



KAESTLE BOOS
associates, inc

MA MITCHELL
ASSOCIATES
ARCHITECTS

Cardinal

PUBLIC FORUM #2



Feasibility Study

NORTHBRIDGE FIRE DEPARTMENT

NORTHBRIDGE, MASSACHUSETTS

MARCH 2, 2020





NORTHBRIDGE FIRE STATION STUDY

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□ OUTLINE

➤ INTRODUCTION OF THE DESIGN TEAM

➤ BACKGROUND FOR THE PROJECT

- FIRE DEPARTMENT OPERATIONS
- STATION CONDITIONS
- FEASIBILITY STUDY PROCESS

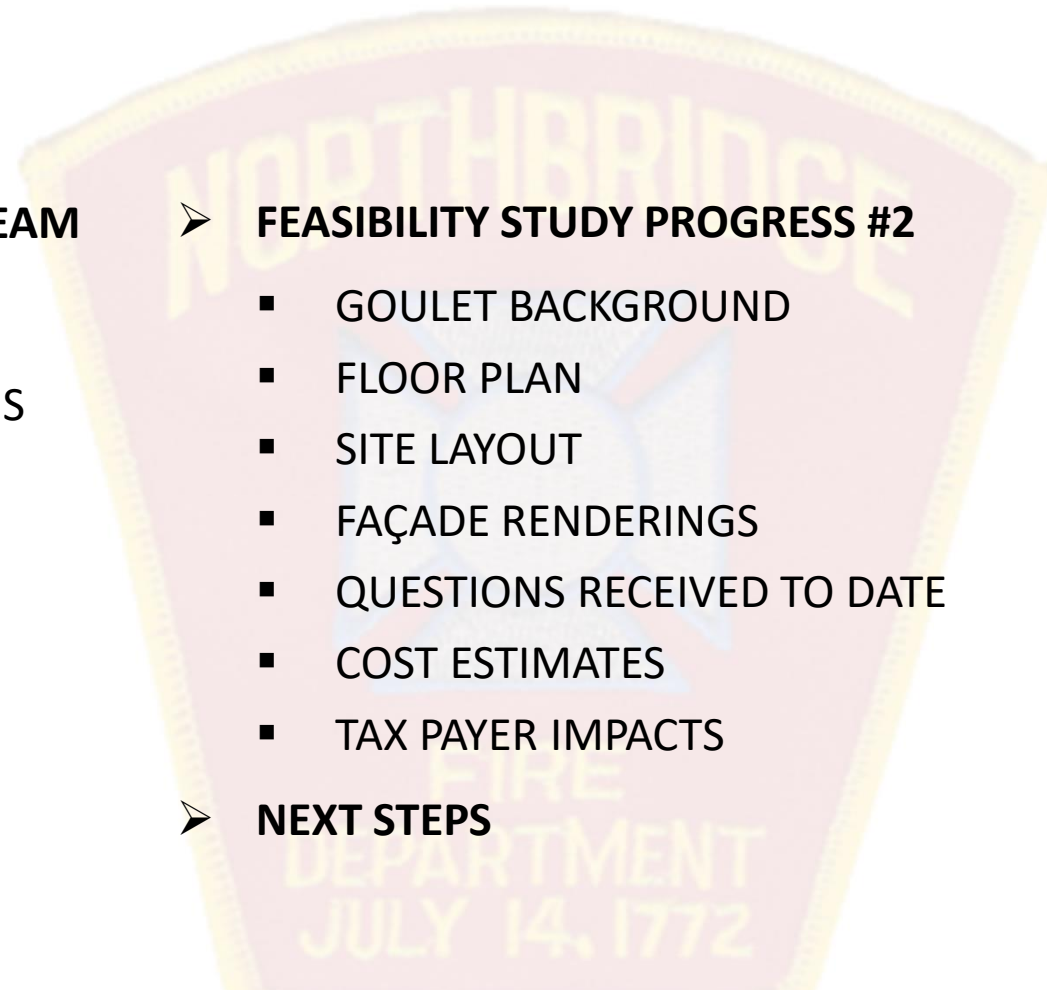
➤ FEASIBILITY STUDY PROGRESS #1

- FIRST PUBLIC FORUM:
NOVEMBER 20, 2019

➤ FEASIBILITY STUDY PROGRESS #2

- GOULET BACKGROUND
- FLOOR PLAN
- SITE LAYOUT
- FAÇADE RENDERINGS
- QUESTIONS RECEIVED TO DATE
- COST ESTIMATES
- TAX PAYER IMPACTS

➤ NEXT STEPS





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❑ PROJECT TEAM

- **TOWN MANAGER – ADAM GAUDETTE**
- **FIRE CHIEF – DAVID WHITE**
- **BUILDING, PLANNING AND CONSTRUCTION COMMITTEE (BPCC)**
 - MICHAEL BEAUDOIN – CHAIRMAN
 - PAUL BEDIGIAN – VICE CHAIRMAN
 - STEVEN NYE – CLERK
 - BRIAN PAULHUS – MEMBER
 - JOHN GIFFORD – MEMBER
 - SHAYNE PICARD – MEMBER
- **OWNERS PROJECT MANAGER (OPM) – CARDINAL CONSTRUCTION, INC.**
 - BRENT ARTHAUD AND SHANE SAMPSON
- **PROJECT DESIGN CONSULTANT – KAESTLE BOOS ASSOCIATES (KBA)**
 - MICHAEL MCKEON AND RENE CROTEAU





❑ **BACKGROUND (NORTHBRIDGE FIRE DEPARTMENT)**

➤ **CURRENT OPERATIONS**

- FULL-TIME FIRE CHIEF & PART-TIME ADMINISTRATIVE ASSISTANT
- 17 FULL-TIME FIREFIGHTERS & 17 ON-CALL FIREFIGHTERS
- FIRE AND EMERGENCY SERVICES (24/7 ADVANCED LIFE SUPPORT - ALS)
- COVER 19 SQUARE MILES – POPULATION 16,544 (2015) – 3,370 CALLS IN FY2019

➤ **EQUIPMENT**

- **THE DEPARTMENT'S CURRENT FLEET OF VEHICLES INCLUDES:**
 - ✓ 2 AMBULANCES
 - ✓ 3 ENGINE COMPANIES
 - ✓ 1 HEAVY RESCUE
 - ✓ 3 UTILITY VEHICLES
 - ✓ 1 AERIAL LADDER
 - ✓ 3 FORESTRY TRUCKS
 - ✓ 4 TRAILERS

➤ **STATIONS**

- **THE DEPARTMENT WORKS OUT OF TWO (2) STATIONS:**
 - ✓ HEADQUARTERS (193 MAIN ST) – CONSTRUCTED 1923 (DONATED BY SHOP 1970'S)
 - ✓ UNMANNED SUBSTATION (ROCKDALE) – CONSTRUCTED 1950'S (DONATED BY MILL)



❑ BACKGROUND (EXISTING CONDITIONS – 193 MAIN STREET)

➤ BUILDING COMPLETED CIRCA 1923

➤ BUILDING EXTERIOR DEFICIENCIES

- CONCRETE FOUNDATION INTEGRITY NEEDS TO BE EVALUATED
- BRICK FAÇADE EXHIBITS EXTENSIVE DISCOLORATION
- WINDOW AND STEEL LINTELS REPLACEMENT
- STEEL DOOR FRAMES, DOORS, APPARATUS BAY DOORS REQUIRE REPLACEMENT
- ROOF LEAKING, STANDING WATER, AND BUBBLING
- ROOF DRAINAGE SYSTEM BACKFLOWS THROUGH BUILDING FLOOR DRAINS





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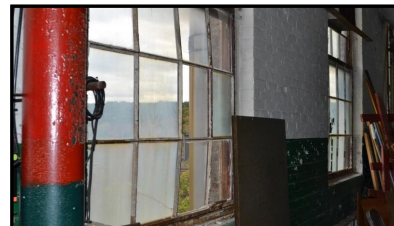
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❑ BACKGROUND (EXISTING CONDITIONS – 193 MAIN STREET)

➤ BUILDING INTERIOR DEFICIENCIES

- EXTENSIVE WATER AND/OR MOISTURE INFILTRATION ON SURFACES
- CEILINGS FLAKING AND CHALKING (CONTAMINATING EQUIPMENT)
- BASEMENT STORAGE AREAS EXPERIENCES CONTINUAL STANDING WATER
- INABILITY FOR WATER TO DRAIN THROUGH APPARATUS BAY FLOOR DRAINS
- STEEL DOORS & FRAMES, APPARATUS BAY DOORS REQUIRE REPLACEMENT
- ROOF LEAKING, STANDING WATER, AND BUBBLING
- ROOF DRAINAGE SYSTEM BACKFLOWS THROUGH BUILDING FLOOR DRAINS

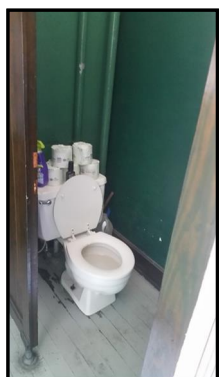
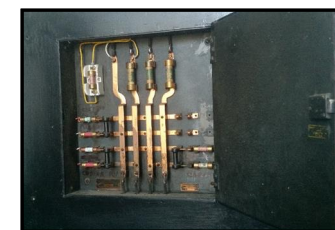




❑ BACKGROUND (EXISTING CONDITIONS – 193 MAIN STREET)

➤ LIFE SAFETY CONCERNS / CODE REQUIREMENTS

- EGRESS STAIRS DO NOT MEET CURRENT CODE REQUIREMENTS
- EGRESS STAIRWAY DOES NOT MEET REQUIRED TWO-HOUR FIRE RATING
- EGRESS DOORS ARE NOT FIRE RATED AS REQUIRED
- EXIT SIGNAGE AND REQUIRED EXIT DOOR HARDWARE IS NOT PRESENT
- FREIGHT ELEVATOR STAIRS DO NOT MEET CURRENT CODE REQUIREMENTS
- NO ACCESSIBLE ENTRANCE PROVIDED INTO THE FACILITY
- NO ELEVATOR ACCESS TO OFFICES LOCATED ON 3RD FLOOR
- NO ACCESSIBLE TOILET ROOMS
- DOORS, WALL MOUNTED ITEMS, AND INTERIOR SIGNAGE DO NOT MEET CURRENT CODE





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❑ BACKGROUND (EXISTING CONDITIONS – ROCKDALE STATION)

➤ BUILDING COMPLETED CIRCA 1950'S

➤ BUILDING EXTERIOR DEFICIENCIES

- EXTERIOR WALLS SHOW EXTENSIVE STRUCTURAL DAMAGE
- DUE TO DIFFERENTIAL SETTLING
- VEHICLE APRON ALSO SHOWS EXTENSIVE DAMAGE
- VEHICLE EXITS ARE UNDERSIZED FOR MODERN APPARATUS



