



Title: Approval of Minnehaha Preserve Boardwalk Repair Plans and Authorization to Solicit Bids

Resolution number: 26-052

Prepared by: Michael Hayman, Director of Project Planning
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Reviewed by: Chuck Holtman, MCWD Counsel

Recommended action: The Board of Managers approves the repair plans for the Minnehaha Preserve Boardwalk and authorizes and authorizes the District Administrator to solicit bids for construction, with anticipated construction commencing early winter 2026.

Schedule:

May 2026:	Board authorizes bidding
Jun – July 2026:	Open bid solicitation window
Aug 2026:	Board awards contract
Nov – Mar 2027:	Boardwalk repairs

Budget considerations: Fund name and budget code: Project Maintenance and Land Management, 2003
Construction contract: \$1,858,182.00
Construction expenditures to date: \$1,573,959.15
Requested amount of funding: N/A

Past Board action: Res # 25-039 Minnehaha Preserve: Work Status, Contract Termination, Use of Bond
Res # 25-066 Engineering Services for Design and Construction Procurement

Summary:

On January 10, 2023, the Minnehaha Creek Watershed District (MCWD) and JTS Construction, Inc. (JTS) entered into a contract for the Minnehaha Creek Preserve Boardwalk Reconstruction project, located in the City of St. Louis Park.

JTS commenced work on the project in early March 2023 and continued construction activity on the site for approximately six weeks. In April and May 2023, during substantial completion inspection by SRF Consulting Group (SRF) as the MCWD's project engineer and the City of St. Louis Park ("City"), numerous defects in the construction and joining of underlying pile caps and joists were discovered throughout all parts of the project where the underlying structure could be visually accessed.

MCWD coordinated with SRF to document the deficiencies and communicate them to JTS for correction. On June 9, 2023, SRF issued a Defective Work Notice (DWN) to JTS, which identified six categories of defects that do not conform to project specifications. On June 15, 16, and 27, 2023, MCWD staff inspected all accessible boardwalk headers to further document the type and number of defects at each individual header. SRF issued a Supplemental Defective Work Notice (SDWN) on June 30, 2023, which expanded the defective work categories to 11 such categories. The SDWN identified the specifications applicable to each defective work category, the required correction to meet project design specifications, and the required process for JTS to follow if it desired to seek a solution other than simply completing the work in accordance with the specifications.

Over the following two years, JTS represented that it would correct nine of the 11 defective work categories to specification, and with the support of MCWD, SRF and the hardware manufacturer, sought approval to correct the other two categories by means of customized alternatives. SRF accepted the alternatives conditioned on JTS preparation of an installation plan describing appropriate methods, and the City building official advised that the City was prepared to approve them pending formal completion of its review process. At that time, JTS advised that it would not commence corrective work until MCWD either:

- a) Paid JTS \$237,397.86 (\$146,830.01 as the amount of an outstanding pay request that JTS submitted in May 2023, and \$90,567.85 in accrued retainage held by MCWD) and promised to pay an additional \$250,000 on JTS completion of the work; or
- b) Stated what it would agree to pay for "complete and final resolution" of contract performance.

On May 12, 2025, after further communications between JTS and MCWD failed to achieve progress, MCWD, through counsel, transmitted written notice to JTS and its performance bond issuer, Granite Re, Inc., that it was considering declaring JTS to be in default of the contract. In the notice, MCWD asserted and outlined the ways in which JTS had failed to comply with material terms of the contract.

MCWD requested a conference to review these conditions of default and on June 3, 2025, JTS, Granite Re, MCWD and SRF representatives met by virtual conference pursuant to the MCWD notice of consideration of default. In the conference, the MCWD Administrator reviewed the defective work categories and the history of work under the contract, and MCWD counsel reported that the Board authorized MCWD staff and counsel to negotiate with JTS, and with Granite Re and SRF if they were to participate, an agreement by which JTS would complete the work, subject to specified conditions.

As of June 26, 2025, those conditions had not been satisfied. At its meeting on that date, the Board adopted Resolution 25-039, directing MCWD legal counsel to terminate the contract for the Minnehaha Preserve Boardwalk reconstruction; declare a contractor default; initiate a claim against the performance bond; and take all other actions counsel deemed necessary and prudent under the contract and bond to protect MCWD's legal and financial interests. On July 2, 2025, counsel notified JTS that the contract was terminated, and submitted MCWD's claim on the performance bond to Granite Re.

Under the bond terms, Granite Re could elect to cooperate in MCWD's hiring of a contractor to perform repairs, could itself hire a contractor, or could investigate the bond claim and proffer to MCWD an amount representing its assessment of its liability under the bond. Granite Re advised MCWD that it would elect the last of these. In early August, the parties met at the site with a representative of Encompass, Inc., an engineering firm that Granite Re retained to investigate the claim and the necessary corrective work. On March 26, 2026, Granite Re denied MCWD's claim pending a determination of claims asserted by JTS in its lawsuit, described below.

JTS Lawsuit Against MCWD:

On September 30, 2025, JTS served on MCWD a summons and complaint, seeking payment of sums alleged due under the contract under a number of theories including breach of contract, violation of prompt payment required by statute, breach of good faith and fair dealing, unjust enrichment, and fraudulent misrepresentation. MCWD presented a claim to the League of Minnesota Cities Insurance Trust, which appointed counsel to represent MCWD in the litigation. MCWD subsequently filed its answer to the complaint. The answer includes cross-claims against SRF for indemnification and professional negligence, and against Granite Re demanding that it fulfill its obligations under the performance bond. Simultaneously, MCWD litigation counsel negotiated tolling agreements with SRF and Granite Re. These agreements preserve MCWD's claims against the two parties, and any claims they may have in response, but put these on hold pending MCWD defense against the JTS claims, orderly procedures under the bond claim and, potentially, completion of the repair work. As of now, the claims between JTS and MCWD will proceed in a normal fashion.

Design and Bid of Preserve Boardwalk Repairs:

Separately from the JTS lawsuit and Granite Re's processing of the MCWD bond claim, MCWD may proceed to retain a contractor to perform the corrective work and otherwise complete the Minnehaha Preserve Boardwalk Reconstruction Project. MCWD's interest is to complete the work as soon as possible, for two reasons. The first is to secure an installation that conforms to the design warranted by the engineer and avoids the need to interrupt public use due to

structural safety or liability concerns; at this time, SRF advises that the boardwalk remains sound for public use, but at a certain point it will not be able to render that professional opinion. The second is to facilitate resolution of outstanding legal and bond claims by allowing the parties to fix the total cost of the defective work corrections, and the project as a whole. However, because of the site environment, construction during cold season is highly preferred.

On November 8, 2025, the Board authorized a contract with SRF to prepare the design plans and specifications for the corrective work and to assist in administering the solicitation process. Since that time, SRF has completed the design documents and advanced preparation of the bid package and solicitation materials. Throughout this process, MCWD staff, SRF, and MCWD counsel have prioritized a careful contract solicitation process by which MCWD can be confident that the selected contractor is adequately skilled, understands the condition of the work, and has given careful thought to material procurement and the methods and procedures by which it will access the site and perform the corrective work.

