

Neighborhood Flooding Issues Report Recommendations

March 1, 2022



Neighborhood Flooding Issues

Discussion

- Staff presented initial report findings and recommendations at the 11/9/21 City Council work session.
- City Council requested additional information related at the 11/9/21 meeting
 - Alternate infrastructure vs. home conversions
 - Are property owners open to the idea of home conversion/acquisition
 - Insurance liability
 - What other cities have done to address localized flooding.



Neighborhood Drainage Assessments

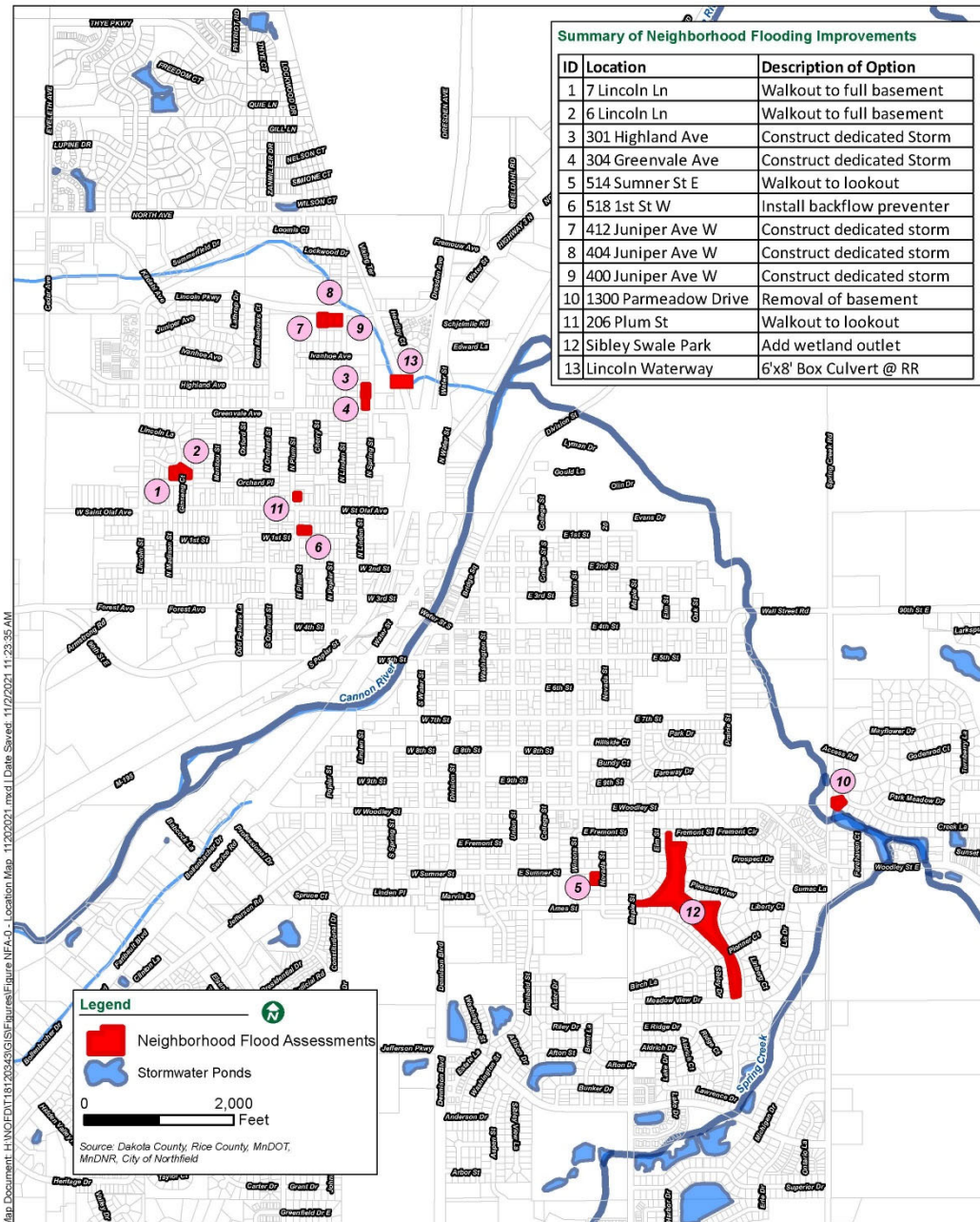
Northfield, MN

NFA-0: LOCATION MAP



November 2021

Real People. Real Solutions.