➤ BUILDING INTERIOR DEFICIENCIES

- BASEMENT FLOODS REGULARLY

➤ LIFE SAFETY CONCERNS / CODE REQUIREMENTS

- CURRENT STAIRS DO NOT MEET LIFE SAFETY CODE
- BUILDING IS NOT ACCESSIBLE





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BACKGROUND (FEASIBILITY STUDY HISTORY)

- **2001 FEASIBILITY STUDY** – WAS NEEDED DUE TO CONDITIONS OF THE 2 FIRE STATIONS
- **2006 BPCC FUNDING** – \$100,000 FOR TESTING, STUDIES, ANALYSIS FOR FIRE STATION
- **2017 SELECTMEN** – ESTABLISH TOWN MANAGER GOAL FOR NEW FIRE STATION
- **2017 BPCC** – HIRED OWNER'S PROJECT MANAGER (OPM) – CARDINAL CONSTRUCTION
- **2018 BPCC** – WORKING GROUP: PRELIMINARY SITE SEARCH & RFQ DEVELOPMENT
- **2019 (SPRING)** – RFQ ADVERTISED THEN BPCC INTERVIEWED/RANKED RESPONDENTS
- **2019 (SUMMER)** – BPCC HIRED PROJECT DESIGN CONSULTANT KBA ARCHITECTS
- **2019 (FALL)** – KBA & SUBCONSULTANTS BEGIN PERFORMING THE STUDY:
 - FIRE STATION PROGRAMMING (MITCHELL ASSOCIATES ARCHITECTS)
 - SITE SELECTION EVALUATION (11 SITES FOR BPCC REVIEW)
 - RESPONSE TIME ANALYSIS (MANITOU INCORPORATED)
 - SITE RECOMMENDATION (FINAL 6 SITE EVALUATIONS AND PREFERRED LOCATION)



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PROGRESS #1





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FEASIBILITY STUDY PROGRAM #1 (PROGRAMMING)

1. STAFF INTERVIEWS

2. SPACE USE SUMMARY

3. PLANNING DIAGRAMS

MITCHELL ASSOCIATES ARCHITECTS
• EMERGENCY SERVICES FACILITIES •

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Fire Station Program Document

Project Name: Northbridge Fire Station
1st Program Meeting Date: 6/24/19

Program Meeting Date: August 27, 2019

This document is not meant to be limited to an inventory of what you currently have. Indicate what you currently need for proper operations and try to forecast what you will need for the future.

This program assumes a department with one building. The spreadsheet will address a two station future.

Filename: Northbridge Fire Program.docx

Option: 1

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NORTHBRIDGE FIRE STATION STUDY

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❑ FEASIBILITY STUDY PROGRESS #1 (SITE SELECTION)

➤ INITIAL WORKING GROUP REVIEW STARTED WITH:

- ALL TOWN-OWNED LAND
- PRIVATE PROPERTIES WITH LARGE ACREAGE
- COMMERCIAL PROPERTIES FOR SALE
- REDUCED TO 21 SITES

➤ WORKING GROUP REDUCED TO 11 SITES TO BE INCLUDED IN FEASIBILITY STUDY:

- | | |
|----------------------------------|------------------------------------|
| ▪ 193 MAIN STREET (HEADQUARTERS) | ▪ 644 PROVIDENCE RD (TOWN) |
| ▪ 180 MAIN STREET (SHOP PARKING) | ▪ 1681 PROVIDENCE RD (GOULET) |
| ▪ NEAR 253 MAIN ST (WEST END) | ▪ 1868 PROVIDENCE RD (HOME SITES) |
| ▪ 44 CROSS STREET (NES) | ▪ 198 CHURCH AVENUE (LEGION) |
| ▪ 260 PROVIDENCE RD (LINWOOD PG) | ▪ 14 HILL STREET (ANNEX – ALDRICH) |
| ▪ 546 PROVIDENCE RD (PUCCIO) | |



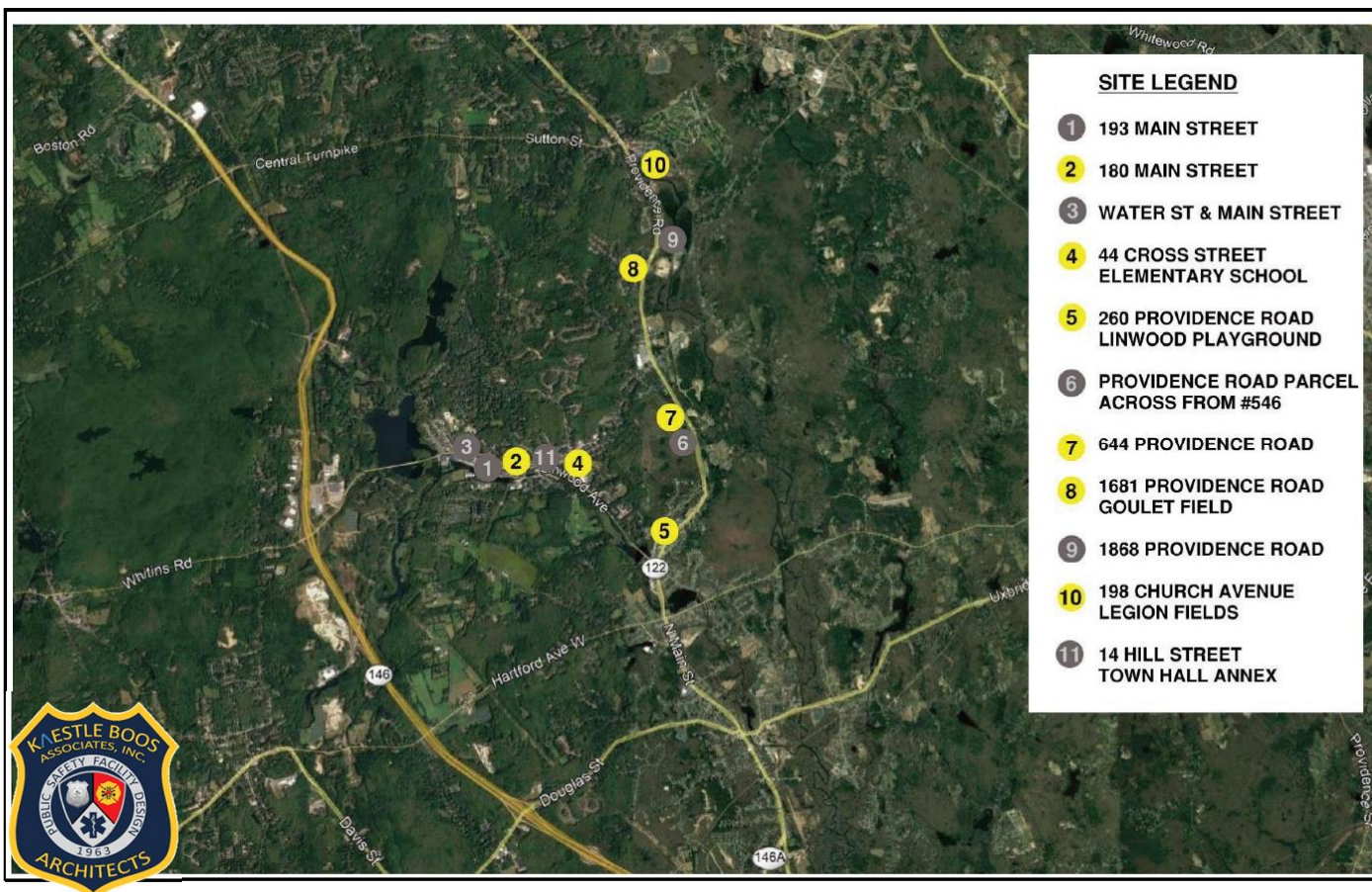
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FEASIBILITY STUDY PROGRESS #1 (SITE SELECTION)



Initial Site Data		Feasibility Criteria and Analysis										Final Status	
Site #	Address	Area (Acres)	Ownership	Current Use	Proximity to Water	Proximity to Highway	Proximity to Other Facilities	Topography	Soil Conditions	Environmental Concerns	Historical Significance	Overall Feasibility Score	Recommendation
1	193 Main Street	0.2	Private	Commercial	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
2	180 Main Street	0.1	Private	Commercial	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
3	Water St & Main Street	0.1	Private	Commercial	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
4	44 Cross Street	0.5	Public	School	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
5	260 Providence Road	1.0	Public	Playground	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
6	Providence Road Parcel	0.5	Private	Commercial	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
7	644 Providence Road	0.5	Private	Commercial	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
8	1681 Providence Road	1.0	Private	Field	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
9	1868 Providence Road	0.5	Private	Commercial	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
10	198 Church Avenue	1.0	Public	Fields	Low	Low	Low	Flat	Good	None	None	Low	Eliminated
11	14 Hill Street	0.2	Public	Town Hall Annex	Low	Low	Low	Flat	Good	None	None	Low	Eliminated

5 OF 11 INITIAL SITES ELIMINATED

- ✓ SITE #1 – 193 MAIN STREET
 - “ PARCEL TOO SMALL
- ✓ SITE #3 – WEST OF 253 MAIN ST
 - “ PARCEL TOO SMALL
- ✓ SITE #6 – 546 PROVIDENCE RD
 - “ PRIVATELY OWNED
- ✓ SITE #9 – 1868 PROVIDENCE RD
 - “ PRIVATELY SOLD, PARCEL TOO SMALL
- ✓ SITE #11 – 14 HILL STREET
 - “ TOO SMALL
 - “ NATIONAL HISTORIC REGISTER