The process as developed has MCWD proceeding with a “Best Value” solicitation process, under which the Board will select a contractor based not only on bid price, but also on a qualitative assessment of the contractor’s qualifications, experience, and proposed approach to the work. Staff believe this process is appropriate given that the corrective work itself is not complex, but that the time and cost to complete it will depend very much on the contractor’s approach to uncovering the work, cooperating with MCWD and the City to identify defects requiring correction, and having efficient methods of maintaining materials inventories and completing the corrections. Because the Best Value process requires additional evaluation and coordination beyond a standard sealed-bid solicitation, the process includes an approximately two-month bid and selection window. This schedule is intended to ensure sufficient time for contractor review, procurement planning, and coordination in advance of construction mobilization.

Consistent with earlier Board direction, SRF’s scope included preparation of final design plans and specifications, bid items, and cost estimates, as well as support for bid publication, pre-bid meetings, responses to bidder questions, bid opening and tabulation, and award support.

Construction observation services are not included in the current contract with SRF. The format and intensity of construction observation will depend significantly on the selected contractor’s proposed means and methods, as well as coordination with City inspection requirements. Staff anticipate returning to the Board with a recommended scope for construction observation services once the Best Value process is complete and the contractor team has been selected.

Next Steps and Timeline

At the May 28, 2026 Board of Managers meeting, staff will bring forward the final repair designs and recommend that the Board of Managers approve the designs and authorize the District Administrator to solicit construction bids. Staff intends to publish the bid on June 1, 2026 and return to the Board in August 2026 with a recommendation for awarding the construction contract and contracting for construction administration and oversight. MCWD will then contract with the selected contractor and commence construction in early winter 2026. Substantial completion is expected early 2027.

Attachments:

- Minnehaha Creek Preserve Boardwalk 2026 Repairs Construction Plans for Boardwalk Rehabilitation



RESOLUTION

Resolution: 26-052

Title: **Approval of Minnehaha Preserve Boardwalk Repair Plans and Authorization to Solicit Bids**

- WHEREAS on January 10, 2023, the Minnehaha Creek Watershed District (MCWD) and JTS Construction, Inc. (JTS) entered into a contract for the Minnehaha Creek Preserve Boardwalk Reconstruction project ("Project"), located in the City of St. Louis Park ("City");
- WHEREAS SRF Consulting Group (SRF) as the MCWD's project engineer and the City, during substantial completion inspection, observed numerous defects in the construction and joining of underlying pile caps and joists throughout all parts of the project where the underlying structure could be visually accessed, which observations were supplemented in subsequent additional inspections;
- WHEREAS in June 2023, SRF issued a Defective Work Notice and a Supplemental Defective Work Notice, identifying 11 categories of defective work and directing that JTS correct the work to project specifications;
- WHEREAS JTS represented that it would correct nine of the 11 defective work categories to specification, and with the support of MCWD, SRF and the hardware manufacturer, sought approval to correct the other two categories of defective work by means of customized alternatives, following which SRF accepted the alternatives conditioned on JTS preparation of an installation plan describing appropriate methods, and the City building official advised that the City was prepared to approve them pending formal completion of its review process;
- WHEREAS thereafter, JTS was unwilling to prosecute the corrective work and on June 26, 2025, after notice and procedures specified in the contract and the performance bond issued for the work by Granite Re, Inc., the Board of Managers ("Board") directed MCWD counsel to terminate the contract and proceed to a claim against the performance bond, which counsel effected on July 2, 2025;
- WHEREAS pursuant to the terms of the performance bond, Granite Re elected not to participate in the selection of a contractor to complete the contract, but investigated the MCWD bond claim and thereafter advised MCWD that pending the resolution of claims made by JTS in its lawsuit against MCWD, it is denying the MCWD claim;
- WHEREAS MCWD therefore may proceed independently to retain a contractor to complete the work, and it is in the interest of the Board that the work be completed without undue delay, so that MCWD is able to provide for public use a facility under designer warranty for structural soundness and so that the amount to which it is entitled under the performance bond and the contract is determined;
- WHEREAS on November 8, 2025, the Board authorized a contract with SRF to prepare the design plans and specifications for the corrective work and to assist in administering the bid solicitation process, and since that time, SRF has completed the design documents and bid package;
- WHEREAS the bid process as developed has MCWD proceeding with a "Best Value" solicitation process, under which the Board will select a contractor based not only on bid price, but also on a qualitative assessment of the contractor's qualifications, experience, and proposed approach to the work;

WHEREAS on May 28, 2026, the Board reviewed the final Minnehaha Preserve Boardwalk repair plans;

NOW, THEREFORE, BE IT RESOLVED that the Minnehaha Creek Watershed District Board of Managers approves the final repair plans for the Minnehaha Preserve Boardwalk Rehabilitation and authorizes the District Administrator, on advice of counsel, to solicit bids.

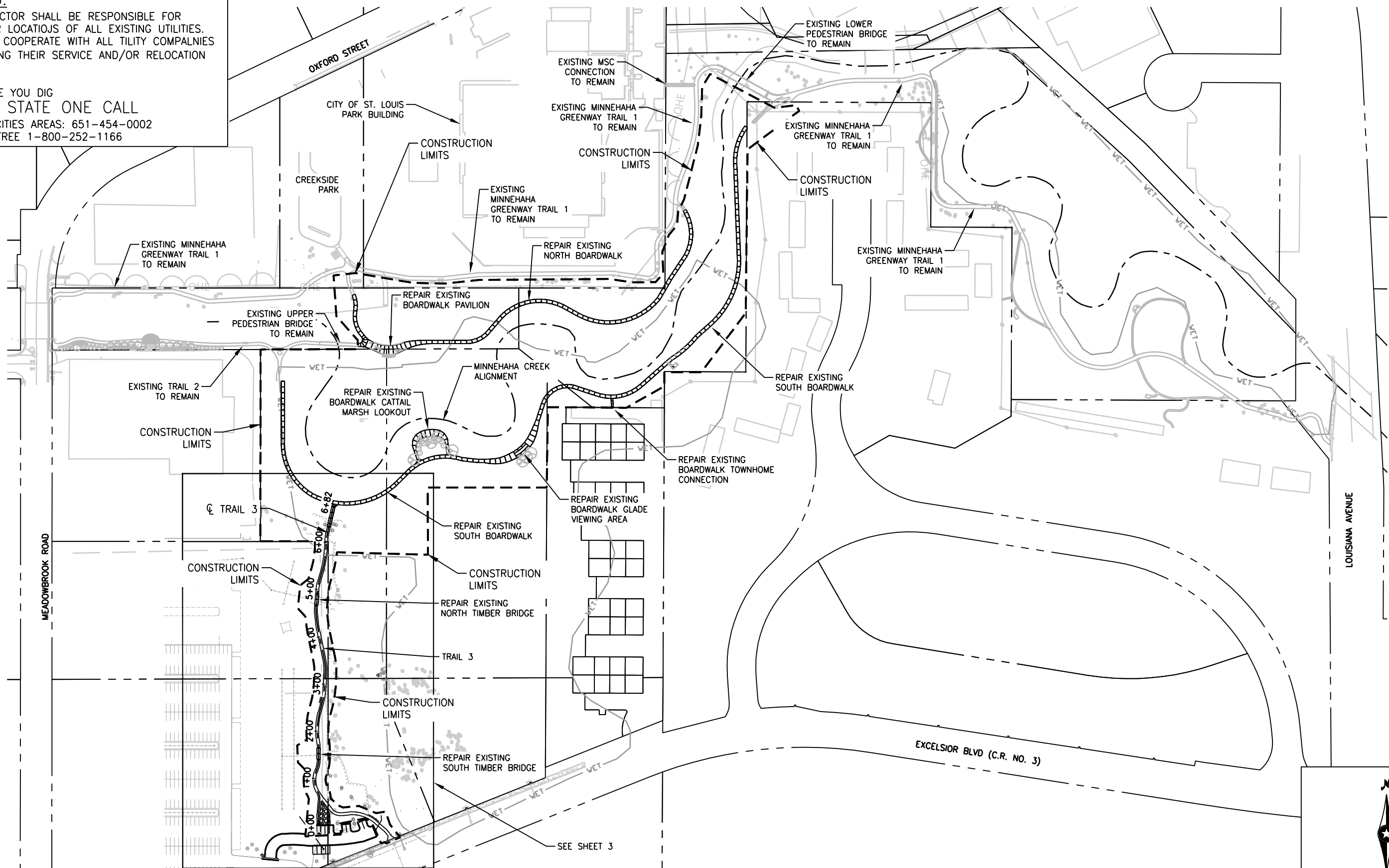
Resolution Number 26-052 was moved by Manager _____, seconded by Manager _____.
Motion to adopt the resolution ___ ayes, ___ nays, ___ abstentions. Date: 5/28/2026

