A RESOLUTION APPROPRIATING $250,000 FOR THE COSTS ASSOCIATED WITH THE PLANNING, DESIGN AND OBTAINING COST ESTIMATES FOR THE RENOVATION OR REPLACEMENT OF THE CLUBHOUSE AND GOLF CART BARN AT H. SMITH RICHARDSON GOLF COURSE AND FOR OTHER SITE AND GROUNDS IMPROVEMENTS AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION.

- -

Resolved:

1. As recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield (the "Town") hereby appropriates the sum of Two Hundred Fifty Thousand and 00/100 Dollars ($250,000.00) for the costs associated with the planning, design and obtaining cost estimates for the renovation or replacement of the clubhouse and golf cart barn at H. Smith Richardson Golf Course and for other site and grounds improvements including mechanical, electrical, plumbing, fire protection and sewer, which costs include architectural, design, specialty consultant, environmental, engineering and other costs and expenses that are related thereto (the "Project").

2. To finance such appropriation and as recommended by the Board of Finance and the Board of Selectmen, the Town may borrow a sum not to exceed Two Hundred Fifty Thousand and 00/100 Dollars ($250,000.00) and issue its bonds for such indebtedness under its corporate name and seal and upon the full faith and credit of the Town in an amount not to exceed said sum for the purpose of financing such appropriation.

3. The Board of Selectmen, the Treasurer and the Fiscal Officer of the Town are hereby appointed a committee (the "Committee") with full power and authority to cause said bonds to be sold, issued and delivered; to determine their form and terms, including provision for redemption prior to maturity; to determine the aggregate principal amount thereof within the amount hereby authorized and the denominations and maturities thereof; to fix the time of issue of each series thereof and the rate or rates of interest thereon as herein provided; to determine whether the interest rate on any series will be fixed or variable and to determine the method by which the variable rate will be determined, the terms of conversion, if any, from one interest rate mode to another or from fixed to variable; to set whatever other terms of the bonds they deem necessary, desirable or appropriate; to designate the bank or trust company to certify the issuance thereof and to act as transfer agent, paying agent and as registrar for the bonds, and to designate bond counsel. The Committee shall have all appropriate powers under the Connecticut General Statutes to issue, sell and deliver the bonds and, further, shall have full power and authority to do all that is required under the Internal Revenue Code of 1986, as amended, and under rules of the Securities and Exchange Commission, and other applicable laws and regulations of the United States, to provide for issuance of the bonds in tax exempt form and to meet all requirements which are or may become necessary in and subsequent to the issuance and delivery of the bonds in order that the interest on the bonds be and remain exempt from Federal income taxes, including,

without limitation, to covenant and agree to restriction on investment yield of bond proceeds, rebate of arbitrage earnings, expenditure of proceeds within required time limitations, the filing of information reports as and when required, and the execution of Continuing Disclosure Agreements for the benefit of the holders of the bonds and notes.

4. The First Selectman and Treasurer or Fiscal Officer, on behalf of the Town, shall execute and deliver such bond purchase agreements, reimbursement agreements, line of credit agreement, credit facilities, remarketing agreement, standby marketing agreements, bond purchase agreement, standby bond purchase agreements, and any other commercially necessary or appropriate agreements which the Committee determines are necessary, appropriate or desirable in connection with or incidental to the sale and issuance of bonds, and if the Committee determines that it is necessary, appropriate, or desirable, the obligations under such agreements shall be secured by the Town's full faith and credit.

5. The bonds may be designated "Public Improvement Bonds of the Town of Fairfield", series of the year of their issuance and may be issued in one or more series, and may be consolidated as part of the same issue with other bonds of the Town; shall be in serial form maturing in not more than twenty (20) annual installments of principal, the first installment to mature not later than three (3) years from the date of issue and the last installment to mature not later than twenty (20) years from the date of issue. The bonds may be sold at an aggregate sales price of not less than par and accrued interest at public sale upon invitation for bids to the responsible bidder submitting the bid resulting in the lowest true interest cost to the Town, provided that nothing herein shall prevent the Town from rejecting all bids submitted in response to any one invitation for bids and the right to so reject all bids is hereby reserved, and further provided that the Committee may sell the bonds on a negotiated basis, as provided by statute. Interest on the bonds shall be payable semi-annually or annually. The bonds shall be signed on behalf of the Town by at least a majority of the Board of Selectmen and the Treasurer, and shall bear the seal of the Town. The signing, sealing and certification of the bonds may be by facsimile as provided by statute.

6. The Committee is further authorized to make temporary borrowings as authorized by the General Statutes and to issue temporary notes of the Town in anticipation of the receipt of proceeds from the sale of the bonds to be issued pursuant to this resolution. Such notes shall be issued and renewed at such time and with such maturities, requirements and limitations as provided by the Connecticut General Statutes. Notes evidencing such borrowings shall be signed by the First Selectman and Treasurer or Fiscal Officer, have the seal of the Town affixed, which signing and sealing may be by facsimile as provided by statute, be certified by and payable at a bank or trust company incorporated under the laws of this or any other state, or of the United States, be approved as to their legality by bond counsel, and may be consolidated with the issuance of other Town bond anticipation notes. The Committee shall determine the date, maturity, interest rates, form and manner of sale, including negotiated sale, and other details of said notes consistent with the provisions of this resolution and the Connecticut General Statutes and shall have all powers and authority as set forth above in connection with the issuance of bonds and

especially with respect to compliance with the requirements of the Internal Revenue Code of 1986, as amended, and regulations thereunder in order to obtain and maintain issuance of the notes in tax exempt form.

7. Pursuant to Section 1.150-2, as amended, of the Federal Income Tax Regulations the Town hereby declares its official intent to reimburse expenditures (if any) paid for the Project from its General or Capital Funds, such reimbursement to be made from the proceeds of the sale of bonds and notes authorized herein and in accordance with the time limitations and other requirements of said regulations.

8. The First Selectman, Fiscal Officer and Town Treasurer are hereby authorized, on behalf of the Town, to enter into agreements or otherwise covenant for the benefit of bondholders to provide information on an annual or other periodic basis to the Municipal Securities Rulemaking Board (the "MSRB") and to provide notices to the MSRB of material events as enumerated in Securities and Exchange Commission Exchange Act Rule 15c2-12, as amended, as may be necessary, appropriate or desirable to effect the sale of the bonds and notes authorized by this resolution.

9. The Committee is hereby authorized to take all action necessary and proper for the sale, issuance and delivery of the bonds and notes in accordance with the provisions of the Connecticut General Statutes and the laws of the United States.

10. The First Selectman or other proper Town official is hereby authorized to apply for and accept any available State or Federal grant in aid funding the Project, and to take all action necessary and proper in connection therewith.

H. SMITH RICHARDSON

CLUBHOUSE PLAN/DESIGN

NON-RECURRING CAPITAL REQUEST

2018/2019

1. **Background:**
   The H. Smith Richardson clubhouse is original to the golf course and has had no meaningful renovations since its original construction in 1972. Without any significant improvements made to the facility the infrastructure (HVAC/boiler, plumbing, septic, roof, windows, cart barn, parking lot) is in desperate need of renovation. The parking lot and cart barn need to be addressed at the same time as the renovations to the building.

   The cart barn is a cold storage building built by the first golf professional at the golf course, as he had the contract to operate the golf carts. This building was built to house 40 gasoline golf carts. Today we squeeze 60 electric golf carts into this building and have no space to expand the building or the staging of the golf carts in its present location. The parking lot as well as the parking lot lighting and drainage should be addressed as well. We would like to redesign traffic flow as well as add additional parking.

2. **Purpose & Justification:**
   This facility is visited by over 40,000 users each year. The facility's rundown condition, limited functionality and dated appearance diminish the golfing experience. We believe that renovations to this facility will reduce the yearly operational cost as the building will be constructed to make the facility energy efficient.

3. **Detailed Description of Proposal:**
   The ($250,000.00) for the costs associated with the planning, design and obtaining cost estimates for the renovation or replacement of the clubhouse and golf cart barn at H. Smith Richardson Golf Course and for other site and grounds improvements including mechanical, electrical, plumbing, fire protection and sewer, which costs include architectural, design, specialty consultant, environmental, engineering and other costs and expenses that are related to the project.

4. **Reliability of Estimated Cost:**
   This estimate is based on previous building projects.

5. **Increase Efficiency or Productivity:**
   The renovation to this facility will increase the number of rounds that are played each season, and the overall golfing experience will be vastly improved. The upgraded facility is also believed to reduce the yearly operational cost due to energy efficient products.

6. **Additional Long-Range Costs:**
   There will be significant long-range costs if the project is funded. Replacing a building of this size and condition will be costly.

7. **Additional Use of Demand on Existing Facilities:**
   Though the course is presently operating near capacity, we do expect a slight

increase in the number of golfers utilizing the golf course and restaurant on an annual basis. This will lead to additional revenue for the Town.

8. **Alternates to this request:**
   One alternative would be to leave the existing building in place and continue to operate as we have for the past forty five years. Another would be to push the project of into another budget year, this would mean we'd most likely see an increase in construction costs due to inflation. Until we determine a solution, we continue to expense poor insulation and continuous repairs.

9. **Safety & Loss Control**
   Areas of improvement can be thoroughly vetted which will lead to additional safety features.

10. **Environmental Considerations**
    All new fixtures will be energy efficient fixtures that are less expensive to operate and provide less spill and glare.

11. **Insurance**
    Contractor will be required to carry insurance coverage

12. **Financing**
    Long term anticipation note not to exceed 20 years.

13. **Other Considerations**
    None

14. **Other Approvals**
    Board of Selectman
    Board of Finance
    RTM


PGA


GUINNESS
Coors
LIGHT
OPEN

H. Smith Richardson
Construction Cost and Design Fee Estimate

Calculation of anticipated Construction Cost			
Construction Cost options	**2008 Cost Estimate**	**Escalation Factor to 2018**	**2018 Projected Cost**
Option 1- 2008 Feasibility Study			
Renovate existing and enclose terrace- 7,159 SF	$1,431,800	1.232	$1,763,978
Exterior renovations- walls roof	$508,000	1.232	$625,856
Kitchen addition- 500 SF	$225,000	1.232	$277,200
New Cart Barn- 3,200 SF	$320,000	1.232	$394,240
Sitework- New paving in parking lot, sidewalks, surface drainage	$700,000	1.232	$862,400
Total cost	**$3,184,800**		**$3,923,674**
Option 2- New Construction			
Build new clubhouse- 7,159 SF @ $450/SF	-		$3,221,550
Kitchen addition- 500 SF	-		$277,200
New Cart Barn- 3,200 SF	-		$394,240
Sitework- New paving in parking lot, sidewalks, surface drainage	-		$862,400
Total cost			**$4,755,390**
Option 3- same as above w/ underground cart barn			
Build new clubhouse- 7,159 SF @ $450/SF	-		$3,221,550
New Addition- kItchen and grille room- 500 SF	-		$277,200
New Underground Cart Barn- 3,200 SF@ $450/SF	-		$1,440,000
Sitework- New paving in parking lot, sidewalks, surface drainage	-		$862,400
Total cost			**$5,801,150**

Calculation of anticipated Design Fee			
Item	**Fee percentage**	**Cost basis**	**Cost**
Estimated Design fee for Design Development drawings	4% to 5% of construction cost	$5.28 million (avg cost of option 2 and 3)	$238,000
Additional cost for Construction Manager to provide cost estimating services			$12,000
Total cost			**$250,000**

Note: Drawings developed with sufficient detail to obtain accurate construction cost estimate

H. Smith Richardson Clubhouse Renovation
Construction Cost Escalation Study

Construction Cost Data		
	Renovation Costs	**New Construction Costs**
Construction Cost Reference		
Unit costs for construction from Lathrop Feasibility report 2008	$250	$350
Unit cost for construction- Architects and Contractors 2017	$300	$425
Cost increase	**20.0%**	**21.4%**
Turner- Building Cost Index 2008	908	908
Turner- Building Cost Index 2017	1044	1044
Cost increase	**15.0%**	**15.0%**
Average escalation	17.49%	18.20%
Add 5% for cost escalation to 2018	5.0%	5%
Total escalation	**22.5%**	**23.2%**

DCD
12/26/17

H. Smith Richardson Clubhouse Renovation and Site Improvements

Draft- Request for Design Proposal

The following design proposal outline can be used to define the scope of work and obtain pricing for the design of the H. Smith Richardson Clubhouse Renovation. This proposal will be utilized to obtain a fee proposal for the completion of design thru the Design Development Phase of drawings.

Phase and scope noted below.

Conceptual Design Phase

- Meet with Building Committee (BC)and owner's representative (OR) to review preliminary design considerations
- Visit the site with the design team to review and document existing conditions of buildings, parking area, sidewalks and site drainage
- Review existing drawings, feasibility studies, maintenance records for information on the conditions of the site and options that have been under review.
- Conduct a code analysis to identify mandatory improvements required to meet state and local building codes. (requirements for: means of egress, fire protection, building occupancy etc.)
- Conduct /review soil borings to establish sub surface conditions, structural bearing capacity and elevation of rock
- Meet with the BC & OR once information has been gathered and establish a plan to prepare 3 conceptual layouts of the proposed renovation/addition/new construction and sitework.
- Conceptual design will include architectural, mechanical, electrical, structural and civil considerations.
- Review the conceptual designs with the BC & OR
- Incorporate comments and provide conceptual cost estimates for the design options.

Schematic Design Phase

- Proceed with schematic design based on a consensus of direction from the BC & OR.
- Schematic design to include architectural, mechanical, electrical and civil design outline.
- Site plans to be included in schematic design
- Include outline specifications
- The schematic design will be reviewed with the building committee and owner's rep. and drawings will be updated based on comments from drawing review
- Include add alternates to the base design that can be incorporated as budget permits.
- Include construction phasing logistics plans
- Provide printing of 2 sets of completed plans for use by the BC & OR

Design Development Phase

Prepare Design Development documents based on the approved direction given by the BC & OR at the completion of the schematic design phase.

Include:

- Code Drawings
- Demolition plans
- Architectural dimensioned plans with details, sections and schedules (i.e. door schedule, partition types)
- HVAC, Plumbing, Fire Protection, Electrical documents including lighting design
- Site Plans identifying paving, concrete sidewalk and site drainage design
- Provide specifications for all disciplines
- Include printing of 3 sets of plans and specifications for use by the BC & OR

Drawings will have sufficient detail to obtain contractor/construction manager pricing that will be utilized to establish the construction budget.

The designer will work with the BC & OR to obtain cost estimates from contractors/construction manager and review estimates once they are submitted.

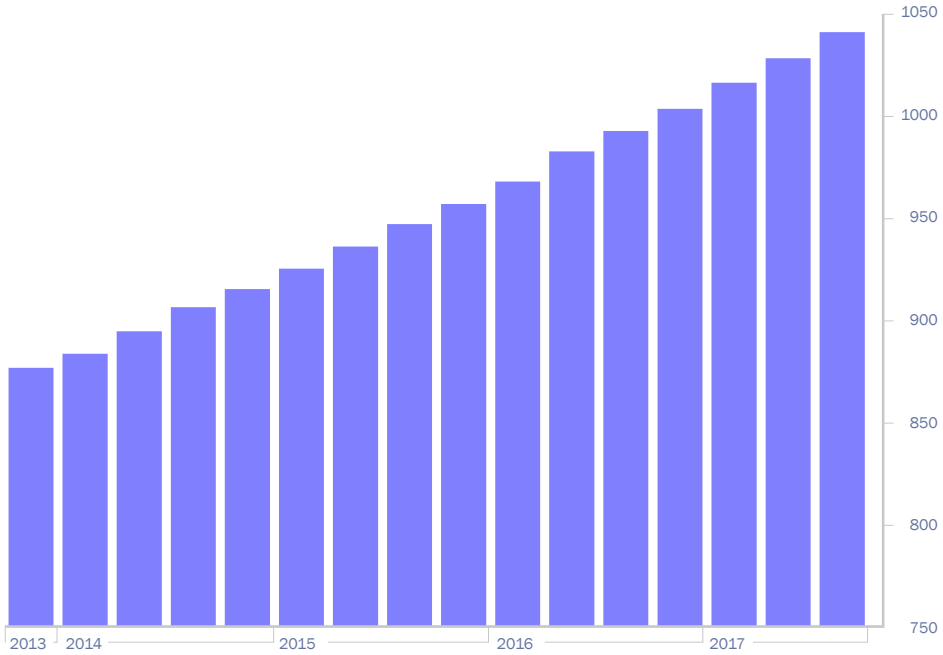
DCD
12/14/17

Turner Building Cost Index

2017 Third Quarter Forecast

"Factors affecting construction costs are the continued, robust level of construction activity combined with many regions experiencing not just one but several mega projects."

Attilio Rivetti
Vice President



Wilshire Grand Center
Los Angeles, California

Quarter	Index	△%
3rd Quarter 2017	**1044**	**1.26**
2nd Quarter 2017	1031	1.18
1st Quarter 2017	1019	1.29
4th Quarter 2016	1006	1.11

Year	Average Index	△%
2016	989	4.7
2015	943	4.5
2014	902	4.4
2013	864	4.1
2012	830	2.1
2011	812	1.6
2010	799	-4.0
2009	832	-8.4
2008	908	6.3
2007	854	7.7
2006	793	10.6
2005	717	9.5
2004	655	5.4

The Turner Building Cost Index is determined by the following factors considered on a nationwide basis: labor rates and productivity, material prices and the competitive condition of the marketplace.

Turner

Town of Fairfield

FINANCE DEPARTMENT
725 Old Post Road
Fairfield, Connecticut 06824
(203) 256-3065 (Office)
(203) 255-7380 (Fax)
rmayer@ fairfield.ct.org

February 7, 2018

UPDATED

Attached please find documents pertaining to Non-Recurring Capital – FY19.

