



Status of Fire Station Upgrade

December 8, 2016



Division Street – until 1971





Current Facility – since fall of 1971





Starting Construction - 1970





Proposed Facility - 2018





Motivation

- **1994 Facility Report on Safety Center (Northfield Public Works)**
 - “The fire department has reached storage capacity for fire trucks . . .”
 - Fire department had 3 trucks in 1971, when Safety Center was built
 - Northfield population in 1971 was about 10,500
- **2008 Facility Analysis (Wold Architects & Engineers)**
 - \$3.2 million in deferred maintenance
 - Life safety issues (no sprinkler system, dead-end hallways)
- **2014 & 2015 Fire calls at Safety Center**
 - Malfunctioning HVAC equipment
- **Flooding Risk**



Guiding Principles (from RFQ)

1. Provide safe and healthy work environment.
2. Provide operational efficiency for responsive customer service.
3. Provide a professional public safety image.
4. Provide a balanced approach in energy efficiency to achieve operating savings.
5. Provide a balanced approach in materials & features to achieve reliable, durable construction.



Summary Requirements

(from RFQ)

1. Provide sufficient space to house all the fire & rescue vehicles.
2. Provide flood control for the site and building.
3. Bring facility into compliance with current building codes.
4. Renovate/replace mechanical infrastructure and roof.
5. Update electrical & lighting systems.
6. Update living space for resident firefighters (both genders).
7. Remodel interior space to meet NAFRS needs.



Where we are today

Architectural and Engineering studies completed: June 2015, July 2016

The Board has developed a plan which is ready to be implemented.

The Board is asking each Member to pass a resolution affirming support for upgrading the existing facility



Schedule

Goal: Complete construction by the end of 2018

- Q4 – 2016 engage attorney specializing in public construction projects
- Q4 select method for project delivery
- Q4 NAFRS Board recommendations on facility to JPA Parties
- Q1 – 2017 engage architect and construction management firm
- Q2 receive Conditional Use Permit from Northfield
- Q3 construction drawings, refine cost estimate, bond prep.
- **Q3 approval by members**
- Q4 bid packages for subcontractors, bond preparation
- Q4 select subcontractors, issue bond
- Q1 – 2018 start construction
- Q4 complete construction



JPA Requirement

Joint Powers Agreement, Section 17.d

Future Fire Facility. NAFRS shall make a recommendation to the Parties on the location, cost, ownership and financing of an upgraded or new facility.