Secretary Date: _____

DRAFT

WARNING:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES

CALL BEFORE YOU DIG
GOPHER STATE ONE CALL
 TWIN CITIES AREAS: 651-454-0002
 TOLL FREE 1-800-252-1166



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NO	DATE	BY	CKD	APPR

I hereby certify that this plan, specification, or 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.
 Print Name: CASEY E. BLACK
 Date: xx/xx/2026 License # 49163

DRAWN BY
E. JOHNSON
 DESIGNED BY
C. BLACK
 CHECKED BY
X
 COMM. NO. 15470

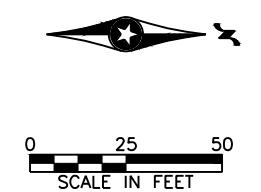
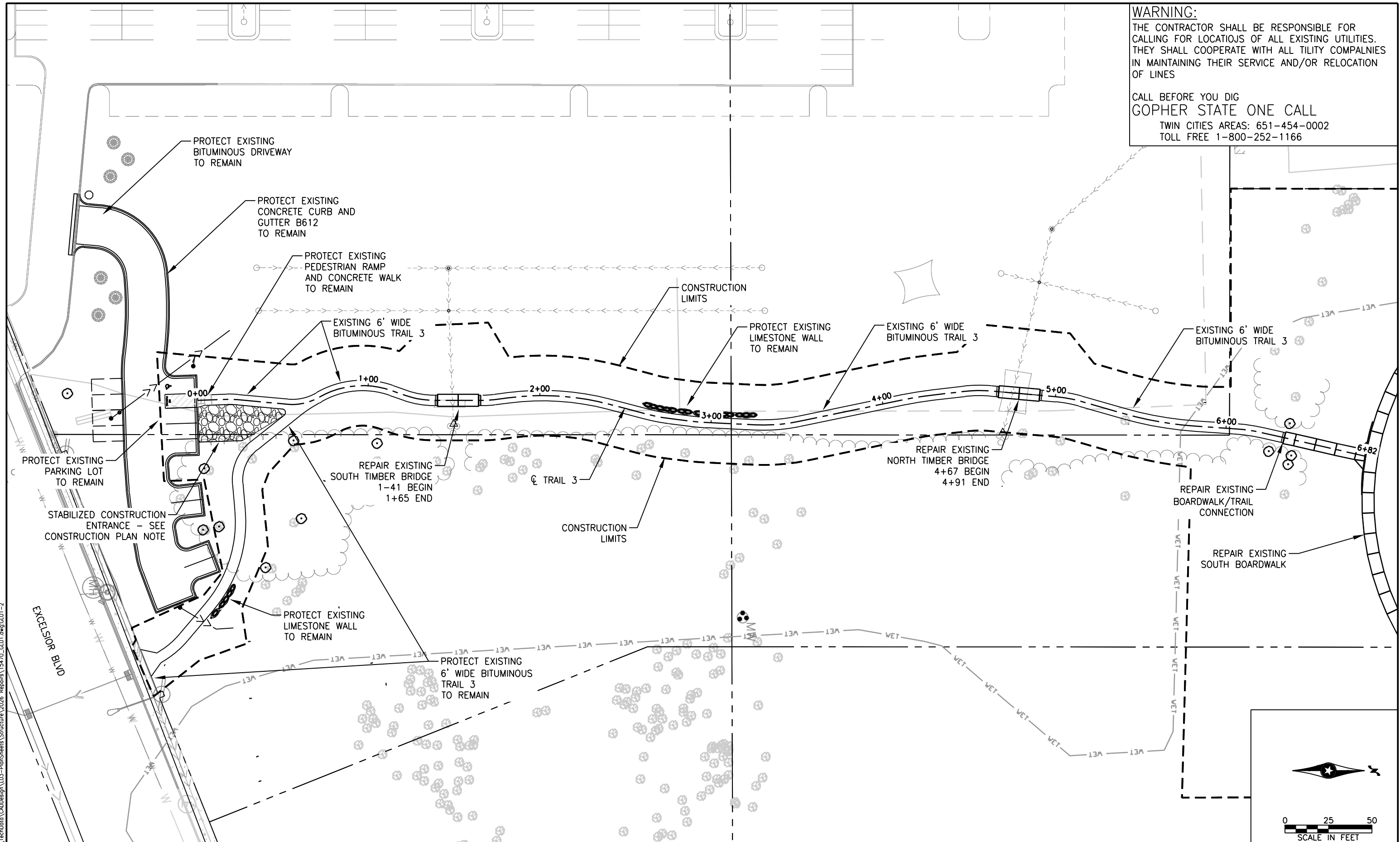


MINNEHAHA CREEK WATERSHED DISTRICT
 MINNEHAHA CREEK PRESERVE BOARDWALK 2026 REPAIRS
 GENERAL LAYOUT

SHEET
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NO	DATE	BY	CKD	APPR

I hereby certify that this plan, specification, or 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.
 Print Name: CASEY E. BLACK
 Date xx/xx/2026 License # 49163

DRAWN BY
E. JOHNSON
 DESIGNED BY
C. BLACK
 CHECKED BY
X
 COMM. NO. 15470



MINNEHAHA CREEK WATERSHED DISTRICT
 MINNEHAHA CREEK PRESERVE BOARDWALK 2026 REPAIRS
 GENERAL LAYOUT

SHEET
 3
 OF
 7

A SUMMARY OF QUANTITIES FOR BOARDWALK & BRIDGES			
ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
2011.601	WORK PLANS	LUMP SUM	1.0
2021.501	MOBILIZATION	LUMP SUM	1.0
2050.601	MATERIALS ALLOWANCE	ALLOWANCE	1.0
2050.601	REPAIR ALLOWANCE	ALLOWANCE	1.0
2104.601	DECK REMOVALS SPECIAL	LUMP SUM	1.0
2403.602	INSTALL RESTRAINED BEARING PLATE	EACH	500
2403.602	INSTALL JOIST HANGER	EACH	1100
2403.602	INSTALL JOIST EXTENSION BRACKET	EACH	90
2403.602	INSTALL TIMBER JOIST	EACH	20
2403.602	INSTALL TIMBER PILE BENT	EACH	4
2452.602	INSTALL HELICAL PILE PLATE	EACH	20
2575.601	EROSION CONTROL	LUMP SUM	1.0
2575.601	SITE RESTORATION	LUMP SUM	1.0

NOTE 1
NOTE 2
NOTE 3
NOTE 4
NOTE 5
NOTE 6
NOTE 7
NOTE 8

NOTES:

SEE SPECIAL PROVISIONS DIVISION S AND SB FOR ALL XXXX.6XX SERIES PAY ITEMS FOR ADDITIONAL REQUIREMENTS.

