THE CITY OF

NORTHFIELD

ESTD MINNESOTA 1855

ENGINEERING DIVISION

2025 RECLAMATION AND OVERLAY PROJECT

Feasibility Report

This report examines the proposed street improvements including curb and gutter, street and sidewalk construction, trail construction, bikeway construction, and associated boulevard improvements for the proposed reclamation and overlay project on Washington Street from Woodley Street to the south end, Industrial Drive from Armstrong Road to the end, Laurel Court from T.H. 19 to the end, Maple Street from Jefferson Parkway to Ford Street, Lake Drive from Jefferson Parkway to Maple Street, and Superior Drive from Maple Street to Erie Drive.

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Certification

I hereby certify that this report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

By: _____

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City of Northfield

Date: 9-6-24

2025 Reclamation and Overlay Project

Feasibility Report

Introduction

This report examines the proposed street improvements including curb & gutter, street, trail, and sidewalk construction, bikeway construction as well as any associated improvements that may be required in the boulevard for the 2025 Reclamation and Overlay Project. The scope of work includes the following:

- Full Depth Pavement Reclamation on Washington Street from Sumner Street to the south end, Industrial Drive from Armstrong Road to the end, Laurel Court from T.H. 19 to the end, and a 2" mill and overlay on Maple Street from Jefferson Parkway to the Ford Street, Lake Drive from Jefferson Parkway to Maple Street, and Superior Drive from Maple Street to Erie Drive. New trail on Maple Street, and Laurel Court, possible pedestrian and bicycle improvements on Washington Street from Woodley Street to the end, and reconstructing the Mill Towns State Trail through Sechler Park. Appendix A provides maps of the proposed project area. Appendix B provides a detailed project process. Appendix C contains the arborist report. Appendix D contains feedback received from the public

Background

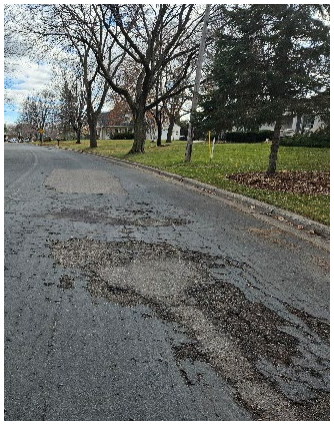
The City of Northfield has a Capital Improvement Plan (CIP) that has been developed in order to address upcoming maintenance, repair and new construction projects. The adopted 2024 – 2028 CIP includes these areas mentioned above to be completed during the 2025 budget cycle. Additionally, the CIP identifies the estimated costs and funding methods to complete these projects. During the preparation of the approved 2024 – 2028 CIP, these various areas throughout the City of Northfield were identified as areas for needed improvement.

As part of the initial planning for this project two neighborhood meetings were held on May 1, 2024, and July 24, 2024 to inform the affected property owners adjacent to the project area of the improvements being considered. This meeting also served as an opportunity to gather input from the impacted residents, and discuss potential design alternatives of this project. A summary of comments from the meetings is included in appendix D.

At their March 12, 2024 meeting the Northfield City Council ordered the preparation of this Feasibility Report via Council Resolution No. 2024-029. This resolution directed the following:

> The proposed improvement be referred to the City Engineer for study and the City Engineer is instructed to report to the Council with all convenient speed advising the Council in a preliminary way as to whether the proposed improvement is necessary, cost-effective, and feasible; whether it should best be made as proposed or in connection with some other improvement; the estimated cost of the improvement as recommended.

Existing Conditions



The existing streets proposed in this project are shown in Appendix A of this report. These areas are broken down into four specific project areas. The Washington Street Area, the Industrial Drive Area, the Laurel Court Area, and the Maple Street Area.

The Washington Street Area is located in the central portion of Northfield, two blocks South of City Hall. This area is an established residential area of the City and has older and more severely distressed street pavement, and mature trees. Sidewalk is found on the first 250 feet south of Woodley street on the west side of Washington Street.

The Industrial Drive area is located on the western part of the City. The area is predominately industrial use and has severely distressed pavement. There are no pedestrian facilities in this area.

The Laurel Court Area is located at the southwest corner of Highway 3 and Highway 19 near Sechler Park. The area is primarily commercial and recreational and has severely distressed pavement, and a small number of smaller trees. Sidewalk is located on both sides for the length of Laurel Court. Also included in this area is the portion of the Mill Towns State Trail that runs through Sechler Park.

The Maple Street area is located at the southern part of the city near Spring Creek park and the City limits. This area is a relatively newer residential area with areas of distressed pavement, and no mature trees. Sidewalk is located on both sides of Maple Street from Jefferson Parkway to Ford Street, on the north/west side of Lake Drive, and the south side of Superior Drive. A shared use trail is located on Maple Street from Ford Street to the south end.

I. Washington Street Area

Washington Street is in a neighborhood residential area, it has midlife to newer infrastructure, and mature trees. The street within the project area is classified as a local roadway and experiences relatively low volumes of traffic. Along with public utilities in the project area, there are also private utilities, including both overhead and underground power, gas and communications.

A. Streets

The streets within the project area are bituminous surfaced with concrete curb and gutter. Pavement widths vary from 32’ – 36’ through street segments, all measured from curb face to curb face. As-built information on the streets within the project area indicate that they were originally constructed anywhere from the late 1950’s to the mid 1980’s. These as-builts also indicate that portions of the street are lacking a select granular road base section, which is common in street construction today. The streets are aged and exhibit wear and distress to different degrees. The pavement is generally in very poor to failing condition, and exhibit transverse and longitudinal cracking, alligator cracking, potholes and rutting. Some street segments have settlements, which allow water to pond, infiltrate and weaken the

subgrade. This has led to frost heaving, and additional transverse cracking during freeze-thaw cycles.

The City surveyed road distress data such as number and size of cracks and potholes and other statistics that describe the condition of the pavement on every street in the City. This information is used to calculate a Pavement Condition Index (PCI) for each street section. The PCI is a tool for comparing streets when considering where roadway improvements are needed the most. A summary of the PCI rating system is provided below.

Pavement Condition Index (PCI) Rating Summary	
PCI Rating Number	**Pavement Condition**
100-91	Excellent
90-81	Very Good
80-71	Good
70-61	Fair
60-51	Poor
50-41	Very Poor
40-0	Failing

Using PCI data from 2022 Washington Streets pavement condition is summarized below.

Washington Street Area Pavement Condition Index		
Segment	**PCI Number**	**Pavement Condition**
Woodley to Sumner	80-71	Good
Sumner to Ames	50-41	Very Poor
Ames to south End	40-0	Failing

The existing concrete curb and gutter is in fair condition throughout the project area. Curb settlements have caused areas of poor drainage along the edge of the pavement in various locations. Significant cracking has occurred in sections of the curb. Many driveway aprons are in poor condition with severe cracking.

An Arborist report has been completed for all project areas. This report provides recommendations for removal, protection, and trimming as a part of the proposed construction. Removals will also follow the guidelines of the City's Emerald Ash Borer Management Plan which calls for Ash trees to be removed that are under 13" in diameter, and all trees with fair or worse rating condition. All trees along Washington Street are in good condition and are not indicated to be removed due to health concerns. Some trees will need to be removed due to construction.

B. Pedestrian & Bicycle Facilities

The project area has existing sidewalk on one side of Washington Street from Woodley Street to approximately 100 feet north of Fremont Street. There is also connecting sidewalk coming from Marvin Lane and Ames Street. There are currently no on-street bicycle facilities on this portion of the project, but Washington Street north of Woodley Street has an on-street bike boulevard. The existing sidewalk is in good condition overall with little heaving or cracking.

The existing walking and biking facilities are incomplete and lack connectivity to the surrounding network. The City's goal is to provide a bike facility that can cater to people of All Ages and Ability (AAA). The proposed project on Washington Street is identified as a future bike route in the City's walking and biking plan.

C. Storm Sewer

The condition of the existing storm sewer system was determined from as-built information, storm sewer televising reports, inspections and discussions with City Staff. Cracks and joint separations were found in four of storm pipes in the project area. The current pipe network consists of Reinforced Concrete Pipe (RCP) with sizes ranging from 12" to 30" in diameter. The catch basins in the project area consist of precast concrete and block structures with 2'x3' castings.

There is no storm sewer south of Marvin lane resulting in stormwater runoff traveling to the south end of Washington street and into the undeveloped private property at the end. This runoff also causes icing conditions at the end of Washington Street during the winter.

D. Sanitary Sewer

Conditions of the sanitary sewer system have been determined from as-built information, sewer televising reports, as well as discussions with the City Staff. The current pipe network consists of Polyvinyl Chloride (PVC), all 8" in diameter. From the information that has been gathered, the sewers in the project corridor are determined to be in an overall good condition, and with some maintenance, will last the life cycle of the street maintenance being recommended until a full reconstruction is warranted.

The sanitary sewer manholes along the project area are primarily pre-cast concrete and are in good condition. Castings throughout the project will be inventoried to ensure castings with open pick-holes are replaced to reduce unwanted inflow of storm water into the sanitary system. In addition, all castings will be reset, and, minor grouting or sealing of the structures is warranted in some locations.

E. Watermain

The existing watermain was evaluated within the proposed project area. Conditions of the watermain system have been determined from as-built information, field evaluation, and discussions with the City Staff. The current pipe network consists of Ductile Iron Pipe (DIP) and Cast-Iron Pipe (CIP) with sizes ranging from 6" – 8", and is in good operational condition and has sufficient capacity and redundancy for the service area. There is not a history of watermain breaks in the area and the system will last the life cycle of the street maintenance recommended until a full reconstruction is warranted.

II. Industrial Drive Area

Industrial Drive is located in an industrial area off of Armstrong Road on the west side of the City, and has higher levels of truck traffic and axial loads than a typical residential street. As-builts show sections of the street were constructed in the mid 1980's and mid 1990's. The street has mid life utilities and very few trees except for the far western part of the project that borders Heath Creek.

A. Streets

The street within the project area is bituminous surfaced with concrete curb and gutter. The pavement width is 36' through the street segments, all measured from curb face to curb face.

As-built information on the street within the project area indicate that they were originally constructed anywhere from the mid 1980's to the mid 1990's. The street is aged and exhibits severe wear and distress. The pavement is generally in very poor condition (PCI of 50-41), and exhibits transverse and longitudinal cracking, alligator cracking, potholes, raveling and rutting. Some street segments have settlements, which allow water to pond, infiltrate and weaken the subgrade. This has led to frost heaving, and additional transverse cracking during freeze-thaw cycles. Ongoing maintenance work has occurred in this area and due to the age of the pavement and the amount of traffic this area receives, the effort required has increased significantly in the recent years.

The existing concrete curb and gutter is in failing condition throughout the project area. Severe cracking is present in a large amount of the curb panels. Curb settlements have caused areas of poor drainage along the edge of the pavement in various locations. All valley gutters and driveway aprons on the road are in poor condition with severe cracking.

An Arborist report has been completed for the project. Five (5) trees along this street have been indicated to be removed due to health concerns or the City's Ash tree policy. It is possible additional trees will need to be removed for construction.

B. Pedestrian & Bicycle Facilities

The project area has no pedestrian or bicycle facilities and none recommended on the City's walking and biking plan.

C. Storm Sewer

The condition of the existing storm sewer system was determined from as-built information, inspections, storm sewer televising reports, and discussions with City Staff. There are erosion issues at the far west end of the project area near St. Olaf's property, from water exiting the storm sewer into the drainage channels. All piping is in adequate condition. The current pipe network consists of Reinforced Concrete Pipe (RCP) with sizes ranging from 12" to 36" in diameter. The catch basins in the project area consist of precast concrete and block structures with 2'x3' castings and round "beehive" style castings.

D. Sanitary Sewer

Investigation of the existing sanitary sewer has found no major issues at this time. Conditions of the sanitary sewer system have been determined from as-built information, sewer televising reports, as well as discussions with the City Staff. The current pipe network consists of Polyvinyl Chloride (PVC) ranging in sizes from 8" – 12". From the information that has been gathered, the sewers in the project corridor are determined to be in an overall good to fair condition and with some maintenance, will last the life cycle of the street maintenance being recommended until a full reconstruction is warranted.

The sanitary sewer manholes along the project area are primarily pre-cast concrete and are in good condition. Castings throughout the project will be inventoried to ensure castings with open pick-holes are replaced to reduce unwanted inflow of storm water into the sanitary system. In addition, all castings will be reset, and, minor grouting or sealing of the structures is warranted in some locations.