NAFRS Board Recommendations

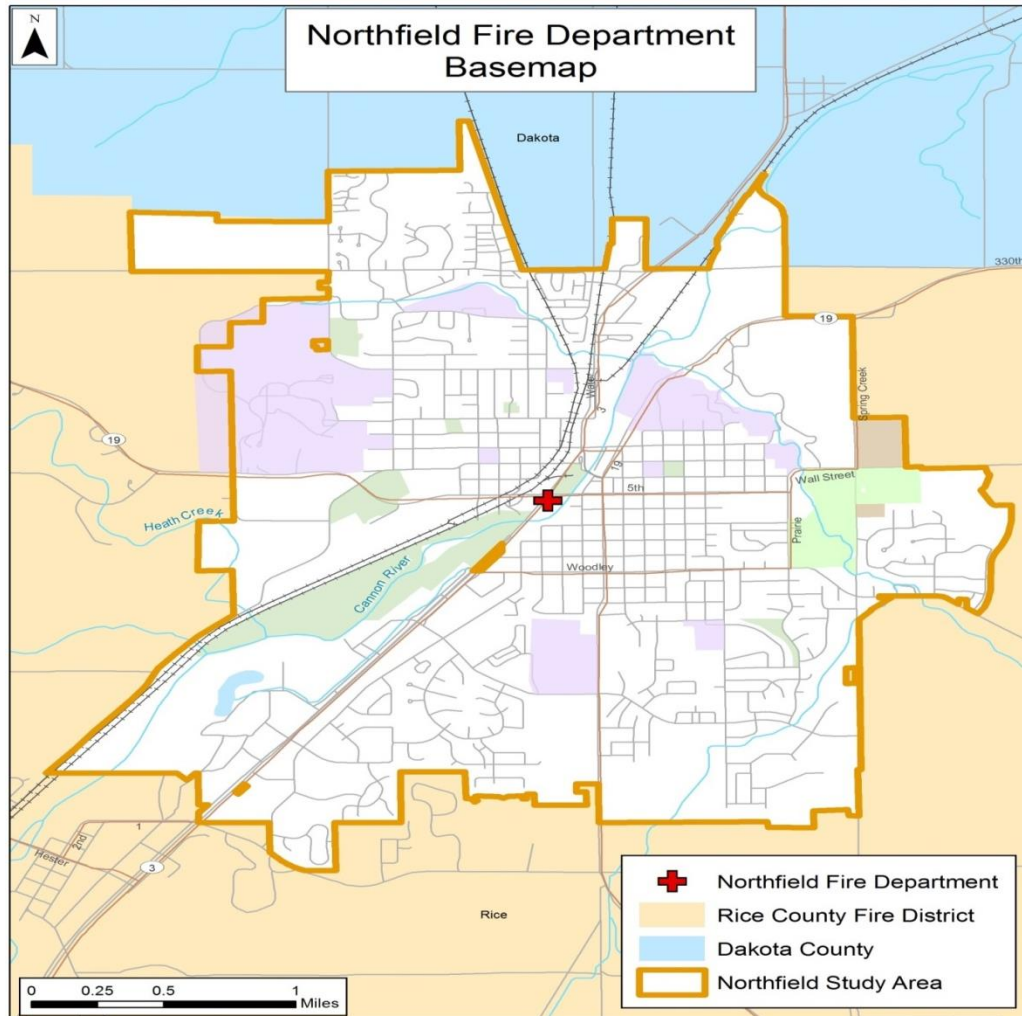
ISSUE	RECOMMENDATION
Location	Remain in the present location
Cost	Not to exceed \$3.5 million
Ownership	Ownership remain with Northfield with a change in ownership to be considered if NAFRS becomes a taxing district.
Financing	Northfield issues bond for the full project cost with township members and Dundas signing agreements with Northfield. Transfer bond to NAFRS Taxing District if it comes into existence.



