen cents (\$23.07) per week for a total amount of twelve hundred dollars (\$1200.00) per year for an individual plan and forty-six dollars and seven cents (\$46.15) per week for a total amount of twenty-four hundred (2400.00) per year for a family plan.

Effective July 1, 2016, said amount shall be increased to twenty-five dollars and ninety-seven cents (\$25.97) per week for a total amount of one thousand and three hundred and fifty (\$1350.00) dollars per year for individual plan and fifty one dollars and ninety-three cents (\$51.93) per week for a total amount of twenty-seven hundred (\$2700.00) for a family plan.

Effective July 1, 2017, said amount shall be increased to twenty-six dollars and ninety-three cents (\$26.93) per week for a total amount of one thousand and four hundred (\$1400.00) dollars per year for individual plan and fifty-three dollars and eighty-five cents (\$53.85) per week for a total amount of twenty eight hundred (\$2800.00) dollars per year for a family plan.

Effective July 1, 2018, said amount shall be increased to twenty eight dollars and eighty five cents (\$28.85) per week for a total amount of one thousand and five hundred (\$1500.00) dollars per year for individual plan and fifty seven dollars and seventy cents (\$57.70) per week for a total amount of three thousand (\$3000.00) dollars for a family plan.

AWF 12/21/15

City

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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(9.) p46 Section 21 - Medical Insurance, Dental Insurance, Life Insurance and Burial Expenses

B. United Health

3. Health Care Co-Share – Each member shall pay, by payroll deduction, a pretax amount of twenty-three dollars and fifteen cents (\$23.07) per week for a total amount of twelve hundred dollars (\$1200.00) per year for an individual plan and forty-six dollars and seven cents (\$46.15) per week for a total amount of twenty-four hundred (\$2400.00) per year for a family plan.

Effective July 1, 2016, said amount shall be increased to twenty-five dollars and ninety-seven cents (\$25.97) per week for a total amount of one thousand and three hundred and fifty (\$1350.00) dollars per year for individual plan and fifty one dollars and ninety-three cents (\$51.93) per week for a total amount of twenty-seven hundred (\$2700.00) for a family plan.

Effective July 1, 2017, said amount shall be increased to twenty-six dollars and ninety-three cents (\$26.93) per week for a total amount of one thousand and four hundred (\$1400.00) dollars per year for individual plan and fifty-three dollars and eighty-five cents (\$53.85) per week for a total amount of twenty eight hundred (\$2800.00) dollars per year for a family plan.

Effective July 1, 2018, said amount shall be increased to twenty eight dollars and eighty five cents (\$28.85) per week for a total amount of one thousand and five hundred (\$1500.00) dollars per year for individual plan and fifty seven dollars and seventy cents (\$57.70) per week for a total amount of three thousand (\$3000.00) dollars for a family plan.

AWF 12/21/15

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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(10.)p55 **Section 21 - Medical Insurance, Dental Insurance, Life Insurance and Burial Expenses**

F. Retired Benefits:

19. Other Post Employment Benefits

Effective July 1, 2016 all members shall pay a sum of thirteen dollars and forty-seven (\$13.47) cents bi-weekly for a total of three hundred and fifty (\$350.00) dollars per year toward their OPEB (Other Post Employment Benefits). The City agrees that they will place these monies in a restricted account toward post retirement benefits.

Effective July 1, 2017 all members shall pay a sum of fifteen dollars and thirty-nine (\$15.39) cents bi-weekly for a total of four hundred (\$400.00) dollars per year toward their OPEB (Other Post Employment Benefits). The City agrees that they will place these monies in a restricted account toward post retirement benefits.

Effective July 1, 2018 all members shall pay a sum of seventeen dollars and thirty-one (\$17.31) cents bi-weekly for a total of four hundred and fifty (\$450.00) dollars per year toward their OPEB (Other Post Employment Benefits). The City agrees that they will place these monies in a restricted account toward post retirement benefits.

AWP 12/21/15

City



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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(11.)p.55 **Section 21 - Medical Insurance, Dental Insurance, Life Insurance and Burial Expenses**

F. Retired Benefits:

21. Effective July 1, 2016 All retired employees who have become eligible for Medicare by reason of age, shall be allowed to purchase for their spouse, at no cost to the City including administrative costs, and at the retired member's expense, the active members' Blue Cross/Blue Shield or United Individual healthcare plan, or any healthcare plan agreed to by the parties at the City's rate, until such time as the spouse is eligible for Medicare by reason of age.

AMF 12/21/15

City

REWARD

L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(12.)p56 **Section 21.2 – Dental Insurance**

1. The maximum dollar (\$) amount on Levels I, II, III, and IV shall be ~~two thousand (\$2,000.00) dollars effective June 30, 2004.~~
Effective January 1, 2015 the dollar amount shall increase to two thousand and five hundred (\$2500.00) dollars per level.
Effective July 1, 2018 the dollar amount shall increase to three thousand (\$3000.00) dollars per level.
2. Effective July 1, 2016 all members enrolled in an individual plan shall pay the sum of two dollars (\$2.00) bi-weekly for a total of fifty two dollars (\$52.00) and any member who is enrolled in a family plan shall pay the sum of five dollars (\$5.00) bi-weekly for a total of one hundred and thirty (\$130.00) dollars per year toward their Dental Insurance.

AWF 12/21/15
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L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(13.)p58

Section 21. 4- Burial Insurance

The City agrees to assume and pay for the funeral expenses for any employee killed in the line of duty; such payment, however, shall not exceed ten thousand (\$10,000.00) dollars.

Effective July 1, 2016 the dollar amount shall shall not exceed twenty thousand (\$20,000.00) dollars

AWF 12/21/15
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RECTOR
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TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(14)p 77.

Section 24.2 - Pension Payments

5. Effective July 1, 2016 all civilian employees of the fire department will have the option of choosing a defined contribution plan (i.e., a 401(a) plan or equivalent) agreed to by the parties in lieu of the State Municipal Employees' Retirement Plan. Under the defined contribution plan, the City shall contribute 3% of the employees' annual salary into this plan. Employees enrolled in this plan shall contribute a minimum of 3% of the employees' annual compensation to be paid through payroll deduction. Employees may contribute additional funds to their account as allowed by the Internal Revenue Code. Any change to the plan shall be agreed to by the parties.

AWF 12/21/15
City

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L1363

TENTATIVE AGREEMENT JULY 1, 2016- JULY 1, 2019

(15.)p 65

Section 24- Pension Payments

~~3-~~ Current Language

4 Current Language

~~3.~~ All retired employees' pension payments will automatically escalate by three (3%) percent compounded on July 1, of each year, subject to that certain settlement agreement entered on or about December 13, 2013 in PC 2012-3590. The parties agree that the obligations set forth in said settlement agreement are incorporated herein as if more fully set forth, and the said obligations are thus contractual and not a mere recital.

4. Effective July 1, 2013 All active duty employees when retired shall have their pension payments adjusted, if necessary, to pension payments received by retired employees participating in the 2013 Pension Adjustment Agreement of similar rank or position and similar credited years of service at the time of their retirement.

AWF 12/21/15
City


L1363

(16.)p 88

Section 34 – Duration of Agreement

This Agreement is effective from July 1, 2013 2016 and shall continue in full force and effect through midnight on June 30, ~~2016~~ 2019 If for any reason what so ever at the end of the term of this contract a new contract has not been agreed upon between Local 1363 (IAFF) and the City Of Cranston this contract will remain in effect until such time as a new contract is agreed upon.

AWF 12/21/15
City


L1363

THE CITY OF CRANSTON

RESOLUTION OF THE CITY COUNCIL
SPEED BUMPS ON LAUREL HILL AVENUE FROM ARGYLE STREET TO
OXFORD STREET

No.

Passed:

John E. Lanni, Jr., Council President

Resolved that,

WHEREAS, the health, safety, and welfare of the citizens of the City of Cranston require that the speed bumps or tables be installed on a seasonal basis in the Fall, Spring, and Summer on Laurel Hill Avenue from Argyle Street to Oxford Street; and

WHEREAS, there are available portable speed bumps and tables that can be erected on a seasonal basis but removed to facilitate plowing of snow; and

WHEREAS, the speeding traffic situation along Laurel Hill Avenue mandates a solution that will slow down the speeding drivers in this area; and

WHEREAS, the Traffic Safety Commission was created to encourage and facilitate Cranston residents, motorists, businesses, and private organizations to participate in a joint effort to improve pedestrian and motorist safety on residential streets and main thoroughfares; and

WHEREAS, the Traffic Safety Commission was created to study and recommend ways and means of promoting an integrated approach to resolving traffic problems in the city that improves pedestrian safety and creates livable neighborhoods and commercial districts.

NOW THEREFORE, BE IT RESOLVED, that we, the City Council of the City of Cranston, Rhode Island do hereby request that Traffic Safety Commission and the Mayor and his administration study the issue of slowing down speeding vehicles at on Laurel Hill Avenue from its intersection with Argyle Street to Oxford Street and a develop a remedy using speed bumps that can be removed for the snow plowing season and report back to the City Council so as to alleviate the existing risks to pedestrians and the motoring public in that area;

BE IT FURTHER RESOLVED, that the City Clerk of the City of Cranston forward this Resolution to Mayor Alan Fung and to the Public Works Director and to the members of the Cranston Traffic Safety Commission for action and request a monthly report be made to the City Council on the progress in repairing resolving this vexatious problem by using speed bumps or tables that can be removed for the snow plowing season.