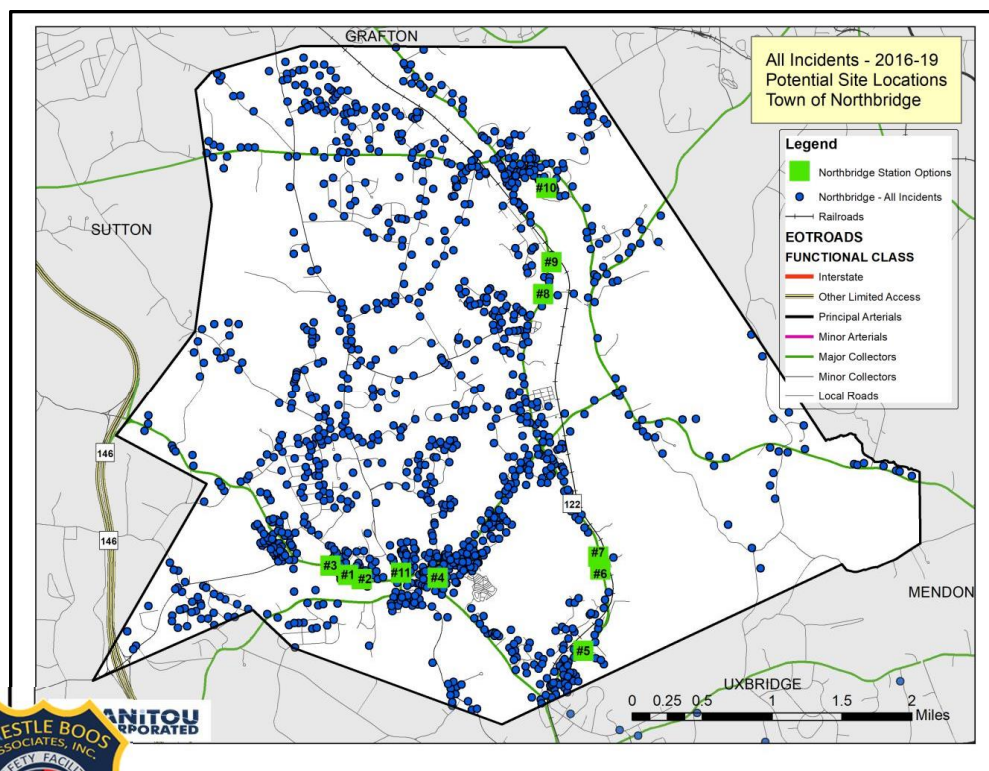
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❑ FEASIBILITY STUDY PROGRESS #1 (RESPONSE STUDY)



ALL INCIDENTS 2016-2019

Address	Description	Total
85 BEAUMONT DR	Beaumont Nursing Home	871
100 COMMERCE DR	Milford Regional Medical	527
447 HILL ST	St. Camillus Nursing Home	496
670 LINWOOD AVE	Linwood Mills Apts.	495
17 DOUGLAS RD	Cotton Mill Apts.	439
1 MAIN ST	The Shop at Whitinsville	343
60 MAIN ST	Whitin Community Center	341
COLONIAL DRIVE	Colonial Drive Apts	249
CHESTNUT ST	Whitin Retirement	201
63 SCHOOL ST	Rockdale House Apts.	194
LAKE STREET	Lake Terrace Apartments	156
PLANTATION ST	Rockdale Commons	104
100 VALLEY PKWY	Walmart	81
130 RIVERDALE ST	Riverdale Mill	59
427 LINWOOD AVE	Northbridge High School	59
181 LINWOOD AVE	Northbridge Middle School	56
21 CRESCENT ST	Balmer School	33
279 LINWOOD AVE	Whitinsville Christian School	24

HIGHEST CALL VOLUME LOCATIONS 2016-2019





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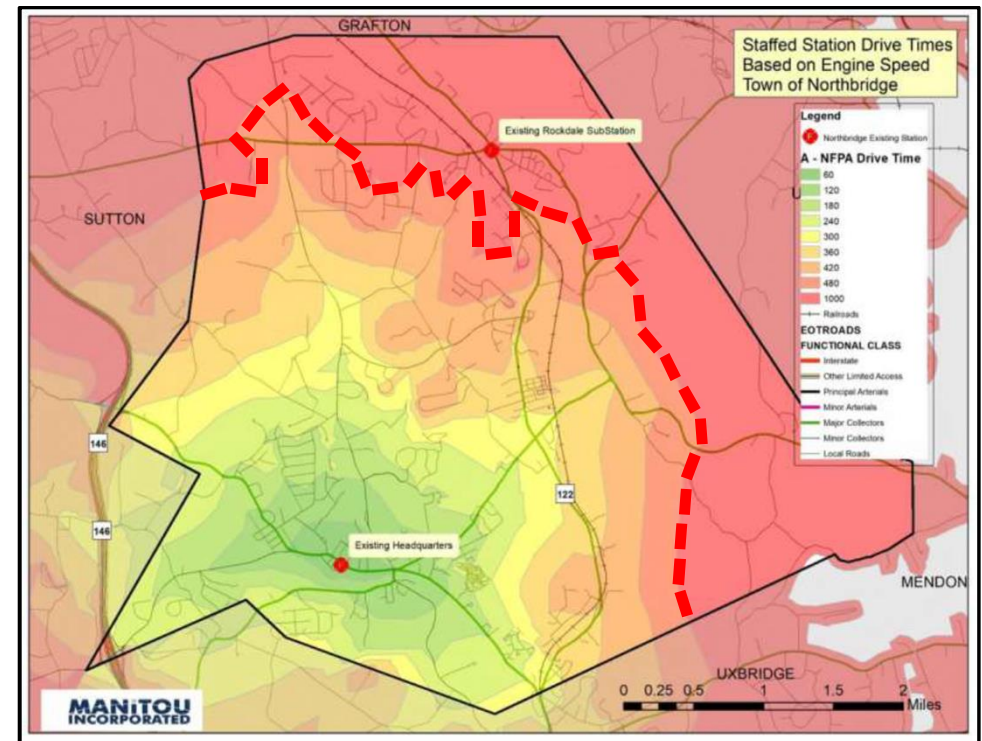
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❑ FEASIBILITY STUDY PROGRESS #1 (RESPONSE STUDY)

➤ RESPONSE TIME ANALYSIS

- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
- NFPA STANDARD 1720 (2014)
- SUBURBAN AREA (DENSITY 500-1000/SQ MI)
- MINIMUM STAFF LEVEL CAN GET TO 80% OF THE TOWN IN 10 MINUTES OR LESS
- CURRENT STATION 78.3% IN 8 MINUTES OR LESS
- PERFORMED RESPONSE ANALYSIS ON 5 FINAL SITES
 1. 1681 PROVIDENCE RD (GOULET) – **94.5%**
 2. 44 CROSS STREET (NES) – 88.8%
 3. 260 PROVIDENCE RD – 82.2%
 4. 180 MAIN STREET (PARKING LOT) – 78.9%
 5. 644 PROVIDENCE RD (TOWN) – 57.2%
 6. 198 CHURCH AVE (LEGION) – ELIMINATED



CURRENT HEADQUARTERS – 78.3% IN 8 MINUTES OR LESS





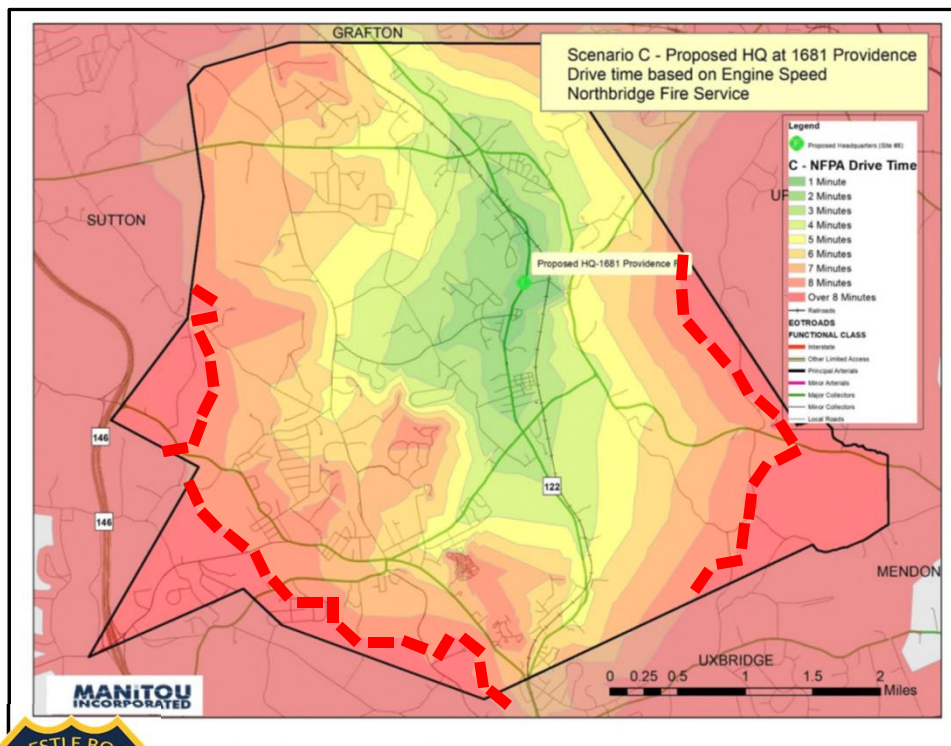
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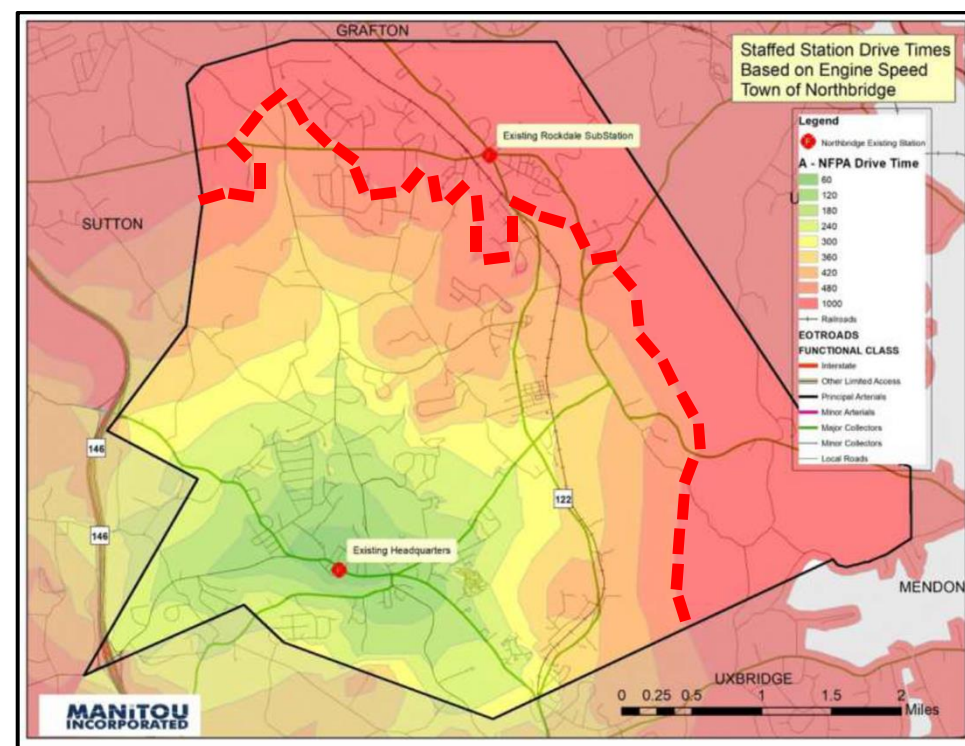
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FEASIBILITY STUDY PROGRESS #1 (RESPONSE STUDY)