LOCATION

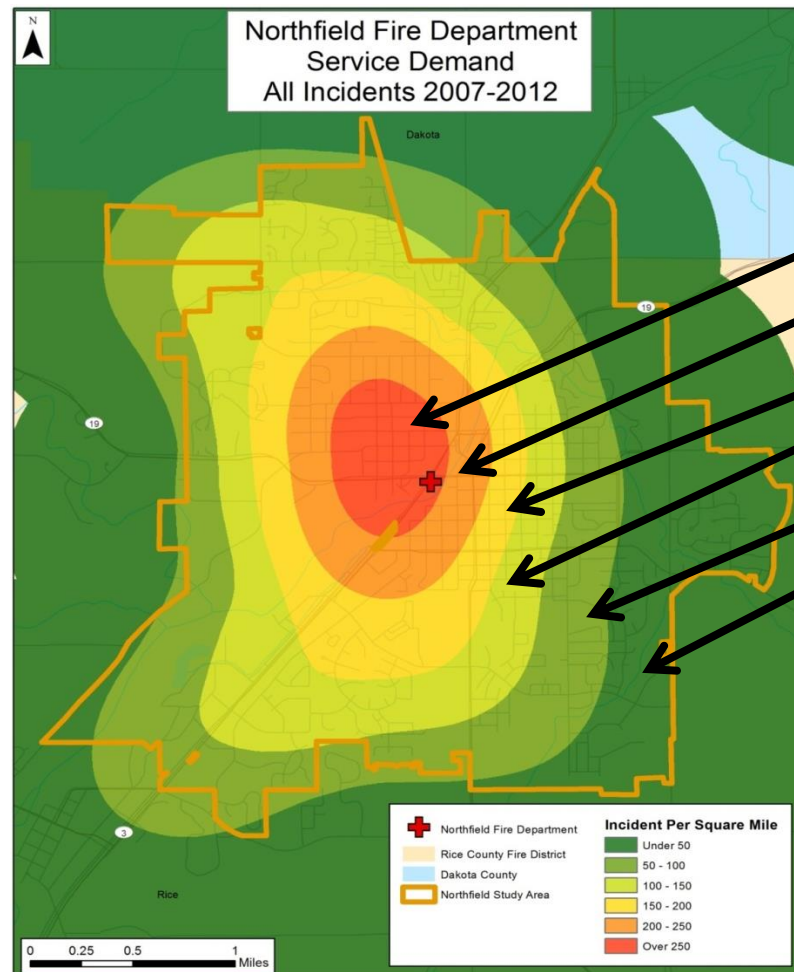


Service Area





Location of Fire Calls



Incidents per square mile 2007 - 2012

- Over 250
- 200 – 250
- 150 – 200
- 100 – 150
- 50 – 100
- Under 50

Source: Emergency Services
Consulting International study,
June 2013



Travel Time – Current Location



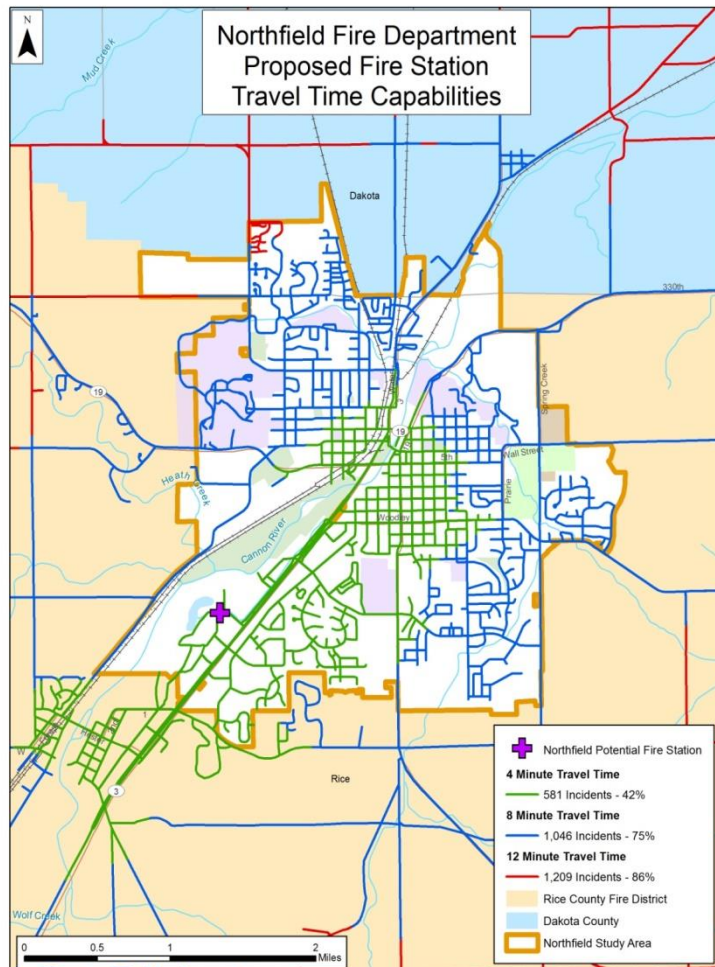
2007 – 2012 Incidents

Travel Time (min)	4	8	12
Coverage %	61	81	88
# Incidents	847	1,128	1,226

Source: Emergency Services Consulting International study, June 2013



Travel Time – Police Station



4 minute response coverage
reduced from 61% to 42%.

8 minutes response coverage
Reduced from 81% to 75%.

Source: Emergency Services Consulting
International study, June 2013



Response Time

Response Time 2015 to calls in Northfield & Dundas – 8.6 minutes

Response Time 2015 to calls in townships – 12.8 minutes

For every mile moved south, travel time increases about 1.7 minutes to locations north of the current fire station (source: National Fire Protection Association)

Example: Fire station adjacent to the police station adds about 2.5 minutes to responses in historic district, industrial park, and colleges.