Sponsored by Councilman Paul H. Archetto

THE CITY OF CRANSTON

**RESOLUTION OF THE CITY COUNCIL
REQUESTING THAT TEMPORARY, SEASONAL SPEED BUMPS OR TABLES
BE INSTALLED ON A SEASONAL BASIS IN THE FALL, SPRING, AND
SUMMER ON HEATHER STREET ON BOTH SIDES OF ITS INTERSECTION
WITH BROWN STREET**

No.

Passed:

John E. Lanni, Jr., Council President

Resolved that,

WHEREAS, the health, safety, and welfare of the citizens of the City of Cranston require that the speed bumps or tables be installed on a seasonal basis in the Fall, Spring, and Summer on Heather Street on both sides of its intersection with Brown Street; and

WHEREAS, there are available portable speed bumps and tables that can be erected on a seasonal basis but removed to facilitate plowing of snow; and

WHEREAS, the difficult traffic situation at this intersection mandates a solution that will slow down the speeding drivers in this area; and

WHEREAS, it is expected that the installation of these temporary speed bumps and tables will serve to improve pedestrian and motorist safety on residential streets and main thoroughfares; and

NOW THEREFORE, BE IT RESOLVED, that we, the City Council of the City of Cranston, Rhode Island do hereby request that the Mayor and his administration install temporary, seasonal speed bumps or tables to slow down speeding vehicles at on Heather Street on both sides of its intersection with Brown Street and that the Mayor report back to the City Council on the feasibility, cost, and schedule for installing these temporary, seasonal speed bumps or tables so as to alleviate the existing risks to pedestrians and the motoring public in that area;

BE IT FURTHER RESOLVED, that the City Clerk of the City of Cranston forward this Resolution to Mayor Alan Fung and to the Public Works Director and to the members of the Cranston Traffic Safety Commission for action and request a monthly report be made to the City Council on the progress in repairing resolving this vexatious problem by using speed bumps or tables that can be removed for the snow plowing season.

Councilman Paul H. Archetto

THE CITY OF CRANSTON

RESOLUTION OF THE CITY COUNCIL
TRAFFIC SAFETY REPORT ON GLADSTONE STREET SCHOOL VICINITY

No.

Passed:

John E. Lanni, Jr., Council President

Resolved that,

WHEREAS, the health, safety, and welfare of the citizens of the City of Cranston require that the morning and afternoon traffic situation in the vicinity of Gladstone Street School, particularly Lawrence Street, Gladstone Street and Brown Street be alleviated; and

WHEREAS, during morning drop off of students and afternoon pickup, the situation is particularly precarious; and

WHEREAS, City of Cranston created the Traffic Safety Commission in Chapter 2.64 of the City Code to deal with difficult traffic situations; and

WHEREAS, the Traffic Safety Commission was created to encourage and facilitate Cranston residents, motorists, businesses, and private organizations to participate in a joint effort to improve pedestrian and motorist safety on residential streets and main thoroughfares; and

WHEREAS, the Traffic Safety Commission was created to study and recommend ways and means of promoting an integrated approach to resolving traffic problems in the city that improves pedestrian safety and creates livable neighborhoods and commercial districts.

NOW THEREFORE, BE IT RESOLVED, that we, the City Council of the City of Cranston, Rhode Island do hereby request that Traffic Safety Commission study the traffic situation in the area of Gladstone street particularly Lawrence Street, Gladstone Street and Brown Street be studied and a remedy be selected and reported back to the City Council so as to alleviate the existing risks to pedestrians and the motoring public in that area;

BE IT FURTHER RESOLVED, that the City Clerk of the City of Cranston forward this Resolution to Mayor Alan Fung and to the Public Works Director and to the members of the Cranston Traffic Safety Commission for action and request a monthly report be made to the City Council on the progress in repairing resolving this vexatious problem.

Sponsored by Councilman Paul H. Archetto

Allan W. Fung
MAYOR



DIVISION OF ECONOMIC DEVELOPMENT
CITY HALL
800 PARK AVENUE
CRANSTON, RHODE ISLAND 02910

Lawrence J. DiBoni
DIRECTOR

15 DEC 10 10:10 AM
CITY OF CRANSTON

Date: December 7, 2015

To: Members of the City's Finance Committee

CC: Mayor Fung, Robert Coupe, Chris Rawson, Robert Strom

Ordinance: Ten Year Commercial Tax Incentive

Dear Members of the City's Finance Committee,

The following information is in support of JMDH Real Estate of Cranston, LLC (Restaurant Depot) of 15-24 132 Street College Point, NY 11356 to take advantage of the Ten Year Commercial Tax Incentive program.

The Ten Year Commercial Tax Phase-In Program is intended for businesses renovating an existing building with a minimum construction cost of greater than two million dollars (\$2,000,000). The Restaurant Depot expansion and renovation consists of a 25,000 SF addition and renovation with a cost of \$5,300,000.00. Restaurant Depot estimates they will be hiring an additional 20 new full time employees (over three years). This tax incentive is only intended for the increase on assessment of new taxes due to the expansion and renovation.

Restaurant Depot is a division of Jetro Holdings, Inc. and was founded in April, 1994. Their corporate headquarters are located in College Point, NY, with offices in Chicago, Los Angeles and Miami. On March 1, 1995 Jetro's first Restaurant Depot Warehouse opened in Plainview, NY. Currently, there are 110 locations throughout 33 states.

Restaurant Depot's mission is to offer one-stop savings, selection and service seven days a week for their primary customers, the small independent foodservice operator.

The City of Cranston is committed to attracting and retaining businesses and professional jobs. The Division of Economic Development, Planning Department, Tax Assessor and Building Inspections are in support of the Council granting this Tax Incentive.

Summary:

Applicant: JMDH Real Estate of Cranston, LLC (Restaurant Depot).

Employees: Restaurant Depot currently employs 65 fulltime employees and is planning to hire an additional 20 employees.

Building: 55,766 SF Total with an addition of 25,000 SF

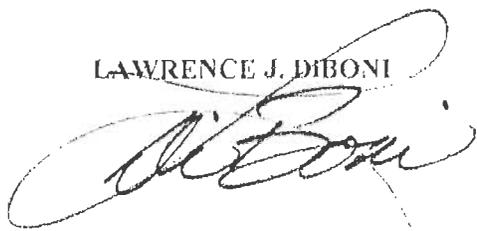
Current Taxes: \$85,897.00

Estimated Additional Tax by Tax Assessor: \$40,000.00

Incentive Time Line: The incentive would allow the business to pay taxes on the building in increments of 10% each year for 10 years. The increments would be \$4,000.00 per year.

Note: The incentive is based on the evaluation established by the City each year of the phase in and not the first year that it is established.

LAWRENCE J. DIBONI



DIRECTOR
Division of Economic Development



City of Cranston
869 Park Avenue
Cranston, RI 02910
(401) 780-3166
ldiboni@cranstonri.org

Apr 7/2015 11:08:32 AM

Restaurant Depot 718-939-2680

1/2

Allan W. Fung
MAYORLawrence DiBoni
DIRECTORDEPARTMENT OF ECONOMIC DEVELOPMENT
CITY HALL
869 PARK AVENUE
CRANSTON, RHODE ISLAND 02910

Application Requesting

TAX INCENTIVE FOR COMMERCIALY OR INDUSTRIALLY ZONED PROPERTY

1. Name & Address of Applicant: JMDH Real Estate of Cranston LLC
15-24 132 Street College Point NY 11356
2. Location of Property: 140 Kenwood Street
329 Niantic Ave Phone #: 718-559-4290
Cranston RI 02910
3. Assessor's Plat and Lot: Plat 7/3, Lot 3746, 3745, 3867, 3515
4. Name and Address of Occupant of the Proposed Construction (if different from the applicant):
RD America LLC 140 Kenwood Street Cranston RI 02910
5. Estimated Cost of New Construction: \$ 3.2
(Attach pertinent documentation supporting estimate; contractor agreements, invoices)
6. Describe Proposed New Facility: # of stories 1 # of sq. ft./floors 79,000
Type of Construction: concrete & steel panel Building with steel frame
Proposed Use of Facility: wholesale distribution of restaurant supplies
7. Estimated Cost of Renovation/Expansion: \$2.1 million
(Attach pertinent documentation supporting estimate)
8. Are Alterations/construction permitted under present zoning? Yes No
9. Current Number of Employees: 65 current employees
10. Future Anticipated number of employees: 85 in 3 years
11. Are taxes on the property current? yes

Application must be submitted before the issuance of the Certificate of Occupancy, from the Building Inspector, please forward your completed application to:

Lawrence DiBoni
Director of Economic Development
City of Cranston
869 Park Avenue
Cranston, RI 02910

Apr 7/2015 11:08:32 AM

Restaurant Depot 718-939-2680

2/2

Applications should be submitted two months prior to the issuance of the Certificate of Occupancy for processing and review of the application by City Council.

It is the understanding of the applicants) that the incentive, if approved, is applicable only for property constructed in commercially or industrially zoned sites, where the new construction or remodeling of existing facilities; that meet the approval of the building inspector, tax assessor, city planner or their designees, and the City Council; that all current and past taxes due by the applicants) must be paid in accordance with the rules set forth by the city ordinance; that the incentive would pertain to only that portion of the assessment attributable to the new construction or renovation of new facilities; that the incentive may be revoked in the event of fraud or misrepresentation by the applicants).

Under penalties of perjury I declare that I have examined this application to the best of my knowledge and belief it is true, correct and complete.

In Witness Whereof, I have hereunto set my hands this

4th day of May AD, 2015.

[Signature]
Signature of Applicant

Signed before me this 4th day of May AD, 2015 in the State of New York
~~Rhode Island~~, Queens County, and City of NY.

Valerie R. Kelly
Notary Public

My Commission Expires 2/28/2018.