INDEX

TOWN OF FAIRFIELD

EXHIBIT 1

NON-RECURRING CAPITAL PROJECTS AND ASSOCIATED BOND ISSUANCE

FOR FISCAL YEAR 2018/2019

UPDATED FOR RTM MEETING - 2/7/2018

TOWN

	Department	Project	20 Year Bond PRESENTED BY DEPT. Amount	PRESENTED BY DEPT. Total
1	DPW	Fairfield Woods Library Elevator	$325,000	$325,000
2	Park & Rec	Golf Course Renovation	$100,000	$100,000
3	Fire	Mechanic Floor Jacks	$120,000	$120,000
4	Conservation	Railroad Bridge Tidegates Design	$225,000	$225,000
5	IT	Data Center Relocation	$250,000	$250,000
	SUBTOTAL NON-RECURRING CAPITAL - TOWN:		**$1,020,000**	**$1,020,000**

BOARD OF EDUCATION

	School	Project	5 Year Bond PRESENTED BY BOE Amount	10 Year Bond PRESENTED BY BOE Amount	20 Year Bond PRESENTED BY BOE Amount	PRESENTED BY BOE Total
1	Systemwide	Security Infrastructure Upgrades			$345,250	$345,250
2	Secondary Schools	I.T. CAT 6 - Electrical Project		$200,000		$200,000
3	FLHS	Student Parking Lot Replacement			$275,000	$275,000
4	Systemwide	I.T. Switch Replacement Project	$972,995			$972,995
	SUBTOTAL NON-RECURRING CAPITAL - BOE:		**$972,995**	**$200,000**	**$620,250**	**$1,793,245**
	GRAND TOTAL NON-RECURRING CAPITAL:		**$972,995**	**$200,000**	**$1,640,250**	**$2,813,245**

TOWN OF FAIRFIELD

EXHIBIT 2

Comparison of January 2018 Non-Recurring Capital Requests to September 2017 Capital Plan Workshop Plan

TOWN

JANUARY 2018

PROPOSED TO BOS - NON-RECURRING CAPITAL - 1-31-2018

	Department	Project	2018/2019	
(4)	DPW	Fairfield Woods Library Elevator	$325,000	
(1)	Park & Rec	Golf Course Renovation	$100,000	
(1)	Fire	Mechanic Floor Jacks	$120,000	
(3)	Fire	Command Vehicle	$106,000	**
(1)	Conservation	Railroad Bridge Tidegates Design	$225,000	
(1)	IT	Data Center Relocation	$250,000	
	SUBTOTAL NON-RECURRING:		$1,126,000	

SEPTEMBER 2017

PROPOSED - CAPITAL PLAN WORKSHOP - 9-21-2017

	Department	Project	2018/2019
(4)	DPW	Fairfield Woods Library Elevator	$275,000
(2)	DPW	Hulls Farm Rd. Br. Construct. - 25% Reimb.	$700,000
(2)	DPW	Brookside Dr. Bridge Design - 50% Reimb.	$300,000
(2)	DPW	Southport Sidewalk Connect. - 80% Reimb.	$450,000
(2)	DPW	Grasmere Ave. Pedestrian Improv. Design	$200,000
(1)	Park & Rec	Golf Course Renovation	$100,000
(2)	Park & Rec	Lighting - Tennis Courts	$125,000
(1)	Fire	Mechanic Floor Jacks	$120,000
(1)	Conservation	Railroad Bridge Tidegates Design	$225,000
(1)	IT	Data Center Relocation	$250,000
	SUBTOTAL NON-RECURRING:		$2,745,000

DIFFERENCE: ($1,619,000)

(1) On both at same amount
(2) Removed
(3) New ***** NOTE: THIS ITEM WAS SUBSEQUENTLY REMOVED BY BOF***
(4) On both but amount increased

TOWN OF FAIRFIELD

EXHIBIT 3

Comparison of January 2018 Non-Recurring Capital Requests to September 2017 Capital Plan Workshop Plan

BOE

JANUARY 2018

PROPOSED TO BOS - NON-RECURRING CAPITAL - 1-31-2018

	School	Project	2018/2019
(1)	Sytemwide	Security & Safety Infrastructure	$345,250
(1)	Secondary Sch.	I.T. CAT 6-Electical Project	$200,000
(1)	FLHS	Student Parking Lot	$275,000
(3)	Systemwide	I.T. Switch Replacement Project	$972,995
	SUBTOTAL NON-RECURRING:		$1,793,245

SEPTEMBER 2017

PROPOSED - CAPITAL PLAN WORKSHOP - 9-21-2017

	School	Project	2018/2019
(1)	District Wide	Security & Safety Infrastructure	$345,250
(2)	McKinley	Roof Warranty Ext. Project	$475,000
(2)	RLMS	Roof Warranty Ext. Project	$975,000
(1)	Secondary Sch.	I.T. CAT 6-Electical Project	$200,000
(1)	FLHS	Student Parking Lot	$275,000
	SUBTOTAL NON-RECURRING:		$2,270,250

DIFFERENCE: ($477,005)

*** Source: BOE Capital Plan dated 8/25/2017**

(1) On both at same amount

(2) Removed

(3) New

2/8/2018

H:\Non-Recurring Capital 1-31-2018\Exhibit 3 - Comparison BOE - NRC Plan vs This Year Requests

EXHIBIT 4

Town of Fairfield & WPCA
Debt Service as a % of Budget
(In Thousands)

Fiscal Year	Budget (1)	Town Debt Service Payments (2)	Town Debt Service as a % of Budget	WPCA Debt Service Payments (3)	Town & WPCA Debt Service as a % of Budget
2012/2013	$272,283	$25,930	9.52%	$0	9.52%
2013/2014	$278,466	$27,658	9.93%	$0	9.93%
2014/2015	$284,963	$27,323	9.59%	$0	9.59%
2015/2016	291,220	$24,646	8.46%	$0	8.46%
2016/2017	293,510	$23,577	8.03%	$0	8.03%
2017/2018	298,492	$24,884	8.34%	$0	8.34%
2018/2019	304,462	$25,475	8.37%	$65	8.39%
2019/2020	310,551	$25,868	8.33%	$397	8.46%
2020/2021	316,762	$27,830	8.79%	$783	9.03%
2021/2022	323,097	$27,996	8.66%	$2,924	9.57%
2022/2023	329,559	$24,676	7.49%	$3,873	8.66%
2023/2024	336,150	$21,144	6.29%	$4,647	7.67%
2024/2025	342,873	$21,474	6.26%	$4,570	7.60%
2025/2026	349,731	$21,523	6.15%	$4,492	7.44%

(1) FY 2017/2018 Approved Budget Increased by 2.0% per year for each subsequent fiscal year
Note: FY13 through FY18 represent approved budget figures
(2) Source: Total Debt Service Payments; FY13 through 2026, Capital Planning (Phoenix Advisors) Waterfall Schedule dated September 21, 2017
(3) Source: Aggregate Debt Service Payments - WPCA; FY19 through 2026 (Phoenix Advisors) Schedule dated September 12, 2017

Fairfield Woods Branch Library Elevator Replacement

PROJECT COST - $325,000

1. BACKGROUND – The Fairfield Woods Branch Library was originally constructed in 1968, with an addition and renovation in 1990. The elevator appears to have been added during the 1990 addition. A two story open atrium in the original building was converted for the purpose of this elevator.

2. PURPOSE - The elevator serves the first floor main level and the lower level (basement). The elevator has a very awkward access on both levels in that there are a series of doors which have to be opened to get to the elevator. The elevator is configured so that you enter/exit on different sides on each floor; basement to the east and first floor to the south. There are gate type mechanisms on the interior elevator doors which are also awkward. The elevator does not provide the features that are needed for handicap patrons.

3. DESCRIPTION OF PROPOPSAL - The proposal replaces the existing elevator with a new elevator car. It will configure the elevator with typical sliding elevator doors. The entrance lobbies on each floor will also be redesigned to remove the current obstacles that make entering difficult.

4. RELIABILITY OF COST ESTIMATE - Reliability is a 6 based on a scale of 1 to 10. The estimate was based on a research of projects from other communities. No specific engineering or architectural work has been performed to obtain an opinion of probable cost. The large contingency represents the uncertainty in the design.

$ 15,000	Design
$ 250,000	Construction
$ 50,000	Contingency (20% of construction based on the preliminary Information)
$ 10,000	Construction Administration
$ 325,000	**Total Estimate**

5. INCREASED EFFICIENCY AND PRODUCTION – The elevator will allow all users and staff to access the lover level for functions and activities.

6. ADDITIONAL LONG RANGE COSTS - No additional costs, having a new elevator will reduce the amount of maintenance and service calls.

7. ADDITIONAL USE OR DEMAND – None.

8. ALTERNATIVES TO THIS REQUEST - None

9. SAFETY- Elevators are typically used by the most vulnerable of our population. We obviously would not want someone to become stuck in this elevator.

10. ENVIRONMENTAL CONSIDERATIONS – Elevator hydraulic systems sometimes leak into the sump pit of the elevator shaft. We will not know this until some additional engineering is performed. If this is encountered there may be an additional cost involved.

11. INSURANCE - The current situation may present an insurance risk.

12. FINANCING – The project may be eligible to use Town Community Development Block Grants (CDBG) to fund a portion of this work.

13. OTHER CONSIDERATIONS - The elevator needs to be replaced. If not, it may have to be put out of service in the near future.

14. APPROVALS - Board of Selectman January 17, 2018

    Board of Finance February 6, 2018

    RTM March 26, 2018

First Floor Elevator Access

Lower Floor Elevator Access

From inside elevator, looking out into first floor enterance

From inside elevator, looking at gates to the south & east

H. SMITH RICHARDSON

GREEN REBUILD/SHAPE

NON-RECURRING CAPITAL REQUEST

2018/2019

Town of Fairfield Golf Commission

1. **Background:**
   In 2010 the Golf Commission presented a 10-year master improvement and financial plan for H. Smith Richardson Golf Course, to the First Selectman and the Board of Finance. This plan was accepted and implementation started FY 2011. The plan calls for a $1.0MM reinvestment in the golf course infrastructure. The plan spreads the necessary projects over a ten year period, prioritizing improvements and targeting an expenditure level of roughly $100K each year. This is a continuation of that plan with a request of $100,000 to continue the improvements to the course.

2. **Purpose & Justification:**
   In the upcoming year we plan to rebuild and reshape the 16th green as well as several tee boxes. Refurbish, level, and / or enlarge. The 16th green is very angulating with a false front. It creates very limited areas to place the hole which wears out certain areas. When the hole is in a "tough" position it creates a pace of play dilemma. With no hole placement areas available on the right side of the green it renders more than 50% of the green unusable. The USGA suggests that tee boxes should be at least 100 square feet for every 1,000 rounds and twice that for tees where irons are used. At H. Smith Richardson, with 40,000 to 45,000 rounds played per year, several of our tee boxes are too small and cannot be adequately maintained as a result of the excess wear and tear.

3. **Detailed Description of Proposal:**

Architect fees -	$20,000
Materials -	$40,000
Labor -	$40,000
Total -	$100,000

4. **Reliability of Estimated Cost**
   The cost estimate is made up of known prices for materials and labor and machine based on current bid.

5. **Increase Efficiency or Productivity**
   These terms don't directly apply to this type of project but there are advantages. With these improvements it is expected that additional revenues would be generated through more rounds when the golfing community realizes the improved conditions.

6. **Additional Long Range Costs**
   There will be none except for the regular daily maintenance during the golf season, as the improvements being made should last 20 years.

7. **Additional Use or Demand on Existing Facilities**
   We do expect additional use with these improvements however we do not anticipate additional burdens on the existing facilities as a result.

8. **Alternatives to this request**
   The alternative discussed was to try to do the work with our present work force; however we do not have the manpower or the expertise to handle these large projects while still performing the daily maintenance of the golf course. Should these improvements not be made we will see a reduction in revenue as golfers will play at courses with better conditions.

9. **Safety & loss Control**
   The proposed renovations will make the playing of golf on the 16th hole more enjoyable. At present, the green is very angulating and hole placement is very limited which slows down play considerably. With limited hole placements the green gets worn out in these areas as we are not able to use the entire green. The green was designed when the speed of greens was not as fast as the demands are in today's golfing world. With the tee boxes we would be leveling the surface and preventing someone from twisting or breaking an ankle.

10. **Environmental Considerations**
    There are no environmental concerns

11. **Insurance**
    Contractor will be required to carry insurance coverage.

12. **Financing**
    Short term anticipation note (BAN's) not to exceed 5 yrs.

13. **Other Considerations**
    None

14. **Other Approvals**
    Board of Selectman
    Board of Finance
    RTM

Fairfield Fire Department

140 Reef Road
Fairfield, CT 06824-5997

Administrative Office

Office (203) 254-4713
Office (203) 254-4720
Fax (203) 254-4724

December 29, 2017

14 Point Summary of Funding Request for Replacement of Mobile Column Lifts
Waterfall Budget Request: $120,000

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1. Background

The six mobile column lifts we currently use were reallocated to the FD Maintenance Division from the Department of Public Works (DPW) in 1994. They were all manufactured in 1987 and rated for up to 12,000 lbs. each. Replacement parts have become costly and difficult to obtain, the electronics in the control panel are obsolete, there are no redundant automatic safety locks, and the design is limited regarding what can safely be lifted due to the rated axle weight on new proposed apparatus.

Although the current lifts undergo annual inspections and service and have been deemed safe, it is our proposal that they be replaced. They have been deemed safe assuming we do not exceed the recommended weight limitations and operating guidelines. Three of our vehicles have tandem rear wheels and we must address the need for a lift system that can accommodate and hold the weight of these piece of apparatus. There have been documented failures on lifts with similar designs as those we are currently using. The current lifts also lack the safety devices that are now incorporated in newer models.

The current safety stands are on loan to the FFD from the Nichols Fire Department.

This is our current lift that holds only one tire

Current Fairfield Lift Control Panel

This is the proposed Jack that holds both tires

Example of a tandem axle on six lifts.

2. **Purpose and Justification**

a. The Current Jacks are **30 years old**.
b. The current jacks have no safety systems in place. The requested jacks have a positive locking system.
c. The requested jacks have a complete tire capture system. The existing jacks do not support both dual rear wheels.
d. The existing jacks cannot lift all of our apparatus. It is critical that we are able to lift all apparatus for our rust mitigation program.
e. The proposed jacks utilize a technology that retracts the dolly wheels that allow the jacks to be moved when the jacks have apparatus on them. This is critical because the dolly wheels can cause the jacks to move even when a truck is lifted on them if there is any imperfections on the floor surface.
f. Parts are no longer made for our existing lifts.
g. New lifts are cordless which creates a much safer working environment by eliminating tripping hazards with the cords.
h. The existing lifts require electricity to constantly power them. Our rust mitigation program requires us to power wash the undercarriage of our apparatus. The overspray of the water can create an electrocution hazard.

3. **Detailed Description of Proposal**

The Fairfield Fire Department requests six new mobile lifts with the necessary safety options we feel will best suit the Fairfield Fire Department.
The six mobile lifts will include four safety jack stands. Four of the six lifts quoted are rated for 18,000 lbs. and the other two are rated for 24,000 lbs. This will allow us to accommodate the added weight of the new Quint Apparatus. A rear axle was specified in order to support the added weight of this type of apparatus. Six lifts are used on tandem axle apparatus, explaining the need for the 2 24,000 lb. lifts. In order to lift tandem axle apparatus (Ladder-2/Rescue 1) all six lifts are necessary to hold the 64,000 lb. weight.
The lifts also incorporate several new safety features as part of their standard design including safety locks, retracting wheels for mobility and cradle extensions that can fully support large tires. These new lifts also allow for options to be added at a later time and due to the fact that they are mobile, they can be relocated in the future if the maintenance division is able to expand into new space.
Although they appear costly on the surface, these jacks should be considered as a 20-30 year investment.

4. Reliability of Cost Estimate

On a scale of 1 to 10, the reliability of this estimate is a 10.0. The proposed request is uncomplicated and costs are easily quantified.

This estimate is based on the following projected costs:

4 Column Lifts, 18K capacity	$60,330
2 Column Lifts, 24K capacity	$47,010
2 Communication Cable	$ 775
DC Dummy Plug	$ 128
5 Cable Reels	$ 3,083
6 Jack Stands	$8,673

Total: **$120,000**

5. Increased Efficiency and Productivity

This purchase will replace outdated, unsupported equipment replace it with new, safe and efficient equipment which will that will be useful for the next several decades.

6. Additional Long Range Costs

None anticipated.

7. Additional Use or Demand

None anticipated.

8. Alternatives to This Request

There are no alternatives to this request. It is a timely request for upgraded equipment which will ensure that the Fairfield Fire Apparatus Maintenance Division is able to fulfill its core mission.

9. Safety

Safety is improved by:

a. Replacing 30 year old equipment.

b. Replacing equipment which has no inherent safety systems with equipment which has.

c. Replacing equipment with that which equipment which has positive locking system.

d. Eliminating tripping hazards.

e. Eliminating electrocution possibility.

Our mechanics have to work under apparatus which may weigh 64,000 pounds. Full confidence in jacks is essential to their well-being.

10. Environmental Considerations

No Environmental impact.

11. Insurance

N/A

12. Financing

No additional expenditures are tied to this request. We expect this item to have a useful life for budgeting purposes of 20 years.

13. Other Considerations

N/A

14. Approvals

Board of Selectmen, Board of Finance, RTM

Engineering Investigation, Design and Permitting Services
Railroad Bridge Tidegate Structure and Dyke
280 Old Dam Road

---

1. **Background** –The berm and former railroad bridge crossing Pine Creek just north of Thomas Hayden field is the primary flood protection measure for western sections of Pine Creek. These culverts were originally installed between 1980 and 1983 and consist of three (3) 60" diameter corrugated steel pipes outfitted with self-regulating tide gates (SRTs). The original corrugated metal pipes were relined in 2010 with a 54" diameter HDPE plastic pipe and two 48" diameter HDPE plastic pipes. The three self-regulating tide gates are the original 60" diameter gates, two in aluminum, one in fiberglass and are all supported from below on timbers with helical soil anchors and chain tie-downs.

   The vertical piles in this bulkhead structure are deteriorated with some hollow areas due to fresh water decay. The structural evaluation completed by Tighe and Bond in 2016 has recommended to the Town that the bulkhead and culvert system be replaced since the entire system is at the end of its design and service life.

2. **Purpose and Justification** – The purpose of the project is to complete the engineered design for the replacement of the existing bulkhead and culvert system do to their age and physical condition. The culverts and tide gates are critical infrastructure since they are the primary flood protection measure for the area north of the gates extending up to Old Field Road and Thorpe Street and west along South Pine Creek Road. The engineering design would incorporate different design concepts and would provide a detailed engineering cost analysis in order to accurately provide construction costs prior to going out to bid for final construction.

3. **Detailed Description of Proposal** –The Town is anticipating the following scope of services for the investigation, design, and permitting for the replacement of the Railroad Bridge Tide Gates:

   Task 1 –Study Phase

   1. Prepare a watershed map for the area based on topographic mapping as provided by the Town of Fairfield to determine the extent of the area contributing to the West Pine Creek Outfall.

   2. Conduct a limited field investigation to confirm the contributing area and flow direction of the drainage system.

   3. Prepare schematic details associated with the proposed culvert and headwall improvements.

   4. Prepare draft study report providing analysis of alternatives, opinions of probably costs, and permit requirements for review by DPW/Conservation Department Staff.