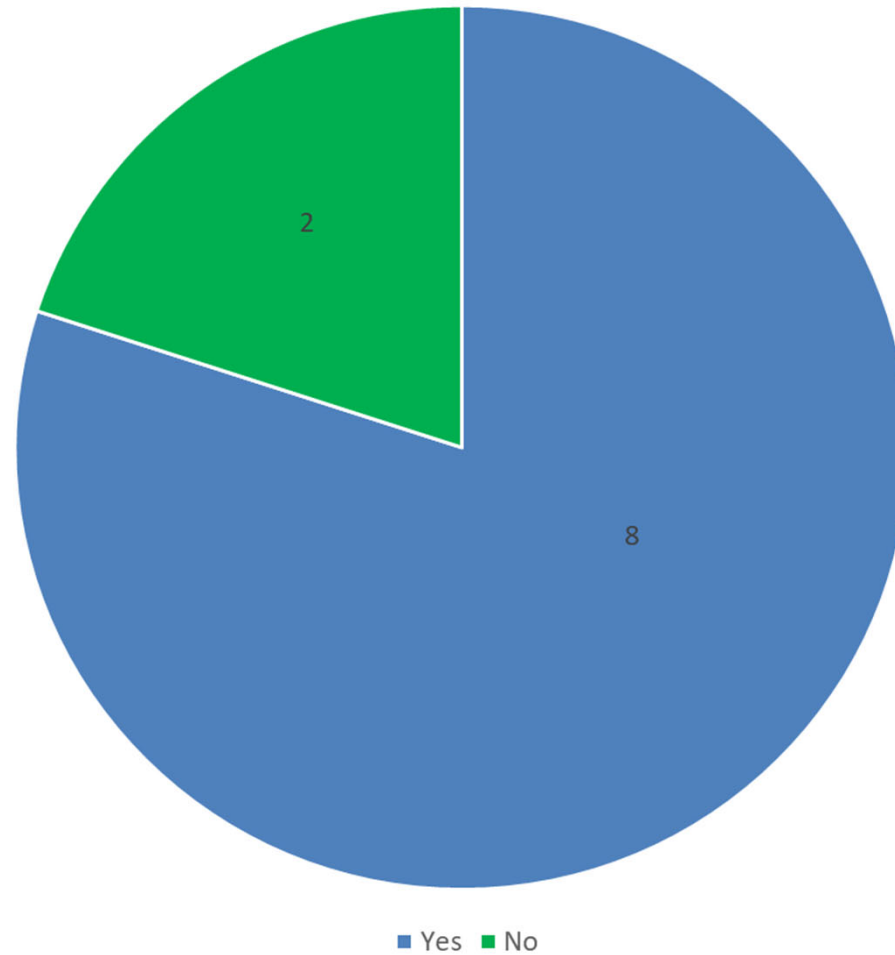


City Flood Mitigation Questionnaire



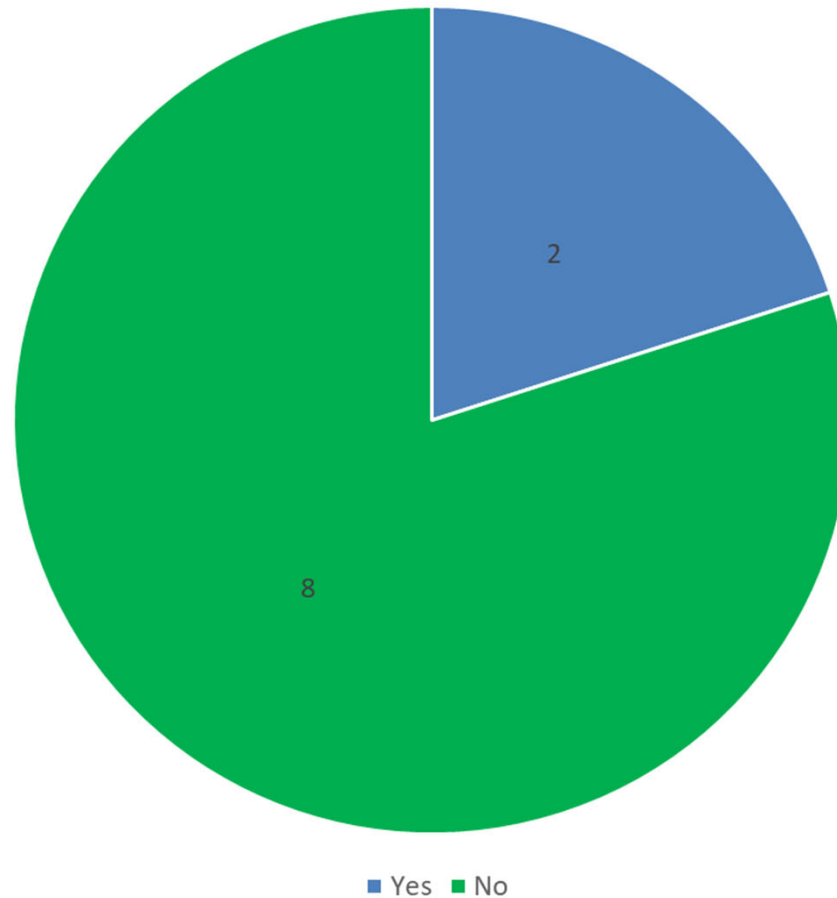
City Flood Mitigation Questionnaire

Has your City Purchased Property so it will no longer flood?