VALERIE R. KELLY
Notary Public, State of New York
No. 01KE4921463
Qualified in Queens County
Commission Expires February 29, 2018



Where Restaurants Shop®

15-24, 132nd Street, College Point, NY, 11356
 ((718) 559-4290, fax (775) 249-8123

Restaurant Depot, a division of Jetro Holdings, Inc, was founded in April, 1994. Our corporate headquarters are located in College Point, NY. We also have corporate offices in Chicago, Los Angeles, and Miami. On March 1, 1995, Jetro's first Restaurant Depot warehouse opened in Plainview, New York. As of May 1, 2015, there are 110 Restaurant Depot locations throughout Thirty-three states.

Restaurant Depot sells food and non-food products related to the foodservice industry. Among the more than 11,000 product offerings are dry groceries, condiments and dressings, baking products, beverages, fresh fish, fresh meats, fresh produce, dairy products and frozen foods. We also have an extensive line of smallwares, paper products, and disposables such as aluminum and plastic pans, wraps and containers. We also sell janitorial chemicals and restaurant equipment and supplies.

Our mission at Restaurant Depot is to offer one-stop for Savings, Selection, Service, Seven Days a Week,® for our primary customer, the small independent foodservice operator. The secondary market for Restaurant Depot includes caterers, bars, lunch wagons, Institutions, civic, religious and social organizations. Our typical location is 60,000- 80,000 sq ft. We are set up as a distribution warehouse with a large dry warehouse area, as well as large refrigerated and frozen sections to store our perishable foods.

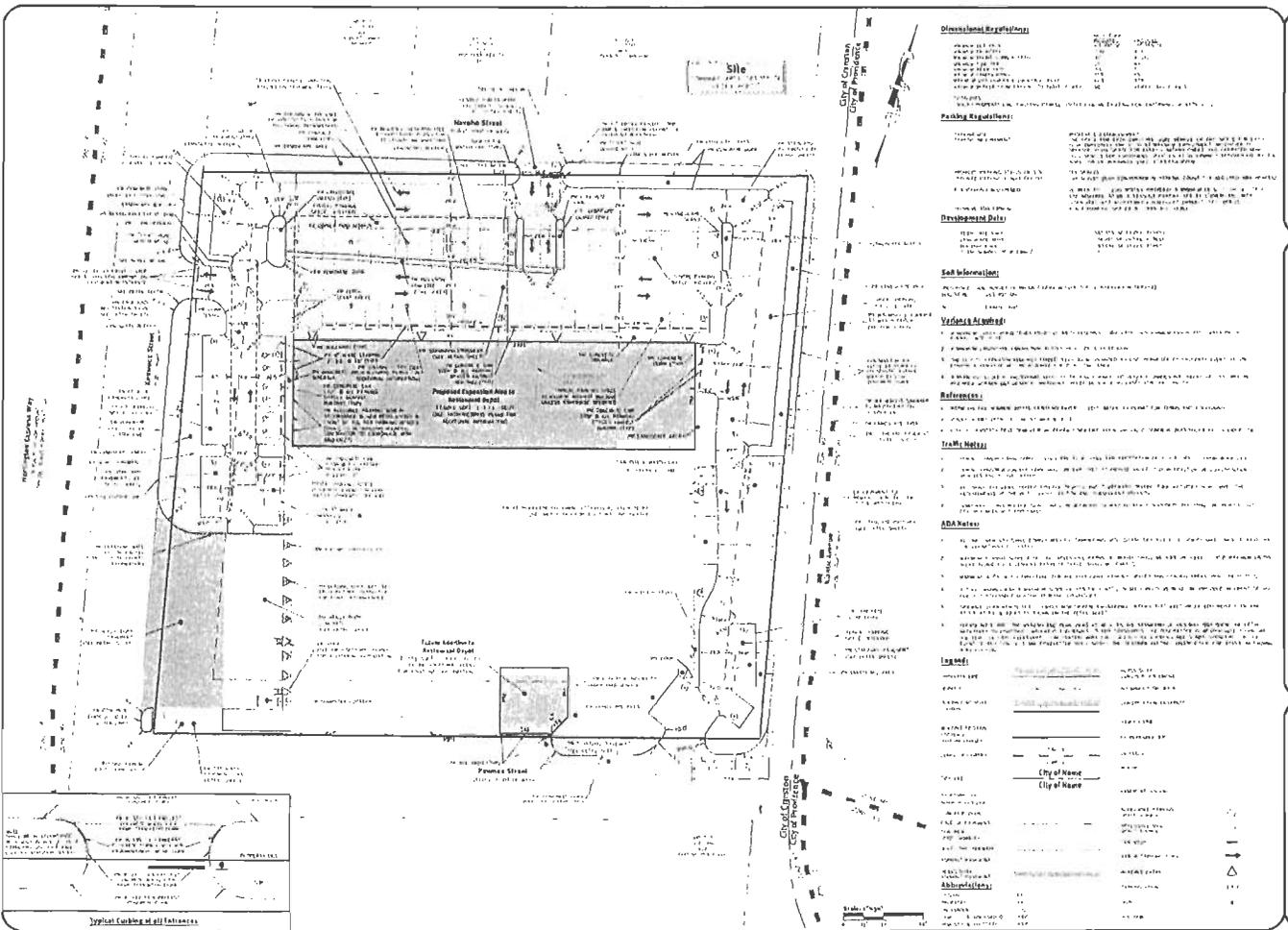
We sell strictly wholesale and are not open to the public. All customers are asked to provide a resale or tax exempt certificate upon signing up. After presenting the proper paperwork, they are given a free membership and are permitted to shop for all their needs. As a commitment to our customers business needs, we are open seven days a week. Our customers are also open seven days a week and must fill their stockrooms and kitchens weekly, rain or shine, regardless of outside conditions. As further commitment to our customers' needs, most locations offer a large covered area in our parking lot to help facilitate shopping in inclement weather.

We opened our Cranston location in June of 2003, and it was our 35th location. When we opened, we immediately discovered a real need in the market place for our services. The small independent restaurants were having trouble sourcing their products, making minimums from the large distributors, and having access to high quality food and supplies in the small quantities and competitive pricing that they needed. The large national restaurant chains were taking over the market. Over the next 10 years, we saw a steady resurgence of these small independent restaurants in the area. Now, with Restaurant Depot, they could not only survive, but also began to thrive. As they did, our business grew along with theirs and by 2011, we realized that we had outgrown our facility. We began looking for a new location with mixed emotions. We knew that we needed a larger facility, but also did not

want to leave the town of Cranston, where we have been successful and also a large part of the local foodservice community.

Luckily, some land became available, adjacent to our property which we purchased. We have now been working with the local municipality to expand our business so that we can stay in Cranston. It is only with the help of the Department of Economic Development that makes this project viable. We are very glad to be able to remain in Cranston, and hope for continued success.

Thank you for all your help during this process.



Client/Project Information:
 Project Name: Restaurant Depot
 Client: Restaurant Depot
 Address: 1000 S. Nevada Street, Las Vegas, NV 89102
 Date: 10/15/2014

Project Description:
 This plan shows the proposed site layout for the Restaurant Depot facility. The building footprint is shown in solid black, and the parking areas are shown with dashed lines. The plan also shows the location of the building relative to Nevada Street and Fremont Street.

Site Information:
 The site is located on the south side of Nevada Street, between Fremont Street and the intersection with the City of Henderson. The site is bounded by Nevada Street to the north, Fremont Street to the south, and the City of Henderson boundary to the east.

References:
 1. City of Henderson, City Code, Chapter 10, Article 10.01, Section 10.01.01, 10.01.02, 10.01.03, 10.01.04, 10.01.05, 10.01.06, 10.01.07, 10.01.08, 10.01.09, 10.01.10, 10.01.11, 10.01.12, 10.01.13, 10.01.14, 10.01.15, 10.01.16, 10.01.17, 10.01.18, 10.01.19, 10.01.20, 10.01.21, 10.01.22, 10.01.23, 10.01.24, 10.01.25, 10.01.26, 10.01.27, 10.01.28, 10.01.29, 10.01.30, 10.01.31, 10.01.32, 10.01.33, 10.01.34, 10.01.35, 10.01.36, 10.01.37, 10.01.38, 10.01.39, 10.01.40, 10.01.41, 10.01.42, 10.01.43, 10.01.44, 10.01.45, 10.01.46, 10.01.47, 10.01.48, 10.01.49, 10.01.50, 10.01.51, 10.01.52, 10.01.53, 10.01.54, 10.01.55, 10.01.56, 10.01.57, 10.01.58, 10.01.59, 10.01.60, 10.01.61, 10.01.62, 10.01.63, 10.01.64, 10.01.65, 10.01.66, 10.01.67, 10.01.68, 10.01.69, 10.01.70, 10.01.71, 10.01.72, 10.01.73, 10.01.74, 10.01.75, 10.01.76, 10.01.77, 10.01.78, 10.01.79, 10.01.80, 10.01.81, 10.01.82, 10.01.83, 10.01.84, 10.01.85, 10.01.86, 10.01.87, 10.01.88, 10.01.89, 10.01.90, 10.01.91, 10.01.92, 10.01.93, 10.01.94, 10.01.95, 10.01.96, 10.01.97, 10.01.98, 10.01.99, 10.01.100.