E. Watermain

The existing watermain was evaluated within the proposed project area. Conditions of the watermain system have been determined from as-built information, field evaluation, and discussions with the City Staff. The current pipe network consists of Ductile Iron Pipe (DIP) with sizes ranging from 6" – 12", and is in good operational condition and has sufficient capacity and redundancy for the service area. There is not a history of watermain breaks in the area and the system will last the life cycle of the street, maintenance is recommended until a full reconstruction is warranted. The water system in the project area contains hydrants and gate valves that were installed in the mid 1980's to the mid 1990's.

III. Laurel Court Area

Laurel Court is located in a commercial area off of Highway 19 on the west side of the City, and has higher levels of traffic and axial loads than a typical residential street. As-builts show sections of the street were constructed in the late 1980's and early 2000's. The street has mid-life utilities and very few trees except for the far southern part of the project that borders Sechler Park. The Laurel Court Area also includes the Mill Towns State Trail that runs from the end of Laurel Court to Armstrong Road through Sechler Park.

A. Streets

The street within the project area are bituminous surfaced with concrete curb and gutter. Pavement width varies from 30' to 40' through the street segments, all measured from curb face to curb face.

As-built information on the street within the project area indicate that it was originally constructed in the late 1980's to the early 2000's. The street is aged and exhibits severe wear and distress. The pavement is generally in very poor to failing condition (PCI of 40-0), and exhibit transverse and longitudinal cracking, alligator cracking, potholes, raveling and rutting. Some street segments have settlements, which allow water to pond, infiltrate and weaken the subgrade. This has led to frost heaving, and additional transverse cracking during freeze-thaw cycles. Ongoing

maintenance work has occurred in this area and due to the age of the pavement and the amount of traffic this area receives, the effort required has increased significantly in the recent years.

The existing concrete curb and gutter is in fair condition throughout the project area. Some areas have moderate to severe cracking and spalling. Curb settlements have caused areas of poor drainage along the edge of the pavement in various locations.

An Arborist report has been completed for the project. One (1) tree on this street has been indicated to be removed due to health concerns. Additional trees may need to be removed for construction.

B. Pedestrian & Bicycle Facilities

The project area has existing sidewalk on both sides of Laurel for the full length of the project area. There is also the Mill Towns State Trail that runs through Sechler Park to Armstrong Road. There are currently no on-street bicycle facilities on this portion of the project. In 2027 MnDOT is proposing to add a multi-use trail along Highway 19. The existing sidewalk is in good to fair condition overall with cracking, settling, and heaving in some areas. There are areas where spot replacement is necessary.

C. Storm Sewer

The condition of the existing storm sewer system was determined from as-built information, inspections, storm sewer televising reports, and discussions with City Staff. There are no known storm drainage issues in the proposed project area and all piping is in adequate condition. The current pipe network consists of Reinforced Concrete Pipe (RCP) and with sizes ranging from 15” to 18” in diameter. The catch basins in the project area consist of precast concrete and block structures with 2’x3’ castings and round “beehive” style castings.

D. Sanitary Sewer

Investigation of the existing sanitary sewer has found no major issues at this time. Conditions of the sanitary sewer system have been determined from as-built information, sewer televising reports, as well as discussions with the City Staff. The current pipe network consists of 8” Polyvinyl Chloride (PVC) pipes. From the information that has been gathered, the sewers in the project corridor are determined to be in an overall good to fair condition and with some maintenance, will last the life cycle of the street maintenance being recommended until a full reconstruction is warranted.

The sanitary sewer manholes along the project area are primarily pre-cast concrete and are in good condition. Castings throughout the project will be inventoried to ensure castings with open pick-holes are replaced to reduce unwanted inflow of storm water into the sanitary system. In addition, all castings will be reset, and, minor grouting or sealing of the structures is warranted in some locations.

E. Watermain

The existing watermain was evaluated within the proposed project area. Conditions of the watermain system have been determined from as-built information, field evaluation, and discussions with the City Staff. The current pipe network consists of Ductile Iron Pipe (DIP) with sizes ranging from 6" – 8", and is in good operational condition and has sufficient capacity and redundancy for the service area. There is not a history of watermain breaks in the area and the system will last the life cycle of the street, maintenance is recommended until a full reconstruction is warranted. The water system in the project area contains hydrants and gate valves that were installed in the mid 1980's.

IV. Maple Street Area

The Maple area consists of Maple Street South of Jefferson Parkway to Ford Street, Lake Drive between Jefferson Parkway and Maple Street, and Superior Drive Between Maple Street and Erie Drive on the southeast side of the City. The area is located in a primarily residential area, and has relatively low levels of traffic. As-builts show sections of the street were constructed in the early to mid 2000's. The street has mid-life utilities and few large trees in the right of way.

A.Streets

The streets within the project area are bituminous surfaced with concrete curb and gutter. Pavement width varies from 32' to 36' through the street segments, all measured from curb face to curb face.

As-built information on the streets within the project area indicate that it was originally constructed in the early to late 2000's. The street is aged and exhibit wear and distress. The pavement is generally in good condition, and exhibit transverse and longitudinal cracking, and alligator cracking.

Using PCI data from 2022 Maple Street Area's pavement condition is summarized below.

Maple Street Area Pavement Condition Index		
Segment	**PCI Number**	**Pavement Condition**
Maple Street	100-91	Excellent
Lake Drive	80-71	Good
Superior Drive	90-81	Very Good

The existing concrete curb and gutter is in good to fair condition throughout the project area. Some curb panels have cracked due to freeze thaw and normal wear, and spot repairs will be necessary.

B. Pedestrian & Bicycle Facilities

The project area has existing sidewalk on both sides of Maple Street to Ford street where it transitions to a shared use trail on the west side of Maple. There is currently existing

sidewalk on the south side of Superior Drive and on the north side of Lake Drive. There are currently no on-street bicycle facilities on this portion of the project however there is an existing on street protected bikeway on Maple Street north of Jefferson Parkway that was installed in 2023, and shared use trails in Spring Creek park. The existing sidewalk is in good condition overall with cracking, settling, and heaving in some areas. There are areas where spot replacement is necessary. Along with these repairs, all existing pedestrian ramps will be updated to current ADA standards.

C. Storm Sewer

The condition of the existing storm sewer system was determined from as-built information, inspections, storm sewer televising reports, and discussions with City Staff. There are some storm drainage issues on the north side of Superior Drive. All piping is assumed to be in adequate condition. The current pipe network consists of Reinforced Concrete Pipe (RCP) and with sizes ranging from 12" to 54" in diameter. The catch basins in the project area consist of precast concrete and block structures with 2'x3' castings and round "beehive" style castings. In addition to the standard storm system there are two 144" precast concrete culverts passing under Maple Street (Bridge 66J19) that will need some maintenance according to the MnDOT bridge inspection. The conditions of the storm structures will be evaluated during final design to determine if maintenance activities are required. It is anticipated that all castings will need to be reset or replaced and that some storm structures may need grouting, sealing, or replacement to better contain storm water runoff in the system.

D. Sanitary Sewer

Investigation of the existing sanitary sewer has found no major issues at this time. Conditions of the sanitary sewer system have been determined from as-built information, sewer televising reports, as well as discussions with the City Staff. The current pipe network consists of 8" to 24" Polyvinyl Chloride (PVC) pipes. From the information that has been gathered, the sewers in the project corridor are determined to be in an overall good to fair condition and with some maintenance, will last the life cycle of the street maintenance being recommended until a full reconstruction is warranted.

The sanitary sewer manholes along the project area are primarily pre-cast concrete and are in good condition. Castings throughout the project will be inventoried to ensure castings with open pick-holes are replaced to reduce unwanted inflow of storm water into the sanitary system. In addition, all castings will be reset, and, minor grouting or sealing of the structures is warranted in some locations.

E. Watermain

The existing watermain was evaluated within the proposed project area. Conditions of the watermain system have been determined from as-built information, field evaluation, and discussions with the City Staff. The current pipe network consists of Ductile Iron Pipe (DIP) with sizes ranging from 6" – 12", and is in good operational condition and has sufficient capacity and redundancy for the service area. There is not a history of watermain breaks in the area and the system will last the life cycle of the street, maintenance is recommended until a full reconstruction is warranted. The water system in the project area contains hydrants and gate valves that were installed in the mid 2000's.

I. Proposed Improvements – Washington Street Area

The Washington Street Area has been broken into four alternative designs for consideration. The sections below will start with general information that is the same between all alternates before describing alternate specific design elements. A table summarizing the alternatives is included at the end of the pedestrian & bicycle facilities section.

A. Streets

1. General Info

The proposed improvement recommended is a Full Depth Modified Pavement Reclamation (FDMPR) to rehabilitate the existing street system in the Washington Area from Sumner Street south to the end. A FDMPR consists of grinding the full depth of asphalt as well as a majority of the existing undelaying aggregate base. This material is then removed to allow an additional sub-cut to be performed on the existing road subgrade to allow the installation of a 1' select granular road base section, along with a subbase drain tile along the curb lines. The existing salvaged reclaim material will then be placed in the roadbed, recompacted, and reshaped to the proper profile. The final step in the process will be the placement of two new lifts of bituminous asphalt. It is also proposed to pave the turnaround at the south end of Washington Street.

A FDMPR is appropriate on this portion of road because the existing street exhibits indication of significant base failure (i.e. alligator cracking, settlement, and significant longitudinal and transverse cracking) and the lack of a select granular road base section. These efforts are an essential part of the overall lifecycle maintenance for street pavement, and provide essential improvements to the road subbase and pavement surface.

The City of Northfield adopted the Pedestrian, Bike, and Trail System Plan 2019. In 2022 the City accepted the Pedestrian and Bikeway Analyzation Report to aid in designing the City's pedestrian system. These reports identify a bikeway to be installed along Washington Street. City staff are considering four typical section alternatives for Washington Street expand the City's pedestrian and bikeway network along Washington Street.

a. Alternate 1 – Sidewalk Entire West Side

The horizontal alignment will remain the same and the roadway will be narrowed from the west side, reducing the street width to 28 feet from 32 feet south of Ames Street and 36 feet north of Ames Street. The street narrowing will occur from Woodley Street to the south end of Washington Street. The curb on the east side will remain in place with spot repairs as needed to ensure proper drainage and repair damaged portions. The narrowing of the street will eliminate parking on the west side, while retaining parking on the east side. The narrowing of the street will allow for the installation of a sidewalk on the west side from 150 feet north of Fremont Street to the south end of Washington Street. while minimizing impacts to private property. Additionally, the cross slope will be set at 2.00% to ensure that storm water drains to the catch basins, and curb and gutter spot repairs will be completed where necessary.

Any boulevard areas disturbed by the construction will be restored with 4" of topsoil and sod. It is estimated that 26 trees will need to be removed for the project though some may be able to be saved by moving the sidewalk, which will be evaluated during design. The goal in past projects

has been to replace any trees removed with new 2" to 2-1/2" trees on at least a two for one basis if proper spacing allows. This report includes a two for one replacement in the cost estimate.

b. Alternate 2 – On-Street Protected Bikeway and Trail

The horizontal alignment will remain the same and the roadway will be narrowed from the west side, reducing the street width to 28 feet from 32 feet south of Ames Street and 36 feet north of Ames Street. The street narrowing will occur from Woodley Street to the south end of Washington Street. The curb on the east side will remain in place with spot repairs as needed to ensure proper drainage and repair damaged portions. The narrowing of the street will eliminate parking on the west side, while retaining parking on the east side. The narrowing of the street will allow for the installation of a trail from Sumner Street to the south end of Washington Street and a sidewalk from Woodley Street to Sumner Street both on the west side of Washington Street while minimizing impacts to private property. From Woodley Street to Sumner Street an on street protected two-way bikeway will be constructed on the west side of Washington Street, which will consist of a 2' wide raised concrete median. Additionally, the cross slope will be set at 2.00% to ensure that storm water drains to the catch basins, and curb and gutter spot repairs will be completed where necessary.