   5. Incorporate comments from DPW/Conservation into final report. Provide the Town with 3 copies of the final report.

Task 2 – Investigation and Design Services

1. Project Startup – The selected contractor will coordinate a project kick off meeting with relevant Town departments involved with the project.

2. Topographic Survey – The contractor will be required to perform a topographic survey within the area of the existing culvert and bridge. Survey information to be gathered will include grades along the existing embankment, location and elevations of the existing culverts and tide gates.

3. Site and Subsurface Investigation – Perform borings in the vicinity of the proposed culverts, headwall and tide gates to identify soil type, depth of rock (if found) and groundwater.

4. Prepare Base Plan – Combine topographic and property survey information with Town GIS mapping to prepare base for design that will include available information for other utilities. Provide plan view along the alignment of the existing embankment and section/profile views along the embankment and through the existing culverts.

5. Utilities – Contact the private utilities (electric, gas, telephone, cable, and sewer) to confirm location in the area of the planned worksite.

6. Construction Plan – Prepare construction plans and details for the project. At a minimum, the anticipated construction plan package will include:

    a. Cover sheet
    b. Existing Condition Plan
    c. Proposed Construction Layout Plan
    d. Embankment Profile – Sections
    e. Headwall – Tidegate Details
    f. Foundation Details
    g. Miscellaneous Construction Details
    h. Soil Erosion Control Plan, Narrative and Details
    i. Notes and Details relating to temporary water handling
    j. Restoration Plan

7. Technical Specifications and Bid Documents - Prepare project manual including bidding requirements, contract requirements, technical specifications and stamped construction plans.

8. Opinion of Probable Construction Cost – Prepare an opinion of probable construction cost based on itemized quantities and unit costs from recent, similar projects.

9. Meetings – Attend three progress coordination meetings with DPW/Engineering/Conservation Staff to discuss project status during the development of the plans and specifications. Attend two Fairfield Flood and Erosion Control Board meetings to provide updates on project status during the design and permitting phases.

10. Final deliverable will be 6 (6) sets of the bid documents including drawings and specifications.

Task 3 – Permitting Services

1. Tidal Wetlands Delineation

The consultant/engineer will delineate tidal wetlands within the project area. Tidal wetlands are generally characterized as low lands subject to tidal action, including those areas now of formerly

connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some of a specific listed plants species detailed in CGS section 22a-29(2). Delineation will be limited to the immediate project area.

2. OLISP Permitting

The project will be subject to permitting by the Connecticut Department of Energy and Environmental Protection's Office of Long Island Sound Programs (OLISP) under the Structures, Dredging and Fill Act (CGS 22a-359 through 22a-363f), the Tidal Wetlands Act (CGS Sections 22a-28 through 22a-35) and the Coastal Management Act (CGS Section 22a-90 through 22a-112). The Town anticipates that the following permits will be required for the project:

- Structures, Dredging and Fill Permit – This permit is required prior to conducting work, including dredging and the placement of fill material, waterward of the Coastal Jurisdiction Line (5.2 NAVD88 in Fairfield) in tidal, coastal or navigable waters of the state.

- Tidal Wetlands Permit – This permit is require prior to conducting work within tidal wetlands as defined in CGS Sections 22a-29

- Section 401 Water Quality Certification – The project would require a state Water Quality Certificate pursuant to Section 401 of the federal Clean Water Act.

The contractor shall request and attend with Town staff a pre-application meeting with OLISP staff prior to submission of the required permit applications. A pre-application questionnaire and supporting materials should be provided to OLISP at the meeting.

3. US Army of Corp of Engineers (ACOE) Permitting

Work and structures located in, under or over any navigable water of the U.S. that affects the course, location, condition, or capacity of such waters; or the excavating from or depositing of material in navigable waters is regulated by the ACOE under Section 10 of the Rivers and Harbors Act of 1899. The Town anticipates the project would be subject to Category 2 authorization under Section2 of the Connecticut General Permit.

4. **Reliability of Cost Estimate** – Tighe and Bond has provided an estimated costs for the investigation, design and permitting in preparation of the construction of the new culvert system as part of their "Fairfield Tide Gate Assessment Technical Memorandum" that was completed in August 3, 2016. As part of the evaluation, the report provided detailed costs estimates related to engineering and construction. Relevant sections of the assessment report have been attached for review as part of this request.

5. **Increased Efficiency or Productivity** – There is no increase in efficiencies or productivity associated with this project. The goal of the project is to reconstruct the existing critical flood control infrastructure to continue to protect commercial and residential property in the flood zone.

6. **Additional Long Range Costs** – Future long range costs associated with this project will be for the construction of the new bulkhead and culvert system that will be designed as part of the approval of this capital plan request. The Conservation Department and Department of Public Works has already provided an engineer estimate in the capital plan for the construction of the new bulkhead/culvert system. The construction project is estimated to cost approximately $1,176,000. The exact costs will be refined once the project is designed and put out to public bid.

7. **Additional Use or Demand on Existing Facilities** – None Anticipated

8. **Alternatives to this Request** – The only alternative to this request is to not do anything which will not resolve the existing problem. If the area is not stabilized, the existing erosion and scour situation will continue to increase exponentially possibly leading to damage and loss to adjacent neighboring public and private properties.

9. **Safety and Loss Control** – The new bulkhead and culvert system is being designed and eventually constructed to replace the old failing system. The new system will continue to function like the current system but will be more resilient to future coastal and inland flooding events. The bulkhead and culvert system is integral in protecting the residential and commercial properties that abut the western portion of Pine Creek.

10. **Environmental Considerations** – There are no environmental causes or concerns as a result of implementing this planning and design grant for the construction of the new bulkhead and culvert system. The project will aim to permit and mitigate and future environmental impacts that might be created during the construction phase of the bulkhead and culvert system.

11. **Insurance** – The engineering consultant will be required to carry the necessary insurance prescribed by the Purchasing Department.

12. **Financing** – If approved, the Project will be bonded as part of the Non-Recurring Capital budget of 2018/2019.

13. **Other Considerations**: None

14. **Other Approvals**:

Board of Selectmen	-	January 17th, 2018
Board of Finance	-	February 6th, 2018
RTM	-	March 26th, 2018.

Town of Fairfield

Engineer Investigation, Design, and Permitting Services
280 Old Dam Road

Legend

- Streams
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery

939.3 0 469.63 939.3 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
Created by Greater Bridgeport Regional Council

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION

GBRC
Greater Bridgeport Regional Council

Photo 14: Marina Culvert Entrance Upper Right, South Benson Road Culvert Collapse Center

Pine Creek Area

Railroad Bridge at Veterans Park

The berm and former railroad bridge crossing Pine Creek just north of Veterans Park is the primary flood protection measure for Pine Creek, consisting of three culverts with self-regulating tide gates. These culverts were originally 60" diameter corrugated steel pipes, but were relined in 2010. One of the culverts was relined with a 54" diameter HDPE plastic pipe and two of the culverts were relined with 48" diameter HDPE plastic pipes. The three self-regulating tide gates are the original 60" diameter gates, two in aluminum, one in fiberglass, supported from below on timbers with helical soil anchors and chain tie-downs. The upper orange plastic floats on both aluminum gates have damage and are deteriorated, but are generally still functioning due to the foam fill. The two aluminum gates also have broken PVC tie-pipes for the lower main floats, which need to be replaced, perhaps with aluminum struts. The fiberglass gate has more robust fiberglass struts securing the lower main float. There is some fiberglass grating over the inner portion of the gates.

The outer end of these culverts and tide gates are supported by a timber bulkhead. The vertical piles/post in this bulkhead structure are deteriorated with some hollow due to fresh water decay. It is recommended that they be replaced with helical piles and additional concrete to support the culvert ends. The entire bulkhead is at the end of its service life and should be replaced with a new concrete wall to help support the gates and access grating in addition to supporting shoreline soils. The embankment immediately east of the railroad bridge should be stabilized with riprap slope. The self-regulated tide gates are still serviceable, but broken PVC struts should be replaced before being reinstalled.

When the timber bulkhead is replaced, we also recommend the replacement of the three culverts below the dike. Conservation Department staff have indicated that the culvert

relining was performed as a temporary repair due to the deteriorated condition of the metal culverts. A more permanent repair in the form of a full culvert replacement, likely with triplewall polypropylene pipe, should be completed when the bulkhead is replaced. Performing both improvements at the same time will create cost savings for design, permitting and construction versus replacing the culverts as a future project.

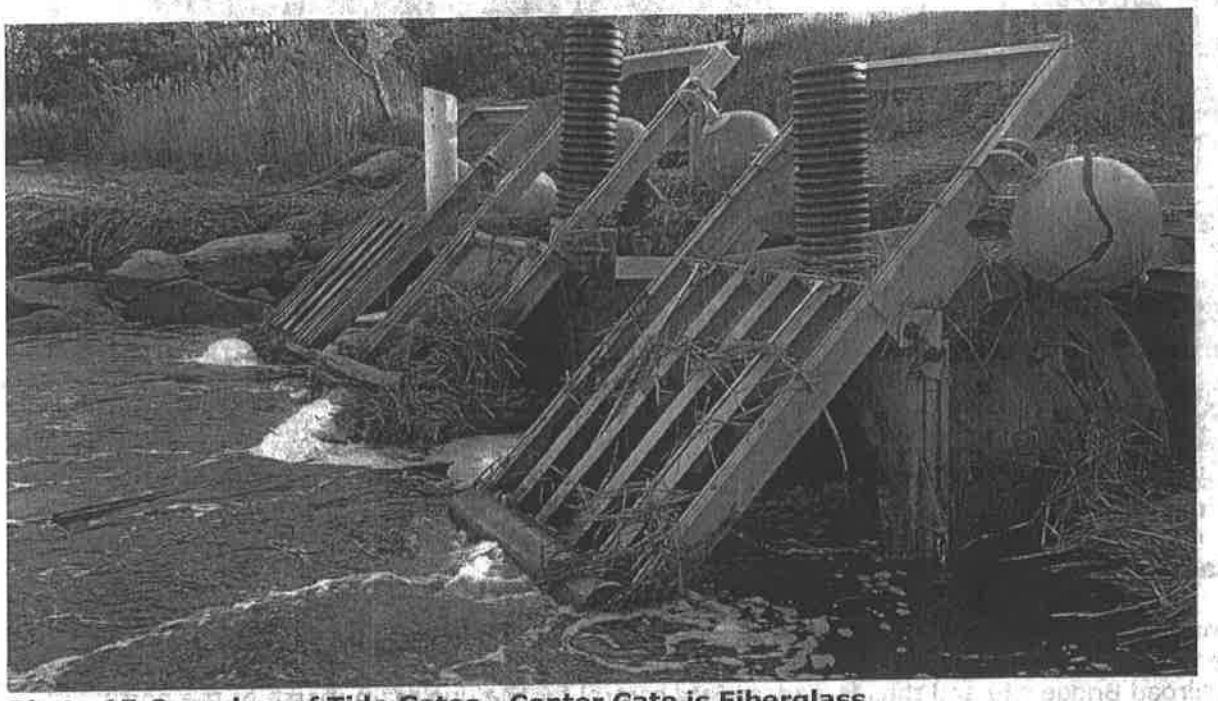

Photo 15:Overview of Tide Gates - Center Gate is Fiberglass

Photo 16: Timber Wall With Decay at Tide Gates

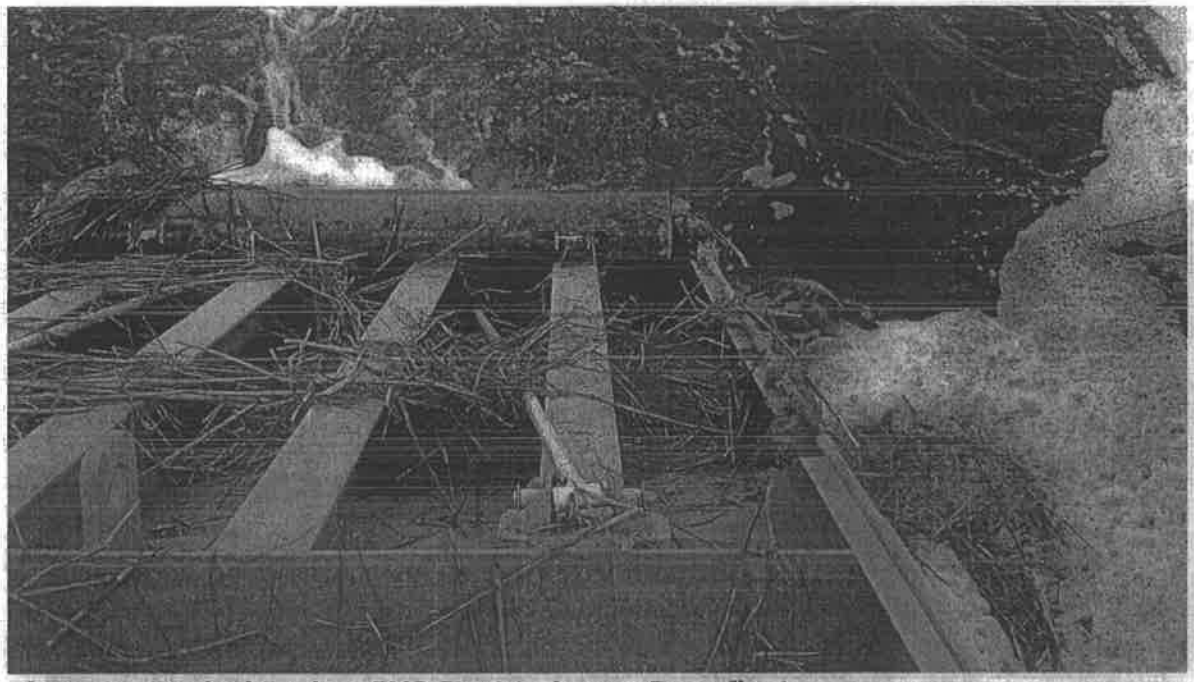

Photo 17: Typical Broken PVC Strut to Lower Door float

Salt Meadow Dike

The Salt Meadow Dike site has a 48" diameter and a 60" diameter tidal flow culverts with self-regulating tide gates. Both culverts are corrugated steel pipe. This site is upstream from the Railroad Bridge site and thus is a secondary control for the upstream marsh to the north.

This site has a narrow dike with steep sides. The downstream bank has a significant amount of large armor stone protecting the bank at least up to high tide level. The upstream bank has some similar large armor stone in the lower tide range, but active erosion and exposed geotextile in the upper tide level.

The 48" diameter tide gate had a lower door float that was dislodged and partially closed on the ebb flow. The 60" diameter tide gate was missing the lower door float and had been tied open with rope. Both tide gates had some cracking and missing chunks of the rubber gaskets, however this does not yet seem to be affecting performance of the gates.

Culvert corrosion holes were not observed during this inspection, but previously have been reported (2015). The culvert anodes were in place at both ends of the culverts. If there are corrosion holes in the culverts, they should be relined or replaced, along with bank erosion repairs and armoring. Given the redundant nature of these tide gates, tide and marsh elevations could be checked to see if these gates are still necessary, or are worth maintaining for flood resiliency.

We recommend replacing the 60" and 48" culverts with triplewall polypropylene pipe. Both ends of the culvert should include the construction of helical pile supported concrete endwalls with riprap aprons. The existing self-regulating tide gates should be removed, repaired, and reinstalled.

Photo 18: Tide Zone Bank Erosion with Exposed Geotextile

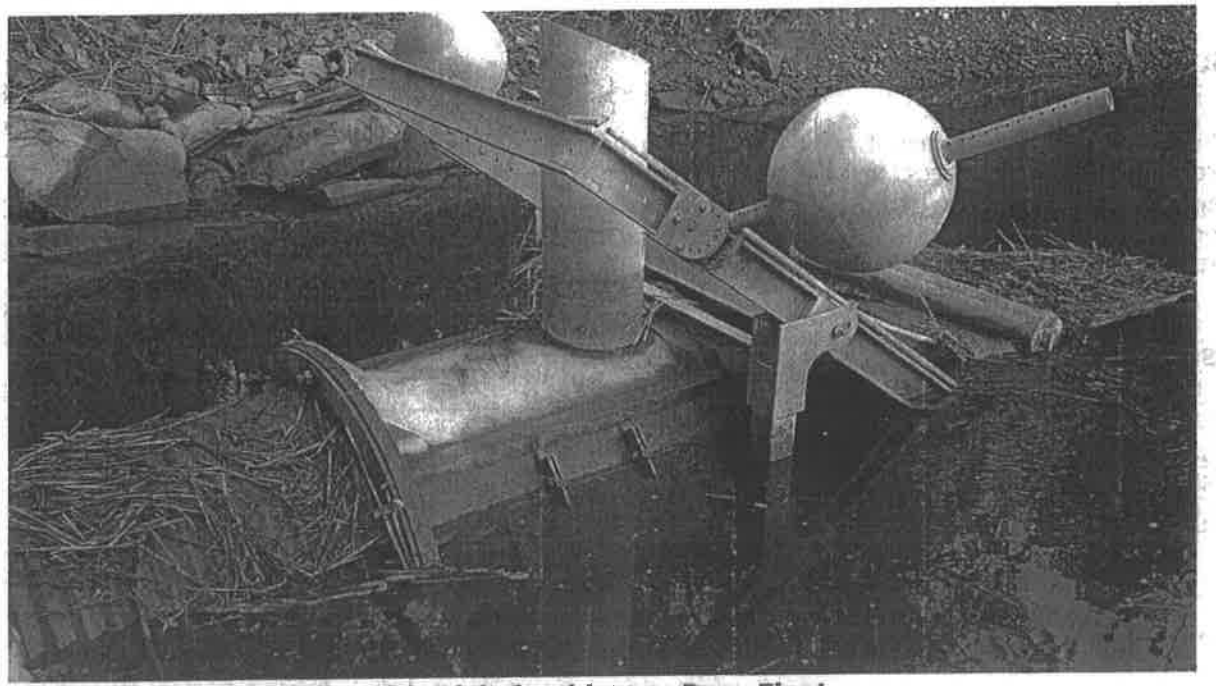

Photo 19: 48" Tide Gate with Dislodged Lower Door Float

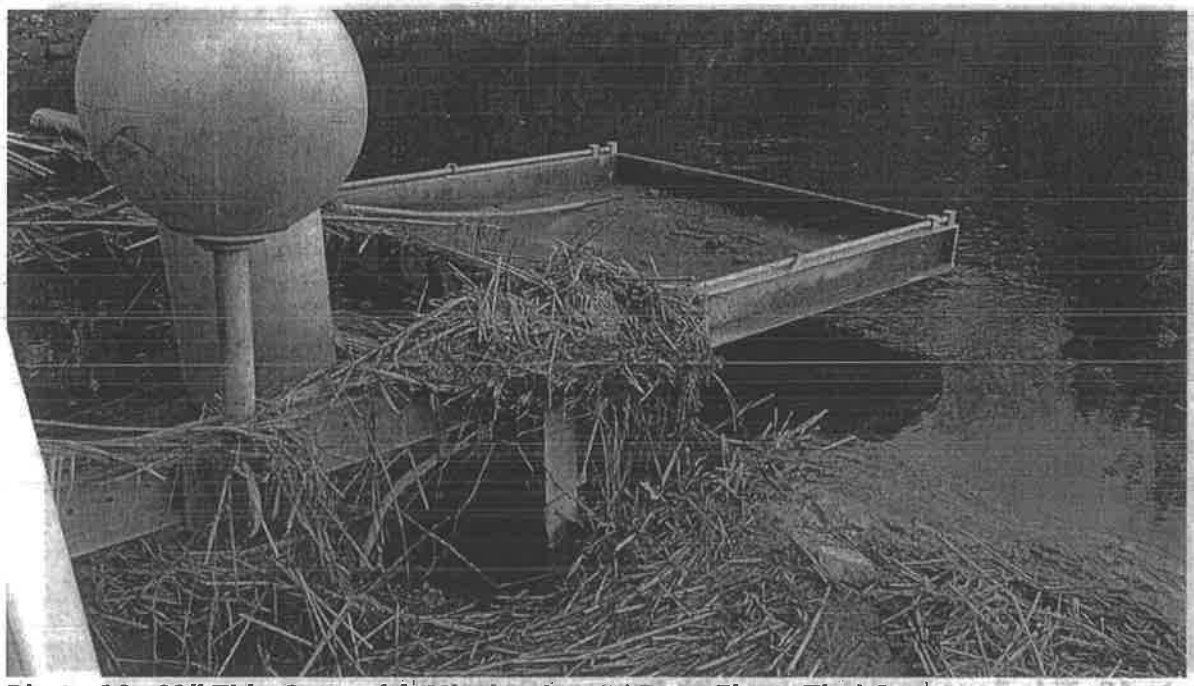

Photo 20: 60" Tide Gate with Missing Lower Door Float, Tied Open

Summary

The tide gates and adjacent headwalls are in varying states of deterioration. Opinions of probable construction cost have been prepared for the recommendations described in this report. The table below summarizes the priority level of each location based on its current condition and the approximate cost of the recommended repairs, with "1" being the highest priority and "5" being the lowest priority.