National Fire Protection Association guideline for urban area response time is 9 minutes or less (source: National Fire Protection Association).



Location Recommendation

Remain in the current location.



FACILITY UPGRADE



Studies prior to NAFRS

DATE	AUTHOR	TITLE
1994	Nfld Staff	Facility Report: Public Safety Building
March 2007	Hay/Dobbs	Municipal Facilities Space Needs Analysis
July 2007	Hay/Dobbs	Municipal Facilities Study
Sept. 2007	Hay/Dobbs	Municipal Facilities Feasibility Analysis
Sept. 2008	Wold	Safety Center Analysis
Jan. 2009	Wold	Space Needs Analysis
August 2009	URS	Review of Flood Protection Alternatives
July 2011	Bonestroo	Apparatus Bay Floor Structure Analysis
July 2011	City Council	PSC Reuse and Site Committee Report
July 2011	DLR/KKE	Public Safety Center Reuse Report



The Process

- November 2014 – NAFRS Facility Committee formed: Gary Bollinger, Bernie Street, Dave Drenth, Jerry Anderson
- January 2015 – RFP for architect for feasibility study on facility reuse
- March 2015 – contract with DJ Medin Architects, low bid
- June 2015 – Complete Phase 1 study: conceptual design, cost estimate
- February 2016 – Joint work session with Northfield City Council, concerns raised
- Spring 2016 – Facility Committee & City Staff cooperate on statement of work for Phase 2 study
- July 2016 – Complete Phase 2 study