SEE SPECIAL PROVISIONS FOR INFORMATION RELATED TO THE MATERIALS ALLOWANCE IN THE CONTRACT.

SEE SPECIAL PROVISIONS FOR INFORMATION RELATED TO THE REPAIRS ALLOWANCE IN THE CONTRACT.

- 1 ITEM INCLUDES PREPARING AND SUBMITTING PLANS REQUIRED IN THE SPECIAL PROVISIONS TO THE ENGINEER FOR REVIEW AND APPROVAL.
- 2 ITEM INCLUDES PARTIAL OR FULL TIMBER DECK REMOVALS, INSTALLING HANGERS WITH FASTENERS TO MAXIMUM FASTENER SCHEDULE AND REINSTALLATION OF TIMBER DECK.
- 3 INCLUDES UNSECURING, RAISING, LOWERING AND RESECURING JOISTS TO ALLOW FOR INSTALLATION OF RESTRAINED BEARING PLATE INCLUDED.
- 4 INCLUDES REMOVAL AND DISPOSAL OF INPLACE JOIST HANGER AND FASTENERS. INCLUDES INSTALLING NEW HANGERS AND REPAIRING EXISTING HANGERS WITH FASTENERS TO MAXIMUM FASTENER SCHEDULE.
- 5 INCLUDES UNSECURING, ADJUSTING AND RESECURING JOIST TO ALLOW FOR INSTALLATION OF JOIST EXTENSION BRACKET INCLUDED.
- 6 INCLUDES REMOVAL AND DISPOSAL OF EXISTING TIMBER JOIST AND REPLACEMENT WITH NEW TIMBER JOIST.
- 7 INCLUDES REMOVAL AND DISPOSAL OF EXISTING TIMBER PILE BENT AND REPLACEMENT WITH NEW TIMBER PILE BENT.
- 8 INSTALL FULL PLATE WASHERS AND HARDWARE AT HELICAL PILES WHERE REQUIRED. INCLUDES REMOVAL AND DISPOSAL OF NON-CONFORMING HARDWARE AND REPLACEMENT WITH MANUFACTURE'S RECOMMENDED HARDWARE.

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NO	DATE	BY	CKD	APPR

I hereby certify that this plan, specification, or 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.
 Print Name: CASEY E. BLACK
 Date xx/xx/2026 License # 49163

DRAWN BY
E. JOHNSON
 DESIGNED BY
C. BLACK
 CHECKED BY
X
 COMM. NO. 15470



MINNEHAHA CREEK WATERSHED DISTRICT
 MINNEHAHA CREEK PRESERVE BOARDWALK 2026 REPAIRS
 STATEMENT OF ESTIMATED QUANTITIES

SHEET
4
OF
7

CONSTRUCTION / SOILS NOTES

GRADING, BASE AND SURFACE

1. STRIP SOD AND TOPSOIL FROM AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE FOR SOIL. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 6". ALL TOPSOIL STRIPPING WILL BE CONSIDERED RESTORATION.
2. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
3. TRAFFIC LANES TO BE USED DURING CONSTRUCTION MUST BE DELINEATED TO KEEP VEHICLES A SAFE DISTANCE AWAY FROM ADJACENT CONSTRUCTION. THE DELINEATION SHOULD COINCIDE WITH POINTS ESTABLISHED BY PROJECTING A 1B:2H OR GREATER (FLATTER) SLOPE BETWEEN THE EDGE OF THE TRAFFIC SURFACING AND THE BOTTOM OF THE EXCAVATION
4. ALL EROSION CONTROL MEASURES DETAILED IN THE STANDARD PLANS IN THE 2022 PRESERVE BOARDWALK RECONSTRUCTION PLANS INCLUDED AS ATTACHMENTS TO THE BID DOCUMENTS APPLY TO THIS PROJECT.
5. EROSION CONTROL IS INCLUDED IN THE BID ITEM RESTORATION.

REMOVALS

6. PROVIDE FOR THE REMOVAL AND DISPOSAL OF ANY INPLACE SURFACING, GUARDRAIL, OTHER STRUCTURES OR DEBRIS THAT WOULD INTERFERE WITH CONSTRUCTION. ALL SUCH MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED OR DISPOSED OF OUTSIDE OF THE RIGHT OF WAY IN ACCORDANCE WITH SPEC. 3104.3.D.
7. ALL TREES AND FOLIAGE NOT INDICATED FOR REMOVAL ARE TO REMAIN AND SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. SEE MNDOT STANDARD PLANS 5-297.302 FOR PROTECTION AND RESTORATION OF VEGETATION REQUIREMENTS. PROTECT ALL TREES THAT ARE NOT MARKED FOR REMOVAL. (INCIDENTAL)
8. CONSTRUCTION SUPPLIES, MATERIALS, SOILS, EQUIPMENT, AND VEHICLES SHALL NOT BE STORED OR OPERATED WITHIN THE DRIP LINE OF ANY PUBLIC TREE WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY FORESTER. IF THE AREA WITHIN THE DRIP LINE OF A TREE MUST BE USED FOR CONSTRUCTION ACTIVITIES, PROTECTIVE MEASURES APPROVED BY THE CITY FORESTER SHALL BE TAKEN TO REDUCE SOIL COMPACTION AND PROTECT TREES FROM DAMAGE.
9. BOULEVARD AND PARKLAND SOILS ARE TO BE PROTECTED FROM COMPACTION. SOIL COMPACTION DUE TO THE CONSTRUCTION ACTIVITIES SHALL BE CORRECTED TO THE SATISFACTION OF, AND AT NO COST, TO THE OWNER.

TURF ESTABLISHMENT

10. ALL TURF ESTABLISHMENT REQUIREMENTS FOUND IN THE CONSTRUCTION & SOILS NOTES IN THE 2022 PRESERVE BOARDWALK RECONSTRUCTION PLANS INCLUDED AS ATTACHMENTS TO THE BID DOCUMENTS APPLY TO THIS PROJECT.
11. TURF ESTABLISHMENT IS INCLUDED IN THE BID ITEM RESTORATION.