Site Location	Priority Level	Opinion of Probable Cost
Turney Creek at Riverside Drive	1	$1,116,000
Railroad Bridge at Veterans Park	2	$1,176,000
Salt Meadow Dike	3	$685,000
So. Benson Marina	4	$265,000
Riverside Creek	5	$440,000

Attachments:

Appendix A – Site Location Figures
Appendix B – Observation Logs
Appendix C – Opinions of Probable Construction Cost

J:\F\F0439 Fairfield Target Client Business Development\09 Tide Gate Capital Plan\Report_Evaluation\Fairfield Tidegate Assessment.docx

Tighe&Bond

Drainage System Observation Log

Site ID/Name: Site 6

Location: Railroad Bridge at Veterans Park

Inspection No.: TG:13 **Tide Conditions:** (Low / High)

Date: 5/23/16 **Time:** 6:26 AM / PM

Conditions: Clear **(Clear, Rain, Snow, Wind, etc.)**

Inspected By: Will Kesler, Duncan Mellor

Type of Inspection:

- ☒ Initial
- ☐ Yearly
- ☐ Post-Storm
- ☐ Complaint

System Designation:

- ☐ Standard Tide Gate
- ☒ Self Reg Tide Gate
- ☐ Drainage Ditch
- ☐ One Way Flap
- ☐ Custom Tide Gate
- ☐ Catch Basin
- ☐ Culvert
- ☐ Outfall
- ☐ Headwall

Overall Functionality:

- ☒ Fully Functional
- ☐ Functional with Restrictions
- ☐ Non-Functional

Notes on Condition/Problems:

Retaining wall leaning out with gaps in boards
Made of fiber glass, Vent pipe is corr. plastic
Pipe is corroded through(concrete lined)
Gate sitting on underwater beam

Maintenance Required:

- ☐ Immediate
- ☐ Repair
- ☒ Continued Upkeep

Notes on Maintenance:

Other Notes:

Riprap across from outlet and on backside, Gates have chains attached leading into water

Original pipe width 60", new size 48", CMP with concrete and corrugated plastic pipes inside

Tighe&Bond

Drainage System Observation Log

Site ID/Name: Site 6

Location: Railroad Bridge at Veterans Park

Inspection No.: TG:14 **Tide Conditions:** (Low / High)

Date: 5/23/16 **Time:** 6:26 AM / PM

Conditions: Clear (Clear, Rain, Snow, Wind, etc.)

Inspected By: Will Kesler, Duncan Mellor

Type of Inspection:

- ☒ Initial
- ☐ Yearly
- ☐ Post-Storm
- ☐ Complaint

System Designation:

- ☐ Standard Tide Gate
- ☒ Self Reg Tide Gate
- ☐ Drainage Ditch
- ☐ One Way Flap
- ☐ Custom Tide Gate
- ☐ Catch Basin
- ☐ Culvert
- ☐ Outfall
- ☐ Headwall

Overall Functionality:

- ☒ Fully Functional
- ☐ Functional with Restrictions
- ☐ Non-Functional

Notes on Condition/Problems:

Retaining wall leaning out with gaps in boards
Floats are cracked and broken
Gate sitting on underwater beam
PVC float holders are broken

Maintenance Required:

- ☐ Immediate
- ☒ Repair
- ☐ Continued Upkeep

Notes on Maintenance:

Other Notes:

Riprap across from outlet and on backside, Gates have chains attached leading into water

Original pipe width 60", new size 54", CMP with concrete and corrugated plastic pipes inside

Pile and Headwall Observation Log

Site 1:

Front Headwall:

- Headwall made up of 11, 4 by 12 Creo
- Piles 8 feet +/-

Piles:

- 1-Head rot
- 2-Head rot
- 3-Top cut off and replaced with tie back
- 4-Okay
- 5-Head rot
- 6-Head rot
- 7-Head rot
- 8-Head rot, Marine bore
- 9-Head rot, Marine bore
- 10-Head rot
- 11-Head rot
- 12-Head rot

Back Headwall:

- Headwall leaning out especially at pile 4

Pile:

- 1-Head rot
- 2-Head rot
- 3-Head rot
- 4-Head rot
- 5-Head rot
- 6-Head rot
- 7-Head rot

Site 4:

Piles:

- 1-Head rot, Marine bore
- 2-Head rot

Site 6:

Headwall:

- Headwall made up of 4 by 12's
- Headwall leaning out with gaps between boards

Piles:

- 1-OK
- 2-OK
- 3-Head rot
- 4-Head rot
- 5-OK
- 6-Head rot
- 7-Head rot
- 8-Minor head rot
- 9-OK
- 10-OK

All had cap material at one time

Tighe&Bond
Consulting Engineers
Environmental Specialists

Prep'd Date 8/1/2016 By JCB
Ch'kd Date By JAR
Town of Farfield
Funds
Town No.
Project No. 15-0439-9
Sheet No. 1 of 1

Opinion of Probable Cost
for the Construction of

Railroad Bridge at Veterans Park Tidal Gate

Project Description Upgrade
Fairfield, CT

FROM STA Conceptual **TO STA**
A LENGTH **FEET AS SHOWN ON THE PLANS**

No.	Item	Unit	Quantity	Price	Amount
1	Sediment and Erosion Control	LS	1	$25,000	$25,000
2	Water Handling & Dewatering	LS	1	$200,000	$200,000
3	Earth Excavation and Backfill	CY	800	$50	$40,000
4	Remove Existing Bulkhead	LS	1	$25,000	$25,000
5	Structural Backfill Material	CY	300	$40	$12,000
6	Crushed Stone	CY	600	$50	$30,000
7	Intermediate Riprap	CY	75	$120	$9,000
8	Cast in Place Concrete for Tide Gate Support	CY	10	$1,500	$15,000
9	Cast in Place Concrete Headwall	CY	100	$1,500	$150,000
10	Helical Piles	EA	24	$4,000	$96,000
11	Remove and Re-install Existing Tide Gates	EA	3	$10,000	$30,000
12	60" Triplewall Polypropylene Pipe	LF	225	$200	$45,000
13	Mobilization (5%)	LS	1	$31,600	$31,600
14	Construction Staking (2.5%)	LS	1	$15,800	$15,800
15	Permitting and Mitigation (5%)	LS	1	$36,000	$36,000
16	Design (15%)	LS	1	$109,000	$109,000
17	Inspection (10%)	LS	1	$72,000	$72,000
18	Geotechnical Investigation	LS	1	$36,000	$36,000
				Subtotal	$980,000
				20% Contingency	$196,000
	TOTAL			SAY	$1,176,000

Tighe&Bond
Consulting Engineers
Environmental Specialists

Prep'd Date 8/1/2016 By JCB
Ch'kd Date By JAR
Town of Farfield
Funds
Town No.
Project No. 15-0439-9
Sheet No. 1 of 1

Opinion of Probable Cost for the Construction of

Project Description: Turney Creek at Riverside Drive Tidal Gate Upgrade, Fairfield, CT

FROM STA **Conceptual** **TO STA**
A LENGTH **FEET AS SHOWN ON THE PLANS**

No.	Item	Unit	Quantity	Price	Amount
1	Clearing and Grubbing	LS	1	$25,000	$25,000.00
2	Sediment and Erosion Control	LS	1	$25,000	$25,000
3	Water Handling & Dewatering	LS	1	$200,000	$200,000
4	Earth Excavation	CY	450	$25	$11,250
5	Remove Existing Bulkhead	LS	1	$25,000	$25,000
6	Crushed Stone	CY	50	$50	$2,500
7	Structural Backfill Material	CY	100	$40	$4,000
8	Intermediate Riprap	CY	150	$120	$18,000
9	Geotextile Fabric	SY	400	$5	$2,000
10	Cast in Place Concrete Headwall	CY	50	$1,500	$75,000
11	Helical Piles	EA	20	$3,000	$60,000
12	48" Self-Regulating Tide Gate	EA	2	$45,000	$90,000
13	60" Flap Gates	EA	2	$25,000	$50,000
14	Grout 48" Culverts	CY	75	$300	$22,500
15	Remove and Reset Wood Guard Rail	LF	35	$225	$7,875
16	Mobilization (5%)	LS	1	$29,400	$29,400
17	Construction Staking (2.5%)	LS	1	$14,700	$14,700
18	Permitting and Mitigation (5%)	LS	1	$33,000	$33,000
19	Design (20%)	LS	1	$132,000	$132,000
20	Inspection (10%)	LS	1	$66,000	$66,000
21	Geotechnical Investigation	LS	1	$33,000	$33,000
				Subtotal	$930,000
				20% Contingency	$186,000
	TOTAL			SAY	$1,116,000

Tighe&Bond
Consulting Engineers
Environmental Specialists

Prep'd Date 8/1/2016 By JCB
Ch'kd Date By JAR
Town of Farfield
Funds
Town No.
Project No. 15-0439-9
Sheet No. 1 of 1

Opinion of Probable Cost for the Construction of

Project Description Salt Meadow Dike Tidal Gate Upgrade
Fairfield, CT

FROM STA **Conceptual** **TO STA**
A LENGTH **FEET AS SHOWN ON THE PLANS**

No.	Item	Unit	Quantity	Price	Amount
1	Sediment and Erosion Control	LS	1	$25,000	$25,000
2	Water Handling & Dewatering	LS	1	$100,000	$100,000
3	Earth Excavation and Backfill	CY	425	$50	$21,250
4	Crushed Stone	CY	100	$50	$5,000
5	Structural Backfill Material	CY	100	$40	$4,000
6	Intermediate Riprap	CY	50	$120	$6,000
7	Cast in Place Concrete for Tide Gate Support	CY	10	$1,500	$15,000
8	Cast in Place Concrete Headwall	CY	60	$1,500	$90,000
9	Helical Piles	EA	16	$4,000	$64,000
10	Tie Rods	EA	6	$2,000	$12,000
11	60" Triplewall Polypropylene Pipe	LF	40	$200	$8,000
12	48" Triplewall Polypropylene Pipe	LF	40	$225	$9,000
13	Geotextile Fabric	SY	250	$5	$1,250
14	Remove, Repair, and Re-install SRT's	EA	2	$15,000	$30,000
15	Mobilization (5%)	LS	1	$19,500	$19,500
16	Construction Staking (2.5%)	LS	1	$9,800	$9,800
17	Permitting and Mitigation (5%)	LS	1	$21,000	$21,000
18	Design (15%)	LS	1	$63,000	$63,000
19	Inspection (10%)	LS	1	$42,000	$42,000
20	Geotechnical Investigation (5%)	LS	1	$21,000	$21,000
				Subtotal	$570,000
				20% Contingency	$114,000
	TOTAL			SAY	$685,000

Fairfield Information Technology
Data Center Relocation – 14 Point Summary
Non-recurring Capital Request

Background

The Town of Fairfield's on premise technology applications currently operate in three formal data centers, two "production" centers located in Town buildings, and one "backup" center at a co-location facility in Trumbull, CT.

This proposal is to combine the Town's two production data centers into one in a safer location.

Definition of a "Data Center"

A data center is usually a large, air conditioned room with either a raised floor (a false floor made of square metal panels elevated on "stilts" above a concrete floor which allows for electrical and data wiring, and/or serves as a cold air plenum for the air conditioning system), or a solid floor with wiring "ladder racks" suspended from the ceiling above, and a large battery-backed Uninterruptible Power Supply (UPS). The Town's current "primary" production server room is the raised floor type.

Fairfield's Current Data Centers

The Town currently operates two in-Town data centers:

1. "Primary" center: A large 800 square foot, professionally designed, raised-floor data center with a large data center-grade air conditioning unit (near end-of-life), and a large battery-backed whole-room UPS system (at end-of-life). This center now houses one equipment rack of data servers and storage.
2. "Police" center: A "makeshift" data center containing a single equipment rack of servers, located in an electrical room.

and one "remote" data center:

3. "Backup" center: A site containing backups of the data in the Town's in-Town data centers – formerly located at Fairfield Woods Library, now moved to a "co-location" facility in Trumbull, CT. The Town "hotels" one equipment rack of data servers and storage at this remote location.

Although years ago, the Town required a large 800 square foot room due to the amount and size of its data processing equipment, this is no longer the case due to:

- Miniaturization of computer equipment over the years
- The transition from "on premise" technology applications to "Software as a Service" (SaaS), vendor-hosted, hybrid (which have both an on premise and off premise component), and cloud-based applications where possible and economically feasible

Due to the above, the Town's current need for, and definition of a "data center" for the foreseeable future is modest (we have two):

- A single **seven square foot** equipment rack containing
- virtualized servers, storage, and various purpose-built technology appliances in
- an air conditioned environment with
- battery-backed UPS and generator power with
- excellent connectivity to the Town's Wide Area Network (WAN)
- in a safe location (2nd floor or higher of a secure building)
- in a physically secure location.

The Problem

With the exception of the Town's "backup" data center, which has recently been moved to a co-location facility approximately twelve miles inland, the Town's two in-Town "production" data centers are **both** located:

- In basements
- below sea level
- within the 100-year flood plain
- within one mile of Long Island Sound

and with regard to the "Primary" data center:

- The data center air conditioning unit is nearing end-of-life, is too large for the Town's now very modest data equipment cooling needs, and is expensive to operate
- The UPS system is at end-of-life
- The center is far larger than needed – an 800 square foot room housing a 7 square foot equipment rack containing all of the Town's non-Police servers and storage

Generally, it is not considered good practice to have a data center in a basement as it may be vulnerable to:

- Freshwater flooding or seepage due to rain or dam break.
- Saltwater flooding or seepage due to storm surge if located close to a saltwater body at low altitude.
- Domestic plumbing breakage, or fire suppression system (sprinkler) release, etc.
- Poor physical security, particularly if there are basement windows located in or near the data center.

Purpose and Justification

The Town's production data centers are vulnerable to all of the risks above.

Although many of the Town's technology applications are now purchased as "Software as a Service" (SaaS), or are vendor-hosted, or are cloud-based, or a hybrid combination, many others are not available as such, or are significantly more expensive to implement as such, and the Town will need on premise technology equipment for the foreseeable future.

Although it is difficult to predict the future, it seems that the trend is toward more severe weather with greater water risks than before, so much so that many Fairfield residents are lifting their homes.

This proposal is to lift the Town's data centers and combine them into one.

<u>Purpose</u>
The purpose of this proposal is to:

- Reduce the risk of permanent damage to, or outage of the Town's on premise IT server assets by moving them to a higher elevation (upper floor of a building) in a more physically secure location at a reasonable cost (by utilizing space within existing Town facilities)

and also to

- "Right-size" the data centers to reduce ongoing operating (electrical and maintenance) costs
- Avoid the costs of replacing the large scale air conditioner and UPS unit in the existing primary data center
- Improve the reliability/cooling of the "Police" data center from its current makeshift electrical room location

Justification

Many of the technology applications running in the Town's data centers are important to the Town's emergency response departments and other personnel serving the public during a Town-wide emergency. In addition, the remainder of Town information systems housed on premise could be damaged as a result of the risks above.

- Utilizing/refitting space in an *existing* Town facility is *substantially* less expensive than constructing a new facility.
- Utilizing a Town facility with good Town Wide Area Network (WAN) access avoids the costs of building, and then maintaining a high speed link to Town technology users.
- Utilizing a Town facility avoids the ongoing co-location costs of using a co-location provider (as described later).

Detailed Description of Proposal

This proposal **combines the Town's two production data centers into one**, and **relocates them to a safer space** where they would be less likely to be impacted during a Town-wide emergency, and would be less susceptible to permanent damage in the event of a disaster.

Data Center Requirements

Each of the Town's two current production data centers contain one rack's worth of equipment (see ***Figure 1***). The racks are located in rooms with air conditioning, battery-backed UPS units, and access to the Town's WAN. A typical rack is about 6½ feet tall, 2 feet wide, and about 3½ feet deep. All of the Town's data center equipment fits into two of these racks.

Figure 1

In a newly outfitted space, an air conditioning unit is needed (ideally one with two-units-in-one so that if there is a failure within the unit, there would still be some cooling capacity), as well as a battery-backed Uninterruptible Power Supply (UPS) which will kick in *immediately* to keep the computer equipment up and running at the beginning of a power failure until the building's backup generator spins up and comes on line, as well as some network equipment to connect the equipment together and to the Town's WAN.