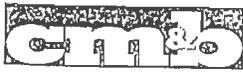
Legend:
 Building Footprint: Solid Black
 Parking Area: Dashed Line
 Typical Curbing at all Entrances: Dashed Line with Triangles
 City of Henderson: Dotted Line
 City of Henderson: Dotted Line


 Diprete Engineering
 Engineers - Planners - Surveyors
 1000 S. Nevada Street, Las Vegas, NV 89102
 Phone: (702) 735-1111
 Fax: (702) 735-1112
 Email: info@diprete.com
 Website: www.diprete.com

Site Layout Plan
Restaurant Depot
 Larry Cohen

4

Category	Contact Info-	Ordered By	Total	Amount	Amount Paid	Balance
Equipment Ordered						
Refrig Install Includes Rigging Refrig/Electric	PIERCE	FOL	\$ 178,896.00	\$	119,263.00	\$ 59,633.00
Indoor Light Fixtures	Cree - Erica Brim - (800) 236-7000 x5015 - Erica.Brim@cree.com	FOL	\$ 34,542.21	\$	34,542.21	\$ -
Outdoor Light Fixtures	Cree - Erica Brim - (800) 236-7000 x5015 - Erica.Brim@cree.com	FOL	\$ 7,095.67	\$	6,973.47	\$ -
Lighting Fixtures- to replace lost fixtures	Cree - Erica Brim - (800) 236-7000 x5015 - Erica.Brim@cree.com	FOL	\$ 9,600.60	\$	9,435.26	\$ -
Extra Lighting Fixtures- box area and the tunnel area	Cree - Erica Brim - (800) 236-7000 x5015 - Erica.Brim@cree.com	FOL	\$ 908.67	\$	893.02	\$ -
Air Curtains Package Install By GC	Powered Aire - Phil Rodenbaugh (724)580-3305 - philr@poweredaire.com	FOL	\$ 6,334.00	\$	6,334.00	\$ -
Main BI parting Enter/Exit and Install	Besam - Pam Homyak - 609-249-9502 - Pam.Homyak@assaabloy.com	FOL	\$ 17,019.00	\$	17,019.00	\$ -
HVAC Gralnger order Install By GC	Gralnger - Bobbie Monson (877)705-9507 - Bobbie.Monson@gralnger-	FOL	\$ 4,324.80	\$	4,115.34	\$ -
Drop box 4 way diffusers	AES Industries - George Lasher (800) 786-0402 - glasher@aescurb.com	FOL	\$ 2,091.00	\$	2,091.00	\$ -
Split HVAC Units	Wallwork - Sharon Sylvestro (973)225-5200 - ssylvestro@wallworkgroup.com	FOL	\$ 1,682.97	\$	1,682.97	\$ -
HVAC roof top units Install By GC - Trane Generator	Trane- Faycal Sidhoum (973) 434-2177 - FAYCAL.SIDHOUM@TRANE.COM	FOL	\$ 37,898.00	\$	40,550.87	\$ -
Greencheck Exhaust fans	MTS - Barry Segal 631-750-6665 ext 100 - bsegal@mtspowersystems.com	FOL	\$ 35,025.00	\$	35,025.00	\$ -
Electrical gear - building interior Installed BY GC/EC	ADE HVAC - Richard Arote (516) 568-6501 - rick@adehvac.com	FOL	\$ 3,800.00	\$	3,800.00	\$ -
Meat Cases Installed by RIC (1 Meat Case)	Kysor Warren - John Hobbs (800)866-5596 - John.Hobbs@Heatcrafttrpd.com Nancy Mitchell - Nancy.Mitchell@Heatcrafttrpd.com	FOL	ABOVE	ABOVE		
Refrigeration Equipment/Condensers Installed by RIC	Kysor Warren - John Hobbs (800)866-5596 - John.Hobbs@Heatcrafttrpd.com Nancy Mitchell - Nancy.Mitchell@Heatcrafttrpd.com	FOL	\$ 6,428.05	\$	6,428.05	\$ -
Refrigeration Evaporators Installed by RIC	Kysor Warren - John Hobbs (800)866-5596 - John.Hobbs@Heatcrafttrpd.com Nancy Mitchell - Nancy.Mitchell@Heatcrafttrpd.com	FOL	\$ 184,213.00	\$	194,558.00	\$ -
Security Roll Down Doors and install Pallet Door	Overhead Door- Angel Burgess (469)-549-7121-	FOL	\$ 23,098.00	\$	23,098.00	\$ -
Walk in panels and Install (FOR EXPANSION)	Overhead Door- Angel Burgess (469)-549-7121-	FOL	ABOVE	ABOVE		
New panels to relocate OH Door in Freezer	KPS - Kandi Herrington (817)231-0546- Kandi.Herrington@manitowoc.com	FOL	\$ 261,203.05	\$	165,065.94	\$ 96,137.11
(1) New Glass Reach In for Phase 1	KPS - Kandi Herrington (817)231-0546- Kandi.Herrington@manitowoc.com	FOL	\$ 18,068.27	\$	10,133.53	\$ 7,934.74
New Glass Reach in Door	Anthony Doors - John Hagerdorn (818)365-9451 -	FOL	\$ 4,789.98	\$	5,710.02	\$ -
Additional New Glas Reach In	Anthony Doors - John Hagerdorn (818)365-9451 -	FOL	\$ 11,530.97	\$	11,046.83	\$ -
Night Doors at Cooler Main Openings and Ice Machine Installed by RIC	Anthony Doors - John Hagerdorn (818)365-9451 -	FOL	\$ 2,737.13	\$	\$0.00	\$ 2,737.13
Perishable Receiving Doors and install	Overhead Door- Angel Burgess (469)-549-7121-	FOL	\$ 4,925.75	\$	4,925.75	\$ -
Fastrax Freezer Door	Howe - Alexandra Pawlikowski (773)235-0200 ext. 127 -	FOL	\$ 19,219.49	\$	18,596.95	\$ -
Dock Levelers	Arbon- Paul Papapetrou (551)804-7667- PPapapetrou@ritehite.com	FOL	\$ 30,942.00	\$	30,942.00	\$ -
Dock seals	Arbon- Paul Papapetrou (551)804-7667- PPapapetrou@ritehite.com	FOL	\$ 21,840.00	\$	-	\$ 21,840.00
Dock Lights	Power Ramp	FOL	\$ 46,984.00	\$	-	\$ 46,984.00
Extra Dock Modification	Power Ramp	FOL	ABOVE	ABOVE		
Vinyl Strip Doors (8'x12')	Power Ramp	FOL	ABOVE	ABOVE		
	Cool Curtain - Randy Wall (877)768-0722- rilcardo@CoolCurtain.com	FOL	\$ 1,435.00	\$	-	\$ 1,435.00
		FOL	\$ 3,375.00	\$	-	\$ 3,375.00
			\$ 980,007.61	\$	752,230.21	\$ 240,075.98



Restaurant Depot - Joint Check Tracking

Construction Management & Builders, Inc.

CSI Division	Subcontractor	Total Contract Value	Joint Check Req #1	Joint Check Req #2	Joint Check Req #3	Joint Check Req #4	Joint Check Req #5	Joint Check Req #6
Sitework	Narragansett Improvement Company	\$328,676	\$9,000	\$34,740	\$43,650.00	\$62,618.40	\$52,290.00	\$14,154.00
Structural Steel	Heavy Metal Corp.(contract voided)	\$260,000						
Structural Steel	Structural Systems Inc.	\$227,531				\$14,550.00	\$115,011.00	\$19,654.20
Roofing System								
Drywall/Framing								
Fire Protection								
Plumbing								
Electrical	Reilly Electrical Contractors, Inc.	\$179,658	\$2,250	\$6,300	\$37,243.80	\$48,565.80	\$34,470.00	\$21,342.60

3/9/2015

Restaurant Depot - Cranston, RI
 Providence County, Cranston, Rhode Island

	6/30/2014 BUDGET	ADJUSTMENTS	REVISED BUDGET	Sq. Ft. Cost	Previous Draws	January Draw	TOTAL TO DATE	BALANCE TO COMPL
DUE DILIGENCE								
REIMBURSABLES	\$ 25,000.00	\$ -	\$ 25,000.00	0.31	\$ 7,523.54	\$ -	\$ 7,523.54	\$ 17,476.46
	\$ 25,000.00	\$ -	\$ 25,000.00	0.31	\$ 7,523.54	\$ -	\$ 7,523.54	\$ 17,476.46
CONSTRUCTION								
SHELL CONSTRUCTION	\$ 2,750,868.37	\$ 519,374.39	\$ 3,270,242.76	41.20	\$ 2,027,977.55	\$ 658,998.16	\$ 2,686,975.71	\$ 583,267.05
OWNER EQUIPMENT (ESTIMATE)	Not Included							
	\$ 2,750,868.37	\$ 519,374.39	\$ 3,270,242.76	41.20	\$ 2,027,977.55	\$ 658,998.16	\$ 2,686,975.71	\$ 583,267.05
CONTINGENCY	\$ 100,000.00	\$ (100,000.00)	\$ -	0.00	\$ -	\$ -	\$ -	\$ -
LANDSCAPING	Included in Shell							
SOFT COSTS								
QUALITY ASSURANCE	\$ 22,500.00	\$ 7,500.00	\$ 30,000.00	0.38	\$ 28,112.93	\$ -	\$ 28,112.93	\$ 1,887.07
	\$ 22,500.00	\$ 7,500.00	\$ 30,000.00	0.38	\$ 28,112.93	\$ -	\$ 28,112.93	\$ 1,887.07
TOTAL PROJECT COST	\$ 2,898,368.37	\$ 426,874.39	\$ 3,325,242.76	\$ 41.90	\$ 2,063,614.02	\$ 658,998.16	\$ 2,722,612.18	\$ 602,630.58
BUILDING SQUARE FOOT	79,367							
COST PER SQUARE FOOT	\$ 41.90							

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CONTINUATION SHEET

Application and Certification for Payment, containing Contractor's signed certification is attached. In tabulations below, amounts are stated to the nearest dollar. Use Column I on Contracts where variable retainage for line items may apply.