Proposed Facility





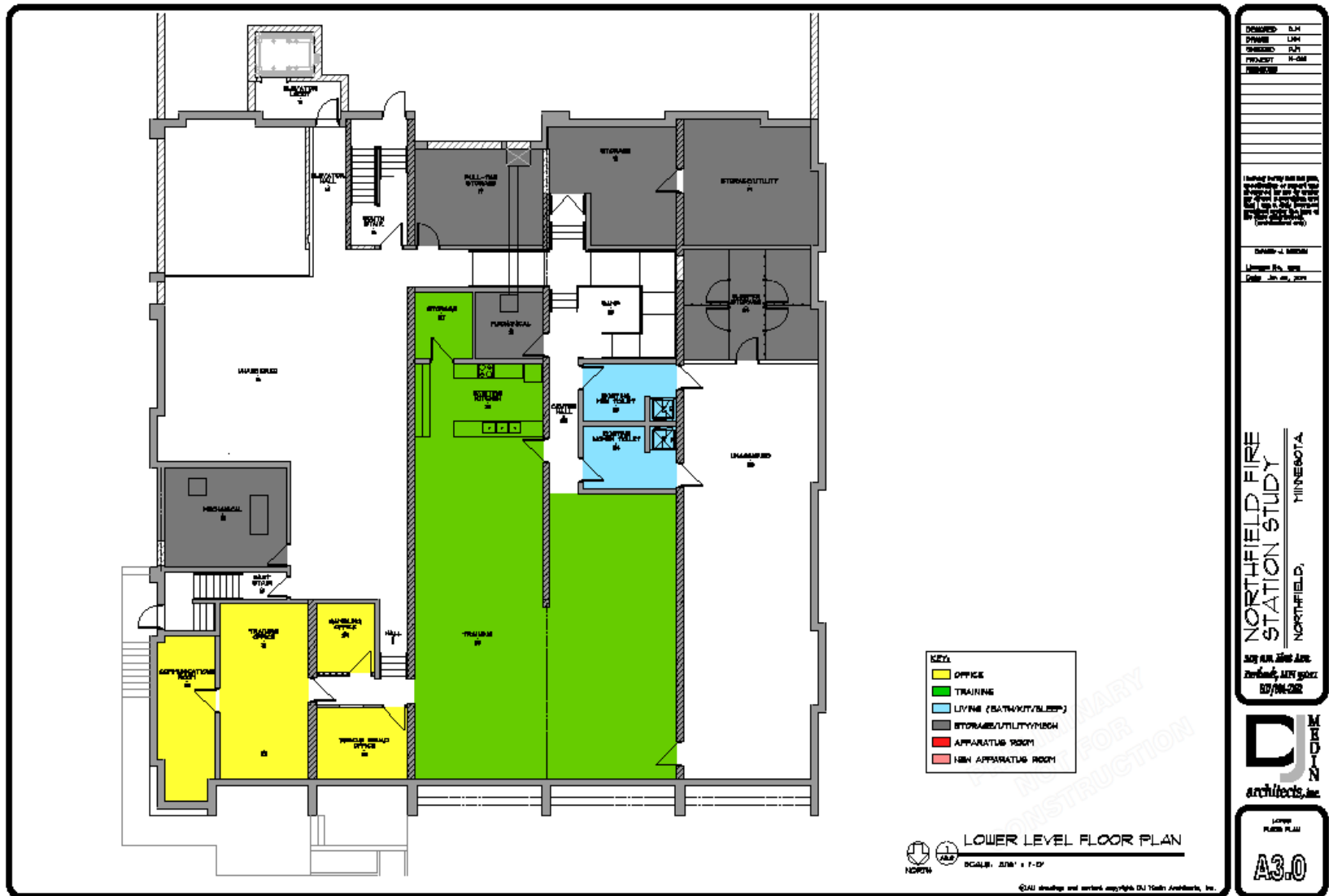
Space Uses

- Equipment bays
- Offices (Chief, Assistant Chiefs, Captains, Training Officer, Rescue Squad)
- Board meetings
- Training
- Dormitory (4 sleepers)
- Building maintenance
- Air Pak maintenance (clean area)
- Small engine repair
- General maintenance (tools, hoses, gear etc.)
- Storage for extra turnout gear
- Portable radio storage and maintenance
- Records storage
- Truck & equipment manuals storage
- Sprinkler shutoff training area

Floor Plan – Main Level



Floor Plan – Lower Level





Site Plan





Concerns

February 2016 Council Work Session

- Flood proofing – is it practical
- Mold in basement
- Condition of wood pilings
- Soil characteristics