In order to house two equipment racks, a network and UPS rack, and an air conditioning unit with adequate air flow and 36 inches of work space in front of, and along the sides of the equipment, a room approximately 9 feet by 15 feet (about 135 square feet) is required (see ***Figure 2***).

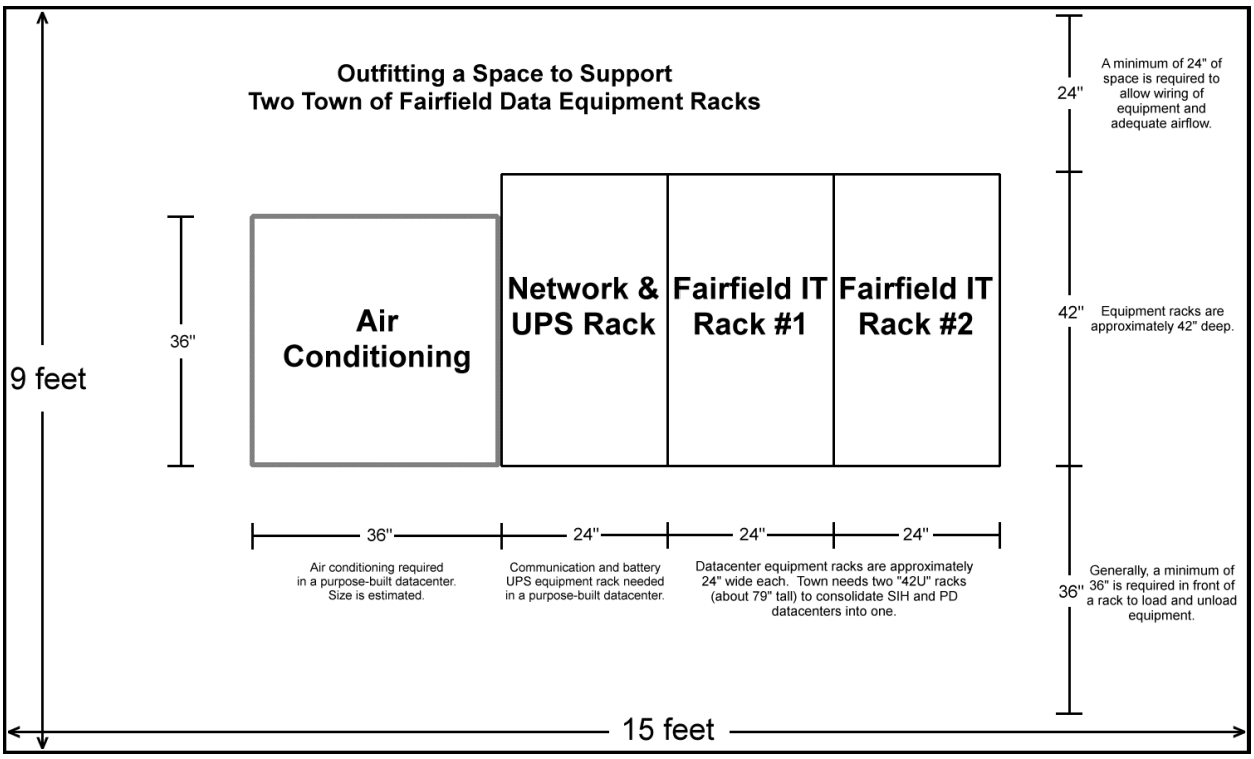

Figure 2

Two in-Town locations have been identified as candidates to house such a data center:

- Police Department – 2nd floor
- Fire Station #1 – 2nd floor

Criteria for the selection:

- Very high speed connectivity to Town Wide Area Network
- Reliable power; Generator backup power available
- Physically secure
- 2nd floor or higher of a building
- Long term cost
- Ability to outfit the space (cooling, weight, power, non-historic building)

In-Town Option – Police Department

The Police Department has a storage room turned informal "mini-data center" in the northeast corner of the second floor of the building. ***Figure 3*** shows the area of interest. Currently, this room does not have formal air conditioning, nor significant network connectivity needed to operate as a Town data center.

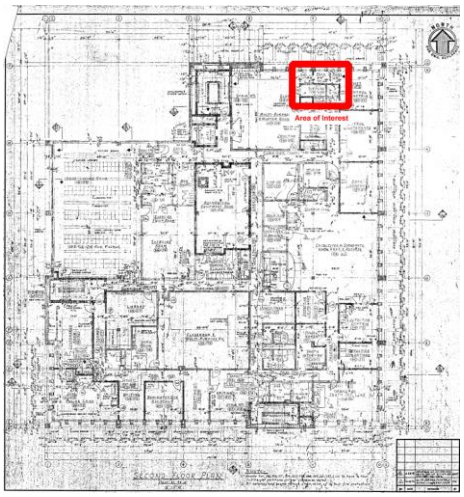

Figure 3

The data network equipment which serves the second floor of the Police Department Building is currently located in an HVAC air handing room elsewhere on the floor. The equipment rack is located directly under an air handler which leaks air conditioning condensate (water) in the summer months. The Police Department wishes to move the equipment, and rewire the second floor of the building to the new location -- the room under consideration as a Town data center. (The room could accommodate both purposes.) The current configuration of the room is not suitable for use as a data center (as shown in ***Figure 4***), however, Chief MacNamara has given verbal permission to reconfigure the room to make it suitable.

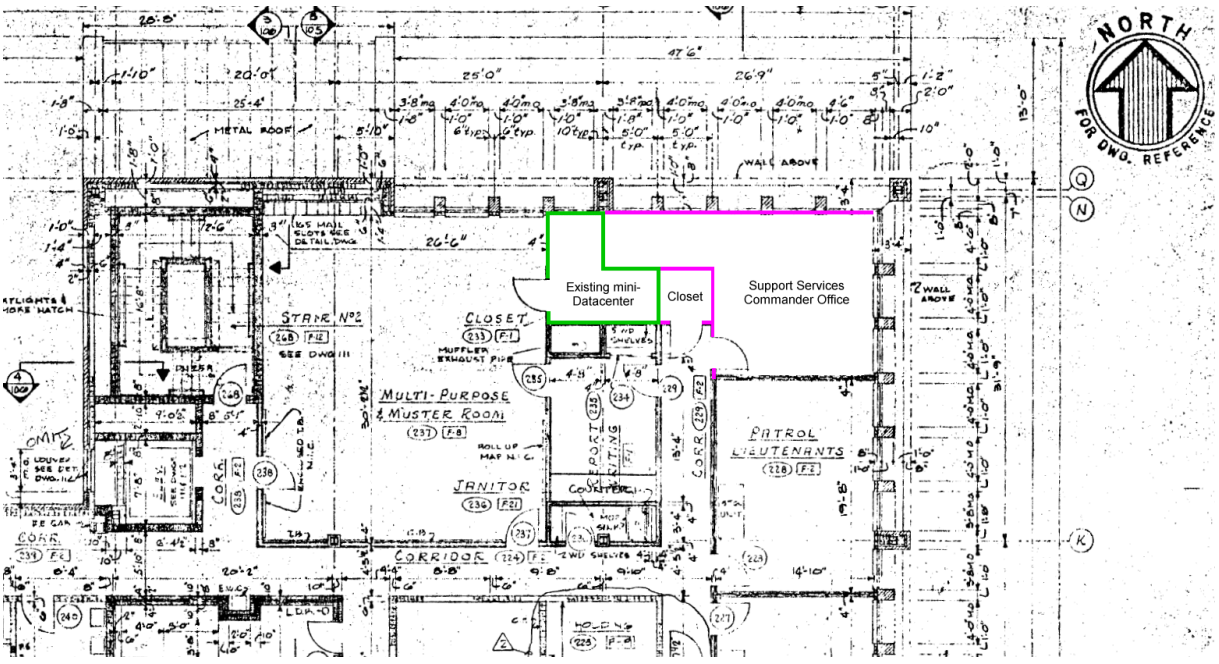

Figure 4

The proposed reconfiguration of the area by moving walls (it is unknown if any of the walls are "load bearing"), which meets the Town's space need, is shown in ***Figure 5***.

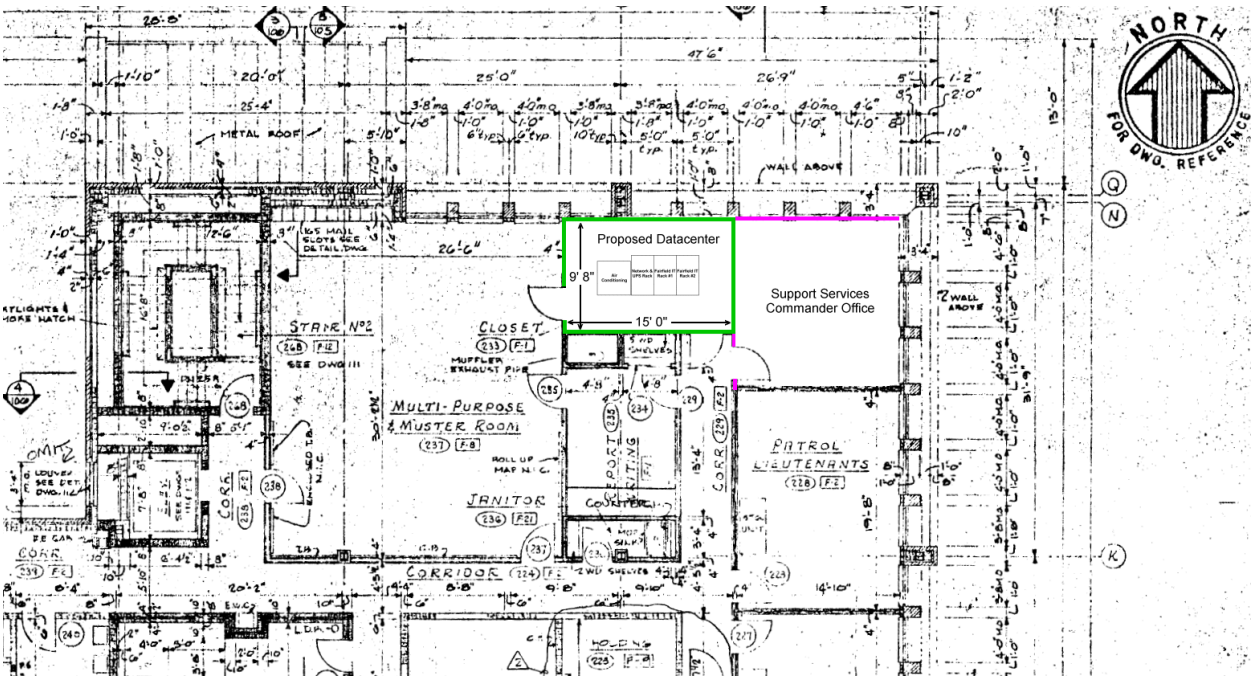

Figure 5

Pros and Cons to choosing this location:

Pros:

- Location -- the second floor of a building:
  - Ideally a data center is located on the second floor (or higher) of a building, but not the top floor (this location meets one of these desired criteria)
  - better than a basement
  - Improved physical security (compared to a basement or first floor location)
- Generator backup power available
- Very good access to the core Town WAN
- Good physical security (in a police station)
- Two benefits in one if the network closet is moved as part of the project
- Physically close to the IT Department
- Less expensive in the long run than co-location at a commercial facility; less expensive than constructing a building

Cons:

- Located in a building still within the 100-year flood plain:
  - It is unclear that the building will have power, even with the backup generator, during a basement flooding event as the electrical equipment for the building may be in the basement – and wet

In-Town Option – Fire Station #1 (Reef Rd)

The Fire Department has an existing "mini-data center" in the center of the second floor of Fire Station #1. ***Figure 6*** shows the area of interest. Currently, this room houses some critical network equipment, the Town's current VoiceMail system, and will house servers for a future VoIP telephone system. The room does not have sufficient air conditioning, nor sufficient UPS backup power to house Town servers, nor is it large enough.

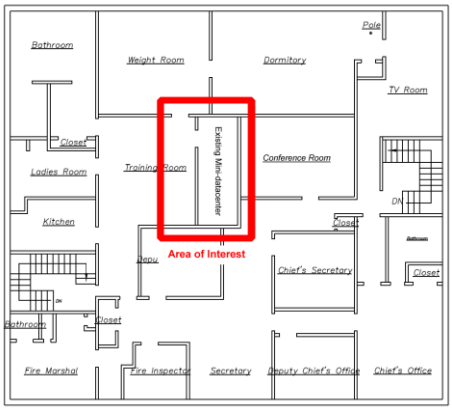

Figure 6

The current room layout is shown in ***Figure 7***. Making the room suitable as a data center would require moving a wall and a door, making the "Training Room" (used as a mapping room) smaller.

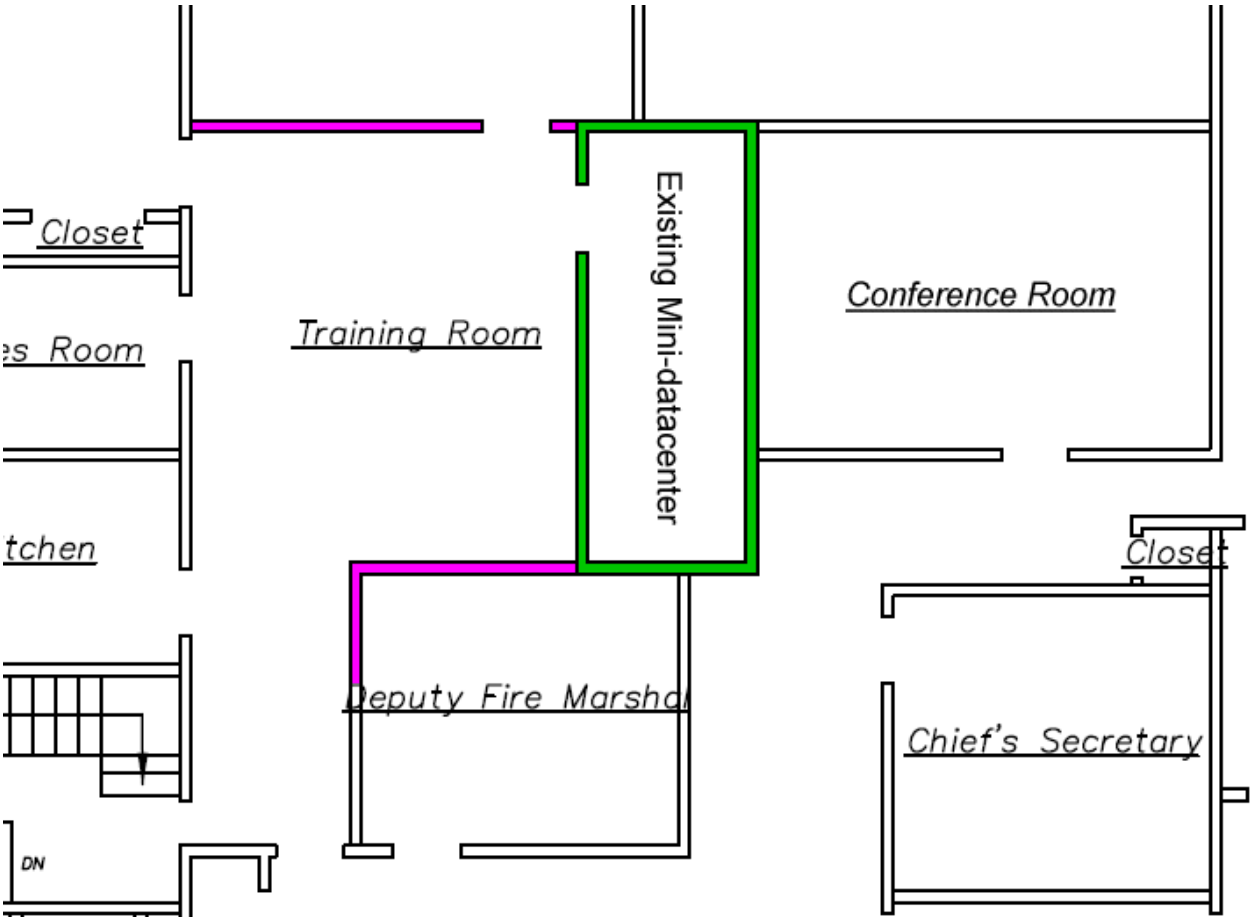

Figure 7

The proposed reconfiguration of the area by moving walls (it is unknown if any of the walls are "load bearing"), which meets the Town's space need, is shown in ***Figure 8***.