ADJUSTED TO OWNER'S PAYMENT

Application No. : 8
Application Date : 1/19/2018
To: 1/31/2018

Architect's Project No.:

Invoice #: 14018-08

Contract: 14018B-01 Restaurant Depot Cranston RI

A Item No.	B Description of Work	C Scheduled Value	D Work Completed		F Materials Presently Stored	G Total Completed and Stored To Date	H % (G / C)	I Balance To Finish (C-G)	J Retainage
			From Previous Application (D+E)	This Period In Place					
					(Not in D or E)	(D+E+F)			
1000	Site - Demolition	10,255.00	10,255.00	0.00	0.00	10,255.00	100.00%	0.00	1,025.50
1010	Site - Earthwork	147,510.00	147,510.00	0.00	0.00	147,510.00	100.00%	0.00	14,751.00
1020	Site - Utilities	137,713.00	137,713.00	0.00	0.00	137,713.00	100.00%	0.00	13,771.31
1030	Site - Asphalt Paving	115,502.00	109,728.90	0.00	0.00	109,728.90	95.00%	5,775.10	10,972.89
1040	Site - Concrete Curbing	38,250.00	7,000.00	0.00	0.00	7,000.00	18.31%	29,250.00	700.00
1050	Site - Fencing & Gates	19,725.00	1,900.00	0.00	0.00	1,900.00	9.63%	17,825.00	190.00
1060	Site - Landscaping	14,360.00	0.00	0.00	0.00	0.00	0.00%	14,360.00	0.00
1070	Building - Demolition	48,000.00	0.00	20,000.00	0.00	20,000.00	43.48%	26,000.00	2,000.00
1080	Building - Foundations	123,690.00	123,690.00	0.00	0.00	123,690.00	100.00%	0.00	12,369.00
1090	Building - Floor Slab	188,301.00	188,301.00	0.00	0.00	188,301.00	100.00%	0.00	18,830.09
1100	Building - Masonry	73,265.00	85,038.60	0.00	0.00	85,038.60	90.00%	7,326.50	6,593.86
1110	Building - Structural Steel	456,732.00	440,455.00	0.00	0.00	440,455.00	98.44%	16,278.10	44,045.58
1120	Building - Exterior Insulated Metal Panels	108,000.00	101,060.04	0.00	0.00	101,060.04	95.34%	4,939.96	10,108.00
1130	Building - Rough Carpentry	158,792.00	92,518.89	55,157.87	0.00	147,676.76	93.00%	11,115.44	14,767.66
1140	Building - Finish Carpentry	17,255.00	0.00	17,255.00	0.00	17,255.00	100.00%	0.00	1,725.50
1150	Building - Roofing System	178,350.00	150,559.89	11,139.87	0.00	161,699.76	90.68%	16,850.04	16,170.00
1160	Building - Caulking & Sealants	15,014.00	15,014.00	0.00	0.00	15,014.00	100.00%	0.00	1,501.40
1170	Building - Int & Ext Man Doors, Frames & Hardw	11,250.00	3,837.50	7,312.50	0.00	11,250.00	100.00%	0.00	1,125.00
1180	Building - Flooring Finishes	6,846.00	6,846.00	0.00	0.00	6,846.00	100.00%	0.00	684.60
1190	Building - Painting	82,102.00	14,038.40	48,145.60	0.00	62,184.00	75.74%	19,918.00	1,991.80
1200	Building - Toilet Partitions & Accessories	8,590.00	0.00	8,590.00	0.00	8,590.00	100.00%	0.00	859.00
1210	Building - Miscellaneous Specialties	2,893.00	0.00	2,893.00	0.00	2,893.00	100.00%	0.00	289.30
1220	Building - Plumbing	79,000.00	74,400.00	0.00	0.00	74,400.00	94.18%	4,600.00	7,440.00
1230	Building - Fire Protection	131,500.00	85,715.00	6,335.00	0.00	92,050.00	70.00%	39,450.00	9,205.00
1240	Building - HVAC	35,000.00	35,000.00	0.00	0.00	35,000.00	100.00%	0.00	3,500.00
1250	Building - Electrical	103,400.00	34,482.24	97,055.20	0.00	131,517.44	127.19%	61,890.56	13,151.74
1260	Supervision	184,770.00	158,370.00	28,400.00	0.00	184,770.00	100.00%	0.00	18,477.00
1270	General Conditions	75,945.00	85,084.00	10,851.00	0.00	75,945.00	100.00%	0.00	7,594.50
1280	Fees	110,165.00	84,436.40	15,728.60	0.00	110,165.00	100.00%	0.00	11,016.50
1290	Alternate #2 - Bird Screen below canopy framing	25,805.37	0.00	0.00	0.00	0.00	0.00%	25,805.37	0.00
2001	Change Order #01 - PCO#02- Remove Isola in F	2,043.56	2,043.56	0.00	0.00	2,043.56	100.00%	0.00	204.36
2002	Change Order #02 - PCO#05 - Existing Septic T.	1,898.57	1,598.57	0.00	0.00	1,598.57	100.00%	0.00	159.86

CONTINUATION SHEET

Application and Certification for Payment, containing Contractor's signed certification is attached. In tabulations below, amounts are stated to the nearest dollar. Use Column I on Contracts where variable retainage for line items may apply.

ADJUSTED TO OWNER'S PAYMENT

Application No.: 8
 Application Date: 1/19/2016
 To: 1/31/2016

Architect's Project No.:

Invoice #: 14018-08 Contract: 14018B-01 Restaurant Depot Cranston RI

A Item No.	B Description of Work	C Scheduled Value	D Work Completed		F Materials Presently Stored	G Total Completed and Stored To Date	H % (G/C)	I Balance To Finlub (C-G)	J Retainage
			From Previous Application (D+E)	This Period In Place					
					(Not in D or E)	(D+E+F)			
2003	Change Order #03 - PCO#08 - Underground Cor	847.35	847.35	0.00	0.00	847.35	100.00%	0.00	84.74
2004	Change Order #03 - PCO#04 - Modifications for	3,038.80	3,038.80	0.00	0.00	3,038.80	100.00%	0.00	303.88
2006	Change Order #05 - PCO#32 - Additional Work I	12,205.01	12,205.01	0.00	0.00	12,205.01	100.00%	0.00	1,220.50
2006	Change Order #08 - PCO#18 - Proposed Gravel	25,268.01	25,268.01	0.00	0.00	25,268.01	100.00%	0.00	2,526.80
2007	Change Order #07 - PCO#37 - Concrete Curbing	-13,662.00	-13,662.00	0.00	0.00	-13,662.00	100.00%	0.00	-1,366.20
2008	Change Order #08 - PCO#16 - Additional Messor	1,178.43	1,178.43	0.00	0.00	1,178.43	100.00%	0.00	117.84
2009	Change Order #09 - PCO#31 - Revised Fire Alar	54,450.00	54,450.00	0.00	0.00	54,450.00	100.00%	0.00	5,445.00
2010	Change Order #10 - PCO#55 - Revision #10, Elk	13,005.30	13,005.30	0.00	0.00	13,005.30	100.00%	0.00	1,300.53
2011	Change Order #11 - PCO#35 - Excavation to Su	2,337.72	2,337.72	0.00	0.00	2,337.72	100.00%	0.00	233.77
2012	Change Order #12 - PCO#47 - Sanitary Sewer T	1,240.25	1,240.25	0.00	0.00	1,240.25	100.00%	0.00	124.03
2013	Change Order #13 - PCO#49 - Framing per RFI#	904.40	904.40	0.00	0.00	904.40	100.00%	0.00	90.44
2014	Change Order #14 - PCO#41 - Rev. Canopy Rox	2,750.00	0.00	0.00	0.00	0.00	0.00%	2,750.00	0.00
2015	Change Order #15 - PCO#51 - Existing Foundat	5,118.30	5,118.30	0.00	0.00	5,118.30	100.00%	0.00	511.83
2016	Change Order #16 - PCO#38 - Phase One Plani	393,580.58	0.00	393,580.60	0.00	393,580.58	100.00%	0.00	39,358.06
2017	Change Order #17 - PCO#63 - Gas Valve / Geni	2,904.46	1,699.51	0.00	2,904.45	1,639.51	100.00%	0.00	290.15
2018	Change Order #18 - PCO#84 - Floor Plan Modifi	7,148.43	0.00	7,148.43	0.00	7,148.43	100.00%	0.00	714.84
2019	Change Order #19 - PCO#66 - Tele-Data Rack	530.66	0.00	530.66	0.00	530.66	100.00%	0.00	53.07
2020	Change Order #20 - PCO#68 - Additional Light E	2,953.50	0.00	2,953.50	0.00	2,953.50	100.00%	0.00	295.35
2021	Change Order #21 - PCO#71 - Electrical Demo	1,395.63	0.00	1,395.63	0.00	1,395.63	100.00%	0.00	139.56
Grand Totals		3,271,504.30	2,253,308.48	733,481.77	0.00	2,986,790.23	91.30%	284,714.07	298,679.05