1681 PROVIDENCE RD – 94.5%



CURRENT HEADQUARTERS – 78.3%





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FEASIBILITY STUDY PROGRESS #1 (SITE SELECTION)

PRELIMINARY SITE EVALUATION MATRIX

CRITERIA	SITE #2 180 Main Street				SITE #4 44 Cross Street				SITE #5 260 Providence Road				SITE #7 644 Providence Road				SITE #8 1681 Providence Road				SITE #10 198 Church Av			
SITE CONSIDERATIONS																								
	Score	Rel. Weight	Total	Comments	Score	Rel. Weight	Total	Comments	Score	Rel. Weight	Total	Comments	Score	Rel. Weight	Total	Comments	Score	Rel. Weight	Total	Comments	Score	Rel. Weight	Total	Comments
Technical Criteria																								
1. Lot size to accommodate entire program	3				3				3				3				3				3			
2. Critical/unobstructed sightlines from site	2				2				2				2				2				2			
3. Building visibility from the road	1				1				1				1				1				1			
4. Permitted zoning use	1				1				1				1				1				1			
5. Acquisition/temporary relocation costs	3				3				3				3				3				3			
6. Site development and building impact costs	3				3				3				3				3				3			
7. Environmental/regulatory restrictions	1				1				1				1				1				1			
8. Town departments relocated within station	2				2				2				2				2				2			
9. Ability for future expansion	3				3				3				3				3				3			
Technical Score SUBTOTAL	0	19			0	19			0	19			0	19										
Subjective Criteria																								
10. Department support	3				3				3				3				3				3			
11. Community support	3				3				3				3				3				3			
12. Site location to provide equal or better response time	3				3				3				3				3				3			
Subjective score SUBTOTAL	0	9			0	9			0	9			0	9										

SCORE X RELATIVE WEIGHT = TOTAL

RELATIVE WEIGHT:

1- SOMEWHAT IMPORTANT
2- IMPORTANT
3- VERY IMPORTANT

Site Selection Rating Criteria

Northbridge Fire Study

Northbridge, Massachusetts

Wednesday, September 18, 2019

CRITERIA	RATING SCALE
1. Lot size to accommodate entire program	3
2. Critical/unobstructed sightlines from site	2
3. Building visibility from the road	1
4. Permitted zoning use	1
5. Acquisition/temporary relocation costs	3
6. Site development and building impact costs	3
7. Environmental/regulatory restrictions	1
8. Town departments relocated within station	2
9. Ability for future expansion	3
10. Department support	3
11. Community support	3
12. Site location to provide equal or better response time	3

RATING SCALE:

1- SOMEWHAT IMPORTANT
2- IMPORTANT
3- VERY IMPORTANT





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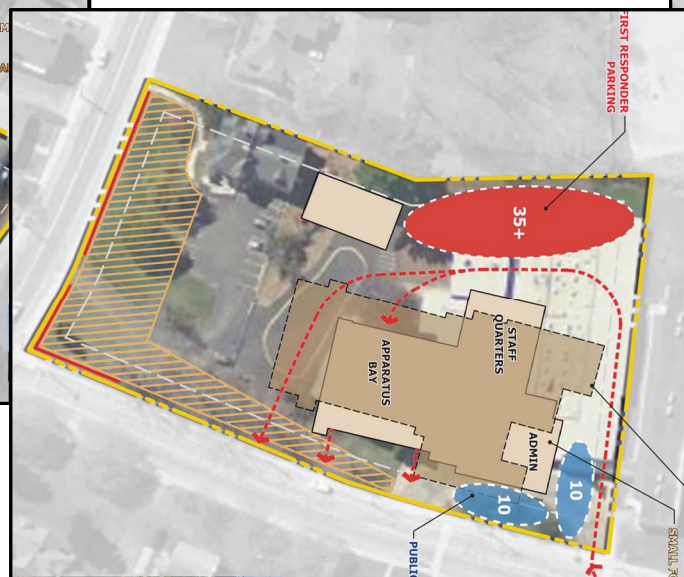
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❑ FEASIBILITY STUDY PROGRESS #1 (SITE SELECTION)

**RANKED LOWER DUE TO SIZE
RESTRICTIONS AND
RESPONSE TIME**



198 CHURCH AVE



44 CROSS STREET

180 MAIN STREET





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❑ FEASIBILITY STUDY PROGRESS #1 (SITE SELECTION)

260 PROVIDENCE RD



**RANKED LOWER DUE TO SITE
DEVELOPMENT RESTRICTIONS AND
RESPONSE TIME**



644 PROVIDENCE RD





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❑ FEASIBILITY STUDY PROGRESS #1 (SITE SELECTION)

➤ PREFERRED SITE

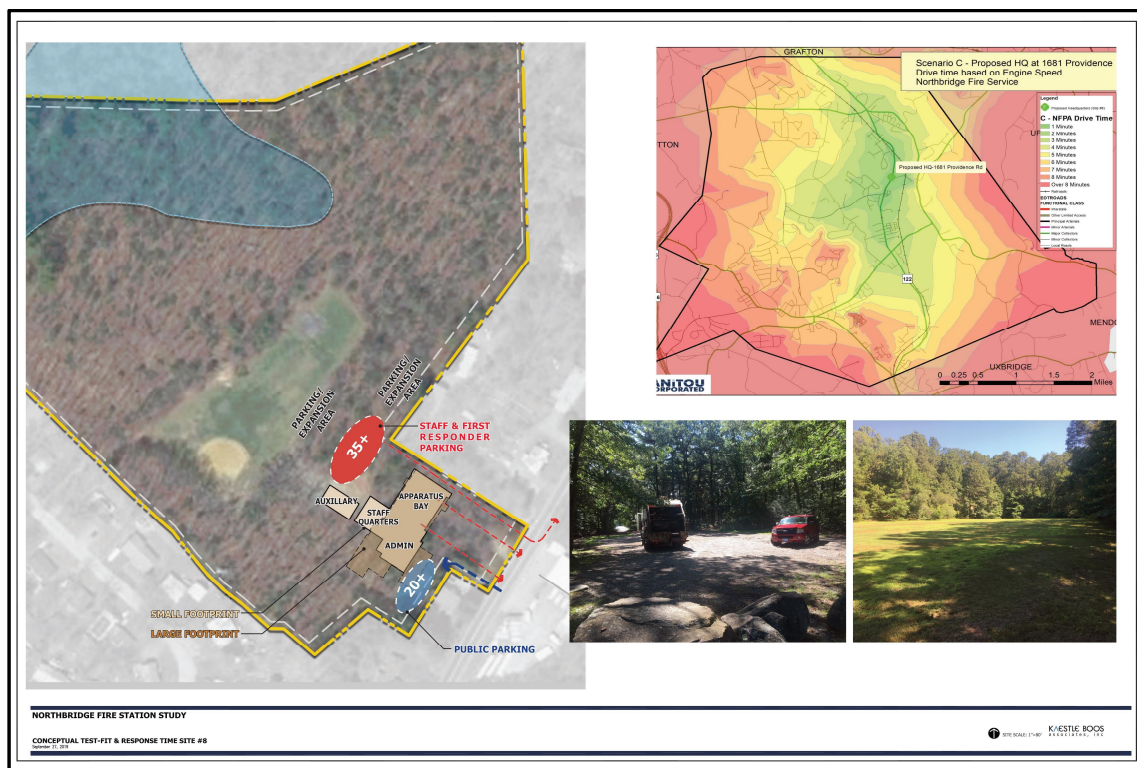
- 1681 PROVIDENCE ROAD (Goulet)

➤ PROS

- RESPONSE TIME: 94.5%
- PARCEL SIZE ACCOMMODATES FULL BUILDING PROGRAM
 - FLOOR PLAN, STORAGE, ON-SITE TRAINING, PARKING, CIRCULATION, EXPANSION, ACCESS TO MAIN ROAD
- SITE DEVELOPMENT COSTS
 - TOWN-OWNED
 - NO DEMOLITION REQUIRED

➤ CONS

- BUILDING VISIBILITY FROM ROAD
- POTENTIAL REGULATORY RESTRICTIONS (OUTSIDE OF PROPOSED DEVELOPMENT AREA)





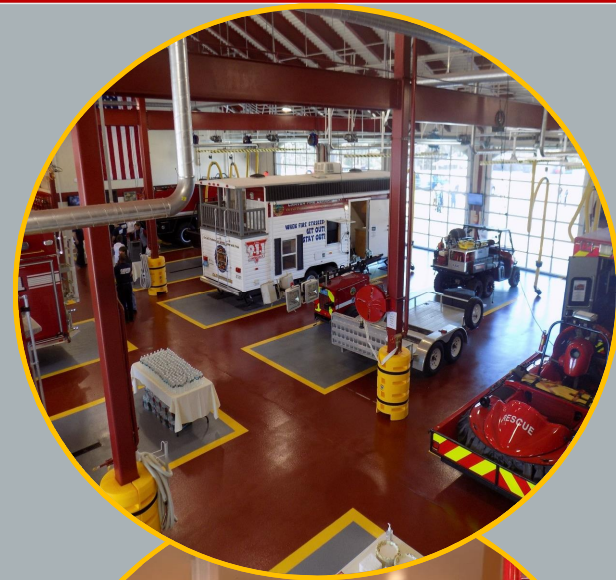
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associates, inc.