Any boulevard areas disturbed by the construction will be restored with 4" of topsoil and sod. It is estimated that 27 trees will need to be removed for the project though some may be able to be saved by moving the sidewalk and trail, which will be evaluated during design. The goal in past projects has been to replace any trees removed with new 2" to 2-1/2" trees on at least a two for one basis if proper spacing allows. This report includes a two for one replacement in the cost estimate.

c. Alternate 3 – Trail Entire West Side

The horizontal alignment will remain the same and the roadway will be narrowed from the west side, reducing the street width to 28 feet from 32 feet south of Ames Street and 36 feet north of Ames Street. The street narrowing will occur from Woodley Street to the south end of Washington Street. The curb on the east side will remain in place with spot repairs as needed to ensure proper drainage and repair damaged portions. The narrowing of the street will eliminate parking on the west side, while retaining parking on the east side. The narrowing of the street will allow for the installation of a trail on the west side from Woodley Street to the south end of Washington Street while minimizing impacts to private property. Additionally, the cross slope will be set at 2.00% to ensure that storm water drains to the catch basins, and curb and gutter spot repairs will be completed where necessary.

Any boulevard areas disturbed by the construction will be restored with 4" of topsoil and sod. It is estimated that 29 trees will need to be removed for the project though some may be able to be saved by moving the trail, which will be evaluated during design. The goal in past projects has been to replace any trees removed with new 2" to 2-1/2" trees on at least a two for one basis if proper spacing allows. This report includes a two for one replacement in the cost estimate.

d. Alternate 4 – On-Street Protected Bikeway and Trail Directly Behind Curb

The horizontal alignment will remain the same and the roadway will be narrowed from the west side, reducing the street width to 27 feet from 32 feet south of Ames Street and 36 feet north of Ames Street. The street narrowing will occur from Woodley Street to the south end of Washington

Street. The curb on the east side will remain in place with spot repairs as needed to ensure proper drainage and repair damaged portions. The narrowing of the street will eliminate parking on the west side, while retaining parking on the east side. The narrowing of the street will allow for the installation of a trail from Sumner Street to the south end of Washington Street and a sidewalk from Woodley Street to Sumner Street both on the west side of Washington Street while minimizing impacts to private property. From Woodley Street to Sumner Street an on street protected two-way bikeway will be constructed on the west side of Washington Street, which will consist of a 2' wide raised concrete median. Additionally, the cross slope will be set at 2.00% to ensure that storm water drains to the catch basins, and curb and gutter spot repairs will be completed where necessary.

Any boulevard areas disturbed by the construction will be restored with 4" of topsoil and sod. It is estimated that 27 trees will need to be removed for the project though some may be able to be saved by moving the trail, which will be evaluated during design. The goal in past projects has been to replace any trees removed with new 2" to 2-1/2" trees on at least a two for one basis if proper spacing allows. This report includes a two for one replacement in the cost estimate.

B. Pedestrian & Bicycle Facilities

1. General Info

The intersection at Washington Street and Woodley Street has been identified for pedestrian crossing safety improvements. Possible improvements to the intersection cub extensions and marked crossings. The intersection at Washington Street and Ames Street has also been identified for crossing safety improvements. Improvements at this intersection could include a marked crossing and possible curb extensions.

All existing sidewalks will be assessed for significant cracking, settling, and heaving that necessitates spot replacement. These spot replacements to the existing concrete sidewalks will be completed in conjunction with the upgrades to each of the existing pedestrian ramps to meet current ADA standards. Pedestrian ramp upgrades involve the removal and replacement of the concrete curb and gutter, ramps and truncated domes, landings, and concrete sidewalk to the proper longitudinal and transverse grades at each crosswalk location. Concrete 'v-curb' may be necessary behind the walk at some locations with difficult grades.

City staff explored the option of extending a trail to the south of Washington Street with this project and reached out to the current land owner of the private undeveloped lot to the south of the project area to discuss acquiring an easement for the trail. The landowner was uninterested in providing an easement. Without an easement a trail can not be constructed south of Washington Street with this project.

a. Alternate 1 – Sidewalk Entire West Side

The proposed pedestrian improvement includes constructing a new six (6) foot sidewalk along the west side of Washington Street from about 150 feet north of Fremont Street to the south end of Washington Street. There will be no bike infrastructure improvements with this alternative. Boulevard and sidewalk widths could be varied to attempt to save trees and existing landscaping along the project corridor.

Current impacts with this alternative includes moving mailboxes to the new curb, relocating fences and landscaping at several houses, relocating street lights and private utility boxes, and

the removal of 26 trees. Alignment of the sidewalk and width of the boulevard will be evaluated during final design to minimize impacts to property and save as many trees as possible.

b. Alternate 2 – On-Street Protected Bikeway and Trail

The proposed pedestrian improvement includes constructing a new six (6) foot sidewalk along the west side of Washington Street from about 150 feet north of Fremont Street to Sumner Street. South of Sumner Street a new off-street shared use trail will be constructed on the west side of Washington Street to the south end. From Woodley Street to Sumner Street an on street two-way protected bikeway will be constructed on the west side of Washington Street. A protected bikeway consists of a raised concrete median between the bike traffic and the motorized vehicle traffic. Boulevard, sidewalk, and trail widths could be varied to attempt to save trees and existing landscaping along the project corridor.

Current impacts with this alternative includes moving mailboxes to the new curb, relocating fences and landscaping at several houses, relocating street lights and private utility boxes, and the removal of 27 trees. Alignment of the sidewalk and width of the boulevard will be evaluated during final design to minimize impacts to property and save as many trees as possible.

c. Alternate 3 – Trail Entire West Side

The proposed pedestrian improvement includes constructing a new off-street shared use trail along the west side of Washington Street from Woodley Street to the south end of Washington Street. Boulevard and trail widths could be varied to attempt to save trees and existing landscaping along the project corridor.

Current impacts with this alternative includes moving mailboxes to the new curb, relocating fences and landscaping at several houses, relocating street lights and private utility boxes, and the removal of 29 trees. Alignment of the sidewalk and width of the boulevard will be evaluated during final design to minimize impacts to property and save as many trees as possible.

d. Alternate 4 – On-Street Protected Bikeway and Trail Directly Behind Curb

The proposed pedestrian improvement includes constructing a new six (6) foot sidewalk along the west side of Washington Street from about 150 feet north of Fremont Street to Sumner Street. South of Sumner Street a new off-street shared use trail will be constructed on the west side of Washington Street to the south end. The trail will be constructed directly behind the curb with a two-foot concrete buffer strip between the curb and the trail. From Woodley Street to Sumner Street an on street two-way protected bikeway will be constructed on the west side of Washington Street. A protected bikeway consists of a raised concrete median between the bike traffic and the motorized vehicle traffic. Boulevard, sidewalk, and trail widths could be varied to attempt to save trees and existing landscaping along the project corridor.

Current impacts with this alternative includes moving mailboxes to the new curb, relocating fences and landscaping at several houses, relocating street lights and private utility boxes, and the removal of 27 trees. Alignment of the sidewalk and width of the boulevard will be evaluated during final design to minimize impacts to property and save as many trees as possible.

A summary of the alternatives for Washington street is provided below.

Washington Street Alternative Summary					
	Existing	**Alternate-1**	**Alternate-2**	**Alternate-3**	**Alternate-4**
Street Width	36 feet north of Ames 32 feet south	28 feet	28 feet	28 feet	27 feet
Ped / Bike Woodley to Sumner	Sidewalk on west side from Woodley to 100' north of Fremont	Sidewalk on west the side	Sidewalk and on-street bikeway on the west side	Trail on the west side	Sidewalk and on-street bikeway on the west side
Ped / Bike Sumner to South End	No ped / bike facility	Sidewalk on the west side	Trail on the west side	Trail on the west side	Trail on the west side directly behind curb

C. Storm Sewer

City Staff performed video inspection and visual inspection on the entire storm sewer system including the storm piping and storm structures within the project corridor and have determined that four storm pipes have severe joint separations and will need to be replaced. Due to the narrowing of the road about 16 storm structures along with the storm main from Woodley Street to Sumner street will need to be moved. Exact alignment and structures will be determined during final design, and some of the existing storm main may be able to be salvaged or remain in place.

Additional work on the storm sewer as part of this project includes adjusting/replacing the storm sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Minor grouting and concrete patching of the structures may also be completed to prevent infiltration/exfiltration in/out of the storm sewer manholes for a majority of the applicable structures. Structures with significant deterioration will be replaced/reconstructed in lieu of rehabilitation.

Due to the lack of storm sewer south of Marvin Lane it will not be possible to address the storm water runoff issues on the south end of Washington Street until either Washington Street is extended to the south with future development or Washington Street is reconstructed.

D. Sanitary Sewer

City Staff performed video inspection and visual inspection on the entire sanitary sewer system including the sanitary piping and sanitary sewer manhole structures and has determined that it is in satisfactory condition. As such, limited rehabilitation work is anticipated to be needed for the sanitary sewer system at this time. Pipes and structures with damage will be rehabilitated.

Work on the sanitary sewer as a part of this project is proposed to include adjusting the sanitary sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Castings and covers that are damaged or allow for inflow of storm water will be replaced. Minor grouting and concrete patching of the structures may also be completed to seal the structures and prevent infiltration/exfiltration in/out of the sanitary sewer manholes.

E. Watermain

The City staff have reviewed the condition of the existing watermain system located within the boundaries of the project and have determined that it is in satisfactory condition. As such, limited rehabilitation work is needed to the watermain system at this time.

Work on the watermain system as part of this project includes replacing valve bolts and boxes on all gate valves. The valve boxes will be adjusted to the grade of the road to provide a smooth driving experience

II. Proposed Improvements – Industrial Drive Area

A. Streets

The proposed improvement recommended is a Full Depth Pavement Reclamation (FDPR) to rehabilitate the existing street system in the Industrial Area. A FDPR consists of grinding the full depth of asphalt as well as a majority of the existing undelaying aggregate base. This material is then reused as the new road base, along with a subbase drain tile along the curb lines. The existing salvaged reclaim material will then be placed in the roadbed, recompacted, and reshaped to the proper profile. The compacted material will be test rolled to determine areas requiring additional repair, these areas will receive a one (1) foot sub-cut with the material being replaced with a select granular material. For the purposes of this report it is estimated that 25% of the pavement area will require additional repair, exact limits and depths of the repairs will be determined during construction. The final step in the process will be the placement of two new lifts of bituminous asphalt.

A FDPR is appropriate on this portion of road because the existing street exhibits indication of significant base failure (i.e. alligator cracking, settlement, and significant longitudinal and transverse cracking). These efforts are an essential part of the overall lifecycle maintenance for street pavement, and provide essential improvements to the road subbase and pavement surface.

The horizontal alignment will remain the same and the existing curb and gutter will remain in place with spot repairs as needed to insure proper drainage. Additionally, the cross slope will be set at 2.00% to ensure that storm water drains to the catch basins, and curb and gutter spot repairs will be completed where necessary. A turn around at the end of the road will be analyzed during design and will likely require an easement.

B. Pedestrian Facilities

There are no existing pedestrian facilities in this project area and no proposed additions. The City's pedestrian and bike plan show a proposed crossing improvement at the intersection of Industrial Drive and Armstrong Road that will be explored with the 2028 Armstrong Road reclamation project.

C. Storm Sewer

City Staff performed video inspection and visual inspection on the entire storm sewer system including the storm piping and storm structures within the project corridor and have determined that some repairs are necessary.

Work on the storm sewer as part of this project includes adjusting/replacing the storm sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Minor grouting and concrete patching of the structures may also be completed to prevent infiltration/exfiltration in/out of the storm sewer manholes for a majority of the applicable structures. Structures with significant deterioration will be replaced/reconstructed in lieu of rehabilitation. Channels at Flared end sections will be stabilized to correct washouts, with energy dissipaters added to reduce erosion.

D. Sanitary Sewer

City Staff performed video inspection and visual inspection on the entire sanitary sewer system including the sanitary piping and sanitary sewer manhole structures and has determined that it is in satisfactory condition. As such, limited rehabilitation work is anticipated to be needed for the sanitary sewer system at this time.

Work on the sanitary sewer as a part of this project is proposed to include adjusting the sanitary sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Castings and covers that are damaged or allow for inflow of storm water will be replaced. Minor grouting and concrete patching of the structures may also be completed to seal the structures and prevent infiltration/exfiltration in/out of the sanitary sewer manholes.

E. Watermain

The City of Northfield has reviewed the condition of the existing watermain system located within the boundaries of the project and have determined that it is in satisfactory condition. As such, limited rehabilitation work is needed to the watermain system at this time.