MISCELLANEOUS

12. ALL MISCELLANEOUS REQUIREMENTS FOUND IN THE CONSTRUCTION & SOILS NOTES IN THE 2022 PRESERVE BOARDWALK RECONSTRUCTION PLANS INCLUDED AS ATTACHMENTS TO THE BID DOCUMENTS APPLY TO THIS PROJECT.
13. PROJECT CONTACTS IDENTIFIED IN THE 2022 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ARE UPDATED AS FOLLOWS:
 MINNEHAHA CREEK WATERSHED DISTRICT (OWNER): JAMES WISKER, 952-641-4509
 CITY OF ST. LOUIS PARK (CITY): ERICK FRANCIS, 952-924-2690
 MINNESOTA DEPARTMENT OF NATURAL RESOURCES (DNR): PATTY FOWLER, 612-708-7732
 MINNESOTA POLLUTION CONTROL AGENCY (MPCA): JOSH NORMAN, 651-757-2389 OR 651-296-6300
 SRF CONSULTING GROUP, INC. (SRF): ANDREW TOAY, 763-249-6736

BOARDWALK CONSTRUCTION NOTES

CONSTRUCTION REQUIREMENTS SHALL CONFORM TO SPEC. 2403 EXCEPT AS NOTED IN SPECIAL PROVISIONS.

ALL HARDWARE, FASTENERS, AND CLIPS ARE TO BE GALVANIZED PER MNDOT 3392.

ALL DRILLING AND CUTTING OF TIMBER EXCEEDING 2" IN THICKNESS SHALL BE COMPLETED BEFORE PRESSURE TREATMENT UNLESS OTHERWISE AUTHORIZED BY ENGINEER.

SEE SPECIAL PROVISIONS FOR ALL XXXX.6XX SERIES PAY ITEMS FOR ADDITIONAL REQUIREMENTS.

THE BAR SIZES SHOWN IN THIS PLAN ARE IN U.S. CUSTOMARY DESIGNATIONS.

BAR MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301.

NO REMOVALS WILL BE PERMITTED UNTIL REMOVAL LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

DIMENSIONING AND STATIONING OF THE IN PLACE STRUCTURES AS SHOWN IN THE PLANS ARE APPROXIMATE AND BASED ON THE ORIGINAL 2013 AND 2017 PLANS. CONTRACTOR SHALL TAKE SUFFICIENT MEASUREMENTS TO FIELD VERIFY COMPATIBILITY BETWEEN IN PLACE STRUCTURE AND PROPOSED WORK.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS ON ALL PROJECT WORK.

BOARDWALK REMOVAL NOTES:

REPAIR OF STRUCTURES IS LIMITED TO THE NORTH AND SOUTH BOARDWALKS, THEIR CONNECTED FEATURES AND THE NORTH AND SOUTH TIMBER BRIDGES. NO WORK TO BE PERFORMED ON THE UPPER OR LOWER PEDESTRIAN BRIDGES.

NO HARDWARE SUCH AS SCREWS, BOLTS, WASHERS, NUTS OR JOIST HANGERS ARE TO BE REUSED FOR CONSTRUCTION. ALL REPLACEMENT HARDWARE SHALL BE SIMILAR IN-KIND OR AS CALLED FOR IN THE PLANS.

HELICAL PIERS SHALL REMAIN AND BE PROTECTED TO SUPPORT CONSTRUCTION. ANY PIERS DAMAGED BY THE CONTRACTOR DURING REPAIRS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

BOARDWALK GENERAL NOTES:

COMPLETE THE REPAIRS MEETING THE REQUIREMENTS FOUND IN THE GENERAL NOTES ON SHEET B2 OF THE 2022 PLANS AVAILABLE IN THE ATTACHMENTS TO THE BID DOCUMENTS.

COMPLY WITH SPEC. 2403.3.D. CAREFULLY TRIM AND COAT TREATED TIMBERS WITH A PRESERVATIVE AS CALLED FOR IN THIS PLAN IN ACCORDANCE WITH 3491, "PRESERVATIVES AND PRESERVATIVE TREATMENT OF WOOD PRODUCTS" AND MEETING THE REQUIREMENTS OF AWPA M4, STANDARD FOR THE CARE OF PRESERVATIVE-TREATED WOOD PRODUCTS. AWPA M4, SECTION 6.2 IS MODIFIED TO REQUIRE THAT ALL WOOD SPECIES BE FIELD TREATED IN ACCORDANCE WITH AWPA M4, SECTION 6.1.

DESIGN LOADS & NOTES FOUND ON SHEET B2 OF THE 2022 PLANS AVAILABLE IN THE ATTACHMENTS TO THE BID DOCUMENTS SHALL APPLY TO THE REPAIR WORK TO BE COMPLETED IN THIS CONTRACT.

DESIGN DATA

DESIGNED IN ACCORDANCE WITH 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

DESIGNED IN ACCORDANCE WITH 2009 AND CURRENT INTERIM AASHTO LRFD GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES.

PEDESTRIAN LIVE LOAD = 0.090 KSF
 SEE SHEET B2 DESIGN LOADS & NOTES FOR MORE INFORMATION.

NO TRUCK VEHICULAR LIVE LOAD

MATERIAL DESIGN PROPERTIES:
 REINFORCED CONCRETE:
 f'c = 4 KSI CONCRETE
 fy = 60 KSI PLAIN & EPOXY COATED BARS
 n = 8 FOR REINFORCEMENT BARS

WOOD:
 Fbo = 1.55 KSI PILE CAPS/BENTS
 DOUGLAS FIR, SELECT STRUCTURAL, FULL SAWN
 Fbo = 1.55 KSI JOISTS, STRINGERS & BRACING
 DOUGLAS FIR, SELECT STRUCTURAL, FULL SAWN
 Fbo = 1.55 KSI DECKING
 DOUGLAS FIR, S1SE, NO. 1 OR BETTER
 Fbo = 1.55 KSI FRAME, RAILING POSTS & BEAMS
 DOUGLAS FIR, SELECT STRUCTURAL, FULL SAWN
 Fbo = 0.85 KSI RAIL POST, RAILING, CLEAT & CAP
 SOUTHERN YELLOW PINE, S4S, NO. 2 OR BETTER
 Fbo = 0.85 KSI CURB & SCUPPER BLOCK
 SOUTHERN YELLOW PINE, S4S, NO. 2 OR BETTER

STRUCTURAL STEEL:
 Fy = 36 KSI STRUC. STEEL SPEC. 3306 (PAINTED)
 GALVANIZED PER SPEC. 3391.
 PAINT, COLOR TO BE PROVIDED BY OWNER

WOOD PRESERVATIVE TREATMENT:
 UC4C = USAGE F4 PER SPEC. 3491
 MODIFY TO USE CuN, COPPER NAPHTHENATE
 APPLY TO BENTS, JOISTS, STRINGERS, BRACING,
 DECKING, POSTS & FRAME
 UC4A = USAGE F1 PER SPEC. 3491 (MODIFIED)
 APPLY TO RAILING POSTS, RAILING, CLEAT, CAP
 CURB & SCUPPER BLOCK

TIMBER CONNECTORS & HARDWARE (GALVANIZED)
 HANGERS, BOLTS & NUTS PER SPEC. 3391.

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NO	DATE	BY	CKD	APPR

I hereby certify that this plan, specification, or 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.
 Print Name: CASEY E. BLACK

Date xx/xx/2026 License # 49163

DRAWN BY
E. JOHNSON

DESIGNED BY
C. BLACK

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X

COMM. NO. **15470**



MINNEHAHA CREEK WATERSHED DISTRICT
 MINNEHAHA CREEK PRESERVE BOARDWALK 2026 REPAIRS
 CONSTRUCTION & SOIL NOTES

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5
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7

GENERAL REPAIR NOTES:

ORIGINAL CONSTRUCTION OF THE MINNEHAHA CREEK PRESERVE BOARDWALK WHICH INCLUDES THE NORTH AND SOUTH BOARDWALKS OCCURRED IN 2013. AS-BUILT PLANS ARE ON FILE AND MAY BE MADE AVAILABLE UPON REQUEST TO THE OWNER.