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ARCHITECTS

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PROGRESS #2





☐ **BPCC FEASIBILITY STUDY EFFORTS**

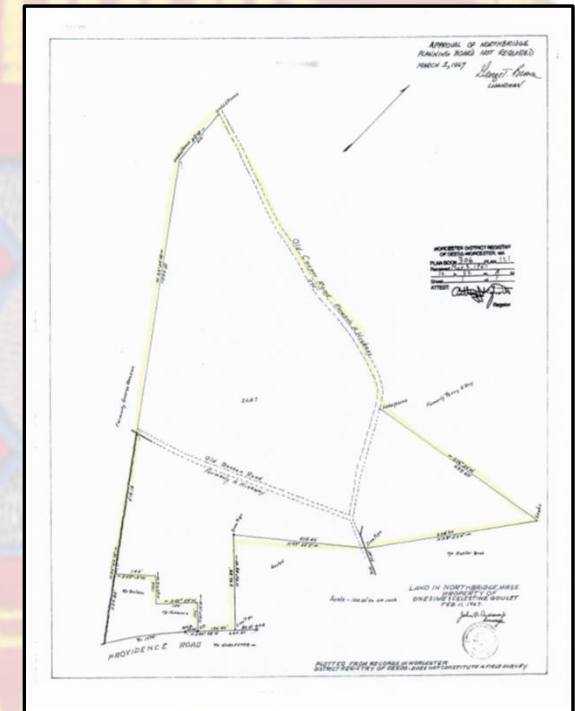
- **BPCC PUBLIC MEETINGS** – STARTED IN AUGUST 2017 HIRED OPM FOR RFQ PROCESS
- **PUBLIC FORUMS** – NOVEMBER AND MARCH PLUS APRIL TBD
- **SELECTMEN** – BI-WEEKLY BOS MEETING UPDATES PLUS COST PRESENTATION – PUBLIC
- **FIRE DEPARTMENT OPEN HOUSE** – FEBRUARY AND MARCH/APRIL TBD
- **FIRE FIGHTER STAFF PRESENTATIONS** – NOVEMBER AND FEBRUARY + CHIEF STAFF
- **FINANCE COM.** – MARCH 4TH AND THROUGH APRIL DISCUSSING UPDATES – PUBLIC
- **SENIOR CENTER VISIT** – MARCH/APRIL TBD
- **WEBSITE** – LIVE JANUARY 29, 2020 – WWW.NORTHBRIDGEFIRESTATIONPROJECT.ORG
 - ☐ ABOUT THE PROJECT
 - ☐ EXISTING CONDITIONS
 - ☐ PLANS (FLOOR, FAÇADE, SITE LAYOUT)
 - ☐ CONTACT – EMAIL OR POST QUESTIONS
 - ☐ INFO ON DESIGN TEAM
 - ☐ FREQUENTLY ASKED QUESTIONS
 - ☐ RESOURCES (RESPONSE, PROGRAMMING)



❑ FEASIBILITY STUDY PROGRESS #2 (GOULET INFO)

➤ GOULET PLAYGROUND / RIVERDALE FIELD BACKGROUND

- **ANNUAL TOWN MEETING – MARCH 8, 1966**
 - Authorized the Purchase of 23 acres for \$12,000
- **PURCHASED BY THE TOWN – MARCH 3, 1967**
 - Intent was for new second elementary school
 - Town purchased Cross Street (parochial school) instead
- **ANNUAL TOWN MEETING – MAY 11, 1976**
 - Accepted ROW Access off Suzanne Drive (Meadowood Project)
- **HIGH SCHOOL FEASIBILITY STUDY – 1997**
 - Deemed too small for new high school – preferred site was Linwood Ave
 - Preliminary Geotechnical Evaluation/Soil study – no fatal flaws
- **BALMER SCHOOL FEASIBILITY STUDY – 2017**
 - Ranked 4th of 7 sites – Issues were size, lack of 2-way access, bus circulation
 - Preferred Site was existing Balmer location – under construction





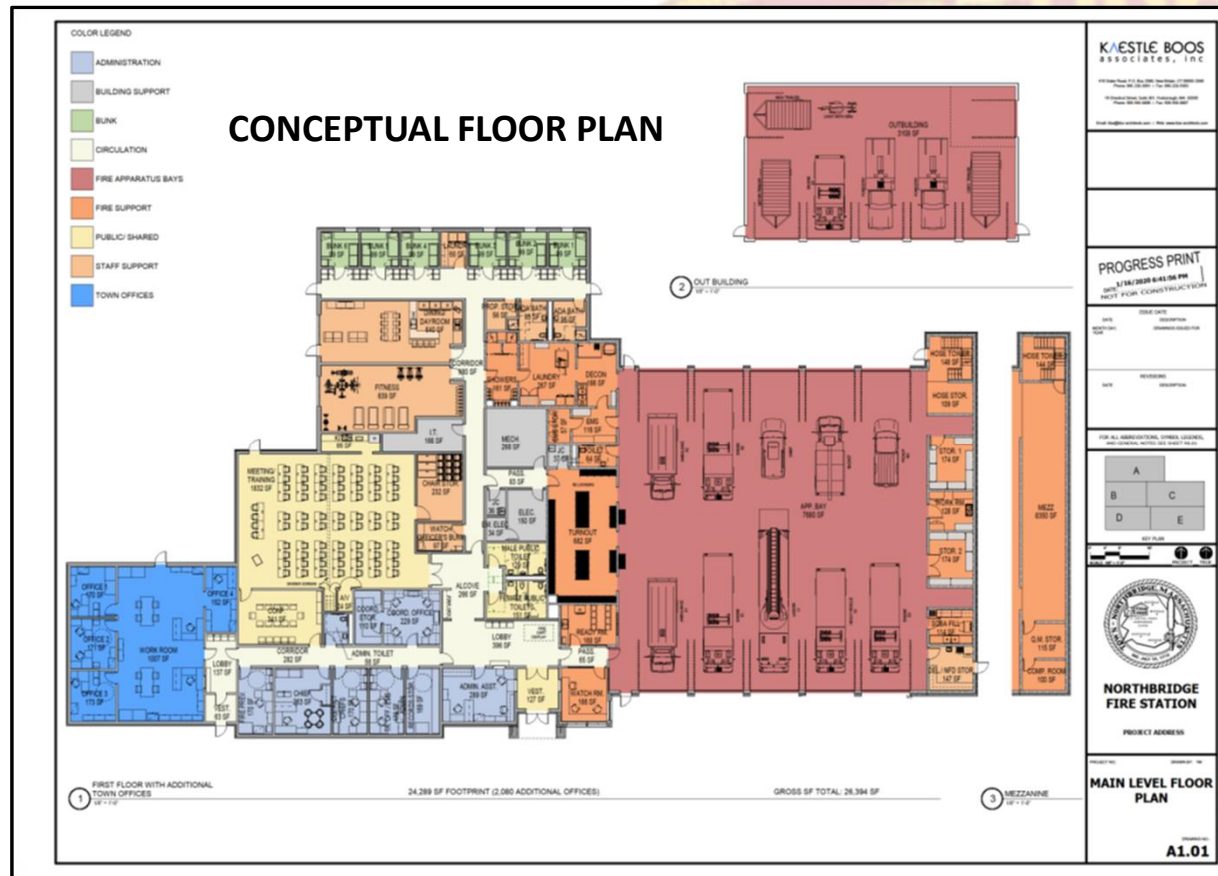
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❑ FEASIBILITY STUDY PROGRESS #2 (FLOOR PLAN)



ONE STORY OPTION



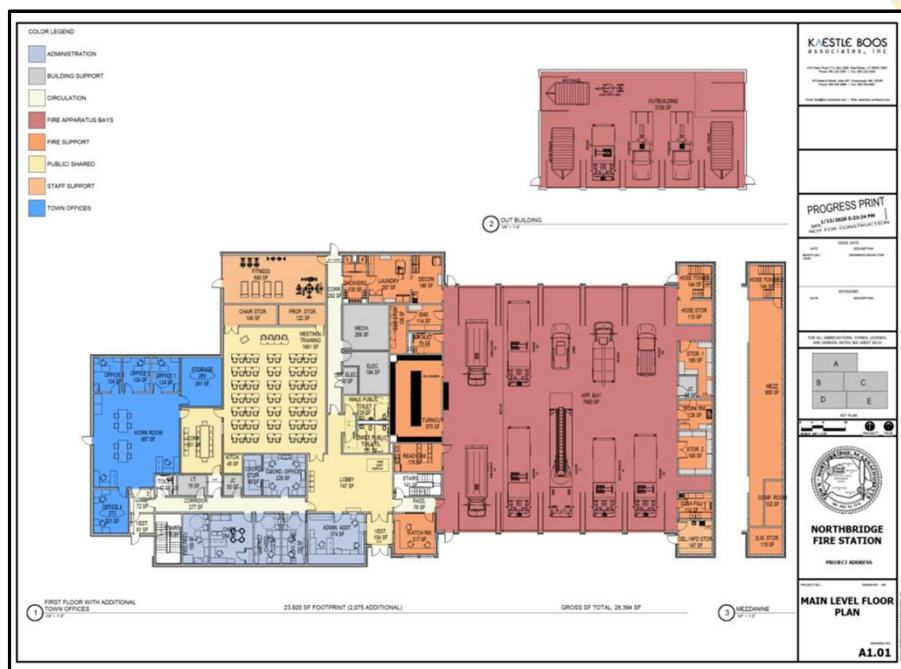
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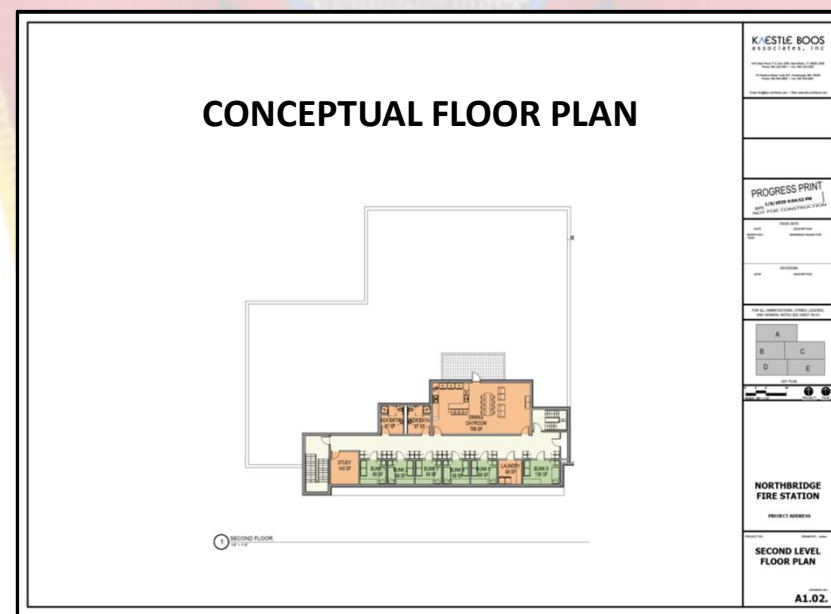
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❑ FEASIBILITY STUDY PROGRESS #2 (FLOOR PLAN)