Work on the watermain system as part of this project includes replacing valve bolts and boxes on all gate valves. The valve boxes will be adjusted to the grade of the road to provide a smooth driving experience.

III. Proposed Improvements – Laurel Court Area

A. Streets

The proposed improvement recommended is a Full Depth Pavement Reclamation (FDPR) to rehabilitate the existing street system in the Laurel Court Area. A FDPR consists of grinding the full depth of asphalt as well as a majority of the existing undelaying aggregate base. This material is then reused as the new road base, along with a subbase drain tile along the curb lines. The existing salvaged reclaim material will then be placed in the roadbed, recompacted, and reshaped

to the proper profile. The final step in the process will be the placement of two new lifts of bituminous asphalt.

A FDPR is appropriate on this portion of road because the existing street exhibits indication of significant base failure (i.e. alligator cracking, settlement, and significant longitudinal and transverse cracking). These efforts are an essential part of the overall lifecycle maintenance for street pavement, and provide essential improvements to the road subbase and pavement surface. The horizontal alignment will remain the same and the existing curb and gutter will remain in place on the east side with spot repairs as needed to insure proper drainage. The curb on the west side will be moved in, narrowing the road to allow for a new shared use trail to be constructed. Additionally, the cross slope will be set at 2.00% to ensure that storm water drains to the catch basins, and curb and gutter spot repairs will be completed where necessary.

B. Pedestrian Facilities

There is currently existing sidewalk on both sides of Laurel Court for its full length. Additionally, the Mill Towns State Trail is accessible from Sechler Park at the end of the road. The proposed improvement includes adding a shared use trail to connect the Mill Towns State Trail in Sechler Park with a future trail on T.H. 19. The construction of this trail will require narrowing a portion of the road to 38 feet due to the limited right-of-way available. In 2027 MnDOT is planning to add a shared use trail along Highway 19, because of this all ped ramps except for the ones on Highway 19 will be upgraded to current ADA standards with the ramps on Highway 19 being upgraded with the MnDOT project. As an alternative the Mill Towns State Trail through Sechler Park could be rebuilt to meet current DNR state trail standards and improve the surface condition of the trail, however Staff is recommending a pause on this trail rehabilitation until additional agreements and funding can be explore with the Minnesota DNR.

C. Storm Sewer

City Staff performed video inspection and visual inspection on the entire storm sewer system including the storm piping and storm structures within the project corridor and have determined that is it in satisfactory condition. As such, limited rehabilitation work is needed to the storm sewer system at this time.

Work on the storm sewer as part of this project includes adjusting/replacing the storm sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Minor grouting and concrete patching of the structures may also be completed to prevent infiltration/exfiltration in/out of the storm sewer manholes for a majority of the applicable structures. Structures with significant deterioration will be replaced/reconstructed in lieu of rehabilitation. Due to the narrowing of the road one structure will need to be replaced to match the new curb line.

D. Sanitary Sewer

City Staff performed video inspection and visual inspection on the entire sanitary sewer system including the sanitary piping and sanitary sewer manhole structures and has determined that it is in satisfactory condition. As such, limited rehabilitation work is anticipated to be needed for the sanitary sewer system at this time.

Work on the sanitary sewer as a part of this project is proposed to include adjusting the sanitary sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Castings and covers that are damaged or allow for inflow of storm water will be replaced. Minor grouting and concrete patching of the structures may also be completed to seal the structures and prevent infiltration/exfiltration in/out of the sanitary sewer manholes.

In addition to maintenance work a new sanitary force main will be installed from the existing structure to Sechler Park Road. This additional force main will allow for restroom facilities to be built in Sechler park in the future. As part of the Alternative to reconstruct the Mill Towns State Trail through Sechler Park the force main will be constructed to the ballfields in Sechler Park.

E. Watermain

The City of Northfield has reviewed the condition of the existing watermain system located within the boundaries of the project and have determined that it is in satisfactory condition. As such, limited rehabilitation work is needed to the watermain system at this time.

Work on the watermain system as part of this project includes adjusting the water gate valve boxes and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. Some damaged valve box tops may require replacement.

IV. Proposed Improvements – Maple Street Area

A. Streets

The proposed improvement recommended is a 2 - Inch Mill and Overlay for all streets in the Maple area. Pavement conditions and existing as-builts show a sufficient existing road base suitable for a mill and overlay rehabilitation of the streets. In addition to the mill and overlay, some isolated areas indicated the need for deeper repairs and potential subgrade corrections may be required where severe distresses are present.

A mill and overlay is considered a maintenance operation that involves the removal of the top layer of pavement and installation of a new wearing surface that prolongs the expected life of the pavement by 15 years. This maintenance ensures continued serviceability to users and keeps the road's entire life cycle cost low.

Additionally, spot concrete cub and gutter will be replaced if it is severely damaged or settled/heaved and not allowing proper drainage.

B. Pedestrian Facilities

There is currently sidewalk on both sides of Maple Street from Jefferson Parkway to Ford Street where the sidewalk becomes a shared use trail on the west side. There is currently sidewalk on the north side of Lake Drive and the South side of Superior Drive. On Superior there is a mid-block trail crossing between Harbor Drive and Michigan Drive.

All existing sidewalks will be assessed for significant cracking, settling, and heaving that necessitates spot replacement. These spot replacements to the existing concrete sidewalks will be completed in conjunction with the upgrades to each of the existing pedestrian ramps to meet

current ADA standards. Pedestrian ramp upgrades involve the removal and replacement of the concrete curb and gutter, ramps and truncated domes, landings, and concrete sidewalk to the proper longitudinal and transverse grades at each crosswalk location. Concrete 'v-curb' may be necessary behind the walk at some locations with difficult grades.

The sidewalk on the west side of Maple will be removed and replaced by a shared use pedestrian and bike trail, this will connect to the shared use trail south of Ford, the on-street bikeway north of Jefferson and other sidewalks connecting to Maple Street. The trail will be 10 feet wide along the City owned property and will then narrow to 8 feet wide at the privately-owned property near Southbridge Drive to save as many boulevard trees as possible.

The intersection of Maple Street and Superior Drive has been identified for pedestrian crossing improvements. The improvements proposed include signing and striping the south and east legs of the intersection. The mid-block trail crossing on Superior Drive will also receive new signing and striping. The north trail through Spring Creek Park intersects the sidewalk on the east side of Maple Street just south of Lake Drive, it is proposed to add a table crossing across Maple Street for this trail, providing an additional connection to the Mill Towns State Trail once constructed.

C. Storm Sewer

City Staff performed video inspection and visual inspection on the entire storm sewer system including the storm piping and storm structures within the project corridor and have determined that is it in satisfactory condition. As such, limited rehabilitation work is needed to the storm sewer system at this time.

Work on the storm sewer as part of this project includes adjusting/replacing the storm sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Minor grouting and concrete patching of the structures may also be completed to prevent infiltration/exfiltration in/out of the storm sewer manholes for a majority of the applicable structures. Structures with significant deterioration will be replaced/reconstructed in lieu of rehabilitation. The bridge under Maple Street will require rip rap to be placed around the headwall per the MnDOT bridge inspection.

D. Sanitary Sewer

City Staff performed video inspection and visual inspection on the entire sanitary sewer system including the sanitary piping and sanitary sewer manhole structures and has determined that it is in satisfactory condition. As such, limited rehabilitation work is anticipated to be needed for the sanitary sewer system at this time.

Work on the sanitary sewer as a part of this project is proposed to include adjusting the sanitary sewer castings and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. This work will include the replacement of all concrete adjustment rings for each structure. Castings and covers that are damaged or allow for inflow of storm water will be replaced. Minor grouting and concrete patching of the structures may also be completed to seal the structures and prevent infiltration/exfiltration in/out of the sanitary sewer manholes.

E. Watermain

The City of Northfield has reviewed the condition of the existing watermain system located within the boundaries of the project and have determined that it is in satisfactory condition. As such, limited rehabilitation work is needed to the watermain system at this time.

Work on the watermain system as part of this project includes adjusting the water gate valve boxes and covers to provide a smooth/drivable street surface in conjunction with the street resurfacing portion of the project. Some damaged valve box tops may require replacement.

Estimated Costs

The estimated construction costs for the proposed improvements are based on costs from recent street maintenance projects that have been completed in the City of Northfield. These costs can fluctuate significantly; however, at this point in the project, staff feels that all the costs below are properly accounted for in the estimate.

The estimated costs below are broken out by each project area with the Mill Towns State Trail segment alternative being separated from Laurel Court. Costs have also been separated by each alternate for Washington Street. Should the project be authorized it is typical to reduce the contingency as the design is developed, and more certainty is brought to bear on the project scope. The overhead portion of the estimate is used to cover the necessary legal, administrative, engineering, and financing costs for the project.

Estimated Project Costs – Washington Street Alternative #1 (sidewalk full length)

Estimated Project Costs						
Washington Street Alternative #1						
	Washington Street Area	**Industrial Drive Area**	**Laurel Court Area**	**MTT Alternative**	**Maple Street Area**	**Total**
Street	$727,804.00	$549,752.50	$240,517.50	$477,563.00	$851,103.50	$2,846,740.50
Storm Sewer	$19,287.50	$48,983.00	$10,372.00	$0.00	$69,020.00	$147,662.50
Sanitary Sewer	$9,482.50	$8,687.00	$51,584.00	$270,504.00	$25,220.00	$365,477.50
Watermain	$7,602.50	$34,035.00	$23,118.00	$0.00	$8,510.00	$73,265.50
Construction Subtotal	**$764,176.50**	**$641,457.50**	**$325,591.50**	**$748,067.00**	**$953,853.50**	**$3,433,146.00**
Construction Contingency (10%)	$76,417.65	$64,145.75	$32,559.15	$74,806.70	$95,385.35	$343,314.60
Total Construction	**$840,594.15**	**$705,603.25**	**$358,150.65**	**$822,873.70**	**$1,049,238.85**	**$3,776,460.60**
Art	$8,405.94	$7,056.03	$3,581.51	$8,228.74	$10,492.39	$37,764.61
Construction + Art Total	**$849,000.09**	**$712,659.28**	**$361,732.16**	**$831,102.44**	**$1,059,731.24**	**$3,814,225.21**
Overhead (20%)	$169,800.02	$142,531.86	$72,346.43	**$166,220.49**	$211,946.25	$762,845.04
Total Project Costs	**$1,018,800.11**	**$855,191.14**	**$434,078.59**	**$997,322.92**	**$1,271,677.49**	**$4,577,070.25**

Estimated Project Costs – Washington Street Alternative #2 (Trail with quick build bike lane)

Estimated Project Costs						
Washington Street Alternative #2						
	Washington Street Area	**Industrial Drive Area**	**Laurel Court Area**	**MTT Alternative**	**Maple Street Area**	**Total**
Street	$710,977.50	$549,752.50	$240,517.50	$477,563.00	$851,103.50	$2,829,914.00
Storm Sewer	$19,287.50	$48,983.00	$10,372.00	$0.00	$69,020.00	$147,662.50
Sanitary Sewer	$9,482.50	$8,687.00	$51,584.00	$270,504.00	$25,220.00	$365,477.50
Watermain	$7,602.50	$34,035.00	$23,118.00	$0.00	$8,510.00	$73,265.50
Construction Subtotal	**$747,350.00**	**$641,457.50**	**$325,591.50**	**$748,067.00**	**$953,853.50**	**$3,416,319.50**
Construction Contingency (10%)	$74,735.00	$64,145.75	$32,559.15	$74,806.70	$95,385.35	$341,631.95
Total Construction	**$822,085.00**	**$705,603.25**	**$358,150.65**	**$822,873.70**	**$1,049,238.85**	**$3,757,951.45**
Art	$8,220.85	$7,056.03	$3,581.51	$8,228.74	$10,492.39	**$37,579.51**
Construction + Art Total	**$830,305.85**	**$712,659.28**	**$361,732.16**	**$831,102.44**	**$1,059,731.24**	**$3,795,530.96**
Overhead (20%)	$166,061.17	$142,531.86	$72,346.43	**$166,220.49**	$211,946.25	$759,106.19
Total Project Costs	**$996,367.02**	**$855,191.14**	**$434,078.59**	**$997,322.92**	**$1,271,677.49**	**$4,554,637.16**

Estimated Project Costs – Washington Street Alternative #3 (Trail full length)