Led to Phase 2 Study



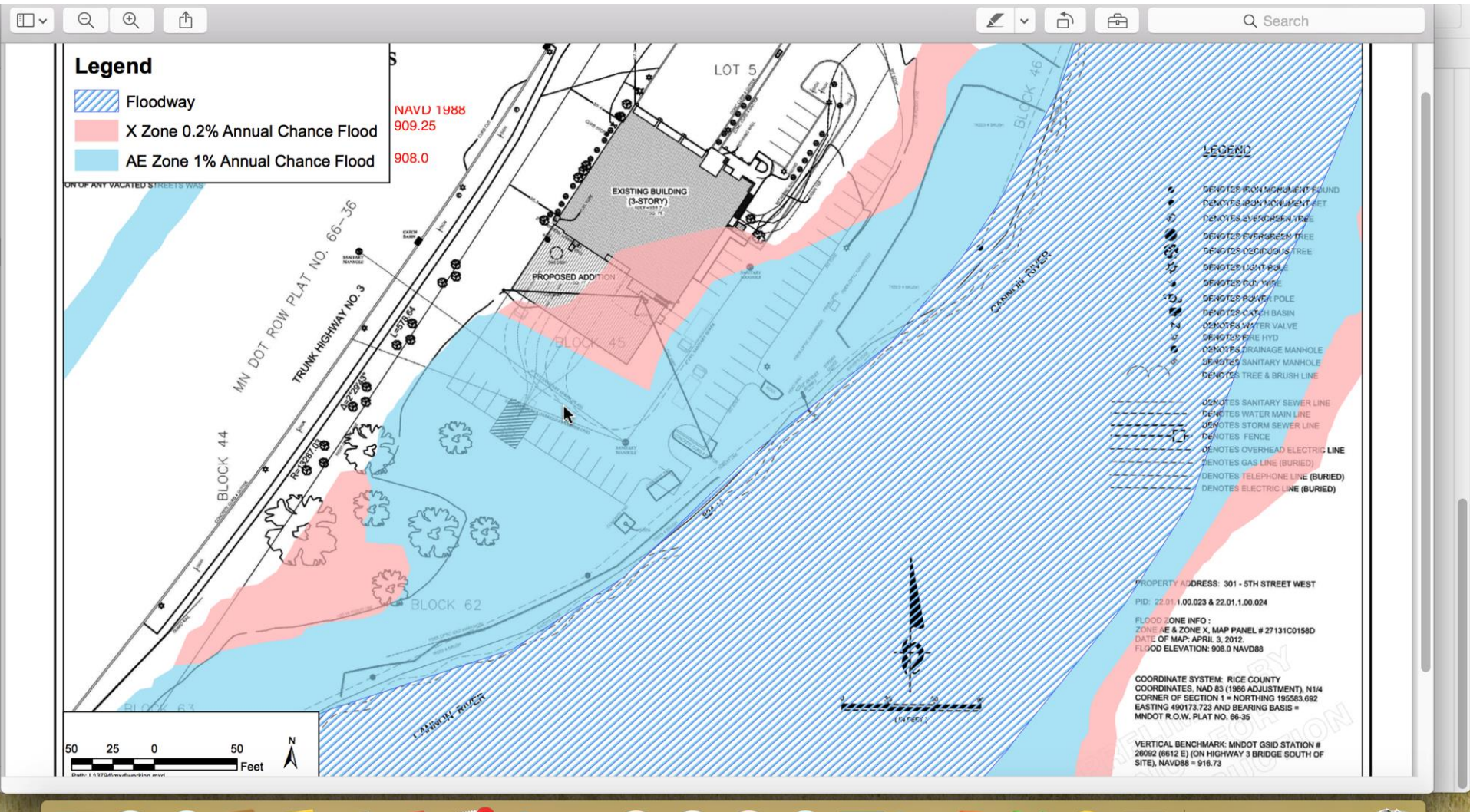
Floodplain Issues Jurisdiction

- The City of Northfield is the responsible government unit for floodplain management at the site.
- It is anticipated that the building improvement can be designed to meet the requirements of the City Floodplain Ordinance.
- City approval will be pursued through a conditional use permit per the City Ordinance.

WENCK Associates, 2016



Floodway





Floodplain Issues

Flood Proofing

- Base Flood Elevation for buildings will be the 500 year flood level.
- The existing basement spaces will be flood proofed as required by the City with the intention of achieving the FP1 building classification for flood proofing.
- Since the proposed fill is in the flood fringe area, it will not affect the regulatory flood level upstream or downstream of the site.



Moisture & Airborne Mold

- Visual inspection of the basement did reveal that moisture has impacted ceiling tiles and limited areas of block walls.
- The only mold growth that was observed was on pipe fittings in the compressor.
- Air sample collected at the site indicate an indoor mold source is not likely in the areas sampled.

WENCK Associates, 2016



Wood Pilings Condition - 2016

- Two piles were exposed directly below the concrete beam cap.
- At both piles, no decay was indicated to the center of the pile at the test locations.
- The drill cuttings were sound and smelled of creosote all the way to the center of the pile.

American Engineering Testing, 2016



Soil Borings

- 9 test borings were performed.
- We recommend supporting both foundations and slabs on the piling.
- We expect that sufficient support capacities can be achieved in the dolomite bedrock present 16 to 21 ½ feet below the surface.