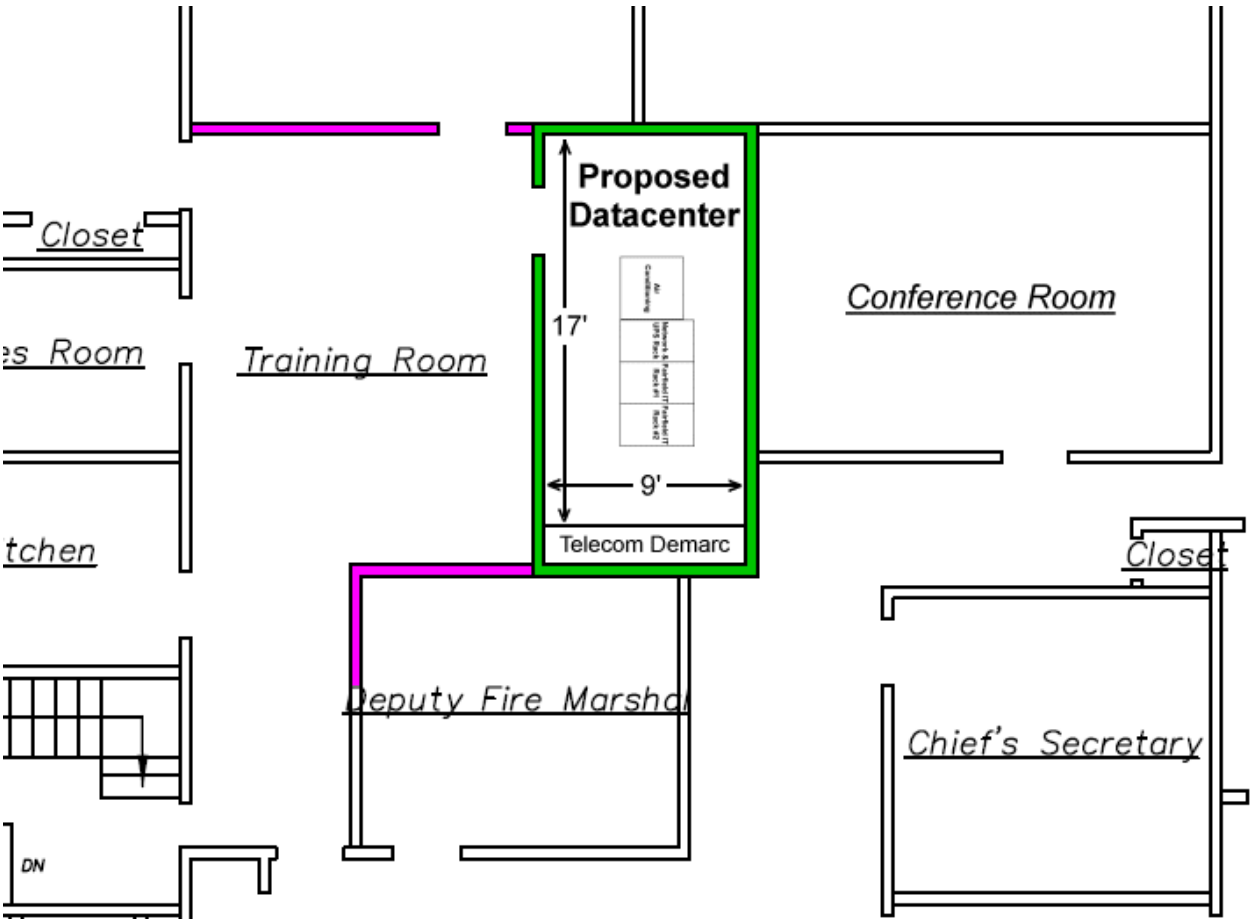

Figure 8

Pros and Cons to choosing this location:

Pros:

- Location -- the second floor of a building:
  - Ideally a data center is located on the second floor (or higher) of a building, but not the top floor (this location meets one of these desired criteria)
  - better than a basement
  - Improved physical security (compared to a basement or first floor location)
- Generator backup power available
- **Extremely** good access to the core Town WAN
- Good physical security (near a police

Cons:

- Located in a building still within the 100-year flood plain:
  - It is unclear that the building will have power, even with the backup generator, during a flooding event as the electrical equipment for the building may be in the lower level – and wet

station)
- Physically close to the IT Department
- Less expensive in the long run than co-location at a commercial facility; less expensive than constructing a building

Reliability of Estimated Cost

Information Technology has estimated the cost up outfitting one of the two suggested locations at $250,000 – the cost of outfitting either space is expected to be roughly the same, although the exact proportions of the costs may vary slightly. For example, one space has a more complicated wall demolition/rebuild while the other's HVAC system's roof unit may need to be fit among/around solar panels. The amount is **estimated** based on the BOE's experience installing an air conditioner in their data center as part of RFP #2016-53, plus an estimation of the cost of design/engineering/architectural services, moving walls, supplying power to the room, and moving network cabling, fiber, and equipment as needed. The Town does not possess bid-worthy "as-built" documentation of the spaces proposed. Some engineering/architectural services would have to be purchased to develop the plan sufficiently in order to go to bid and get formal pricing, should this proposal be approved.

Estimated Costs of Refitting Police Department

Install air conditioning unit with roof unit and condensate removal	110,000
Engineering/architectural	15,000
Wall demolition/rebuild	15,000
Electrical	15,000
Relocate/re-pull fiber and cabling	20,000
Rewire 2nd floor Police Department offices to new location	50,000
Contingency	25,000
Total	$250,000

Efficiency/Productivity

There will be some operational savings from consolidating two air-conditioned data centers into one, and by "right-sizing" the space. Operation and maintenance costs of two existing/obsolete air conditioning units, and an obsolete UPS system will be replaced by that in the newer, smaller space. "Right-sizing" space down to today's smaller needs reduces these costs going forward. The existing 800 square foot data center could be repurposed for uses appropriate for a basement location in a flood plain.

Additional Long-Range Costs

There should be a reduced cost compared to current spend due to cooling of less space with a single smaller air conditioning system and UPS units. The HVAC system and UPS units will require normal maintenance.

Additional Use or Demand on Existing Facilities

In the Police Department, the new space is realized by combining several existing storage spaces and closets into one, resulting in a net reduction of storage space at the Department. In the Fire Station, most of the existing space already houses some data and telephone equipment. In order to fit data center racks into the space, the room needs to be expanded by two feet in one direction, resulting in a reduction of the Department's Map Room by 34 square feet. In both cases, IT Staff and vendors would need 24x7 access to the spaces.

Alternates to this Request

Several alternatives to this request have been considered:

- **Do nothing**
  Leave both data centers in basements, accepting the risk of outage and/or loss in the event of a water event. During Storm Sandy, the Town's Public Works Department successfully defended the larger data center through continuous pumping of water away from the building. The existing air conditioning unit in that center is functioning, but is old and will eventually need replacement at a cost similar to the one proposed here.

- **Move to BOE data center**
  Co-location within the Board of Education's data center has been considered. As BOE moves more services to the cloud, they will vacate some rack space. Also, BOE's data center has excellent connectivity to the Town's WAN, and they are somewhat close to the Town IT Department. However, BOE's data center, which is in a leased space, has no generator backup, and the building is directly adjacent to Rooster River and Ash Creek. The BOE data center experienced a lengthy outage during Storm Sandy.

- **Move BOE equipment to a larger new Town datacenter**
  Due to BOE's projected move to the cloud within the next couple of years, it would not be cost effective to build a larger space now, and incur the costs and effort to move their equipment for only a short time.

- **Rent a co-location space**
  Currently, the Town's backup data center is located at a commercial facility in Trumbull, CT. The cost of housing one equipment rack there is currently $19,200 per year (which is comparable among vendors); two additional racks (as needed for Town production servers, preferably at a different location than the backup center) would be $38,400 per year (about a 7-year break-even point). In addition, a fairly expensive network link upgrade would be required to attach a distant data center to the Town's WAN to support day-to-day production activity, and there are time and transportation costs associated with operating a distant data center. An advantage to a co-location arrangement is that the remote space can situated well away from the flood plain; the drawbacks are cost and accessibility.

Safety and Loss Control

Although still in the 100 year flood plain, either in-Town location described in this proposal is markedly more secure due to its raised elevation on the second floors of their respective buildings, and their proximity to the Police Department. Although a substantial flooding event could render either location temporarily inoperable, the likelihood of permanent damage to the Town IT assets would be far lower than as currently situated.

Environmental Considerations

None.

Insurance

No effect identified. Contractors would be required to carry insurance.

Financing

A significant portion of the cost of this project is an air conditioning unit which would have a useful life expectancy of about 15 years.

Other Considerations

None.

Other Approvals

Board of Selectman
Board of Finance
RTM

5 YEAR

A RESOLUTION APPROPRIATING $972,995 FOR THE COST OF A CERTAIN NONRECURRING CAPITAL PROJECT AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION.

\- -

Resolved:

1. As recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield hereby appropriates the sum of Nine Hundred Seventy-two Thousand Nine Hundred Ninety-five and 00/100 ($972,995.00) Dollars to fund all costs associated with the nonrecurring capital project described on **Exhibit A** attached hereto, inclusive of planning, design and engineering fees, other professional fees, demolition, construction and oversight costs and temporary and permanent financing costs (the "Project"), in the amount of such appropriation allocated to each Project as set forth in **Exhibit A**.

2. To finance such appropriation, and as recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield shall borrow a sum not to exceed Nine Hundred Seventy-two Thousand Nine Hundred Ninety-five and 00/100 ($972,995.00) Dollars and issue bonds/bond anticipation notes for such indebtedness under its corporate name and seal and upon the full faith and credit of the Town in an amount not to exceed said sum for the purpose of financing the appropriation for the Project.

3. The Board of Selectmen, the Treasurer and the Fiscal Officer of the Town are hereby appointed a committee (the "Committee") with full power and authority to cause said bonds to be sold, issued and delivered; to determine their form and terms, including provision for redemption prior to maturity; to determine the aggregate principal amount thereof within the amount hereby authorized and the denominations and maturities thereof; to fix the time of issue of each series thereof and the rate or rates of interest thereon as herein provided; to determine whether the interest rate on any series will be fixed or variable and to determine the method by which the variable rate will be determined, the terms of conversion, if any, from one interest rate mode to another or from fixed to variable; to set whatever other terms of the bonds they deem necessary, desirable or appropriate; to designate the bank or trust company to certify the issuance thereof and to act as transfer agent, paying agent and as registrar for the bonds, and to designate bond counsel. The Committee shall have all appropriate powers under the Connecticut General Statutes, including Chapter 748 (Registered Public Obligations Act), Chapter 173 (School Building Projects) and Chapter 109 (Municipal Bond Issues) to issue, sell and deliver the bonds and, further, shall have full power and authority to do all that is required under the Internal Revenue Code of 1986, as amended, and under rules of the Securities and Exchange Commission, and other applicable laws and regulations of the United States, to provide for issuance of the bonds in tax exempt form and to meet all requirements which are or may become necessary in and subsequent to the issuance and delivery of the bonds in order that the interest on the bonds be and remain exempt from Federal income taxes, including, without limitation, to covenant and agree to restriction on investment yield of bond proceeds, rebate of arbitrage

earnings, expenditure of proceeds within required time limitations, the filing of information reports as and when required, and the execution of Continuing Disclosure Agreements for the benefit of the holders of the bonds and notes.

4. The First Selectman and Treasurer or Fiscal Officer, on behalf of the Town, shall execute and deliver such bond purchase agreements, reimbursement agreements, line of credit agreement, credit facilities, remarketing agreement, standby marketing agreements, bond purchase agreement, standby bond purchase agreements, and any other commercially necessary or appropriate agreements which the Committee determines are necessary, appropriate or desirable in connection with or incidental to the sale and issuance of bonds, and if the Committee determines that it is necessary, appropriate, or desirable, the obligations under such agreements shall be secured by the Town's full faith and credit.

5. The bonds may be designated "Public Improvement Bonds," series of the year of their issuance and may be issued in one or more series, and may be consolidated as part of the same issue with other bonds of the Town; shall be in serial form maturing in not more than five (5) annual installments of principal, the first installment to mature not later than three (3) years from the date of issue and the last installment to mature not later than five (5) years from the date of issue. The bonds may be sold at an aggregate sales price of not less than par and accrued interest at public sale upon invitation for bids to the responsible bidder submitting the bid resulting in the lowest true interest cost to the Town, provided that nothing herein shall prevent the Town from rejecting all bids submitted in response to any one invitation for bids and the right to so reject all bids is hereby reserved, and further provided that the Committee may sell the bonds on a negotiated basis, as provided by statute. Interest on the bonds shall be payable semi-annually or annually. The bonds shall be signed on behalf of the Town by at least a majority of the Board of Selectmen and the Treasurer, and shall bear the seal of the Town. The signing, sealing and certification of the bonds may be by facsimile as provided by statute.

6. The Committee is further authorized to make temporary borrowings as authorized by the General Statutes and to issue temporary notes of the Town in anticipation of the receipt of proceeds from the sale of the bonds to be issued pursuant to this resolution. Such notes shall be issued and renewed at such time and with such maturities, requirements and limitations as provided by the Connecticut General Statutes. Notes evidencing such borrowings shall be signed by the First Selectman and Treasurer or Fiscal Officer, have the seal of the Town affixed, which signing and sealing may be by facsimile as provided by statute, be certified by and payable at a bank or trust company incorporated under the laws of this or any other state, or of the United States, be approved as to their legality by bond counsel, and may be consolidated with the issuance of other Town bond anticipation notes. The Committee shall determine the date, maturity, interest rates, form and manner of sale, including negotiated sale, and other details of said notes consistent with the provisions of this resolution and the General Statutes and shall have all powers and authority as set forth above in connection with the issuance of bonds and

especially with respect to compliance with the requirements of the Internal Revenue Code of 1986, as amended, and regulations thereunder in order to obtain and maintain issuance of the notes in tax exempt form.

7. Pursuant to Section 1.150-2, as amended, of the Federal Income Tax Regulations the Town hereby declares its official intent to reimburse expenditures (if any) paid for the Project from its General or Capital Funds, such reimbursement to be made from the proceeds of the sale of bonds and notes authorized herein and in accordance with the time limitations and other requirements of said regulations.

8. The First Selectman, Fiscal Officer and Town Treasurer are hereby authorized, on behalf of the Town, to enter into agreements or otherwise covenant for the benefit of bondholders to provide information on an annual or other periodic basis to the Municipal Securities Rulemaking Board (the "MSRB") and to provide notices to the MSRB of material events as enumerated in Securities and Exchange Commission Exchange Act Rule 15c2-12, as amended, as may be necessary, appropriate or desirable to effect the sale of the bonds and notes authorized by this resolution.

9. The Committee is hereby authorized to take all action necessary and proper for the sale, issuance and delivery of the bonds and notes in accordance with the provisions of the Connecticut General Statutes and the laws of the United States.

10. The First Selectman or other proper Town official is hereby authorized to apply for and accept any available State or Federal grant in aid of the financing of any Project, and to take all action necessary and proper in connection therewith.

EXHIBIT A

TO

A RESOLUTION APPROPRIATING $972,995 FOR THE COST OF A CERTAIN NONRECURRING CAPITAL PROJECT AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION

TOWN OF FAIRFIELD			
	BOARD OF EDUCATION	**Project**	**Project Amount**
1	Systemwide	I.T. Switch Replacement Project	$972,995
	TOTAL NON-RECURRING CAPITAL - BOE:		**$972,995**

10 YEAR

A RESOLUTION APPROPRIATING $200,000 FOR THE COSTS OF A CERTAIN NONRECURRING CAPITAL PROJECT AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION.

- -

Resolved:

1. As recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield hereby appropriates the sum of Two Hundred Thousand and 00/100 ($200,000.00) Dollars to fund all costs associated with the nonrecurring capital Project described on **Exhibit A** attached hereto, inclusive of planning, design and engineering fees, other professional fees, demolition, construction and oversight costs and temporary and permanent financing costs (collectively, the "Project"), in the amount of such appropriation allocated to the Project as set forth in **Exhibit A.**

2. To finance such appropriation, and as recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield shall borrow a sum not to exceed Two Hundred Thousand and 00/100 ($200,000.00) Dollars and issue bonds/bond anticipation notes for such indebtedness under its corporate name and seal and upon the full faith and credit of the Town in an amount not to exceed said sum for the purpose of financing the appropriation for the Project.

3. The Board of Selectmen, the Treasurer and the Fiscal Officer of the Town are hereby appointed a committee (the "Committee") with full power and authority to cause said bonds to be sold, issued and delivered; to determine their form and terms, including provision for redemption prior to maturity; to determine the aggregate principal amount thereof within the amount hereby authorized and the denominations and maturities thereof; to fix the time of issue of each series thereof and the rate or rates of interest thereon as herein provided; to determine whether the interest rate on any series will be fixed or variable and to determine the method by which the variable rate will be determined, the terms of conversion, if any, from one interest rate mode to another or from fixed to variable; to set whatever other terms of the bonds they deem necessary, desirable or appropriate; to designate the bank or trust company to certify the issuance thereof and to act as transfer agent, paying agent and as registrar for the bonds, and to designate bond counsel. The Committee shall have all appropriate powers under the Connecticut General Statutes, including Chapter 748 (Registered Public Obligations Act), Chapter 173 (School Building Projects) and Chapter 109 (Municipal Bond Issues) to issue, sell and deliver the bonds and, further, shall have full power and authority to do all that is required under the Internal Revenue Code of 1986, as amended, and under rules of the Securities and Exchange Commission, and other applicable laws and regulations of the United States, to provide for issuance of the bonds in tax exempt form and to meet all requirements which are or may become necessary in and subsequent to the issuance and delivery of the bonds in order that the interest on the bonds be and remain exempt from Federal income taxes, including, without limitation, to covenant

and agree to restriction on investment yield of bond proceeds, rebate of arbitrage earnings, expenditure of proceeds within required time limitations, the filing of information reports as and when required, and the execution of Continuing Disclosure Agreements for the benefit of the holders of the bonds and notes.

4. The First Selectman and Treasurer or Fiscal Officer, on behalf of the Town, shall execute and deliver such bond purchase agreements, reimbursement agreements, line of credit agreement, credit facilities, remarketing agreement, standby marketing agreements, bond purchase agreement, standby bond purchase agreements, and any other commercially necessary or appropriate agreements which the Committee determines are necessary, appropriate or desirable in connection with or incidental to the sale and issuance of bonds, and if the Committee determines that it is necessary, appropriate, or desirable, the obligations under such agreements shall be secured by the Town's full faith and credit.

5. The bonds may be designated "Public Improvement Bonds," series of the year of their issuance and may be issued in one or more series, and may be consolidated as part of the same issue with other bonds of the Town; shall be in serial form maturing in not more than ten (10) annual installments of principal, the first installment to mature not later than three (3) years from the date of issue and the last installment to mature not later than ten (10) years from the date of issue. The bonds may be sold at an aggregate sales price of not less than par and accrued interest at public sale upon invitation for bids to the responsible bidder submitting the bid resulting in the lowest true interest cost to the Town, provided that nothing herein shall prevent the Town from rejecting all bids submitted in response to any one invitation for bids and the right to so reject all bids is hereby reserved, and further provided that the Committee may sell the bonds on a negotiated basis, as provided by statute. Interest on the bonds shall be payable semi-annually or annually. The bonds shall be signed on behalf of the Town by at least a majority of the Board of Selectmen and the Treasurer, and shall bear the seal of the Town. The signing, sealing and certification of the bonds may be by facsimile as provided by statute.

6. The Committee is further authorized to make temporary borrowings as authorized by the General Statutes and to issue temporary notes of the Town in anticipation of the receipt of proceeds from the sale of the bonds to be issued pursuant to this resolution. Such notes shall be issued and renewed at such time and with such maturities, requirements and limitations as provided by the Connecticut General Statutes. Notes evidencing such borrowings shall be signed by the First Selectman and Treasurer or Fiscal Officer, have the seal of the Town affixed, which signing and sealing may be by facsimile as provided by statute, be certified by and payable at a bank or trust company incorporated under the laws of this or any other state, or of the United States, be approved as to their legality by bond counsel, and may be consolidated with the issuance of other Town bond anticipation notes. The Committee shall determine the date, maturity, interest rates, form and manner of sale, including negotiated sale, and other details of said notes consistent with the provisions of this resolution and the General Statutes and shall have

all powers and authority as set forth above in connection with the issuance of bonds and especially with respect to compliance with the requirements of the Internal Revenue Code of 1986, as amended, and regulations thereunder in order to obtain and maintain issuance of the notes in tax exempt form.