TWO STORY OPTION

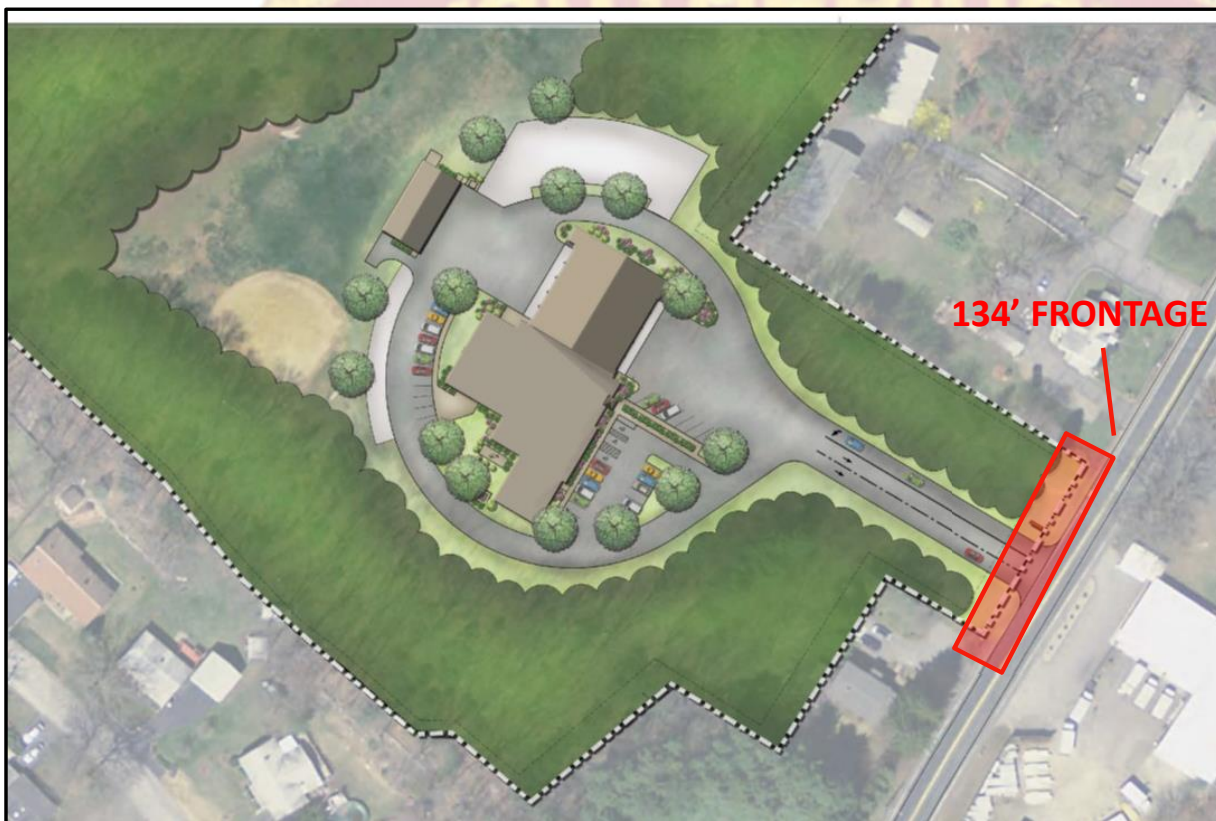
- HIGHER COSTS – STUCTURAL
- LESS EFFICIENT/SAFETY – STAIRWAYS





❑ FEASIBILITY STUDY PROGRESS #2 (SITE LAYOUT)

- ✓ **EFFICIENT USE OF PROPERTY**
 - TOWARDS FRONT
 - AVOID SLOPES & WETLANDS
 - FLAT, AVOID LEDGE, NO DEMO
- ✓ **EXCELLENT ACCESS/CIRCULATION**
 - FRONT AND REAR BAY ACCESS
- ✓ **SUFFICIENT PARKING**
 - FT EMPLOYEES, ON-CALL STAFF, GUESTS + OVERFLOW
- ✓ **ROOM FOR ON-SITE TRAINING AND FUTURE EXPANSION**
- ✓ **NEIGHBORHOOD BUFFER**





❑ FEASIBILITY STUDY PROGRESS #2 (FAÇADE RENDERINGS)

✓ ARCHITECTURAL BALANCE

- ROOF LINES
- LIGHT
- FACADE

✓ REGIONAL CHARACTER

- UTILIZATION OF BRICK
- PITCHED ROOF

✓ COST RECOGNITION

- METAL PANELS IN FRONT GABLE
- CONCRETE BLOCK
- CAST STONE BASE



PRELIMINARY ONE-STORY OPTION RENDERING



NORTHBRIDGE FIRE STATION STUDY

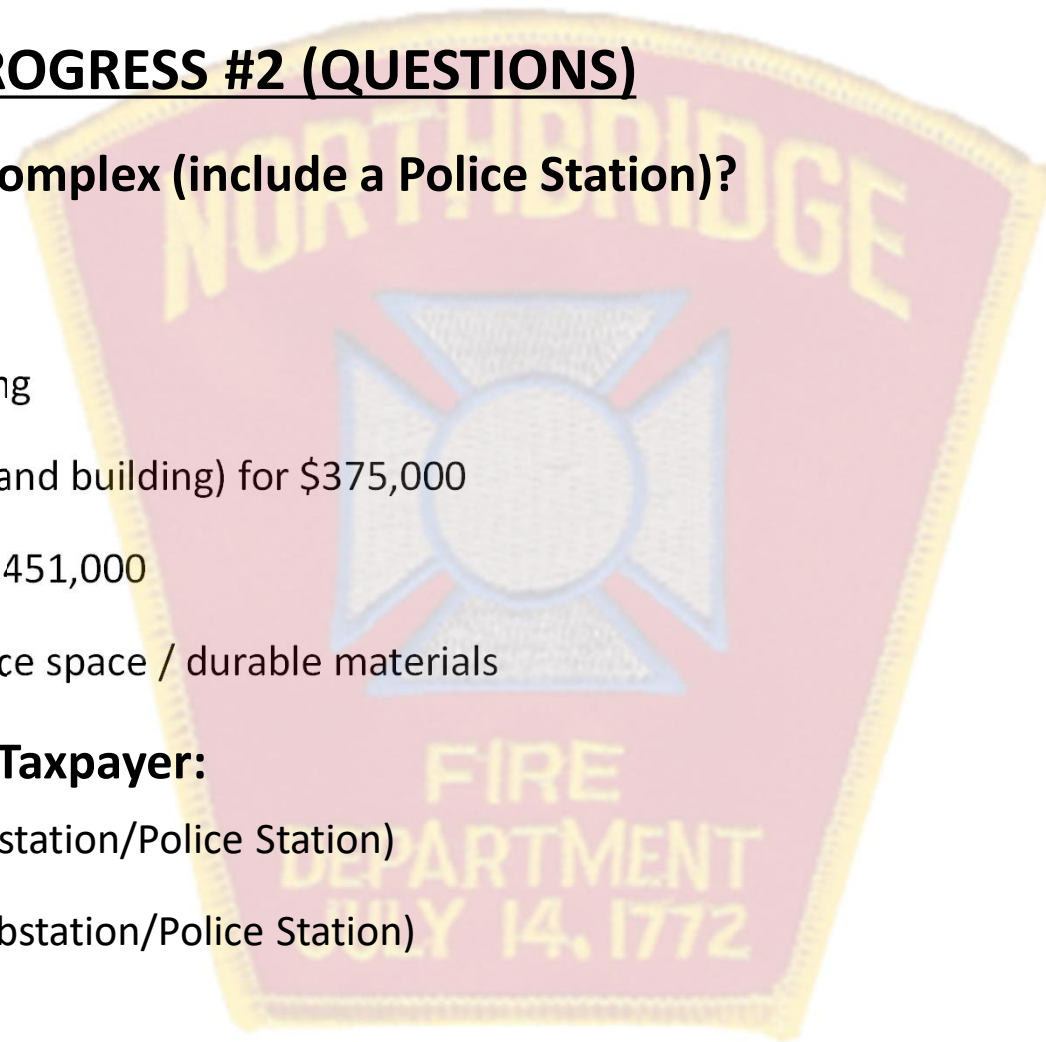
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☐ FEASIBILITY STUDY PROGRESS #2 (QUESTIONS)

- **Why is the project not a Public Safety Complex (include a Police Station)?**
- **Info on our Current Police Station:**
 - Built in 1960 as a Light Manufacturing Building
 - Purchased by the Town March 3, 1987 (land and building) for \$375,000
 - Renovated by the Town in 1989 at cost of \$1,451,000
 - Remains in Very Good condition - mainly office space / durable materials
- **Not in the best interest of Northbridge Taxpayer:**
 - Auburn - \$39.7 Million (Headquarters/Substation/Police Station)
 - Charlton - \$28.5 Million (Headquarters/Substation/Police Station)





❑ FEASIBILITY STUDY PROGRESS #2 (QUESTIONS)

➤ Why is there a Town Offices wing added as part of the floor plan?

▪ Current Planning / Code Offices

- Town Hall Annex (14 Hill Street)
- Built 1890 – Former Elementary School
- Current Building 15,850 sq ft living (21,262 gross)
- 3 stories (1st office, 2nd storage, 3rd empty)
- 5 FT, 1PT Staff = **2,882 sq ft per staff**
- Building Upgrades - **\$3.96 Million** (20 year life)
- Current Utility Costs – **\$11,500 FY2018**

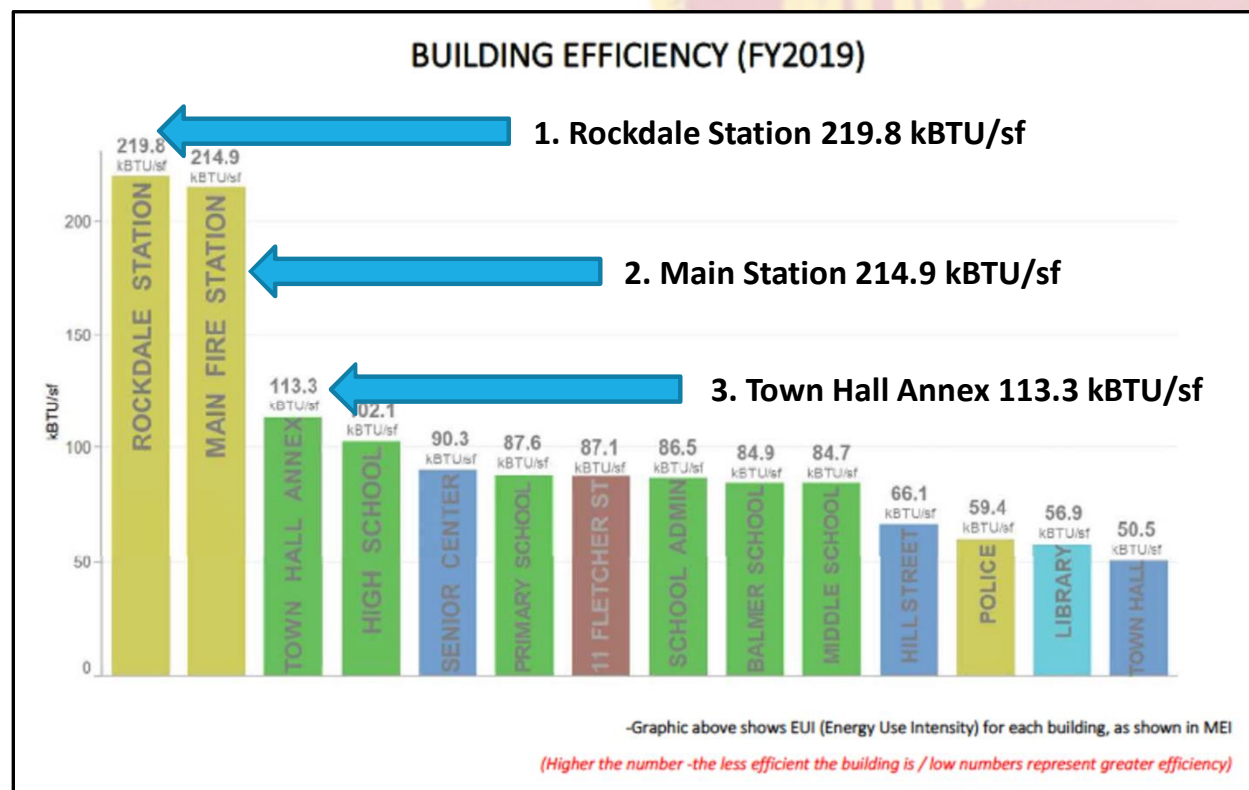
▪ Proposed Planning / Code Offices

- New Fire Station (1681 Providence Rd)
- Built 2021 – Municipal Office Space
- Proposed Building Space 1,873 sq ft living area
- 1 story (4 offices, work room w/ 2 stations)
- 5 FT, 1PT Staff = **340 sq ft per staff**
- Construction Cost – **\$828,000** (50 year life)
- Expected Utility Costs – \$2/sq ft = **\$4,230/year**