KBE Building Corporation
 30 Batterson Park Road
 Farmington, CT 06032

RESTAURANT DEPOT
 140 Kenwood Street
 Cranston, RI

Project # 14018B-01

Period thru : 1/31/15

Subcontractor/Supplier	Total Contract Price	Change Order	Adjusted Contract Price	Amount Already Paid	Amount Currently Owning	Retention	Balance to Complete
A & M Electrical	\$ 108,000.00	\$ 44,002.22	\$ 152,002.22	\$ 85,260.00	\$ 38,281.93	\$ 18,460.29	\$ 28,460.29
Brookside Co.	\$ 108,000.00	\$ -	\$ 108,000.00	\$ 87,870.00	\$ -	\$ 13,130.10	\$ 20,130.00
C & E Concrete	\$ 123,800.00	\$ (120,439.18)	\$ 3,360.82	\$ 14,580.00	\$ -	\$ -	\$ (11,219.18)
Energy Electric Co.l	\$ 179,000.00	\$ 250,697.00	\$ 429,697.00	\$ 31,421.25	\$ 268,061.60	\$ 33,053.65	\$ 132,214.15
Heavy Metal Corp	\$ 455,000.00	\$ (58,193.62)	\$ 396,806.38	\$ 341,449.41	\$ -	\$ 37,838.82	\$ 55,356.97
Northern Site Contractors	\$ 409,000.00	\$ 35,214.92	\$ 444,214.92	\$ 352,740.15	\$ -	\$ 39,193.36	\$ 91,474.77
New Century Roofing	\$ 179,900.00	\$ 25,570.81	\$ 205,470.81	\$ 140,879.00	\$ 11,709.22	\$ 16,932.03	\$ 53,082.59
New England Fire Systems	\$ 129,000.00	\$ 43,807.78	\$ 172,807.78	\$ 85,885.00	\$ 43,787.77	\$ 19,345.01	\$ 43,345.01
South Dartmouth Cons.	\$ 135,025.00	\$ 30,674.03	\$ 165,699.03	\$ 90,144.46	\$ 48,140.11	\$ 20,663.21	\$ 27,414.46
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Subtotal: \$ 407,960.63 ✓
 Payment to KBE Building Corp. \$ 252,122.95 251,037.58
TOTAL: \$ 660,133.58 658,999.16

10/5/2015

Restaurant Depot - Cranston, RI
Providence County, Cranston, Rhode Island

	6/30/2014 BUDGET	ADJUSTMENTS	CHANGE ORDERS	REVISED BUDGET	Sq. Ft. Coat	Previous Draws	September Draw	TOTAL TO DATE	BALANCE TO COMPL
DUE DILIGENCE REIMBURSABLES	\$ 25,000.00	\$ -	\$ -	\$ 25,000.00	0.31	\$ 22,987.38	\$ -	\$ 22,987.38	\$ 2,012.62
	\$ 25,000.00	\$ -	\$ -	\$ 25,000.00	0.31	\$ 22,987.38	\$ -	\$ 22,987.38	\$ 2,012.62
CONSTRUCTION									
SHELL CONSTRUCTION (KBE)	\$ 2,750,868.37	\$ 519,374.39	\$ -	\$ 3,270,242.76	41.20	\$ 2,688,975.71	\$ -	\$ 2,688,975.71	\$ 581,267.05
SHELL CONSTRUCTION (CMB)	-	2,184,389.00	62,452.00	2,246,851.00	28.31	1,506,790.11	230,422.45	1,746,212.56	501,638.44
OWNER EQUIPMENT (ESTIMATE)	Not Included								
	\$ 2,750,868.37	\$ 2,703,773.39	\$ 62,452.00	\$ 5,517,093.76	69.51	\$ 4,195,765.82	\$ 230,422.45	\$ 4,432,188.27	\$ 1,084,905.49
CONTINGENCY	\$ 100,000.00	\$ (100,000.00)	\$ -	\$ -	0.00	\$ -	\$ -	\$ -	\$ -
LANDSCAPING	Included in Shell								
SOFT COSTS									
QUALITY ASSURANCE	\$ 22,500.00	\$ 15,000.00	\$ -	\$ 37,500.00	0.47	\$ 31,376.94	\$ -	\$ 31,376.94	\$ 6,123.06
	\$ 22,500.00	\$ 15,000.00	\$ -	\$ 37,500.00	0.47	\$ 31,376.94	\$ -	\$ 31,376.94	\$ 6,123.06
TOTAL PROJECT COST	\$ 2,898,368.37	\$ 2,618,773.39	\$ 62,452.00	\$ 5,579,593.76	70.30	\$ 4,248,130.14	\$ 230,422.46	\$ 4,486,552.60	\$ 1,093,041.17
BUILDING SQUARE FOOT	79,367								
COST PER SQUARE FOOT	\$ 70.30								

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 Paid I & phaz II
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 Balance to complete

CONTINUATION SHEET

AIA DOCUMENT G703

PAGE 2 OF 5 PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.
 In tabulations below, amounts are stated to the nearest dollar.
 Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 6
 APPLICATION DATE: 9/30/2015
 PERIOD TO: 9/30/2015
 ARCHITECT'S PROJECT NO: 15061

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H % (G + C)	I BALANCE TO FINISH (C - G)	J RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
Div 1	General Conditions	\$36,087	\$24,057	\$3,290		\$27,347	76%	\$8,740	\$1,367
01105	Blueprinting/Photocopying	\$5,250	\$4,463	\$250		\$4,713	90%	\$537	\$236
01210	First Aid	\$350	\$300	\$25		\$325	93%	\$25	\$16
01220	Safety Inspections/Loss Control Services	\$4,375	\$2,844	\$975		\$3,819	87%	\$556	\$191
01230	Temporary Fire Extinguishers	\$980	\$980	\$0		\$980	100%	\$0.00	\$49
01310	Field Office Expenses	\$16,557	\$10,762	\$1,015		\$11,777	71%	\$4,780	\$589
01370	Temporary Toilets	\$5,775	\$2,888	\$575		\$3,463	60%	\$2,312	\$173
01650	Postage/ Overnight/Courier	\$2,800	\$1,820	\$450		\$2,270	81%	\$530	\$114
Div 2	Demolition	\$86,225	\$71,721	\$10,219		\$81,940	95%	\$4,285	\$4,097
02220	Select Demolition	\$42,500	\$38,075	\$2,500		\$40,575	95%	\$1,925	\$2,029
02220	Concrete Slab Removal	\$26,125	\$22,206	\$3,919		\$26,125	100%	\$0.00	\$1,306
02220	Dumpsters	\$17,600	\$11,440	\$3,800		\$15,240	87%	\$2,360	\$762
Div 2	Sitework	\$356,035	\$206,931	\$56,540		\$263,471	74%	\$92,564	\$13,174
02300	Sitework	\$314,724	\$173,100	\$49,060		\$222,160	71%	\$92,564	\$11,108
02300	Survey Services	\$4,200	\$2,500	\$1,700		\$4,200	100%	\$0.00	\$210
02820	Fencing	\$23,120	\$17,340	\$5,780		\$23,120	100%	\$0.00	\$1,156
02820	Temporary Fence	\$13,991	\$13,991	\$0		\$13,991	100%	(\$0)	\$700
Div 3	Concrete	\$208,127	\$184,041	\$7,135		\$191,176	92%	\$16,951	\$9,559
03050	Concrete Materials	\$92,249	\$78,412	\$4,820		\$83,232	90%	\$9,017	\$4,162
03110	Concrete Foundations	\$31,400	\$31,400	\$0		\$31,400	100%	\$0.00	\$1,570
03150	Concrete Accessories	\$6,959	\$6,244	\$715		\$6,959	100%	\$0.00	\$348
03210	Reinforcing Steel/Mesh	\$14,242	\$14,242	\$0		\$14,242	100%	\$0.00	\$712
03300	Concrete Slabs	\$63,277	\$53,743	\$1,600		\$55,343	87%	\$7,934	\$2,767
Div 4	Masonry	\$28,927	\$25,427	\$0		\$25,427	88%	\$3,500	\$1,271
04200	Masonry	\$28,927	\$25,427	\$0		\$25,427	88%	\$3,500	\$1,271
Div 6	Metals	\$221,794	\$221,794	\$0		\$221,794	100%	\$0.00	\$11,090
05120	Structural Steel	\$221,794	\$221,794	\$0		\$221,794	100%	\$0.00	\$11,090

CONTINUATION SHEET

AIA DOCUMENT G703

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AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.
 In tabulations below, amounts are stated to the nearest dollar.
 Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 6
 APPLICATION DATE: 9/30/2015
 PERIOD TO: 9/30/2015
 ARCHITECT'S PROJECT NO: 15061