Estimated Project Costs						
Washington Street Alternative #3						
	Washington Street Area	**Industrial Drive Area**	**Laurel Court Area**	**MTT Alternative**	**Maple Street Area**	**Total**
Street	$651,256.00	$549,752.50	$240,517.50	$477,563.00	$851,103.50	$2,770,192.50
Storm Sewer	$19,287.50	$48,983.00	$10,372.00	$0.00	$69,020.00	$147,662.50
Sanitary Sewer	$9,482.50	$8,687.00	$51,584.00	$270,504.00	$25,220.00	$365,477.50
Watermain	$7,602.50	$34,035.00	$23,118.00	$0.00	$8,510.00	$73,265.50
Construction Subtotal	**$687,628.50**	**$641,457.50**	**$325,591.50**	**$748,067.00**	**$953,853.50**	**$3,356,598.00**
Construction Contingency (10%)	$68,762.85	$64,145.75	$32,559.15	$74,806.70	$95,385.35	$335,659.80
Total Construction	**$756,391.35**	**$705,603.25**	**$358,150.65**	**$822,873.70**	**$1,049,238.85**	**$3,692,257.80**
Art	$7,563.91	$7,056.03	$3,581.51	$8,228.74	$10,492.39	$36,922.58
Construction + Art Total	**$763,955.26**	**$712,659.28**	**$361,732.16**	**$831,102.44**	**$1,059,731.24**	**$3,729,180.38**
Overhead (20%)	$152,791.05	$142,531.86	$72,346.43	**$166,220.49**	$211,946.25	$745,836.08
Total Project Costs	**$916,746.32**	**$855,191.14**	**$434,078.59**	**$997,322.92**	**$1,271,677.49**	**$4,475,016.45**

Estimated Project Costs – Washington Street Alternative #4 (Trail with quick build bike lane, No boulevard)

Estimated Project Costs						
Washington Street Alternative #4						
	Washington Street Area	**Industrial Drive Area**	**Laurel Court Area**	**MTT Alternative**	**Maple Street Area**	**Total**
Street	$687,814.50	$549,752.50	$240,517.50	$477,563.00	$851,103.50	$2,806,751.00
Storm Sewer	$19,287.50	$48,983.00	$10,372.00	$0.00	$69,020.00	$147,662.50
Sanitary Sewer	$9,482.50	$8,687.00	$51,584.00	$270,504.00	$25,220.00	$365,477.50
Watermain	$7,602.50	$34,035.00	$23,118.00	$0.00	$8,510.00	$73,265.50
Construction Subtotal	**$724,187.00**	**$641,457.50**	**$325,591.50**	**$748,067.00**	**$953,853.50**	**$3,393,156.50**
Construction Contingency (10%)	$72,418.70	$64,145.75	$32,559.15	$74,806.70	$95,385.35	$339,315.65
Total Construction	**$796,605.70**	**$705,603.25**	**$358,150.65**	**$822,873.70**	**$1,049,238.85**	**$3,732,472.15**
Art	$7,966.06	$7,056.03	$3,581.51	$8,228.74	$10,492.39	$37,324.72
Construction + Art Total	**$804,571.76**	**$712,659.28**	**$361,732.16**	**$831,102.44**	**$1,059,731.24**	**$3,769,796.87**
Overhead (20%)	$160,914.35	$142,531.86	$72,346.43	**$166,220.49**	$211,946.25	$753,959.37
Total Project Costs	**$965,486.11**	**$855,191.14**	**$434,078.59**	**$997,322.92**	**$1,271,677.49**	**$4,523,756.25**

Estimated Project Costs – Recommended, No Washington Street, No Mill Towns State Trail

Estimated Project Costs				
No Washington Street				
	Industrial Drive Area	**Laurel Court Area**	**Maple Street Area**	**Total**
Street	$549,752.50	$240,517.50	$851,103.50	$1,641,373.50
Storm Sewer	$48,983.00	$10,372.00	$69,020.00	$128,375.00
Sanitary Sewer	$8,687.00	$51,584.00	$25,220.00	$85,491.00
Watermain	$34,035.00	$23,118.00	$8,510.00	$65,663.00
Construction Subtotal	**$641,457.50**	**$325,591.50**	**$953,853.50**	**$1,920,902.50**
Construction Contingency (10%)	$64,145.75	$32,559.15	$95,385.35	$192,090.25
Total Construction	**$705,603.25**	**$358,150.65**	**$1,049,238.85**	**$2,112,992.75**
Art	$7,056.03	$3,581.51	$10,492.39	$21,129.93
Construction + Art Total	**$712,659.28**	**$361,732.16**	**$1,059,731.24**	**$2,134,122.68**
Overhead (20%)	$142,531.86	$72,346.43	$211,946.25	$426,824.54
Total Project Costs	**$855,191.14**	**$434,078.59**	**$1,271,677.49**	**$2,560,947.21**

Alternative Estimated Cost Comparison

	Alternate-1	Alternate-2	Alternate-3	Alternate-4	As Recommended
Total Cost	**$4,577,070.25**	**$4,554,637.16**	**$4,475,016.45**	**$4,523,756.25**	**$2,560,947.21**

Project Funding

I. Funding

The funding for the proposed improvements will come from several sources. General Fund monies, bonding, and Enterprise Funds will be used to fund this project.

Estimated Project Funding

Estimated Total Project Funding					
	Alternate-1	Alternate-2	Alternate-3	Alternate-4	As Recommended
Bonding	**$3,053,909**	**$3,031,476**	**$2,951,855**	**$3,000,595**	**$1,416,229**
Franchise Fees	**$800,000**	**$800,000**	**$800,000**	**$800,000**	**$800,000**
Storm Fund	**$182,099**	**$182,099**	**$182,099**	**$182,099**	**$158,313**
Sanitary Fund	**$450,711**	**$450,711**	**$450,711**	**$450,711**	**$105,428**
Water Fund	**$90,352**	**$90,352**	**$90,352**	**$90,352**	**$80,976**
Total Project Costs	**$4,577,070**	**$4,554,637**	**$4,475,016**	**$4,523,756**	**$2,560,947**

Conclusion

I. Schedule

Appendix B shows the proposed process and schedule for completing this project during the 2025 construction season.

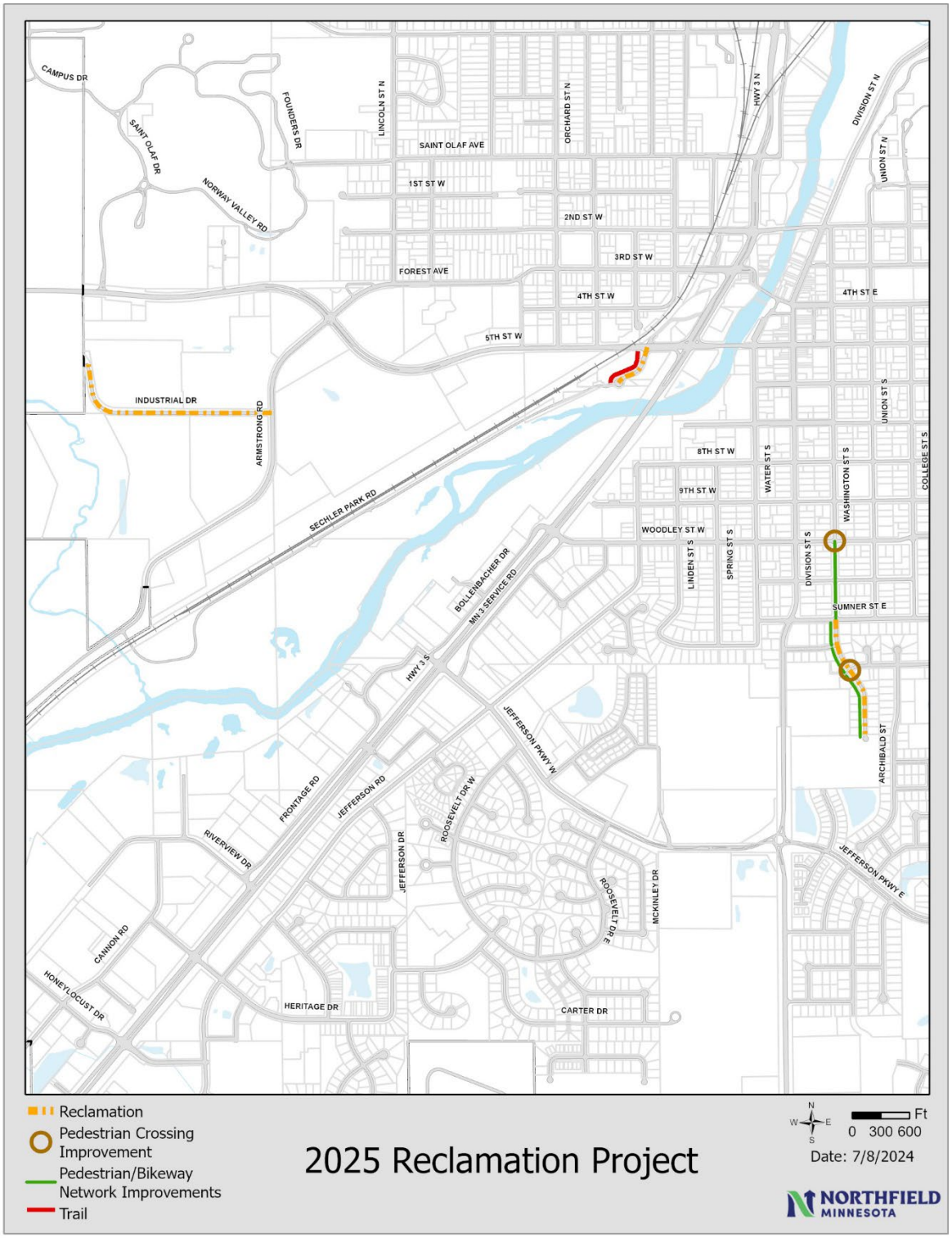
II. Feasibility and Recommendation

To create the best continuity between the City's walking and biking infrastructure it is recommended that the Washington Street area of the project not be included in the final design. It is recommended that the Washington Street area be put on pause, so that the pedestrian and bicycle infrastructure can be evaluated further to better understand the continuity with the on-street bikeway north of Woodley Street, this will allow time to determine how to best implement an All Ages and Abilities bike facility on Washington Street from Second Street to Jefferson Parkway. It is also recommended to not proceed with the Mill Towns State Trail Alternative segment with this project to allow for the City to pursue funding opportunities with the MnDNR. Lastly, it is recommended to not pursue the Fester Farms Parcel trail at this time since the property owners are currently working with a Developer on the property. For the current project the recommendation is to move ahead with the Maple Street, Laurel Court, and Industrial Drive Areas of the project without the Mill Towns State Trail Alternative.