ORIGINAL CONSTRUCTION OF THE MINNEHAHA CREEK PRESERVE ENHANCEMENT PROJECT WHICH INCLUDES THE NORTH AND SOUTH TIMBER BRIDGES OCCURRED IN 2017. AS-BUILT PLANS ARE ON FILE AND MAY BE MADE AVAILABLE UPON REQUEST TO THE OWNER.

ORIGINAL HELICAL PILES AND BENT SADDLES WERE INSTALLED WITH THE WORK PERFORMED IN 2013 AND 2017. CHANCE HELICAL PIERS WERE INSTALLED BY ATLAS FOUNDATION COMPANY. PRODUCT INFORMATION IS AVAILABLE AT: [HTTPS://WWW.ATLASFOUNDATION.COM/](https://www.atlasfoundation.com/)

TIMBER AND CONCRETE ELEMENTS FROM THE 2013 AND 2017 PROJECTS WERE REPLACED AS PART OF THE 2022 MINNEHAHA CREEK PRESERVE BOARDWALK RECONSTRUCTION PROJECT. CONTRACT DOCUMENTS INCLUDING PLANS AND TECHNICAL SPECIFICATIONS FROM THAT PROJECT ARE INCLUDED IN THE ATTACHMENTS TO THE BID DOCUMENTS AND ARE REFERENCED IN THE FOLLOWING NOTES.

REPAIRS AS DESCRIBED BELOW ARE TO PORTIONS OF THE WORK COMPLETED IN 2022.

MITEK IS THE MANUFACTURER OF THE JOIST HANGERS INSTALLED IN 2022 AND IS REFERENCED IN THE FOLLOWING NOTES AS MANUFACTURER, UNLESS OTHERWISE NOTED. MITEK IHF23925 STANDARD AND INVERTED FLANGE HANGERS HAVE BEEN INSTALLED. INVERTED FLANGE HANGERS ARE TYPICALLY INSTALLED AT THE FASCIA JOISTS IN EACH SPAN. PRODUCT INFORMATION IS AVAILABLE AT: [HTTPS://WWW.MITEK-US.COM/](https://www.mitek-us.com/)

FOR NEW STANDARD OR CUSTOM MATERIAL PROCUREMENT FROM MITEK (MANUFACTURER), THE MANUFACTURER HAS INDICATED THAT SEQUENCED OR ROLLING ORDERS CAN BE REQUESTED TO ASSIST WITH THIS PROJECT. PRIOR COORDINATION HAS INDICATED THAT CUSTOM HANGERS COULD BE AVAILABLE WITHIN TWO WEEKS OF ORDERING FOR DESIGN AND FABRICATION AND THAT UP TO ONE HUNDRED (100) COULD BE PRODUCED PER WEEK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE MATERIAL PROCUREMENT AND CONFIRM LEAD TIMES WITH THE MANUFACTURER AS LEAD TIMES CAN VARY THROUGHOUT CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR THEIR MEANS AND METHODS AND WORK PLAN.

THE PROJECT ASSUMES THE CONTRACTOR WILL SALVAGE AND INSTALL THE TIMBER RAILING AND TIMBER TOE RAIL AND PROTECT THEM FROM DAMAGE DURING REPAIRS.

TIMBER DECKING MAY BE REMOVED AND REINSTALLED A MAXIMUM OF ONE TIME BEFORE THE DECKING BOARD REQUIRES REPLACEMENT.

THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING IN-PLACE WORK AND MATERIALS FROM DAMAGE FROM REPAIRS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGE TO WORK OR MATERIAL DETERMINED TO BE A RESULT OF CONTRACTOR NEGLIGENCE.

INSPECTION NOTES:

MINNEHAHA CREEK WATERSHED DISTRICT STAFF HAVE INSPECTED A MAJORITY OF THE 2022 CONSTRUCTION CONDITIONS AND MAINTAIN A DATABASE OF KNOW REPAIRS. INSPECTIONS WERE CONDUCTED ON RAISED PORTIONS OF THE BOARDWALK AND OTHER ACCESSIBLE AREAS. THESE AREAS ARE GENERALLY AREAS WITH TIMBER RAILING. LOWER PORTIONS OF THE BOARDWALK WERE NOT ACCESSIBLE BY STAFF FOR POST-CONSTRUCTION INSPECTION. THESE AREAS ARE GENERALLY AREAS WITH CURB RAILS AND LARGE GATHERING SPACES SUCH AS THE PAVILION. THESE AREAS WILL NEED TO BE UNCOVERED, INSPECTED FOR DEFECTS AND NECESSARY REPAIRS QUANTIFIED PRIOR TO INITIATING REPAIRS.

TO COMPLETE INSPECTIONS, THE CONTRACTOR WILL NEED TO REMOVE LIMITED DECKING NEAR THE PILE BENTS FOR INSPECTION AND MEASUREMENTS. THE CONTRACTOR IS EXPECTED TO COORDINATE WORK WITH THE OWNER'S INSPECTOR TO IDENTIFY NECESSARY REPAIRS AND QUANTIFY NEEDED MATERIALS PRIOR TO REPAIRS BEING MADE.

THE OWNER'S INSPECTOR WILL CONDUCT INSPECTIONS TO VERIFY COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

THE CITY'S INSPECTORS WILL CONDUCT INSPECTIONS TO VERIFY COMPLIANCE WITH CITY PERMITS.

THE CONTRACTOR WILL COORDINATE INSPECTIONS WITH BOTH THE OWNER'S AND CITY'S INSPECTORS PRIOR TO COVERING WORK REQUIRING INSPECTION.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INSPECTIONS. THE OWNER'S INSPECTOR WILL BE AVAILABLE AS NEEDED. IT IS ANTICIPATED THAT CITY INSPECTORS CAN BE AVAILABLE DAILY UP TO TWICE A DAY FOR SITE VISITS. ANTICIPATE ONE SITE VISIT IN THE MORNING AND ONE IN THE AFTERNOON. ON-GOING COMPLETION OF QUALITY WORK BY THE CONTRACTOR MAY RESULT IN THE POTENTIAL FOR MORE FLEXIBLE CITY INSPECTION REQUIREMENTS AS WORK PROGRESSES.

MAXIMUM FASTENER SCHEDULE (DWC1)

ALL JOIST HANGERS WERE APPROVED ON THE CONDITION THEY BE INSTALLED WITH FASTENERS TO THE MANUFACTURER'S MAXIMUM FASTENER SCHEDULE. INSPECTIONS HAVE DETERMINED THAT MANY JOIST HANGERS WERE INSTALLED WITH FEWER FASTENERS THAN REQUIRED.

THE CONTRACTOR SHALL ENSURE THAT ALL HANGERS ARE INSTALLED TO MEET THE MANUFACTURER'S MAXIMUM FASTENER SCHEDULE. COMPLETION OF THIS WORK WILL REQUIRE JOIST REMOVAL AND RESETTING OR REPLACEMENT AT INSTALLATIONS WHERE INVERTED FLANGE HANGERS HAVE BEEN INSTALLED AS THE FASTENERS ARE MASKED BY THE END OF THE JOIST.