7. Pursuant to Section 1.150-2, as amended, of the Federal Income Tax Regulations the Town hereby declares its official intent to reimburse expenditures (if any) paid for the Project from its General or Capital Funds, such reimbursement to be made from the proceeds of the sale of bonds and notes authorized herein and in accordance with the time limitations and other requirements of said regulations.

8. The First Selectman, Fiscal Officer and Town Treasurer are hereby authorized, on behalf of the Town, to enter into agreements or otherwise covenant for the benefit of bondholders to provide information on an annual or other periodic basis to the Municipal Securities Rulemaking Board (the "MSRB") and to provide notices to the MSRB of material events as enumerated in Securities and Exchange Commission Exchange Act Rule 15c2-12, as amended, as may be necessary, appropriate or desirable to effect the sale of the bonds and notes authorized by this resolution.

9. The Committee is hereby authorized to take all action necessary and proper for the sale, issuance and delivery of the bonds and notes in accordance with the provisions of the Connecticut General Statutes and the laws of the United States.

10. The First Selectman or other proper Town official is hereby authorized to apply for and accept any available State or Federal grant in aid of the financing of any Project, and to take all action necessary and proper in connection therewith.

EXHIBIT A

TO

A RESOLUTION APPROPRIATING $200,000 FOR THE COSTS OF A CERTAIN NONRECURRING CAPITAL PROJECT AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION

		TOWN OF FAIRFIELD	
	BOARD OF EDUCATION		
	School	**Project**	**Project Amount**
1	Secondary Schools	I.T. CAT 6 – Electrical Project	$200,000
	TOTAL NON-RECURRING CAPITAL - BOE:		**$200,000**

20 YEAR

A RESOLUTION APPROPRIATING $1,640,250 FOR THE COSTS OF CERTAIN NONRECURRING CAPITAL PROJECTS AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION.

- -

Resolved:

1. As recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield hereby appropriates the sum of One Million Six Hundred Forty Thousand Two Hundred Fifty and 00/100 ($1,640,250.00) Dollars to fund all costs associated with the nonrecurring capital projects described on **Exhibit A** attached hereto, inclusive of planning, design and engineering fees, other professional fees, demolition, construction and oversight costs and temporary and permanent financing costs (collectively, the "Projects"), in the amount of such appropriation allocated to each Project as set forth in **Exhibit A**. Any reallocation of unused bond proceeds from one project category listed as items 1-9 on **Exhibit A** to a different project category listed on **Exhibit A** that would cause the cost of such project to exceed the cost listed on **Exhibit A** shall require approval by the Board of Selectmen, Board of Finance, and the Representative Town Meeting.

2. To finance such appropriation, and as recommended by the Board of Finance and the Board of Selectmen, the Town of Fairfield shall borrow a sum not to exceed One Million Seven Hundred Forty Thousand Two Hundred Fifty and 00/100 ($1,640,250.00) Dollars and issue bonds/bond anticipation notes for such indebtedness under its corporate name and seal and upon the full faith and credit of the Town in an amount not to exceed said sum for the purpose of financing the appropriation for the Projects.

3. The Board of Selectmen, the Treasurer and the Fiscal Officer of the Town are hereby appointed a committee (the "Committee") with full power and authority to cause said bonds to be sold, issued and delivered; to determine their form and terms, including provision for redemption prior to maturity; to determine the aggregate principal amount thereof within the amount hereby authorized and the denominations and maturities thereof; to fix the time of issue of each series thereof and the rate or rates of interest thereon as herein provided; to determine whether the interest rate on any series will be fixed or variable and to determine the method by which the variable rate will be determined, the terms of conversion, if any, from one interest rate mode to another or from fixed to variable; to set whatever other terms of the bonds they deem necessary, desirable or appropriate; to designate the bank or trust company to certify the issuance thereof and to act as transfer agent, paying agent and as registrar for the bonds, and to designate bond counsel. The Committee shall have all appropriate powers under the Connecticut General Statutes, including Chapter 748 (Registered Public Obligations Act), Chapter 173 (School Building Projects) and Chapter 109 (Municipal Bond Issues) to issue, sell and deliver the bonds and, further, shall have full power and authority to do all that is required under the Internal Revenue Code of 1986, as amended, and under rules of the Securities and Exchange Commission, and other applicable laws and

regulations of the United States, to provide for issuance of the bonds in tax exempt form and to meet all requirements which are or may become necessary in and subsequent to the issuance and delivery of the bonds in order that the interest on the bonds be and remain exempt from Federal income taxes, including, without limitation, to covenant and agree to restriction on investment yield of bond proceeds, rebate of arbitrage earnings, expenditure of proceeds within required time limitations, the filing of information reports as and when required, and the execution of Continuing Disclosure Agreements for the benefit of the holders of the bonds and notes.

4. The First Selectman and Treasurer or Fiscal Officer, on behalf of the Town, shall execute and deliver such bond purchase agreements, reimbursement agreements, line of credit agreement, credit facilities, remarketing agreement, standby marketing agreements, bond purchase agreement, standby bond purchase agreements, and any other commercially necessary or appropriate agreements which the Committee determines are necessary, appropriate or desirable in connection with or incidental to the sale and issuance of bonds, and if the Committee determines that it is necessary, appropriate, or desirable, the obligations under such agreements shall be secured by the Town's full faith and credit.

5. The bonds may be designated "Public Improvement Bonds," series of the year of their issuance and may be issued in one or more series, and may be consolidated as part of the same issue with other bonds of the Town; shall be in serial form maturing in not more than twenty (20) annual installments of principal, the first installment to mature not later than three (3) years from the date of issue and the last installment to mature not later than twenty (20) years from the date of issue. The bonds may be sold at an aggregate sales price of not less than par and accrued interest at public sale upon invitation for bids to the responsible bidder submitting the bid resulting in the lowest true interest cost to the Town, provided that nothing herein shall prevent the Town from rejecting all bids submitted in response to any one invitation for bids and the right to so reject all bids is hereby reserved, and further provided that the Committee may sell the bonds on a negotiated basis, as provided by statute. Interest on the bonds shall be payable semi-annually or annually. The bonds shall be signed on behalf of the Town by at least a majority of the Board of Selectmen and the Treasurer, and shall bear the seal of the Town. The signing, sealing and certification of the bonds may be by facsimile as provided by statute.

6. The Committee is further authorized to make temporary borrowings as authorized by the General Statutes and to issue temporary notes of the Town in anticipation of the receipt of proceeds from the sale of the bonds to be issued pursuant to this resolution. Such notes shall be issued and renewed at such time and with such maturities, requirements and limitations as provided by the Connecticut General Statutes. Notes evidencing such borrowings shall be signed by the First Selectman and Treasurer or Fiscal Officer, have the seal of the Town affixed, which signing and sealing may be by facsimile as provided by statute, be certified by and payable at a bank or trust company incorporated under the laws of this or any other state, or of the United States, be approved as to their legality by

bond counsel, and may be consolidated with the issuance of other Town bond anticipation notes. The Committee shall determine the date, maturity, interest rates, form and manner of sale, including negotiated sale, and other details of said notes consistent with the provisions of this resolution and the General Statutes and shall have all powers and authority as set forth above in connection with the issuance of bonds and especially with respect to compliance with the requirements of the Internal Revenue Code of 1986, as amended, and regulations thereunder in order to obtain and maintain issuance of the notes in tax exempt form.

7. Pursuant to Section 1.150-2, as amended, of the Federal Income Tax Regulations the Town hereby declares its official intent to reimburse expenditures (if any) paid for the Projects from its General or Capital Funds, such reimbursement to be made from the proceeds of the sale of bonds and notes authorized herein and in accordance with the time limitations and other requirements of said regulations.

8. The First Selectman, Fiscal Officer and Town Treasurer are hereby authorized, on behalf of the Town, to enter into agreements or otherwise covenant for the benefit of bondholders to provide information on an annual or other periodic basis to the Municipal Securities Rulemaking Board (the "MSRB") and to provide notices to the MSRB of material events as enumerated in Securities and Exchange Commission Exchange Act Rule 15c2-12, as amended, as may be necessary, appropriate or desirable to effect the sale of the bonds and notes authorized by this resolution.

9. The Committee is hereby authorized to take all action necessary and proper for the sale, issuance and delivery of the bonds and notes in accordance with the provisions of the Connecticut General Statutes and the laws of the United States.

10. The First Selectman or other proper Town official is hereby authorized to apply for and accept any available State or Federal grant in aid of the financing of any Project, and to take all action necessary and proper in connection therewith.

EXHIBIT A
TO
A RESOLUTION APPROPRIATING $1,640,250 FOR THE COSTS OF CERTAIN NONRECURRING CAPITAL PROJECTS AND AUTHORIZING THE ISSUANCE OF BONDS TO FINANCE SUCH APPROPRIATION

TOWN OF FAIRFIELD			
	TOWN		
	Department	**Project**	**Project Amount**
1	DPW	Fairfield Woods Library Elevator	$325,000
2	Park & Rec	Golf Course Renovation	$100,000
3	Fire	Mechanic Floor Jacks	$120,000
4	Conservation	Railroad Bridge Tidegates Design	$225,000
5	IT	Data Center Relocation	$250,000
	SUBTOTAL NON-RECURRING CAPITAL - TOWN:		**$1,020,000**
	BOARD OF EDUCATION		
	School	**Project**	**Project Amount**
8	Systemwide	Security Infrastructure Upgrades	$345,250
9	FLHS	Student Parking Lot Replacement	$275,000
	SUBTOTAL NON-RECURRING CAPITAL - BOE:		**$620,250**
	TOTAL NON-RECURRING CAPITAL		**$1,640,250**

Fairfield Board of Education
Proposed
Capital Non-Recurring Projects
2018 – 2019

Systemwide Security and Safety Infrastructure Project

Secondary Schools I.T. CAT 6 Quad Electrical Project

Fairfield Ludlowe High School Student Parking Lot Replacement Project

Systemwide I.T. Switch Replacement Project

December 8, 2017

Dear Board of Education Members:

This booklet provides an overview of the following 2018-2019 Proposed Capital Non-Recurring Project Requests:

1. System-wide Security Infrastructure Upgrades
2. Secondary Schools I.T. CAT 6 Electrical project
3. Fairfield Ludlowe High School Student Parking Lot
4. System-wide I.T. Switch Replacement project

All of the above have been included in long-term facilities planning over the last five years and are listed in the Fairfield Public Schools' Facilities Plan.

Information for each project is provided using the 14-point format devised by the Town of Fairfield and includes:

- Justification and background information.
- A cost estimate that includes previous project information, verbal quotations, and/or written proposals.
- Photographs of projects in existing conditions.

We hope you find this information helpful and we are confident it will answer many of your questions as we begin the budget discussions. Thank you for your continued support.

Sincerely,

Toni Jones, Ed.D.
Superintendent of Schools

Fairfield Public Schools
2018-2019
Capital Non-Recurring Projects

Table of Contents

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Security Infrastructure Upgrades

Systemwide $ 345,250

Background: Following the Sandy Hook Elementary School tragedy, the Fairfield Police Department along with the Central Office Administration conducted a security assessment of all the Fairfield Public School buildings. Based on this assessment the Fairfield Police Department recommended several improvements to the Fairfield Public Schools' security infrastructure. Many of the security projects have been performed and completed over the past three years from the 2015-2016, 2016-2017, and 2017-2018 funding requests. This proposed funding request will be for the completion work on phases one and two specific to the intrusion panels.

Purpose & Justification: The purpose of this funding request is to make security infrastructure improvements as recommended by the Fairfield Police Department. These recommended improvements will enhance the security and safety at our facilities for our students and staff. The scope of this work is too great to be handled within the BOE operating budget.

Detailed Description: This expenditure would cover the total costs for completion of the intrusion panels to our school facilities. Details about these specific improvements cannot be shared in public upon the advice of the Fairfield Police Department.

Estimated Cost: The cost of this funding request is $ 345,250. Estimates were provided by bids received from multiple professional licensed contractors/vendors for the intrusion panels as part of the projects in this funding request.

Long Range Costs: Most of the projects listed do not have added long-term costs associated with their implementation. There will be normal operating costs associated with everyday maintenance and upkeep as well as to make sure all security systems, devices, and equipment are running properly. If the school system's security account and budget continue to be maintained at current levels, no increase will be needed to maintain this equipment on an annual basis.

Demand on Existing Facilities: These projects will not add any additional demand to the existing facilities.

Security, Safety and Loss Control: This project would greatly enhance security, safety and loss control by improving monitoring capabilities, hardening of our facilities against unauthorized entry, and enhancing communications during emergencies.

Environmental Considerations: None

Funding, Financing & SDE Reimbursement: These projects would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities. Grant funding through the CT Department of Emergency Management and Homeland Security "School Security Competitive Grant Program" (SSCGP) will be applied for if they are available to offset some of these costs for the 2018-2019 fiscal year.

Schedule, Phasing & Timing: Approval of this funding will allow the implementation of these projects over the next two years as identified in the Fairfield Public Schools Facilities Plan "Waterfall Schedule".

Other Considerations: The Town of Fairfield Purchasing Department will award the work per the purchasing guidelines and all work will be performed by outside professional licensed contractors/vendors.

Alternates to the Request: The alternate to this request is to do nothing. This alternative will leave some of our school buildings without intrusion panel safety and leave a breach in the school security program.

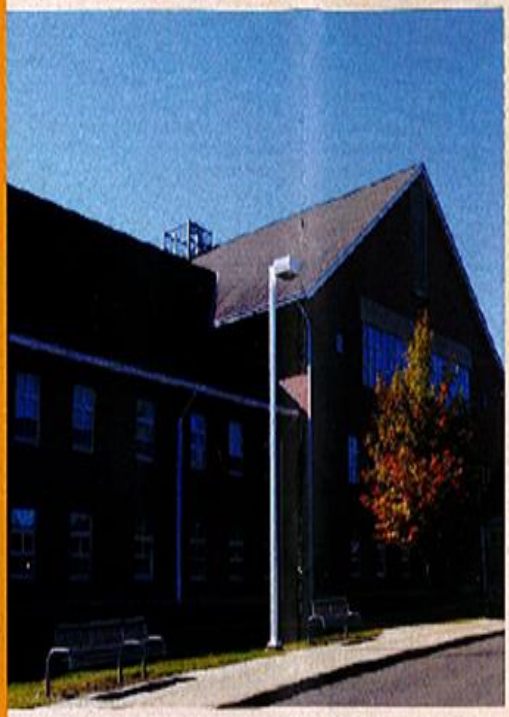
Systemwide

Security Infrastructure Projects – Completion	**$ 345,250**

Details

Completion of Intrusion Panels	$ 345,250

Total	**$ 345,250**



New England Glass Armor Security Panels

Protects schools from Intrusion Vandalism Theft

New England Glass Armor
35 Corporate Ridge Hamden, CT 06514
203 640.0668 www.neglassarmor.com

- Custom designed and installed panels for any shape or size windows and doors; whether interior or exterior
- Protects windows and doors from impact, vandalism, theft and intruders
- Does not change the appearance of the existing building, windows and doors
- Panels are UV-rated and available in clear, tinted, anti-graffiti and in several thicknesses, including bullet-proof
- New England Glass Armor is an affordable alternative for school safety
- Be safe, sound and secure at school

New England Glass Armor security panels

Systemwide

Information Technology and Electrical Upgrades $ 200,000

Background: The existing multimedia projectors at the schools, installed before 2012, require data cabling to connect with a centralized management server located at the central office. This system allows the district personnel to monitor projector performance; identify bulbs and other consumables that are in need of replacement and allow remote control of the projectors to enable technicians to adjust projectors without the need to visit the classroom. In addition, the district has been migrating to wireless projection using various computing devices by both teachers and students to share and discuss work. In the schools with older projection installations, only two outlets were installed. In order to support the wireless projection devices, which also require a power source, additional outlets are required to put those rooms on par with other classrooms with more recent installation.

Purpose & Justification: All teachers and students need access to technology in their classrooms to facilitate instruction and delivery of curriculum. Remote management of the projectors maximizes the efficiency of the support staff and the uptime of the equipment for teachers.

Detailed Description: This expenditure would cover the cost for the installation of the low voltage cabling and installation of the additional dual outlet and/or quad outlet for the secondary schools. The estimate details the data cabling and electrical outlets at an estimate of $275 per room before bidding. The grand total is projected at $200,000.

Estimated Cost: The cost of this funding request is $200,000, which includes the engineering professional for documents for bidding purposes as well as a small contingency for unforeseen conditions in the school buildings.

Long Range Costs: This project has no long range cost other than preventative maintenance to monitor systems and to prepare for any damaged cable or electrical outlet issues. This new work is expected to last 15 years.

Demand on Existing Facilities: This project would facilitate remote control of the projectors, maximizing technician efficiency and limiting downtime of the projection systems in the classrooms.

Security, Safety and Loss Control: This project would enable proactive action regarding replacing projection bulbs.

Environmental Considerations: Not applicable.

Funding, Financing & SDE Reimbursement: This project would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: This work would be planned as a summer project and will be completed in preparation for the new school year.

Other Considerations: This work will be bid out by the Town Purchasing Department and will be performed by outside contractors.

Alternates to the Request: The alternate to this request is to do nothing, which creates inequity between classrooms for access to projection technology systems.

Systemwide

Information Technology and Electrical Upgrades **$ 200,000.00**

Details

Licensed contractor to provide labor and materials
Prepared by: Yankee Electric and Auto Home Commercial Companies

Scope:
To upgrade existing Information Technology conditions related to the multimedia projectors by providing CAT 6 low voltage wiring and electrical power quad outlets next to all multimedia projectors in the secondary schools.

Contractor Breakdown:

Electrical
Investigate school building electrical panel locations for spare breakers and feeders for new power requirements.
Remove acoustical ceiling pads to run new power wiring.
Provide material and labor for new quad outlets in all classrooms with multimedia projectors.
Run electrical power lines to main electrical panel.
Label and mark breaker locations clearly with marker.
Start-up and testing of units.
One year warranty.
Permits as required.

Low Voltage
Investigate school building MDF closet location for CAT 6 wiring integration.
Remove acoustical ceiling pads to run new low voltage wiring.
Provide material and labor for new CAT 6 wiring integration in all classrooms with multimedia Projector systems.
Run low voltage wiring lines to MDF closet.
Label and mark breaker locations clearly with marker.
Start-up and testing of units.
One-year warranty.
Permits as required.

$ 180,000.00

Licensed professional engineer to provide labor and materials
Prepared by: van Zelm Engineers, Inc.

Professional Consultant Breakdown:

Provide professional engineering drawings and specifications for information technology low voltage CAT 6 wiring and electrical power quad outlets for school classrooms with multimedia projector systems.