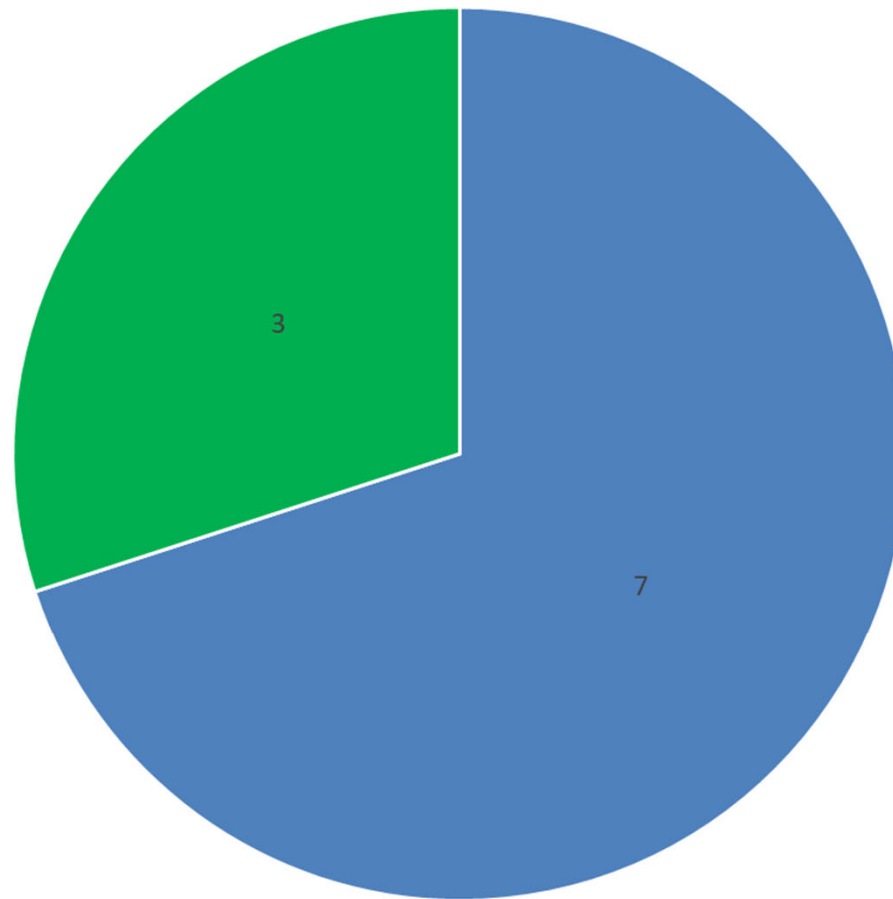
City Flood Mitigation Questionnaire

Has your City modified homes (ex. Convert walkout to lookout or full basement)?



City Flood Mitigation Questionnaire

Has your City built additional flood storage?

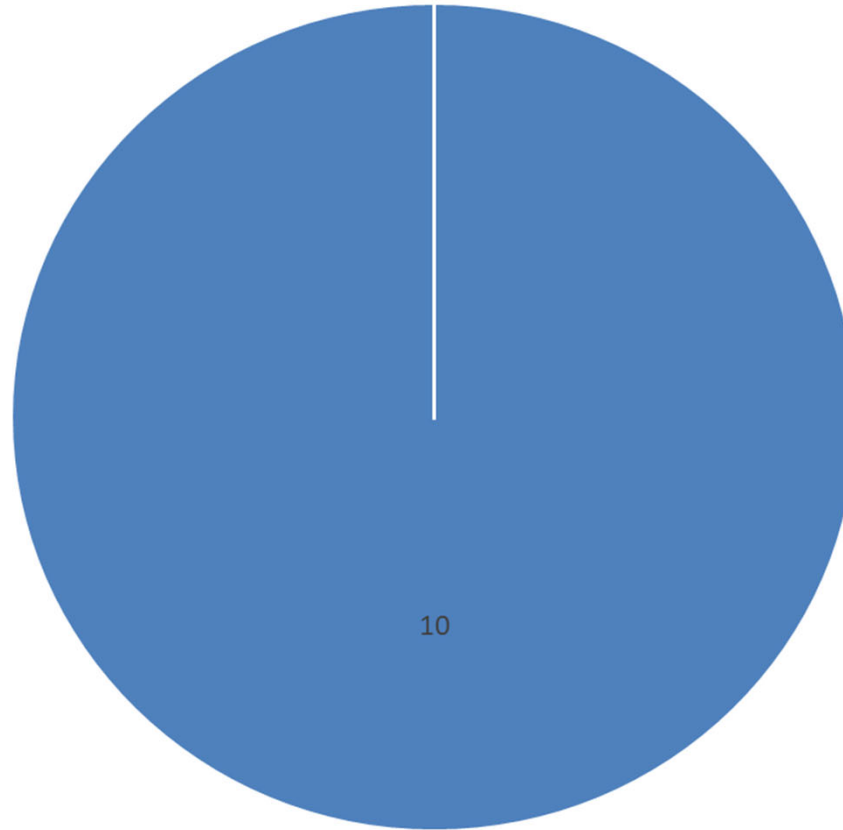


■ Yes ■ No



City Flood Mitigation Questionnaire

Has your City improved drainage infrastructure to reduce flooding?