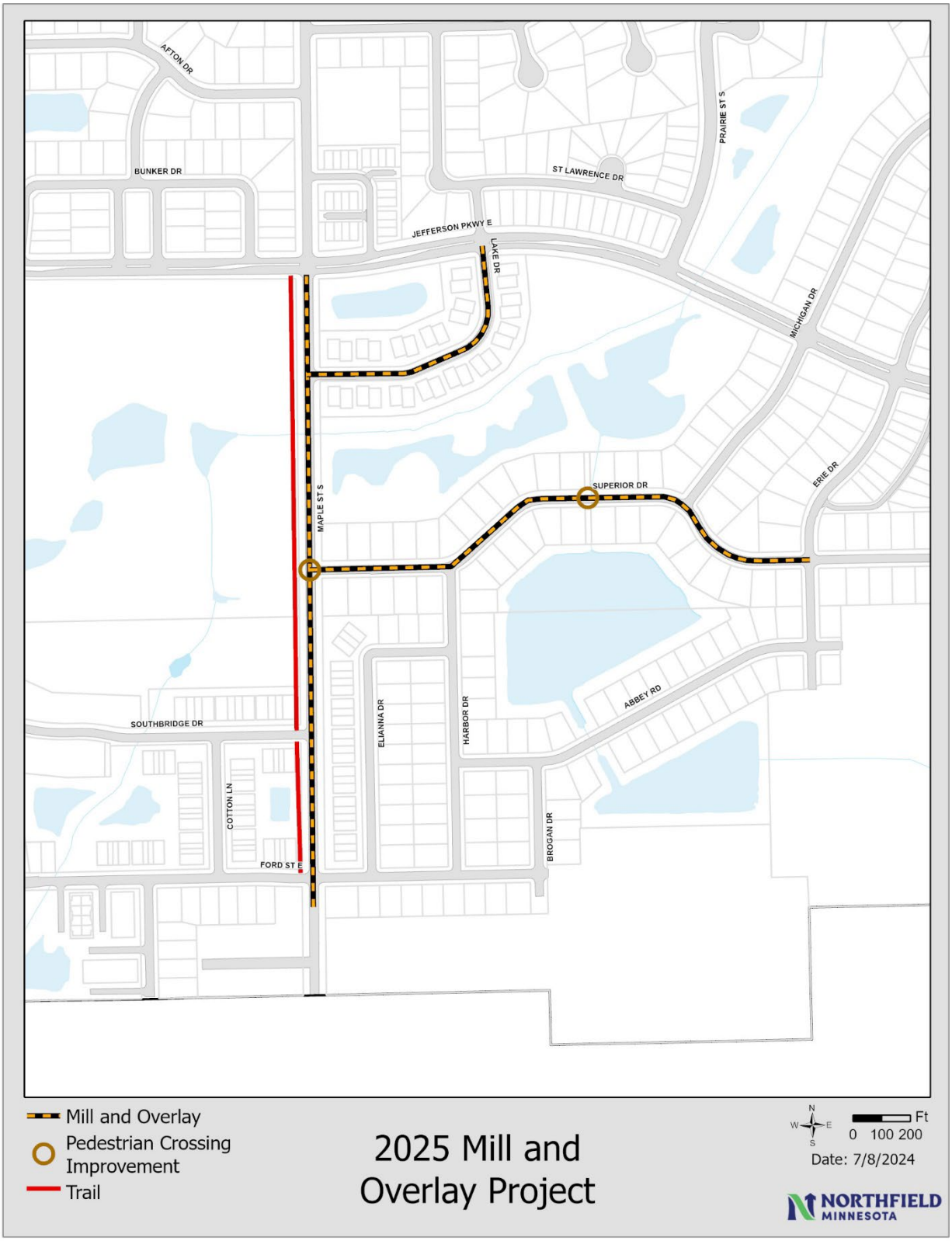
From an engineering standpoint this project, as proposed, is feasible, cost effective and necessary. It can best be accomplished by letting competitive bids for the work. Due to the similarity in the scope and nature of the work it is also recommended that the work be completed under one contract in order to have the work done in the most efficient, cost-effective and orderly manner possible.

Appendix A – Location Maps

I. Full Depth Reclamation Areas



II. Mill and Overlay Areas



Appendix B – Project Process

Date[1]	Project Step	Purpose of Step
March 12, 2024	Order preparation of Feasibility Report	Ordering the Feasibility Report will allow Staff to create a Feasibility Report that will allow the Engineer to analyze the potential project, and estimate initial project costs.
April 2, 2024	Approve Professional Service Agreement	Approve Professional Services Agreement for Design and Construction Services
May 1, 2024	Neighborhood Meeting	The intent of this meeting is to inform the neighborhood of the upcoming project and seek input on the improvements, which will be summarized for City Council.
June 11, 2024	**Council Discussion with Alta**	Council will discuss proposed pedestrian improvements.
July 24, 2024	2nd Neighborhood Meeting	The intent of this meeting is to inform the neighborhood of the upcoming project and seek input on the improvements, which will be summarized for City Council.
September 3, 2024	**Council Discussion of Draft Feasibility Report**	
September 17, 2024	Accept Feasibility Report and Authorize Preparation of Plans and Specifications	The engineer will present the Feasibility Report, the proposed project, and an initial cost estimate.
November 19, 2024	Publish Street Recon Plan Hearing Ad in Northfield News	A step in the project financing process for bonding
December 3, 2024	Public Hearing – 5 Year Street Reconstruction Plan and Adoption of Plan	Authorization of bonds requires a public hearing and adoption of a 5-year street reconstruction plan. Plan must be approved by two-thirds of the governing body members present, publish at least 10-day before hearing but no more than 28-days. Once plan and preliminary authorization of bonds is adopted, the public has a 30-day period where a petition signed by at least 5% of the votes cast in the last election can require that the bonding be subject to a referendum. 2/3 of majority of governing body present at the meeting for approval
February 5, 2025	3rd Neighborhood Meeting	The intent of this meeting is to inform the neighborhood of the upcoming project and seek input on the improvements, which will be summarized for City Council.
February 18, 2025	Approve Plans and Order Advertisement for Bids	Final approval of plans for bidding
February 26, March 5, 12 2025	Publish Ad for Bid in Northfield News	A step in the bidding process. The project will also be advertised on the MnDOT e-Advert website.
March 20, 2025	Bid Opening – 2:00 P.M.	Final step in the bidding process. Bids are opened by staff and tabulated. From here staff will make a recommendation to the City Council for award.
April 1, 2025	Accept Bids and Award Contract	This step follows the uniform municipal contracting law, 471.345, the City's purchase policy and allows for the project to move forward with beginning the actual construction process.
May 2025	Property Owner Meetings	Individual meetings with property owners will be scheduled to go over the details of construction and document existing conditions.
May – October, 2025	Construction	The City Engineer recommends to City Council when the final payment should be made to the Contractor. The City Council may accept the work by resolution; however, if the city fails to pay the amount due within 30 days of a monthly estimate, or 90 days after the final estimate, the city must pay interest on the past due amount as prescribed by law.
July 2026	Accept Improvements and Authorize Final Payment	

Arborist Summary Report

2025 Northfield Reclamation and Overlay Project

April 16, 2024

Prepared By:
Davey Resource Group
1196 7th St. S
St. Paul, MN 55106
651-202-3662

DAVEY Resource Group

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Appendix A

Scope of Work

An inventory of all public trees within the Right of Way boundaries of the Northfield 2025 Reclamation and Overlay project was performed on April 8, 2024 by Tree Risk Assessment Qualified and ISA Certified Arborist Kyle Schansberg (MN-4758A). The data will be used to develop a tree preservation plan to provide insight on recommended tree fate, either save or remove, prior to construction. The data collected for each tree include tag number, location (X and Y coordinates), species, condition (0-9; 0 is dead, 9 is an excellent tree), diameter, and fate (save/remove). Additional notes regarding disease or pest presence, as well as visible defects, were also included.

Inventory Results

A total of 136 trees were inventoried for the Northfield 2025 Reclamation and Overlay Project. Of the 136 trees inventoried, almost 90% of them are distributed across 6 genera of trees: maple (49%), hackberry (15%), ash (10%), elm (7%), oak (7%), and spruce (7%). For a full breakdown of genera, see Table 1 in Appendix A. In a larger tree population such as this one, diversifying species is recommended. Ideally, no more than 10% of the population should be comprised of one genus. Increasing diversity will limit the impacts of insects and diseases that attack specific species of tree. An example of this is emerald ash borer (EAB), an insect targeting ash trees, which accounts for 10% of trees within the project areas alone.

Condition

Several factors were considered to determine the condition of each tree, including root characteristics; branch structure; trunk condition, canopy and foliage condition; as well as the presence of diseases or pests. The condition of each inventoried tree was rated on a scale of 0–9, 0 is equivalent to Dead and 9 is Excellent. The overall condition and health of the trees in the project boundaries is Good, with the majority of trees ranging from a 7-8 on condition rating (Figure 1). In general, Poor trees (2-4 rating) may be recommended for removal or require a strict management plan to correct structure or pest/disease damage. All Critical and Dead trees are recommended for removal. For a complete breakdown of condition, see Table 2 in Appendix A.

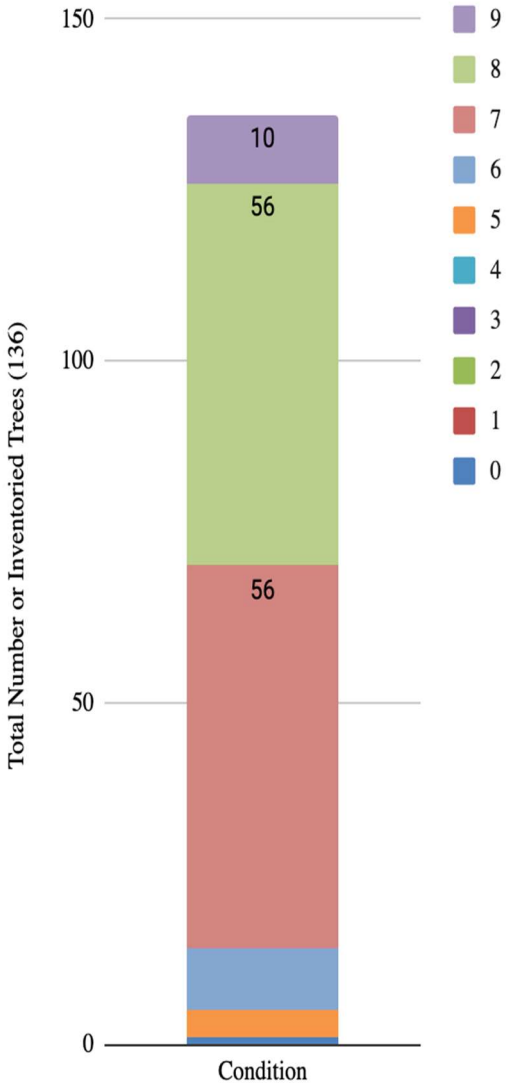

Figure 1.

Tree Management Recommendations

Recommended Maintenance

The Northfield 2025 Reclamation and Overlay Project calls for only nine trees to be removed, with the other 127 trees to be saved and maintained. Trees recommended for removal may be exhibiting poor health or condition and will not likely survive construction activity. Additionally in accordance with the city of Northfield's ash policy; all ash trees greater than 13 inches in diameter and in good health will be recommended for treatment, and all ash trees less than 13 inches in diameter are recommended for removal

regardless of health. Removal recommendations should be completed before construction begins to mitigate risk.

Throughout the project area, 127 trees are recommended for saving. The majority of the inventoried trees are young in age with over 50% of the population 10" or smaller in diameter. These young trees would benefit from a training prune aimed at improving form and structure to ensure a healthy tree for years to come. Only 13% of the inventoried trees are 21" or larger in diameter. These mature trees would benefit from cleaning prunes aimed at removing deadwood and correcting defects to help improve health and vigor.

Table 1. Projected maintenance for trees in the construction boundaries

Maintenance	Tree Totals
Removals	9
Recommended Treatment For EAB*	8
Save	127

*Ash trees greater than 13 inches in DBH and in good health recommended for treatment, all ash less than 13 inches in DBH recommended for removal.

Planting and Tree Diversity

As trees are removed, they should be replaced to maintain the tree population of Northfield. When replanting, consider species diversity. For example, it would not be recommended to plant any more maple, hackberry, or ash, as those are the most common trees in the project area and already consist of 75% of the entire population. The City of Northfield has a list of trees they recommend planting, this list can be found at the end of Appendix A.

Insects and Diseases

There are numerous insects and diseases that damage trees, some are more harmful than others, and some are easier to manage than others. The biggest liability for Northfield is Emerald Ash Borer (EAB). With the presence of EAB in Dakota and Rice County, a long-term strategy should be developed to ensure the remaining ash trees that could interfere with the roadway or trail are managed through a treatment or removal cycle to be cost effective. There are currently 8 Ash in the project boundaries greater than 13 inches in diameter recommended to be saved. Of those 8 ash trees, three are showing early signs and symptoms of EAB infestation and may be candidates for removal.

Conclusion

We receive many benefits from healthy trees, young or mature, from health benefits to environmental and economic benefits. Many studies have also shown a correlation between mature trees and property value. With the upcoming street and trail construction, Northfield should prioritize sustaining the young tree canopy, preserving the mature tree canopy, and public safety. With proper planning and care, the construction areas can continue to maintain a healthy tree population for years to come.

Appendix A

Table 1. Genus Breakdown

Genus composition across the Northfield 2025 Reclamation and Overlay Project

Genus	# of Trees
Maple	61
Hackberry	20
Ash	14
Elm	7
Oak	7
Spruce	7
Linden	6
Boxelder	5
Crabapple	3
Honeylocust	3
Black Walnut	1
Cherry	1
White Pine	1

Table 2. Condition Breakdown

Condition rating composition across the Northfield 2025 Reclamation and Overlay Project

Rating	# of Trees
9	10
8	56
7	56
6	9
5	4
4	0
3	0
2	0
1	0
0	1

Planting Recommendations

Within this list, the native varieties are strongly preferred. This list is divided into categories in part by height. Many species have a wide variety of heights depending on growing conditions and other factors. Consult an arborist for final selection.