Chosen Valley Testing, 2016



COST OF UPGRADE



Project Cost

Total Project:	\$3,230,420
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Construction:	\$2,511,000
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Construction Contingency:	\$301,320
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Soft Costs:	\$418,100
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Expect these estimates to change over the next 8 months



Project Cost

Existing Building Renovation	\$1,311,688
New Addition	\$1,500,632
Soft Costs	\$418,100
TOTAL	\$3,230,420

Expect these estimates to change over the next 8 months



Soft Costs

Legal Fees, Permits, Bonding	\$40,000
NAFRS Project Representative	26,000
Architectural & Engineering fees	143,600
Furnishings for sleeper rooms	15,000
Staff housing during construction	16,500
Inflation Factor	132,000
Soft Cost Contingency	45,000
Total Soft Costs	\$418,100

Expect these estimates to change over the next 8 months



Construction Cost

Estimates are from trades contractors acting as subcontractors to DJ Medin in the Phase 1 and Phase 2 studies

General Conditions	\$158,500
Demolition	153,500
Concrete & Masonry	234,100
Steel	122,450
Carpentry	3,000
Thermal & Moisture Protection	210,900
Doors & Windows	102,500
Finishes	115,250
Specialities	3,300
Equipment	12,000
Elevator	135,000
Fire Suppression	65,000
Plumbing	94,000
HVAC	164,000
Electrical	363,000
Site Improvements	574,500
Total Construction	\$2,511,000

Expect these estimates to change over the next 8 months



Alternative Build New on this Site

Estimate from 2010 study for Northfield by DLR/KKE

Site work	\$1,048,000
Construction	\$3,361,490
Administration	\$289,430
Occupancy	\$272,795
Total (2010)	\$4,971,715
Inflation/year	1.5%
Total (2018)	\$5,600,600



Cost Recommendation

Budget \$3.5 million for renovation and expansion of the existing facility



FINANCING



Source of Funds

- Northfield issues Capital Improvement Bond for the entire project cost
- Allow time for reverse referendum
- Agreements between Northfield and JPA members for Northfield to recover members portion of the cost



Cost to Members

Estimate of Total Amount to be Bonded (Source: EHLERS)

Project Construction	\$3,500,000.00
Cost of Issuance	\$46,000.00
Deposit to Capital Interest Fund	\$58,086.67
Underwriter's Discount	\$43,800.00
Rounding Amount	\$2,113.33
Total	\$3,650,000.00

Expect these estimates to change over the next 8 months



Cost to Members

Estimated payments on 20 and 15 year bonds (source: EHLERS)

	Total 2019 Payment	Northfield (72.22%)	Rural Fire (22.41%)	Dundas (5.37%)
20 year	\$253,370	\$182,983	\$56,780	\$13,605
15 year	\$311,986	\$225,316	\$69,916	\$16,753
	Total Over Bond Period	Northfield (72.22%)	Rural Fire (22.41%)	Dundas (5.37%)
20 year	\$5,098,002	\$3,681,777	\$1,142,462	\$273,762
15 year	\$4,671,738	\$3,373,928	\$1,046,936	\$250,872

Expect these estimates to change over the next 8 months



Townships

This cost (estimated) has already been incorporated into your projected payments to the Rural Fire District through 2023.

This will not be an expense in addition to what you are already projected to pay for fire protection.



Requested Resolution

WHEREAS the NAFRS Board recommends maintaining the fire department at its current location, and

WHEREAS the NAFRS Board recommends upgrading the current facility at a cost not to exceed \$3.5 million, and

WHEREAS the NAFRS Board recommends that Northfield continue to own the building and lease it to NAFRS on similar terms to the existing lease, and

WHEREAS the City of Northfield intends to bond for the entire project cost and make agreements with the JPA members to pay their portion to Northfield and enter collateral agreements either with the other JPA Members (with each individual entity) or with the Parties (with Dundas and the Rural Fire District), to pay their portion of the cost of the project to Northfield.

THEREFORE BE IT RESOLVED that (jurisdiction) affirms its support for the project to upgrade the current facility as presently proposed.



Next Steps - 2017

- Q1 Contract with Architectural & Construction Management Firms
- Q1 Conditional Use Permit
- Q2 Construction Drawings
- Q2 Refine Cost Estimates
- **Q3 Members Approval**
- Q3 Prepare Bid Packages
- Q3 Prepare Bond Documents
- Q4 Public Bids; Select Contractors
- Q4 Bond Sale