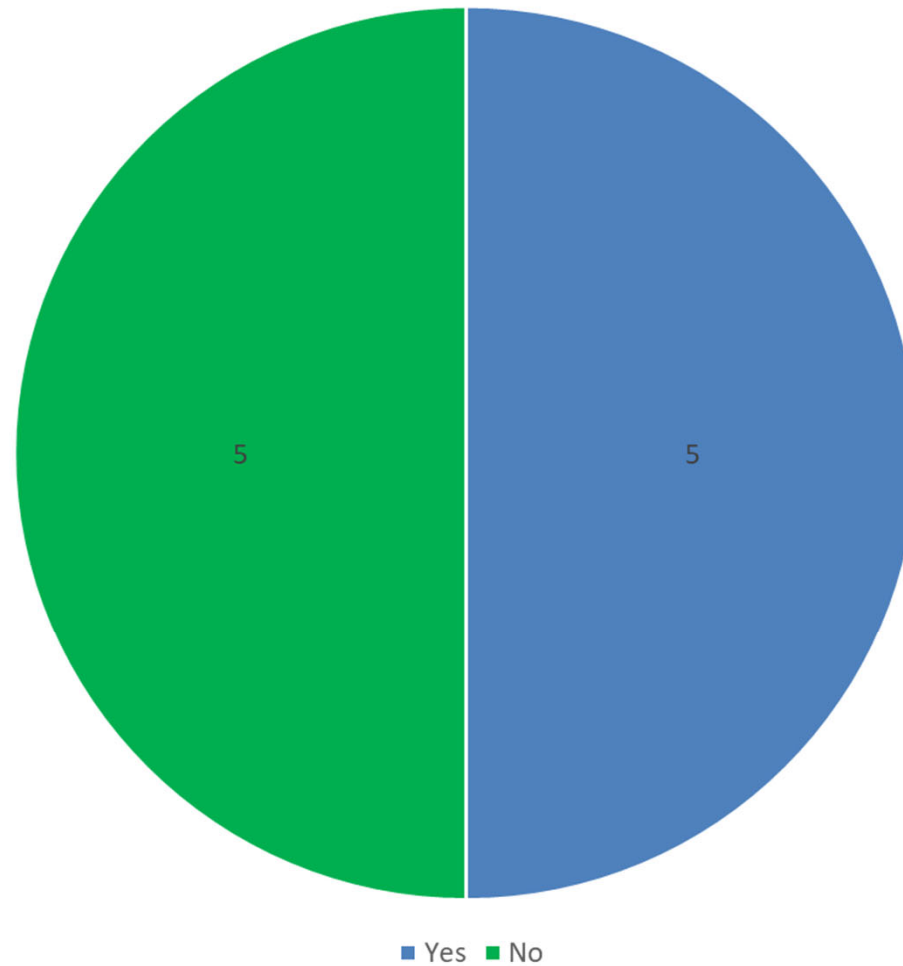


■ Yes ■ No



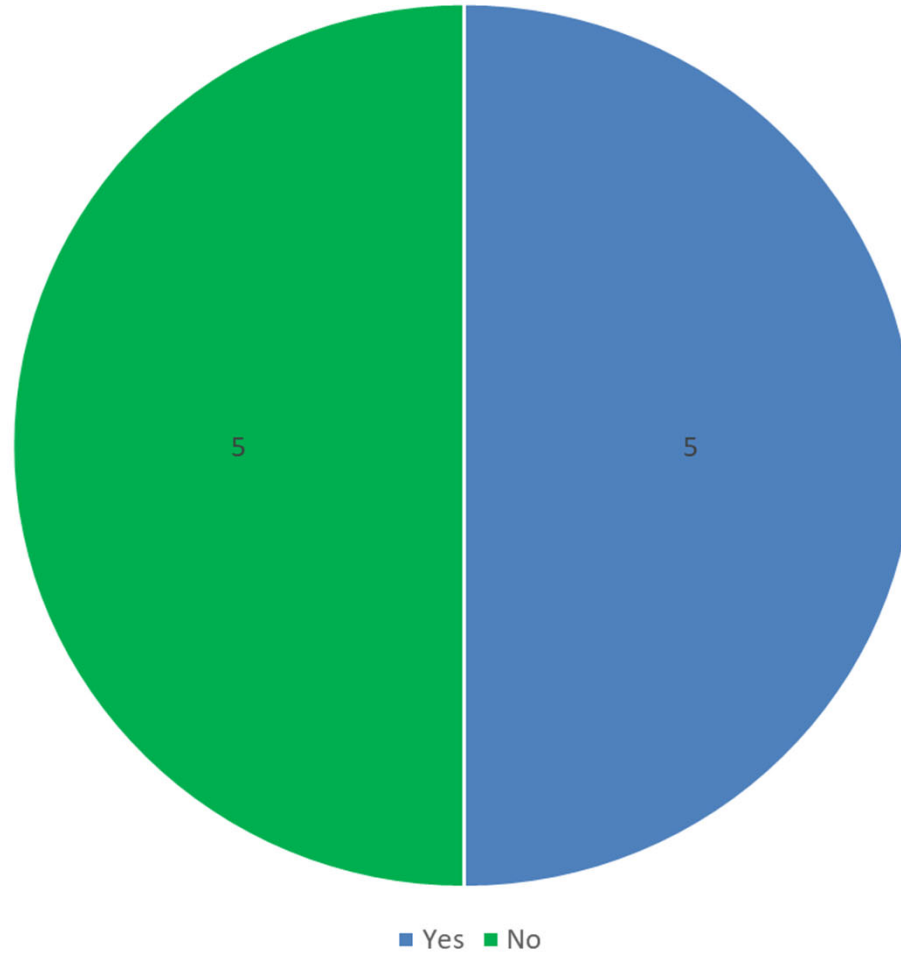
City Flood Mitigation Questionnaire

Has your City flood proofed a building?