City of Northfield Acceptable Tree and Shrub List:

Species	Allowed in areas regulated by the Land Development Code	Allowed in ROW/boulevard	Native*	Rated for Zone 5
Tall Stature Deciduous Trees				
Alder – Alnus hirsuta	X	X		
American Mountain Ash--Sorbus americana	X	X	X	
Aspen – Populus tremuloides	X	X	X	
Beech – Carpinus caroliniana	X	X	X	
Birch – Betula nigra	X	X	X	
Birch – Betula papyrifera	X	X	X	
Birch – Betula populifolia	X	X	X	
Birch – Betula platyphylla	X	X		
Buckeye – Aesculus glabra Willd.	X		X	
Catalpa – Catalpa speciosa	X		X	
Cherry – Prunus maackii	X			
Cherry – Prunus sargentii	X			

Pin Cherry – Prunus pensylvanica	X		X	
Black Cherry – Prunus serotina	X		X	
Chokecherry--Prunus virginiana	X		X	
Coffeetree – Gymnocladus dioicus	X	X	X	
Crabapple, Prairie – Malus ioensis	X		X	
Crabapple – Malus coronaria	X		X	
Dogwood – Cornus alternifolia	X		X	
Eastern Wahoo--Euonymus atropurpureus	X	X	X	
Elm – Ulmus japonica	X	X		
Elm – Ulmus X 'Cathedral'	X	X		
Elm – Ulmus americana	X	X	X	
Elm – Ulmus carpinifolia	X	X		
Elm – Ulmus X 'Patriot'	X	X		
Filbert – corylus colurna	X			X
Fringetree--Chionanthus virginicus (12-20 feet)	X	X	X	
Ginkgo – Ginkgo biloba (non-fruiting male)	X	X		

Hackberry – Celtis occidentalis	X	X	X	
Hawthorn--Crataegus crus-galli var. inermis *(25-35 feet)*	X		X	
Hickory – Carya ovata	X	X	X	
Bitternut Hickory – Carya cordiformis	X		X	
Honeylocust – Gleditsia triacanthos var. inermis	X	X	X	
Ironwood – Ostrya virginiana	X	X	X	
Katsura – Cercidiphyllum japonicum vas. Pendulum	X	X		X
Linden – Tilia americana	X	X	X	
Linden – Tilia cordata	X	X		
Linden – Tilia mongolica	X	X		
Maackia – Maackia amurensis	X	X		
Magnolia – Magnolia acuminata	X	X		X
Magnolia – Magnolia stellate	X	X		
Magnolia – Magnolia X loebneri	X	X		
Maple – Acer saccharum – Sugar Maple	X	X	X	

Maple – Acer rubrum—Red Maple	X	X	X	
Maple – Acer freemanii – hybrid Maple	X	X	X	
Maple – Acer tataricum	X	X		
Maple – Acer griseum	X	X		X
Maple – Acer palmatum --Japanese Maple	X			
Maple – Acer pseudosieboldianum – Korean Maple	X			
Oak – Quercus macrocarpa – Bur Oak	X	X	X	
Oak – Quercus alba – White Oak	X	X	X	
Oak – Quercus X macdanielli	X	X		
Oak – Quercus ellipsoidalis – Northern Pin Oak	X	X	X	
Oak – Quercus rubra – Red Oak	X	X	X	
Oak – Quercus bicolor – Swamp White Oak	X	X	X	
Plum – Prunus (many species; see comments)	X		Some, not all, are native. Natives below esp. recommended.	
Wild Plum – Prunus americana	X		X	

Redbud – Cercis canadensis – Northern Redbud	X		X	
Red Obelisk – Fagus sylvatica	X	X		X
Serviceberry – Amelanchier X grandiflora	X		X	
Serviceberry – Amelanchier laevis	X		X	
Sycamore – Platanus occidentalis	X	X	X	
Tulip Tree – Liriodendron tulipifera	X	X	X	
Tupilo – Nyssa sylvatica	X	X	X	
Yellowwood – Cladrastis kentukea	X	X	X	
Short Stature Deciduous Trees (<15 feet)				
Cherry, domestic for fruit (10-12 feet)	X			
Birch – Betula nigra – 'Little King'	X	X	X	
Crabapple – Malus (See above; some are less than 15')	X			
Hawthorn – Crataegus crusgalli var. inermis	X		X	
Lilac – Meyeri – Dwarf Korean Tree	X			
Ninebark, tree form – Physocarpus opulifolius	X	X	X	

Pear – Pyrus fauriei (15 feet)	X			
Viurnum, tree form – Viburnum opulus "Snowball"	X	X	X	
Tall Stature Deciduous Shrubs				
Azalea – Rhododendron (tall varieties)	X		Some, not all, are native	
Buckeye – Aesculus parviflora (8-12 feet)	X		X	
Chokeberry – Aronia melanocarpa	X		X	
American Highbush Cranberry – Viburnum opulus var. Americanum (8-15 feet)	X		X	
Elderberry – Sambucus canadensis (4-13 feet)	X		X	
False Indigo – Amorpha fruticose (3-12 feet)	X		X	
Hazelnut – Corylus americana, American (4-16 feet)	X		X	
Heptacodium – Heptacodium miconioides (15-20 feet)	X			X
Hydrangea – Hydrangea paniculata (8-15 feet)	X			

Leatherwood – Dirca palustris, 3-6 feet	X		X	
Lilac – Syringa (5-15 feet)	X			
Mockorange--Philadelphus, Snowbelle (3-4 feet)	X			
Ninebark--Physocarpus opulifolius	X		X	
Pagoda Dogwood--Cornus alternifolia (12-25 feet)	X		X	
Viburnum--Viburnum prunifolium (up to 30 feet)	X		X	
Viburnum--Viburnum lentago (10-25 feet)	X		X	
White Meadowsweet – Spiraea alba (2-6 feet)	X		X	
Winter Berry – Ilex verticillate (5-20 feet)	X		X	
Witch Hazel – Hamamelis virginiana (6-20 feet)	X		X	
Species	**Allowed in areas regulated by the Land Development Code**	**Allowed in ROW/boulevard**	**Native***	**Rated for Zone 5**
Conifers - Evergreen				
Arborvitae – Thuja occidentalis (many sizes)	X		X	

Fir – Abies (many sizes)	X		Some are native	
Hemlock – Tsuga canadensis (many sizes)	X		X	
Juniper – Juniperus (many sizes)	X		X	
Pine – Pinus (many sizes)	X		Some are native	
Spruce – Picea (many sizes)	X		Some are native	
Yew – Taxus (many sizes)	X		Some are native	
Conifers - Deciduous				
Larch/Tamarack – Larix laricina	X		X	

LIMITED WARRANTY

Davey Resource Group, Inc. ("DRG") provides this limited warranty ("Limited Warranty") in connection with the provision of services by DRG (collectively the "Services") under the agreement between the parties, including any bids, orders, contracts, or understandings between the parties (collectively the "Agreement").
Notwithstanding anything to the contrary in the Agreement, this Limited Warranty will apply to all Services rendered by DRG and supersedes all other warranties in the Agreement and all other terms and conditions in the Agreement that conflict with the provisions of this Limited Warranty. Any terms or conditions contained in any other agreement, instrument, or document between the parties, or any document or communication from you, that in any way modifies the provisions in this Limited Warranty, will not modify this Limited Warranty nor be binding on the parties unless such terms and conditions are approved in a writing signed by both parties that specifically references this Limited Warranty.

Subject to the terms and conditions set forth in this Limited Warranty, for a period of ninety (90) days from the date Services are performed (the "Warranty Period"), DRG warrants to Customer that the Services will be performed in a timely, professional and workmanlike manner by qualified personnel.

To the extent the Services involve the evaluation or documentation ("Observational Data") of trees, tree inventories, natural areas, wetlands and other water features, animal or plant species, or other subjects (collectively, "Subjects"), the Observational Data will pertain only to the specific point in time it is collected (the "Time of Collection"). DRG will not be responsible nor in any way liable for (a) any conditions not discoverable using the agreed upon means and methods used to perform the Services, (b) updating any Observational Data, (c) any changes in the Subjects after the Time of Collection (including, but not limited to, decay or damage by the elements, persons or implements; insect infestation; deterioration; or acts of God or nature [collectively, "Changes"]), (d) performing services that are in addition to or different from the originally agreed upon Services in response to Changes, or (e) any actions or inactions of you or any third party in connection with or in response to the Observational Data. If a visual inspection is utilized, visual inspection does not include aerial or subterranean inspection, testing, or analysis unless stated in the scope of work. When performing tree inventories or assessments, DRG will not be liable for the discovery or identification of non-visually observable, latent, dormant, or hidden conditions or hazards, and does not guarantee that Subjects will be healthy or safe under all circumstances or for a specified period of time, or that remedial treatments will remedy a defect or condition.

To the extent you request DRG's guidance on your permitting and license requirements, DRG's guidance represents its recommendations based on its understanding of and experience in the industry and does not guarantee your compliance with any particular federal, state or local law, code or regulation.
DRG may review information provided by or on behalf of you, including, without limitation, paper and digital GIS databases, maps, and other information publicly available or other third-party records or conducted interviews (collectively, "Source Information"). DRG assumes the genuineness of all Source Information. DRG disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any Source Information.
If it is determined that DRG has breached this Limited Warranty, DRG will, in its reasonable discretion, either: (i) re-perform the defective part of the Services or (ii) credit or refund the fees paid for the defective part of the Services. This remedy will be your sole and exclusive remedy and DRG's entire liability for any breach of this Limited Warranty. You will be deemed to have accepted all of the Services if written notice of an alleged breach of this Limited Warranty is not delivered to DRG prior to the expiration of the Warranty Period.

To the greatest extent permitted by law, except for this Limited Warranty, DRG makes no warranty whatsoever, including, without limitation, any warranty of merchantability or fitness for a particular purpose, whether express or implied, by law, course of dealing, course of performance, usage of trade or otherwise.

2025 Reclamation and Overlay Project

1. ROADWAY PAVEMENT CONDITION

Do you feel the pavement surface has deteriorated to the point it needs to be fixed?

YES	NO
18	15

1. Y - Street pavement on Washington only no concrete barrier for bike trails
2. N - Redo Maple Street
3. Y - Getting close any way
4. Y - In many areas around town
5. N - Already being fixed
6. Y - Fix the potholes please!
7. Y - Not on proposed work on Washington. Fremont St. west of Washington, especially west of Division
8. Y - Not with a trail or bikeway, waste of tax dollars! Leave our roads alone!
9. N - I'm on Woodley St.

2. STORM SEWER, STORM WATER DRAINAGE AND SURFACE EROSION

I have observed street ponding after a significant rain, located at:

YES
5

1. Y - Sometimes at Ford and Maple
2. Y - Near the storm drain between 2016 and 2100 Michigan Drive
3. Y - Sometimes on Ford St by the drains
4. Y - Only when drains are blocked
5. Y - 704 Ford St E
6. N - None - Only because people don't clean the street grates

I have observed areas of erosion along the boulevard at:

YES
3

1. Y - Erosion at S street sidewalk drain on Ames St just W of the elementary school. Looks like a sinkhole slowly developing the last few years
2. Y - 704 Ford St E
3. Y - Concrete crumbling at ped crossing Woodley / union

Does your home or business have a sump pump?

YES	NO
18	14

1. 1308 Washington St.
2. 538 Ford St E.
3. 708 Ford St.
4. 2016 Michigan Drive.
5. 825 Superior Dr.
6. 712 Ford St.
7. 801 Superior Dr.
8. 2317 Harbor Drive
9. 704 Ford St E.
10. 1405 Washington St.
11. 2315 Elianna Dr.
12. 704 Superior Drive
13. 2313 Harbor Dr.

If yes, would you be interested in a sump line extended beyond the curb to hook your sump pump discharge to?

YES	NO
7	15

1. Y - But would like to know if and what the cost would be for the homeowner
2. Maybe depends on any cost
3. I don’t know what this is but it seems good.
4. Only if at no cost to me
5. Not sure I need one

3. SANITARY SEWER

_____We have not experienced any problems with our sanitary sewer service.
_____We have experienced problems with our sanitary sewer service

YES	NO
0	35

4. WATERMAIN

_____We have not experienced any problems with our water service.
_____We have experienced problems with our water service

YES	NO

5. SIDEWALKS AND TRAILS (WALKING AND BIKING)

Are there any sidewalks, trails, or bikeways that you believe are missing that need to be added to the project or comments on the initial planned improvements?