THIS REPAIR IS ASSUMED TO BE REQUIRED AT ALL TIMBER PILE BENTS THROUGHOUT THE PROJECT AT ALL EXTERIOR JOIST HANGERS. REPAIRS ARE REQUIRED AT SOME INTERIOR HANGERS.

GAPS GREATER THAN 1/8" (DWC2)

JOISTS WERE TO BE INSTALLED WITH A MAXIMUM GAP BETWEEN THE END OF THE TIMBER JOIST AND THE TIMBER PILE BENT OF 1/8" MAXIMUM GAP FOR FULL LOAD CAPACITY PER THE MANUFACTURER'S REQUIREMENTS. INSPECTIONS HAVE DETERMINED THAT SOME JOISTS WERE INSTALLED WITH GAPS THAT EXCEED 1/8".

THIS REPAIR IS STRUCTURED BASED ON GAP SIZE TO BE MEASURED, QUANTIFIED AND DOCUMENTED IN THE FIELD BY THE OWNER'S ENGINEER PRIOR TO REPAIRS.

GAPS GREATER THAN 1/8" AND UP TO 5/8" CAN BE LEFT INPLACE WITHOUT REPAIR. THIS CONDITION MEETS THE MANUFACTURER'S CERTIFIED ENGINEERING AND PRODUCT WARRANTY AND HAS BEEN APPROVED FOR USE ON THIS PROJECT AS A PROPOSAL FOR ALTERNATIVE MATERIAL, DESIGN, OR METHOD OF CONSTRUCTION IN EXHIBIT B AND EXHIBIT C INCLUDED IN BID DOCUMENT ATTACHMENTS.

GAPS GREATER THAN 5/8" AND UP TO 1-1/4" ARE TO BE REPAIRED WITH A JOIST EXTENSION BRACKET CUSTOM MITEK PRODUCT EC-SB23-0509A ATTACHED TO THE END OF THE JOIST AND SET TO BEAR ON THE JOIST HANGER. THIS CONDITION MEETS THE MANUFACTURER'S CERTIFIED ENGINEERING AND PRODUCT WARRANTY AND HAS BEEN APPROVED FOR USE ON THIS PROJECT AS A PROPOSAL FOR ALTERNATIVE MATERIAL, DESIGN, OR METHOD OF CONSTRUCTION IN EXHIBIT D INCLUDED IN BID DOCUMENT ATTACHMENTS.

INSTALL THE JOIST EXTENSION BRACKET PER THE MANUFACTURER'S RECOMMENDATIONS WITH MINIMAL GAP AT THE TIMBER PILE BENT AND SUCH THAT THE TOP OF THE TIMBER JOIST LEVEL WITH THE TOP OF THE TIMBER PILE BENT TO PROVIDE AN EVEN BEARING FOR TIMBER DECK BOARDS.

GAPS GREATER THAN 1-1/4" REQUIRE A REPLACEMENT JOIST TO BE INSTALLED. THE REPLACEMENT JOIST IS TO MEET THE 1/8" MAXIMUM GAP CONDITION ALLOWABLE BY THE MANUFACTURER'S REQUIREMENTS.

HANGER REPLACEMENT (DWC3 & 9)

JOIST HANGERS WERE TO BE SUITED FOR FRAMING CONDITIONS AND SKEWED MEMBERS UP TO 45-DEGREES. THE MANUFACTURER'S HANGERS HAVE SKEW TOLERANCE OF 5 DEGREES AND ARE CUSTOMIZABLE UP TO 45 DEGREES. INSPECTIONS HAVE DETERMINED THAT SQUARE HANGERS WERE INSTALLED TO SUPPORT SKEWED JOISTS WHERE MANUFACTURER'S TOLERANCES HAVE BEEN EXCEEDED.

HANGERS FOUND TO NOT MEET THE MANUFACTURER'S SKEW TOLERANCE SHALL BE REMOVED AND REPLACED WITH A NEW HANGER. NEW SKEW CONDITIONS MAY REQUIRE CUSTOM ORDER HANGERS TO BE MANUFACTURED TO MEET ALLOWABLE TOLERANCE REQUIREMENTS. NEW HANGERS WILL BE INSTALLED TO ENSURE THE TOP TIMBER JOIST IS LEVEL WITH THE TOP OF TIMBER PILE BENT.

HANGERS AND HARDWARE THAT HAS BEEN REMOVED ARE NOT REUSABLE. REMOVED NAILS ARE TO BE REPLACED WITH MITEK LL930 SCREWS, OR AN ACCEPTABLE EQUAL APPROVED BY THE ENGINEER.

RESTRAINED BEARING PLATES (DWC4)

LUMBER WAS TO BE CUT AND FRAMED TRUE AND EXACT TO A CLOSE FIT TO CONSTRUCT JOINTS WITH AN EVEN BEARING. INSPECTIONS HAVE DETERMINED THAT SOME JOIST HANGERS WERE INSTALLED LOW SUCH THAT THE TOP OF THE TIMBER JOIST IS NOT EVEN WITH THE TOP OF TIMBER PILE BENT LEAVING AN UNEVEN BEARING FOR THE TIMBER DECKING. IN SOME INSTANCES, TIMBER SHIMS HAVE BEEN WEDGED INTO PLACE TO ACCOUNT FOR INCORRECTLY INSTALLED JOIST HANGERS.

WHERE JOIST HANGERS ARE TO BE REPLACED AS PART OF OTHER REPAIRS, ENSURE THAT NEW HANGERS ARE INSTALLED AT THE CORRECT HEIGHT. SEE THE HANGER REPLACEMENT REPAIR NOTES FOR MORE INFORMATION. REMOVE AND DISPOSE OF ALL TIMBER WEDGES AND SHIMS.

WHERE JOIST HANGER REPLACEMENT IS NOT REQUIRED FOR OTHER REPAIRS, INSTALL A RESTRAINED BEARING PLATE USING CUSTOM MITEK PRODUCT EC-TG23-1023 BETWEEN THE BOTTOM OF THE JOIST AND THE JOIST HANGER TO RAISE THE JOIST TO THE APPROPRIATE ELEVATION.

FULLY SEAT THE RESTRAINED BEARING PLATE AND SECURE TO THE BOTTOM OF THE JOIST PER THE MANUFACTURER'S RECOMMENDATIONS. THIS CONDITION MEETS THE MANUFACTURER'S CERTIFIED ENGINEERING AND PRODUCT WARRANTY AND HAS BEEN APPROVED FOR USE ON THIS PROJECT AS A PROPOSAL FOR ALTERNATIVE MATERIAL, DESIGN, OR METHOD OF CONSTRUCTION IN EXHIBIT E INCLUDED IN BID DOCUMENT ATTACHMENTS.

JOIST HANGERS THAT REQUIRE MORE THAN THE MAXIMUM NUMBER OF ALLOWABLE RESTRAINED BEARING PLANS PER THE MANUFACTURER'S REQUIREMENTS ARE TO BE REPLACED WITH NEW JOIST HANGERS SET AT THE CORRECT HEIGHT. SEE THE HANGER REPLACEMENT REPAIR NOTES FOR MORE INFORMATION.