City Flood Mitigation Questionnaire

Has your city constructed a flood control dike or wall?



City Liability

- City is not responsible for acts of nature.
- Liability would transfer to contractor if the homes flooded due to poor workmanship.
- Insurance suggested the City have the homeowner sign a waiver stating the property owner cannot hold the City liable for any flooding after the improvement project is complete.



Storm Sewer / Drainage System Improvements



Storm Sewer/Drainage Improvements

- Proposed on 11/9/21
 - 301 Highland (Inlet grading and lowering)
 - 518 First St West (Backflow Preventer)
 - Sibley Swale (Construction of dedicated outlet)
 - Lincoln Waterway – (6X8 Box Culvert at Rail Road, North and South Oak Apartments)
- Additions on 3/1/22
 - Juniper Avenue Dedicated Outlet
 - Serves 400, 404, and 412 Juniper
 - Eliminates need for the home conversions (3)
 - Dependent on LWW Box Culvert
 - Spring Street Dedicated Outlet
 - Serves all of the properties between Greenvale, Highland, Linden, and Spring
 - Eliminates need of home conversion at 304 Greenvale
 - Provides additional freeboard to 301 Highland





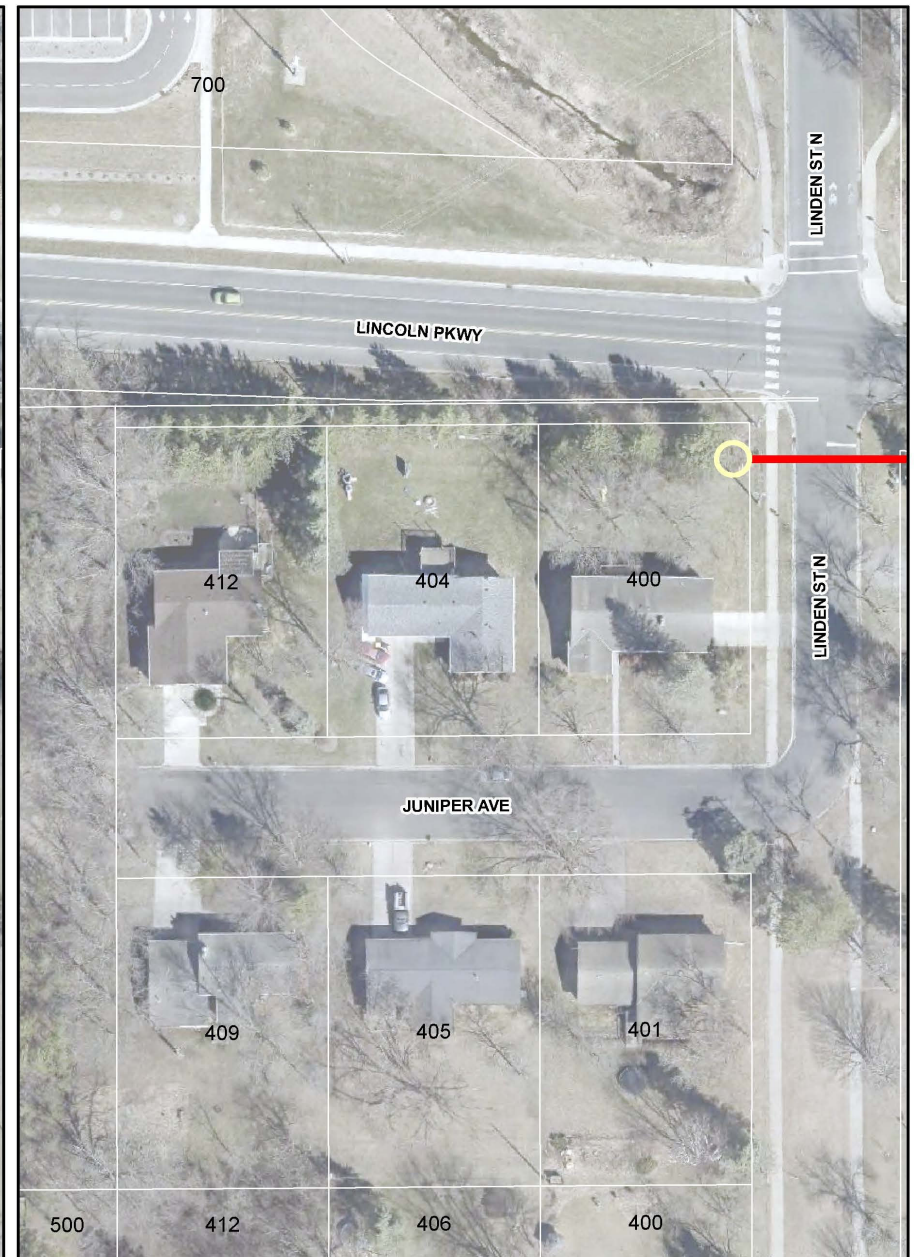
Home Conversion

Previous Recommendation
Walkout to Look Out Conversion

0 20 40 Feet



City of
Northfield
 Minnesota



New Recommendation
Upsize Existing Storm
Outlet and Construct
Dedicated Storm Sewer

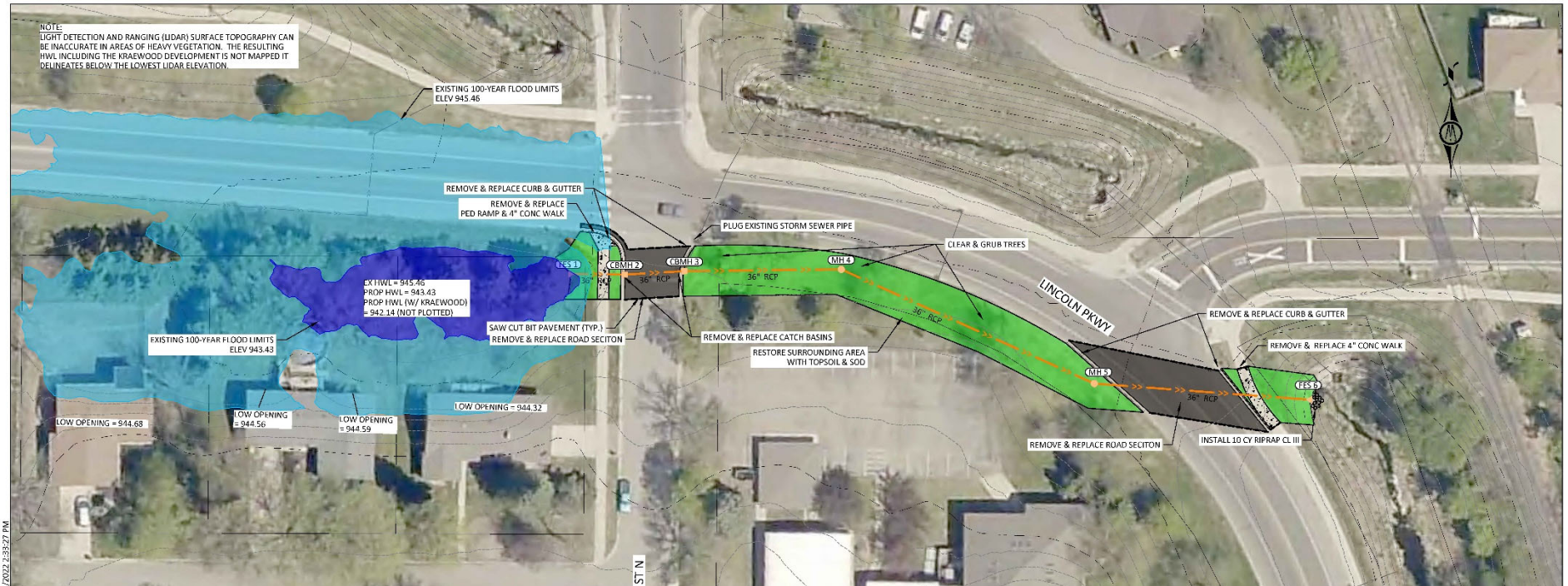
Existing Storm Structure
 Dedicated Storm Sewer