❑ FEASIBILITY STUDY PROGRESS #2 (QUESTIONS)

- Why is there a Town Offices wing added as part of the floor plan?





NORTHBRIDGE FIRE STATION STUDY

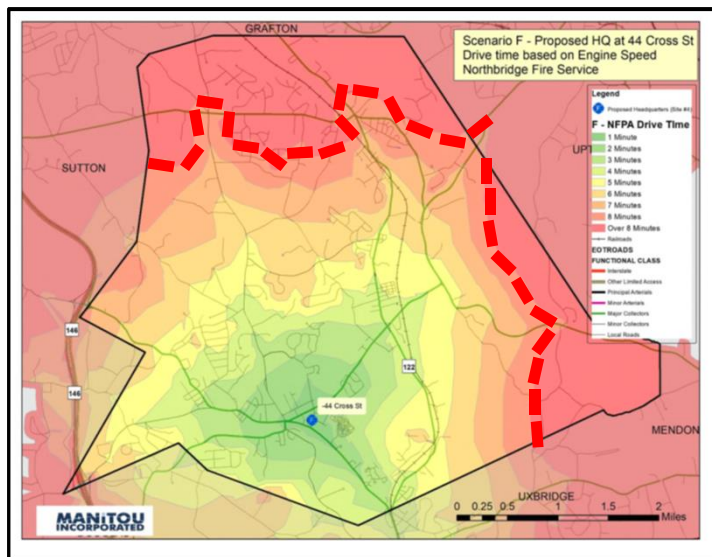
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❑ FEASIBILITY STUDY PROGRESS #2 (QUESTIONS)

- Isn't NES (44 Cross Street) the best solution as it will be empty in the Fall of 2021?



Not Centrally-Located &
Goulet Site Provides for
Better Response Time

2-Story Not as Efficient/Safe



Does Not Fit the Required Program
(Parking, Training, Circulation - 49' Ladder,
Access or Have Room for Expansion)



☐ FEASIBILITY STUDY PROGRESS #2 (QUESTIONS)

- **What is the plan for the vacant town buildings if not used for project?**
 - Town Properties slated for replacement
 - **Northbridge Elementary School (44 Cross Street)** – being replaced by new Balmer Project
 - **Northbridge Fire Station Headquarters (193 Main Street)** – proposed to be replaced with new station
 - **Northbridge Fire Sub Station (Rockdale)** – proposed to be replaced with new station
 - **Town Hall Annex (14 Hill Street)** – proposed new wing in new fire station
- **The BPCC would undertake an Adaptive Reuse Study for all 4 properties – producing a report that would detail the building conditions, explore compatible uses, and perform market analysis.**
- **Then the BPCC, in accordance with MGL c. 30B, would advertise a Request for Proposals (RFP) for Development/Redevelopment Proposals and purchase Price.**
- **The BPCC would make recommendation to the Board of Selectmen for the project that would be in the best interest of the community, rejecting all bids if necessary.**



❑ FEASIBILITY STUDY PROGRESS #2 (QUESTIONS)

➤ Why was Uxbridge's station built for only \$10M & ours will be significantly more?

▪ Uxbridge Fire Station Project

- Replaced Headquarters Only
 - 3-man crews, 12FT, $\pm 2,500$ calls
- Replaced 6,600 sq ft Station New Building
14,365 sq ft (**118% larger**)
- Storage at other off-site substation
- Original Programming was up to 19,000 sq ft,
reduced program to fit downtown site
- No room for on-site training, lacks sufficient
parking, poor circulation access, no room for
expansion

▪ Northbridge Fire Station Project

- Replacing 3 Buildings (HQ, Sub, Annex) –
 - 4-man crews, 17 FT), $\pm 3,400$ calls
- Replacing 33,556 sq ft existing HQ Station, 3,520
sq ft substation and 21,262 (total 58,338 sq ft)
- New Building Space 29,047 sq ft (**50% smaller**)
- New Building also includes out building/ storage
and Planning / Code Wing
- Room for On-site Training, Sufficient Parking,
Better Access/Circulation, Room for Expansion
- 2020 Total Project Cost is \$653/sq ft vs \$679/sq ft



NORTHBRIDGE FIRE STATION STUDY

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FEASIBILITY STUDY PROGRESS #2

COST ESTIMATE

➤ DIRECT COST SUBTOTAL	\$12,429,000
➤ GC MARK-UPS + ESCALATION	\$2,566,000
➤ PROBABLE TOTAL CONSTRUCTION	\$14,995,000
➤ EQUIPMENT COSTS	\$679,000
➤ INDIRECT COSTS (DESIGN/OTHER)	\$2,318,000
➤ OWNER CONTINGENCIES	\$976,000
➤ TOTAL PROJECT COST	\$18,968,000

Northbridge Fire Department - Central Station			
February 4, 2020			
Preliminary OPC - Single Story Option			
Cost Detail	Subtotal	Totals	Comments
Direct Construction Costs:			
Probable scope			
HazMat Allowance (site)		\$0	
Central Station	25,743 sf	\$8,700,000	Includes Planning Wing
Auxiliary Bldg.	3,304 sf	\$742,000	
Site Development		\$1,857,000	
		\$11,299,000	
Design & Estimating Contingency	10.00%	\$1,130,000	
		\$12,429,000	
GC Mark-ups:			
General Conditions & Requirements	7.50%	\$932,000	
Insurance	1.25%	\$167,000	
Bonds	0.65%	\$88,000	
Building Permit		Waived by Town	Confirm
GC Fee	5.00%	\$681,000	
		\$1,868,000	
Escalation (to Midpoint of Construction - 2021):	4.88%	\$698,000	
		\$14,995,000	
Equipment Costs			
Station Alerting System		\$105,000	Preliminary Estimate
Furnishings, Furniture		\$257,000	Allowance
Computer Equipment & UPS		\$50,000	Allowance
Telephone System		\$60,000	Allowance
Security / Access Control		\$65,000	Allowance
Firematic Equipment		\$142,000	Adjusted MAA Est.
		\$679,000	
Owner's Indirect Cost			
Land Survey		\$15,000	Allowance
Geotech		\$20,000	Allowance
Environmental Study		N/A	
Basic A/E Fee	9.5%	\$1,425,000	
Equipment Design & Procurement		\$68,000	
Project Management Fee	3.5%	\$525,000	Cardinal Est.
Reimbursables/Add Services	Allow.	\$71,000	
Structural Peer Review		\$6,000	If Required (Building Off.)
Utility Backcharges	Allow.	\$50,000	Verify w/Eversource
Moving	Allow.	\$10,000	
Reproduction / Miscellaneous		\$5,000	Electronic Distribution
Legal / Advertising		\$10,000	
Material Testing		\$75,000	
Builder's Risk Insurance		\$30,000	
One 3rd Party Cost Estimate		\$8,000	
		\$2,318,000	
Owner's Contingencies			
Construction Contingency	5.00%	\$750,000	
Equipment Contingency	7.50%	\$51,000	
Owner's Indirect Costs Contingency	7.50%	\$175,000	
		\$976,000	
		\$18,968,000	
Notes:			
Costs are rounded to nearest thousand.			
This OPC is based on an updated Construction Cost Estimate dated 2/04/2020 by Myakoda Consulting.			
The Breakout cost of the Planning Wing has been estimated @ \$681,000.			



NORTHBRIDGE FIRE STATION STUDY

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Public Safety Facility Projects: Comparative Construction Costs \$/SF (escalated to 2020)

FACILITY & TYPE	Bldg. Area	Bid Year	Bid - Est Cost/SF	2020 Cost/SF
MEDFIELD FIRE & POLICE	41,022	2015	\$ 371	\$ 464
NORTHBRIDGE FIRE STATION	29,047	2020	\$ 516	\$ 516
MANSFIELD FIRE & POLICE	39,621	2016	\$ 465	\$ 557
PLAINVILLE FIRE & POLICE	41,655	2017	\$ 495	\$ 567 *
WESTON POLICE	19,800	2015	\$ 455	\$ 569
MILLIS POLICE	7,890	2015	\$ 460	\$ 576
SHARON FIRE & POLICE	42,460	2015	\$ 463	\$ 579
SOUTHBRIDGE FIRE STATION	34,135	2019	\$ 557	\$ 584
NORTHBOROUGH FIRE STN.	26,420	2020	\$ 584	\$ 584
WESTWOOD POLICE	20,748	2016	\$ 490	\$ 586
NEEDHAM FIRE & POLICE	60,690	2019	\$ 570	\$ 598
NEEDHAM FIRE STATION 2	22,204	2019	\$ 582	\$ 610
RANDOLPH FIRE SUBSTATION	8,500	2015	\$ 491	\$ 615
ORLEANS POLICE	17,830	2016	\$ 515	\$ 617 *
N. ACTON FIRE STATION	12,179	2020	\$ 624	\$ 624 *
SCITUATE FIRE & POLICE	28,818	2016	\$ 527	\$ 630
WESTWOOD FIRE STATION	20,457	2015	\$ 572	\$ 715
BURLINGTON FIRE STATION	10,021	2020	\$ 721	\$ 721
NANTUCKET FIRE STATION	22,340	2017	\$ 713	\$ 817