MODIFIED & DAMAGED HANGERS (DWC5 & 8)

JOIST HANGERS WERE TO BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS. INSPECTIONS HAVE DETERMINED THAT SOME JOIST HANGERS HAVE BEEN MODIFIED, DAMAGED AND/OR IMPROPERLY INSTALLED.

ALL MODIFIED, DAMAGED, OR IMPROPERLY INSTALLED JOIST HANGERS ARE TO BE REMOVED AND REPLACED. SEE THE HANGER REPLACEMENT REPAIR NOTES FOR MORE INFORMATION.

MISSING HELICAL PILE PLATES (DWC6)

HELICAL PILES AND BENT SADDLES WERE TO REMAIN AND BE REUSED. INSPECTIONS HAVE DETERMINED THAT SOME TIMBER PILE BENTS WERE SECURED TO THE BENT SADDLES WITHOUT FULL PLATE WASHERS FROM THE ORIGINAL PILE SYSTEM HARDWARE.

ALL TIMBER PILE BENTS SECURED TO BENT SADDLES WITH INDIVIDUAL WASHERS OR OTHER UNACCEPTABLE MATERIALS INSTEAD OF ORIGINAL FULL PLATE WASHERS ARE TO BE REPAIRED.

REMOVE NON-COMPLIANT HARDWARE AND FURNISH AND INSTALL NEW PLATE WASHERS AND HARDWARE AS RECOMMENDED BY THE HELICAL PILES MANUFACTURER.

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NO	DATE	BY	CKD	APPR

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MINNEHAHA CREEK WATERSHED DISTRICT
 MINNEHAHA CREEK PRESERVE BOARDWALK 2026 REPAIRS
 REPAIR NOTES & DETAILS
 SHEET 1 OF 2

SHEET
 6
 OF
 7

FULLY DRIVEN FASTENERS (DWC7)

FASTENERS WERE TO BE INSTALLED TO A CONDITION WHERE THE HEADS ARE FLUSH WITH THE SURFACE OF THE TIMBER. INSPECTIONS HAVE DETERMINED THAT FASTENERS HAVE NOT BEEN FULLY DRIVEN.

REPAIR ALL PARTIALLY DRIVEN FASTENERS BY FULLY DRIVING THE FASTENER TO A POINT WHERE THE HEAD IS FLUSH WITH THE SURFACE OF THE HANGER OR WOOD WITHOUT DAMAGE TO TIMBER MEMBERS. IF A FASTENER CANNOT BE DRIVEN DUE TO DAMAGE OR OTHER CONDITIONS, REMOVE THE ORIGINAL FASTENER AND REPLACE WITH MITEK LL930 SCREWS, OR AN ACCEPTABLE EQUAL APPROVED BY THE ENGINEER.

JOINTS WITHOUT JOIST HANGERS (DWC10)

ALL JOINTS WERE TO BE CONSTRUCTED USING JOIST HANGERS. JOIST HANGERS WERE TO BE SIZED TO SUIT FRAMING CONDITIONS AND SKEWED MEMBERS UP TO 45-DEGREES. ANY CONDITIONS BEYOND A SKEW OF 45-DEGREES WERE TO BE COORDINATED WITH THE ENGINEER. INSPECTIONS HAVE DETERMINED THAT SOME JOINTS WERE CONSTRUCTED WITHOUT A JOIST HANGER.

REPAIR ALL JOINTS CONSTRUCTED WITHOUT A JOIST HANGER TO A CONDITION WHERE JOISTS ARE PROPERLY SUPPORTED BY A NEW JOIST HANGER. COORDINATE ANY JOINTS FOUND WITH CONDITIONS THAT EXCEED 45 DEGREES WITH THE ENGINEER PRIOR TO REPAIRS. JOIST REPLACEMENT MAY BE NECESSARY DEPENDING ON THE CONDITION OF THE INPLACE JOINT.

UPLIFT CAPACITY (DWC11)

ALL JOIST HANGERS WERE TO BE INSTALLED TO THE MANUFACTURER'S MAXIMUM FASTENER SCHEDULE USING THE MANUFACTURER'S RECOMMENDED HARDWARE. THIS INCLUDES THE INSTALLATION OF TWO FASTENERS ATTACHING THE HANGER TO THE BOTTOM OF THE TIMBER JOIST FOR UPLIFT CAPACITY. INSPECTIONS HAVE DETERMINED THAT SOME JOISTS HAVE BEEN INSTALLED WITHOUT THIS ADDITIONAL SET OF FASTENERS IN THE DIMPLE HOLES ON THE SIDES OF STANDARD HANGERS AND NON-DIAMOND DIMPLE HOLES ON THE SIDES OF INVERTED FLANGE HANGERS.

THIS REPAIR INSTALLS FASTENERS TO THE MANUFACTURER'S RECOMMENDATIONS FOR UPLIFT CAPACITY. THE MANUFACTURER HAS PROVIDED CLARIFICATION THAT THE FASTENERS MAY BE INSTALLED AT THE ANGLE PROVIDED BY THE PREFORMED HANGER UP TO LEVEL AND BE CONSIDERED AN ACCEPTABLE INSTALLATION. NO FASTENER IS TO BE INSTALLED AT A PITCH ABOVE LEVEL.

DO NOT DRILL NEW HOLES IN THE HANGERS FOR INSTALLATION OF THE FASTENERS. IF THE HANGER IS SET LOW AND THE JOIST HAS BEEN RAISED IN THE HANGER WITH A RESTRAINED BEARING PLATE TO A POSITION THAT WILL NOT ALLOW THE FASTENER TO BE INSTALLED AT OR BELOW A LEVEL PITCH, THE CONTRACTOR WILL REPLACE THE HANGER. SEE THE HANGER REPLACEMENT REPAIR NOTES FOR MORE INFORMATION.

IF SPLITTING OF THE JOIST OCCURS DURING INSTALLATIONS, CONSULT WITH THE ENGINEER BEFORE CONTINUING TO INSTALL ADDITIONAL FASTENERS. FIELD TESTING HAS SHOWN THAT PREDRILLING AND INSTALLING MITEK LL930 SCREWS, OR AN ACCEPTABLE EQUAL APPROVED BY THE ENGINEER REDUCES THE SPLITTING POTENTIAL OF THE TIMBER.

NO NEW HOLES ARE TO BE DRILLED THROUGH THE HANGER FOR FASTENER PLACEMENT WITHOUT FIRST PROVIDING DOCUMENTATION OF APPROVAL BY THE HANGER MANUFACTURER TO THE ENGINEER.



MAXIMUM FASTENER SCHEDULE REPAIR
IMAGE OF SUPPLEMENTAL FASTENERS FIELD TEST
(CUSTOM MITEK PRODUCT LL930 SCREWS)



GAPS GREATER THAN 5/8" UP TO 1 1/4" REPAIR
IMAGE OF JOIST EXTENSION BRACKET INSTALLATION FIELD TEST
(CUSTOM MITEK PRODUCT EC-SB23-0509A)



RESTRAINED BEARING PLATES REPAIR
IMAGE OF RESTRAINED BEARING PLATES FIELD TEST
(CUSTOM MITEK PRODUCT EC-TG23-1023)

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 MINNEHAHA CREEK PRESERVE BOARDWALK 2026 REPAIRS
 REPAIR NOTES & DETAILS
 SHEET 2 OF 2

SHEET
 7
 OF
 7