JUNIPER STORM SEWER

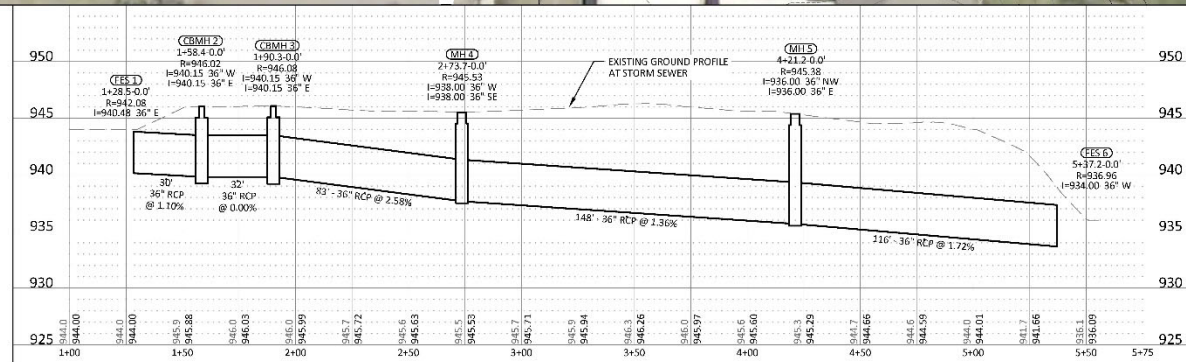
CITY OF NORTHFIELD, MN

PROPOSED STORM SEWER

JANUARY 2022



H:\PROJECTS\2021\2021-2022\2021-2022\PROPOSED STORM SEWER\FIGURE 1.dwg, 2/15/2022, 2:39:27 PM





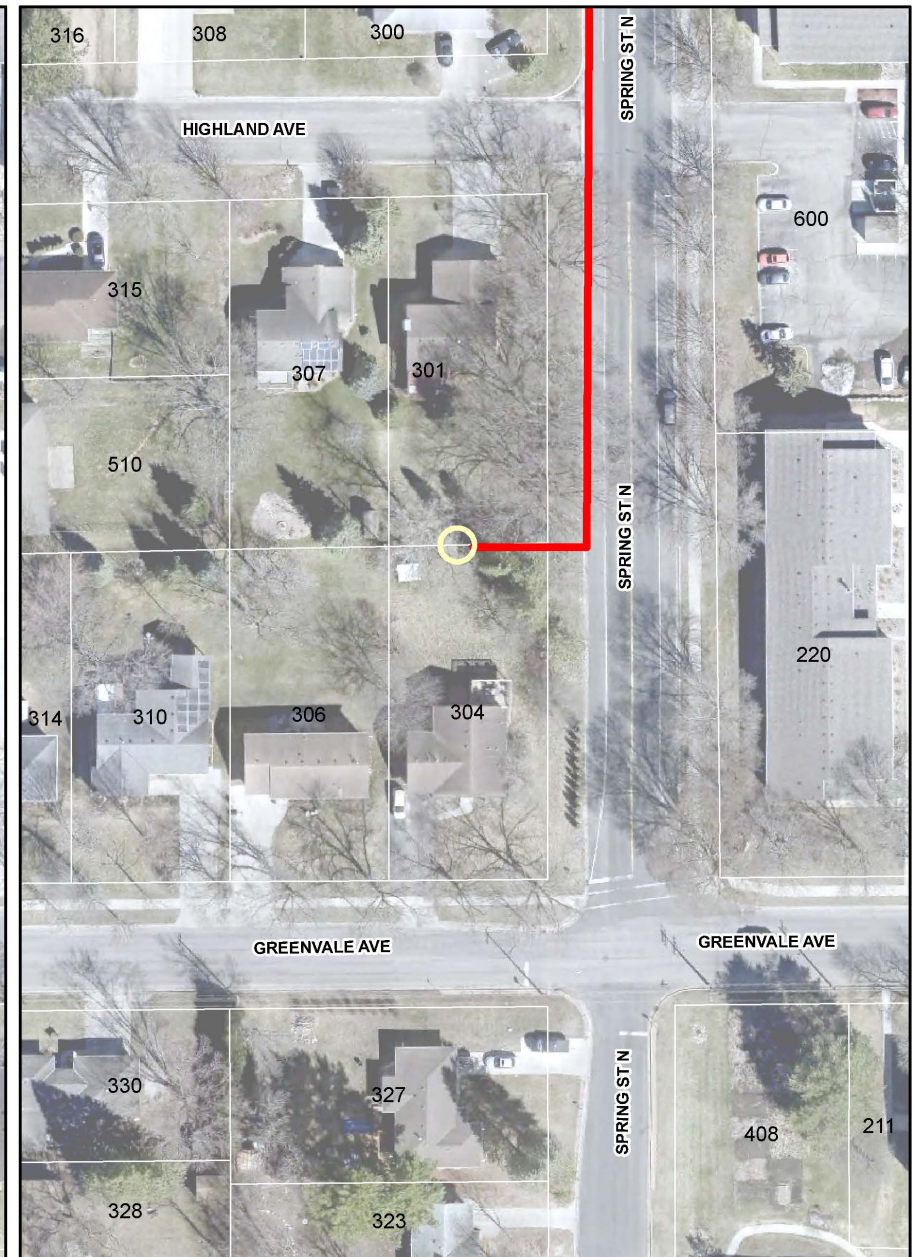
Home Conversion

Previous Recommendation
Walkout to Look Out Conversion

0 20 40 Feet



City of
Northfield
 Minnesota



New Recommendation
Construct New Storm Outlet
and Dedicated Storm Sewer

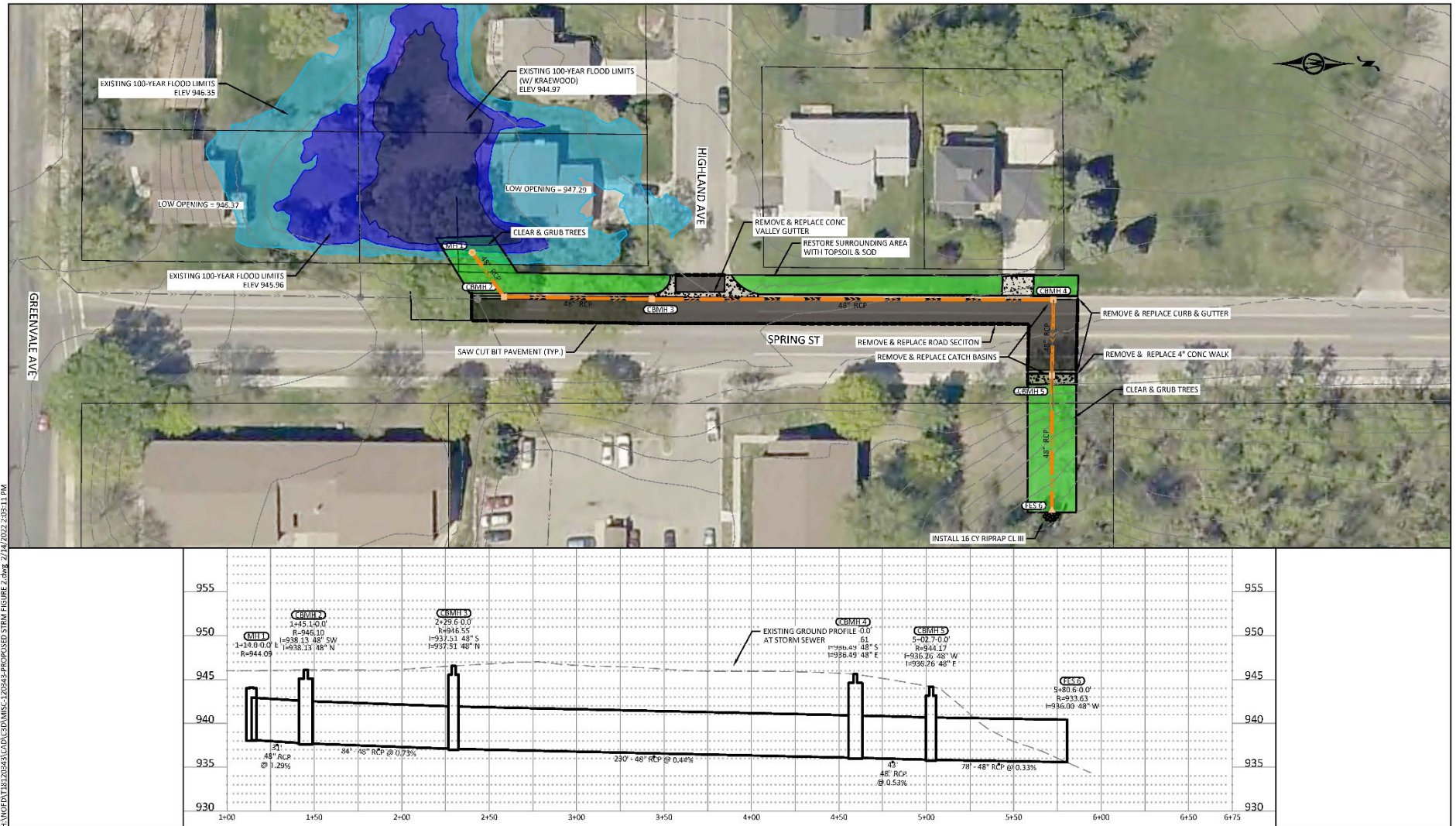
New Storm Outlet
 Dedicated Storm Sewer

SPRING ST STORM SEWER

CITY OF NORTHFIELD, MN

PROPOSED STORM SEWER

JANUARY 2022



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2022 Capital Improvement Costs

| Address | Cost | Improvement |
|--------------------------------------|-------------------------------------|--|
| 301 Highland/304 Greenvale Avenue | \$605,200 | Install new dedicated 48" storm sewer |
| 518 First Street West | \$19,575 | Backflow Preventer |
| Sibley Swale | \$89,175 | Install Outlet |
| Lincoln Waterway | \$445,900 + Railroad Costs (TBD) | 6x8 Box Culvert @ RR |
| Juniper Avenue (400, 404, 412) | \$407,600 | Install new dedicated 36" storm sewer |
| Total Cost | \$1,567,450 | |



Future Home Conversion Project

| Address | Cost | Improvement | Participation |
|----------------------|--------------------|--------------------------|---|
| 7 Lincoln Lane | \$300,000 | Walkout to Full Basement | Open to discussion/participation |
| 6 Lincoln Lane | \$300,000 | Walkout to Full Basement | Open to discussion/participation |
| 514 Sumner Street | \$217,500 | Walkout to Lookout | Not willing to participate |
| 206 Plum Street | \$217,500 | Walkout to Lookout | Willing to participate |
| 1300 Parmeadow Drive | \$550,000 | Removal of Basement | Willing to participate (Home Acquisition) |
| Total Cost | \$1,585,000 | | |



Cost Comparison

| Project | Original Proposal (11/9/21) | Current Proposal |
|-------------------------------------|-----------------------------|--------------------|
| Home Modifications/Acquisition | \$2,455,000 | \$1,585,000 |
| Drainage/Infrastructure Improvement | \$584,650 | \$1,567,450 |
| Total Cost | \$3,039,650 | \$3,152,450 |



Thank You

Questions