Avg. SF Cost in 2020 \$': **\$ 678**

* A CM@Risk rather than GC Project

FEASIBILITY STUDY PROGRESS #2

COST ESTIMATE

Two Fire Station Projects: Comparative Total Project Cost \$/SF (Uxb. escalated to 2020)

	Bldg. Area	Bid Year	Tot. Proj. Cost/SF	2020 Cost/SF
NORTHBOROUGH FIRE STN.	26,420	2020	\$ 712	\$ 712
BURLINGTON FIRE STATION	10,021	2020	\$ 886	\$ 886
NORTHBRIDGE FIRE STATION	29,047	2020	\$ 653	\$ 653
UXBRIDGE FIRE STATION	14,365	2016	\$ 568	\$ 679

Cost per Uxbridge Town Records
Cost below per 2018 Newspaper Article

\$ 734 **\$ 770**

Version 1.2 Feb 4, 2020



❑ FEASIBILITY STUDY PROGRESS #2 (COST ESTIMATES)

➤ GOULET COST ESTIMATE

▪ DIRECT COST SUBTOTAL	\$12,429,000
▪ GC MARK-UPS + ESCALATION	<u>\$2,566,000</u>
▪ PROBABLE TOTAL CONSTRUCTION	\$14,995,000
▪ EQUIPMENT COSTS	\$679,000
▪ INDIRECT COSTS (DESIGN/OTHER)	\$2,318,000
▪ <u>OWNER CONTINGENCIES</u>	<u>\$976,000</u>
▪ TOTAL PROJECT COST	\$18,968,000

➤ NES COST ESTIMATE

▪ DIRECT COST SUBTOTAL	\$13,965,400
▪ GC MARK-UPS + ESCALATION	<u>\$3,768,600</u>
▪ PROBABLE TOTAL CONSTRUCTION	\$17,734,000
▪ EQUIPMENT COSTS	\$680,000
▪ INDIRECT COSTS (DESIGN/OTHER)	\$2,694,000
▪ <u>OWNER CONTINGENCIES</u>	<u>\$1,141,000</u>
▪ TOTAL PROJECT COST	\$22,249,000



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❑ FEASIBILITY STUDY PROGRESS #2 (TAX IMPACTS)

TERM	RATE	TOTAL PRINCIPAL	TOTAL INTEREST	TOTAL DEBT SERVICE	ANNUAL AVERAGE TAXPAYER IMPACT AVG HOME VALUE \$329,000
30 YEARS	4.50%	\$ 19,000,000.00	\$ 13,252,500.00	\$ 32,252,500.00	\$ 198.80
25 YEARS	4.50%	\$ 19,000,000.00	\$ 11,115,000.00	\$ 30,115,000.00	\$ 222.75
20 YEARS	4.50%	\$ 19,000,000.00	\$ 8,977,500.00	\$ 27,977,500.00	\$ 258.67

TERM	RATE	TOTAL PRINCIPAL	TOTAL INTEREST	TOTAL DEBT SERVICE	ANNUAL AVERAGE TAXPAYER IMPACT AVG HOME VALUE \$329,000
30 YEARS	3.00%	\$ 19,000,000.00	\$ 8,835,000.00	\$ 27,835,000.00	\$ 171.57
25 YEARS	3.00%	\$ 19,000,000.00	\$ 7,410,000.00	\$ 26,410,000.00	\$ 195.34
20 YEARS	3.00%	\$ 19,000,000.00	\$ 5,985,000.00	\$ 24,985,000.00	\$ 231.01



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□ FEASIBILITY STUDY PROGRESS #2 (TAX IMPACTS)

			FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
PROJECT	PAYOFF YEAR	2020 PAYMENT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT	TAX RATE IMPACT
POLICE ROOF	2022	\$14,330	\$0.01	\$0.01	\$0.01							
M. SCHOOL ROOF	2022	\$148,877	\$0.08	\$0.08	\$0.08							
BVRHS EXPANSION	2025	\$72,404	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05				
DPW BUILDING	2028	\$294,750	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	
BALMER SCHOOL #1	2049	\$1,739,167	\$0.98	\$0.97	\$0.96	\$0.94	\$0.93	\$0.91	\$0.90	\$0.89	\$0.87	\$0.86
BALMER SCHOOL #2*	2051	\$1,520,000		\$0.85	\$0.84	\$0.83	\$0.81	\$0.80	\$0.79	\$0.77	\$0.76	\$0.75
TURF FIELD PROJECT	2023	\$1,001,313		\$0.59	\$0.57	\$0.56						
NEW FIRE STATION*	2048	\$1,330,000				\$0.75	\$0.73	\$0.72	\$0.71	\$0.70	\$0.68	\$0.67
Total Tax from Debt:			\$1.29	\$2.72	\$2.68	\$3.30	\$2.69	\$2.65	\$2.57	\$2.53	\$2.48	\$2.28
Other 2020 Tax Rate:			\$12.55	\$12.55	\$12.55	\$12.55	\$12.55	\$12.55	\$12.55	\$12.55	\$12.55	\$12.55
Total Projected Tax Rate:			\$13.84	\$15.27	\$15.23	\$15.85	\$15.24	\$15.20	\$15.12	\$15.08	\$15.03	\$14.83

Assumes Current Values & Tax Rate

Assumes Balmer #2 30 years @ 3.00%

Assumes Fire Station 25 years @ 3.00%



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❑ FEASIBILITY STUDY PROGRESS #2 (TAX IMPACTS)

	FY2020 TAX RATES	AVERAGE SINGLE FAMILY FY2020 TAX	AVERAGE SINGLE FAMILY FY2020 VALUE
1. BLACKSTONE	\$18.86	\$5,600	\$297,300
2. HOPEDALE	\$17.41	\$6,500	\$371,200
3. UPTON	\$17.22	\$7,500	\$438,000
4. DOUGLAS	\$16.98	\$5,500	\$325,200
5. MENDON	\$16.75	\$7,100	\$423,700
6. UXBRIDGE	\$16.74	\$5,500	\$328,700
7. GRAFTON	\$16.50	\$6,900	\$419,400
8. MILLVILLE	\$16.07	\$4,800	\$297,600
9. SUTTON	\$15.86	\$6,200	\$390,700
NORTHBRIDGE (23')	\$15.85	\$5,268	TBD
10. MILLBURY	\$15.33	\$4,700	\$303,400
11. NORTHBRIDGE (20')	\$13.84	\$4,600	\$329,100



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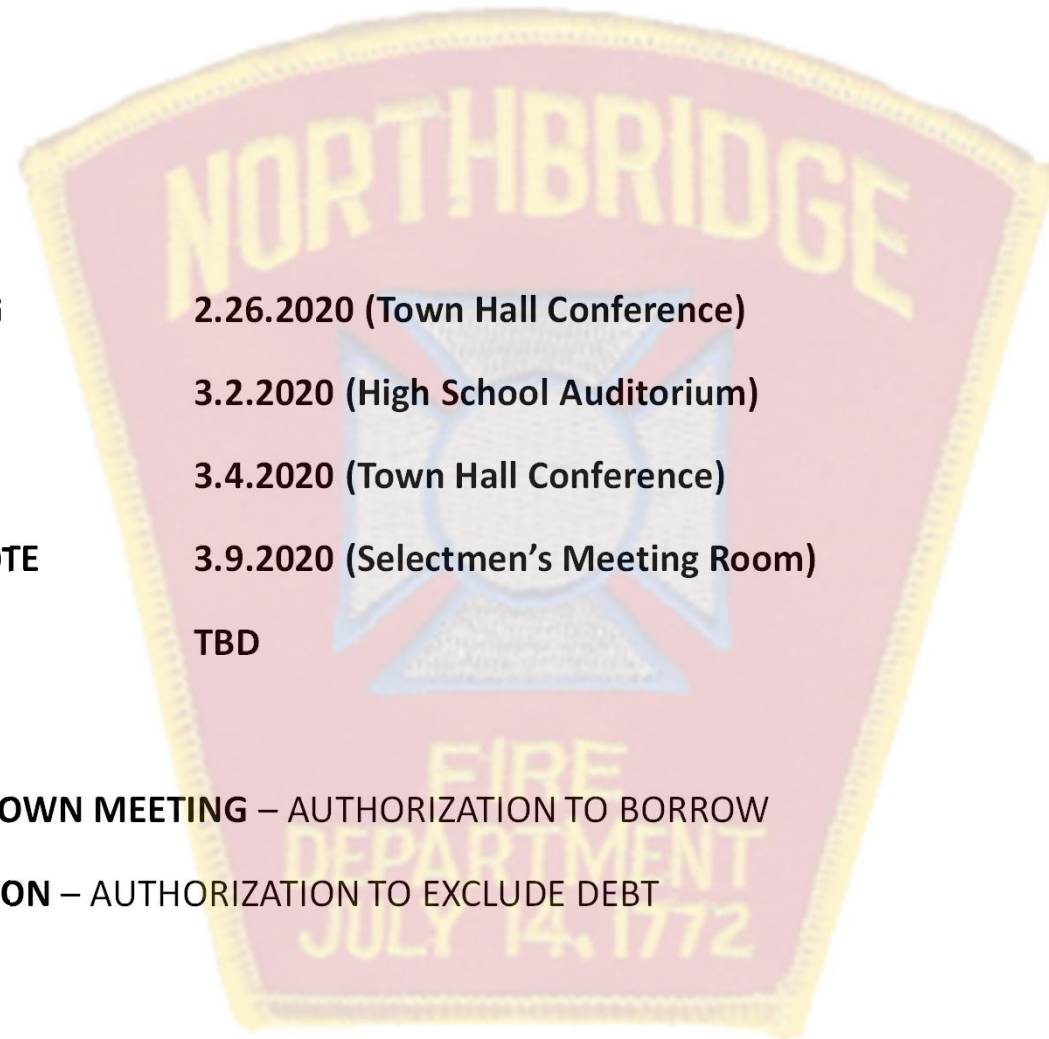
❑ NEXT STEPS

➤ FUTURE MEETINGS

- FINANCE COMMITTEE MEETING 2.26.2020 (Town Hall Conference)
- MARCH PUBLIC FORUM 3.2.2020 (High School Auditorium)
- BPCC MEETING (FINAL REPORT) 3.4.2020 (Town Hall Conference)
- MARCH SELECTMEN BALLOT VOTE 3.9.2020 (Selectmen's Meeting Room)
- APRIL PUBLIC FORUM TBD

➤ VOTER APPROVAL PROCESS

- MAY 5, 2020 SPRING ANNUAL TOWN MEETING – AUTHORIZATION TO BORROW
- MAY 19, 2020 – ANNUAL ELECTION – AUTHORIZATION TO EXCLUDE DEBT





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QUESTIONS