$ 10,000.00

Contingency:

For unforeseen conditions in the school buildings.

$ 10,000.00

Total **$ 200,000.00**

CAT 6 low voltage rack cabinet

Electrical power quad outlet

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Fairfield Ludlowe High School

Student Parking Lot Replacement $ 275,000

Background: The existing student parking lot is deteriorating and in poor condition. This parking lot is specifically designated for the student drivers. The existing condition parking lot is at least 13 years old and has received several patches over the years in an effort to maintain usable conditions. This request is for funding the repair and replacement of the parking lot, new subsurface grading for proper drainage, new striping line markings and numbers, as well as new speed tables with required signage.

Purpose & Justification: The condition of the parking lot is deteriorating to the point that repairs are not repairable. The parking lot receives a lot of student traffic throughout the school year and is a main thoroughfare for all through traffic along the Webster Wing portion of the high school. This parking lot is also used by parents and visitors for FLHS after-hour events and activities.

Detailed Description: This expenditure would cover the total cost of the project for the entire student parking lot. This would include all labor and material, soil testing, reclaiming bituminous material, regrading for proper drainage, new bituminous paving, new striping markings, new number markings and new speed tables with required signage.

Estimated Cost: The cost of this funding request is $275,000. This number is based on similar repair and repaving projects undertaken in the Town of Fairfield and at our schools as well as estimates provided by professional licensed contractors for this specific site.

Long Range Costs: This repaving project is expected to last at least 10 years. Long-range costs would only relate to general preventative maintenance and repairs as they come up year to year.

Demand on Existing Facilities: This project would reduce the probability of staff and students falling and getting hurt in the parking lot as well as cause less damage to vehicles using the parking lot.

Security, Safety and Loss Control: This project would enhance safety and loss control by drastically reducing the risk of injury to students and staff using the parking lot and walking through it.

Environmental Considerations: Drainage will be included with this project to make sure water run-off is accounted for and properly discharged off the site, which in turn will improve the environment.

Funding, Financing & SDE Reimbursement: This project would not proceed without funding approval. There are no State or Federal regulations that require this project to be undertaken. This project is not eligible for reimbursement through the State Department of Education, Bureau of School Facilities.

Schedule, Phasing & Timing: The schedule is to have all this work done in the summer of 2018 and to be completed and ready for the new school year.

Other Considerations: The work will be assigned to a State Approved contracted paving contractor, a State Approved contracted reclaiming contractor, with help from the Town of Fairfield Department of Public Works.

Alternates to the Request: The alternate to this request is to do nothing. This alternative will delay this needed replacement and further delay other similar projects scheduled in the BOE future planning. This could increase the risk of injury to students and staff, as well as visitors to the site for after hour-events.

Fairfield Ludlowe High School

Student Parking Lot Replacement **$ 275,000**

Details

Licensed contractor to provide labor and materials
Prepared by: Garrity Asphalt Reclaiming
Tilcon Connecticut Inc.
Safety Marking Inc.

Breakdown:

Garrity Asphalt Reclaiming
Reclaiming existing bituminous material.
Load excess material.
Fine grading, adding fill if needed.
Rolling existing sub base material to accept new bituminous.
$ 24,832.50

Tilcon Connecticut Inc.
Install new bituminous paving material binder course.
Roll and compact.
Install new bituminous paving material surface course.
Roll, compact finish surface.
Install speed tables.
Install bituminous curbing.
$ 232,188.60

Safety Marking Inc.
Paint paving markings – Regular Stalls with numbers.
Paint paving markings – Hatching for Emergency.
Paint paving markings – Handicap stalls, crosswalks and stop bars.
$ 5,478.90

Contingency
For unforeseen conditions on the school site. $ 12,500.00

Total **$ 275,000**

FLHS student parking lot deteriorating bituminous paving showing cracks and several patches

FLHS student parking lot deterioration after more than 13 years of use

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Systemwide

Informational Technology Switch Replacement Project – Phase 1 $972,995

Background: Local Area Network switches are the backbone of any network. All receptacles for Ethernet access found in classrooms are wired back to a distribution closet, which contains racks containing switches. There is a patch panel in the rack to which the wire from the classroom receptacle is terminated. Then a cable is connected from the patch panel to the switch.

These receptacles and their ports (aka plugs) service all computers, printers, wireless access points, electronic door locks, surveillance cameras, and all things that require Ethernet access. The switches also provide low voltage power.

The district last replaced LAN switches over a three-year period in 2009-2011. Since that time, we have more than doubled the number of ports (outlets) through acquisition of refurbished equipment to maintain and expand the network. The district's original port count was approximately 8,100 in 2010. It is currently 16,608 and continues to grow annually as new equipment and features are added to the system.

The typical life span of a switch is 5-7 years.

Purpose and Justification: The current switches are approaching ten years in age. Replacement parts are becoming hard to find, and are only refurbished, not new. They cannot meet our needs for Power over Ethernet capacity nor power newer wireless access points and potentially Internet Protocol (IP) phones. They cannot support newer, faster transmission speeds.

Adding capacity or additional switches to our network requires us to connect them to each other in a way that slows down the communication between the user's computer and the source of information. The district is moving to 24/7/365 learning, where the majority of our educational resources is found through the Internet. Speed is of the essence for both access to those resources, online testing, and operations (e.g. security). Educational time lost due to slow response times is time that cannot be recovered.

The current switches are managed and configured through software that is no longer supported by the manufacturer, as it is already end of life.

Detailed Description of Proposal:

See attached spreadsheet for details. Proposal is to migrate the Ethernet switches in two phases:

1. High Schools, WFC – AHS, and Central Office Administration
2. Middle Schools and Elementary schools

The order will be dependent upon requirements to support additional security devices, Wi-Fi or VOIP (phones). These new devices have new power requirements which are dependent on new switch capacity.

School's "main distribution frame" switch closets which supports access to transmission connections, referred to commonly as the MDF would be the priority for each site. Intermediate distribution closets (IDF) would be secondary.

Current projects that require the new switch capacity are:

- Expansion and upgrade of Wi-Fi access in the K-8 schools
- Expansion of security cameras
- Implementation of VOIP phone system

Costs will include the hardware, software, warranty, installation, configuration and project management.

Phase 1 Cost Estimate for the High Schools, WFC – AHS, and Central Office Administration
$972,995

Phase 2 Cost Estimate for all K-8 schools
$1,040,885

Total Project Cost $2,013,880

Grant Filing:

Estimated E-Rate grant $461,314

Net Total Cost if Grant Approved $1,552,566

Note: This cost estimate is based on currently available Cisco switch product, pre bid, and subject to availability at the time funding is available. It does not consider adding port capacity, but will provide throughput and support newer protocols required for projects on the horizon, listed above.

E-Rate grant funding is subject to availability and approval at time of project commencement. Current priority 2 E-Rate funds are available through FY 2019.

Reliability of Estimated Cost: We began our estimations through online sites of vendors that cater to educational pricing, and then asked our current Cisco vendor for a close to accurate estimate based on our equipment criteria.

The largest unknown would be the availability of the represented model and brand at the time of a phased implementation. We would want to secure funding for the entire project, and get commitment from the vendor for availability throughout the project. This is a key justification for bonding the project so all the funds are committed up front, and then spent as the project can be feasibly implemented.

Payback: In addition to the benefits outlined above, the new switch hardware runs more efficiently than the current equipment, which in theory reduces power consumption.

If we are able to secure funding in 2019 for the project, we may have access to E-Rate funds. This grant is also known as the Universal Service Fund. Projects of this nature are referred to as Priority 2 funding, for which there is a qualification formula. Under the 2017 calculation, the district would qualify for $1.1 million under the program, with our 40% rate, which translates to a grant of $440,000. Please note, however, that the funding for Priority 2 projects is only authorized through the 2019 year of the grant program and is enrollment dependent.

Additional Costs: A site survey will be performed to insure fiber and other connectivity between closets is sufficient for the newer product. Cost estimated at $20,000.

Annual Smart Net operating system and technical support costs for critical switches will be an additional charge (see chart for cost per switch). We do not expect, nor need to put Smart Net on all devices, only those critical or cost prohibitive to spare.

Additional Use or Demand on Existing Facilities: Because newer switches have a smaller footprint, impact on existing closets will be positive- allowing growth without the cost of additional racks.

Alternates to this request: If we do nothing, we will reach capacity limitations in the switch rack locations and be unable to expand nor use newer technologies to support IoT (The Internet of Things) such as wireless connectivity

Safety and Loss Control: All equipment will be locked in secure spaces until deployed.

Environmental Conditions: Newer equipment is more energy efficient, so it will save energy costs. The hardware takes up less physical plant than older equipment.

Insurance: FPS insurance will cover damage/replacement costs. The equipment comes with a limited lifetime warranty.

Systemwide

Informational Technology Switch Replacement Project – Phase 1 **$972,995**

Detailed Description of Proposal:

Proposal is to migrate the Ethernet switches in the High Schools, WFC – AHS, and Central Office Administration.

The order will be dependent upon requirements to support additional security devices, Wi-Fi or VOIP (phones). These new devices have new power requirements which are dependent on new switch capacity.

School's "main distribution frame" switch closets, referred to commonly as the MDF, would be the priority for each site as the switch closet that supports access to transmission connections (demarcation points). (Intermediate distribution closets (IDF) would be secondary).

Current projects that require the new switch capacity are:

- Expansion and upgrade of Wi-Fi access in the K-8 schools
- Expansion of security cameras
- Implementation of VOIP phone system

Costs:

Costs will include the hardware, software, warranty, installation, configuration and project management and is estimated at a total of $972,995.

This cost estimate is based on currently available Cisco switch product, pre bid, and subject to availability at the time, funding is available. It does not consider adding port capacity, but will provide throughout and support newer protocols required for projects on the horizon, listed above.

ERate grant funding is subject to availability and approval at time of project commencement. Current priority 2 ERate funds are available through FY 2019.

Reliability of Estimated Cost:

We began our estimations through online sites of vendors that cater to educational pricing, and then asked our current Cisco vendor for a close to accurate estimate based on our equipment criteria.

The largest unknown would be the availability of the represented model and brand at the time of a phased implementation. We would want to secure funding for the entire project, including phase 2 and get commitment from the vendor for availability throughout the project. This is a key justification for bonding the project so all the funds are committed up front, and then spent as the project can be feasibly implemented.

Payback:

In addition to the benefits outlined above, the new switch hardware runs more efficiently than the current equipment, which in theory reduces power consumption.

If we are able to secure funding in 2019 for the project, we may have access to ERate funds.

This grant is also known as the Universal Service Fund. Projects of this nature are referred to as Priority 2 funding, for which there is a qualification formula. Under the 2017 calculation, the district would qualify for $1.1 million for the whole project (both phases) under the program, with our 40% rate, which translates to a grant of $440,000 for the whole project.

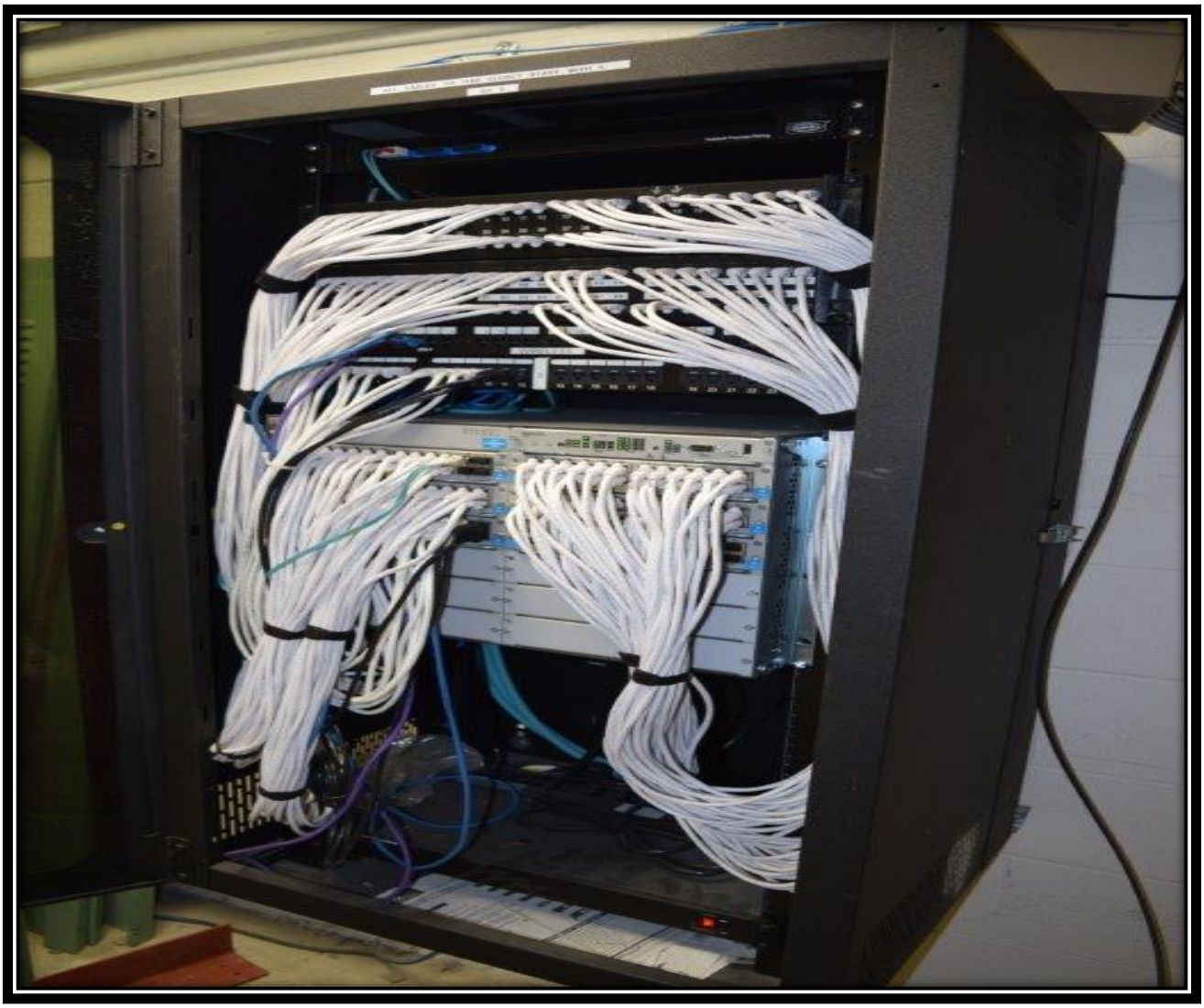
Please note, however, that the funding for Priority 2 projects is only authorized through the 2019 year of the grant program and is enrollment dependent.

Additional Costs:

A site survey will be performed to insure fiber and other connectivity between closets is sufficient for the newer product. Cost estimated at $ 20,000.

Annual Smart Net operating system and technical support costs for critical switches will be an additional charge (see chart for cost per switch). We do not expect, nor need to put Smart Net on all devices, only those critical or cost prohibitive to spare.

Total project costs for this phase one work **$ 972,995**



End of Life switch conditions photo

ws-c4500x-40x-ews-c3850-12xs-e*

State of the Art switch photo

*Pending Available

Switches

Our switches are constantly learning. Constantly adapting. Constantly protecting. In your data center, core, or edge. This is the new era in networking. The Network. Intuitive.

Compare us with others

View Digital Network Architecture

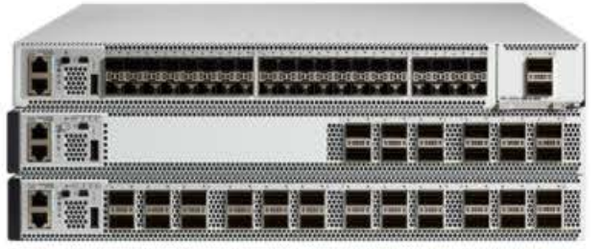
New Innovations | Products | Services | For Partners | Let Us Help

Switching for a changing world

Our Catalyst 9000 switches constantly adapt to help you solve new challenges. Their integrated security helps you address ever-changing threats. They simplify management of your evolving mobility, Internet-of-Things (IoT), and cloud requirements. Introducing an entirely new era of networking. The Network. Intuitive.

Catalyst 9300 Series

Catalyst 9400 Series



Catalyst 9500 Series

Ordinance Establishing a Housing Trust Fund

Section I: Purpose

Pursuant to Conn. Gen. Stat. § 7-148(c)(2)(K), the Town of Fairfield does hereby create a special fund to provide affordable housing for the Town of Fairfield. The Fund shall be known as the Affordable Housing Trust Fund, hereinafter the "Fund". Such Fund shall not lapse at the end of the municipal fiscal year.

Section II: Sources of Funding, Investments, and Limitations on Use of Fund

A. In addition to such sums as may be directly appropriated by the Town for deposit into said Fund (if any), the Town is authorized to and shall deposit all other monies received by it for the purposes of affordable housing, from whatever source such monies are received (the "Sources"). The Sources may include, but are not limited to, building department fees, inclusionary zoning fees, monetary gifts, grants, loans, and monies received from state and federal agencies.

B. Said Fund shall be in the custody of the Town of Fairfield. All or any part of the monies in said Fund may be invested in any securities in which public funds may be lawfully invested. All income derived from such investment shall be placed into the Fund and become a part thereof. The monies so invested shall at all times be subject to withdrawal for use as hereinafter set forth.

C. No sums contained in said Fund, including interest and dividends earned, shall be transferred to any other account within the town budget. No expenditures shall be made from said Fund except in accordance with the provisions of this ordinance. No expenditures shall be made from the Fund in excess of the available balance in the Fund.

Section III: Expenditures from Fund

A. The continuation of the Fund shall be perpetual, notwithstanding that from time to time said Fund may be unfunded.

B. Expenditures shall be made from the Fund only in accordance with the following procedures and requirements:

1. Said expenditures shall be made exclusively for the costs associated with the investigation, appraisal, acquisition, constructing, rehabilitating, repairing, administration, fees and maintenance costs relating to parcels of land, both improved and unimproved, or development rights, easements, deed restrictions, options, interests or rights therein, the use of which shall be limited to retention or designation of parcels for their long term use in providing affordable housing within the meaning of Conn. Gen. Stat. § 8-30g.

2. Recommendations for any and all proposed expenditures from the Fund shall be submitted to the Affordable Housing Committee (AHC) and the Director of Community & Economic Development for approval. Recommendations from AHC and the Director of Community & Economic Development for expenditures from the Fund shall be submitted, including the sum to be expended, to the Fairfield Board of Selectmen for the approval of the Board of Selectmen.

3. The AHC will provide an annual report of the amount in the Housing Trust Fund and the expenditures to members of the Representative Town Meeting at their January meeting.