YES	NO
7	26

If Yes, please describe .

1. N - Please do not pour those hideous concrete beam bike trails on Washington. They are ridiculous, and will be a hazard themselves. City council chose to ignore a significant number of voters who did not want them. Contrary to the mayor's comments, I knew exactly What I was signing in that petition. The whole treatment of the citizens by the council was shameful.

2. Y - From Division St. to Culvers, on the south side of Woodley. City planners, do not ruin our wide 4-lanes of space on Washington Street by thinking "modern" bike lanes would be safer or make Northfield look more "modern". The "elbow room" in Northfield

3. N - We are in 1300 - 1400 Washington St. The street hits dead-end. We don't need either sidewalk or trail. The Mayor told the residents that by adding bike trails we will have more tourists coming to town. Q 1) who would benefit by them? A few downtown business? 2) By increasing already high taxes to residents? 3) By cutting down / damaging beautiful trees that's part of the Northfield scenery -small town goodness. From what I received as an answer to the trail plan beyond the dead-end - there in Not a concrete plan as the property is still for sale and the City does not know if the trail can be built in the near future, Replacing the mature trees with tiny young ones wont do. Please keep the street improvement work and add the storm sewer that residents need rather than spending the budget on the unnecessary trail.

4. Y - Not missing but need repairs. The bike trails around the three ponds in SE Northfield are in terrible condition. They are filled with bumps, etc. from tree shoots coming up through the asphalt. Plus generally in bad condition.

5. N - the sidewalks and trails on Maple and Ford, including Superior, are just fine. I use them daily and never see cause for concern. Parts of sidewalk at 704 + 708 Ford street east should be lifted up. Ponding occurs especially after rains and in winter. It's a safety concern and hazard its a sheet of ice. 2 squares of sidewalk long east of both driveways. Lets be proactive and get this repaired before someone slips and falls. Thank you. P.S. Also the tree. On the boulevard is rotting and hasn't grown in 20 years since I been here I believe the tree wasn't planted right. With the ball of the tree, thanks. Also big crack in curb need to be FIXED.

6. Y - A pedestrian crossing should be added connecting the two spring creek walking paths on either side of Jefferson Parkway. Just west of Michigan Dr. (mid-block); and if this location is part of the project, a crosswalk with overhead lights (like on highway 3 and 19 by MOM Brand & Quarterback Club)is DESPERATELY needed off Raider Drive crossing Jefferson Parkway (by Bridgewater & the H.S.) and something should be done crossing 246 by the middle school

7. I'm ok with a sidewalk down one side at least of Washington. We have a lot of foot traffic with the schools

8. Y - All the walking paths around the Spring Creek ponds are In dire need of resurfacing. Willows breaking through surface adds to the challenge of walking without constant "eyes down".

9. N - We don't need the proposed ones either.

10. Y - Missing sloping access curbs on bike/hiking trails near Superior Dr. crossing around ponds. I was wondering the missing slanted curbs when crossing Superior Dr on the trail are on purpose, so cars wouldn't tempted to use the trail around the ponds. Is there another way to protect the trail from car traffic? The access of the trail crossing Superior Dr on the east side is tricky with the bike

11. Y - 704 Ford St. East I have a sewer drain at end of driveway. The cement apron is crack and lower than the sewer drain so water goes under the cement slab is sank down causing sink hole next to sewer under cement. There is a big dip in sidewalk puddles up every time it rains. In winter it is like a hockey rink. Both @ 704 Ford St E.

12. N - Too much has been put into bike lanes. Not needed. Don't do anymore!

13. N - Again I do not want this project to be completed near my home. Nobody likes these trails around town, as you have seen. I run down these roads currently they are a huge safety hazard, they are not practical! People avoid these types of roads. It is literally wasting our tax dollars! This is a violation of our constitution!

14. Y - It would be nice to have sidewalks on Hall Ave. between Huron Ct. and Michigan Dr. and Erie Dr. There are nice views of the town from up there!

6. GENERAL COMMENTS / QUESTIONS

1. I've attached my assessment of adding bike lanes outside of NFLD downtown. Washington St. from Woodley going south does NOT need / require or benefit from the proposed bike lane. It will no longer be a friendly place for a stroll with family or a run, scooter or bike ride.

2. Please keep the project as street surface replacement - no sidewalk or trail, and add the storm sewer to it. We would like our town environmental friendly by keeping those mature trees and also keeping bike trails away from residential area.

3. The spring creek walking path asphalt needs repairs due to heaving, potholes, cracks, and weeds growing up through the asphalt.

4. I hope the city gets a better contractor. The road (Ames St) in front of our house was redone before the last time Washington from Ames to Woodley was resurfaced + the pavement on Ames is in substantially better shape than the pavement on Washington. It seems pointless to put a median separated bike path on a dead end street. If the city is going to actually connect up Washington, then it makes more sense. And also given the level of traffic in Northfield painted bike lanes seem adequate, without the expense of putting in + maintaining the cement dividends. I haven't noticed stories about car/bike accident on any regular or frequent basis.

5. Our street docent get any bike traffic. We do NOT want to have a bike trail on our street. There's hardly anywhere to park to begin with! Property value will go down. No like trail on Maple either + hardly anyone uses the one by the school.

6. We have lots of ponding at the paved trail intersection behind our house.

7. I hope your not planning bikeways like were down on Maple St. These are terrible! I'd much rather see the 2 sections of gravel on Hall be paved so many new houses have been built out here and no work on that road. Please take care of that asap.

8. The proposed trail behind the homes on Archibald. 1. When will work start & end? 2. how close will path be to property line? 3. What will be cost to homeowners? 4. will the path connect with the present path? The present path does not extend behind my home when we bought our home, the neighbors on both sides stated that the path was supposed to be extended behind our houses to connect with Washington St & Division & that they had been assessed for the work/cost. We fear our privacy & Security will be compromised with this path requiring the cost of a work or fence.

9. Part of the sidewalk on Ford St E. could be lifted, there is significant ponding when it rains and creates a tripping hazard.

10. When you do resurface the streets, make sure that the sewer and storm drains are in good shape so that you don't have to fix them a year after repaving. Also, we need to fix the streets before putting in trails and bike paths. Bikers need to pay $10 a year per bike to help pay for the bike trails and streets.

11. Thanks for planning these improvements. Makes this City much more livable for a retired/no car person.

12. Many people park on both sides of Maple St. during soccer games making the driving lanes very narrow. I'm concerned if a bike lane is added to Maple St. by the soccer fields, will there be enough parking for soccer tournaments? Will people still try to park on Maple even if there is a bike lane? I also have concerns about light pollution. The new streetlights at the corner of Superior Dr + Maple are extremely bright + obtrusive.

13. Please choose these projects carefully. My property tax burden is already enough, and sill vanity projects like bike lanes that nobody uses have wasted enough money. Northfield isn't Minneapolis you cant continuously tax and spend. The people have had enough and I look forward to voting every single council member out and the mayor.

14. Thank you for making the City AWESOME!!!

15. Stop more bike lanes!

16. This area does NOT need sidewalks or bike trails. This was grandfathered in for no sidewalks in 2001. The City tried once to shove this down our throat AND they still aren't needed! My taxes have went up just shy of $400 in the last 2 years so NO MORE!!Besides the streets are narrow enough without putting in a bike lane! What part of grandfathered in do you people NOT understand. If you take out these 4 trees we will not have any shade from the west. Back in 2002 when power, water, new curb + gutters were put in we lost 2 big shade trees. We planted 3 new ones. Now you want to put in sidewalk and cut those 3 down. We have lived here for soon to be 50 years, on June 28, 1974. We planted the nice big white pine and our kids used to jump over it. Now you want to cut that down too in the name of a sidewalk. I am personally asking that you reconsider the project. As I said before this area has all been "grandfathered" for no sidewalks.

17. No to sidewalks. No to bike lanes, we are a dead end street.

18. We are NOT in favor of adding in more bike lanes especially on our street/neighborhood. It seems like it would cause more danger to our street + less parking.

19. I bike to work all yearlong and what makes my ride so dangerous is the potholes that are not getting fixed. I am totally against these trails that do not lead to anything. Taking down trees is no helping Northfield be carbon free - use the structure we already have. You will be disturbing a wild life area and a wetland area that is helping our neighborhood with heavy rains. We are in a flood plain that should not be disturbed.

20. We do not want bike trails or sidewalks. Why haven't the roads been fixed before I gets so bad that its now a big expense. Where is the street department. Don't know why we are filling out this survey - the city council doesn't listen to the tax payers anyway. The bike trails are maintained better than the streets - doesn't make a lot of sense. Have seen zero riders where there are new lanes - does that make sense?

21. We don't want trees removed on Maple St. a lot of people park on Maple St. using the Soccer fields. We don't want bicycle paths divided from main street with cement barriers like on other side of Maple (north). That's the dumbest thing we've ever seen.

22. Improved pedestrian crossing are Washington and Woodley is a good idea.

23. There are frequently many cars parked on Maple St. next to the soccer fields when games are being played. Trails installed on Maple street could interfere with this if the trail is on the existing road. I live on the corner of Superior and Harbor and I often see people blowing through the Harbor stop sign to get onto Superior. This could be a safety concern for a trail on Superior.

24. The bike path Ames to the south dead end on Washington seems unnecessary. The bikes can share the road as this is a quiet cul de sac. Similarly sidewalks don't need to be added.

25. There should be a four way stop sign at Jefferson Parkway and Maple St. New residential construction around this area has resulted in an increase in traffic and it has become a danger point for bikes and pedestrians.

26. Enough of these ridiculous bike trails that take up car lanes with the cement dividers!! I have barely seen bikers on Maple St unless it's the kids having fun on the dividers - dangerous !!! Currently when there's a soccer game along Maple St. Cars can park on both sides of the street with enough room for two way traffic easily. I could count on one hand the number of bikes I would be seeming that road most any given day!

27. To do either ped walkway or bike trail - example - Lincoln Ave So. Because of both have to drive over both sidewalk / bike lane and because of parking on other side of street, very hard to get out of driveway (too much concrete) Also - please look at T intersection at end of Lincoln Ave So. very dangerous - very fast cars coming thru.

1. Our driveway is quite steep. If you shorten it to put in a sidewalk or bike trail it's very possible we wont be able to get up it into our garage. This is extremely horrible possibility. We also have a camper that we park on the street when we are getting it ready for trips, we need to hook it up to our electric and water. If you take away parking on our side of the street, you end our camping trips. This is serious stuff for you to consider. A sidewalk and/or bike trail is stupid on our dead end and the entire neighborhood as well as others not in the immediate neighborhood feel the same way. The possibility of our driveway not working out for us is very frightening! Suppose we could sell out cars and bike everywhere on he new bike paths!!! Would be great in the winter. And during the wither there would be several times we wouldn't be able to get up a shortened and therefore steeper slippery driveway. We need contact from you to assess our driveway situation.

2. As a PhD statistician I am extremely disappointed that these decisions are being made without actual unbiased understanding of the desires of the community all samples appear biased so far. Also where is a proper explanation of the project from council pertaining rationale to the public

3. I moved to Northfield 2 years ago and purchased my house because location on a dead end with trees on front yard *you will take a food chunk of my yard trees and my driveway for what? *There are already existing paths west of us on Ames St. that could easily connect to facilitate continuous path. * Street parking is another concern.

4. Thank you for your work

5. I am concerned about the space to pack my vehicle and steepness of my driveway if part of my front lawn is converted to a bike path or sidewalk

6. We would like just cub and blacktop on our dead end street. No bike path. No sidewalk.

7. A bike path and/or sidewalk is unnecessary on the dead end of Washington St. The only traffic is those few houses that live there. Our kids don't need a sidewalk. No one wats to lose the trees lining the St. I do not want to lose my front yard and devalue my investment.

8. I really wish you would have had a clear presentation of the information. As it stands, people are angrily firing questions at the City reps and vey little info about the overall project Is being explained. I left.

7. **NEIGHBORHOOD MEETING #2 COMMENT CARDS**

1. My neighbors and I support the suggestion to postpone construction of a trail or path on Washington south of Ames Street until there is a connecting path through the field. Thank you!