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)		H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G + C)			
Div 6	Carpentry & General Labor	\$84,674	\$51,950	\$15,750		\$67,700	80%	\$16,974	\$3,385
06030	Job Cleanup & Laborer	\$59,200	\$38,480	\$8,950		\$47,430	80%	\$11,770	\$2,372
06040	Final Job Cleaning	\$8,626	\$0	\$4,300		\$4,300	50%	\$4,326	\$215
06050	Equipment Rentals	\$6,793	\$4,415	\$1,500		\$5,915	87%	\$878	\$296
08400	Milwork & Architectural Woodwork	\$10,055	\$9,055	\$1,000		\$10,055	100%	\$0.00	\$503
Div 7	Thermal & Moisture Protection	\$92,150	\$35,075	\$36,675		\$71,750	78%	\$20,400	\$3,588
07410	Insulated Metal Panels	\$46,750	\$35,075	\$11,675		\$46,750	100%	\$0.00	\$2,338
07500	Membrane Roofing	\$37,400	\$0	\$25,000		\$25,000	67%	\$12,400	\$1,250
07820	Sealants & Caulking	\$8,000	\$0	\$0		\$0	0%	\$8,000	\$0
Div 8	Doors & Windows	\$11,166	\$11,166	\$0		\$11,166	100%	\$0.00	\$558
08100	Doors, Frames & Hardware	\$9,791	\$9,791	\$0		\$9,791	100%	\$0.00	\$490
08400	Aluminum Storefront	\$1,375	\$1,375	\$0		\$1,375	100%	\$0.00	\$69
Div 9	Finishes	\$161,929	\$114,474	\$26,249		\$140,723	87%	\$21,206	\$7,036
09260	Drywall & Metal Framing	\$75,040	\$67,609	\$4,500		\$72,109	96%	\$2,931	\$3,605
09510	Acoustical Ceilings	\$4,402	\$3,500	\$902		\$4,402	100%	\$0.00	\$220
09860	VCT & Resilient Flooring	\$9,262	\$6,915	\$2,347		\$9,262	100%	\$0.00	\$463
09910	Painting	\$73,225	\$36,450	\$18,500		\$54,950	75%	\$18,275	\$2,748
Div 10	Specialties	\$30,537	\$30,537	\$0		\$30,537	100%	\$0.00	\$1,527
10280	Wall and Corner Guards	\$1,145	\$1,145	\$0		\$1,145	100%	\$0.00	\$57
10805	Blind Screening	\$27,905	\$27,905	\$0		\$27,905	100%	\$0.00	\$1,395
10800	Toilet Partitions & Accessories	\$1,487	\$1,487	\$0		\$1,487	100%	\$0.00	\$74
Div 16	Mechanical	\$192,770	\$65,040	\$29,200		\$94,240	49%	\$98,530	\$4,712
15300	Fire Protection	\$78,610	\$19,675	\$11,500		\$31,175	40%	\$47,435	\$1,559
15400	Plumbing	\$79,000	\$22,365	\$13,500		\$35,865	45%	\$43,135	\$1,793
15700	HVAC	\$35,160	\$23,000	\$4,200		\$27,200	77%	\$7,960	\$1,360

CONTINUATION SHEET

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APPLICATION NO: 6
 APPLICATION DATE: 9/30/2015
 PERIOD TO: 9/30/2015
 ARCHITECT'S PROJECT NO: 15061

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)		H BALANCE TO FINISH (C-G)	I RETAINAGE (IF VARIABLE RATE)
			D FROM PREVIOUS APPLICATION (D+E)	E THIS PERIOD		% (G+C)			
Div 16	Electrical	\$136,800	\$90,382	\$23,714		\$114,096	83%	\$22,704	\$5,705
16100	Electrical	\$136,800	\$90,382	\$23,714		\$114,096	83%	\$22,704	\$5,705
Div 17	cm&b Supervision	\$279,781	\$182,916	\$26,952		\$209,868	75%	\$69,913	\$10,493
17020	Project Supervision	\$144,763	\$94,632	\$13,940.00		\$108,572	75%	\$36,191	\$5,429
17110	Project Accountant	\$6,900	\$4,515	\$660.00		\$5,175	75%	\$1,725	\$259
17130	Project Administration	\$7,360	\$4,810	\$710.00		\$5,520	75%	\$1,840	\$276
17210	Project Estimating	\$7,130	\$4,665	\$715.00		\$5,380	75%	\$1,750	\$269
17230	Project Manager	\$72,185	\$47,198	\$6,941.00		\$54,139	75%	\$18,046	\$2,707
17240	Project Executive	\$41,443	\$27,097	\$3,986.00		\$31,083	75%	\$10,360	\$1,554
Div 1	Allowances	\$130,500	\$120,207	\$0		\$120,207	92%	\$10,293	\$6,010
01160	Temporary Partitions Allowance	\$11,000	\$7,332	\$0		\$7,332	67%	\$3,668	\$367
01165	Temporary Shoring & Underpinning Allow.	\$75,000	\$75,000	\$0		\$75,000	100%	\$0.00	\$3,750
01171	Landscaping Allowance	\$44,500	\$37,875	\$0		\$37,875	85%	\$6,625	\$1,894
Div 1	Insurance & Fee	\$126,898	\$87,925	\$15,247		\$103,172	81%	\$23,726	\$5,159
01030	Contractor's Insurance	\$20,975	\$15,897	\$2,536		\$18,433	88%	\$2,542	\$922
01080	OH & P	\$105,924	\$72,028	\$12,711		\$84,739	80%	\$21,184	\$4,237
	CHANGE ORDERS								
CO #1	Parking Lot Rework (Phase I Area)	\$14,049	\$14,049	\$0		\$14,049	100%	\$0.00	\$702
CO #1	Quad Outlets at Offices	\$652	\$652	\$0		\$652	100%	\$0.00	\$33
CO #1	Hand Dryers at Restrooms	\$5,378	\$5,378	\$0		\$5,378	100%	\$0.00	\$269
	TOTAL	\$20,079	\$20,079	\$0		\$20,079	100%	\$0.00	\$1,004
CO #2	Repair Phase I Sewer Work	\$18,095	\$18,095	\$0		\$18,095	100%	\$0.00	\$905
CO #2	Work Completed in Phase I	(\$19,962)	(\$19,962)	\$0		(\$19,962)	100%	\$0.00	(\$998)
CO #2	PPC Electric Panel Installation	\$46,608	\$46,608	\$0		\$46,608	100%	\$1	\$2,330
CO #2	Install Missing Landscape Island	\$2,906	\$2,906	\$0		\$2,906	100%	\$0.00	\$145
CO #2	Jet and Camera the Phase I Sewer Line	\$2,933	\$2,933	\$0		\$2,933	100%	\$0.00	\$147
CO #2	Power for Temporary Shrimp Cases	\$7,486	\$7,486	\$0		\$7,486	100%	\$0.00	\$374
CO #2	Extend Loading Dock Slab to 60'	\$952	\$952	\$0		\$952	100%	\$0.00	\$48

CONTINUATION SHEET

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APPLICATION NO: 6
 APPLICATION DATE: 9/30/2015
 PERIOD TO: 9/30/2015
 ARCHITECT'S PROJECT NO: 15061

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H % (G + C)	I BALANCE TO FINISH (C - G)	J RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
CO #2	Concrete Apron Outside Pallet Door	\$557	\$557	\$0		\$557	100%	\$0.00	\$28
CO #2	Plywood Wainscot at New Wall	\$2,069	\$2,069	\$0		\$2,069	100%	\$0.00	\$103
CO #2	Replace Entire Receiving Slab	\$51,704	\$51,704	\$0		\$51,704	100%	\$0.00	\$2,585
CO #2	Exdaling receiving Foundation to Remain	(\$18,127)	(\$18,127)	\$0		(\$18,127)	100%	\$0.00	(\$906)
	TOTAL	\$95,220	\$95,220	\$0		\$95,220	100%	\$0.00	\$4,761
CO #3	Add Bollards at Pallet Door	\$2,153	\$2,153	\$0		\$2,153	100%	\$0.00	\$108
	TOTAL	\$2,153	\$2,153	\$0		\$2,153	100%	\$0.00	\$108
CO #4	Allowance Adjustment for Temporary Shoring	(\$55,000)	-\$55,000	\$0		(\$55,000)	100%	\$0.00	(\$2,750)
	TOTAL	(\$55,000)	(\$55,000)	\$0		(\$55,000)	100%	\$0.00	(\$2,750)
GRAND TOTALS		\$2,246,851	\$1,586,095	\$250,991	\$0	\$1,837,066	82%	\$409,785	\$91,853
Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity									

nationalgrid

Pole & UG Petition/Permit Request Form

City
Town of Cranston, RI WR # 20844247
(circle one)

Install 1 (Pole & Anchor) ^{SO}
(quantity) JO Poles on Hosey Dr (Parent pole is on Robson St)
(circle one) (street name)

Remove _____ ^{SO}
(quantity) JO Poles on _____
(circle one) (street name)

Relocate _____ ^{SO}
(quantity) JO Poles on _____
(circle one) (street name)

Beginning at a point approximately _____ feet _____ of the centerline
(distance) (compass heading)

of the intersection of _____
(street name)

and continuing approximately _____ feet in a _____ direction.
(distance) (compass heading)

Install underground facilities:

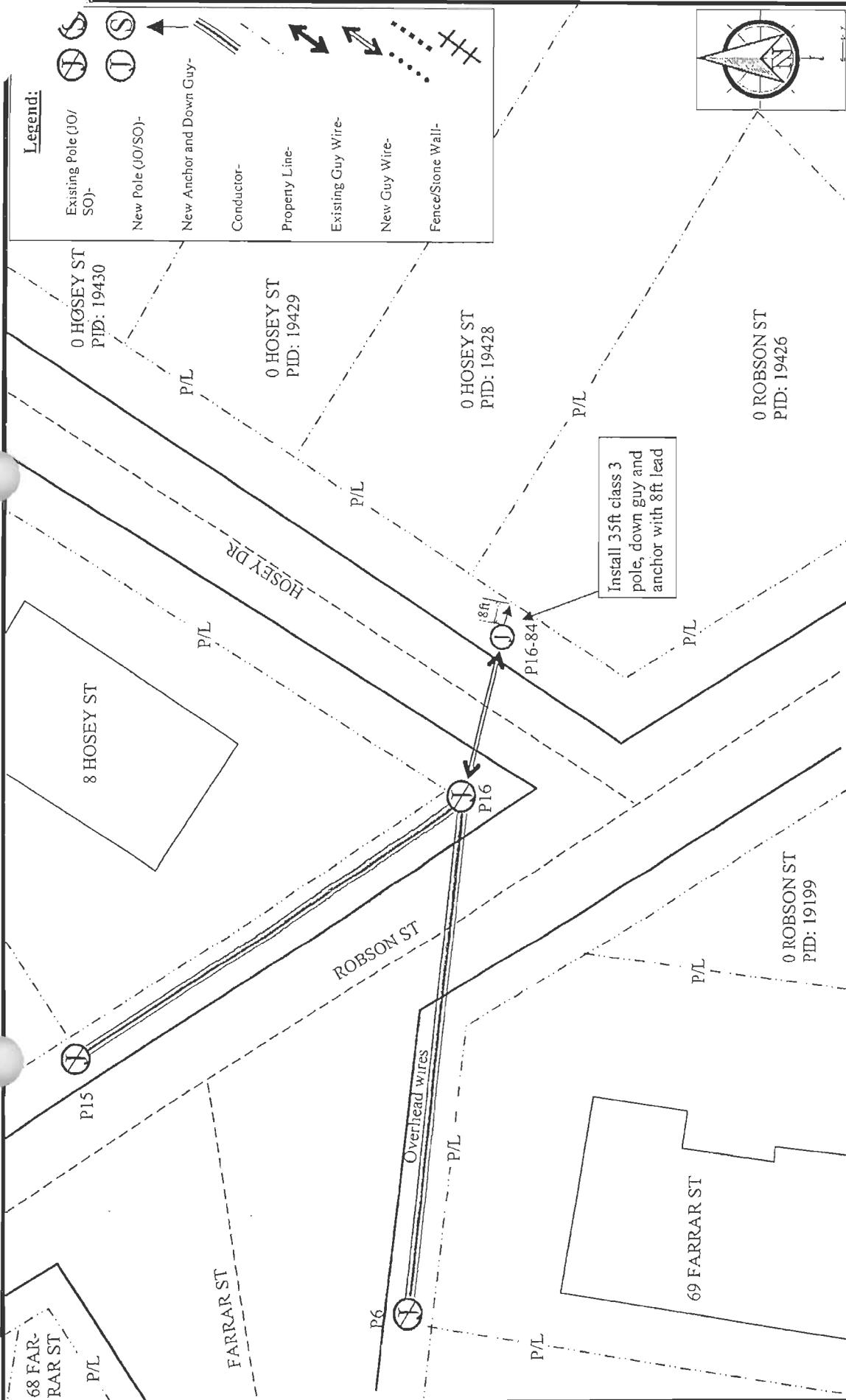
Street(s) _____

Description of Work:

Install pole, down guy, and anchor with an 8ft lead across from pole 16 Robson St. Pole and anchor will be located on town property on the south side of Hosey Rd. Pole will be labeled 16-84.

ENGINEER Prasand Nair

DATE 11/20/15



Petition #:

Designer: Prasad Nair
Date: 11/20/15
Work Order #: 20844247
Town: Cranston, RI

Petition Sketch

CONSTRUCTION DETAILS:
 Install 35ft class 3 pole, down guy, and anchor with an 8ft lead across from pole 16 Robson St. Pole and anchor will be located on town property on the south side of Hosey Rd. Pole will be labeled 16-84.

national grid

Exhibit A-Not to Scale

The Exact location of said Facilities to be established by and upon the installation and erection of the Facilities thereof

**QUARTER 1
JAN-FEB-MAR
2016**

			Hon. J.	Hon. C.J.	Hon. J.	Hon. J.	Hon. J.
DAY	DATE	TIME	COIA	JOSLYN	NAPOLITANO	RICCI	SCHREIBER
Monday	January 4, 2016	9:00 AM					
Tuesday	January 5, 2016	9:00 AM					
Thursday	January 7, 2016	9:00 AM					
Thursday	January 7, 2016	5:00 PM					
Wednesday	January 13, 2016	2:00 PM					
Tuesday	January 19, 2016	9:00 AM					
Thursday	January 21, 2016	9:00 AM					
Thursday	January 21, 2016	5:00 PM					
Wednesday	January 27, 2016	2:00 PM					
Monday	February 1, 2016	9:00 AM					
Tuesday	February 2, 2016	9:00 AM					
Thursday	February 4, 2016	9:00 AM					
Thursday	February 4, 2016	5:00 PM					
Wednesday	February 10, 2016	2:00 PM					
Wednesday	February 24, 2016	2:00 PM					
Monday	February 29, 2016	9:00 AM					
Tuesday	March 1, 2016	9:00 AM					
Thursday	March 3, 2016	9:00 AM					
Thursday	March 3, 2016	5:00 PM					
Wednesday	March 9, 2016	2:00 PM					
Monday	March 14, 2016	9:00 AM					
Tuesday	March 15, 2016	9:00 AM					
Wednesday	March 23, 2016	2:00 PM					
Tuesday	March 29, 2016	9:00 AM					
Thursday	March 31, 2016	9:00 AM					
Thursday	March 31, 2016	5:00 PM					

**QUARTER 2
APRIL-MAY-JUNE
2016**

			Hon. J.	Hon. C.J.	Hon. J.	Hon. J.	Hon. J.
DAY	DATE	TIME	COIA	JOSLYN	NAPOLITANO	RICCI	SCHREIBER
Wednesday	April 6, 2016	2:00 P.M.					
Monday	April 11, 2016	9:00 AM					
Tuesday	April 12, 2016	9:00 A.M.					
Thursday	April 14, 2016	9:00 A.M.					
Thursday	April 14, 2016	5:00 P.M.					
Monday	April 25, 2016	9:00 A.M.					
Tuesday	April 26, 2016	9:00 A.M.					
Thursday	April 28, 2016	9:00 A.M.					
Thursday	April 28, 2016	5:00 P.M.					
Wednesday	May 4, 2016	2:00 P.M.					
Monday	May 9, 2016	9:00 A.M.					
Tuesday	May 10, 2016	9:00 A.M.					
Thursday	May 12, 2016	9:00 A.M.					
Thursday	May 12, 2016	5:00 P.M.					
Wednesday	May 18, 2016	2:00 P.M.					
Monday	May 23, 2016	9:00 A.M.					
Tuesday	May 24, 2016	9:00 A.M.					
Thursday	May 26, 2016	9:00 A.M.					
Thursday	May 26, 2016	5:00 P.M.					
Wednesday	June 1, 2016	2:00 P.M.					
Monday	June 6, 2016	9:00 A.M.					
Tuesday	June 7, 2016	9:00 A.M.					
Thursday	June 9, 2016	9:00 A.M.					
Wednesday	June 15, 2016	2:00 P.M.					
Monday	June 20, 2016	9:00 A.M.					
Tuesday	June 21, 2016	9:00 A.M.					
Thursday	June 23, 2016	9:00 A.M.					
Thursday	June 23, 2016	5:00 P.M.					
Wednesday	June 29, 2016	2:00 P.M.					

**QUARTER 3
JULY-AUG-SEPT
2016**

			Hon. J.	Hon. C.J.	Hon. J.	Hon. J.	Hon. J.
DAY	DATE	TIME	COIA	JOSLYN	NAPOLITANO	RICCI	SCHREIBER
Thursday	July 7, 2016	9:00 AM					
Thursday	July 7, 2016	5:00 PM					
Wednesday	July 13, 2016	2:00 PM					
Monday	July 18, 2016	9:00 AM					
Tuesday	July 19, 2016	9:00 AM					
Thursday	July 21, 2016	9:00 AM					
Thursday	July 21, 2016	5:00 PM					
Wednesday	July 27, 2016	2:00 PM					
Monday	August 1, 2016	9:00 AM					
Tuesday	August 2, 2016	9:00 AM					
Wednesday	August 10, 2016	2:00 PM					
Thursday	August 18, 2016	9:00 AM					
Thursday	August 18, 2016	5:00 PM					
Wednesday	August 24, 2016	2:00 PM					
Monday	August 29, 2016	9:00 AM					
Tuesday	August 30, 2016	9:00 AM					
Thursday	September 1, 2015	9:00 AM					
Thursday	September 1, 2016	5:00 PM					
Wednesday	September 7, 2016	2:00 PM					
Monday	September 12, 2016	9:00 AM					
Tuesday	September 13, 2016	9:00 AM					
Thursday	September 15, 2016	9:00 AM					
Thursday	September 15, 2016	5:00 PM					
Wednesday	September 21, 2016	2:00 PM					
Monday	September 26, 2016	9:00 AM					
Tuesday	September 27, 2016	9:00 AM					
Thursday	September 29, 2016	9:00 AM					
Thursday	September 29, 2016	5:00 PM					

**QUARTER 4
OCT-NOV- DEC
2016**

			Hon. J.	Hon. C.J.	Hon. J	Hon. J.	Hon. J
			COIA	JOSLYN	NAPOLITANO	RICCI	SCHREIBER
DAY	DATE	TIME					
Wednesday	October 5, 2016	2:00 PM					
Tuesday	October 11, 2016	9:00 AM					
Thursday	October 13, 2016	9:00 AM					
Thursday	October 13, 2016	5:00 PM					
Wednesday	October 19, 2016	2:00 PM					
Monday	October 24, 2016	9:00 AM					
Tuesday	October 25, 2016	9:00 AM					
Thursday	October 27, 2016	9:00 AM					
Thursday	October 27, 2016	5:00 PM					
Wednesday	November 2, 2016	2:00 PM					
Monday	November 7, 2016	9:00 AM					
Thursday	November 10, 2016	9:00 AM					
Thursday	November 10, 2016	5:00 PM					
Wednesday	November 16, 2016	2:00 PM					
Monday	November 21, 2016	9:00 AM					
Tuesday	November 22, 2016	9:00 AM					
Wednesday	November 30, 2016	2:00 PM					
Monday	December 5, 2016	9:00 AM					
Tuesday	December 6, 2016	9:00 AM					
Thursday	December 8, 2016	9:00 AM					
Thursday	December 8, 2016	5:00 PM					
Wednesday	December 14, 2016	2:00 PM					
Monday	December 19, 2019	9:00 AM					
Tuesday	December 20, 2016	9:00 AM					
Thursday	December 22, 2016	5:00 PM					

